

CHARADE

Chassis

FOREWORD

This workshop manual contains essential information regarding the construction, disassembly/reassembly procedures and servicing methods of the power train, suspension, brake system, steering system, body and electrical system of the DAIHATSU CHARADE.

We hope that this workshop manual is consulted to the fullest extent, in combination with the workshop manual of the Type CB Engine, Type CL Engine, and Trouble shooting for Engine control system of Type CB-80 Engine so that quality servicing may be assured at all times.

Furthermore, due to continuing improvements in the design, contents and specifications in this workshop manual may be partly revised without advance notice and without incurring any obligation to us.

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DAIHATSU MOTOR CO., LTD.

WF-00000

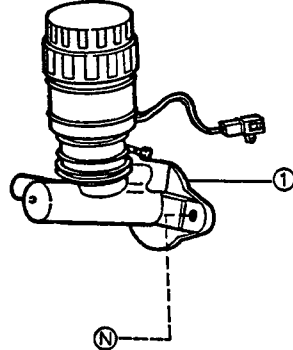
MANUAL TRANSMISSION	3
AUTOMATIC TRANSMISSION	4
FRONT AXLE & SUSPENSION	5
REAR AXLE & SUSPENSION	6
STEERING	7
BRAKES	8
BODY	9
BODY ELECTRICAL	10
APPENDIX	11

SECTION 1

GENERAL INFORMATION

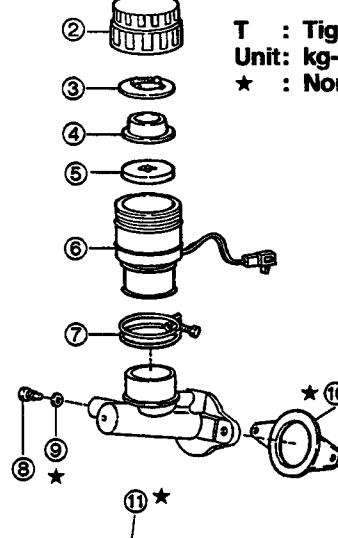
HOW TO READ THIS BOOK	1-2
CONTENTS OF EXPLANATION	1-2
1. Schematic Diagram of Components	1-2
2. Servicing Procedure	1-2
3. Trouble Shooting	1-3
4. Table of SSTs Used	1-3
5. Table of Service Specifications	1-3
6. Table of Tightening Torque	1-3
7. Wiring Diagrams	1-3
DEFINITIONS OF TERMS	1-3
ABBREVIATION CODES	1-4
SERVICING OPERATIONS	1-5
JACKING POINTS AND SUPPORTING	
POINTS OF SAFETY STANDS	1-6
SUPPORTING POINTS OF TWO-POST LIFT	1-6

WR-01001

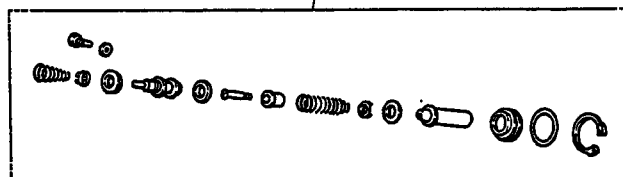


T : 1.2 - 1.8
(8.7 - 13.0)

- ① Brake master cylinder Ay
- ② Reservoir filler cap
- ③ Reservoir cap spacer
- ④ Reservoir diaphragm
- ⑤ Switch operating float
- ⑥ Master cylinder reservoir S/A
- ⑦ Clamp
- ⑧ Set bolt
- ⑨ Gasket
- ⑩ Gasket
- ⑪ Master cylinder repair kit



T : Tightening Torque
Unit: kg-m (ft-lb.)
★ : Non-reusable parts



WR-01002

2. Servicing Procedure

- (1) In principle, the servicing procedure is described in the following sequence given below: Removal → Inspection → Installation, and Disassembly → Inspection → Assembly.
- (2) The explanation covers detailed servicing methods, specifications and notes.
- (3) The main point of each item explains the servicing section and servicing procedure, using illustrations.

(Example)

What to do

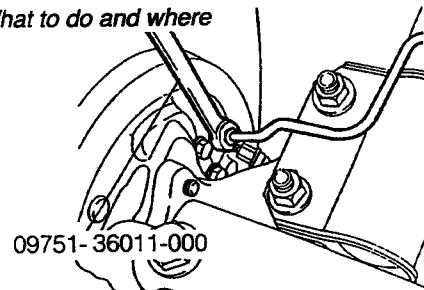
How to do it

3. Brake tube installation

- (1) Install the brake tube to the wheel cylinder temporarily by hands.
- (2) Tighten the brake tube to the wheel cylinder, using the following SST.

SST: 09751-36011-000

What to do and where



09751-36011-000

WR-01003

6. Table of Tightening Torque

- (1) As for those sections where their tightening torque must be controlled during the service, the tightening torque is specified in the appendix of this book.

7. Wiring Diagrams

- (1) The vehicle wiring diagrams are posted in the appendix of this book separately for Type CB and Type CL engines.

DEFINITIONS OF TERMS

- Specified Value A value which represents the allowable range during the inspection and adjustment.
Limit A maximum or a minimum limit which the value should not exceed or fall below.
Note An item which requires special attention or an item which is prohibited during the service.

WR-01004

O/S	Over Size	In instances where fitting becomes too loose due to wear resulting from use for a long period of time or due to frequent removal/installation operations, if fitting part (e.g. piston) is replaced with a part having larger dimensions, the other mating part may be put into use again. "Over sized" parts denote those parts having larger dimensions compared standard parts.
U/S	Under Size	In the same manner as with the "oversized" parts, if fitting part (e.g. bush and bearing) is replaced with a part having smaller bore dimensions, the other mating part may be put into use again. "Under sized" parts denote those parts having smaller dimensions compared with standard parts.
PR	Ply Rating	Represents strength of tires. The larger the ply rating number, the stronger the tire strength.
SAE	Society of Automotive Engineers	For example, automotive oils are designated as SAE so and so number. These designation numbers have been set forth by the Society of Automotive Engineers in the United States of America (SAE). The larger the SAE number, the higher the oil viscosity. Conversely, the smaller the SAE number, the lower the oil viscosity.
API	American Petroleum Institute	The standards set forth by the American Petroleum Institute (abbreviated as API Classification) have been employed to evaluate and classify properties of various oils. Engine oils for gasoline engines are classified as SD, SE, SF and so on, whereas engine oils for diesel engines are classified as CC, CD and so on.
SST	Special Service Tool	Refers to a tool designed for a specific purpose.
T	Torque	Refers to tightening torque.
S/A	Sub-Assembly	Refers to a component comprising more than two single parts which are welded, staked, or studded to each other to form a single component.
Ay	Assembly	Refers to an assembled component comprising more than two single parts or sub-assembly parts.
W/	With	Denotes that the following part is attached.
L/	Less	Denotes that the following part is not attached.
M/T	Manual Transmission	Refers to manual transmission.
A/T	Automatic Transmission	Refers to automatic transmission
ISO	International Organization for Standardization	The standards set forth by the international Organization for Standardization (abbreviated as ISO classification) have been employed to evaluate and classify properties of various component parts and oils etc.

The abbreviation codes that appear in the figure stand for the following, respectively.

Ⓑ	Bolt	Ⓢ	Screw
Ⓝ	Nut	Ⓦ	Washer

WR-01005



3. **Repairing fuel system**
Type CB-80 engine employs a high fuel pressure. Therefore, the following notes should be observed.
- (1) When the union bolt is removed, take a measure to prevent the fuel from splashing with a cloth or the like. Slacken the union bolt gradually.
 - (2) Tighten each connecting section to the specified torque.
 - (3) Attach the specified clip to each connecting section.

4. For increased work efficiency and improved accuracy, be sure to utilize the SSTs (Special Service Tools) effectively.

5. Removal and disassembly

- (1) When disassembling complicated components, put stamped marks or mating marks on those sections where such marks do not affect their functions so that the assembling operation may be performed easily.
- (2) Each time a part is removed, check the part for the assembled condition, deformation, breakage, roughness and scratches.
- (3) Arrange the disassembled parts in the disassembling order. In addition, separate and arrange those parts to be replaced and those parts to be reused.
- (4) Thoroughly clean and wash those parts to be reused.
- (5) Inspection and measurement of part
Perform thorough inspection and measurement on those parts to be reused, as required.

6. Installation and assembly

- (1) Assemble those satisfactory parts, following the proper procedure and specified standards (adjusting values and tightening torque, etc.).
- (2) Ensure that seal packings and grease are applied to those sections where such application is needed.
- (3) Be sure to use new packings, gaskets, cotter pins and so forth.
- (4) Ensure that the specified bolts and nuts only be used. Moreover, where specified, make sure to employ a torque wrench to tighten bolts and nuts to the specified torque.
Make sure to use only genuine parts for every replacement.

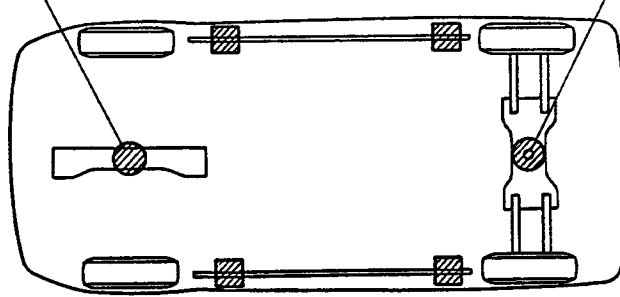
7. Adjustment and operation check

Adjust the reassembled or replaced components to the servicing specifications, using gauges and testers, as required.

8. Handling of hose, etc.

- (1) Connect fuel hoses and water hoses, etc. securely so that they exhibit no leakage.
- (2) When disconnecting fuel hoses, make sure that no fuel is splashed around the hose. (Special care must be exercised as to the engine mount rubber, etc., for there is a possibility that the rubber is deteriorated by the petrol-based liquid.)

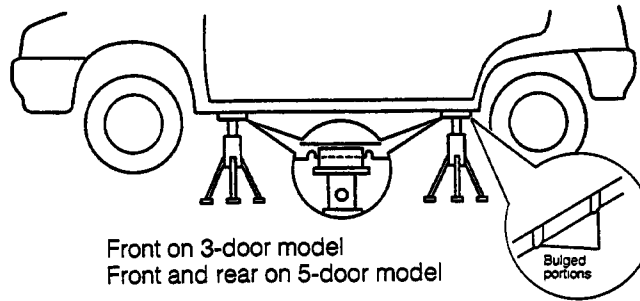
WR-01006



- Supporting point of garage jack
- Supporting point of safety stand

• Supporting points of safety stands

Four supporting points are located at the right and left sides. (The supporting points have been strengthened by spot-welding reinforcements. Never support the vehicle at points other than the specified points.)



Front on 3-door model

Front and rear on 5-door model

Rear on 3-door model

Fig. 1-1

WR-01007

SUPPORTING POINTS OF TWO-POST LIFT

Align the supporting pads of a two-post lift with the supporting points of safety stands, as indicated in the figure above.

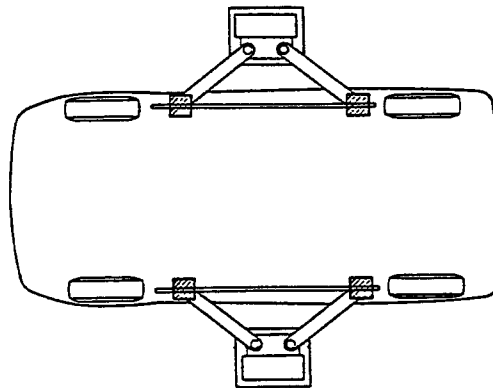


Fig. 1-2

WR-01008

SECTION 2

CLUTCH

DESCRIPTION	2- 2
TROUBLE SHOOTING	2- 2
CLUTCH PEDAL ADJUSTMENT	2- 2
CLUTCH PEDAL AND	
CLUTCH RELEASE CABLE	2- 4
COMPONENTS	2- 4
REMOVAL	2- 4
INSPECTION	2- 5
INSTALLATION	2- 6
CLUTCH UNIT	2- 7
COMPONENTS	2- 7
REMOVAL	2- 7
INSPECTION	2- 8
INSTALLATION	2-10

WR-02001

	● Flattened diaphragm spring.	● Replace clutch cover.	2-7
Grabbing and chattering clutch	● Worn or oily clutch disc linings. ● Faulty pressure plate. ● Flattened disc torsion spring. ● Bent diaphragm spring.	● Check clutch disc and replace, as required. ● Replace clutch cover. ● Replace clutch disc. ● Replace clutch cover.	2-8 2-7 2-7 2-7
Clutch noises	● Parts in housing loose. ● Worn or contaminated release bearing. ● Release fork and linkage seized.	● Repair, as required. ● Replace release bearing. ● Repair, as required.	2-7
Dragging clutch (Poor clutch disengagement)	● Clutch pedal free travel improperly adjusted. ● Flattened diaphragm spring, or worn tip end of spring.	● Adjust clutch pedal free travel. ● Replace clutch cover.	2-3 2-7

WR-02002

CLUTCH PEDAL ADJUSTMENT

1. Check the clutch pedal for the installation height.
 Pedal installation height
 (Distance between pedal pad upper surface's center and dash panel)

R.H.D. vehicle	189.5 - 194.5 mm (7.46 - 7.66 inch)
L.H.D. vehicle	181.5 - 186.5 mm (7.15 - 7.34 inch)
2. Adjust the pedal installation height, as required.
 - (1) Slacken the lock nut. Turn the stopper bolt until the installation height conforms to the specification.
 - (2) Tighten the lock nut.

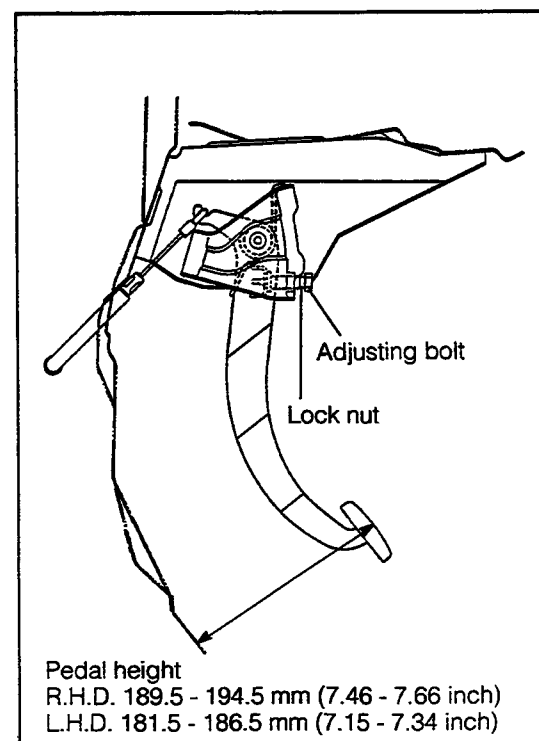


Fig. 2-1

WR-02003

resistance from the clutch. Measure the depressing distance up to this point.

Pedal Free Travel: 15 - 30 mm (0.59 - 1.18 inch)

5. Adjust the clearance between the clutch pedal and the floor with the pedal fully depressed. (Minimum clearance between the dash panel and the pedal arm)

Vehicles mounted with Type CB-80 engine:

not less than 20 mm (0.79 inch)

Vehicle other than those mounted with Type CB-80 engine: not less than 25 mm (0.98 inch)

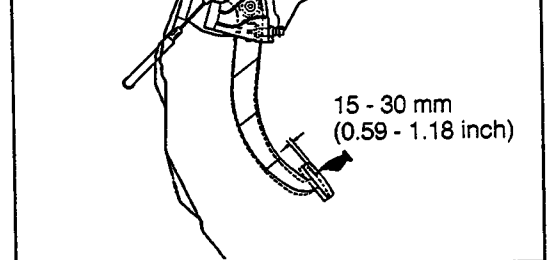


Fig. 2-3

WR-02005

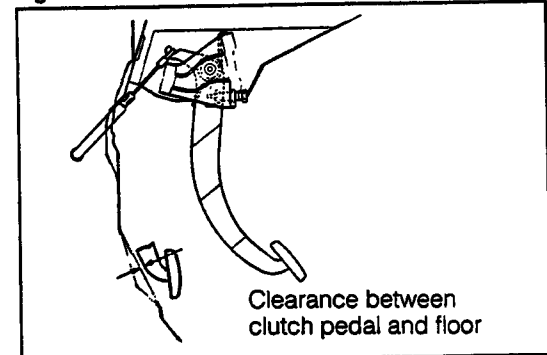
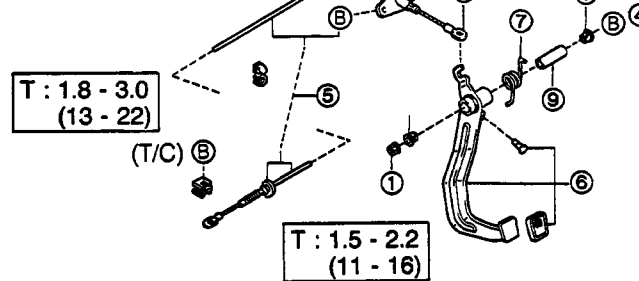


Fig. 2-4

WR-02006



- ① Nut
- ② Clutch release cable
- ③ Nut & bolt
- ④ Bolt
- ⑤ Clutch release cable

- ⑥ Clutch pedal Ay
- ⑦ Spring
- ⑧ Bush
- ⑨ Spacer

Fig. 2-5

WR-02007

REMOVAL

1. Remove the brake pedal Ay. (Only for L.H.D. vehicles. See page 8-7)
2. Remove the nut located at the clutch pedal installation section. Separate the end section of the clutch release cable.

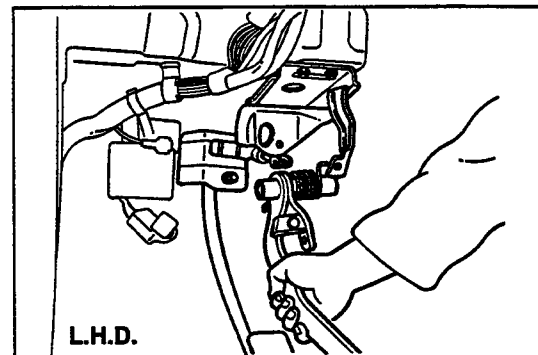


Fig. 2-6

WR-02008

3. Remove the adjusting bolt.

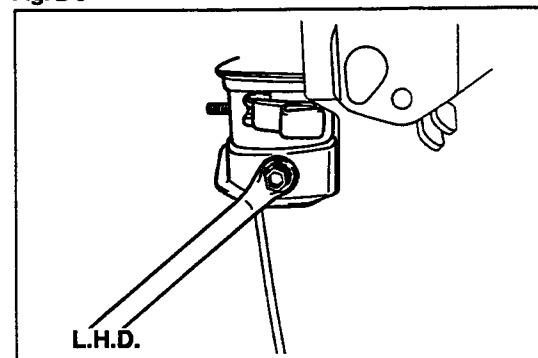


Fig. 2-7

WR-02009

6. Remove the clutch pedal assembly. Remove the spring, bush and spacer.

INSPECTION

Inspect the following parts.

1. Bush for wear or damage.
2. Pedal spacer for wear or damage.
3. Pedal for damage or deformation.
4. Pedal pad for wear or damage.
5. Spring for flattened condition.

6. Each section of clutch cable

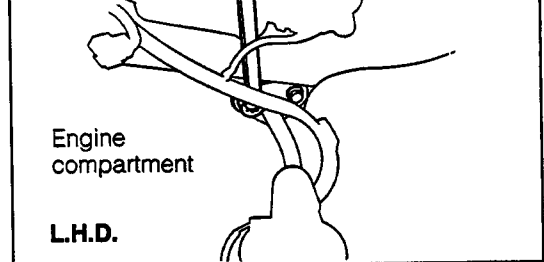


Fig. 2-9

WR-02011

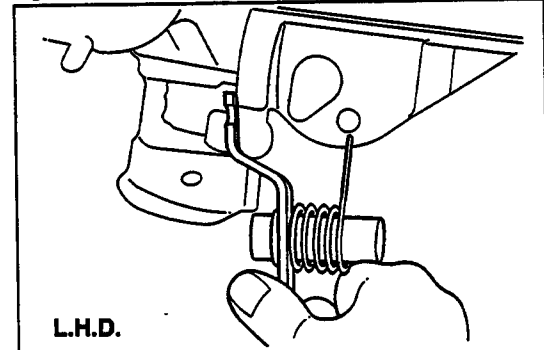


Fig. 2-10

WR-02012

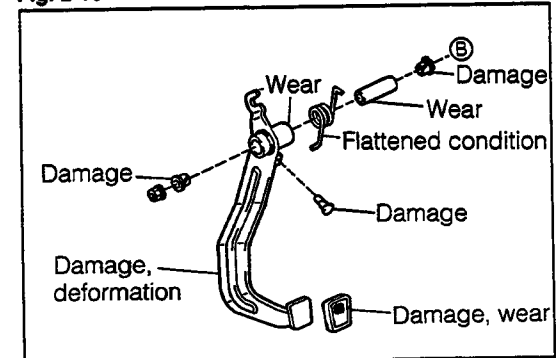


Fig. 2-11

WR-02013

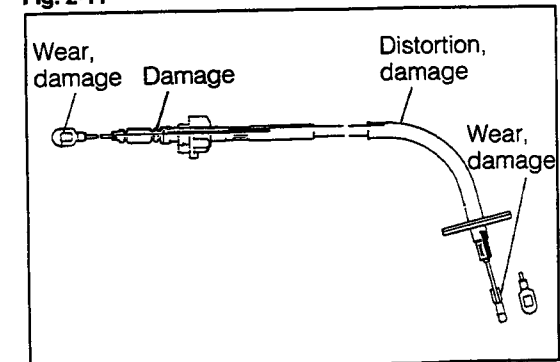


Fig. 2-12

WR-02014

3. Install the bolt with washer in position.

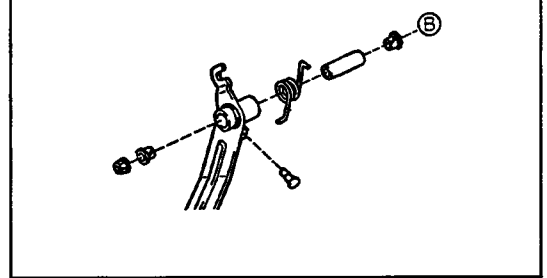


Fig. 2-14

WR-02016

4. Install both ends of the clutch cable. Tighten the bracket with the bolts.

Tightening Torque: 0.4 - 0.7 kg-m (2.9 - 5.1 lb)

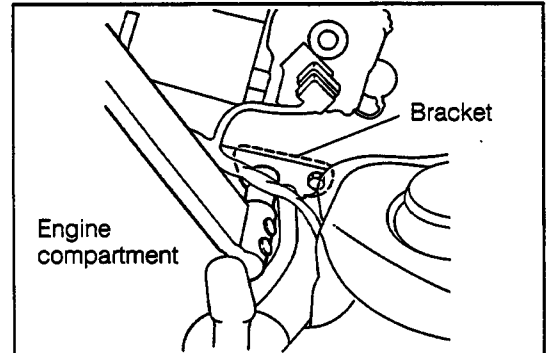


Fig. 2-15

WR-02017

5. Install the adjusting bolt.

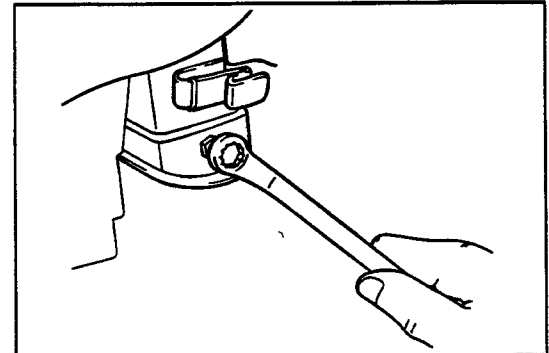


Fig. 2-16

WR-02018

6. Tighten the nut.

Tightening Torque: 1.5 - 2.2 kg-m (11 - 16 lb)

7. Depress the clutch pedal two or three times. Proceed to adjust the clutch pedal, following the procedure at page 2-2.
8. Install the brake pedal Ay. (Only for L.H.D. vehicles. See page 8-8)

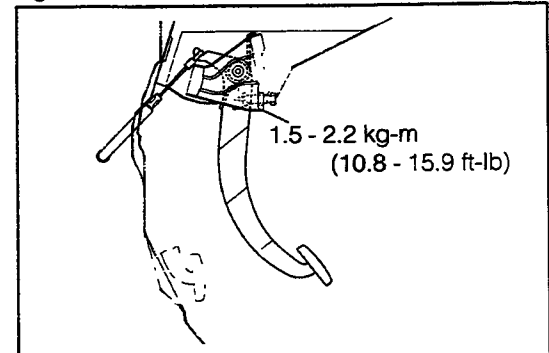
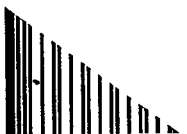
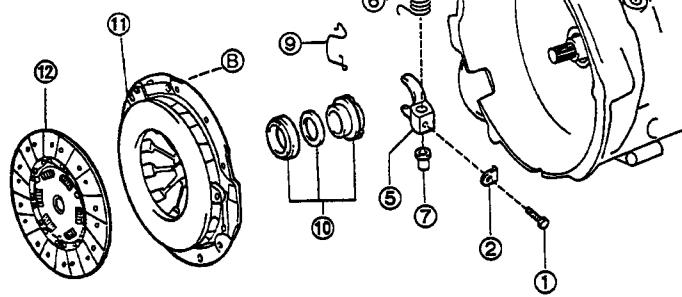


Fig. 2-17

WR-02019





- ① W/Washer bolt
- ② Lock plate
- ③ Clutch release fork lever
- ④ Bush No.1
- ⑤ Clutch release lever yoke
- ⑥ Torsion spring

- ⑦ Bush No.1
- ⑧ Dust seal
- ⑨ Release bearing clip
- ⑩ Clutch release bearing hub
- ⑪ Clutch cover
- ⑫ Clutch disc

Fig. 2-18

WR-02020

REMOVAL

1. Remove the transmission assembly from the vehicle. (See page 3-3.)

**SEE
TRANSMISSION
REMOVAL SECTION
Page 3-3 to 3-7.**

WR-02021

2. Release the lock plate. Proceed to remove the lock plate along with the bolt.

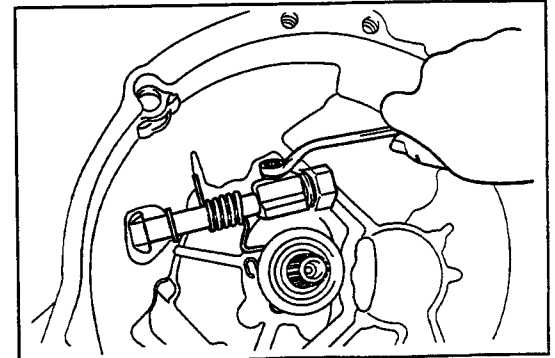


Fig. 2-19

WR-02022

INSPECTION

1. Check the pressure plate and flywheel surface for scores, cracks and discoloration.

2. Check the diaphragm spring tips for wear, rust and breakage.

3. Check the clutch disc for wear and runout.

Allowable Wear Limit (Rivet Depth):
0.3 mm (0.012 inch)

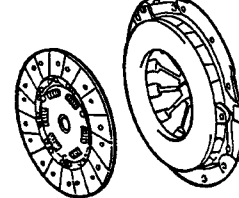


Fig. 2-21

WR-02024

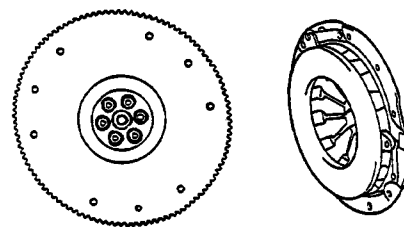


Fig. 2-22

WR-02025

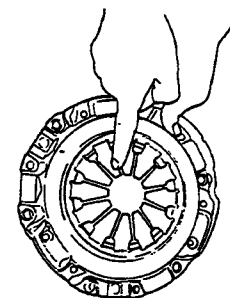


Fig. 2-23

WR-02026

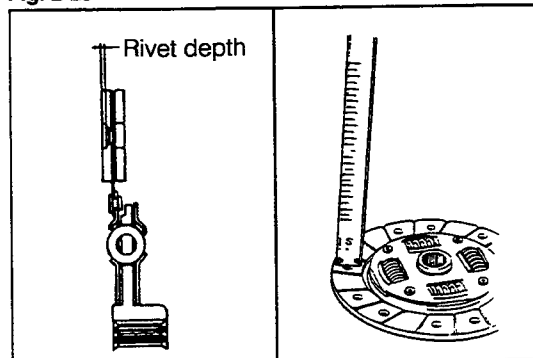


Fig. 2-24

WR-02027

pressure to the bearing in a thrust direction. Check to see if the bearing rotates without any abnormal feeling or binding.

5. Check the release bearing hub, clip-contacting surface and hub-to-housing sliding section for damage and wear.

6. Check to see if the clip has the configuration as shown in the figure in its horizontal plane.

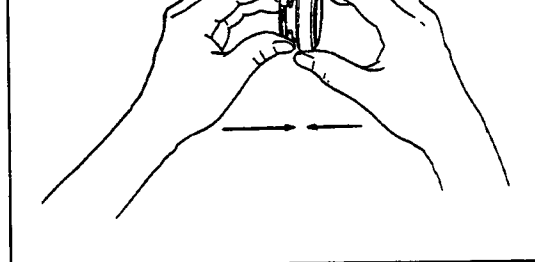


Fig. 2-26

WR-02029

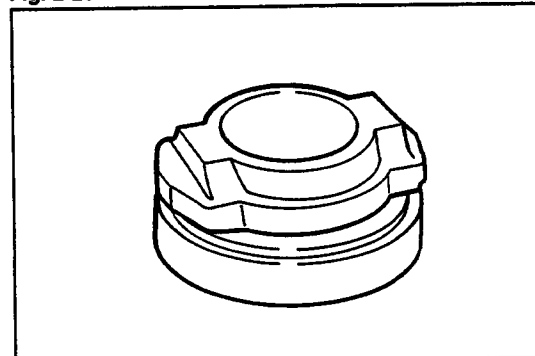


Fig. 2-27

WR-02030

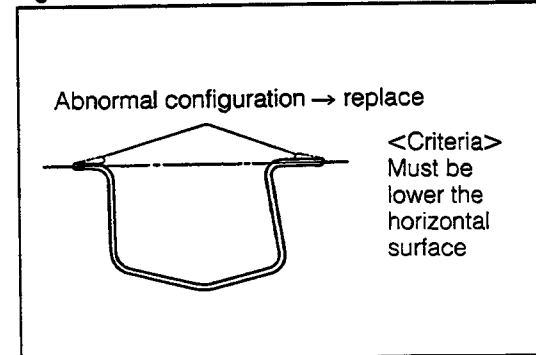


Fig. 2-28

WR-02031

2. Check the clutch release bearing spring tips for variation in height. Adjust the diaphragm spring tips, as required.

Check

Allowable Limit of Variation in Height:

0.7 mm (0.028 inch)

SST: 09302-87701-000

~~87702~~

Adjustment

Align the diaphragm spring tips at such a height that makes the number of tips to be adjusted at a minimum number.

SST: 09333-00011-000

3. Assemble the clutch release bearing hub and release bearing clip to the clutch release lever yoke.

- (1) Bring the cut-out section of the release lever yoke in contact with the clip.
- (2) Under the condition described in (1), assemble the lever yoke by turning it 180 degrees.

NOTE:

Apply long-life chassis grease to the yoke-to-hub sliding section and bearing-to-housing case sliding section.

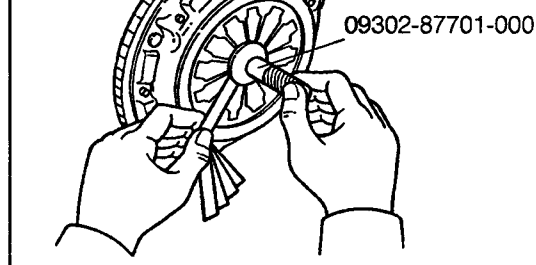


Fig. 2-30

WR-02032A

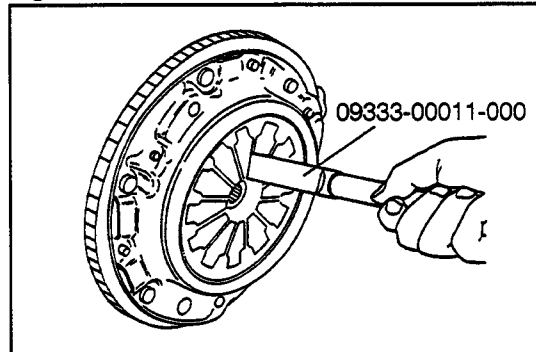


Fig. 2-31

WR-02033

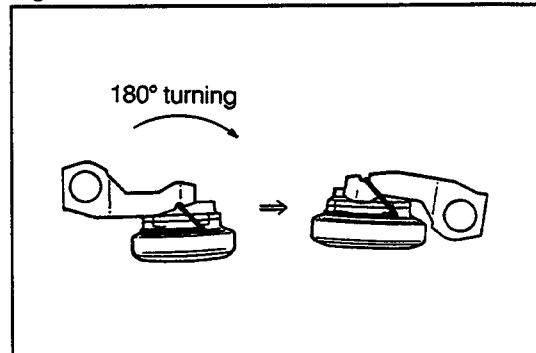


Fig. 2-32

WR-02034

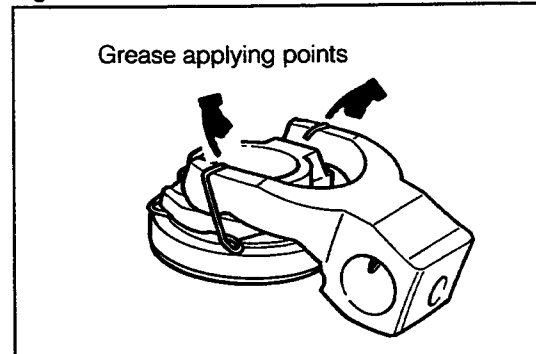


Fig. 2-33

WR-02035

Tightening Torque: 3.0 - 4.0 kg-m (22 - 29 ft-lb)

6. Check the release hub and yoke for proper operation. Operate the clutch release lever about 50 times. Check the section A of the clip. If the clip exhibits excessive spread and there is a likelihood that the clip may be detached, replace it with a new clip.
7. Install the transmission assembly to the vehicle.
(See page 3-7.)

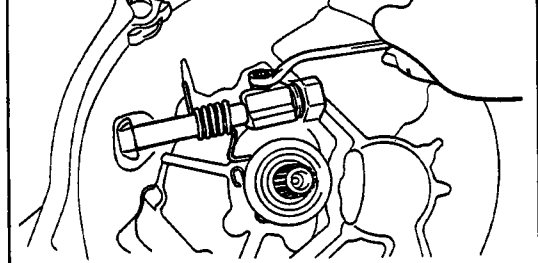


Fig. 2-35

WR-02037

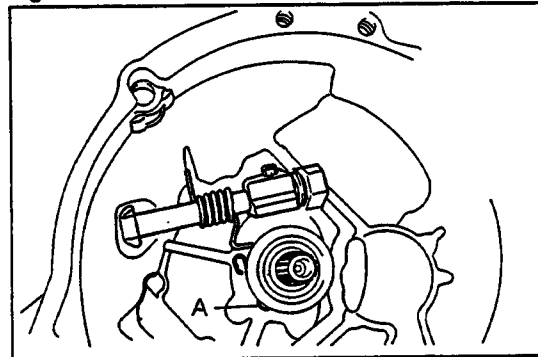


Fig. 2-36

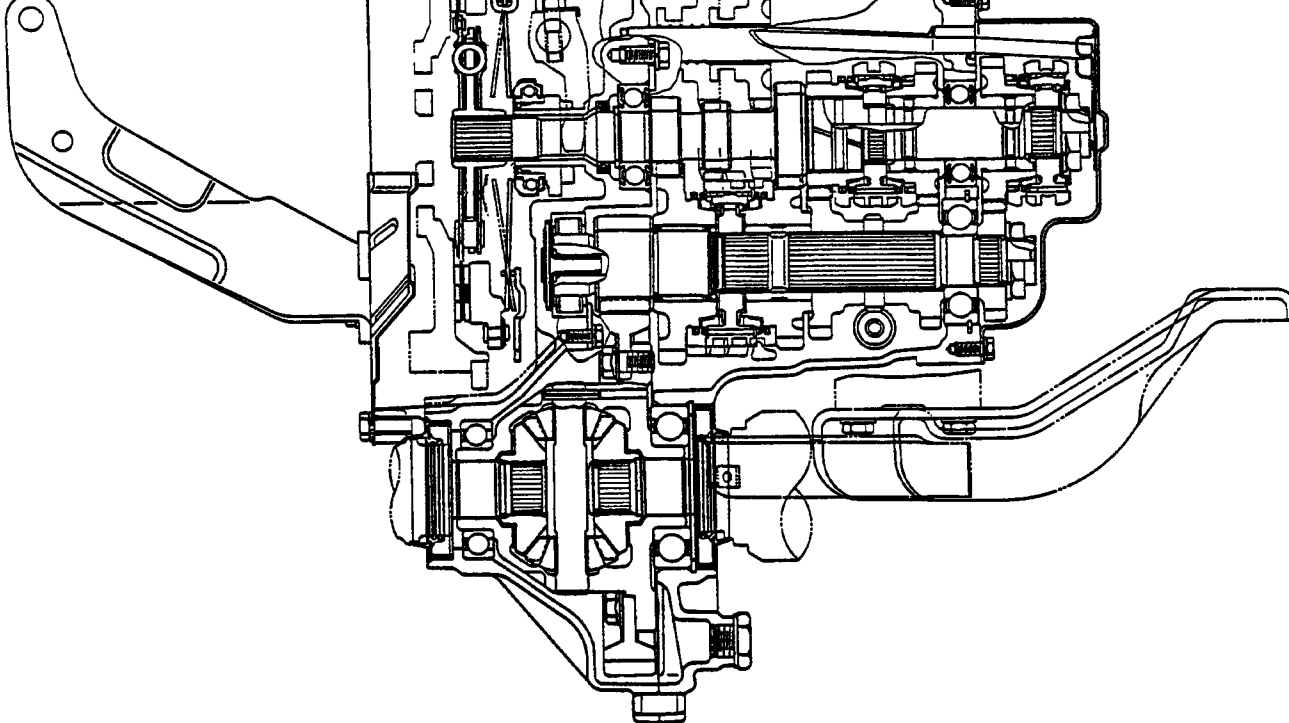
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SECTION 3

MANUAL TRANSMISSION

SECTIONAL VIEW	3- 2
MANUAL TRANSMISSION ASSEMBLY	3- 3
REMOVAL	3- 3
INSTALLATION	3- 7
DISASSEMBLY, INSPECTION AND ASSEMBLY OF TRANSMISSION HOUSING, CASE S/A AND CASE COVER	3-12
COMPONENTS	3-12
DISASSEMBLY	3-14
REPLACEMENT	3-16
INSPECTION	3-17
ASSEMBLY	3-18
APPLICATION POINTS OF GREASE & BOND AND APPLICATION PROCEDURE	3-22
DISASSEMBLY, INSPECTION AND ASSEMBLY OF INPUT SHAFT	3-24
COMPONENTS	3-24
DISASSEMBLY	3-25
INSPECTION	3-26
ASSEMBLY	3-28
DISASSEMBLY, INSPECTION AND ASSEMBLY OF OUTPUT SHAFT	3-31
COMPONENTS	3-31
DISASSEMBLY	3-32
INSPECTION	3-34
ASSEMBLY	3-36

DISASSEMBLY, INSPECTION AND ASSEMBLY OF 5TH GEAR	3-38
COMPONENTS	3-38
DISASSEMBLY	3-39
INSPECTION	3-40
ASSEMBLY	3-42
DISASSEMBLY, INSPECTION AND ASSEMBLY OF DIFFERENTIAL CASE	3-44
COMPONENTS	3-44
DISASSEMBLY	3-45
INSPECTION	3-46
ASSEMBLY	3-47
DISASSEMBLY, INSPECTION AND ASSEMBLY OF CONTROL LINKAGE-RELATED PARTS	3-50
COMPONENTS	3-50
DISASSEMBLY	3-52
INSPECTION	3-54
ASSEMBLY	3-55
SHIFT LEVER & SELECTING ROD	3-59
COMPONENTS	3-59
REMOVAL	3-60
INSPECTION	3-61
DISASSEMBLY	3-61
INSPECTION	3-63
ASSEMBLY	3-64
INSTALLATION	3-65



Part of 4-speed transmission

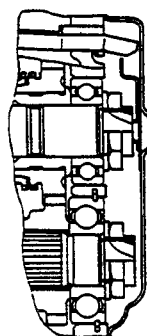


Fig. 3-1

WR-03002

	Reverse gear	3.142 (44/30/14)	3.142 (44/30/14)	3.142 (44/30/14)	3.142 (44/30/14)	3.142 (44/30/14)
Final reduction gear ratio (Tooth number)		* ¹ 4.500 (72/16)	* ³ 4.500 (72/16)	4.933 (74/15)	4.642 (65/14)	4.642 (65/14)
Number of speedo- meter gear teeth (driven/drive)		* ² 16/4	* ⁴ 16/4	* ⁵ 18/4	21/5	21/5
Trans- mission oil	Kind	SAE 80, GL-3	SAE-80, GL-3	SAE-80, GL-3	SAE-80, GL-3	SAE-80, GL-3
	Capacity <i>ℓ</i> (Imp. qts U.S. qts)	1.9 - 2.0 (1.67 - 1.76, 2.0 - 2.1)	2.1 - 2.2 (1.85 - 1.94, 2.2 - 2.3)	2.1 - 2.2 (1.85 - 1.94, 2.2 - 2.3)	2.1 - 2.2 (1.85 - 1.94, 2.2 - 2.3)	2.1 - 2.2 (1.85 - 1.94, 2.2 - 2.3)

*¹4.933 (74/15), *²18/4 for Swedish specifications

*³4.933 (74/15), *⁴18/4 for Swiss & Swedish specifications

*⁵ 17/4: When 155/80 R13 tires are used:

WR-03003

MANUAL TRANSMISSION ASSEMBLY

REMOVAL

1. Remove the engine hood assembly.
2. Remove the hold-down clamp and battery.
3. Remove the battery carrier stay.

4. Disconnect the following harnesses:

- (1) Harness to starter ①
- (2) Transmission earth
- (3) Backup lamp harness ②

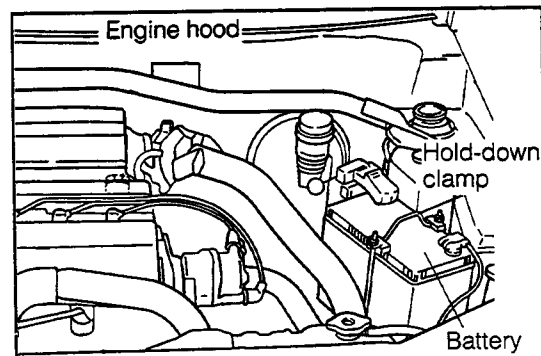


Fig. 3-2

WR-03004

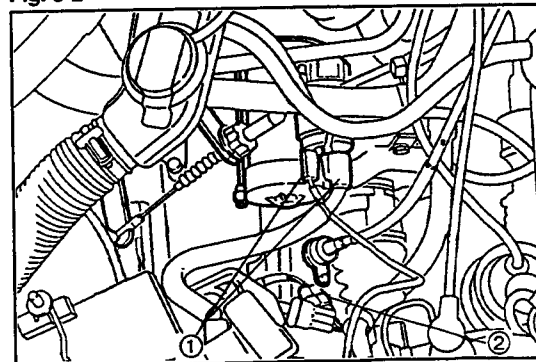


Fig. 3-3

WR-03005

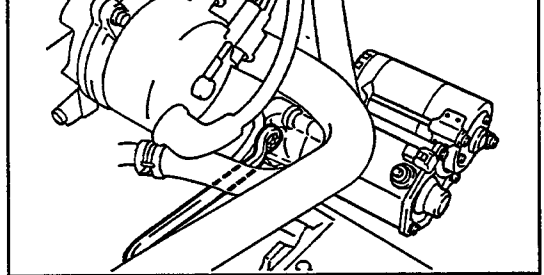


Fig. 3-5

WR-03007

7. Disconnect the speedometer cable.

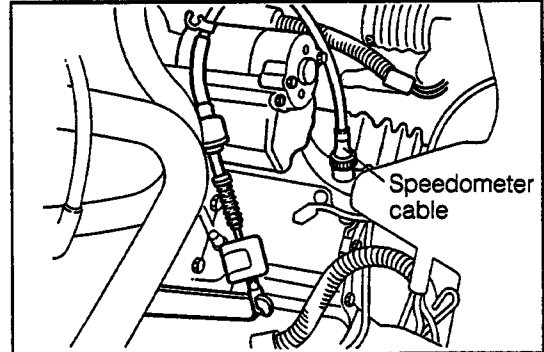


Fig. 3-6

WR-03008

8. Detach the three harness clamps.

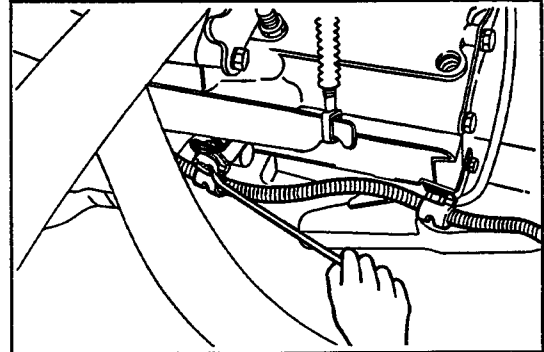


Fig. 3-7

WR-03009

9. Disconnect the clutch cable.

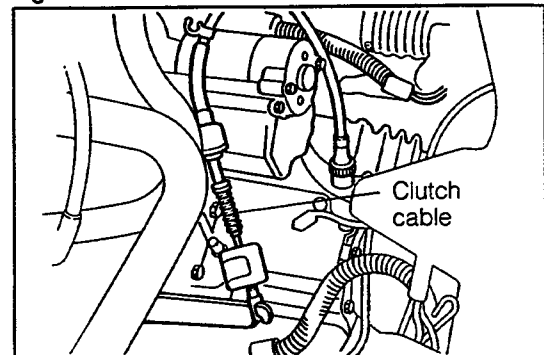


Fig. 3-8

WR-03010

NOTE:

Be sure to support the vehicle securely by means of safety stands.

12. Drain the transmission oil.

13. Detach the engine undercover. (Type CL engine only)

14. Remove the lower suspension brace. (Types CB-61 and CB-80 engines only)

15. Disconnect the front exhaust pipe at the bracket support No.1 and manifold sides.

16. Disconnect the following control linkage-related parts from the transmission housing.

- (1) Shift & select shaft S/A
- (2) Extension rod S/A

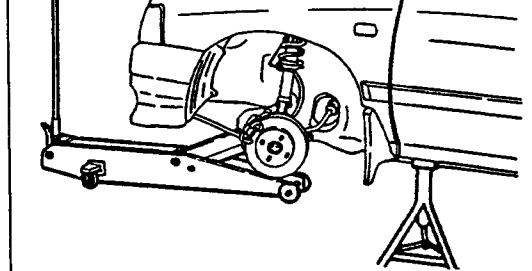


Fig. 3-10

WR-03012

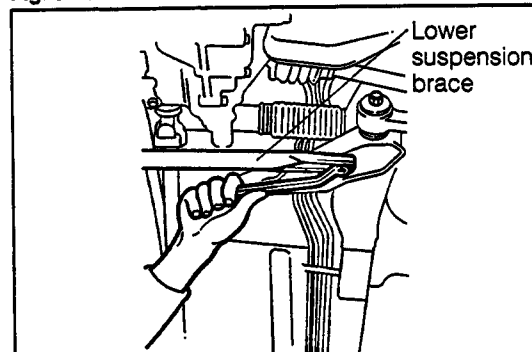


Fig. 3-11

WR-03013

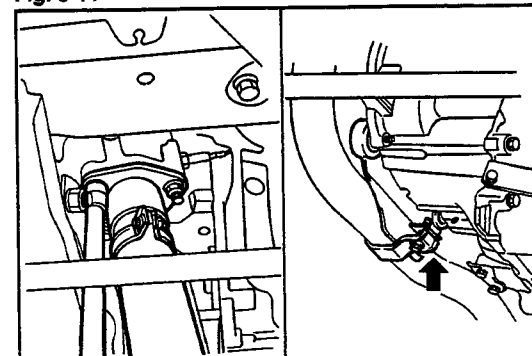


Fig. 3-12

WR-03014

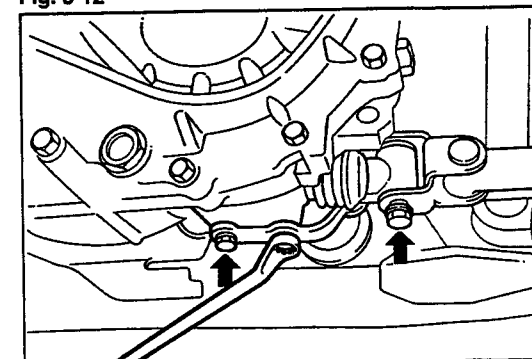


Fig. 3-13

WR-03015

19. Remove the drive shafts at the right and left sides, using the following SST.

SST: 09648-87201-000

NOTE:

1. No stopper is provided at the inboard side of the drive shaft. Hence, be sure to support the inboard joint section during the removal.
2. Be very careful not to damage the lip section of the oil seal during the removal.

3. As for the right side of vehicles mounted with Type CB-80 engine, insert a crowbar into between the protruding section of the bearing shaft and the drive shaft. Then take out the front drive shaft, being very careful not to deform the dust cover of the drive shaft.

20. Remove the front drive bearing shaft assembly.
(Vehicles mounted with Type CB-80 engine only)
- (1) Remove the two bolts and pull out the front driveshaft bearing shaft from the transmission assembly.

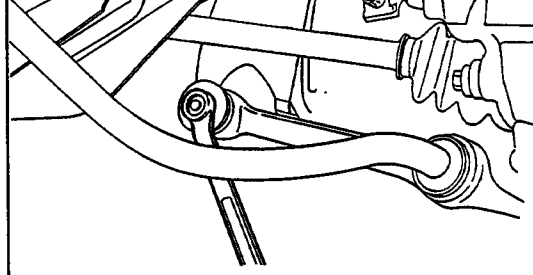


Fig. 3-15

WR-03017

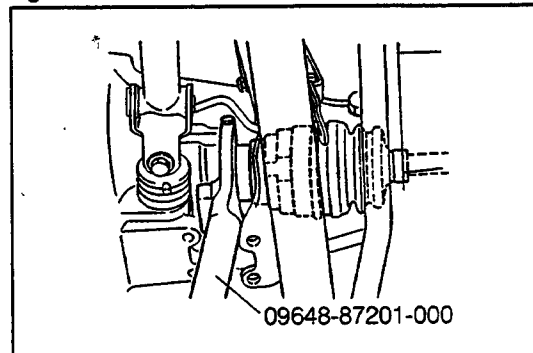


Fig. 3-16

WR-03018

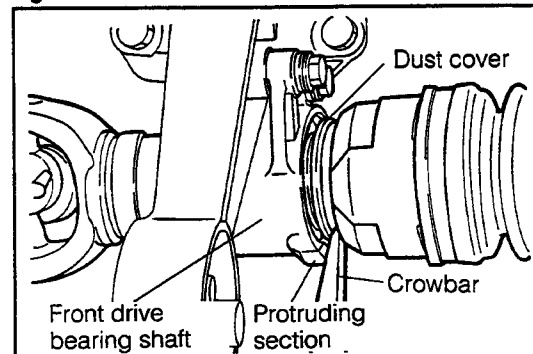


Fig. 3-17

WR-03019

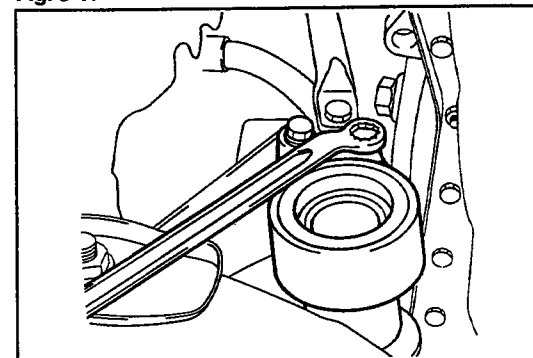


Fig. 3-18

WR-03020

attaching bolts.
Turn the engine mounting lower/left insulator 90 degrees so that it may point upward.

23. Remove the one bolt located at the front central part of the transmission assembly. Slowly jack down the transmission assembly and take it out from below the vehicle.

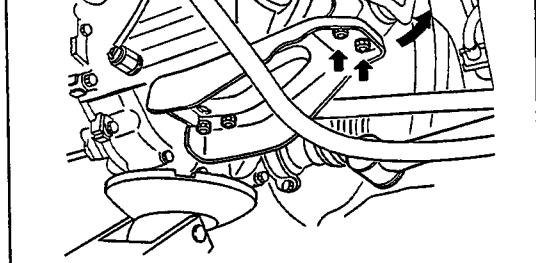


Fig. 3-20

WR-03022

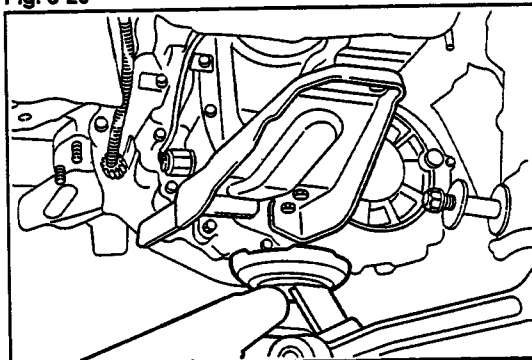


Fig. 3-21

WR-03023

INSTALLATION

1. Install the transmission assembly to the engine assembly as follows:
 - (1) Ensure that the clutch disc is centered in position, using the SST given below.
SST: 09301-87702-000
 - (2) Install the transmission, making sure that the clutch disc may not be pried. Temporarily tighten the attaching bolts.

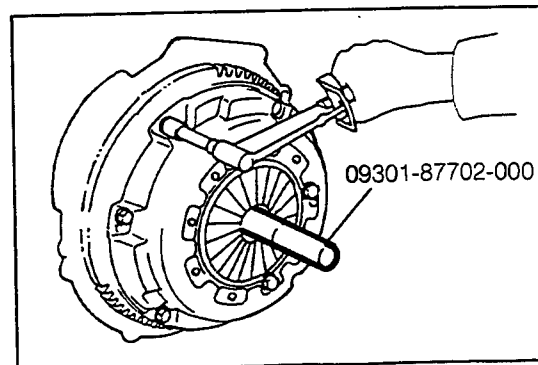


Fig. 3-22

WR-03024

Bracket Tightening Torque:
3.0 - 4.5 kg-m (22 - 33 ft-lb)
Insulator Tightening Torque:
7.5 - 10.5 kg-m (54 - 76 ft-lb)

4. Install the front drive bearing shaft assembly as follows:
(Vehicles mounted with Type CB-80 engine only)
 - (1) Slowly install the bearing shaft assembly to the differential case, making sure that no damage is made to the lip section of the oil seal.
 - (2) Tighten the two attaching bolts.**Tightening Torque: 3.0 - 4.5 kg-m (22 - 33 ft-lb)**

5. Install the drive shafts at the right and left sides.

NOTE:

Slowly install the drive shaft to the differential case, making sure that no damage is made to the lip section of the oil seal.

6. Install the lower arm (at the bracket side). Temporarily tighten the attaching bolts.

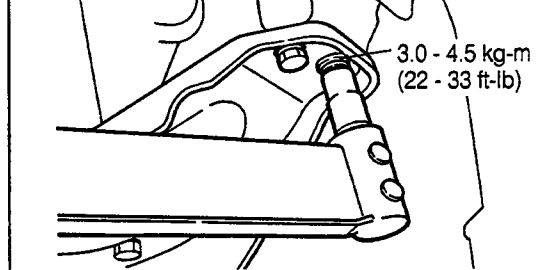


Fig. 3-24

WR-03026

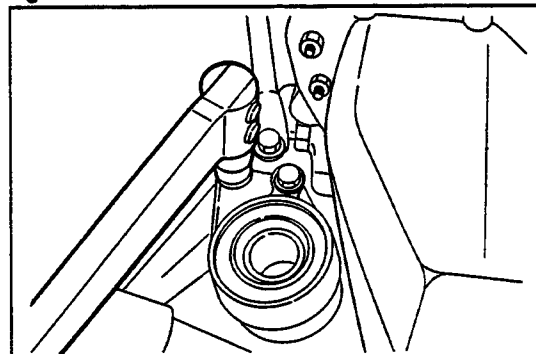


Fig. 3-25

WR-03027

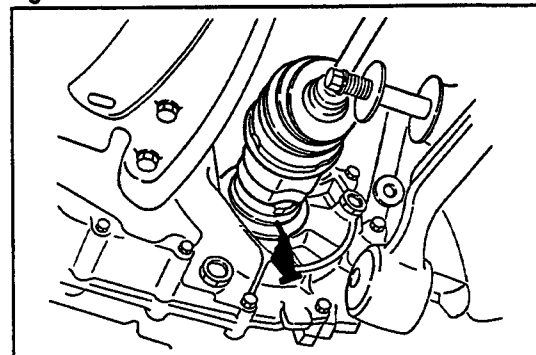


Fig. 3-26

WR-03028

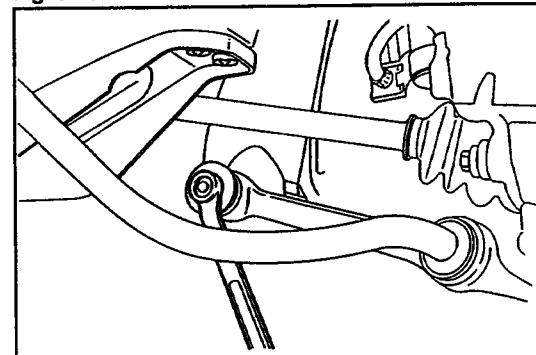


Fig. 3-27

WR-03029

Tightening Torque: 1.0 - 1.6 kg-m (7.2 - 11.6 ft-lb)

- (2) Extension rod S/A

Tightening Torque: 1.0 - 1.6 kg-m (7.2 - 11.6 ft-lb)

9. Install the manifold side of the front exhaust pipe. Install the bracket support No.1.

- (1) Manifold side

Tightening Torque: 3.0 - 5.0 kg-m (22 - 36 ft-lb)

- (2) Bracket support No.1

Tightening Torque: 2.0 - 3.0 kg-m (14.5 - 22 ft-lb)

10. Install the lower suspension brace.

(Vehicles mounted with Type CB-61 and CB-80 engines only)

Tightening Torque: 4.0 - 5.5 kg-m (29 - 40 ft-lb)

11. Install the engine undercover.

(Vehicles mounted with Type CL engine only)

12. Install the front wheels at the right and left wheels. Jack down the vehicle.

13. Rock the vehicle in a up-and-down direction a few times so as to settle the suspension.

With the vehicle in an unloaded, tighten the nuts.

- (1) Stabilizer bar installing nuts

Tightening Torque: 7.5 - 11.0 kg-m (54 - 80 ft-lb)

- (2) Lower arm (bracket side)

Tightening Torque: 7.0 - 10.0 kg-m (51 - 72 ft-lb)

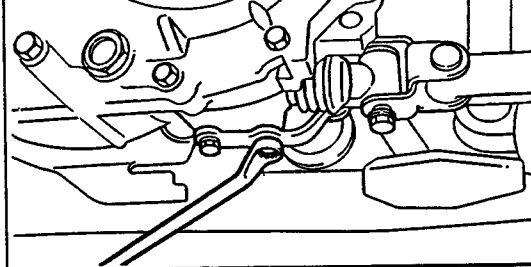


Fig. 3-29

WR-03031

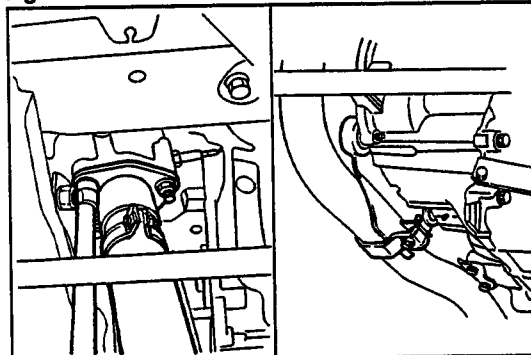


Fig. 3-30

WR-03032

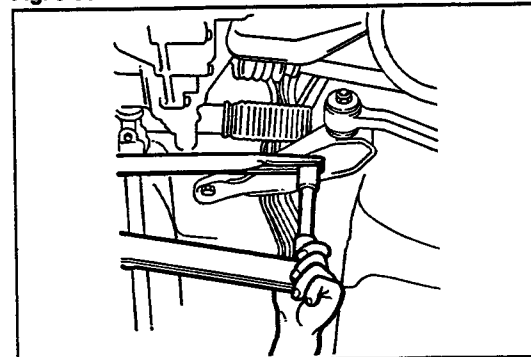


Fig. 3-31

WR-03033

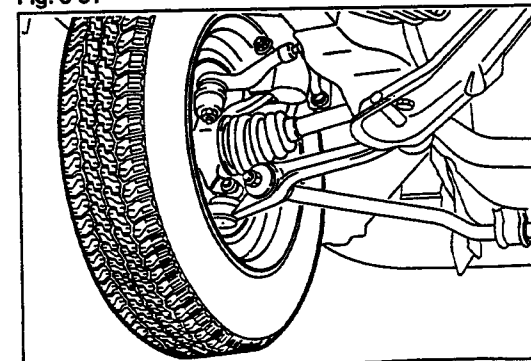


Fig. 3-32

WR-03034

15. Attach the three harness clamps.

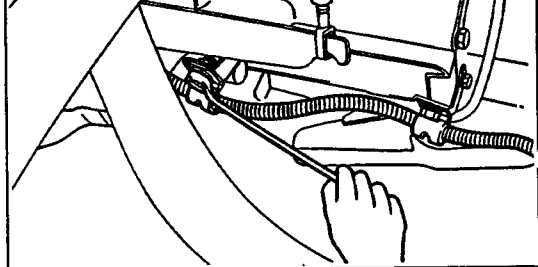


Fig. 3-34

WR-03036

16. Install the speedometer cable.

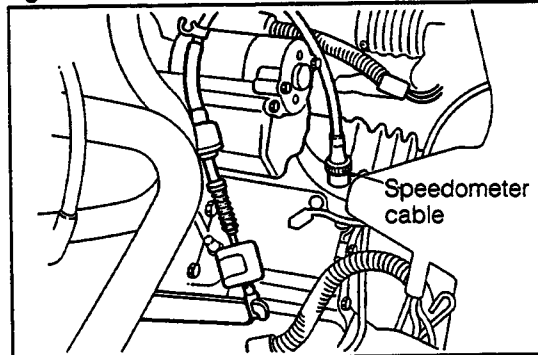


Fig. 3-35

WR-03037

17. Install the starter assembly.

Tightening Torque: 5.0 - 7.0 kg-m (36 - 51 ft-lb)

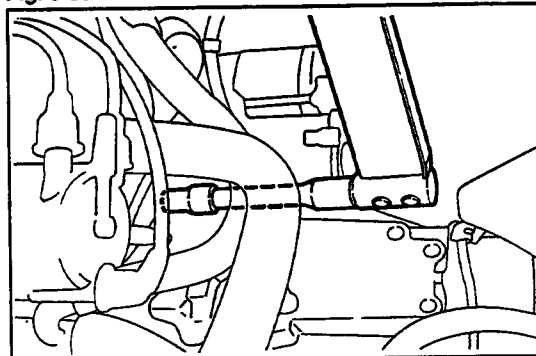


Fig. 3-36

WR-03038

18. Install the intercooler assembly.

(Vehicles mounted with Type CB-80 engine only)

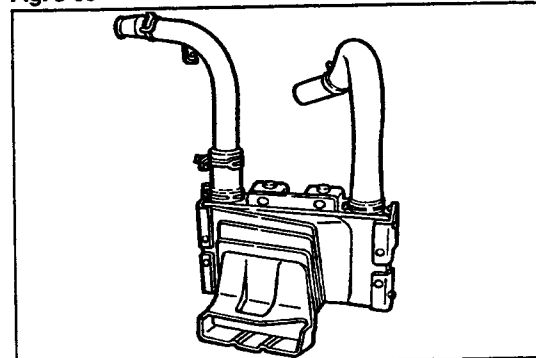


Fig. 3-37

WR-03039

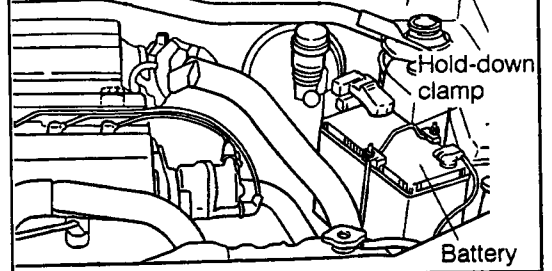
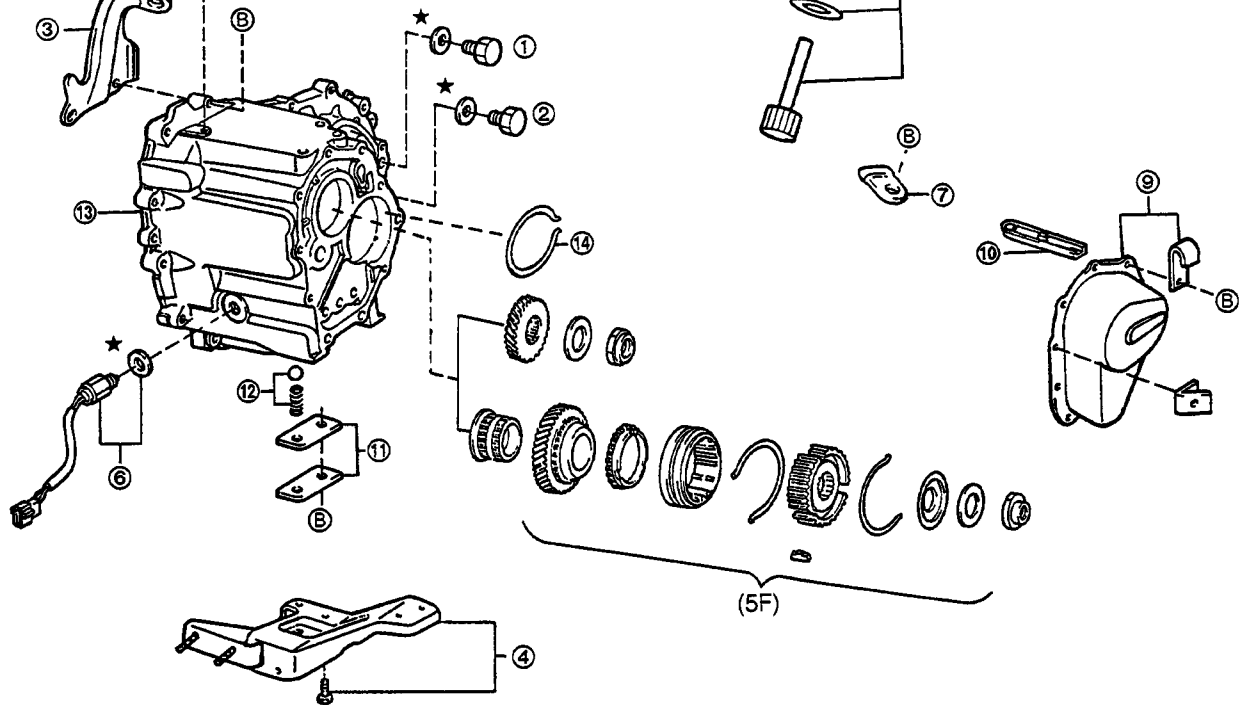


Fig. 3-39

WR-03041



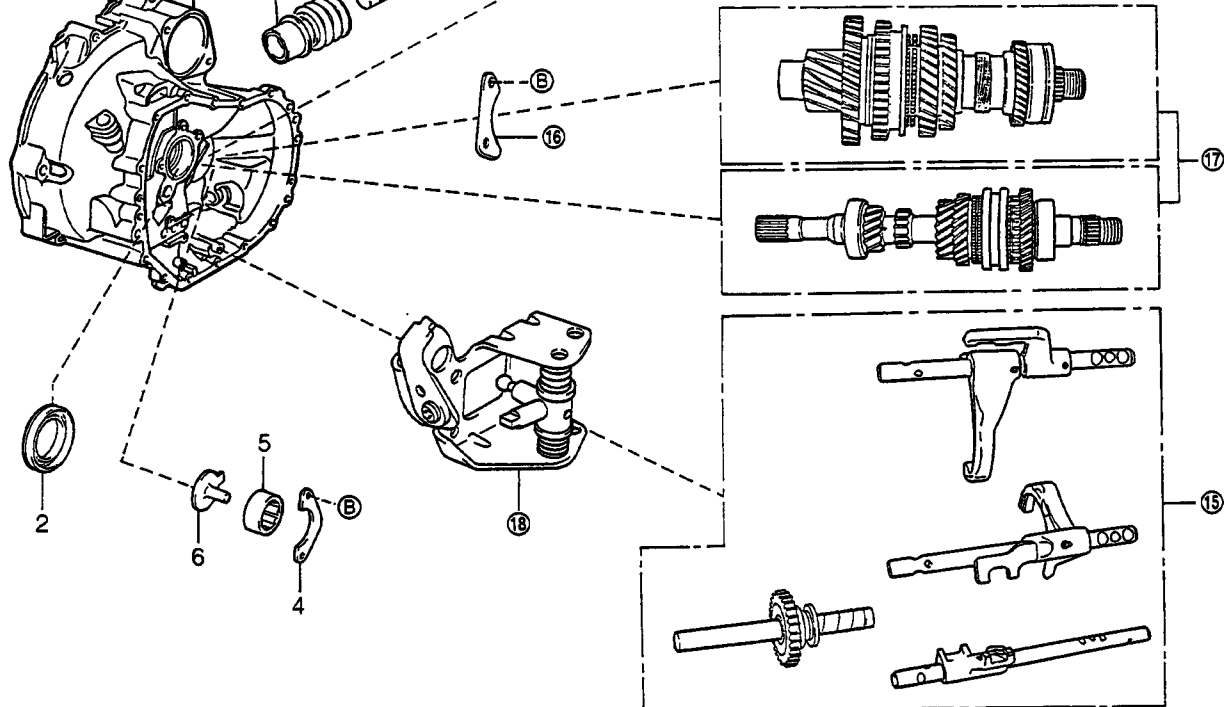
★ : Non-reusable parts.

- ① W/head straight screw plug (filler side)
- ② W/head straight screw plug (drain side)
- ③ Clutch cable bracket
- ④ Engine mounting bracket
- ⑤ Breather plug
- ⑥ Backup lamp switch Ay & gasket
- ⑦ Lock plate

- ⑧ Speedometer shaft sleeve S/A
- ⑨ Transmission case cover S/A
- ⑩ Case cover oil pipe
- ⑪ Gasket & lock ball plate
- ⑫ Ball & compression spring
- ⑬ Transmission case
- ⑭ Hole snap ring

Fig. 3-40

WR-03041A



★ : Non-reusable parts.

- ⑮ Control related parts
- ⑯ Input shaft bearing lock plate
- ⑰ Input shaft Ay & output shaft Ay
- ⑱ Selector support Ay & shifting bell crank
- ⑲ Differential case Ay

- ⑳ Transaxle case
- 1, 2, 3. Oil seal
- 4. Output shaft bearing lock plate
- 5. Needle roller bearing
- 6. Output shaft cover

Fig. 3-41

WR-03041B

3. Remove backup lamp switch assembly and breather plug.

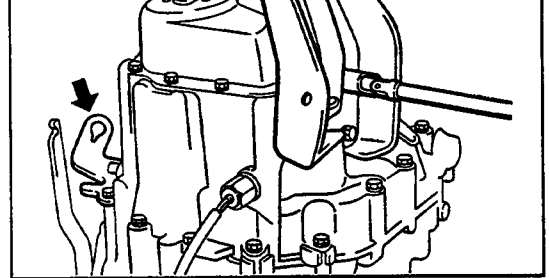


Fig. 3-43

WR-03043

4. Remove the lock plate and speedometer shaft sleeve subassembly.
5. Remove the oil seal, using the SST given below.
SST: 09921-00010-000

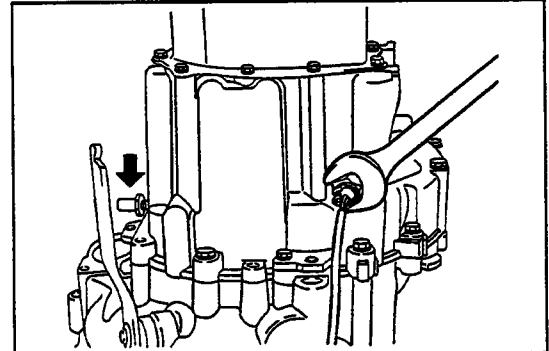


Fig. 3-44

WR-03044

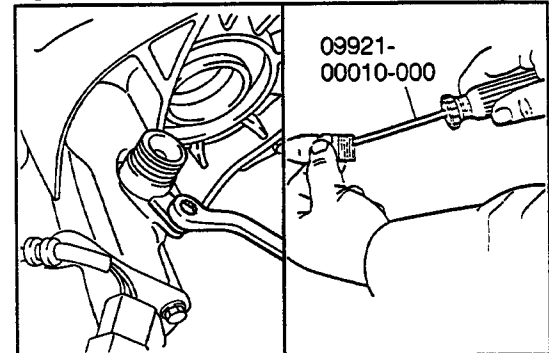


Fig. 3-45

WR-03045

6. Remove the transmission case cover subassembly as follows:

- (1) To drive out the case cover subassembly, tap the flange section lightly in the axial direction, using a plastic hammer.

NOTE:

Never tap the case cover at its side.

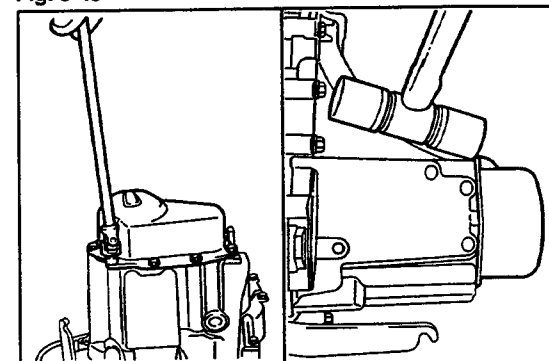


Fig. 3-46

WR-03046

(In the case of the 5-speed transmission, proceed to this operation after the 5th gear has been disassembled.)

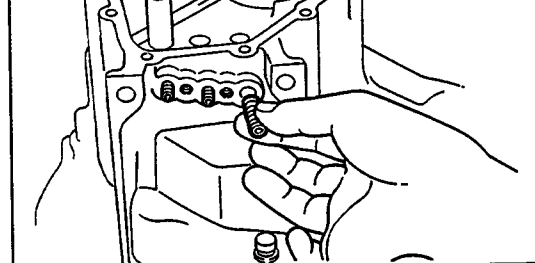


Fig. 3-48

WR-03048

9. Remove the transmission case as follows:

- (1) With the hole snap ring for output shaft bearing use held in an expanded state by means of the SST, drop the shaft.

SST: 09905-00012-000

- (2) To drive out the transmission case, tap the case rib with a plastic hammer.

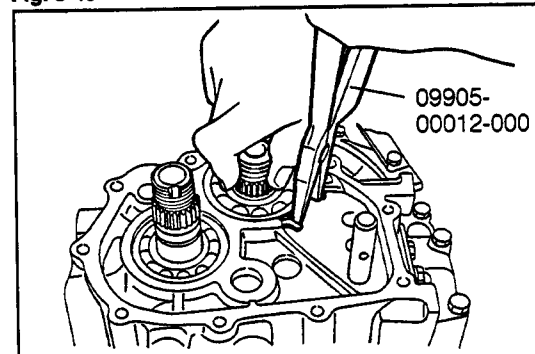


Fig. 3-49

WR-03049

10. Detach the hole snap ring.

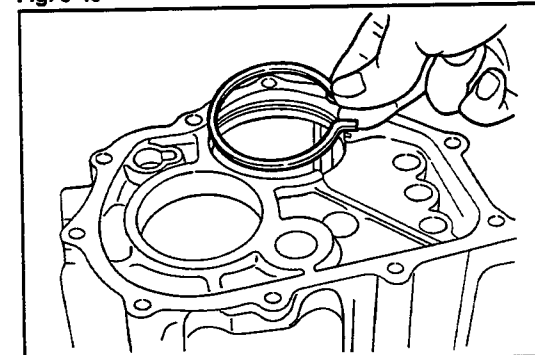


Fig. 3-50

WR-03050

11. Remove the control linkage-related parts.

(For the disassembly procedure for each part, see page 3-50.)

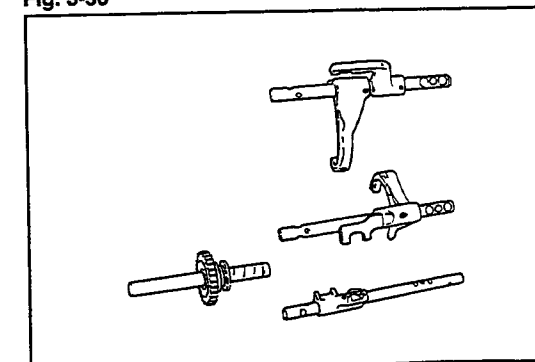


Fig. 3-51

WR-03051

(1) Alternately pull out both shafts a little at a time.

14. Remove the selector support assembly, shifting bell crank and magnet.

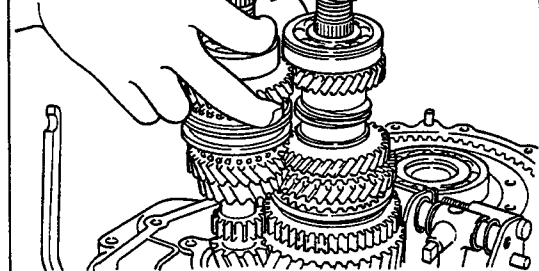


Fig. 3-53

WR-03053

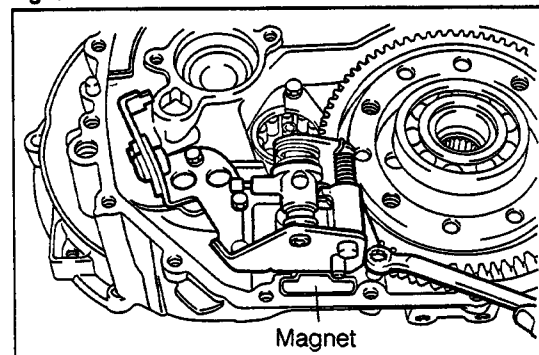


Fig. 3-54

WR-03054

15. Remove the differential case as follows:
(1) With a brass bar placed on the inner race of the side bearing, lightly tap the bar so that the differential case may be driven out from the transaxle case.

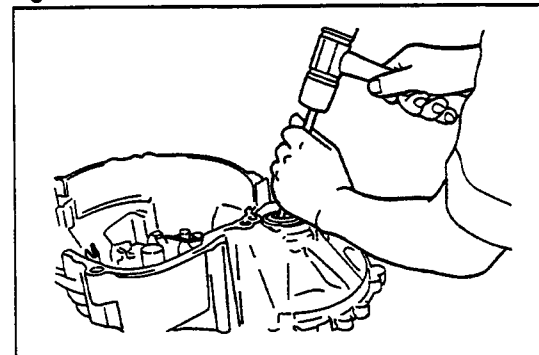


Fig. 3-55

WR-03055

REPLACEMENT

Inspect the following parts. (See page 3-18.) Replace any parts that exhibit defects, following the procedure given below.

1. Oil seal for control shaft use

Disassembly: Remove the oil seal by pinching its flange section with pliers.

Assembly: Drive the oil seal into position, until it comes into contact with the axle case.

SST: 09515-87201-000

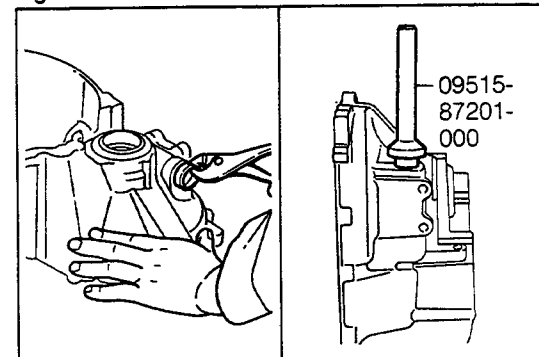


Fig. 3-56

WR-03056

Assembly:

- (1) Assemble the roller bearing, using the SST given below.

SST: 09309-87201-000

NOTE:

Visually check to see if the output shaft cover exhibits severe distortion or clogging.

- (2) Install the bearing lock plate.

Tightening Torque: 0.7 - 1.0 kg-m (5.1 - 7.2 ft-lb)

4. Oil seal for differential use

Disassembly: Remove the oil seal with a common screwdriver.

Assembly: Drive the oil seal into position, until it comes into contact with the rib of the axle case.

SST: 09517-87701-000 (Case side)

09517-87702-000 (Housing side)

INSPECTION

1. Check each bearing for wear or damage.

Part	Inspection criteria
Bearing	When the inner race is rotated by your fingers, it should rotate smoothly without any binding.

2. Check each oil seal for wear or damage.

Part	Inspection criteria
Lip section of oil seal	Visually inspect to see if the lip section exhibits excessive damage or wear.

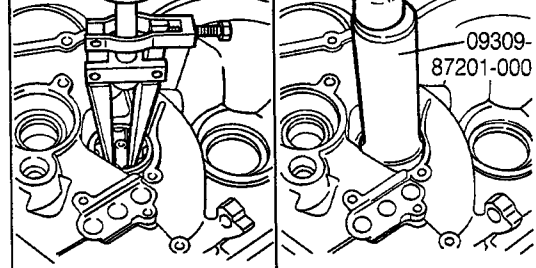


Fig. 3-58

WR-03058

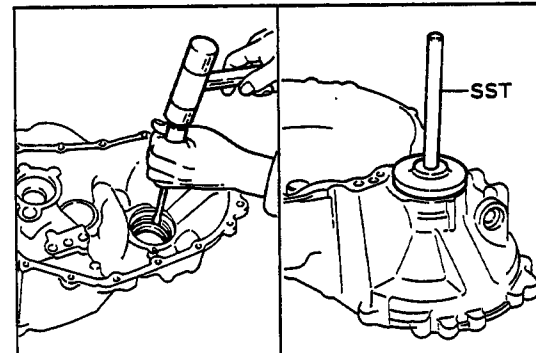


Fig. 3-59

WR-03059

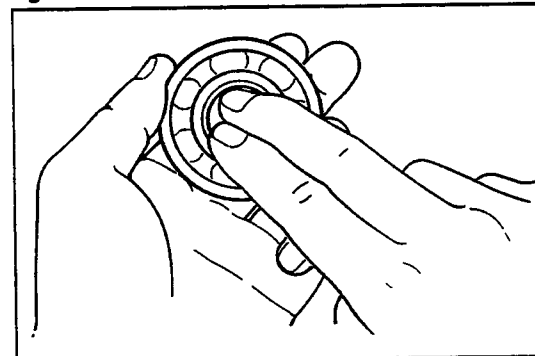


Fig. 3-60

WR-03060

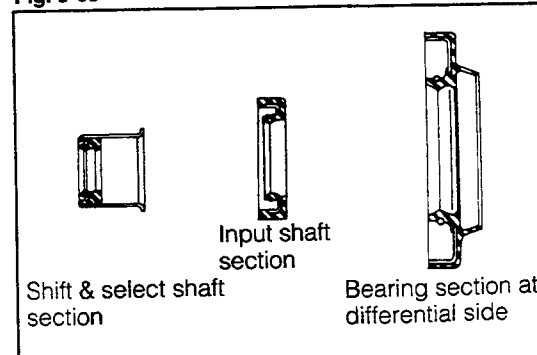


Fig. 3-61

WR-03061

(For the assembly procedure for each part, see page 3-47.)

2. Assemble the magnet and selecting & shifting bell crank support assembly.
(For the assembly procedure for each part, see page 3-57.)

Tightening Torque: 0.7 - 1.0 kg-m (5.1 - 7.2 ft-lb)

3. Assemble the input shaft assembly and output shaft assembly at the same time.

4. Assemble the input shaft bearing lock plate.

Tightening Torque: 1.5 - 2.2 kg-m (11 - 16 ft-lb)

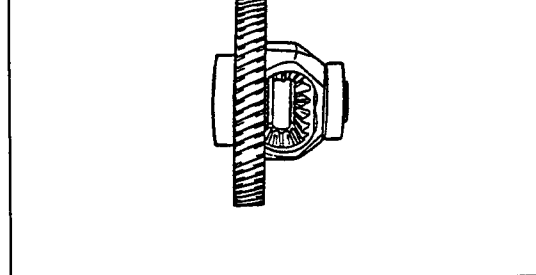


Fig. 3-63

WR-03062

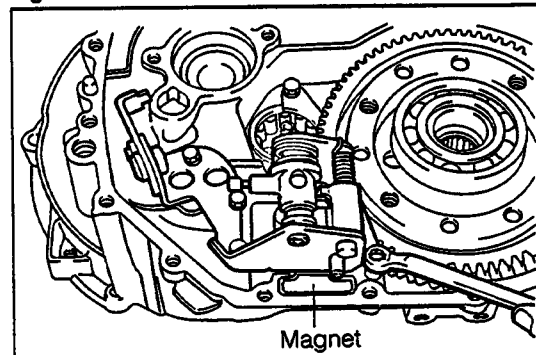


Fig. 3-64

WR-03063

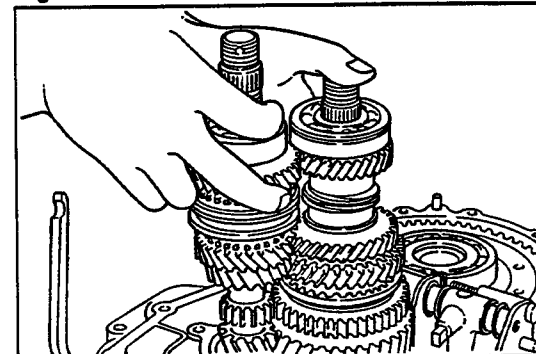


Fig. 3-65

WR-03064

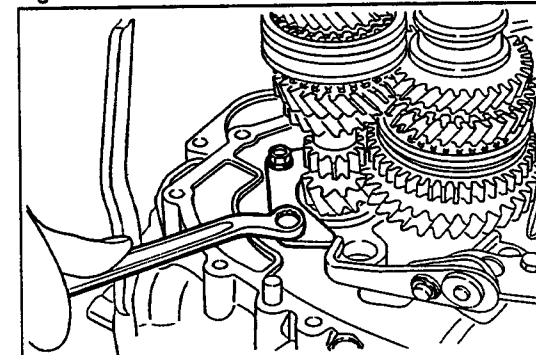


Fig. 3-66

WR-03065

7. Assemble the transmission case as follows:

- (1) Apply the Three Bond sealer 1216 to the mating surface of the housing. While the hole snap ring of the bearing is held in an expanded state, assemble the transmission case in the axle case.

SST: 09905-00012-000

NOTE:

Make sure that the snap ring is fitted positively in the bearing, by raising the output shaft by your hand.

- (2) Tighten the housing attaching bolts.

Tightening Torque: 1.5 - 2.2 kg-m (11 - 16 ft-lb)

8. Assemble the ball and compression spring.

9. Assemble the lock ball plate and gasket as follows:

- (1) Perform the assembling, using the bolts.

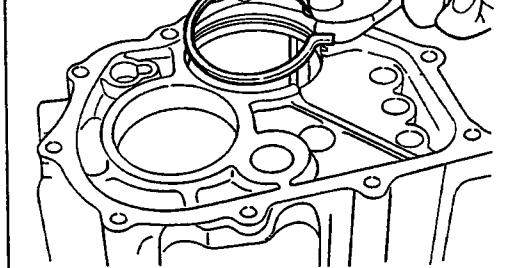


Fig. 3-68

WR-03067

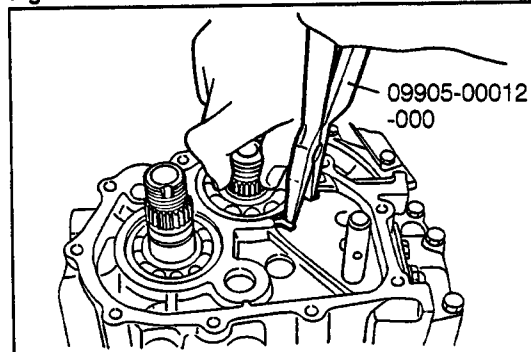


Fig. 3-69

WR-03068

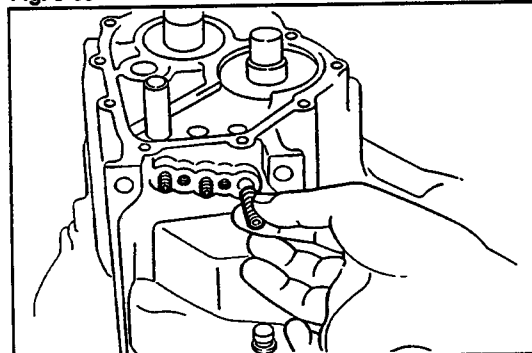


Fig. 3-70

WR-03069

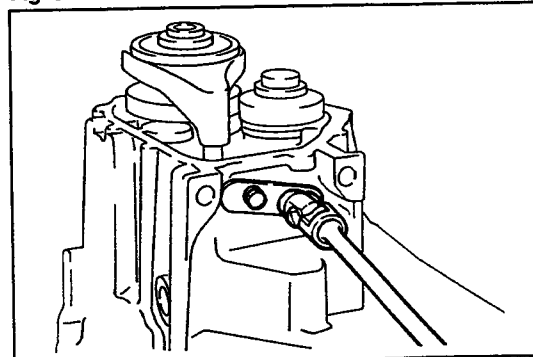


Fig. 3-71

WR-03070

11. Assemble the transmission case cover as follows:
(1) Apply the liquid gasket sealer (Three Bond 1216) to the mating surfaces of the case, except for those hole areas. (See page 3-19.)
Tightening Torque: 0.7 - 1.0 kg-m (5.1 - 7.2 ft-lb)

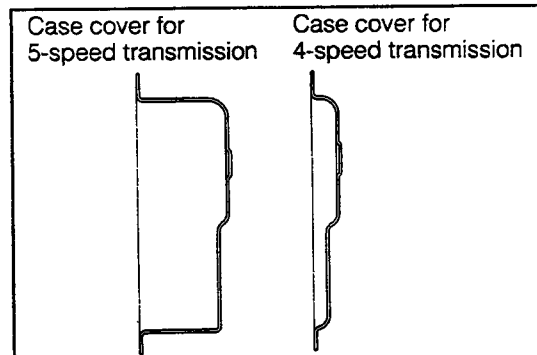


Fig. 3-73

WR-03072

12. Assemble the oil seal for speedometer shaft sleeve, using the SST given below.
SST: 09201-60011-000
13. Assemble the speedometer shaft sleeve subassembly and lock plate.
Tightening Torque: 0.7 - 1.0 kg-m (5.1 - 7.2 ft-lb)

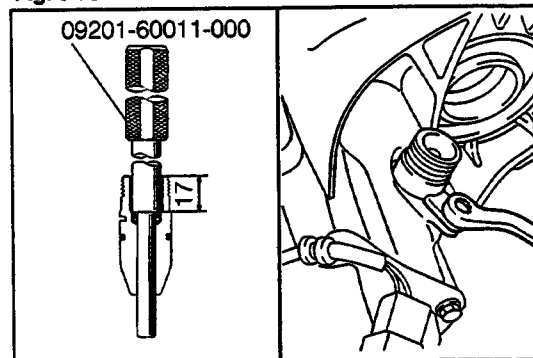


Fig. 3-74

WR-03073

14. Install the backup lamp switch and breather plug.
Tightening Torque
Backup Lamp Switch: 3.0 - 5.0 kg-m (22 - 36 ft-lb)
Breather Plug: 1.0 - 1.3 kg-m (7.2 - 9.4 ft-lb)

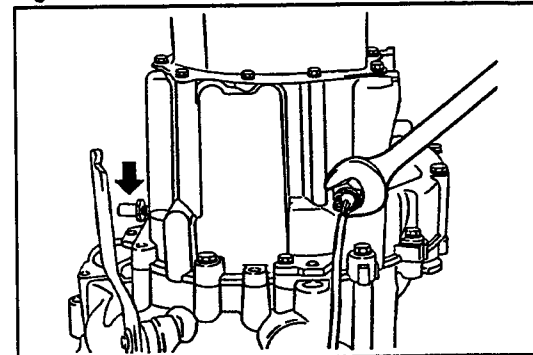


Fig. 3-75

WR-03074

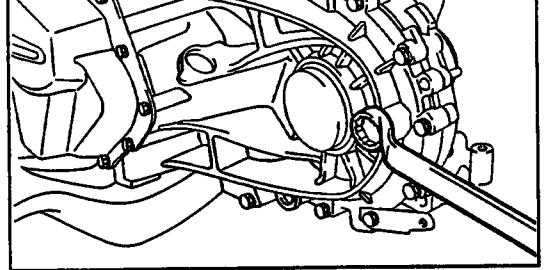
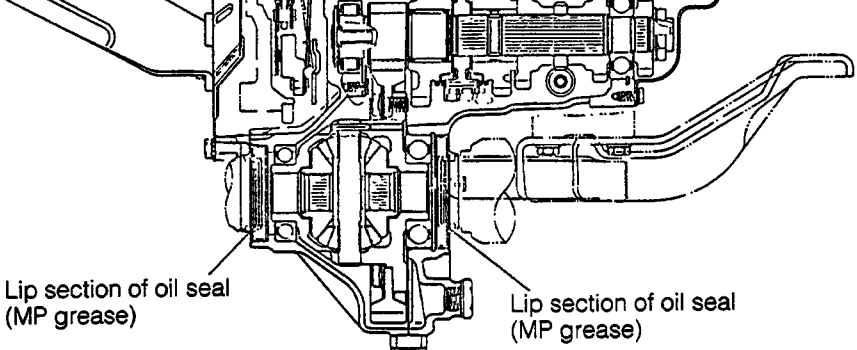


Fig. 3-77

WR-03076



Lip section of oil seal
(MP grease)

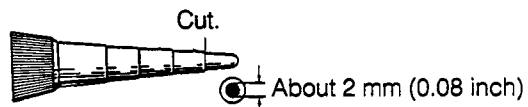
Lip section of oil seal
(MP grease)

Fig. 3-78

WR-03077

**Application Procedure for Liquid Gasket Sealer
(Three Bond 1216 ... Part No. 999-0480-8U90-00)**

1. Cut the first stage of the nozzle of the Daihatsu genuine sealer (Three Bond 1216) that is furnished in accessories.



2. Remove any remaining trace of the liquid gasket that may be found on the housing or the case with thinner or a scraper. Care must be exercised not to scratch the surfaces during the cleaning.

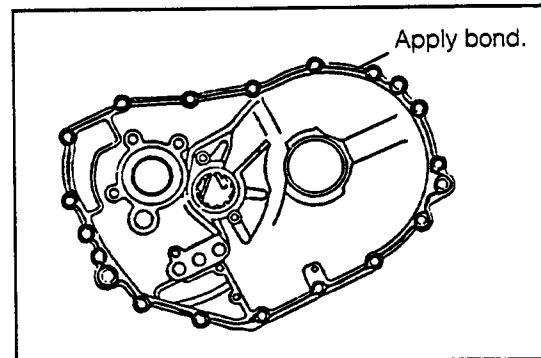


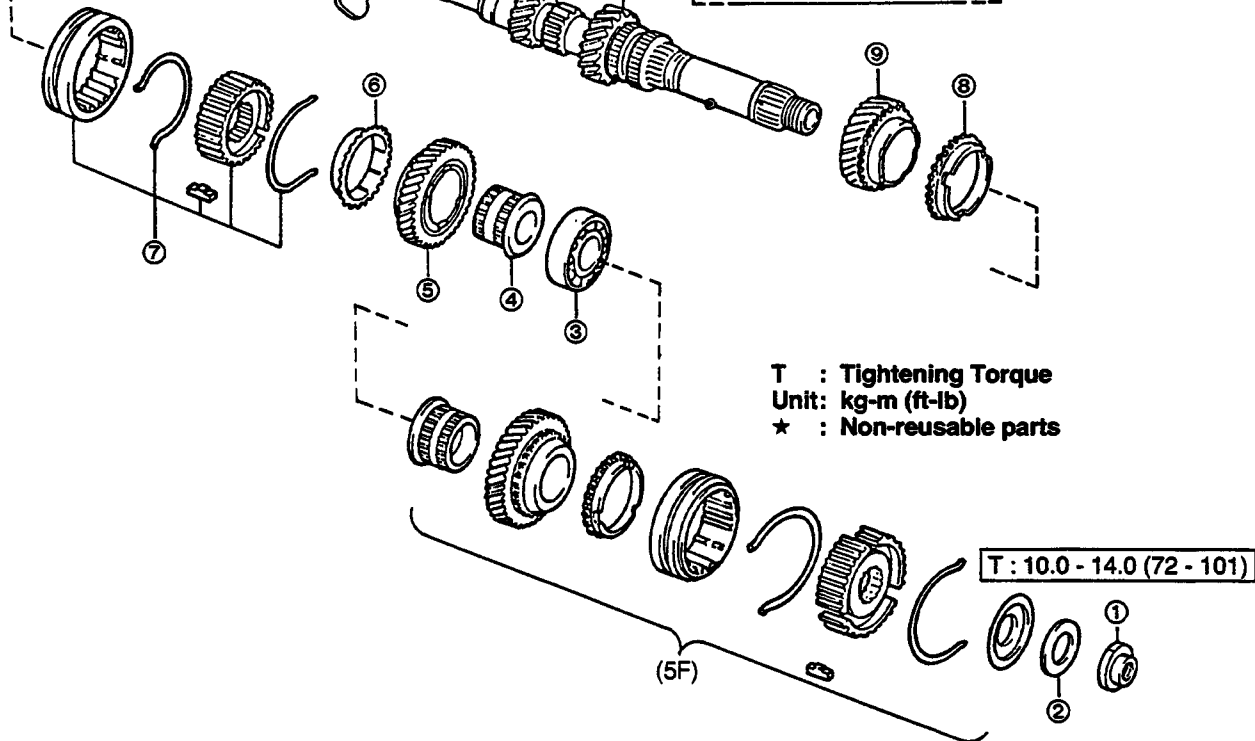
Fig. 3-79

WR-03078

moisture in the atmosphere. When you begin the work, be sure to expel any air trapped in the tube and tighten the tube cap securely.

2. As regards the storage place for this liquid gasket, avoid such places where high temperature or high humidity prevails or those exposed to direct sunrays. Make sure to store it in a dry, cold and dark place.

(The allowable limit for use is approximately six months.)



- ① Lock nut
- ② Conical washer
- ③ Bearing
- ④ 4th gear bush
- ⑤ 4th gear
- ⑥ Synchronizer ring

- ⑦ Synchronizer hub Ay No.2
- ⑧ Synchronizer ring
- ⑨ 3rd gear
- ⑩ Shaft snap ring
- ⑪ Bearing
- ⑫ Input shaft

Fig. 3-81

WR-03079A

NOTE:
For the 5-speed transmission, see page 3-39.

2. Remove the conical spring washer. Then, remove the bearing, using the SST given below.

SST: 09602-87301-000

Fig. 3-82

WR-03080

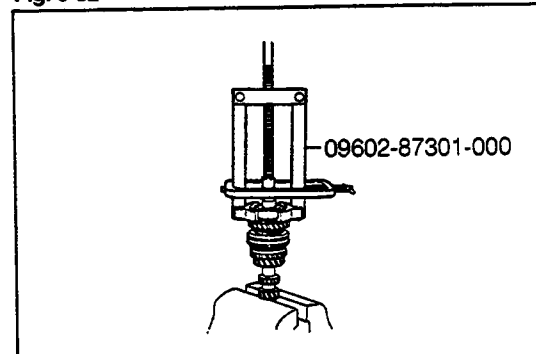


Fig. 3-83

WR-03081

3. Remove the 4th gear and 4th gear bush.

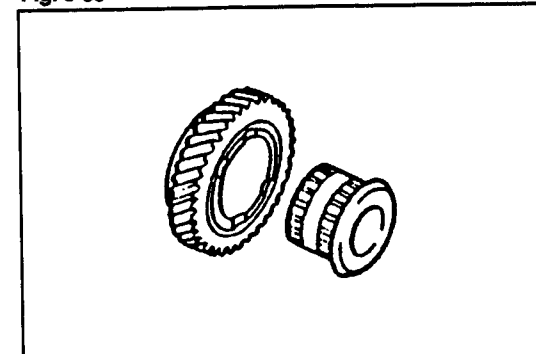


Fig. 3-84

WR-03082

4. Remove the synchronizer ring. Then, remove the synchronizer hub assembly No.2.

- (1) Detach the two synchromesh shifting springs and three synchromesh shifting keys.

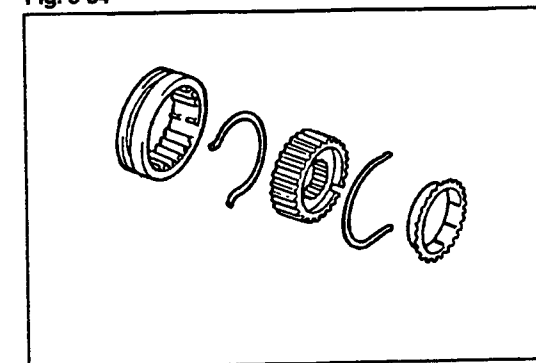


Fig. 3-85

WR-03083

NOTE:

1. Special care must be exercised as to the snap ring which may jump out during the disassembly.
2. Particular attention should be paid to avoid scratching the shaft.

7. Remove the bearing, using the SST given below.

SST: 09602-87301-000

INSPECTION

1. Check the 4th gear bush for wear or damage.

Part	Specified value mm (inch)	Limit mm (inch)
Bore ①	$25 \begin{smallmatrix} +0.042 \\ +0.027 \end{smallmatrix}$ (0.9843 $\begin{smallmatrix} +0.0017 \\ +0.0011 \end{smallmatrix}$)	25.02 (0.985)
Outer diameter ②	$37 \begin{smallmatrix} -0.040 \\ -0.080 \end{smallmatrix}$ (1.4567 $\begin{smallmatrix} -0.0016 \\ -0.0031 \end{smallmatrix}$)	36.89 (1.452)
Overall length ③	29 ± 0.03 (1.1417 ± 0.0012)	28.97 (1.141)
Thickness of flange section ④	3 ± 0.06 (0.1181 ± 0.0024)	2.94 (0.116)

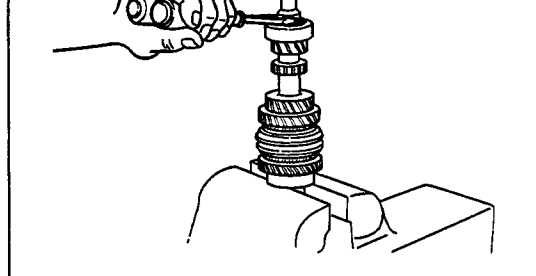


Fig. 3-87

WR-03085

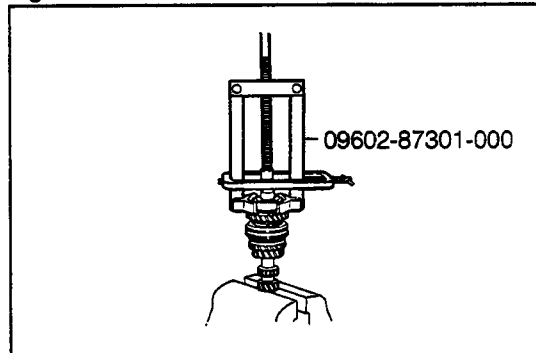


Fig. 3-88

WR-03086

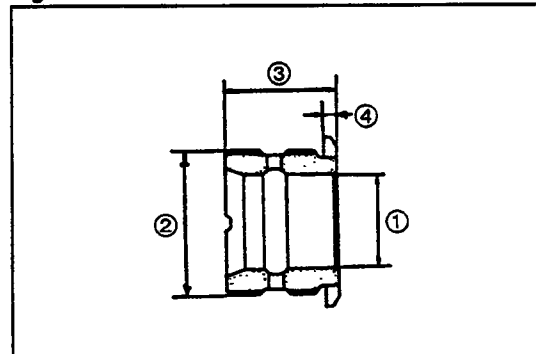


Fig. 3-89

WR-03087

Tapered section ②	
Both edge surfaces of gear ④	
Fitting section with hub sleeve ⑤	Inspect the section for excessive play, nick or rounded edge.

3. Check the clutch hub and sleeve for the 3rd & 4th gear use for wear or damage.

Clutch Hub

Part	Limit
Splined section ①	Visually inspect the section for excessive damage or wear.
Synchromesh shifting key fitting groove ②	
With the hub fitted into the sleeve, check for excessive looseness in up-&-down direction and slant of the hub and sleeve.	

Sleeve

Part	Specified value mm (inch)	Limit mm (inch)
Shift fork groove width ③	$7.0 \begin{smallmatrix} +0.12 \\ +0.05 \end{smallmatrix}$ ($0.276 \begin{smallmatrix} +0.004 \\ +0.002 \end{smallmatrix}$)	7.3 (0.287)
Fitting section with gear ④	Visually inspect the section for excessive damage, wear, nick or rounded edge.	

4. Check the input shaft for wear or damage.

Part	Specified value mm (inch)	Limit mm (inch)
Outer diameter of bush bore-contact-section ①	$25 \begin{smallmatrix} +0.017 \\ +0.002 \end{smallmatrix}$ ($0.9843 \begin{smallmatrix} +0.0007 \\ +0.0001 \end{smallmatrix}$)	24.99 (0.984)
Tooth surfaces of gear and spline	Visually inspect the surface for excessive damage, wear, nick or rounded edge.	



Gear for vehicle mounted with Type CB-80 engine (4th gear)

Fig. 3-90

WR-03088

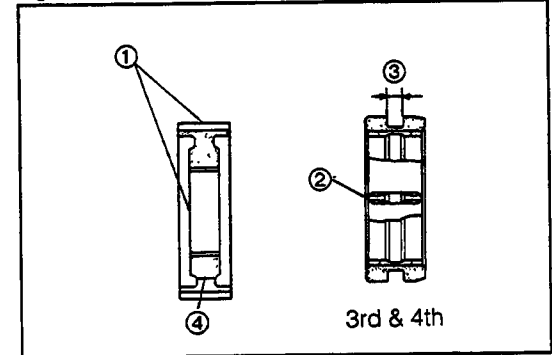


Fig. 3-91

WR-03089

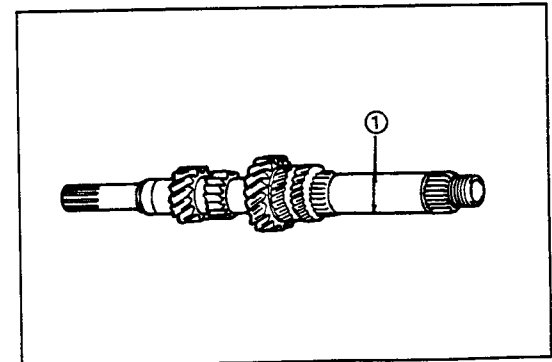


Fig. 3-92

WR-03090

Part		mm (inch)	mm (inch)
Gap when synchronizer ring is pressed to gear	3rd and 4th gears	0.85 - 1.45 (0.034 - 0.06)	0.5 (0.020)
Damage at inner tapered section	Visually inspect the section for excessive damage.		
Damage at spline			

7. Check the bearing for wear or damage.

Part	Inspection criteria
Bearing	When the inner race is rotated by your fingers, it should rotate smoothly without any binding.

ASSEMBLY

1. Apply gear oil to the entire surface of the rotary or sliding section of each gear of the input shaft.

NOTE:

The overall length of the input shaft differs depending upon the transmission type. Hence, special care must be exercised as to its overall length.

Transmission type	Overall length mm (inch)	Presence of splines at section A
4-Speed	269 (10.59)	No
5-Speed	311 (12.24)	Yes

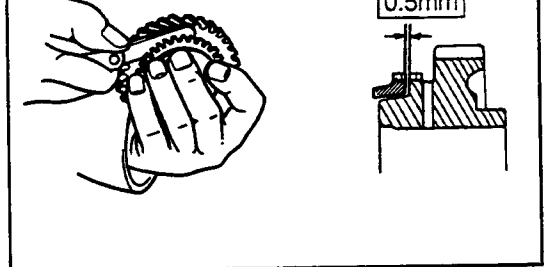


Fig. 3-94

WR-03092

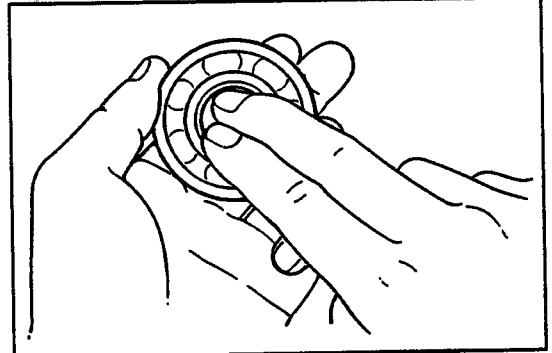


Fig. 3-95

WR-03093

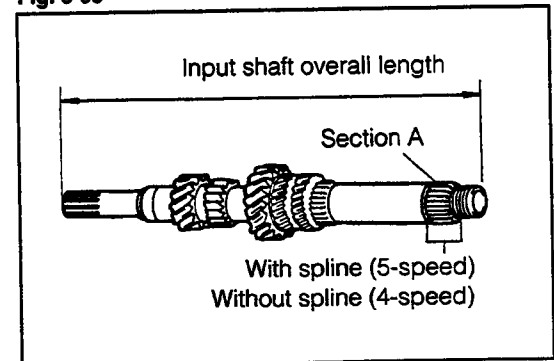


Fig. 3-96

WR-03094

For easier installation, hold the snap ring with the SST
given below.

SST: 09309-87201-000

NOTE:

Be very careful not to scratch the shaft.

4. Assemble the 3rd gear.

5. Assemble the synchronizer ring and synchronizer hub assembly No.2.

- (1) Assemble the clutch and sleeve. Ensure that both parts can slide smoothly.
- (2) Assemble the shifting keys and springs.

6. Assemble the synchronizer ring and 4th gear.

7. Assembly the 4th gear bush.

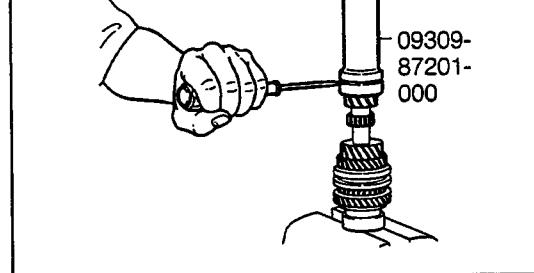


Fig. 3-98

WR-03096

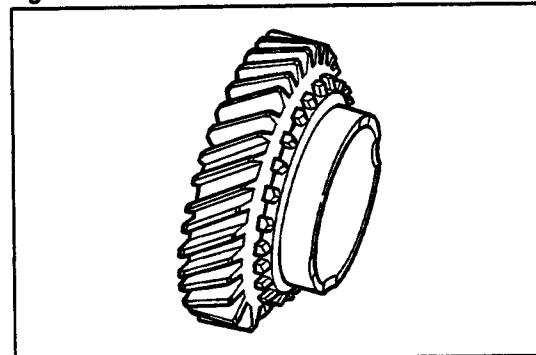


Fig. 3-99

WR-03097

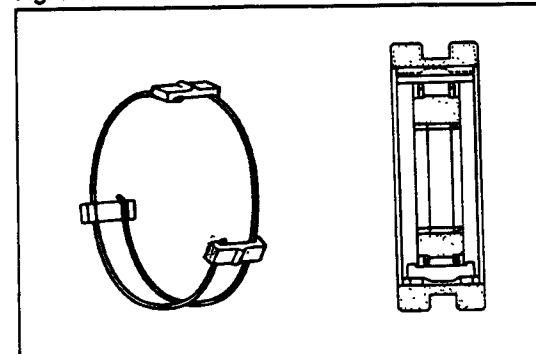


Fig. 3-100

WR-03098

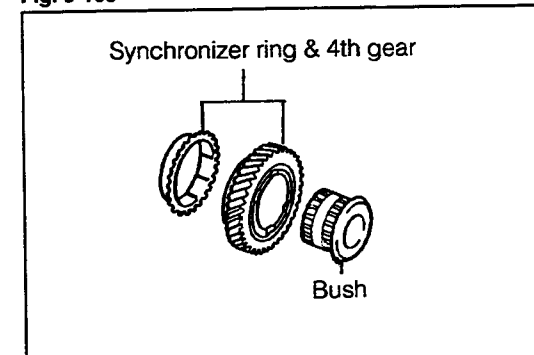


Fig. 3-101

WR-03099

- (1) Install the conical spring in such a way that its expanded side may face toward the shaft side.
- (2) Clamp the reduction gear section in a vise, making sure that no scratch may be made to the section.
- (3) Tighten the lock nut.

Tightening Torque: 10.0 - 14.0 kg-m (72 - 101 ft-lb)

10. Upon completion of the assembly, measure the end play of each part of the input shaft.

Part		Specified value mm(inch)	Limit mm (inch)
2nd gear	①	0.1 - 0.23 (0.0039 - 0.0091)	0.4 (0.016)
4th gear	②		

NOTE:

If the end play does not comply with the specification, check the gear, bush and clutch hub sliding section. Replace any parts which exhibit defects.

11. Stake the lock nut, using a chisel.

NOTE:

Be sure to stake the central part of the lock nut so as to avoid dislocation or cracks.

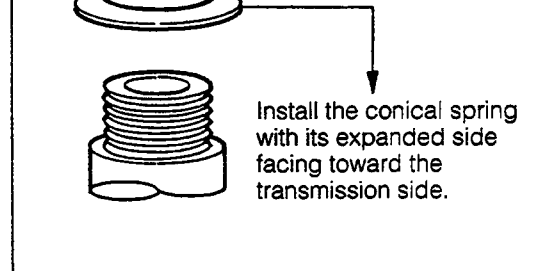


Fig. 3-103

WR-03101

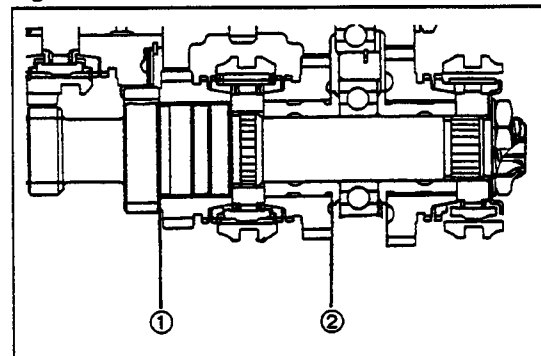


Fig. 3-104

WR-03102

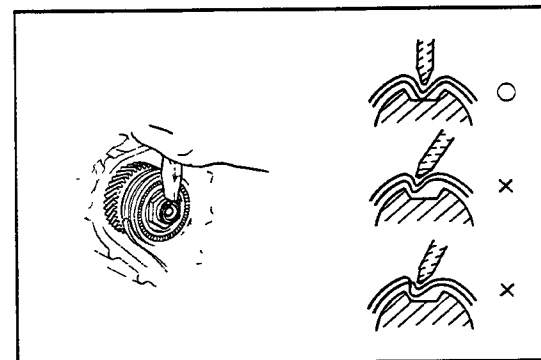
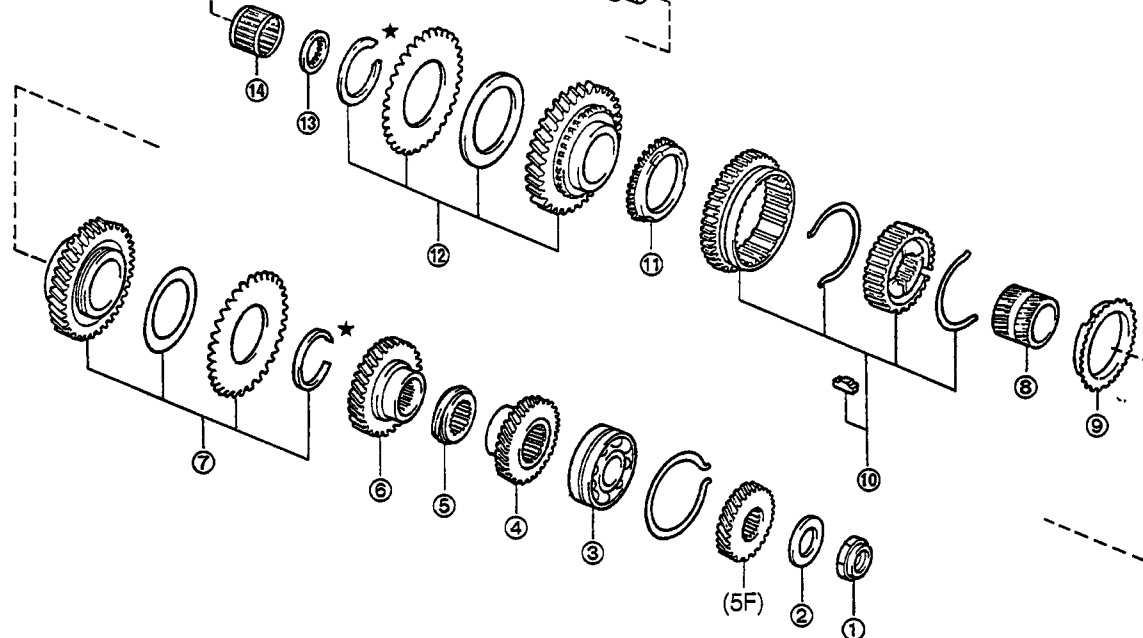


Fig. 3-105

WR-03103



T : 10.0 - 14.0 (72 - 101)

- ① Lock nut
- ② Conical spring washer
- ③ Bearing
- ④ Output 4th gear
- ⑤ Speedometer drive gear
- ⑥ Output 3rd gear
- ⑦ 2nd gear Ay
- ⑧ Bush

- ⑨ Synchronizer ring No.3
- ⑩ Synchronizer hub Ay
- ⑪ Synchronizer ring No.3
- ⑫ 1st gear Ay
- ⑬ Washer
- ⑭ Needle roller bearing
- ⑮ Output shaft

Fig. 3-106

WR-03103A

(c) Remove the lock nut.

NOTE:

For the 5-speed transmission, see page 3-39.

2. Remove the conical spring washer. Then, remove the bearing, using the SST given below.

SST: 09602-87301-000

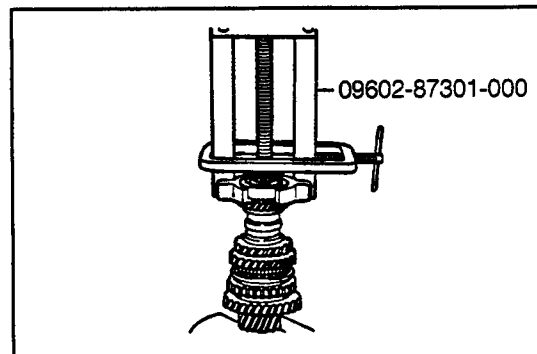


Fig. 3-108

WR-03105

3. Remove the output 4th gear, speedometer drive gear and output 3rd gear.

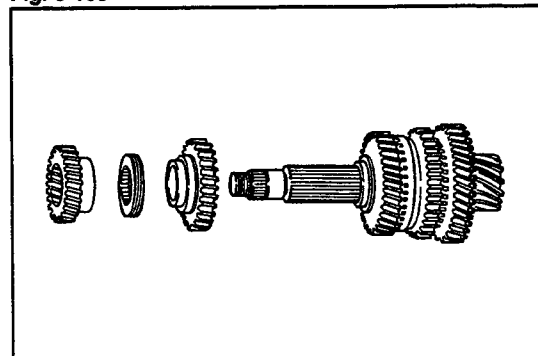


Fig. 3-109

WR-03106

4. Remove the 2nd gear assembly.

- (1) Detach the shaft snap ring, using the SST given below.

SST: 09905-00012-000

- (2) Remove the 2nd subgear.

- (3) Remove the conical spring washer.

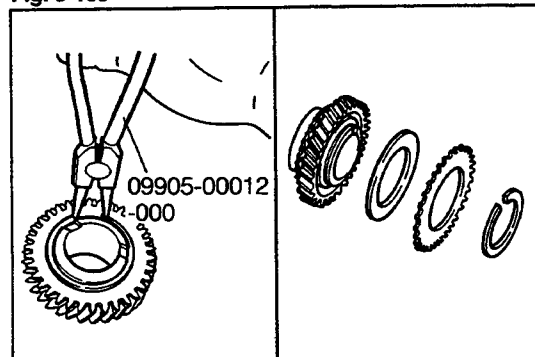


Fig. 3-110

WR-03107

three synchromesh shifting keys.

7. Remove the synchronizer ring No.3.

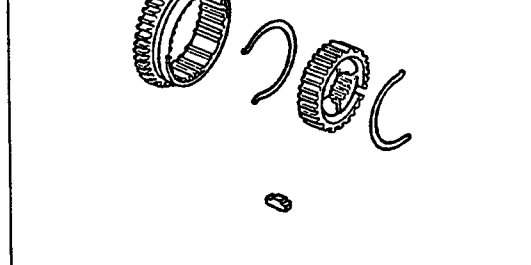


Fig. 3-112

WR-03109

8. Remove the 1st gear assembly.

(1) Detach the shaft snap ring, using the SST given below.

SST: 09905-00012-000

(2) Remove the 1st subgear.

(3) Remove the conical spring washer.

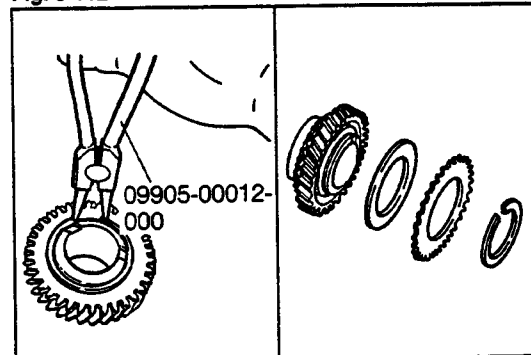


Fig. 3-113

WR-03110

9. Remove the spacer and needle roller bearing.

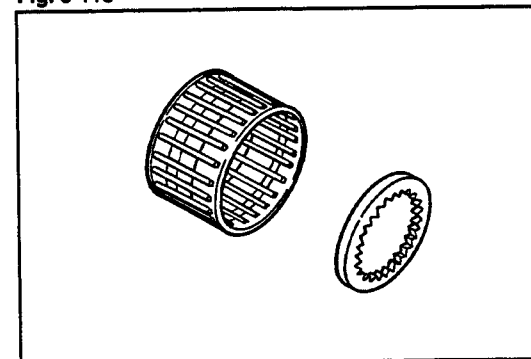


Fig. 3-114

WR-03111

Part	Specified value mm (inch)		Limit mm (inch)	
	Bore ①	Width ⑥	① Bore	⑥ Width
1st gear (output)	$37 \begin{smallmatrix} +0.025 \\ 0 \end{smallmatrix}$ (1.4567 $\begin{smallmatrix} +0.0010 \\ 0 \end{smallmatrix}$)	$*32.5 \begin{smallmatrix} -0.20 \\ -0.27 \end{smallmatrix}$ (1.2795 $\begin{smallmatrix} -0.0079 \\ -0.0106 \end{smallmatrix}$)	37.05 (1.459)	32.2 (1.268)
2nd gear (output)	$37 \begin{smallmatrix} +0.025 \\ 0 \end{smallmatrix}$ (1.4567 $\begin{smallmatrix} +0.0010 \\ 0 \end{smallmatrix}$)	$32.5 \begin{smallmatrix} -0.13 \\ -0.20 \end{smallmatrix}$ (1.2795 $\begin{smallmatrix} -0.0051 \\ -0.0079 \end{smallmatrix}$)	37.05 (1.459)	32.2 (1.268)
Splined section Tapered section ②	Visually inspect the section for excessive damage or wear.			
Gear section ③				
Both edge surfaces of gear ④				
Fitting section with hub sleeve ⑤	Inspect the section for excessive play, nick or rounded edge.			

*30.5 $\begin{smallmatrix} -0.20 \\ -0.27 \end{smallmatrix}$ for GTti model
(1.200 $\begin{smallmatrix} -0.0079 \\ -0.0106 \end{smallmatrix}$)

- Check the clutch hub for the 1st & 2nd gears and reverse gear for wear or damage.

Clutch Hub

Part	Limit
Splined section ①	Visually inspect the section for excessive damage or wear.
Synchromesh shifting key fitting groove ②	
With the hub fitted into the sleeve, check for excessive looseness in up-&-down direction and slant of the hub and sleeve.	

Reverse Gear

Part	Specified value mm (inch)	Limit mm (inch)
Shift fork groove width ③	$7.0 \begin{smallmatrix} +0.12 \\ +0.05 \end{smallmatrix}$ (0.276 $\begin{smallmatrix} +0.004 \\ +0.002 \end{smallmatrix}$)	7.3 (0.287)
Fitting section with gear ④	Visually inspect the section for excessive damage, wear, nick or rounded edge.	
Reverse gear tooth surface ⑤		

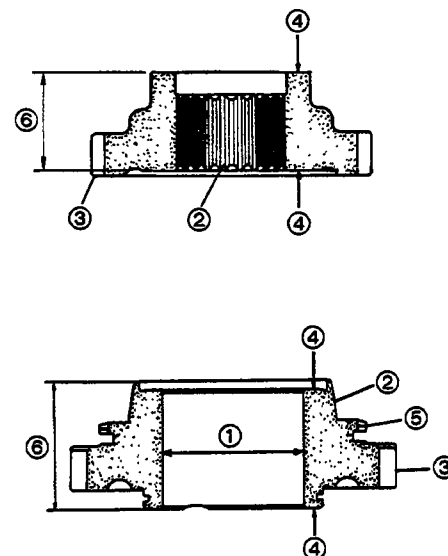


Fig. 3-116

WR-03113

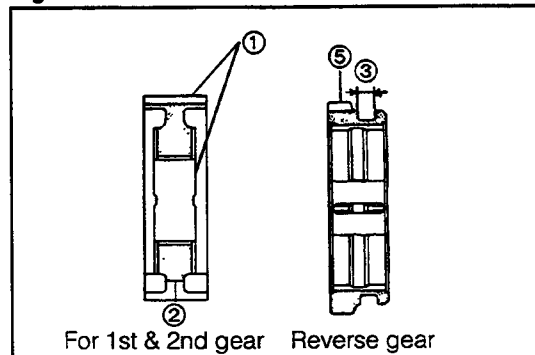


Fig. 3-117

WR-03114

Part	Specified value mm (inch)	Limit mm (inch)
Shifting key for 1st & 2nd gears (dimension H)	5.1 ± 0.1 (0.2008 $\pm$ 0.0039)	4.7 (0.185)
Spring ①	Visually inspect the spring for damage or distortion.	

6. Check the 1st and 2nd subgears and conical spring washer for damage or wear. (Except for vehicles mounted with Type CB-80 engine)

Part	Specified value mm (inch)	Limit mm (inch)
Bore of subgear ①	47 ± 0.2 (1.8504 $\pm$ 0.0079)	47.5 (1.870)
Subgear-to-conical spring washer sliding surface ②	Visually inspect the surface for damage or distortion.	

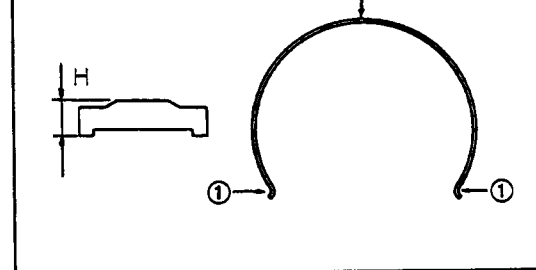


Fig. 3-119

WR-03116

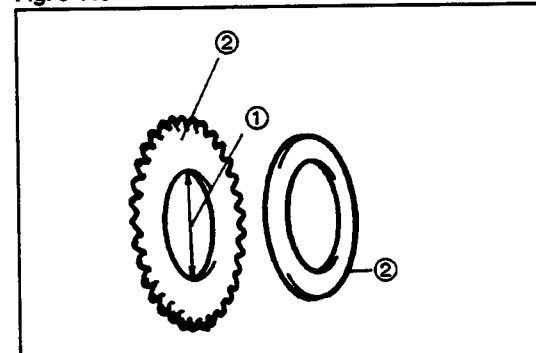


Fig. 3-120

WR-03117

7. Check the synchronizer ring for wear or damage.

Part	Specified value mm (inch)	Limit mm (inch)
Gap when synchronizer ring is pressed to gear	0.85 - 1.45 (0.0335 - 0.0571)	0.5 (0.020)
Damage at inner tapered section	Visually inspect the section for excessive damage.	
Damage at spline		

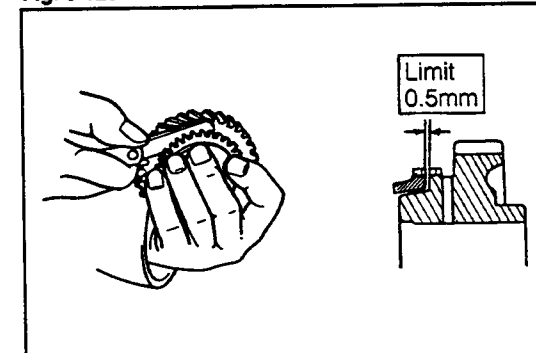


Fig. 3-121

WR-03118

8. Check the bearing for wear or damage.

Part	Inspection criteria
Bearing	When the inner race is rotated by your fingers, it should rotate smoothly without any binding.

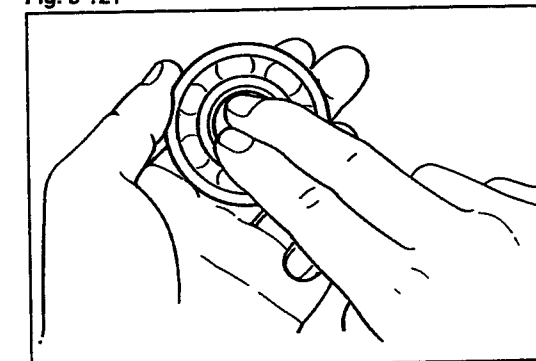


Fig. 3-122

WR-03119

expanded side may face toward the subgear side.

- (2) Assemble the 1st subgear.
- (3) Assemble a new snap ring, using the SST given blow.
SST: 09905-00012-000

3. Assemble the synchronizer ring No.3.

4. Assemble the synchronizer hub assembly.

- (1) Assemble the hub clutch and reverse gear. Ensure that both parts can slide smoothly.
- (2) Assemble the shifting keys and springs.

5. Assemble the synchronizer ring No.3 and 2nd gear bush.

6. Assemble the 2nd gear assembly.

- (1) Install the conical spring in such a way that its expanded side may face toward the subgear side.
- (2) Assemble the 2nd subgear.
- (3) Assemble a new snap ring, using the SST given below.

SST: 09905-00012-000

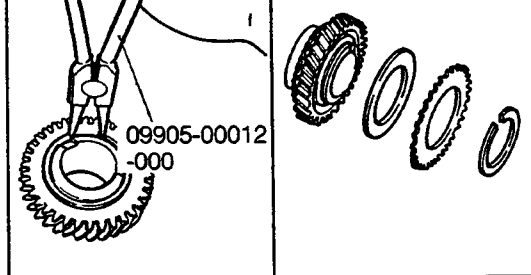


Fig. 3-124

WR-03121

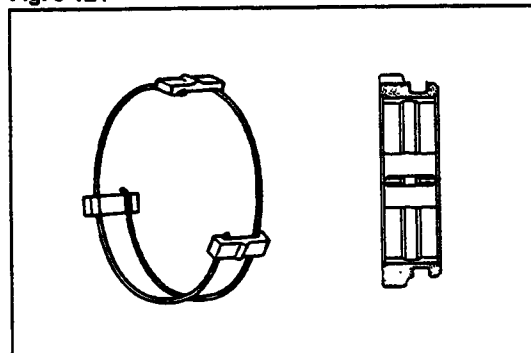


Fig. 3-125

WR-03122

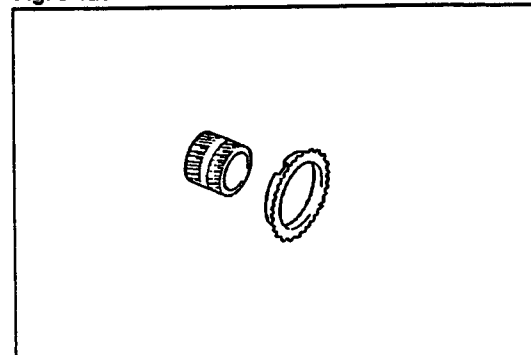


Fig. 3-126

WR-03123

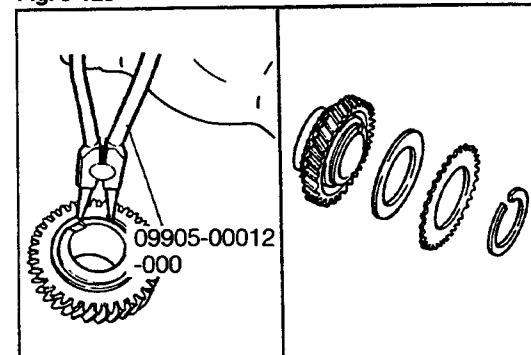


Fig. 3-127

WR-03124

9. Assemble the conical spring washer and lock nut.
(4-speed transmission)

- (1) Install the conical spring in such a way that its expanded side may face toward the gear side.
- (2) Clamp the reduction gear section in a vise, making sure that no scratch may be made to the section.
- (3) Tighten the lock nut.

Tightening Torque: 10.0 - 14.0 kg-m (72 - 101 ft-lb)

10. Upon completion of the assembly, measure the end play of each part of the output shaft.

Part		Specified value mm(inch)	Limit mm (inch)
1st gear	①	0.1 - 0.37 (0.0039 - 0.0146)	0.5 (0.020)
3rd gear	②		

NOTE:

If the end play does not comply with the specification, check the gear, bush and clutch hub sliding section. Replace any parts which exhibit defects.

11. Stake the lock nut, using a chisel.

NOTE:

Be sure to stake the central part of the lock nut so as to avoid dislocation or cracks.

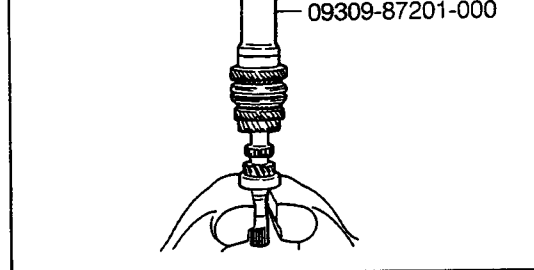


Fig. 3-129

WR-03126

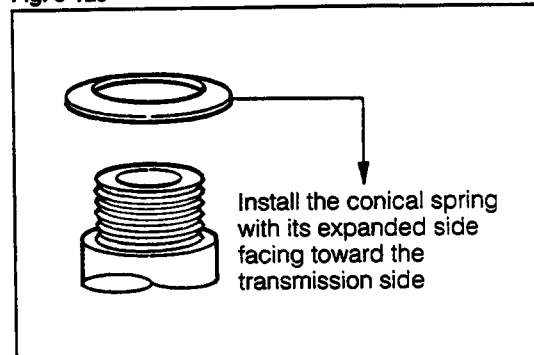


Fig. 3-130

WR-03127

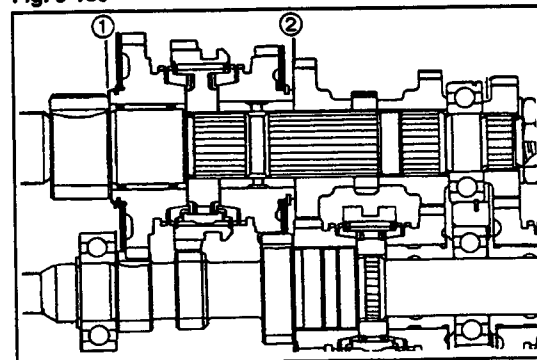


Fig. 3-131

WR-03128

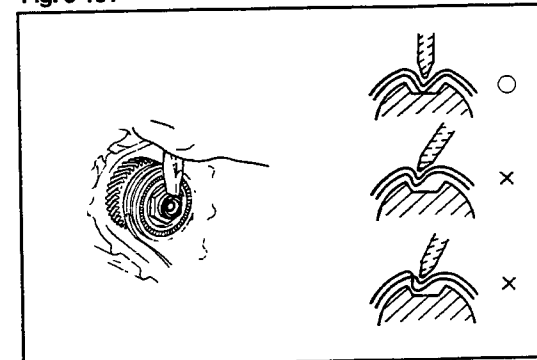
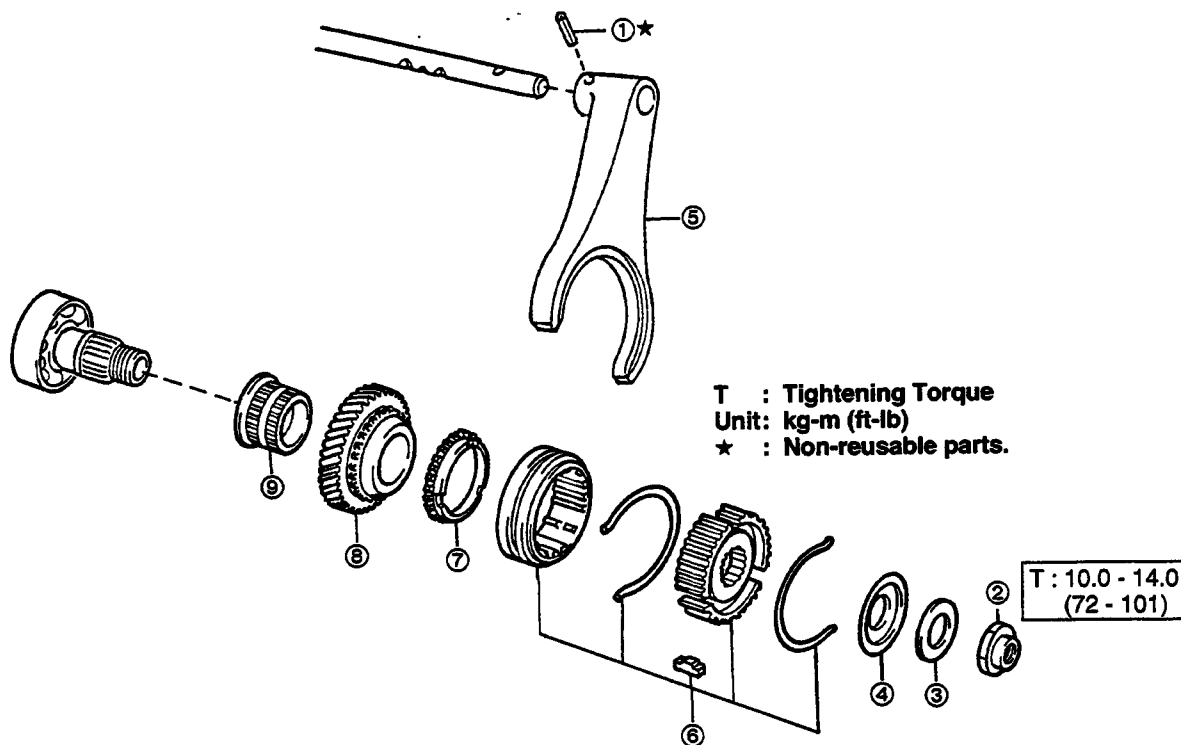


Fig. 3-132

WR-03129



- ① Slotted spring pin
- ② Lock nut
- ③ Conical spring washer
- ④ Transmission hub sleeve stopper
- ⑤ 5th shift fork
- ⑥ Transmission clutch No.3 hub Ay

- ⑦ Synchronizer ring
- ⑧ 5th gear
- ⑨ 5th gear bush
- ⑩ Lock nut
- ⑪ Conical spring washer
- ⑫ Output 5th gear

Fig. 3-133

WR-03129A

this application. (See page 3-00)

(2) Release the staked lock nut, using a chisel.

NOTE:

Be very careful not to damage the threaded portion of the input shaft.

- (3) Remove the lock nut at the input shaft, using a socket whose width across flats is 32 mm.
- (4) Set the sleeve for 5th gear to the 5th gear position.
- (5) Remove the lock nut at the output shaft side.

3. Remove the conical spring washer at the input shaft side and transmission hub sleeve stopper.

4. Remove the 5th shift fork and transmission clutch hub assembly No.3.

- (1) Remove the 5th shift fork and transmission clutch hub assembly No.3 at the same time.

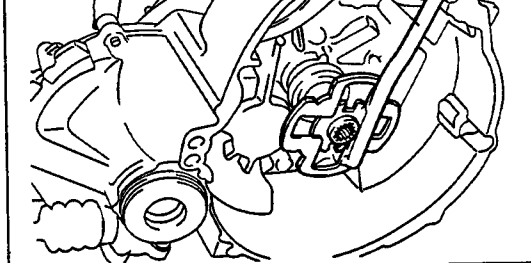


Fig. 3-135

WR-03131

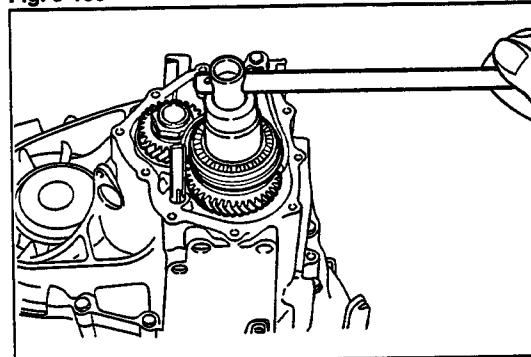


Fig. 3-136

WR-03132

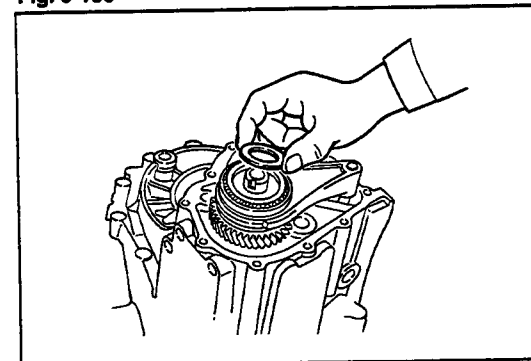


Fig. 3-137

WR-03133

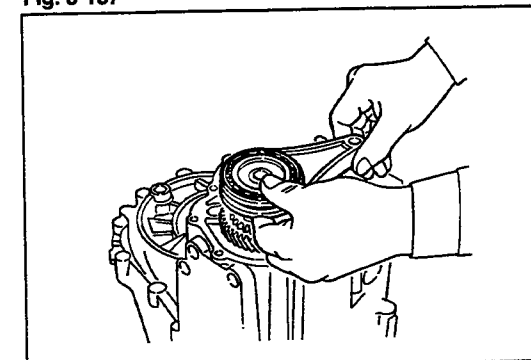


Fig. 3-138

WR-03134

INSPECTION

1. Check the bush wear or damage.

Part	Specified value mm (inch)	Limit mm (inch)
Bush bore ①	$25 \begin{smallmatrix} +0.042 \\ -0.027 \end{smallmatrix}$ (0.9843 $\begin{smallmatrix} +0.0017 \\ -0.0011 \end{smallmatrix}$)	25.02 (0.985)
Bush outer diameter ②	$37 \begin{smallmatrix} -0.040 \\ -0.080 \end{smallmatrix}$ (1.4567 $\begin{smallmatrix} -0.0016 \\ -0.0031 \end{smallmatrix}$)	36.89 (1.452)
Overall length ③	29 ± 0.03 (1.1417 ± 0.0012)	28.97 (1.141)
Thickness of flange section ④	3 ± 0.06 (0.1181 ± 0.0024)	2.94 (0.116)

2. Check the 5th gear for wear or damage.

Part	Specified value mm (inch)		Limit mm (inch)	
	Bore ①	Width ⑥	Bore ①	Width ⑥
5th gear (input)	$37 \begin{smallmatrix} +0.025 \\ 0 \end{smallmatrix}$ (1.4567 $\begin{smallmatrix} +0.001 \\ 0 \end{smallmatrix}$)	$26 \begin{smallmatrix} -0.13 \\ -0.20 \end{smallmatrix}$ (1.0236 $\begin{smallmatrix} -0.005 \\ -0.008 \end{smallmatrix}$)	37.05 (1.459)	25.7 (1.012)
Splined section Tapered section ②	Visually inspect the section for excessive damage or wear.			
Gear section ③				
Both edge surfaces of gear ④				
Fitting section with hub sleeve ⑤	Inspect the section for excessive play, nick or rounded edge.			

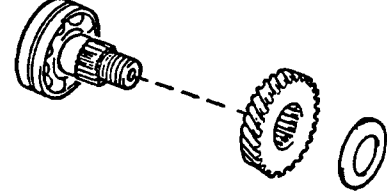


Fig. 3-140

WR-03136

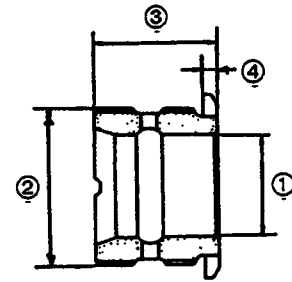


Fig. 3-141

WR-03137

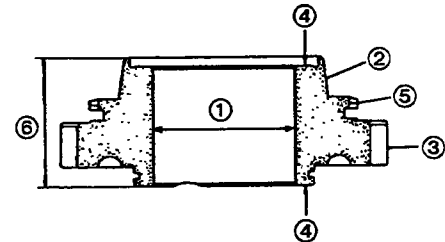


Fig. 3-142

WR-03138

Part	Specified value mm (inch)	Limit mm (inch)
Shift fork groove width ③	70 $\begin{smallmatrix} 0.12 \\ +0.05 \\ -0.004 \end{smallmatrix}$ (0.276 $\begin{smallmatrix} +0.002 \end{smallmatrix}$)	7.3 (0.287)
Fitting section with gear ④	Visually inspect the section for excessive damage, wear, nick or rounded edge.	

WR-03139

4. Check the synchromesh shifting key and key spring for wear or damage.

Part	Specified value mm (inch)	Limit mm (inch)
Key for 5th gear (Dimension H)	5.0 $\begin{smallmatrix} -0.2 \\ -0.0079 \end{smallmatrix}$ (0.1969 $\begin{smallmatrix} -0.0158 \end{smallmatrix}$)	4.3 (0.169)
Spring ①	Visually inspect the spring for damage or distortion.	

5. Check the synchronizer ring for wear or damage.

Part	Specified value mm (inch)	Limit mm (inch)
Gap when synchronizer ring is pressed to gear	0.85 - 1.45 (0.033 - 0.057)	0.5 (0.020)
Damage at inner tapered section	Visually inspect the section for excessive damage.	
Damage at spline		

6. Check the shift fork for the 5th gear for damage or wear.

Part	Specified value mm (inch)	Limit mm (inch)
Thickness at tip-section of fork	7.0 (0.28)	6.3 (0.25)

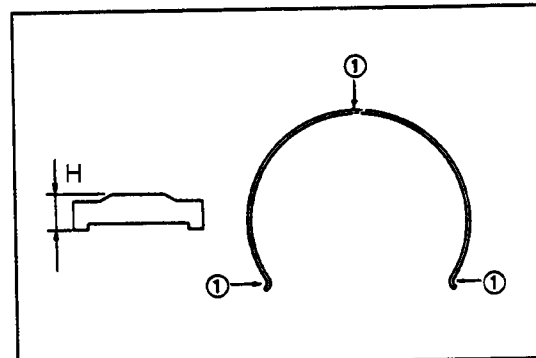


Fig. 3-144

WR-03140

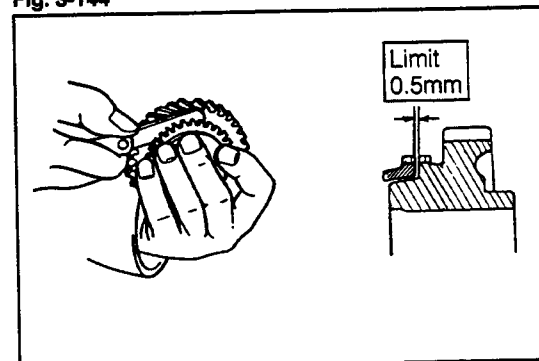


Fig. 3-145

WR-03141

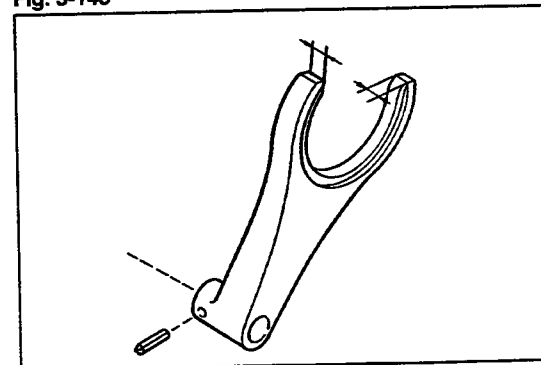


Fig. 3-146

WR-03142

4. Assemble the transmission clutch hub assembly.
 - (1) Assemble the clutch and sleeve. Ensure that both parts can slide smoothly.
 - (2) Assemble the shifting keys and springs.

NOTE:

1. The hub assembly for the 3rd and 4th gear use differs from the hub assembly for the 5th gear use only in the inner diameter of the clutch hub. Other parts are shared in common.
 2. The sleeve and clutch do not have any installing direction to be observed during their assembly.
5. Assemble the transmission clutch hub assembly and the 5th gear shift fork at the same time.

6. Assemble the transmission hub sleeve stopper.
7. Assemble the conical spring washer.
 - (1) Install the conical spring in such a way that its expanded side may face toward the transmission side.

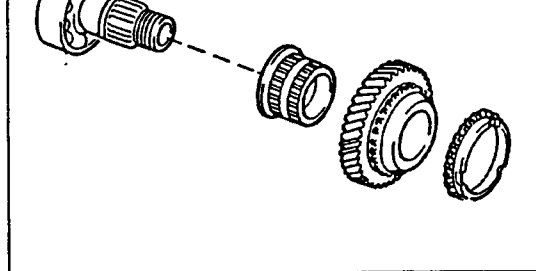


Fig. 3-148

WR-03145

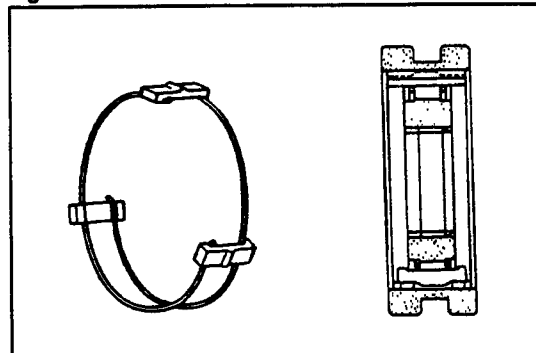


Fig. 3-149

WR-03146

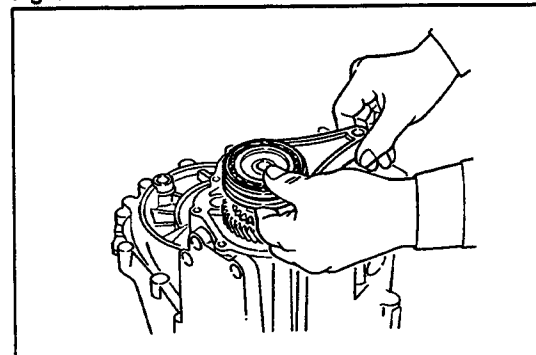


Fig. 3-150

WR-03147

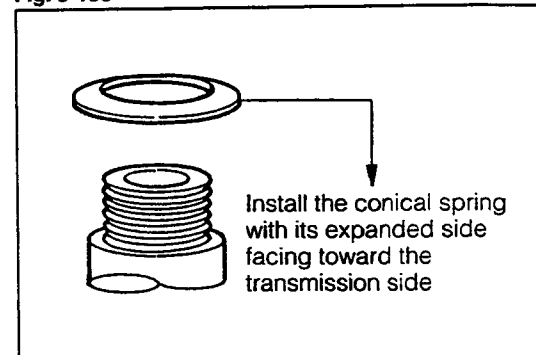


Fig. 3-151

WR-03149

torque.
Tightening Torque: 10.0 - 14.0 kg-m (72 - 101 ft-lb)

- (5) Before the lock nut is staked, measure the end play of the 5th gear.
Specified Value: 0.1 - 0.23 mm (0.004 - 0.009 inch)
Limit: 0.4 mm (0.016 inch)

- (6) Stake the lock nut, using a chisel.

NOTE:

Be sure to stake the central part of the lock nut so as to avoid dislocation or cracks.

9. Drive the slotted spring pin into position, until it becomes flush with the edge surface of the shift fork.

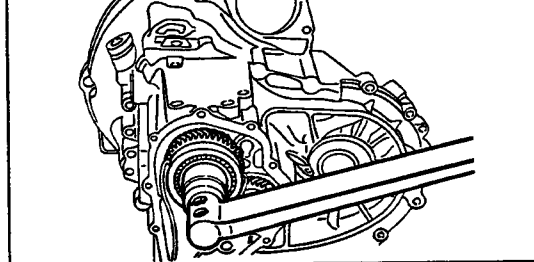


Fig. 3-153

WR-03151

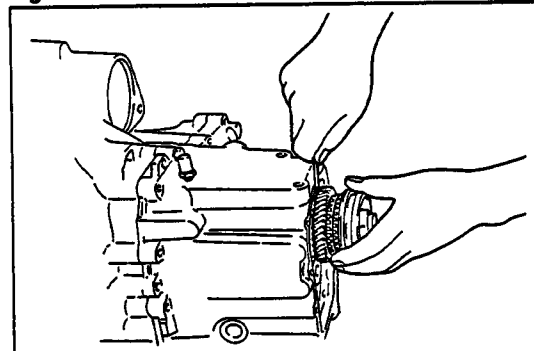


Fig. 3-154

WR-03152

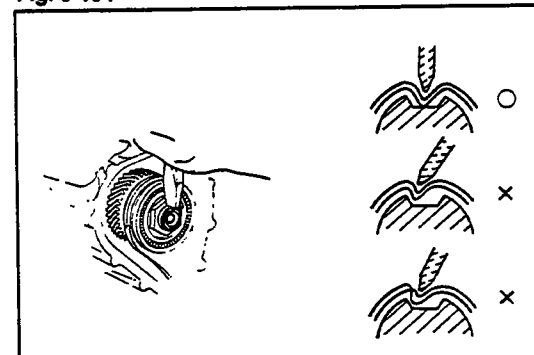


Fig. 3-155

WR-03153

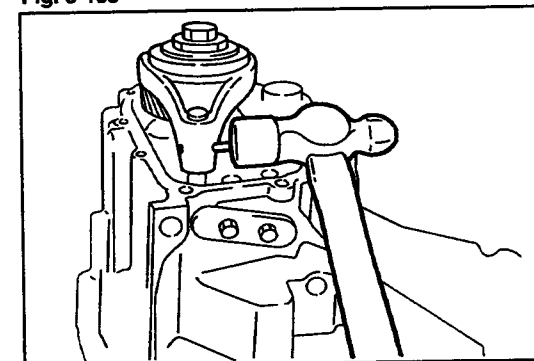
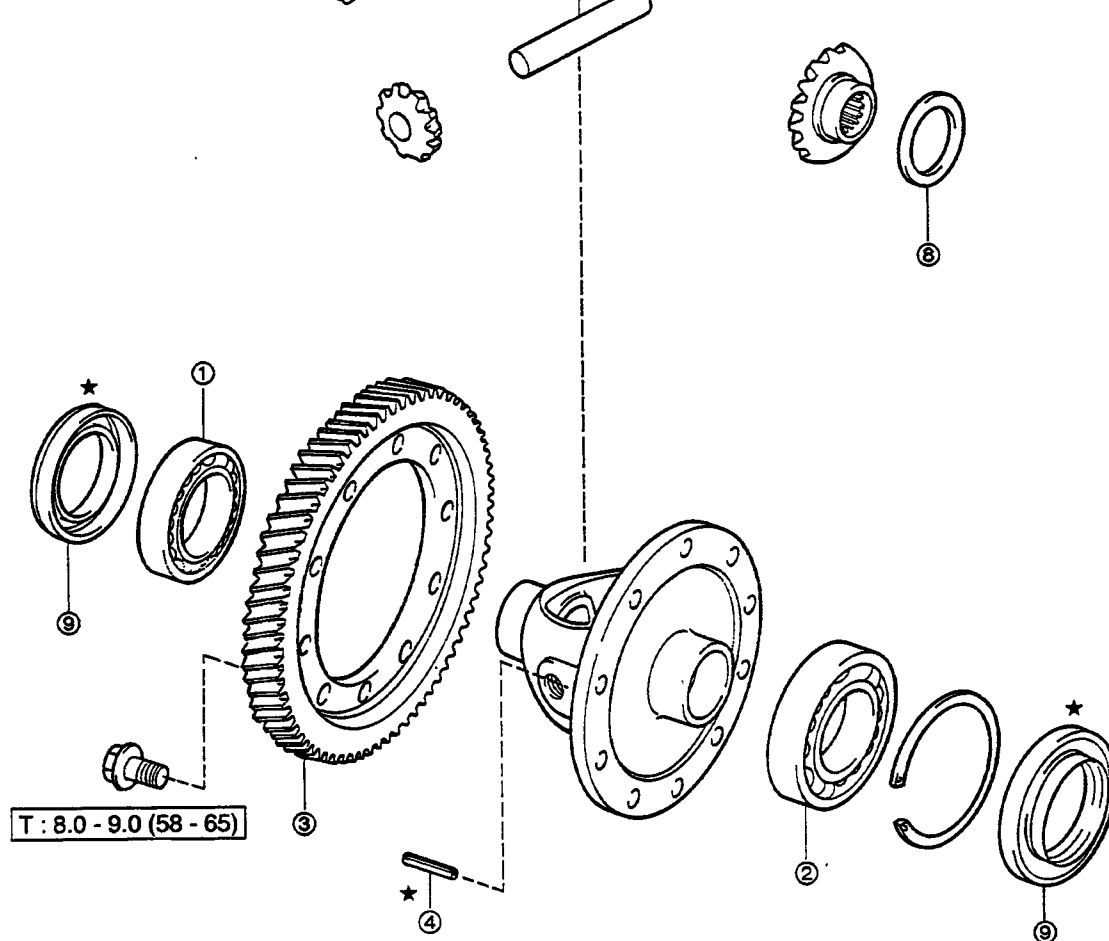


Fig. 3-156

WR-03154



T : 8.0 - 9.0 (58 - 65)

T : Tightening Torque

Unit: kg-m (ft-lb)

★ : Non-reusable parts

- ① Radial ball bearing
- ② Radial ball bearing
- ③ Differential gear
- ④ Slotted spring pin
- ⑤ Differential pinion shaft
- ⑥ Differential pinion
- ⑦ Differential side gear
- ⑧ Differential washer
- ⑨ Oil seal

Fig. 3-157

WR-03154A

NOTE:

Grinding off the interfering section of the SST will make the operation easier.

2. Remove the differential ring gear.

- (1) Clamp the differential case in a vise. Remove the attaching bolts.

(2) Remove the differential ring gear.

If any difficulty in removing the ring gear is encountered, evenly tap the peripheral section of the ring gear, using a plastic hammer.

3. Drive out the slotted spring pin, using a punch pin.

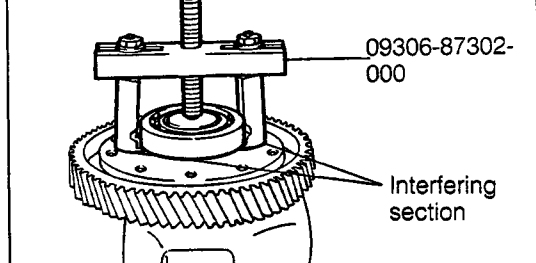


Fig. 3-159

WR-03156

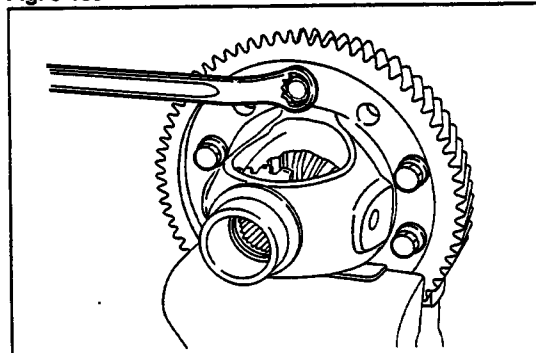


Fig. 3-160

WR-03157

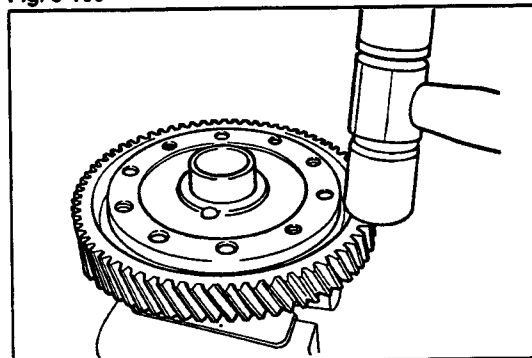


Fig. 3-161

WR-03158

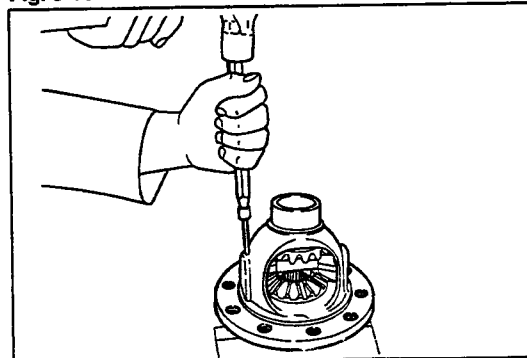


Fig. 3-162

WR-03159

INSPECTION

1. Check the differential ring gear for wear or damage.

Part	Inspection criteria
Gear tooth surface	Visually inspect the surface for wear, damage, nick or rounded edge.

2. Check the side gear, pinion and pinion shaft for wear or damage.

Part		Specified value mm (inch)	Limit mm (inch)
Outer diameter of side gear boss section ①	Except vehicles mounted with Type CB-80 engine	32.0 $\begin{smallmatrix} -0.025 \\ -0.050 \end{smallmatrix}$ (1.2598 $\begin{smallmatrix} -0.0010 \\ -0.0020 \end{smallmatrix}$)	31.97 (1.259)
	Vehicles mounted with Type CB-80 engine	35.0 $\begin{smallmatrix} -0.005 \\ -0.030 \end{smallmatrix}$ (1.3780 $\begin{smallmatrix} -0.0002 \\ -0.0012 \end{smallmatrix}$)	34.97 (1.377)
Pinion shaft fitting hole of pinion ②	Except vehicles mounted with Type CB-80 engine	15.0 $\begin{smallmatrix} \pm 0.008 \\ \pm 0.003 \end{smallmatrix}$ (0.5906 $\begin{smallmatrix} \pm 0.0003 \\ \pm 0.0001 \end{smallmatrix}$)	15.03 (0.592)
	Vehicles mounted with Type CB-80 engine	16.0 $\begin{smallmatrix} \pm 0.008 \\ \pm 0.003 \end{smallmatrix}$ (0.6299 $\begin{smallmatrix} \pm 0.0003 \\ \pm 0.0001 \end{smallmatrix}$)	16.03 (0.631)
Outer diameter of pinion shaft ③	Except vehicles mounted with Type CB-80 engine	15.0 $\begin{smallmatrix} -0.032 \\ -0.050 \end{smallmatrix}$ (0.5906 $\begin{smallmatrix} -0.0013 \\ -0.0020 \end{smallmatrix}$)	14.97 (0.589)
	Vehicles mounted with Type CB-80 engine	16.0 $\begin{smallmatrix} -0.032 \\ -0.050 \end{smallmatrix}$ (0.6299 $\begin{smallmatrix} -0.0013 \\ -0.0020 \end{smallmatrix}$)	15.97 (0.629)
Check the gear tooth surface and the splined section of the side gear for wear or damage.			

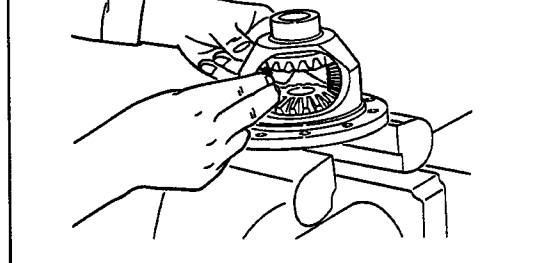


Fig. 3-164

WR-03161

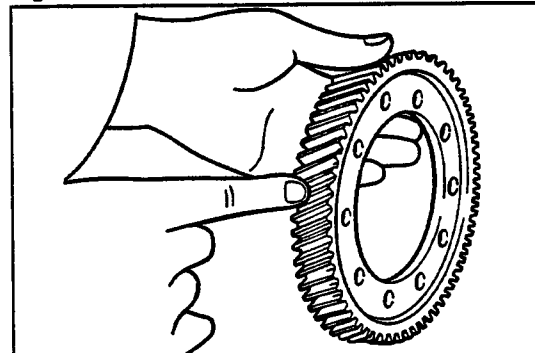


Fig. 3-165

WR-03162

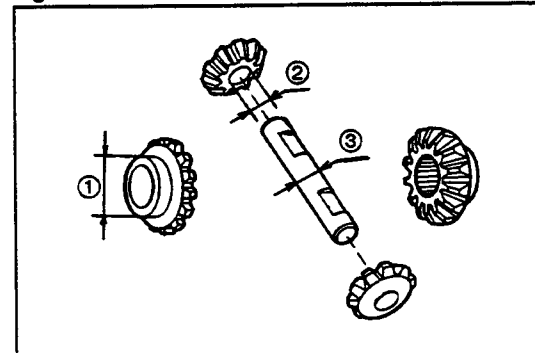
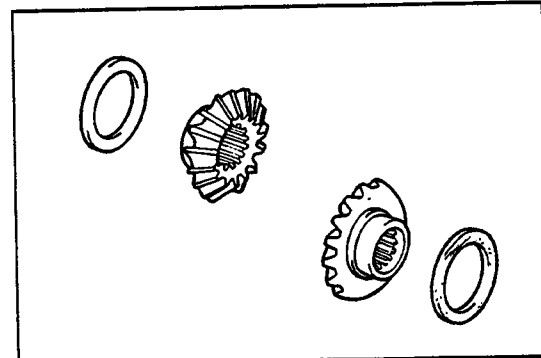


Fig. 3-166

WR-03163

ASSEMBLY

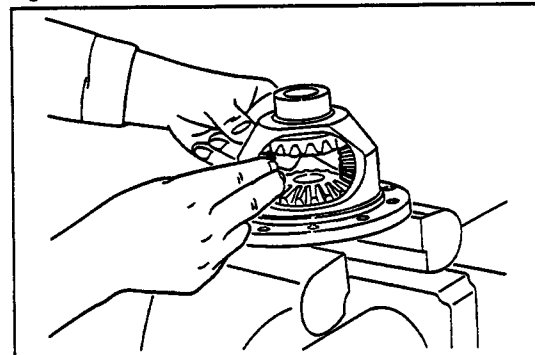
1. Assemble the differential pinion washers and differential side gears.

**Fig. 3-168**

WR-03166

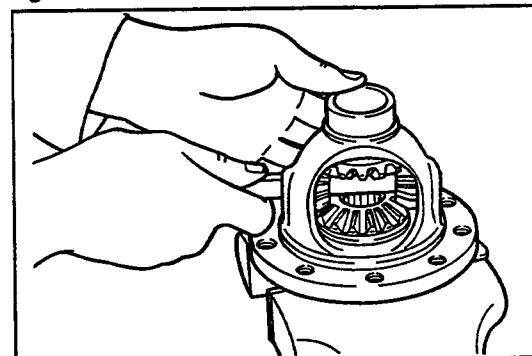
2. Assemble the differential pinions.

- (1) Make the two pinions mesh with the side gears, working from the case side. Rotate the side gear so that the pinion's hole may align with the pinion shaft hole provided in the case.

**Fig. 3-169**

WR-03167

3. Assemble the differential pinion shaft.

**Fig. 3-170**

WR-03168

ponding pin hole in the case.

- (2) Working from the backside of the case (ring gear side), drive a new slotted spring pin into position, until it becomes flush with the case edge surface.

5. Assemble the differential ring gear.

- (1) Install the ring gear in such a way that the side having large chamfer at its inner diameter comes at the case side.

NOTE:

1. The number of gear teeth varies depending upon each reduction ratio. Hence, it is necessary to identify the ring gear by checking the identification groove.
2. Care must be exercised to ensure that no foreign matter gets into the mating surface.

Identification of Ring Gear

Number of gear teeth	Identification groove	Final reduction gear ratio
72	One	4.500
74	None	4.933
65	Two	4.642
* 65	Three	4.642

* For Type CB-80 engine

- (2) Tighten the ring gear attaching bolts.
Tightening Torque: 8.0 - 9.0 kg-m (58 - 65 ft-lb)

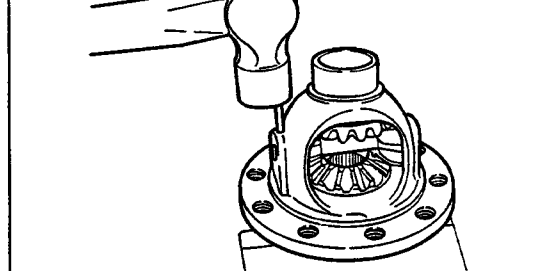


Fig. 3-172

WR-03170

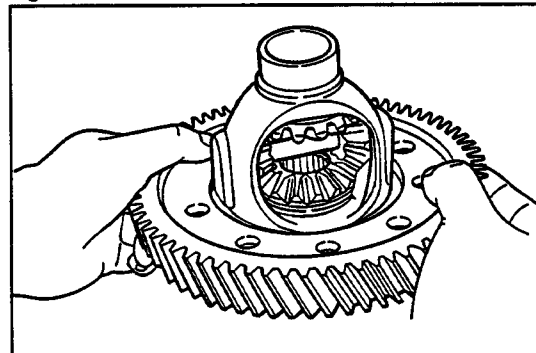


Fig. 3-173

WR-03171

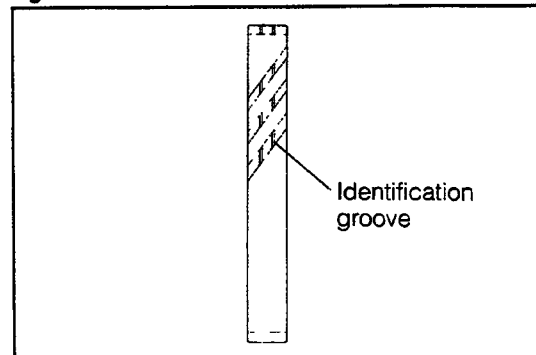


Fig. 174

WR-03172

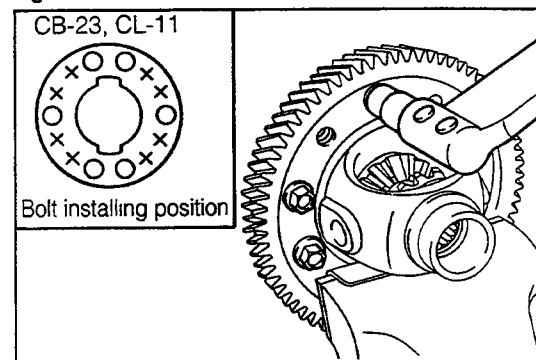
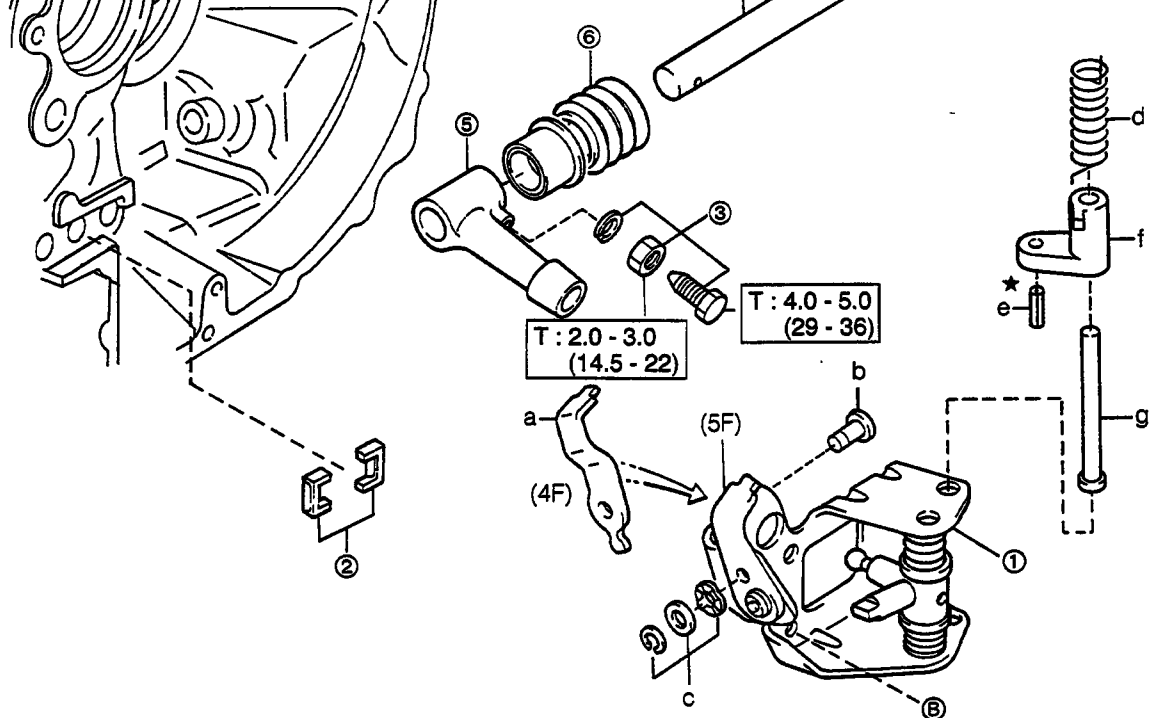


Fig. 3-175

WR-03173



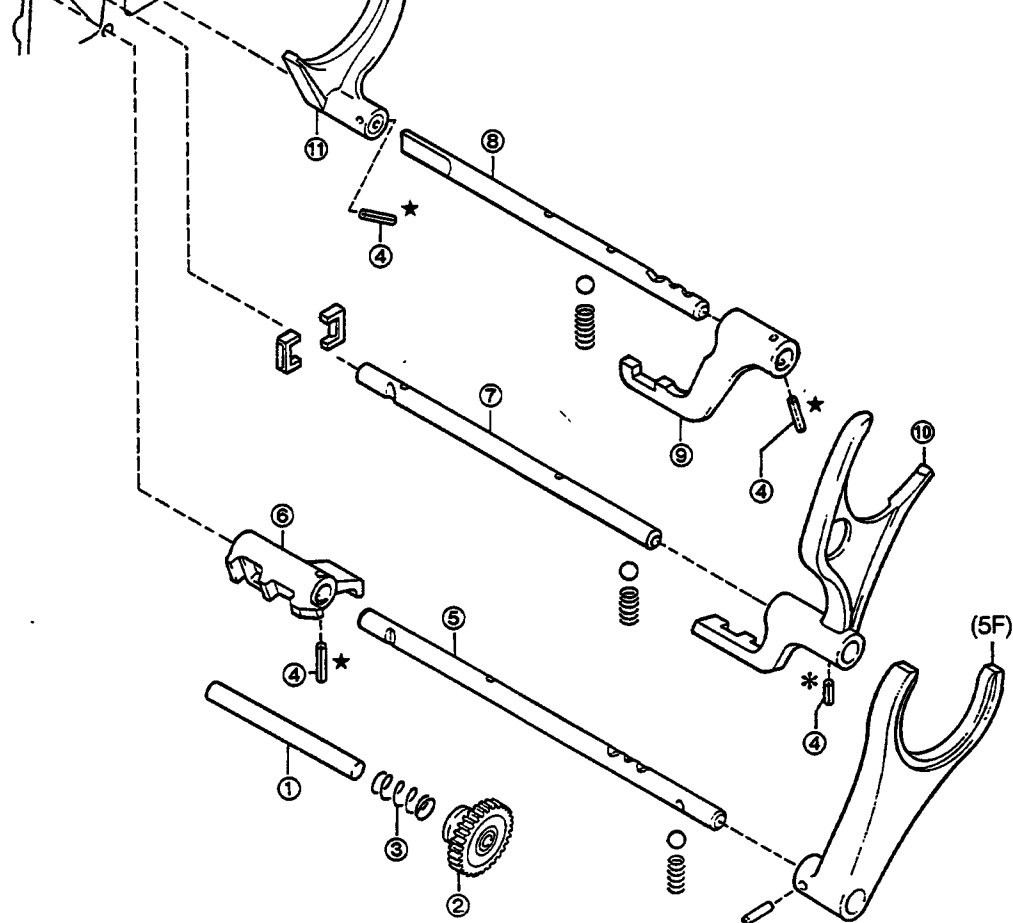
T : Tightening Torque
Unit: kg-m (ft-lb)
★ : Non-reusable parts

- ① Select support Ay & shifting bell crank
 - a. Reverse shift arm (4 M/T)
 - b. Shift arm pin & washer
 - c. E ring & washer
 - d. Compression spring
 - e. Slotted spring pin
 - f. Reverse restrict cam
 - g. Reverse restrict shaft

- ② Shift inter lock plate
- ③ Wave washer, bolt and nut set
- ④ Shift & select shaft
- ⑤ Shift inner lever
- ⑥ Control shaft boot

Fig. 3-177

WR-03174A



★ : Non-reusable parts

- ① Reverse idler shaft
- ② Reverse idler gear
- ③ Compression spring
- ④ Slotted spring pin × 4
- ⑤ 5th & reverse shift fork shaft
- ⑥ Reverse shift arm head

- ⑦ 3rd & 4th shift fork shaft
- ⑧ 1st & 2nd shift fork shaft
- ⑨ 1st & 2nd shift head
- ⑩ 3rd & 4th shift fork
- ⑪ 1st & 2nd shift fork

Fig. 3-178

WR-03174B

drive out the slotted spring pin by means of a punch pin. (Four points)

3. Pull out the 5th & reverse shift fork shaft. Remove the reverse shift arm head.

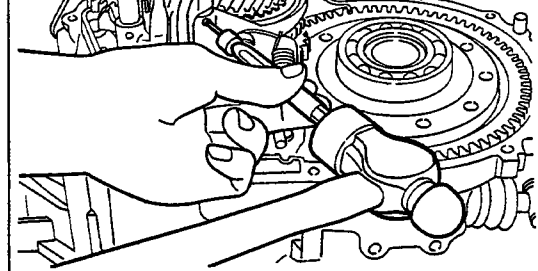


Fig. 3-180

WR-03176

4. Remove the 3rd & 4th shift fork shaft and the 3rd & 4th shift fork.

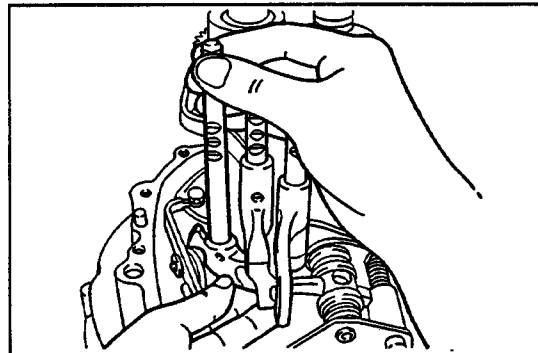


Fig. 3-181

WR-03177

5. Pull out the 1st & 2nd shift fork shaft. Remove the 1st & 2nd shift fork and the 1st & 2nd shift head.

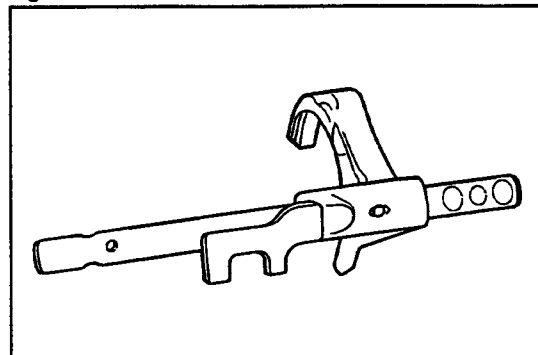


Fig. 3-182

WR-03178

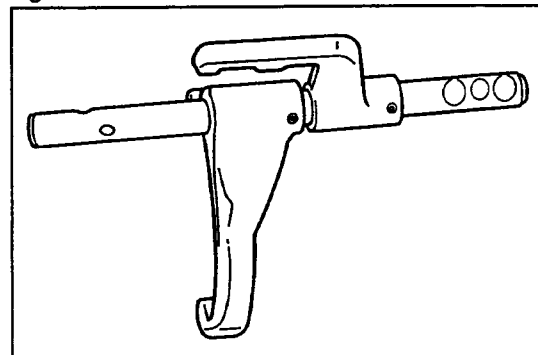


Fig. 3-183

WR-03179

NOTE:

1. Be sure not to release the staked section of the bell crank.
2. On both the 4-speed and 5-speed transmissions, replacement parts are supplied only as those with the bell crank support assembly. (In the case of the replacement parts for the 5-speed transmission, the reverse restricting cam is excluded.)
Furthermore, it should be noted that the reverse restricting cam can not be disassembled.

8. Remove the shift interlock plate.

9. Remove the wave washer, nut and set bolt.

- (1) After the nut has been slackened, proceed to slacken the set bolt.

10. After the differential case assembly has been removed (see page 3-16), remove the shift & select shaft.

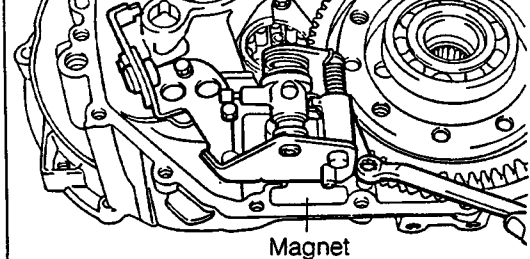


Fig. 3-185

WR-03181

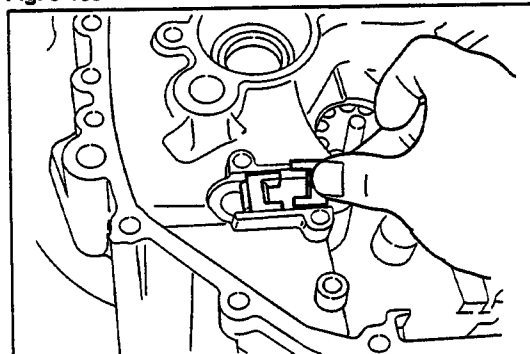


Fig. 3-186

WR-03182

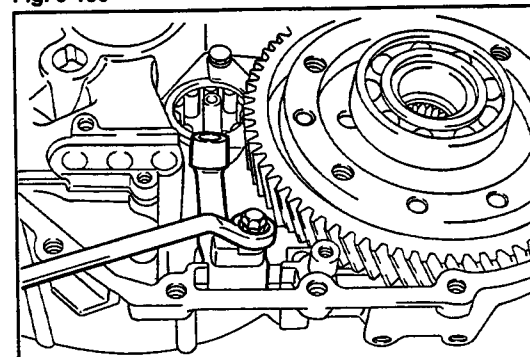


Fig. 3-187

WR-03183

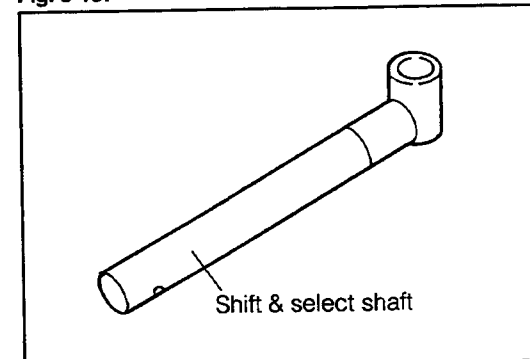


Fig. 3-188

WR-03184

or wear.

Part	Inspection criteria
Ball lock section and interlock section of fork shaft ①	Visually inspect the section for excessive damage or wear.

2. Check the 1st shift fork, the 2nd shift fork and the reverse shift head for damage or wear.

Part	Specified value mm (inch)	Limit mm (inch)
Thickness at tip-section of fork ①	7.0 (0.276)	6.3 (0.248)
Groove width of shift inner lever-contact-section ②	$12.1 \begin{smallmatrix} +0.1 \\ 0 \end{smallmatrix}$ ($0.476 \begin{smallmatrix} +0.004 \\ 0 \end{smallmatrix}$)	12.7 (0.500)
Groove width of reverse shift arm pin-contact-section ③	$150 \begin{smallmatrix} +0.043 \\ 0 \end{smallmatrix}$ ($0.5906 \begin{smallmatrix} +0.0017 \\ 0 \end{smallmatrix}$)	15.1 (0.595)

3. Check the interlock plate for damage or wear.

Part	Specified value mm (inch)	Limit mm (inch)
*Length of lock plate	16.3 ± 0.15 (0.642 ± 0.006)	16.0 (0.630)
Roller section	Check the section for excessive damage or wear.	

*Two lock plates must be replaced at the same time.

4. Check the control shaft and inner lever for damage or wear.

Part	Inspection criteria
Control shaft ①	Visually inspect the following items given below. ● Shaft for bend ● Recessed section of inner lever and shaft inserting section for wear or damage. ● Dust boot for cracks or wear ● Tip-end of lock bolt for wear
Inner lever recessed section and shaft inserting section ②	
Sliding section of dust boot and breakage ③	
Tip-end of lock bolt ④	

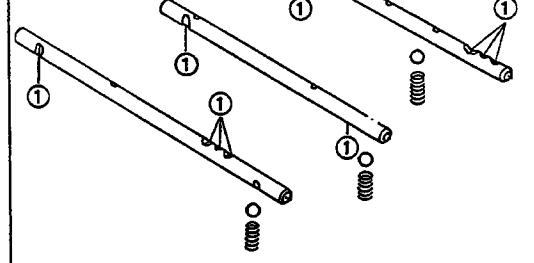


Fig. 3-190

WR-03186

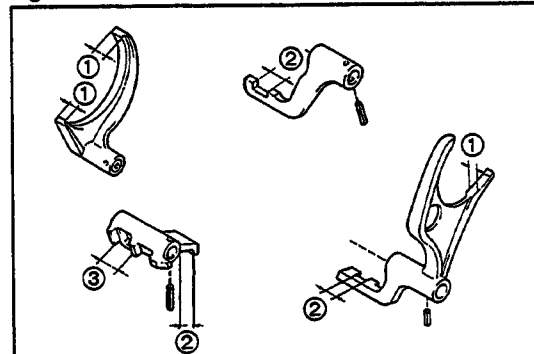


Fig. 3-191

WR-03187

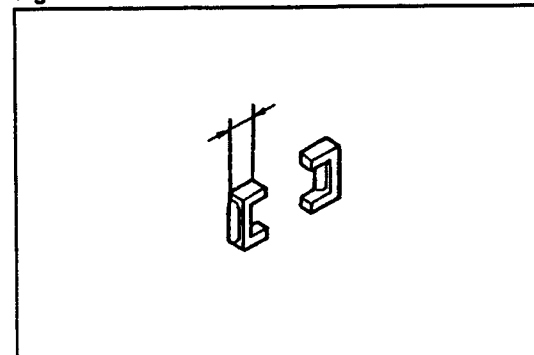


Fig. 3-192

WR-03188

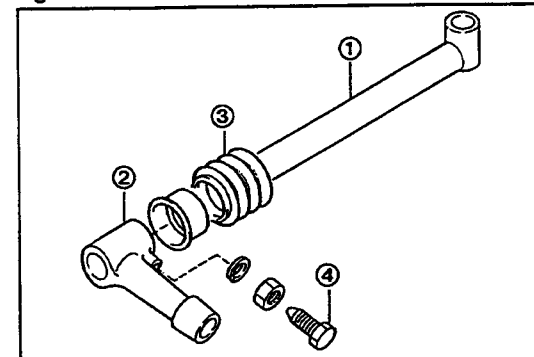


Fig. 3-193

WR-03189

6. Check the reverse restricting cam and shaft for damage or wear. (5-speed transmission only)

Part	Inspection criteria
Operation of restricting cam	- Ensure that the mis-operation preventing mechanism functions at the support assembly. - The cam should be raised at the same time when the section (A) is lifted. - When turned to the left, ensure that the cam drops and the section (A) is locked.
Each part of reverse restricting cam and shaft ①	Visually inspect each part for damage or wear.

7. Check the reverse idler gear and shaft for wear or damage.

Part	Specified value mm (inch)	Limit mm (inch)
Bush inner diameter ①	$17 \begin{smallmatrix} +0.027 \\ -0 \\ +0.0011 \end{smallmatrix}$ (0.6693 $\begin{smallmatrix} +0.0011 \\ -0 \end{smallmatrix}$)	17.05 (0.671)
Shaft outer diameter ②	$17 \begin{smallmatrix} -0.032 \\ -0.055 \\ -0.0013 \end{smallmatrix}$ (0.6693 $\begin{smallmatrix} -0.0013 \\ -0.0023 \end{smallmatrix}$)	16.9 (0.665)
Groove width ③	$8 \begin{smallmatrix} +0.058 \\ -0 \\ +0.0023 \end{smallmatrix}$ (0.3150 $\begin{smallmatrix} +0.0023 \\ -0 \end{smallmatrix}$)	8.2 (0.323)
Wear or damage of spring ④	Visually inspect the spring for flattened condition and the washer for wear or damage.	

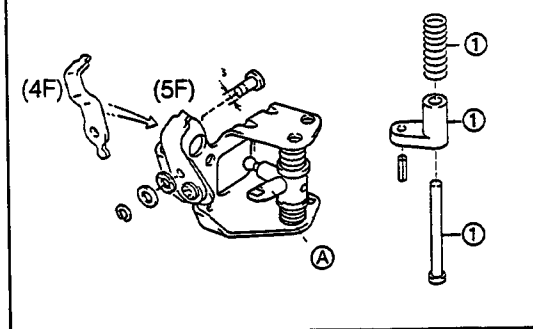


Fig. 3-195

WR-03191

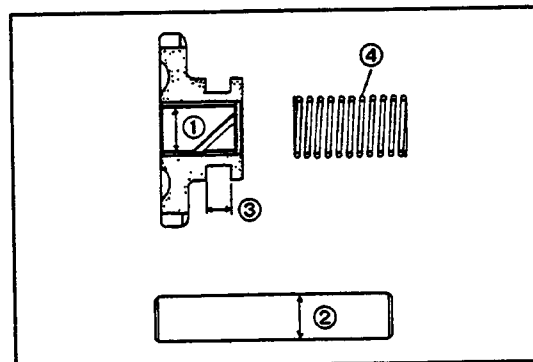


Fig. 3-196

WR-03192

ASSEMBLY

- Assemble the boot and shift inner lever on the control shaft.

NOTE:

Be very careful not to scratch the boot.

- Assemble the shift & select shaft in the case.

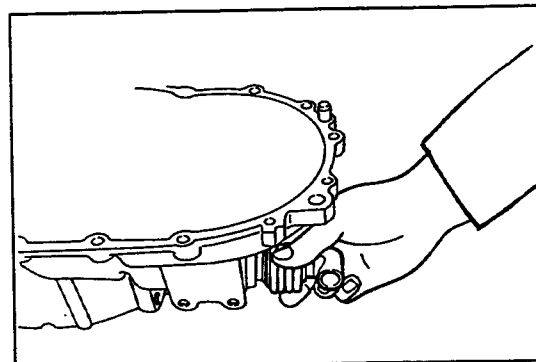


Fig. 3-197

WR-03193

5. Install the magnet into position.

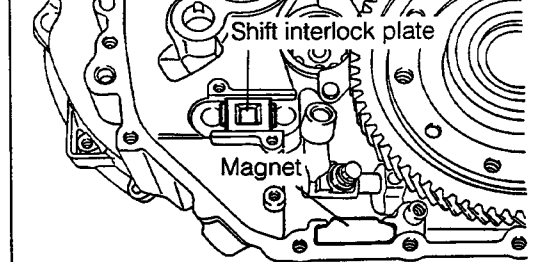


Fig. 3-199

WR-03195

6. Assemble the input shaft and output shaft at the same time.

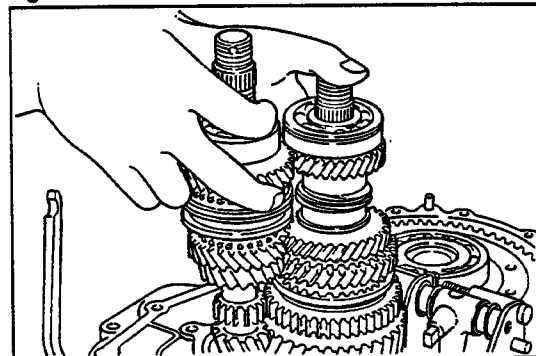


Fig. 3-200

WR-03195A

7. Install the input shaft bearing lock plate. Tighten the nuts.

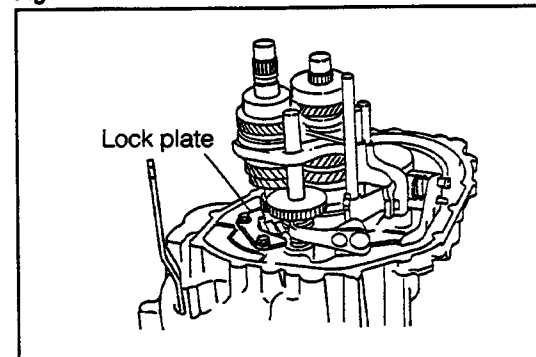


Fig. 3-201

WR-03195B

fork.

NOTE:

Prior to the assembling, apply gear oil to the sliding section of each shift fork.

- (1) Assemble the 1st & 2nd shift fork onto the synchronizer hub for the 1st & 2nd gear use provided at the output shaft side.
- (2) Assemble the 3rd & 4th shift fork onto the synchronizer hub for the 3rd & 4th gear use provided at the input shaft side.

10. Assemble the 1st & 2nd shift head, the 1st & 2nd shift fork shaft and the 3rd & 4th shift fork shaft.

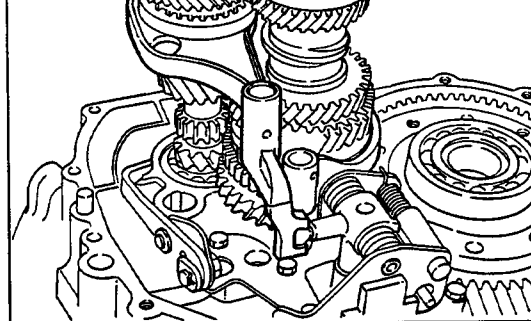


Fig. 3-203

WR-03197

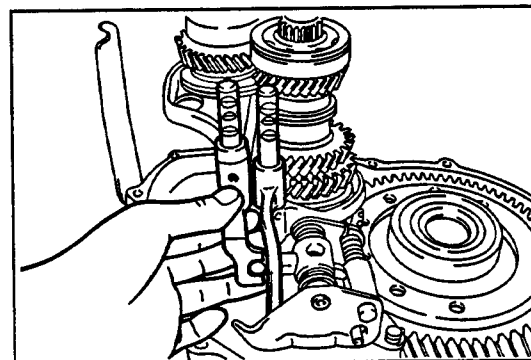


Fig. 3-204

WR-03198

11. Assemble the reverse shift arm head.

- (1) Assemble the arm head in the direction as indicated in the right figure.

NOTE:

It should be noted that the arm head for the 4-speed transmission differs from that for the 5-speed transmission in its shape.

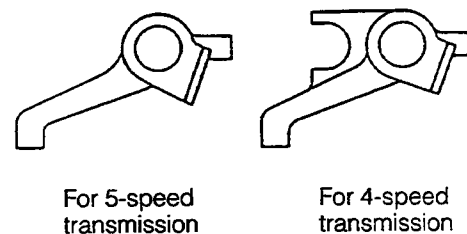


Fig. 3-205

WR-03199

with the edge surface of the shift fork.

14. Assemble the compression spring, reverse idler gear and reverse idler gear shaft.

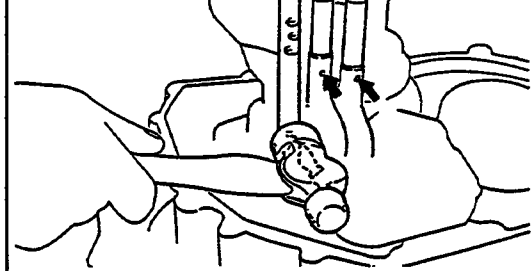


Fig. 3-207

WR-03201

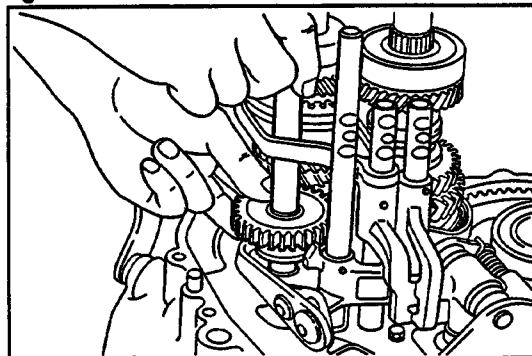
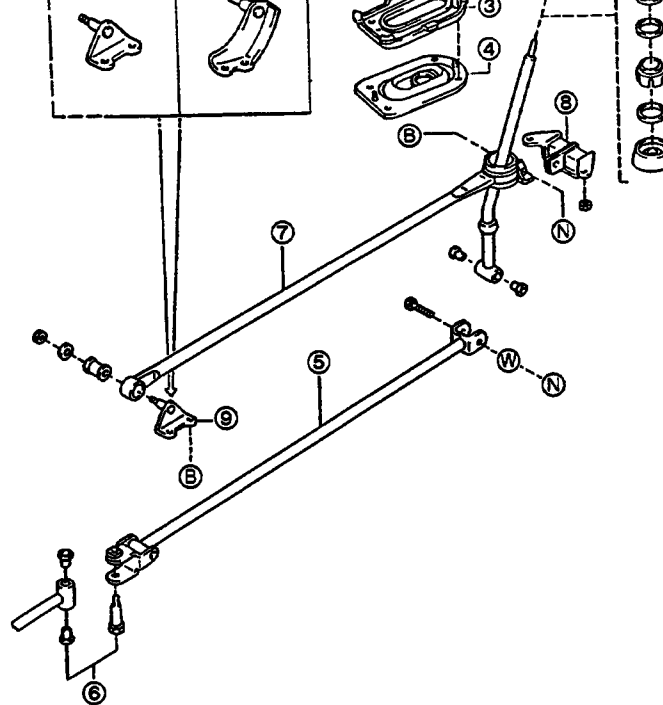


Fig. 3-208

WR-03202



- ① Shift lever knob
- ② Shift & select lever boot
- ③ Dust seal retainer
- ④ Dust boot
- ⑤ Shift & select shaft S/A (transmission side)
- ⑥ Bush

- ⑦ Extension rod S/A
- ⑧ Floor shift support No.2
- ⑨ Floor shift support No.1

Fig. 3-209

WR-03203

3. Disconnect the shift & select shaft subassembly at the transmission side.
4. Remove the bush.

5. Remove the extension rod subassembly and floor shift support No.2.

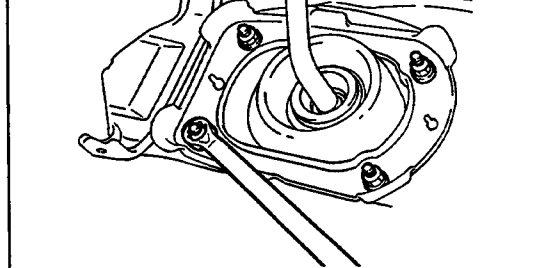


Fig. 3-211

WR-03205

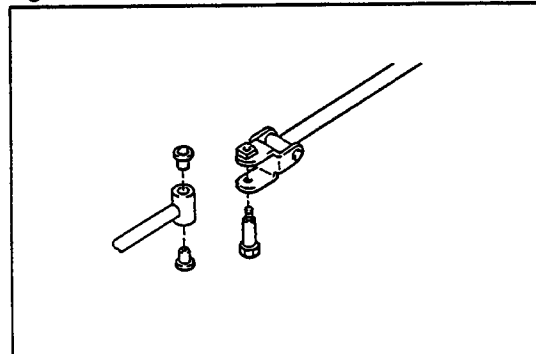


Fig. 3-212

WR-03206

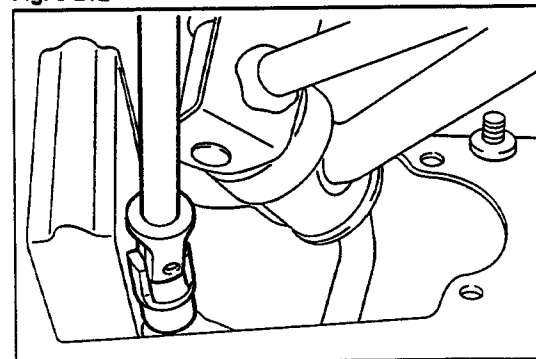


Fig. 3-213

WR-03207

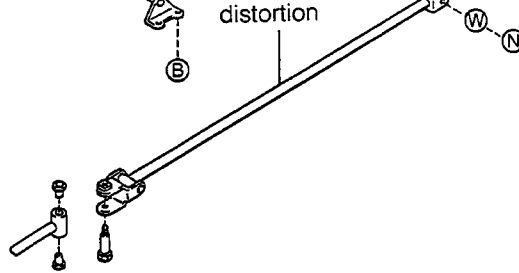


Fig. 3-214

WR-03208

DISASSEMBLY

1. Working from the case side, pull out the hole snap ring by means of the SST.

SST: 09905-87001-000

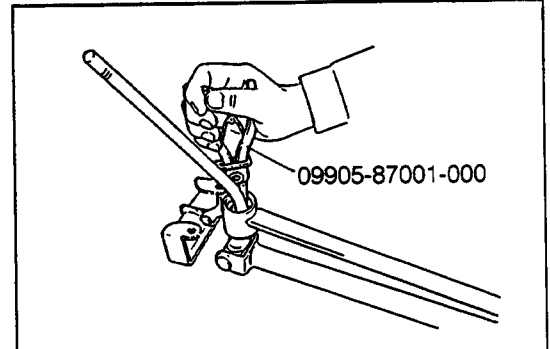


Fig. 3-215

WR-03209

2. Disassemble the plate washer, bush and shift lever seat.

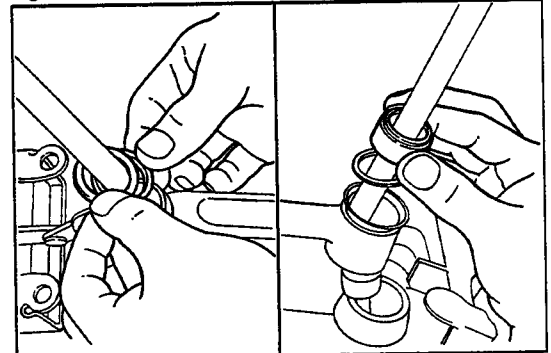


Fig. 3-216

WR-03210

3. Remove the extension rod subassembly from the shift lever subassembly.

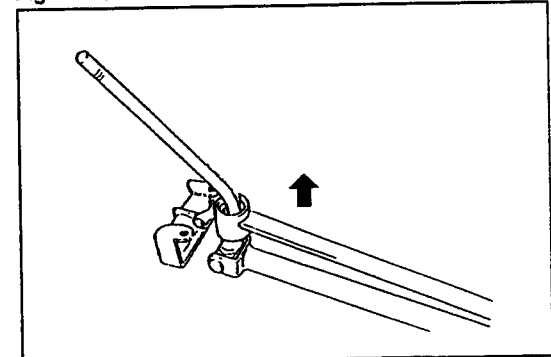


Fig. 3-217

WR-03211

6. Grind off the staked section of the extension rod sub-assembly, using a grinder.
7. Grind off the staked section of the shift & select sub-assembly, using a grinder.

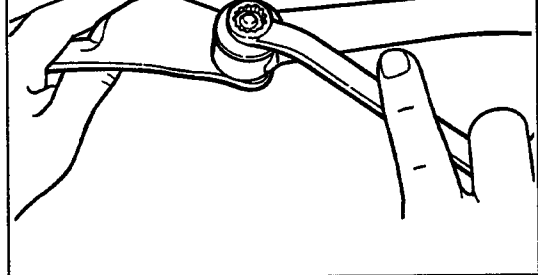


Fig. 3-219

WR-03214

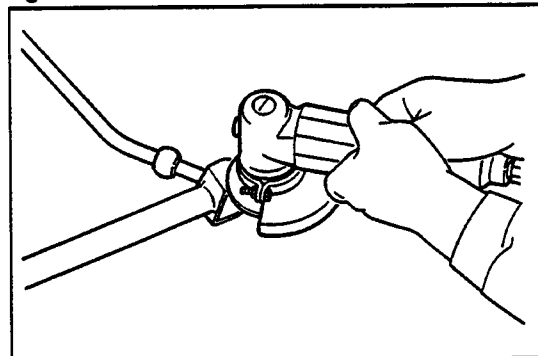


Fig. 3-220

WR-03215

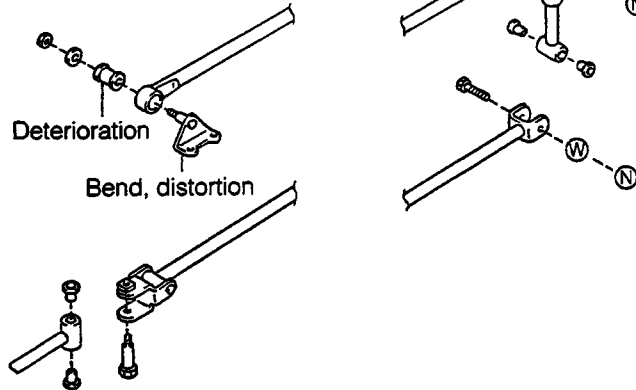


Fig. 3-221

WR-03216

Grease Application Points

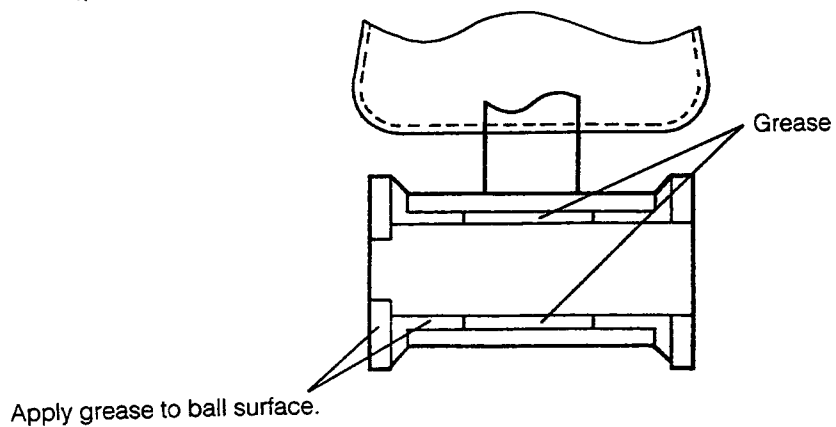
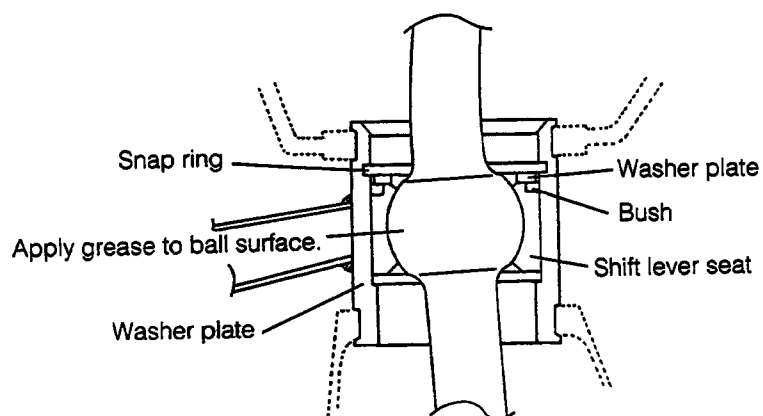


Fig. 3-222

WR-03217

If any difficulty is encountered in inserting the bush, apply soap water to the case side for easier installation.

3. Assemble the floor shift support No.1. Install the nut and washer.

4. Assemble the bush in the shift lever subassembly.

1. Assemble the shift & select shaft.

NOTE:

On replacement parts, the connecting method with the shift lever employs a bolt. Hence, care must be exercised to ensure that the assembling is carried out in the correct direction.

Tightening Torque: 1.0 - 1.6 kg-m (7.2 - 11.6 ft-lb)

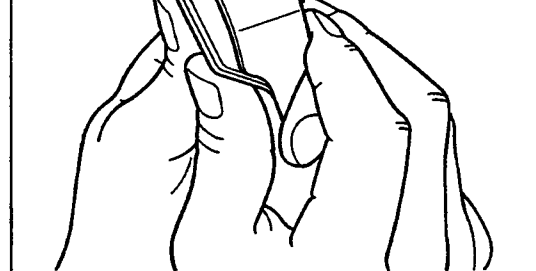


Fig. 3-224

WR-03219

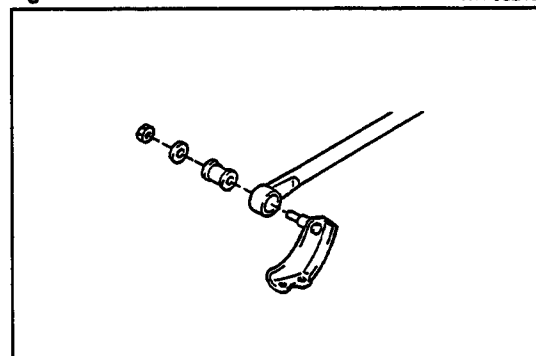


Fig. 3-225

WR-03220

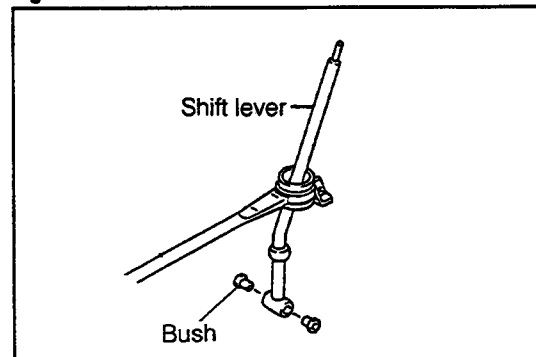


Fig. 3-226

WR-03221

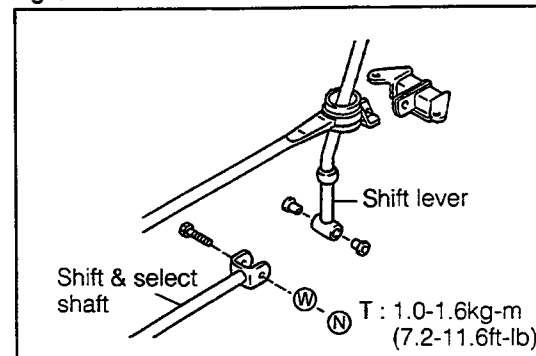


Fig. 3-227

WR-03222

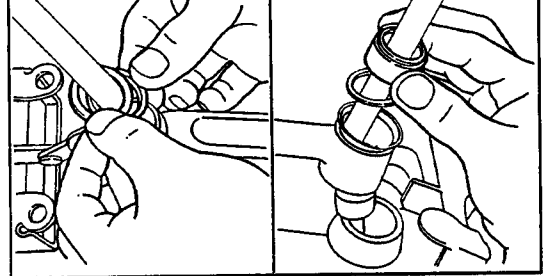


Fig. 3-229

WR-03224

8. Assemble the hole snap ring, using the SST given below.
SST: 09905-87001-000

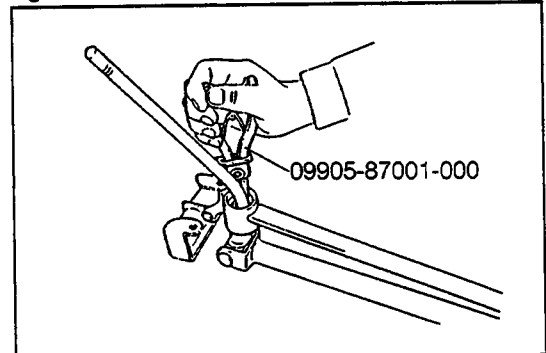


Fig. 3-230

WR-03225

INSTALLATION

1. Install the floor shift support No.2, shift lever and extension rod as a set on the vehicle.

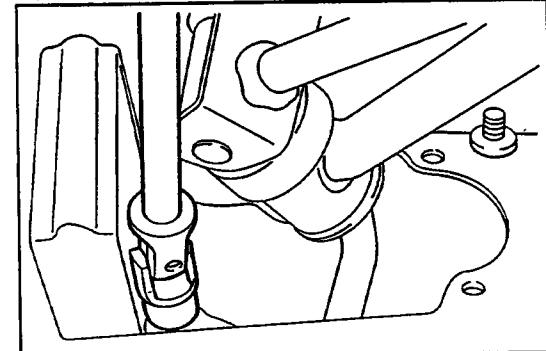


Fig. 3-231

WR-03226

2. Install the extension rod subassembly, onto the transmission.

Tightening Torque: 1.0 - 1.6 kg-m (7.2 - 11.6 ft-lb)

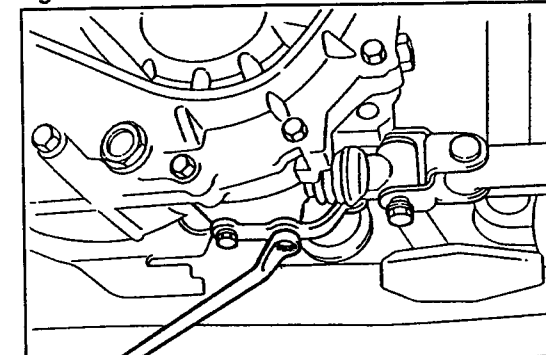


Fig. 3-232

WR-03227

5. Install the shift & select lever boot and the shift lever knob.

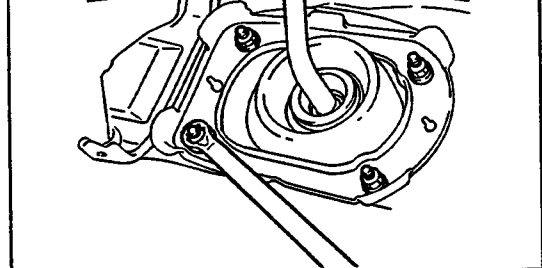


Fig. 3-234

WR-03229

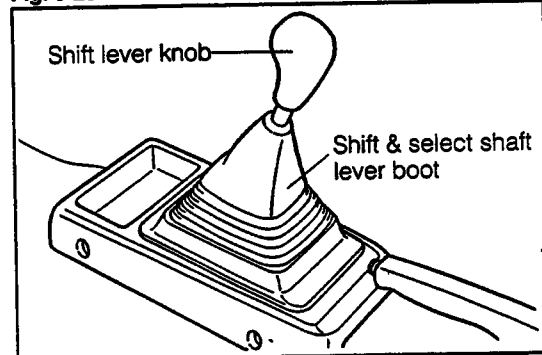


Fig. 3-235

WR-03230

Input Shaft Locking Tool

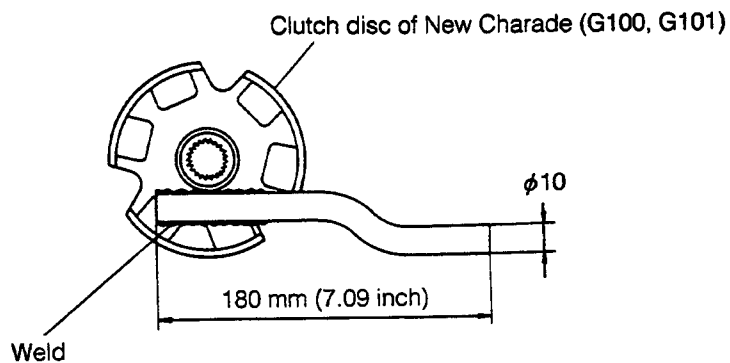


Fig. 3-236

WR-03231

Make the input shaft locking tool with clutch disc of new Charade (G100, G101) as shown in the above illustration.

SECTION 4

AUTOMATIC TRANSMISSION

GENERAL INFORMATION	4- 2	ASSEMBLY OF TRANSMISSION	4-50
SECTIONAL VIEW	4- 2	APPENDIX	4-70
SPECIFICATIONS	4- 3	SHIFT LEVER CONSTRUCTION	4-70
BASIC CHECKS	4- 5	CONTROL CABLE CONSTRUCTION	4-71
ADJUSTMENTS	4- 6	ASSEMBLING POSITION AND DIRECTION	
TESTS	4- 7	OF THRUST BEARING	4-72
UNIT INSPECTION	4-15	LIST OF SPRINGS	4-73
TROUBLE SHOOTING	4-19	LIST OF "O" RINGS	4-73
FLUID CHANGE	4-23	LIST OF BOLTS USED	4-74
TRANSMISSION REMOVAL AND			
INSTALLATION	4-24		
DISASSEMBLY OF TRANSMISSION	4-26		
INSPECTION AND REPAIRS OF			
EACH PART	4-35		
OIL PUMP	4-35		
FORWARD CLUTCH	4-37		
DIRECT CLUTCH	4-40		
VALVE BODY	4-43		

WR-04001

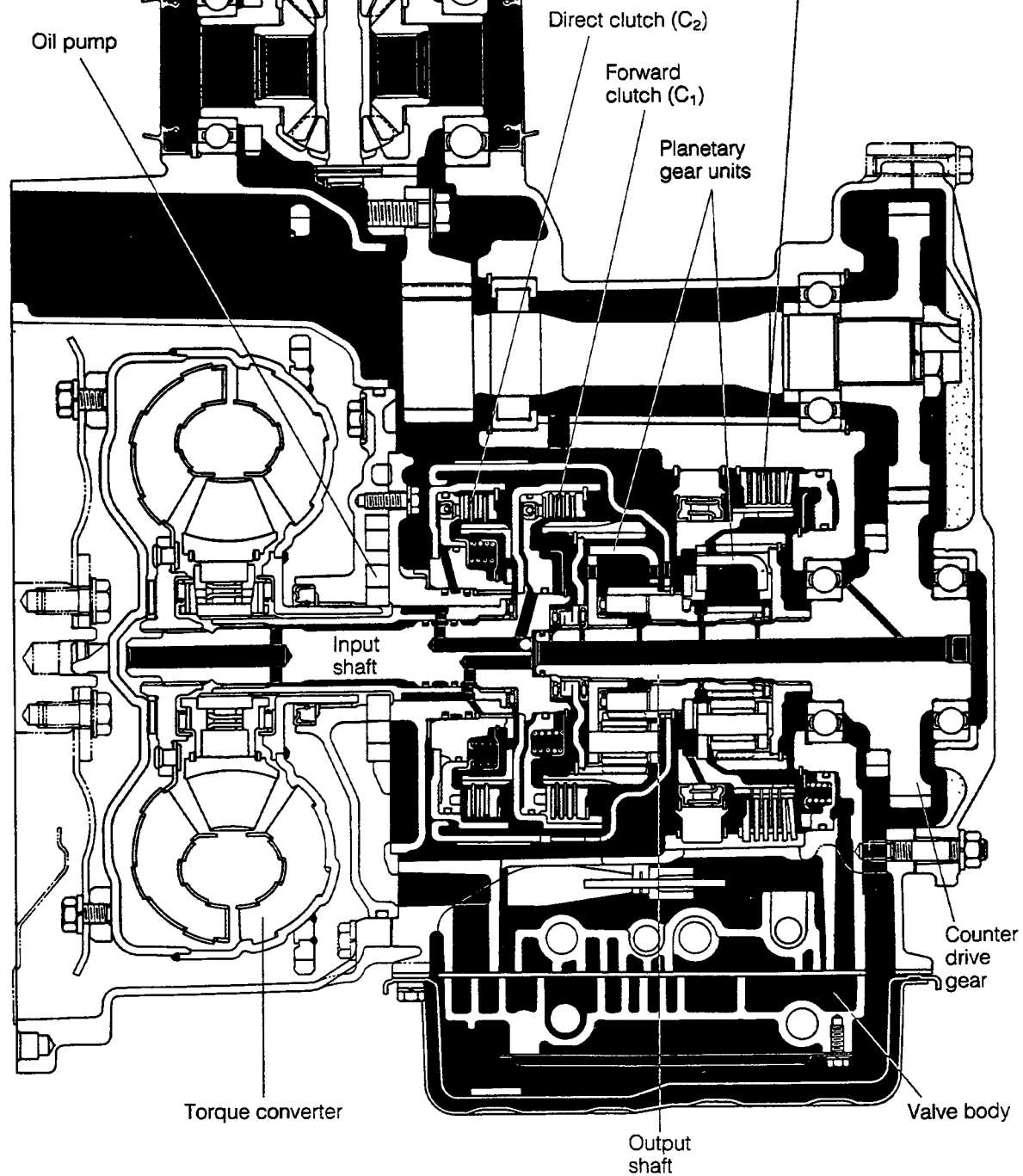


Fig. 4-1

WR-04002

Trans- mission type		Wet type multiple brake	1 set
		One-way clutch	1 piece
	Gear ratio	1st gear: 2.810; 2nd gear: 1.549; 3rd gear: 1.000 reverse gear: 2.296	
	Reduction gear ratio	Reduction gear ratio: 0.980; final gear ratio: 3.872	
	Speedometer	Number of drive gear teeth: 27, Number of driven gear teeth: 24	
	Oil pump	Internal gear type	
	Fluid to be used	Automatic fluid Dexron-II	
	Fluid capacity liter (Imp. qts, US qts)	Approx. 5 (4.4, 5.3)	
Control system	Cooling method	Water-cooled (radiator built-in type)	
	Gear shift control method	Electronic hydraulic pressure control method	
	Automatic gear shift	Three forward speeds, full automatic shift	
	Manual control pattern	P—R—N—D—2—L	

WR-04003

malfunctioning gear shift, and yet you must perform emergency running, you may operate the vehicle, following the procedure given below.

- 1) Disconnect the 2-pole connector (elliptical and white) leading to the solenoid of the transmission.
Secure the disconnected harness leading to the solenoid so that it may not be caught by the drive shaft.
- 2) When the shift lever is selected to the **L**, **2** and **D** ranges progressively in this order, upshift occurs as follows: the 1st gear in the **L** range, the 2nd gear in the **2** range and the 3rd gear in the **D** range.

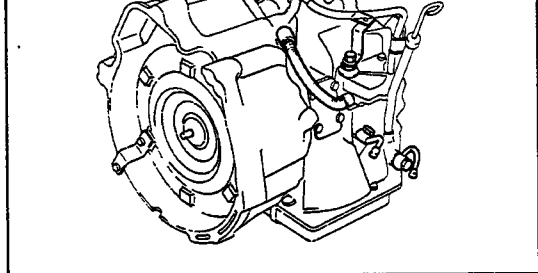
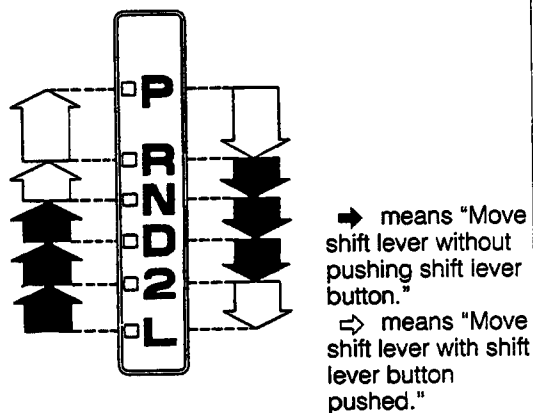


Fig. 4-2

WR-04005

N			
P			
Others			

Shift Lever Position Check



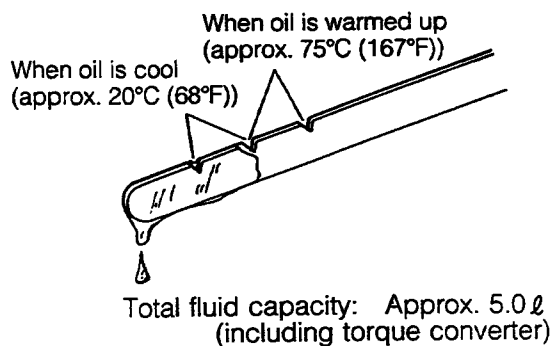
1. Start the engine. Release the parking brake. Ensure that the vehicle moves forward when the shift lever is shifted from the **[N]** range to the **[D]**, **[2]** or **[L]** ranges. Also, ensure that the vehicle moves backward when the shift lever is shifted to the **[R]** range.
2. Stop the engine, and apply the parking brake.
3. Set the shift lever from the **[N]** range to each of the **[D]**, **[2]** and **[L]** ranges.
 Make sure that the shift lever can be operated smoothly and shifted to each range with a good detent feeling. Also ensure that the position indicator functions properly. Moreover set the engine key switch to the **[ON]** position. Ensure that the position indicator in the combination meter functions properly.
4. Set the engine key switch to the **[ON]** position. Switch the shift lever from the **[P]** or **[N]** range to the **[R]** range. Ensure that the backup lamp goes on.

Engine Idling Speed Check

Specified Value: 800 - 850 rpm

1. Apply the parking brake.
2. Attach an engine tachometer.
3. With the **[N]** range selected, warm up the engine.
4. Ensure that the engine idling speed complies with the specification.

Automatic Transmission Fluid Level Check



1. Apply the parking brake.
 2. With the brake pedal depressed and the engine running at the idling speed, select the shift lever all through the ranges from the **[P]** to **[L]**. Finally, return the shift lever to the **[P]** range.
 3. Take out the level gauge and wipe off the fluid with a cloth. Insert the level gauge and take it out again. Check to see if the fluid level is between the upper and lower limits.
- NOTE:**
1. Perform the check when the fluid temperature is 70 - 80°C (158 - 176°F), which is the normal operating temperature.
 2. If the fluid level is low, check for fluid leakage.
 3. Care must be exercised as to a too-low fluid level, for it will cause various troubles.

Solenoid Valve Connector Check Computer Connector Check

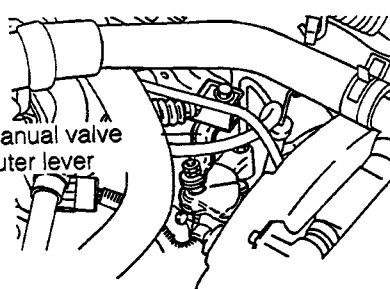
1. Check to see if any connector is disconnected.

Speedometer Check

1. Check to see if the speedometer pointer is moving.
2. Check to see if the vehicle speed indicator is normal.
3. Check to see if the vehicle speed sensor is producing an output. (See page 4 - 15.)

WR-04006

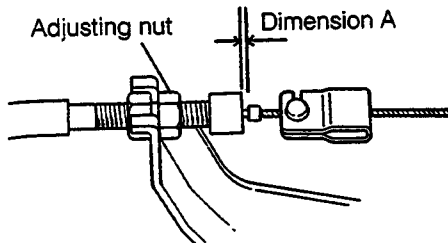
Manual valve
outer lever



detent feeling and that the position indicator functions properly for each range. Also, make sure that the vehicle moves forward in the **D**, **2** and **L** ranges, whereas the vehicle backs up in the **R** range.

Throttle Cable Adjustment

Adjusting nut Dimension A

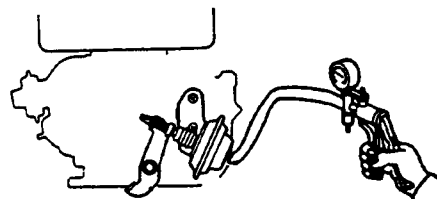


Adjust the adjusting nut in such a way that the dimension A complies with the specified value when the throttle is fully closed.

Specified Value: 0 - 0.5 mm (0 - 0.02 inch)

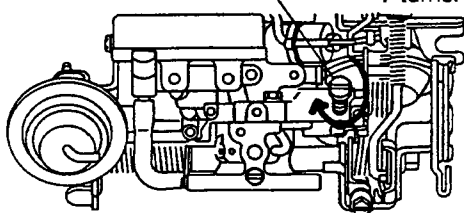
Tightening Torque: 0.85 - 1.55 kg-m (6.15 - 11.2 ft-lb)

Throttle Sensor Adjustment

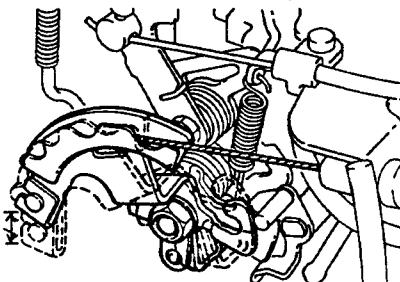


Throttle Adjusting Screw

Screw-in
7 turns.

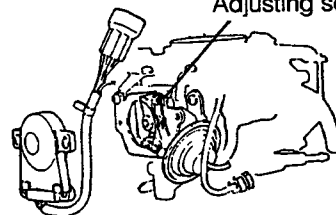


10 mm



1. Using a MityVac (a hand vacuum pump), keep the dashpot in a contracted state.
2. Slacken the throttle adjusting screw so that it may be once cleared from the throttle shaft arm.
3. Screw-in the throttle adjusting screw until it comes in contact with the throttle shaft arm. Further screw-in the throttle adjusting screw 7 turns. (At this point, the periphery of the throttle lever travels 10 mm (0.39 inch).)
4. Adjust the throttle sensor so that the switch "S₄" - to - "earth" continuity of the throttle sensor may be changed from [OFF] to [ON] at this opening degree of the throttle valve. Perform this adjustment by turning the adjusting screw located at the back of the throttle sensor, using the SST. (See page 4-14.)
5. Remove the MityVac. Back off the throttle adjusting screw so that the idling speed may be adjusted to 800 - 850 rpm.

Adjusting screw



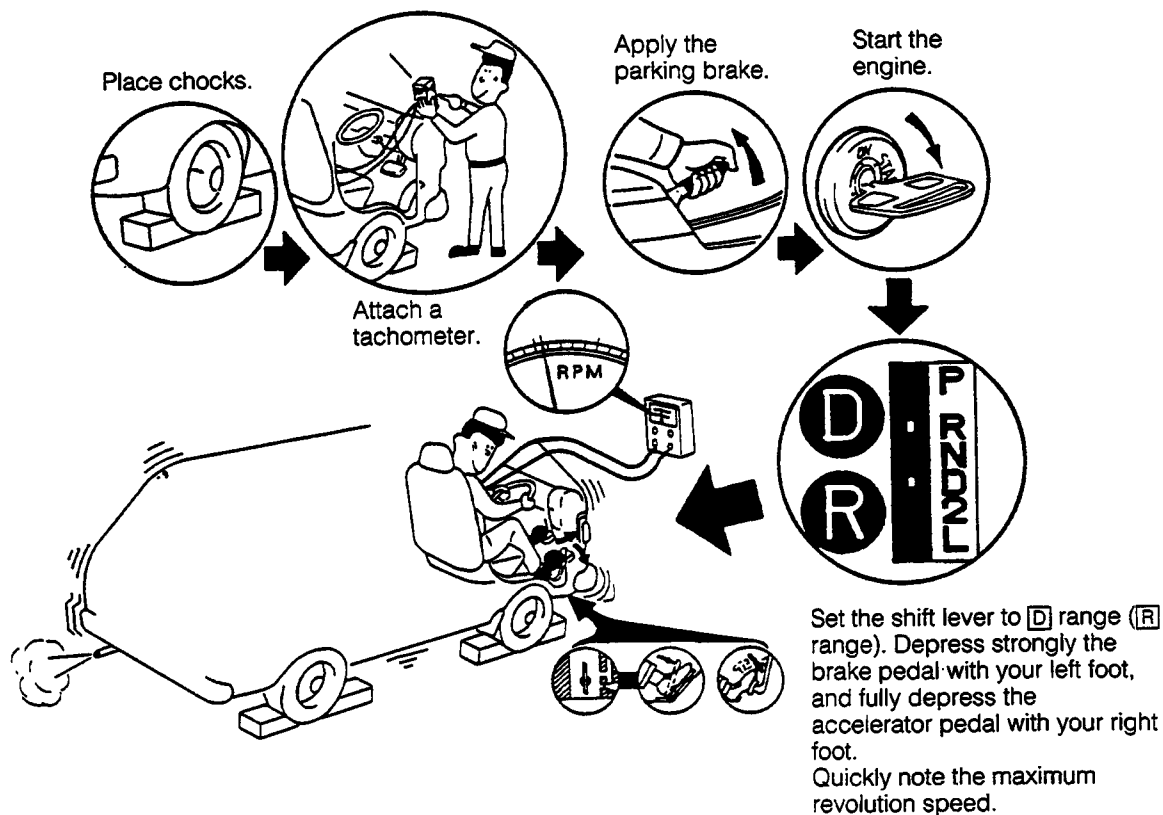


Fig. 4-3

WR-04008

Specified stall revolution speed:

2100 - 2300 rpm

Reference: If the measured value does not conform to the specification, the following are possible causes.

Case where stall revolution speeds for both ranges are the same, but lower than the specified value	1. Lack of engine output 2. Torque converter malfunctioning
Case where stall revolution speed for D range is greater than the specified value	1. Forward clutch slipping 2. One-way clutch of torque converter malfunctioning 3. Line pressure too low
Case where stall revolution speed for R range is greater than the specified value	1. Direct clutch slipping 2. 1st & reverse brake slipping 3. Line pressure too low

WR-04009

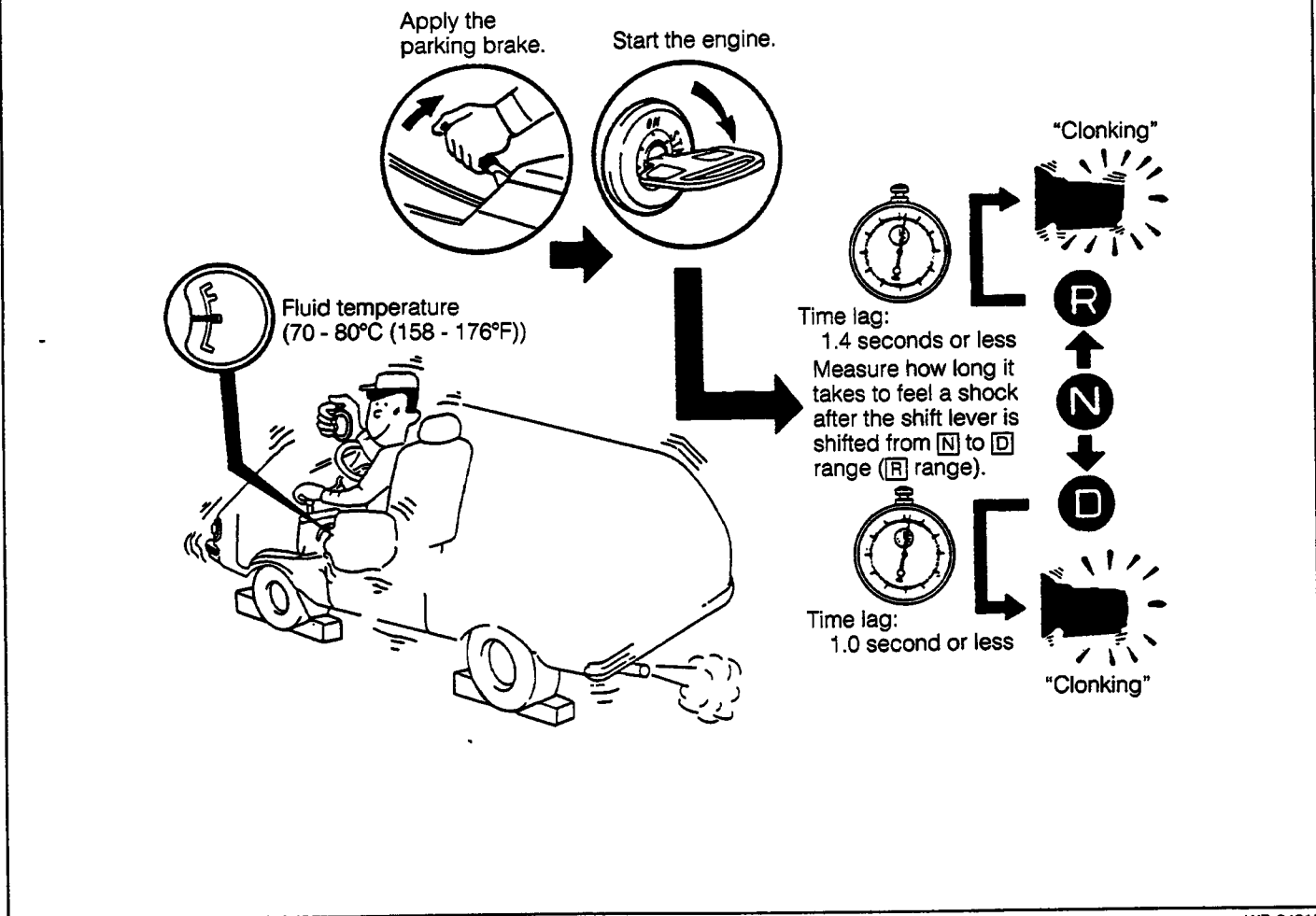


Fig. 4-4

WR-04010

Specified time lag

N → D Range: 1.0 Second or Less

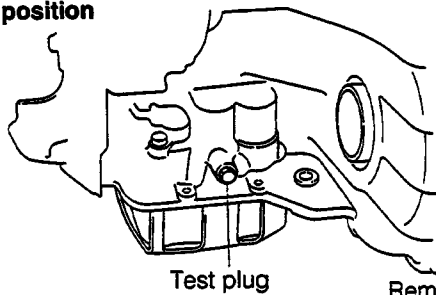
N → R Range: 1.4 Seconds or Less

Reference: If the measured value does not conform to the specification, the following are possible causes.

Case where time lag for N to D shift is greater than the specified value	1. Forward clutch worn 2. Line pressure too low
Case where time lag for N to R shift is greater than the specified value	1. Direct clutch worn 2. First & reverse brake worn 3. Line pressure too low

WR-04011

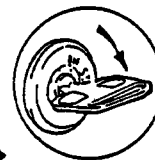
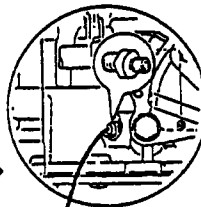
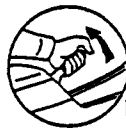
Test plug position



Test plug

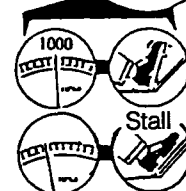
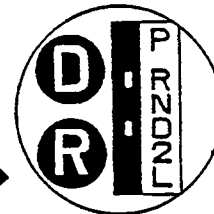
Remove the test plug.
Attach a hydraulic
pressure gauge.

Apply the
parking brake.



Start the
engine.

Shift to **R** range
(**D** range).



While depressing the brake pedal strongly
with your left foot, manipulate the
accelerator pedal with your right foot.
Measure the hydraulic pressure.

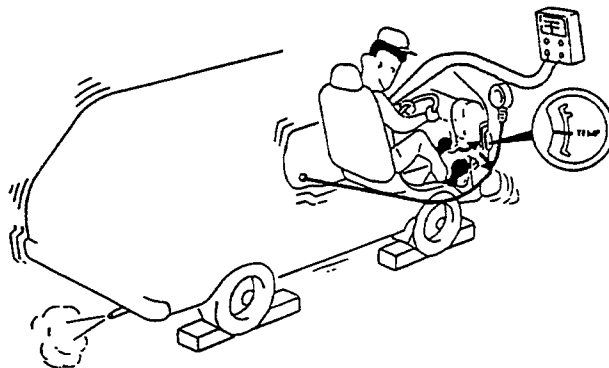


Fig. 4-5

Case where hydraulic pressure for each range is lower than the specified value	1. Oil pump faulty 2. Regulator valve malfunctioning 3. Throttle valve malfunctioning 4. Throttle cable improperly adjusted
Case where hydraulic pressure for ☐ D range is lower than the specified value	1. Forward clutch malfunctioning 2. Oil leakage at ☐D range circuit
Case where hydraulic pressure for ☐ R range is lower than the specified value	1. Direct clutch malfunctioning 2. First & reverse brake malfunctioning 3. Oil leakage at ☐R range circuit

WR-04013

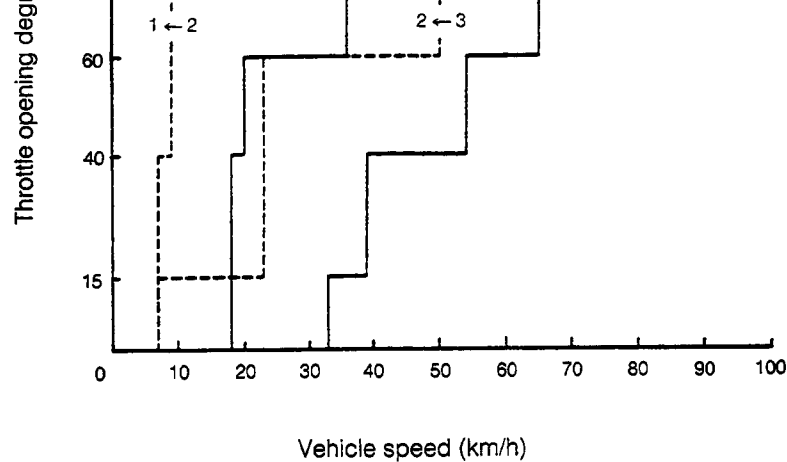


Fig. 4-6

WR-04014

D range test

1. From the standstill state, start the vehicle by fully depressing the accelerator pedal (in **D** range). Ensure that the upshift from 1st gear to 2nd gear occurs at a vehicle speed of approx. 50 km/h.
2. From the standstill state, start the vehicle by depressing the accelerator pedal about halfway. Ensure that the upshift from the 2nd gear to the 3rd gear occurs at a vehicle speed of approx. 54 km/h.

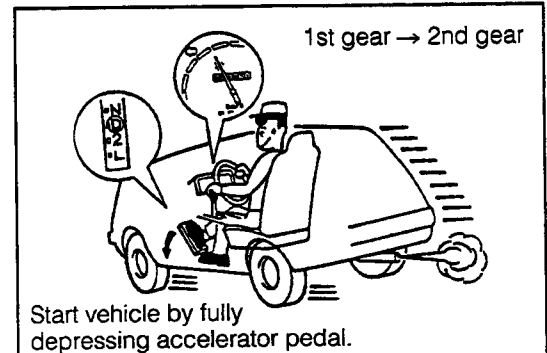


Fig. 4-7

WR-04015

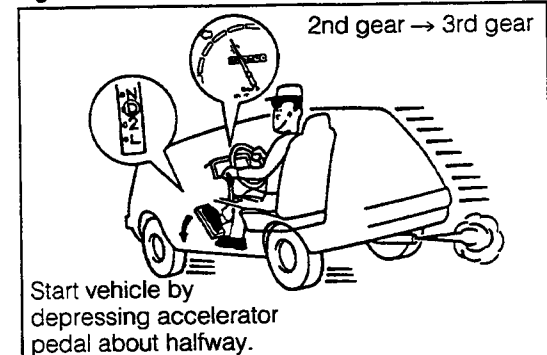
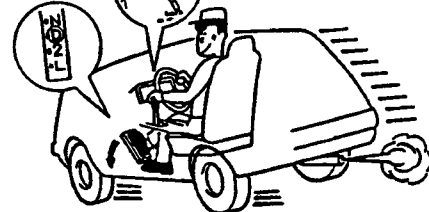


Fig. 4-8

WR-04016

Ensure that the downshift from the 2nd gear to the 1st gear occurs.



Depress the accelerator pedal fully.

Fig. 4-10

WR-04018

Trouble symptom	Possible causes
No upshift from 1st gear to 2nd gear takes place.	1. 1 – 2 shift valve malfunctioning 2. Solenoid valve No. 2 malfunctioning 3. Shift control system malfunctioning
No upshift from 2nd gear to 3rd gear takes place.	1. 2 – 3 shift valve malfunctioning 2. Solenoid valve No. 1 malfunctioning 3. Shift control system malfunctioning
Incorrect shift points	1. 1 – 2 and 2 – 3 shift valves malfunctioning 2. Shift control system malfunctioning
Excessive shocks	1. Idling speed too high 2. Line pressure too high 3. Accumulator malfunctioning

WR-04019

Case where engine brake will not work in [L] range	First & reverse brake malfunctioning
---	--------------------------------------

(3) Manual running test

Remove the harness of the solenoid valves No. 1 and No. 2 at its connector section (white, 2-pole). Run the vehicle by manually shifting the shift lever to each range. Check to see if the gear shifts occur in accordance with each range.

NOTE:

Secure the disconnected harness, using vinyl tape or the like, so that it may not be caught by the rotating sections.

Specifications

Shift lever position	D	2	L
Gear position	3rd	2nd	1st

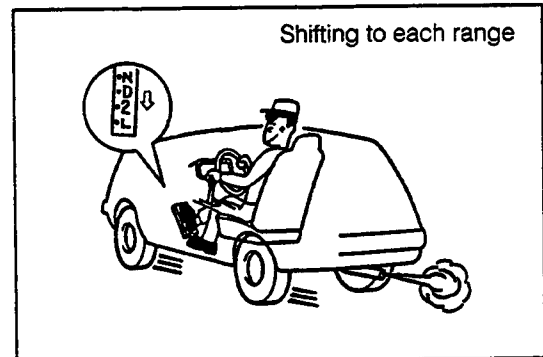


Fig. 4-12

WR-04021

(4) **[P]** range test

1. Place the vehicle on a grade (about 5 degrees or more) with the vehicle in an uphill state. Set the lever to the **[P]** range and release the parking brake lever.
Ensure that the vehicle will not move by the operation of the parking lock mechanism.
2. Repeat this test in the same procedure for the vehicle facing downhill.
3. Check to see if the vehicle moves when the shift lever is changed from the **[P]** range to other ranges.

WR-04022

How to use SST

Connect the transmission control computer check subharness between the computer and the connector of the harness at the vehicle side. This subharness is used for checking input/output voltages of each terminal.

When measuring the connector terminal voltage, use a circuit tester with adequate internal resistance of more than 40 k Ω . If a circuit tester with small internal resistance is used, no correct voltage is indicated. After completion of the connection, confirm the following items and perform the check.

1. Continuity exists between the body earth and each of the earth terminals ⑨ and ⑳.
2. Regardless of the key switch position, the battery voltage is applied across ㉒ and ⑨ (earth).
3. When the key switch is set to the [LOCK] and [ACC] position, no voltage is applied across ㉒ and ⑨ (earth); when set to the [ON] position, the battery voltage is applied.

Computer terminals

⑫	⑪	⑩	⑨	⑧	⑦	⑥	⑤	④	③	②	①
IG	L1	L2	E01	S3	T1	SPD1	P	D	2	L	BR
ST	FP	+B	E1	S4	S1	Ne	S2	SPD2	TV	N	R
㉔	㉓	㉒	㉑	㉐	㉏	㉍	㉌	㉋	㉊	㉉	㉈

WR-04024

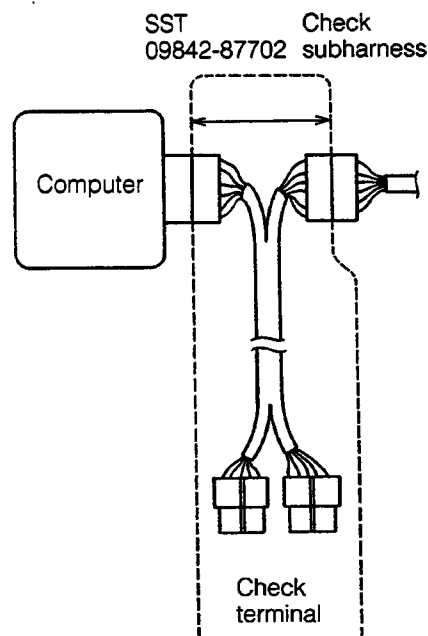
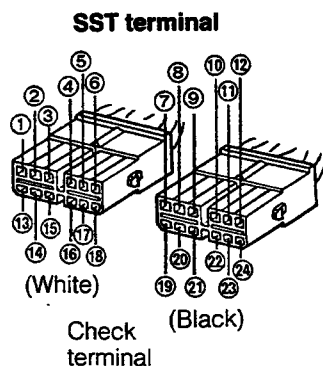


Fig. 4-13

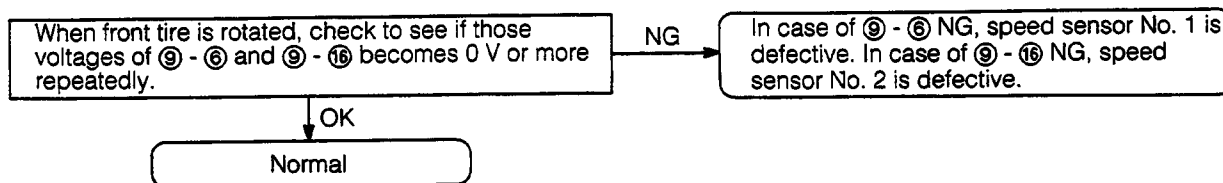
5	5	Abnormality in signal input of throttle sensor	P 4-17
6	6	Abnormality in shift position signal	P 4-16
7	7	Abnormality in pulse signal of vehicle speed sensor No. 2	P 4-15

WR-04025

UNIT INSPECTION

1. VEHICLE SPEED SENSOR CHECK (Refer to page 3-47 of the Technical Information No. 9331-GE)

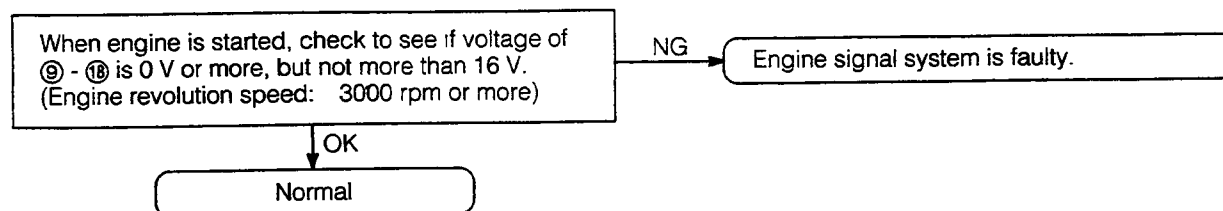
Perform this check with the key switch set to the [ON] position, but without starting the engine.



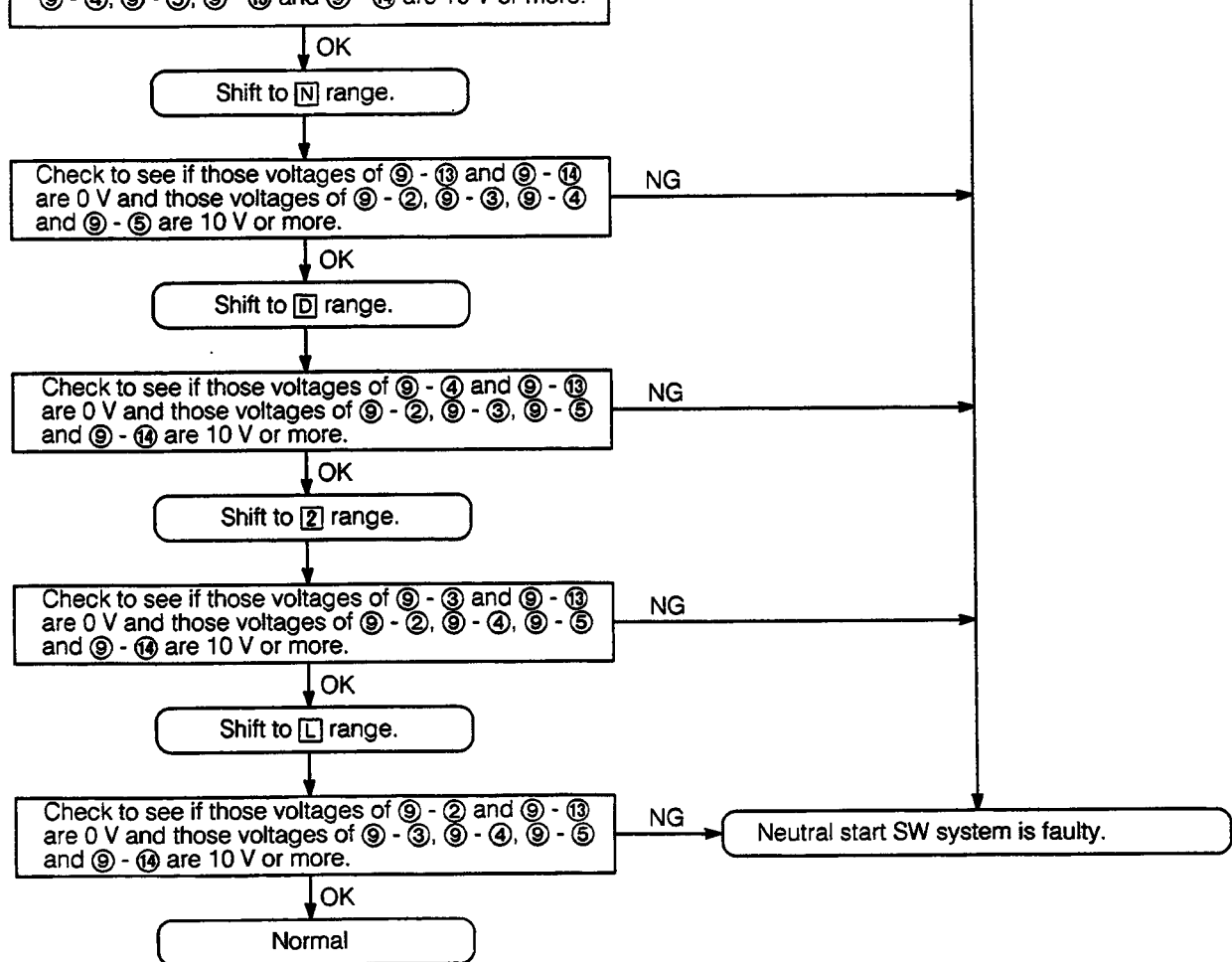
WR-04026

2. IG PULSE CHECK

Perform this check after starting the engine.



WR-04027



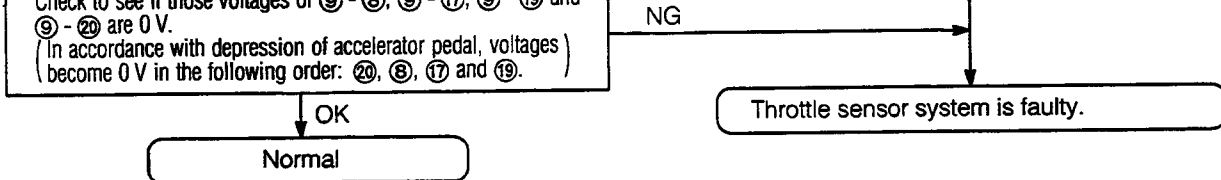
WR-04028

Voltage between ⑨ (E01) and each terminal

Terminal No. Shift position	⑤ _P	⑬ _R	⑭ _N	④ _D	③ ₂	② _L
P	L	L	H	H	H	H
R	H	H	H	H	H	H
N	H	L	L	H	H	H
D	H	L	H	L	H	H
2	H	L	H	H	L	H
L	H	L	H	H	H	L

L: 0V H: 10V or more

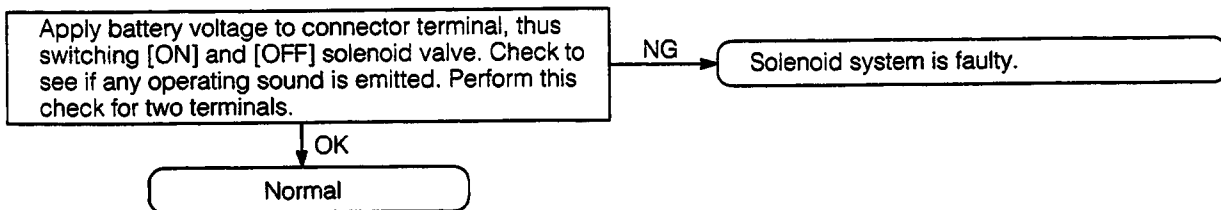
WR-04029



WR-04030

5. SOLENOID VALVE CHECK (2 POINTS) (Refer to page 3-48 of the Technical Information No. 9331-GE)

With the connector of the solenoid harness disconnected, apply the battery voltage to the connector at the transaxle side. Check to see if any operating sound occurs.



WR-04031

computer proper should be soaked by water or the like, do not reuse the computer proper.

NOTE:

The computer is installed on the upper side of the glove compartment box.

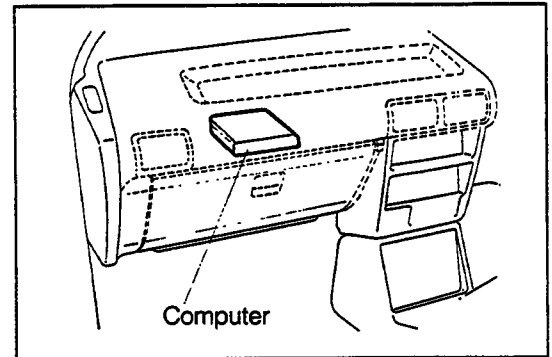
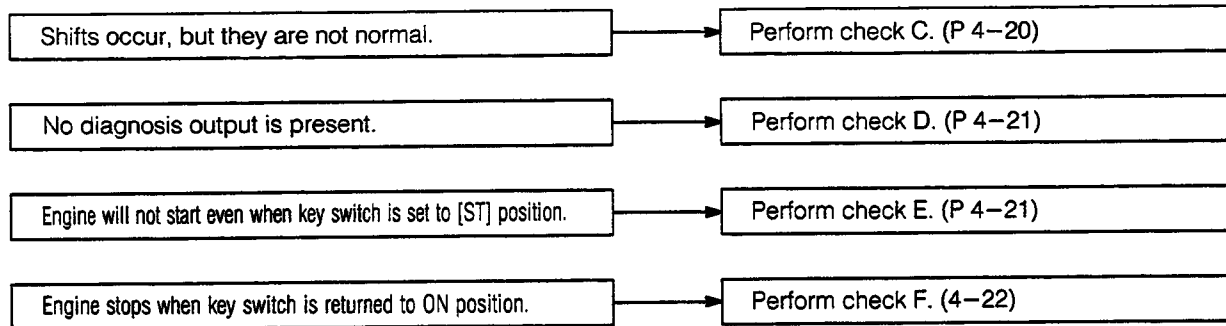


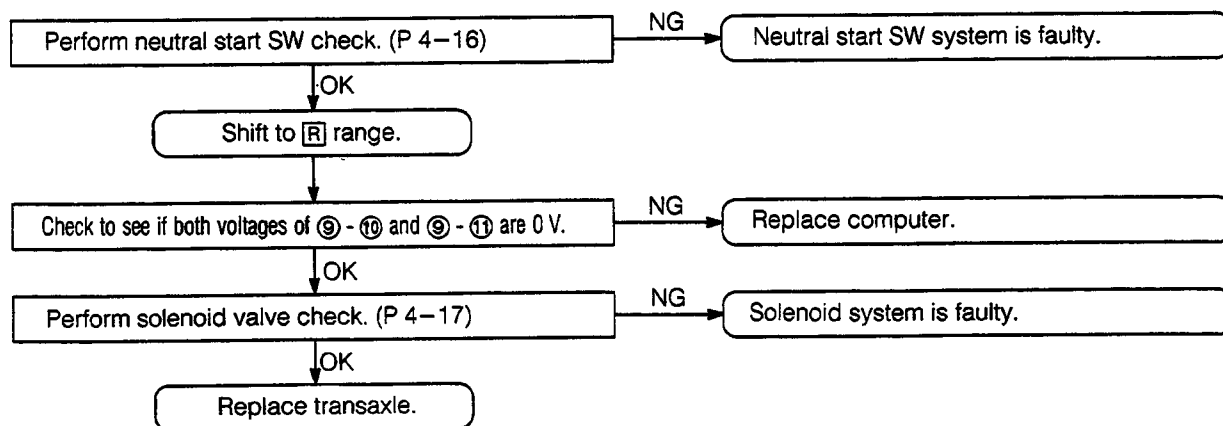
Fig. 4-14

WR-04032



WR-04033

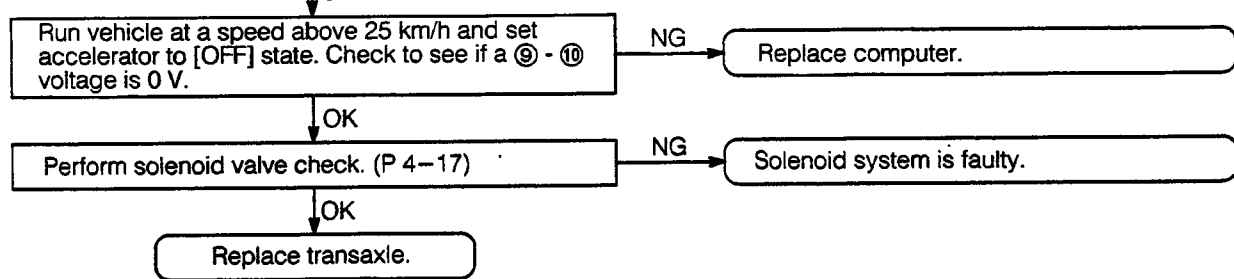
1. CHECK A



NOTE:

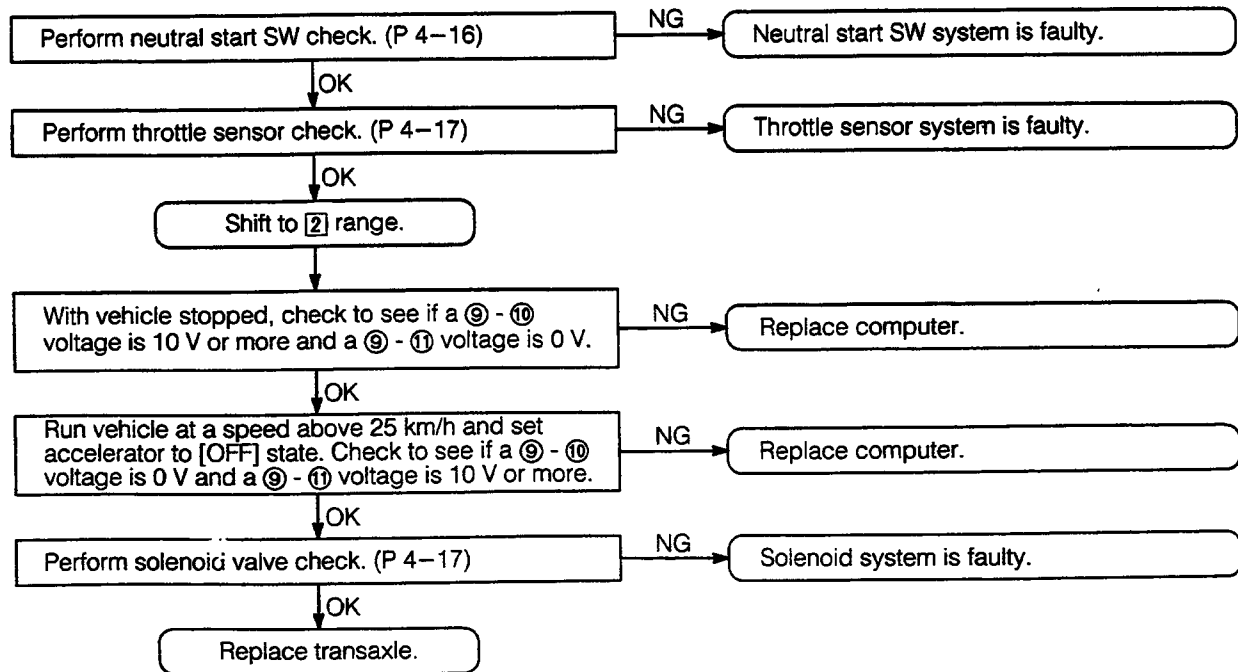
Here, “So-and-so system is faulty” means not only that sensors are faulty but also that there are disconnected connector, open wire, short and so forth at the vehicle side, as viewed from the computer side.

WR-04034

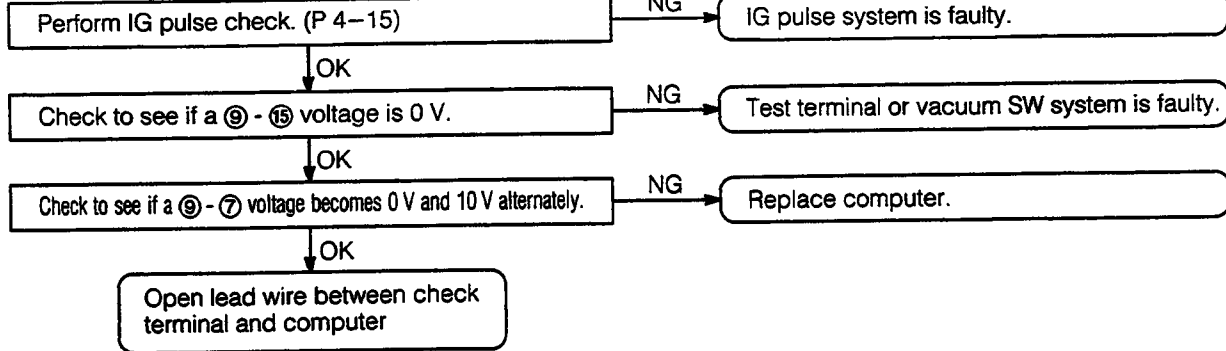


WR-04035

3. CHECK C



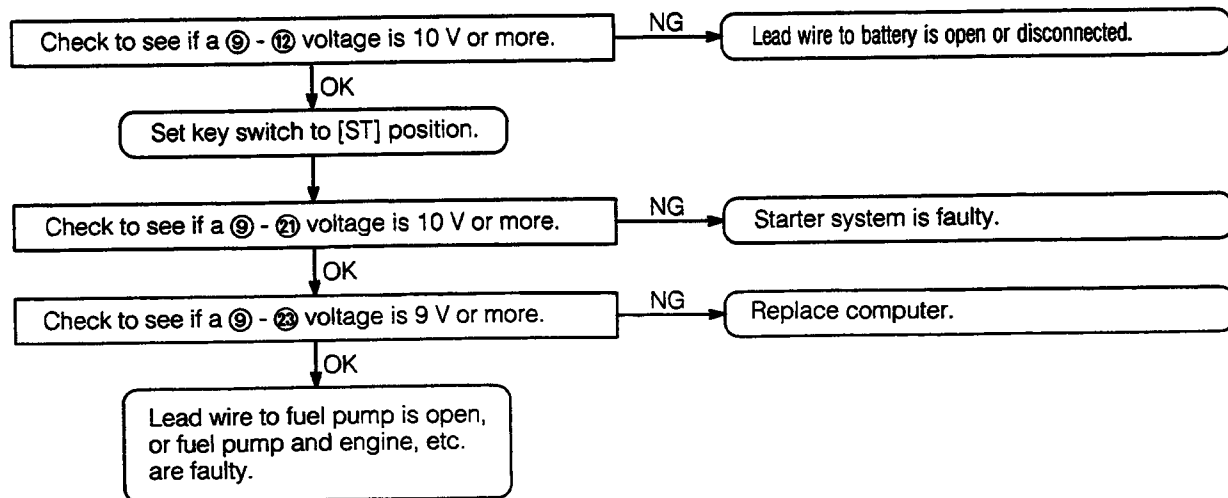
WR-04036



WR-04037

5. CHECK E

Perform this check with the key switch set to the [ON] position, but without starting the engine.



WR-04038

OK

Lead wire to fuel pump is open,
or fuel pump and engine, etc.
are faulty.

WR-04039

7. MEMORY ELIMINATION OF DIAGNOSIS CODE

After repairing abnormal part, remove the fuse (tail) or battery negative ⊖ terminal for more than 10 seconds in order to cancel the memory.

4. While the vehicle is still in a raised state, check the transmission and adjacent areas (including oil hose and oil cooler) for oil leakage, loose connecting sections or damage.
5. Pull out the oil level gauge from the oil filler tube. Add 1.5 ℓ (2.64 Imp.pt) of new fluid through the oil filler tube.

NOTE 1:

When the automatic transmission has been overhauled and the torque converter is to be reused, add 3.5 ℓ (6.2 Imp.pt) of new automatic fluid.

NOTE 2:

As for the torque converter and automatic transmission which contain no fluid at all, add 5 ℓ (8.8 Imp.pt) of new automatic fluid.

6. Check the fluid level only after the vehicle has reached the running state (70 - 80°C, 158 - 176°F).

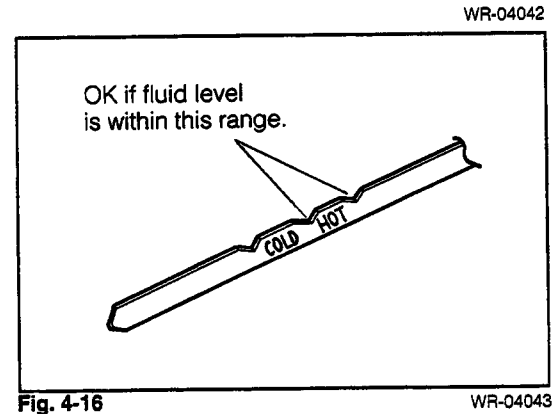


Fig. 4-16

10. Remove the control cable from the transmission. (See APPENDIX.)
11. Remove the starter motor.
12. Drain out the automatic fluid from the transmission.
13. Disconnect the fluid inlet/outlet pipes. Then, hang them by means of wire so that no fluid may flow out from the oil cooler and hose.
14. Jack up or lift up the vehicle.
15. Remove the exhaust front pipe.
16. Remove the clutch housing undercover.
17. Remove the six bolts at the drive plate.

NOTE:

It is advisable to lock the drive plate by inserting a common screwdriver to the drive plate gear through the clutch housing cut-out section.

18. Remove the right and left drive shafts in accordance with the "DRIVE SHAFT DISASSEMBLY" of the SECTION 5 (FRONT AXLE).
19. In order to remove the transmission, securely support the engine and transmission separately, using jacks or the like.
20. Remove the engine lower/left mounting.
21. Remove the bolt connecting the engine and transmission.
22. Remove the transmission from the engine. Carefully lower the transmission.

NOTE 1:

When removing the transmission from the engine, be very careful not to apply excessive forces to the drive plate or the torque converter.

NOTE 2:

After the transmission has been removed, keep the transmission in such a way that the oil pan may come at the bottom so that no fluid may flow out.

WR-04046

NOTE 3:

Tighten the six bolts on the drive plate and the torque converter to the following torque.

Tightening Torque: 1.5 - 2.2 kg-m (11 - 16 ft-lb)

NOTE 4:

Tighten the bolts attaching the transmission to the engine to the following torque.

Tightening Torque: 5.0 - 7.0 kg-m (36 - 51 ft-lb)

NOTE 5:

Tighten the lower/left mounting bracket to the following torque.

Tightening Torque: 3.0 - 4.5 kg-m (22 - 33 ft-lb)

NOTE 6:

Install the right and left drive shafts in accordance with the "ASSEMBLY OF DRIVE SHAFT" of the SECTION 5 (FRONT AXLE).

NOTE 7:

After completion of the installation, check the automatic fluid level with the vehicle placed on a level place.

5. Do not remove any parts unnecessarily.
6. Completely peel off any trace of the gaskets from the parts, making sure that no damage is made to the gasket mate surfaces.
7. When removing the snap rings, care must be exercised not to damage other parts.
8. When removing the bearings, be very careful not to apply forces to the balls and rollers.
9. When disassembling the transmission case, rear cover, oil pump, housing, valve body and so forth, never pry them off by a common screwdriver. Instead, disassemble them by lightly tapping them using a plastic hammer.

1. Remove the torque converter.

NOTE:

Be sure to receive fluid which may leak with a pan or the like.

WR-04048

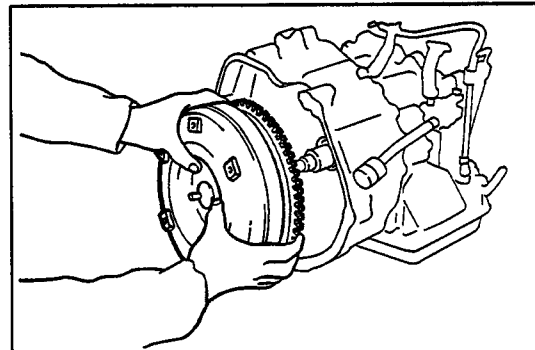


Fig. 4-19

WR-04049

2. Remove the oil filler tube and oil level gauge.

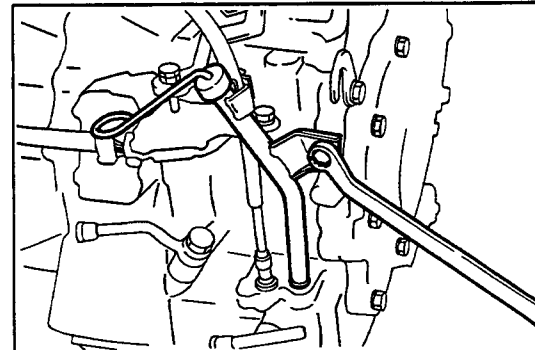


Fig. 4-20

WR-04050

3. Remove the drain plug and drain out the transmission fluid.

NOTE:

Completely drain out the fluid remaining inside the differential case by tilting it in various directions.

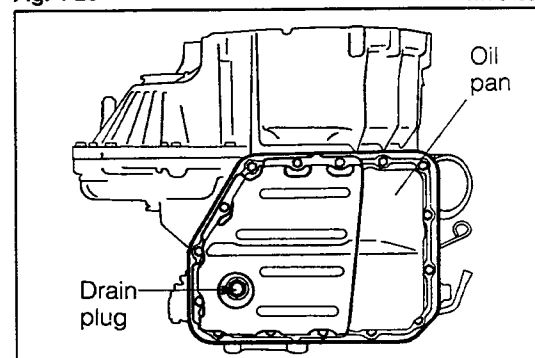


Fig. 4-21

WR-04051

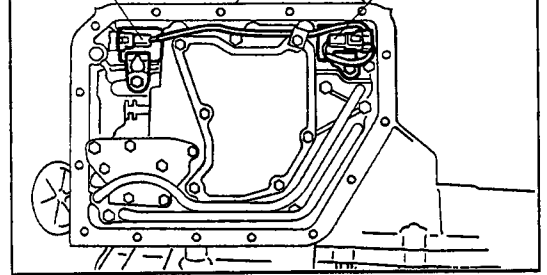


Fig. 4-23

WR-04053

6. Remove the oil tube.

NOTE:

Raise the end of the tube, using a common screwdriver.

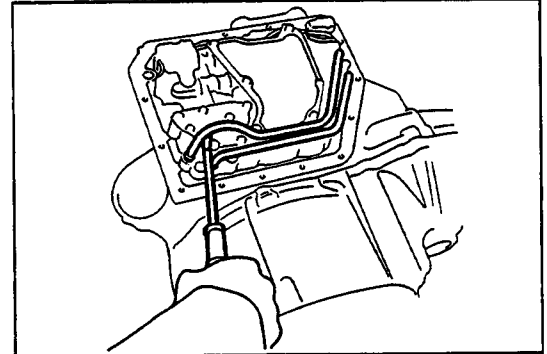


Fig. 4-24

WR-04054

7. Remove the throttle cable from the throttle valve cam.

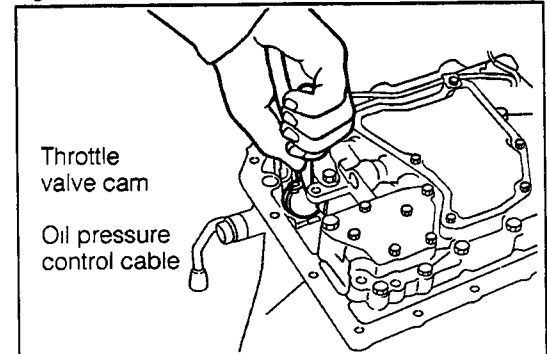


Fig. 4-25

WR-04055

8. Remove the valve body and oil strainer.

NOTE:

Remove the 11 bolts indicated in the figure.

9. Remove the throttle cable from the transmission case.

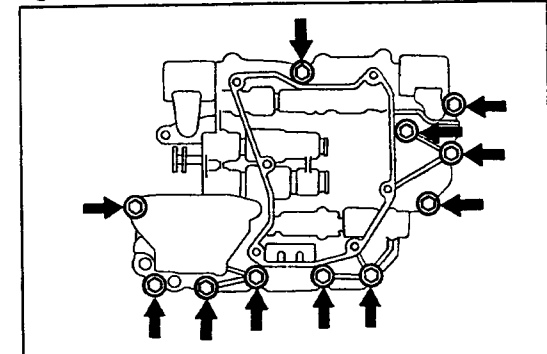


Fig. 4-26

WR-04056

- (1) Prior to the removal, shift to **[N]** range and scribe marks between the manual valve control lever and the neutral start switch and between the switch and the switch attaching position of the case in order to be easy to install.
- (2) Remove the manual valve control lever and the neutral start switch.
- (3) Remove the case side cover and the gasket.

11. Check of the 2nd brake piston rod stroke

- (1) Scribe a mark on the piston rod.
- (2) Apply compressed air into the oil hole indicated in the right figure and measure the rod stroke.

Specified Value: 1.5 - 3.0 mm (0.059 - 0.118 inch)

(The length of difference (A) represents the rod stroke.)

- (3) If the measured value does not comply with the specification, select a rod from the table below and replace it. Or replace the brake band.

Evaluation	Piston rod length	Identification mark
Too short	121.3 mm (4.77 inches)	Not provided
Too long	122.7 mm (4.83 inches)	Provided (See figure below.)

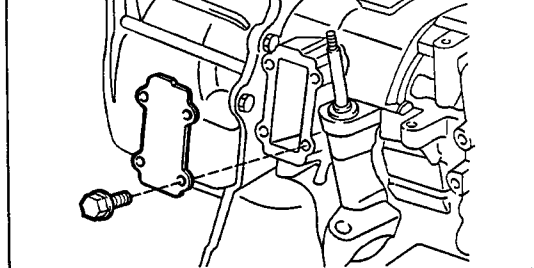


Fig. 4-28

WR-04058

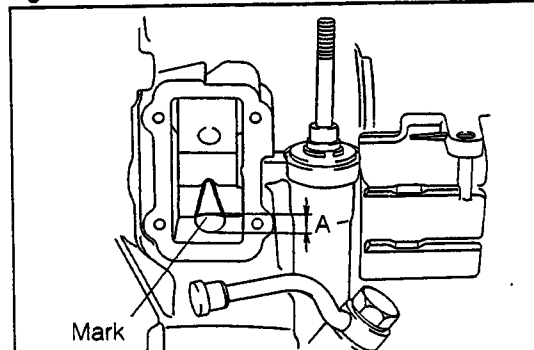


Fig. 4-29

WR-04059

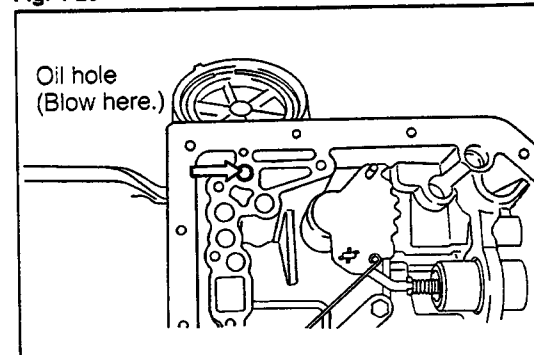


Fig. 4-30

WR-04060

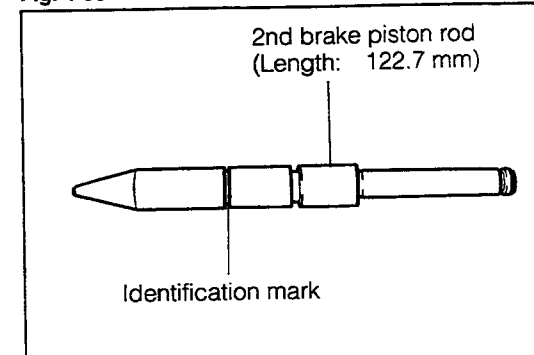


Fig. 4-31

WR-04061

wire.

- (2) Remove the wire clamps (2 points) of the rear cover.

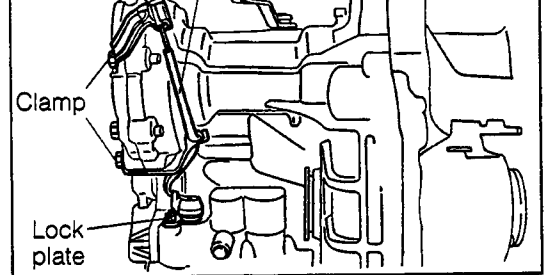


Fig. 4-33

WR-04063

14. Removal of the oil pump

- (1) Remove the oil pump attaching bolts (6 pieces).
- (2) Remove the oil pump, using the following SST.

SST: 09350-87702-000

09350-87702-000

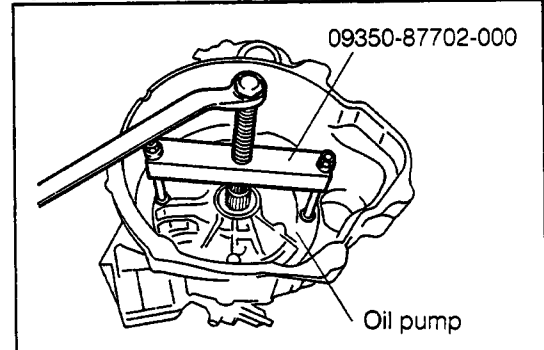


Fig. 4-34

WR-04064

15. Removal of the torque converter housing

- (1) Remove the bolts at both inside and outside of the housing.
- (2) Remove the housing by lightly tapping the periphery of the housing, using a plastic hammer.

NOTE:

Before removing the housing, detach the speedometer driven gear.

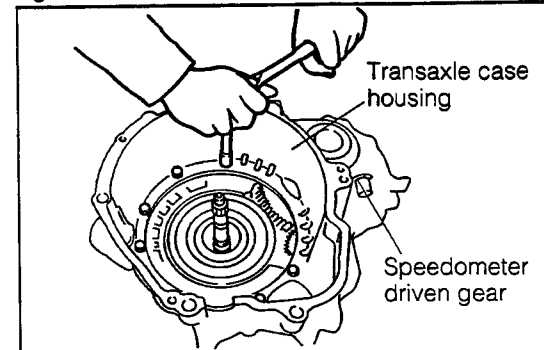


Fig. 4-35

WR-04065

16. Draw out the straight pin, using pliers.

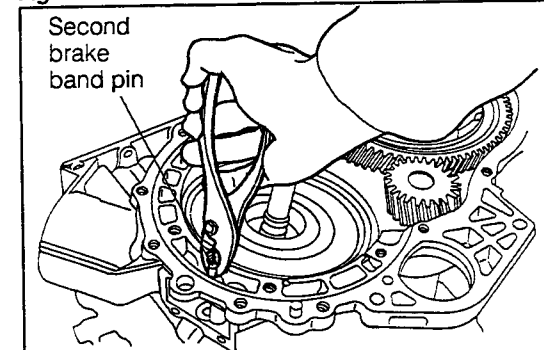


Fig. 4-36

WR-04066

18. Remove the 2nd brake band.

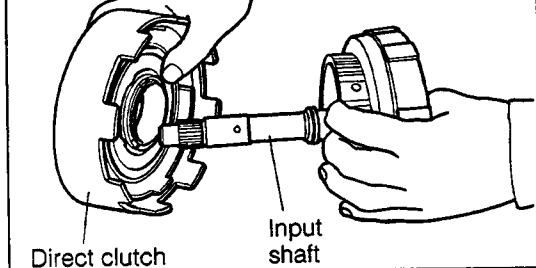


Fig. 4-38

WR-04068

19. Remove the front planetary ring gear.
NOTE:
Check the thrust needle roller bearing.

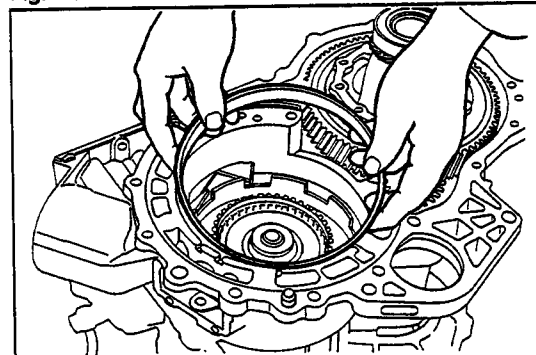


Fig. 4-39

WR-04069

20. Remove the front planetary ring gear assembly.
NOTE:
Check the thrust needle roller bearing.

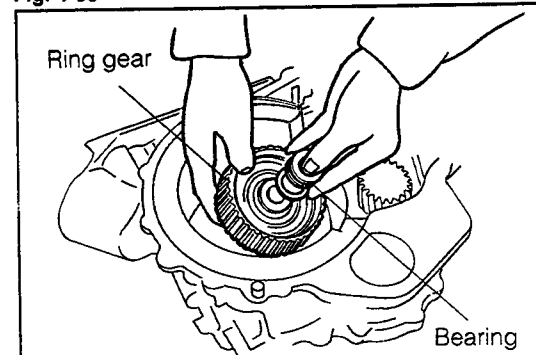


Fig. 4-40

WR-04070

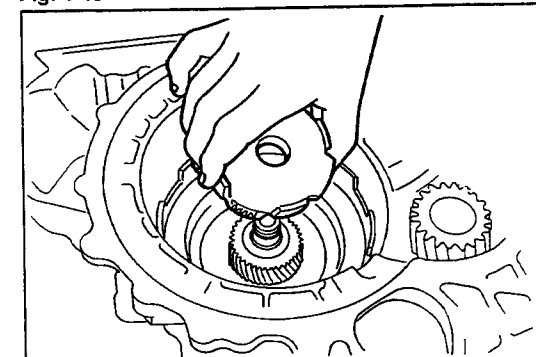


Fig. 4-41

WR-04071

Check the thrustwasher.

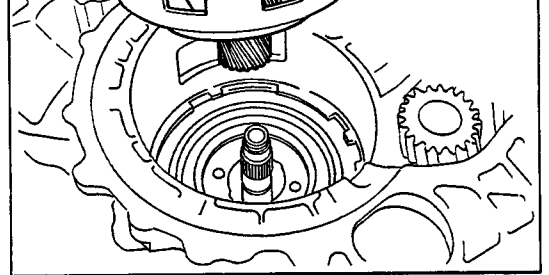


Fig. 4-43

WR-04073

23. Detach the one-way clutch snap ring.
NOTE:
Be very careful not to scratch other parts.

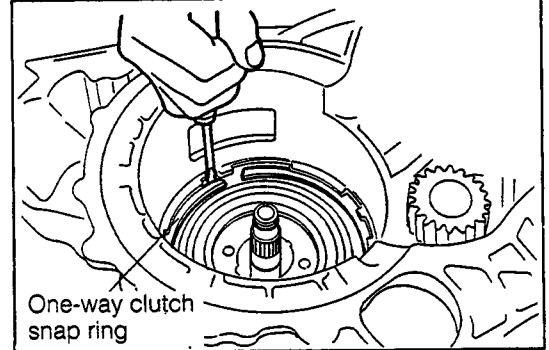


Fig. 4-44

WR-04074

24. Remove the one-way clutch and rear planetary gear.
NOTE:
Check the thrust washer.

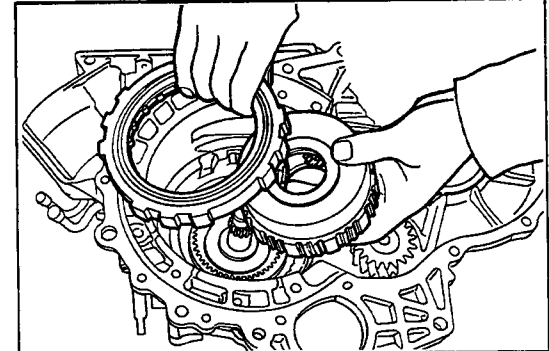


Fig. 4-45

WR-04075

25. Remove the rear planetary ring gear and thrust bearing.
NOTE:
Check the thrust needle roller bearing.

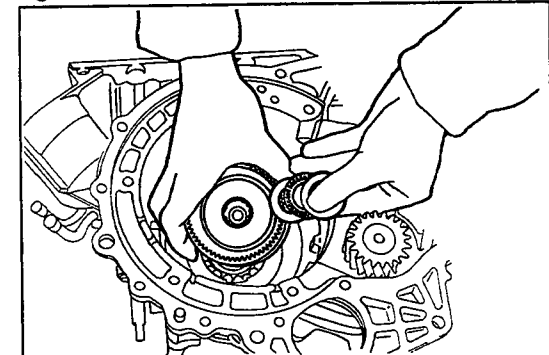


Fig. 4-46

WR-04076

NOTE:

Be very careful not to scratch other parts.

28. Remove the 1st & reverse brake flange, disc, plate and damper plate.

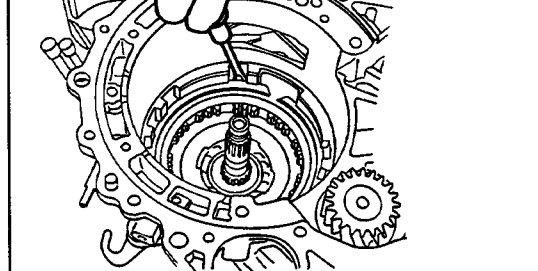


Fig. 4-48

WR-04078

29. Remove the differential gear assembly.

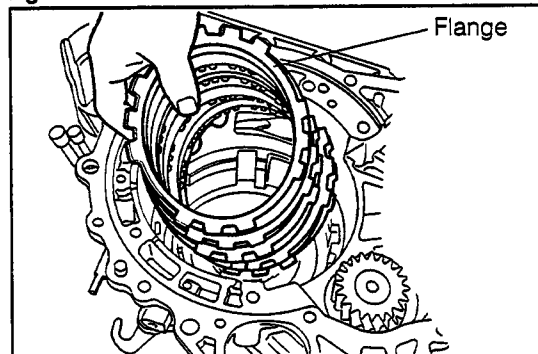


Fig. 4-49

WR-04079

30. Removal of the rear cover

- (1) Remove the bolts (7 pieces) and nuts (2 pieces).
- (2) Remove the rear cover by lightly tapping the position indicated in the figure, using a plastic hammer.

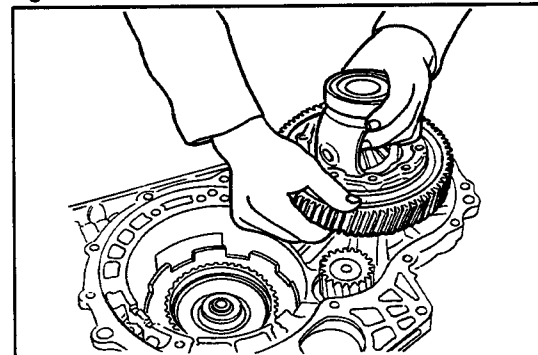


Fig. 4-50

WR-04080

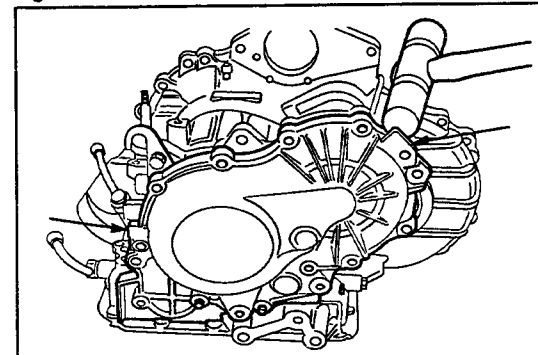


Fig. 4-51

WR-04081

33. Remove the drive counter shaft by lightly tapping it, using a plastic hammer.

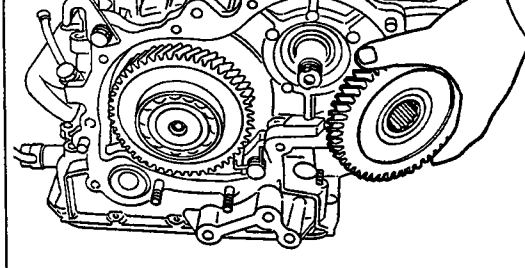


Fig. 4-53

WR-04083

34. Removal of the counter drive gear

(1) Remove the output shaft by pushing the bearing outer race of the inner output shaft. During this operation, use the following SST as shown in the figure.

NOTE:

Never tap the output shaft.

SST: 09350-87702-000

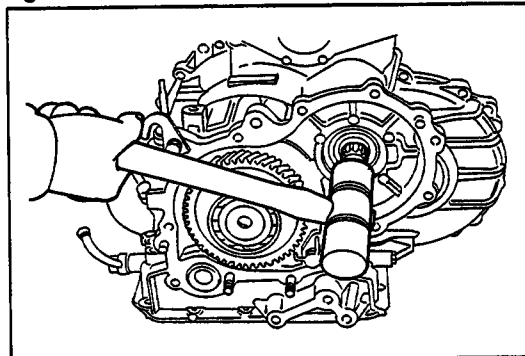


Fig. 4-54

WR-04084

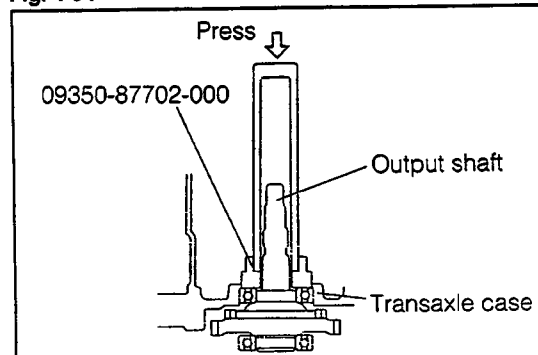


Fig. 4-55

WR-04085

35. Removal of the parking lock pawl

(1) Draw out the parking lock pawl shaft and spring.
(2) Remove the parking lock pawl.

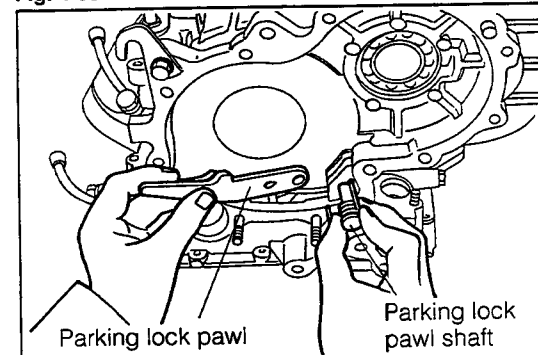


Fig. 4-56

WR-04086

the figure.

SST: 09350-87702-000

NOTE:

Do not compress the return spring beyond its compression allowance (deflection allowance).

(2) Detach the snap ring.

(3) Remove the return spring subassembly.

(4) Remove the piston by applying compressed air into the oil hole indicated in the figure.

NOTE:

Slowly apply compressed air with a low pressure (1 kg/cm², 15 psi) so that the piston may not tilt.

(5) Remove the "O" ring from the piston.

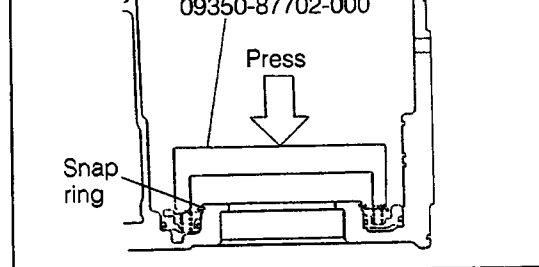


Fig. 4-58

WR-04088

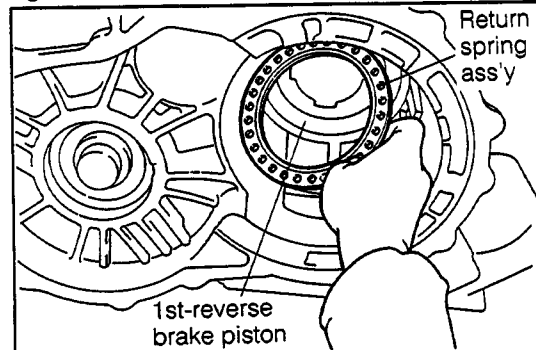


Fig. 4-59

WR-04089

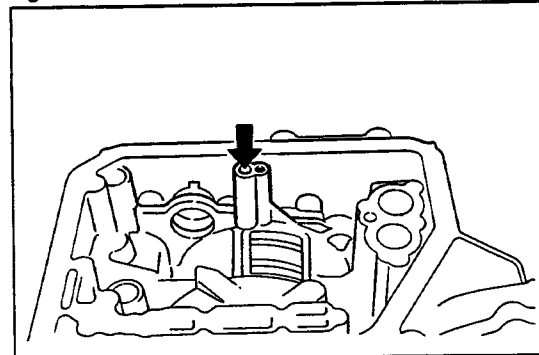
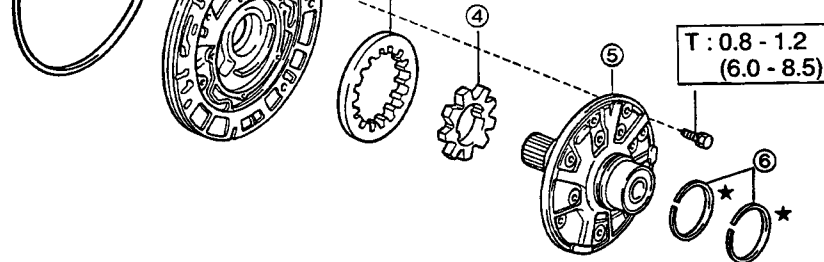


Fig. 4-60

WR-04090

WR-04091



- ① "O" ring
- ② Oil pump body
- ③ Driven gear
- ④ Drive gear
- ⑤ Stator shaft
- ⑥ "O" ring

Fig. 4-61

WR-04092

DISASSEMBLY

1. Remove the following parts from the oil pump body.
 - (1) "O" ring
 - (2) Bolts (11 pieces)
 - (3) Stator shaft

WR-04093

INSPECTION

1. Check the pump body oil seal for wear, damage and cracks.

NOTE:

Replace any parts that exhibit defects.

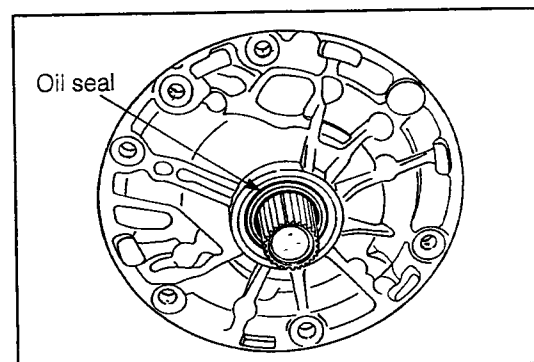


Fig. 4-62

WR-04094

and the crescent, using a thickness gauge.

Specified Value: 0.11 - 0.14 mm
(0.0043 - 0.0055 inch)

Allowable Limit: 0.30 mm (0.011 inch)

NOTE:

If the clearance exceeds the allowable limit, replace the driven gear.

4. Side clearance check

- (1) Measure the side clearance between the gear and the installation surface of the stator shaft over the entire periphery, using a straight edge (square) in combination with a thickness gauge.

Specified Value: 0.02 - 0.05 mm
(0.0008 - 0.0019 inch)

Allowable Limit: 0.1 mm (0.0039 inch)

NOTE:

If the side clearance exceeds the allowable limit, replace the part.

ASSEMBLY

NOTE:

Be sure to replace the "O" rings with new ones.

1. Install the driven gear and drive gear into the pump body.

NOTE:

Prior to the installation, apply the automatic fluid to the parts.

2. Install the stator shaft to the pump body. Tighten the bolts (11 pieces).

Tightening Torque: 0.8 - 1.2 kg-m (6.0 - 8.5 ft-lb)

3. Install the cover seal rings (2 pieces).
4. Apply the automatic fluid to the oil pump bush and "O" ring.
5. Install the "O" ring.

NOTE:

Ensure that the seal is not corrugated and that it is fitted properly in the groove.

6. Ensure that the drive gear rotates smoothly.

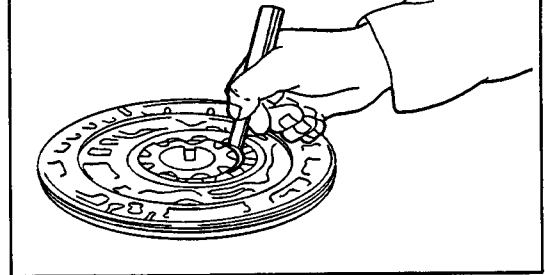


Fig. 4-64

WR-04096

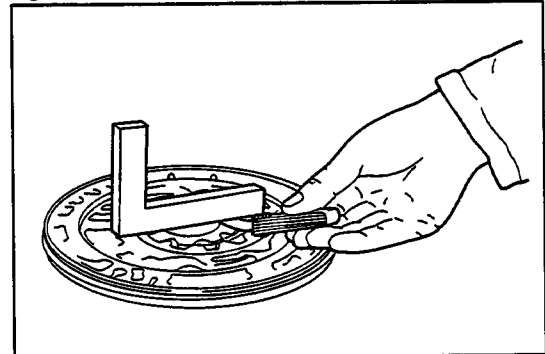


Fig. 4-65

WR-04097

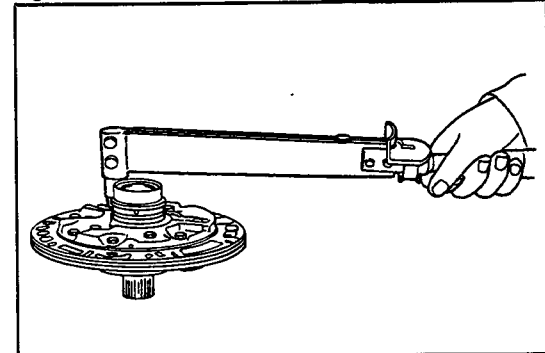
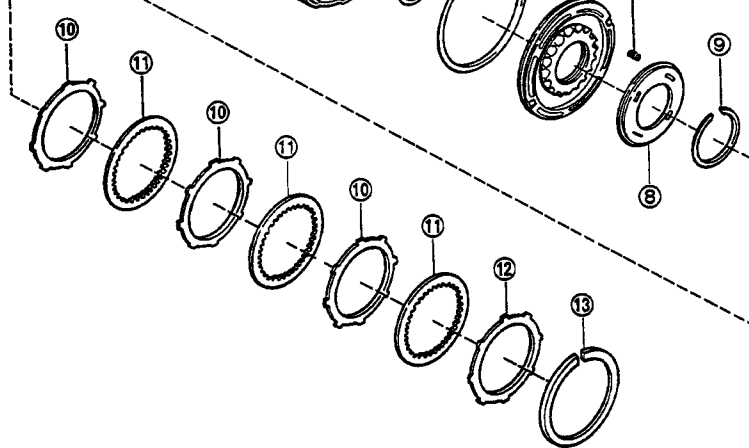


Fig. 4-66

WR-04098



- ① Direct clutch washer
- ② Input shaft "O" ring
- ③ Input shaft sub-assy
- ④ "O" ring (inner)
- ⑤ "O" ring (outer)
- ⑥ Forward clutch piston
- ⑦ Return spring
- ⑧ Return spring seat
- ⑨ Spring seat snap ring
- ⑩ Clutch plate
- ⑪ Clutch disc
- ⑫ Clutch flange
- ⑬ Clutch plate snap ring

Fig. 4-67

WR-04099

DISASSEMBLY

1. Compress the return spring, using the following SST. Remove the spring seat snap ring.

SST: 09350-87702-000

NOTE:

Do not compress the return spring beyond its compression allowance (deflection allowance).

2. Remove the spring seat and return spring.
3. Detach the clutch plate snap ring. Remove the flange, disc and plate.

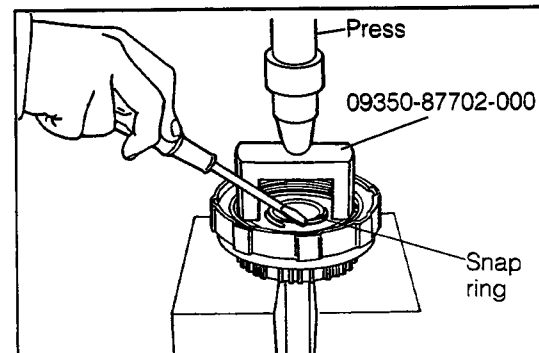


Fig. 4-68

WR-04100

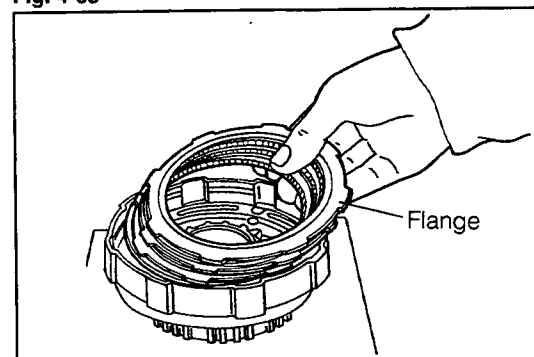


Fig. 4-69

WR-04101

piston.

2. Check the valve for leakage by applying compressed air with a low pressure.

NOTE:

If any valve seizure or air leakage exists, replace the forward clutch piston.

ASSEMBLY

NOTE:

Be sure to replace the "O" rings and the seal rings with new ones.

1. Apply the automatic fluid to "O" rings (both inner and outer). Proceed to install the "O" rings to the forward clutch piston.
2. Insert the forward clutch piston to the input shaft drum.

NOTE:

Be careful not to twist the "O" rings or not to have them caught by other parts.

WR-04104

3. Install the return springs (18 pieces) and spring seats.

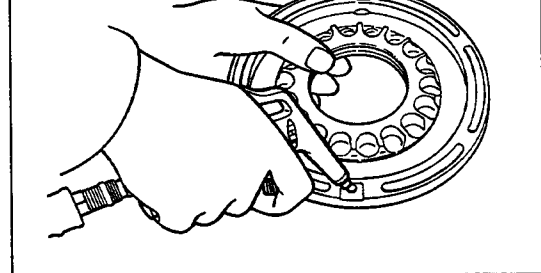


Fig. 4-71

WR-04103

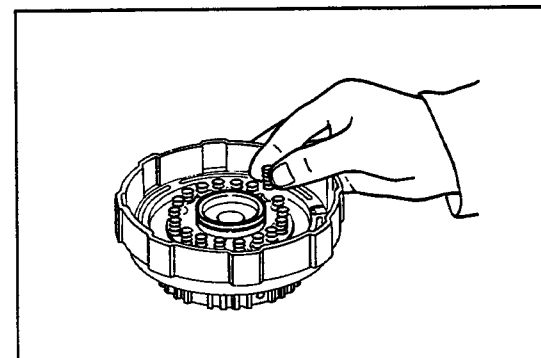


Fig. 4-72

WR-04105

4. Compress the return spring and attach the spring seat snap ring, using the following SST.

SST: 09350-87702-000

NOTE 1:

Check to see if the spring seat snap ring is fitted properly on the spring seat.

NOTE 2:

Do not compress the return spring beyond its compression allowance (deflection allowance).

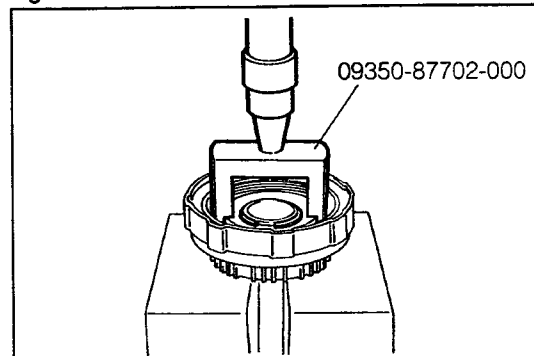


Fig. 4-73

WR-04106

thickness gauge.

Specified Value: 0.41 - 1.08 mm (0.016 - 0.043 inch)

NOTE 1:

If the measured clearance does not comply with the specification, replace the clutch disc or plate.

NOTE 2:

If the measured clearance does not comply with the specification although a new clutch disc or plate has been used, select a proper one from the following two flanges having different thicknesses.

Evaluation	Flange thickness
Too small	3.00 mm (0.118 inch)
Too large	3.37 mm (0.132 inch)

8. Apply compressed air into the oil hole of the input shaft indicated in the figure and check to see if the clutch piston moves freely.

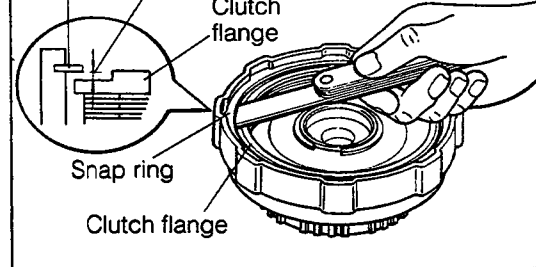


Fig. 4-74

WR-04108

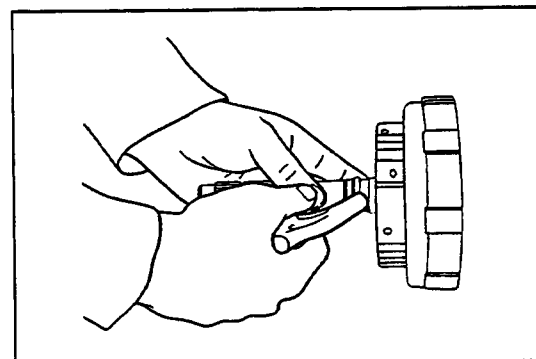
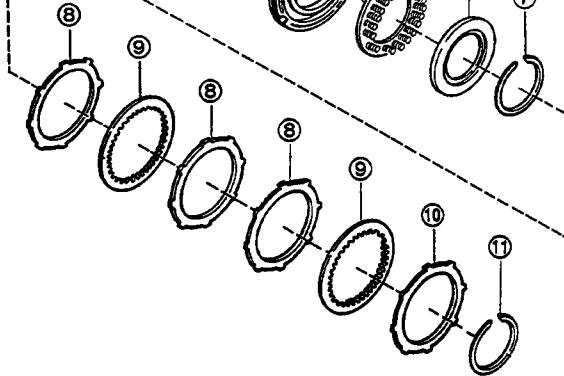


Fig. 4-75

WR-04109



- | | |
|------------------------|--------------------------|
| ① Direct clutch drum | ⑦ Spring seat snap ring |
| ② "O" ring (inner) | ⑧ Clutch plate |
| ③ "O" ring (outer) | ⑨ Clutch disc |
| ④ Direct clutch piston | ⑩ Clutch flange |
| ⑤ Return spring S/A | ⑪ Clutch plate snap ring |
| ⑥ Return spring seat | |

Fig. 4-76

WR-04110

DISASSEMBLY

1. Compress the return spring and detach the spring seat snap ring, using the following SST.

SST: 09350-87702-000

NOTE:

Do not compress the return spring beyond its compression allowance (deflection allowance).

2. Remove the return spring seat and return spring sub-assembly.
3. Detach the clutch plate snap ring. Remove the flange, disc and plate.

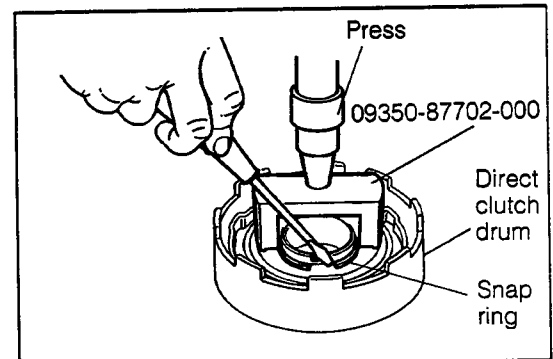


Fig. 4-77

WR-04111

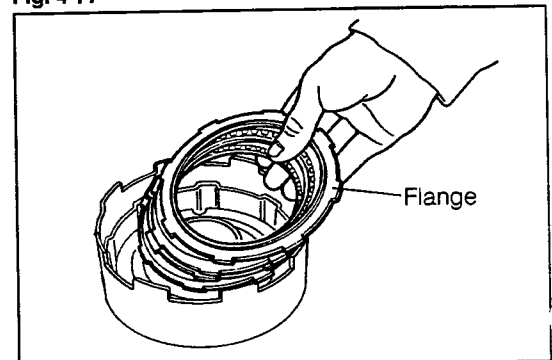


Fig. 4-78

WR-04112

INSPECTION

1. Check to see if the check valve (ball) moves freely in the clutch piston.
2. Check the valve for leakage by applying compressed air with a low pressure.

NOTE:

If any valve seizure or air leakage exists, replace the direct clutch piston.

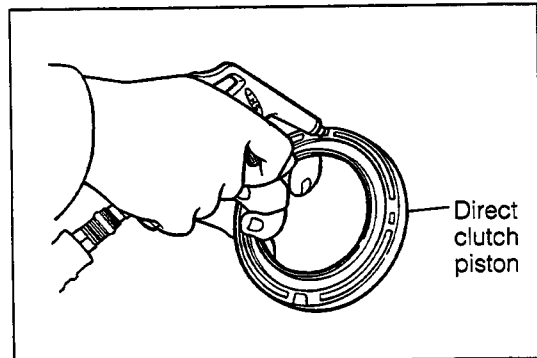


Fig. 4-80

WR-04115

ASSEMBLY

NOTE:

Be sure to replace the "O" rings with new ones.

1. Apply the automatic fluid to the "O" ring. Proceed to install the "O" ring to the direct clutch drum.
2. Apply the automatic fluid to the "O" ring. Proceed to install the "O" ring to the direct clutch piston.
3. Insert the direct clutch piston to the direct clutch drum.

NOTE:

Be careful not to twist the "O" ring or not to have it caught by other parts.

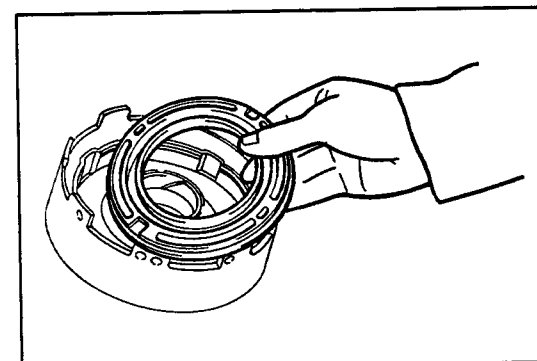


Fig. 4-81

WR-04116

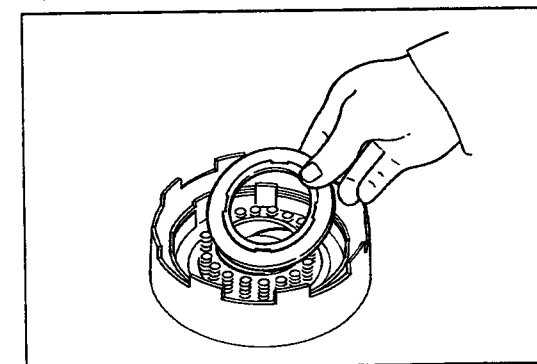


Fig. 4-82

WR-04117

4. Install the spring seat subassembly.
5. Install the spring seat.

- (1) Plate
- (2) Clutch disc
- (3) Plate
- (4) Plate
- (5) Clutch disc
- (6) Flange

NOTE:

Prior to the installation, immerse the clutch discs in the automatic fluid for at least two hours.

WR-04119

8. Attach the clutch plate snap ring.
9. Measurement of the clutch (C₂) clearance
 - (1) Measure the clearance indicated in the figure, using a thickness gauge.

Specified Value: 0.89 - 1.46 mm (0.035 - 0.057 inch)

NOTE 1:

If the measured clearance does not comply with the specification, replace the clutch disc or plate.

NOTE 2:

If the measured clearance does not comply with the specification although a new clutch disc or plate has been used, select a proper one from the following two flanges having different thicknesses.

Evaluation	Flange thickness
Too large	3.37 mm (0.132 inch)
Too small	3.00 mm (0.118 inch)

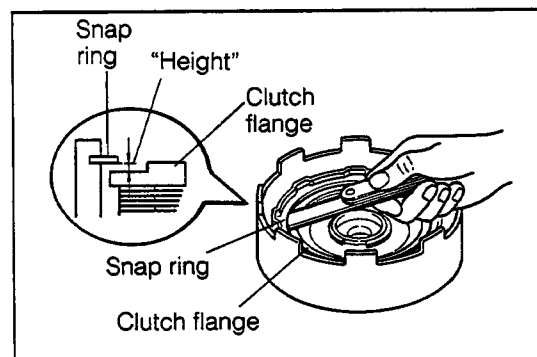


Fig. 4-84

WR-04120

10. Apply compressed air into the oil hole indicated in the figure and check to see if the direct clutch moves.

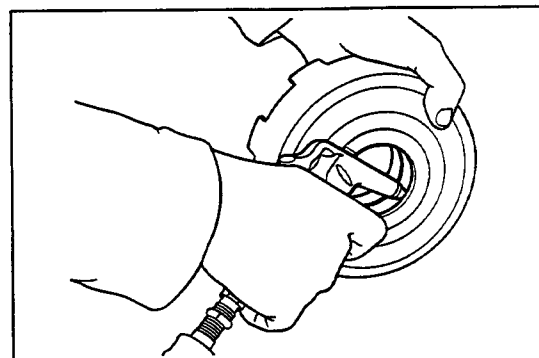
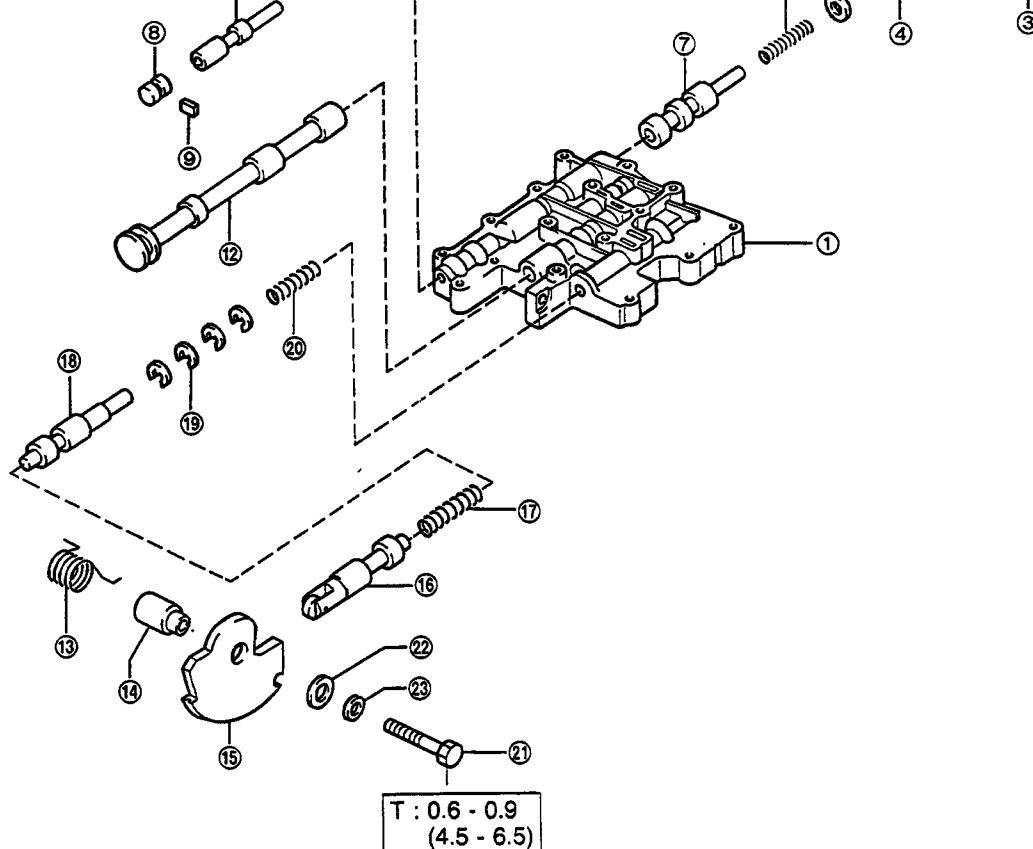


Fig. 4-85

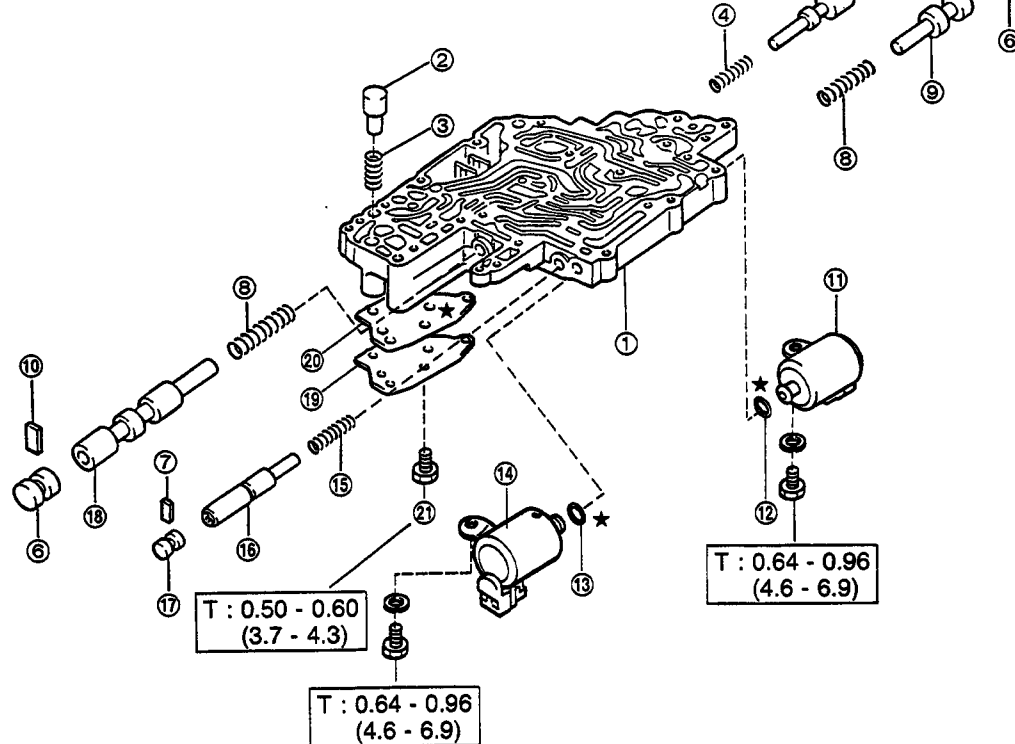
WR-04121



- | | |
|---|---|
| <p>① Upper valve body</p> <p>② Pressure regulator valve sleeve</p> <p>③ No. 1 key (ℓ = 9.2 mm, 0.36 inch)</p> <p>④ Primary regulator valve plunger</p> <p>⑤ Plate washer</p> <p>⑥ Primary regulator valve spring
(Red. Length: 52.5 mm)</p> <p>⑦ Primary regulator valve</p> <p>⑧ Plug</p> <p>⑨ No. 3 key (ℓ = 11 mm, 0.43 inch)</p> <p>⑩ B₁ control valve</p> <p>⑪ B₁ control valve spring
(Yellow-green. Length: 34.1 mm)</p> <p>⑫ Manual valve</p> | <p>⑬ Throttle valve spring</p> <p>⑭ Throttle valve cam pin</p> <p>⑮ Throttle valve cam</p> <p>⑯ Downshift plug</p> <p>⑰ Throttle valve No. 2 spring
(Purple. Length: 31.5 mm)</p> <p>⑱ Throttle valve</p> <p>⑲ Throttle valve ring(s)</p> <p>⑳ Throttle valve No. 1 spring
(White. Length: 22.2 mm)</p> <p>㉑ Throttle valve cam bolt</p> <p>㉒ Washer plate</p> <p>㉓ Spring washer</p> |
|---|---|

Fig. 4-86

WR-04122



- ① Lower valve body
- ② Cooler by-pass valve
- ③ Spring
(Orange. Length: 19.9 mm)
- ④ Secondary regulator valve spring
(Yellow. Length: 31.4 mm)
- ⑤ Secondary regulator valve
- ⑥ Plug
- ⑦ No. 3 key ($\ell = 11$ mm, 0.43 inch)

- ⑧ Shift valve spring
(Pink. Length: 39.6 mm)
- ⑨ 2 - 3 shift valve
- ⑩ No. 2 key ($\ell = 15$ mm, 0.59 inch)
- ⑪ Direct clutch solenoid
- ⑫ "O" ring
- ⑬ "O" ring
- ⑭ 2nd brake solenoid

- ⑮ B₂ control valve spring
(Blue. Length: 28.1 mm)
- ⑯ B₂ control valve
- ⑰ B₂ control valve plug
- ⑱ 1 - 2 shift valve
- ⑲ Lower valve body cover
- ⑳ Gasket
- ㉑ Lower valve body cover bolt

Fig. 4-87

WR-04123

(Upper valve body side)

NOTE:

Prior to the disassembly, take out the manual valve, for it drops by its own weight.

- (2) With the upper valve body held at the lower side, separate the lower valve body.

NOTE 1:

If this separation is made with the upper valve body held at the upper side, there is a possibility that the steel balls drop and will be lost.

NOTE 2:

After completion of the separation, remove the steel balls from the upper valve body.

2. Disassembly of the upper valve body assembly
- (1) Remove the throttle valve cam attaching bolt. Remove the cam, spring and pin.
- (2) Remove the downshift plug and spring.

- (3) Remove the throttle valve after the "E" rings have been removed from the outside of the valve body.

NOTE:

Record the number of the "E" rings used.

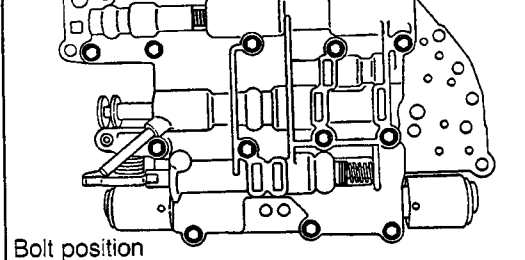


Fig. 4-88

WR-04125

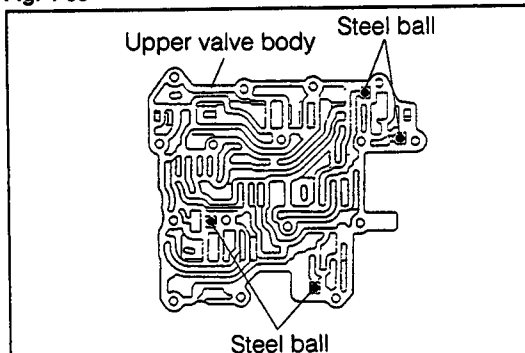


Fig. 4-89

WR-04126

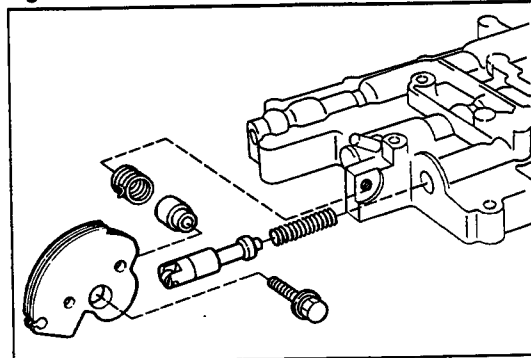


Fig. 4-90

WR-04127

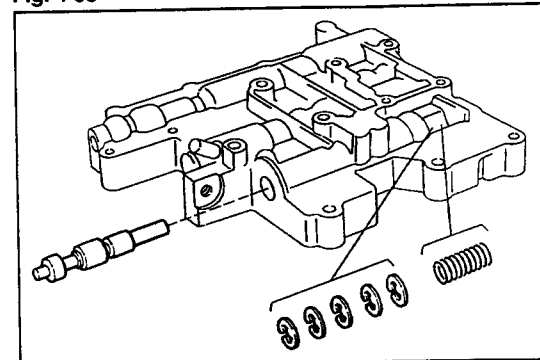


Fig. 4-91

WR-04128

plunger, washer, spring and primary regulator valve.

3. Disassembly of the lower valve body assembly

(1) Remove the direct clutch solenoid assembly and second brake solenoid assembly.

(2) Remove the gasket and lower valve body cover.

NOTE:

Care must be exercised as to the jumping out of the cooler bypass valve during this operation.

(3) Remove the straight key. Remove the plug, secondary regulator valve and spring.

(4) Remove the straight key. Remove the plug, 2 - 3 shift valve and spring.

(5) Remove the straight key. Remove the plug, B₂ control valve and spring.

(6) Remove the straight key. Remove the plug, 1 - 2 shift valve and spring.

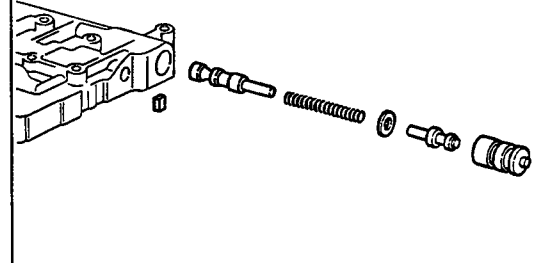


Fig. 4-93

WR-04130

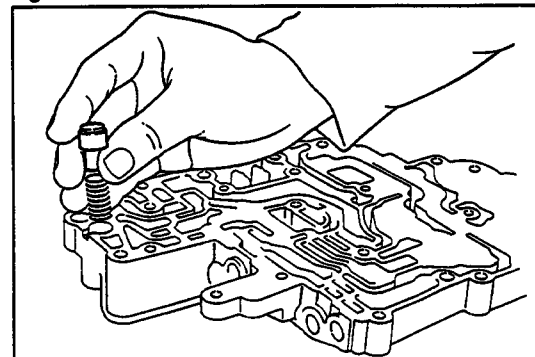


Fig. 4-94

WR-04131

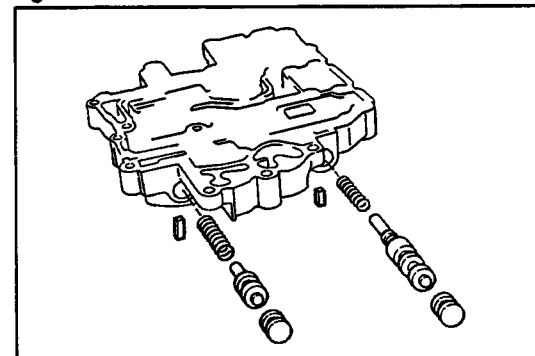


Fig. 4-95

WR-04132

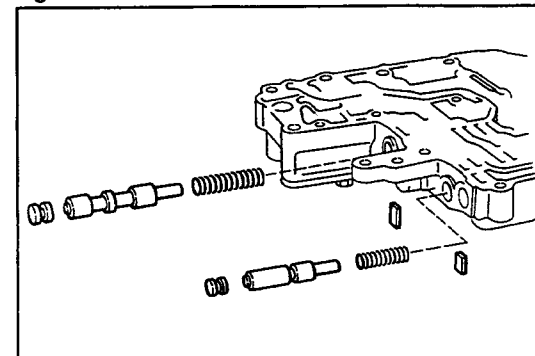


Fig. 4-96

WR-04133

NOTE 1:

Install these parts in accordance with the marks showing the item numbers which were put during the disassembly.

NOTE 2:

See "LIST OF SPRINGS" at page 4-73 during the assembly.

- (4) Care must be exercised to ensure that the valves are inserted in their correct directions.
- (5) When inserting the valve, spring, plug and straight key, be careful not to damage the valve body.
- (6) Check to see if the valve moves smoothly.

NOTE 1:

Make sure that each part (particularly plunger and sleeve) goes in by its own weight during the insertion.

WR-04135

1. Assembly of the upper valve body

(1) Installation of primary regulator valve

- ① Hold the valve body horizontally. Insert the primary regulator valve approx. 80 % of its overall length. Then, push the spring (red) so as to insert the primary regulator valve.
- ② Put the plunger into the sleeve. Install the washer plate. Then, insert it into position.
- ③ Insert the straight key ($\varnothing = 9.2 \text{ mm}$, 0.36 inch) so as to secure the sleeve.

(2) Installation of B₁ control valve

- ① Install the spring to the valve. Insert them together into position.
- ② Insert the plug. Secure it by means of the straight key ($\varnothing = 11 \text{ mm}$, 0.43 inch).

(3) Installation of throttle valve and downshift plug

- ① Push the spring (purple) so as to insert the throttle valve.
- ② Working from the outside of the valve body, install the "E" rings to the throttle valve.

NOTE:

Install the "E" rings in the same number as that prior to the disassembly.

- ③ Install the spring (white).

- ④ Install the downshift plug.

(4) Installation of throttle valve cam

- ① Install the pin and spring to the cam.

NOTE:

Attach the hook of the spring to the cam hole.

2. Assembly of the lower valve body

(1) Installation of secondary regulator valve

① Insert the spring (yellow), secondary regulator valve and plug.

② Insert the straight key ($\ell = 11$ mm, 0.43 inch). Secure it by means of the plug.

(2) Installation of 1 - 2 shift valve

① Insert the spring (pink), 1 - 2 shift valve and plug.

② Insert the straight key ($\ell = 11$ mm, 0.43 inch). Secure it by means of the plug.(3) Installation of B₂ control valve① Insert the spring (blue), B₂ control valve and plug.② Insert the straight key ($\ell = 15$ mm, 0.59 inch). Secure it by means of the plug.

(4) Installation of 2 - 3 shift valve

① Insert the spring (pink), 2 - 3 shift valve and plug.

② Insert the straight key ($\ell = 15$ mm, 0.59 inch). Secure it by means of the plug.

(5) Installation of direct clutch solenoid assembly and second brake solenoid assembly

① Prior to the insertion, apply the automatic fluid to the new "O" ring.

② Care must be exercised as to the tightening bolt holes. When tightening the bolts, be sure not to mistake the right and left holes.

M6 bolt Nominal length: 10 mm (0.39 inch) × 2 pieces**Tightening Torque:** 0.64 - 0.96 kg-m (4.6 - 6.9 lb-ft)

WR-0413

(6) Installation of lower valve body cover

① Install the cover, using a new gasket.

M5 bolt Nominal length:

14 mm (0.55 inch) × 10 pieces

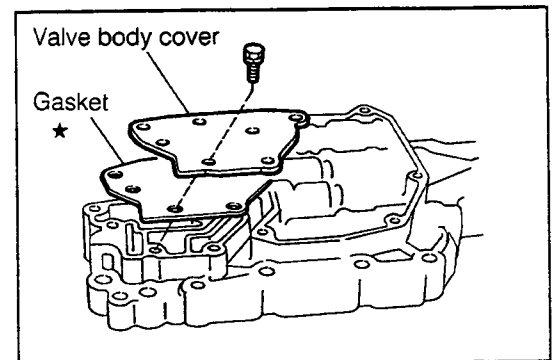
Tightening Torque: 0.50 - 0.60 kg-m (3.6 - 4.3 ft-lb)

Fig. 4-97

WR-04140

- (3) Install new gaskets on both surfaces of the valve body plate. Place the valve body plate on the upper valve body.
- (4) Turn over the upper valve body, while making sure that the plate may not separate from the upper valve body. Then, place the upper valve body on the lower valve body.

NOTE 1:

When the upper valve body is being turned over, be very careful not to allow the steel balls to drop.

NOTE 2:

Do not pry the cooler bypass valve.

NOTE 3:

Ensure that the plate or gasket may not be displaced from its installation position.

WR-04143

4. Installation of the bolts

(1) List of bolts used

Stand- ard	Nominal length	Shape of head	Number	Installation position
M5	29.5 mm (1.16 inch) Length of threaded portion: 22.0 mm	Deep recess	6	A
M5	38.0 mm (1.50 inch)	Deep recess	6	B
M5	44.0 mm (1.73 inch)	Deep recess	2	C
M5	29.5 mm (1.16 inch) Length of threaded portion: 19.5 mm	Normal recess	2	D

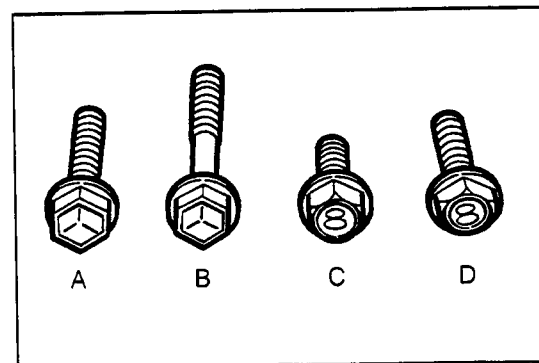


Fig. 4-99

WR-04144

A C A D
③ ② ③ ①

Fig. 4-100

WR-04145

5. Insert the manual valve into the upper valve body.

WR-04146

ASSEMBLY OF TRANSMISSION

INSTRUCTIONS ON ASSEMBLY

1. Be sure to replace the following parts with new ones: gaskets, lock nut, "O" rings, oil seals, seal rings of each piston, seal washers of the oil pump set bolts, oil deflector and test plug.
2. When replacing the low brake band and clutch disc with new ones, immerse the new parts in the automatic fluid for at least two hours preceding the assembly.
3. Be sure to apply the automatic fluid to the sliding sections of the parts.
4. Thoroughly clean the bolts or threaded holes, to which a sealing agent has been applied.
5. Prior to the assembly, ensure that air continuity exists in each oil passage by applying compressed air into each oil passage.
6. Be careful not to damage each gasket surface of the transmission case, rear cover, oil pump, valve body and housing.
7. Tighten the bolts and nuts to the specified torque.
8. Install the bearing and race in their correct positions and directions.
9. In order to prevent foreign matters, such as dust or dirt, from getting into the transmission case, clean each part by applying compressed air prior to the installation.
10. When applying grease, use the specified MP (multipurpose) type.

WR-04147

1. Installation of the manual shift shaft and parking lock pawl
 - (1) Install the lower washer and parking rod to the manual shift shaft.
 - (2) Insert the manual shift shaft into the transmission case.

NOTE:

When the manual shift shaft passes through the oil seal, be careful not to damage the lip section of the oil seal.

- (3) Lock the shift shaft by the washer and the "E" ring.

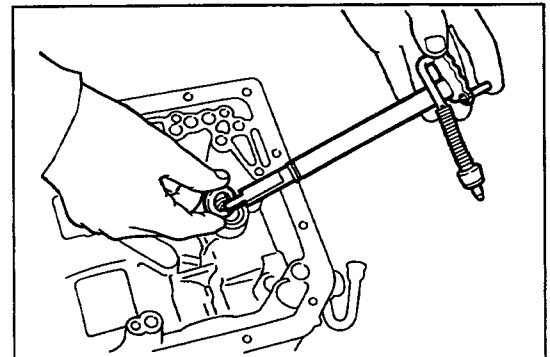


Fig. 4-101

WR-04148

such a way that the rod may get into the sleeve.

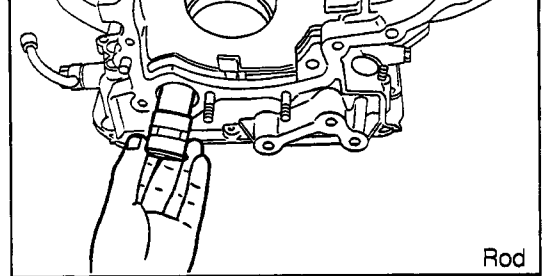


Fig. 4-103

WR-04150

(5) Installation of parking lock pawl and parking lock pawl shaft

- ① Install the pawl in the correct position.
- ② Pass the shaft through the spring. Install them to the pawl, as shown in the right figure.
- ③ Shift the manual shift lever to the **P** range. Ensure that the parking lock pawl moves smoothly.

WR-04151

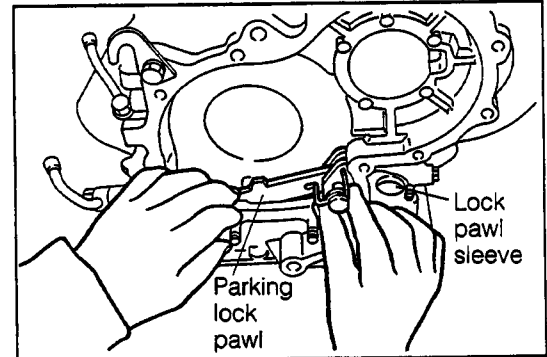


Fig. 4-104

WR-04151

2. Installation of the 1st & reverse brake piston

- (1) Apply the automatic fluid to the "O" rings (both inner and outer). Then, install them to the piston.
- (2) Insert the piston into the transmission case in the direction indicated in the right figure.

NOTE:

Be careful not to twist the "O" rings or not to have them caught by other parts.

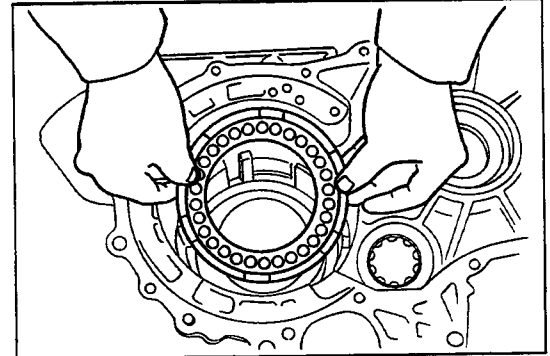


Fig. 4-105

WR-04152

(4) Install the following parts in this order.

① Cushion plate

② Plate

③ Disc

④ Plate Total number of plates: 4

⑤ Disc Total number of discs: 4

⑥ Plate

⑦ Disc

⑧ Plate

⑨ Disc

⑩ Flange

NOTE 1:

Make sure that the cushion plate is installed in the correct installing direction.

(Install it in such a way that, as viewed from above, the floated side may come to the center, whereas the recessed side may come to the outside.)

NOTE 2:

Immerse the discs in the automatic fluid for at least two hours preceding the installation.

NOTE 3:

Care must be exercised as to the assembling sequence and the number of the discs and plates.

(5) Install the snap ling.

(6) Measure the clearance indicated in the right figure, using a thickness gauge

Specified Value: 0.58 - 1.92 mm (0.023 - 0.075 inch)

NOTE:

If the measure value does not comply with the specification, check the installing condition of the clutch discs and the plates.

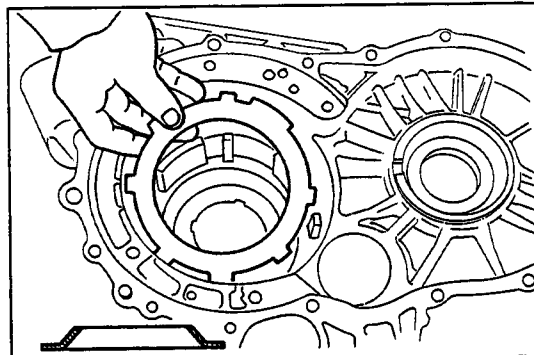


Fig. 4-107

WR-04154

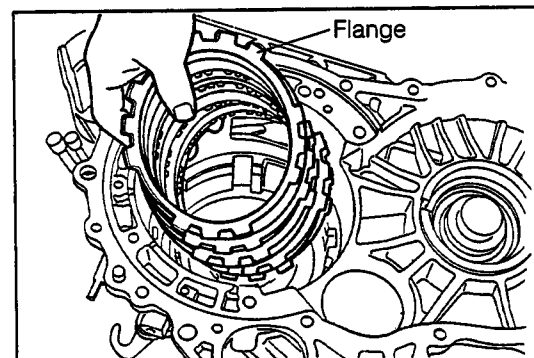


Fig. 4-108

WR-04155

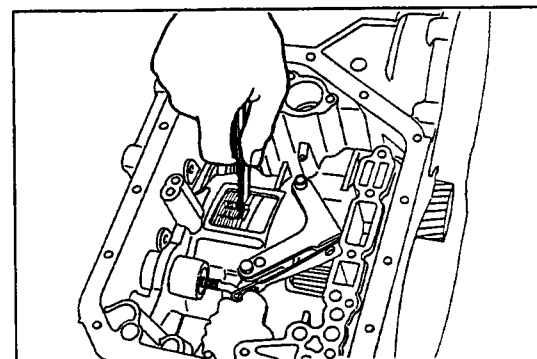


Fig. 4-109

WR-04155A

- (1) Press the ball bearing into the output shaft, using the following SST.

SST: 09350-87702-000

NOTE:

Prior to the press-fitting, apply the automatic fluid to the inner race and outer race.

- (2) Drive the ball bearing into the transmission case, using a hammer in combination with the following SST.

SST: 09608-30011-000

NOTE:

Prior to the press-fitting, apply the automatic fluid to the inner race and outer race.

- (3) Press the output shaft into the transmission case using the following SST, as indicated in the figure.

SST: 09350-87702-000

- (4) Press the roller bearing from the differential gear side of the counter shaft case, using the following SST. Then, attach the snap ring.

SST: 09608-30011-000

NOTE:

Prior to the press-fitting of the bearing, apply the automatic fluid to the inner race and outer race.

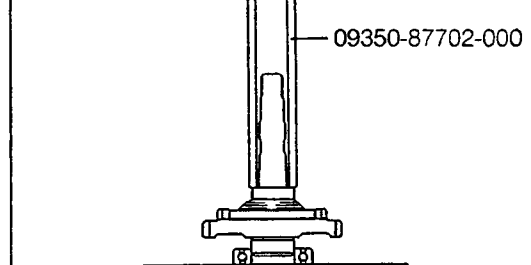


Fig. 4-111

WR-04157

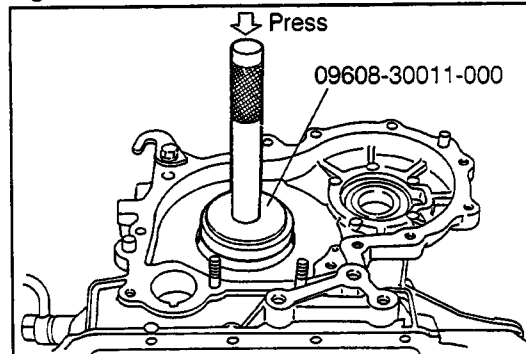


Fig. 4-112

WR-04158

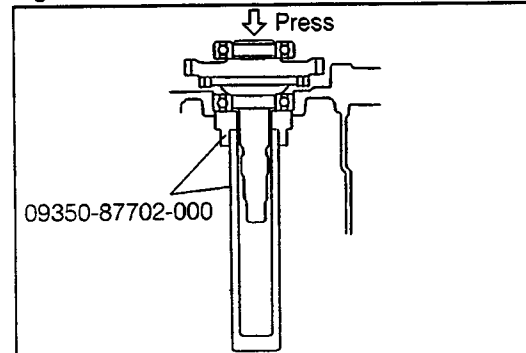


Fig. 4-113

WR-04159

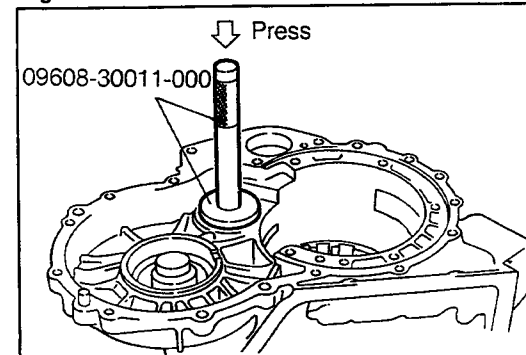


Fig. 4-114

WR-04160

- (8) While the inner race of the ball bearing is being sustained, pass the spacer through the counter shaft and press the counter shaft into position.
SST: 09350-87702-000

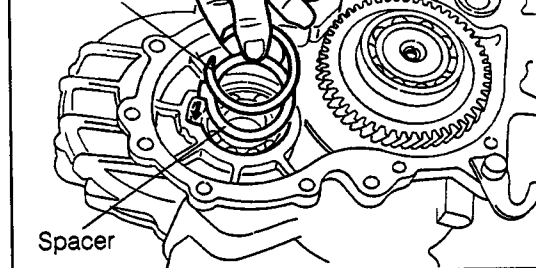


Fig. 4-116

WR-04162

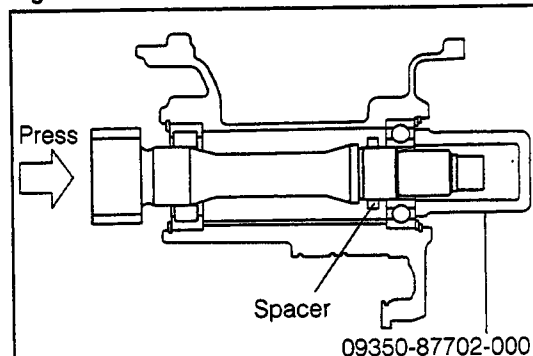


Fig. 4-117

WR-04162A

- (9) Install the reduction driven gear to the counter shaft.
Tighten the lock nut.
Tightening Torque: 11 - 15 kg-m (80 - 108 ft-lb)

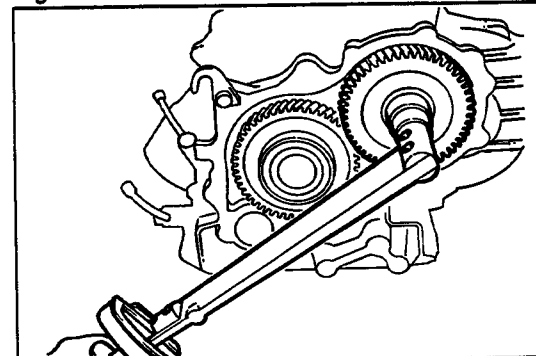


Fig. 4-118

WR-04163

- (10) Stake the lock nut, using a chisel.

NOTE:

Be careful not to apply excessive forces to the counter shaft.

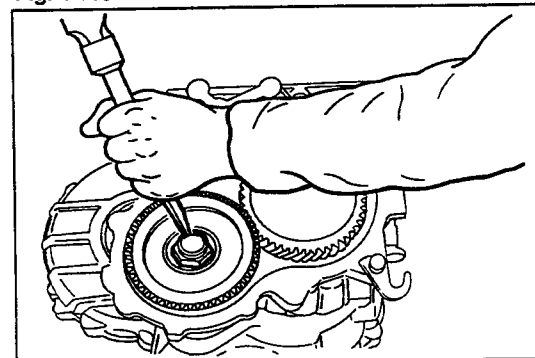


Fig. 4-119

WR-04164

Tightening Torque: 1.1 - 1.5 kg-m (8.0 - 10 ft-lb)

NOTE:

As for the arrow-headed bolt in the right figure, use this bolt to secure the solenoid wire harness in common.

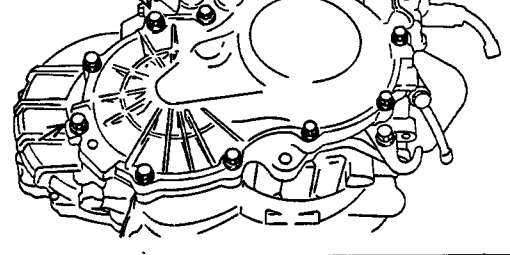


Fig. 4-120

WR-04165

- (13) Working from the inside of the case, push the bearing outer race against the rear cover side, using the following SST.

SST: 09350-87702-000

NOTE 1:

For this operation, use the four cut-out sections of the transmission case.

Pushing Force: 500 kg (1100 lb)

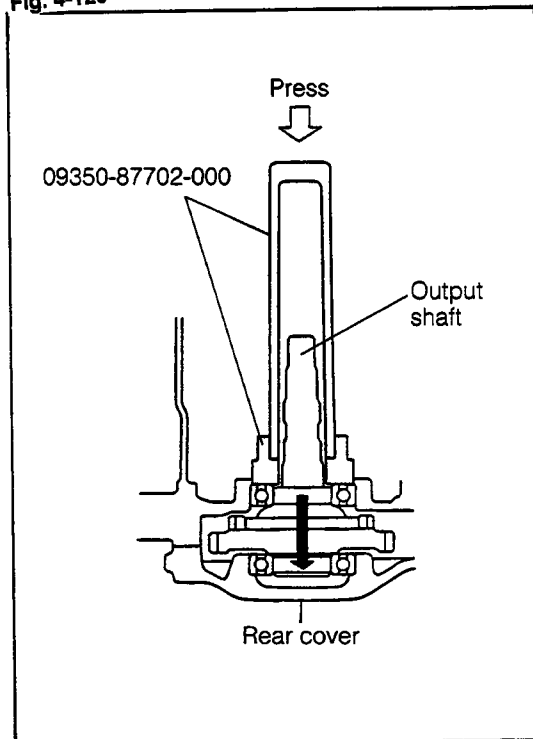


Fig. 4-121

WR-04167

4. Installation of the rear planetary gear and one-way clutch
- (1) Install the rear planetary ring gear, making sure that it is aligned with the spline of the output shaft.

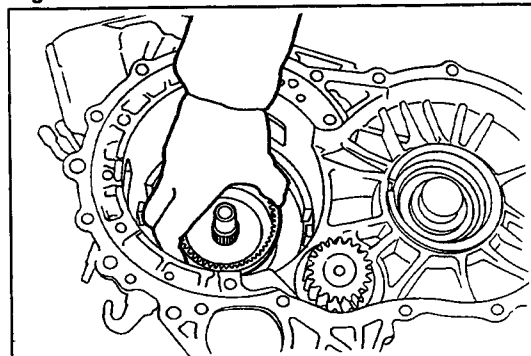


Fig. 4-122

WR-04168

- (4) Install the thrust washers on each of the front and rear sections of the planetary gear assembly.

NOTE 1:

Apply grease to the washers.

NOTE 2:

Fit the recessed sections of the gear assembly with the two protruding sections correctly.

- (5) While turning the one-way clutch assembly counterclockwise, install it to the planetary gear assembly.

NOTE:

After completion of the installation, be sure that the planetary gear assembly freely rotates clockwise when the one-way clutch outer race is secured.

- (6) Insert the planetary gear assembly fitted with the one-way clutch assembly into the transmission case, while rotating the planetary gear assembly.

NOTE 1:

For easier insertion, align the pawls of the brake disc in advance.

NOTE 2:

If the shift lever is shifted to the **P** range, the shaft is locked, thus making it easier to align the cut-out sections with each other.

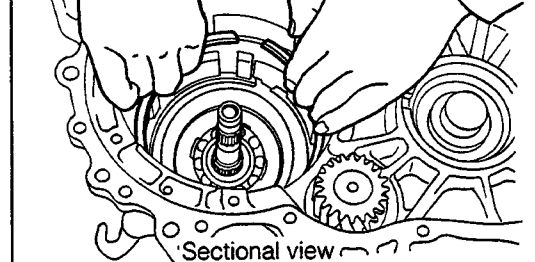


Fig. 4-124

WR-04170

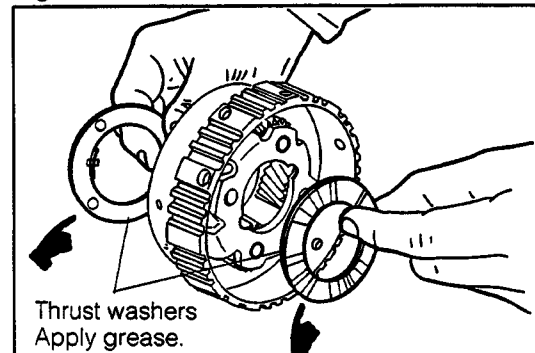


Fig. 4-125

WR-04171

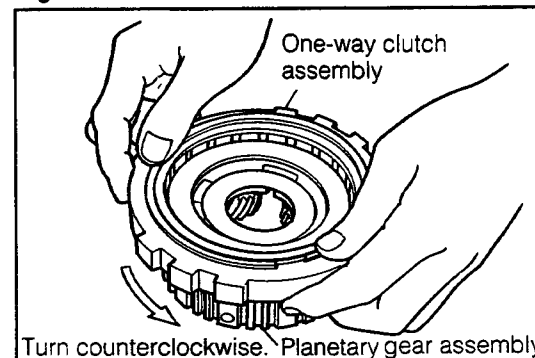


Fig. 4-126

WR-04172

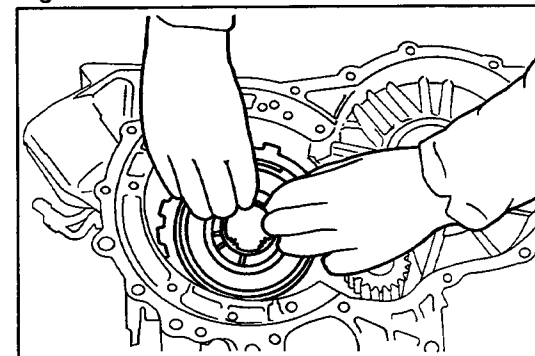


Fig. 4-127

WR-04173

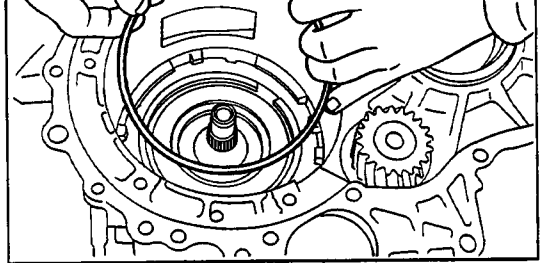


Fig. 4-129

WR-04175

5. Installation of the planetary sun gear assembly
 - (1) Install the cushion plate and the snap ling (sheet type) to the sun gear.

NOTE:

Be sure to install the cushion plate in the correct direction.

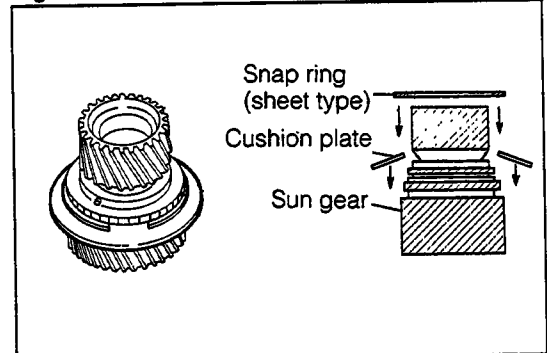


Fig. 4-130

WR-04176

- (2) Insert the sun gear into the sun gear input drum.

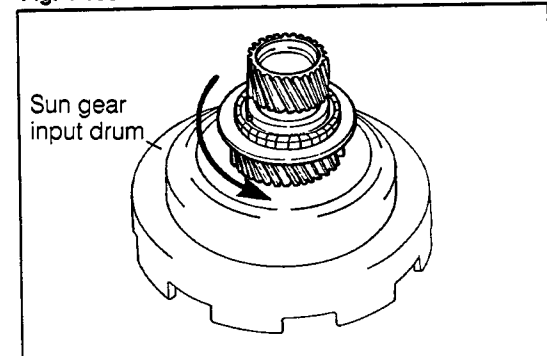


Fig. 4-131

WR-04176A

- (3) Temporarily lock the sun gear input drum with another snap ring (wire type).

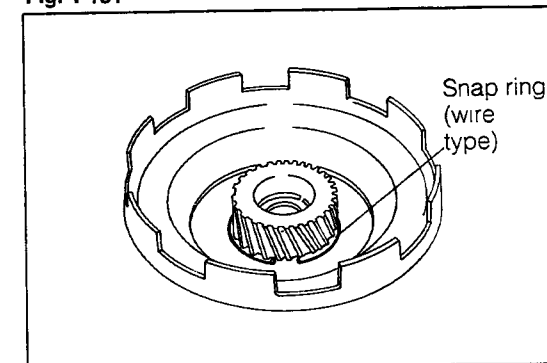


Fig. 4-132

WR-04176B

gets into the cut-out section of the planetary thrust washer.

NOTE:

Prior to the installation, apply grease to the washer to prevent it from dropping.

- (7) While meshing the sun gear assembly with the rear planetary gear, insert the sun gear assembly into the transmission case.

NOTE 1:

Be careful not to damage the bush provided inside of the sun gear.

NOTE 2:

Be certain that the flange section of the thrust bearing race, which was installed in the previous step, has been installed positively into the sun gear bore.

6. Installation of the front planetary gear
(1) Place the thrust needle roller bearing and bearing race on the sun gear.

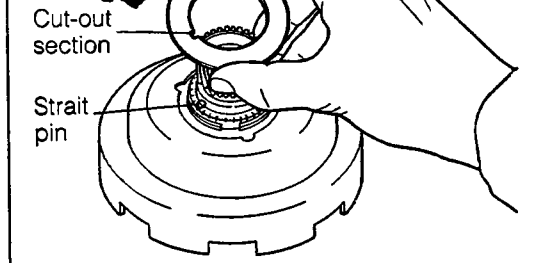
NOTE:

Be sure to place the bearing race in the correct direction on the sun gear.

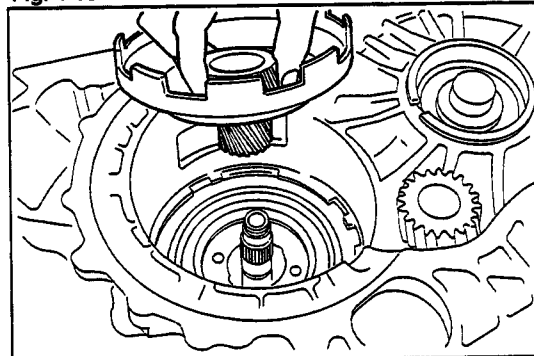
- (2) While rotating the front planetary gear assembly, fit the pinion gear in the sun gear.

NOTE:

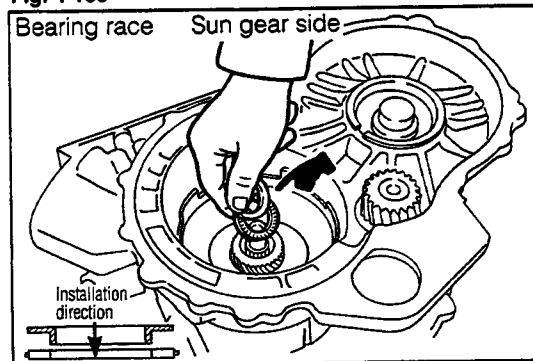
Care must be exercised to ensure that the thrust bearing or the race may not be displaced from the correct position.



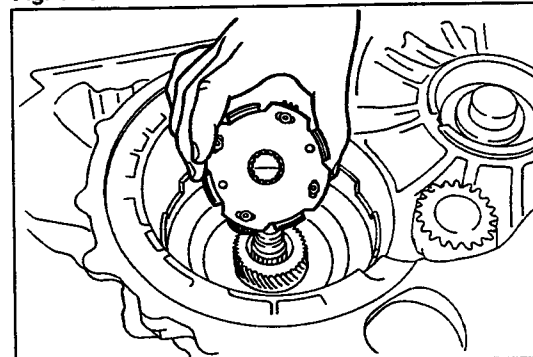
WR-04177



WR-04178



WR-04179



WR-04180

(5) Install the "O" ring at the forward end of the output shaft.

NOTE:

Do not expand the "O" ring excessively during the installation.

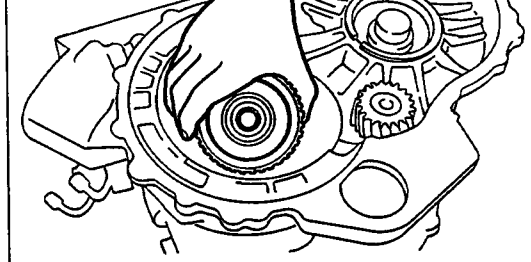


Fig. 4-139

WR-04182

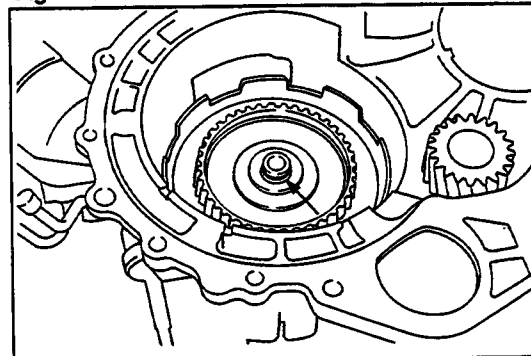


Fig. 4-140

WR-04183

7. Installation of the 2nd brake band

(1) Install the brake 2nd band in the transmission case.

NOTE:

Be sure to install the brake band in the correct direction.

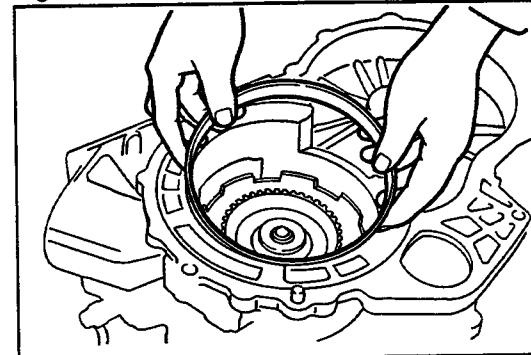


Fig. 4-141

WR-04184

8. Installation of the forward clutch and direct clutch

(1) When the "O" ring of the input shaft is replaced, apply grease to the input shaft side before installing the new "O" ring.

NOTE 1:

Be sure to install the "O" ring to the correct groove.

NOTE 2:

Do not expand the "O" ring excessively during the installation.

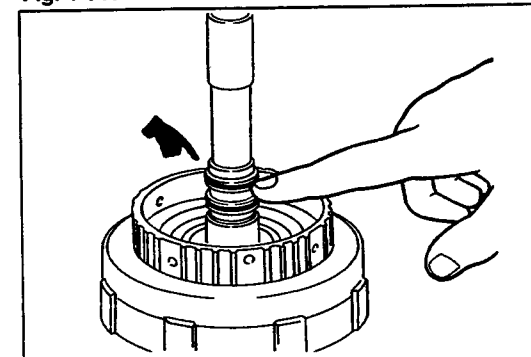


Fig. 4-142

WR-04185

installation, apply grease to the side of the direct clutch.

NOTE:

Be sure to install the thrust washer in the correct direction.

(4) Install the direct clutch to the forward clutch.

NOTE 1:

For easier insertion, align the pawls of the clutch disc prior to the installation.

NOTE 2:

Be careful not to drop the thrust washer which was installed in the preceding step.

(5) Apply grease on the front planetary ring gear in the transmission case. Install the thrust bearing race and thrust needle roller bearing in position.

NOTE:

Care must be exercised as to the installing direction and sequence.

(6) While holding the input shaft of the forward clutch, install the forward clutch fitted with the direct clutch to the transmission.

NOTE 1:

For easier insertion, align the pawls of the forward clutch disc prior to the installation.

NOTE 2:

Be careful not to drop the thrust bearing which was installed in the preceding step.

NOTE 3:

Be very careful not to damage the oil seal of the output shaft.

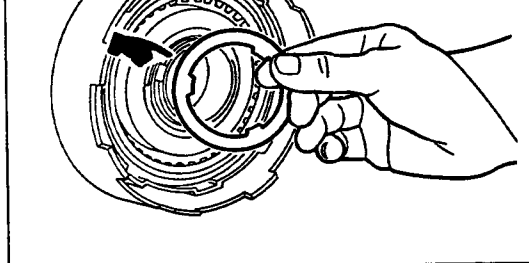


Fig. 4-144

WR-04187

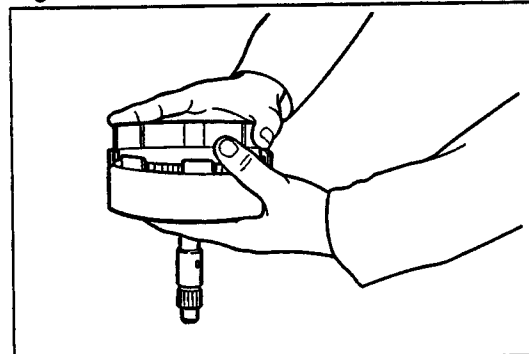


Fig. 4-145

WR-04188

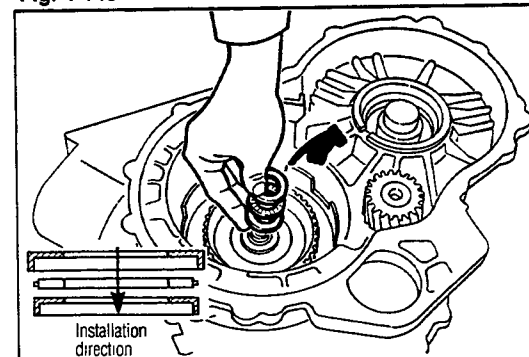


Fig. 4-146

WR-04189

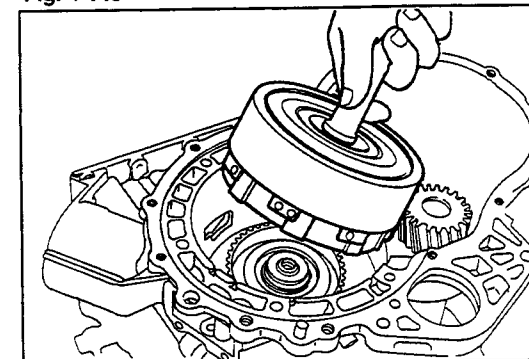


Fig. 4-147

WR-04190

facing downward. While meshing the pinion gear of the counter shaft with the teeth of the differential ring gear, install the differential assembly.

NOTE 1:

Be careful not to damage the teeth of the gear during the installation.

NOTE 2:

The counter shaft pinion gear and the differential ring gear have been set as a pair. Hence, be careful not to mix these parts with other parts.

10. Installation of the torque converter housing

(1) Install the gasket.

NOTE:

Make sure that the gasket is not protruding to the inside.

(2) While aligning the center of the differential gear bearing and the locating pin position, install the housing in the transmission case.

(3) Tighten the housing attaching bolts indicated in the right figure.

Tightening Torque: 1.6 - 2.3 kg-m (12 - 16 ft-lb)

NOTE:

Apply the sealant to the entire threaded portion of each bolt which bears a star mark (indicated by an arrow mark in the figure).

11. Installation of the oil pump assembly

(1) Apply grease to the thrust bearing race and thrust needle roller bearing. Install them to the input shaft.

NOTE 1:

Be sure to install the bearing race in the correct direction.

NOTE 2:

Make sure that the bearing race and bearing are fitted positively.

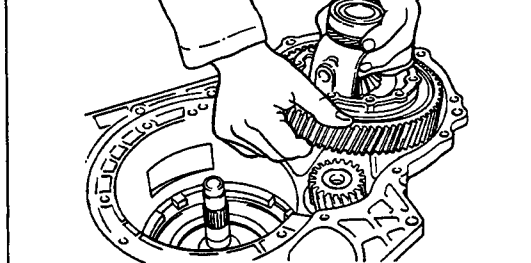


Fig. 4-148

WR-04191

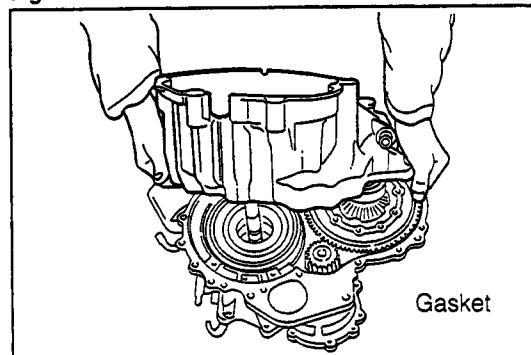


Fig. 4-149

WR-04192

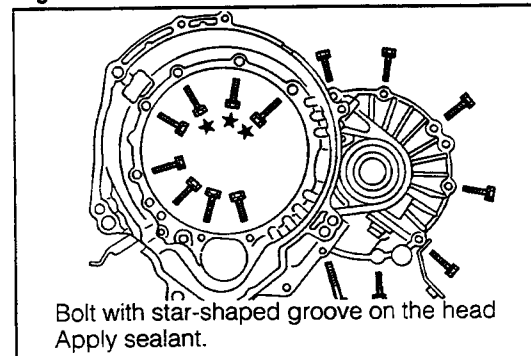


Fig. 4-150

WR-04193

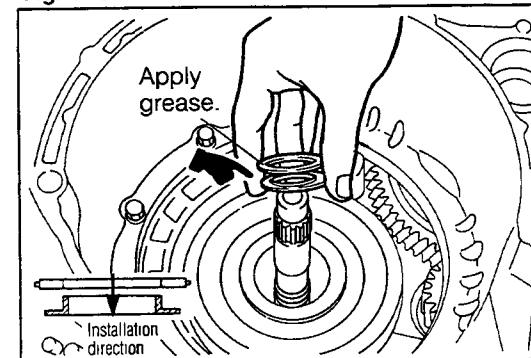


Fig. 4-151

WR-04194

Align the flange of the washer with the cut-out section of the pump.

NOTE 2:

Prior to the installation, apply grease to retain the thrust washer.

(4) When the oil seal is replaced, apply grease to the oil seal prior to the installation.

NOTE 1:

Do not expand the oil seal excessively during the installation.

NOTE 2:

Be certain to install the oil seal to the correct groove.

(5) Install the "O" ring to the periphery of the oil pump.

NOTE 1:

Prior to the installation, apply grease to the "O" ring.

NOTE 2:

Use a new "O" ring.

NOTE 3:

Make sure that the "O" ring is not twisted or displaced from the groove on the periphery of the oil pump.

(6) Install the oil pump assembly in the transmission case.

NOTE:

Care must be exercised to ensure that the "O" ring of the input shaft and the "O" rings provided inside or outside of the pump may not be pinched or damaged.

WR-04198

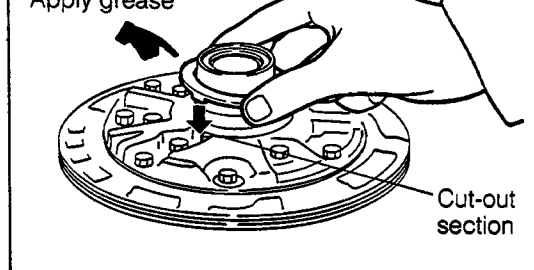


Fig. 4-153

WR-04196

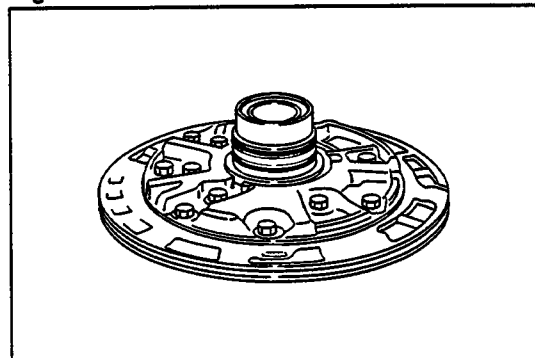


Fig. 4-154

WR-04197

plunger or a dial gauge to the end surface of the input shaft.

Specified Value: 0.3 - 0.9 mm (0.012 - 0.035 inch)

- (2) If the measured value does not comply with the specification, select a proper one from the following two thrust bearing races having different thicknesses. Then, replace the race which was installed in Step 12-(3) at page 00 with the newly-selected bearing race.

Thrust bearing race thickness

Too large end play → 1.4 mm (0.055 inch)

Too small end play → 0.8 mm (0.031 inch)

- (3) After the reinstallation, ensure that the input shaft rotates smoothly.

13. Installation of the solenoid wire harness

- (1) Fit the lock plate into the groove of the solenoid wire grommet. Install the solenoid wire to the stud bolt of the transmission case.
- (2) Attach the washer to the stud bolt and tighten it with the nut.
- (3) Clamp the wire harness at two points of the rear cover.

14. Installation of the throttle cable

- (1) Insert the throttle cable into the hole of the transmission case.

NOTE 1:

Apply the automatic fluid to the "O" ring.

NOTE 2:

Care must be exercised to ensure that the "O" ring may not be damaged or pinched.

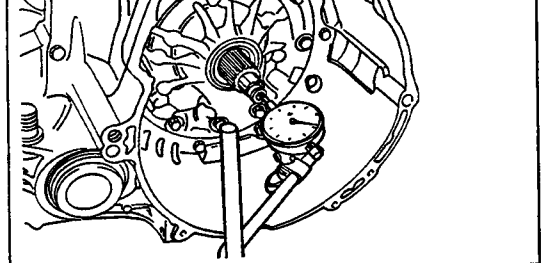


Fig. 4-156

WR-04200

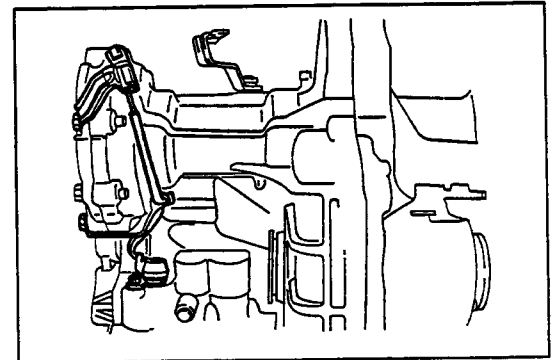


Fig. 4-157

WR-04201

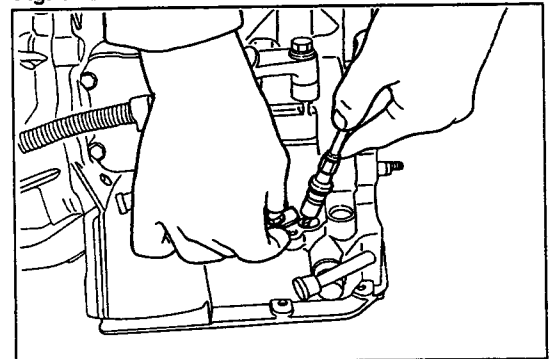


Fig. 4-158

WR-04202

Be careful not to damage the "O" rings.

NOTE 2:

Do not expand the "O" rings excessively.

- (4) Put the spring in the transmission case. Insert the piston assembly into the case.

NOTE 1:

Apply the automatic fluid to the inserting section of the piston rod.

NOTE 2:

Care must be exercised to ensure that the "O" ring may not be damaged or pinched.

NOTE 3:

Make sure that the forward end of the rod is aligned with the metal fitting of the brake band.

- (5) Install two "O" rings to the piston cover.

NOTE:

Prior to the installation, apply the automatic fluid to the "O" rings.

- (6) Insert the piston cover into the transmission case.

NOTE:

Care must be exercised to ensure that the "O" ring may not be damaged or pinched.

- (7) With the piston cover pushed to the inside, attach the snap ring in position.
- (8) Through the side cover hole, check to see if the forward end of the rod is in contact with the metal fitting of the brake band at its specified position.

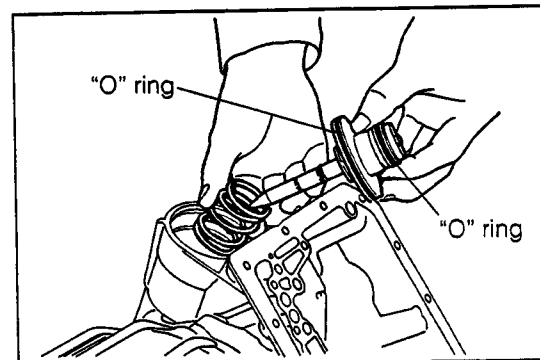


Fig. 4-160

WR-04203

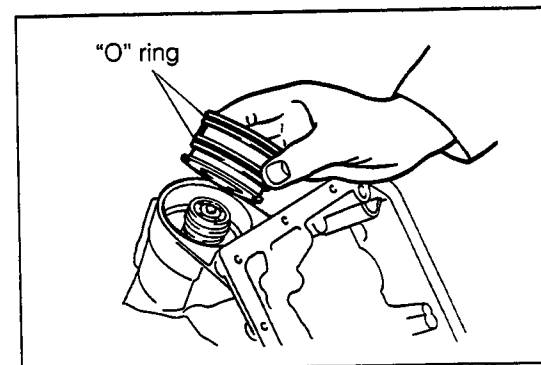


Fig. 4-161

WR-04204

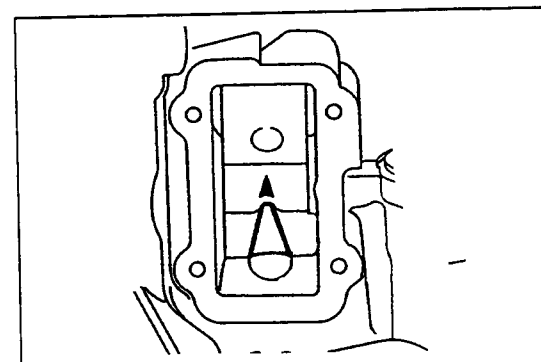


Fig. 4-162

WR-04205

16. Installation of the neutral start switch and the manual valve outer lever.

(1) Install the neutral start switch.

- ① Set the manual shaft to the "N" position.
- ② Insert the switch into the control shaft.
- ③ Temporarily secure the switch bolt (nominal length: 35 mm).
- ④ Align the scribe lines on the control rod and switch with each other.
- ⑤ Securely tighten the bolt which has been secured temporarily in the step ③ above.

Tightening Torque: 1.6 - 2.3 kg-m (12 - 17 ft-lb)

- ⑥ Ensure that the switch is functioning properly

- (2) Pass the upper washer and then the shift lever through the manual shift shaft which protrudes above the transmission upper section. Then, secure them by means of double nuts.

NOTE:

The following shows the tightening sequence of double nuts.

- ① Tighten the lower nut.
Tightening Torque: 0.9 - 1.7 kg-m (6.5 - 12 ft-lb)
- ② Tighten the upper nut.
Tightening Torque: 0.9 - 1.7 kg-m (6.5 - 12 ft-lb)
- ③ With the upper nut locked, tighten the lower nut in the reverse direction.
Tightening Torque: 0.9 - 1.7 kg-m (6.5 - 12 ft-lb)

- (3) Check to see if the shaft rotates smoothly.

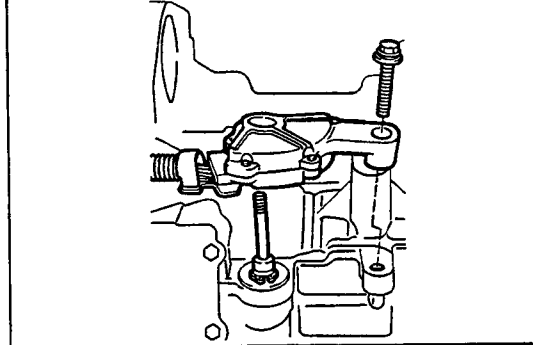


Fig. 4-164

WR-04149

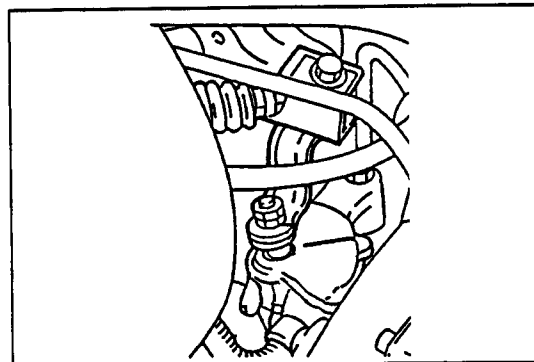


Fig. 4-165

WR-04149A

C ₁	1	64.1 (2.52)	15.0 (0.591)
----------------	---	----------------	-----------------

NOTE 2:

Care must be exercised to ensure that the "O" ring may not be damaged or pinched.

18. Installation of the valve body assembly

- (1) Place the valve body assembly on the transmission case.
- (2) Install the pin of the manual lever in the manual valve.
- (3) Temporarily tighten the two bolts indicated in the figure.

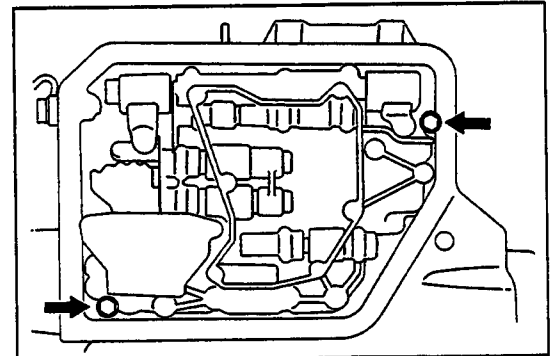


Fig. 4-167

WR-04209

- (4) Install the throttle cable to the throttle cam.

NOTE:

Do not pull the cable more than 40 mm (1.57 inches).

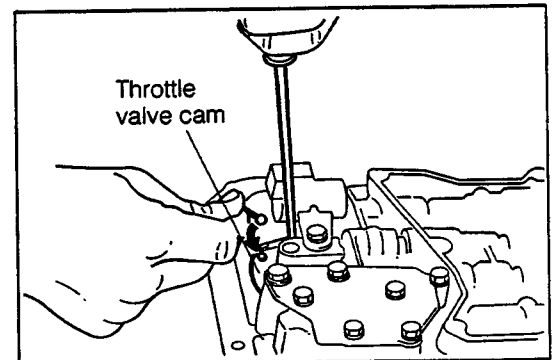


Fig. 4-168

WR-04210

(6) Install the oil tubes.

NOTE 1:

First insert the oil tube's end having no stopper (1 in the right figure) about 2 mm (0.079 inch). Then, insert the end having a stopper (2 in the right figure).

NOTE 2:

To prevent the tube from being deformed, lightly tap the tube using a plastic hammer.

NOTE 3:

Positively insert the tube, until the stopper of the tube comes into contact with the case.

NOTE 4:

Install the tubes in parallel with the valve body.

(7) Connect the solenoid connector.

NOTE:

The wire harness differs in length to prevent wrong connections. Therefore, do not pull it forcibly.

(8) Install the oil strainer. At the same time, clamp the two solenoid connectors. Tighten them all together.

Tightening Torque: 0.4 - 0.6 kg-m (3.0 - 4.0 ft-lb)



Fig. 4-169

WR-04211

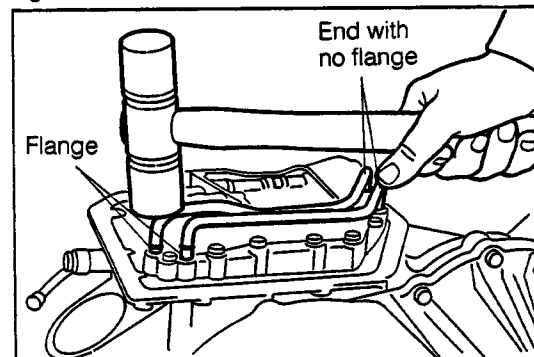


Fig. 4-170

WR-04212

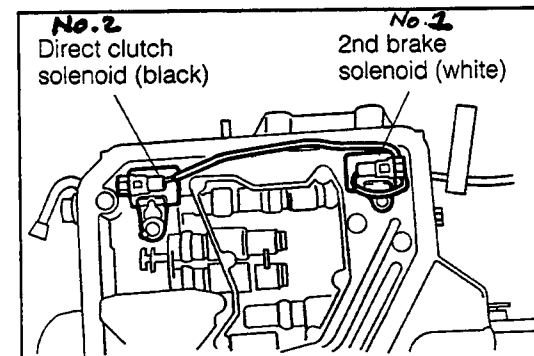


Fig. 4-171

WR-04213

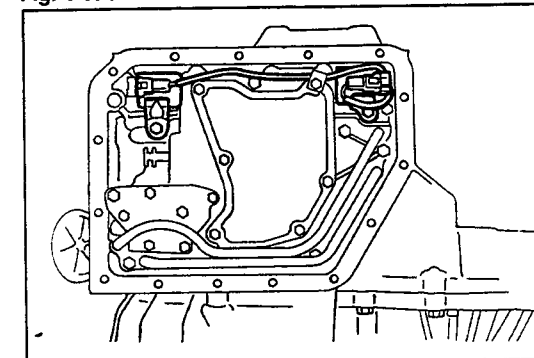


Fig. 4-172

WR-04214

- (3) Tighten the oil pan by means of the bolts (13 pieces) and screws (two pieces).

Tightening Torque: 0.4 - 0.6 kg-m (3.0 - 4.0 ft-lb)

NOTE 1:

Apply the sealant to the two screws indicated in the figure.

NOTE 2:

Make sure that the tube and oil pan do not interfere with each other.

- (4) Tighten the drain plug.

Tightening Torque: 1.8 - 2.3 kg-m (13.5 - 16.5 ft-lb)

WR-04217

20. Installation of the oil filler tube

- (1) Install the "O" ring to the oil filler tube. Insert the oil filler tube into the transmission case.

NOTE 1:

Apply the automatic fluid to the "O" ring.

NOTE 2:

Insert the oil filler tube up to the flange position.

- (2) Secure the oil filler tube by means of the bolt.

Tightening Torque: 0.3 - 0.7 kg-m (2.4 - 5.6 ft-lb)

21. Installation of the test plug at the detecting hole

- (1) Install the "O" ring and tighten the plug.

Tightening Torque: 0.6 - 0.9 kg-m (4.3 - 6.5 ft-lb)

NOTE:

Apply the automatic fluid to the "O" ring.



Fig. 4-173

WR-04215

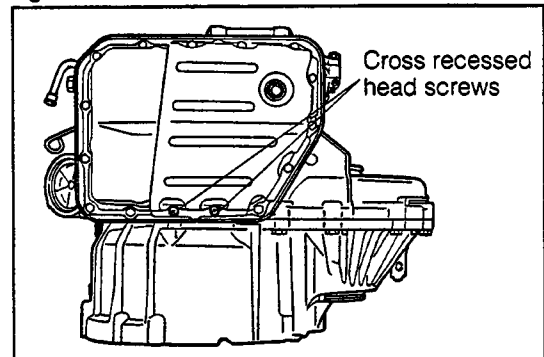


Fig. 4-174

WR-04216

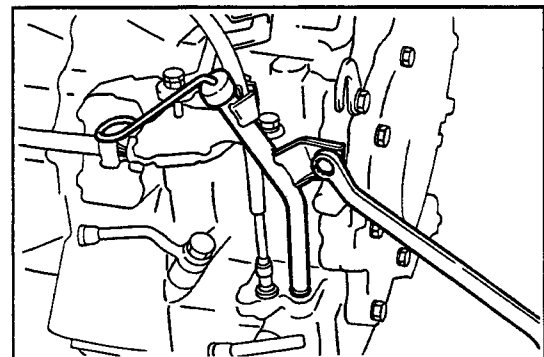


Fig. 4-175

WR-04218

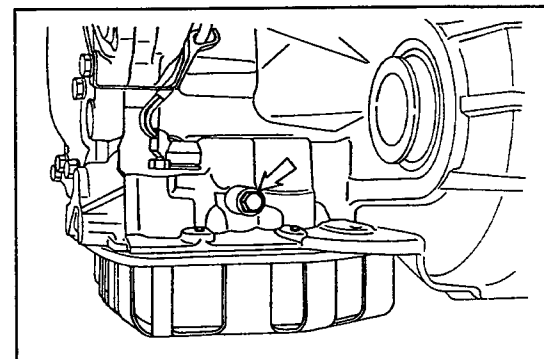


Fig. 4-176

WR-04220

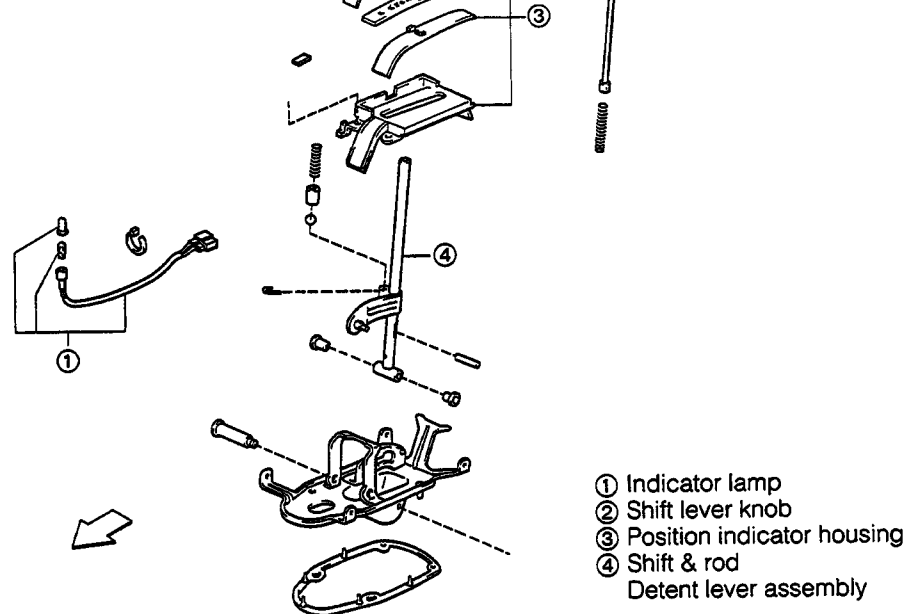


Fig. 4-178

WR-04222

Shift lever components

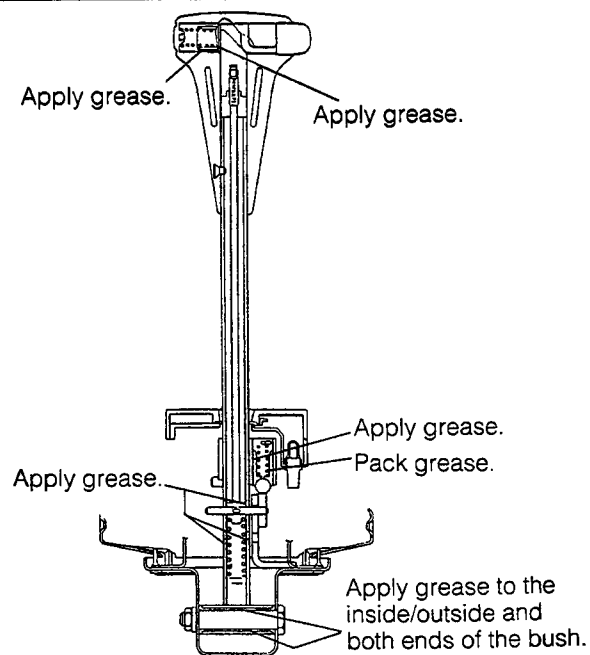


Fig. 4-179

WR-04222A

- ① Shift lever cover
- ② Nut
- ③ Bolt
- ④ Clip

- ⑤ Clamp
- ⑥ Clamp
- ⑦ Clip
- ⑧ Control cable assembly

Fig. 4-180

WR-04223

Control cable components

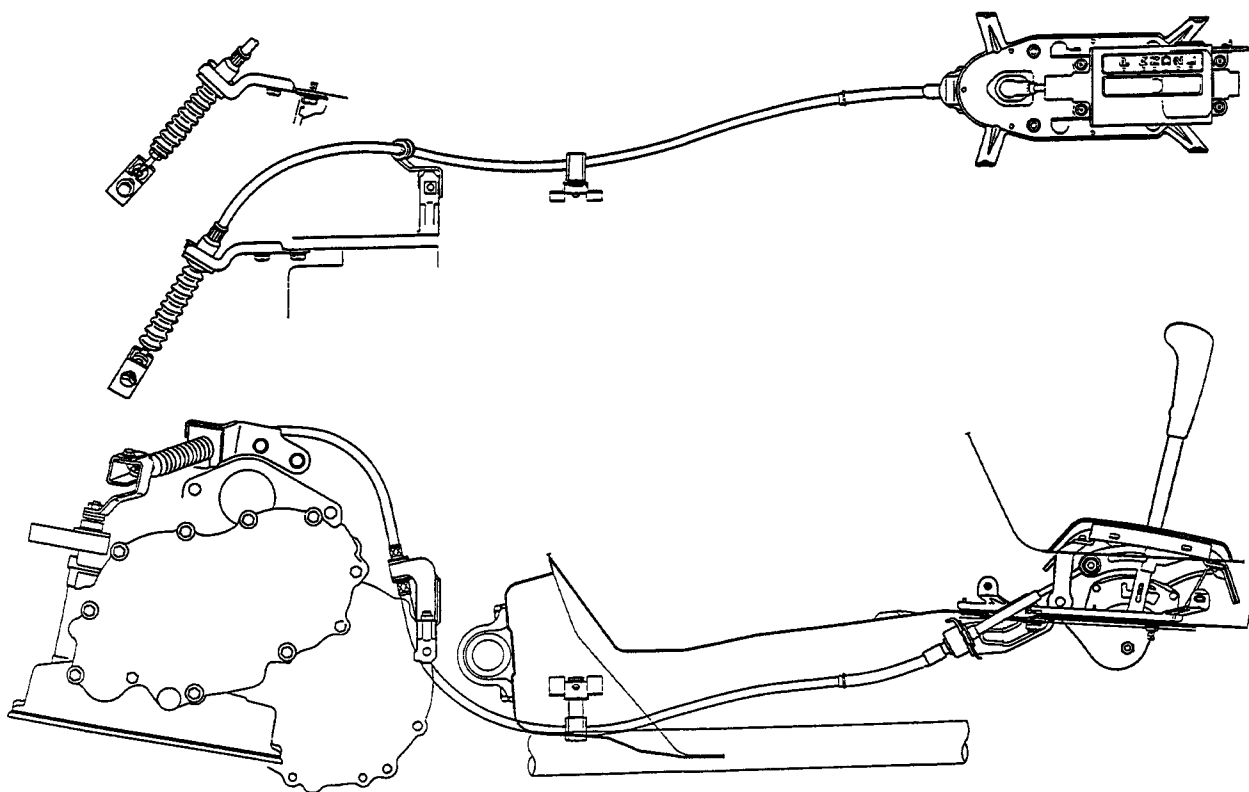
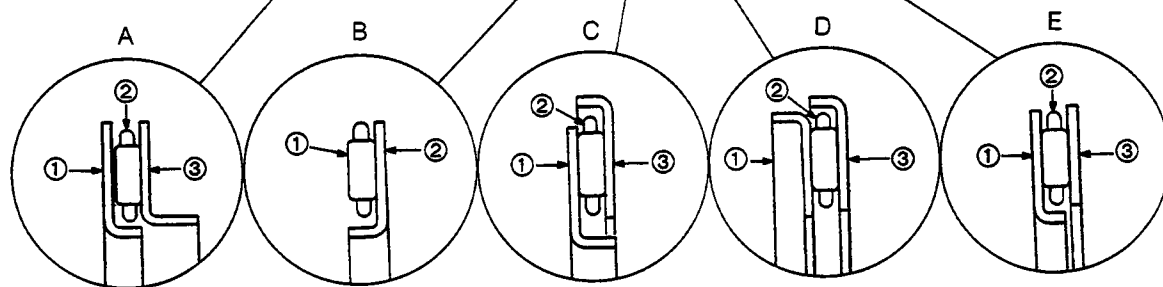


Fig. 4-181

WR-04223A

Output shaft
(counter drive gear)

Input shaft



Position	Part	Inner diameter mm (inch)	Outer diameter mm (inch)	Flange	Thickness	Remarks
A	① Race ② Bearing ③ Race	22.15 (0.872) 24 (0.94) 24 (0.94)	37.5 (1.47) 37.5 (1.47) 37.5 (1.47)	Inner diameter flange — Inner diameter flange		
B	① Bearing ② Race	30 (1.18) 28 (1.10)	45 (1.77) 45 (1.77)	— Inner diameter flange		
C	① Race ② Bearing ③ Race	19 (0.75) 22.3 (0.88) 22 (0.87)	35 (1.38) 36 (1.42) 37.9 (1.49)	Inner diameter flange — Outer diameter flange		
D	① Race ② Bearing ③ Race	23 (0.91) 22.3 (0.88) 22 (0.87)	35.8 (1.41) 36 (1.42) 37.9 (1.49)	Outer diameter flange — Outer diameter flange		Shared in common with C ② Shared in common with C ③
E	① Race ② Bearing ③ Race ③ Race	27.1 (1.07) 30 (1.18) 30.5 (1.20) 30.5 (1.20)	42 (1.65) 42 (1.65) 43 (1.69) 43 (1.69)	Inner diameter flange — Not provided Not provided	0.8 1.4	Option Option

Fig. 4-182

WR-04224

Lower v	2 - 3 shift valve	Pink	39.6 (1.56)	10.5 (0.413)
	1 - 2 shift valve	Blue	28.1 (1.11)	7.9 (0.31)
	B ₂ control valve	Orange	19.9 (0.783)	11.0 (0.433)
	Cooler bypass			
Case	B ₁ accumulator	—	52.0 (2.05)	10.0 (0.394)
	C ₁ accumulator	—	64.1 (2.52)	15.0 (0.591)
B ₁ servo	Inner	—	19 (0.75)	23 (0.91)
	Outer	—	45.9 (1.81)	39 (1.5)
C ₁	For forward clutch (18 pieces)	—	14.90 (0.5866)	7.7 (0.30)
	Shaft parking pawl	—	—	Inner diameter 10.25 (0.4035)

(NOTE)

- Figures in () in the column of "Coil outer diameter" represent the inner diameter.
- Figures in () in the column of "Installing point" represent the number of the part.
- This list does not post those springs which are incorporated in assemblies.

WR-04225

LIST OF "O" RINGS

Installing point	Inner diameter mm (inch)	Installing point	Inner diameter mm (inch)
Oil pump body	200 (7.87)	B ₂ brake	135 (5.31)
Direct clutch drum, inner	75.9 (3.00)	B ₁ servo rod	8.8 (0.35)
C ₂ piston, outer	117 (4.61)	C ₁ , B ₁ accumulators	23.47 (0.9240)
B ₁ servo cover	59.6 (2.35)	B ₁ accumulator	15.4 (0.606)
C ₁ piston, inner	46.52 (1.831)	Filler tube	9.6 (0.38)
C ₁ piston, outer	117 (4.61)	Speedometer	19.7 (0.776)
B ₂ brake	94.1 (3.70)		

- C₁: Forward clutch
 C₂: Direct clutch
 B₁: 2nd brake
 B₂: 1st & reverse brake

WR-04226

Stater shaft × Oil pump body	11	M6	0.8 - 1.2 (6.0 - 8.5)	17	B, W/W
Case side cover × case	4	M6	0.7 - 0.9 (5.5 - 6.5)	18	B, W/W
Counter shaft × counter driver gear	1	M22	11 - 15 (80 - 108)	—	N
Differential gear × differential ring gear	10	M10	8.0 - 1.0 (58 - 72)	—	B, F
Manual shift shaft × Manual valve outer lever	2	M8	0.9 - 1.7 (6.5 - 12)	—	N
Detent × case	1	M6	0.8 - 1.2 (6.0 - 8.5)	16.5	B, W/W
Detent × case	1	M6	0.2 (1.4)	1 $\frac{1}{8}$	B, S
Detent × case	1	M6	0.8 - 1.2 (6.0 - 8.5)	—	N
Detent × case	1	φ 6	—	—	W
Valve body assembly × case	7	M6	0.8 - 1.2 (6.0 - 8.5)	36	B, F
Valve body assembly × case	1	M6	0.8 - 1.2 (6.0 - 8.5)	47	B, F
Valve body assembly × case	2	M6	0.8 - 1.2 (6.0 - 8.5)	25	B, F
Valve body assembly × case	1	M6	0.8 - 1.2 (6.0 - 8.5)	32	B, F
Upper valve body × lower valve body	6	M5	0.5 - 0.6 (3.6 - 4.3)	29.5	B, F
Upper valve body × lower valve body	6	M5	0.5 - 0.6 (3.6 - 4.3)	38	B, F
Upper valve body × lower valve body	2	M5	0.5 - 0.6 (3.6 - 4.3)	44	B, F
Upper valve body × lower valve body	2	M5	0.5 - 0.6 (3.6 - 4.3)	29.5	B, F
Lower cover × lower valve body	6	M5	0.5 - 0.6 (3.6 - 4.3)	14	B, F
Strainer × lower valve body	6	M5	0.5 - 0.6 (3.6 - 4.3)	14	B, F
Solenoid × lower valve body	2	M6	0.64 - 0.96 (4.6 - 6.9)	10	B, W/W
Throttle cam × lower valve body	1	M6	0.6 - 0.9 (4.3 - 6.5)	28	B, F
Oil pan × case	13	M6	0.4 - 0.6 (3.0 - 4.3)	16	B, W/W
Drain plug × oil pan	1	M10	1.8 - 2.3 (13 - 17)	8.3	P
Wire-to-solenoid × case	1	M6	0.2 (1.4)	1 $\frac{1}{8}$	B, S
Wire-to-solenoid × case	1	M6	0.5 - 0.6 (3.6 - 4.3)	—	N
Wire-to-solenoid × case	1	φ 6	—	—	W

WR-04227

Speedometer sleeve plate lock × case	1	M6	0.6 - 0.9 (4.3 - 6.5)	12	B, W/W
Throttle cable clamp × case	1	M6	0.6 - 0.9 (4.3 - 6.5)	12	B, W/W
O/P assembly × case	1	M10	1.8 - 2.7 (14 - 19)	28	B, F
Neutral start switch × case	1	M8	1.6 - 2.3 (12 - 16)	35	B, W/W
Clamp × case	1	M8	0.9 - 1.7 (6.5 - 12)	20	B, W/W
Mount bracket × case	3 (5)	M10	3.0 - 4.5 (22 - 33)	25	B, W/W

: Apply sealant to the bolt bearing the "" mark.

case: Transmission case

WR-04228

Explanation of shape

B, W/W : Bolt with washer
 B, S : Stud bolt
 N : Nut
 W : Washer
 B, F : Bolt flange
 P : Plug
 S, W/W : Screw with washer

WR-04229

SECTION 5

FRONT AXLE & SUSPENSION

5

FRONT AXLE	5- 2	DRIVE SHAFT	5-22
SECTIONAL VIEW	5- 2	DRIVE SHAFT-RELATED PARTS	5-22
COMPONENTS	5- 2	OPERATION PRIOR TO REMOVAL	5-23
REMOVAL	5- 3	REMOVAL	5-23
INSPECTION	5- 5	INSPECTION	5-25
INSTALLATION	5- 6	COMPONENTS	5-26
FRONT SUSPENSION	5- 9	DISASSEMBLY	5-27
SECTIONAL VIEW	5- 9	INSPECTION	5-28
FRONT SHOCK ABSORBER	5-10	ASSEMBLY	5-28
COMPONENTS	5-10	INSTALLATION	5-29
REMOVAL	5-10	FRONT DRIVE BEARING SHAFT	5-32
DISASSEMBLY	5-11	COMPONENTS	5-32
INSPECTION	5-12	INSPECTION	5-32
ASSEMBLY	5-13	DISASSEMBLY	5-33
INSTALLATION	5-14	INSPECTION	5-35
FRONT STABILIZER BAR	5-15	ASSEMBLY	5-35
COMPONENTS	5-15	WHEEL ALIGNMENT (FRONT AND REAR) ...	5-38
REMOVAL	5-15	CHECKS PRIOR TO WHEEL ALIGNMENT	
INSPECTION	5-16	MEASUREMENT	5-38
INSTALLATION	5-16	CHECKS AND ADJUSTMENT OF FRONT	
LOWER ARM	5-17	WHEEL ALIGNMENT	5-39
COMPONENTS	5-17	CHECK AND ADJUSTMENT OF REAR	
REMOVAL	5-18	TOE-IN	5-44
INSPECTION	5-19		
INSTALLATION	5-20		

WR-05001

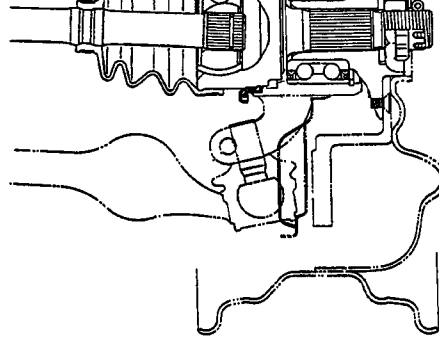
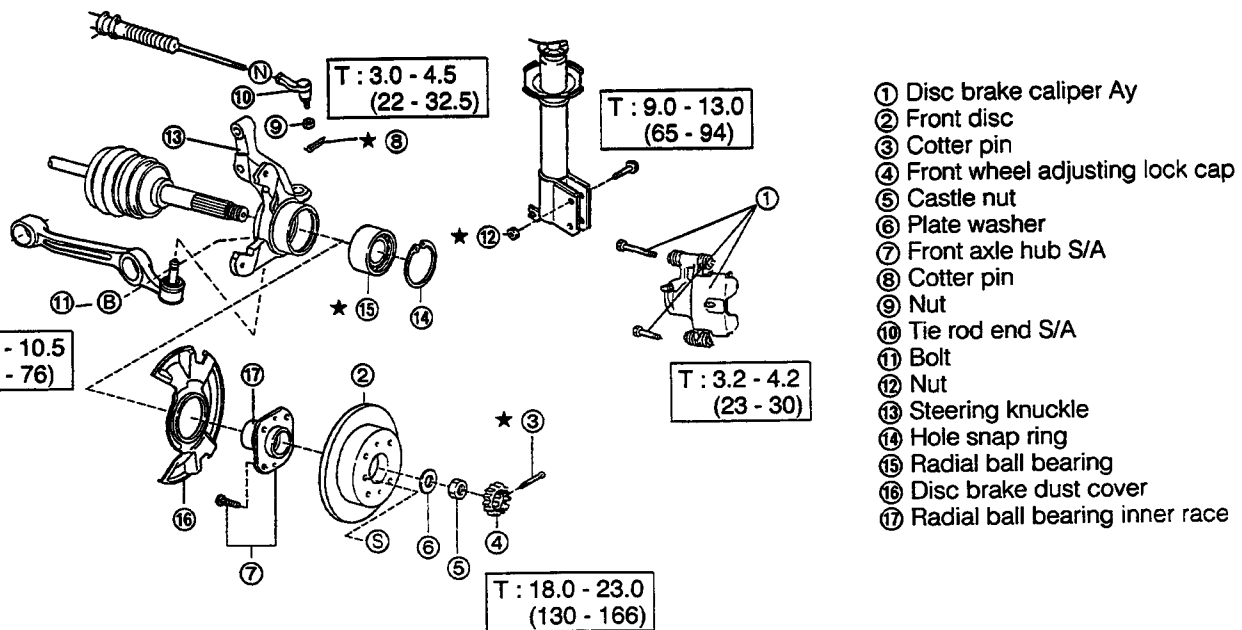


Fig. 5-1

WR-05002

COMPONENTS



T : Tightening torque
Unit: kg-m (ft-lb)
★ : Non-reusable parts

Fig. 5-2

WR-05003

(2) Suspend the caliper.

4. Remove the disc rotor.

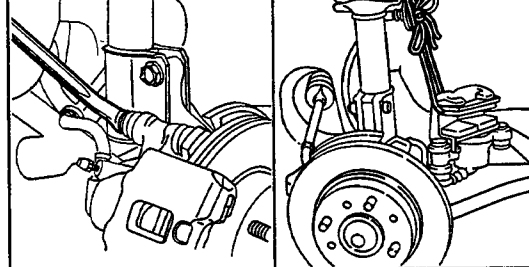


Fig. 5-4

WR-05005

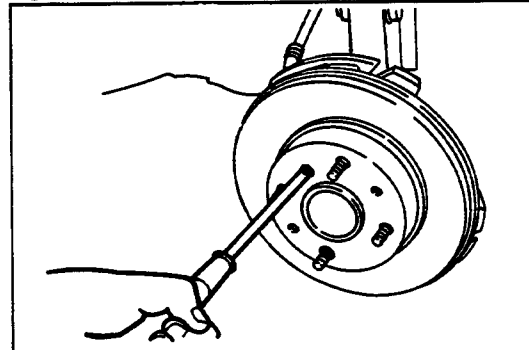


Fig. 5-5

WR-05006

5. Front axle hub removal

(1) Remove the cotter pin and front wheel adjusting lock cap.

(2) Remove the castle nut, using the following SST.

SST: 09511-87202-000

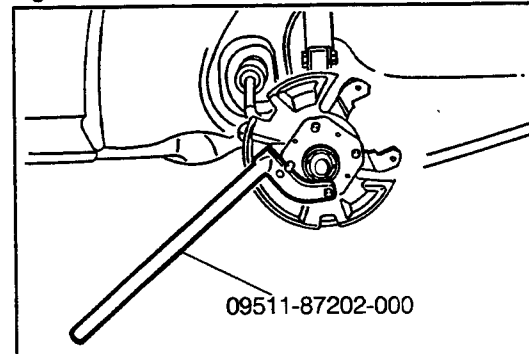


Fig. 5-6

WR-05007

(3) Draw out the axle hub, using the following SST.

NOTE:

Do not separate the axle hub from the steering knuckle unless such separation is necessary.

SST: 09520-00031-000

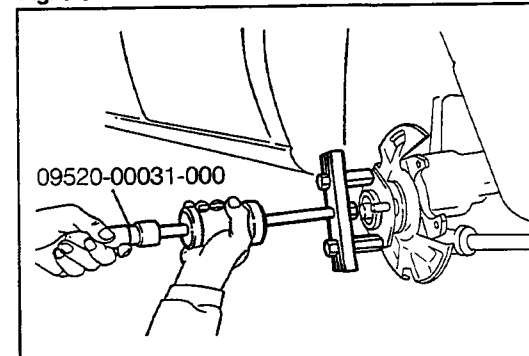


Fig. 5-7

WR-05008

8. Steering knuckle separation

Remove the attaching nuts. Leave the bolts in their inserted conditions.

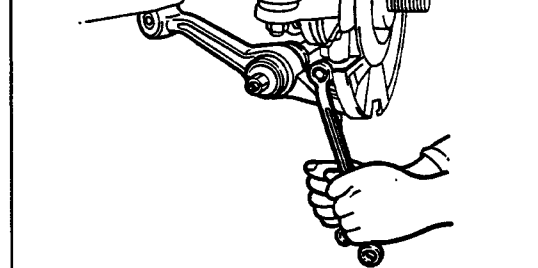


Fig. 5-9

WR-05010

9. Steering knuckle removal

- (1) While supporting the steering knuckle, draw out the attaching bolts of the shock absorber lower bracket.
- (2) Disengage the axle hub from the drive shaft. Remove the steering knuckle.

NOTE:

- Protect the drive shaft boot with cloth or the like so that it may not be damaged during the operation.
- Wind a tape or the like on the drive shaft threaded portion so that the oil seal may not be damaged.

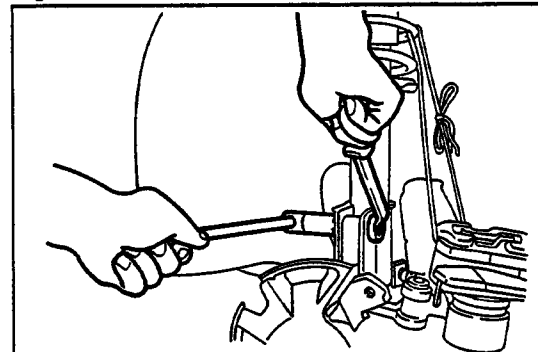


Fig. 5-10

WR-05011

10. Front axle bearing removal

- (1) Remove the dust seal from the axle hub, using a common screwdriver.
- (2) Remove the bearing inner race (outer side) from the axle hub, using the following SST.

SST: 09950-20014-000

09720-00010-000 (Use the item No.3 that is part of the set.)

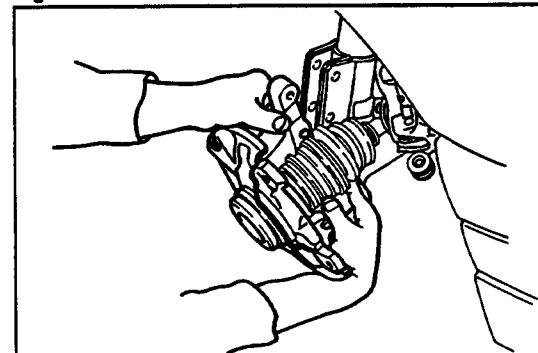


Fig. 5-11

WR-05012

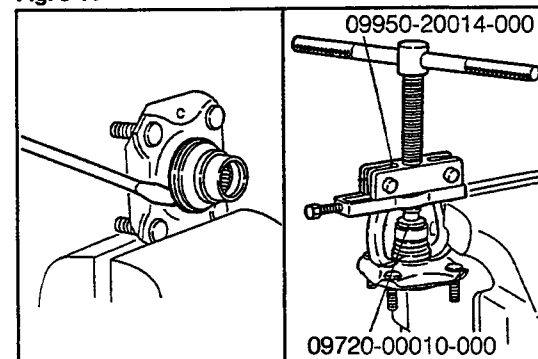


Fig. 5-12

WR-05013

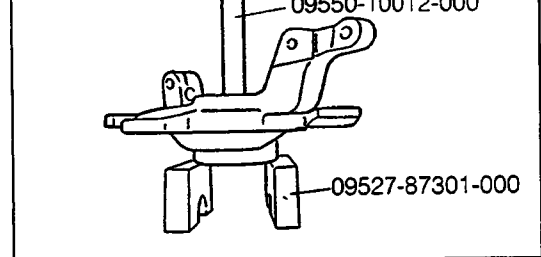


Fig. 5-14

WR-05015

INSPECTION

Inspect the following parts.

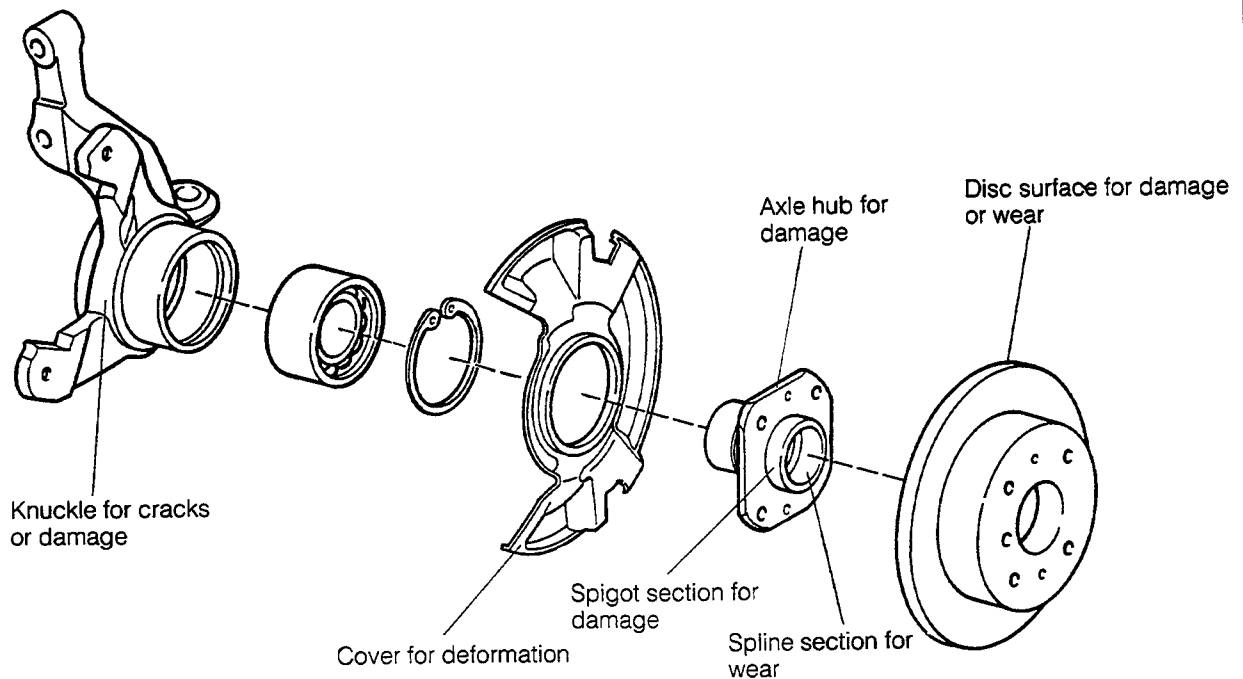


Fig. 5-15

WR-05016

INSTALLATION

1. Front axle bearing installation

- (1) Press the bearing into position, using the following SSTs.

SST: 09506-87302-000

09550-10012-000 (09554-10010-000, part of the preceeding tool)

- (2) Install a new snap ring, using snap ring pliers.

- (3) Press the front axle hub into position, using the following SST.

SST: 09550-10012-000 (09554-10010-000, part of the preceeding tool)

2. Steering knuckle installation

- (1) Insert the steering knuckle into the drive shaft.

NOTE:

- Be careful not to allow the drive shaft to come into contact with the oil seal at the knuckle side.
- Pay utmost attention not to damage the ball joint dust cover.

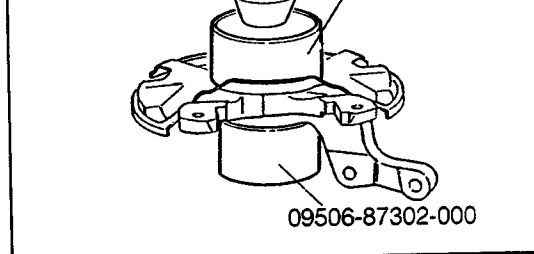


Fig. 5-17

WR-05018

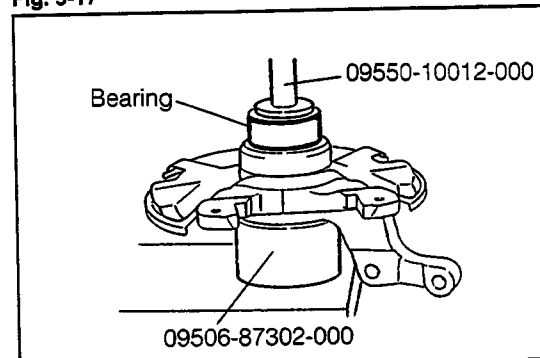


Fig. 5-18

WR-05019

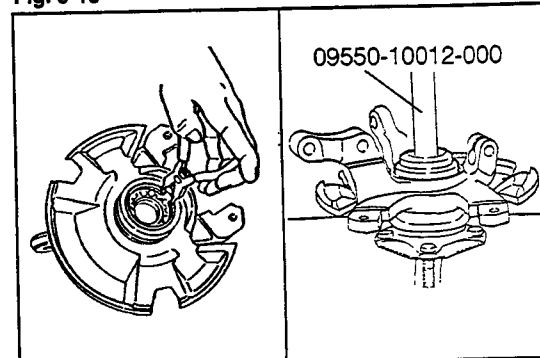


Fig. 5-19

WR-05020

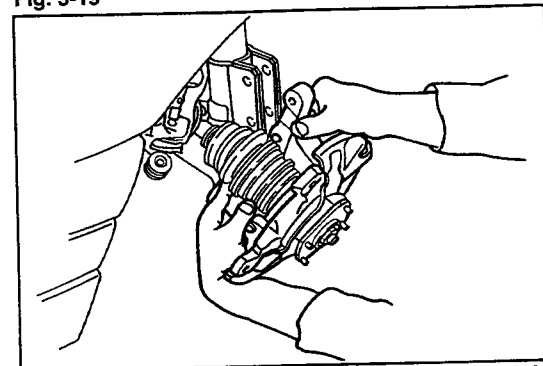


Fig. 5-20

WR-05021

(5) Install the washer. Install the nut temporarily.

NOTE:

Be sure to install the washer in the correct direction.

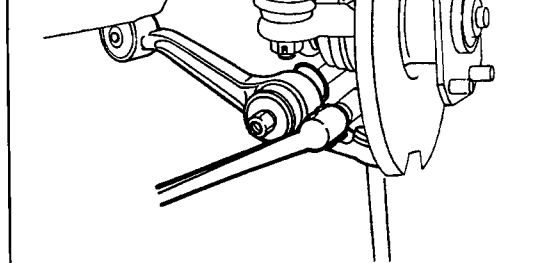


Fig. 5-22

WR-05023

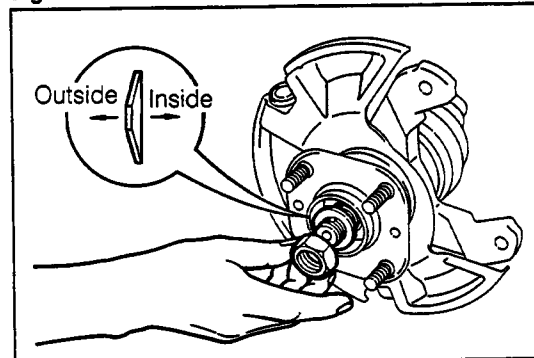


Fig. 5-23

WR-05024

3. Install the disc rotor.

NOTE:

Care must be exercised to ensure that no foreign matter lodge between the hub and the disc rotor.

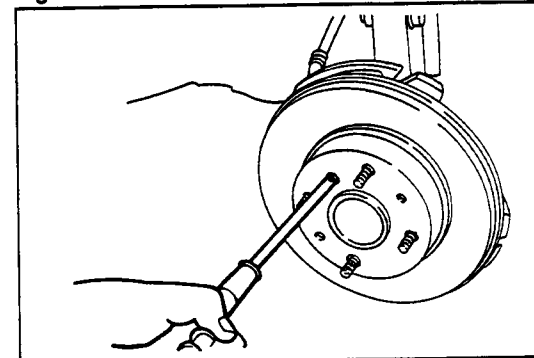


Fig. 5-24

WR-05025

4. Disc brake caliper installation

(1) Install the pad guide plate to the steering knuckle.

(2) Tighten the attaching bolts of the disc brake caliper.

Tightening Torque: 3.2 - 4.2 kg-m (23 - 30 ft-lb)

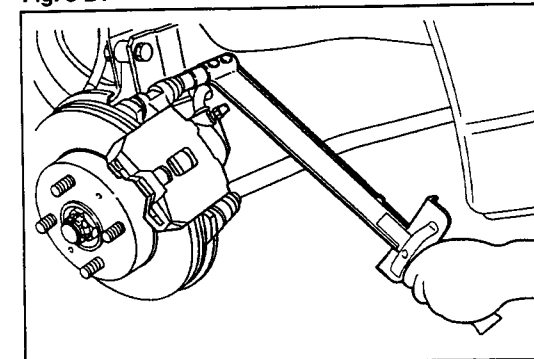


Fig. 5-25

WR-05026

tighten the castle nut.

Tightening Torque: 3.0 - 4.5 kg-m (22 - 32.5 ft-lb)

(2) Install a new cotter pin.

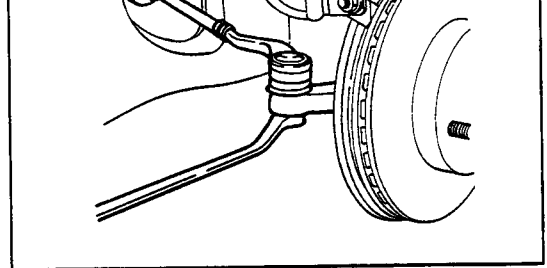


Fig. 5-27

WR-05028

7. Install the wheel.
8. Front wheel alignment inspection and adjustment
(See page 5-38.)

WR-05029

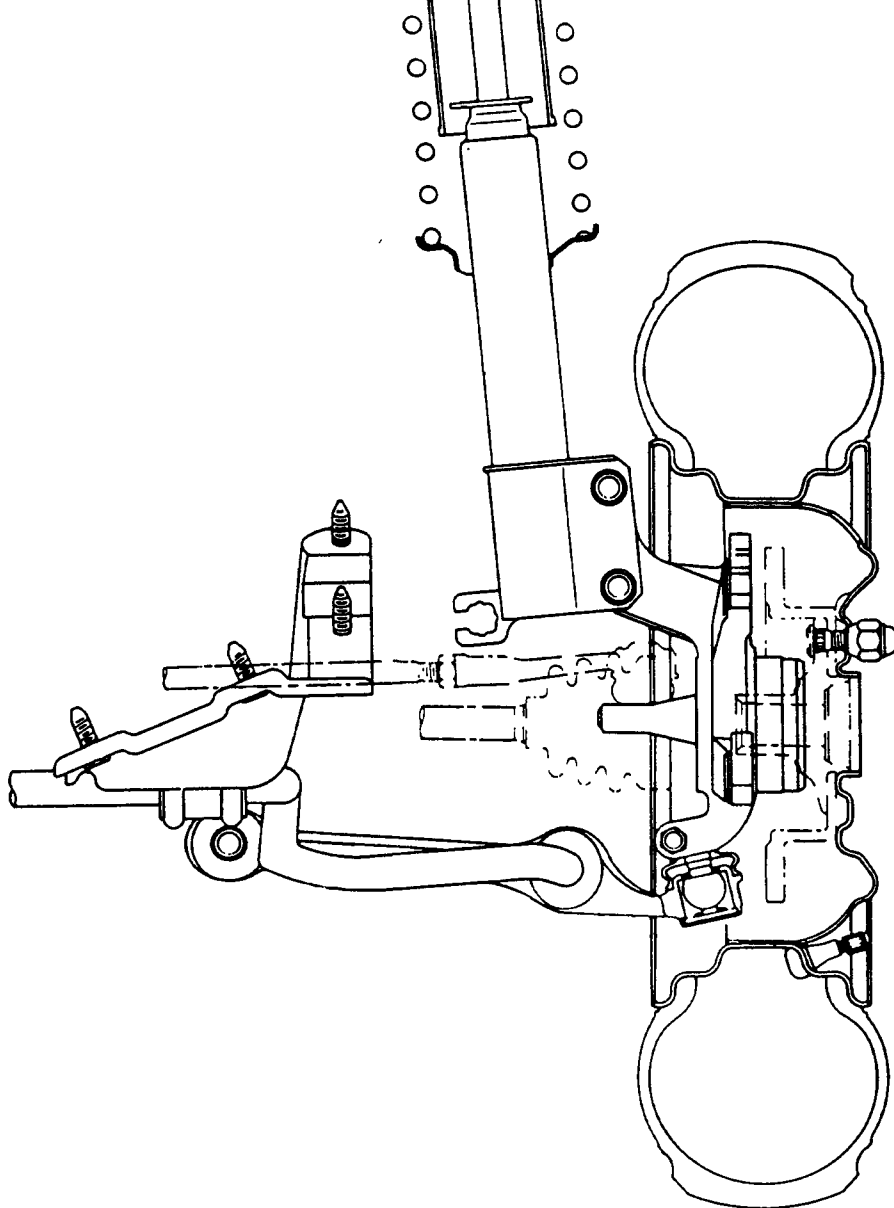
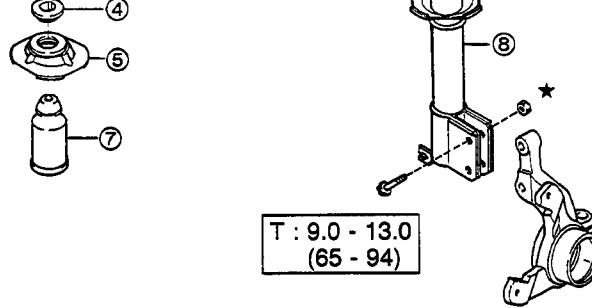


Fig. 5-28

WR-05030



- ① Bearing dust cover
- ② Nut
- ③ Front suspension support
- ④ Bearing

- ⑤ Front spring upper seat
- ⑥ Coil spring
- ⑦ Spring bumper
- ⑧ Shock absorber

Fig. 5-29

WR-05031

REMOVAL

1. Jack up the vehicle at the front side. Support the body with safety stands.
2. Remove the front wheel.

3. Flexible hose removal
 - (1) Remove the clip at the shock absorber side.
 - (2) Disconnect the flexible hose at the shock absorber bracket.

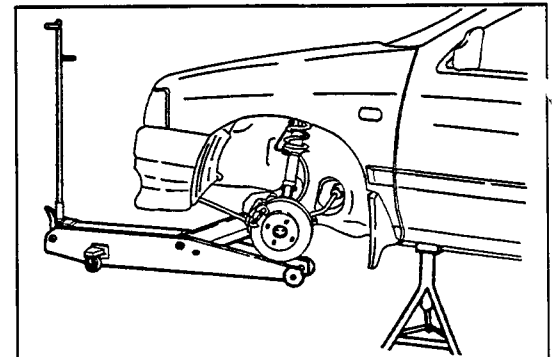


Fig. 5-30

WR-05032

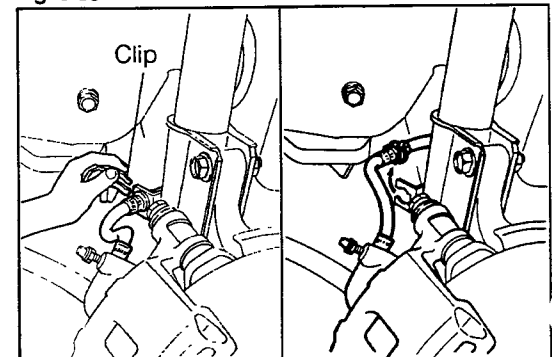


Fig. 5-31

WR-05033

the shock absorber from the body.

NOTE:

Be sure to protect the drive shaft boot with cloth or the like so that it may not be damaged.

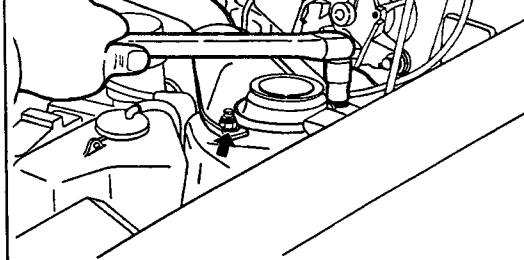


Fig. 5-33

WR-05035

DISASSEMBLY

1. Compress the coil spring, using the following SST.
SST: 09727-87701-000

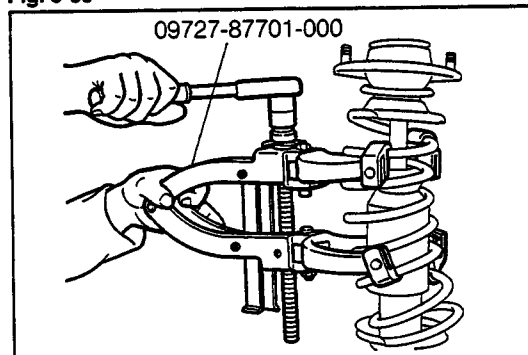


Fig. 5-34

WR-05036

2. Coil spring disassembly
 - (1) Clamp the front suspension support in a vice.
 - (2) Remove the bearing dust cover and loosen the nut.

NOTE:

Never remove the nut by applying impacts on it, using an impact wrench or the like.

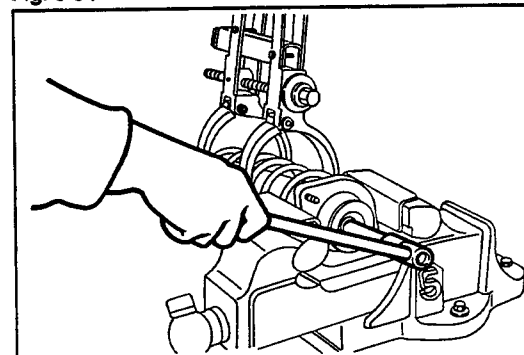


Fig. 5-35

WR-05037

Front shock absorber

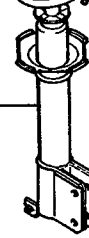


Fig. 5-36

WR-05038

INSPECTION

1. Inspect the following parts.

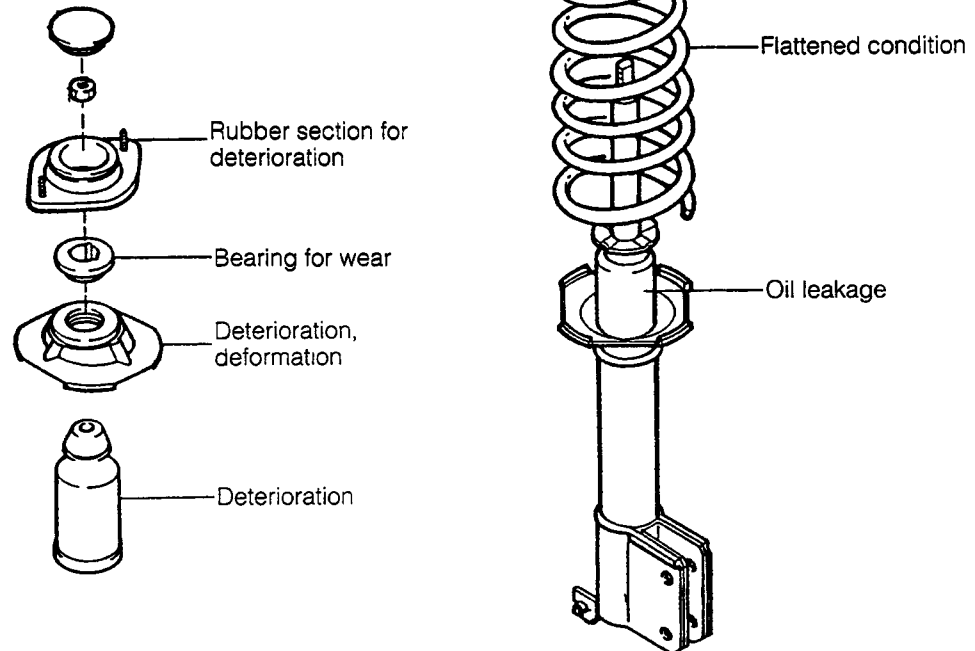


Fig. 5-37

WR-05039

the inspection above, replace the shock absorber.

NOTE:

- Perform this inspection after the piston rod has been moved in a up-and-down direction three or four times.
- When the gas filling type shock absorber is replaced, previous to the disposal, be sure to release the gas from the shock absorber.

ASSEMBLY

1. Assembly of coil spring

- (1) Insert the spring bumper at a point below the cut-out section of the piston rod.
- (2) Compress the coil spring, using the following SST.

SST: 09727-87701-000

- (3) Install the front spring upper seat and bearing.

- (4) Install the front suspension support.

NOTE:

Be sure to align the cut-out section of the front suspension support with that of the piston rod during the assembly.

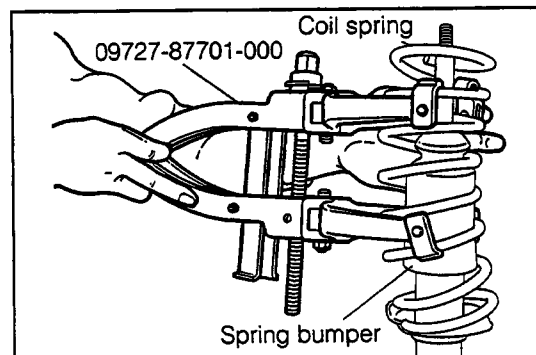


Fig. 5-39

WR-05041

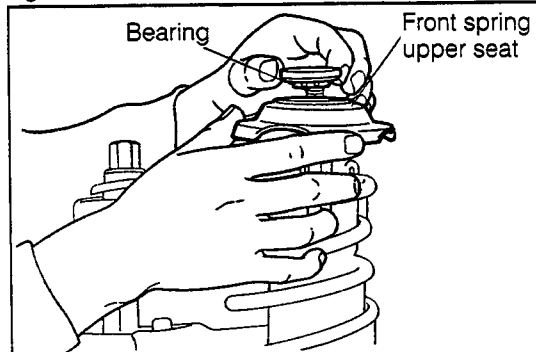


Fig. 5-40

WR-05042

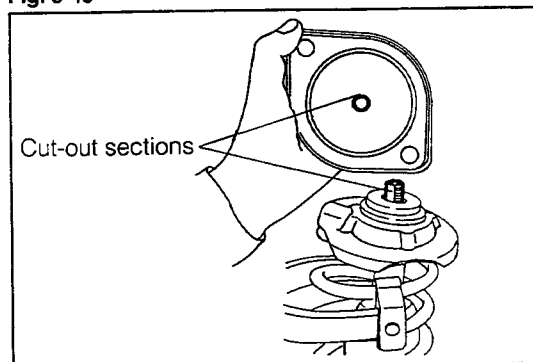


Fig. 5-41

WR-05043

- (1) Install the suspension support on the fender apron.
(Use a new nut.)

Tightening Torque: 2.0 - 3.0 kg-m (14.5 - 22 ft-lb)

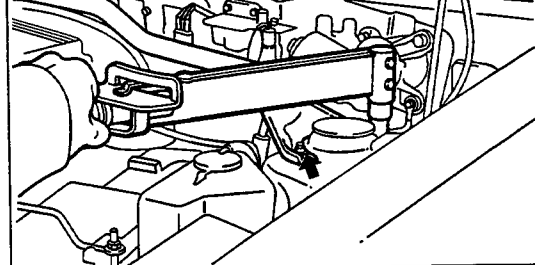


Fig. 5-43

WR-05045

2. Installation of steering knuckle section

- (1) Mount the steering knuckle on the shock absorber lower bracket.

- (2) Install the bolt and nut in position and tighten them.

Tightening Torque: 9.0 - 13.0 kg-m (65 - 94 ft-lb)

NOTE:

With the knuckle pushed against the lower side, tighten the bolt and nut.

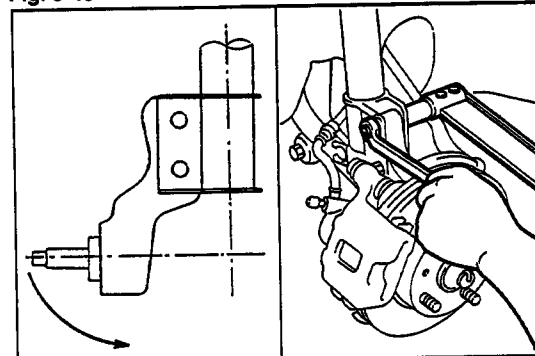


Fig. 5-44

WR-05046

NOTE:

In the case of the removal/installation of the left shock absorber, install the attaching bolt (upper side) of the disc brake caliper after the steering knuckle section has been installed.

Tightening Torque: 3.2 - 4.2 kg-m (23 - 30 ft-lb)

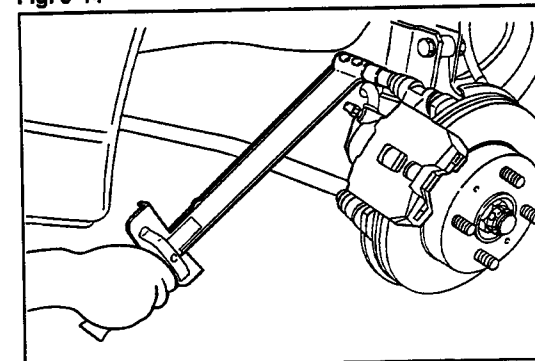


Fig. 5-45

WR-05047

3. Install the flexible hose, as follows:

- (1) Install the flexible hose to the shock absorber bracket.
(2) Install the flexible hose clip.

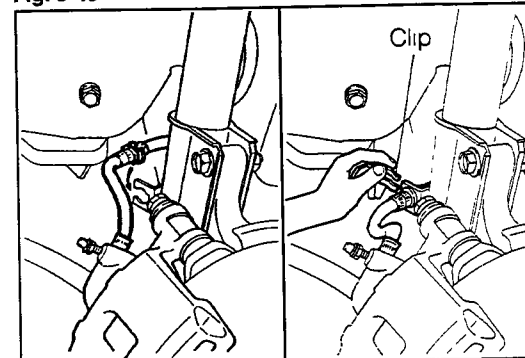


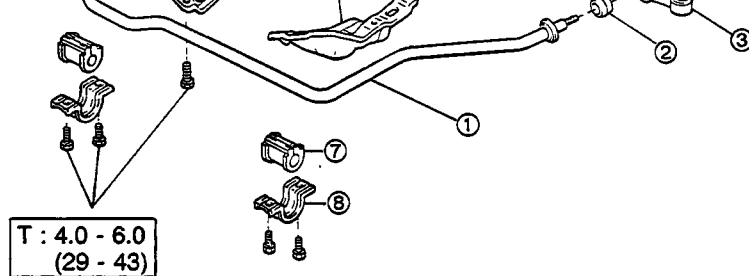
Fig. 5-46

WR-05048

4. Install the wheels. Jack down the vehicle.

5. Front wheel alignment inspection (See page 5-38.)

WR-05048



- ① Front stabilizer bar
- ② Strut bar cushion
- ③ Suspension lower arm S/A
- ④ Strut bar cushion
- ⑤ Retainer cushion

- ⑥ Nut
- ⑦ Stabilizer bush
- ⑧ Stabilizer bracket
- ⑨ Steering knuckle
- ⑩ Front stabilizer lower bracket

Fig. 5-47

WR-05049

REMOVAL

1. Jack up the vehicle at the front side. Support the body with safety stands.
2. Remove the engine under-cover. (Vehicles mounted with Type CL-11 and CL-61 engines only)
3. Remove the stabilizer bar, as follows:
 - (1) Remove the stabilizer bar end nuts and retainer.

- (2) Remove the attaching bolts of the stabilizer bar brackets.

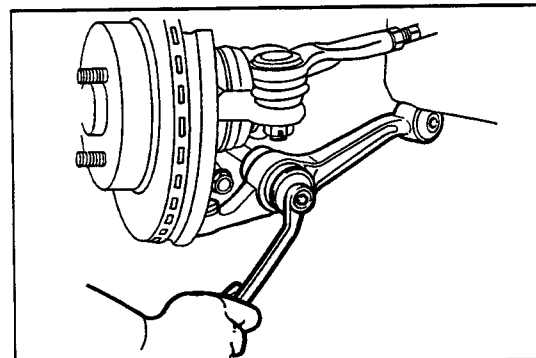


Fig. 5-48

WR-05050

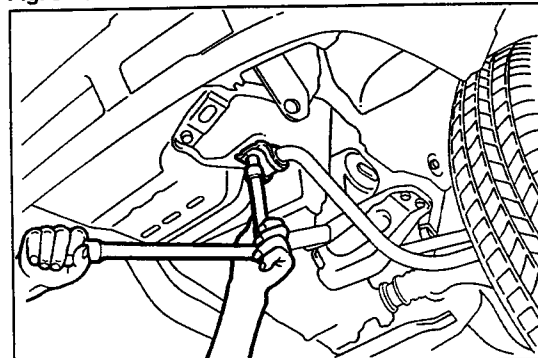


Fig. 5-49

WR-05051

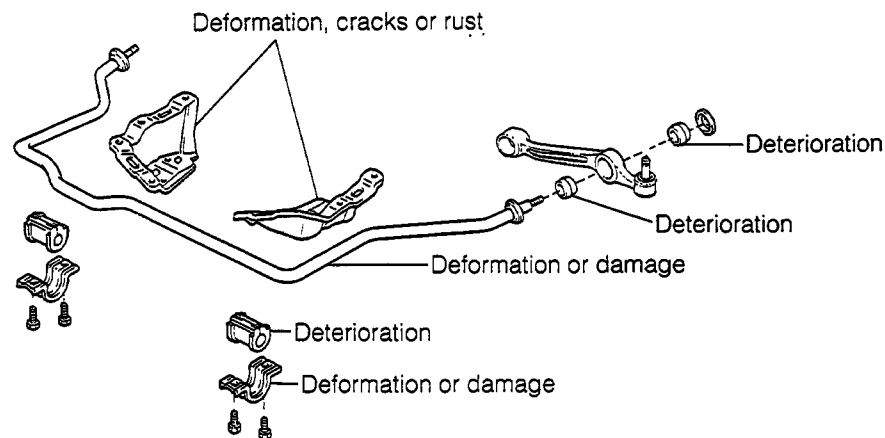


Fig. 5-51

WR-05053

INSTALLATION

1. Stabilizer bar installation

(1) Install the cushions to the stabilizer bar.

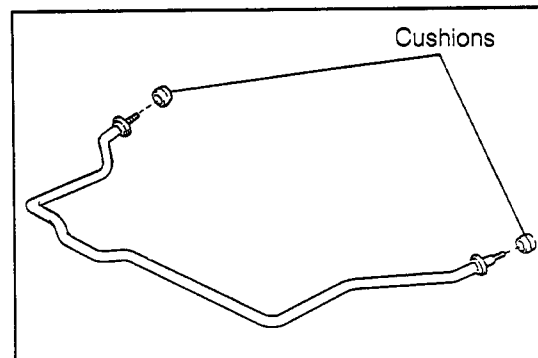


Fig. 5-52

WR-05054

(2) Install the stabilizer bar to the lower arm.

NOTE:

If the stabilizer bar end is not aligned with the lower arm attaching hole, use a jack on the tire so as to align the holes with each other.

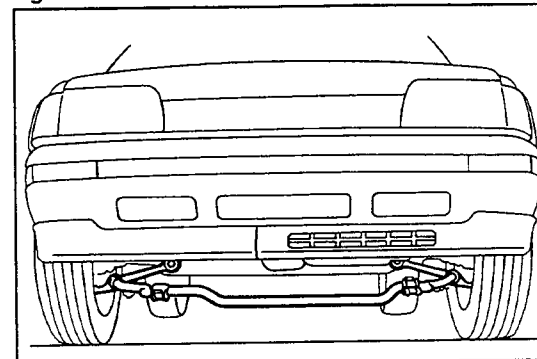


Fig. 5-53

WR-05055

temporarily, using a new nuts.

- (5) Rock the front section of the vehicle in an up-and-down direction two or three times so as to settle the suspension.
- (6) With the vehicle in an unloaded state (the lower arm is horizontal), tighten the nuts.

Tightening Torque: 7.5 - 11 kg-m (54 - 80 ft-lb)

NOTE:

If the nut is tightened at the rebound side, the cushion twisting angle will become large, resulting in reduced riding comfort.

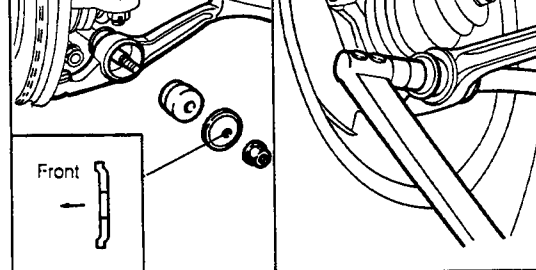


Fig. 5-55

WR-05057

2. Install the engine under-cover. (Vehicles mounted with Type CL-11 and CL-61 engines only)
3. Front wheel alignment inspection (See page 5-38.)

LOWER ARM COMPONENTS

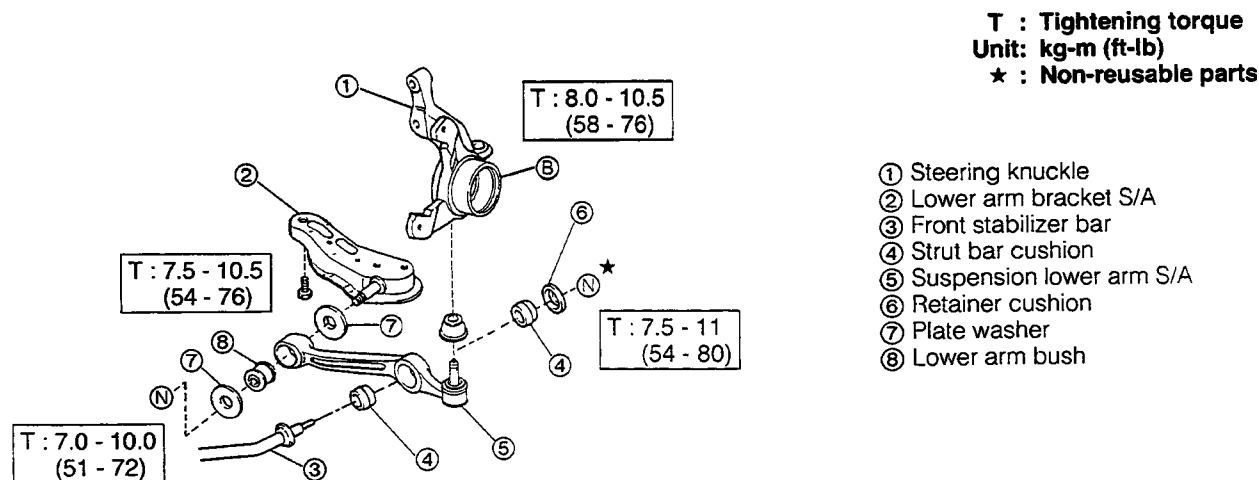


Fig. 5-56

WR-05058

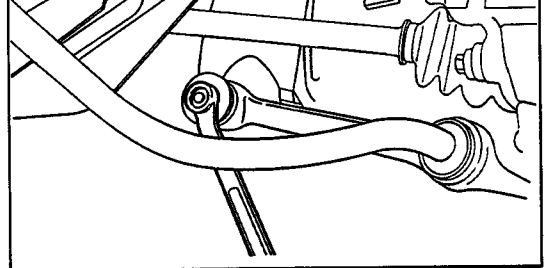


Fig. 5-58

WR-05060

- (4) Remove the attaching bolts of lower suspension brace.
(TURBO and GTti grades only)
- (5) Remove the lower arm bracket.
- (6) Remove the lower arm.

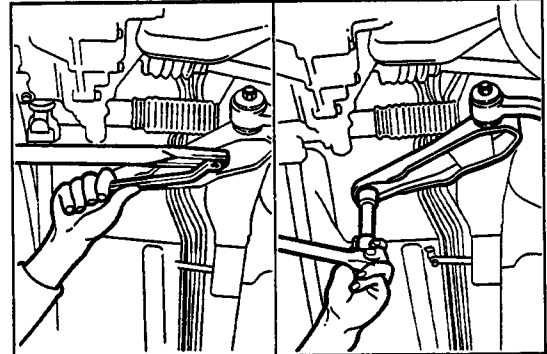


Fig. 5-59

WR-05061

Damage or cracks

Fig. 5-60

WR-05062

1. Lower ball joint dust cover replacement

(1) Remove the dust cover, using a common screwdriver.

NOTE:

Be very careful not to damage the socket section.

(2) When assembling the lower ball joint dust cover, apply grease to the following sections.

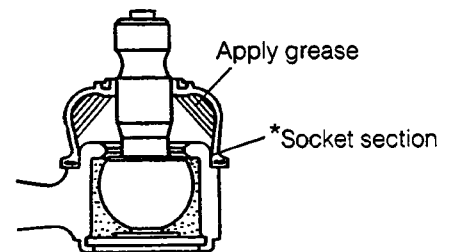


Fig. 5-61

WR-05063

(3) Press the dust cover into position, using a press in combination with the following SST.

SST: 09618-87301-000

NOTE:

Make sure that no grease or oil gets to the socket section (indicated by a "*" mark) during the press operation.

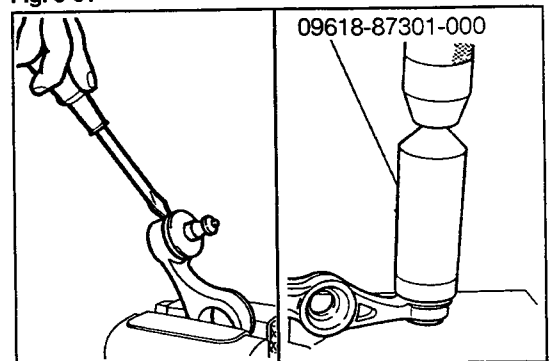


Fig. 5-62

WR-05064

- (1) Temporarily tighten the lower arm ball joint section and stabilizer bar end nut section.

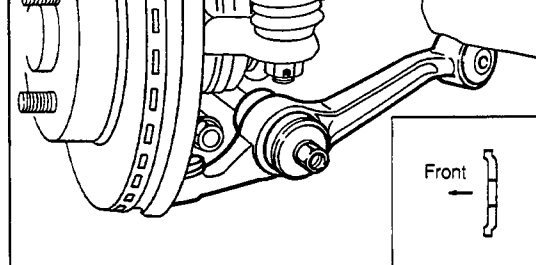


Fig. 5-64

WR-05066

- (2) Tighten the bolt and nut of the ball joint section.
Tightening Torque: 8.0 - 10.5 kg-m (58 - 76 ft-lb)

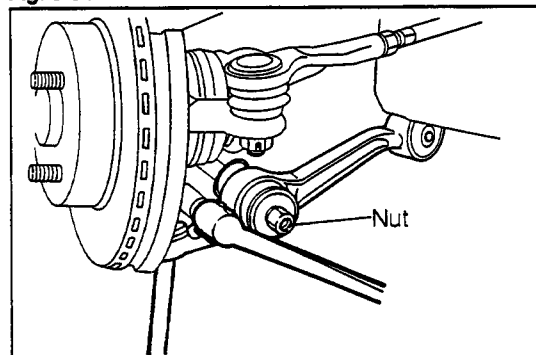


Fig. 5-65

WR-05067

- (3) Install the lower arm bracket.
Tightening Torque: 7.5 - 10.5 kg-m (54 - 76 ft-lb)
- (4) Tighten the lower arm attaching nut temporarily.

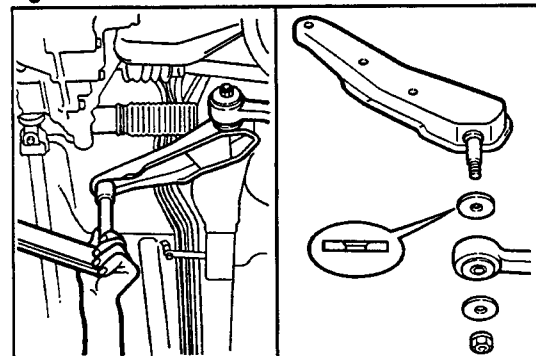


Fig. 5-66

WR-05068

- (5) Installation of lower suspension brace.
(TURBO and GTti grades only)
Tightening Torque: 4.0 - 5.5 kg-m (29 - 40 ft-lb)

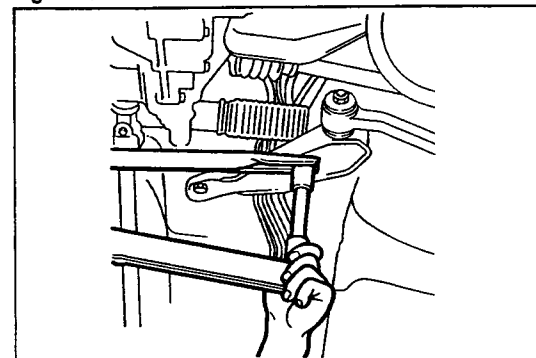


Fig. 5-67

WR-05069

7.0 - 10.0 kg-m (51 - 72 ft-lb)

2. Front wheel alignment inspection (See page 5-38.)

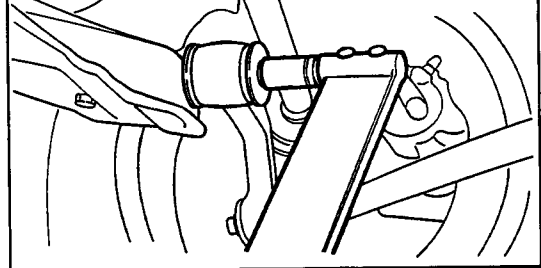
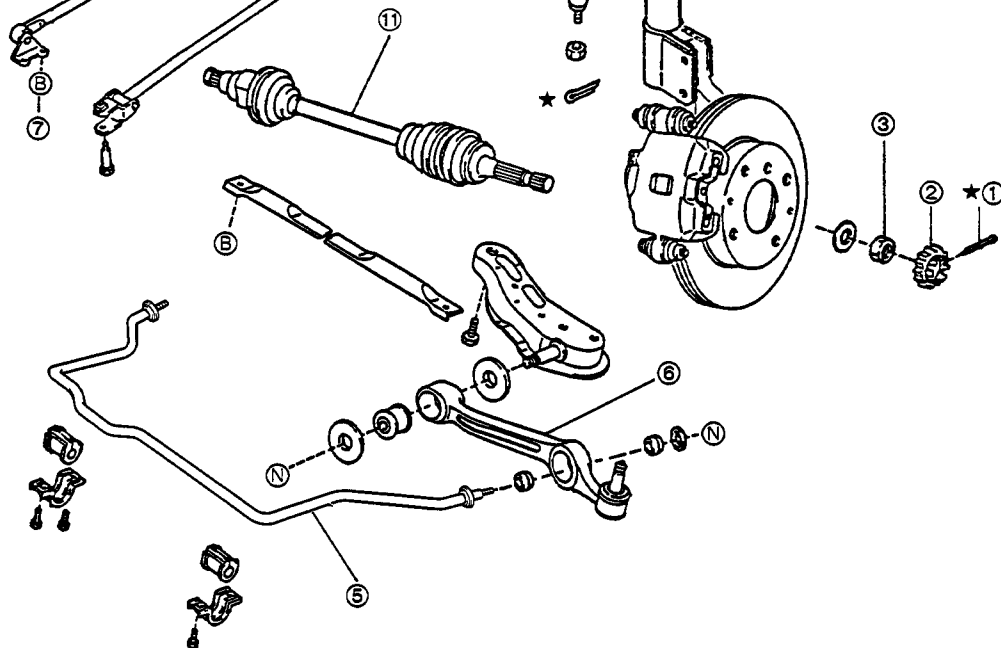


Fig. 5-69

WR-05071



★: Non-reusable parts

- ① Cotter pin
- ② Front wheel adjusting lock cap
- ③ Nut
- ④ Tie rod Ay
- ⑤ Stabilizer bar
- ⑥ Lower arm Ay
- ⑦ Bolt

- ⑧ Extension rod S/A
- ⑨ Lower suspension brace
(Vehicles mounted with Type CB-80 engine only)
- ⑩ Shift & select shaft S/A
- ⑪ Front drive shaft Ay
- ⑫ Bolt
- ⑬ Front drive bearing shaft Ay
(Vehicles mounted with Type CB-80 engine only)

Fig. 5-70

WR-05072

lock cap.

2. Remove the nut, using the following SST.
SST: 09511-87202-000

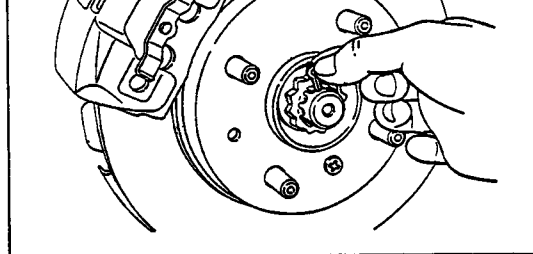


Fig. 5-72

WR-05074

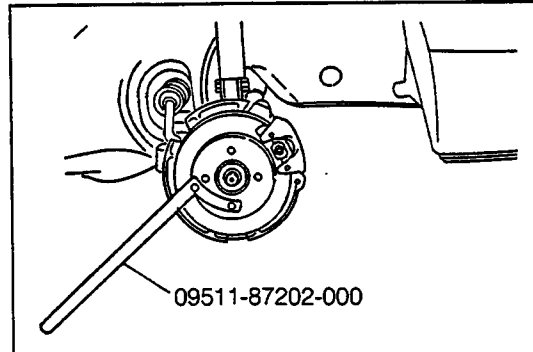


Fig. 5-73

WR-05075

3. Disconnect the tie rod, using the following SST.
SST: 09611-87701-000

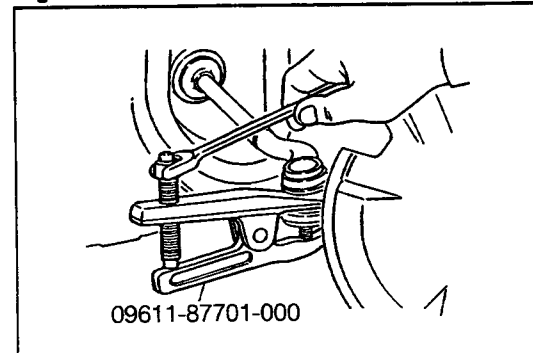


Fig. 5-74

WR-05076

4. Remove the stabilizer bar.

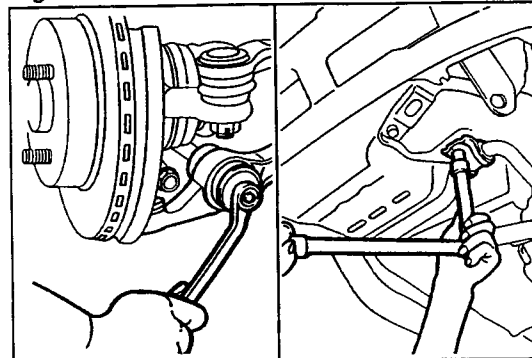


Fig. 5-75

WR-05077

mission.

7. Pull out the front drive shaft, using the following SST.

SST: 09648-87201-000

NOTE:

1. As for the inboard side of the drive shaft, no stopper is provided at the inside. Therefore, be sure to support the inboard joint section by your hand during the removal.

2. As for the right side of vehicles mounted with Type CB-80 engine, insert a crowbar into between the protruding section of the bearing shaft and the drive shaft. Then, take out the front drive shaft, being very careful not to deform the dust cover of the drive shaft.

9. Remove the two bolts. Remove the front drive shaft bearing shaft assembly. (Vehicles mounted with Type CB-80 engine only)

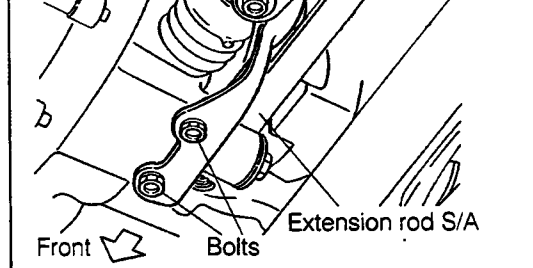


Fig. 5-77

WR-05079

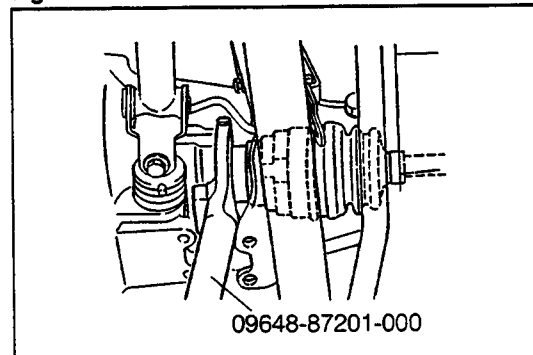


Fig. 5-78

WR-05080

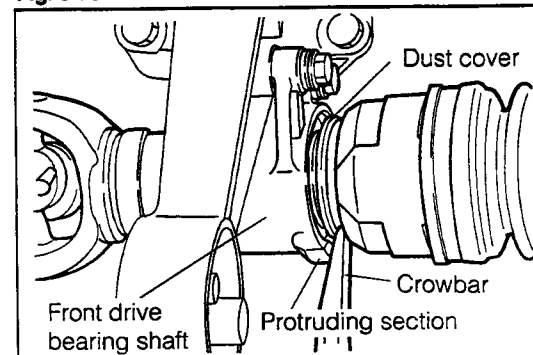


Fig. 5-79

WR-05081

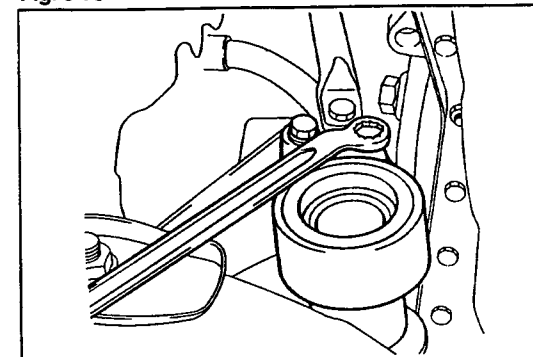


Fig. 5-80

WR-05082

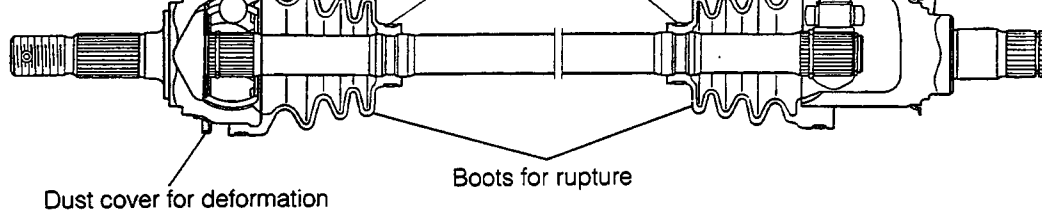
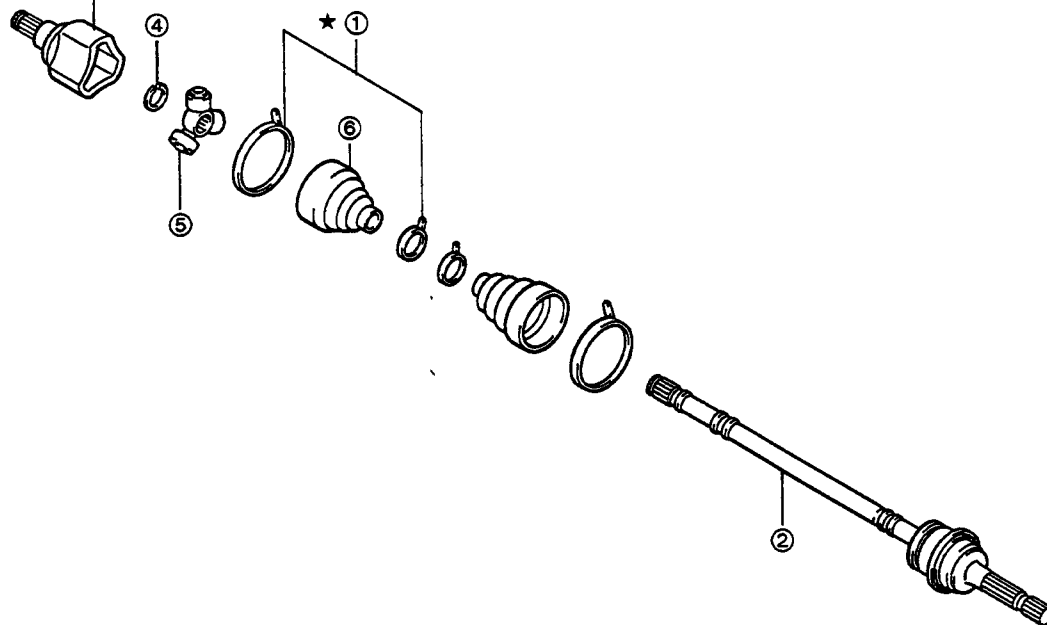


Fig. 5-81

WR-05083



★: Non-reusable parts

- ① Boot band
- ② Outboard joint S/A
- ③ Front axle inboard joint S/A
- ④ Shaft snap ring
- ⑤ Inboard joint tripod Ay
- ⑥ Front axle joint boot

Fig. 5-82

WR-05084

subassembly.

NOTE:

Put mating marks by painting. (Never use a punch to put mating marks.)

3. Detach the shaft snap ring, using a snap ring expander.

4. Remove the inboard joint tripod assembly, as follows:
 - (1) Put a mating mark at the tip end of the tripod and shaft, using a punch.

- (2) Pull out the tripod from the shaft, using a brass bar.

NOTE:

Be sure to apply the brass bar to the tripod boss section, not to the roller section.

5. Remove the front axle joint boot.

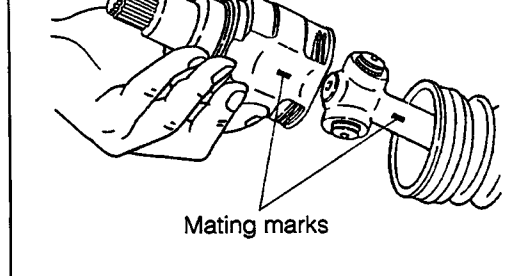


Fig. 5-84

WR-05086

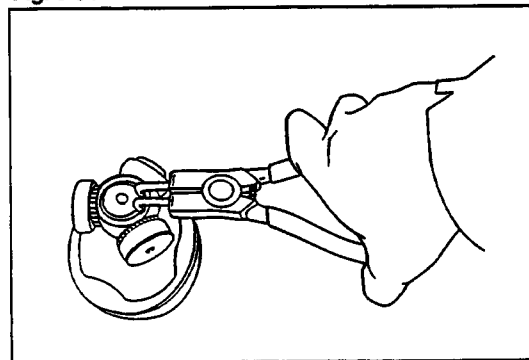


Fig. 5-85

WR-05087

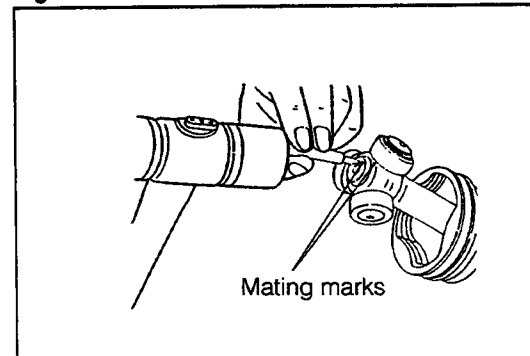


Fig. 5-86

WR-05088

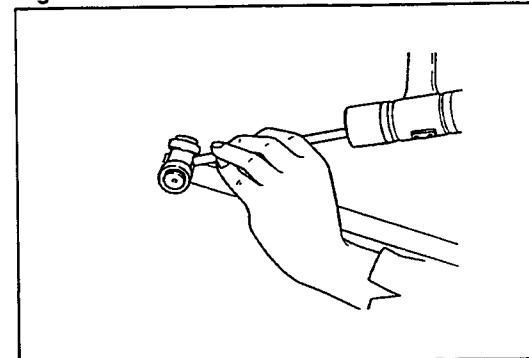


Fig. 5-87

WR-05089

Fig. 5-88

WR-05090

ASSEMBLY

1. Assemble the front axle joint boot in position.
2. Assemble the inboard joint tripod assembly, as follows:
 - (1) Face the non-splined side of the tripod toward the outboard joint.
 - (2) Align the mating marks which were put during the disassembly.

- (3) Drive the tripod assembly into the shaft lightly, using a brass bar.

NOTE:

Be sure to apply the brass bar to the boss section of the tripod, not to the roller section.

3. Attach the shaft snap ring in position, using a snap ring expander.

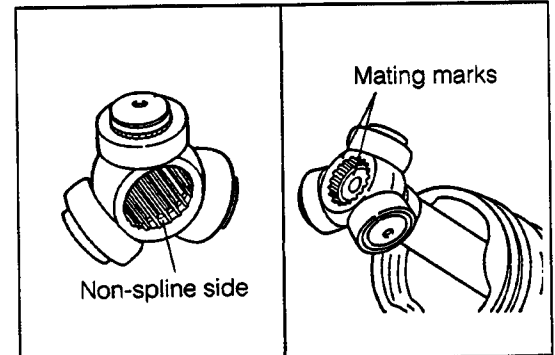


Fig. 5-89

WR-05091

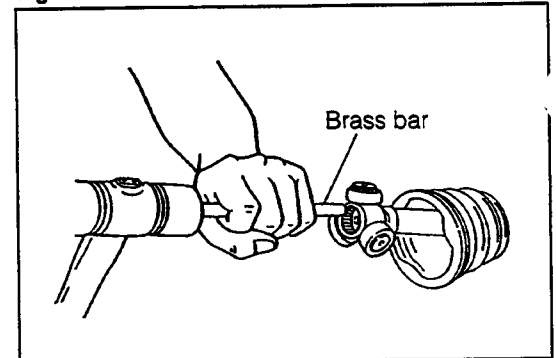


Fig. 5-90

WR-05092

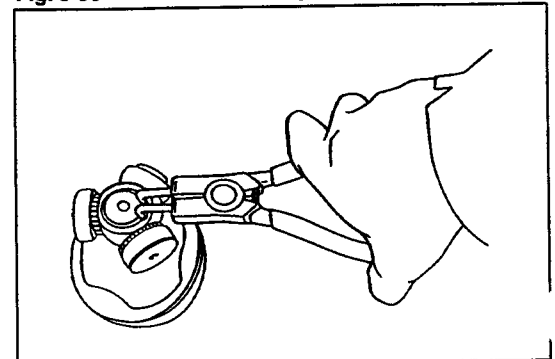


Fig. 5-91

WR-05093

5. Prior to assembling the boot of the front axle outboard joint, pack the outboard joint with joint grease.

NOTE:

1. Use the grease which has been provided in the boot kit of the replacement parts.
2. On vehicles other than those mounted with Type CB-80 engine, it should be noted that the grease to be used for the inboard joint differs from that to be used for the outboard joint.

Grease for inboard joint ... Yellow

Grease for outboard joint ... Black

6. Assemble a new boot band, as shown in the figure.

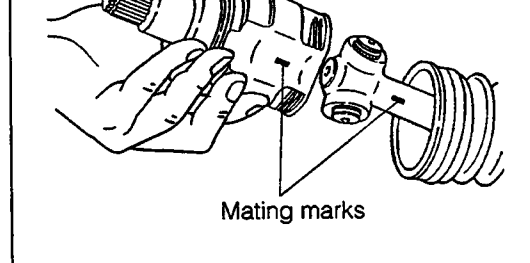


Fig. 5-93

WR-05095

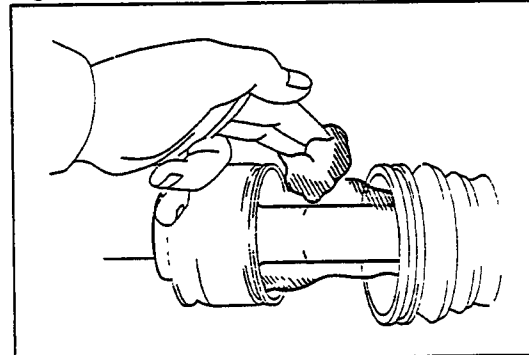


Fig. 5-94

WR-05096

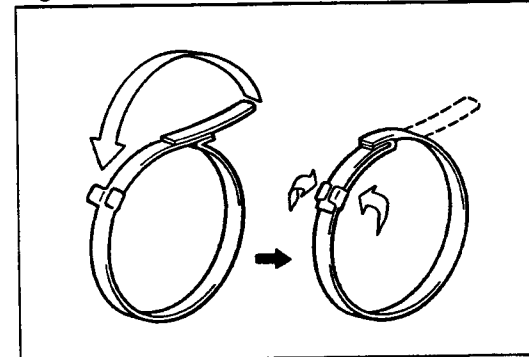


Fig. 5-95

WR-05097

INSTALLATION

Grease applying points

1. Apply chassis grease to the whole serrated section of the front axle hub installation section.

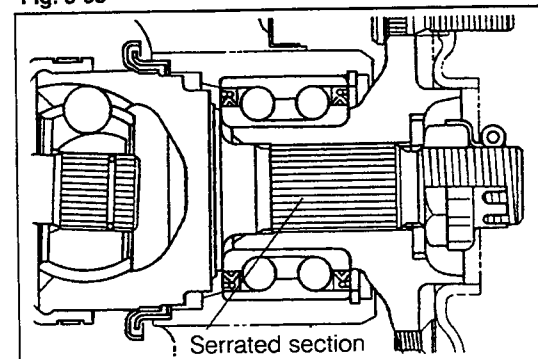


Fig. 5-96

WR-05098

Be very careful not to damage the oil seal during the installation.

4. Install the shift & select shaft subassembly and extension rod subassembly in position.

Tightening Torque: 1.0 - 1.6 kg-m (7.2 - 11.6 ft-lb)

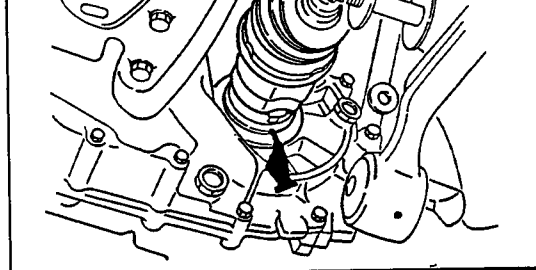


Fig. 5-98

WR-05100

5. Install the bracket side of the lower arm assembly in position.

Tightening Torque: 7.0 - 10.0 kg-m (51 - 72 ft-lb)

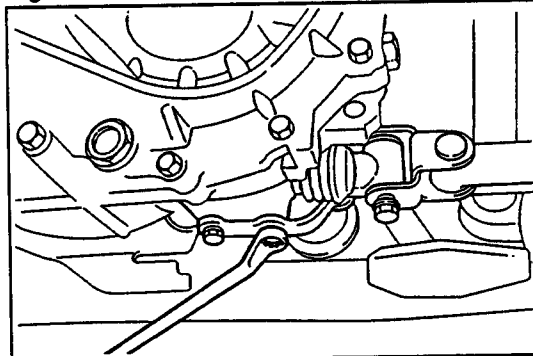


Fig. 5-99

WR-05101

6. Install the stabilizer bar to the lower arm assembly.
Tightening Torque: 7.5 - 11.0 kg-m (54 - 80 ft-lb)

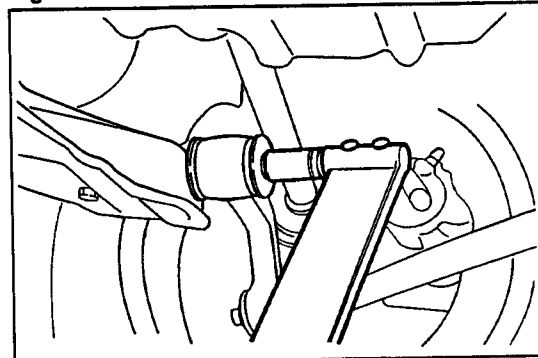


Fig. 5-100

WR-05102

7. Install the stabilizer lower bracket to the body.
Tightening Torque: 4.0 - 6.0 kg-m (29 - 43 ft-lb)

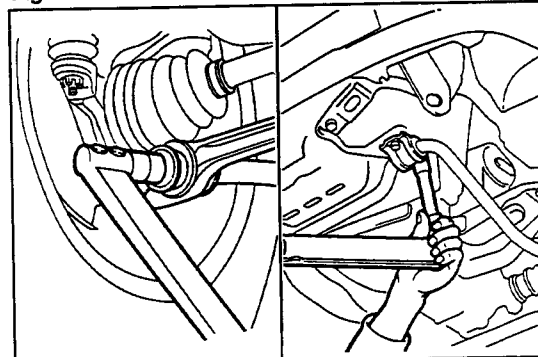


Fig. 5-101

WR-05103

10. Tighten the nut.

Tightening Torque:

18.0 - 23.0 kg-m (130 - 166 ft-lb)

NOTE:

1. When this nut is tightened to the specified torque, the specified preload of the front wheel is attained.
2. Assemble the spring washer in such a way that its recessed side comes to the hub side.

11. Install the front wheel adjusting lock cap to the nut.

12. Install the cotter pin, as shown in the right figure.

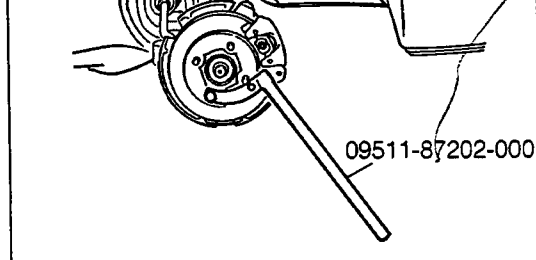


Fig. 5-103

WR-05105

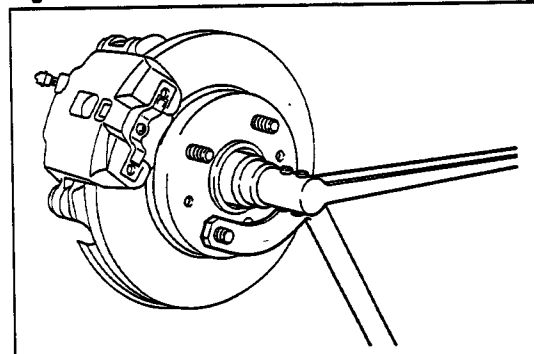


Fig. 5-104

WR-05106

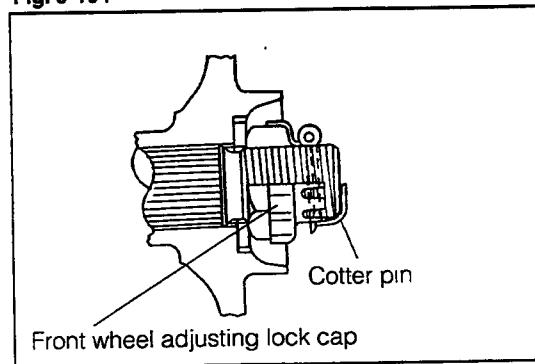
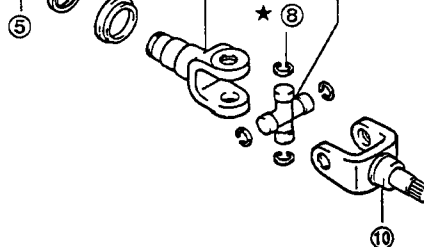


Fig. 5-105

WR-05107



★: Non-reusable parts

- ① Oil seal
- ② Shaft snap ring
- ③ Drive shaft bearing bracket
- ④ Oil seal
- ⑤ Hole snap ring
- ⑥ Radial ball bearing

- ⑦ Dust deflector
- ⑧ Hole snap ring
- ⑨ Universal joint spider S/A
- ⑩ Universal joint No.2 yoke
- ⑪ Universal joint yoke S/A

Fig. 5-106

WR-05108

INSPECTION

Inspect the following parts.

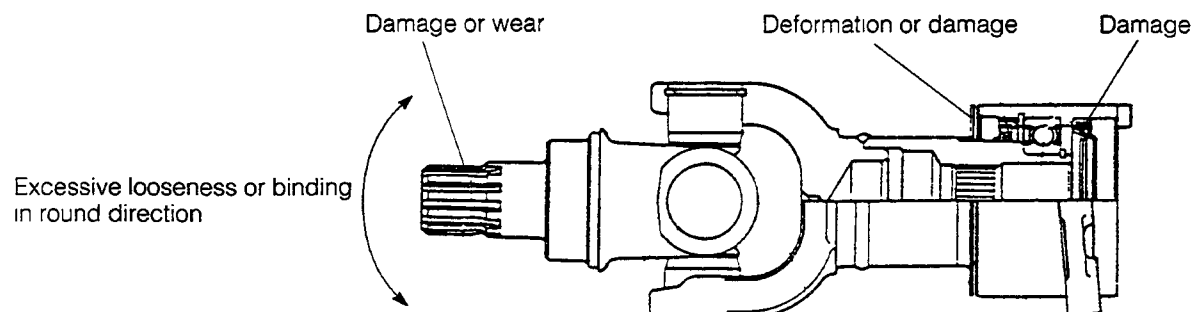


Fig. 5-107

WR-05109

SST: 09334-87201-000
SST: 09608-87501-000

4. Remove the another oil seal, using a common screwdriver.
5. Detach the hole snap ring, using a snap ring expander.

6. Remove the radial ball bearing, using the following SSTs.

SST: 09547-87301-000

SST: 09608-87501-000

7. Remove the dust deflector, using a brass bar and a hammer. Be careful not to damage the dust deflector during the removal.

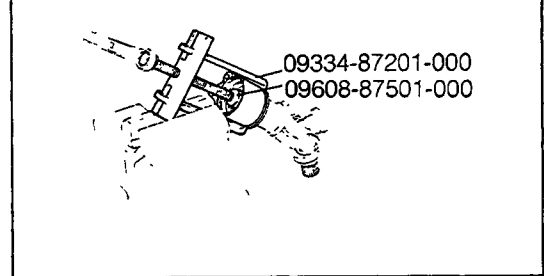


Fig. 5-109

WR-05111

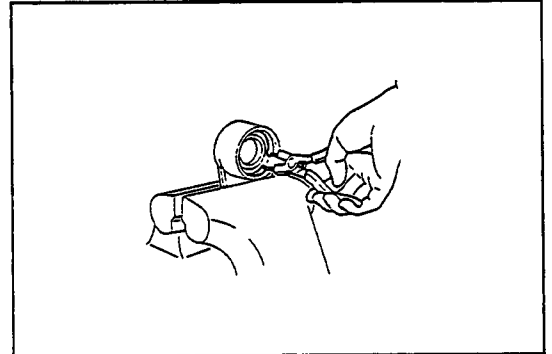


Fig. 5-110

WR-05112

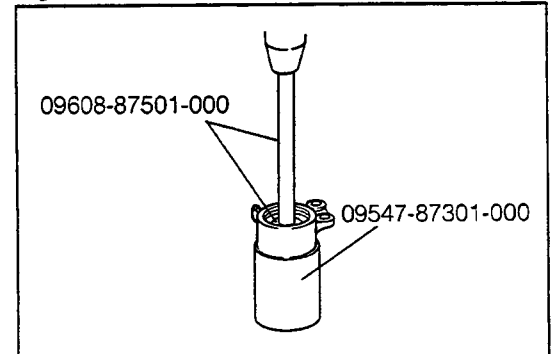


Fig. 5-111

WR-05113

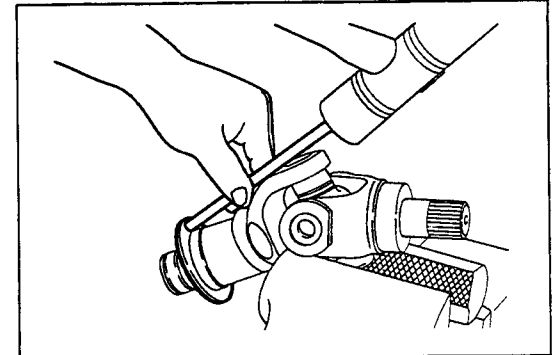


Fig. 5-112

WR-05114

- (1) Push off the spider bearing cap, using a vice in combination with a 19 mm socket and the following SST.

SST: 09628-10020-000

- (2) Clamp the pushed-out cap in a vice. Remove the bearing cap from the yoke No.2 by tapping the yoke No.2 lightly.
- (3) Tap the spider from the side of the cap removed, thus pushing out the another cap.

- (4) Clamp the cap in a vice. Remove the cap by tapping the yoke No.2 lightly. Separate the yoke No.2 from the universal joint yoke subassembly.
- (5) Remove the remaining caps, following the same procedure.

11. Disconnect the universal joint No.2 yoke from the universal joint yoke subassembly.

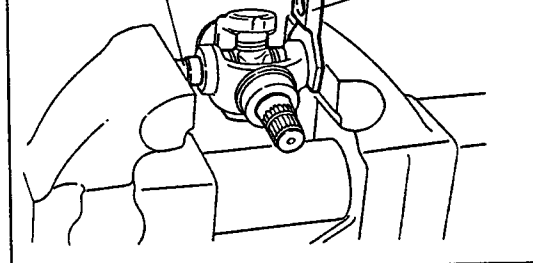


Fig. 5-114

WR-05116

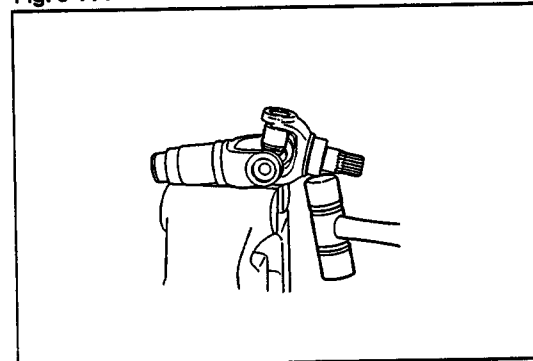


Fig. 5-115

WR-05117

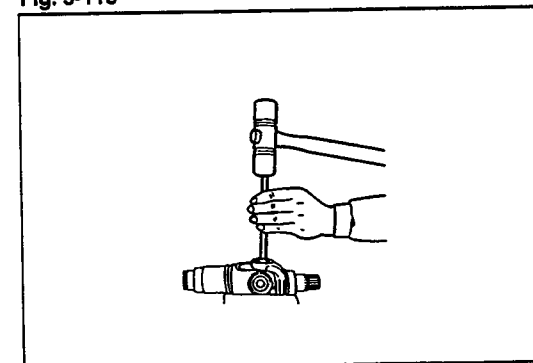


Fig. 5-116

WR-05118

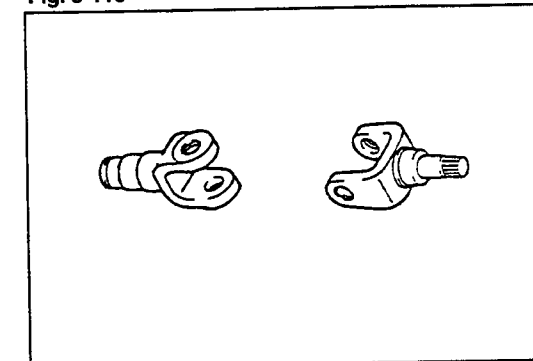


Fig. 5-117

WR-05119

Fig. 5-118

WR-05120

ASSEMBLY

Grease applying points

Apply MP grease to the points shown in the right figure.

1. Assemble the universal joint yoke spider subassembly, following the procedure given below.
 - (1) Assemble the spider to the universal joint yoke subassembly. Push them in a vice from both sides until the bearing cap becomes flush with the end surface of the yoke subassembly.
 - (2) Using a 19 mm socket, push the spider cap in a vice until the snap ring can be inserted in position.
 - (3) Install the universal joint yoke No.2 to the spider. Assemble it in the sequence (1) and (2) described above.

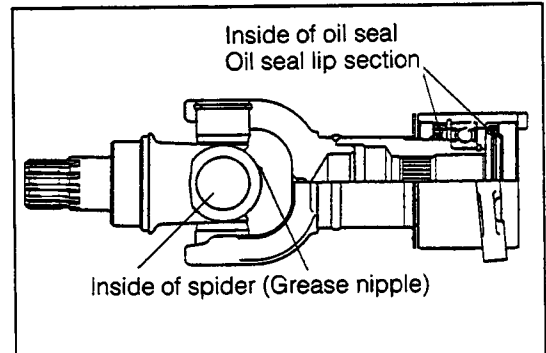


Fig. 5-119

WR-05121

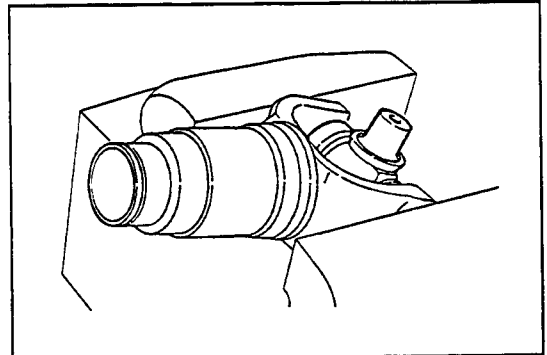


Fig. 5-120

WR-05122

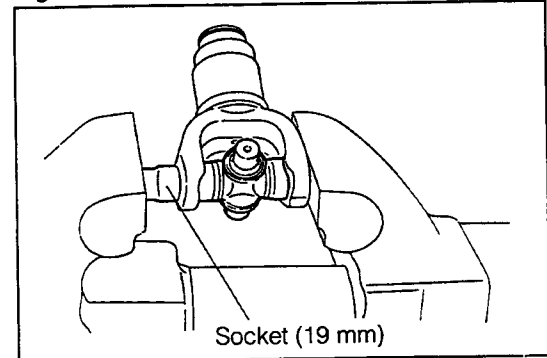


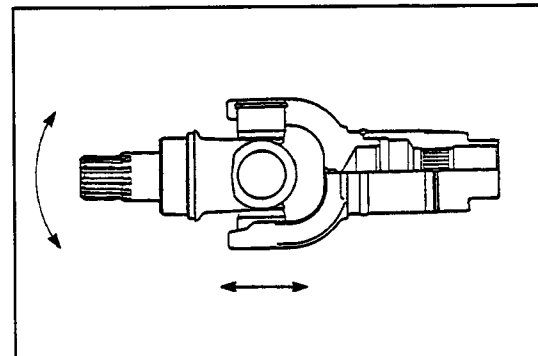
Fig. 5-121

WR-05123

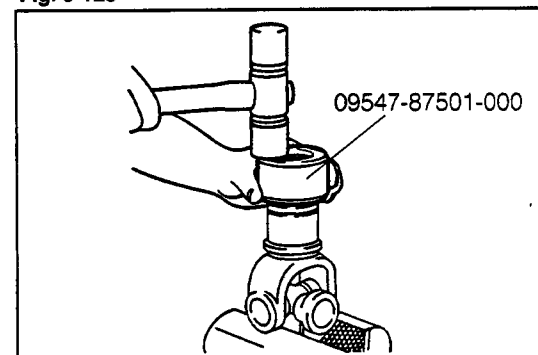
- (2) Assemble the selected snap ring.
- (3) Check the spider bearing for excessive looseness.

3. Install the dust deflector, using the following SST.
SST: 09547-87501-000

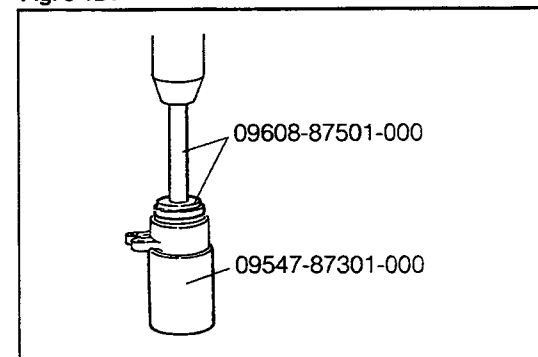
4. Assemble the radial ball bearing, using the following SSTs.
SST: 09547-87301-000
SST: 09608-87501-000

**Fig. 5-123**

WR-05125

**Fig. 5-124**

WR-05126

**Fig. 5-125**

WR-05127

7. Install the drive shaft bearing bracket, using the following SSTs.

SST: 09506-30011-000

SST: 09608-87501-000

8. Attach the shaft snap ring, using a snap ring expander.
9. Assemble the oil seal, using the following SST.

SST: 09608-87501-000

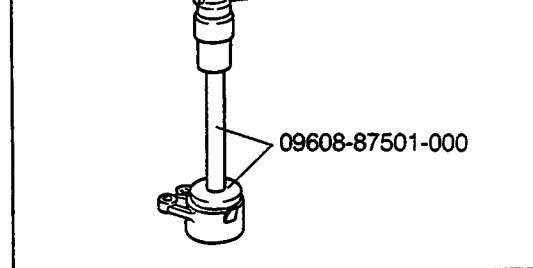


Fig. 5-127

WR-05129

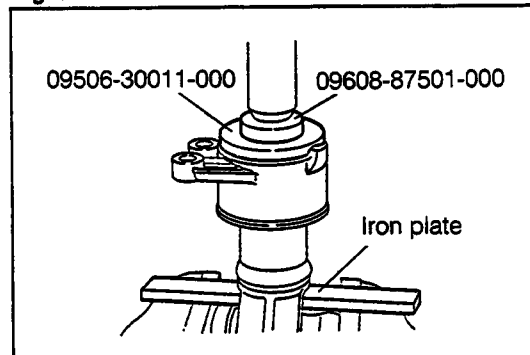


Fig. 5-128

WR-05130

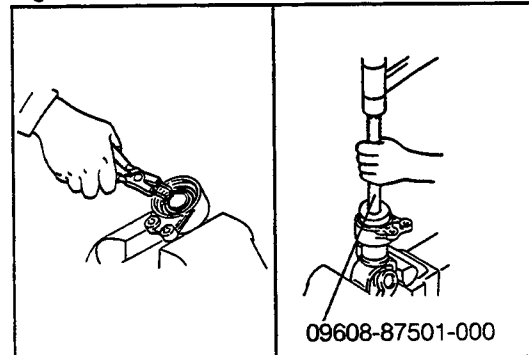


Fig. 5-129

WR-05131

MEASUREMENT

1. Checking Tires for Wear
2. Checking Tires for Air Pressure

Tire	Air inflation pressure kg/cm ² (psi)	
	G-100	G-101
6.00.12.4PR	1.9 (27)	1.9 (27)
145/80R13 74S, 145SR13	1.8 (26)	2.0 (29)
155/80R13 78S, 155SR13	1.8 (26)	2.0 (29)
165/70R13 79S, 165/70SR13	1.8 (26)	2.0 (29)
175/60R14 78H	1.8 (26)	
185/60R14 82H (Pirelli)	1.8 (26)	

3. Checking Tires for Runout
(Up-and-down and right-and-left directions)
Maximum Limit: 3.0 mm (0.12 inch)
2. mm
4. Checking Bolts of Related Sections for Tightened Condition

5. Checking Related Sections for Excessive Play
 - (1) Jack up the vehicle. Alternately push and pull the upper and lower parts of each tire. Ensure that the tire exhibits no excessive play.
 - (2) If the tire exhibits an excessive play, perform the following check while the brake pedal is being depressed.
 - The excessive play disappears:
This indicates that the front wheel bearing is loose.
 - The excessive play still persists:
This indicates that the knuckle section, axle carrier section or suspension is loose.

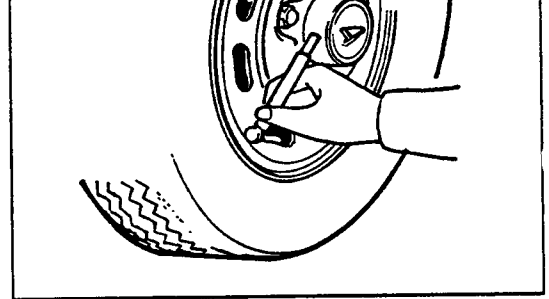


Fig. 5-130

WR-05133

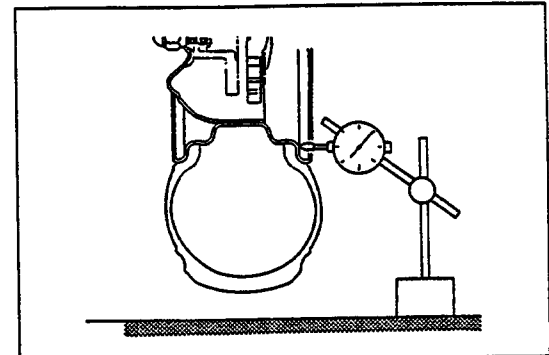


Fig. 5-131

WR-05134

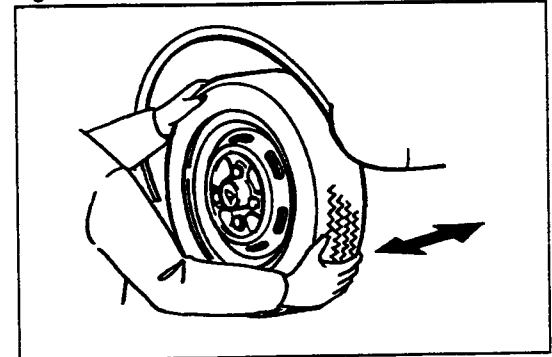


Fig. 5-132

WR-05135

CHECKS AND ADJUSTMENT OF FRONT WHEEL ALIGNMENT

1. Turning Radius Gauge Set

- (1) Set the turning radius gauge to the zero point. Proceed to lock the gauge.
- (2) Place the vehicle on the gauge in such a way that the center of the tire-to-floor contact surface may be aligned with the center of the turning radius gauge.

NOTE:

- Perform the check on a level floor.
- When a portable type turning radius gauge is employed, a plate having the same thickness as that of the gauge should be placed under the rear wheel so that the vehicle levelness may be maintained.
- Make sure that the wheels are in their straightahead conditions.
- Keep the vehicle in an unloaded state. In order to prevent the vehicle from moving during the check, be sure to apply the foot brake, using a brake pedal pusher or the like.
- Remove the stop lamp fuse so as to prevent the stop lamp from glowing.

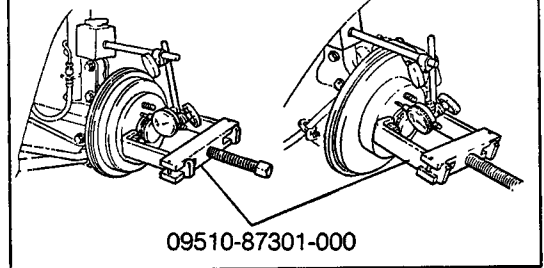


Fig. 5-134

WR-05137

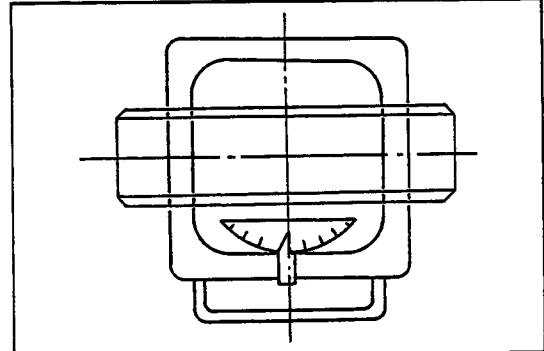


Fig. 5-135

WR-05138

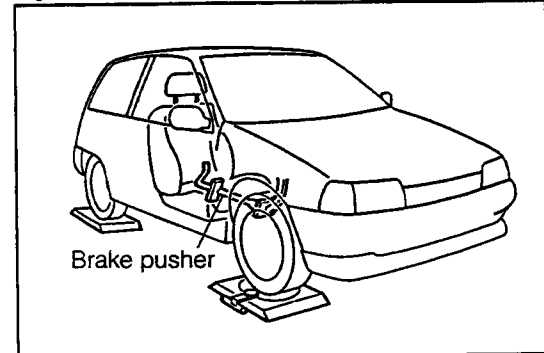


Fig. 5-136

WR-05139

(2) Make the length indicated in the right figure equal between the right and left sides.

NOTE:

- Make sure that the boot is not twisted during the correction.
- Make sure that the tie rods at the right and left sides are turned by the same amount.

4. Checking Camber, Caster and Kingpin Angles

(1) In the case of steel wheels, perform the measurement, using the following SST (attachment).

SST: 09722-87702-000

(2) In the case of aluminum wheels, perform the measurement, using the CCK (Camber, Caster, Kingpin) gauge compensator (available in the market).

NOTE:

The CCK gauge compensator can be used for the measurement on steel wheels, too.

(3) Installation procedure for the CCK gauge compensator, and the camber, caster and kingpin gauge.

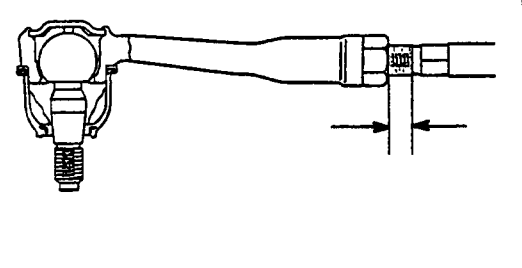


Fig. 5-138

WR-05141

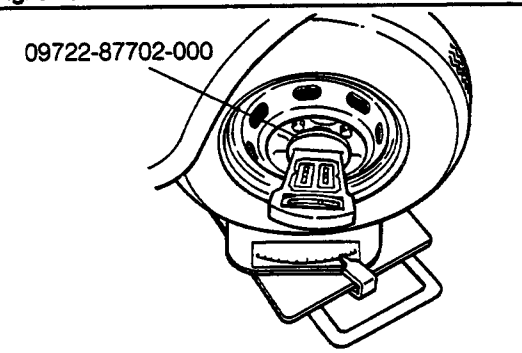


Fig. 5-139

WR-05142

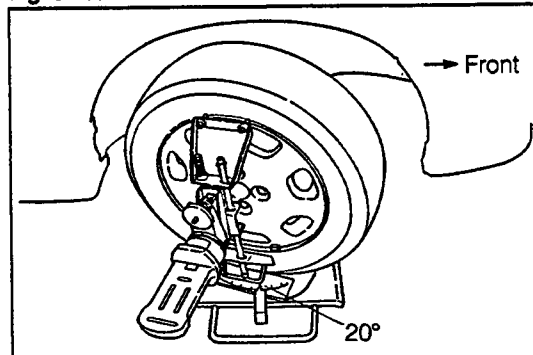


Fig. 5-140

WR-05143

CCK gauge

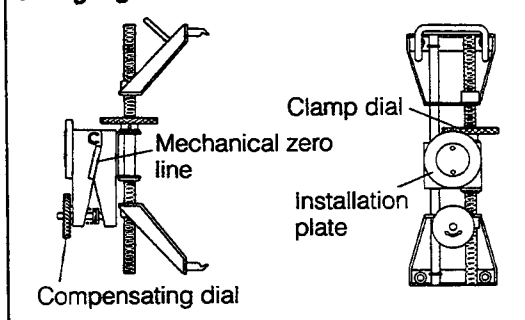


Fig. 5-141

WR-05144

edges securely while pushing the compensator, lock the compensator positively by turning the clamp dial.

NOTE:

In order to prevent the wheel edges from being scratched, affix tapes or the like on the wheel edge sections to which the four pawls of the compensator are hooked.

- Set the camber caster and kingpin gauge to the installation plate of the CCK gauge compensator. At this point, align the set lines on the gauge and compensator with each other.

- Turn the wheel so that the level air bubble in the gauge may come to the central position. At this position, turn the caster adjusting screw of the gauge so that the caster air bubble may be aligned with the graduation zero position.

- Turn the wheel 180 degrees so that the gauge may be turned over. Proceed to align the set lines on the gauge and compensator with each other. Next, turn the wheel so that the level air bubble in the gauge may come to the central position.

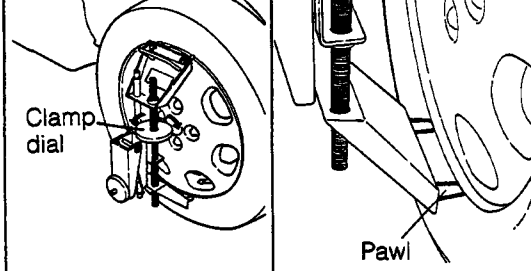


Fig. 5-143

WR-05146

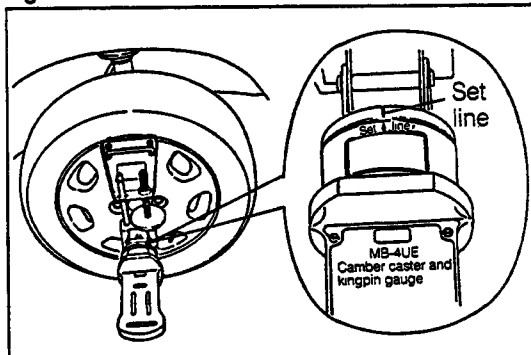


Fig. 5-144

WR-05147

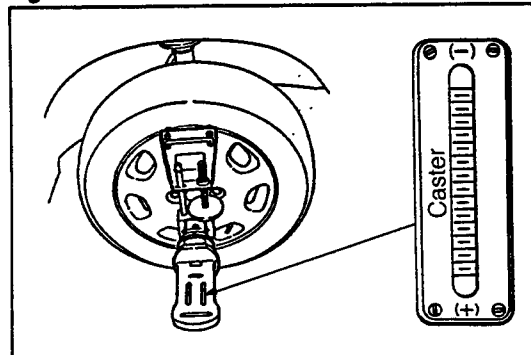


Fig. 5-145

WR-05148

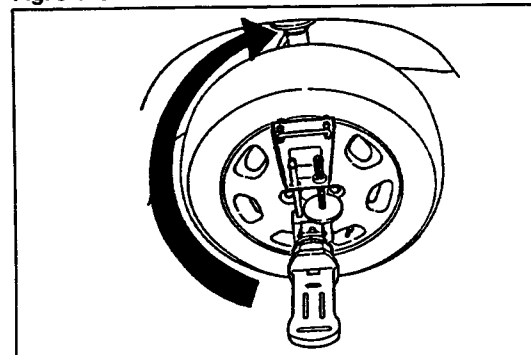


Fig. 5-146

WR-05149

- Jack down the wheel on the turning radius gauge. Rock the vehicle in an up-and-down direction so as to settle the suspension.

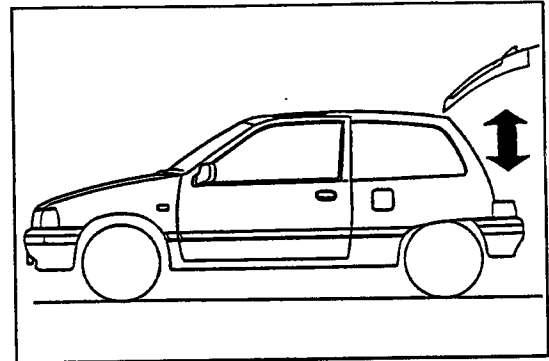


Fig. 5-148

WR-05151

(4) Camber check

- Ensure that the wheels are in their straight-ahead conditions.
- Align the level air bubble with the central position.
- Take the camber reading of the gauge.

Specified Value: $0^{\circ}20' \pm 1^{\circ}$

$0^{\circ}20' + 40'$
 $- 20'$

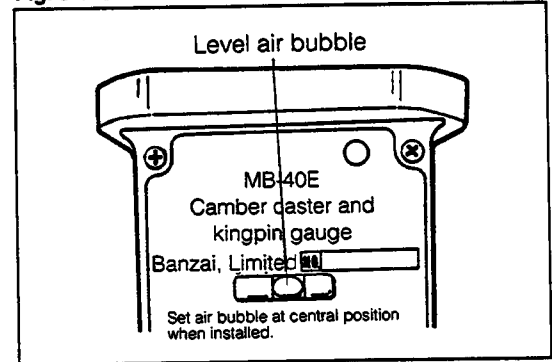


Fig. 5-149

WR-05152

direction of the steering wheel must be reversed.

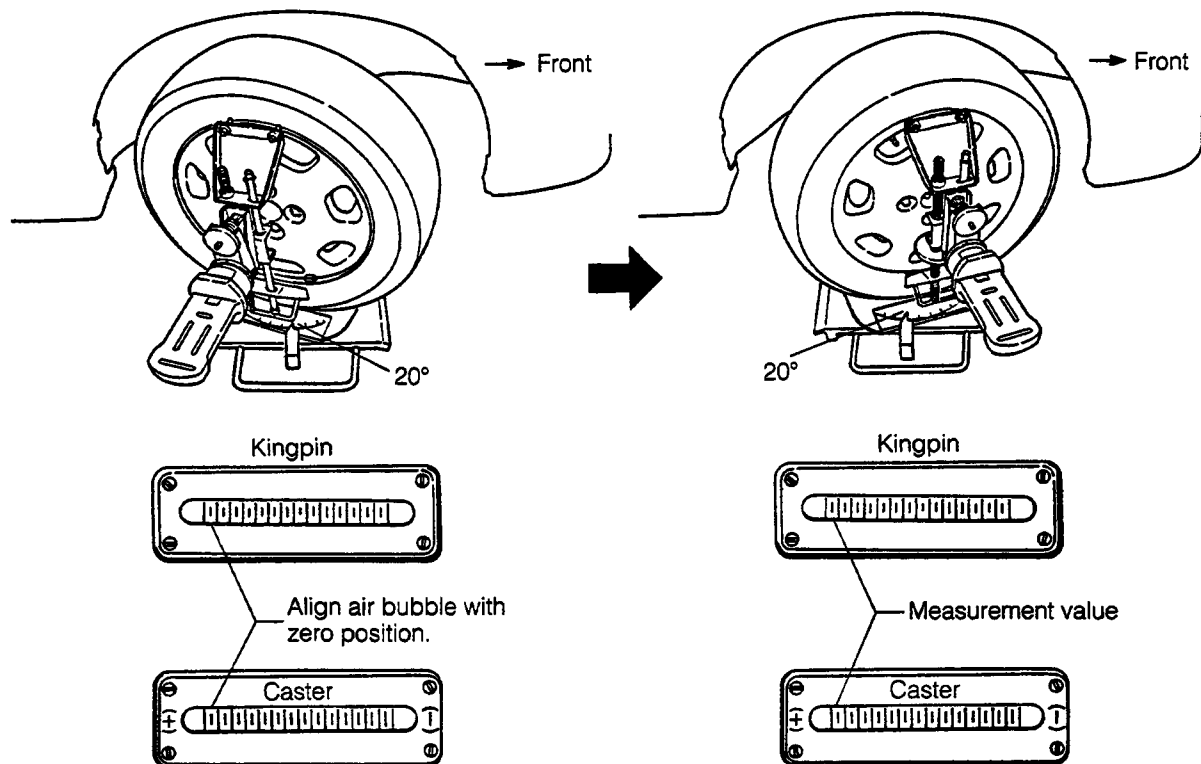


Fig. 5-150

WR-05153

5. Toe-In Measurement

- (1) Rock the vehicle so that the vehicle height may stabilize.
- (2) Move the vehicle forward about five meters so that the front wheels may become in their straight-ahead conditions.

NOTE:

Do not move the vehicle backward during the measurement.

- (3) Align the height of the toe-in gauge pointers with the center height of the front wheels.
- (4) Put a mark on the tread center of each front wheel tire at the rear side. Measure the distance between the two marks (Dimension A) in the figure.

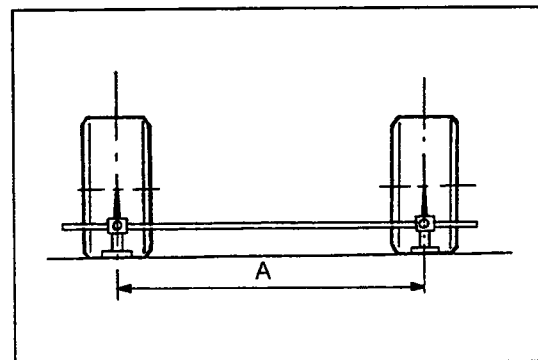


Fig. 5-151

WR-05154

measurement is performed at the front side of the vehicle.

Calculate the amount of toe-in, i.e. (Dimension A – Dimension B).

Specified Value: $-1 - +3$ mm ($-0.04 - +0.12$ inch)

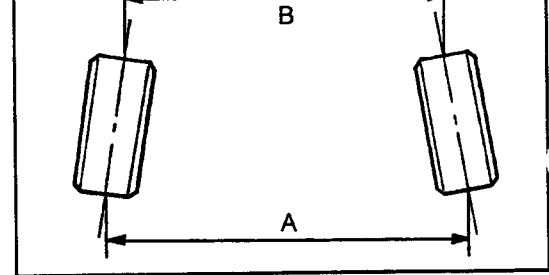


Fig. 5-153

WR-05156

6. Toe-In Adjustment

- (1) Slacken the lock nuts of the tie rod ends.
- (2) Perform the toe-in adjustment by turning the tie rod ends.

NOTE:

- Care must be exercised to ensure that the boot is not twisted during the adjustment.
- When adjusting the toe-in, the tie rods at the right and left sides should be turned by the same amount.
- The length indicated in the right figure must be the same amount.

(If the length differs between the right and left sides, a difference occurs in the wheel turning angle between the right and left sides.)

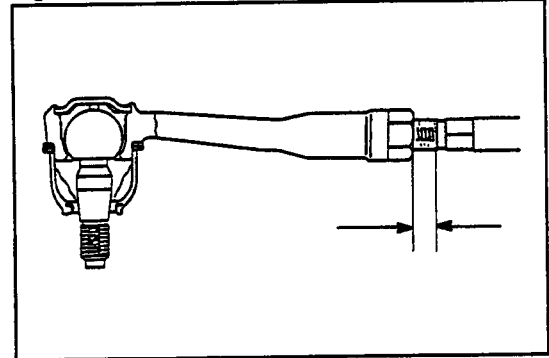


Fig. 5-154

WR-05157

7. Sideslip Check

Check the sideslip, using a sideslip tester.

Specified Value: $-3 - +3$ mm ($-0.12 - +0.12$ inch)

Per 1 meter (3.28 ft)

WR-05158

$-4 \sim +4$

CHECK AND ADJUSTMENT OF REAR TOE-IN

1. Toe-In Check

- (1) Rock the vehicle so that the vehicle height may stabilize.
- (2) Move the vehicle forward about five meters so that the front wheels may become in their straight-ahead conditions.
- (3) Align the height of the toe-in gauge pointers with the center height of the rear wheels.
- (4) Put a mark on the tread center of each rear wheel tire at the rear side. Measure the distance between the two marks (Dimension A) in the figure.

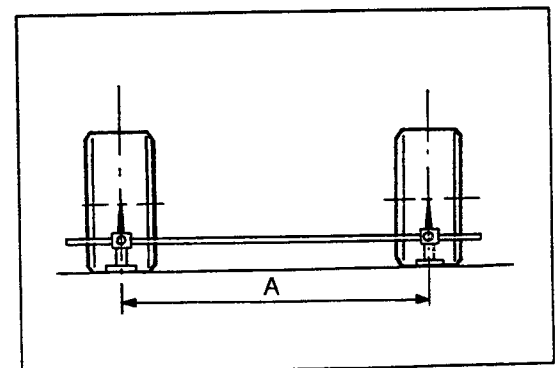


Fig. 5-155

WR-05159

measurement is performed at the front side of the rear wheels.

- (7) Calculate the amount of toe-in, i.e. (Dimension A – Dimension B).

Specified Value: +4 - +8 mm (+0.16 - +0.31)

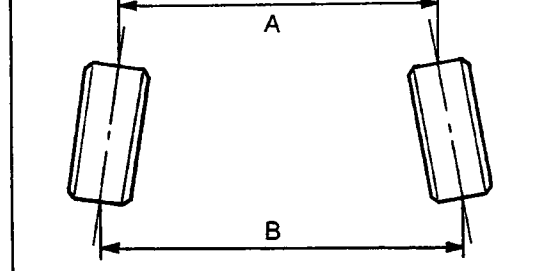


Fig. 5-157

WR-05161

2. Toe-In Adjustment

- (1) Slacken the set bolt of the toe adjusting cam.

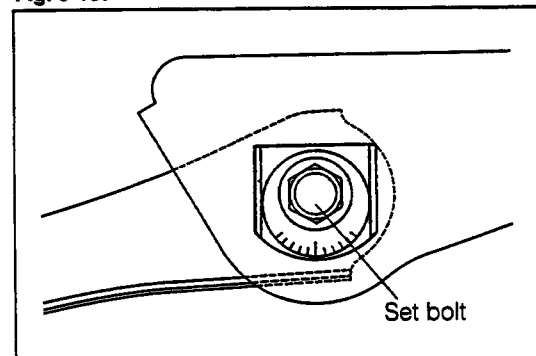


Fig. 5-158

WR-05162

- (2) Insert a hexagon wrench key into the hexagonal hole provided at the back side of the tow adjusting cam. Turn the hexagon wrench key.

(Inside: IN, Outside: OUT)

(Reference)

When each of the adjusting cams provided at both sides is turned by one graduation, the toe-in will change approximately 5 mm (0.20 inch).

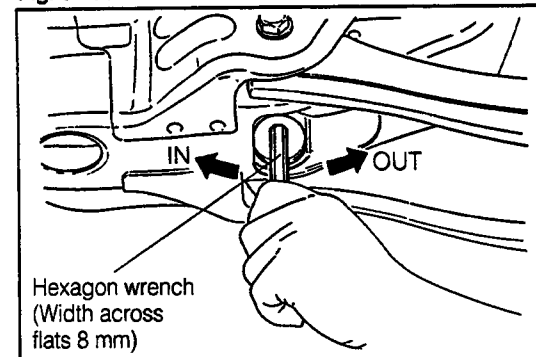


Fig. 5-159

WR-05163

3. Sideslip Check

Check the sideslip, using a sideslip tester.

Specified Value: 1 - 7 mm (-0.04 - 0.28 inch)

Per 1 meter (3.28 ft)

SECTION 6

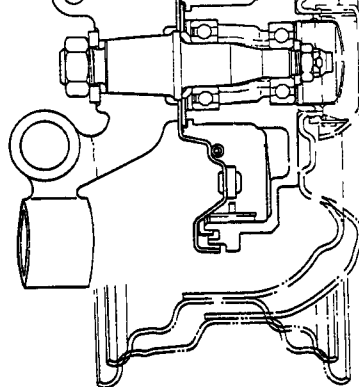
REAR AXLE & SUSPENSION

6

REAR AXLE	6- 2
SECTIONAL VIEW	6- 2
COMPONENTS	6- 3
REMOVAL	6- 4
INSPECTION	6- 7
INSTALLATION	6- 8
REAR SUSPENSION	6-11
SECTIONAL VIEW	6-11
REAR SHOCK ABSORBER	6-11
COMPONENTS	6-11
REMOVAL	6-12
DISASSEMBLY	6-13
INSPECTION	6-14
ASSEMBLY	6-15
INSTALLATION	6-16

SUSPENSION ARM	6-18
COMPONENTS	6-18
REMOVAL	6-18
INSPECTION	6-20
INSTALLATION	6-20
STRUT ROD	6-22
REMOVAL	6-22
INSPECTION	6-22
INSTALLATION	6-22
STABILIZER BAR	6-23
COMPONENTS	6-23
REMOVAL	6-23
INSPECTION	6-24
INSTALLATION	6-25

WR-06001



Disc Brake

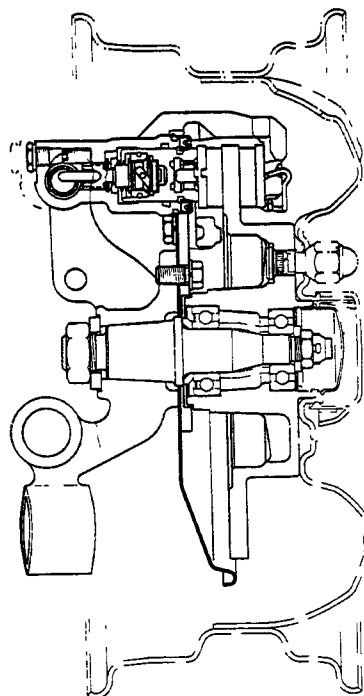
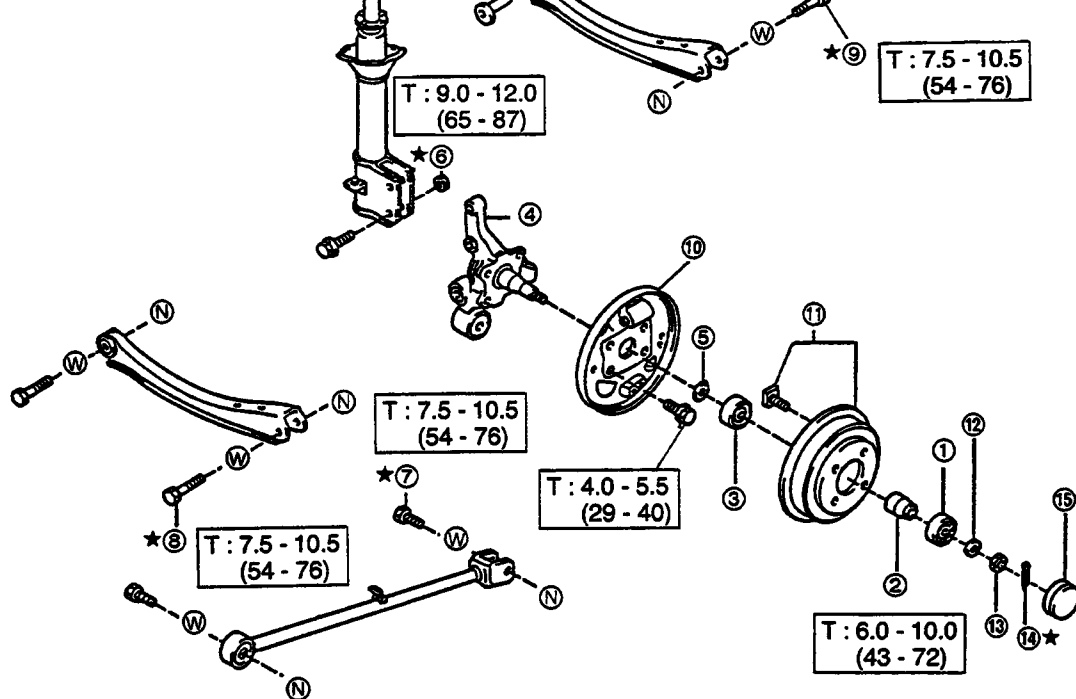


Fig. 6-1

WR-06002



T : Tightening torque
Unit: kg-m (ft-lb)
★ : Non-reusable parts

- ① Radial ball bearing
- ② Rear axle bearing outer retainer
- ③ Radial ball bearing
- ④ Rear axle carrier S/A
- ⑤ Rear axle bearing inner retainer
- ⑥ Nut
- ⑦ Bolt
- ⑧ Bolt

- ⑨ Bolt
- ⑩ Rear brake Ay
- ⑪ Rear brake drum
- ⑫ Plate washer
- ⑬ Castle nut
- ⑭ Cotter pin
- ⑮ Grease retainer cap

Fig. 6-2

WR-06003

- (1) Remove the grease retainer cap.
- (2) Remove the cotter pin, castle nut and plate washer.

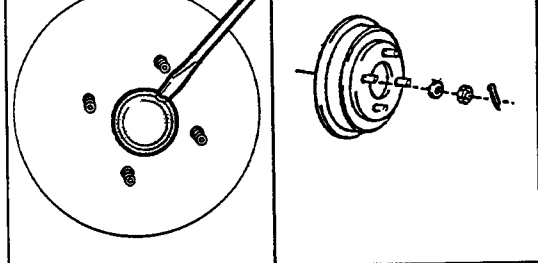


Fig. 6-4

WR-06005

- (3) Remove the brake drum, using the following SST.
Remove the bearing inner retainer.
SST: 09510-87301-000

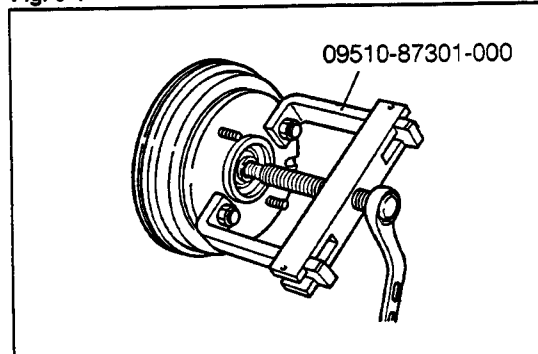


Fig. 6-5

WR-06006

- (4) Disconnect the brake tube from the wheel cylinder, using the following SST.
SST: 09751-36011-000

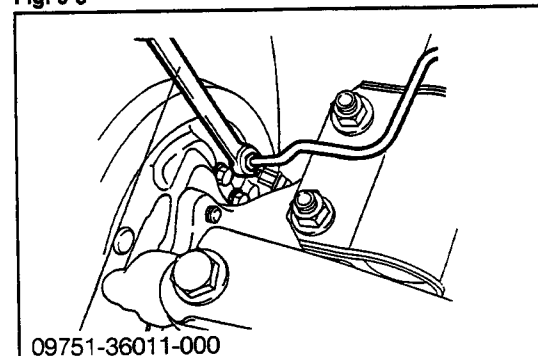


Fig. 6-6

WR-06007

- (5) Remove the backing plate with the brake shoe installed.

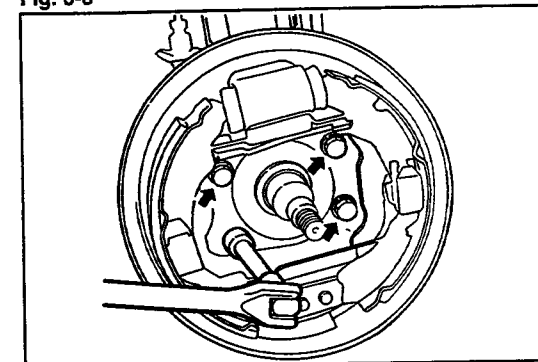


Fig. 6-7

WR-06008

Suspend the caliper as shown in the right figure.

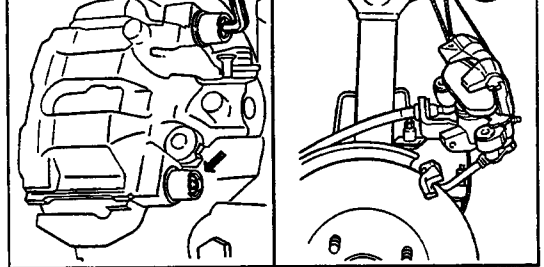


Fig. 6-9

WR-06010

(4) Remove the caliper support.

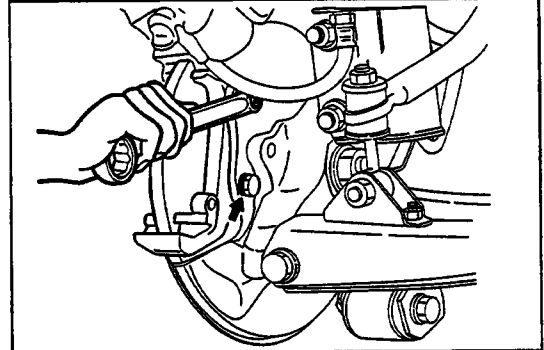


Fig. 6-10

WR-06011

(5) Remove the grease retainer cap.
(6) Remove the cotter pin, castle nut and plate washer.

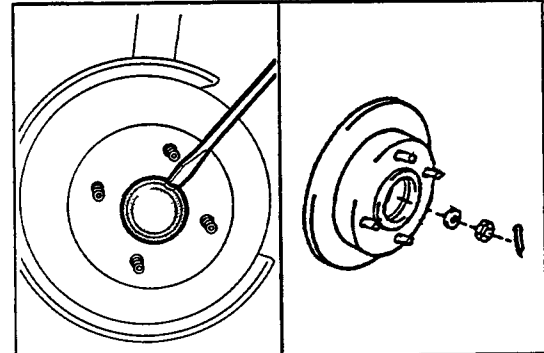


Fig. 6-11

WR-06012

(7) Remove the disc rotor and bearing inner retainer.

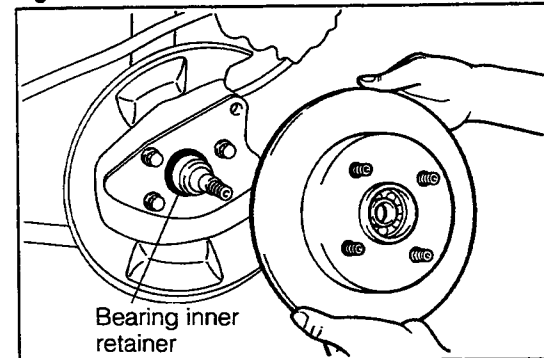


Fig. 6-12

WR-06013

from the strut rod.

- (2) Remove the attaching bolt and nut of the axle carrier from the suspension arm No.1.

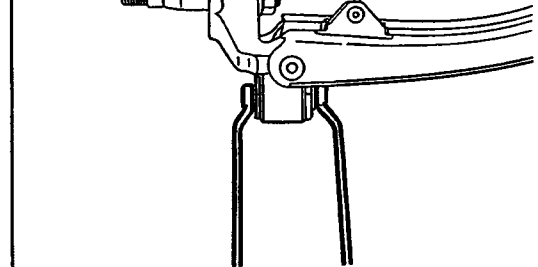


Fig. 6-14

WR-06015

- (3) Remove the attaching bolt and nut of the axle carrier from the suspension arm No.2.

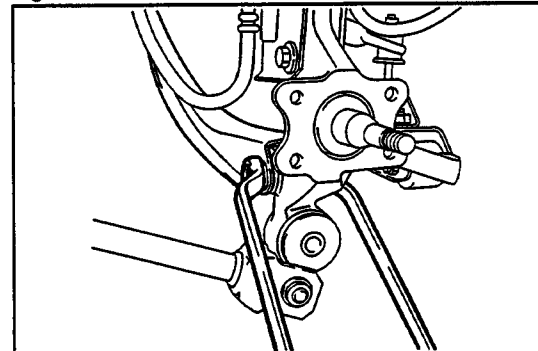


Fig. 6-15

WR-06016

- (4) Remove the attaching bolts and nuts of the axle carrier from the shock absorber. Remove the axle carrier.

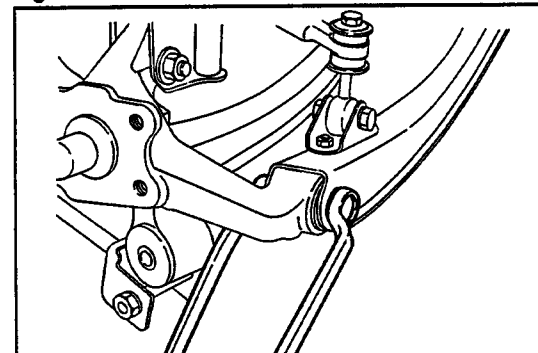


Fig. 6-16

WR-06017

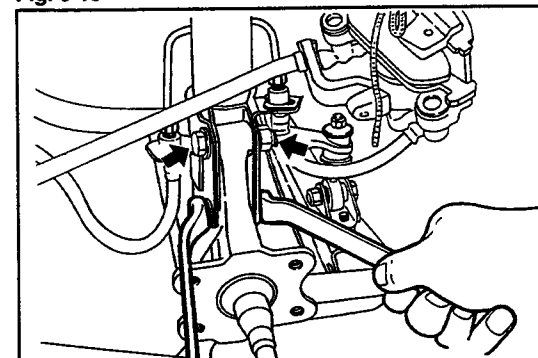


Fig. 6-17

WR-06018

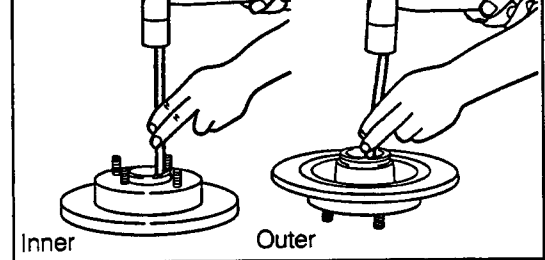


Fig. 6-19

WR-06020

INSPECTION

Inspect the following parts.

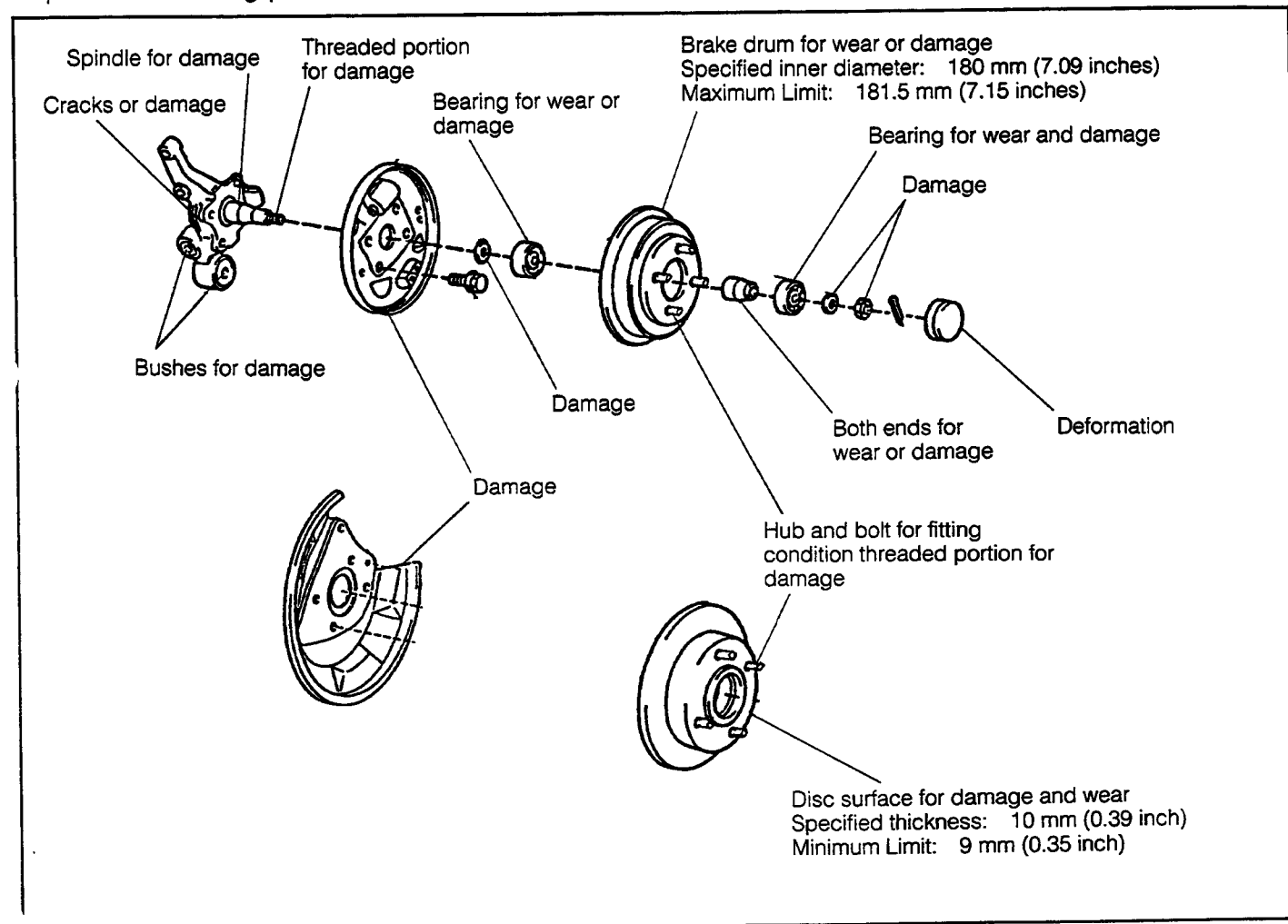


Fig. 6-20

WR-06021

2. Axle carrier installation

NOTE:

As for those suspension-related bolts and nuts on which a friction stabilizing agent has been coated, be certain not to reuse them if they have been once removed

- (1) Mount the axle carrier to the shock absorber.
- (2) Install the attaching bolts and new nuts of the axle carrier. Proceed to tighten them.

Tightening Torque: 9.0 - 12.0 kg-m (65 - 87 ft-lb)

NOTE:

Tighten the bolts and nuts while pushing the axle carrier to the lower side (positive side).

- (3) Mount the axle carrier on the suspension arm No.1. Tighten the new bolt and nut temporarily.
- (4) Mount the axle carrier on the suspension arm No.2. Temporarily tighten the new bolt and nut.

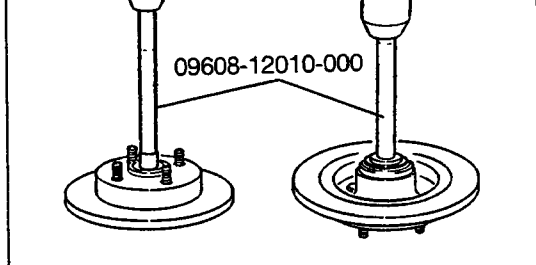


Fig. 6-22

WR-06023

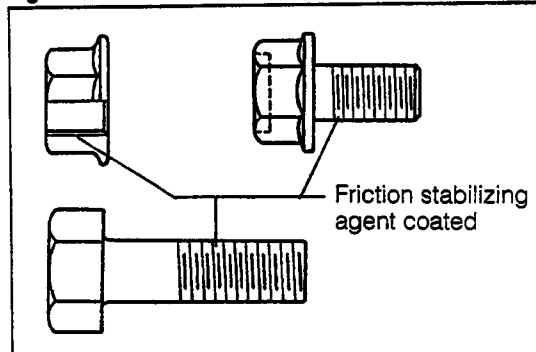


Fig. 6-23

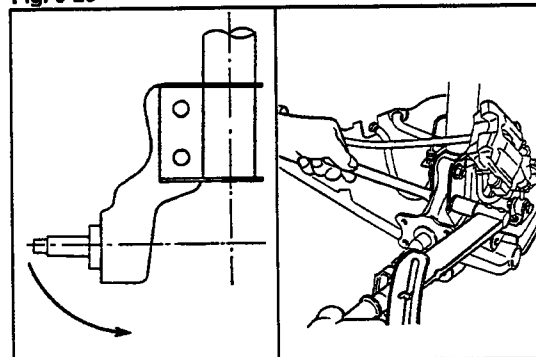


Fig. 6-24

WR-06024

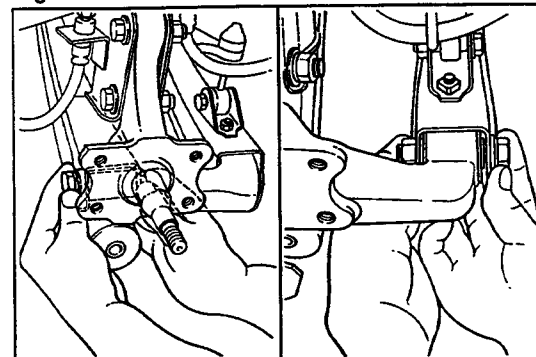


Fig. 6-25

WR-06025

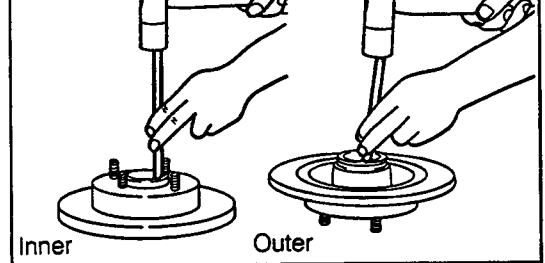


Fig. 6-19

WR-06020

INSPECTION

Inspect the following parts.

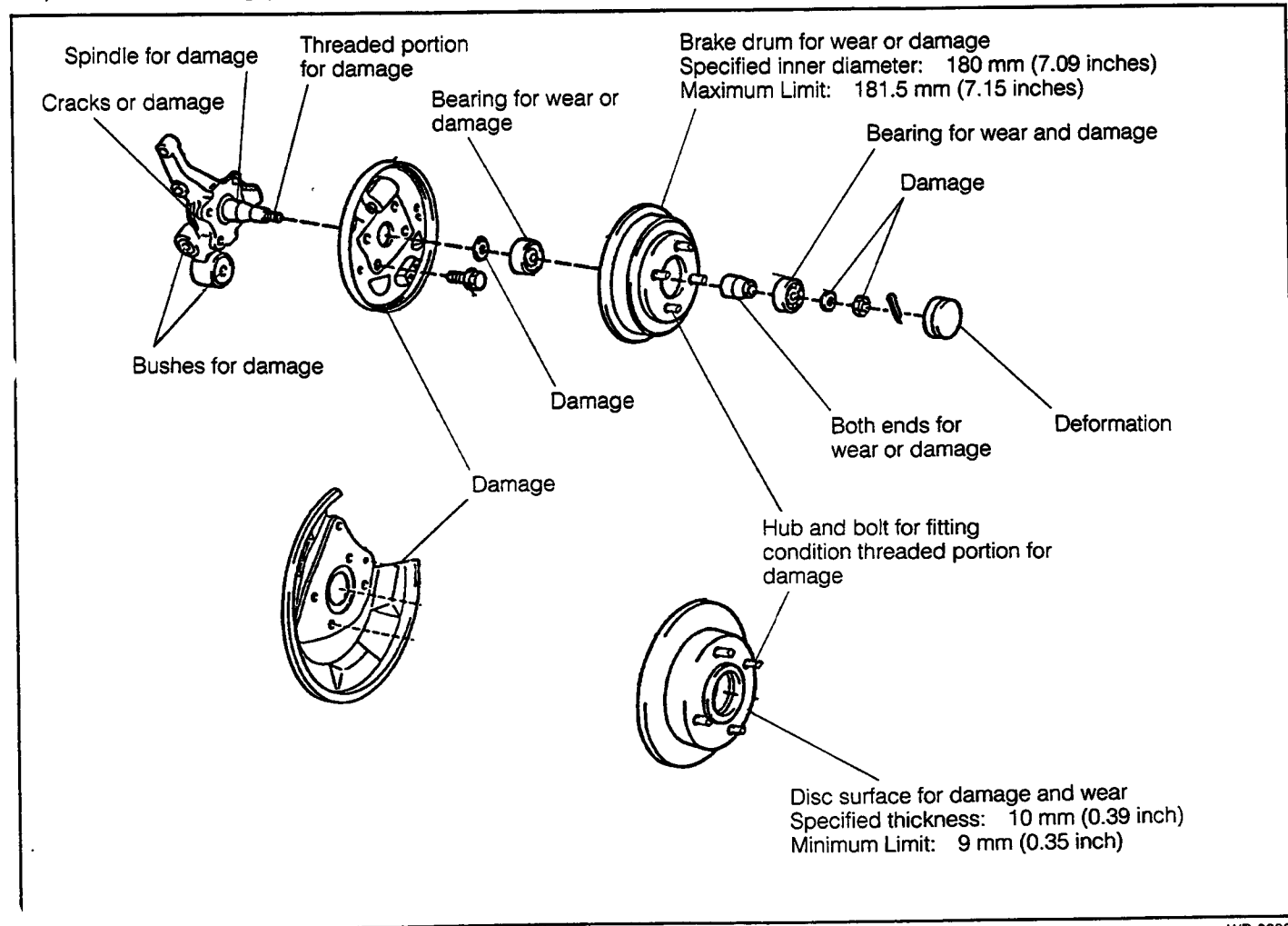


Fig. 6-20

WR-06021

2. Axle carrier installation

NOTE:

As for those suspension-related bolts and nuts on which a friction stabilizing agent has been coated, be certain not to reuse them if they have been once removed

- (1) Mount the axle carrier to the shock absorber.
- (2) Install the attaching bolts and new nuts of the axle carrier. Proceed to tighten them.

Tightening Torque: 9.0 - 12.0 kg-m (65 - 87 ft-lb)

NOTE:

Tighten the bolts and nuts while pushing the axle carrier to the lower side (positive side).

- (3) Mount the axle carrier on the suspension arm No.1.
Tighten the new bolt and nut temporarily.
- (4) Mount the axle carrier on the suspension arm No.2.
Temporarily tighten the new bolt and nut.

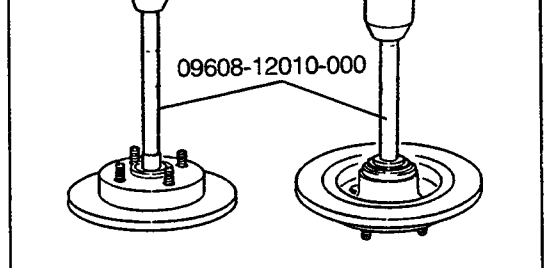


Fig. 6-22

WR-06023

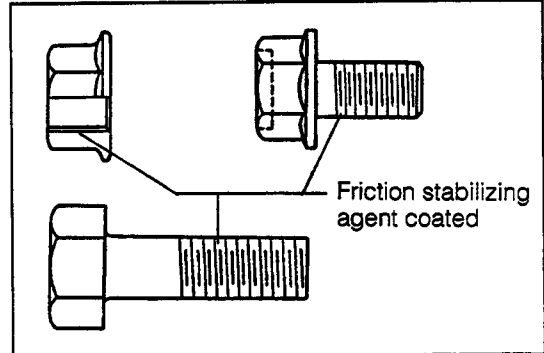


Fig. 6-23

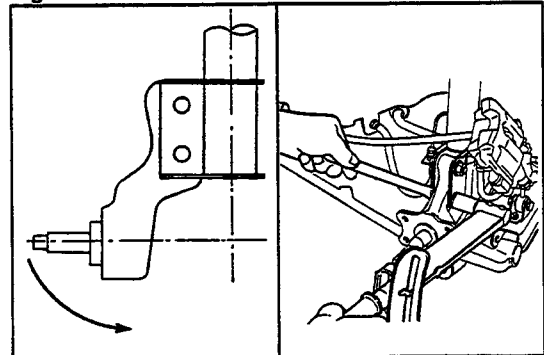


Fig. 6-24

WR-06024

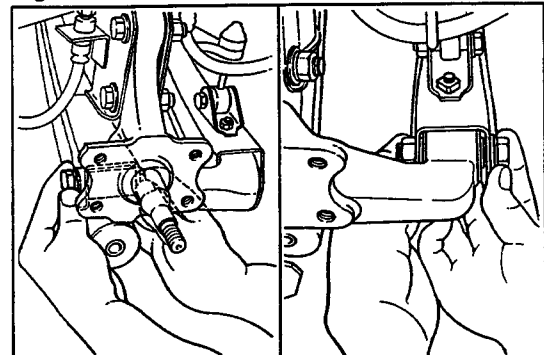


Fig. 6-25

WR-06025

(1) Install the backing plate.

Tightening Torque: 4.0 - 5.5 kg-m (29 - 40 ft-lb)

NOTE:

Be sure to apply DAIHATSU Bond No.4 (999-6304-6323-00) to the mating surface between the rear brake and the axle carrier. During this sealer application, be very careful not to restrict the 5 mm (0.20 inch) dia. grease releasing hole.

(2) Install the brake tube to the backing plate.

Tightening Torque: 1.3 - 1.8 kg-m (9.4 - 13.0 ft-lb)

(3) Install the bearing inner retainer, brake drum, plate washer and castle nut.

(4) Tighten the castle nut.

Tightening Torque: 6.0 - 10.0 kg-m (43 - 72 ft-lb)

(5) Install a new cotter pin. Install the grease retainer cap.

(6) Perform air bleeding for the brake system. (See page 8-5.)

(Disc brake equipped vehicle)

(1) Install the backing plate.

Tightening Torque: 4.0 - 5.5 kg-m (29 - 40 ft-lb)

(2) Install the bearing inner retainer, disc rotor, plate washer and castle nut.

(3) Tighten the castle nut.

Tightening Torque: 6.0 - 10.0 kg-m (43 - 72 ft-lb)

(4) Install a new cotter pin. Install the grease retainer cap.

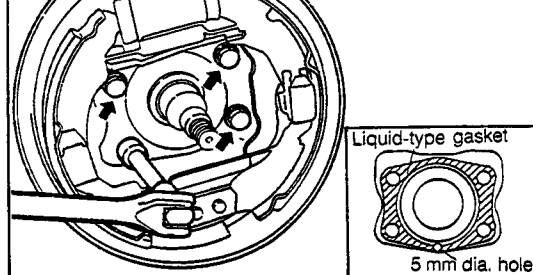


Fig. 6-27

WR-06027

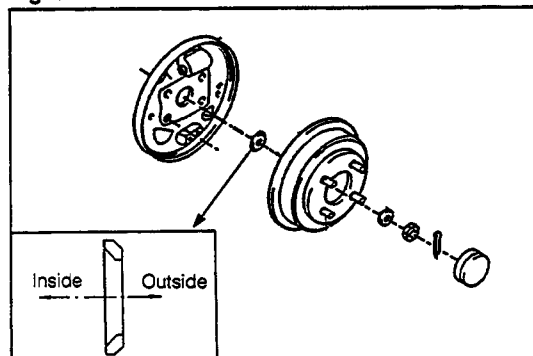


Fig. 6-28

WR-06028

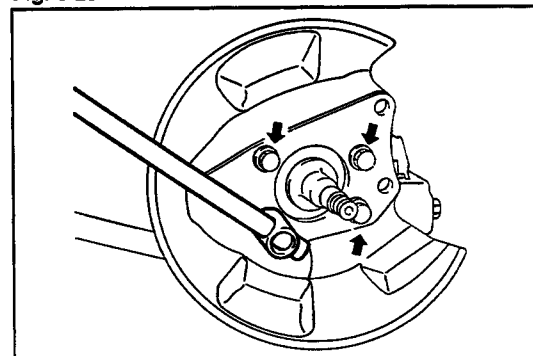


Fig. 6-29

WR-06029

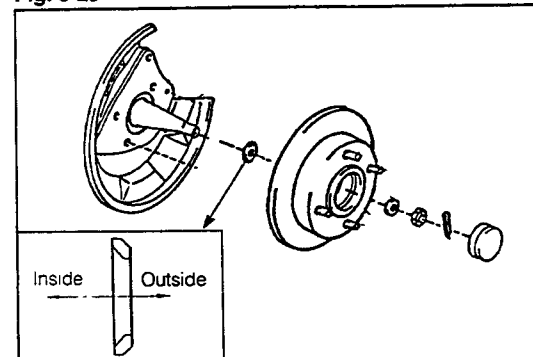


Fig. 6-30

WR-06030

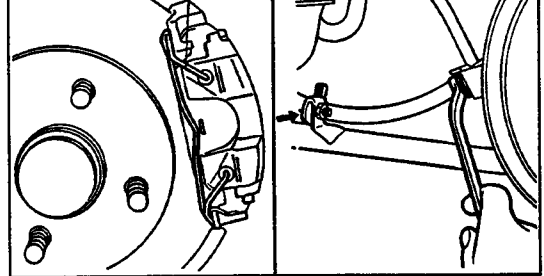


Fig. 6-32

WR-06032

4. Tightening of axle carrier attaching bolts

- (1) Install the tires.
- (2) With the vehicle in an unloaded state, jack down the vehicle. Rock the vehicle in an up-and-down direction several times to settle the suspensions.

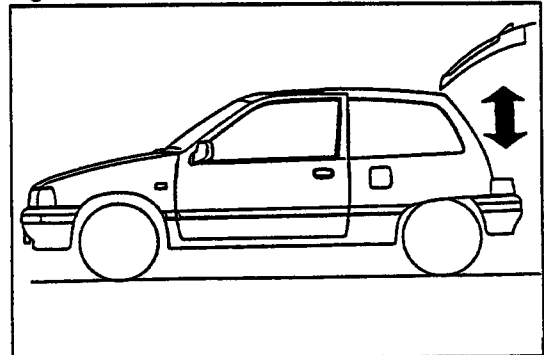


Fig. 6-33

WR-06033

- (3) With the vehicle weight being applied to the suspensions, tighten the bolt and nut of each section.

Tightening Torque: 7.5 - 10.5 kg-m (54 - 76 ft-lb)

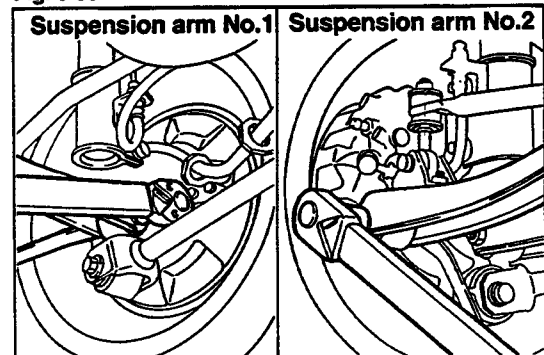


Fig. 6-34

WR-06034

5. Rear wheel alignment inspection
(See Fig. 5-38)

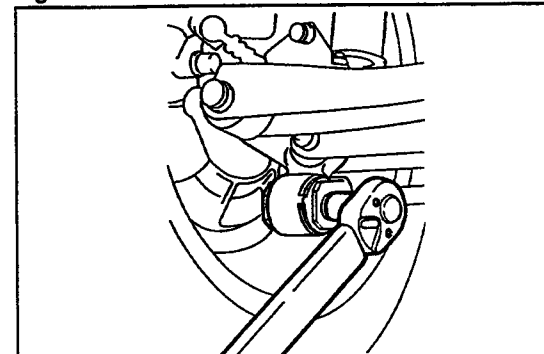


Fig. 6-35

WR-06035

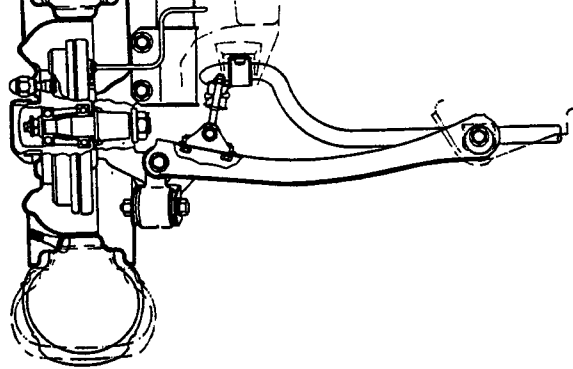


Fig. 6-36

WR-06036

REAR SHOCK ABSORBER COMPONENTS

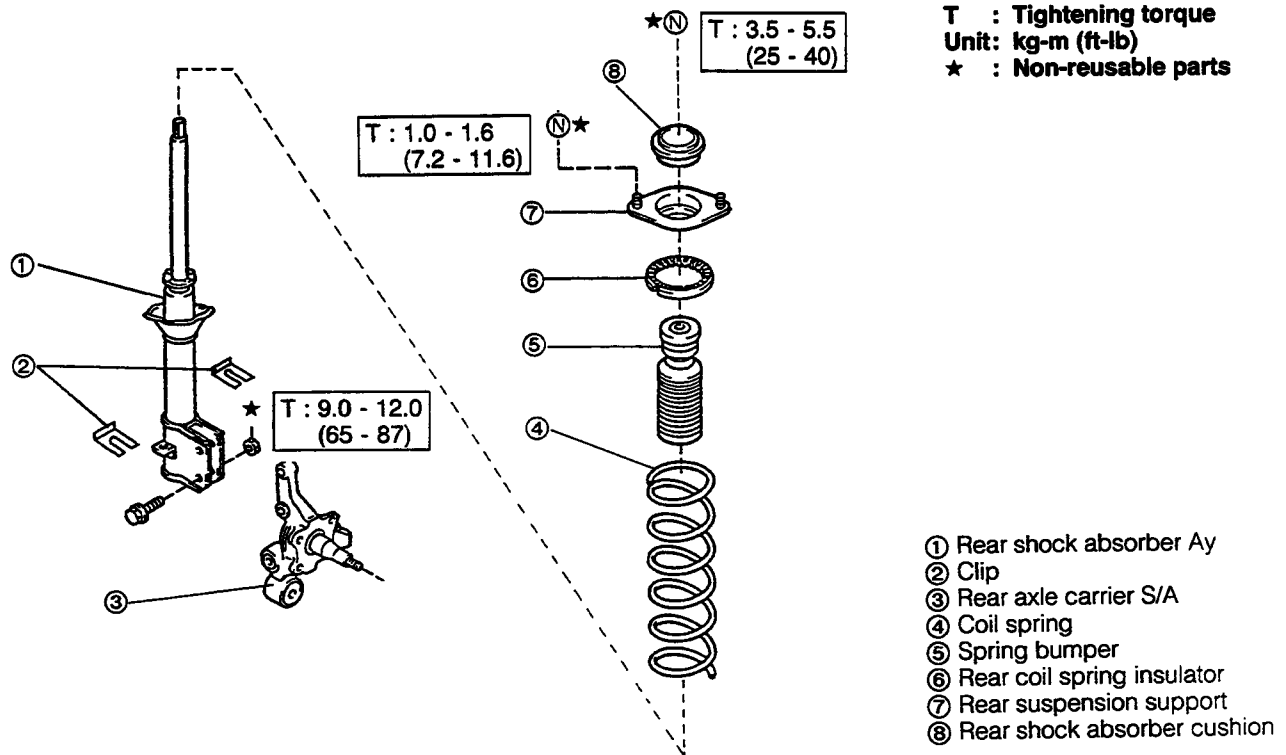


Fig. 6-37

WR-06037

- (2) Detach the clip. Disconnect the flexible hose from the shock absorber.

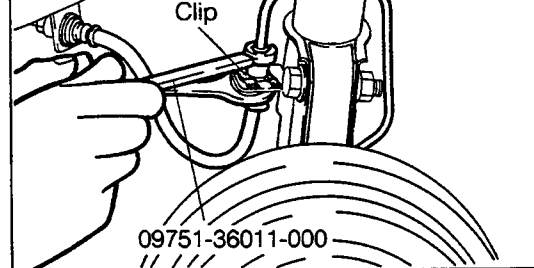


Fig. 6-39

WR-06039

Disc brake equipped vehicle

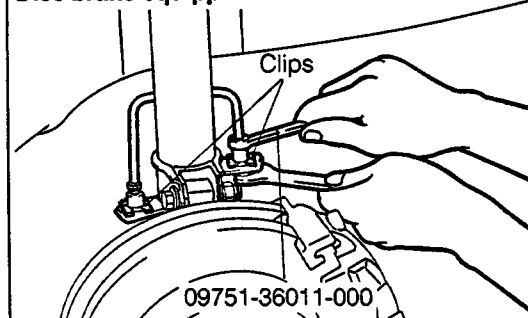


Fig. 6-40

WR-06040

4. Remove the nuts attaching the shock absorber to the axle carrier. Leave the bolts in an inserted condition.

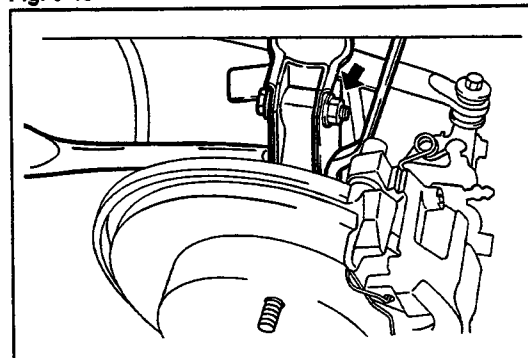


Fig. 6-41

WR-06041

5. Trim removal
 - (1) Remove the package tray.
 - (2) Remove the package tray side trim.

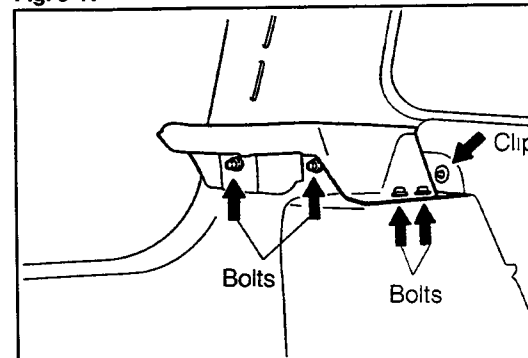


Fig. 6-42

WR-06042

8. Remove the attaching bolts of the axle carrier and shock absorber. Remove the shock absorber from the body.

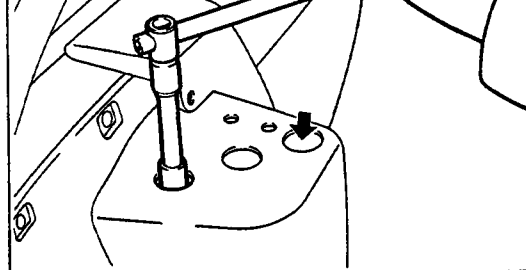


Fig. 6-44

WR-06044

DISASSEMBLY

1. Coil spring removal

- (1) Compress the coil spring, using the following SST.
SST: 09727-87701-000

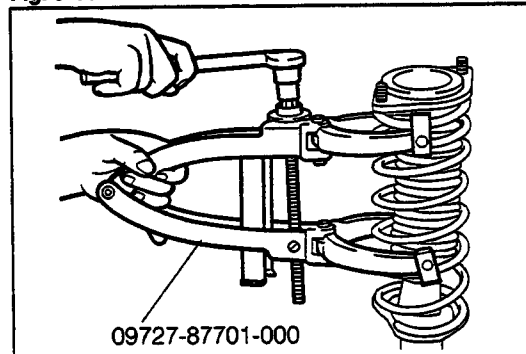


Fig. 6-45

WR-06045

- (2) Remove the nut.

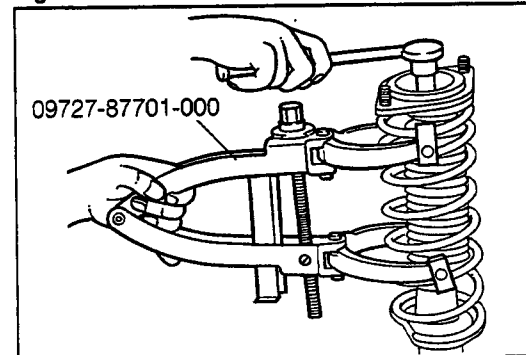


Fig. 6-46

WR-06046

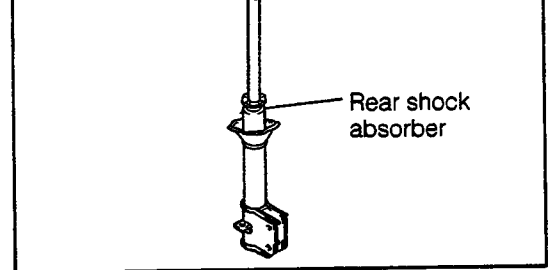


Fig. 6-47

WR-06047

INSPECTION

1. Inspect the following parts.

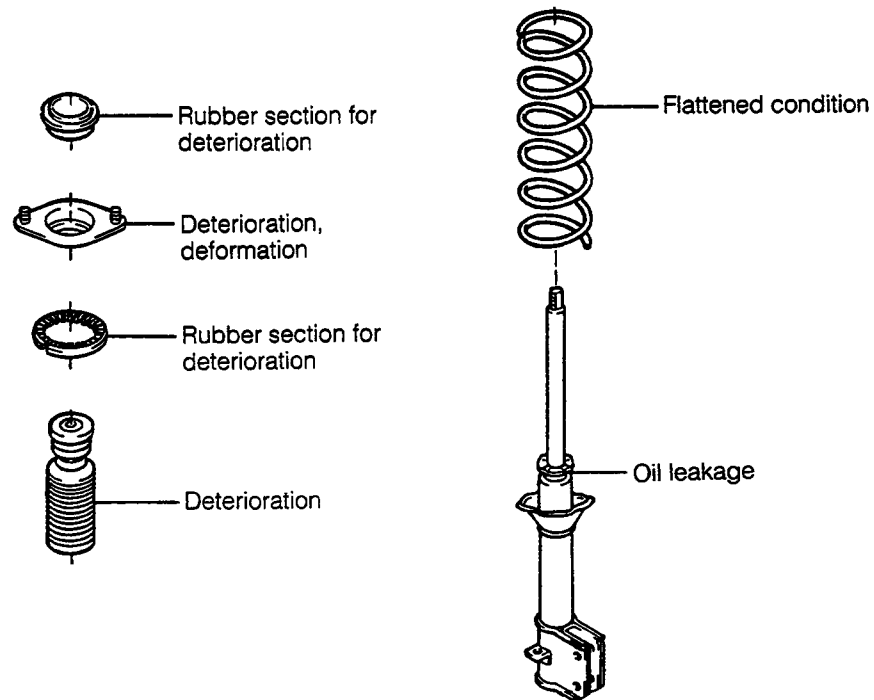


Fig. 6-48

WR-06048

the inspection above, replace the shock absorber.

NOTE:

- Perform this inspection after the piston rod has been moved in a up-and-down direction three or four times.
- When the gas filling type shock absorber is replaced, previous to the disposal, be sure to release the gas from the shock absorber.

ASSEMBLY

1. Assembly of coil spring

- (1) Install the spring bumper at a point below the cut-out section of the piston rod.
- (2) Compress the coil spring, using the following SST. Install it to the shock absorber.

SST: 09727-87701-000

- (3) Install the rear shock absorber cushion to the rear suspension support.
- (4) Install the rear coil spring insulator to the rear suspension support.

NOTE:

Be sure to align the cut-out section of the rear coil spring insulator with the stud bolt section of the rear suspension support during the assembly.

- (5) Install the rear suspension support.

NOTE:

- Be sure to align the cut-out section of the rear suspension support with that of the piston rod during the assembly.
 - Align the rear suspension support on the shock absorber lower bracket, as shown in Fig. 6-53.
- (6) Fit the suspension support. Tighten it temporarily, using a new nut.

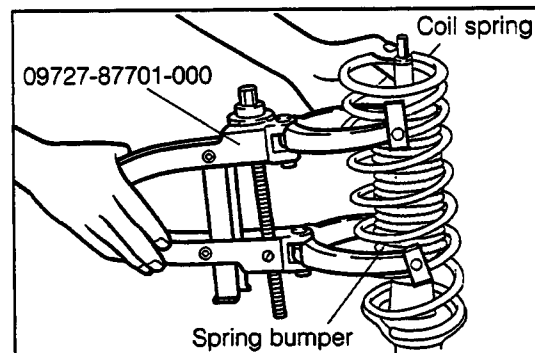


Fig. 6-50

WR-06050

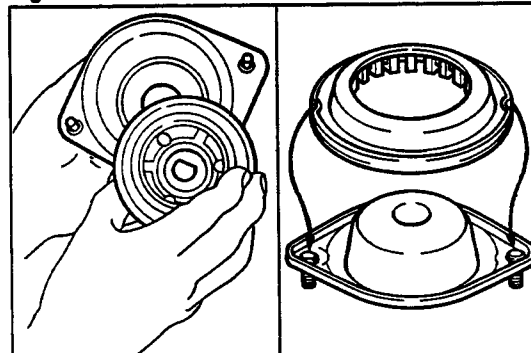


Fig. 6-51

WR-06051

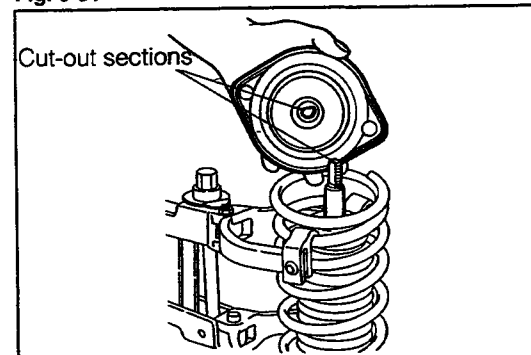


Fig. 6-52

WR-06052

INSTALLATION

1. Install the suspension support to the body, using a new nuts.

Tightening Torque: 1.0 - 1.6 kg-m (7.2 - 11.6 ft-lb)

2. Mount the axle carrier on the shock absorber. Fit the bolts and new nuts in position and tighten them.

Tightening Torque: 9.0 - 12.0 kg-m (65 - 87 ft-lb)

NOTE:

- The steering carrier attaching nuts are special nuts on which a friction stabilizing agent has been coated. Hence, be certain not to reuse them.
- Tighten the bolts and nuts while pushing the axle carrier to the lower side (positive side).

3. Install the flexible hose and brake tube, as follows:
 - (1) Install the flexible hose to the shock absorber. Secure it with the clip.
 - (2) Install the brake tube to the flexible hose.

SST: 09751-36011-000

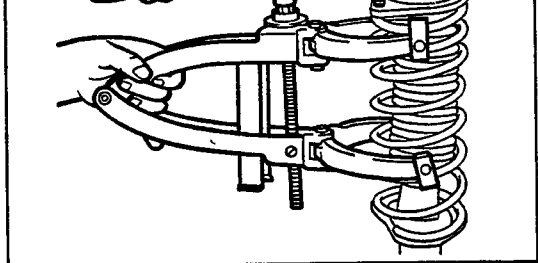


Fig. 6-54

WR-06054

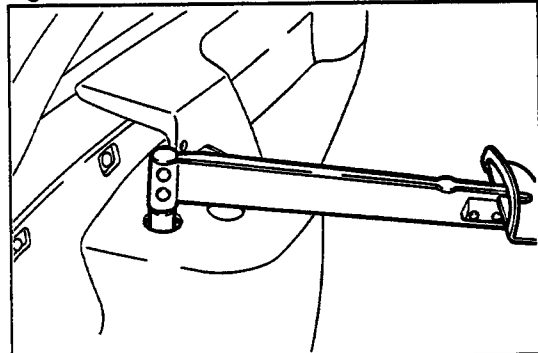


Fig. 6-55

WR-06055

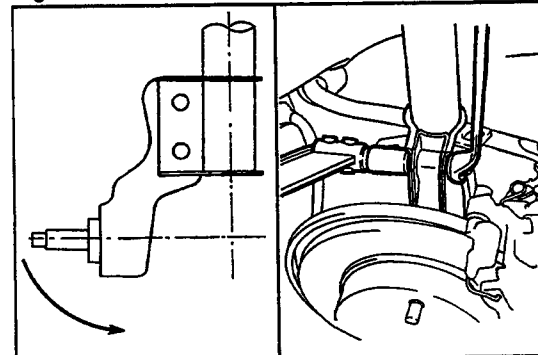


Fig. 6-56

WR-06056

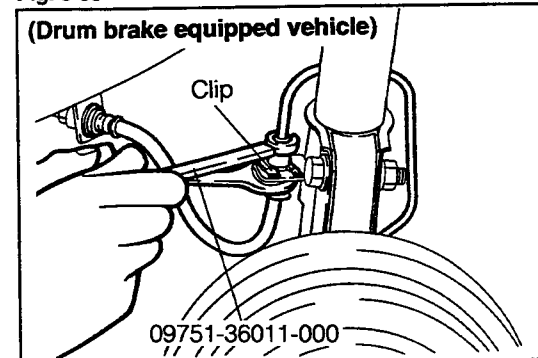


Fig. 6-57

WR-06057

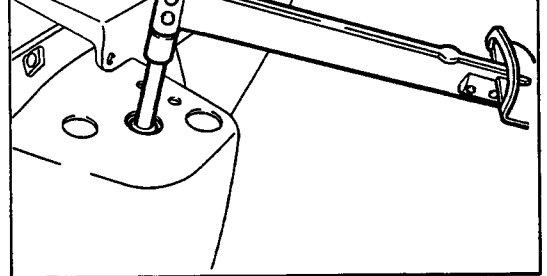


Fig. 6-59

WR-06059

5. Trim installation

- (1) Install the package tray side trim.
- (2) Install the package tray.

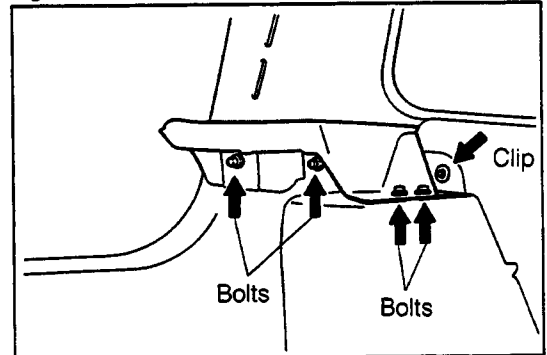
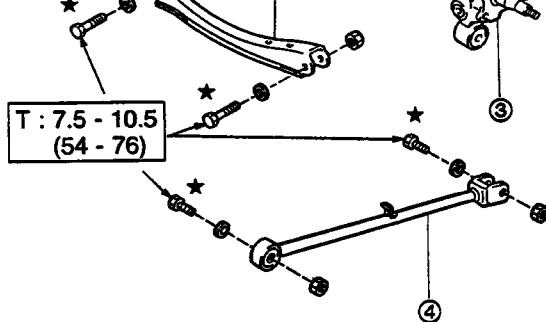


Fig. 6-60

WR-06060

6. Perform air bleeding for the brake system. (See page 8-5.)
7. Install the wheels. Jack down the vehicle.
8. Check the rear wheel alignment. (See page 5-38.)

WR-06061



- ① Suspension arm No. 1
- ② Suspension arm No. 2
- ③ Rear axle carrier S/A
- ④ Strut rod
- ⑤ Toe adjust cam S/A
- ⑥ Toe adjust plate

Fig. 6-61

WR-06062

REMOVAL

1. Jack up the vehicle.
 - (1) Jack up the vehicle and support the body with safety stands.
 - (2) Remove the wheel.
2. Removal of suspension arm No.2
 - (1) Remove the attaching bolt and nut of the stabilizer link.
 - (2) Remove the attaching bolt and nut of the suspension arm at the axle carrier side.

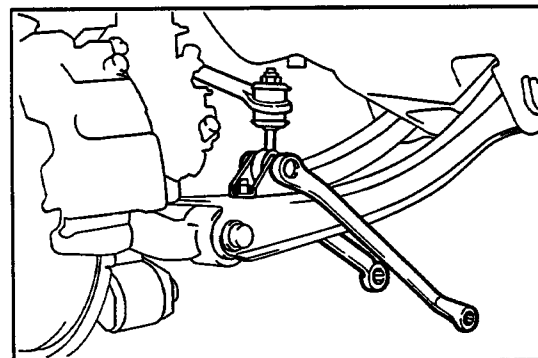


Fig. 6-62

WR-06063

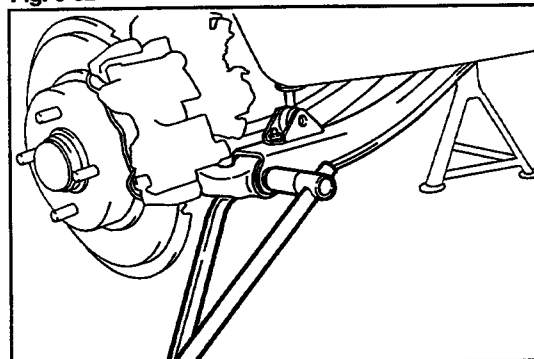


Fig. 6-63

WR-06064

3. Removal of suspension arm No.1

- (1) Remove the attaching bolt and nut of the suspension arm at the axle carrier side.

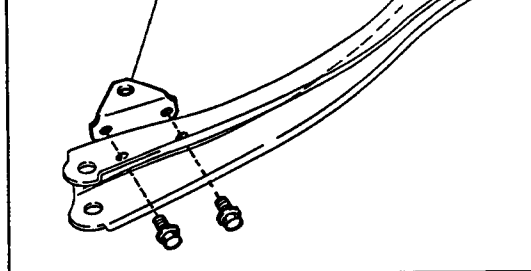


Fig. 6-65

WR-06066

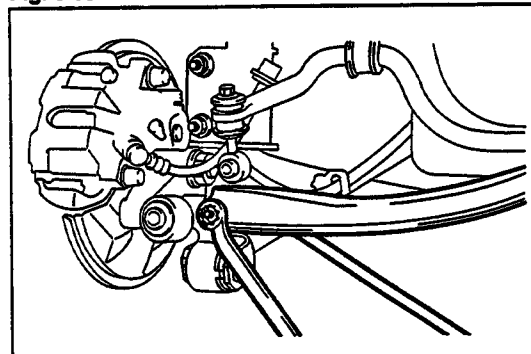


Fig. 6-66

WR-06067

- (2) Remove the attaching bolt and nut of the suspension arm at the body side. Then, remove the suspension arm.

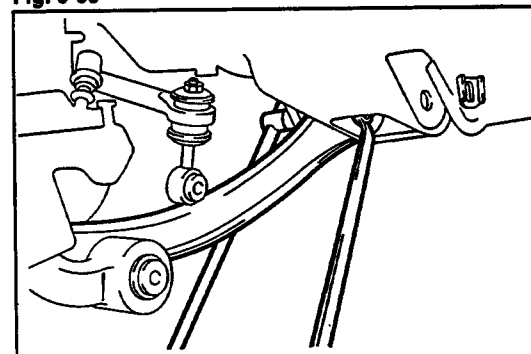


Fig. 6-67

WR-06068

INSTALLATION

NOTE:

The suspension arm attaching bolts are special bolts on which a friction stabilizing agent has been coated. Hence, be certain not to reuse them.

1. Installation of suspension arm No.1
 - (1) Tighten the suspension arm to the body temporarily with the new bolt and nut.
 - (2) Tighten the suspension arm to the axle carrier temporarily with the new bolt and nut.

2. Installation of suspension arm No.2
 - (1) Install the rear stabilizer bar bracket to the suspension arm.

Tightening Torque: 1.0 - 1.6 kg-m (7.2 - 11.6 ft-lb)

- (2) Mount the suspension arm on the body.
 - (3) Tighten the suspension arm to the body temporarily with the new bolt and cam.
 - (4) Prior to secure tightening, align the mate marks on the toe adjuster cam and body with each other.

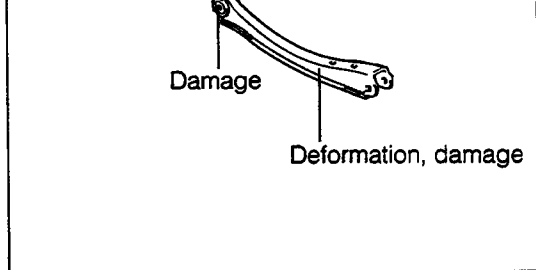


Fig. 6-68

WR-06069

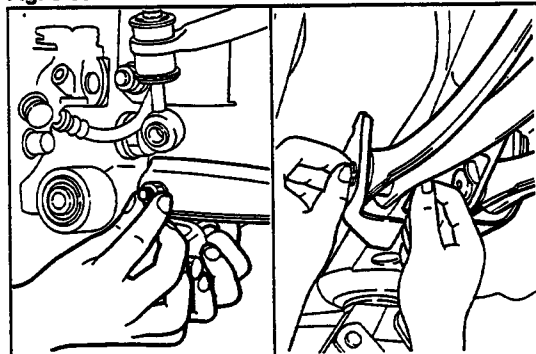


Fig. 6-69

WR-06070

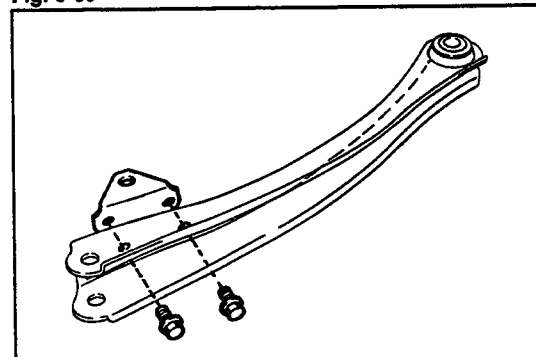


Fig. 6-70

WR-06071

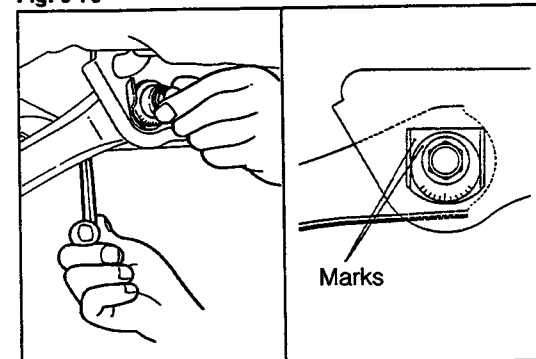


Fig. 6-71

WR-06072

Tightening Torque: 1.9 - 3.1 kg-m (14 - 22 ft-lb)

3. Tightening of suspension arm attaching bolt

- (1) Install the wheel.
- (2) With the vehicle in an unloaded state, jack down the vehicle. Rock the vehicle in an up-and-down direction a few times so as to settle the suspension.

- (3) With the vehicle weight applied to the suspension, tighten the bolts and nuts.

[Suspension arm No.1]

(Axle carrier side)

Tightening Torque: 7.5 - 10.5 kg-m (54 - 76 ft-lb)

(Body side)

Tightening Torque: 7.5 - 10.5 kg-m (54 - 76 ft-lb)

[Suspension arm No.2]

(Axle carrier side)

Tightening Torque: 7.5 - 10.5 kg-m (54 - 76 ft-lb)

(Body side)

Tightening Torque: 7.1 - 8.8 kg-m (51 - 64 ft-lb)

4. Check the rear wheel alignment.
(See page 5-38.)

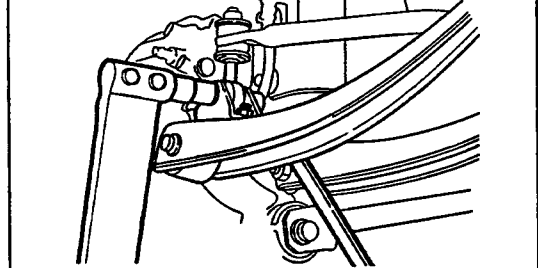


Fig. 6-73

WR-06074

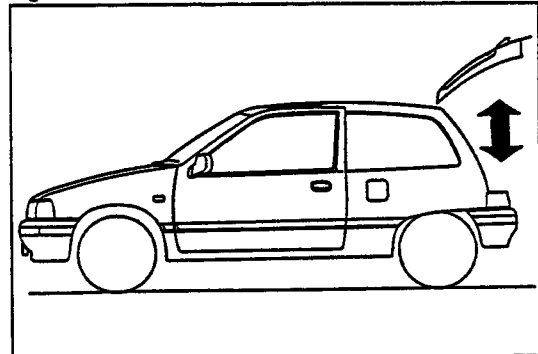


Fig. 6-74

WR-06075

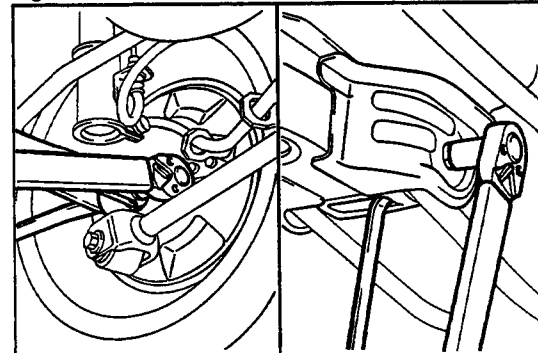


Fig. 6-75

WR-06076

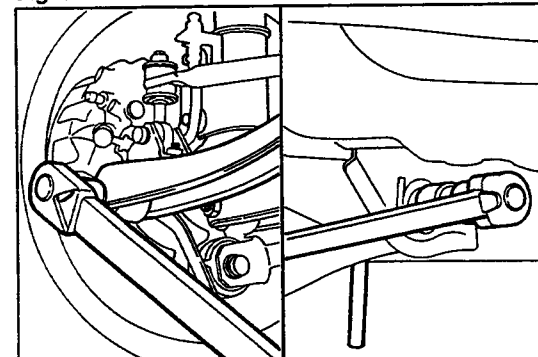


Fig. 6-76

WR-06077

INSPECTION

Inspect the parts as right figure.

INSTALLATION

1. Strut rod installation
 - (1) Tighten the strut rod to the body temporarily with the new bolt and nut.
 - (2) Tighten the strut rod to the axle carrier temporarily with the new bolt and nut.

NOTE:

The strut rod attaching bolts are special bolts on which a friction stabilizing agent has been coated. Hence, be certain not to reuse them.

2. Tightening of strut rod attaching bolt
 - (1) Install the wheel.
 - (2) With the vehicle in an unloaded state, jack down the vehicle. Rock the vehicle in an up-and-down direction a few times so as to settle the suspension.



Fig. 6-77

WR-06079

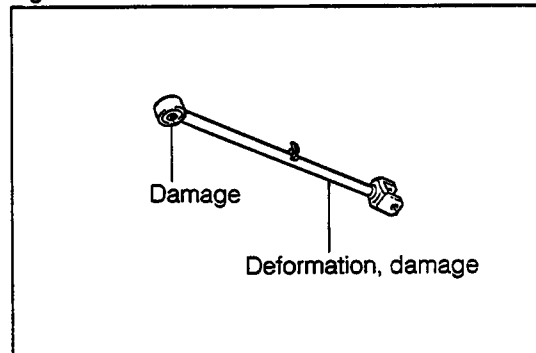


Fig. 6-78

WR-06080

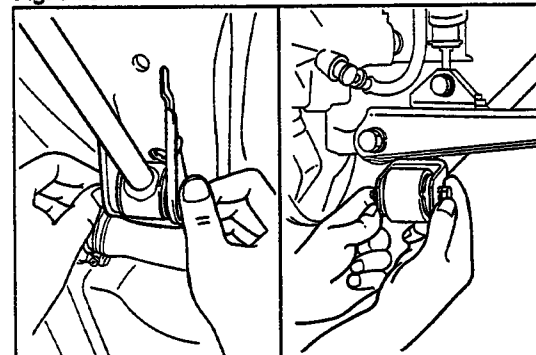


Fig. 6-79

WR-06081

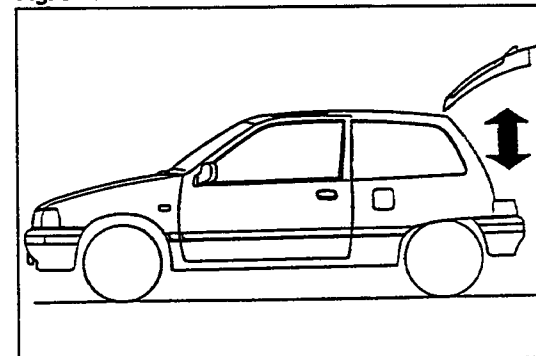
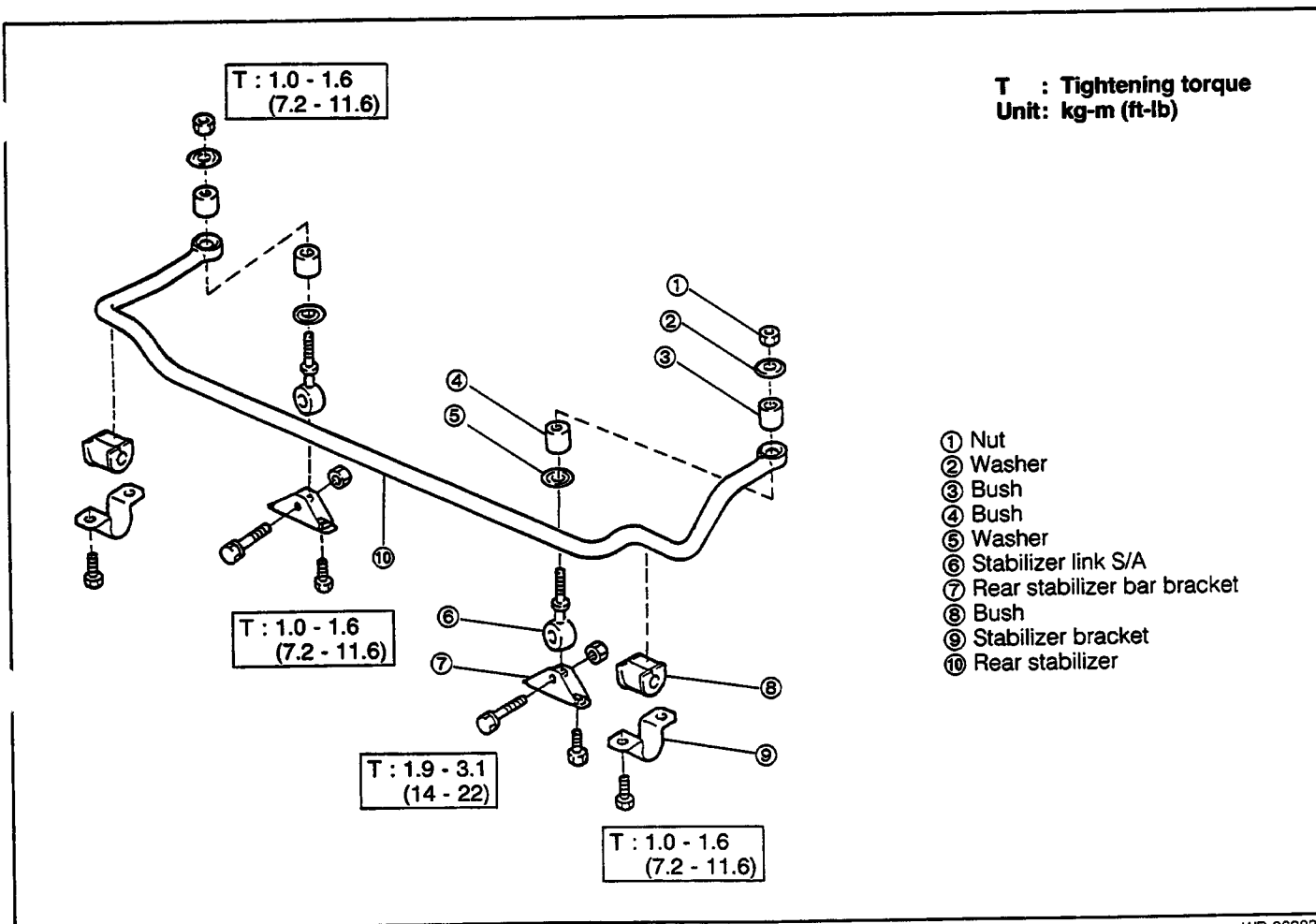


Fig. 6-80

WR-06082

COMPONENTS



WR-06083A

REMOVAL

1. Jack up the vehicle. Support the body with safety stands.
2. Stabilizer bar removal
 - (1) Remove the stabilizer bar attaching nuts from the stabilizer link.

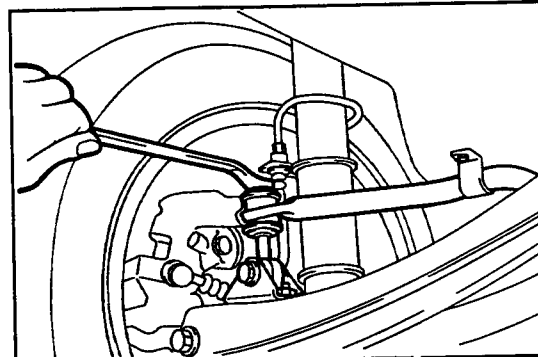


Fig. 6-83

WR-06084

- (4) Remove the rear stabilizer bar bracket attaching bolts.
Proceed to remove the stabilizer bar bracket.

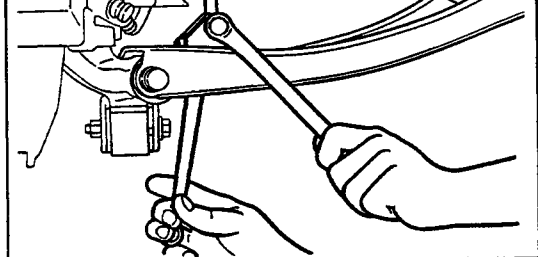


Fig. 6-85

WR-06086

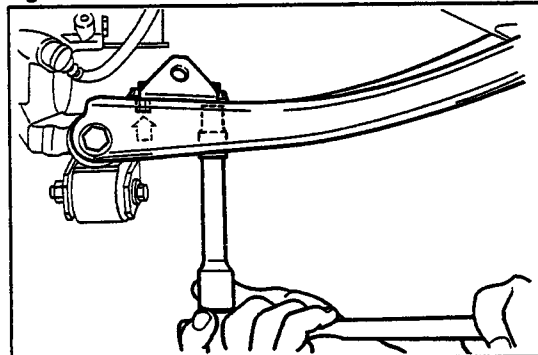


Fig. 6-86

WR-06087

INSPECTION

Inspect the following parts.

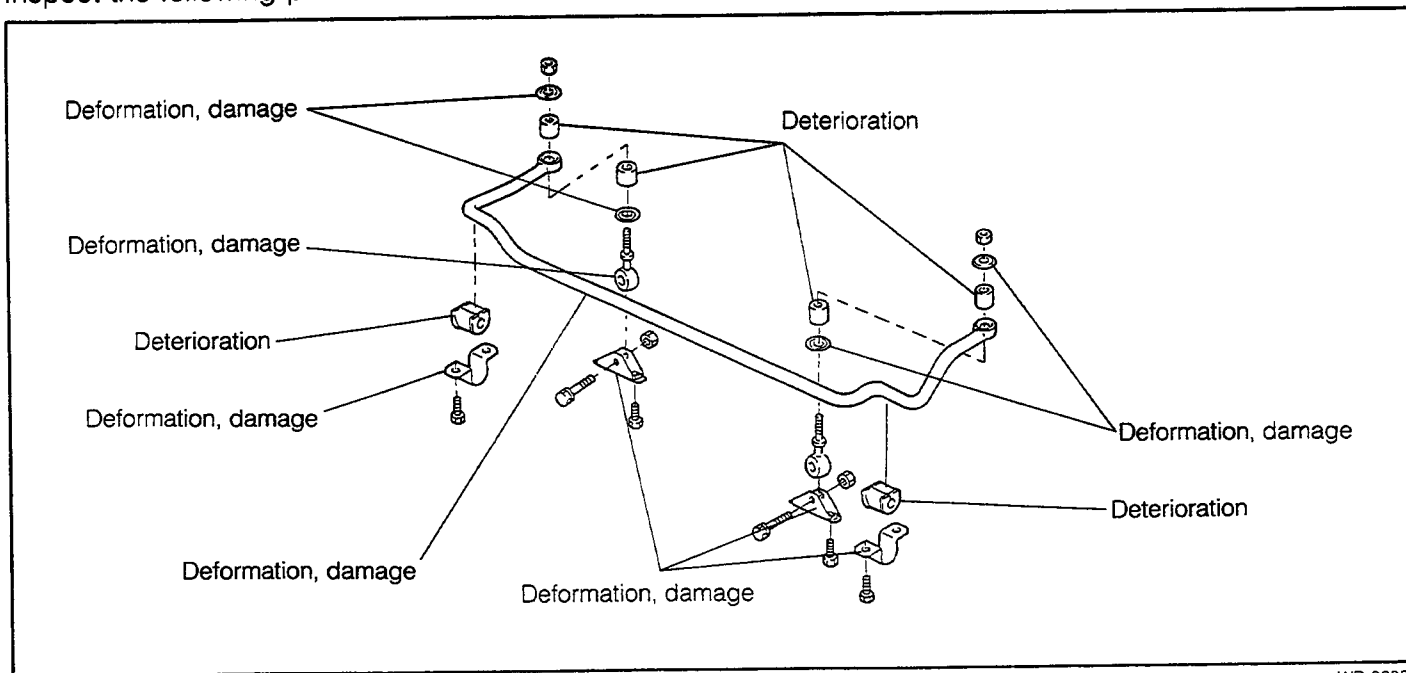


Fig. 6-87

WR-06088

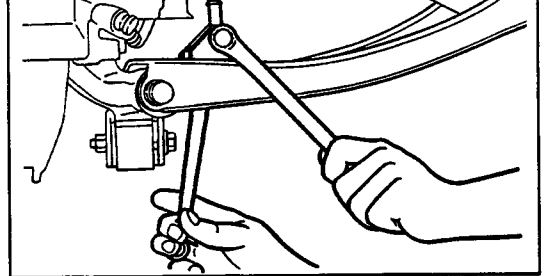


Fig. 6-89

WR-06090

- (3) Fit temporarily the bush, bracket and stabilizer bar to the body.

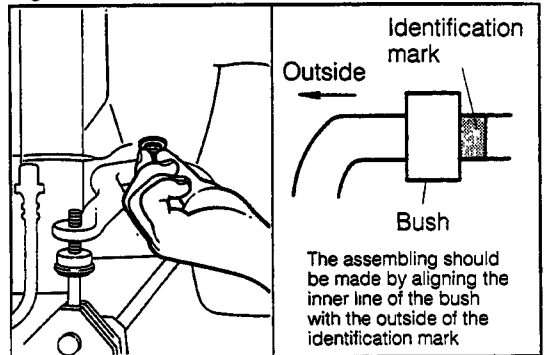


Fig. 6-90

WR-06091

- (4) Fit the stabilizer bar to the stabilizer link. Tighten the nuts temporarily.

NOTE:

Assemble the bush and bracket, as shown in the right figure.

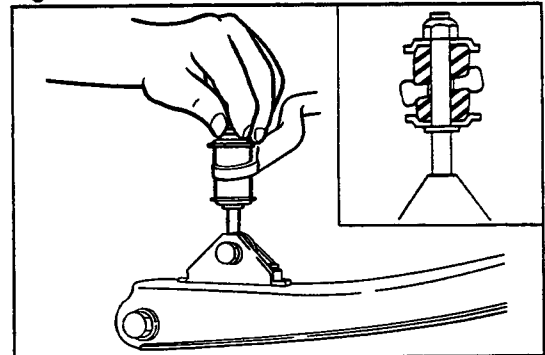


Fig. 6-91

WR-06092

2. Tightening of bolts and nuts

- (1) Tighten the nuts attaching the stabilizer bar to the stabilizer link.

Tightening Torque: 1.0 - 1.6 kg-m (7.2 - 11.6 ft-lb)

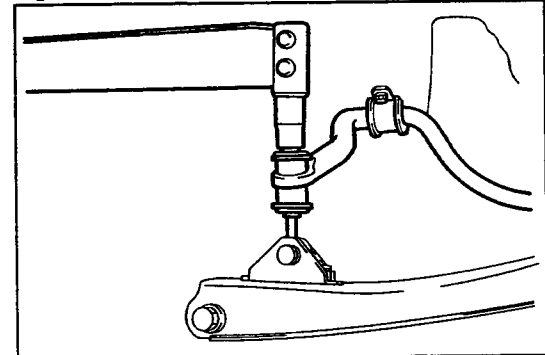


Fig. 6-92

WR-06093

Tightening Torque: 1.9 - 3.1 kg-m (14 - 22 ft-lb)

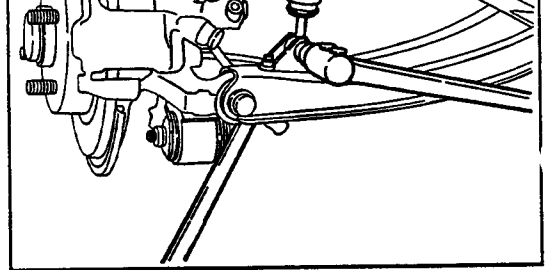


Fig. 6-94

WR-06095

SECTION 7

STEERING

7

STEERING	7- 2
SCHEMATIC VIEW	7- 2
STEERING WHEEL	7- 3
COMPONENTS	7- 3
REMOVAL	7- 3
INSTALLATION	7- 4
ENGINE KEY CYLINDER	7- 5
REMOVAL	7- 5
INSTALLATION	7- 5
STEERING COLUMN	7- 6
COMPONENTS	7- 6
REMOVAL	7- 6
DISASSEMBLY	7- 7
INSPECTION	7- 9
ASSEMBLY	7- 9
INSTALLATION	7-10
STEERING GEAR ASSEMBLY	7-12
COMPONENTS	7-12
REMOVAL	7-12
STEERING GEAR HOUSING	7-14
SECTIONAL VIEW	7-14
COMPONENTS	7-15
DISASSEMBLY	7-16
INSPECTION	7-18
ASSEMBLY	7-18
INSTALLATION	7-21

WR-07001

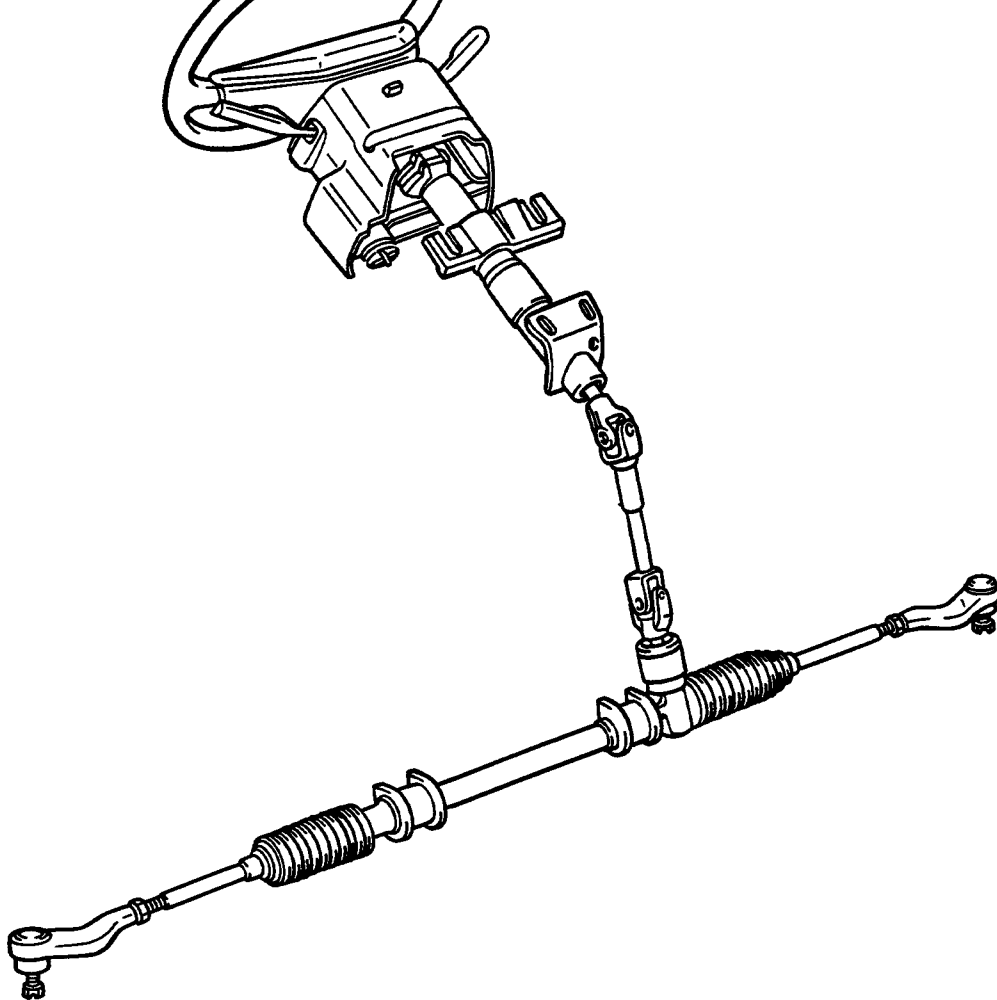
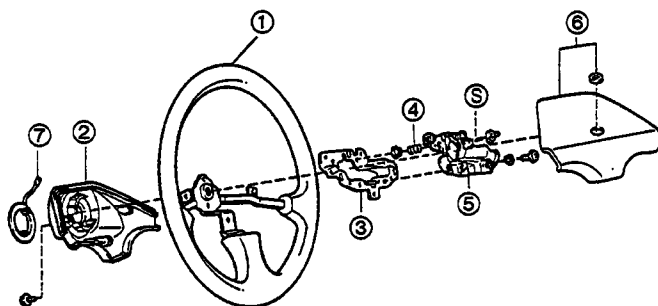


Fig. 7-1

WR-07002

Urethane type



- ① Steering wheel
- ② Steering wheel boss lower cover
- ③ Horn button contact plate
- ④ Horn contact spring
- ⑤ Horn contact spring set plate
- ⑥ Steering wheel cover S/A
- ⑦ Horn contact ring

Fig. 7-2

WR-07003

REMOVAL

1. Disconnect the battery negative (-) terminal.
2. Hold the steering wheel pad at its lower end by your fingers. Then, detach the steering wheel pad by pulling it toward your side.
3. Remove the steering wheel lock nut.

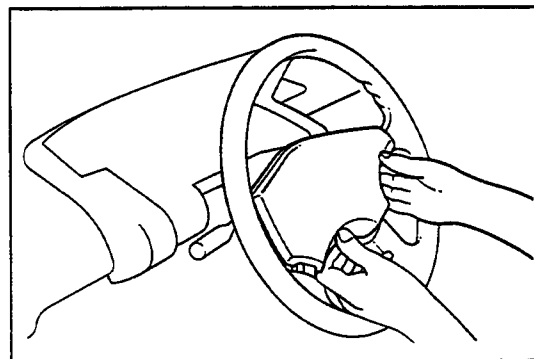


Fig. 7-3

WR-07004

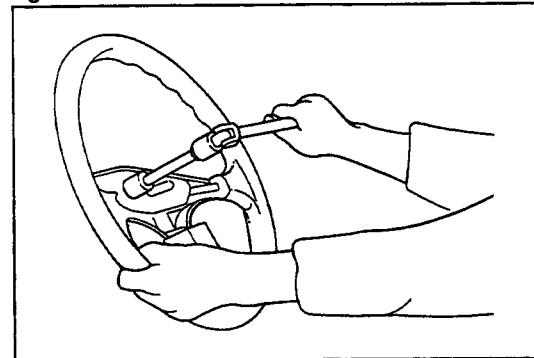


Fig. 7-4

WR-07005

Tightening Torque: 3.5 - 5.5 kg-m (25 - 40 ft-lb)

2. Install the steering wheel pad.
3. Connect the battery negative (–) terminal.

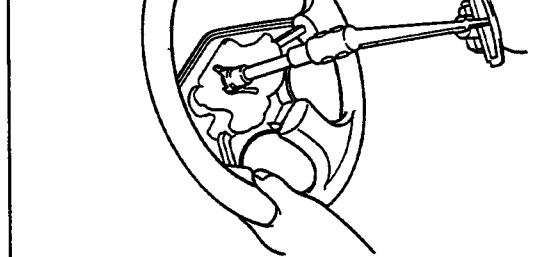


Fig. 7-6

WR-07007

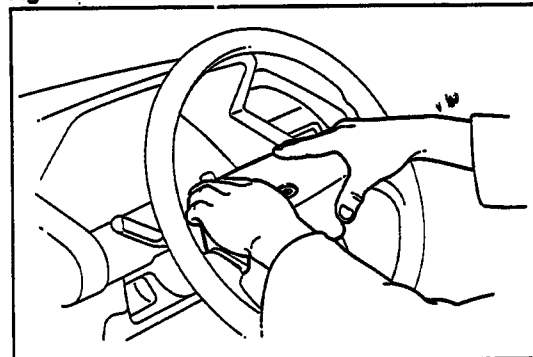


Fig. 7-7

WR-07008

- bending an approx. 2 mm (0.08 inch) diameter rod.
(2) Set the engine key to the [ACC] position.

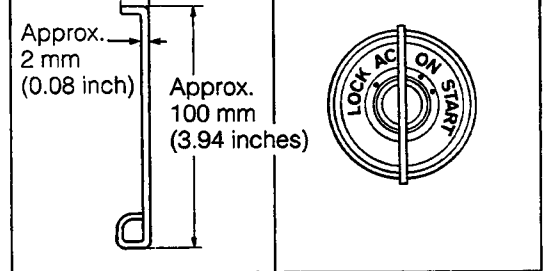


Fig. 7-9

WR-07010

- (3) While pushing the stop pin by means of the rod, draw out the cylinder.

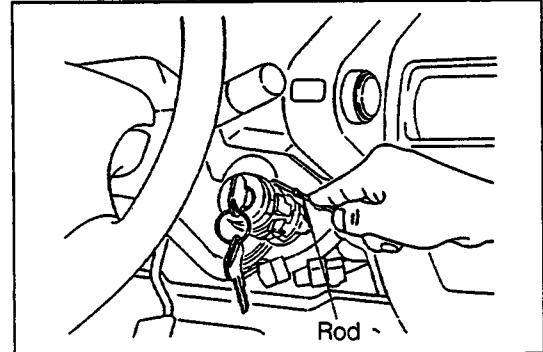


Fig. 7-10

WR-07011

INSTALLATION

1. Engine key cylinder installation
 - (1) Insert a common screwdriver into the pawl groove of the lock cylinder. Set the pawl groove to the [ACC] position.
 - (2) Set the engine key to the [ACC] position. Insert the key cylinder. Ensure that the stop pin is locked to the lock cylinder.
2. Install the steering column lower cover.

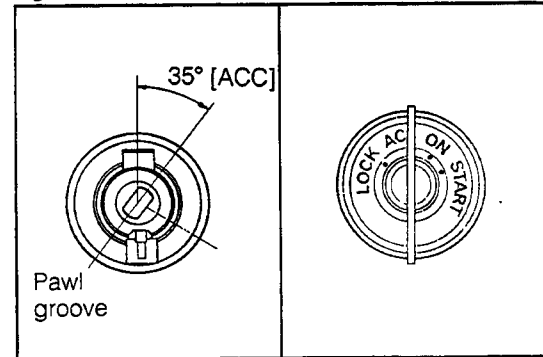
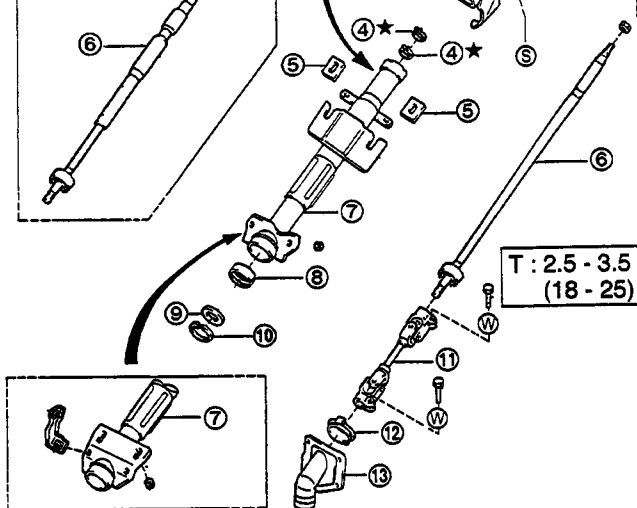


Fig. 7-11

WR-07012



 : ECE & EEC and Australian Specifications

- ① Steering column upper w/switch bracket
- ② Steering column upper cover
- ③ Steering column lower cover
- ④ Snap ring
- ⑤ Steering column upper attachment plate
- ⑥ Steering main shaft Ay
- ⑦ Steering column Ay
- ⑧ Steering shaft thrust stopper
- ⑨ Plate washer
- ⑩ Snap ring
- ⑪ Universal joint
- ⑫ Steering column hole cover
- ⑬ Main shaft lower dust cover

Fig. 7-12

WR-07013

REMOVAL

1. Disconnect the battery negative (−) terminal.
2. Remove the steering wheel. (See page 7-3.)
3. Detach the instrument lower finish panel and steering column lower cover.

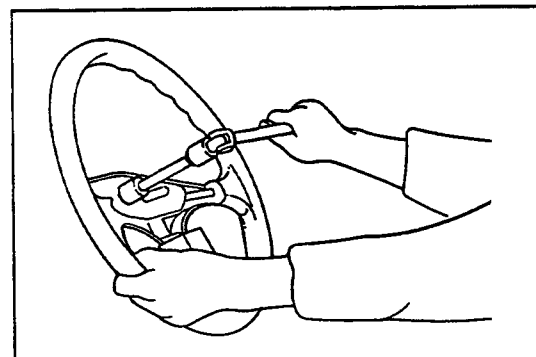


Fig. 7-13

WR-07014

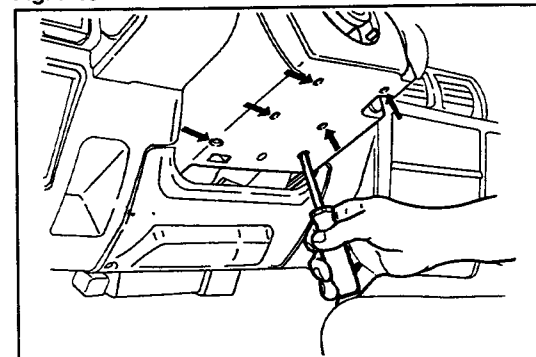


Fig. 7-14

WR-07015

7. Steering column assembly removal

- (1) Remove three bolts and two nuts.
- (2) Remove the steering column assembly from the body.

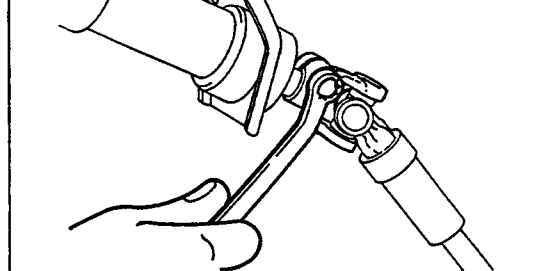


Fig. 7-16

WR-07017

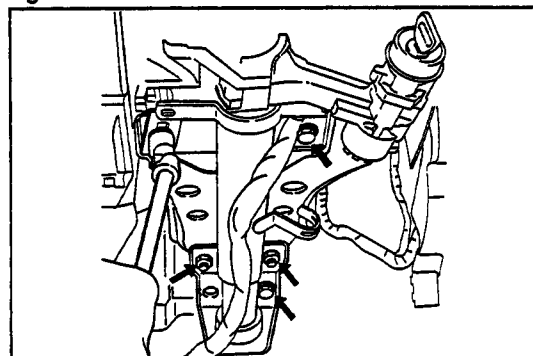


Fig. 7-17

WR-07018

8. Remove the steering column upper cover and multi-use lever switch from the steering column assembly.

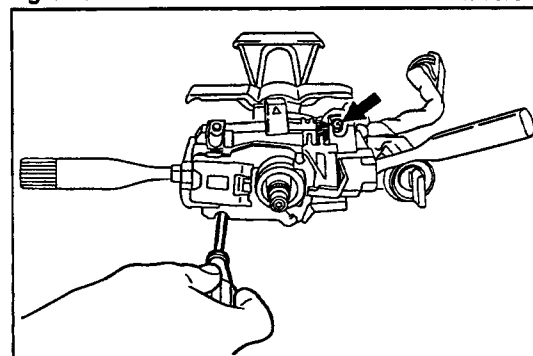


Fig. 7-18

WR-07019

DISASSEMBLY

1. Detach the snap ring and plate washer located at the lower side of the steering main shaft.

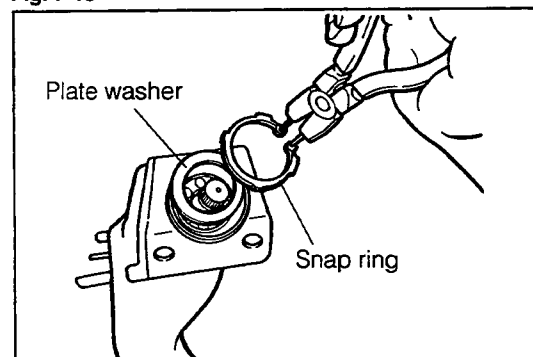


Fig. 7-19

WR-07020

tapping the main shaft lightly with a plastic hammer.

NOTE:

Never tap the main shaft strongly. If the main shaft should be tapped strongly, the resin pin of the steering main shaft may be damaged. (ECE & EEC and Australian specifications)

- (2) Remove the stopper from the steering main shaft.
- (3) Detach the snap ring from the steering main shaft.

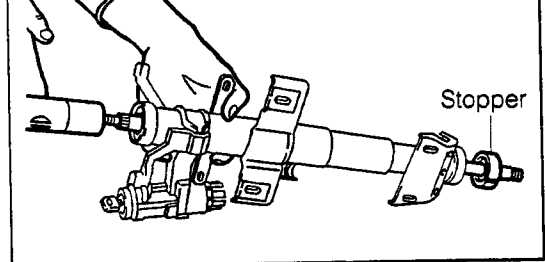


Fig. 7-21

WR-07022

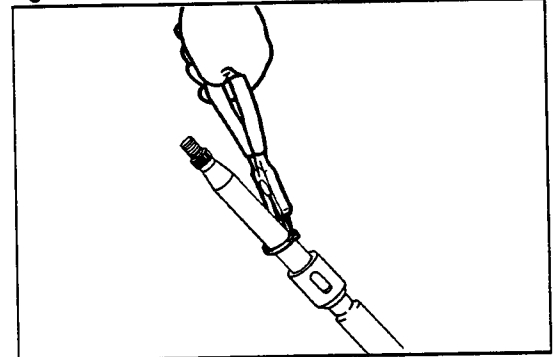
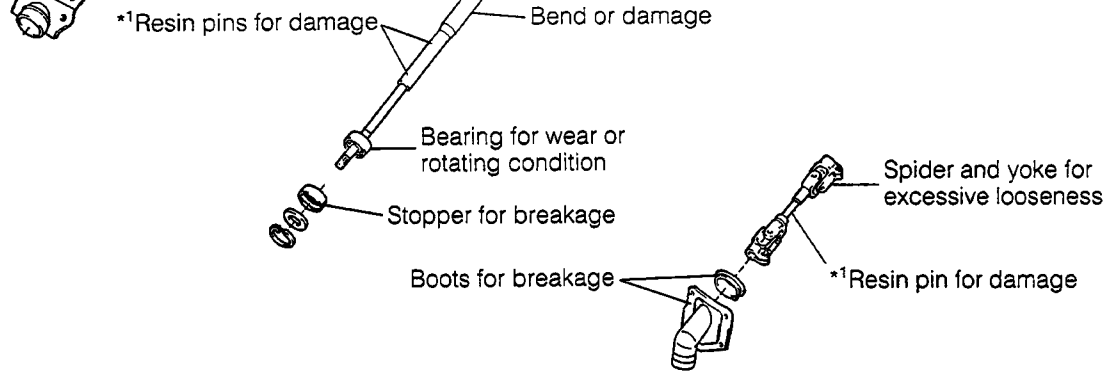


Fig. 7-22

WR-07023



***1: ECE & EEC and Australian specifications**

Fig. 7-23

WR-07024

ASSEMBLY

1. Assembly of steering main shaft
 - (1) Fit a new snap ring to the steering main shaft.
 - (2) Place the stopper on the bearing.
2. Insert the main shaft (with the bearing) into the steering column, using a plug wrench.

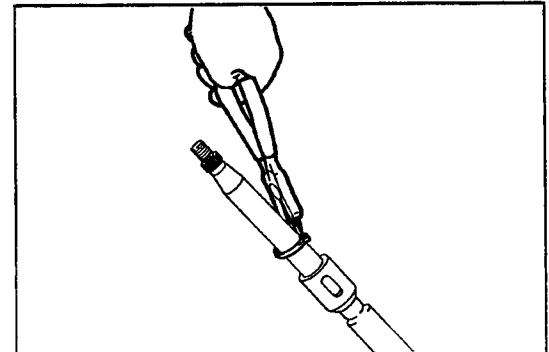


Fig. 7-24

WR-07025

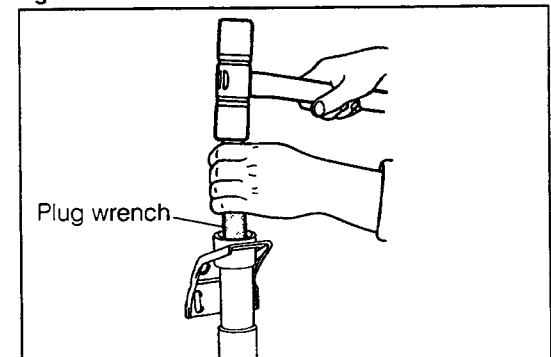


Fig. 7-25

WR-07026

5. Install the multi-use lever switch to the steering column.

INSTALLATION

1. Steering column assembly installation

- (1) Install the steering column upper cover to the steering column.
- (2) Tighten the attaching bolt of the universal joint.
Tightening Torque: 2.5 - 3.5 kg-m (18 - 25 ft-lb)

- (3) Install the steering column with the three bolts and two nuts.

Tightening Torque:

Bolt 1.5 - 2.2 kg-m (11 - 16 ft-lb)

Nut 2.5 - 3.5 kg-m (18 - 25 ft-lb)

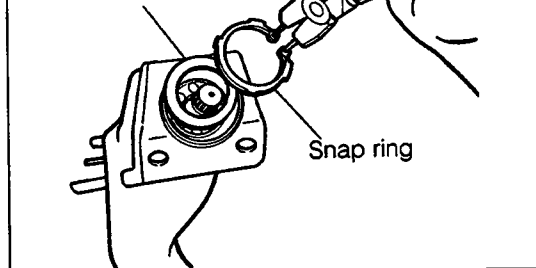


Fig. 7-27

WR-07028

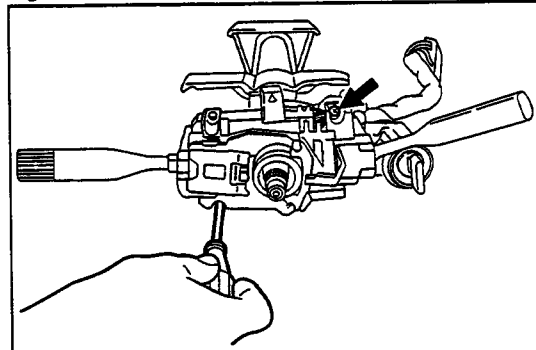


Fig. 7-28

WR-07029

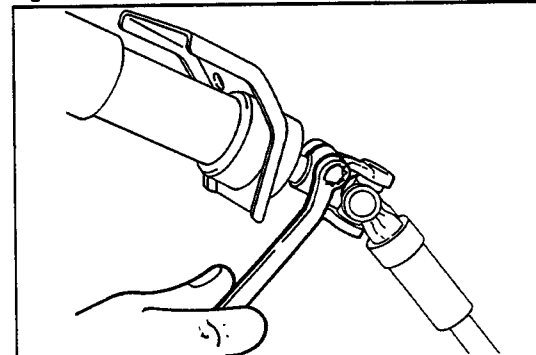


Fig. 7-29

WR-07030

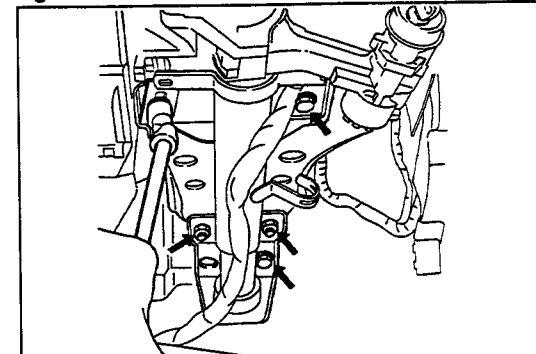
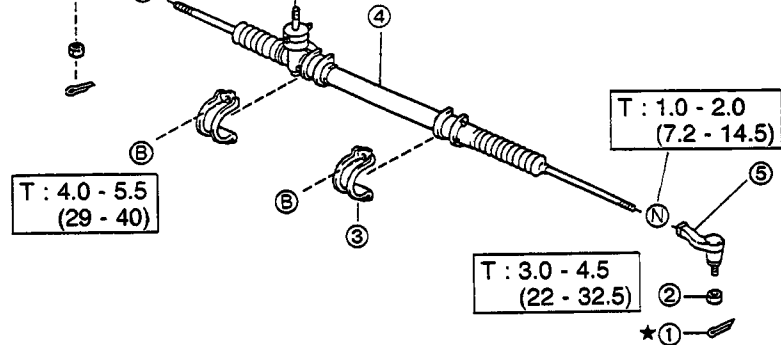


Fig. 7-30

WR-07031



- | | |
|--------------------------------------|--------------------|
| ① Cotter pin | ④ Steering gear Ay |
| ② Castle nut | ⑤ Ball joint |
| ③ Steering rack housing No.1 bracket | ⑥ Universal joint |

Fig. 7-32

WR-07033

REMOVAL

1. Jack up the vehicle at the front side. Support the body with safety stands.
2. Remove the wheel.

3. Steering universal joint removal
 - (1) Remove the bolt.
 - (2) Remove the universal joint.

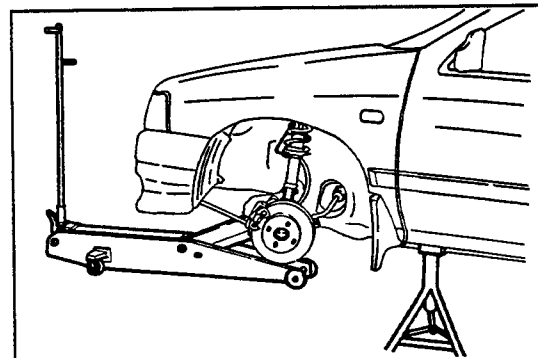


Fig. 7-33

WR-07034

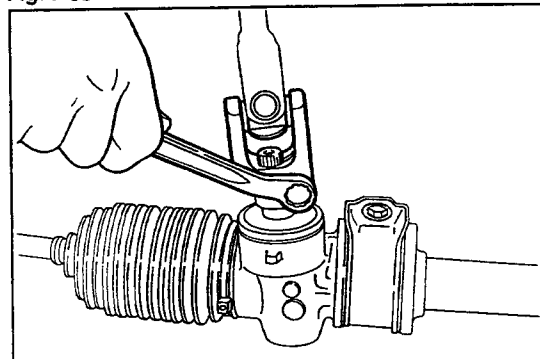


Fig. 7-34

WR-07035

bracket set bolts.

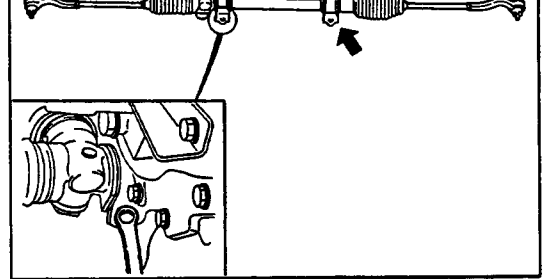


Fig. 7-36

WR-07037

(2) Remove the steering gear assembly from the vehicle.

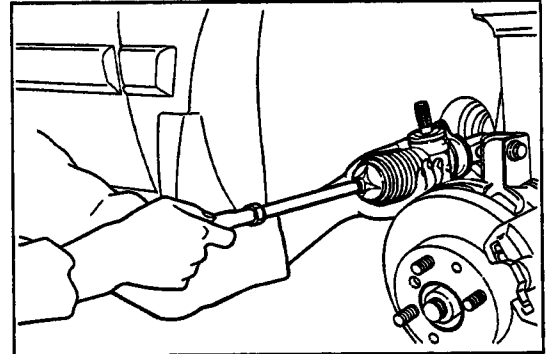


Fig. 7-37

WR-07038

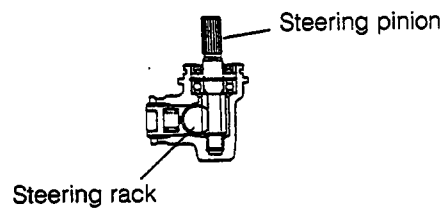


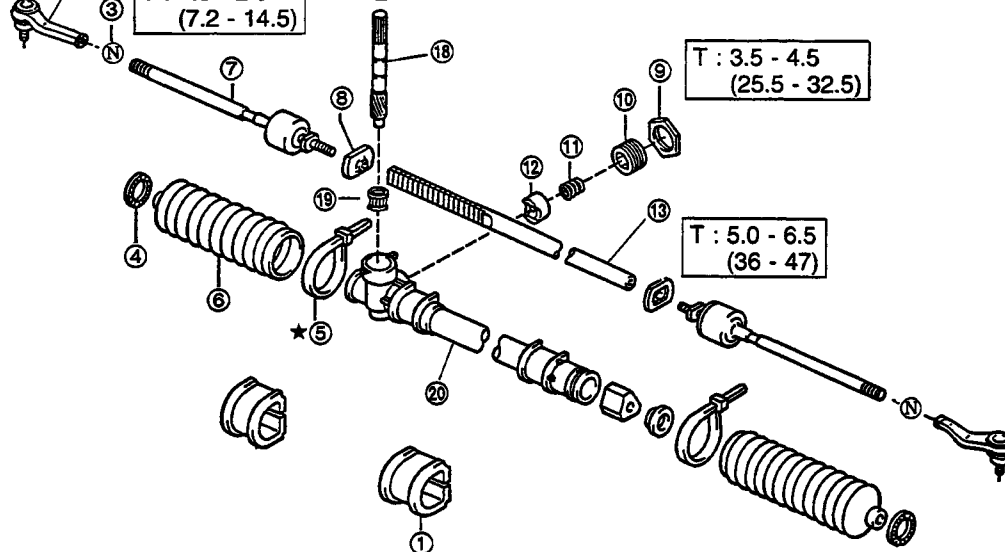
Fig. 7-38

WR-07039

Specifications

Maximum turns from lock to lock	3.82
Rack stroke mm (inch)	141.5 (5.571)
Steering pinion tooth number	6
Rack tooth number	26

WR-07040



T : Tightening torque
Unit: kg-m (ft-lb)
★ : Non-reusable parts

- ① Steering rack housing grommet
- ② Tie rod end S/A
- ③ Nut
- ④ Steering boot band No.2
- ⑤ Steering rack boot band
- ⑥ Steering rack boot
- ⑦ Steering rack end
- ⑧ Rack end plug
- ⑨ Hexagon nut
- ⑩ Rack guide spring cap

- ⑪ Compression spring
- ⑫ Rack guide
- ⑬ Steering rack
- ⑭ Oil seal
- ⑮ Snap ring
- ⑯ Shaft snap ring
- ⑰ Radial ball bearing
- ⑱ Steering pinion
- ⑲ Needle roller bearing
- ⑳ Steering rack housing S/A

Fig. 7-39

WR-07041

on the rack end section in order that this mark may be used as guide to ensure easier toe-in adjustment during the reassembly.

- (2) Slacken the lock nut. Remove the tie rod end from the rack end.
3. Remove the boot band No.2 and rack boot band. Remove the rack boot.
4. Steering rack end removal
 - (1) Slacken the rack end plug, using the flat sections of the steering rack (width across flats: 19 mm) and the flat sections of the rack end plug (width across flats: 26 mm).
 - (2) Remove the steering rack end from the steering rack.
 - (3) Remove the rack end plug from the steering rack end:

5. Remove the lock nut (hexagon nut), using the following SST.

SST: 09617-22030-000

6. Rack guide spring cap removal
 - (1) Remove the rack guide spring cap, using a simple spinner.
Simple Spinner (Width across flats: 17 mm)
 - (2) Remove the compression spring and rack guide from the steering rack housing.

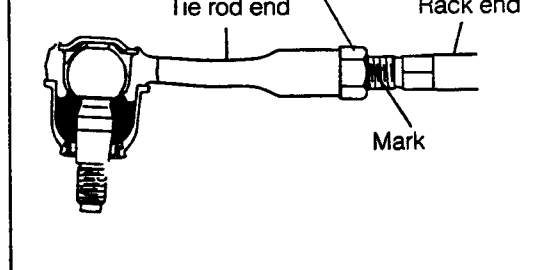


Fig. 7-41

WR-07043

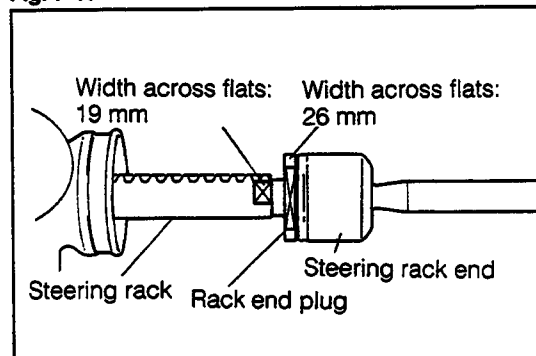


Fig. 7-42

WR-07044

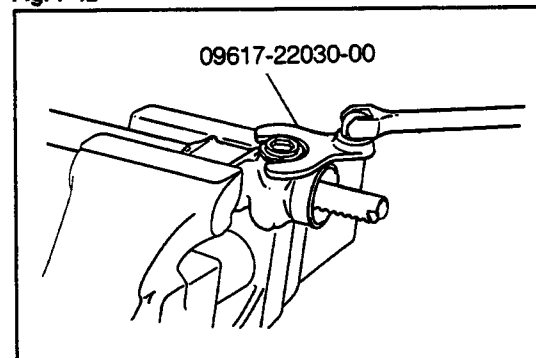


Fig. 7-43

WR-07045

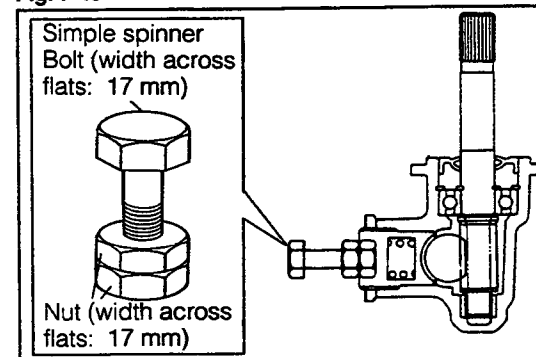


Fig. 7-44

WR-07046

removal.

9. Detach the snap ring, using a snap ring expander.
10. Remove the steering pinion, together with the bearing, from the steering rack housing.

11. Radial ball bearing removal

- (1) Detach the shaft snap ring, using a snap ring expander.
- (2) Remove the bearing, using the following SST.
SST: 09950-20014-000

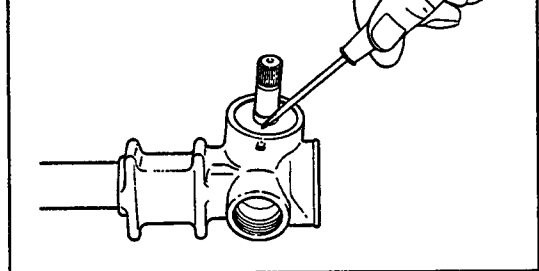


Fig. 7-46

WR-07048

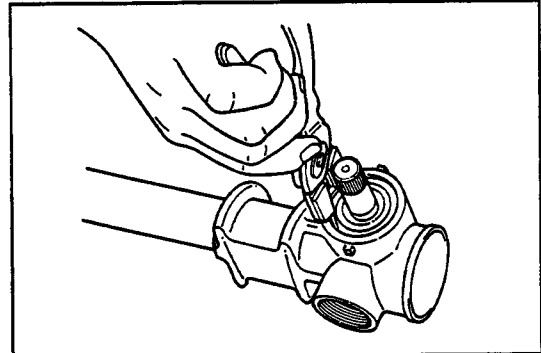


Fig. 7-47

WR-07049

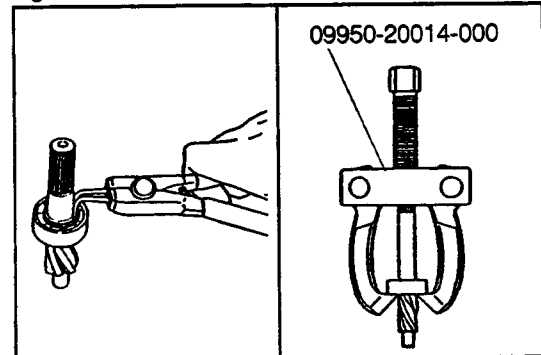


Fig. 7-48

WR-07050

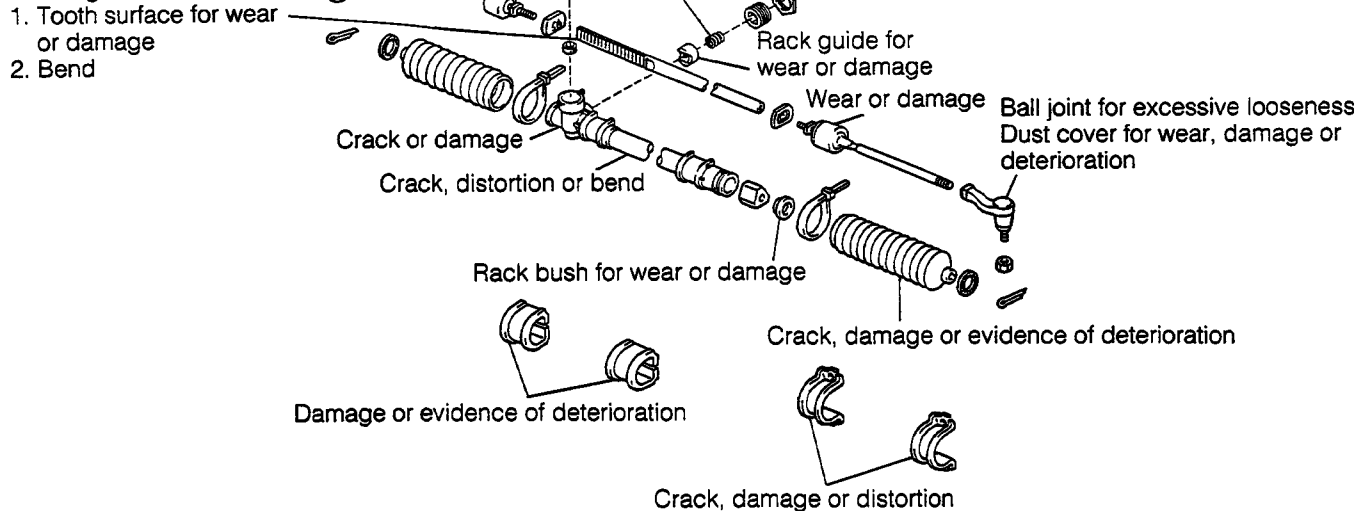


Fig. 7-49

WR-07051

ASSEMBLY

1. Apply grease to the following sections.

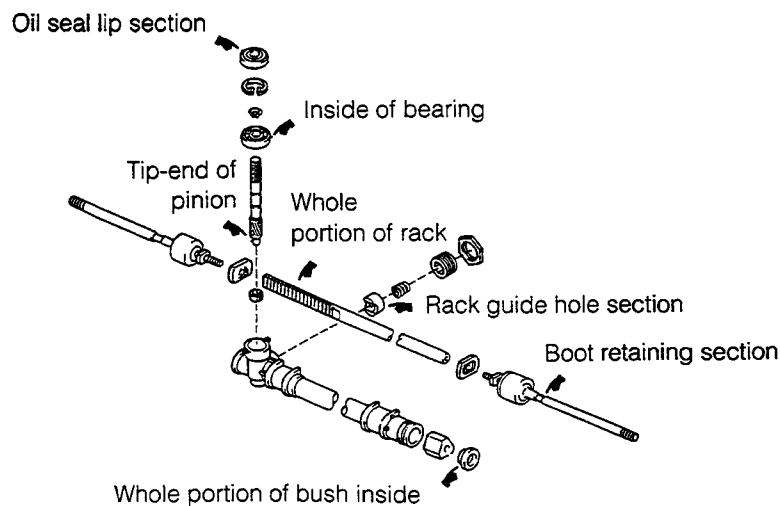


Fig. 7-50

WR-07052

using the following SST:
SST: 09309-87102-000

(2) Attach the snap ring, using a snap ring expander.

3. Install the oil seal to the steering rack housing, using the following SST.

SST: 09309-87201-000

4. Assembly of steering rack

(1) Apply EP grease to the tooth surface and whole peripheral portion of the steering rack.

(2) Assemble the steering rack, paying attention not to damage the rack bush.

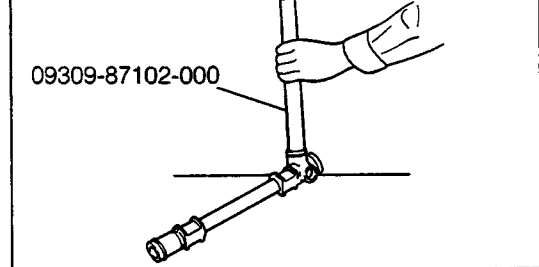


Fig. 7-52

WR-07054

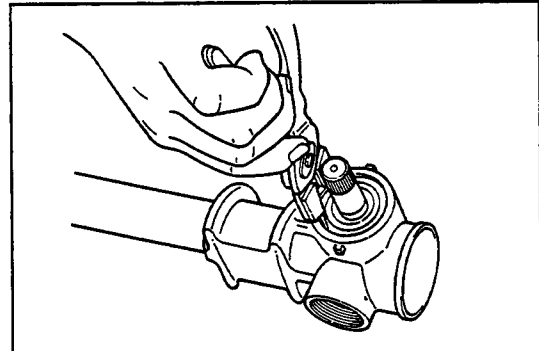


Fig. 7-53

WR-07055

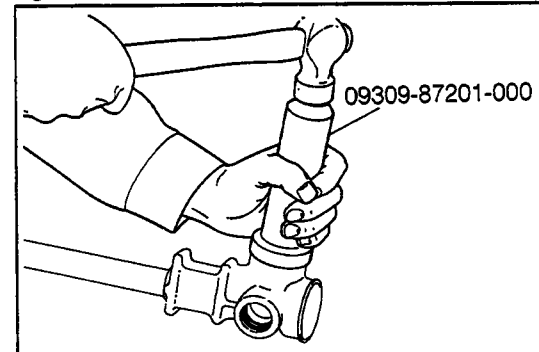


Fig. 7-54

WR-07056

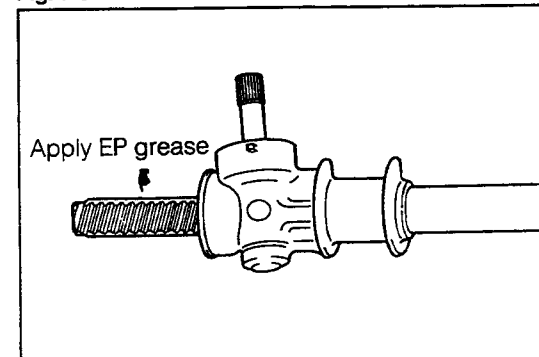


Fig. 7-55

WR-07057

spinner.

Tightening Torque: 0.7 kg-m (5.1 ft-lb)

- (2) Move the steering rack back and forth about 15 times so as to settle the steering rack. Then, proceed to tighten the rack guide spring cap again.

Tightening Torque: 1.25 kg-m (0.9 ft-lb)

- (3) Back off the rack guide spring cap $45^{\circ} \pm 10^{\circ}$, using a simple spinner.
- (4) Measure the rack preload, using the following SST.

SST: 09616-87701-000

Specified Value [Starting Torque]:

3 - 6 kg-cm (2.6 - 5.2 inch-lb)

- (5) If the preload does not comply with the specification, repeat the operations (1) through (4).

7. Hexagon nut (lock nut) installation

- (1) Tighten the lock nut using the SST, while holding the rack guide spring cap with a simple spinner so as to prevent the rack guide spring cap from turning during the tightening.

SST: 09617-22030-000

Tightening Torque: 3.5 - 4.5 kg-m (25.5 - 32.5 ft-lb)

NOTE:

The actual reading of the torque wrench will be a product that is obtained by multiplying the figure above by the following figure given below:

Length of torque wrench

Length of torque wrench + 6 cm

- (2) Check the pinion starting torque again.

SST: 09616-87701-000

Specified Value [Starting Torque]:

3 - 6 kg-cm (2.6 - 5.2 inch-lb)

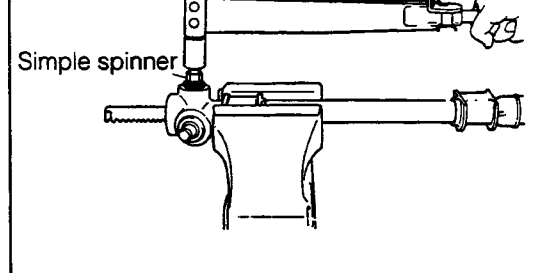


Fig. 7-57

WR-07059

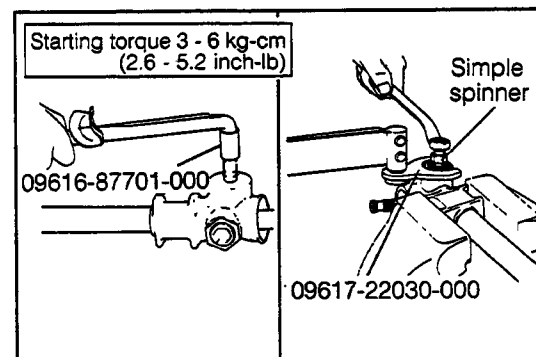


Fig. 7-58

WR-07060

10. Tie rod end installation

- (1) Screw in the lock nut and tie rod end into the rack end up to the mating mark. Tighten the lock nut temporarily.
- (2) Tighten the lock nut securely after the toe-in check and adjustment have been carried out.

INSTALLATION

1. Steering rack assembly installation

- (1) Install the grommet to the steering rack assembly.
Then, insert it to the vehicle.

NOTE:

Be very careful not to damage the steering rack boot during the insertion.

- (2) Install the steering universal joint to the steering pinion.
Tighten the bolt temporarily.

- (3) Install the steering rack assembly to the body.
Tightening Torque: 4.0 - 5.5 kg-m (29 - 40 ft-lb)

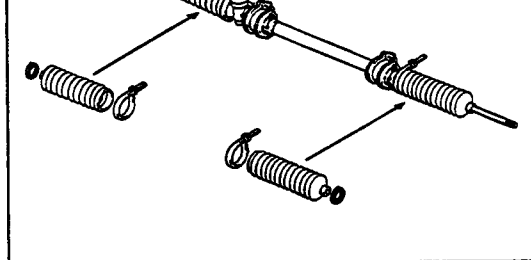


Fig. 7-60

WR-07062

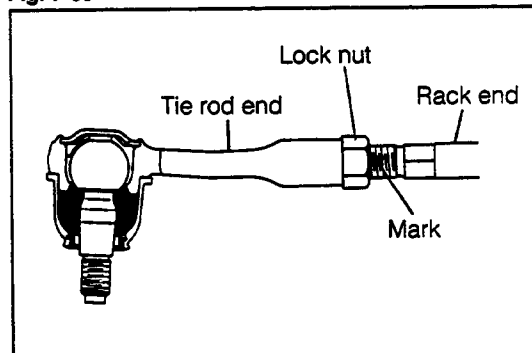


Fig. 7-61

WR-07063

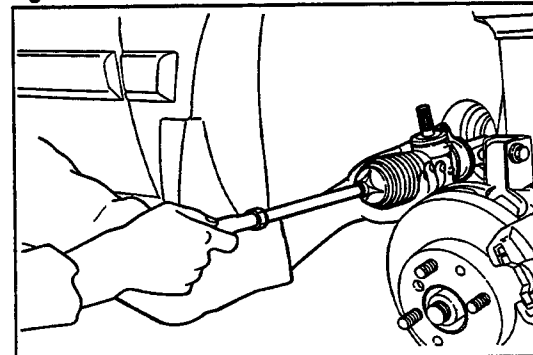


Fig. 7-62

WR-07064

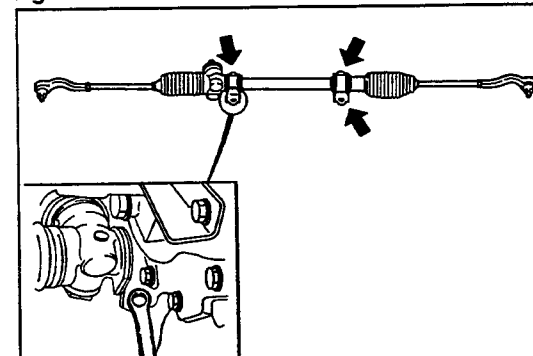


Fig. 7-63

WR-07065

nuts.

Tightening Torque: 3.0 - 4.5 kg-m (22 - 32.5 ft-lb)

(2) Install a new cotter pins.

4. Install the wheel. Jack down the vehicle.
5. Check the steering wheel play.
6. Perform the toe-in adjustment. (See page 5-44.)
7. Confirm the straight-ahead position of steering wheel.

WR-07068

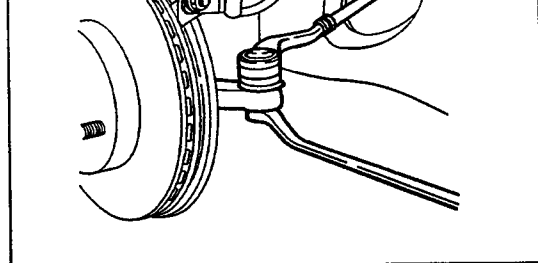


Fig. 7-65

WR-07067

SECTION 8

BRAKES

BRAKE PEDAL CHECKS AND

ADJUSTMENT	8- 2
BRAKE BOOSTER OPERATION CHECK	8- 3
AIR BLEEDING OF BRAKE SYSTEM	8- 5
SCHEMATIC VIEW	8- 6
BRAKE PEDAL	8- 7
COMPONENTS	8- 7
REMOVAL	8- 7
INSPECTION	8- 8
INSTALLATION	8- 8

BRAKE MASTER CYLINDER AND

BRAKE BOOSTER	8-10
SECTIONAL VIEW	8-10
MASTER CYLINDER	8-11
COMPONENTS	8-11
REMOVAL	8-12
DISASSEMBLY	8-12
INSPECTION	8-13
ASSEMBLY	8-13
INSTALLATION	8-14
BRAKE BOOSTER	8-15

(6-inch Booster)

COMPONENTS	8-15
REMOVAL	8-16
DISASSEMBLY	8-16
INSPECTION	8-17
ASSEMBLY	8-18

(7-inch Booster)

COMPONENTS	8-21
DISASSEMBLY	8-22
INSPECTION	8-23
ASSEMBLY	8-23
INSTALLATION	8-26
FRONT BRAKE	8-28
SECTIONAL VIEW	8-28
COMPONENTS	8-29
DISC BRAKE PAD	8-30
DISC BRAKE FRONT CALIPER	8-31
REAR DRUM BRAKE	8-37
SECTIONAL VIEW	8-37
COMPONENTS	8-37
REMOVAL	8-38
INSPECTION	8-40
INSTALLATION	8-41
REAR DISC BRAKE	8-45
SECTIONAL VIEW	8-45
COMPONENTS	8-46
DISC BRAKE PAD	8-47
DISC BRAKE REAR CYLINDER	8-49
PARKING BRAKE	8-56
PARKING BRAKE LEVER	8-56
PARKING BRAKE CABLE	8-58

8

WR-08001

adjust the pedal height. Lock the nut ②.

- (3) Turn the switch, until the pedal cushion comes in contact with the edge of the threaded portion of the stop lamp switch. Lock the nut ①.
- (4) Connect the connector of the stop lamp switch.
- (5) Upon completion of the pedal height adjustment, ensure that the pedal free travel is proper and the stop lamp functions properly.

3. Pedal free travel check

After stopping the engine, depress the brake pedal strongly several times so that no vacuum may remain the brake booster. Measure the brake pedal free travel by pushing the brake pedal lightly by fingers. Here, the pedal free travel means the distance from a point where the brake pedal is free to a point where you begin to feel a resistance.

Specified Value:

- 6-inch Booster 3 - 7 mm (0.12 - 0.28 inch)
- 7-inch Booster 0.5 - 2 mm (0.02 - 0.08 inch)

4. Pedal free travel adjustment

- (1) Slacken the nut ②. Turn the push rod ③ so as to adjust the pedal free travel.
- (2) Upon completion of the adjustment, ensure that the pedal height is proper and the stop lamp functions properly.

5. Pedal reserve travel check

With the engine running at the idling speed and with the parking brake lever in its returned state, depress the brake pedal with a pedal applying force of 30 kg (66 lb). Measure the gap between the position where the depressed pedal stops and the floor panel.

Specified Value: 102 mm (4.0 inches) or more



Fig. 8-1

WR-08002

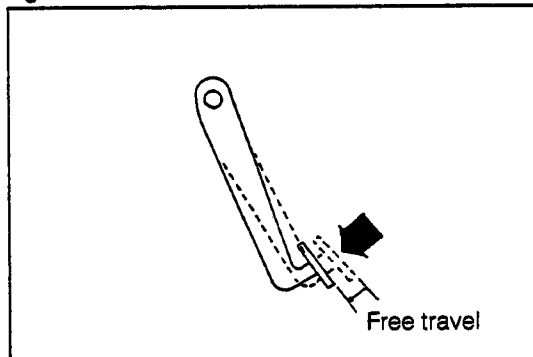


Fig. 8-2

WR-08003

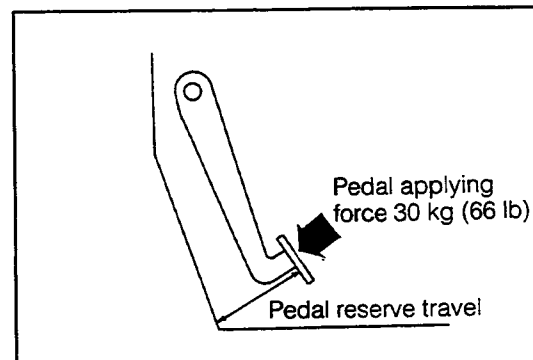


Fig. 8-3

WR-08004

as between the second and third applications should be at least five seconds.

(2) **Booster air-tight performance check under loaded condition**

With the engine running, depress the brake pedal. While maintaining this condition, stop the engine. If the brake pedal height remains at the same level at least 30 seconds, it indicates that the booster is functioning properly.

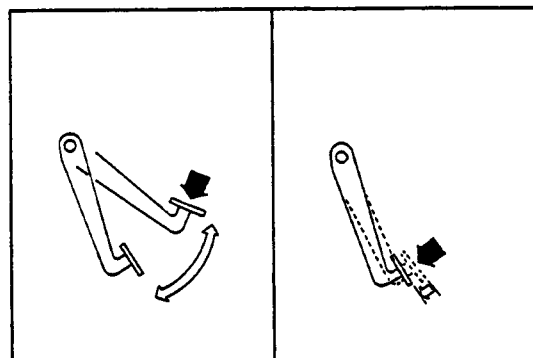


Fig. 8-5

WR-08006

(3) **Booster operation check**

With the engine stopped, depress the brake pedal several times, applying the same force at each brake application. Ensure that the brake pedal height will not vary at each brake application. Then, start the engine while depressing the brake pedal. If the brake pedal moves in slightly, it indicates that the booster is functioning properly.

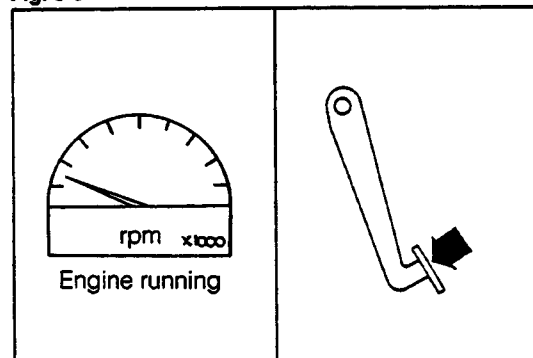


Fig. 8-6

WR-08007

2. **CHECK EMPLOYING PORTABLE BRAKE BOOSTER TESTER**

(1) **Connection of portable brake booster tester**

Connect the portable booster tester. Carry out air bleeding for the booster tester.

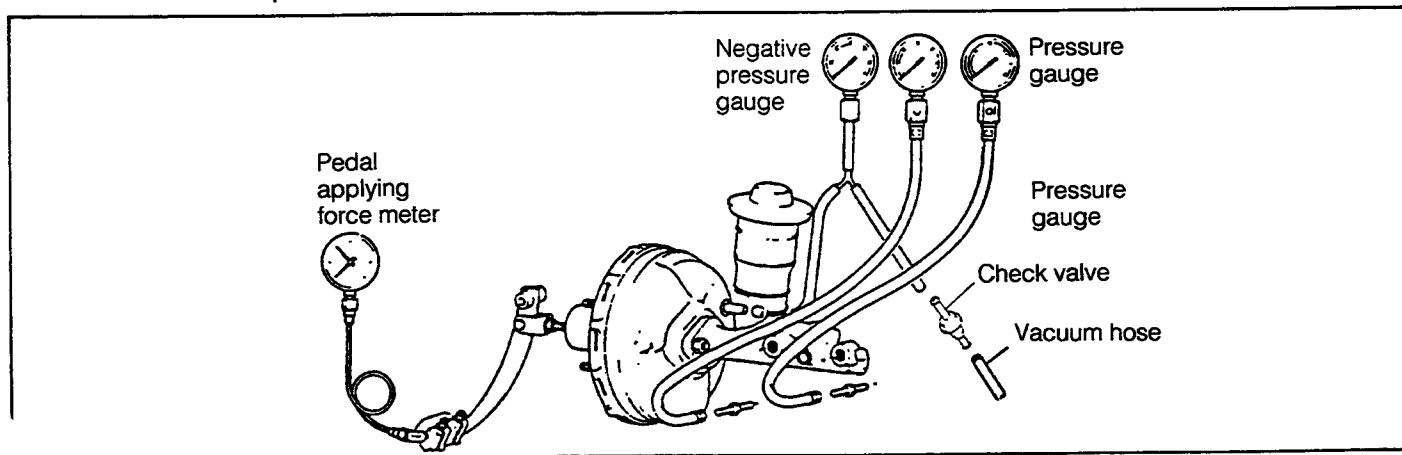


Fig. 8-7

WR-08008

With the engine running, depress the brake pedal with a pedal applying force of 20 kg (44 lb). Stop the engine when the negative pressure exceeds 500 mm Hg, stop the engine. Proceed to measure the negative pressure. Ensure that the negative pressure will not drop more than 25 mmHg for a period of 15 seconds following the stoppage of the engine.

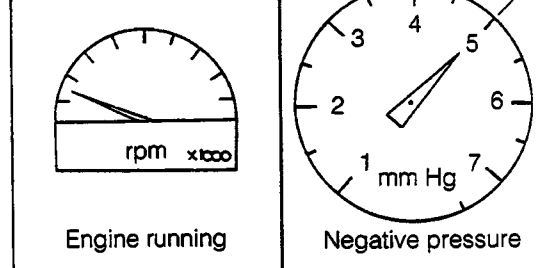


Fig. 8-9

WR-08010

(4) No-boosting operation check

With the engine stopped, set the reading of the negative pressure gauge to zero. Under this condition, check the relationship between the pedal applying force and the hydraulic pressure.

Specified Value:

Pedal applying force kg (lb)	Hydraulic pressure kg/cm ² (Psi)	
	6-inch	7-inch
10 (22)	6.5 (92)	5.6 (80)
30 (66)	37.8 (538)	32.4 (461)

WR-08011

(5) Boosting operation check

With the engine running, set the reading of the negative pressure gauge to 500 mmHg. After stopping the engine, depress the brake pedal. Check the relationship between the pedal applying force and the hydraulic pressure.

Specified Value:

Pedal applying force kg (lb)	Hydraulic pressure kg/cm ² (Psi)	
	6-inch	7-inch
5 (11)	18.4 (262)	13.6 (193)
10 (22)	46.4 (660)	34.2 (487)
15 (33)	56.0 (797)	54.8 (779)
20 (44)	63.9 (909)	67.2 (955)

WR-08012

- (1) Submerge one end of a vinyl hose in a container filled with the brake fluid. Connect the other end of the vinyl hose to the wheel cylinder bleeder plug of the vehicle.
- (2) Start this air bleeding operation at the wheel cylinder which is located at the farthestmost point from the master cylinder.

3. Air bleeding

- (1) Perform the operation by two persons. One person should depress the brake pedal slowly and hold it in a depressed state.
- (2) The other person slackens the bleeder plug $1/3$ through $1/2$ turn at a time. Be sure to tighten the bleeder plug before the hydraulic pressure ceases to exist in the cylinder.
- (3) Repeat the steps (1) and (2) above , until you no longer observe bubbles in the fluid.

4. Checking of brake fluid leakage

Depress the brake pedal and ensure that each section of the pipe line exhibits no fluid leakage.

WR-08016

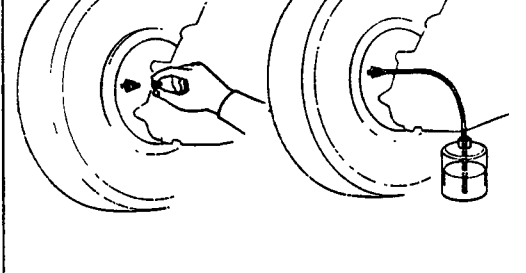


Fig. 8-11

WR-08014

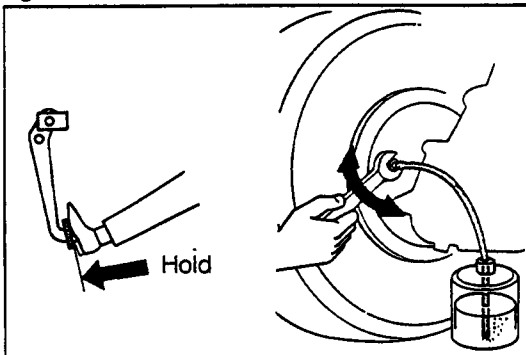


Fig. 8-12

WR-08015

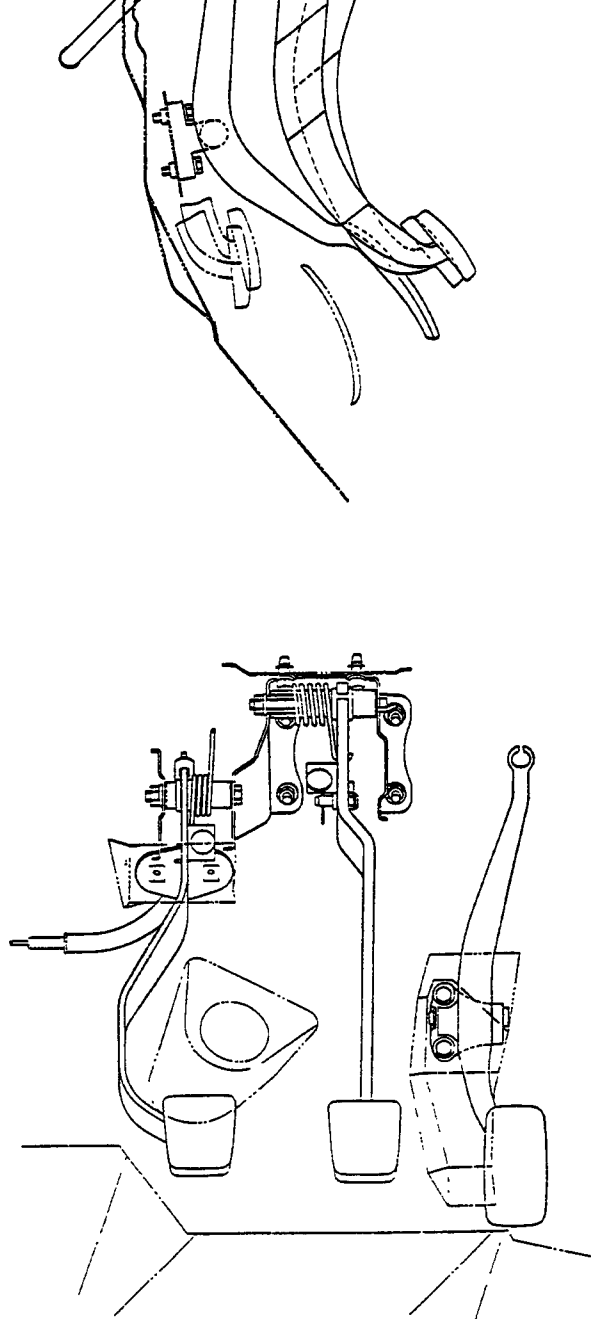
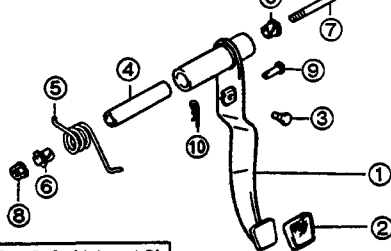


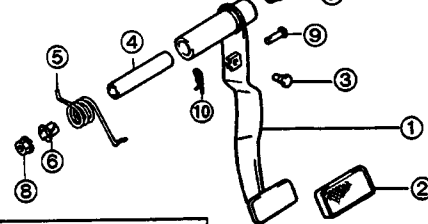
Fig. 8-13

WR-08017



RHD: T : 1.5 - 2.2 (11 - 16)
LHD: T : 1.5 - 2.0 (11 - 15)

- ① Brake pedal
- ② Brake pedal pad
- ③ Cushion
- ④ Spacer
- ⑤ Spring
- ⑥ Bush



RHD: T : 1.5 - 2.2 (11 - 16)
LHD: T : 1.5 - 2.0 (11 - 15)

T : Tightening torque
Unit: kg-m (ft-lb)

- ⑦ Bolt
- ⑧ Nut
- ⑨ With-hole pin
- ⑩ Clip
- ⑪ Brake pedal bracket

Fig. 8-14

WR-08018

REMOVAL

1. Detach the clamp of the stop lamp switch wiring.
2. Remove the clip and the with-hole pin from the connecting section of the master cylinder push rod with the brake pedal.

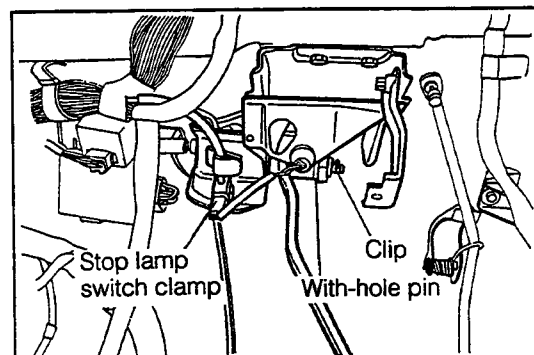


Fig. 8-15

WR-08019

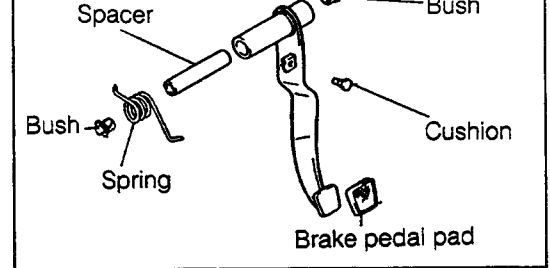


Fig. 8-17

WR-08021

INSPECTION

Inspect the following parts.

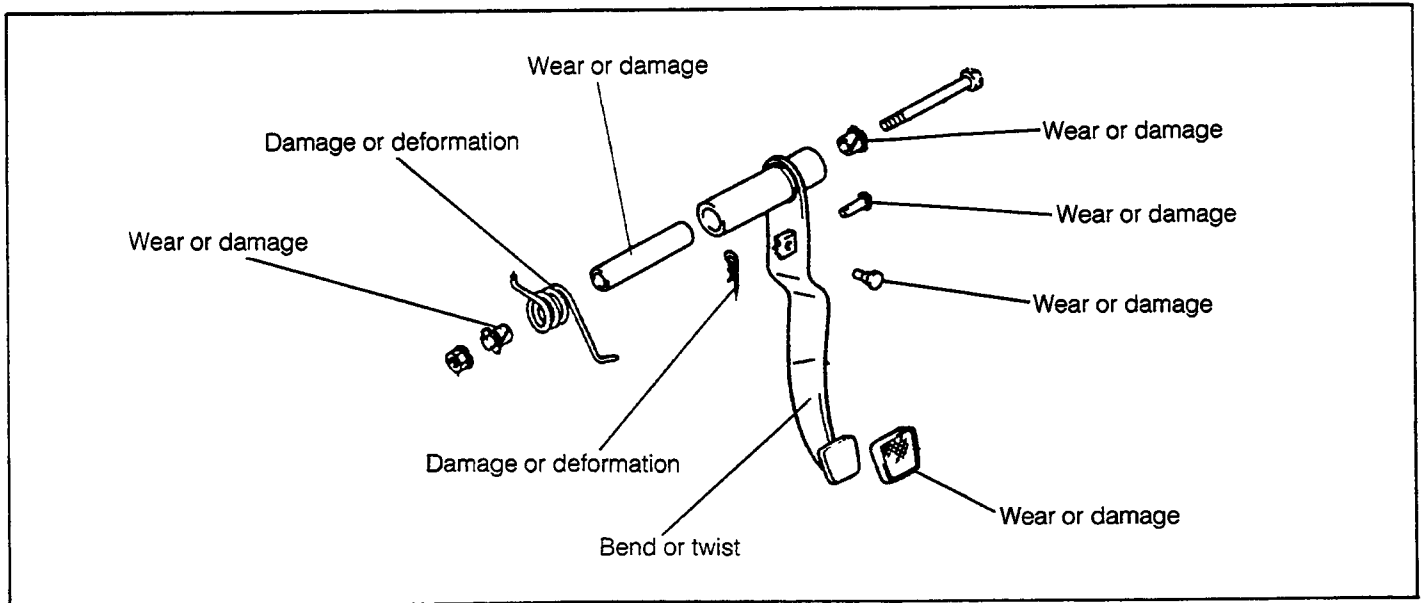


Fig. 8-18

WR-08022

INSTALLATION

1. Install the cushion, brake pedal pad, spacer, bush and spring on the brake pedal.

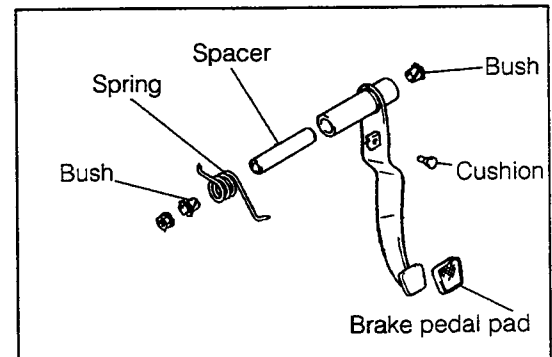


Fig. 8-19

WR-08023

- pedal.
5. Attach the clamp of the stop lamp switch wiring.
 6. Perform the check and adjustment of the brake pedal.
(See page 8-2.)

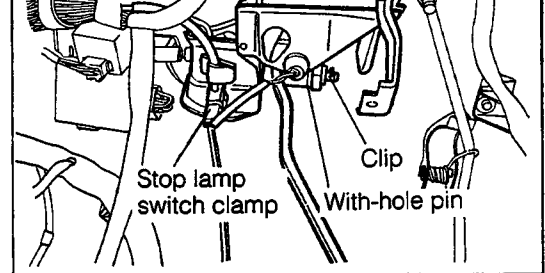
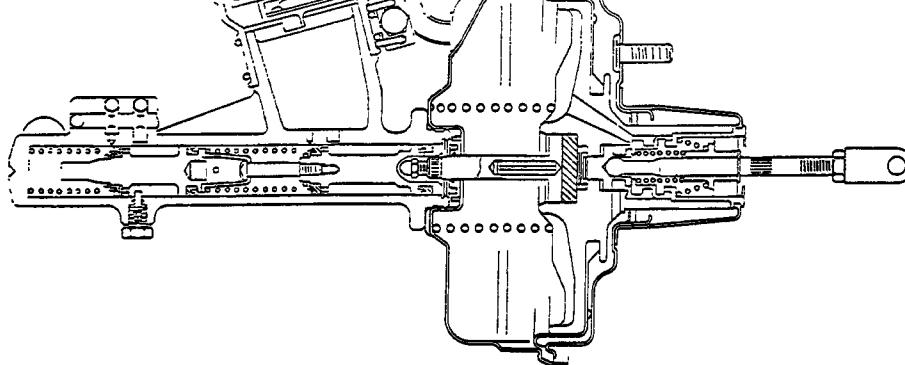


Fig. 8-21

WR-08025



7-inch

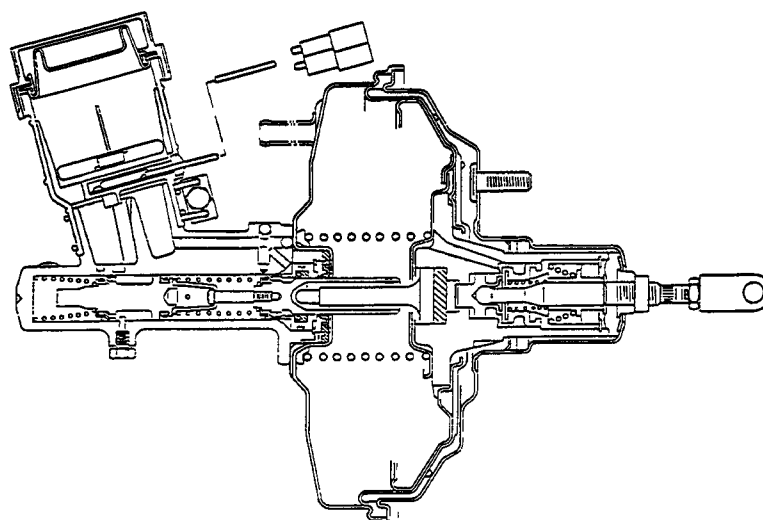
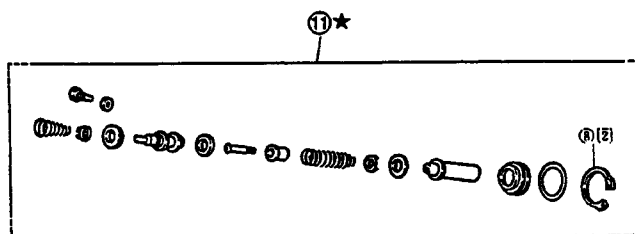
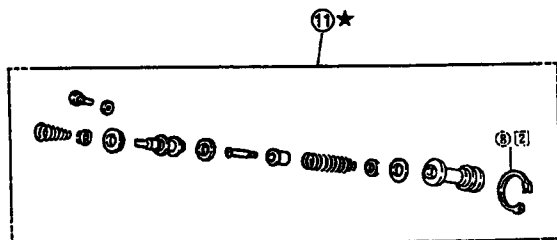
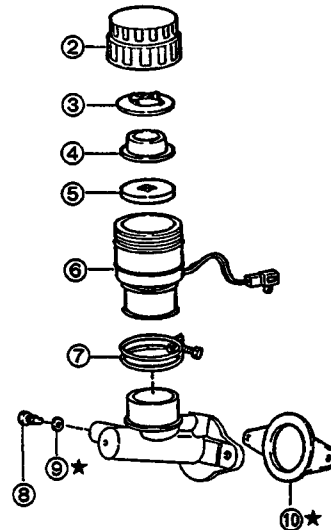
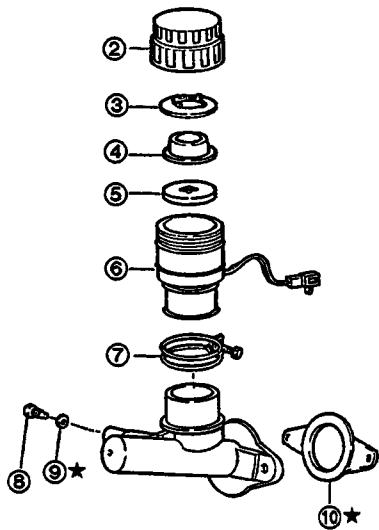


Fig. 8-22

WR-08026



T : Tightening torque
Unit: kg-m (ft-lb)
★ : Non-reusable parts

- ① Brake master cylinder Ay
- ② Reservoir filler cap
- ③ Reservoir cap spacer
- ④ Reservoir diaphragm
- ⑤ Master cylinder reservoir float

- ⑥ Master cylinder reservoir Ay
- ⑦ Clamp
- ⑧ Set bolt
- ⑨ Gasket
- ⑩ Gasket
- ⑪ Tandem master cylinder repair kit

Fig. 8-23

WR-08027

DISASSEMBLY

1. Clamp the flange section of the master cylinder in a vise, with jaw plates or the like interposed.

NOTE:

Be sure not to clamp the cylinder portion of the master cylinder in a vise. Failure to observe this caution will cause cylinder distortion.

2. Remove the reservoir filler cap, reservoir diaphragm, reservoir cap spacer, master cylinder reservoir float, clamp and master cylinder reservoir assembly from the master cylinder.

3. Remove the set bolt and gasket while the pistons are being pushed fully by means of a cross point screwdriver.

NOTE:

During the removal, be sure to push the piston slowly so as to prevent the brake fluid from splashing.

4. Detach the snap ring.
Using a snap ring, detach the snap ring while the pistons are being pushed by means of a screwdriver.
5. Remove the pistons No.1 and No.2 from the master cylinder.

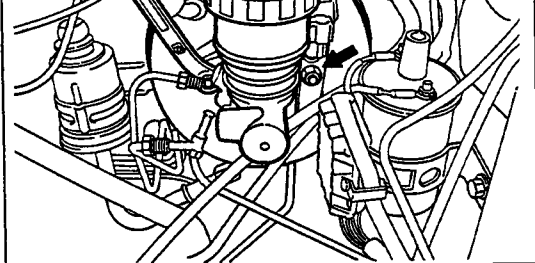


Fig. 8-25

WR-08029

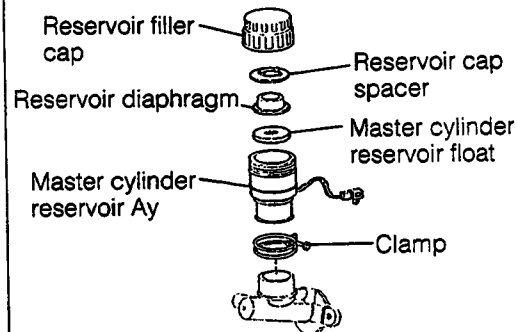


Fig. 8-26

WR-08030

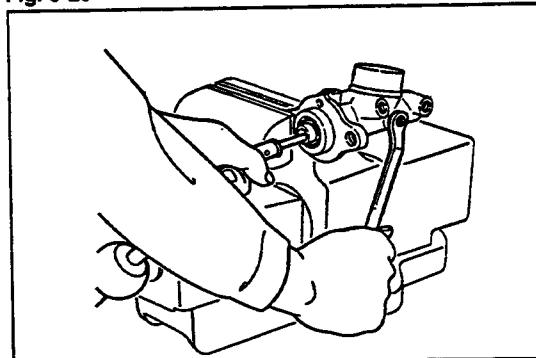


Fig. 8-27

WR-08031

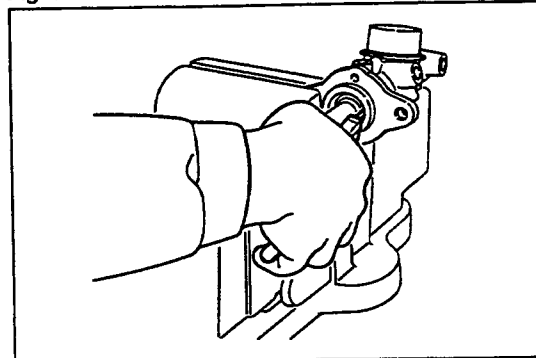


Fig. 8-28

WR-08032

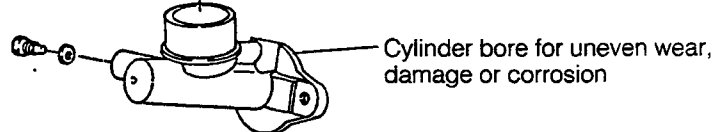


Fig. 8-29

WR-08033

ASSEMBLY

1. Assemble a new tandem master cylinder repair kit (comprising the pistons No.1 and No.2) in the master cylinder.

NOTE:

Apply rubber grease to those points indicated by arrow heads in the figure below.

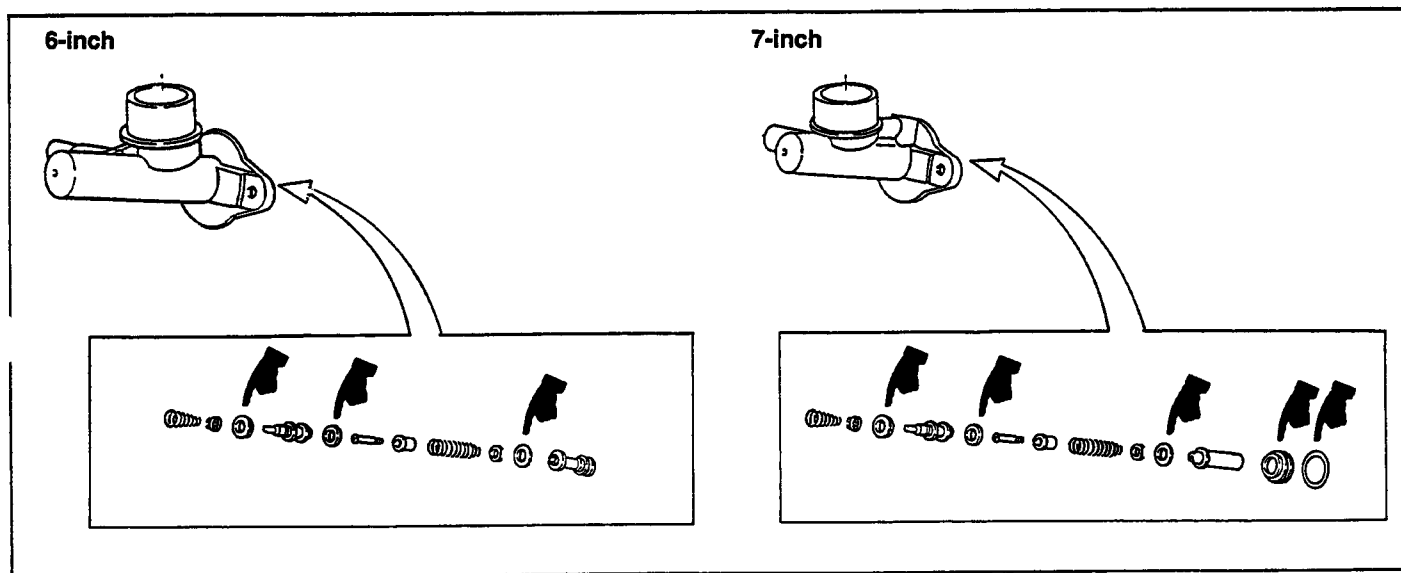


Fig. 8-30

WR-08034

2. Install the snap ring.
With the pistons in their fully pushed-in state, install a new snap ring.

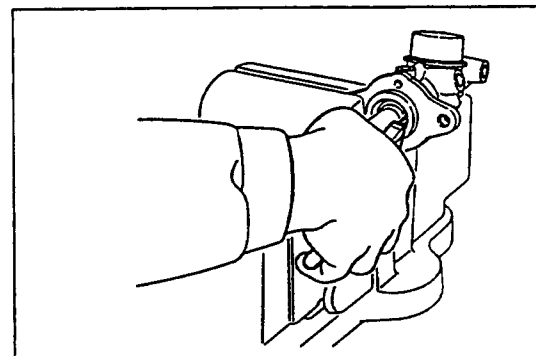


Fig. 8-31

WR-08035

reservoir diaphragm and reservoir filler cap.

INSTALLATION

1. Adjust the clearance of the brake booster push rod.
6-inch Booster: See page 8-20.
7-inch Booster: See page 8-26.
2. With a new gasket interposed, install the master cylinder, using the two nuts.

NOTE:

The master cylinder's attaching nut at the right side, as viewed toward the vehicle, should be used to tighten the bracket, too.

3. Connect the brake tubes.
 - (1) Temporarily connect the three brake tubes to the master cylinder by hands.
 - (2) Tighten the brake tube, using the following SST.
SST: 09751-36011-000

4. Connect the level switch connector.
5. Fill the brake fluid.
6. Perform air bleeding for the brake system.
(See page 8-5.)
7. Check the brake system for brake fluid leakage.
8. Perform the checks and adjustments for the brake pedal.
(See page 8-2.)

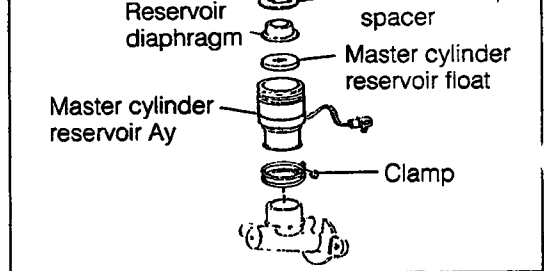


Fig. 8-33

WR-08037

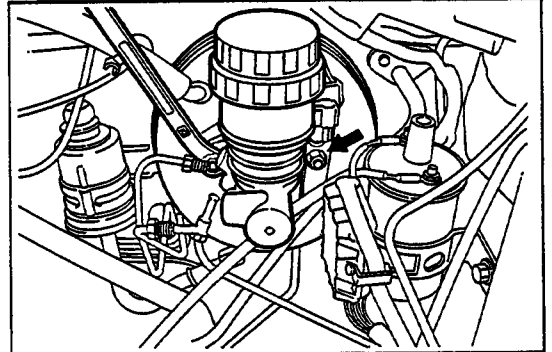


Fig. 8-34

WR-08038

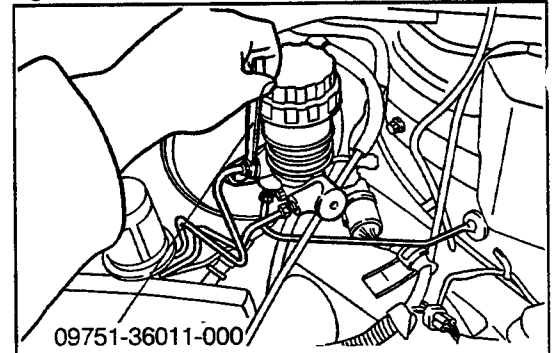
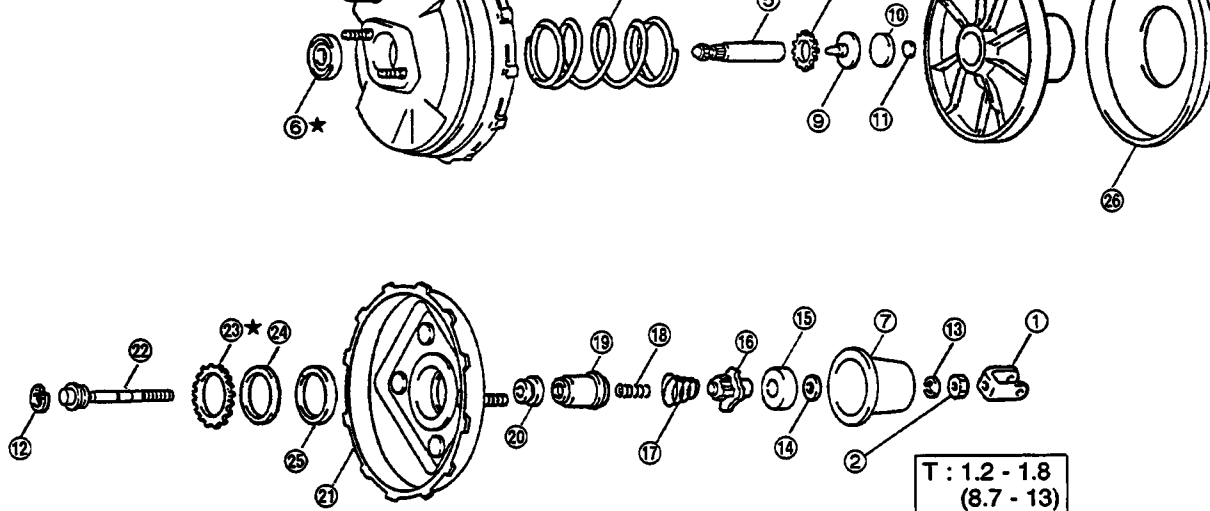


Fig. 8-35

WR-08039



T : Tightening torque
Unit: kg-m (ft-lb)
★ : Non-reusable parts

- ① Master cylinder push rod clevis
- ② Nut
- ③ Booster body
- ④ Booster spring
- ⑤ Output rod
- ⑥ Rod seal
- ⑦ Boot
- ⑧ Rod stopper
- ⑨ Reaction ring
- ⑩ Reaction rubber
- ⑪ Reaction plate
- ⑫ Snap ring
- ⑬ "E" ring
- ⑭ Plate washer

- ⑮ Element
- ⑯ Spring seat
- ⑰ Valve spring
- ⑱ Poppet spring
- ⑲ Valve stopper
- ⑳ Poppet valve
- ㉑ Booster housing
- ㉒ Push rod W/valve
- ㉓ Bush stopper
- ㉔ Bush
- ㉕ Piston seal
- ㉖ Diaphragm
- ㉗ Booster piston

Fig. 8-36

WR-08041

using a long socket wrench (having a width across flat of 12 mm), as indicated in Fig. 8-38.

- (2) Remove the brake booster assembly and gasket from the vehicle.

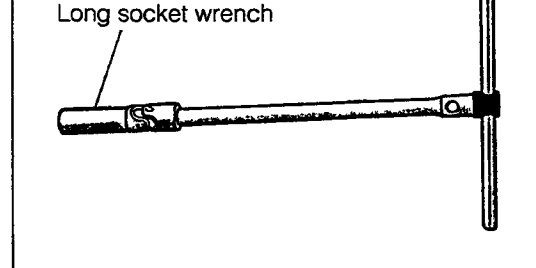


Fig. 8-38

WR-08043

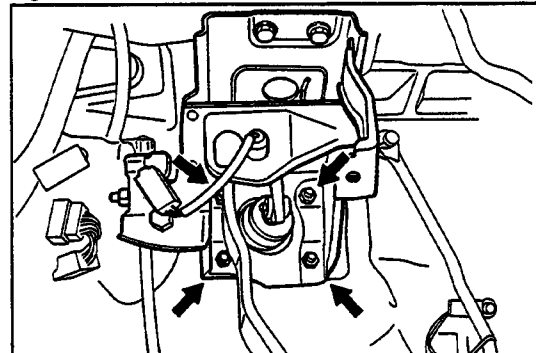


Fig. 8-39

WR-08044

(6-inch Booster) DISASSEMBLY

1. Remove the master cylinder pushrod clevis and lock nut.
2. Separate the booster housing from the booster body as follows:
 - (1) Put mate marks on the booster body and booster housing.

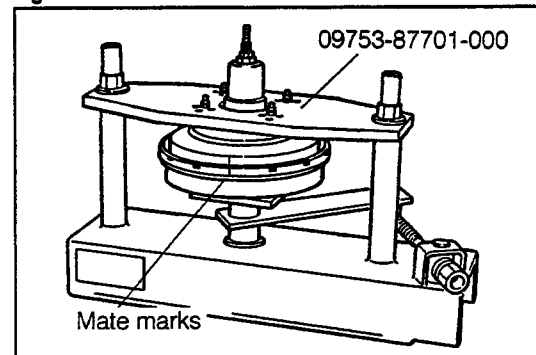


Fig. 8-40

WR-08045

- (2) Secure the brake booster on the following SST.

SST: 09753-87701-000

NOTE:

Be certain to evenly tighten the SST nuts at the right and left sides. Also, be very careful not to tighten the SST nuts excessively.

- (3) Turn the SST screw clockwise so as to disengage the booster housing from the booster body.
- (4) Detach the brake booster from the SST.

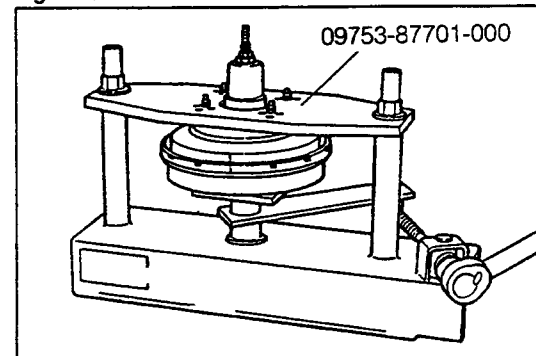


Fig. 8-41

WR-08046

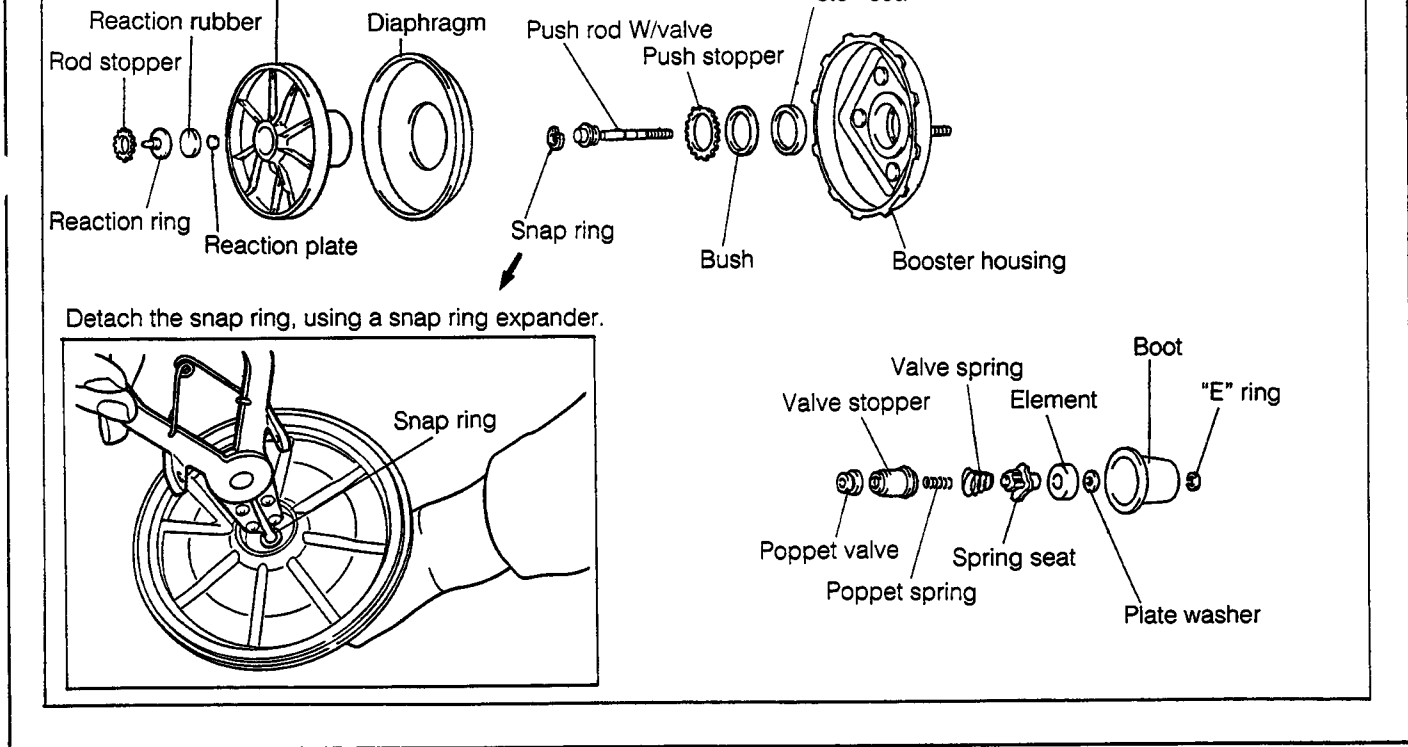


Fig. 8-42

WR-08047

INSPECTION

Inspect the following parts.

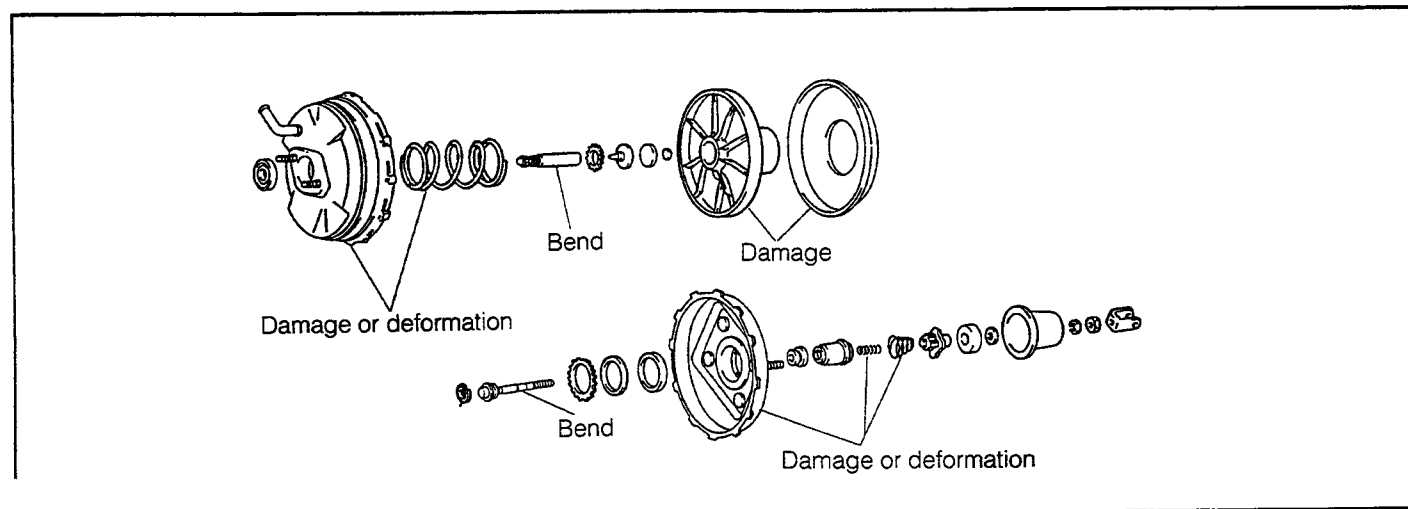


Fig. 8-43

WR-08048

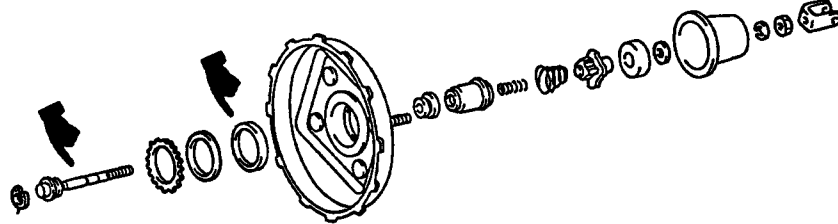


Fig. 8-44

WR-08049

2. Assemble the following parts in the booster piston.
 - (1) Install the diaphragm in position.
 - (2) Assemble the push rod with valve. Retain it with the snap ring.

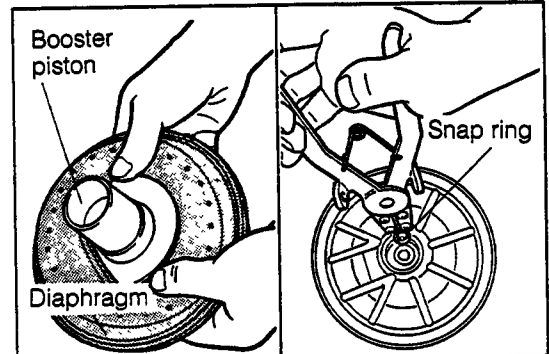


Fig. 8-45

WR-08050

- (3) Install the reaction plate, reaction rubber and reaction ring.
- (4) Install the rod stopper.

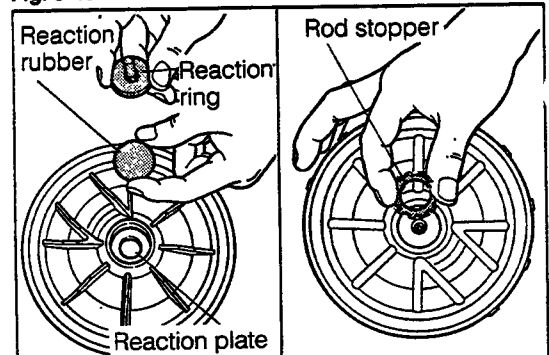


Fig. 8-46

WR-08051

3. Assemble the following parts in the booster housing.
 - (1) Install the piston seal, bush and bush stopper.
 - (2) Install the booster piston.

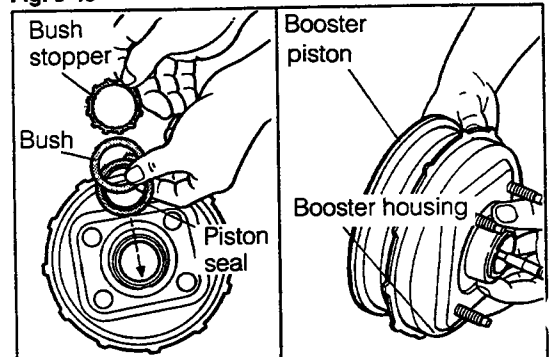


Fig. 8-47

WR-08052

4. Assemble the booster body and booster housing as follows:

- (1) Place the booster body and booster spring in the following SST.

SST: 09753-87701-000

- (2) Place the booster housing in the following SST.

SST: 09753-87701-000

NOTE:

Be certain to evenly tighten the SST nuts at the right and left sides. Also, be very careful not to tighten the SST nuts excessively.

Furthermore, care must be exercised to ensure that the diaphragm will not be pinched.

- (3) Turn the SST screw counterclockwise so that the mating marks may be lined up.

If the force required for turning is great, apply a small amount of silicon grease to the portion where the booster body is making contact with the booster housing.

- (4) Remove the brake booster from the SST.

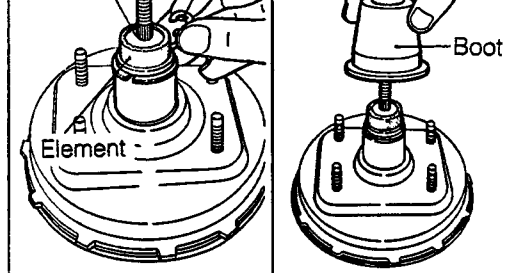


Fig. 8-49

WR-08054

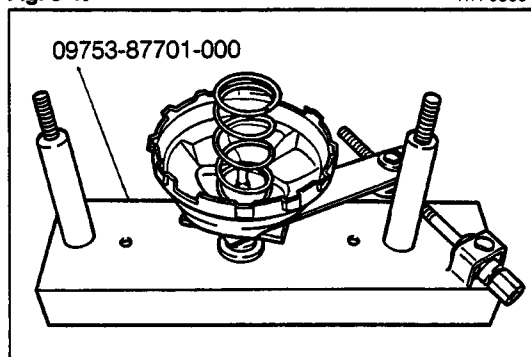


Fig. 8-50

WR-08055

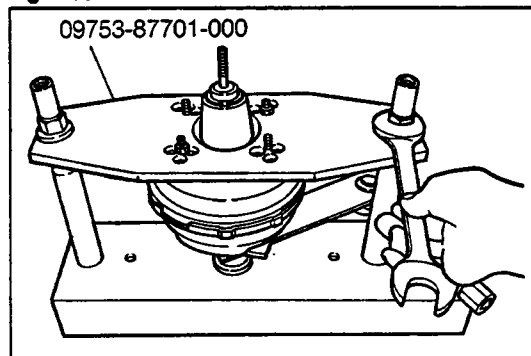


Fig. 8-51

WR-08056

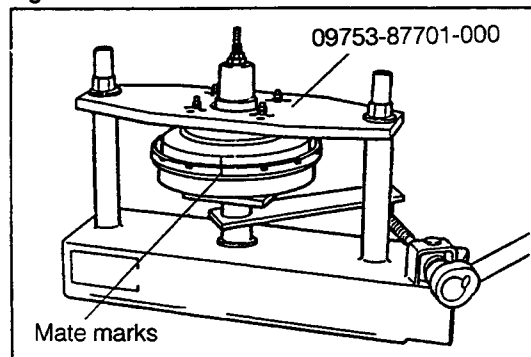


Fig. 8-52

WR-08057

light contact with the piston of the master cylinder, as indicated in Fig. 8-54.

SST: 09737-22011-000

NOTE:

Be sure to carry out this adjustment with the gasket attached in position.

- (2) Connect a MityVac to the union of the brake booster. Apply a negative pressure of 500 mmHg.
- (3) Set the SST as indicated in Fig. 8-55. Adjust the push rod so that the push rod clearance may become zero.

- (4) Perform the adjustment of the push rod clearance by turning the nut provided at the tip end of the push rod.

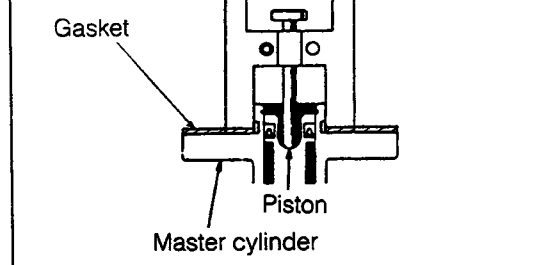


Fig. 8-54

WR-08059

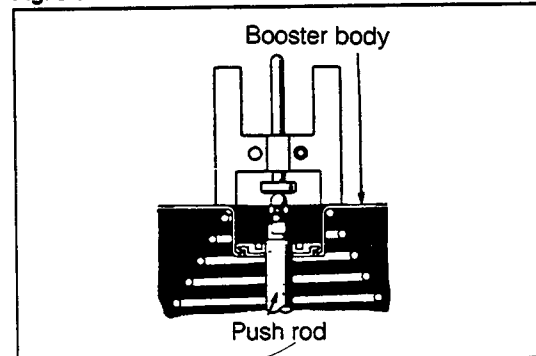


Fig. 8-55

WR-08060

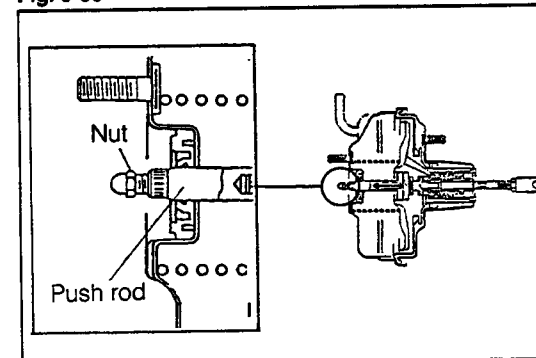
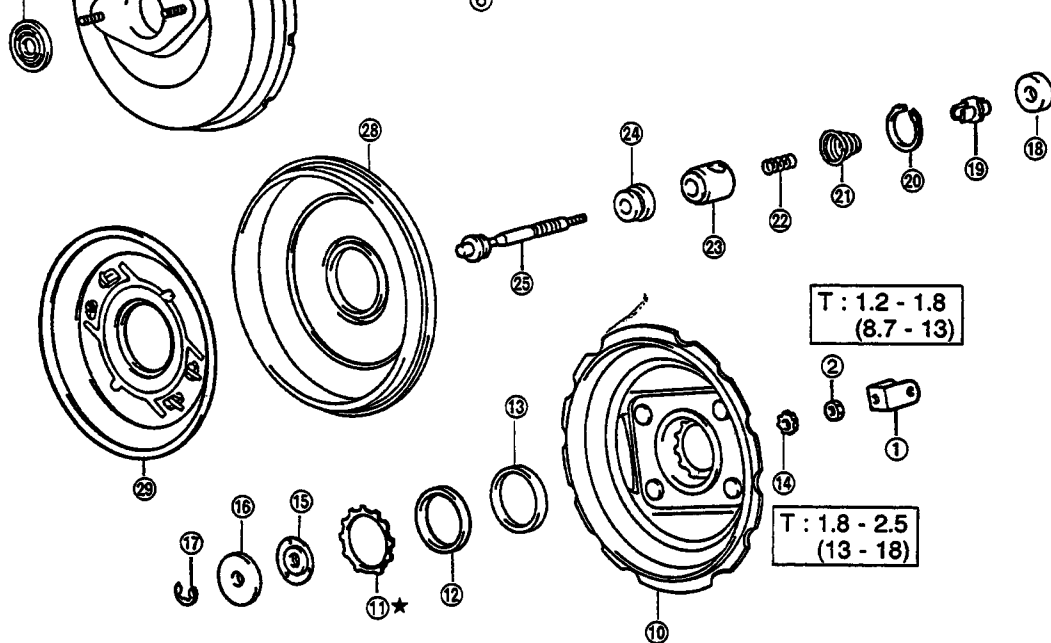


Fig. 8-56

WR-08061



T : Tightening torque
Unit: kg-m (ft-lb)
★ : Non-reusable parts

- ① Master cylinder push rod clevis
- ② Nut
- ③ Rod seal
- ④ Booster body
- ⑤ Retainer spring
- ⑥ Booster spring
- ⑦ Booster piston rod
- ⑧ Reaction disc
- ⑨ Reaction plate
- ⑩ Booster housing
- ⑪ Booster push rod seal retainer
- ⑫ Valve ring
- ⑬ Piston seal
- ⑭ Nut

- ⑮ Adjuster nut
- ⑯ Element B
- ⑰ "E" ring
- ⑱ Element A
- ⑲ Control valve spring retainer
- ⑳ Piston return spring retainer
- ㉑ Valve spring
- ㉒ Control valve spring
- ㉓ Air valve spring retainer
- ㉔ Poppet valve
- ㉕ Booster with rod, valve S/A
- ㉖ Set cover
- ㉗ Valve body
- ㉘ Diaphragm
- ㉙ Booster plate

Fig. 8-57

WR-08062

NOTE:

Be certain to evenly tighten the SST nuts at the right and left sides. Also, be very careful not to tighten the SST nuts excessively.

- (3) Turn the SST screw clockwise so as to disengage the booster housing from the booster body.
- (4) Remove the brake booster from the SST.

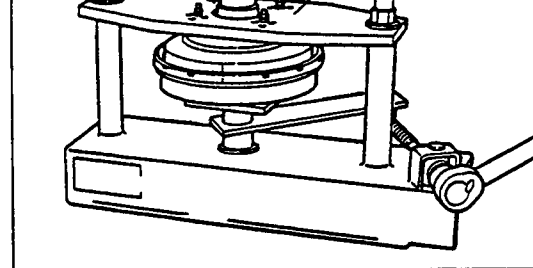


Fig. 8-59

WR-08064

4. Disassemble the brake booster.

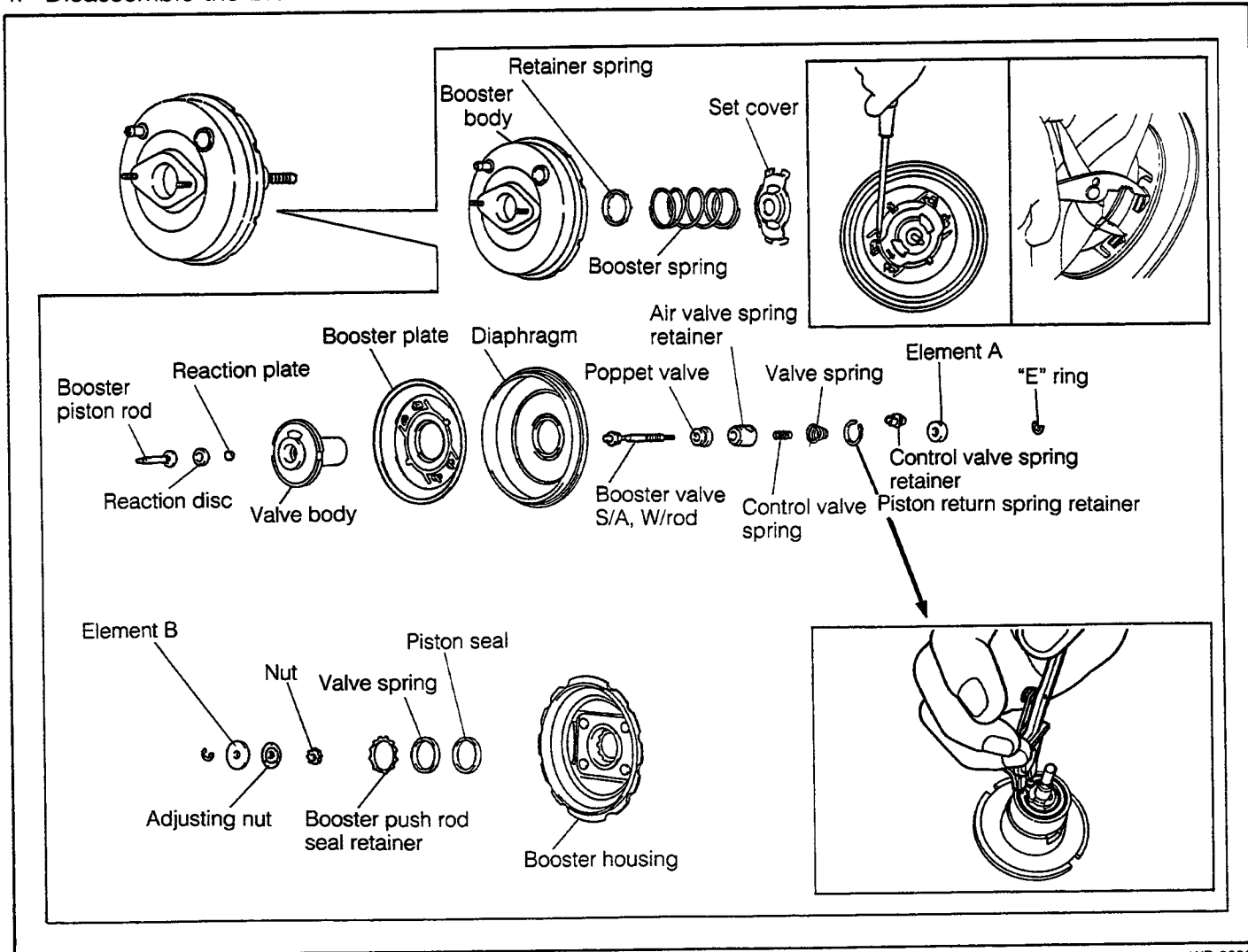


Fig. 8-60

WR-08065

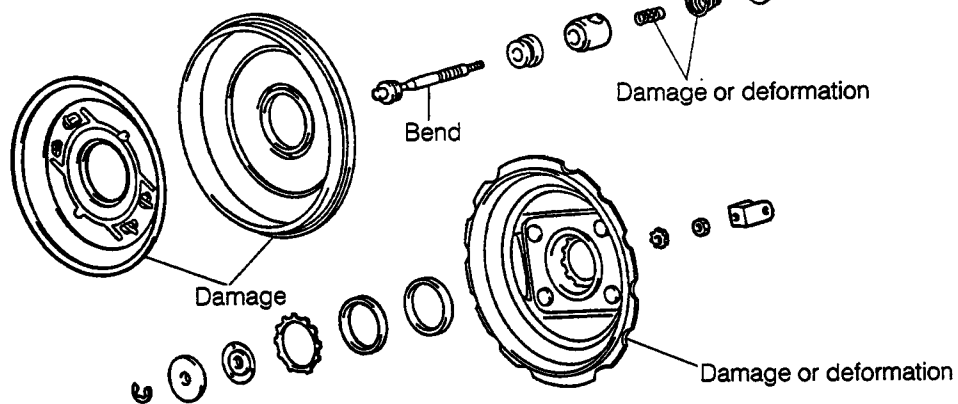


Fig. 8-61

WR-08066

ASSEMBLY

1. Application of silicon grease

Apply silicon grease to those points indicated by arrow heads in the figure below.

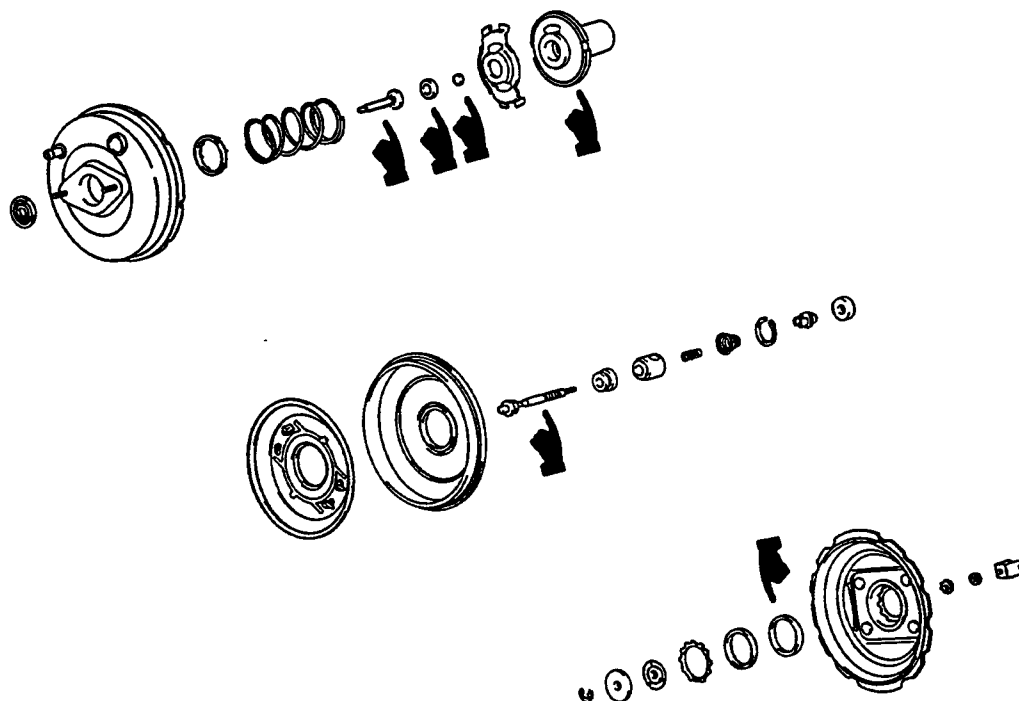


Fig. 8-62

WR-08067

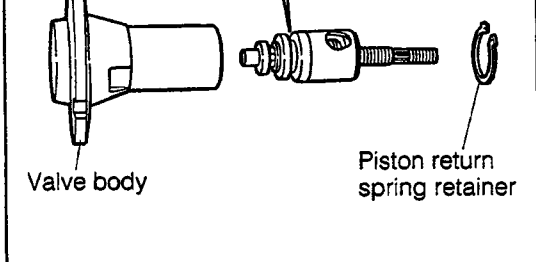


Fig. 8-63

WR-08068

4. Install the element, adjusting nut and nut in place.

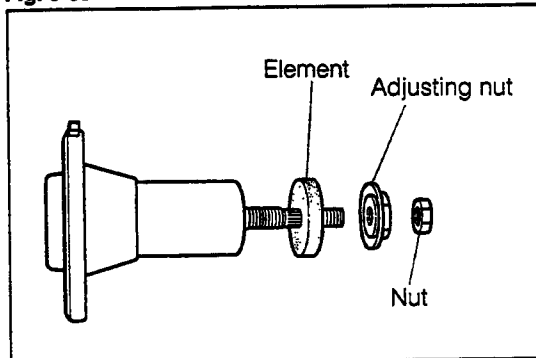


Fig. 8-64

WR-08069

5. Assemble the following parts in the booster plate.
 - (1) Install the diaphragm.
 - (2) Install the valve body, reaction plate, reaction disc and booster piston rod.

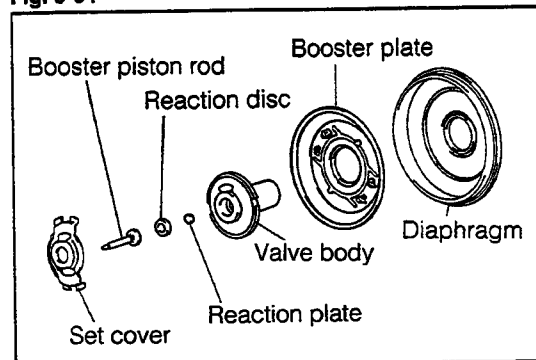


Fig. 8-65

WR-08070

- (3) Install the set cover as follows:
 - Temporarily install the set cover on the booster plate.
 - Assemble the set cover by pinching the joint section of the booster plate with the claw section of the set cover, using pliers.
 - Slide the claw section of the set cover using a common screwdriver, until it is no longer possible to move the claw section.

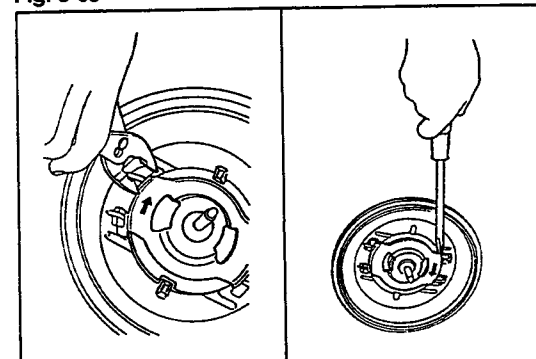


Fig. 8-66

WR-08071

8. Assemble the booster body and booster housing as follows:

- (1) Place the booster body, spring retainer and booster spring in the following SST.

SST: 09753-87701-000

- (2) Place the booster housing in the following SST.

SST: 09753-87701-000

NOTE:

Be certain to evenly tighten the SST nuts at the right and left sides. Also, be very careful not to tighten the SST nuts excessively.

Furthermore, care must be exercised to ensure that the diaphragm will not be pinched.

- (3) Turn the SST screw counterclockwise so that the mating marks may be lined up.

If the force required for turning is great, apply a small amount of silicon grease to the portion where the booster body is making contact with the booster housing.

- (4) Remove the brake booster from the SST.

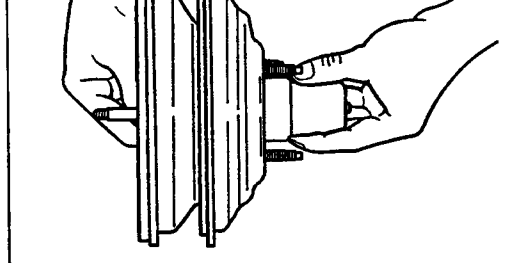


Fig. 8-68

WR-08073

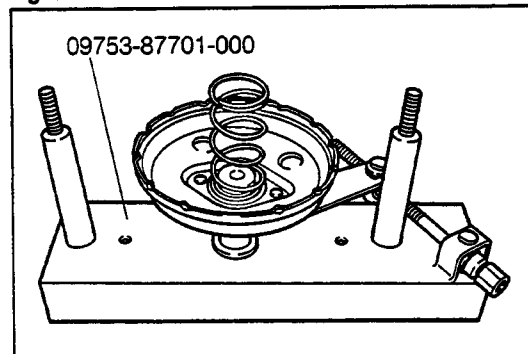


Fig. 8-69

WR-08074

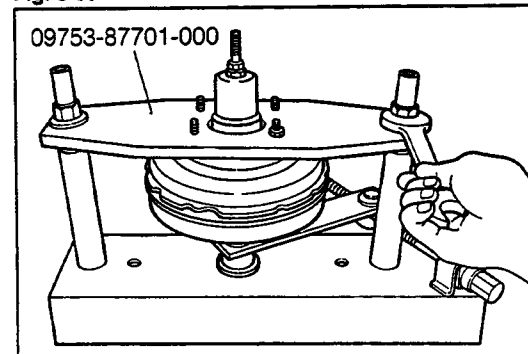


Fig. 8-70

WR-08075

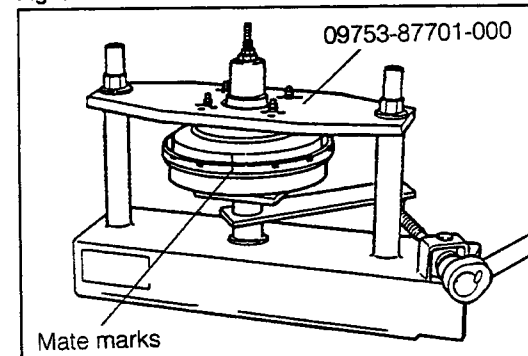


Fig. 8-71

WR-08076

light contact with the piston of the master cylinder, as indicated in Fig. 8-73.

SST: 09737-87001-000

NOTE:

Be sure to carry out this adjustment with the gasket attached in position.

- (2) Set the SST as indicated in Fig. 8-74. Adjust the push rod so that the push rod clearance may become zero.

- (3) Perform the adjustment of the push rod clearance by turning the nut provided at the tip end of the push rod.

INSTALLATION

1. Install the brake booster on the body with a new gasket interposed, using the four nuts.
2. Attach the master cylinder push rod clevis to the brake pedal by means of the with-hole pin and clip.

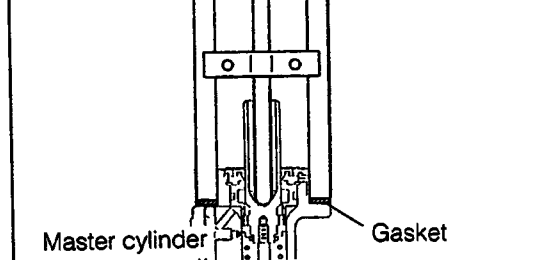


Fig. 8-73

WR-08078

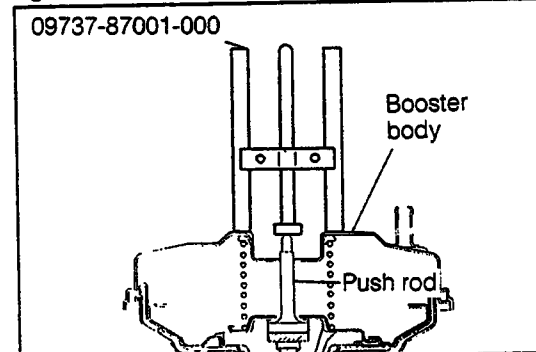


Fig. 8-74

WR-08079

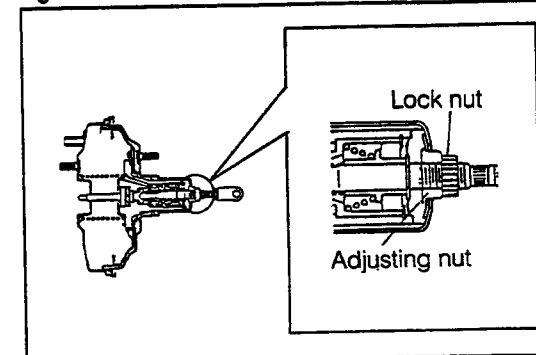


Fig. 8-75

WR-08080

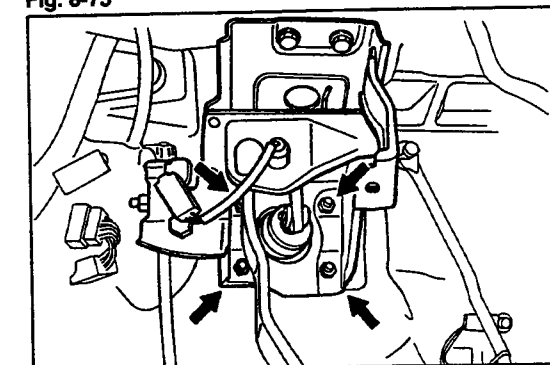


Fig. 8-76

WR-08081

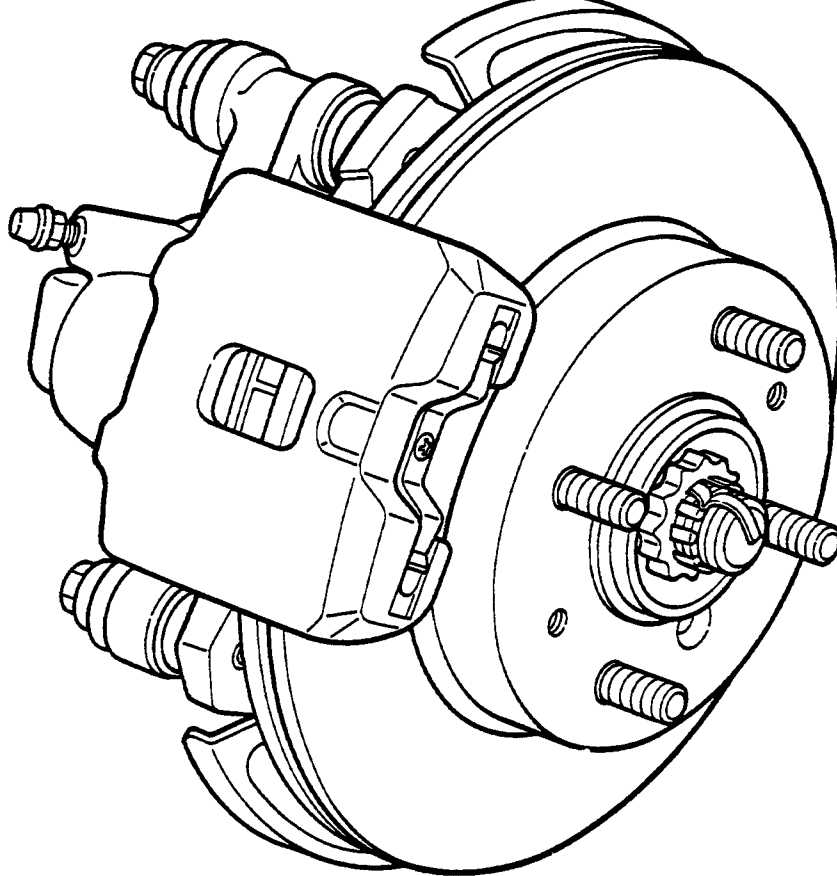
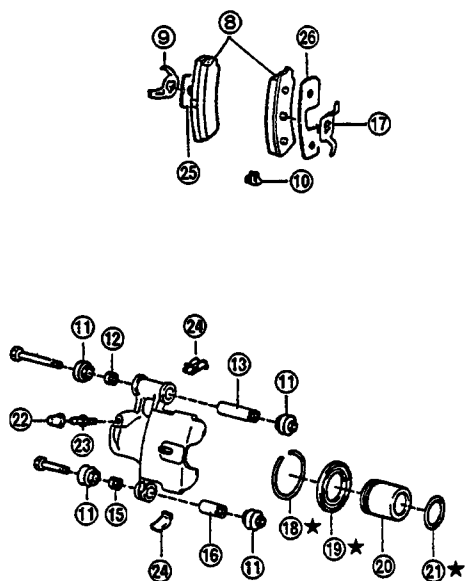


Fig. 8-78

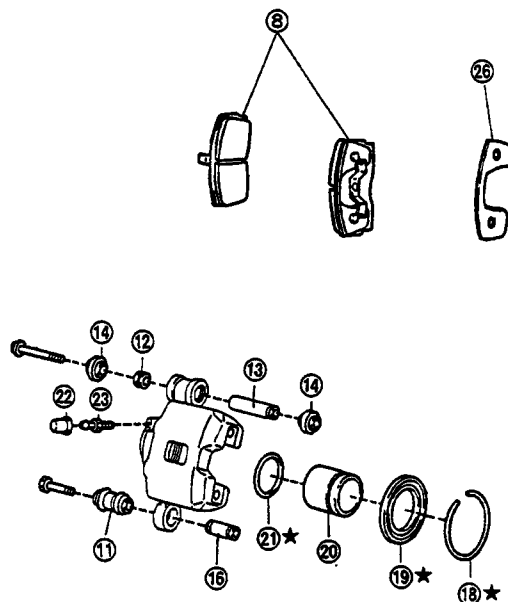
WR-08083

General specifications except for TURBO, GT_{II} grade



- ① Disc brake front caliper Ay
- ② Bolt
- ③ "E" ring
- ④ Tube clamp
- ⑤ Flexible hose
- ⑥ Screw
- ⑦ Front disc
- ⑧ Disc brake pad
- ⑨ Anti-rattle spring No. 1
- ⑩ Pad wear indicator plate
- ⑪ Bush dust boot
- ⑫ Bush retainer
- ⑬ Cylinder slide bush

Others



- ⑭ Piston boot
- ⑮ Bush retainer
- ⑯ Cylinder slide bush
- ⑰ Anti-rattle spring No. 2
- ⑱ Set ring
- ⑲ Cylinder boot
- ⑳ Front disc brake piston
- ㉑ Piston seal
- ㉒ Bleeder plug cap
- ㉓ Bleeder plug
- ㉔ Disc brake pad guide plate
- ㉕ Anti-squeal shim No. 1
- ㉖ Anti-squeal shim No. 2

Fig. 8-79

WR-08084

3. Remove the two attaching bolts of the disc brake front cylinder assembly.

4. Remove the disc brake pad and anti-squeal shim.
5. Detach the disc brake pad guide plate.
6. Check the front disc thickness. (See Fig. 8-98.)

	General specifications except for TURBO, GT _{ti} grade	Others
Specified Thickness	11 mm (0.43 inch)	18 mm (0.71 inch)
Minimum Limit	10 mm (0.39 inch)	17 mm (0.67 inch)

7. Drain a small amount of brake fluid from the master cylinder reservoir. Push in the piston with the handle of a hammer or the like.

NOTE:

Be sure to carry out the pad replacement operation for one wheel at a time, for there is a possibility that the piston at the opposite side may be jumped out.

INSTALLATION

1. Install a new disc brake pad guide plate on the knuckle.

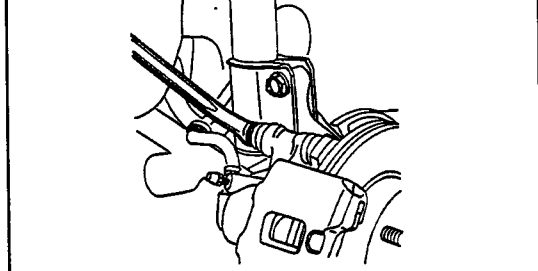


Fig. 8-81

WR-08086

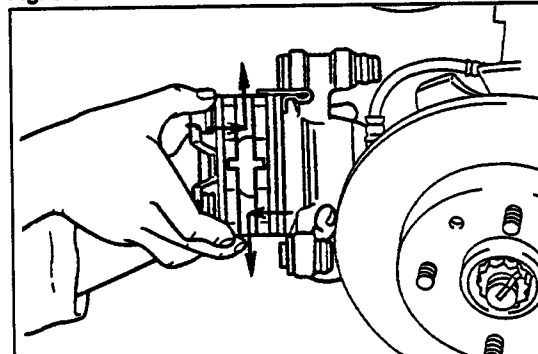


Fig. 8-82

WR-08087

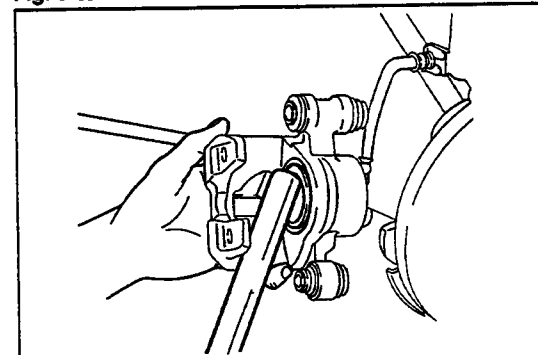


Fig. 8-83

WR-08088

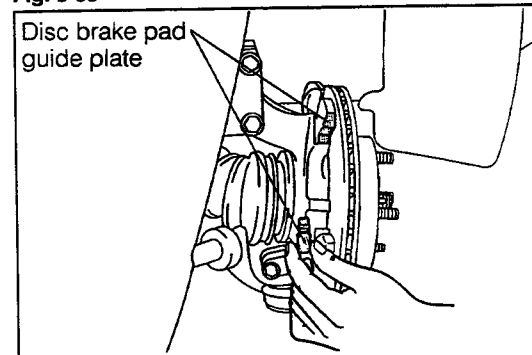


Fig. 8-84

WR-08089

Tightening Torque: 3.2 - 4.2 kg-m (23 - 30 ft-lb)

NOTE:

Care must be exercised so that the caliper boot may not be pinched during the installation.

4. Install the front wheel.
5. Fill the brake fluid up to the "MAX" reference line of the master cylinder reservoir.

DISC BRAKE FRONT CALIPER REMOVAL

1. Jack up the front end of the vehicle. Support the body with safety stands. Remove the front wheel.
2. Disconnect the flexible hose as follows:
(Body side)
 - (1) Separate the flexible hose from the brake tube, using the following SST.
SST: 09751-36011-000
 - (2) Detach the clip.
(Shock absorber side)
 - (3) Detach the clip.
 - (4) Disconnect the flexible hose from the shock absorber bracket.
- (5) Disconnect the flexible hose from the disc brake front caliper, using the following SST.
SST: 09751-36011-000

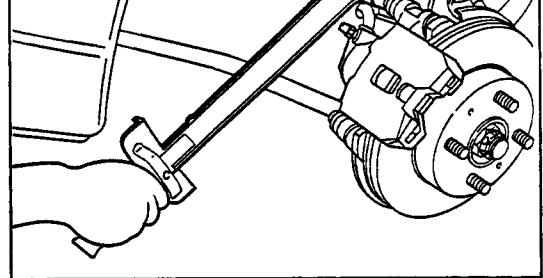


Fig. 8-86

WR-08091

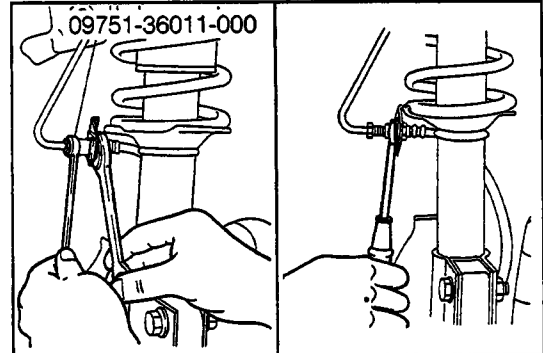


Fig. 8-87

WR-08092

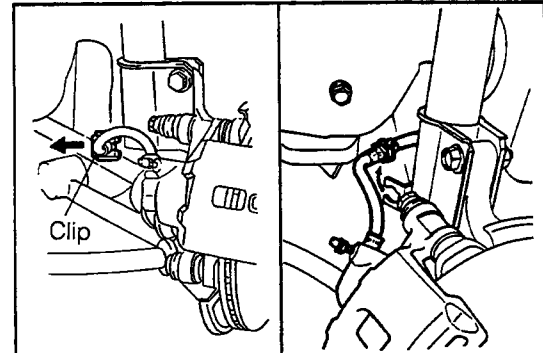


Fig. 8-88

WR-08093

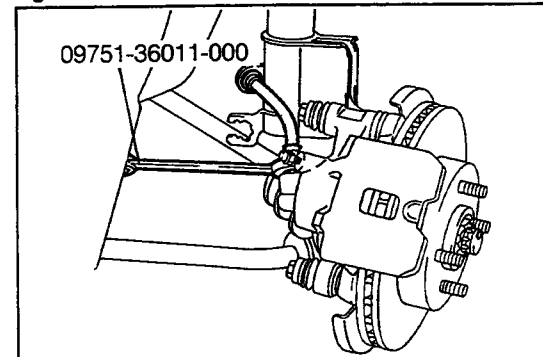


Fig. 8-89

WR-08094

caliper.

- (1) General specifications except for TURBO, GT_{ti} grade
(Bush dust boot, bush retainer, cylinder slide bush, bleeder plug and plug cap)

- (2) Other specifications
(Piston boot, bush dust boot, bush retainer, cylinder slide bush, bleeder plug and plug cap)

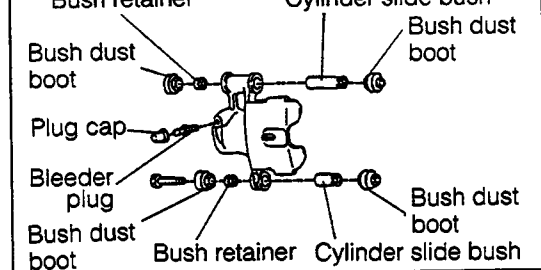


Fig. 8-91

WR-08096

Other specifications

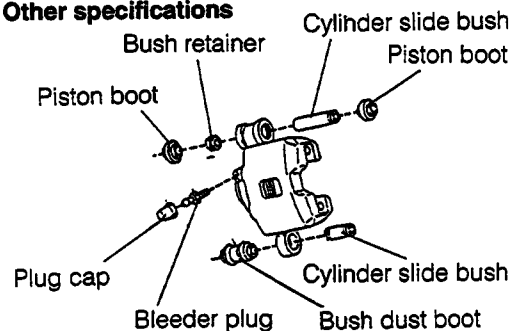


Fig. 8-92

WR-08097

2. Detach the cylinder boot set ring and cylinder boot, using a common screwdriver.

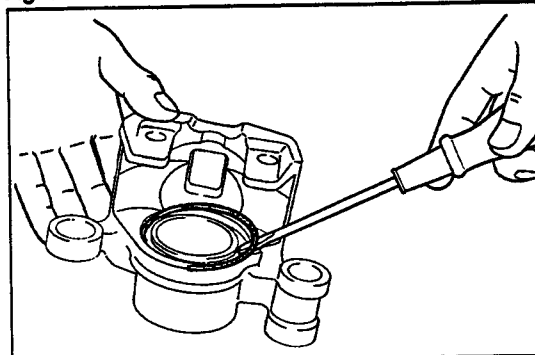


Fig. 8-93

WR-08098

3. With a wooden piece or a cloth placed at the end of the disc cylinder, as indicated in the right figure, drive out the piston by applying compressed air.

NOTE:

Special caution must be exercised so that no brake fluid may be splashed. Also, be very careful not to allow your finger be pinched.

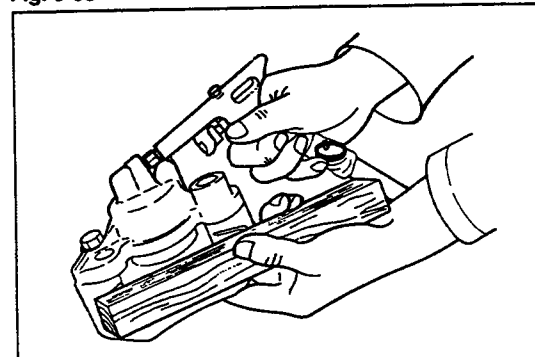


Fig. 8-94

WR-08099

2. Measurement of pad thickness

	General specifications except for TURBO, GT _{ti} grade	Others
Specified Thickness	10 mm (0.39 inch)	9 mm (0.35 inch)
Minimum Limit	1 mm (0.04 inch)	1 mm (0.04 inch)

3. Checking of disc thickness

	Specifications other than GT _{ti}	GT _{ti} grade
Specified Thickness	11 mm (0.43 inch)	18 mm (0.71 inch)
Minimum Limit	10 mm (0.39 inch)	17 mm (0.67 inch)

4. Replace the front disc.

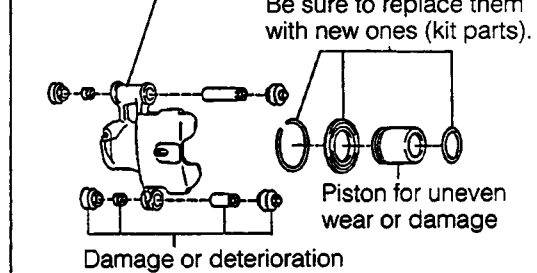


Fig. 8-96

WR-08101

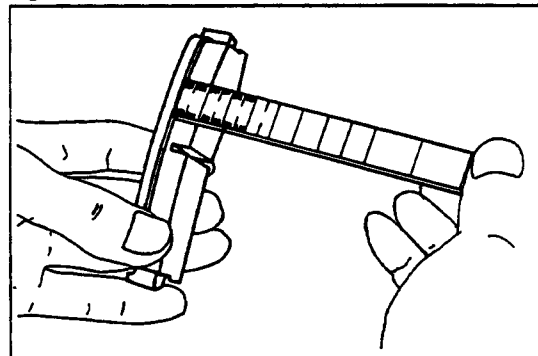


Fig. 8-97

WR-08102

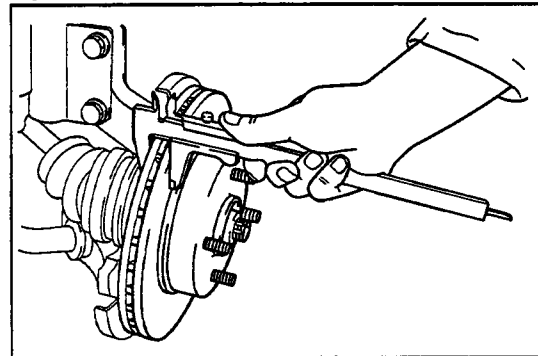


Fig. 8-98

WR-08103

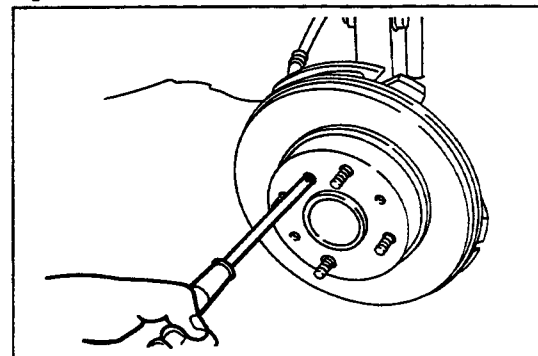


Fig. 8-99

WR-08105

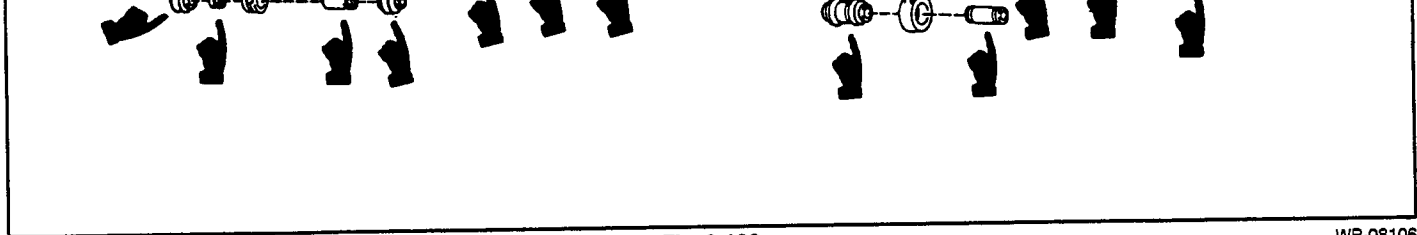


Fig. 8-100

WR-08106

2. Assemble the piston seal and piston.

- (1) Assemble the piston seal in the disc brake front caliper.

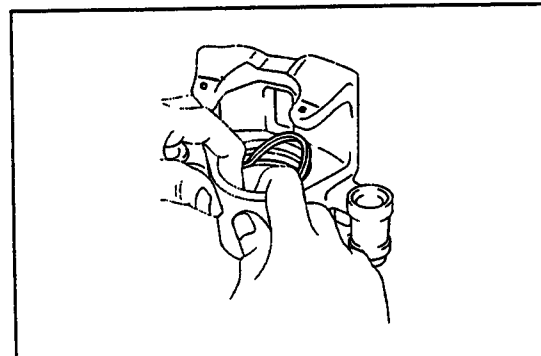


Fig. 8-101

WR-08107

- (2) Insert the piston into the disc brake front caliper, making sure that the piston is not tilted during the installation.

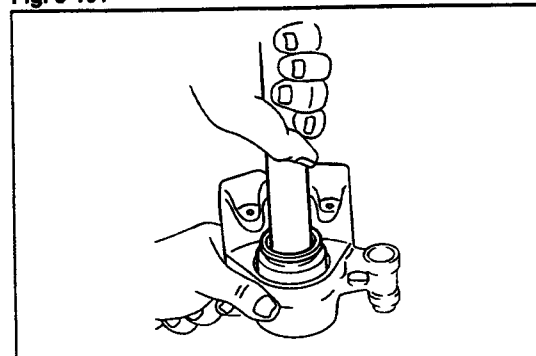


Fig. 8-102

WR-08107A

3. Assemble the cylinder boot in the disc brake front caliper.

NOTE:

Make sure that the boot is fitted securely in the groove.

4. Assemble the cylinder boot set ring, making sure that no scratch is made to the boot.

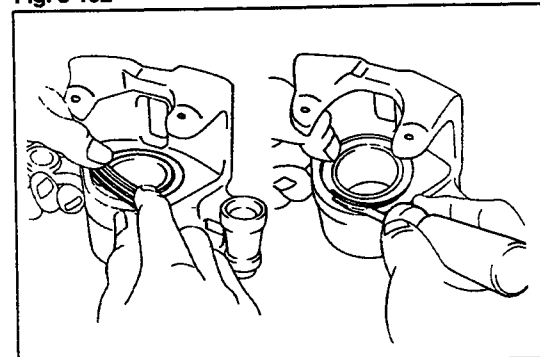


Fig. 8-103

WR-08108

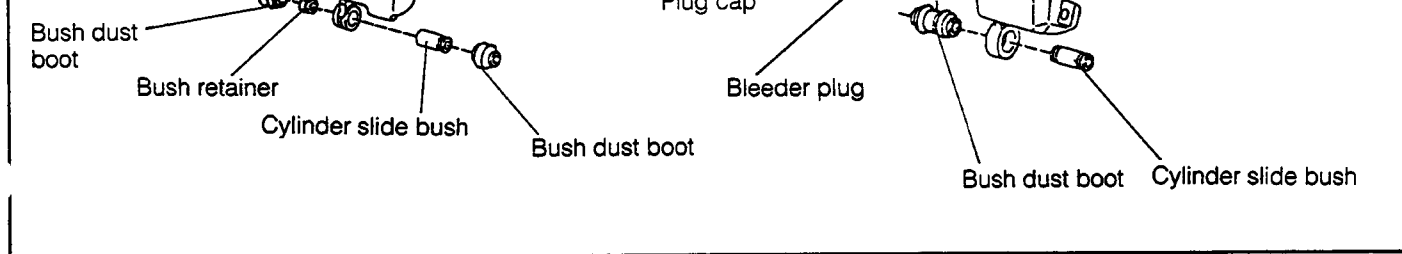


Fig. 8-104

WR-08109

INSTALLATION

1. Install the disc brake pad guide plate on the knuckle. (See Fig. 8-84.)
2. Install the anti-squeal shim at the disc brake pad (out-board side). Then, install them on the disc brake front caliper.

3. Install the disc brake front caliper assembly on the knuckle.

Tightening Torque: 3.2 - 4.2 kg-m (23 - 30 ft-lb)

NOTE:

Care must be exercised so that the caliper boot may not be pinched during the installation.

4. Install the flexible hose.
 - (1) Attach the flexible hose to the disc brake front caliper, using the following SST.

SST: 09751-36011-000

- (2) Attach the flexible hose to the bracket section at the shock absorber side, using the clip.

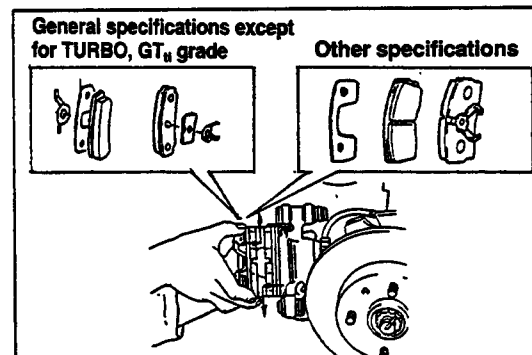


Fig. 8-105

WR-08110

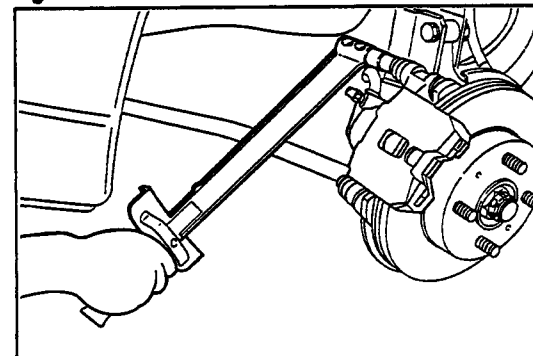


Fig. 8-106

WR-08111

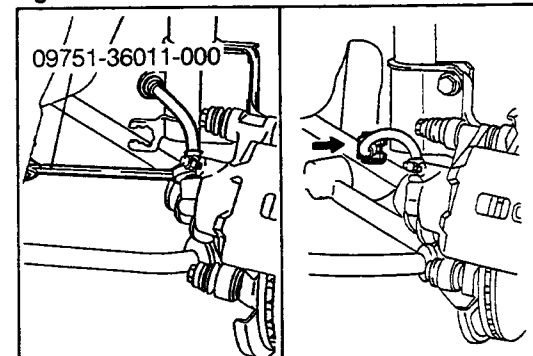


Fig. 8-107

WR-08112

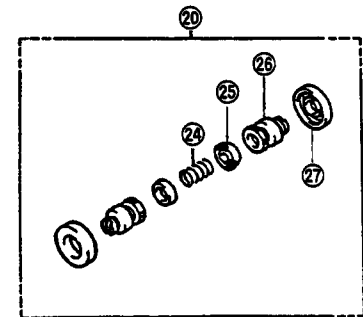
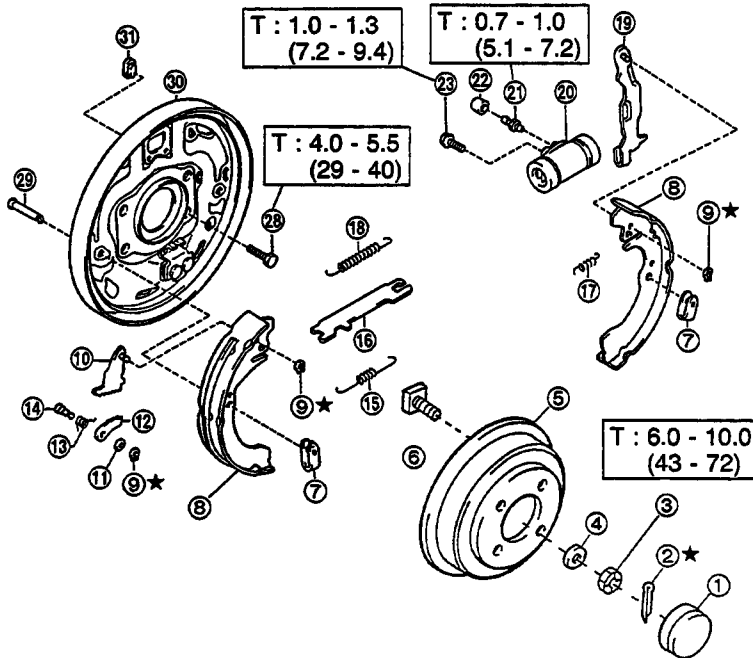
5. Perform air bleeding for the brake system.
(See page 8-5.)
6. Check the brake system for brake fluid leakage.
(See page 8-5.)

WR-08114

Fig. 8-109

WR-08115

COMPONENTS



T : Tightening torque
Unit: kg-m (ft-lb)
★ : Non-reusable parts

- ① Grease cap
- ② Cotter pin
- ③ Castle nut
- ④ Plate washer
- ⑤ Brake drum Ay
- ⑥ Bolt
- ⑦ Shoe hold-down spring
- ⑧ Brake shoe
- ⑨ "C" ring
- ⑩ Automatic adjusting lever S/A
- ⑪ Washer

- ⑫ Automatic adjusting latch
- ⑬ Torsion spring
- ⑭ Automatic adjusting lever pin
- ⑮ Tension spring
- ⑯ Parking brake shoe strut
- ⑰ Tension spring
- ⑱ Tension spring
- ⑲ Parking brake shoe lever S/A
- ⑳ Rear wheel brake cylinder Ay
- ㉑ Bleeder plug
- ㉒ Bleeder plug cap

- ㉓ Bolt
- ㉔ Compression spring
- ㉕ Cylinder cup
- ㉖ Wheel brake cylinder piston
- ㉗ Wheel cylinder boot
- ㉘ Bolt
- ㉙ Shoe hold-down pin
- ㉚ Rear brake backing plate S/A
- ㉛ Hole plug

Fig. 8-110

WR-08116

4. Remove the tension spring, using the following SST.
SST: 09703-30010-000

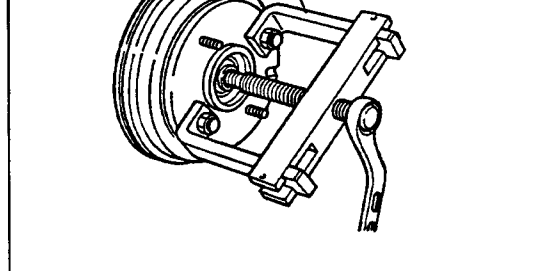


Fig. 8-112

WR-08118

5. Detach the tension spring, using a common screwdriver.

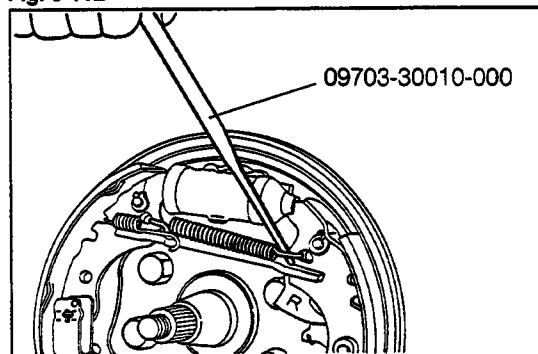


Fig. 8-113

WR-08119

6. Removal of brake shoe (leading side)
(1) Detach the shoe hold-down spring and pin.
(2) Remove the brake shoe, parking brake shoe strut and tension spring at the leading side.

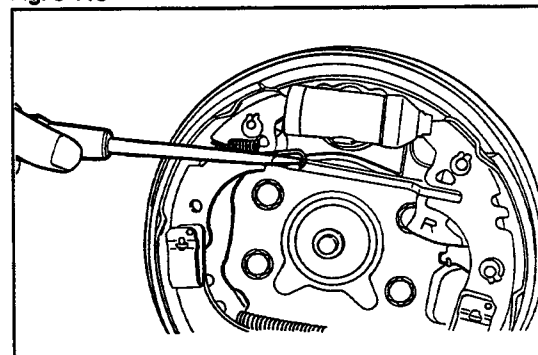


Fig. 8-114

WR-08120

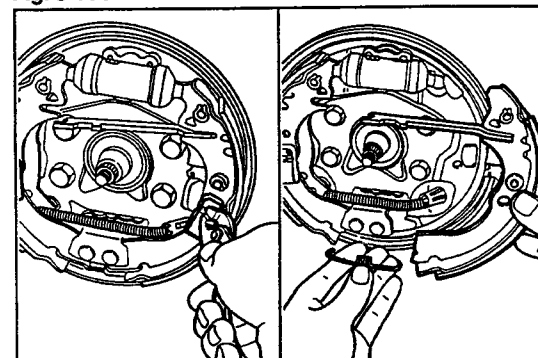


Fig. 8-115

WR-08121

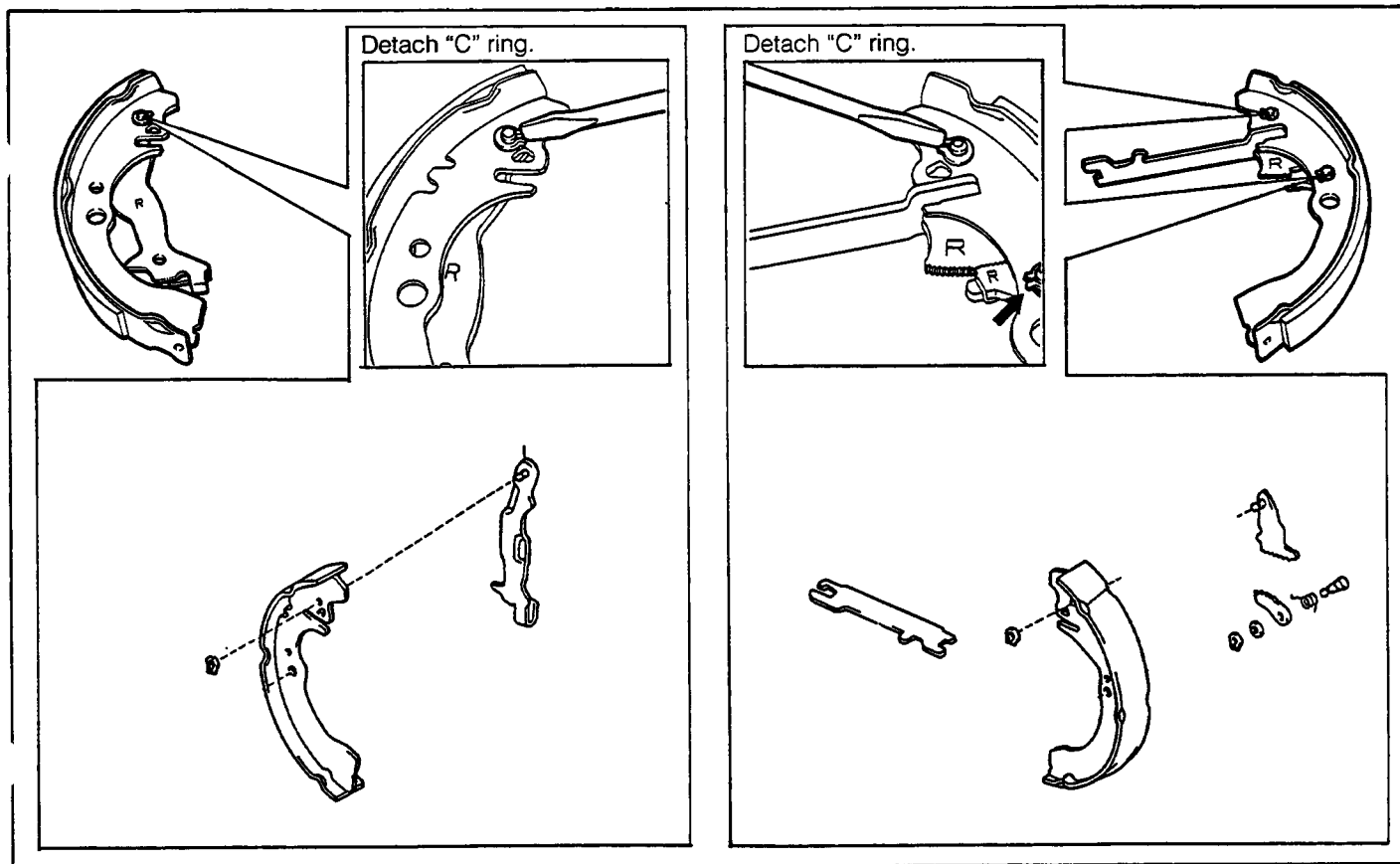


Fig. 8-117

WR-08123

9. Wheel cylinder removal

- (1) Disconnect the brake tube from the wheel cylinder, using the following SST.

SST: 09751-36011-000

- (2) Remove the two attaching bolts of the wheel cylinder. Proceed to remove the wheel cylinder from the backing plate.

NOTE:

The wheel cylinder can be disassembled or checked with the wheel cylinder mounted on the backing plate. It is, therefore, unnecessary to remove the wheel cylinder from the backing plate except for cases where the wheel cylinder assembly is replaced.

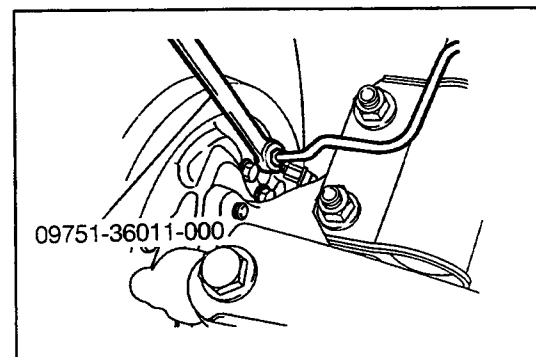


Fig. 8-118

WR-08124

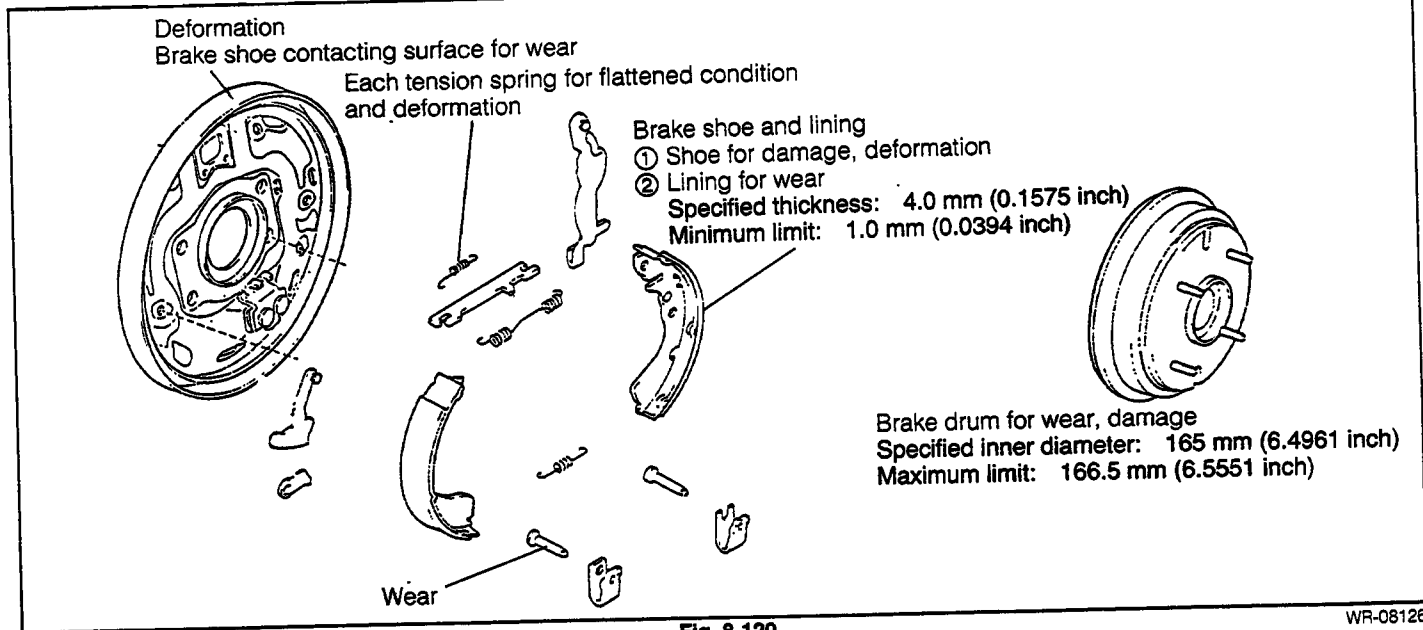


Fig. 8-120

WR-08126

1. Rear brake backing plate replacement

- (1) Remove the four attaching bolts of the rear brake backing plate.
- (2) Apply Daihatsu Bond No.4 (999-6304-6323-00) to the installation surface of the rear brake backing plate with the rear axle carrier. At this time, do not plug the grease releasing hole [5 mm (0.20 inch) dia.] with the grease.
- (3) Install the rear brake backing plate, using the four bolts.

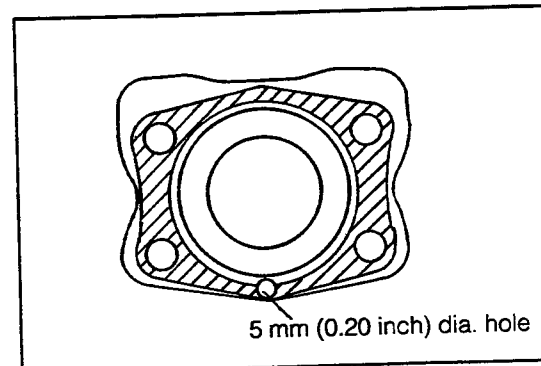


Fig. 8-121

WR-08127

2. Brake drum replacement

- (1) Apply Mp grease to the points indicated in the right figure.

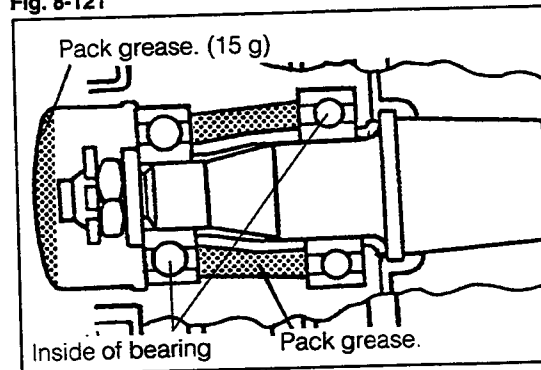


Fig. 8-122

WR-08128

- (1) Apply rubber grease to the points indicated by arrows.
- (2) Assemble the cup on the wheel cylinder piston.

NOTE:

Be sure to install the cup in the correct direction.

- (3) Install the two pistons and compression spring to the wheel cylinder.
- (4) Assemble the two wheel cylinder boots.

2. Wheel cylinder installation

- (1) Apply liquid gasket to the installation section of the rear brake backing plate with the wheel cylinder.
- (2) Install the wheel cylinder to the rear brake backing plate, using the two bolts.

Tightening Torque: 4.0 - 5.5 kg-m (28.9 - 39.8 ft-lb)

3. Brake tube installation

- (1) Install the brake tube to the wheel cylinder temporarily by hands.
- (2) Tighten the brake tube to the wheel cylinder, using the following SST.

SST: 09751-36011-000

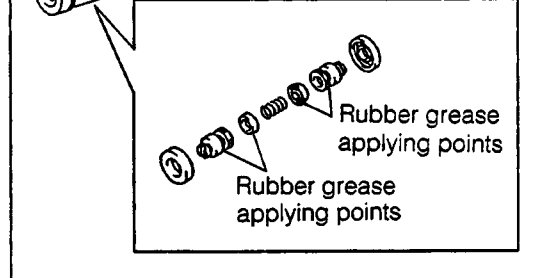


Fig. 8-124

WR-08130

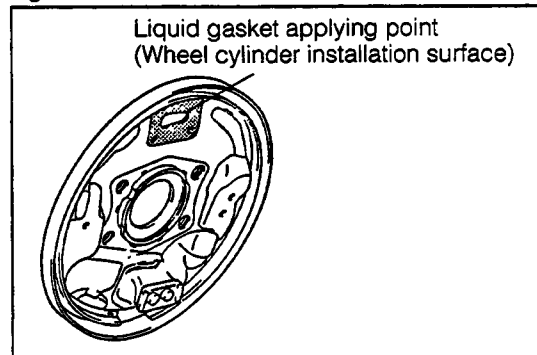


Fig. 8-125

WR-08131

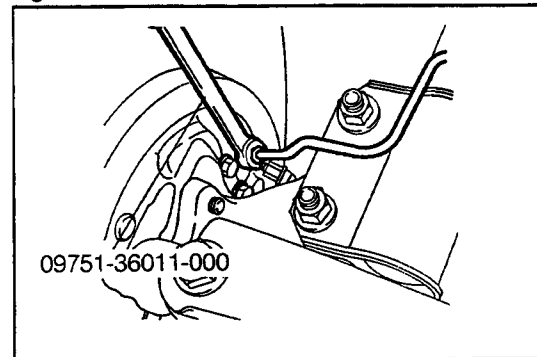


Fig. 8-126

WR-08132

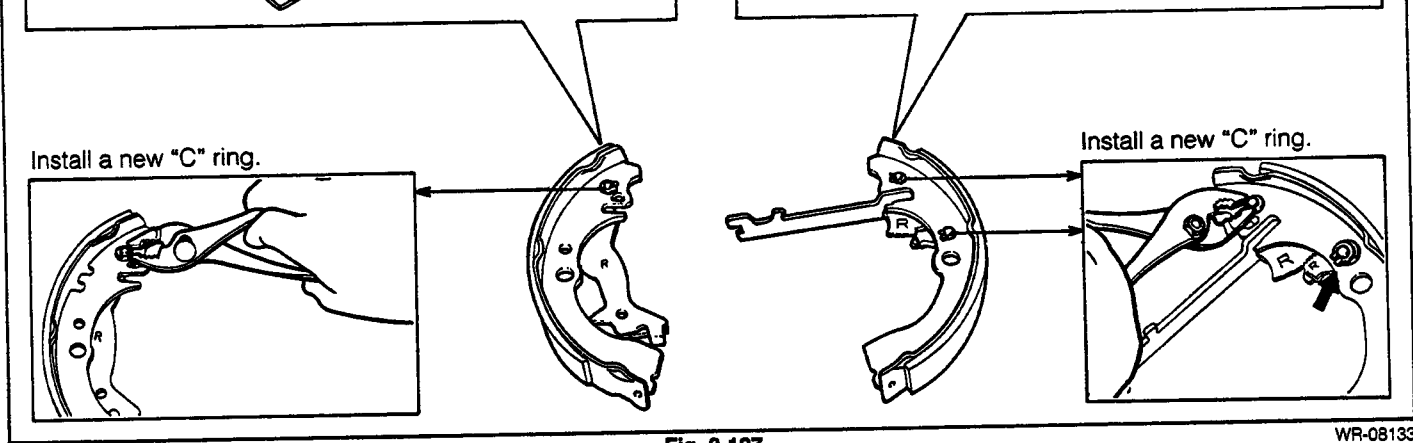


Fig. 8-127

WR-08133

5. Apply brake grease to the contacting points of the rear brake backing plate with the brake shoe.

NOTE:

Be careful not to allow lubricants, such as grease, to get to the wheel cylinder boot.

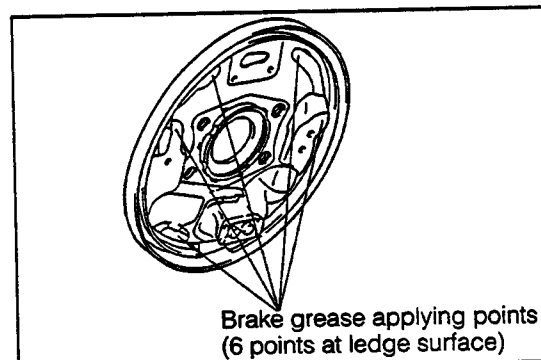


Fig. 8-128

WR-08134

6. Assembly of brake shoe (trailing side)
 - (1) Assemble the parking brake cable to the parking brake shoe lever, using pliers.
 - (2) Assemble the brake shoe on the rear brake backing plate. Install the shoe hold-down spring and pin.

NOTE:

Apply liquid gasket to the installation section of the rear brake backing plate with the shoe hold-down spring.

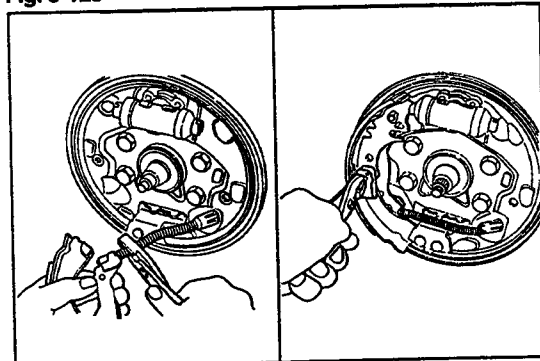


Fig. 8-129

WR-08135

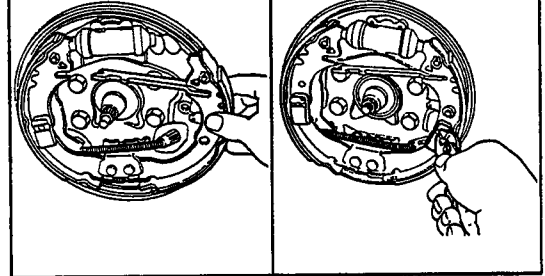


Fig. 8-131

WR-08137

8. Install the tension spring, using a cross point screwdriver.

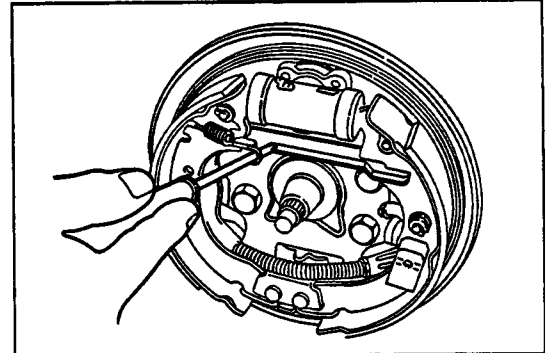


Fig. 8-132

WR-08138

9. Install the tension spring, using the following SST.

SST: 09703-30010-000

NOTE:

Be careful not to damage the wheel cylinder boot during the installation.

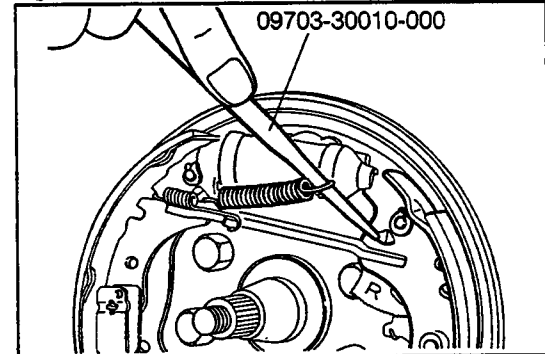
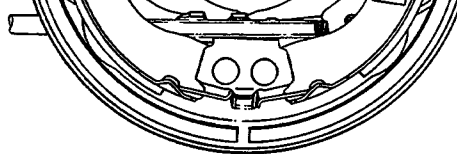


Fig. 8-133

WR-08139



Left Wheel



Right Wheel

Fig. 8-134

WR-08140

11. Brake adjustment procedure

- (1) Retract the shoe by moving the engagement of the parking brake shoe strut, using a common screwdriver or the like.

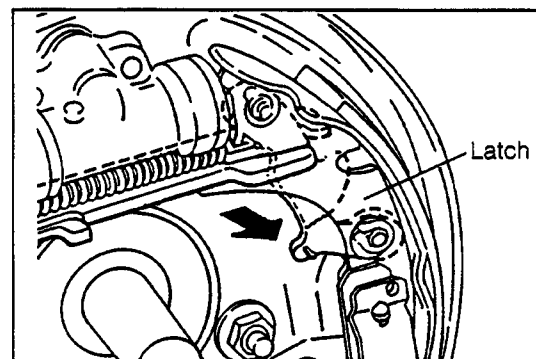


Fig. 8-135

WR-08141

- (2) Brake drum installation

(Bearing inner retainer, brake drum, plate washer, castle nut, new cotter pin and grease cap)

Tightening Torque: 6.0 - 10.0 kg-m (43 - 72 ft-lb)

- (3) Perform air bleeding for the brake system. (See page 8-5.)
- (4) Check the brake system for brake fluid leakage.
- (5) Depress the brake pedal and ensure that the automatic adjusting mechanism emits operating sound. Repeat this operation until you no longer hear the operating sound.
- (6) Adjust the working travel of the parking brake lever. (See page 8-57.)

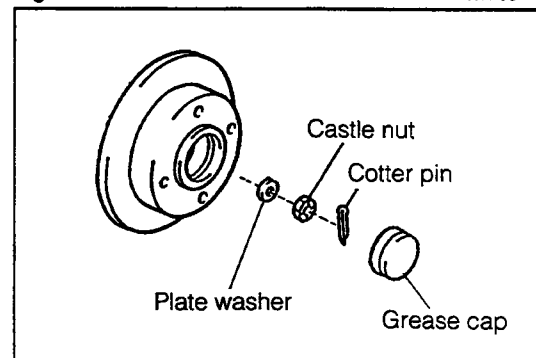


Fig. 8-136

WR-08142

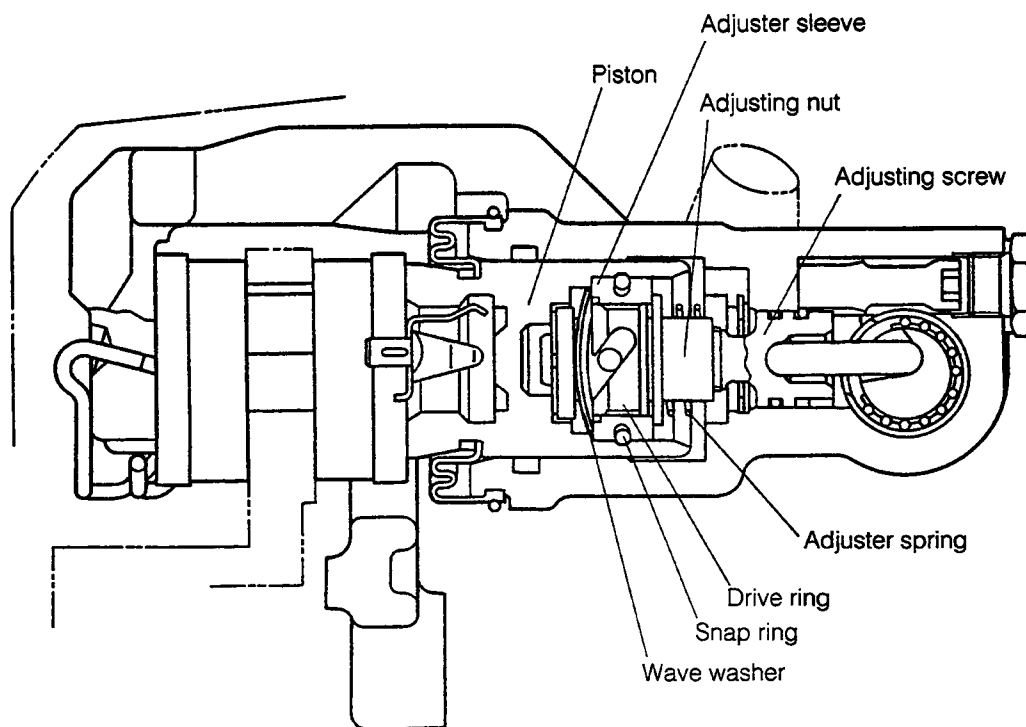
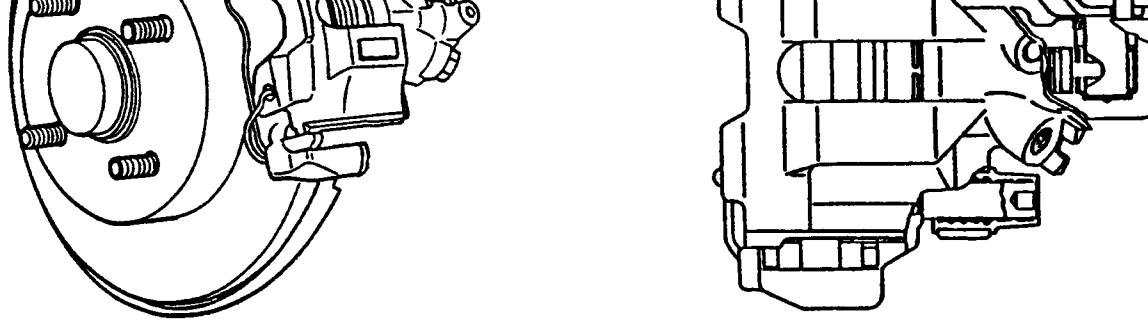
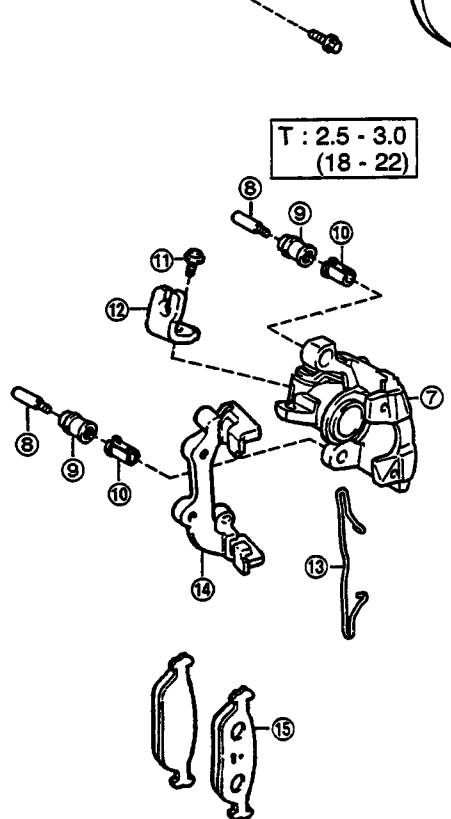
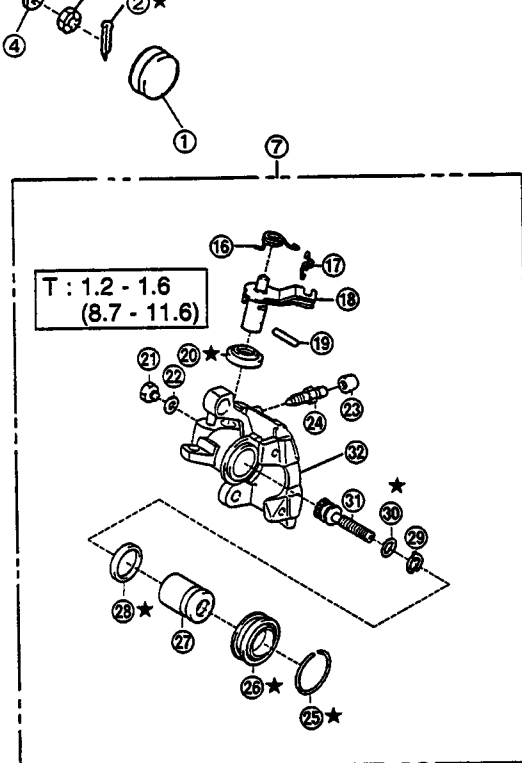


Fig. 8-137

WR-08143



- ① Grease cap
- ② Cotter pin
- ③ Castle nut
- ④ Plate washer
- ⑤ Brake rear disc S/A
- ⑥ Brake dust cover
- ⑦ Disc brake caliper Ay
- ⑧ Hexagon socket head cap bolt
- ⑨ Bush dust boot
- ⑩ Cylinder slide bush
- ⑪ Bolt
- ⑫ Cable support bracket
- ⑬ Anti-rattle spring
- ⑭ Disc brake cylinder mounting
- ⑮ Disc brake pad
- ⑯ Torsion spring



- ⑰ Clip
- ⑱ Parking brake clamp S/A
- ⑲ Parking brake strut
- ⑳ Oil seal
- ㉑ Screw plug
- ㉒ Gasket
- ㉓ Bleeder plug cap
- ㉔ Bleeder plug
- ㉕ Set ring
- ㉖ Cylinder boot
- ㉗ Disc brake piston S/A
- ㉘ Piston seal
- ㉙ Hole snap ring
- ㉚ "O" ring
- ㉛ Pad adjusting bolt
- ㉜ Disc brake rear cylinder

Fig. 8-138

WR-08144

5. Remove the screw plug.
6. Turn the adjusting gear counterclockwise as far as it will go, using a hexagon wrench key, so that the piston may be retracted.

NOTE:

It should be noted that the adjusting gear can not be removed.

7. Remove the hexagon socket head cap bolts (2 pieces), using a hexagon wrench key.

8. Remove the disc brake pad.

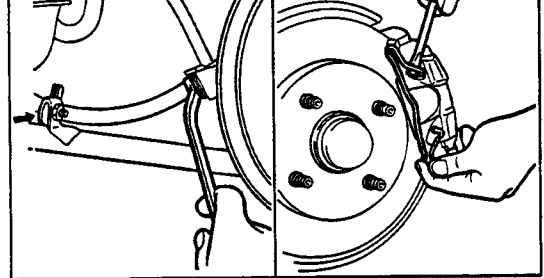


Fig. 8-140

WR-08146

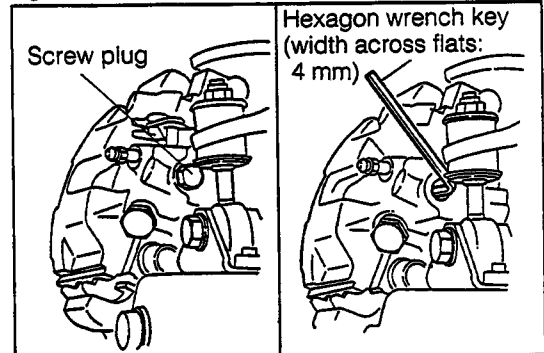


Fig. 8-141

WR-08147

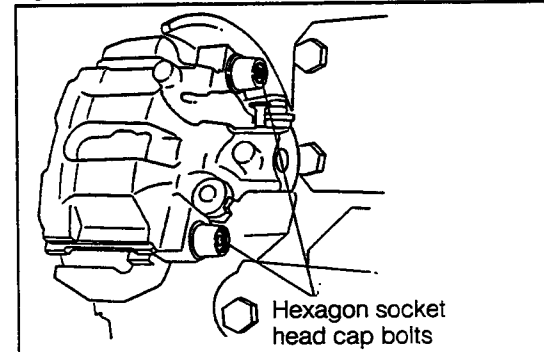


Fig. 8-142

WR-08148

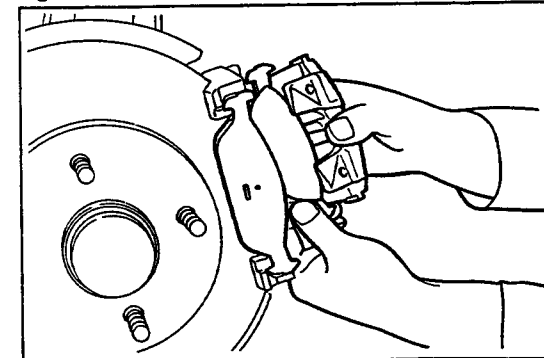


Fig. 8-143

WR-08149

hexagon wrench key. Assemble the disc brake caliper assembly.

(2) Install the anti-rattle spring.

3. Turn the adjusting gear clockwise, using a hexagon wrench key, until the disc brake pad is pressed against the brake disc. Then, back off the adjusting gear about 180 degrees counterclockwise.
4. Install the gasket and screw plug.

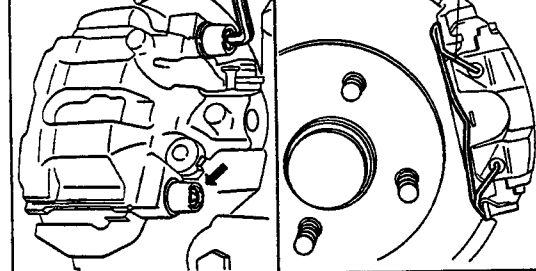


Fig. 8-145

WR-08151

5. Install the parking cable guide.

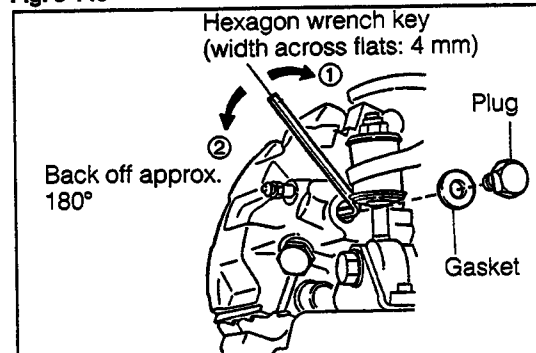


Fig. 8-146

WR-08152

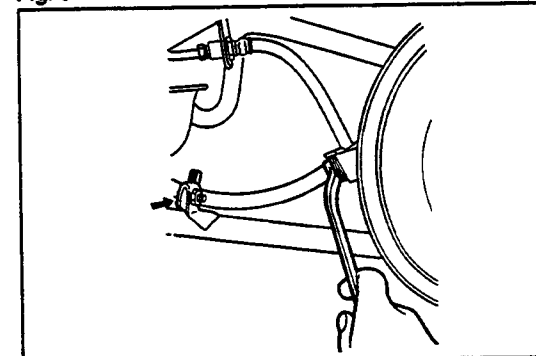


Fig. 8-147

WR-08153

6. Depress the brake pedal about 40 times. (This operation makes it possible to adjust the clearance between the disc brake pad and the rear brake disc.)
7. Adjust the working travel of the parking brake lever. (See Fig. 8-181.)
8. Install the rear wheel. Jack down the vehicle.

WR-08154

- (2) Remove the cable support bracket.
- (3) Remove the parking brake cable from the disc brake cylinder.

5. Remove the anti-rattle spring.
6. Remove the hexagon socket head cap bolts (2 pieces), using a hexagon wrench key.

7. Remove the disc brake rear cylinder from the vehicle.
Remove the disc brake pad.

DISASSEMBLY

1. Remove the set ring and cylinder boot from the disc brake rear cylinder.

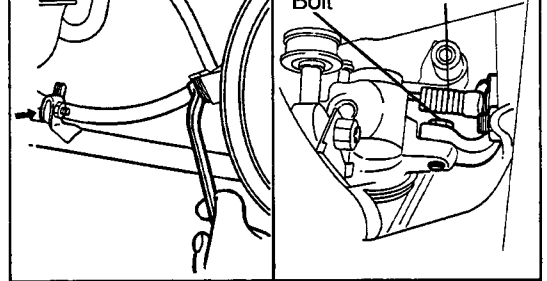


Fig. 8-149

WR-08156

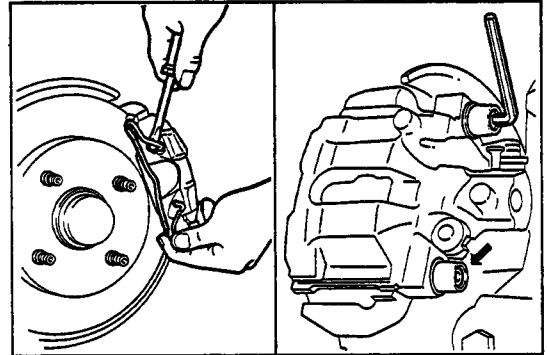


Fig. 8-150

WR-08157

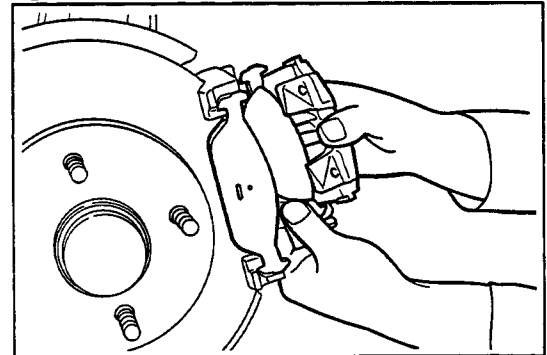


Fig. 8-151

WR-08158

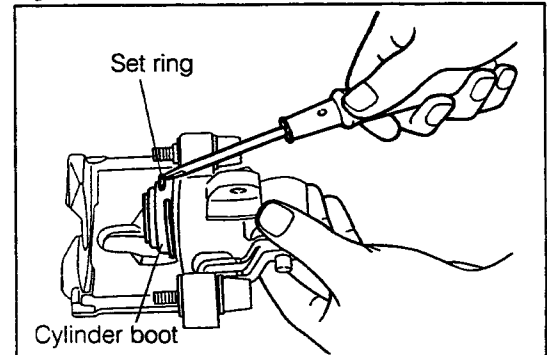
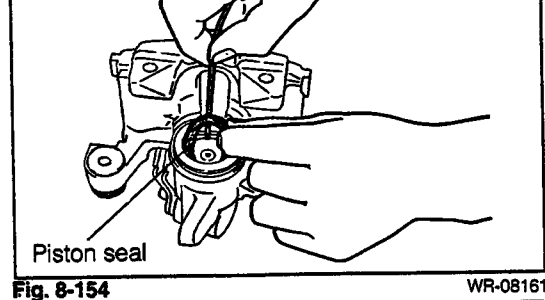


Fig. 8-152

WR-08159

3. Remove the piston seal.

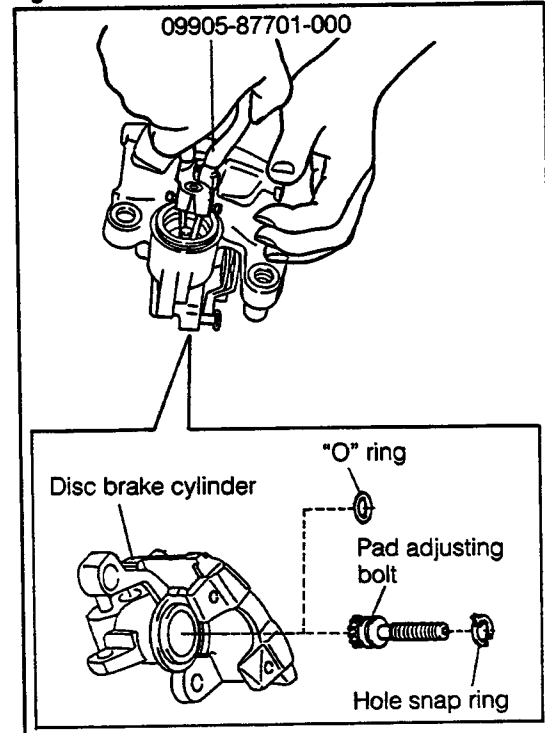


4. Pad adjusting bolt removal

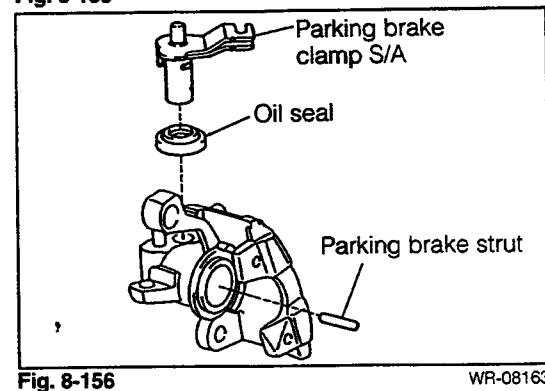
(1) Detach the hole snap ring, using the SST.

SST: 09905-87701-000

(2) Take out the pad adjusting bolt from the disc brake cylinder. Remove the "O" ring from the pad adjusting bolt.



5. Remove the parking brake strut, parking brake clamp subassembly and oil seal from the disc brake cylinder.



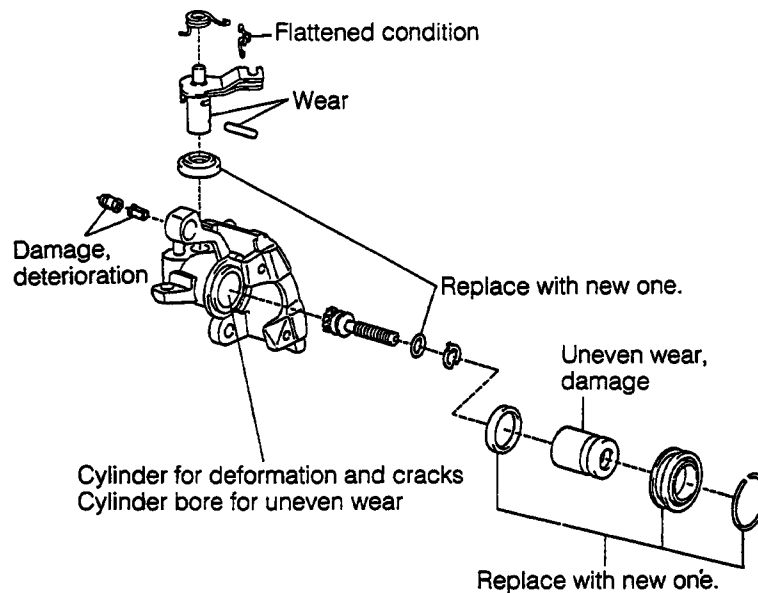


Fig. 8-158

WR-08165

2. Pad thickness measurement

Specified Thickness: 9 mm (0.35 inch)

Minimum Limit: 1 mm (0.04 inch)

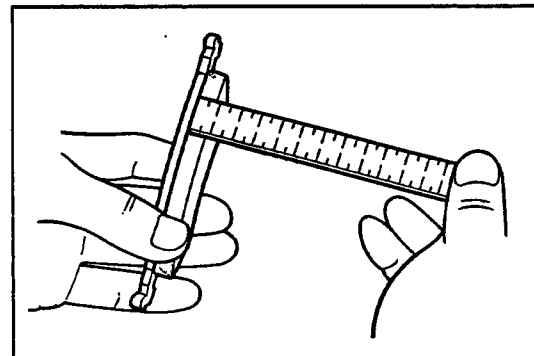


Fig. 8-159

WR-08166

3. Brake rear disc thickness check

Specified Thickness: 10 mm (0.39 inch)

Minimum Limit: 9 mm (0.35 inch)

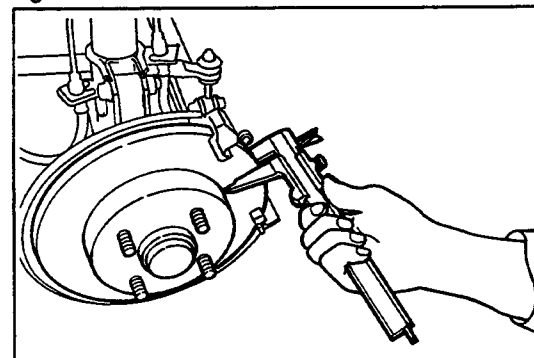


Fig. 8-160

WR-08167

retainer cap, cotter pin, castle nut and brake rear disc.
 (2) Check the brake dust cover for defects, such as damage, cracks and deformation. Replace the brake dust cover which exhibits any defect.
Tightening Torque: 4.0 - 5.5 kg-m (28.9 - 39.8 ft-lb)

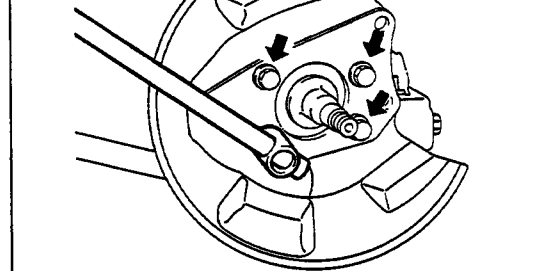


Fig. 8-162

WR-08169

- (3) Install the outer bearing, outer retainer and inner bearing to the brake rear disc, using the following SSTs.

(Outer bearing)

SST: 09608-12010-000 (No.13)

(Inner bearing)

SST: 09608-12010-000 (No.5)

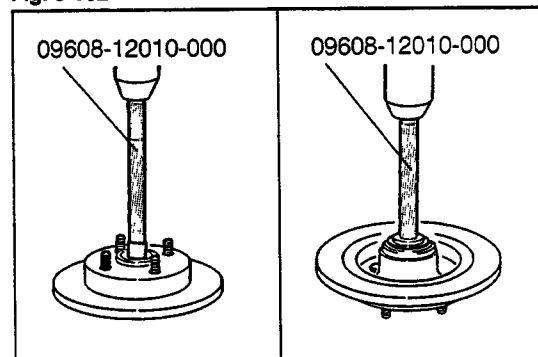


Fig. 8-163

WR-08170

- (4) Apply chassis grease to the points indicated in the right figure.

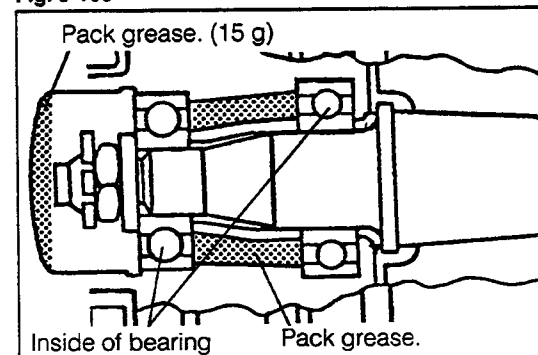


Fig. 8-164

WR-08171

- (5) Install the bearing inner retainer, brake rear disc, plate washer and castle nut.

Tightening Torque: 6.0 - 10.0 kg-m (43 - 72 ft-lb)

- (6) Install a new cotter pin. Attach the grease retainer cap.

- (7) Install the disc brake cylinder mounting.

Tightening Torque: 4.0 - 5.5 kg-m (29 - 40 ft-lb)

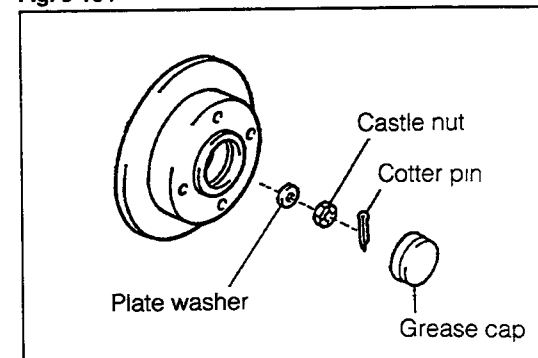
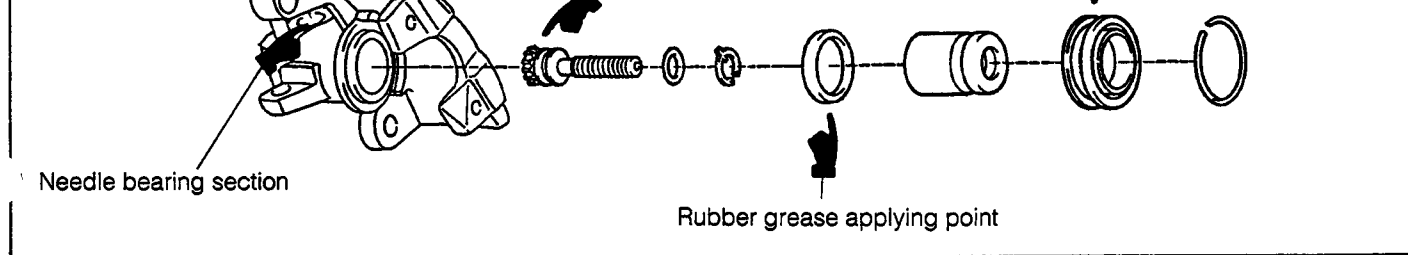
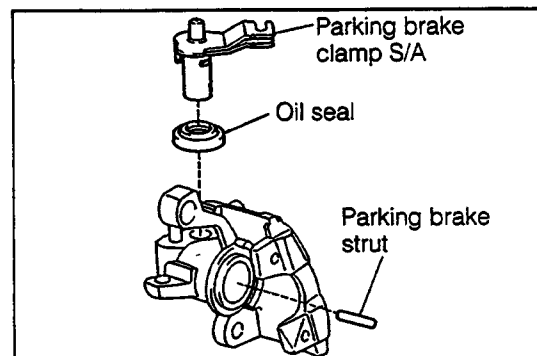


Fig. 8-165

WR-08172

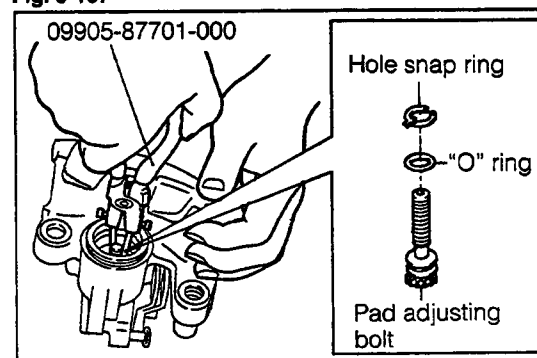


2. Install the oil seal, parking brake clamp subassembly and parking brake stopper to the disc brake cylinder.

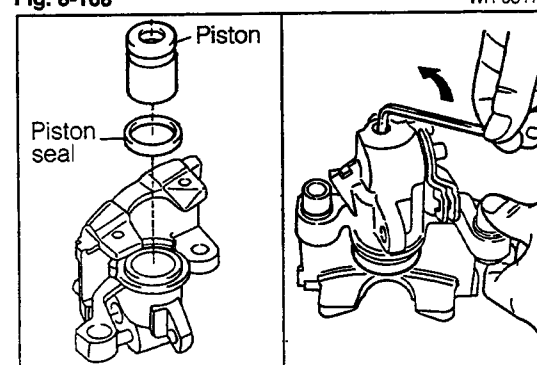


3. Pad adjusting bolt installation
 - (1) Install the "O" ring to the pad adjusting bolt. Assemble the pad adjusting bolt to the disc brake cylinder.
 - (2) Attach the hole snap ring, using the following SST.

SST: 09905-87701-000



4. Installation of disc brake piston assembly
 - (1) Install the piston seal in the disc brake cylinder.
 - (2) Insert the piston into the caliper. With the piston pushed lightly, turn the adjusting gear counterclockwise as far as it will go, using a hexagon wrench key. Then, pull back the piston, until it is no longer possible to turn the adjusting gear.



- (1) Install the disc brake cylinder to the disc brake cylinder mounting, using a hexagon wrench key.
- (2) Install the anti-rattle spring.

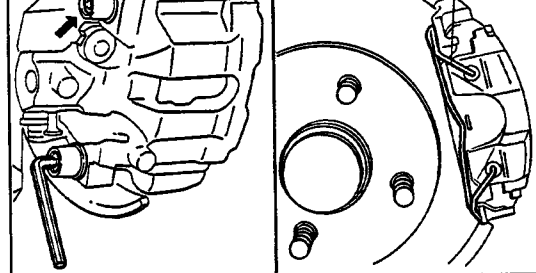


Fig. 8-171

WR-08178

2. Parking brake cable installation

- (1) Attach the tip end of the parking brake cable to the parking brake clamp subassembly.
- (2) Install the cable support bracket.

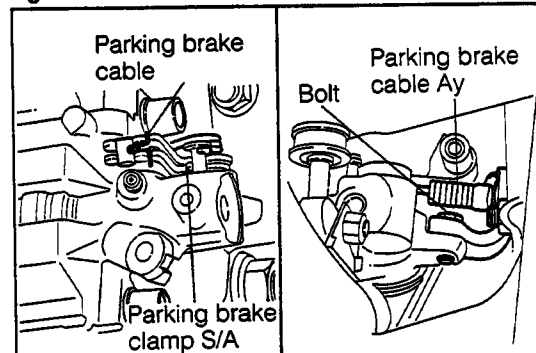


Fig. 8-172

WR-08179

3. Install the parking brake guide.

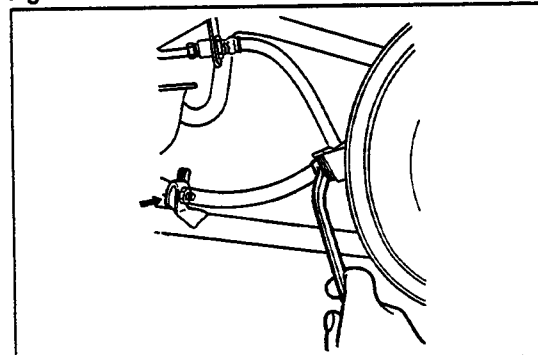


Fig. 8-173

WR-08180

4. Install the following parts to the disc brake cylinder.

- (1) Install the torsion spring and clip.
- (2) Connect the brake hose.
(Use a new gasket.)

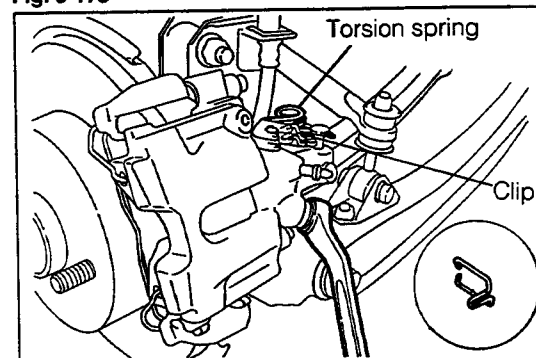


Fig. 8-174

WR-08181

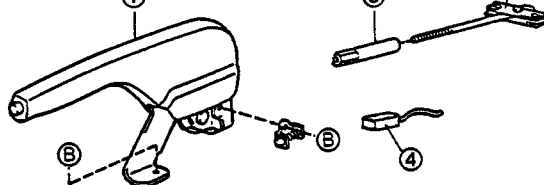


Fig. 8-176

WR-08183

REMOVAL

1. Console box
 - (1) Remove the coin box.
 - (2) Remove the console box from the vehicle by removing the bolts and screws, two each.

2. Remove the connector and adjusting nut.

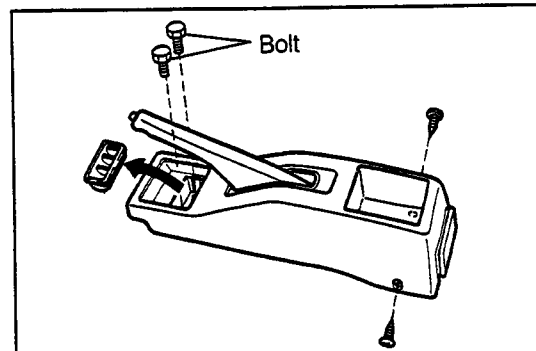


Fig. 8-177

WR-08184

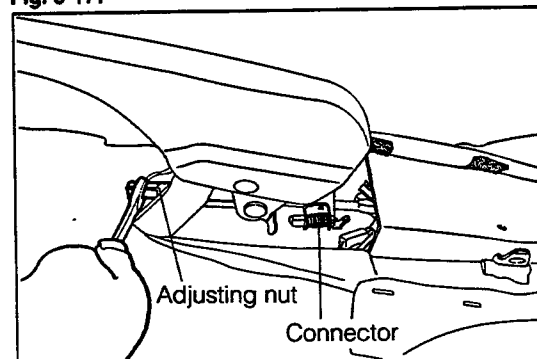


Fig. 8-178

WR-08185

3. Remove the two bolts. Remove the parking brake handle assembly from the vehicle.

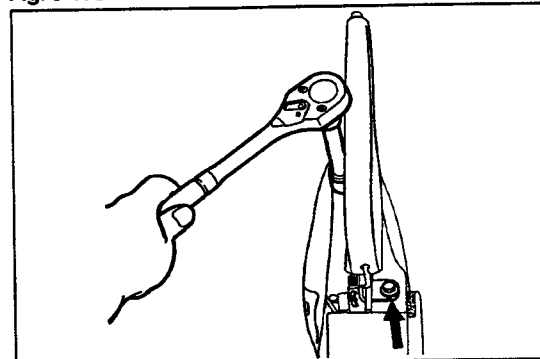


Fig. 8-179

WR-08186

brake indicator lamp for proper operation.)

Specified Value: 5 - 9 Notches

[When pulled by a force of 20 kg (44 lb)]

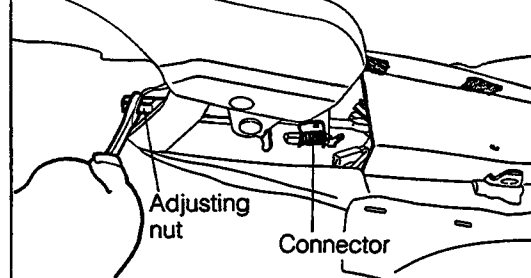


Fig. 8-181

WR-08188

3. Install the console box.

- (1) Install the console box to the vehicle with the bolts and screws, two each.
- (2) Install the coin box.

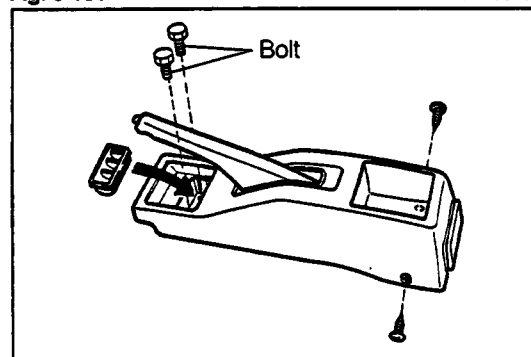


Fig. 8-182

WR-08189

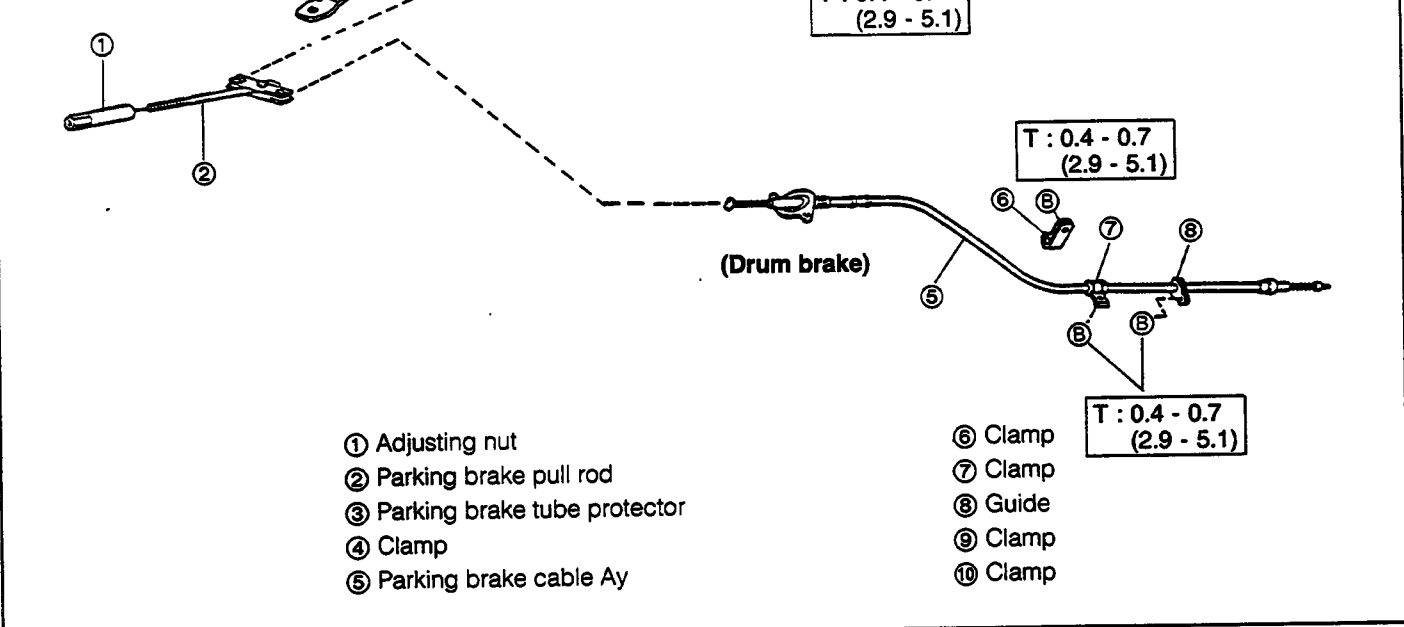


Fig. 8-183

WR-08190

REMOVAL

1. Remove the console box. (See Fig. 8-177.)
2. Remove the parking brake tube protector.
3. Remove the parking brake cable from the parking brake pull rod.

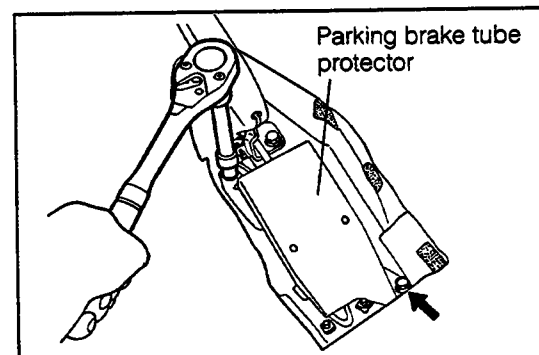


Fig. 8-184

WR-08191

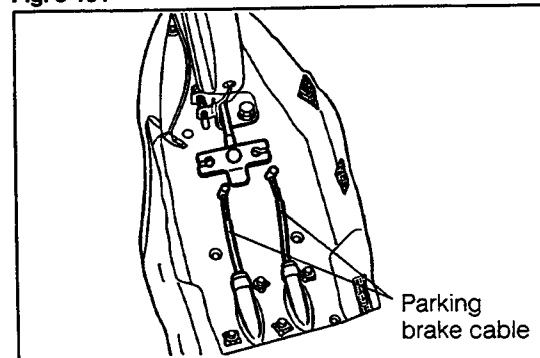


Fig. 8-185

WR-08192

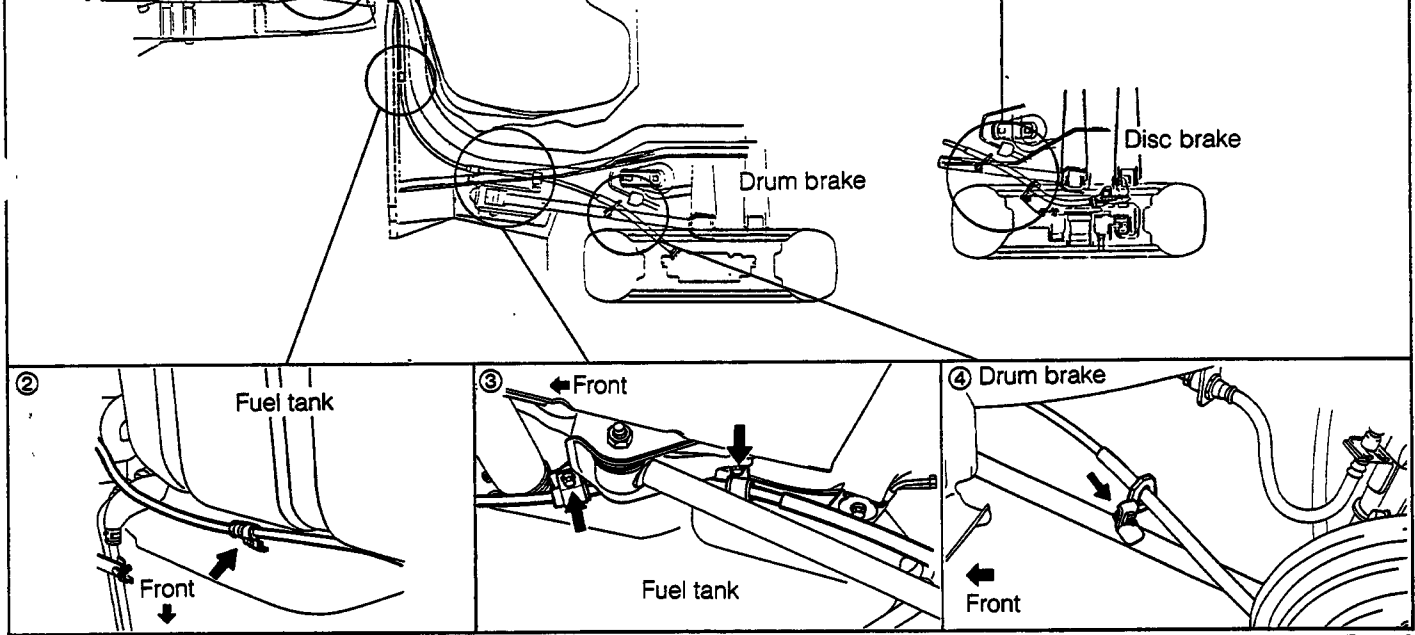


Fig. 8-186

WR-08193

5. Removal of rear brake-related parts (Drum brake)

- (1) Remove the brake shoe. (See page 8-38.)
- (2) Remove the parking brake cable from the rear brake backing plate.

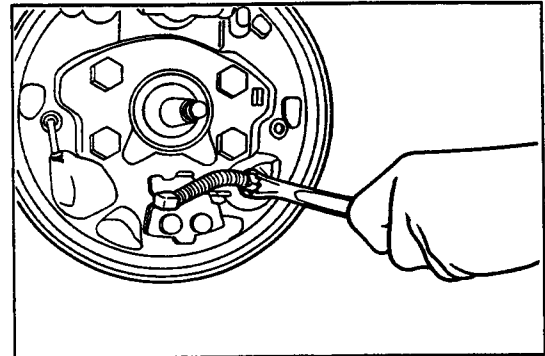


Fig. 8-187

WR-08194

(Disc brake)

- (1) Remove the clip attaching the parking brake cable to the cable support bracket.
- (2) Detach the clip from the parking brake clamp. Then, remove the parking brake cable.

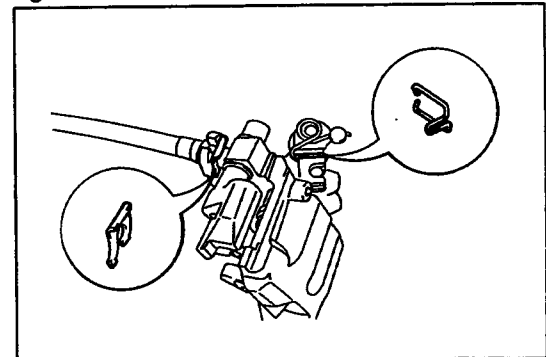


Fig. 8-188

WR-08195

caliper.

(2) Install the clips at two points.

2. Install the clamp-related parts provided under the body.
(See Fig. 8-186.)
3. Attach the parking brake cable to the cable end.

4. Install the parking brake tube protector.

5. Rear brake adjustment
Drum brake (See Fig. 8-44.)
6. Adjust the working travel of the parking brake.
Specified Value: 5 - 9 Notches
[When pulled by a force of 20 kg (44 lb)]
7. Install the console box. (See Fig. 8-182.)

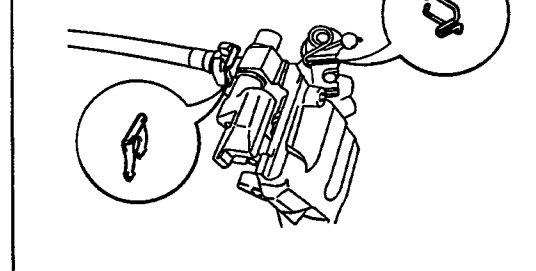


Fig. 8-189

WR-08197

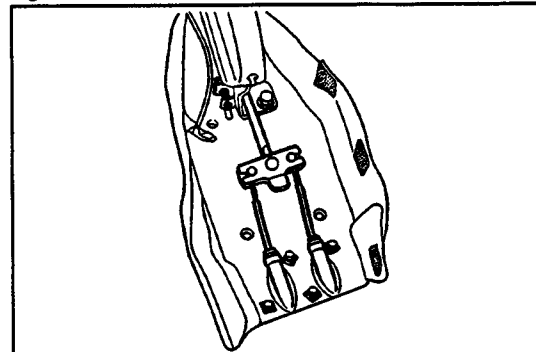


Fig. 8-190

WR-08198

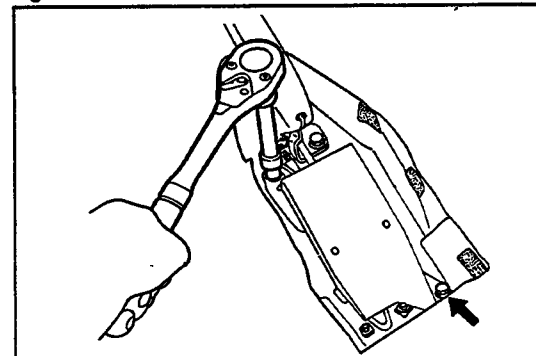


Fig. 8-191

WR-08199

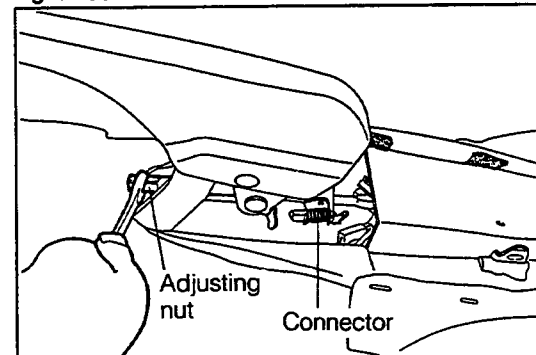


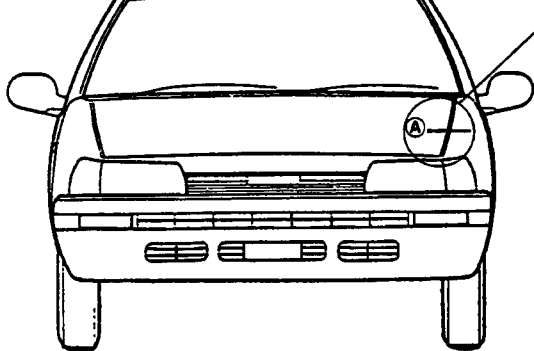
Fig. 8-192

SECTION 9

BODY

ALIGNMENT ADJUSTMENTS	9- 2
ENGINE HOOD ALIGNMENT ADJUSTMENT	9- 2
FRONT DOOR ALIGNMENT ADJUSTMENT	9- 3
REAR DOOR ALIGNMENT ADJUSTMENT	9- 4
HATCHBACK DOOR ALIGNMENT ADJUSTMENT	9- 5
POWER SUNROOF ALIGNMENT ADJUSTMENT	9- 6
FRONT BUMPER	9- 9
COMPONENTS	9- 9
REMOVAL	9- 9
INSTALLATION	9- 9
REAR BUMPER	9-12
COMPONENTS	9-12
REMOVAL	9-12
INSTALLATION	9-13
RADIATOR GRILLE	9-15
COMPONENTS	9-15
REMOVAL	9-15
INSTALLATION	9-15
COMPONENTS	9-16
REMOVAL	9-16
FRONT FENDER	9-17
COMPONENTS	9-17
REMOVAL	9-17
INSTALLATION	9-19
HOOD LOCK CONTROL CABLE	9-20
COMPONENTS	9-20
REMOVAL	9-20
INSTALLATION	9-21
WINDOWS	9-22
FRONT WIND SHIELD	9-22
BACK DOOR GLASS	9-28
QUARTER WINDOW GLASS	9-31
OUTSIDE MOLDINGS	9-32
ARTICLES TO BE PREPARED	9-32
COMPONENTS	9-32
REMOVAL	9-32
INSPECTION AND CLEANING	9-32
INSTALLATION	9-33

BACK DOOR GARNISH	9-35
ARTICLES TO BE PREPARED	9-35
INSTALLATION POSITION	9-35
REMOVAL	9-35
INSTALLATION	9-35
BACK DOOR OUTSIDE GARNISH NO.2	9-36
ARTICLES TO BE PREPARED	9-36
COMPONENTS	9-36
REMOVAL	9-36
INSTALLATION	9-37
FRONT DOOR	9-38
DOOR TRIM AND SERVICE HOLE COVER	9-38
DOOR LOCK AND OUTSIDE DOOR HANDLE	9-42
DOOR GLASS AND REGULATOR	9-44
REAR DOOR	9-47
DOOR TRIM AND SERVICE HOLE	9-47
DOOR LOCK AND OUTSIDE DOOR HANDLE	9-49
DOOR GLASS AND REGULATOR	9-47
BACK DOOR	9-53
REMOVAL	9-53
INSTALLATION	9-56
BACK DOOR OPENER AND FUEL LID OPENER	9-57
POWER GLASS SUNROOF WITH	
TILT-UP MECHANISM	9-60
COMPONENTS	9-60
REMOVAL	9-61
INSTALLATION	9-63
ROOF DRIP MOLDING	9-66
INSTALLATION POSITION	9-66
REMOVAL	9-66
INSTALLATION	9-67
EXHAUST PIPE	9-67
COMPONENTS	9-67
FRONT PIPE	9-67
CENTER PIPE	9-69
TAIL PIPE	9-69
FUEL TANK	9-70
COMPONENTS	9-70
FUEL INLET PIPE	9-71
FUEL TANK	9-73



Front fender

Hood

Specified values

Gap: 2.7 - 5.7 mm (0.11 - 0.22 inch)

Lateral deviation:

Not to exceed 1.5 mm (0.06 inch)

Difference between right and left sides:

Not to exceed 1.5 mm (0.06 inch)

Fig. 9-1

WR-09002

1. Adjustment of engine hood-to-front fender gap
Loosen the bolts @. Perform the adjustment by moving the hood.

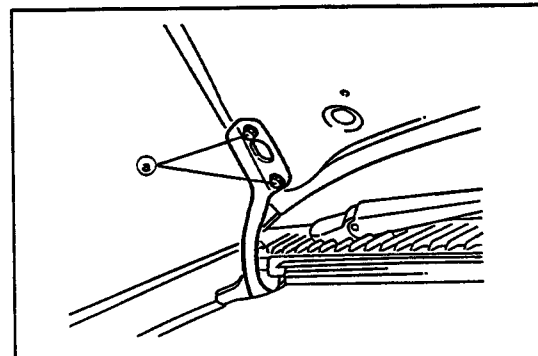


Fig. 9-2

WR-09003

2. Hood lock adjustment
Loosen the three attaching bolts of the hood lock. Perform the adjustment by moving the hood lock.
(Adjust the hood lock in such a way that you will feel a slight looseness when the center section of the hood end is pushed strongly.)

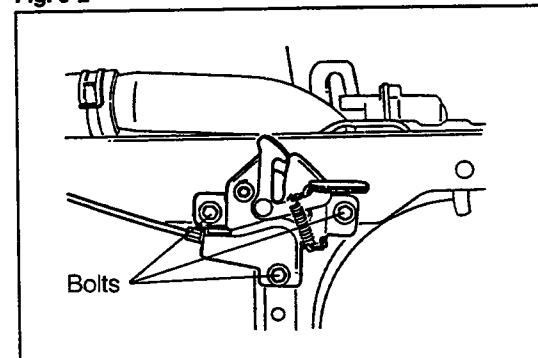
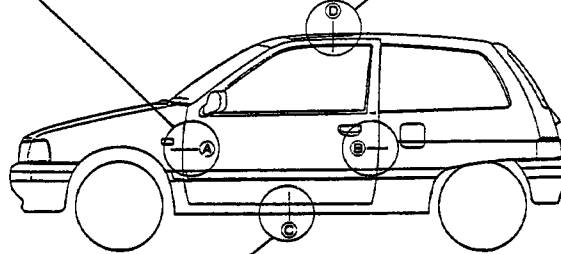


Fig. 9-3

WR-09004



Front door-to-rocker panel gap

Front door-to-quarter panel gap

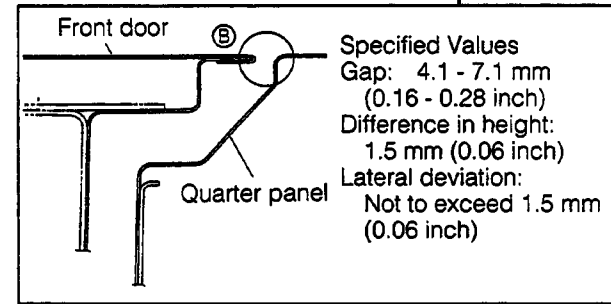
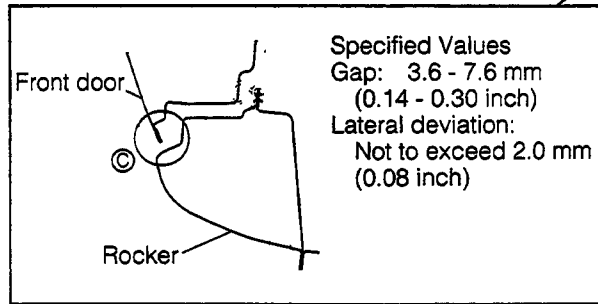


Fig. 9-4

WR-09005

1. Adjustments of Front Door-to-Front Fender Gap and Front Door-to-Quarter Panel Gap
Replace the bolts (a). Perform the adjustment by moving the door panel in a fore-and-aft direction.

SST: 09812-30010-000

NOTE:

Adjustment-free bolts have been employed in the assembly plant. Hence, the adjustment should be performed after replacing the bolts with the following bolts.

Part Number of Bolt: 91661-60820-000

2. Adjustments of Front Door-to-Rocker Panel Gap and Front Door-to-Roof Panel Gap
Loosen the bolt (b). Perform the adjustment by moving the door panel in an up-and-down direction.

SST: 09812-30010-000

3. Adjustment of Difference in Height between Front Door and Front Fender
Loosen the bolts (c). Perform the adjustment by moving the door panel in a right-and-left direction.

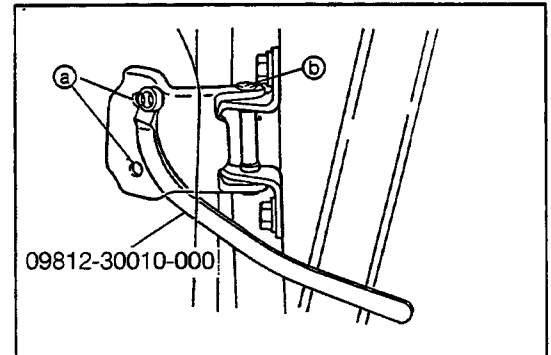


Fig. 9-5

WR-09006

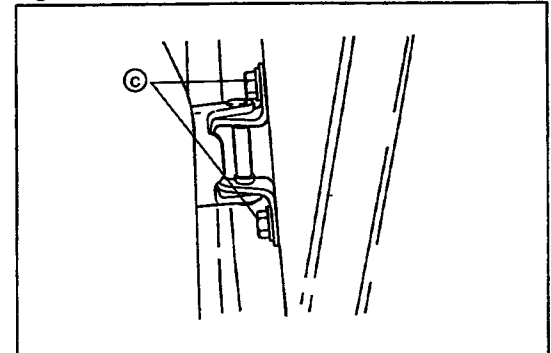
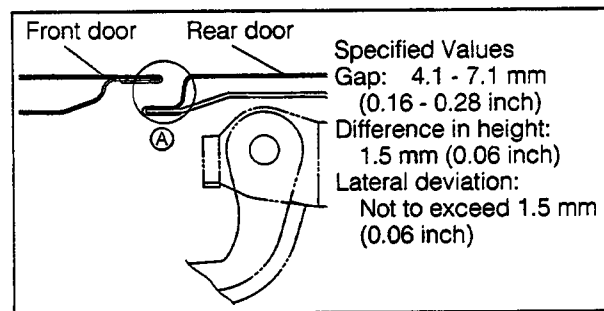


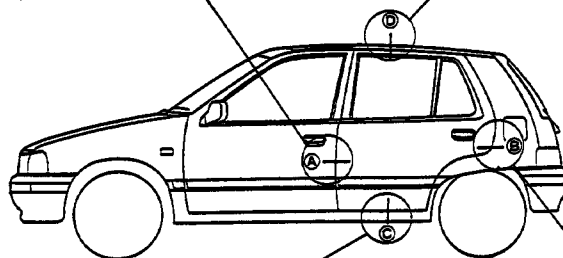
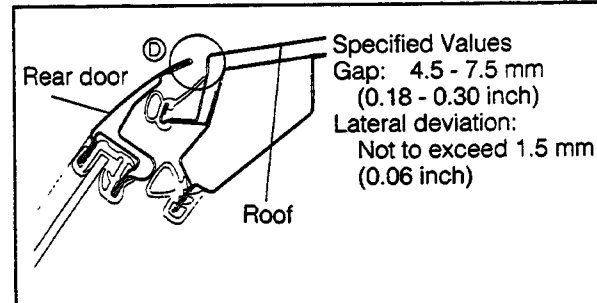
Fig. 9-6

WR-09007

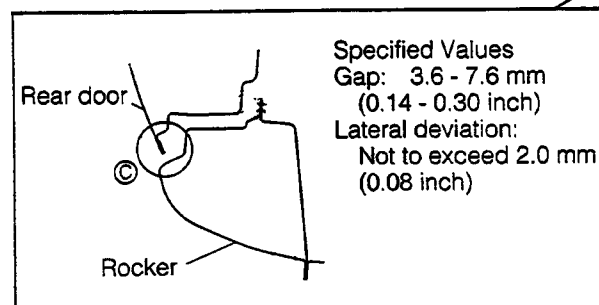
Rear door-to-front door gap



Rear door-to-roof panel gap



Rear door-to-rocker panel gap



Rear door-to-quarter panel gap and difference in height between rear door and quarter panel

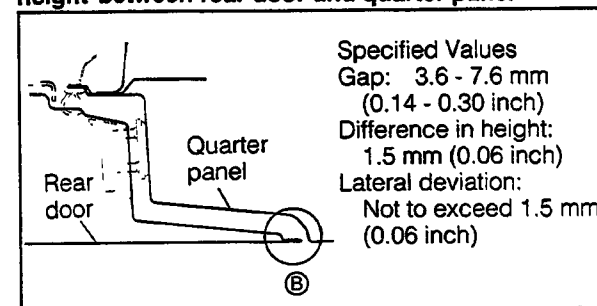


Fig. 9-8

WR-09009

- Adjustments of Rear Door-to-Front Door Gap and Rear Door-to-Quarter Panel Gap
Replace the bolts @. Perform the adjustment by moving the door panel in a fore-and-aft direction.

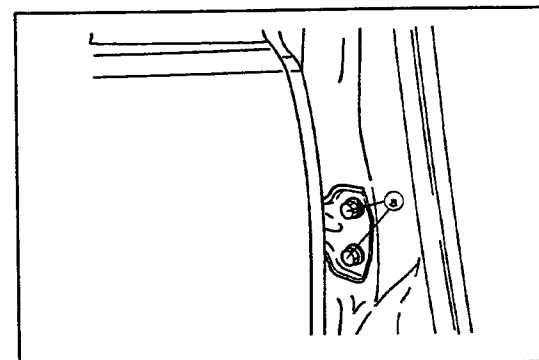


Fig. 9-9

WR-09010

4. Adjustment of Difference in Height between Rear Door and Quarter Panel
Loosen the screws ③ of the lock striker. Perform the adjustment by moving the striker in a right-and-left direction.
5. Door Lock Adjustment
Loosen the screws ③ of the lock striker. Perform the adjustment by tapping the striker lightly.

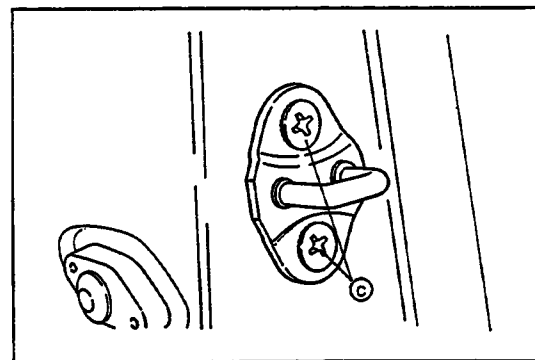
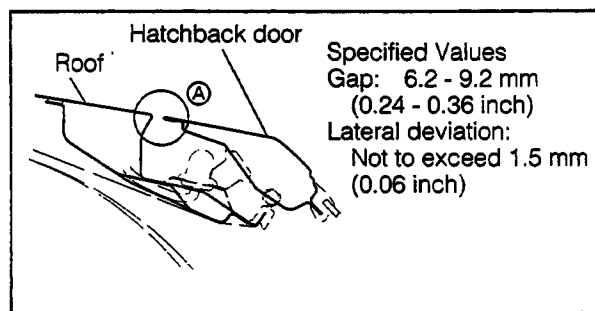


Fig. 9-11

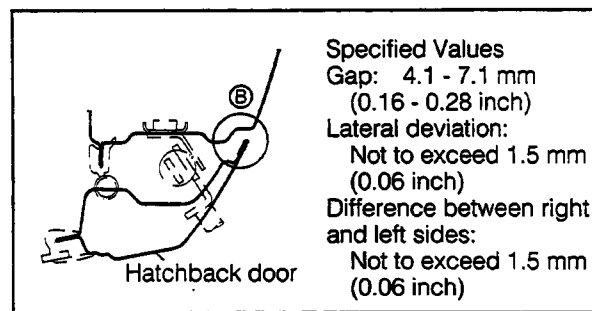
WR-09012

HATCHBACK DOOR ALIGNMENT ADJUSTMENT

Hatchback door-to-roof panel gap



Hatchback door-to-quarter panel gap



Hatchback door-to-rear bumper gap

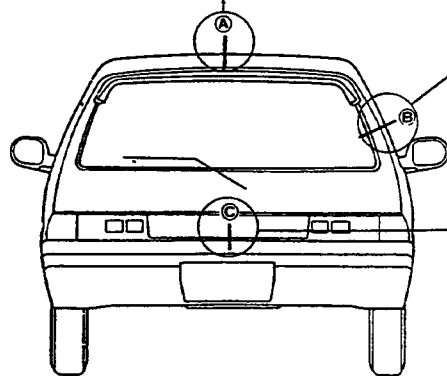
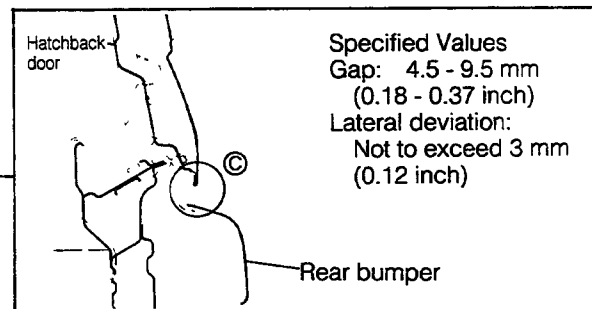


Fig. 9-12

WR-09013

adjustment by tapping the striker lightly.

POWER SUNROOF ALIGNMENT ADJUSTMENT

1. Difference in Height (A) between Sliding Roof and Roof Panel

Specified Value:

Difference in height: 0 - 3 mm (0 - 0.12 inch)

Lateral deviation: Not to exceed 2 mm (0.08 inch)

(How to Move Sunroof Manually)

- (1) Detach the sunroof switch cover.
- (2) Loosen the screw (A) located at the right side of the motor about one turn, using the wrench for exclusive use in the sunroof.
- (3) Move the sunroof by turning the screw (B) at the left side.

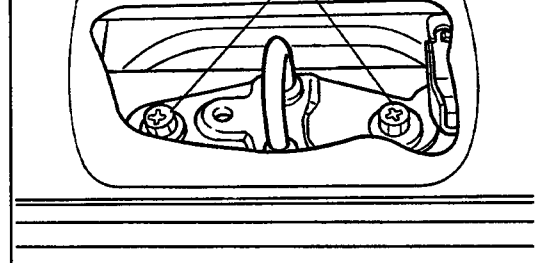


Fig. 9-14

WR-09015

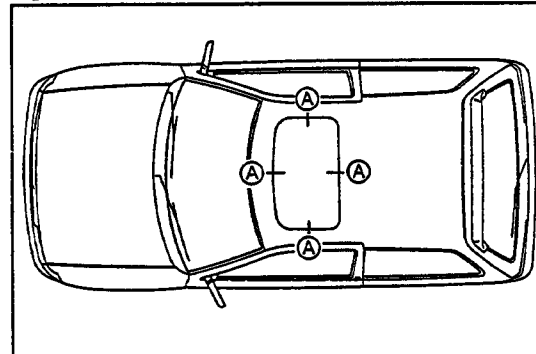


Fig. 9-15

WR-09016

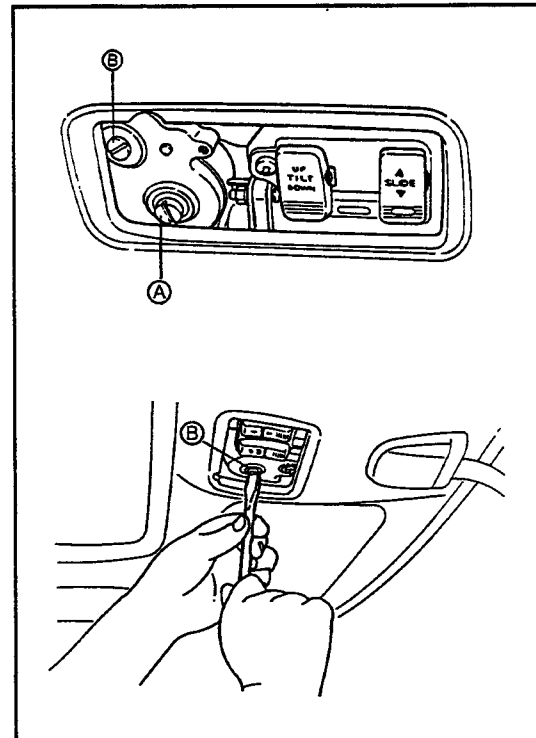


Fig. 9-16

WR-09017

Loosen the attaching bolts of the sliding roof at both sides.
Perform the adjustment by moving the panel.

4. Adjustment of Sliding Roof in a Right-and-Left Direction
Loosen the nut of the rear shoe. Perform the adjustment by moving the sliding roof in a right-and-left direction.

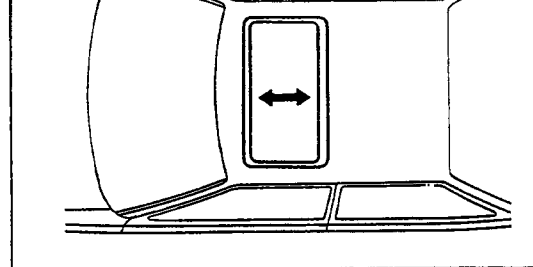


Fig. 9-18

WR-09019

5. Lateral Deviation in Sliding Roof-to-Roof Panel Gap
 - (1) If the sliding roof exhibits a deviation of about 2 mm (0.08 inch), detach the gear and advance the cable at the side having a wider gap one notch.
[One notch of cable: 2.5 mm (0.10 inch)]

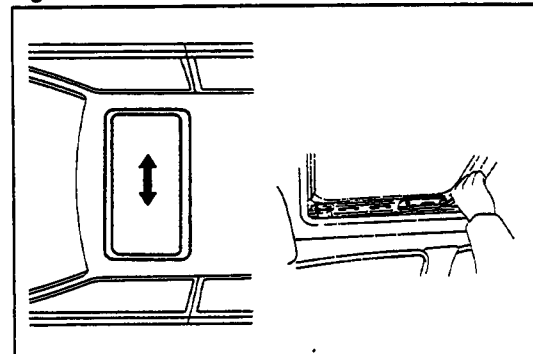


Fig. 9-19

WR-09020

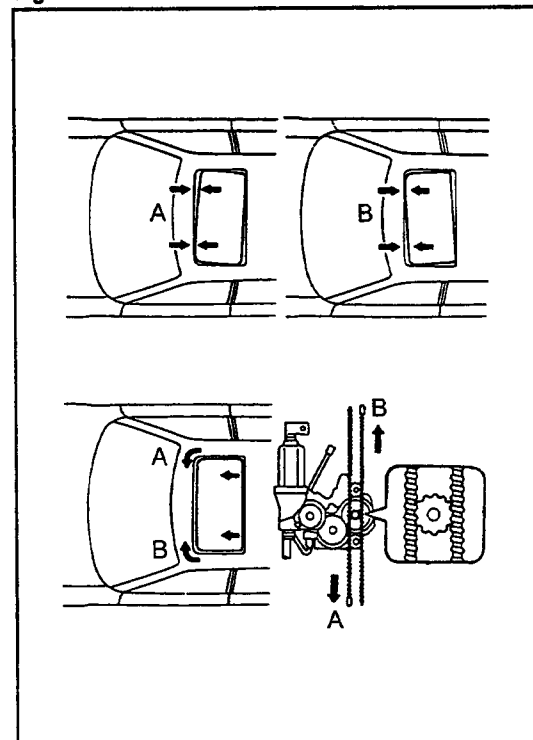


Fig. 9-20

WR-09021

readjust the installation position of the sliding roof to the normal position.

Inspection After Adjustment

1. Ensure that the sliding roof operates from the fully-opened position to the fully-closed position (while the engine is running).
2. Ensure that the sliding roof exhibits no binding or emits no abnormal noise during the operation.
3. Make sure that no water leaks into the vehicle when the sliding roof is fully closed.

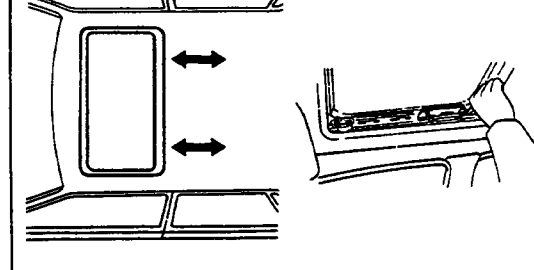
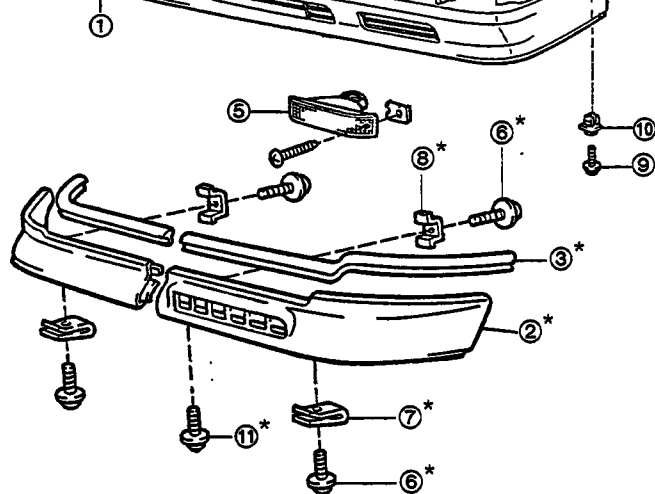


Fig. 9-22

WR-09023



- ① Front bumper S/A
- ② Front spoiler cover
- ③ Protector
- ④ Front bumper arm S/A
- ⑤ Turn signal lamp Ay
- ⑥ Bolt
- ⑦ Clip
- ⑧ Clip
- ⑨ Bolt
- ⑩ Clip
- ⑪ Bolt

* : Front spoiler-equipped vehicle

Fig. 9-23

WR-09024

REMOVAL

1. Remove the bolt attaching the front fender liner to the front bumper subassembly.
2. Remove the bolt attaching the front bumper subassembly to the front fender.
3. Remove the attaching bolts of the front bumper arm subassembly.

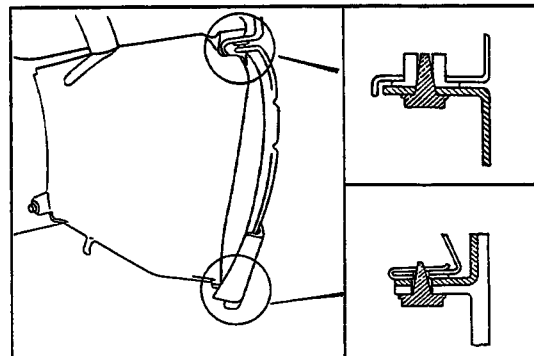


Fig. 9-24

WR-09025

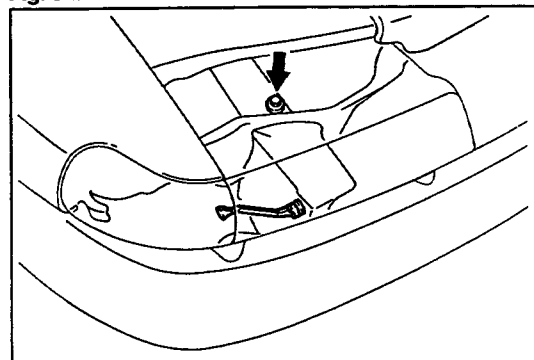


Fig. 9-25

WR-09026

7. Remove the front spoiler cover from the front bumper subassembly. (GTti grade vehicle)

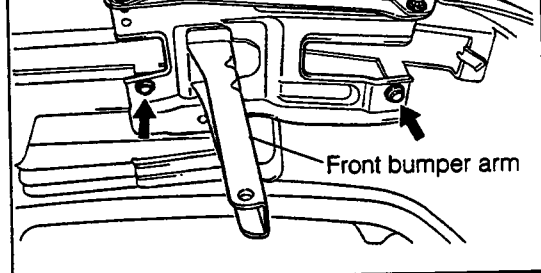


Fig. 9-27

WR-09028

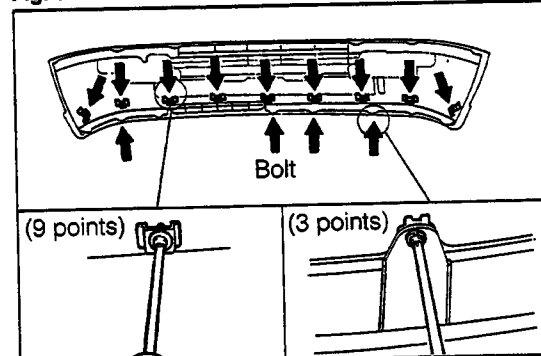


Fig. 9-28

WR-09029

INSTALLATION

1. Install the front spoiler cover to the front bumper subassembly. (GTti grade vehicle)
(See Fig. 9-28.)
2. Install the front bumper arm subassembly to the front bumper subassembly. (See Fig. 9-27.)
3. Install the turn signal lamp assembly to the front bumper subassembly.
4. Connect the coupler for turn signal lamp use. Set it to the holder of the bumper.

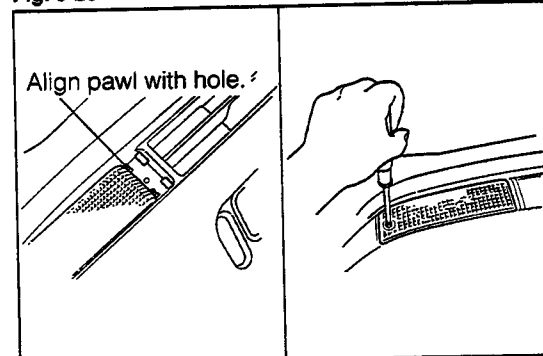


Fig. 9-29

WR-09030

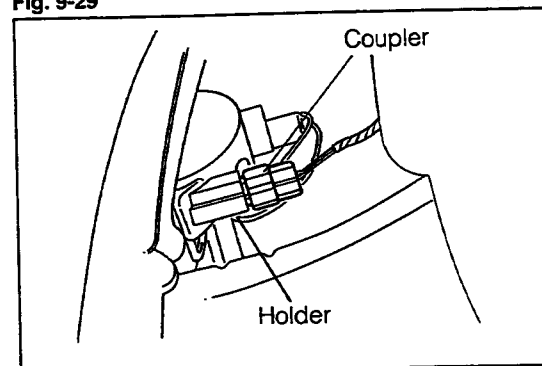


Fig. 9-30

WR-09031

- (3) Install the front fender to the front bumper subassembly with the clip and bolt.
- (4) Tighten the attaching bolts of the front bumper arm subassembly.

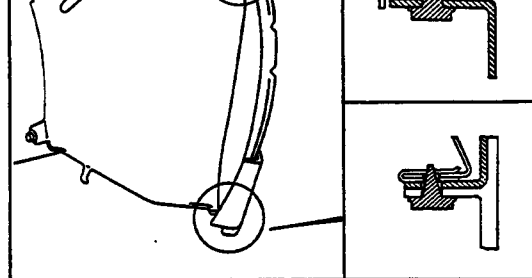
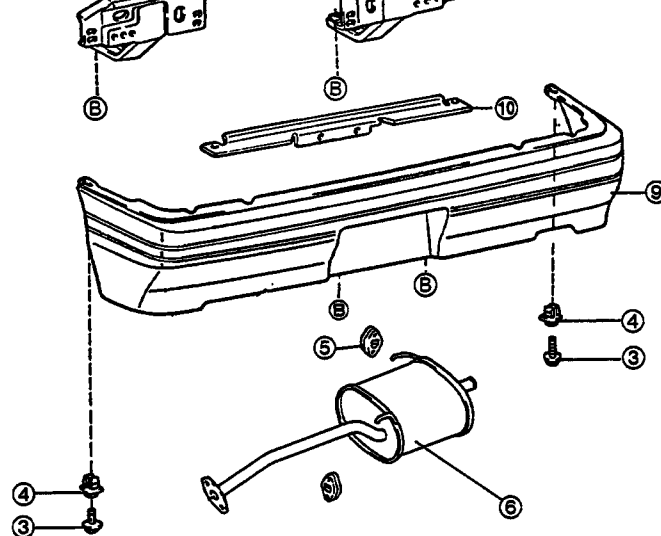


Fig. 9-32

WR-09033



- ① Clip
- ② Lower back trim
- ③ Bolt
- ④ Clip
- ⑤ Exhaust pipe support Ay
- ⑥ Exhaust tail pipe
- ⑦ Rear bumper arm S/A
- ⑧ License plate lamp Ay
- ⑨ Rear bumper S/A
- ⑩ Rear bumper reinforcement

Fig. 9-33

WR-09034

REMOVAL

1. Lower Back Trim Removal

- (1) Detach the clips at four points by pushing the center section [2.5 mm (0.10 inch)] of each clip.
- (2) Remove the lower back trim.

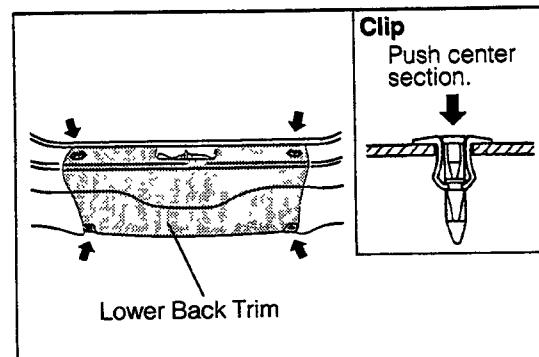


Fig. 9-34

WR-09035

2. Removal of Rear Bumper Subassembly

- (1) Remove the body attaching bolts located at both sides of the rear bumper subassembly.
- (2) Remove the attaching bolts at the central part of the rear bumper.
- (3) Remove the attaching bolts of the rear bumper arm subassembly.

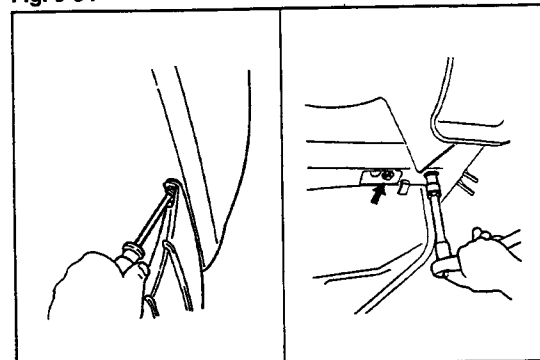


Fig. 9-35

WR-09036

- bly use. Detach the harness clamp.
 (4) Remove the rear bumper subassembly from the vehicle.

3. Remove the license plate lamps assembly from the rear bumper subassembly.
4. Remove the rear bumper arm subassembly from the rear bumper subassembly.

INSTALLATION

1. Install the rear bumper arm subassembly to the rear bumper subassembly.
 (See Fig. 9-39.)
2. Install the license plate lamps assembly to the rear bumper subassembly.
 (See Fig. 9-38.)
3. Install the rear bumper subassembly to the vehicle, as follows:
 - (1) Connect the couplers for license plate lamp use.
 Attach the harness clamp.

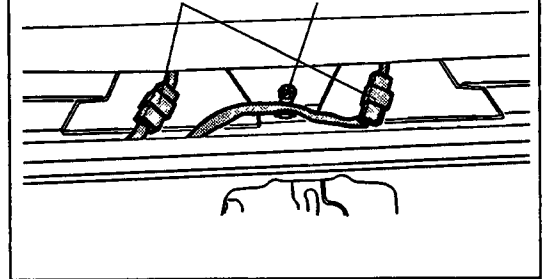


Fig. 9-37

WR-09038

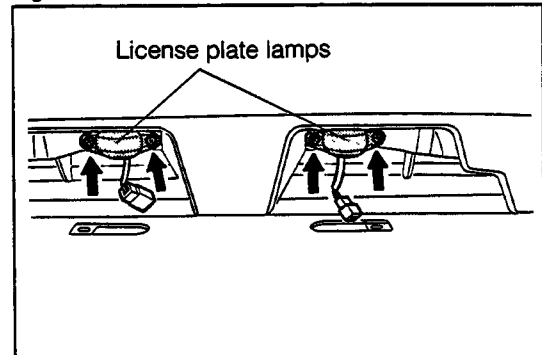


Fig. 9-38

WR-09039

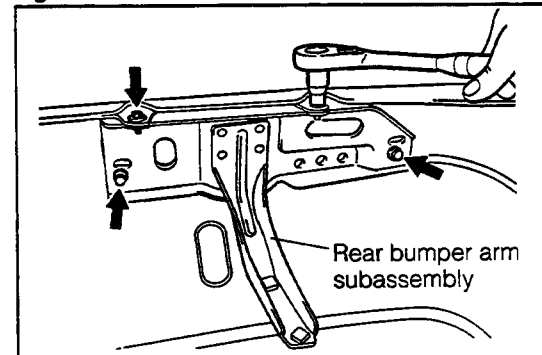


Fig. 9-39

WR-09040

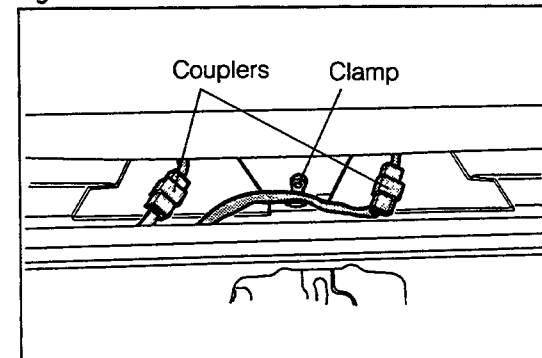


Fig. 9-40

WR-09041



- ① Clip
- ② Radiator grille
- ③ Screw
- ④ Emblem (Turbo vehicle only)
- ⑤ Radiator grille emblem

Fig. 9-42

WR-09043

REMOVAL

1. Remove the radiator grille by detaching the clips at five points.
(Push the pawl section at the upper side of the clip, using a common screwdriver. Then, pull the radiator grille toward your side.)

2. Remove the emblem (TURBO) by loosening the two screws.

NOTE:

The radiator grille emblem is attached to the radiator grille by means of two-faced adhesive tape.

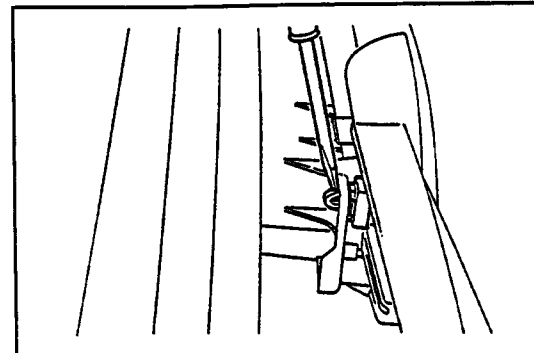


Fig. 9-43

WR-09044

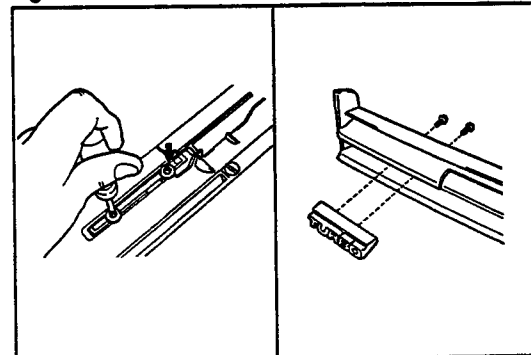


Fig. 9-44

WR-09045

INSTALLATION

1. Install the emblem (TURBO) with the two screws. (See Fig. 9-44.)
2. Radiator grille installation
 - (1) Ensure that five clips are attached to the radiator grille.
 - (2) Install the radiator grille to the vehicle.

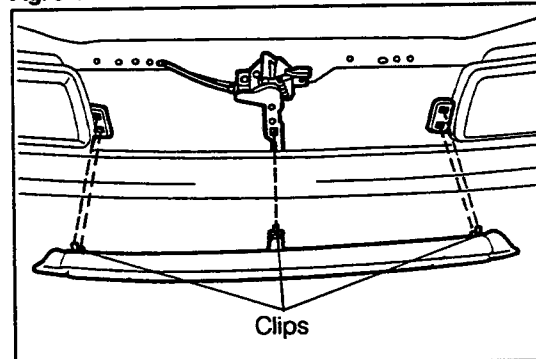


Fig. 9-45

WR-09046



- ① Clip
- ② Clip
- ③ Radiator grille
- ④ Screw

Fig. 9-46

WR-09047

REMOVAL

1. Remove the attaching screw of the radiator grille.
2. Detach the two clips.
To detach the clip, turn the center section of the clip 90 degrees clockwise, using a cross point screwdriver.
3. Detach the three clips, using a screwdriver.
4. Remove the radiator grille.

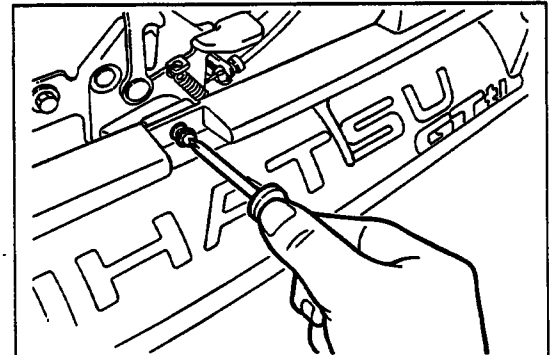


Fig. 9-47

WR-09048

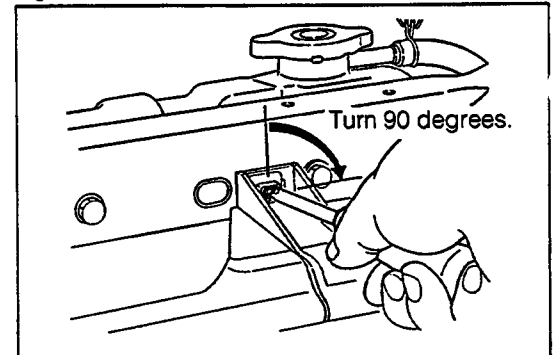


Fig. 9-48

WR-09049

INSTALLATION

1. Install the radiator grille, aligning the positions of the three clips.
2. Install the radiator grille to the vehicle. To attach the clip, turn the center section of the clip 90 degrees counter-clockwise, using a cross point screwdriver.
3. Install the screw at the center section of the radiator grille.

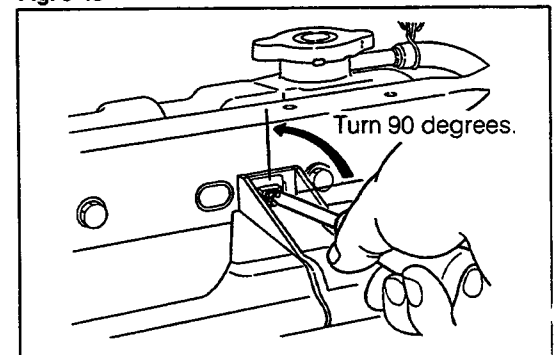
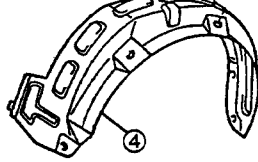


Fig. 9-49

WR-09050



- ① Front fender
- ② Clearance lamp Ay
- ③ Side turn signal lamp Ay
- ④ Front fender liner

Fig. 9-50

WR-09051

REMOVAL

1. Front fender liner

- (1) Remove the three screws at the rear section of the front fender liner.

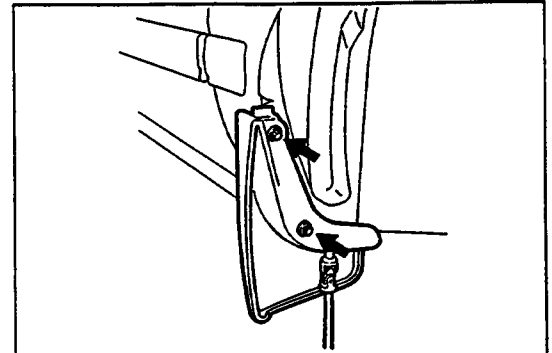


Fig. 9-51

WR-09052

- (2) Cut off the hem of each screw grommet (at three points) at the rear section of the front fender liner.

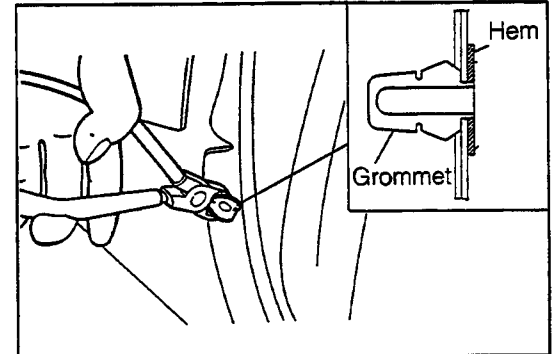


Fig. 9-52

WR-09053

- (3) Remove the screws attaching the front fender liner to the body and bumper.

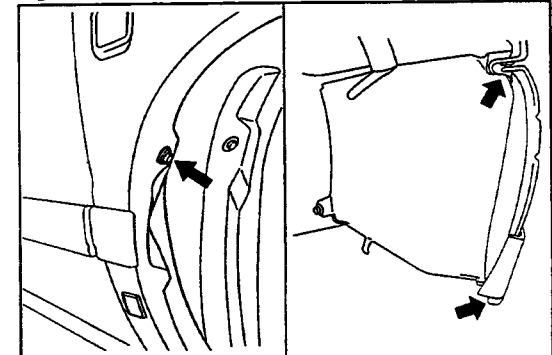


Fig. 9-53

WR-09054

3. Remove the front fender attaching bolts.

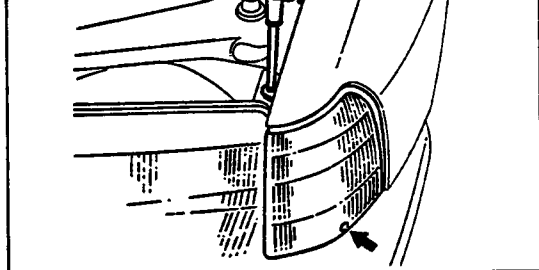


Fig. 9-55

WR-09056

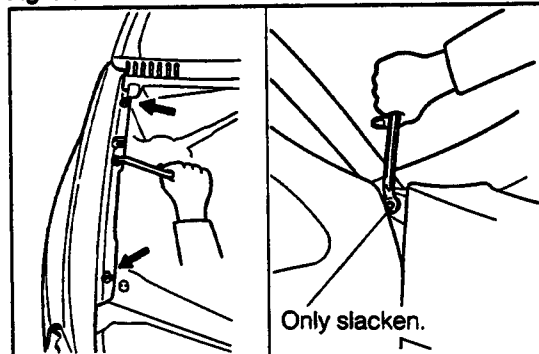


Fig. 9-56

WR-09057

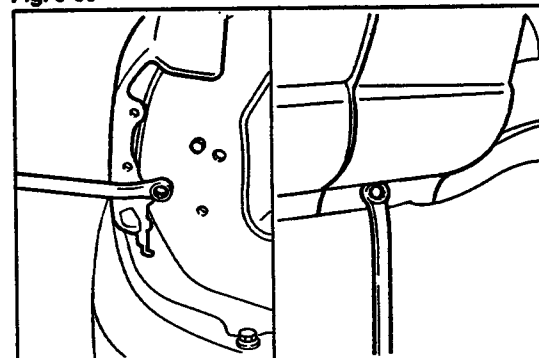


Fig. 9-57

WR-09058

4. Disconnect the coupler for side turn signal lamp use.
5. Remove the side turn signal lamp assembly from the front fender.

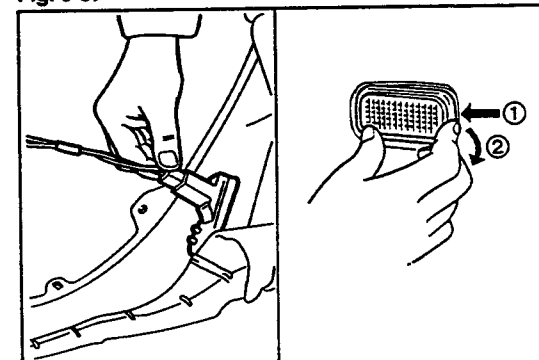


Fig. 9-58

WR-09059

4. Front fender liner installation

- (1) Attach the clips at three points, using a cross point screwdriver.
- (2) Attach the screw at one point, using a cross point screwdriver.

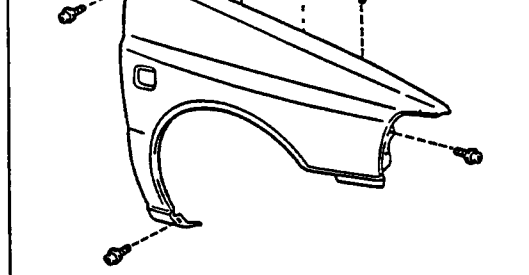


Fig. 9-60

WR-09061

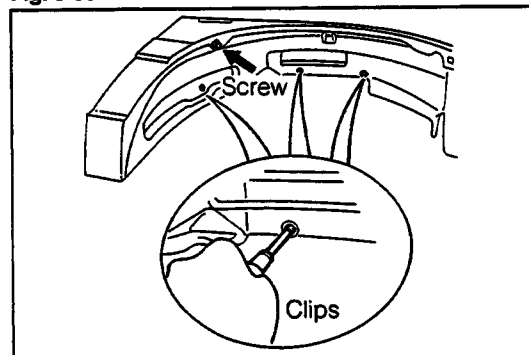


Fig. 9-61

WR-09062

- (3) Attach the three grommets at the rear section of the front fender liner. Install them with the three screws.

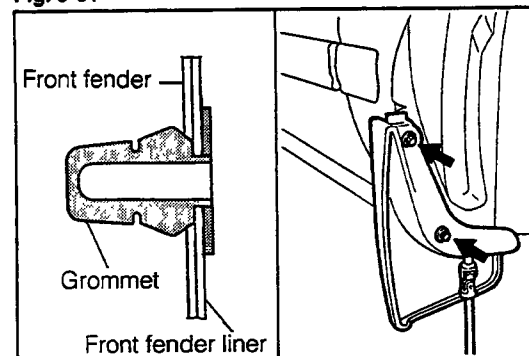


Fig. 9-62

WR-09063

- (4) Install the screws attaching the front fender liner to the body and bumper.

5. Install the clearance lamp with the two screws.
(See Fig. 9-55.)

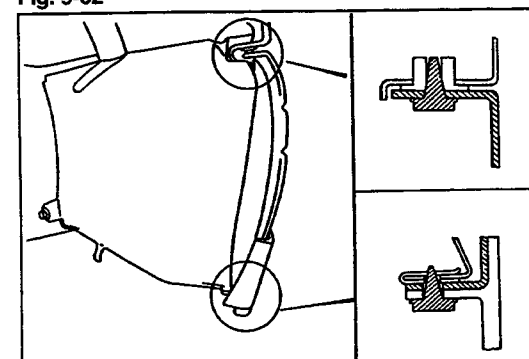
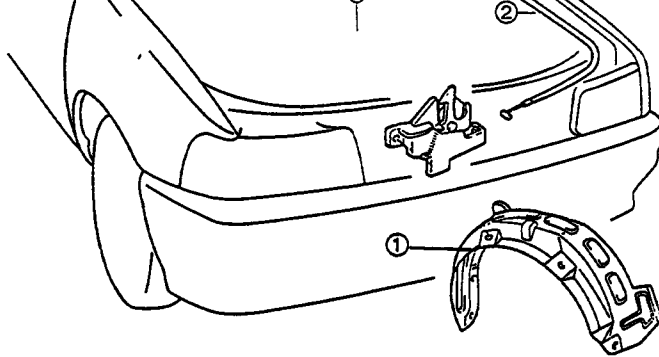


Fig. 9-63

WR-09064



- ① Hood lock control cable Ay
- ② Front fender liner

Fig. 9-64

WR-09065

REMOVAL

1. Remove the front fender liner. (See page 9-17.)
2. Hood lock control cable assembly
 - (1) Remove the cable at the hood lock side.

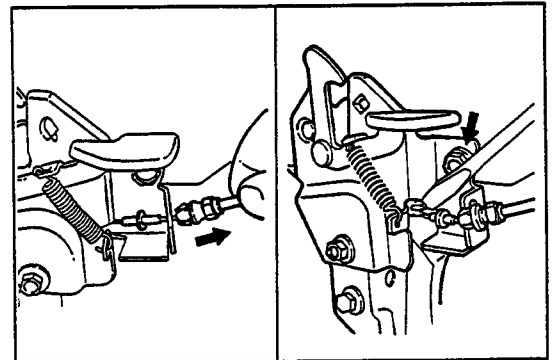


Fig. 9-65

WR-09066

- (2) Remove the hood lock control cable at the interior side.

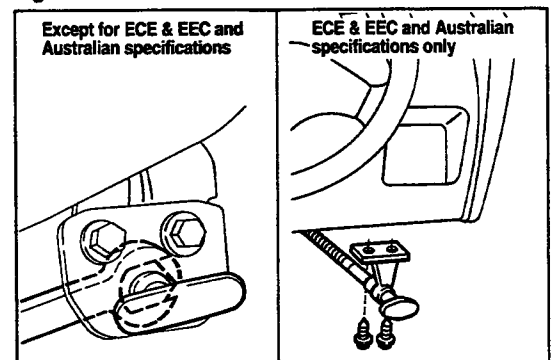


Fig. 9-66

WR-09067

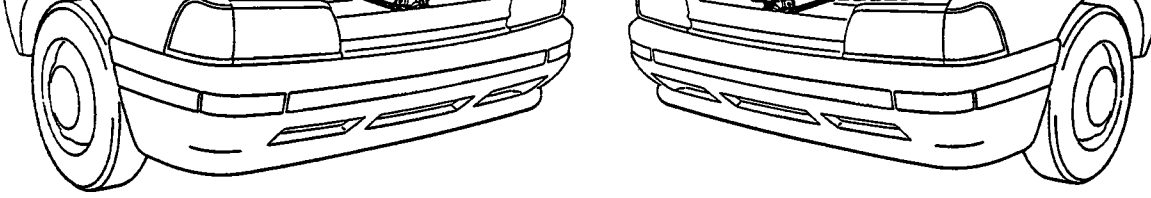


Fig. 9-67

WR-09068

Sucking rubber disc	For use in holding glass during glass installation
Solvent (Alcohol or white gasoline)	For use in cleaning adhesion surface
Eyeleteer	For use in making hole at adhesion layer through which piano wire is passed
Cutter knife	For use in removing (cutting) molding For use in cutting adhesion layer surface and in cleaning glass
Spatula	For use in correcting surface after application of adhesive agent
Tape (Cloth tape)	Prevention of damage to paint surface

WR-09069

★ Contents of Seal Set

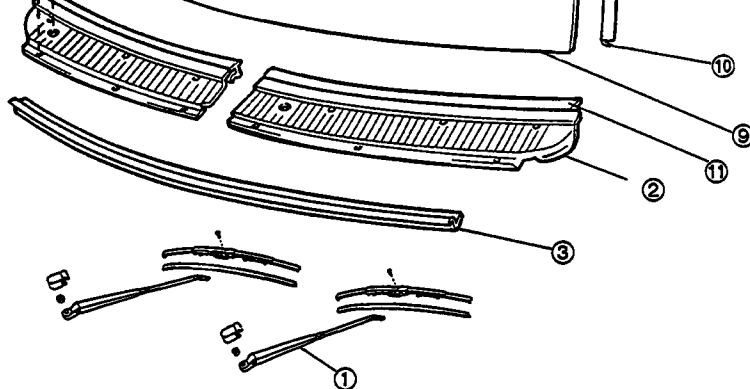
Item	Quantity	Shape
① Adhesive agent (WS100) (300 cc)	1	
② Primer G for glass (20 g)	1	
③ Primer M for body (20 g)	1	
④ Piano wire ($\phi 0.6 \times 1$ m)	1	
⑤ Gauze for primer application	4	
⑥ Nozzle	2	
⑦ Pin set	1	
⑧ Instruction manual	1	

WR-09070

★ Handling Instructions on Seal Set

1. Store the seal set in a dark, cool place. (Be sure to use the seal set before the guarantee date indicated on the box expires.)
2. The adhesive agent and primer will begin curing when they are mixed with or brought into contact with water. Hence, be sure to store them under a sealed condition.
3. Once the adhesive agent and primer are opened, they can not be used again in the future by storing them.
4. If the seal set has been stored at a low temperature, previous to use, be sure to recover the working temperature of the materials.
5. The primer contains a flammable solvent. Hence, keep it away from the fire.

WR-09071



★ : Non-reusable parts

- ① Windshield wiper arm Ay
- ② Cowl top ventilator louver
- ③ Hood-to-cowl top weatherstrip
- ④ Inner rear view mirror Ay
- ⑤ Front pillar garnish
- ⑥ Roof head lining

- ⑦ Windshield outside upper molding
- ⑧ Windshield outside right & left moldings
- ⑨ Windshield glass
- ⑩ Windshield retainer
- ⑪ Protector
- ⑫ Windshield glass adhesive dam

Fig. 9-68

WR-09072

REMOVAL

1. Affix the protective tape to the body.

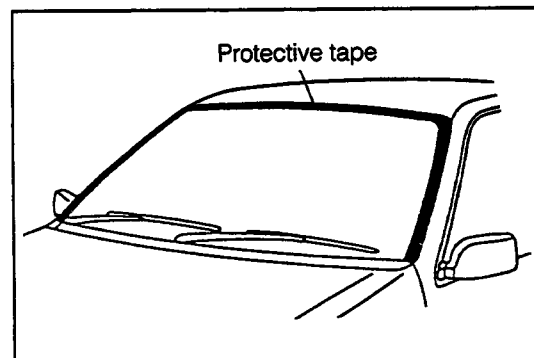


Fig. 9-69

WR-09073

2. Removal of windshield wiper arm assembly
 - (1) Remove the front wiper arm cover.
 - (2) Remove the windshield wiper arm assembly by removing the attaching nut of the front wiper arm assembly.

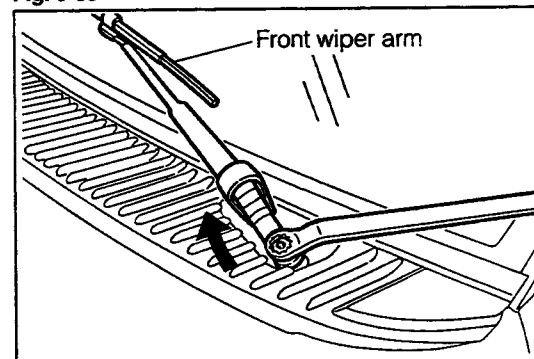


Fig. 9-70

WR-09074

4. Remove the inner rear-view mirror assembly by removing the cover and three screws.

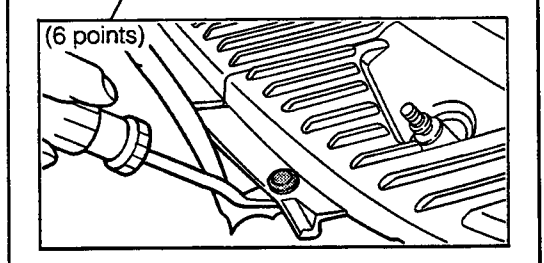


Fig. 9-71

WR-09075

5. Removal of front pillar garnish
- (1) Disengage the clip by prying its fitting position, using a screwdriver wrapped with a protective tape.
 - (2) Remove the front pillar garnish by pulling it up.

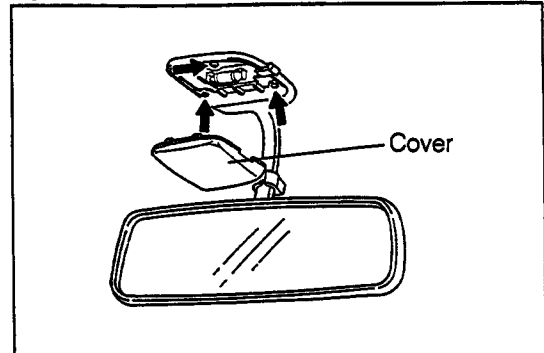


Fig. 9-72

WR-09076

6. Remove the windshield outside upper, right and left moldings.
- Remove the molding by cutting off the leg section of the molding, using a cutter knife.

NOTE:

Be very careful not to scratch the paint finish surface of the body.

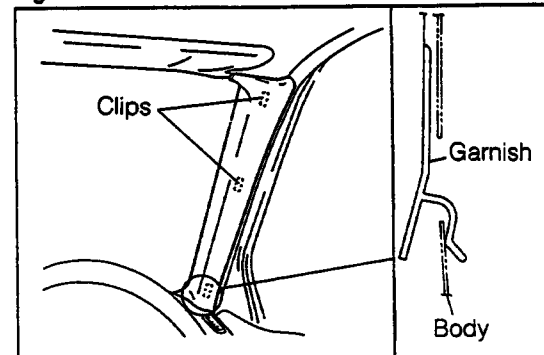


Fig. 9-73

WR-09077

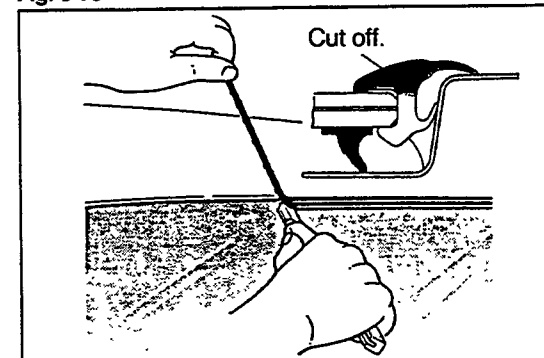


Fig. 9-74

WR-09078

- Care must be exercised not to scratch the interior or exterior appointment trim during the cutting.
- (3) When glass at lower side is separated:
Apply a plastic protective plate, such as B4-sized board for stationery use, on the instrument panel section where the piano wire may contact during the operation.

CHECK AND CLEANING

1. Cleaning of Adhesion Surface of Body

- (1) Smooth any irregularities on the adhesion surface of the body, using a knife or the like. Clean the body surface and adhesion surface with white gasoline.

NOTE:

Do not remove the adhesion layer to such an extent that the body may be exposed. After the adhesion layer has been removed, allow the adhesion surface to dry.

2. Cleaning of Glass Surface

- (1) If the glass is reused, scrape away thoroughly any adhesive agent or dirt which may have collected on the glass. Then, clean the adhesion surface with white gasoline.

NOTE:

As for the laminated glass, there is a possibility that white gasoline may penetrate into the glass from the edges, affecting the intermediate film. Hence, do not use white gasoline excessively during the cleaning.

- (2) When a new glass is used, clean the glass margin 20 - 30 mm (0.79 - 1.18 inches) from the glass edge with white gasoline.

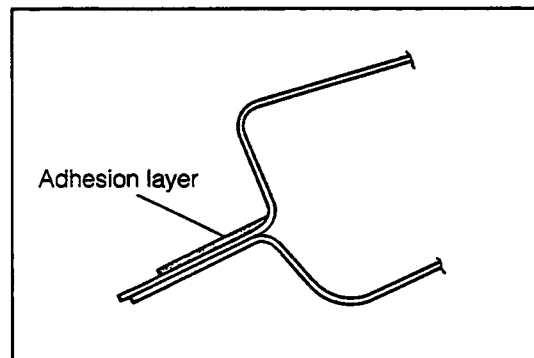


Fig. 9-76

WR-09080

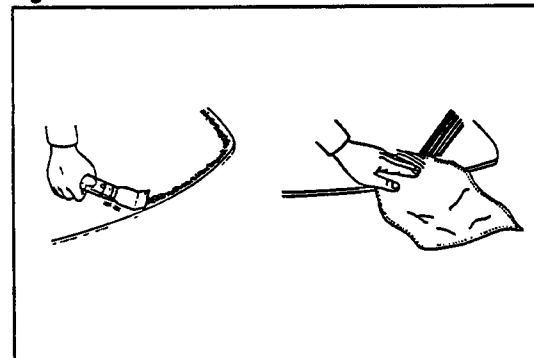


Fig. 9-77

WR-09081

pillar section and cowl section, using a clean brush or gauze.

- (2) Allow these sections to dry at least five minutes after the application.
- (3) Apply the primer G for glass surface use to the glass adhesion surface and glass side surface, using a sponge or gauze.

- (4) After completion of the primer application, install the glass within the time given below.

Specified Time

Primer G: Within 70 Minutes

Primer M: Within 120 Minutes

NOTE:

1. The primer application strengthens the adhesive force. Hence, make sure that the primer is applied without any skipped portion. Also, it should be noted that the adhesive force drops if the primer is applied too thickly.
2. The primer once opened should not be reused.

4. Windshield glass installation

(1) Application of adhesive agent

- Cut the discharge port of the adhesive agent cartridge to the following dimension given in the table below.

Unit: mm (inch)

Presence/nonpresence of adhesion layer at body side	Height of adhesive agent	Discharge port of cartridge
When layer is removed:	8 - 10 (0.31 - 0.39)	10 (0.39)
When layer is not removed:	3.5 - 5 (0.14 - 0.20)	5 (0.20)

- Using a sealant gun or air gun, apply a bead of adhesive agent over the entire periphery of the glass adhesion surface along the dam.

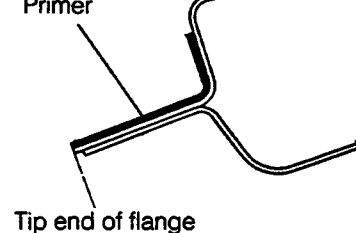


Fig. 9-79

WR-09083

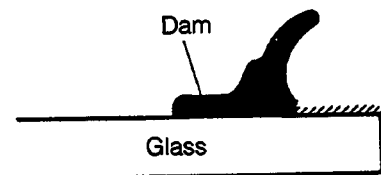


Fig. 9-80

WR-09084

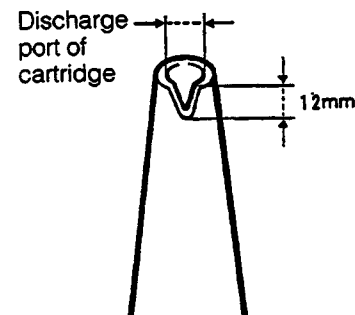


Fig. 9-81

WR-09085

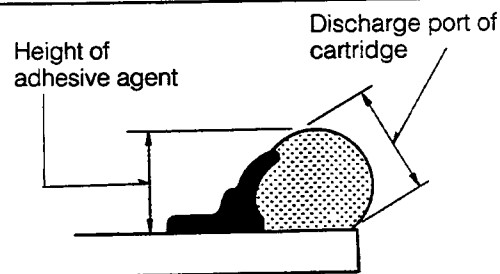


Fig. 9-82

WR-09086

windshield retainers, install the glass on the retainers, using a sucking disc or the like.
Press the glass against the opening flange thoroughly, while pushing the entire surface of the glass lightly.

- (3) Using a spatula, remove any excessive adhesive agent or add the adhesive agent where it is lacking.

NOTE:

Be sure to thoroughly apply the adhesive agent up to the glass edge.

5. Installation of windshield outside moldings
Attach the side moldings (RH & LH) to the upper molding. Then, install them in place.

NOTE:

Remove any excessive adhesive agent on the paint finish surface with white gasoline.

6. Water leakage check and repairs
Perform the water leakage check about one hour after the glass installation. If the water leakage exists, dry the leaky point. Then, repair the leaky point with the adhesive agent or non-drying window sealer.
7. Install the roof headlining.

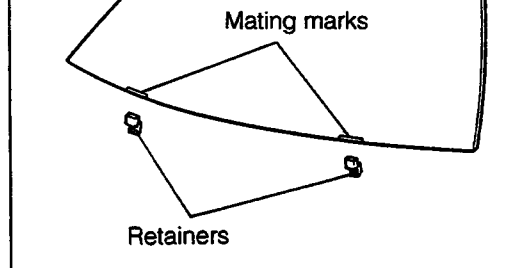


Fig. 9-84

WR-09088

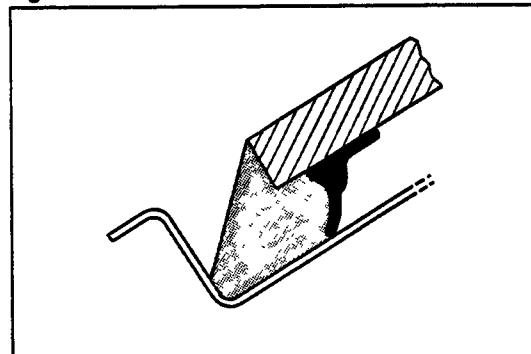


Fig. 9-85

WR-09089

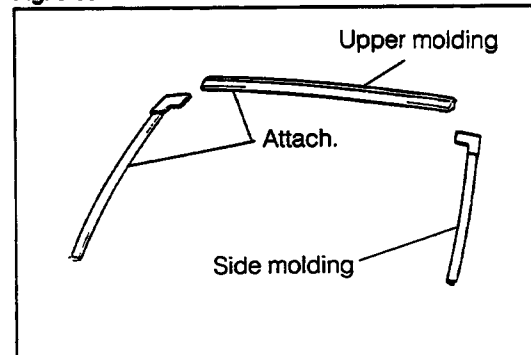


Fig. 9-86

WR-09090

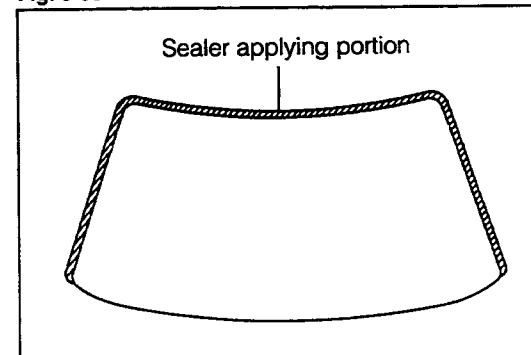


Fig. 9-87

WR-09091

11. Installation of windshield wiper arm assembly

- (1) Operate the wiper motor, until it assumes the automatic stopping position.
- (2) Set the wiper arms at the positions indicated in the right figure.
- (3) Tighten the nut and attach the front wiper arm cover.

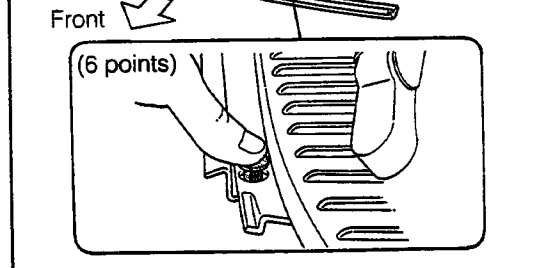


Fig. 9-88

WR-09092

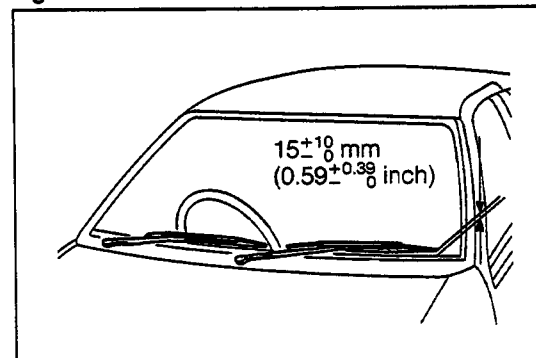


Fig. 9-89

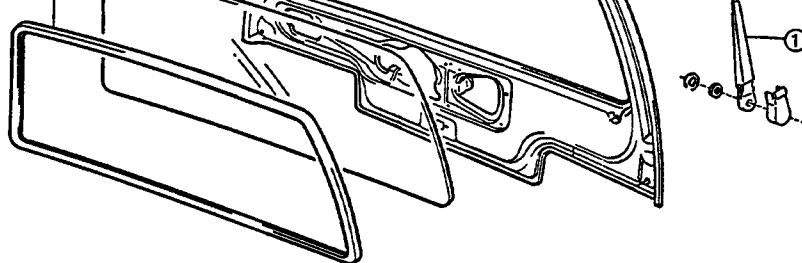
WR-09093

BACK DOOR GLASS

ARTICLES TO BE PREPARED

Part nomenclature	Use
Non-drying window sealer	For use in filling after glass installation or in repairing water leakage
Tape	Prevention of damage to paint finish surface
Brush	For use in applying soap water
Cutter or knife	For use in cutting molding
Operation rope (approx. 3 - 4 mm dia.)	For use in installing glass
Soap water	For use in installing glass
Solvent (Alcohol, white gasoline)	For use in cleaning adhesion surface

WR-09094



- ① Rear wiper arm Ay
- ② Coupler (for defogger use)
- ③ Back door glass
- ④ Back door glass weatherstrip

Fig. 9-90

WR-09095

REMOVAL

- (1) Remove the rear wiper arm assembly. [Rear wiper-equipped vehicle only. (See Fig. 9-166.)]
- (2) Remove the coupler for defogger use. [Defogger-equipped vehicle only.]
- (3) Remove the rear spoiler. [Rear spoiler-equipped vehicle only. (See page 9—36.)]
- (4) Back door glass

Push the lip section of the weatherstrip outward from the body flange, using a common screwdriver or a bamboo spatula. This operation is performed from the vehicle interior.

NOTE:

Be very careful not to scratch the body paint finish surface.

- (5) Remove the back door weatherstrip from the back door glass.

Push lip section outward from body flange.

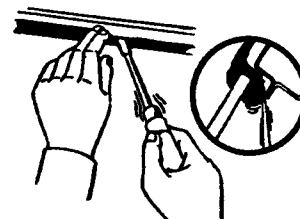


Fig. 9-91

WR-09096

INSPECTION AND CLEANING

Clean the adhesion sections of the glass and body, using a solvent such as alcohol or white gasoline.

WR-09097

of the weatherstrip. Also, apply soap water to the body flange.

- (3) Install the back door glass to the body.

- (4) Hold the one end of the rope that is suspending in the vehicle interior. Pull the rope in such an angle that allows the weatherstrip to cross over the flange. While so doing, pound the surface of the glass at points adjacent to the weatherstrip using one's palm from the vehicle exterior in order that the windshield may be installed into position.
- (5) Pound the surface of the glass using one's palm from the vehicle exterior so that the windshield may be settled in place.
- (6) Application of non-drying window sealer
Working from the outside, apply the non-drying window sealer between the weatherstrip and the glass as well as between the weatherstrip and the body.

NOTE:

Remove any excessive sealer.

- (7) Water leakage check
If water leakage exists, dry the leaky point thoroughly.
Then, fill the leaky point with the non-drying sealer.
3. Connect the coupler for defogger use. [Defogger-equipped vehicle only]
4. Installation of rear wiper arm assembly [Rear wiper-equipped vehicle only]
 - (1) Operate the wiper motor, until it assumes the automatic stopping position.
 - (2) Install the rear wiper arm, aligning the arm with the bottom line of the defogger pattern.

Installation position:
Bottom line of pattern ± 5 mm (± 0.2 inch)

 - (3) Install the wiper link cap.
5. Install the rear spoiler. [Rear spoiler-equipped vehicle only. (See page 9-37.)]

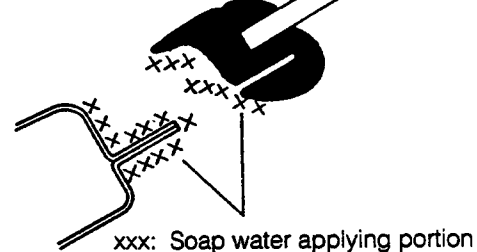


Fig. 9-93

WR-09099

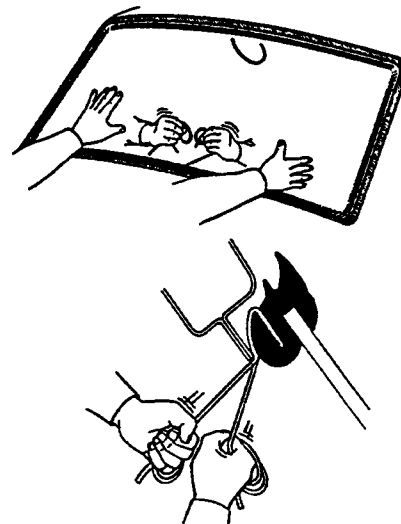


Fig. 9-94

WR-09100

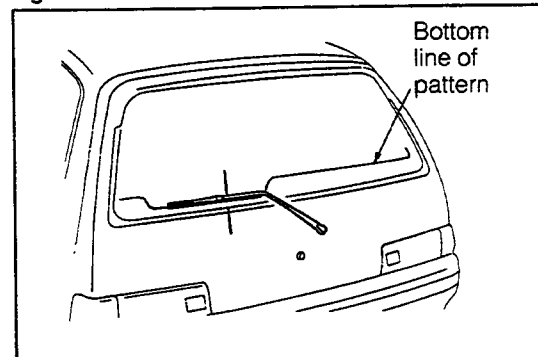
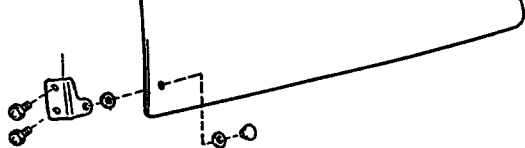


Fig. 9-95

WR-09101



- ① Screw with washer
- ② Screw with washer
- ③ Quarter window Ay
- ④ Quarter window lock Ay
- ⑤ Quarter window hinge No.1

Fig. 9-96

WR-09102

REMOVAL

1. Removal of quarter window assembly
 - (1) Remove the screws attaching the quarter window lock to the body.
 - (2) Remove the screws attaching the quarter window hinge No.1 to the body.
 - (3) Remove the quarter window assembly from the body.
2. Remove the quarter window lock and quarter window hinge No.1 from the quarter window assembly.

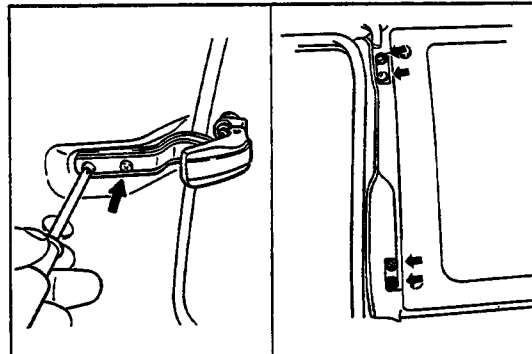


Fig. 9-97

WR-09103

INSTALLATION

1. Install the quarter window lock and quarter window hinge No.1 to the quarter window assembly.
2. Install the quarter window assembly to the body, as follows:
 - (1) Install the quarter window hinge No.1 to the body with the screws.
 - (2) Install the quarter window lock to the body with the screws.

NOTE:

When tightening the screw, fill the nut with an adhesive agent (instantaneous adhesive agent).

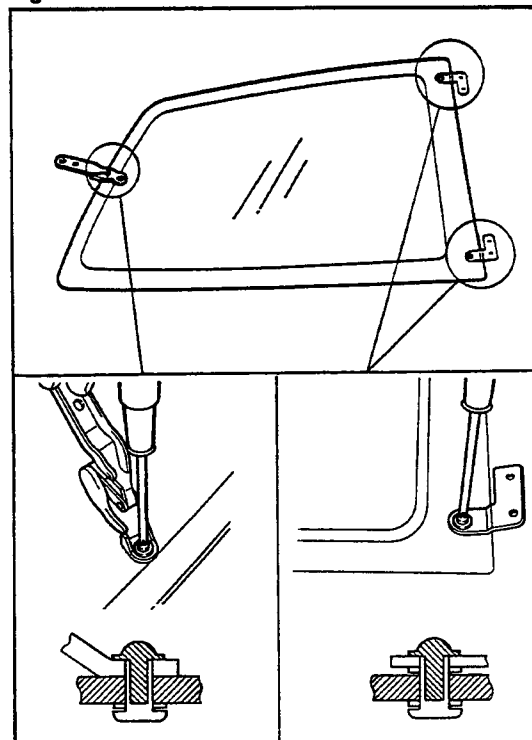
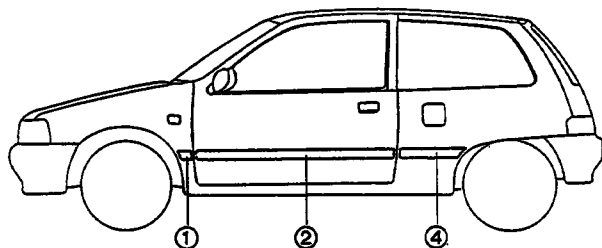


Fig. 9-98

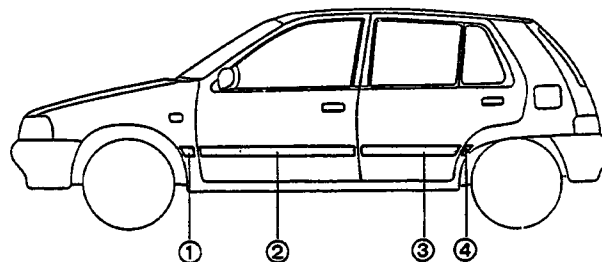
WR-09104

3-door model



- ① Front fender outside molding
- ② Front door outside molding

5-door model



- ③ Rear door outside molding
- ④ Quarter outside molding

Fig. 9-99

WR-09106

REMOVAL

1. Removal of Outside Moldings

- (1) Raise the lower end of the molding. Insert a plastic spatula into that section.

- (2) While raising the lower side of the molding, remove the molding with a plastic spatula.

NOTE:

Be very careful not to scratch the body.

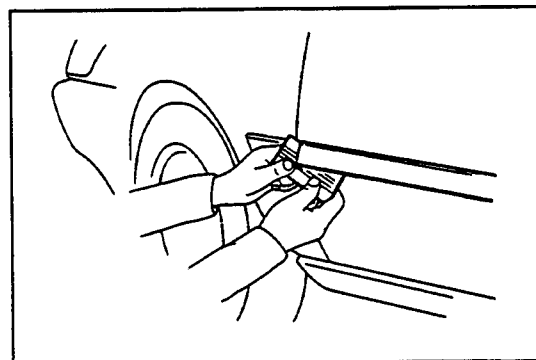


Fig. 9-100

WR-09107

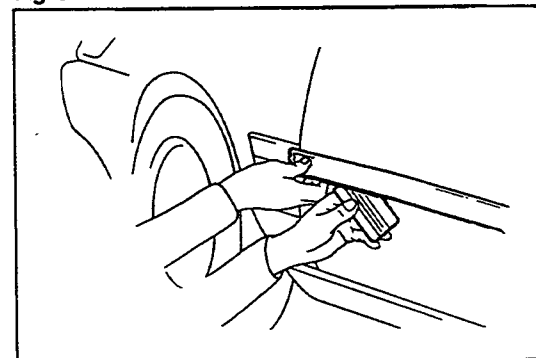


Fig. 9-101

WR-09108

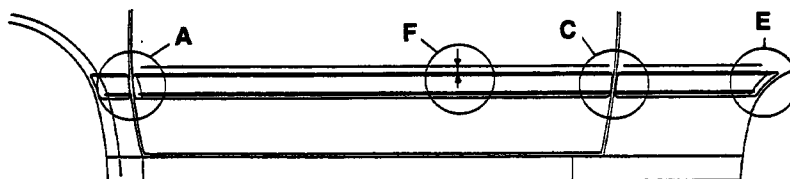
INSPECTION AND CLEANING

Remove any adhesive agent remaining on the body surface with a cloth dampened with white gasoline.

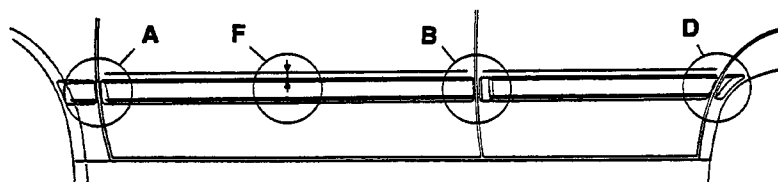
WR-09109

(3) Position the molding at the specified points of the body. Press the molding lightly.

3-door model



5-door model



Unit: mm (inch)

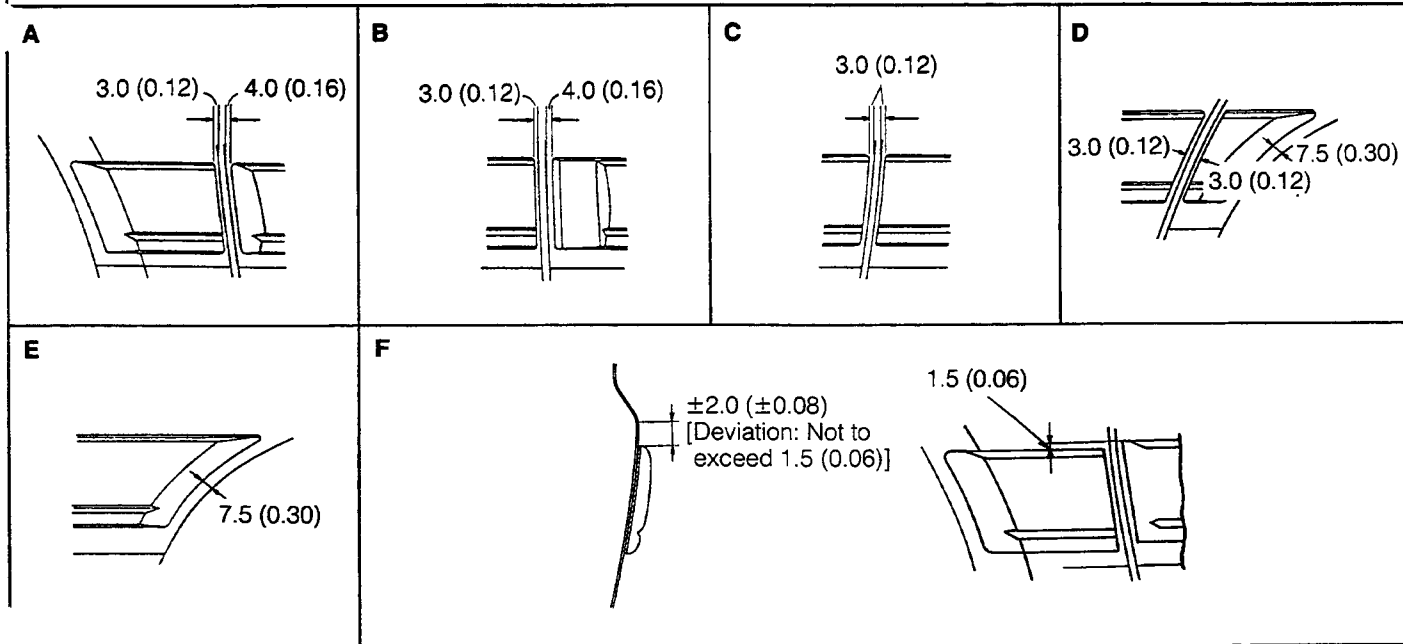
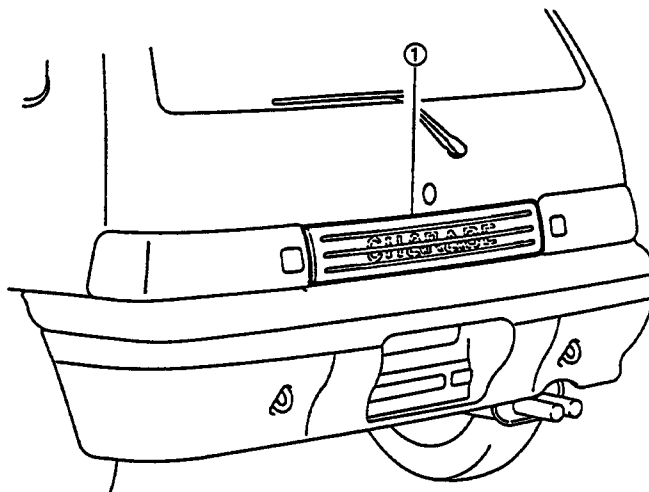


Fig. 9-103



① Back door outside garnish S/A

Fig. 9-104

WR-09114

REMOVAL

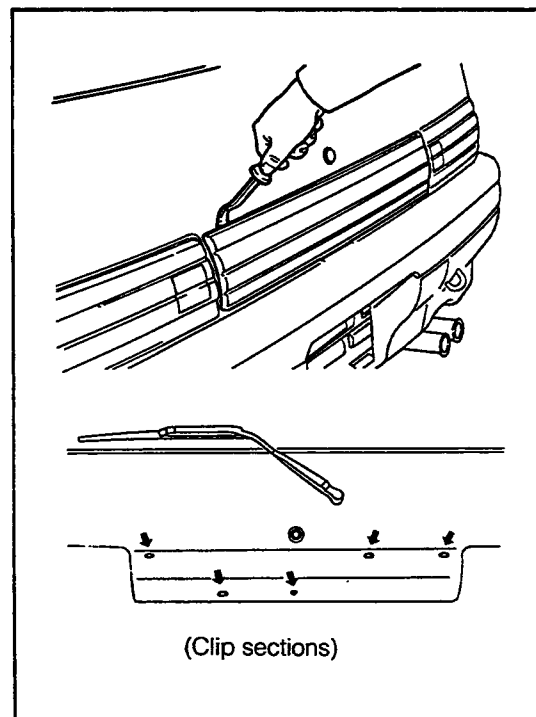
1. Detach the clip sections from the body, using a screwdriver type clip clamping tool wrapped with a protective tape.
2. Remove the garnish slowly, starting from the end of it.

NOTE:

Remove the garnish slowly, for it has been attached by a two-faced adhesive tape.

INSTALLATION

1. Clean the body surface with alcohol or white gasoline.
2. Install the garnish and press the two-faced adhesive tape section.



(Clip sections)

Fig. 9-105

WR-09115

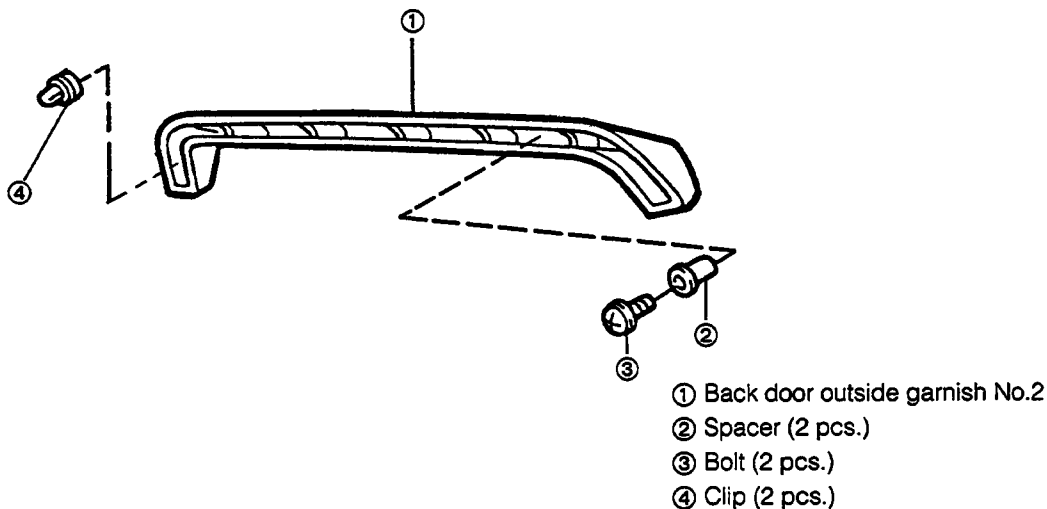


Fig. 9-106

WR-09117

REMOVAL

1. Remove the attaching bolt of the back door outside garnish No.2, using a socket wrench.

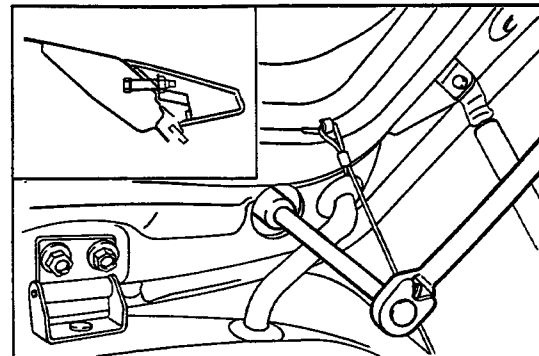


Fig. 9-107

WR-09118

2. Back door outside garnish No.2

- (1) Detach the clip sections from the body, using a screwdriver type clip clamping tool wrapped with a protective tape.

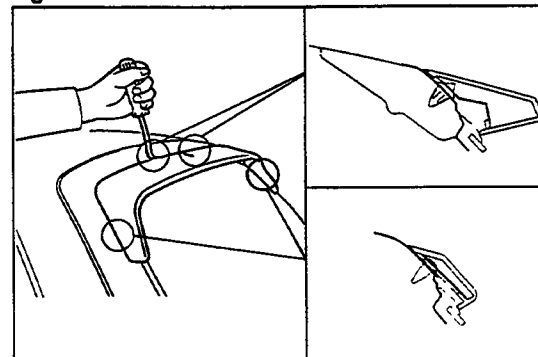


Fig. 9-108

WR-09119

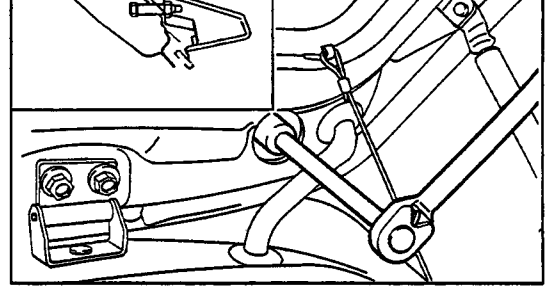
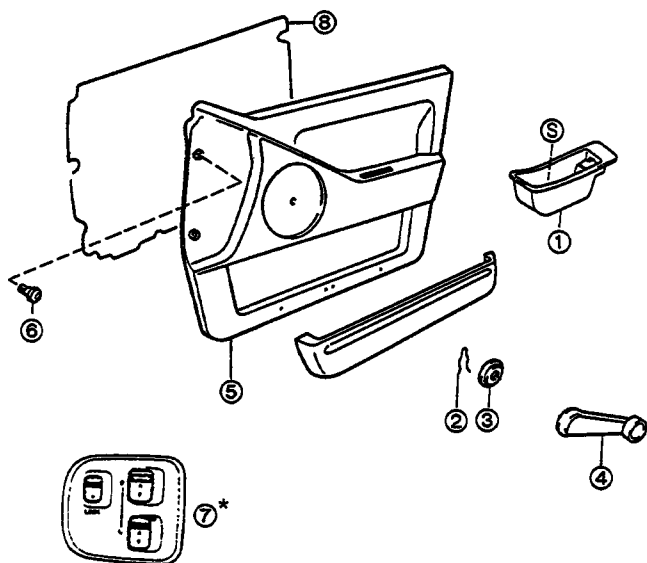


Fig. 9-110

WR-09121

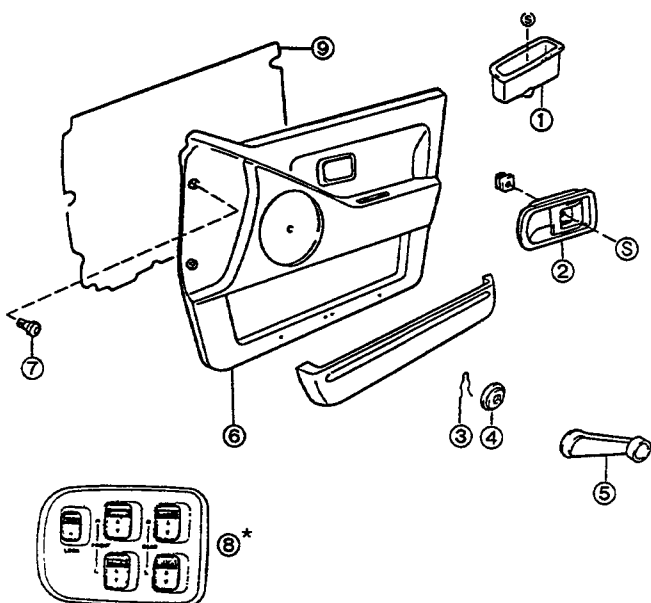
DOOR TRIM AND SERVICE HOLE COVER COMPONENTS

3-door model



- ① Door pull handle
- ② Shaft snap ring
- ③ Regulator inside handle plate
- ④ Front door window regulator handle Ay
- ⑤ Front door trim panel Ay
- ⑥ Clip
- ⑦ Power window master switch Ay
- ⑧ Front door service hole cover S/A

5-door model



- ① Door pull handle
- ② Door inside handle Ay
- ③ Shaft snap ring
- ④ Regulator inside handle plate
- ⑤ Front door window regulator handle Ay
- ⑥ Front door trim panel Ay
- ⑦ Clip
- ⑧ Power window master switch Ay
- ⑨ Front door service hole cover S/A

* : Power window-equipped vehicle only

Fig. 9-111

WR-09123

- (2) Remove the front door window regulator handle assembly and regulator inside handle plate.

4. Detach the two clips by pushing the center section of each clip.

NOTE:

Never push the center section excessively. If pushed excessively, the center section of the clip may fall off.

5. Removal of front door trim panel assembly

- (1) Remove the front door trim panel assembly, using the clip clamping tool.
- (2) Remove the coupler for power window use. (Power window-equipped vehicle only)
- (3) Remove the power window master switch assembly from the front door trim panel assembly. (Power window-equipped vehicle only)

6. Remove the door inside handle assembly and bracket.

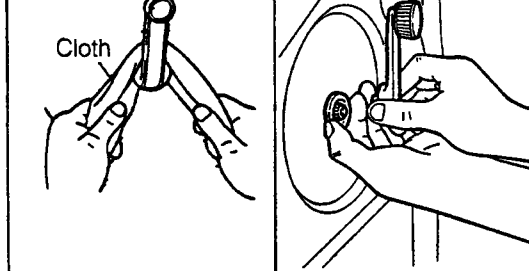


Fig. 9-113

WR-09125

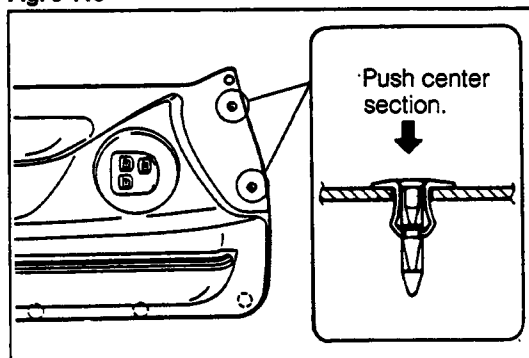


Fig. 9-114

WR-09126

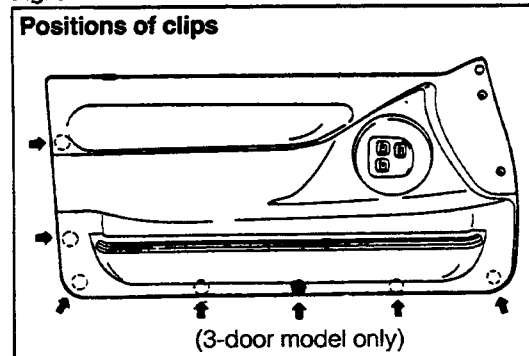


Fig. 9-115

WR-09127

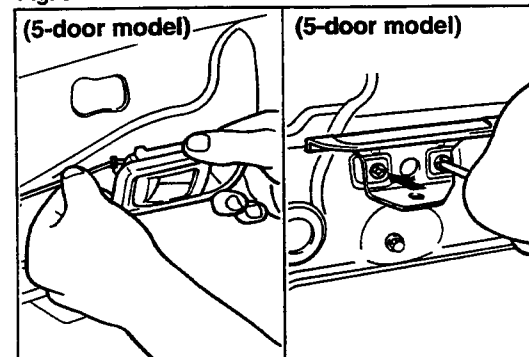


Fig. 9-116

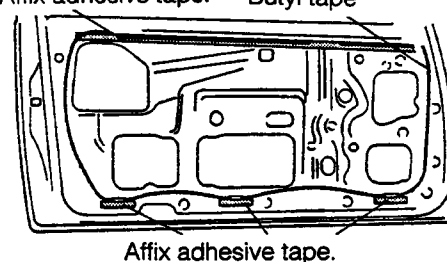
WR-09128

- (1) Affix butyl tape to the points indicated in the right figure.
- (2) Insert the cover at the lower end into the aperture at the lower side of the door panel. Affix adhesive tape on the holes.

NOTE:

1. Never plug the clip hole of the door trim with adhesive tape.
 2. Replace any service hole cover which exhibits rupture.
2. Install the door inside handle assembly and bracket.
(5-door model: See Fig. 9-116.)
(3-door model: See Fig. 9-117.)

3. Installation of front door trim panel assembly
 - (1) Ensure that the clips are attached to the front door trim panel assembly.
 - (2) Install the power window master switch assembly to the front door trim panel assembly. (Power window-equipped vehicle only)
 - (3) Connect the coupler for power window use. (Power window-equipped vehicle only)
 - (4) Install the front door trim panel assembly to the front door.



5-door model

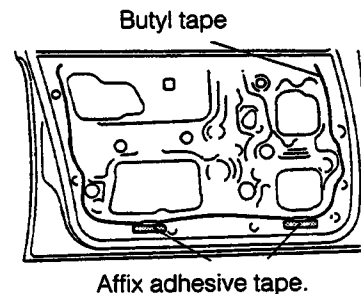
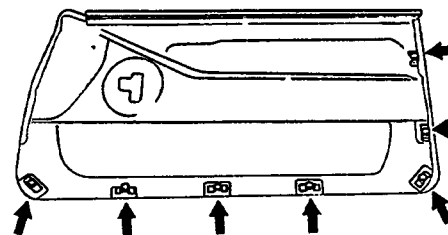


Fig. 9-118

WR-09130

3-door model



5-door model

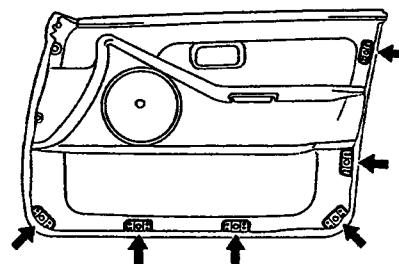


Fig. 9-119

WR-09131

- (1) Close the door glass fully.
- (2) Set the regulator inside handle plate to the trim side.
- (3) Set the shaft snap ring to the front door window regulator handle.

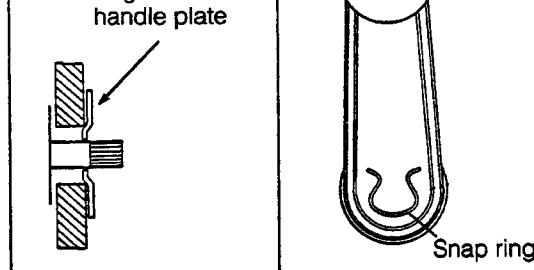


Fig. 9-121

WR-09133

- (4) Install the front door window regulator handle in the angle specified in the right figure.

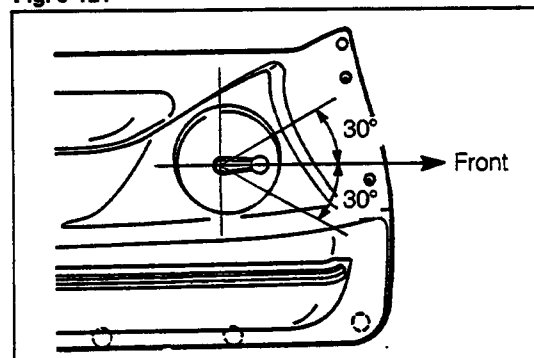


Fig. 9-122

WR-09134

5. Install the door pull handle.
(3-door model: two screws, 5-door model: one screw)
6. Install the door inside handle assembly. (5-door model only)

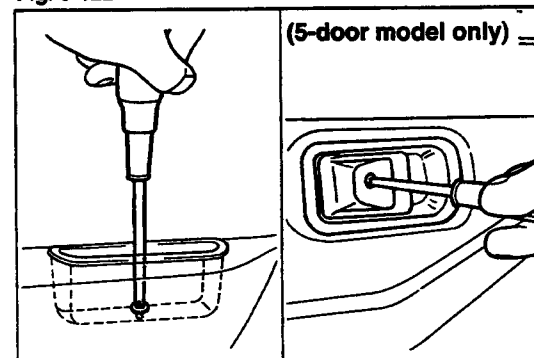


Fig. 9-123

WR-09135

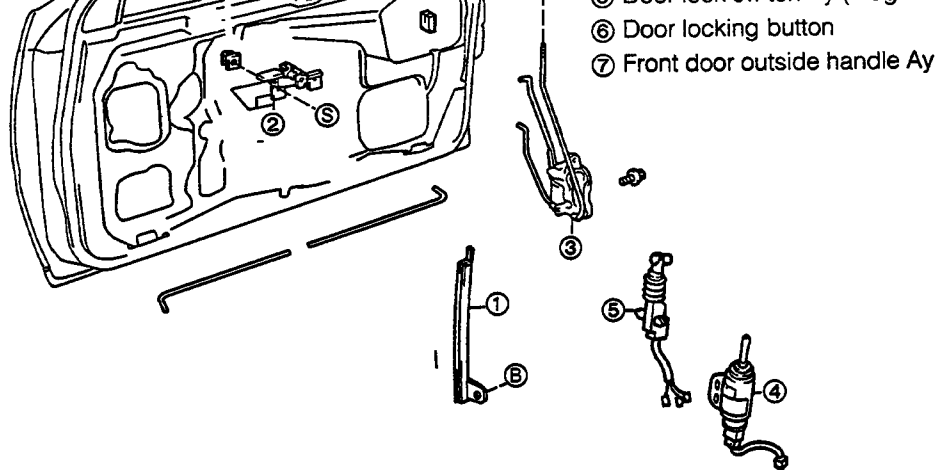


Fig. 9-124

WR-09136

REMOVAL

1. Remove the door trim-related parts. (See page 9-39.)
2. Remove the front door front lower frame subassembly. (3-door model only)

3. Removal of front door lock assembly
 - (1) Detach the door locking button from the front door lock assembly.
 - (2) Remove the link-related parts.
 - (3) Remove the three attaching screws of the front door lock assembly. (In the case of the passenger side on the magnetic lock-equipped vehicle, remove the bolt (A).)
 - (4) Take out the front door lock assembly from the front door.

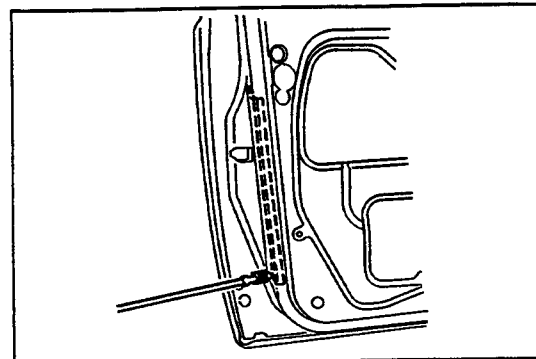


Fig. 9-125

WR-09137

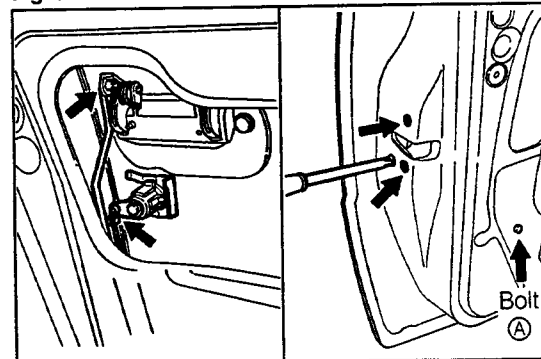


Fig. 9-126

WR-09138

5. Detach the clip. Remove the key cylinder.

INSTALLATION

1. Install the front door outside handle assembly with the two bolts. (See Fig. 9-128.)
2. Install the key cylinder into position with the clip. (See Fig. 9-128.)
3. Installation of front door lock assembly
 - (1) Apply MP grease to the sliding sections.
 - (2) Install the door lock switch assembly in the front door lock assembly. (Driver's seat only on the magnetic lock-equipped vehicle)
 - (3) Install the door control solenoid assembly in the front door lock assembly (Sides other than the driver's seat on the magnetic lock-equipped vehicle)
 - (4) Place the solenoid in a locking state. Adjust the solenoid assembly so that the clearance may become zero, as indicated in the right figure. Tighten the solenoid assembly securely. (Magnetic lock-equipped vehicle only)
- (5) Install the front door lock assembly in the front door, using the three screws. (In the case of the passenger side on the magnetic lock-equipped vehicle, install the bolt (A).)

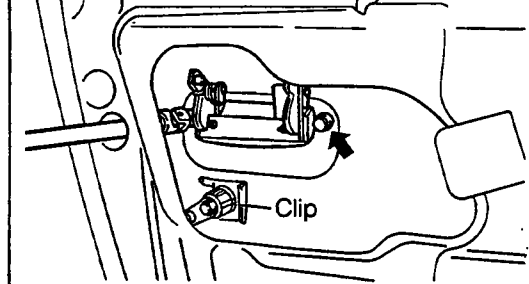


Fig. 9-128

WR-09140

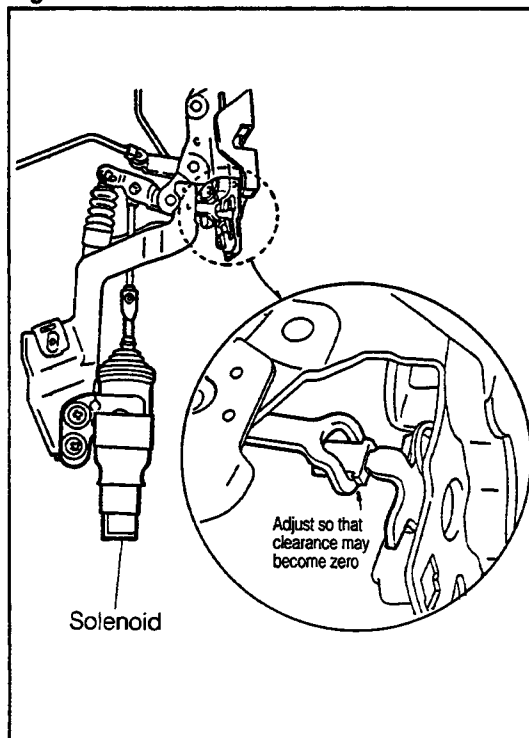


Fig. 9-129

WR-09141

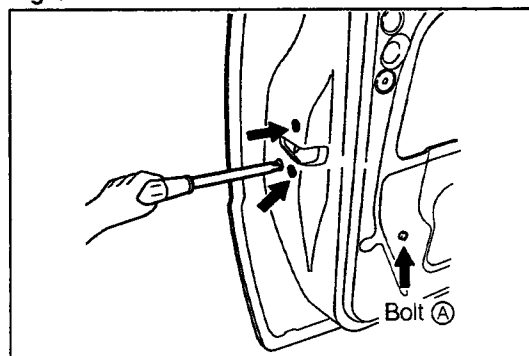
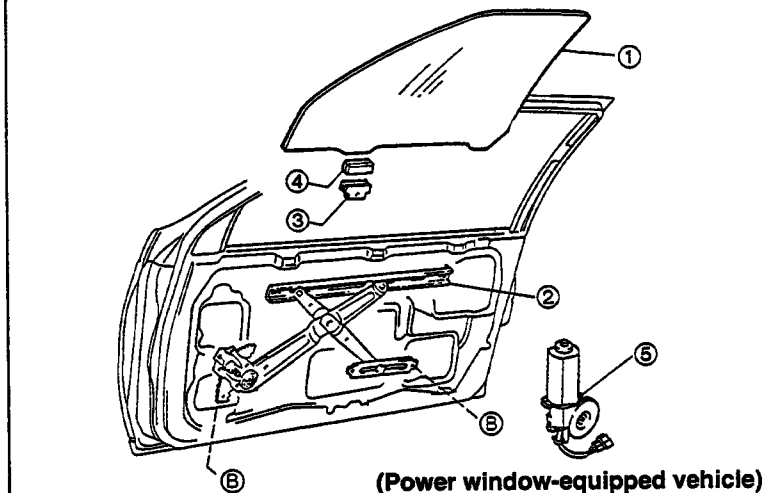


Fig. 9-130

WR-09142



- ① Front door glass S/A
- ② Front door window regulator Ay
- ③ Door window glass holder
- ④ Door window glass holder cushion
- ⑤ Power window motor

Fig. 9-132

WR-09144

REMOVAL

1. Remove the door trim-related parts. (See page 9-39.)
2. Remove the two attaching bolts of the front door glass subassembly. Remove the front door glass subassembly from the front door.
3. Remove the door window glass holder & cushion from the front door glass subassembly.

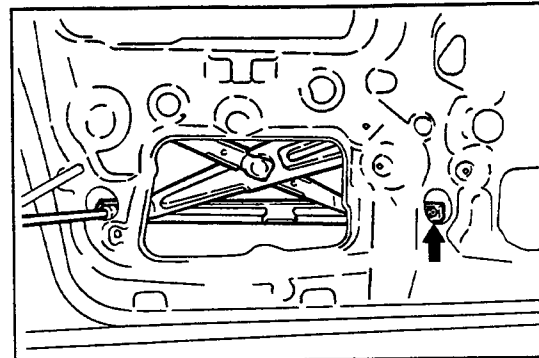


Fig. 9-133

WR-09145

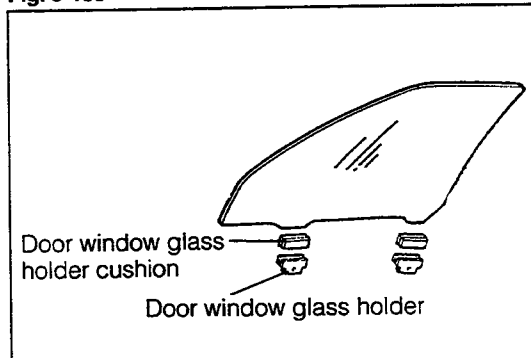


Fig. 9-134

WR-09146

5. Remove the power window motor from the front door window regulator assembly. (Power window-equipped vehicle)
6. Remove the front door glass outer weatherstrip and front door glass run.
7. Remove the front door front and rear lower frame sub-assembly.

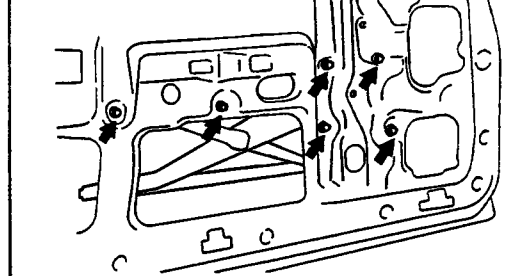


Fig. 9-135

WR-09147

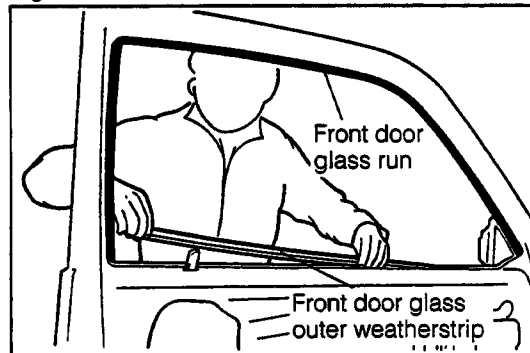


Fig. 9-136

WR-09148

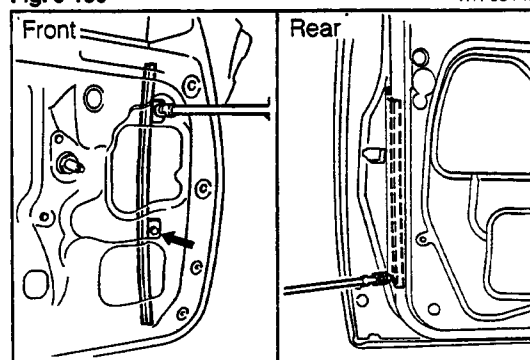


Fig. 9-137

WR-09149

4. Installation of front door window regulator assembly
 - (1) Apply MP grease to the sliding section.
 - (2) Install the power window motor to the front door window regulator assembly. (Power window-equipped vehicle)

- (3) Install the front door window regulator assembly.
 (Tighten the bolts other than the bolts **(A)**. Then, tighten the two bolts **(A)** at the center section of the elongated hole of the door panel.)
5. Installation of front door glass subassembly
 - (1) Install the front door glass subassembly. (See Fig. 9-133.)
 - (2) Close the front door glass fully. Then, lower the front door glass 40 mm (1.57 inches).
 - (3) First loosen the bolts **(A)** and then tighten them again.

6. Install the door trim-related parts. (See page 9-40.)

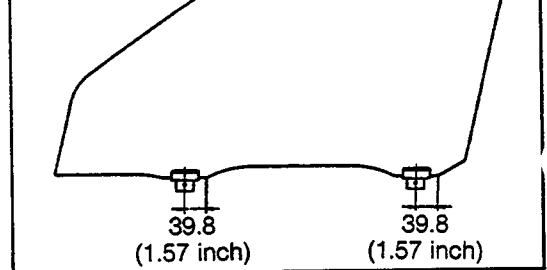


Fig. 9-138

WR-09150

Grease applying points

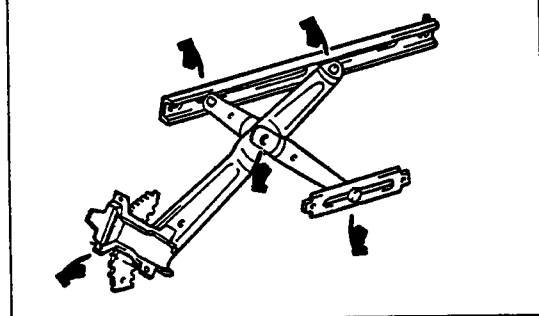
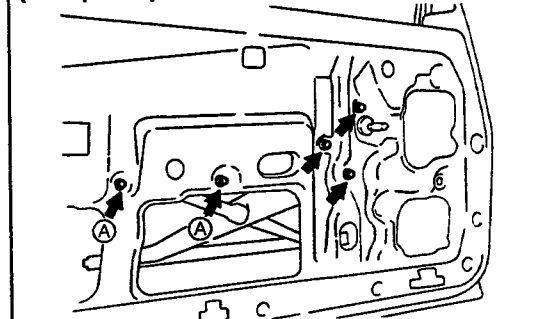


Fig. 9-139

WR-09151

(Except for power window-equipped vehicle)



(Power window equipped-vehicle)

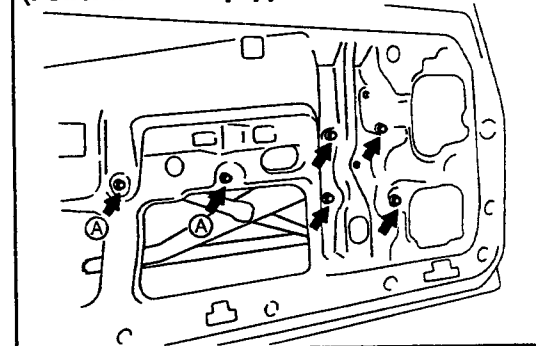
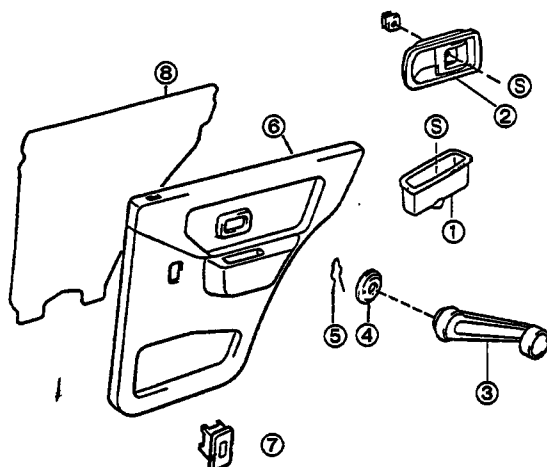


Fig. 9-140

WR-09152

DOOR TRIM AND SERVICE HOLE COMPONENTS



(Power window-equipped vehicle)

- ① Door pull handle
- ② Door inside handle Ay
- ③ Rear door window regulator handle Ay
- ④ Regulator inside handle plate
- ⑤ Shaft snap ring
- ⑥ Rear door trim panel Ay
- ⑦ Power window subswitch Ay
- ⑧ Rear door service hole cover

Fig. 9-141

WR-09154

REMOVAL

1. Detach the door pull handle.
2. Remove the door inside handle assembly.
3. Removal of rear door window regulator handle assembly
 - (1) Detach the shaft snap ring, using a cloth.
 - (2) Take out the rear door window regulator handle assembly and regulator inside handle plate.

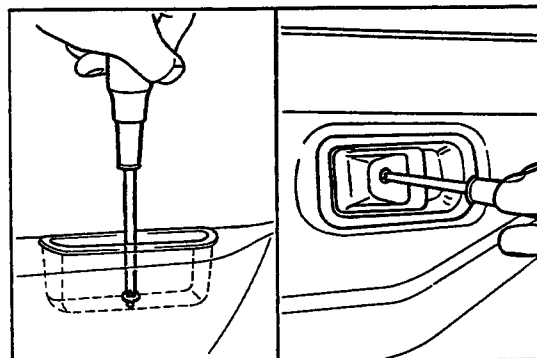


Fig. 9-142

WR-09155

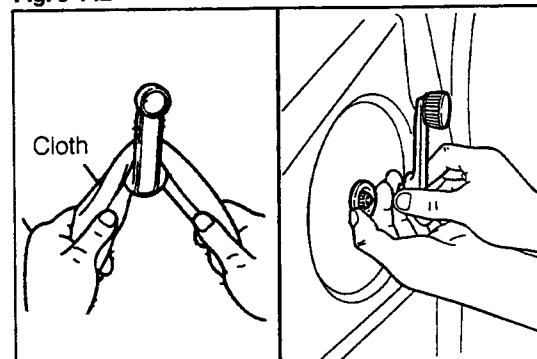


Fig. 9-143

WR-09156

INSTALLATION

1. Installation of rear door service hole cover subassembly
 - (1) Affix butyl tape on the position specified in the right figure.
 - (2) Place the lower edge of the cover in the aperture provided at the lower part of the door panel. Then, affix adhesive tape on it.

NOTE:

1. Be sure not to plug the clip hole with the adhesive tape.
 2. Replace the service hole cover if it exhibits rupture.
2. Install the door inside handle assembly and bracket.
3. Installation of rear door trim panel assembly
 - (1) Ensure that the clip is attached to the rear door trim panel assembly.
 - (2) Install the power window subswitch assembly on the rear door trim panel assembly. Connect the coupler. (Power window-equipped vehicle only)
 - (3) Attach the rear door trim panel assembly on the rear door.
4. Installation of rear door window regulator handle assembly
 - (1) Close the door glass fully.
 - (2) Set the regulator inside handle plate at the trim side.
 - (3) Set the shaft snap ring in the rear door window regulator handle.

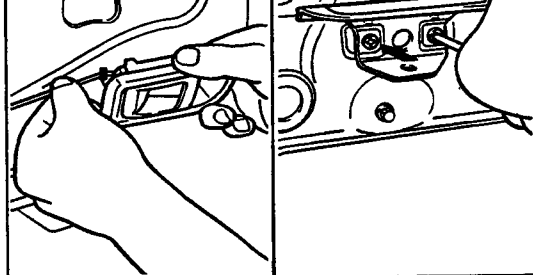


Fig. 9-145

WR-09158

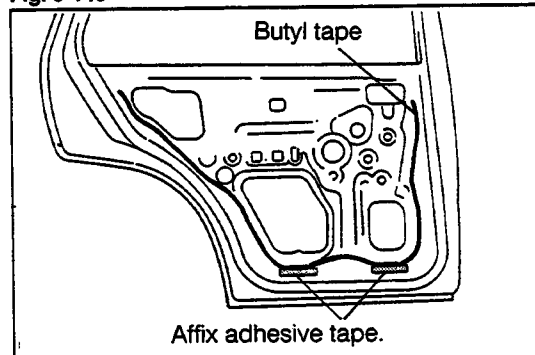


Fig. 9-146

WR-09159

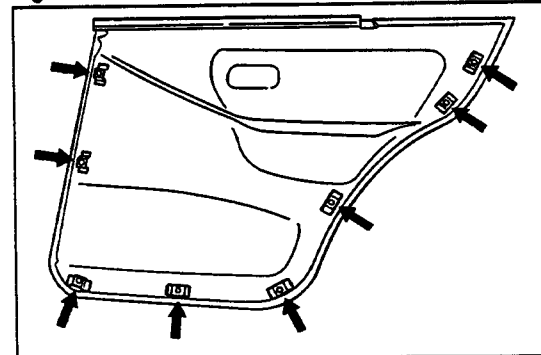


Fig. 9-147

WR-09160

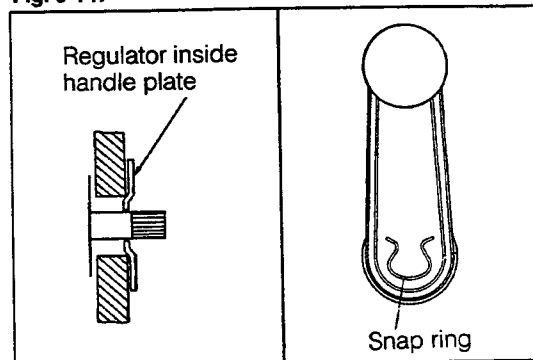


Fig. 9-148

WR-09161

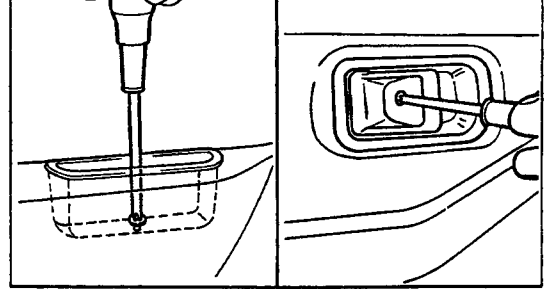
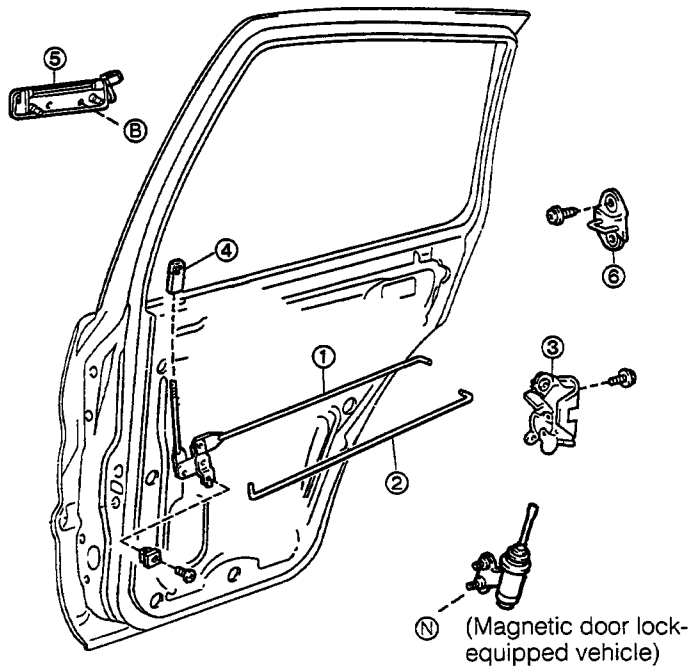


Fig. 9-150

WR-09163

DOOR LOCK AND OUTSIDE DOOR HANDLE Components



- ① Rear door locking link S/A
- ② Rear door open control link
- ③ Rear door lock Ay
- ④ Door locking button
- ⑤ Rear door outside handle Ay
- ⑥ Door lock striker plate S/A

Fig. 9-151

WR-09164

- (2) Remove the attaching screw of the rear door locking link subassembly.
- (3) Remove the three attaching screws of the rear door lock assembly.
- (4) Remove the rear door lock assembly (link-related parts) from the door.

4. Remove the following parts from the rear door lock assembly.

- (1) Remove the rear door locking link subassembly.
- (2) Remove the rear door opening control link.

5. Remove the rear door outside handle assembly.

INSTALLATION

1. Install the rear door outside handle assembly.
2. Install the following parts in the rear door lock assembly.
 - (1) Install the rear door opening control link.
 - (2) Install the rear door locking link subassembly.
3. Install the rear door lock assembly and rear door locking button in the rear door. (See Fig. 9-153.)
4. Install the rear control solenoid assembly. (See Fig. 9-157.)
 The solenoid assembly should be installed at such a position that the lock button stroke may become at least 10 mm (0.37 inch).
5. Install the door trim-related parts. (See page 9-48.)

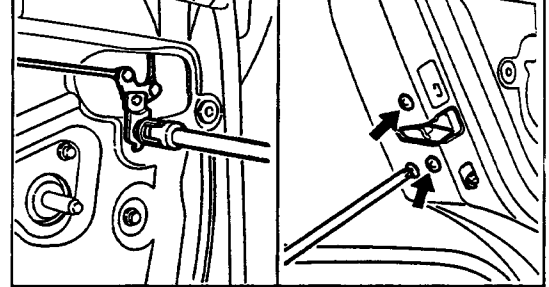


Fig. 9-153

WR-09166

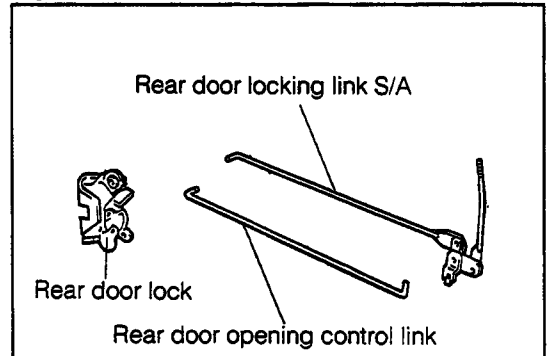


Fig. 9-154

WR-09167

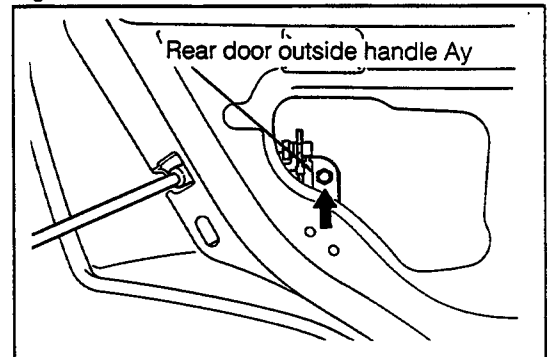


Fig. 9-155

WR-09168

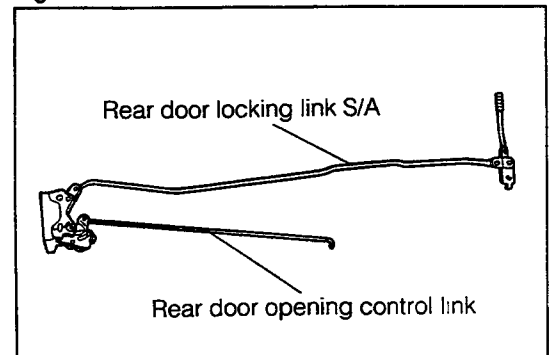
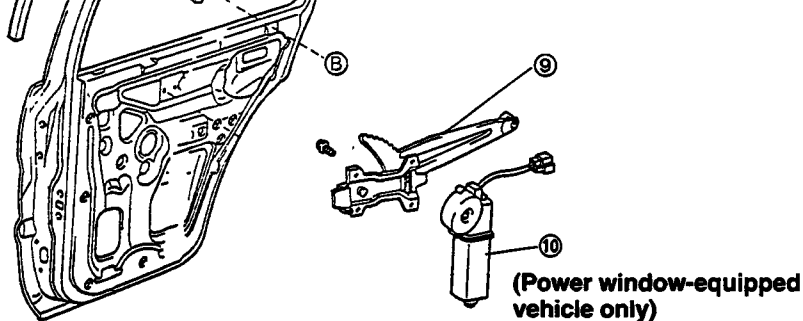


Fig. 9-156

WR-09169

⑤

⑥



① Rear door outer weatherstrip

② Rear door glass S/A

③ Rear quarter glass

④ Rear quarter glass weatherstrip

⑤ Rear door glass filler

⑥ Rear door glass channel S/A

⑦ Rear door glass run

⑧ Rear door window division bar S/A

⑨ Rear door window regulator A/y

⑩ Power window motor

(Power window-equipped vehicle only)

Fig. 9-157

WR-09170

REMOVAL

1. Remove the rear door trim board-related parts. (See page 9-47.)
2. Remove the rear door weatherstrip.
3. Removal of rear door window division bar subassembly
 - (1) Remove the upper attaching screw and lower bolt of the rear door window division bar subassembly.
 - (2) Remove the rear door window division bar subassembly from the rear door.
4. Remove the rear quarter glass and rear quarter glass weatherstrip.

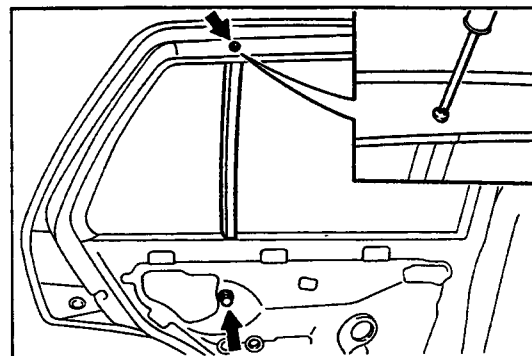


Fig. 9-158

WR-09171

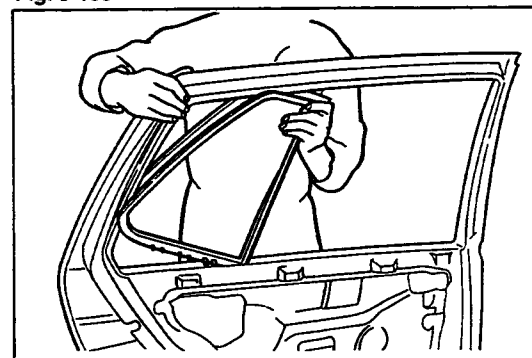


Fig. 9-159

WR-09172

removing the three bolts.

- (2) Remove the power window motor from the rear door window regulator assembly. (Power window-equipped vehicle only)
7. Remove the rear door glass outer weatherstrip.

INSTALLATION

1. Install the rear door glass outer weatherstrip.
2. Installation of rear door window regulator assembly
 - (1) Apply MP grease to the sliding sections.
 - (2) Install the power window motor in the rear door regulator assembly. (Power window-equipped vehicle only)
 - (3) Install the rear door window regulator assembly in the rear door. (See Fig. 9-161.)
3. Installation of rear door glass subassembly
 - (1) Apply soap water, etc. to the inner surface of the rear door glass filler. Install the glass filler in the glass channel.
 - (2) Install the rear door glass filler and channel in the rear door glass subassembly. (Install these parts by tapping them lightly with a wooden hammer or the like.)
4. Install the rear quarter glass and rear quarter glass weatherstrip.
5. Install the rear door window division bar subassembly.
6. Install the rear door glass weatherstrip.
7. Install the rear door trim board-related parts. (See Fig. 9-48.)

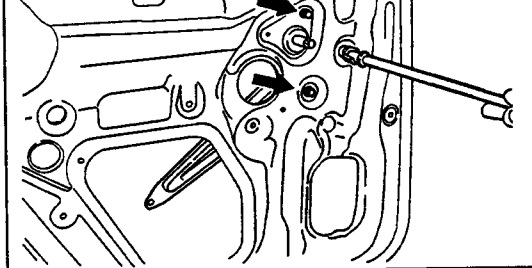


Fig. 9-161

WR-09174

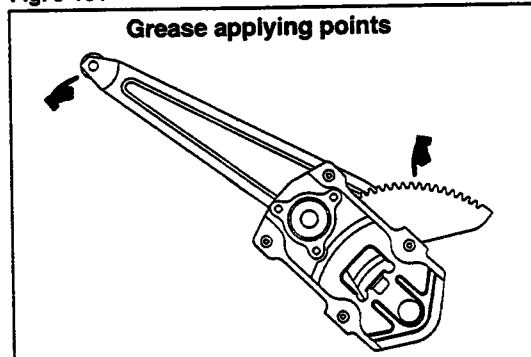


Fig. 9-162

WR-09175

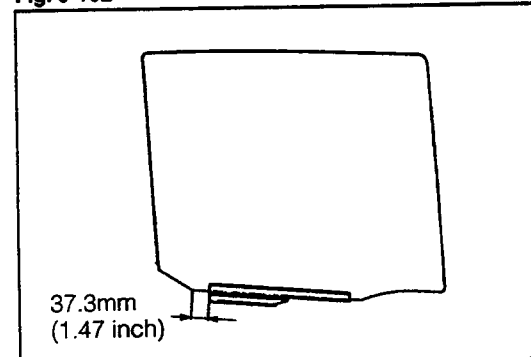


Fig. 9-163

WR-09176

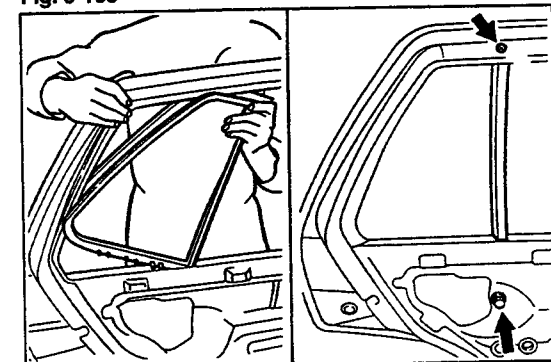
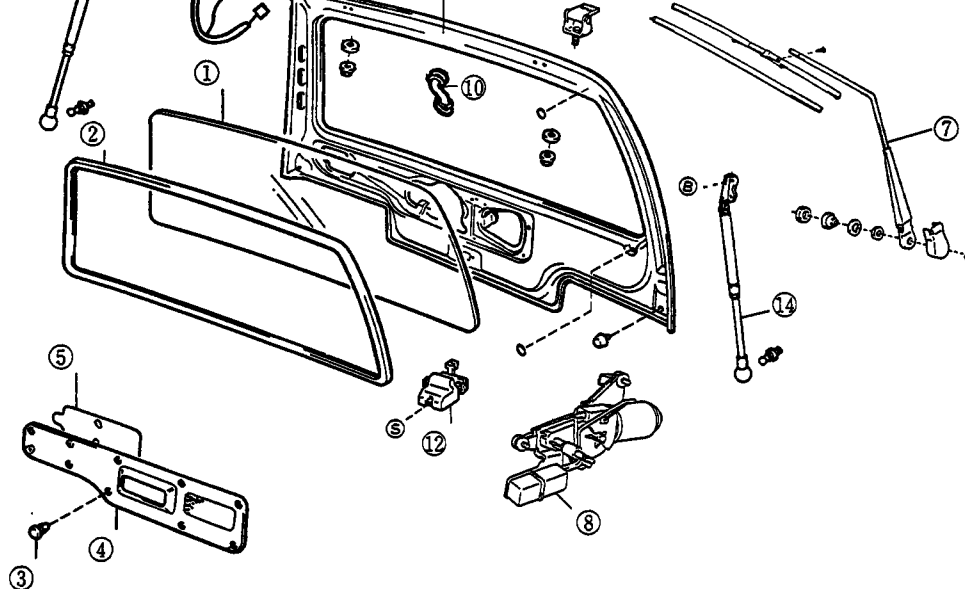


Fig. 9-164

WR-09177



- ① Back door glass
- ② Back door glass weatherstrip
- ③ Clip
- ④ Back door trim board
- ⑤ Back door service hole cover S/A
- ⑥ Coupler for defogger
(Defogger-equipped vehicle only)
- ⑦ Rear wiper arm
(Rear wiper-equipped vehicle only)

- ⑧ Rear wiper motor & bracket
(Rear wiper-equipped vehicle only)
- ⑨ Rear washer nozzle A/y
- ⑩ Hose & grommet
- ⑪ Back door lock cylinder
- ⑫ Back door lock A/y
- ⑬ Harness & grommet
- ⑭ Back door stay A/y
- ⑮ Back door panel

Fig. 9-165

WR-09179

REMOVAL

1. Remove the rear wiper arm attaching nut. Detach the rear wiper arm. (Rear wiper-equipped vehicle only)
2. Disconnect the couplers for defogger use at two points.
3. Remove the rear spoiler. (See page 9-36.)
4. Remove the back door glass and weatherstrip. (See page 9-29.)

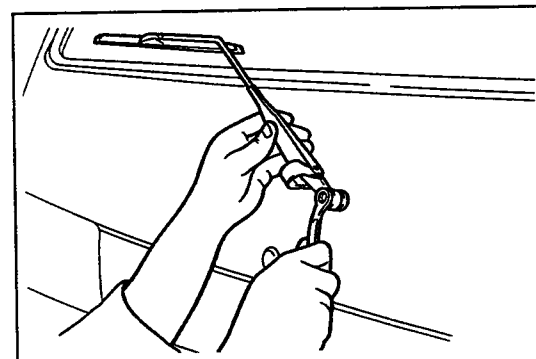


Fig. 9-166

WR-09180

- (1) Working from the outside of the back door, remove the boot, nut, spacer and bush.
- (2) Working from the inside of the back door, disconnect the coupler, using a piece of wire.
- (3) Remove the rear wiper motor and bracket assembly by removing the three bolts.

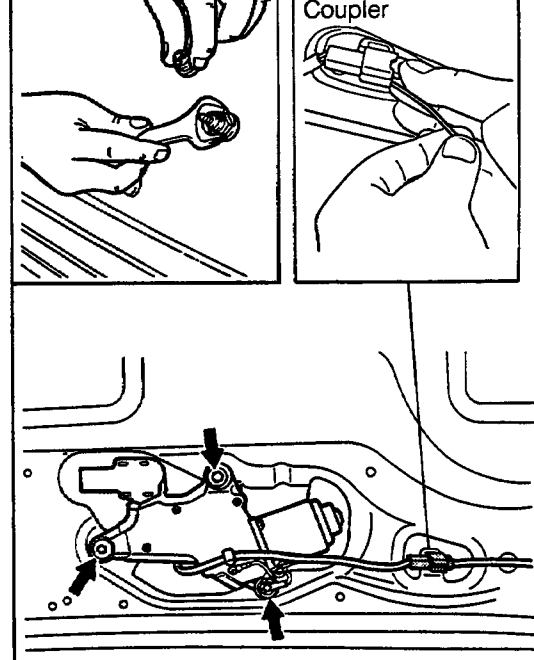


Fig. 9-168

WR-09182

7. Removal of rear washer nozzle assembly

- (1) Remove the rear washer nozzle assembly. Detach the hose from the nozzle assembly.
- (2) Remove the hose and grommet from the back door.

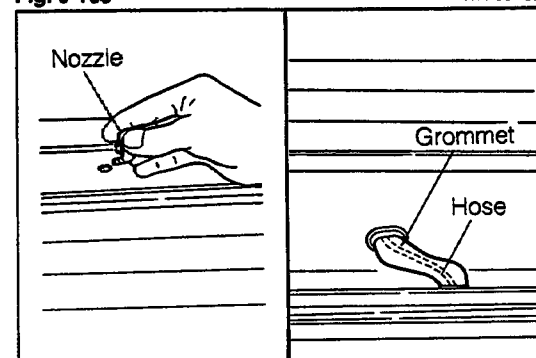


Fig. 9-169

WR-09183

8. Detach the clip and remove the back door lock cylinder.

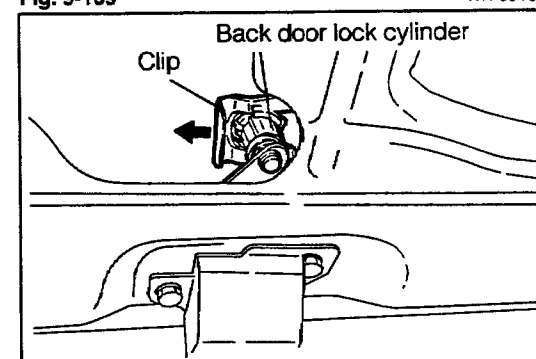


Fig. 9-170

WR-09184

11. Remove the back door stay assembly as follows:

- (1) Detach the attaching section at the body side.

NOTE:

Be sure to protect the body surface by means of adhesive tape or like, as indicated in the right figure.

- (2) Remove the back door stay assembly by removing the two attaching bolts at the back door side.

NOTE:

- Never attempt to disassemble the door stay assembly, for the cylinder is filled with high-pressure gas.
- After the damper stay has been replaced, be certain to discharge the high-pressure gas from it, by making a 2 to 3 mm dia. hole at the bottom of the cylinder of the removed damper stay.
(The discharging gas is colorless, odorless and non-poisonous. However, be very careful as to drilled metal chips being blown off.)
- Utmost caution must be exercised as to the handling of the damper stay. Never let scratch, paint or oil get to the exposed section of the piston rod.
- When the damper stay is in an extended state, be sure not to turn the piston rod or the cylinder.

12. Removal of back door panel

- (1) Detach the rear section of the roof headlining.
- (2) Working from the vehicle interior, remove the back door panel from the vehicle by removing the two attaching nuts (a) of the back door panel.

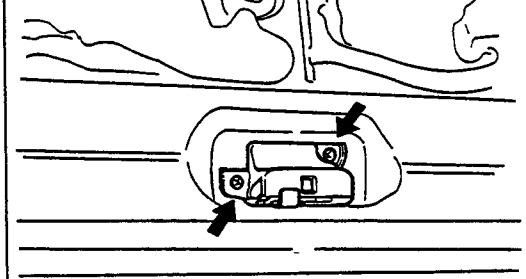


Fig. 9-172

WR-09186

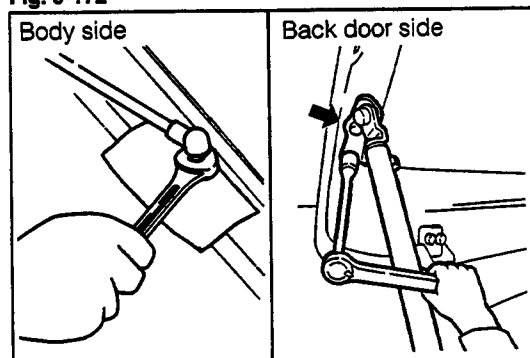


Fig. 9-173

WR-09187

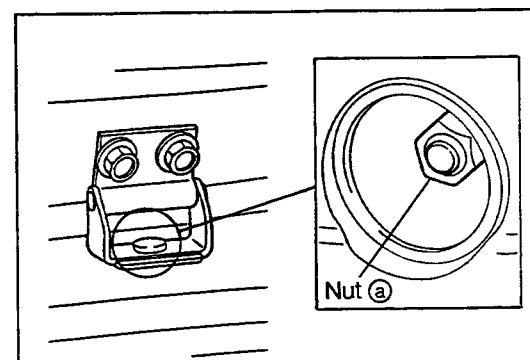


Fig. 9-174

WR-09188

6. Installation of rear washer nozzle
 - (1) Attach the washer hose to the rear washer nozzle.
Attach the rear washer nozzle to the back door.
 - (2) Install the grommet.

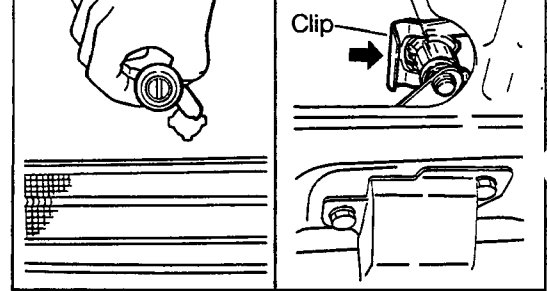


Fig. 9-176

WR-09190

7. Install the rear wiper motor and bracket assembly as follows:
 - (1) Install the rear wiper motor and bracket assembly, using the three bolts.
 - (2) Connect the coupler.
 - (3) Working from the outside, install the bush, spacer, nut and boot.

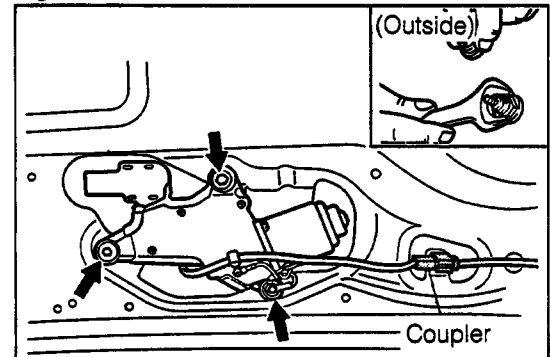


Fig. 9-177

WR-09191

8. Installation of back door trim board
 - (1) Affix butyl tape on the position specified in the right figure. Install the back door service hole cover sub-assembly.

NOTE:

Replace the service hole cover if it exhibits rupture.

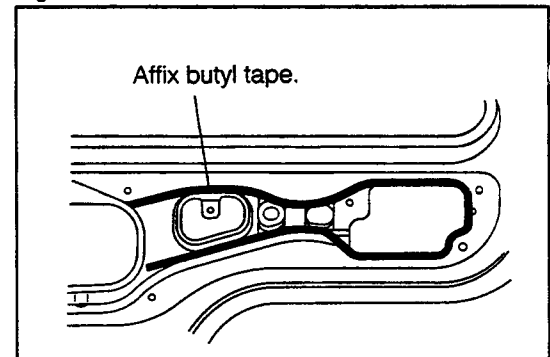


Fig. 9-178

WR-09192

- (2) Attach the back door trim board using the 10 clips. With the central part of the clip pulled out, set the clip on the trim. Push the central part of the clip so that the clip may retain the trim.
9. Install the back door glass and weatherstrip. (See page 9-30.)
10. Install the rear spoiler. (See page 9-37.)

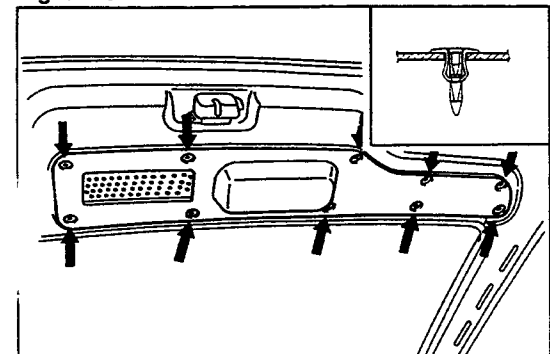
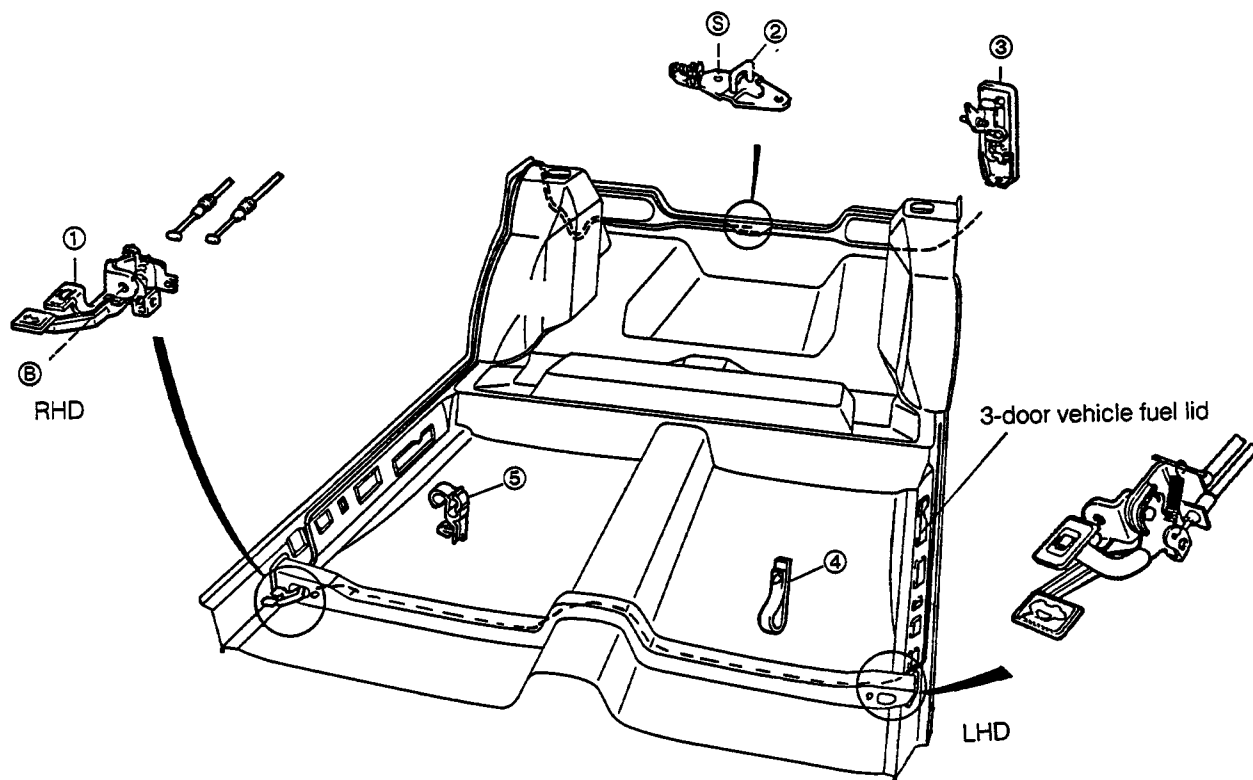


Fig. 9-179

WR-09193



- ① Back door opener Ay
- ② Back door lock striker Ay
- ③ Fuel filler opening lid lock S/A
- ④ Clamp
- ⑤ Clamp

Fig. 9-181

WR-09195

Remove the front door scuff plate at the right side, the rear door scuff plate at the right side, the package tray side trim at the right and left sides, the quarter wheel house cover at the right side, the deck side trim at the right and left sides and the lower deck trim.

(5-door model back door opener)

Remove the front door scuff plate at the right side, the rear door scuff plate at the right side, the package tray side trim at the right side, the quarter wheel house cover at the right side, the deck side trim at the right side and the lower deck trim.

4. Remove the back door opener assembly as follows:
 - (1) Remove the attaching bolt. Remove the back door opener assembly.
 - (2) Detach the spring. Remove the cable.

5. Removal of fuel filter opening lid lock subassembly
 - (1) Remove the fuel filler opening lid lock subassembly.
 - (2) Detach the fuel lid cable.

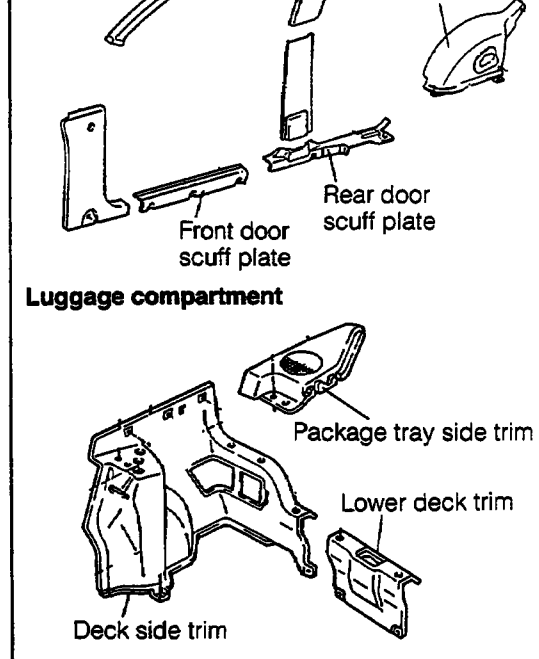


Fig. 9-182

WR-09196

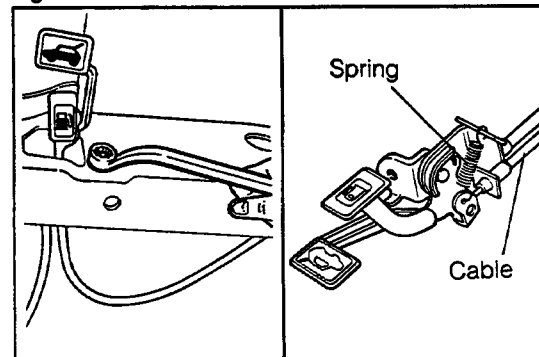


Fig. 9-183

WR-09197

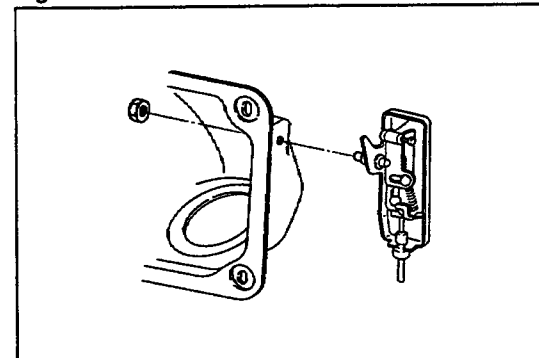


Fig. 9-184

WR-09198

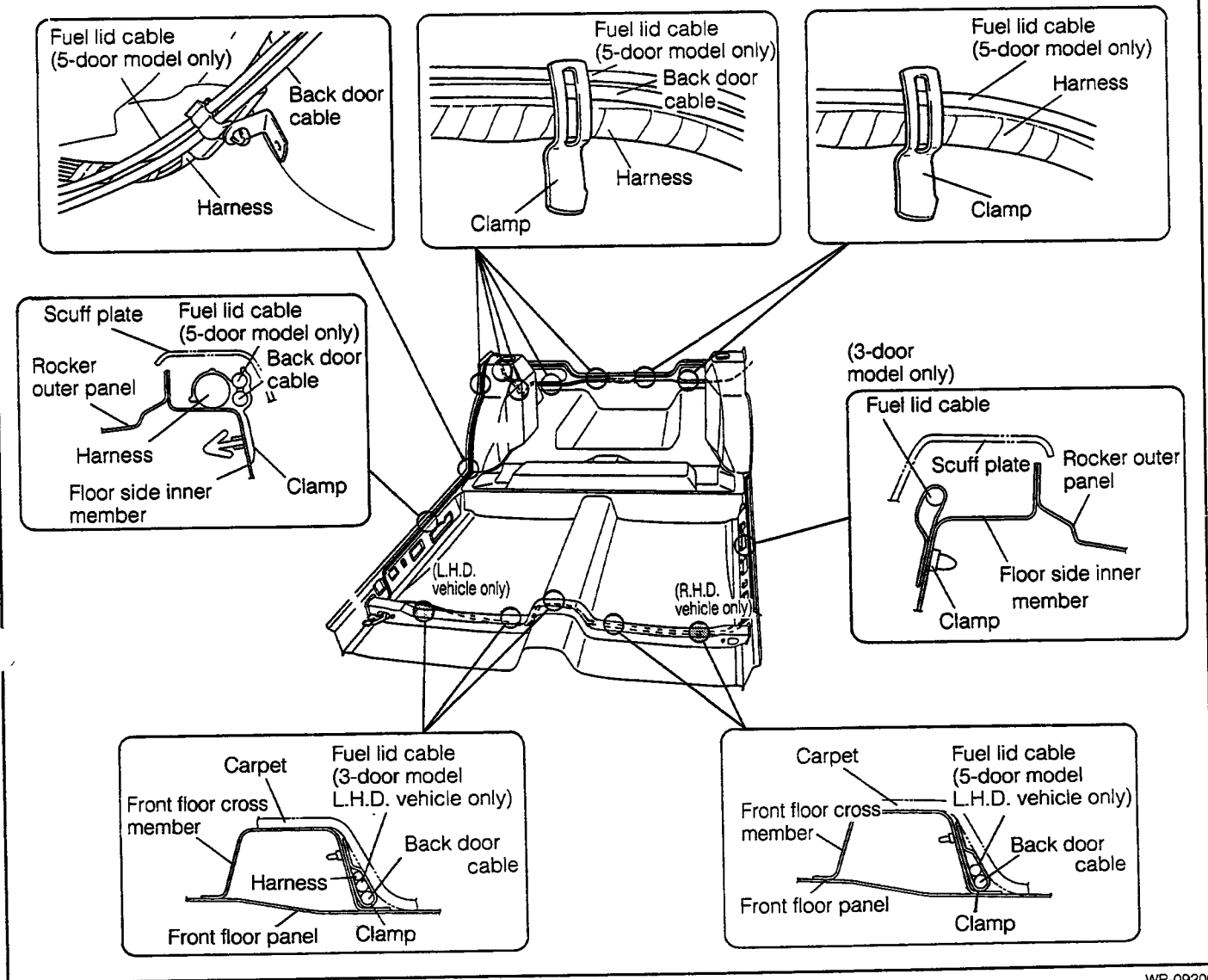
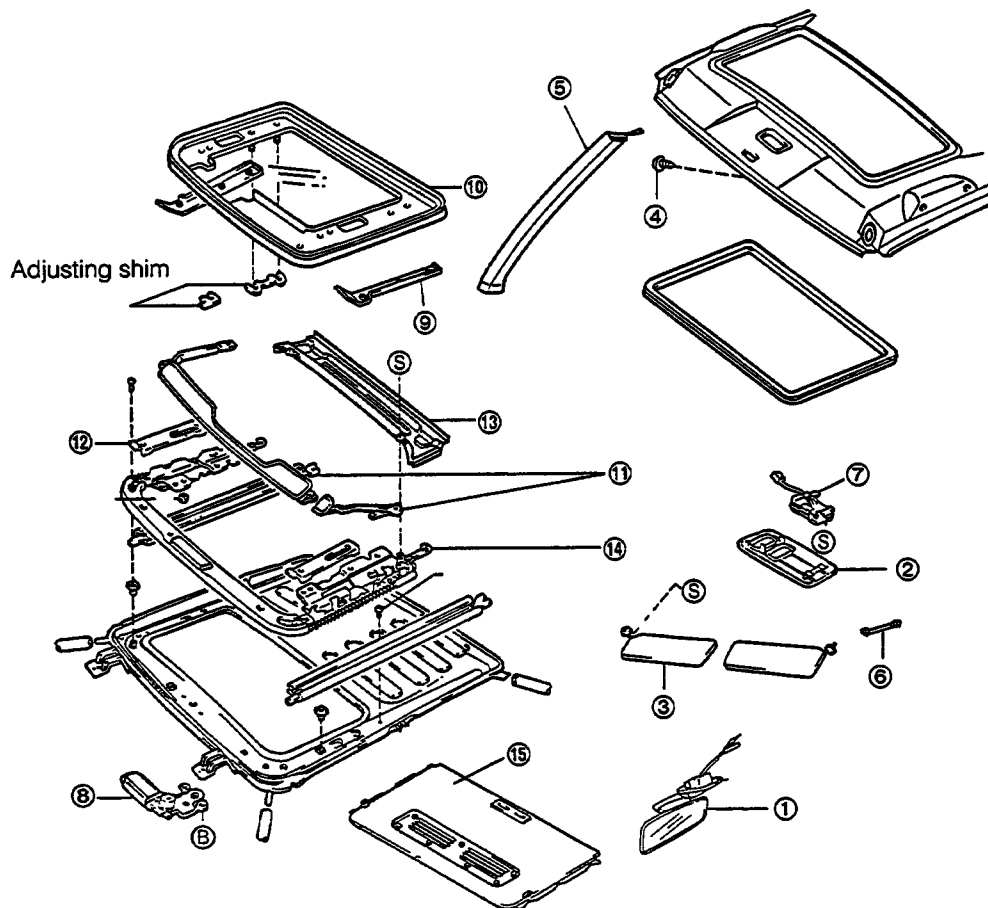


Fig. 9-186

WR-09200

2. Install the back door lock striker assembly.
3. Install the fuel filler opening lid lock subassembly. (Perform the operation check.)
4. Install the back door opener assembly. (Perform the operation check.)
5. Install the trim-related parts.
 - 6. Install the rear seat.
 - 7. Install the front seat.

WR-09201



① Inner rear-view mirror W/room lamp

② Switch bezel

③ Sun visor

④ Clip (at front side of roof headlining)

⑤ Front pillar garnish

⑥ Assist grip Ay (Detach the front section of the roof headlining.)

⑦ Sliding roof switch Ay

⑧ Sliding roof drive gear Ay

⑨ Slide roof garnish (sunroof)

⑩ Sliding roof glass S/A

⑪ Roof window deflector arm S/A & roof window deflector panel S/A

⑫ Guide rail cover

⑬ Roof drip rear channel

⑭ Sliding roof drive cable S/A

⑮ Sun shade trim S/A

Fig. 9-187

WR-09203

section by means of a common screwdriver.

- (2) Remove the front pillar garnish by pulling it upward.

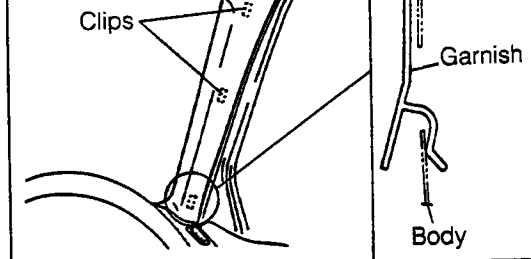


Fig. 9-189

WR-09205

4. Detach the front section of the roof headlining.

- (1) Prior to the operations given below, disconnect the negative $\ominus$ terminal of the battery.
- (2) Remove the sun visor assembly.
- (3) Remove the inner rear-view mirror with room lamp.
- (4) Remove the switch bezel.
- (5) Detach the sunroof opening trim molding.

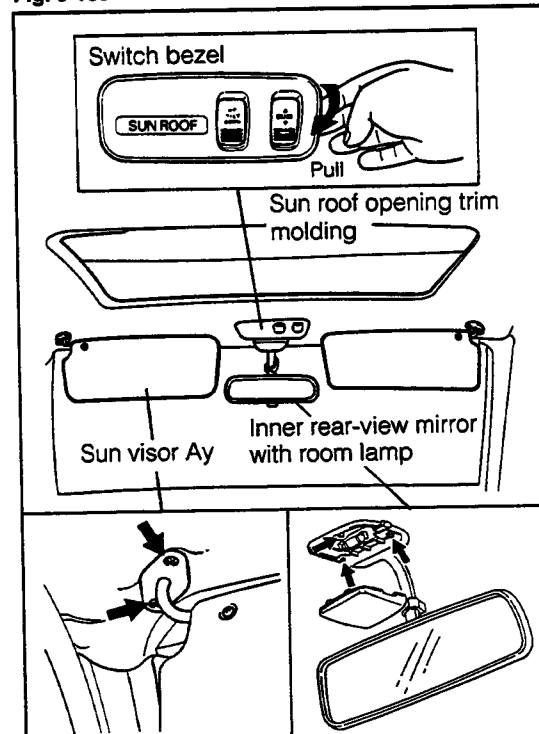


Fig. 9-190

WR-09206

- (6) Remove the assist grip assembly.
- (7) Remove the clip, using the clip removing tool.

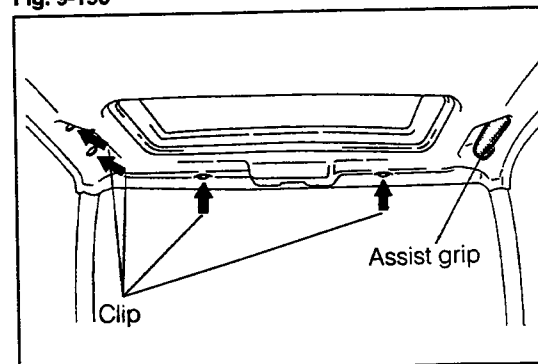


Fig. 9-191

WR-09207

roof glass subassembly.

8. Remove the roof window deflector arm subassembly and the roof window deflector panel subassembly by removing the four screws.

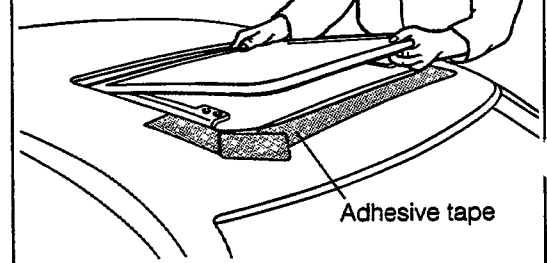


Fig. 9-193

WR-09209

9. Detach the guide rail cover by removing the screws, one each at the right and left sides.

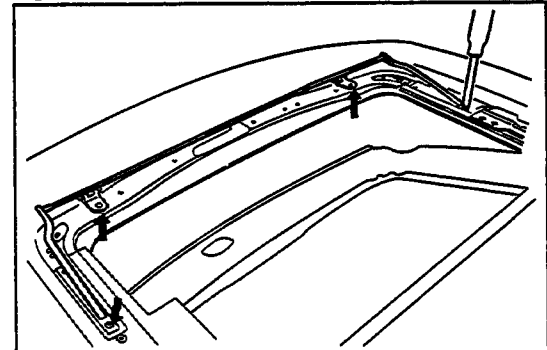


Fig. 9-194

WR-09210

10. Remove the roof drip rear channel by removing the two screws.

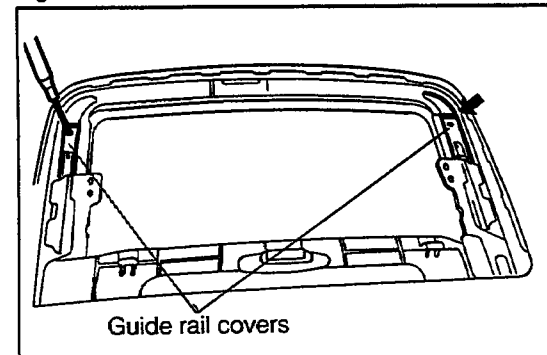


Fig. 9-195

WR-09211

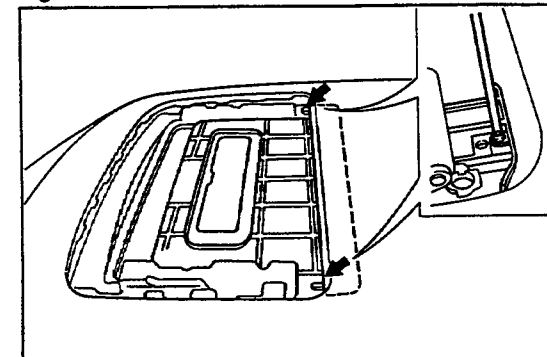


Fig. 9-196

WR-09212

12. Remove the sun shade trim subassembly from the back side of the sliding roof drive cable subassembly.

INSTALLATION

1. Install the sun shade trim from the back side of the sliding roof drive cable subassembly.
2. Installation of sliding roof drive cable subassembly
 - (1) Align the link position with each other by inserting a pin or the like into the reference hole. Set the roof in a fully-closed state.
 - (2) Place the drive cable subassembly into position from the front side of the roof while holding the both sides of the rail by hands.

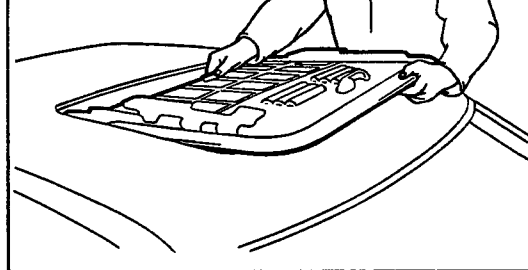


Fig. 9-197

WR-09213

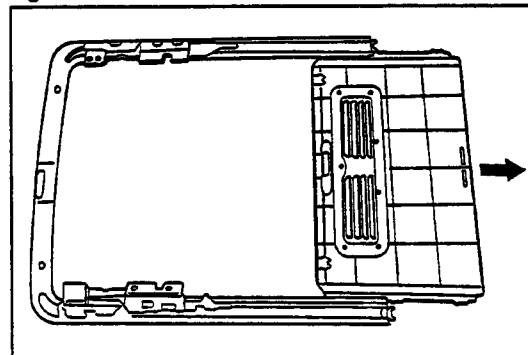


Fig. 9-198

WR-09214

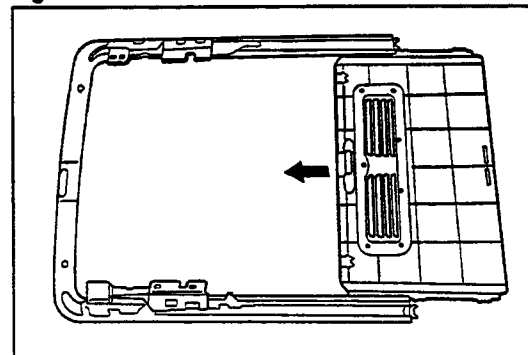


Fig. 9-199

WR-09215

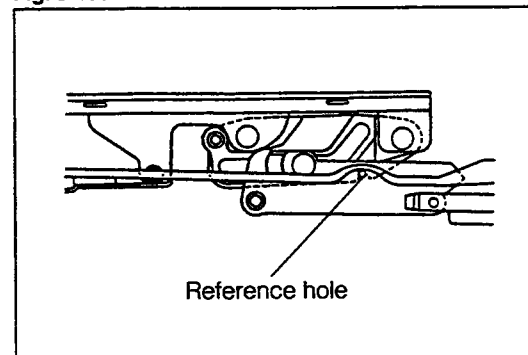


Fig. 9-200

WR-09216

right and left sides.

(2) Install the roof drip rear channel with the two screws.

4. Attach the guide rail cover.
5. Install the roof window deflector arm subassembly and the roof window deflector panel subassembly with the four screws.

6. Install the sliding roof glass subassembly with the eight nuts.

7. Installation of sliding roof drive gear assembly
 - (1) Remove the cover by removing the screws.
 - (2) Turn the cam manually, until the punched marks on the housing and gear are aligned with each other so that the cam may be set to the fully-closed position.
 - (3) Attach the cover.
 - (4) Install the sliding roof drive gear assembly with the two bolts. Connect the coupler.

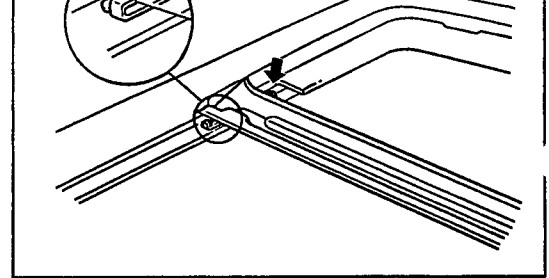


Fig. 9-202

WR-09218

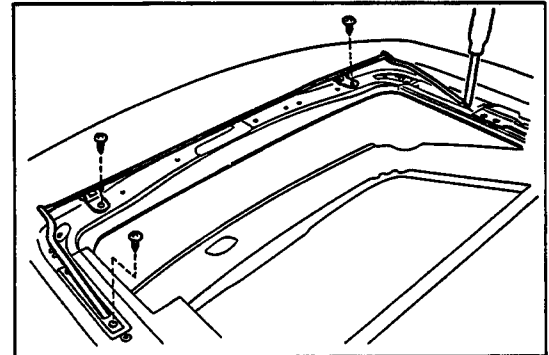


Fig. 9-203

WR-09219

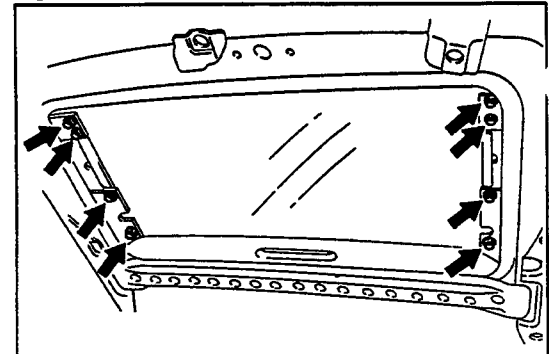


Fig. 9-204

WR-09220

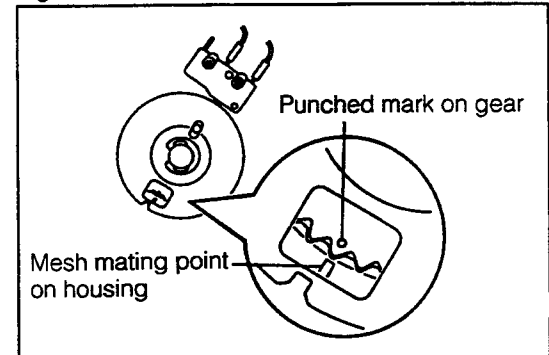


Fig. 9-205

WR-09221

- (2) Install the sun visor.
- (3) Install the inner rear-view mirror with room lamp.
- (4) Install the switch bezel.
- (5) Attach the sunroof opening trim molding.

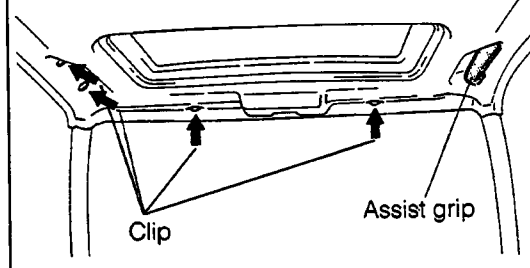


Fig. 9-207

WR-09223

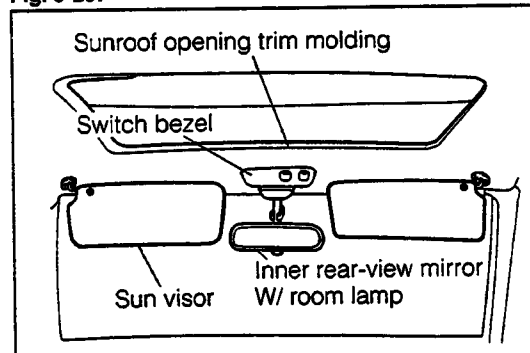


Fig. 9-208

WR-09224

10. Installation of front pillar garnish

- (1) Attach the hanger provided at the lower part of the front pillar garnish to the body.
- (2) Align the positions of the two clips. Attach the garnish by tapping the garnish lightly by hands.

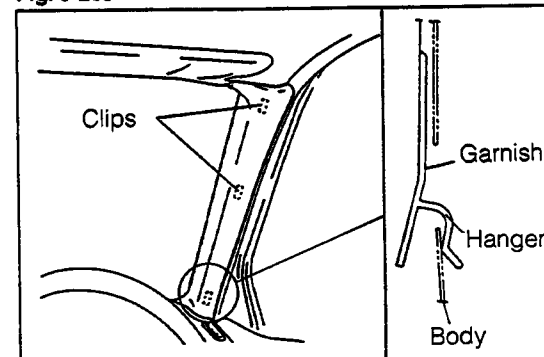


Fig. 9-209

WR-09225

1. Be sure to store this sealant in a cold, dark place. Avoid moisture, (for it will harden quickly.)
2. Once it is opened (after the nozzle is cut off), it will harden in two or three days. It is, therefore, necessary to open it immediately prior to use.

INSTALLATION POSITION

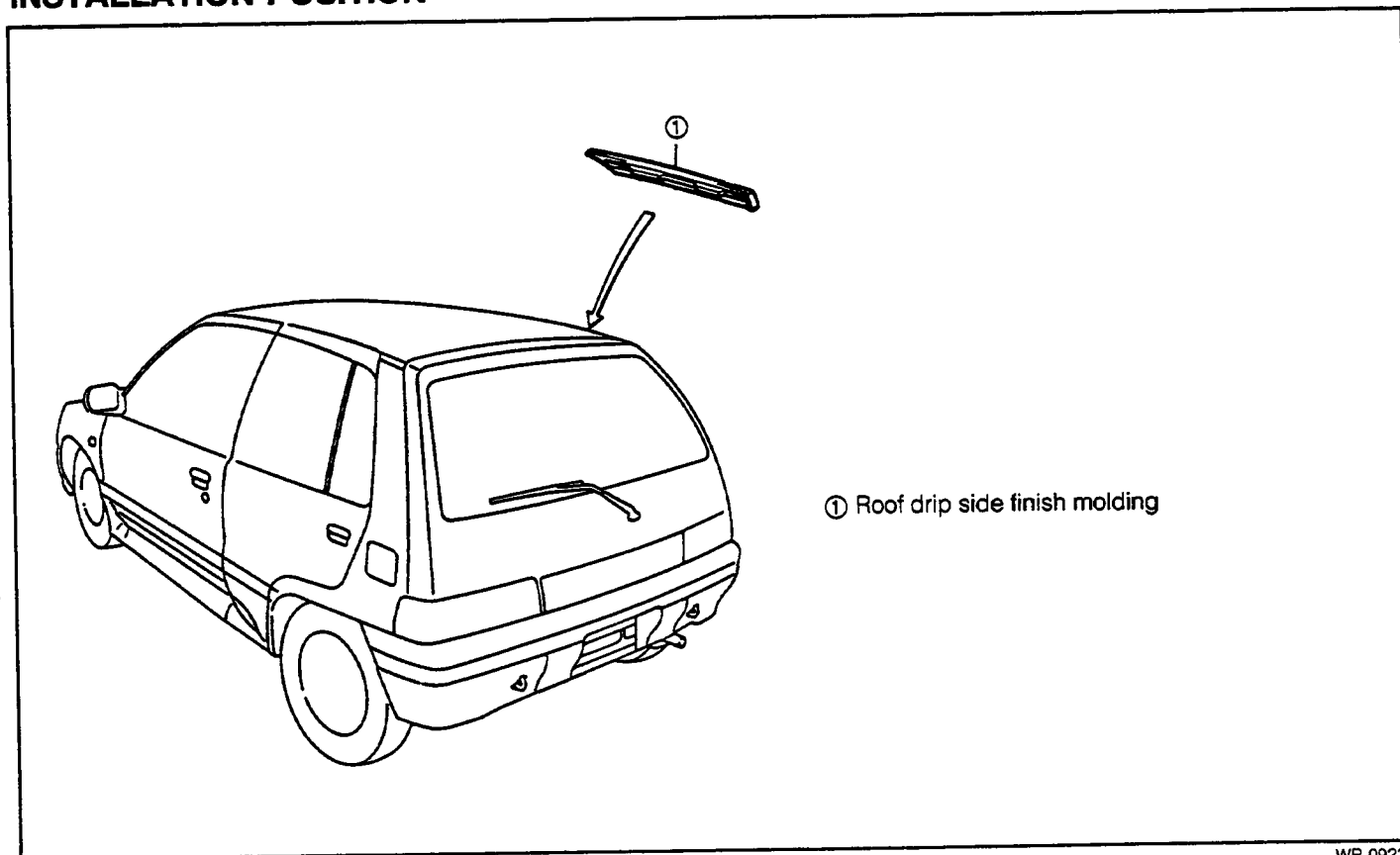


Fig. 9-210

WR-09227

REMOVAL

1. Detach the roof drip side finish molding by inserting a common screwdriver into the rear end of the molding.

NOTE:

When the molding is pried with a screwdriver, be very careful not to scratch the body.

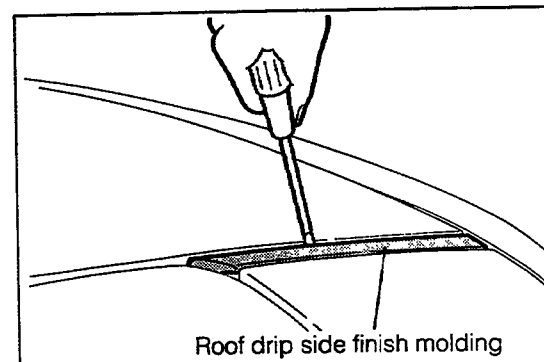
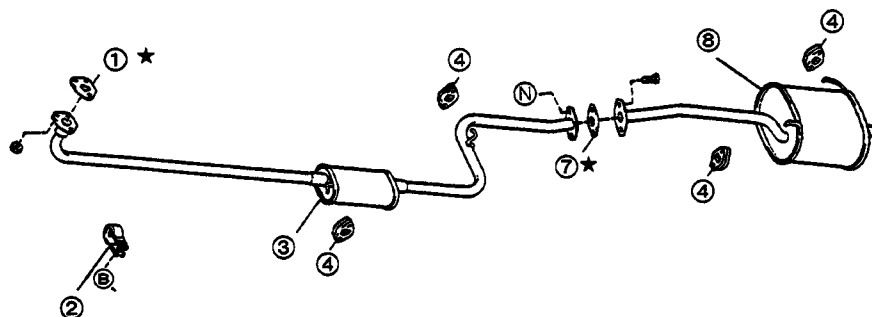


Fig. 9-211

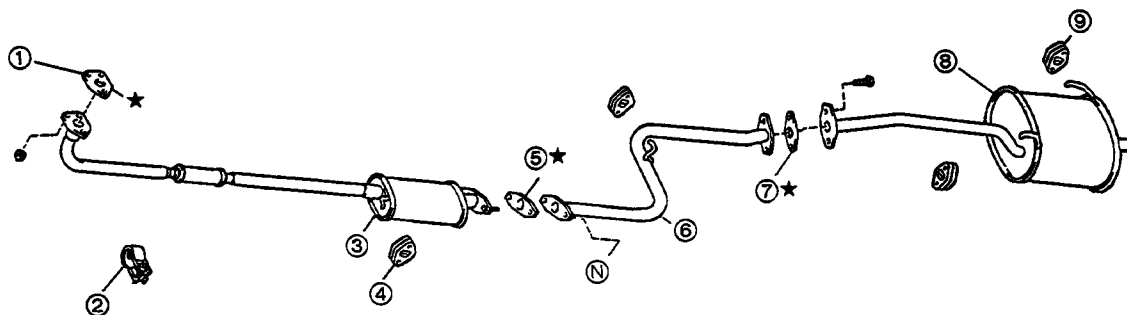
WR-09228

EXHAUST PIPE COMPONENTS

Gasoline-fueled vehicle



Diesel-powered vehicle



★ : Non-reusable parts

- ① Gasket
- ② Clamp
- ③ Exhaust front pipe
- ④ Exhaust pipe support

- ⑤ Gasket
- ⑥ Exhaust center pipe
- ⑦ Gasket
- ⑧ Exhaust tail pipe

Fig. 9-213

WR-09230

5. Separate the exhaust pipe support.
CB-23, CB-61 and CB-80 engines: Two points
CL-11 and CL-16 engines: One point

INSTALLATION

1. With a new gasket interposed, connect the tail pipe or the center pipe to the front pipe by tightening the two nuts temporarily.
2. With a new gasket interposed, connect the front pipe to the exhaust manifold by tightening the two nuts temporarily.

3. Install the exhaust pipe support.
CB-23, CB-61 and CB-80 engines: Two points
CL-11 and CL-16 engines: One point

NOTE:

Replace any exhaust pipe support which exhibits damage.

4. Tighten the nuts attaching the tail pipe or the center pipe to the front pipe.

Tightening Torque: 4.0 - 6.0 kg-m (29 - 43 ft-lb)

5. Tighten the nuts attaching the front pipe to the exhaust manifold.

Tightening Torque: 4.0 - 6.0 kg-m (29 - 43 ft-lb)

6. Install the bracket support No.1.

Tightening Torque: 3.5 - 5.0 kg-m (25 - 36 ft-lb)

7. Remove the safety stands and jack down the vehicle.

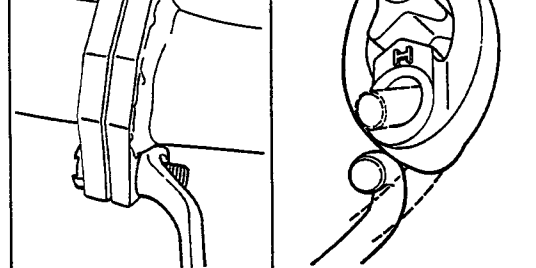


Fig. 9-215

WR-09232

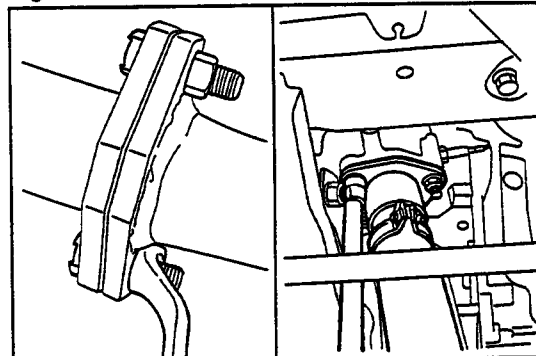


Fig. 9-216

WR-09233

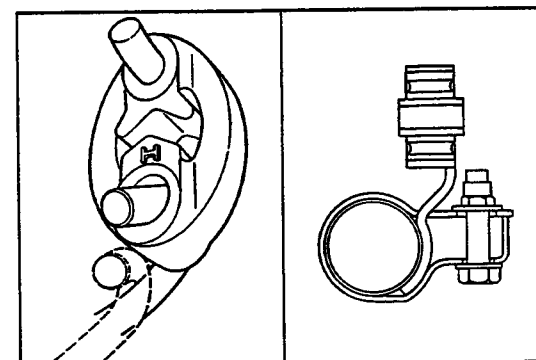


Fig. 9-217

WR-09234

4. Remove the safety stands and jack down the vehicle.

TAIL PIPE

REMOVAL

1. Jack up the vehicle and support it with safety stands.
2. Separate the tail pipe from the front pipe or the center pipe.
3. Remove the two exhaust pipe supports.

INSTALLATION

1. With a new gasket interposed, connect the tail pipe to the front pipe or the center pipe by tightening the nuts temporarily.
2. Install the two exhaust pipe supports.
3. Tighten the tail pipe attaching nuts.

Tightening Torque: 4.0 - 6.0 kg-m (29 - 43 ft-lb)

4. Remove the safety stands and jack down the vehicle.

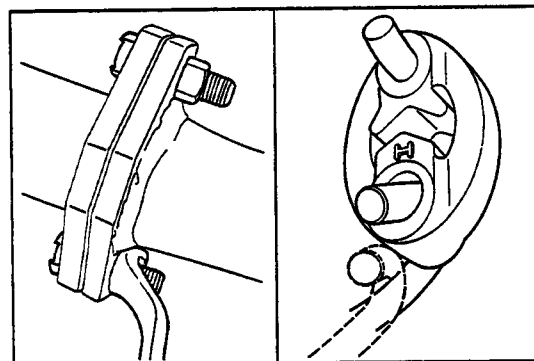
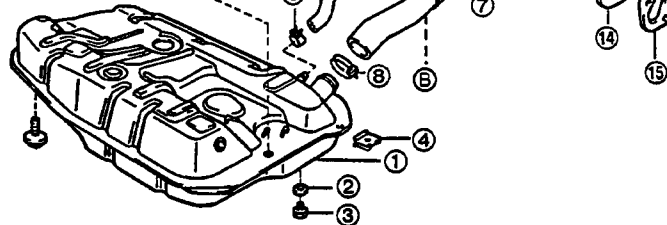
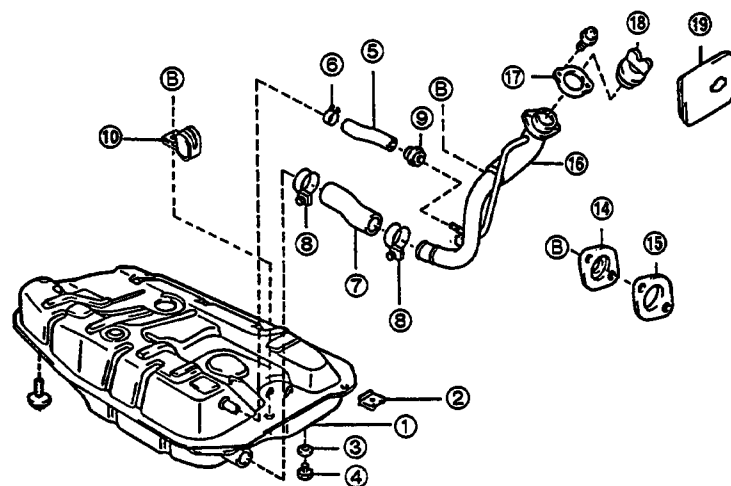


Fig. 9-219

WR-09236



5-door model



- ① Fuel tank Ay
- ② Fuel tank flange reinforcement
- ③ Gasket
- ④ Drain plug
- ⑤ Fuel hose No.5
- ⑥ Clip
- ⑦ Fuel tank sub inlet hose
- ⑧ Clamp
- ⑨ Grommet
- ⑩ Clamp

- ⑪ Breather tube
- ⑫ Clip
- ⑬ Fuel hose No.4
- ⑭ Fuel inlet pipe seal lower plate
- ⑮ Fuel inlet pipe lower plate
- ⑯ Fuel inlet pipe S/A
- ⑰ Fuel tank inlet pipe shield
- ⑱ Fuel tank cap Ay
- ⑲ Fuel filler opening lid S/A
- ⑳ Clamp

Fig. 9-220

WR-09237

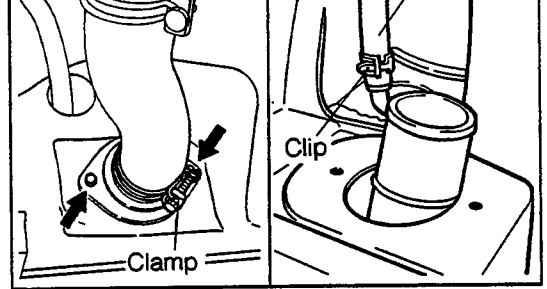


Fig. 9-222

WR-09240

5. Detach the clamp and separate the fuel tank subinlet hose.
6. Remove the fuel inlet pipe seal lower plate and the fuel inlet pipe lower seal by removing the two bolts.
7. Detach the clip and remove the breather hose.

8. Working from the vehicle interior, remove the fuel inlet pipe attaching bolt. Detach the fuel inlet pipe sub-assembly.
9. Detach the boot.

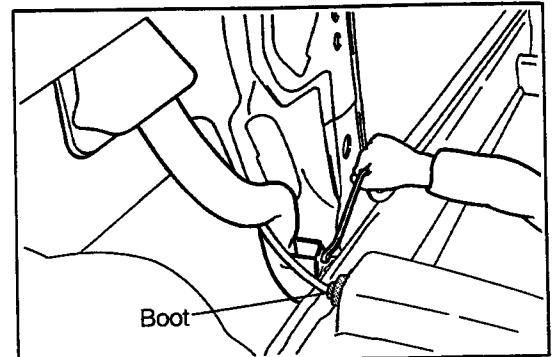


Fig. 9-223

WR-09241

INSTALLATION

1. Attach the boot. Set the fuel inlet pipe in the vehicle.
2. Install the fuel inlet pipe attaching bolt at the vehicle interior, using the four bolts.
3. Working from the outside, install the fuel inlet pipe, using the two attaching screws.

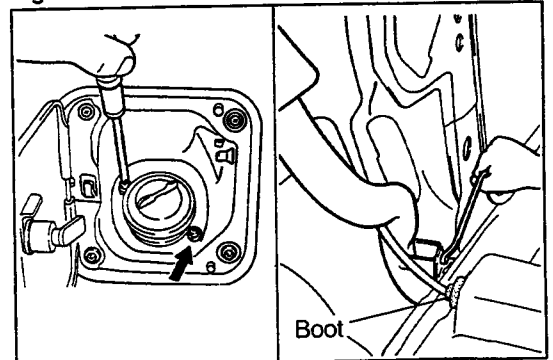


Fig. 9-224

WR-09242

plug. After the fuel has been drained, install the drain plug.

2. Remove the rear seatback and seat cushion (fixed type only) (See page 9–101.)
3. Remove the package tray, package tray side trim, rear scuff plate, quarter wheel house and cover deck side trim.

WR-09244

4. Remove the fuel inlet box and fuel filler opening lid subassembly by removing the six screws.

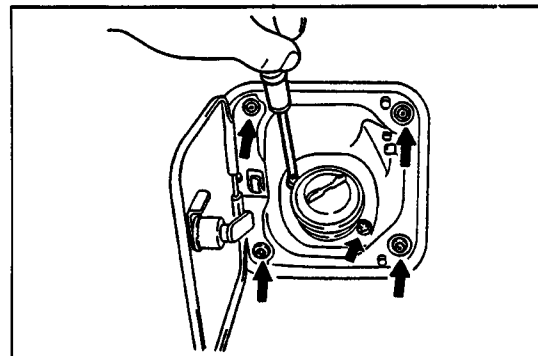


Fig. 9-226

WR-09245

5. Detach the clamp and separate the fuel tank subinlet hose.
6. Detach the clip and remove the breather hose.
7. Remove the fuel inlet pipe seal lower plate and the fuel inlet pipe lower seal by removing the two bolts.

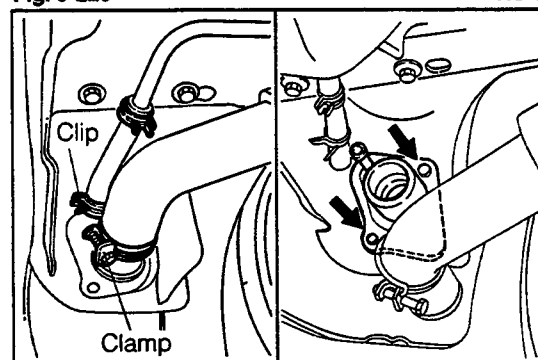


Fig. 9-227

WR-09246

8. Working from the vehicle interior, remove the three attaching bolts of the fuel inlet pipe subassembly. Detach the fuel inlet pipe subassembly.

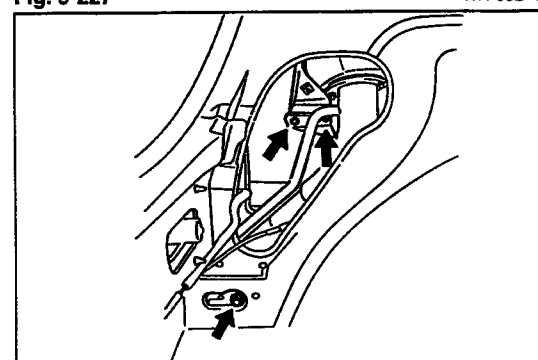


Fig. 9-228

WR-09247

4. Attach the breather hose to the fuel inlet pipe subassembly. Secure it with the clip.
5. Install the fuel tank subinlet hose. Secure it with the clamp.
6. Install the cover deck side trim, quarter wheel house, rear scuff plate, package tray side trim and package tray.
7. Install the rear seatback and seat cushion.

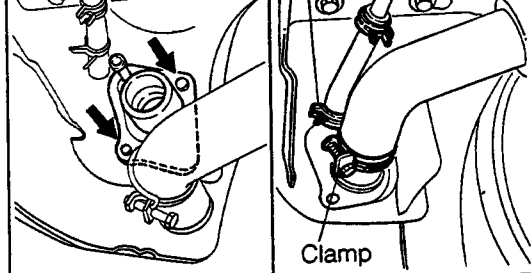


Fig. 9-230

WR-09249

FUEL TANK

REMOVAL

1. Jack up the vehicle and support it with safety stands.
2. Drain the fuel from the fuel tank by removing the drain plug. After the fuel has been drained, install the drain plug.
3. Removal of fuel sender gauge and fuel pump connector

WR-09250

- (1) Remove the rear seat.
- (2) Detach the rear quarter trim at the right side. (3-door model)
- (3) Detach the rear scuff plate at the right/rear side. (5-door model)
- (4) Disconnect the connector. Take out the connector together with the grommet to the vehicle exterior.

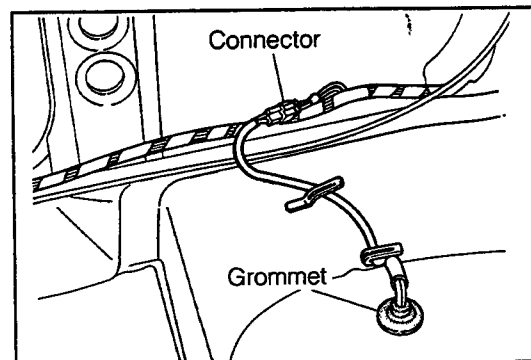


Fig. 9-231

WR-09251

4. Removal of fuel tank subinlet hose and breather hose

3-Door Model

- (1) Detach the clamp. Remove the fuel tank subinlet hose.
- (2) Detach the clip. Remove the breather hose.

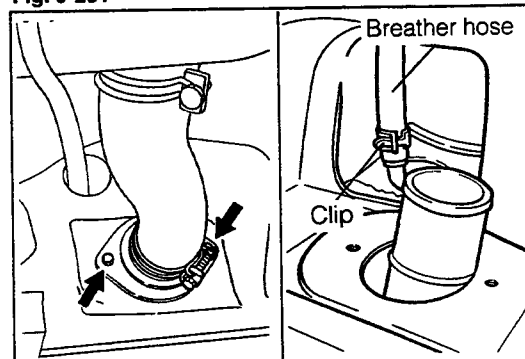


Fig. 9-232

WR-09252

- (2) Disconnect the return fuel hose.
- (3) Disconnect the fuel hose for emission control.

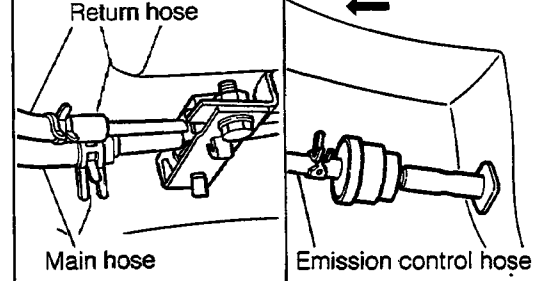


Fig. 9-234

WR-09254

(Charcoal canister-equipped vehicle)

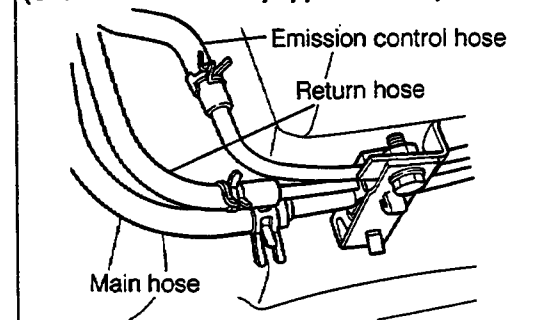


Fig. 9-235

WR-09255

(Vehicle mounted with Type CB-80 engine)

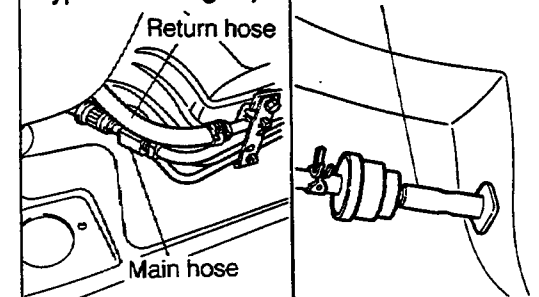


Fig. 9-236

WR-09256

6. Removal of fuel tank assembly

- (1) Support the fuel tank assembly with a jack.
- (2) Remove the four attaching bolts of the fuel tank.
- (3) Remove the fuel tank assembly from the vehicle.

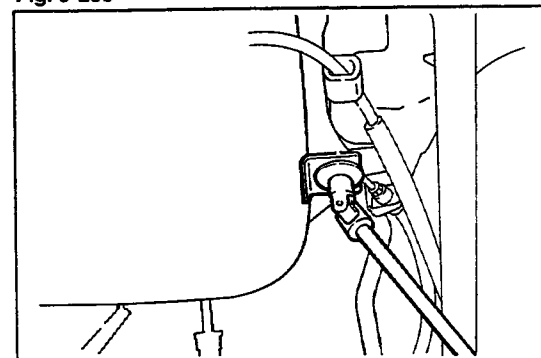


Fig. 9-237

WR-09257

coupler and five screws.

9. Remove the fuel pump assembly with bracket by removing the eight screws.

INSTALLATION

1. Install the fuel pump assembly with bracket and the fuel sender gauge assembly.
2. Install the fuel hose and pipe.
3. Install the fuel tank assembly with the four bolts.

NOTE:

Prior to the fuel tank installation, be sure to route the fuel gauge-related harness through the inside.

4. Installation of fuel hose

- (1) Connect the main fuel hose.
- (2) Connect the return fuel hose.
- (3) Connect the emission control fuel hose.

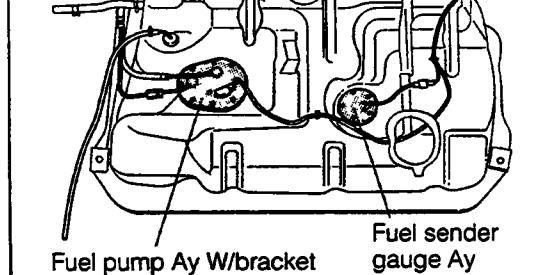


Fig. 9-239

WR-09259

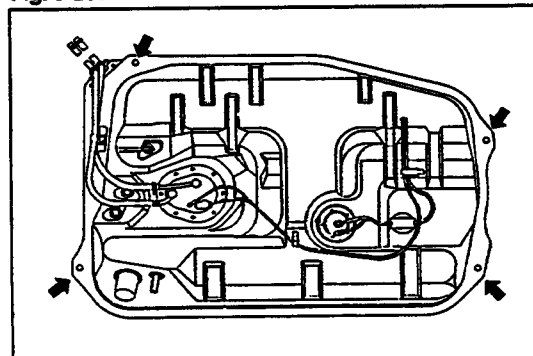


Fig. 9-240

WR-09260

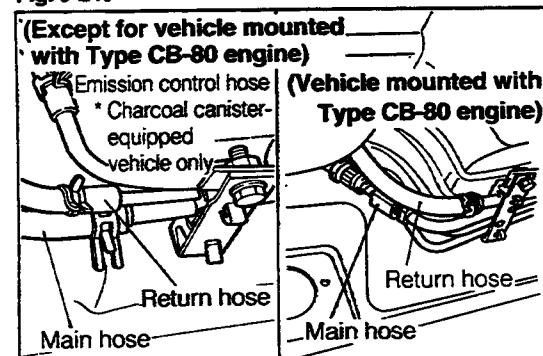


Fig. 9-241

WR-09261

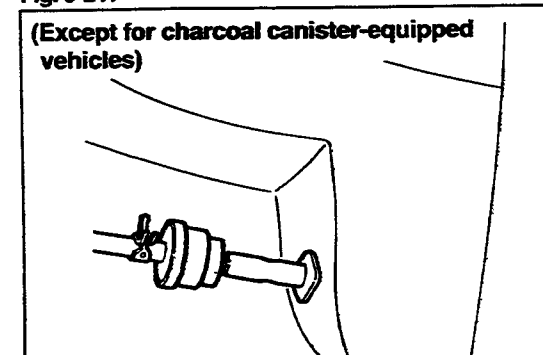


Fig. 9-242

WR-09262

clamp.

- (2) Connect the hoses to both ends of the breather pipe. Secure them with the clips.
- (3) Install the breather pipe with one bolt.



Fig. 9-244

WR-09264

6. Installation of fuel sender gauge and fuel pump connectors

- (1) Connect the connectors and install the grommet.
- (2) Attach the rear quarter trim at the right/rear side. (3-door model)
- (3) Attach the scuff plate at the right/rear side. (5-door model)
- (4) Install the rear seat.

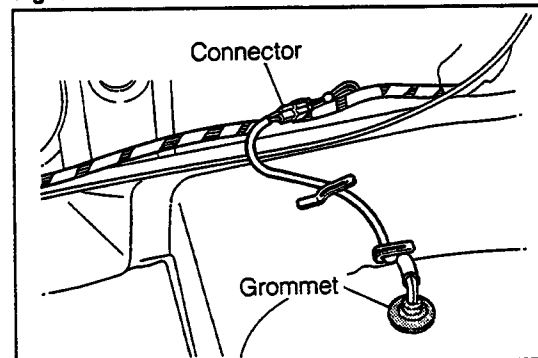
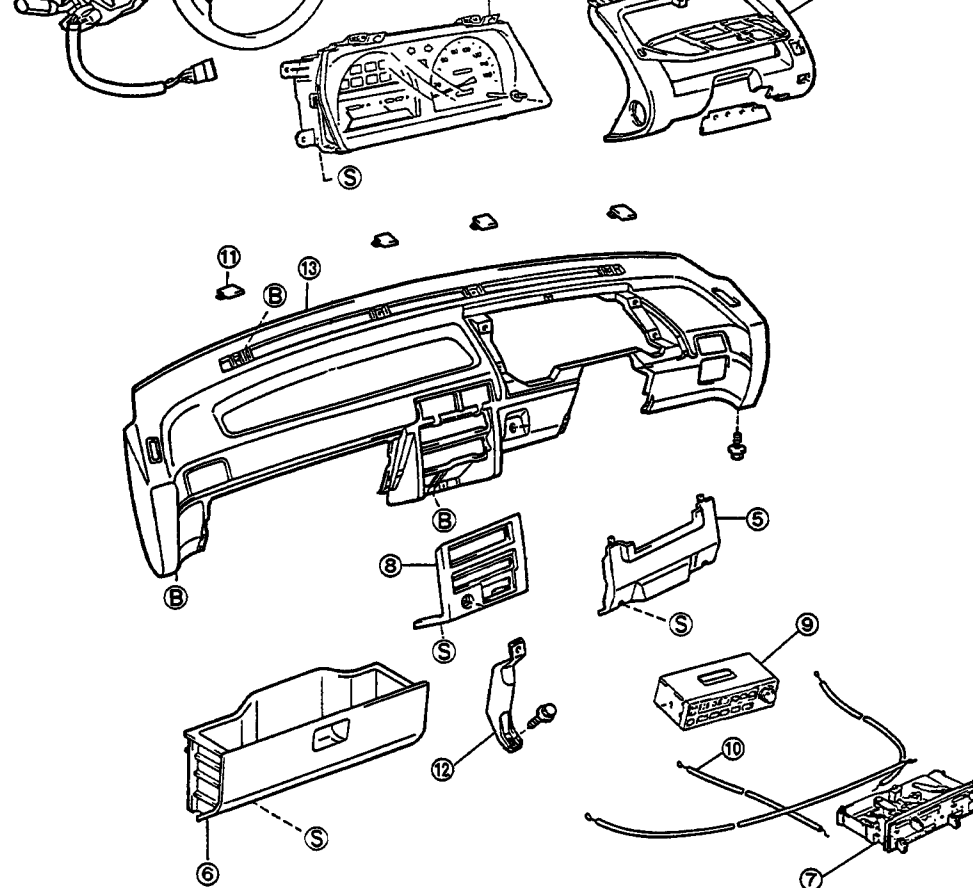


Fig. 9-245

WR-09265



- ① Steering wheel Ay
- ② Turn signal switch Ay
- ③ Instrument cluster finish panel S/A
- ④ Combination meter Ay
- ⑤ Instrument panel finish lower panel
- ⑥ Glove compartment door S/A
- ⑦ Heater control Ay

- ⑧ Instrument cluster finish center panel
- ⑨ Radio Ay
- ⑩ Heater control cable (3 pcs.)
- ⑪ Instrument panel hole cover
- ⑫ Instrument panel-to-floor brace
- ⑬ Instrument panel Ay

Fig. 9-246

WR-09266

4. Remove the steering column by removing the attaching bolts and nuts of the steering column.

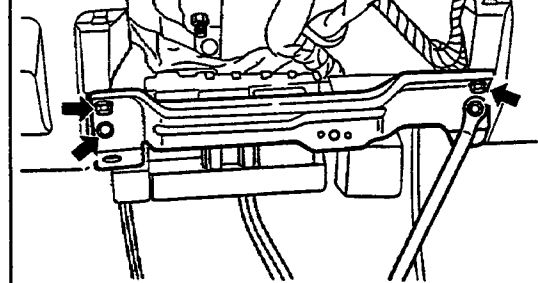


Fig. 9-248

WR-09268

5. Removal of instrument cluster finish panel subassembly
- (1) Remove the four attaching screws of the instrument cluster finish panel subassembly.
 - (2) Slightly pull out the instrument cluster finish panel subassembly toward your side. Then, disconnect the couplers of the rear window defogger and rear wiper switch.
 - (3) Remove the instrument cluster finish panel subassembly.

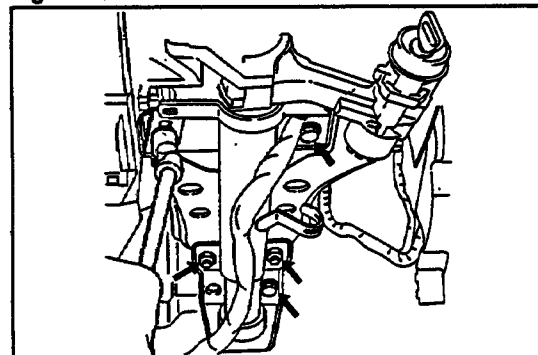


Fig. 9-249

WR-09269

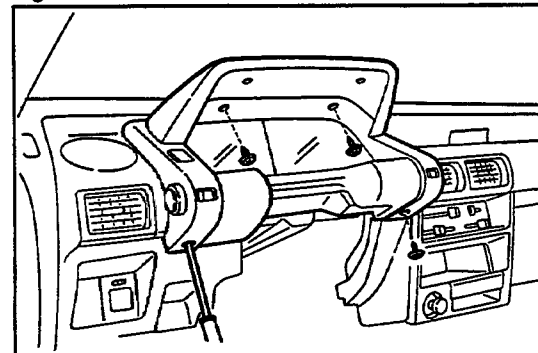


Fig. 9-250

WR-09270

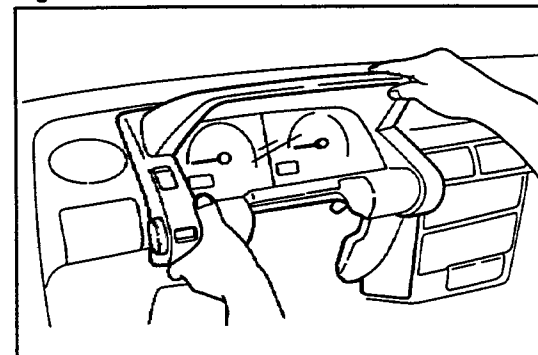


Fig. 9-251

WR-09271

- (3) Pull out the combination meter assembly toward your side. Disconnect the speedometer cable and the coupler of the wire harness. Remove the combination meter assembly.

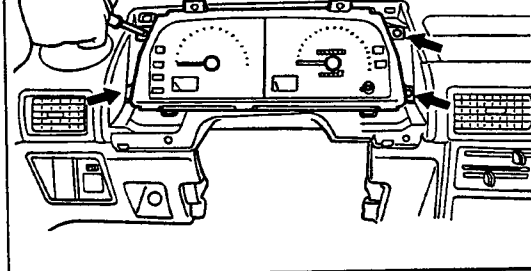


Fig. 9-253

WR-09273

7. Remove the glove compartment door subassembly by removing the two screws.

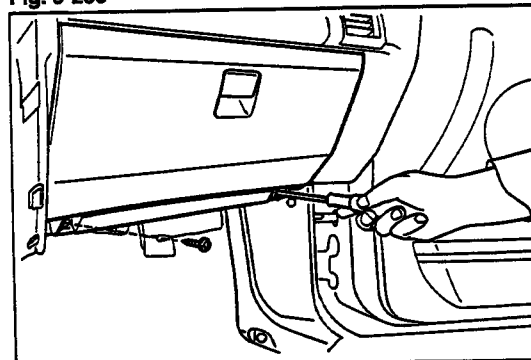


Fig. 9-254

WR-09274

8. Removal of instrument cluster finish center panel
- (1) Remove the instrument cluster finish center panel by removing the four screws and pulling out the panel toward your side.
 - (2) Disconnect the connectors of the cigar lighter.

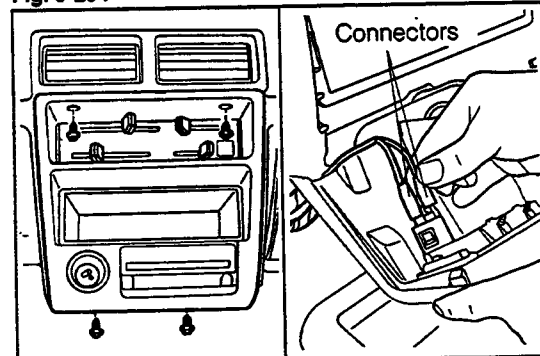


Fig. 9-255

WR-09275

9. Remove the heater control assembly by removing the three screws.

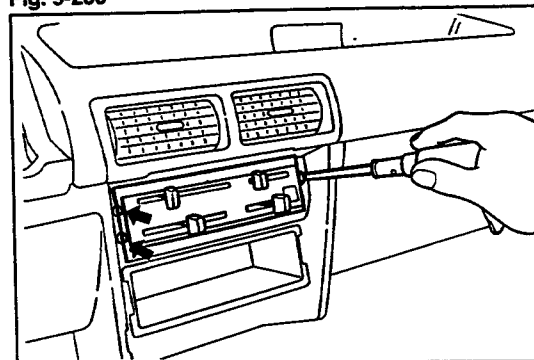


Fig. 9-256

WR-09276

four points of the upper section of the instrument panel assembly.

- (2) Remove the two attaching bolts at both sides of the instrument panel assembly.
- (3) Remove the two attaching bolts at the center of the instrument panel assembly.
- (4) Remove the instrument panel assembly from the vehicle.

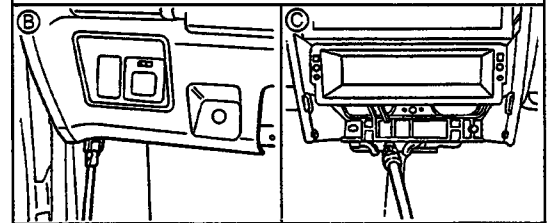
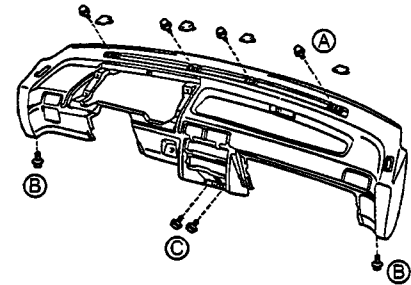
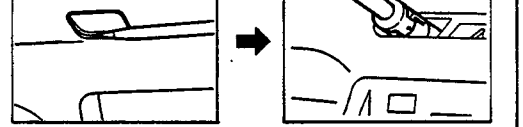


Fig. 9-258

WR-09278

12. Remove the following parts from the instrument panel assembly.

- (1) Remove the defroster nozzle assembly, side defroster nozzle duct, evaporator-to-register duct subassembly and front ventilator duct by removing the six screws.

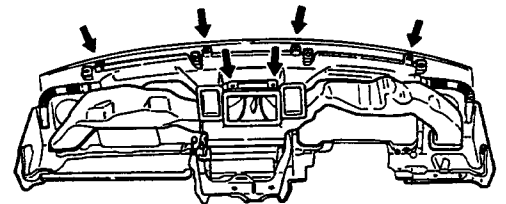


Fig. 9-259

WR-09279

- (2) Remove the ECU together with the bracket by removing the two screws and one bolt.
- (3) Remove the clock by removing the two screws. (LHD vehicle only)

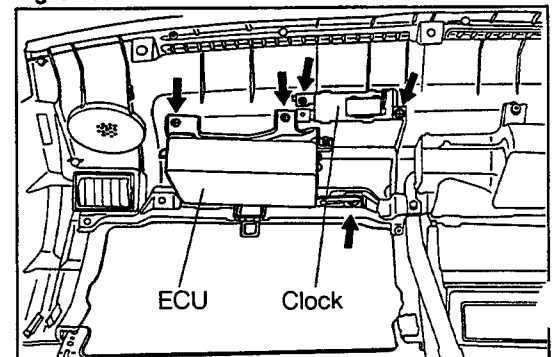


Fig. 9-260

WR-09280

- (8) Detach the clamps by removing the screws. (Two points)
- (9) Remove the instrument box or the remote controlled mirror switch.

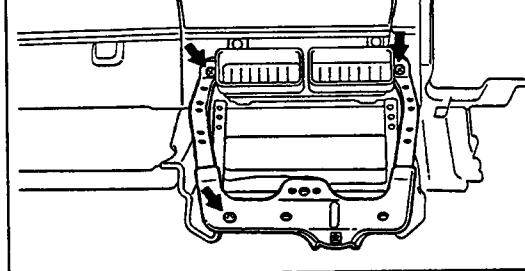


Fig. 9-262

WR-09282

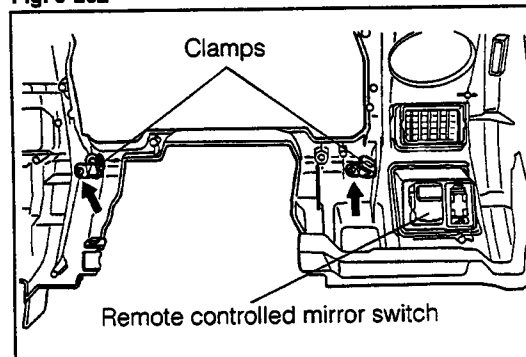


Fig. 9-263

WR-09283

- (10) Remove the instrument panel registers (R & L) and instrument panel center register.
- (11) Remove the instrument panel safety pad by removing the eight screws. (LHD vehicle only)

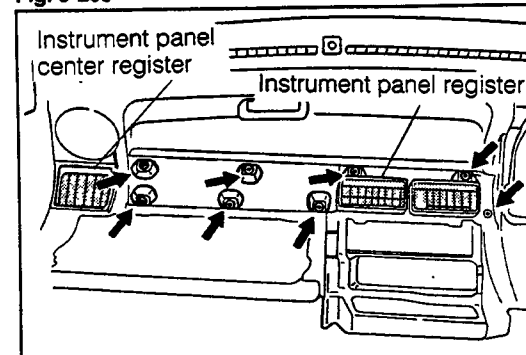


Fig. 9-264

WR-09284

- (12) Remove the radio tuning opening cover by removing the two screws.
- (13) Remove the instrument panel reinforcement No.3 by removing the four bolts.

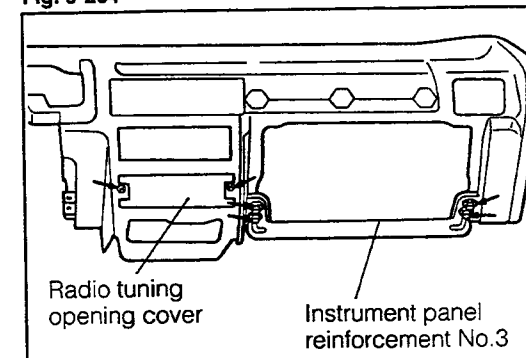


Fig. 9-265

WR-09285

7. Install the following parts to the instrument panel assembly.

- (1) Install the instrument panel bracket No.1 (two screws) and instrument panel bracket No.2 (four screws).
- (2) Install the instrument panel reinforcement No.3 with the four bolts.
- (3) Install the radio tuning opening cover with the two screws.

- (4) Install the instrument panel safety pad with the eight screws. (LHD vehicle only)
- (5) Install the instrument panel registers (R & L) and instrument panel center register.

- (6) Install the instrument box or the remote controlled mirror switch.
- (7) Attach the clamps with the screws. (Two points)

- (8) Install the instrument panel center stay with the three screws.

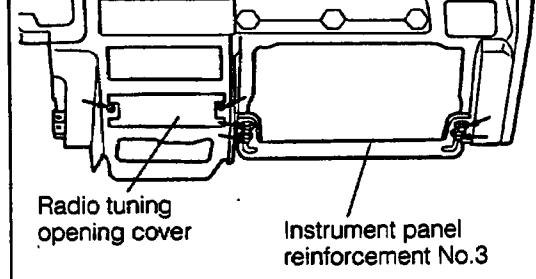


Fig. 9-267

WR-09287

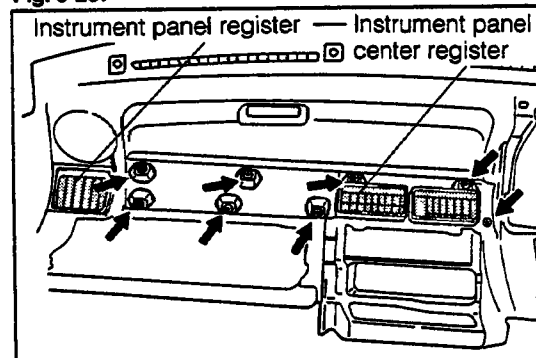


Fig. 9-268

WR-09288

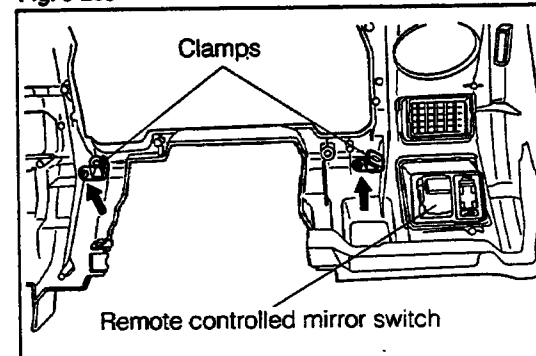


Fig. 9-269

WR-09289

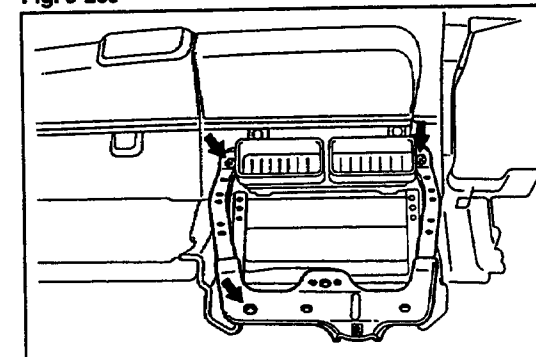


Fig. 9-270

WR-09290

- (13) Install the ECU together with the bracket by means of the two screws and one bolt.

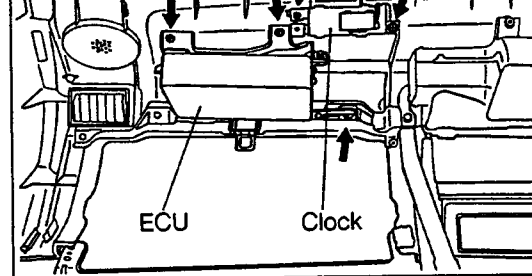


Fig. 9-272

WR-09292

- (14) Install the evaporator-to-register duct subassembly, front ventilator duct, defroster nozzle assembly and side defroster nozzle.

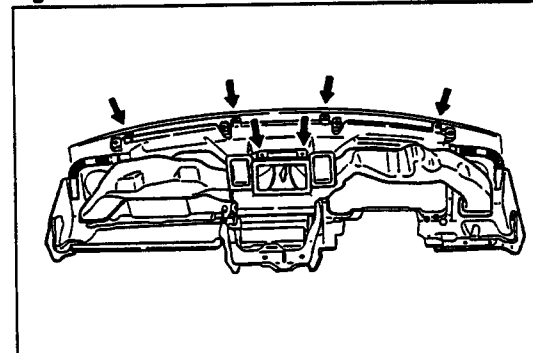


Fig. 9-273

WR-09293

2. Installation of instrument panel assembly
 - (1) Temporarily install the four bolts (A) at the upper side of the instrument panel assembly.
 - (2) Temporarily install the two bolts (B) at both sides of the instrument panel assembly.
 - (3) Temporarily install the two bolts (C) at the center of the instrument panel assembly.
 - (4) Settle the instrument panel assembly and tighten the eight bolts.
 - (5) Install the instrument panel hole covers.
3. Connect the couplers and wire harness clamps of the ECU (for EFI or A/T use), blower fan motor, clock and remote controlled mirror switch.
4. Install the heater control assembly with the three screws.

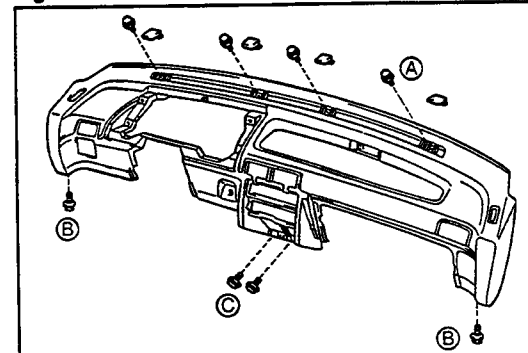


Fig. 9-274

WR-09294

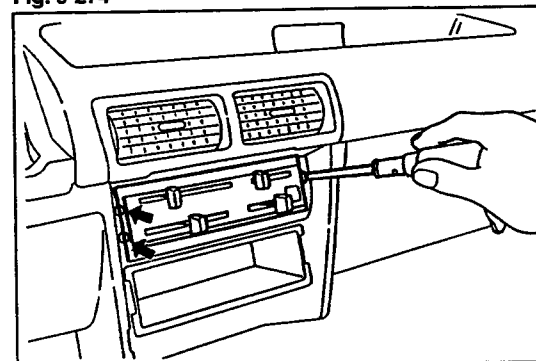


Fig. 9-275

WR-09295

meter cable to the combination meter assembly.

- (2) Install the combination meter assembly with the four screws.
- (3) Connect the speedometer cable at the transmission side.

8. Installation of instrument cluster finish panel subassembly

- (1) Connect the couplers of the rear window defogger and rear wiper switch.
- (2) Install the instrument cluster finish panel subassembly with the four screws.

9. Install the steering column with the bolts and nuts.

10. Install the instrument panel lower reinforcement with the four bolts.

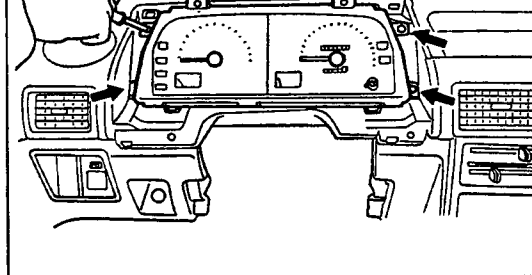


Fig. 9-277

WR-09297

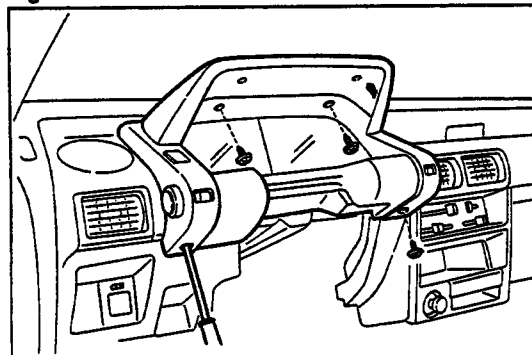


Fig. 9-278

WR-09298

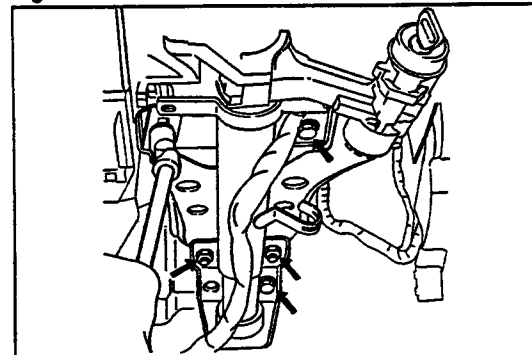


Fig. 9-279

WR-09299

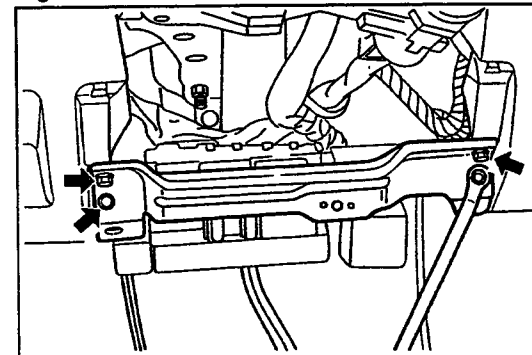
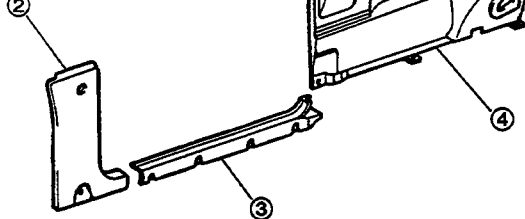


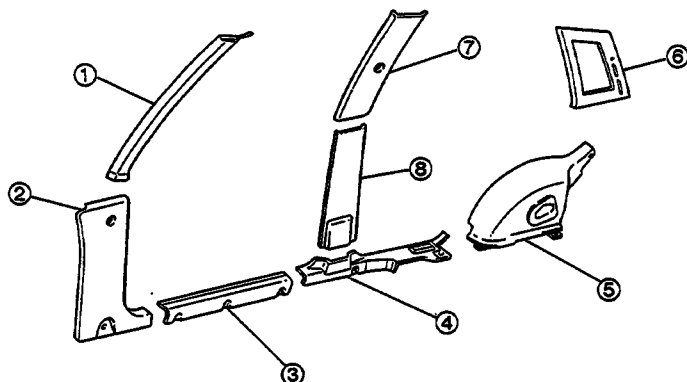
Fig. 9-280

WR-09300



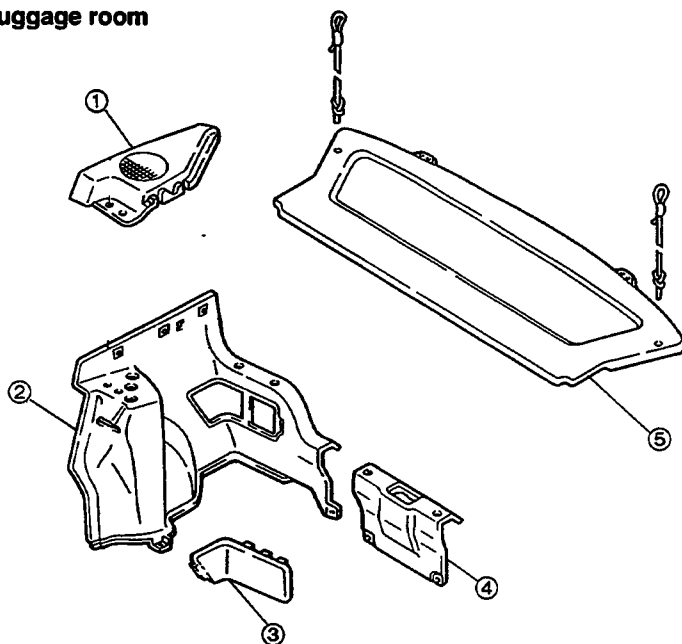
- ⑤ Center pillar upper garnish
- ⑥ Roof side inner garnish

5-door model



- ① Front pillar garnish
- ② Cowl side trim
- ③ Front door scuff plate
- ④ Rear door scuff plate
- ⑤ Quarter wheel house cover
- ⑥ Roof side inner garnish
- ⑦ Center pillar upper garnish
- ⑧ Center pillar lower garnish

Luggage room



- ① Package tray side trim
- ② Deck side trim
- ③ Rear combination lamp service hole cover
- ④ Lower back trim
- ⑤ Package tray trim

Fig. 9-282

WR-09302

Removal
Remove the cowl side trim by detaching the two clips, using a clip clamping tool.

Installation

Install the cowl side trim with the two clips.

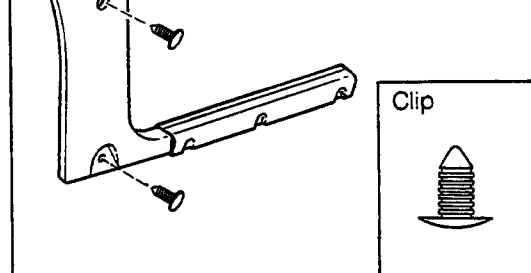


Fig. 9-284

WR-09304

FRONT DOOR SCUFF PLATE (3-DOOR MODEL)

Removal

Remove the front door scuff plate by removing the five screws.

Installation

Install the front door scuff plate with the five screws.

(5-DOOR MODEL)

Removal

Remove the front door scuff plate by removing the three screws.

Installation

Install the front door scuff plate with the three screws.

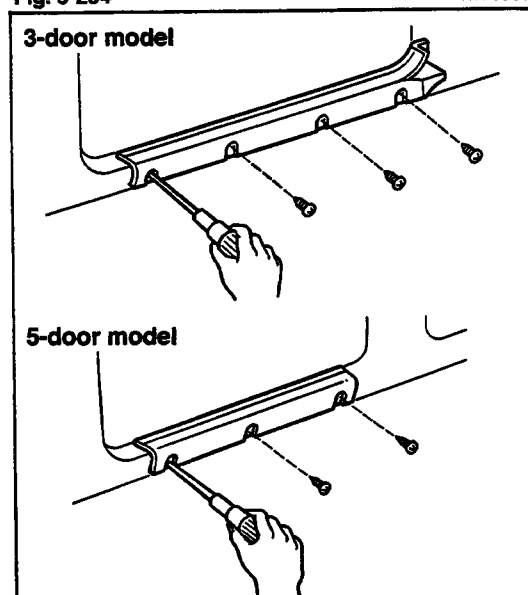


Fig. 9-285

WR-09305

QUARTER TRIM (3-DOOR MODEL)

Removal

1. Remove the two screws at the lower end of the trim.
2. Detach the three clips (A) by pushing the center sections of the clips.
3. Detach the clips (B) (at six points), using a common screwdriver.
4. Remove the quarter trim by pulling it toward the front.

Installation

1. Attach the clip (C).
2. Attach the clips (B) (at six points).
3. Attach the clips (A) (at three points).
4. Install the two screws at the lower end of the trim.

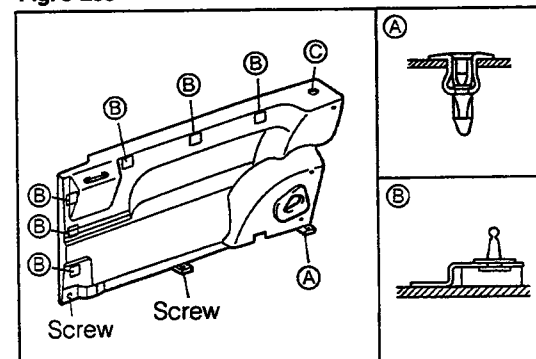


Fig. 9-286

WR-09306

Removal

1. Remove the rear door scuff plate. (See Fig. 9-287.)
2. Remove the one screw and two clips (A).
3. Detach the four clips (B), using a common screwdriver.

Installation

1. Align the clips (B) in place. Install the quarter wheel house cover by lightly tapping around the clips by hand.
2. Install the one screw and two clips (A).
3. Install the rear door scuff plate.

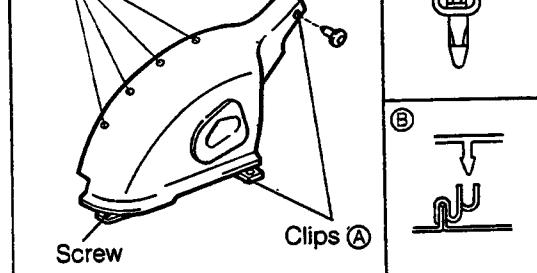


Fig. 9-288

WR-09308

CENTER PILLAR LOWER GARNISH**Removal**

1. Disengage the clips (A), using a common screwdriver.
2. Disengage the clips (B), using a common screwdriver.
3. Remove the center pillar lower garnish.

Installation

1. Hang the lower end of the center pillar lower garnish to the rear door scuff plate.
2. Align the clips (A) and (B) in place. Install the center pillar lower garnish by lightly tapping around the clips by hand.

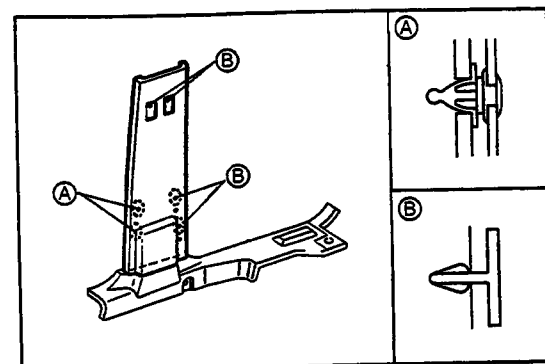


Fig. 9-289

WR-09309

ROOF SIDE INNER UPPER GARNISH**Removal**

1. Remove the quarter window lock cover.
2. Remove the two attaching screws of the quarter window lock assembly.
3. Disengage the clips (A), using a common screwdriver.
4. Disengage the clips (B) and (C), using a common screwdriver.
5. Remove the roof side inner upper garnish.

Installation

1. Align the clips (A), (B) and (C) in place. Install the roof side inner upper garnish by lightly tapping around the clips by hand.
2. Install the quarter window lock assembly with the two screws.
3. Install the quarter window lock cover.

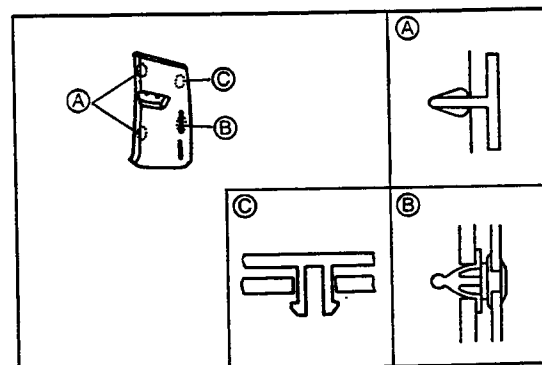


Fig. 9-290

WR-09310

DECK SIDE TRIM

Removal

1. Remove the package tray.
2. Remove the quarter trim.

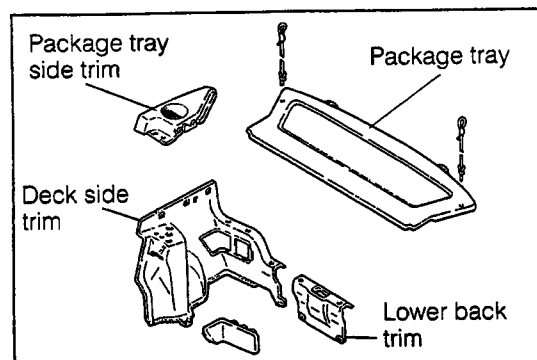


Fig. 9-292

WR-09312

3. Removal of package tray side trim
 - (1) Remove the four bolts.
 - (2) Remove the package tray side trim.

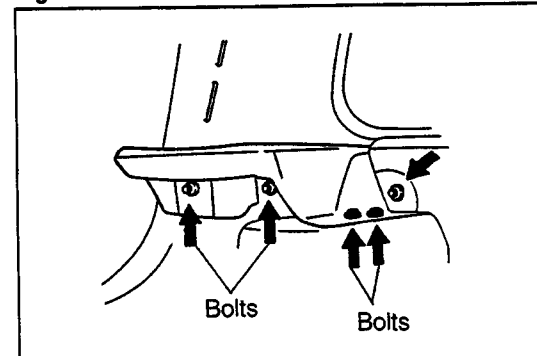


Fig. 9-293

WR-09313

4. Removal of lower back trim
 - (1) Detach the four clips by pushing the center sections of the clips.
 - (2) Remove the lower back trim.

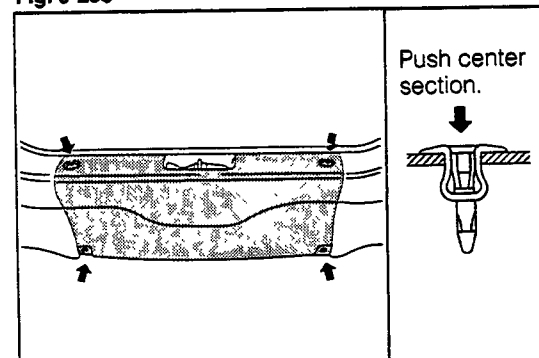


Fig. 9-294

WR-09314

- (1) Install the deck side trim with the four clips.
- (2) Install the rear combination lamp service hole cover.

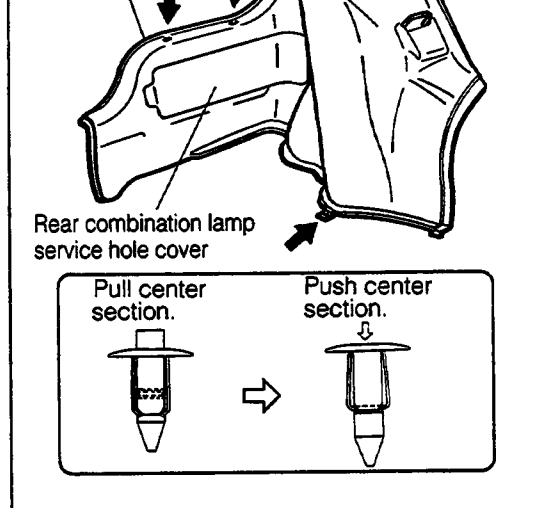


Fig. 9-296

WR-09316

2. Install the lower back trim with the four clips.

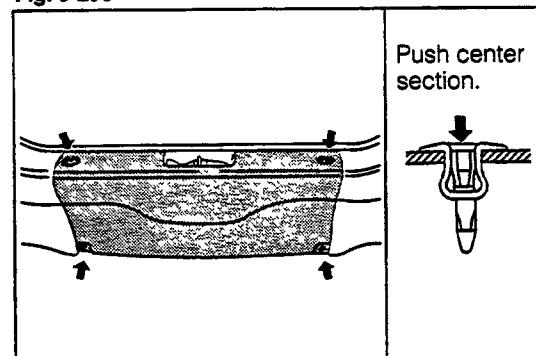


Fig. 9-297

WR-09317

3. Install the package tray side trim with the four bolts.
4. Install the package tray.
5. Install the quarter trim.

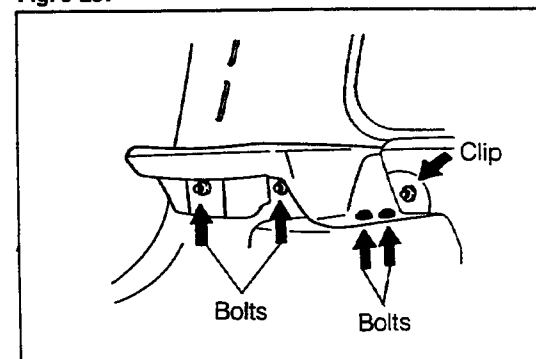
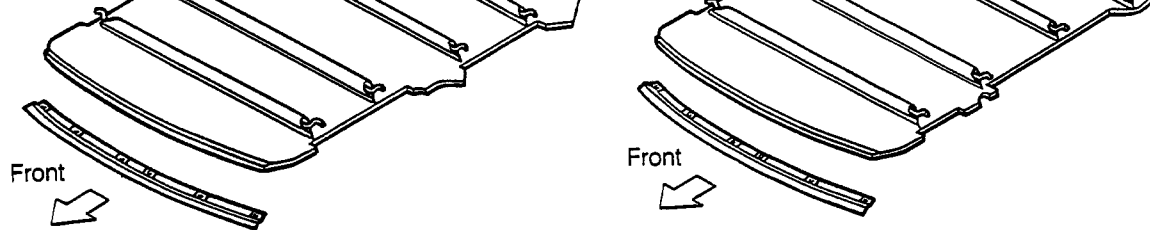


Fig. 9-298

WR-09318



Molded ceiling

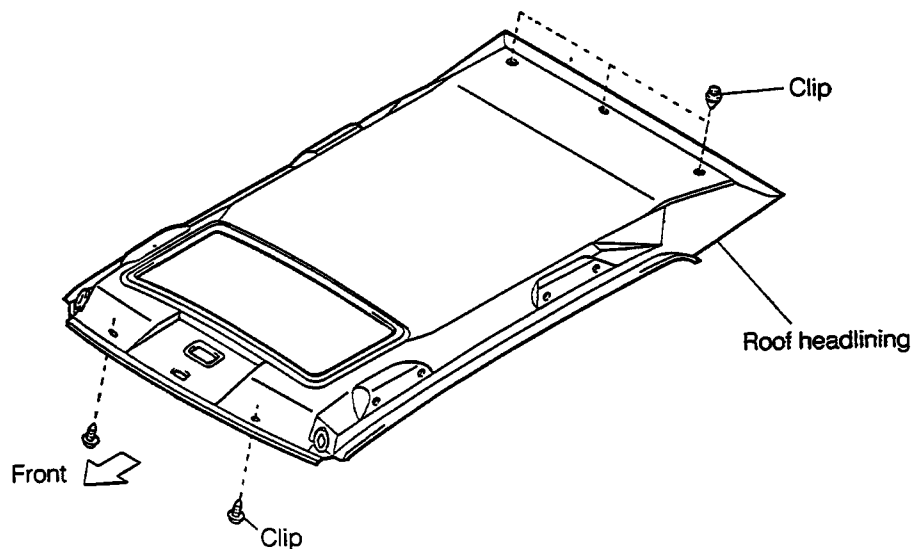


Fig. 9-299

WR-09319

SUSPENDED CEILING

Removal

1. Remove the sun visor assembly.
2. Remove the inner rear-view mirror with room lamp.
3. Remove the front pillar garnish, center pillar garnish and roof side inner upper garnish. (Only vehicle equipped with those garnishes)

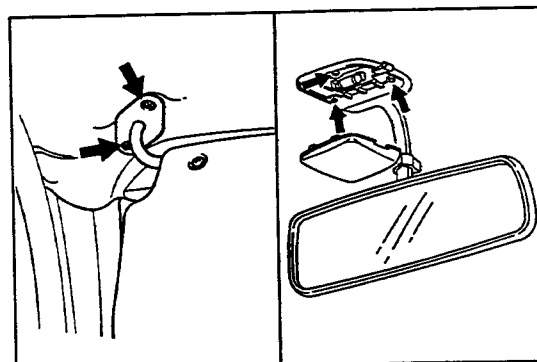


Fig. 9-300

WR-09320

7. Remove the lifting wires from the body side rail holes one by one, starting from the rear of the roof headlining.

8. Remove the roof headlining retainer and roof headlining by removing the five screws.

Installation

1. Install the roof headlining retainer by tightening the five screws in the sequence indicated in the right figure.

NOTE:

Install the roof headlining retainer in such a direction that a cut-out section at the center section of the retainer faces forward.

2. Insert each lifting wire into the body side rail hole one by one, starting from the front of the roof headlining retainer. Each hole should be held at the uppermost position.
3. Attach the three hooks at the rear of the roof headlining.

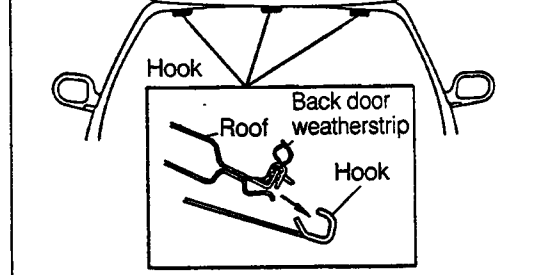


Fig. 9-302

WR-09322

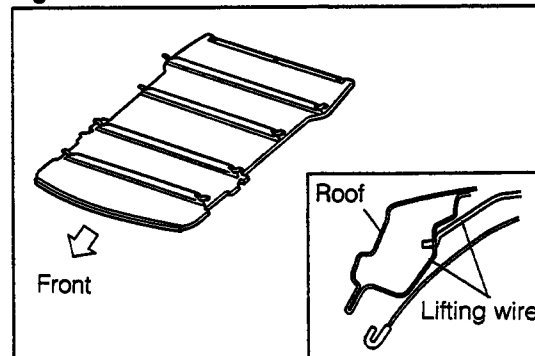


Fig. 9-303

WR-09323

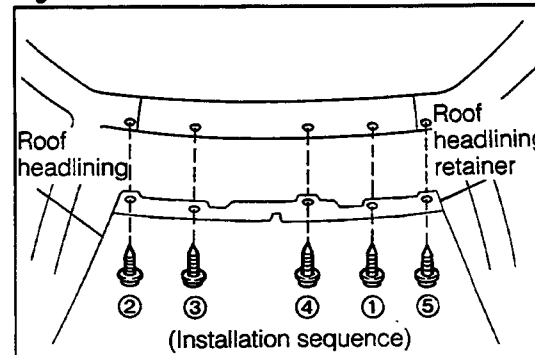


Fig. 9-304

WR-09324

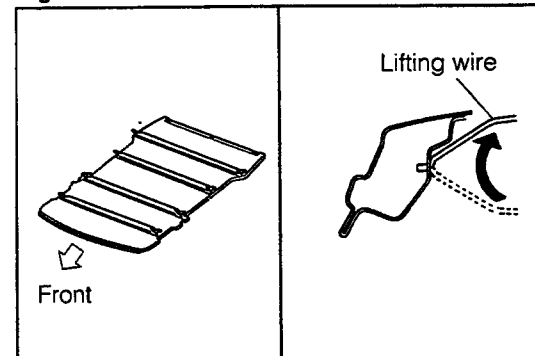


Fig. 9-305

WR-09325

MOLDED CEILING

Removal

1. Remove the sun visor assembly.
2. Remove the inner rear-view mirror with room lamp.
Detach the switch bezel.
4. Remove the sunroof opening trim molding.
5. Remove the front pillar garnish, center pillar garnish and roof side inner upper garnish.

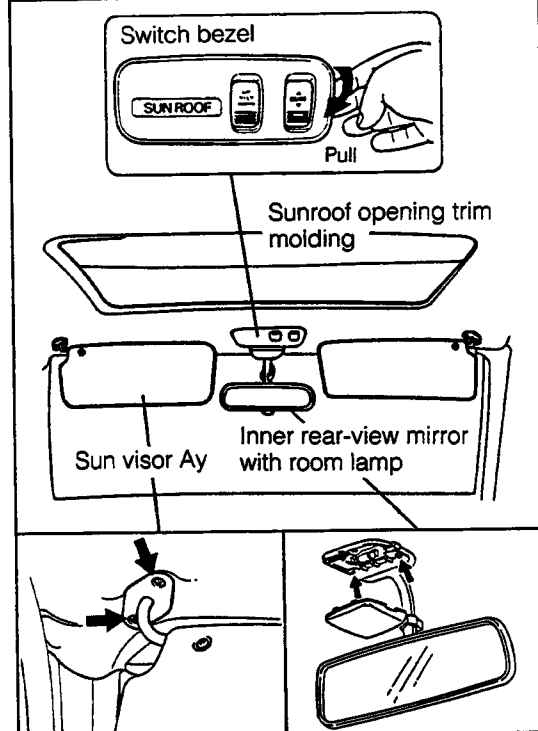


Fig. 9-307

WR-09327

Remove the front and rear door opening trim molding (quarter window weatherstrip). Proceed to remove the roof headlining.

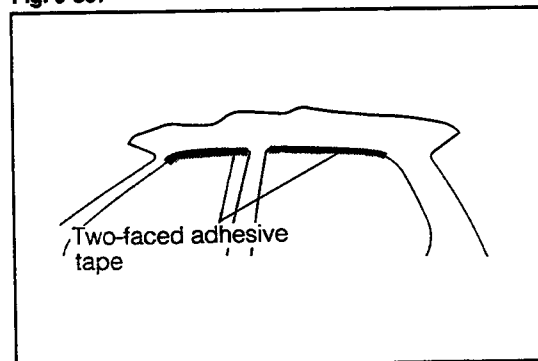


Fig. 9-308

WR-09328

- (2) Detach the three clips at the rear of the roof headlining.

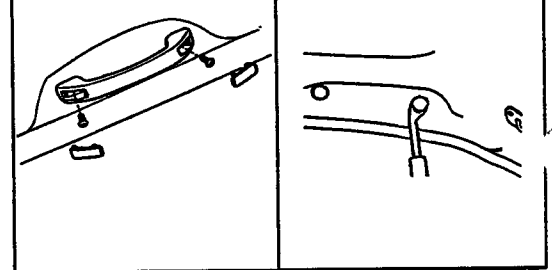


Fig. 9-309

WR-09329

- (3) Detach the two clips at the front of the roof headlining.
(4) Remove the roof headlining from the vehicle.

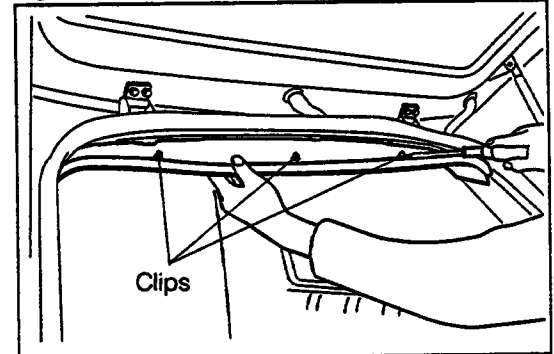


Fig. 9-310

WR-09330

Installation

1. Installation of roof headlining

- (1) Attach the front of the roof headlining with the two clips.

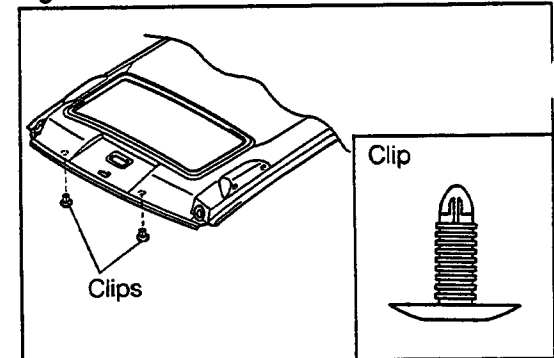


Fig. 9-311

WR-09331

- (2) Attach the rear of the roof headlining with the three clips.

NOTE:

Be sure to replace any damaged clip with a new one during the operations (1) and (2).

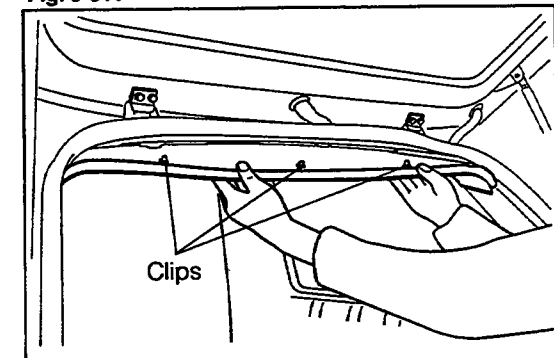


Fig. 9-312

WR-09332

2. Installation of front and rear door opening trim molding (quarter window weatherstrip)
 - (1) Affix the roof headlining at the front and rear door (quarter window) section, using a two-faced adhesive tape.
 - (2) Install the front and rear door opening trim molding (quarter window weatherstrip).

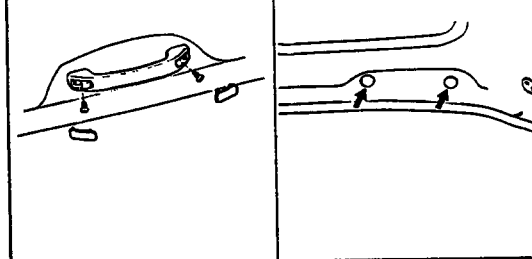


Fig. 9-313

WR-09333

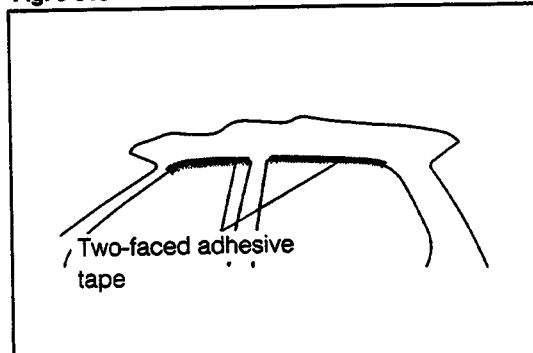


Fig. 9-314

WR-09334

3. Install the front pillar garnish, center pillar garnish and roof side inner upper garnish.
 1. Install the sunroof opening trim molding.
 5. Install the switch bezel.
 6. Install the inner rear-view mirror with room lamp.
 7. Install the sun visor assembly.

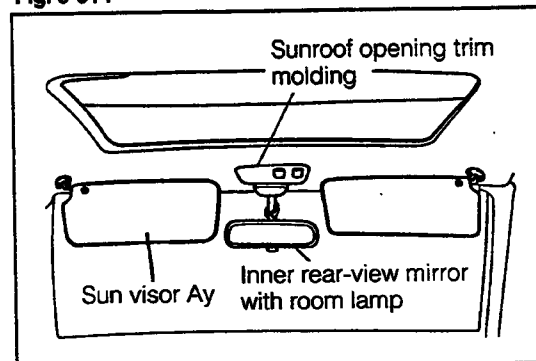
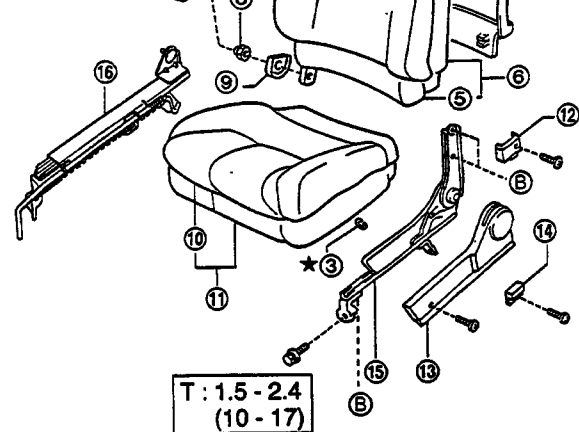
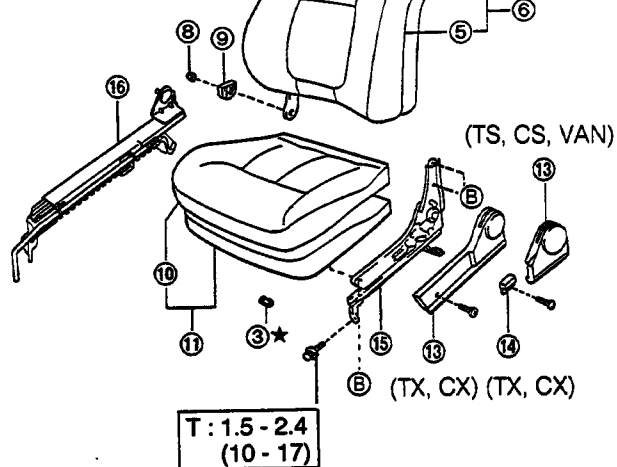


Fig. 9-315

WR-09335



T : Tightening torque
Unit: kg-m (ft-lb)
★ : Non-reusable parts

- ① Headrest Ay
- ② Front seatback cover
- ③ Hug snap ring
- ④ Front headrest support
- ⑤ Front seatback cover
- ⑥ Front seatback Ay
- ⑦ Front seat hinge cover
- ⑧ Nut

- ⑨ Front seat hinge cover
- ⑩ Front seat cushion cover
- ⑪ Front seat cushion Ay
- ⑫ Reclining hinge cover
- ⑬ Front seat cushion shield
- ⑭ Adjusting reclining release handle
- ⑮ Reclining seat adjuster Ay
- ⑯ Seat track Ay

Fig. 9-316

WR-09336

REMOVAL

Remove the front seat from the vehicle by removing the four bolts.

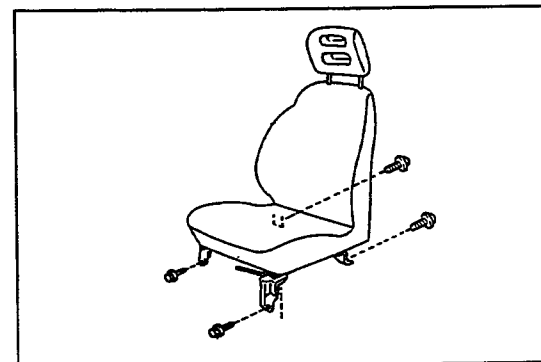


Fig. 9-317

WR-09337

3. Remove the reclining hinge cover by removing the one screw. (TURBO and GTti grades only)

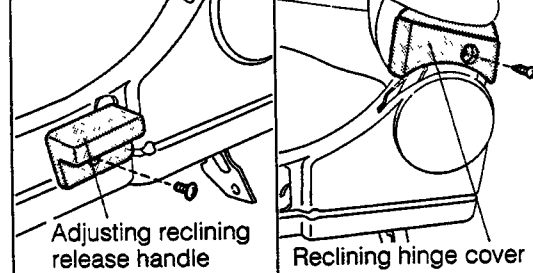


Fig. 9-319

WR-09339

4. Remove the front seat cushion shield by removing the attaching screws.

VAN, TX and TC grades: two screws

Except for VAN, TX and TC grades: three screws

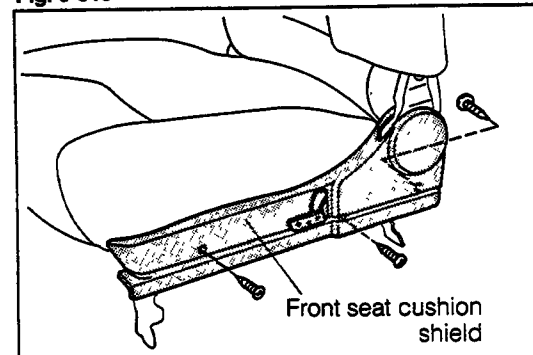


Fig. 9-320

WR-09340

5. Remove the front seat hinge cover by removing the one screw. (TURBO and GTti grades only)

Remove the front seatback cover by pulling its lower end. (TURBO and GTti grades only)

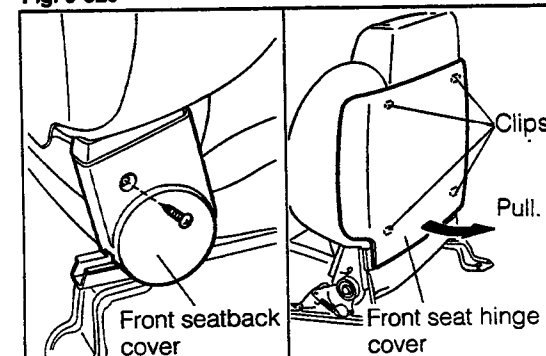


Fig. 9-321

WR-09341

7. Remove the front seatback assembly.

(1) Remove the four hug rings at the lower section of the seatback. (Except for TURBO and GTti grades)

(2) Remove the two hug rings at the reclining seat adjuster assembly side. (TURBO and GTti grades only)

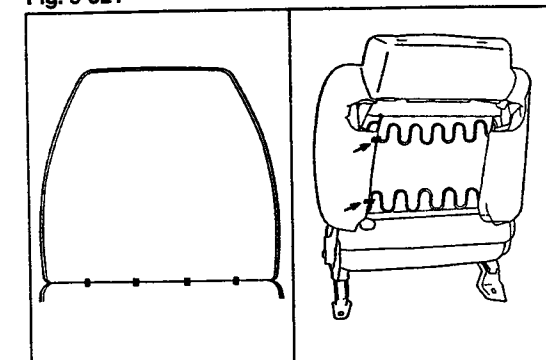


Fig. 9-322

WR-09342

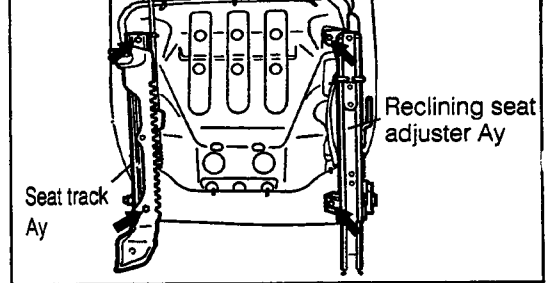


Fig. 9-324

WR-09344

10. Removal of front seatback cover

- (1) Remove the hug rings at the back side of the seatback. (TURBO and GTti grades only)

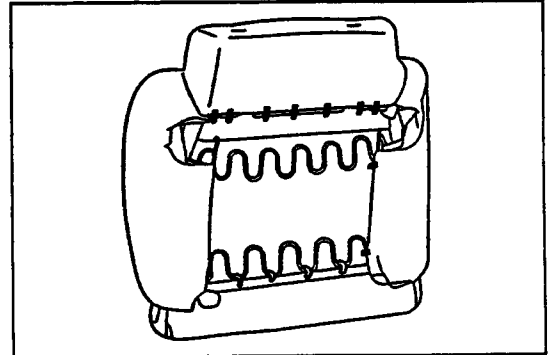


Fig. 9-325

WR-09345

- (2) Remove the front headrest support by compressing the end of the front headrest support and pulling it upward by your fingers.

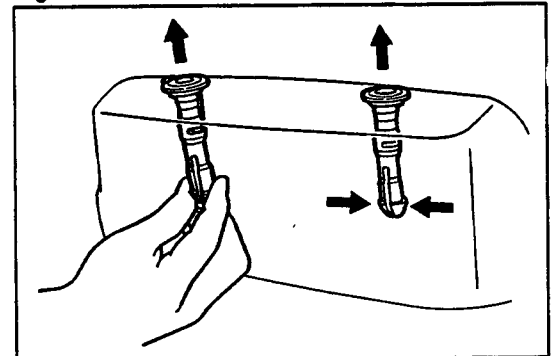


Fig. 9-326

WR-09346

- (3) Turn over the front seatback cover. Remove the front seatback cover by removing the hug rings at the upper section of the seatback.

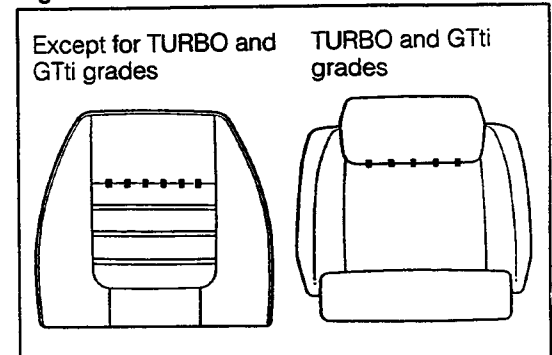


Fig. 9-327

WR-09347

- (3) Remove the front seat cushion cover.

ASSEMBLY

1. Installation of front seat cushion cover
 - (1) Install the hug rings at the front side of the front seat cushion. (See Fig. 9-329.)
 - (2) Install the hug rings at the back side of the front seat cushion.

NOTE:

- Be very careful not to smear or scratch the seat cover during the assembly.
- When installing the hug rings, make sure that no wrinkle is formed on the front seat cushion cover wherever possible.

2. Installation of front seatback cover
 - (1) Install the hug rings at the front side of the front seatback.
 - (2) Install the front headrest support.

- (3) Install the hug rings at the rear of the seatback at positions indicated in the right figure. (TURBO and GTti grades only)

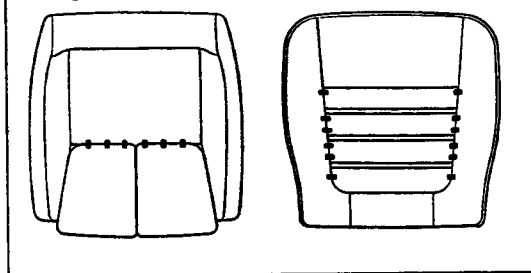


Fig. 9-329

WR-09349

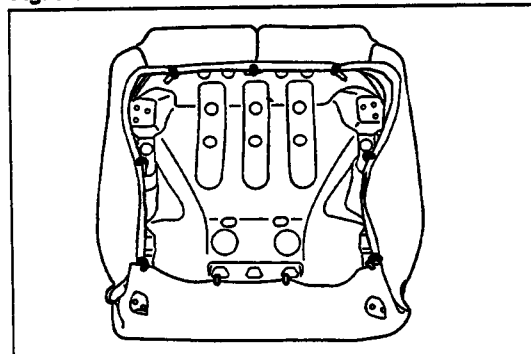


Fig. 9-330

WR-09350

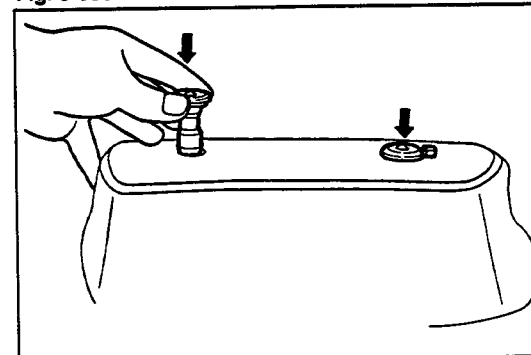


Fig. 9-331

WR-09351

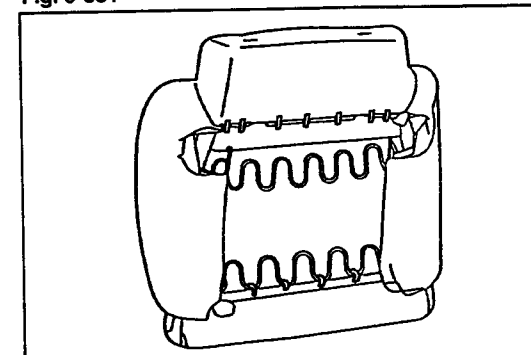


Fig. 9-332

WR-09352

assembly. Then, install them to the seat cushion with the two bolts and one nut.

(2) Install the hug rings from the rear of the seatback.

5. Hook the two clips at the upper section of the front seatback cover to the seatback. Then, install the front seatback cover by pushing its lower side. (TURBO and GTti grades only)
6. Install the front seat hinge cover with one screw. (TURBO and GTti grades only)

7. Install the front seat cushion shield with the screws.
VAN, TC and TX grades: Two screws
Except for VAN, TC and TX grades: Three screws

8. Install the reclining hinge cover with the one screw. (TURBO and GTti grades only)
9. Install the adjusting reclining release handle with the one screw.
10. Install the headrest.

INSTALLATION

Install the front seat with the four bolts.

Tightening Torque: 1.5 - 2.4 kg-m (11 - 17 ft-lb)

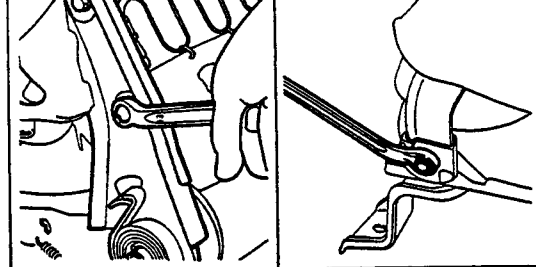


Fig. 9-334

WR-09354

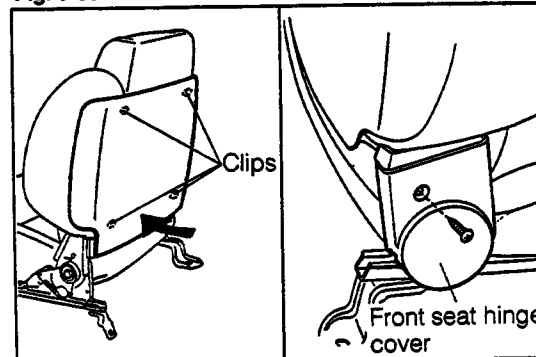


Fig. 9-335

WR-09355

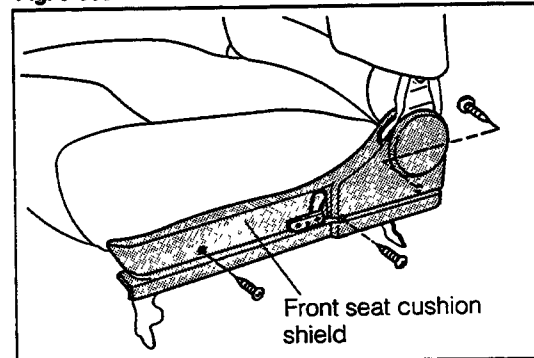


Fig. 9-336

WR-09356

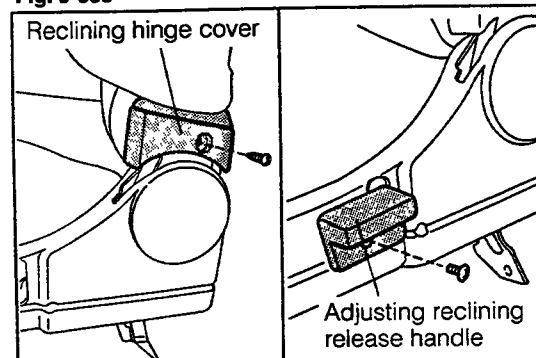
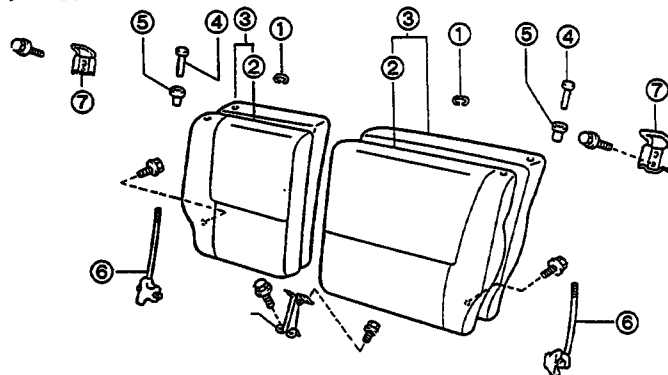


Fig. 9-337

WR-09357

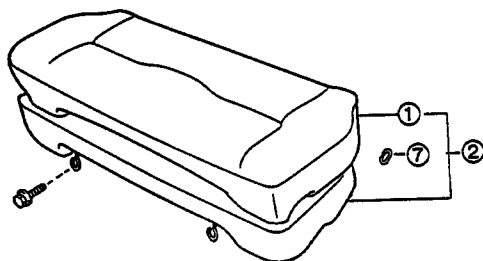
(Split type)



- ① Hug ring
- ② Rear seatback Ay
- ③ Rear seatback stop release button
- ④ Rear seatback stop button grommet
- ⑤ Rear seatback stop button grommet
- ⑥ Rear seatback lock Ay
- ⑦ Rear seatback lock striker S/A

Seat Cushion

(Fixed type)



- ① Rear seat cushion cover
- ② Rear seat cushion Ay
- ③ Rear seat turn lock Ay
- ④ Cushion
- ⑤ Rear seat cushion hinge cover
- ⑥ Rear seat cushion hinge Ay
- ⑦ Hug ring

(Rise-up type)

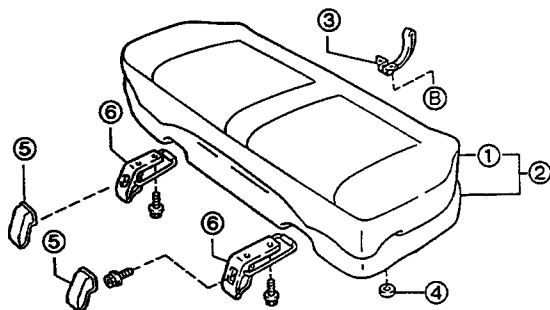


Fig. 9-338

WR-09358

by detaching the clips.

Bench type: Clips 10 pcs.

Split type: Clips 14 pcs.

2. Detach the rear seatback stop release buttons and rear seatback stop button grommets from the rear seatback assembly.

3. Removal of rear seatback cover
 - (1) Detach the hug rings at the back side of the rear seatback.

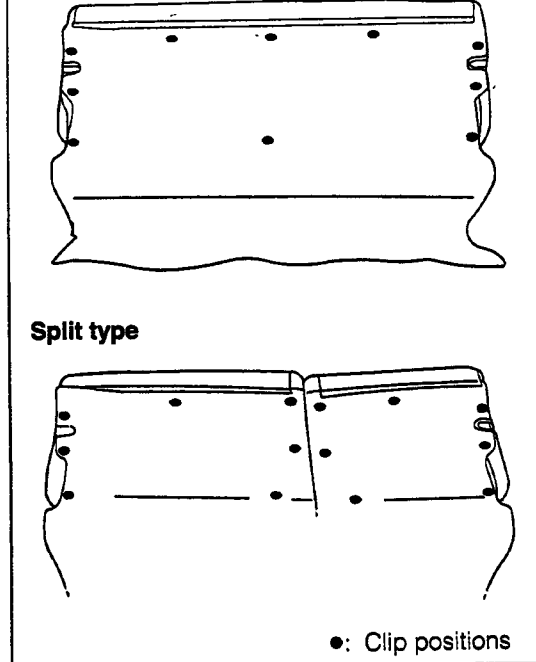


Fig. 9-340

WR-09360

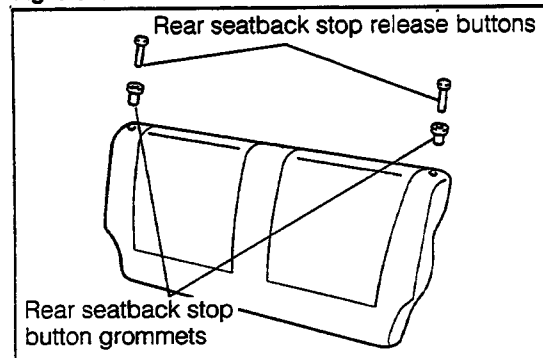


Fig. 9-341

WR-09361

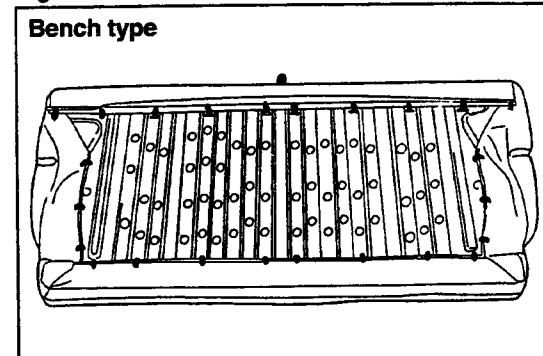


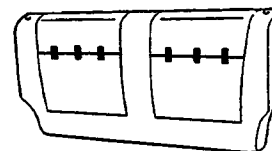
Fig. 9-342

WR-09362

- (1) Install the hug rings at the front side of the rear seatback.
- (2) Install the hug rings at the back side of the rear seatback.

NOTE:

- Be very careful not to smear or scratch the rear seatback cover during the assembly.
 - When installing the hug rings, make sure that no wrinkle is formed on the rear seatback cover whenever possible.
2. Install the rear seatback stop button grommets and rear seatback stop release buttons on the rear seatback assembly.
 3. Install the deck carpet on the rear seatback assembly with the clips. (See Fig. 9-340.)
 Bench type: Clips 10 pcs.
 Split type: Clips 14 pcs.



TURBO and GTi grades

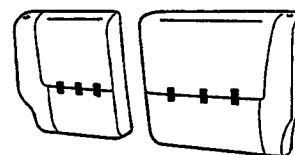


Fig. 9-344

WR-09364

Installation

1. Installation of rear seatback assembly
 - (1) Temporarily install the rear seatback assembly on the vehicle with the bolts.
 Bench type: Bolts 4 pcs.
 Split type: Bolts 8 pcs.

NOTE:

The rear seatback attaching bolts should be installed at those positions specified in the right figure.

- (2) Tighten the bolts.
 Tightening Torque: 0.4 - 0.7 kg-m (2.9 - 5.1 ft-lb)

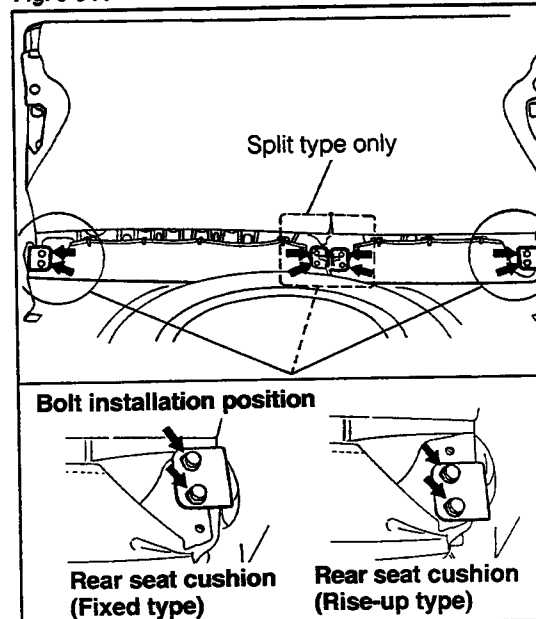


Fig. 9-345

WR-09365

- (1) Remove the hinge cover.
- (2) Remove the rear seat cushion hinge attaching bolts.
- (3) Pull the belt and disengage the lock.
- (4) Remove the rear seat cushion assembly from the vehicle.

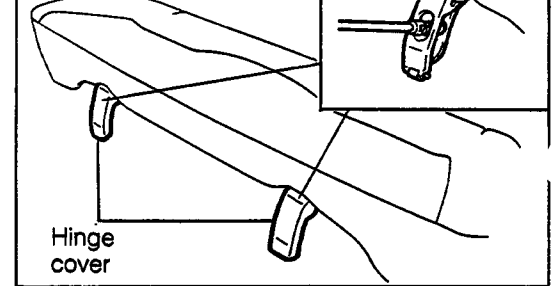


Fig. 9-347

WR-09367

Disassembly

1. Detach the hug rings at the back side of the rear seat cushion assembly. (Fixed type only)

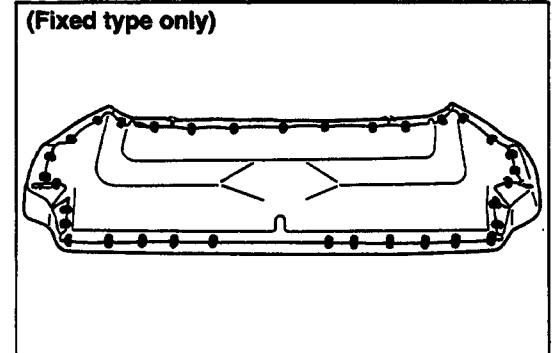


Fig. 9-348

WR-09368

2. Remove the rear seat cushion hinge assembly and rear seat turn lock assembly. (Rise-up type only)

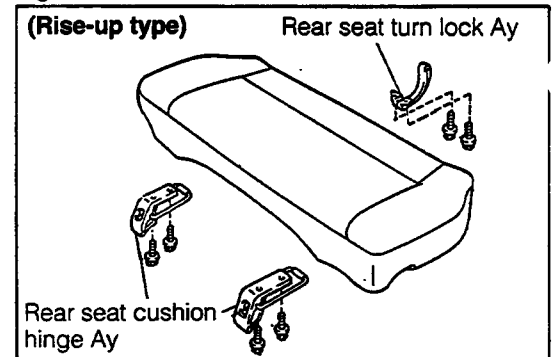


Fig. 9-349

WR-09369

3. Remove the rear seat cushion cover from the rear seat cushion frame. (Rise-up type only)

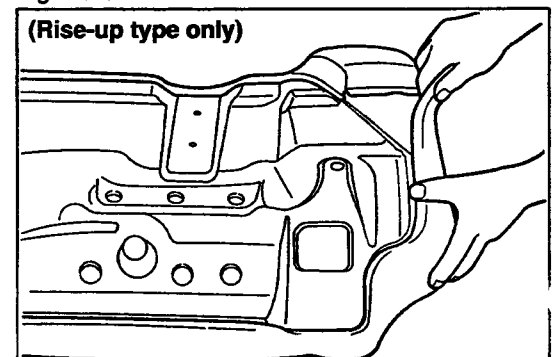


Fig. 9-350

WR-09370

- When installing the rear seat cushion cover, make sure that no wrinkle is formed whenever possible.

4. Install the rear seat cushion hinge assembly and rear seat turn lock assembly on the back side of the rear seat cushion. (Rise-up type only)

Installation

1. Installation of fixed type rear seat cushion assembly
 - (1) Align and engage the hook at the rear seat cushion side with the hook at the floor side, as indicated in the right figure.
 - (2) Install the rear seat cushion assembly with the two bolts.

Tightening Torque: 1.5 - 2.4 kg-m (11 - 17 ft-lb)

 - (3) Install the rear seatback assembly. (See Fig. 9-345.)
2. Installation of rise-up type rear seat cushion assembly
 - (1) Temporarily install the attaching bolts of the rear seat cushion hinge assembly.
 - (2) Ensure that the rear seat turn lock is functioning properly.
 - (3) Tighten the attaching bolts of the rear seat cushion hinge assembly.

Tightening Torque: 1.5 - 2.4 kg-m (11 - 17 ft-lb)

 - (4) Install the hinge cover.

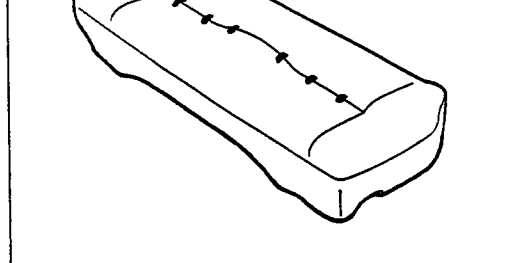


Fig. 9-351

WR-09371

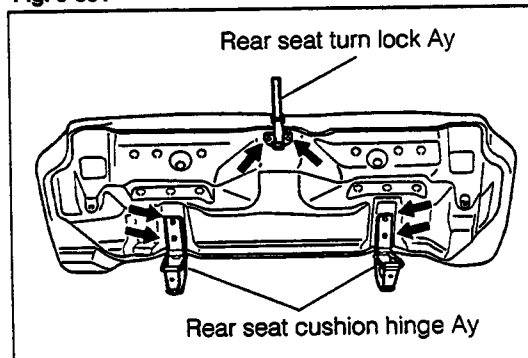


Fig. 9-352

WR-09372

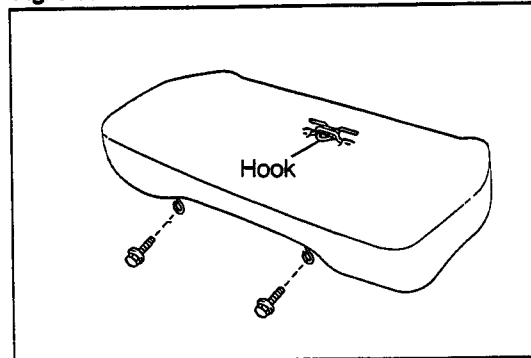


Fig. 9-353

WR-09373

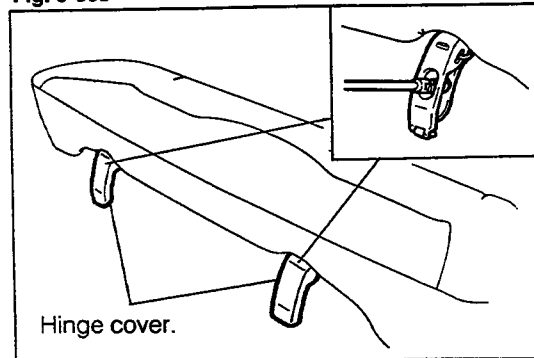
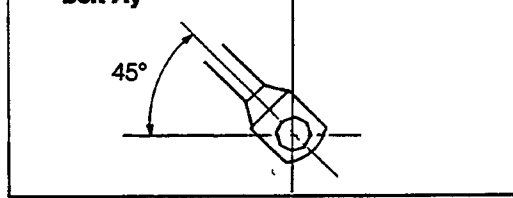


Fig. 9-354

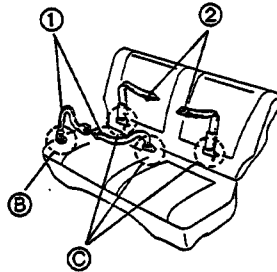
WR-09374



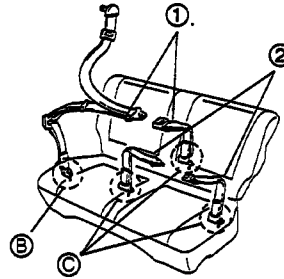
- ① Front seat belt adjuster Ay
- ② Front seat outer belt Ay
- ③ Front seat inner belt Ay

Rear

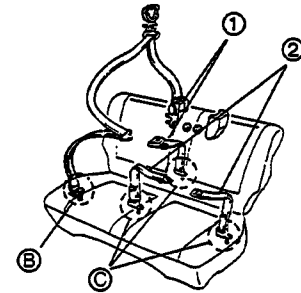
2-point (NR) × 3



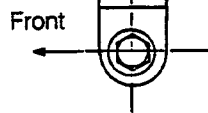
3-point (NR) × 2 and 2-point (NR)



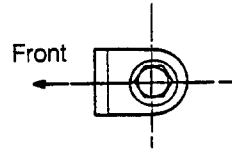
3-point (ELR) × 2 and 2-point (NR)



⑧ **Installing direction of rear seat belt lap outer anchor**
(Quarter house side)



⑨ **Installing direction of rear seat belt lap inner anchor**



**Bolt Tightening Torque T: 2.9 - 5.4 kg-m
21 - 39 ft-lb**

- ① Rear seat lap belt Ay
- ② Rear seat lap center belt Ay

Fig. 9-355

WR-09375

Inspection

ELR Locking Check

Slowly tilt the retractor from the installation angle. Ensure that no belt locking takes place within 15 degrees in all directions. Also, ensure that the locked state is retained when the retractor is tilted 45 degrees or more.

NOTE:

- Never attempt to disassemble the retractor.
- After the anchor bolts have been tightened, make sure that each anchor can move in the bolt's circumferential direction.
- Be sure that the belt in the installed state can be pulled out smoothly and also it can be retracted smoothly into position.

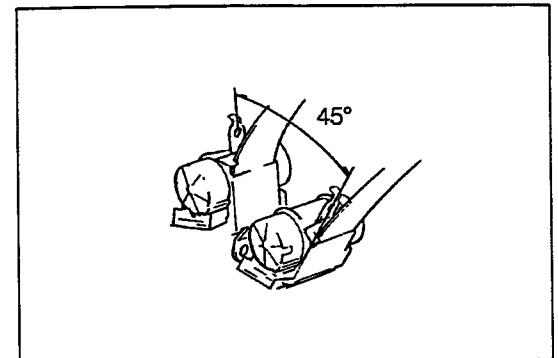


Fig. 9-356

WR-09376

BODY DIMENSIONS

Point code	Measuring point	Diameter
H, h	Front cross member reference hole, lower	15 (0.59)
I, i	Front side member reference hole, front lower	10 (0.39)
J, j	Lower arm installation nut, inner	13 (0.51)
K, k	Front fender rear apron reference hole	10 (0.59)
L, ℓ	Front floor under reinforcement reference hole, rear	20 (0.79)

Point code	Measuring point
M, m	Rear strut bar installation hole,
N, n	Rear floor side member reference
O, o	Rear floor cross member reference
P, p	Rear side member bumper installation

[Underbody]

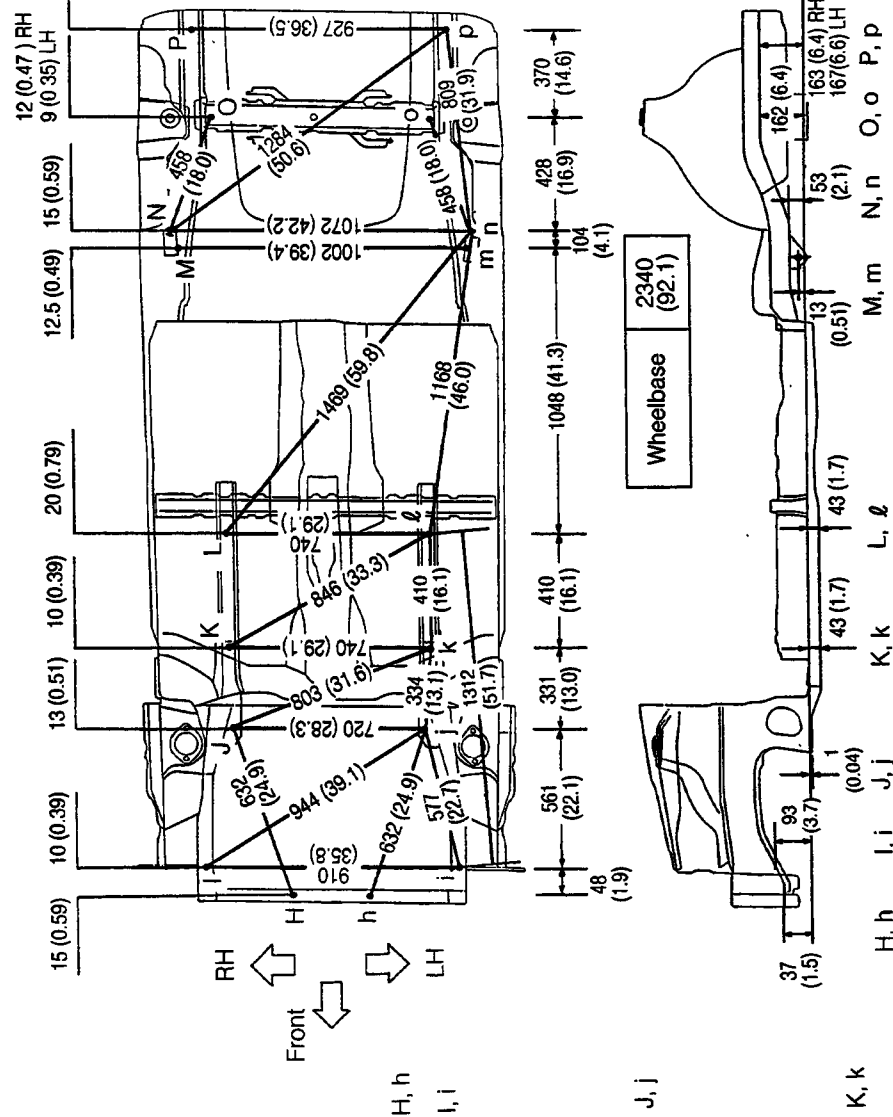


Fig. 9-357

Point code	Measuring point	Diameter
A, a	Fender installation nut, front	7 (0.28)
B, b	Front spring support hole, front	10 (0.39)
C, c	Fender installation nut, rear	7 (0.28)
D	Hood-to-cowl top seal installation hole (Center of vehicle)	7 (0.28)

[Engine compartment]

Point code	Measuring point
E, e	Front side member bumper ins
F, f	Headlamp installation hole, upper
G, g	Headlamp installation hole, lower

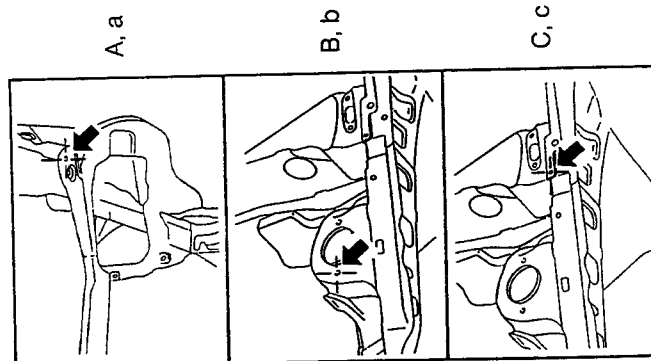
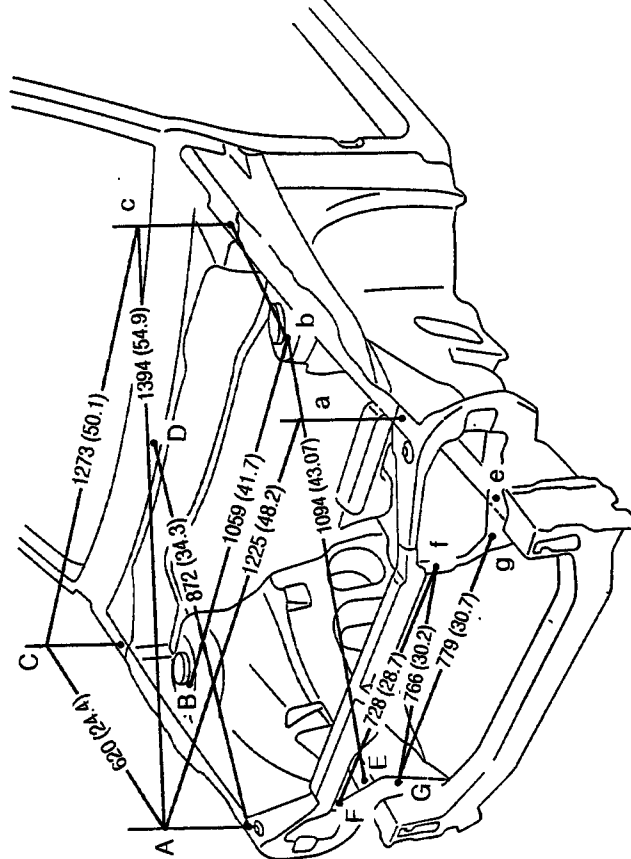


Fig. 9-358

SECTION 10

BODY ELECTRICAL SYSTEM

HANDLING INSTRUCTIONS	10- 3
HANDLING AND INSTRUCTION OF WITH LOCK TYPE CONNECTOR	10- 3
REPLACEMENT	10- 3
WIRING HARNESSSES	10- 4
SCHEMATIC DIAGRAM	10- 4
FUSES	10- 5
FUSIBLE LINK BLOCK	10- 8
LAMPS	10-10
TROUBLE SHOOTING	10-10
CLEARANCE LAMP	10-11
HEADLAMP	10-11
FRONT TURN SIGNAL LAMP	10-14
SIDE TURN SIGNAL LAMP	10-14
LICENSE PLATE LAMP	10-15
REAR COMBINATION LAMP	10-16
ROOM LAMP	10-17
LUGGAGE ROOM LAMP	10-18
COMBINATION METER	10-19
COMPONENTS	10-20
SINGLE-METER TYPE	10-21
TWO-METER TYPE	10-22
FUEL GAUGE AND WATER TEMPERATURE GAUGE	10-24
FUEL RECEIVER GAUGE	10-24
FUEL SENDER GAUGE	10-25
WATER TEMPERATURE RECEIVER GAUGE	10-26
WATER TEMPERATURE SENDER GAUGE	10-26

CROSS COIL TYPE GAUGE CIRCUIT	10-27
FUEL RECEIVER GAUGE	10-27
FUEL SENDER GAUGE	10-28
WATER TEMPERATURE RECEIVER GAUGE	10-28
WATER TEMPERATURE SENDER GAUGE	10-29
WARNING AND INDICATOR SYSTEM	10-30
BRAKE LEVEL WARNING LAMP	10-30
PARKING BRAKE SWITCH	10-30
BRAKE LEVEL WARNING SWITCH	10-31
OIL PRESSURE WARNING LAMP	10-31
OIL PRESSURE SWITCH	10-31
FUEL DRAIN WARNING LAMP	10-31
SHIFT INDICATOR LAMP	10-32
DIMMER DEVICE FOR TURBO AND A/T INDICATORS	10-33
MULTI-USE LEVER SWITCH	10-34
LIGHTING SWITCH	10-35
TURN SIGNAL AND HAZARD SWITCH	10-36
TURN SIGNAL FLASHER	10-37
FRONT WIPER AND WASHER SWITCH	10-37
CONTINUITY TABLE OF MULTI-USE LEVER SWITCH BY DESTINATION	10-38

10

(To be continued)

REAR WIPER AND WASHER SWITCH	10-62	OPERATION CHECK	10-90
ELECTRICAL REMOTE CONTROL		NOZZLE	10-90
DOOR MIRROR	10-63	ADJUSTING PROCEDURE FOR	
DOOR MIRROR SWITCH	10-63	NOZZLE INJECTION ANGLE	10-91
ELECTRICAL REMOTE CONTROL		HEADLAMP WASHER TANK	10-92
DOOR MIRROR	10-64	DIM-DIP LAMP	10-93
CENTRAL DOOR LOCK	10-67	CIRCUIT DIAGRAM	10-93
DOOR LOCK SWITCH AND SOLENOID	10-67	OPERATION CHECK	10-93
DOOR LOCK SWITCH	10-69	DAY-LIGHT DELAY	10-94
DOOR CONTROL RELAY	10-69	CIRCUIT DIAGRAM	10-94
POWER WINDOW	10-71	OPERATION CHECK	10-94
CIRCUIT DIAGRAM	10-71		
POWER WINDOW MASTER SWITCH	10-71		
POWER WINDOW SWITCH	10-74		
POWER WINDOW REGULATOR MOTOR ...	10-74		
CIRCUIT BREAKER	10-75		

WR-10001

When using a circuit tester, if you insert a test prod from the connector side, it is impossible to get an adequate fitting. Hence, be sure to positively insert the test prod from the harness side, as indicated in the right figure.

REPLACEMENT

Removal

- (1) From the aperture, insert a miniature type common screwdriver into between the locking lug and the terminal.

- (2) While the locking lug is being pried upward by means of a screwdriver, pull out the terminal from the backside.

Installation

- (1) Insert the terminal, until the locking lug is locked positively.
- (2) Ensure that the locking lug is locked positively by raising the wire.

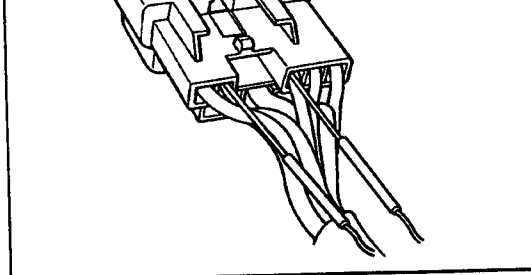


Fig. 10-2

WR-10003

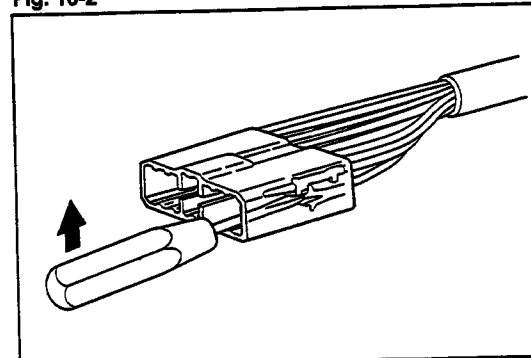


Fig. 10-3

WR-10004

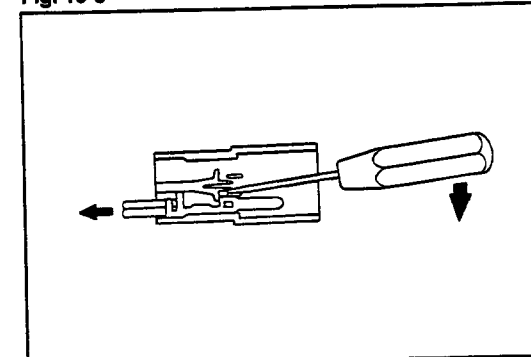


Fig. 10-4

WR-10005

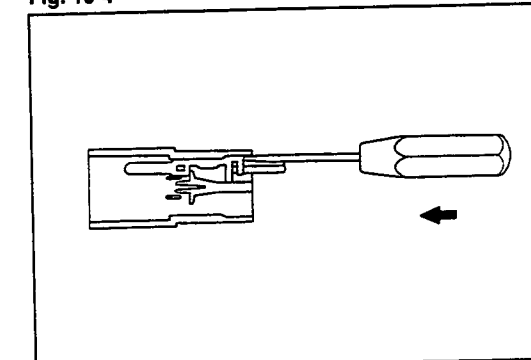
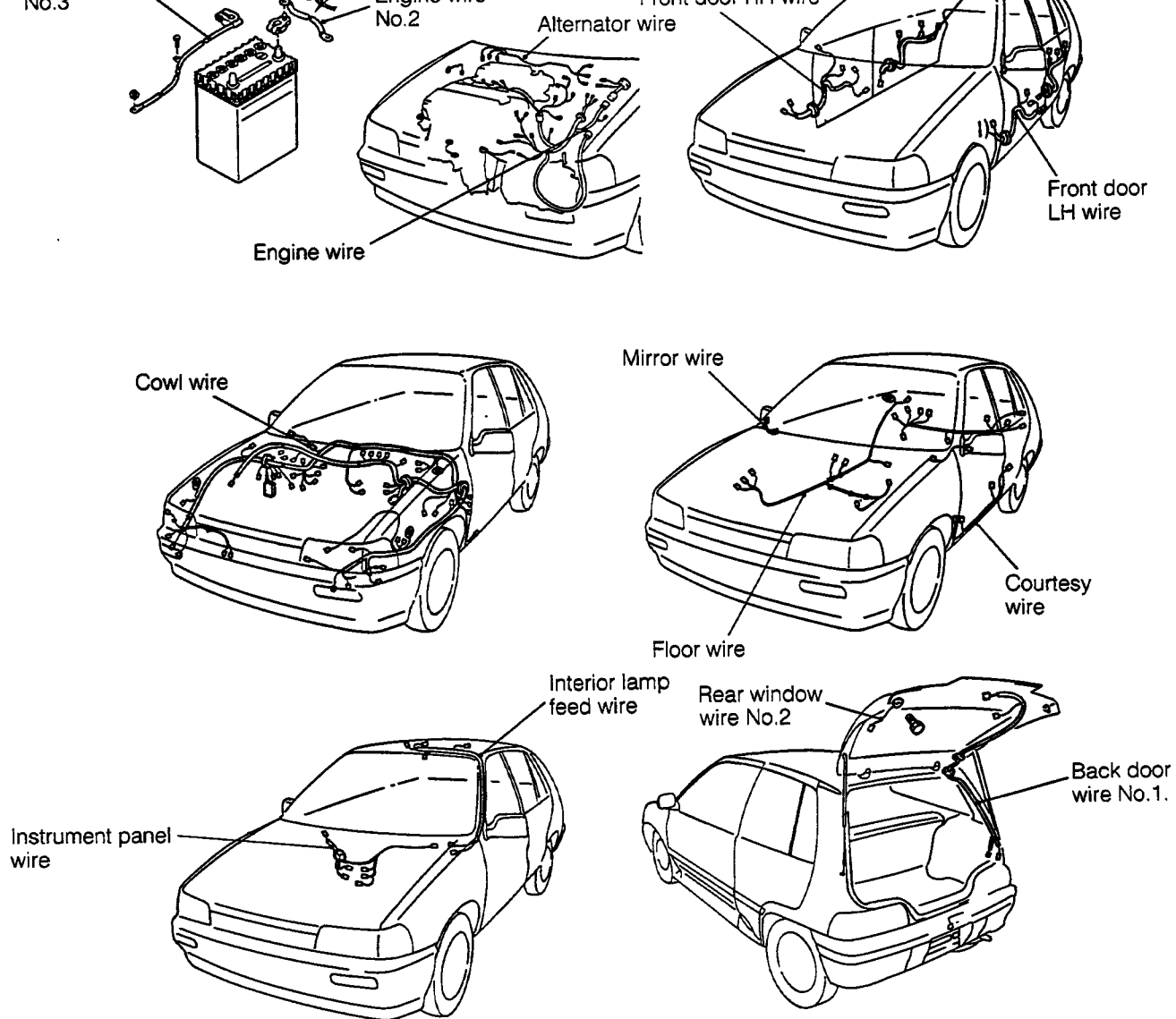


Fig. 10-5

WR-10006



(Above figures show R.H.D.)

Fig. 10-6

WR-10007

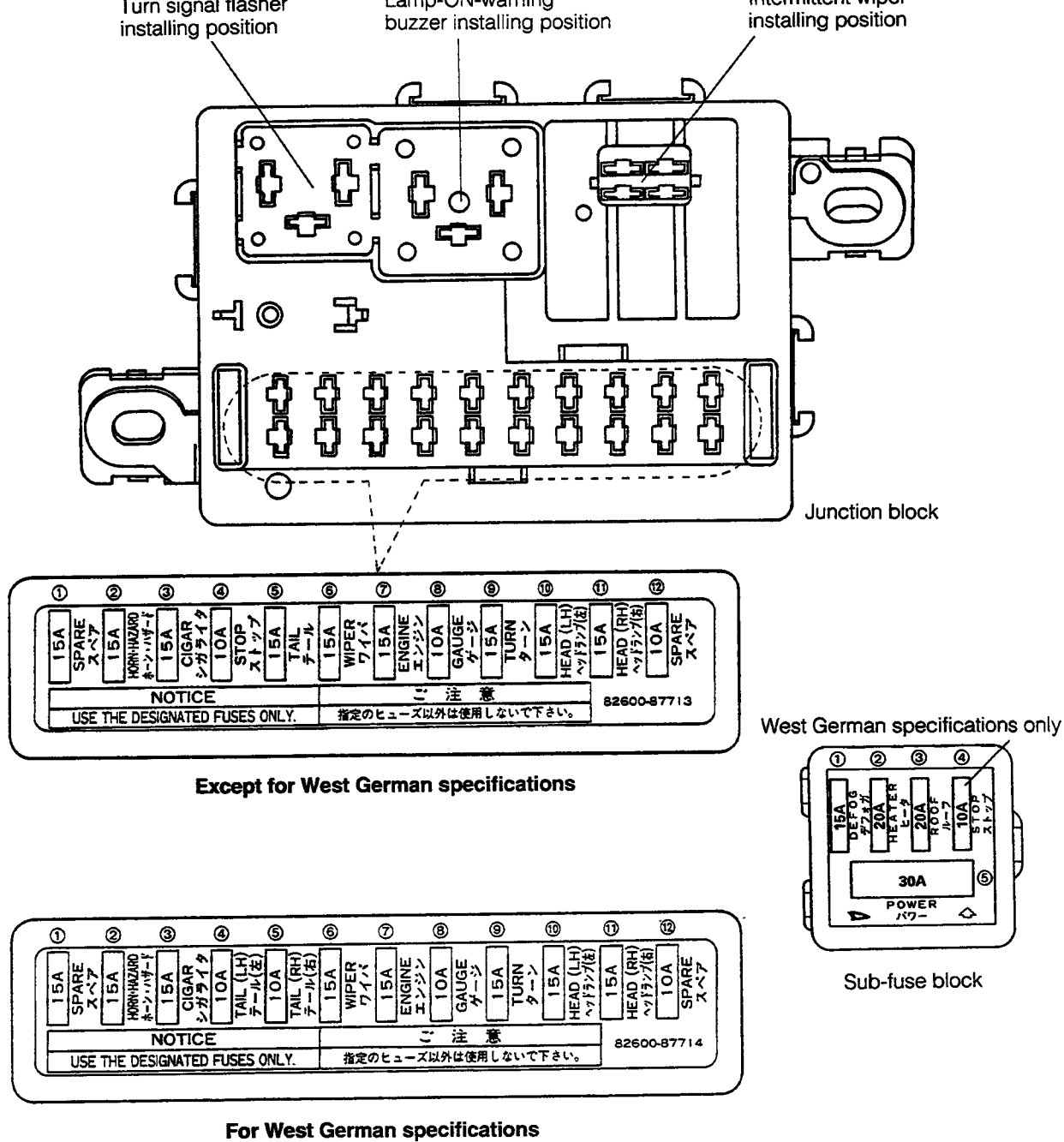


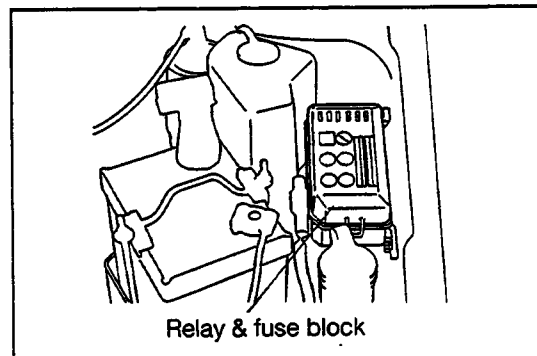
Fig. 10-8

WR-10009

If any fuse is blown out repeatedly, the likelihood is that there exists a short in the relevant system. Hence, perform checks for possible systems, referring to Page 10-9 and Section 11 under "Wiring Diagram."

Relay and fuse block (Vehicles mounted with Type CB-80 engine)

The relay and fuse block are located next to the battery in the engine compartment.



Relay & fuse block

Fig. 10-10

WR-10011

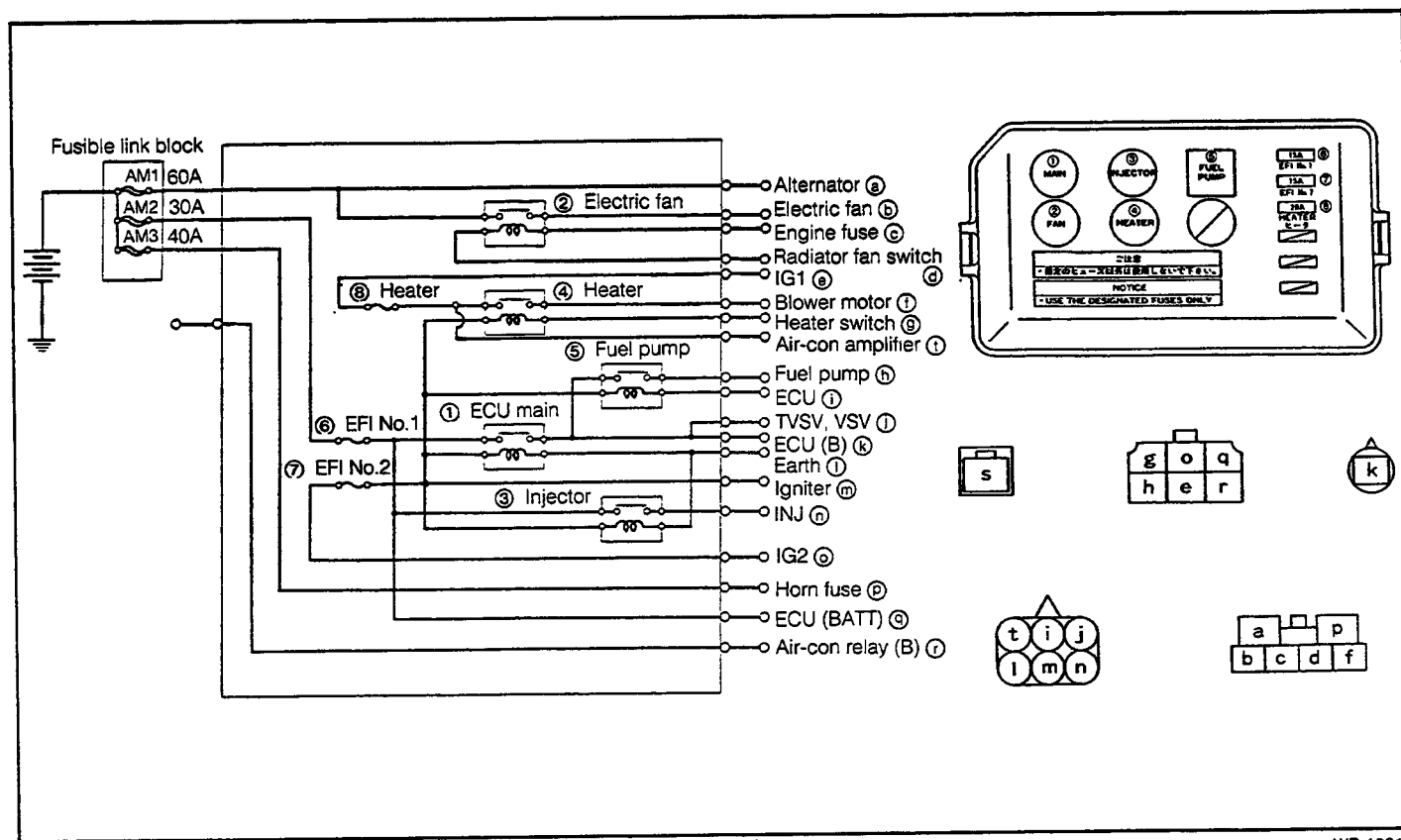


Fig. 10-11

WR-10012

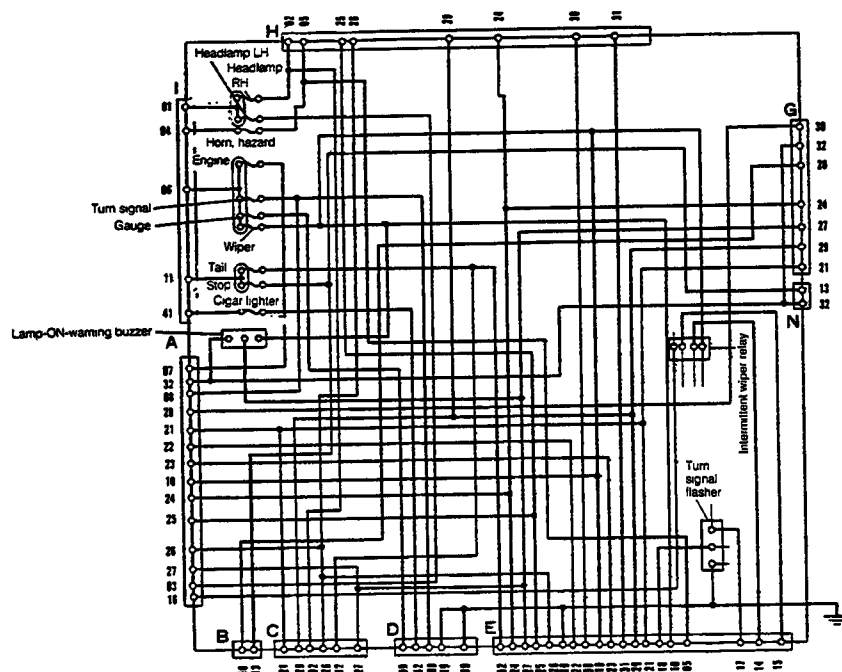


Fig. 10-12

WR-10013

Connectors

Code	Connected system	Code	Connected system
A	Cowl harness	H	Cowl harness
B	Cowl harness	I	Cowl harness
C	Cowl harness	N	—
D	Cowl harness	K	Intermittent wiper relay
E	Multi-use lever switch harness	L	Lamp-ON-warning buzzer relay
G	—	M	Flasher relay

TR86-08004

to not trusted wiring. If a fusible link is replaced forcibly, it will cause breakage or poor contact.

2. If the fusible link is blown out repeatedly, the likelihood is that there exists a short in the relevant system. Hence, perform checks for possible systems, referring to Page 10-5 and Section 11 under "Wiring Diagram."

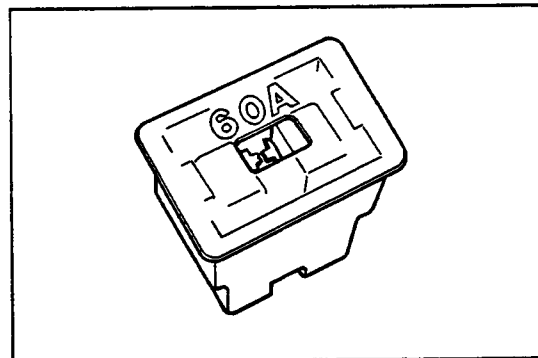


Fig. 10-14

WR-10015

TAIL	15	Meter illumination, Heater control illumination, Ashtray illumination, Day-light relay, Dim-dip relay, Rheostat (for AUS), A/T ECU (B)	West German specifications
TAIL (RH)	10	Tail lamp (RH), Clearance lamp (RH), Ashtray illumination, Meter illumination	West German specifications only
WIPER	15	Front wiper, Rear wiper, Headlamp cleaner	
ENGINE	15	Alternator, Radiator fan motor, Fuel pump relay (CB) CSD switch (CL), Fuel cut governor (CL), Outer vent solenoid (CB), Fuel cut solenoid (CB), Vacuum warning relay, Day-light relay, Dim-dip relay	
GAUGE	10	Meter	
TURN	15	Back lamp switch, Lamp-ON-warning buzzer	
HEADLAMP (LH)	15	Headlamp (LH)	
HEADLAMP (RH)	15	Headlamp (RH), High-beam indicator	
DEFOG	15	Rear window defogger	
HEATER	20	Heater, Blower motor	
ROOF	20	Power glass sunroof	
EFI 1	15	EFI main	
EFI 2	15	EFI relay, IG coil	

WR-10016

Circuit breaker nomenclature	Capacity (A)	Connecting circuit	Remarks
POWER	30	Power window	

WR-10017

Clearance lamp, tail lamp or license lamp will not glow.	● Faulty wiring ● "Tail" fuse blown out ● Fusible link blown out ● Faulty side lamp switch ● Faulty wiring or earth	● Check for short. Replace fuse. ● Replace fusible link. ● Check switch. ● Repair, as required.	10- 6 10- 8 10-38
Turn signal lamps at one side will not glow.	● Faulty turn signal lamp switch ● Faulty wiring or earth	● Check switch. ● Repair, as required.	10-36
Turn signal lamps at both sides will not glow.	● "Turn" fuse blown out ● Faulty turn signal/hazard switch ● Faulty turn signal flasher relay ● Faulty wiring or earth	● Check for short. Replace fuse. ● Check switch. ● Check flasher relay ● Repair, as required.	10- 6 10-36 10-37
Stop lamp will not glow.	● "Stop" fuse blown out ● Faulty stop lamp switch ● Faulty wiring or earth	● Check for short. Replace fuse. ● Check switch. ● Repair, as required.	10- 6 10-47
Stop lamp remains in glow state.	● Faulty stop lamp switch.	● Adjust or replace switch.	10-47
Hazard warning lamp will not glow.	● "Horn" fuse blown out ● Faulty flasher relay ● Faulty hazard switch ● Faulty wiring or earth	● Check for short. Replace fuse. ● Check flasher. ● Check switch. ● Repair, as required.	10- 6 10-36

WR-10018

designated wattage.

2. Install the clearance lamp with the two screws.

HEADLAMP

NOTE:

If should be noted that the bulb replacement can be performed only after socket cover has been detached.

Removal

1. Remove the radiator grille as follows.
Except GT_{ti} grade Pull the grille toward you, while the upper part of the claw is being pushed down, using a common screwdriver.
GT_{ti} grade Detach the grille by turning the central part of of the clip 90 degrees, using a cross point screwdriver.
2. Remove the clearance lamp.
See the section under "Clearance Lamp" above.
3. Remove the headlamp assembly.
4. Remove the socket cover.
5. Detach the bulb.

CAUTION:

The halogen bulb reaches a very high temperature while it is put into use. If any lubricant gets on the bulb surface, it will result in significantly reduced lamp life. Hence, be very careful not allow your fingers, etc. to touch with the glass portion during the replacement. Be sure to hold the flange section to replace the bulb.

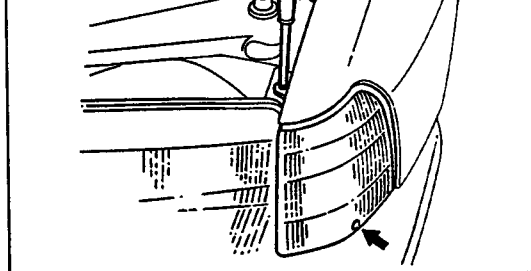


Fig. 10-16

WR-10020

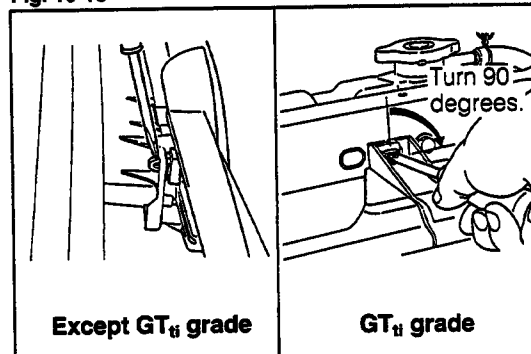


Fig. 10-17

WR-10021

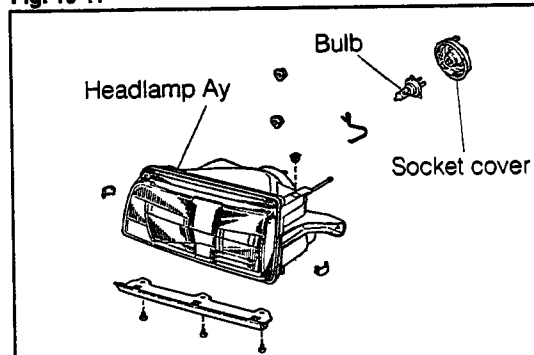


Fig. 10-18

WR-10022

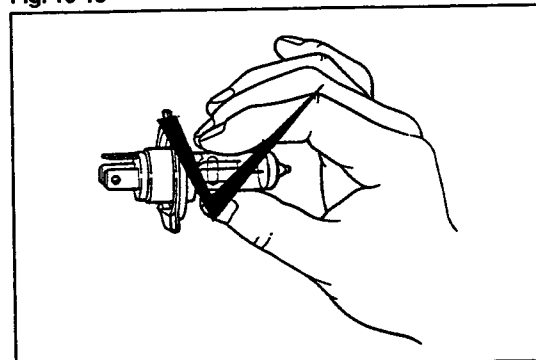


Fig. 10-19

WR-10023

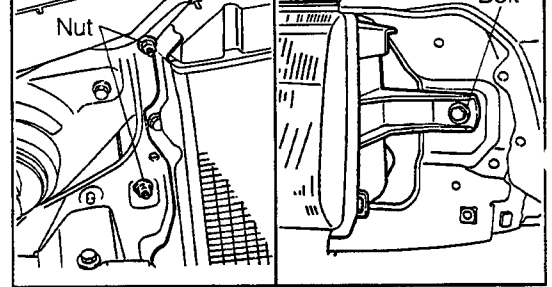


Fig. 10-21

WR-10025

Halogen headlamps

1. Setting of reference points on screen

- (1) Measure the center height "H" of the headlamps. Draw an adjustment line on the screen at a height 29 mm (1.14 inches) below the center height "H".
- (2) Draw a vertical straight line on the screen at each center of the headlamps on both right and left sides. Thus, establish each intersection "F" made by the vertical center line and the adjustment line.

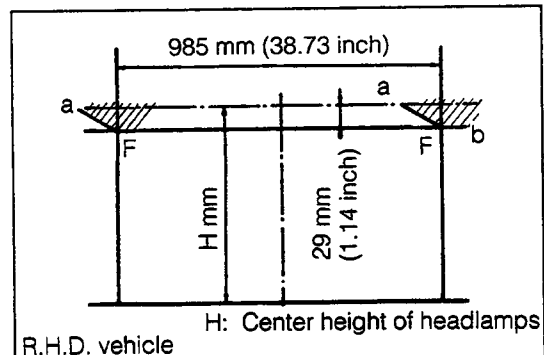


Fig. 10-22

WR-10029

2. Headlamp aiming adjustment

- (1) Position the vehicle in front of the screen so that the headlamps of the vehicle come at a distance of 3 m (9.84 ft). Also, ensure that the vehicle is positioned normal to the screen.
- (2) When the headlamps are turned ON with the lower beam selected, you can get a light distribution pattern as indicated in the right figure. Therefore, the aiming adjustment can be carried out at an intersection made by the line "a" and the line "b" of cut-off lines.
- (3) Turn ON the headlamps with the low beam selected. Perform the adjustment using the adjusting screws in such a way that each intersection of the cut-off lines comes at the respective intersection "F" on the screen.

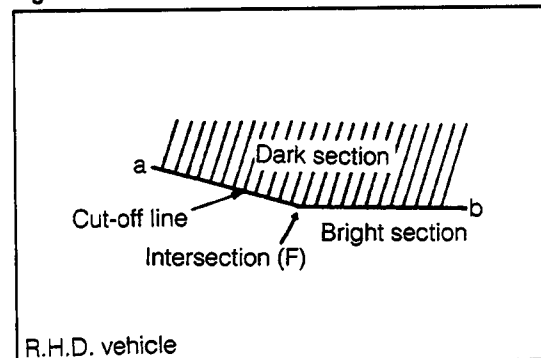


Fig. 10-23

WR-10030

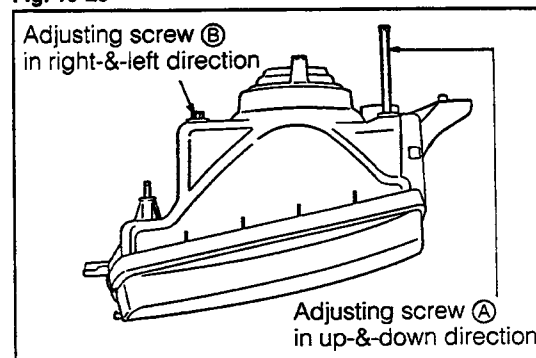


Fig. 10-24

WR-10028

FRONT TURN SIGNAL LAMP

Removal

1. Remove the front turn signal lamp by removing one screw.
2. After detaching the lens, remove the bulb.

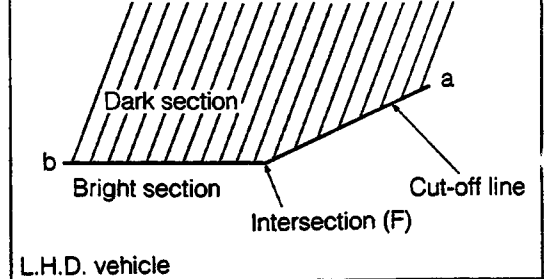
Installation

1. When the bulb is burnt out, install a new bulb with the designated wattage.
2. Install the lens. Secure the front turn signal lamp assembly with the screw.

SIDE TURN SIGNAL LAMP

Removal

1. Using a common screwdriver, remove the side turn signal lamp assembly by pushing it toward the front part of the vehicle. This removal must be performed carefully with a cloth or the like placed on the body that no scratch may be made to the paint finish surface.
2. After detaching the lens, remove the bulb.



L.H.D. vehicle

Fig. 10-26

WR-10031

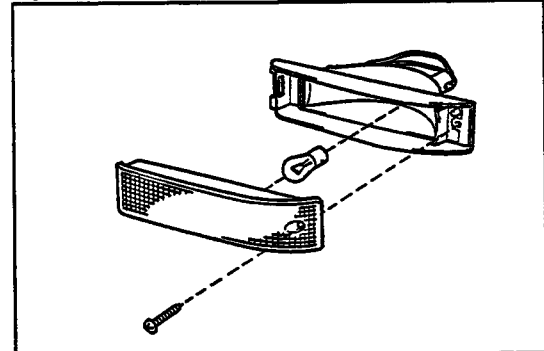


Fig. 10-27

WR-10032

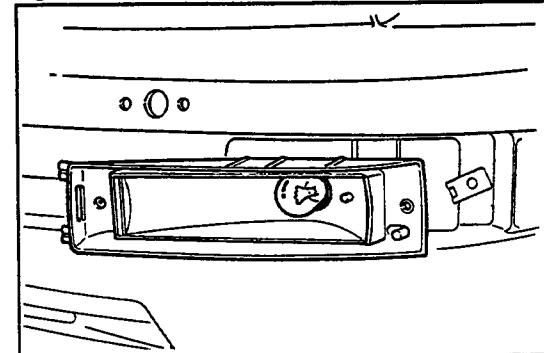


Fig. 10-28

WR-10033

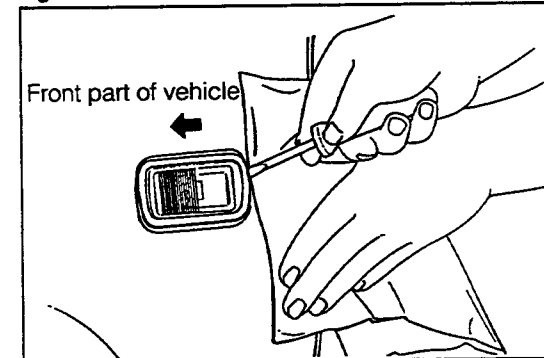


Fig. 10-29

WR-10034

LICENSE PLATE LAMP

Removal

1. Detach the clip. Remove the lower back trim.

NOTE:

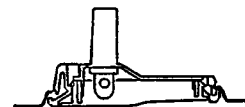
It should be noted that the bulb replacement can be carried out without removing the lower back trim.

2. Disconnect the coupler.
3. Remove the license plate assembly and lens by removing the two tapping screws.
Take out the bulb.

Installation

1. When the bulb is burnt out, install a new bulb with the designated wattage.
2. Ensure that the spring nut is mounted properly on the bumper rib.

Shape of installation hole (left side)



Installation cross-section (left side)
(Right side is symmetrical to left side.)

Fig. 10-31

WR-10036

Press central part.

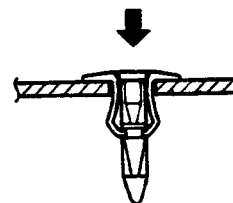


Fig. 10-32

WR-10037

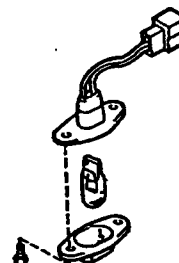


Fig. 10-33

WR-10038

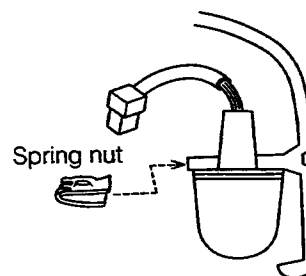


Fig. 10-34

WR-10039

state. Then, push the central part, until the part becomes flush with the other part.

REAR COMBINATION LAMP

NOTE:

It should be noted that the bulb replacement can be performed only after the rear combination lamp service cover has been detached.

Removal

1. Remove the rear bumper. (Refer to page 9–12.)
2. Detach the rear combination lamp service cover.
3. Remove the rear combination lamp assembly from the body.
4. Detach the socket and bulb.

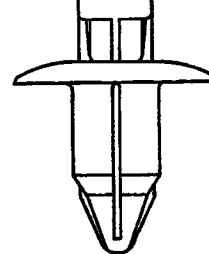


Fig. 10-36

WR-10041

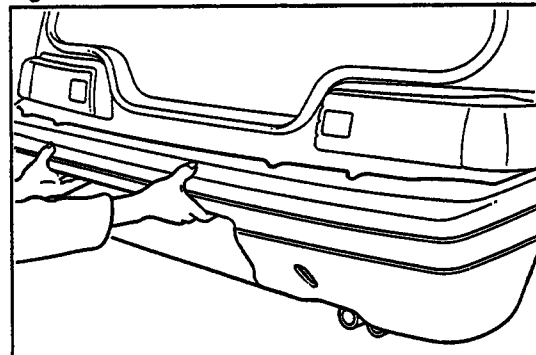


Fig. 10-37

WR-10042



Fig. 10-38

WR-10043

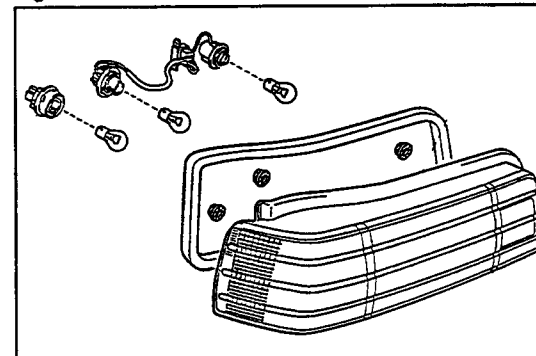


Fig. 10-39

WR-10044

the body surface as well as from the gasket surface of the rear combination lamp.

- (2) Affix the butyl tape exclusively for this application onto the rear combination lamp.

NOTE:

1. Make sure that the application of butyl is limited only within the marked area.
 2. Be sure that the application of butyl is started at around the mid-point of the inner side of the rear combination lamp.
 3. Be certain that the ends of the butyl tape are overlapped about 10 mm (0.39 inch).
3. Attach the rear combination lamp service cover.
 4. Install the rear bumper.

ROOM LAMP

Removal

1. Detach the room lamp cover. Remove the bulb.

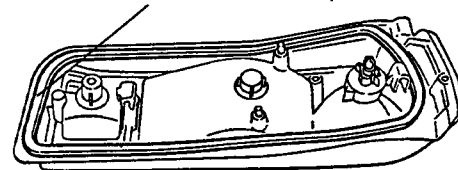


Fig. 10-41

WR-10046

Ends of butyl tape are overlapped about 10 mm (0.39 inch).

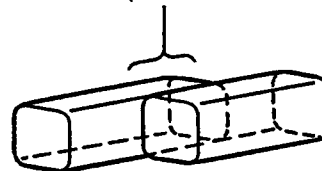


Fig. 10-42

WR-10047

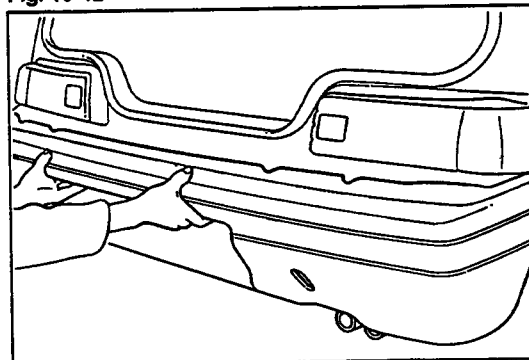


Fig. 10-43

WR-10048

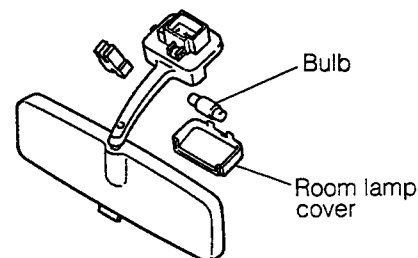


Fig. 10-44

WR-10049

It should be noted that the bulb replacement can be performed only after the lens has been detached.

Removal

1. Detach the rear combination lamp service cover.
2. Disconnect the connector. Tie a string to the connector section. Working from above, remove the luggage room lamp assembly.
3. Remove the lens and bulb.

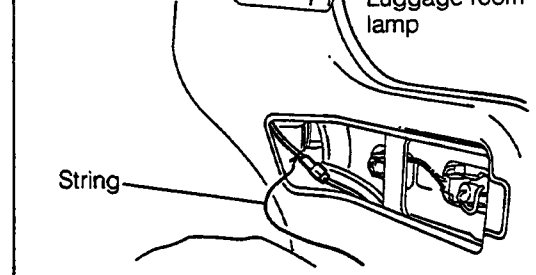


Fig. 10-45

WR-10051

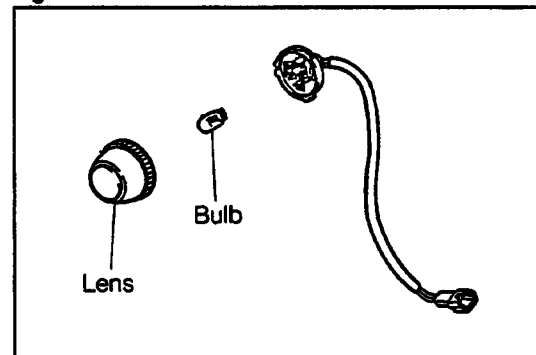


Fig. 10-46

WR-10052

Installation

1. When the bulb is burnt out, install a new bulb with the designated wattage.
2. Attach the lens to the luggage room lamp assembly.
3. Install the luggage room lamp assembly.
For easier operation, install the lamp assembly by tying the string which was used during the removal to the connector section.
4. Connect the connector. Attach the rear combination lamp service cover.

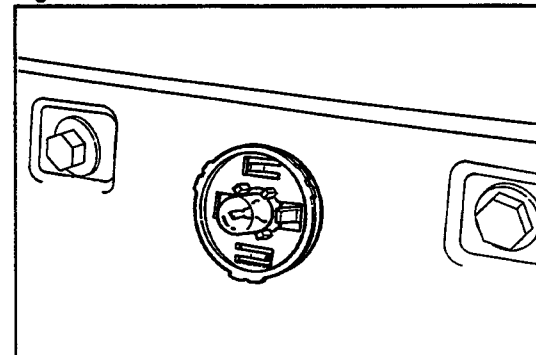


Fig. 10-47

WR-10053

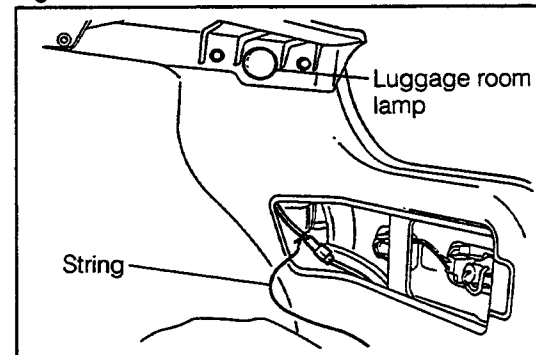


Fig. 10-48

WR-10054

Installation

1. Connect each connector.
Install the combination meter Ay to the instrument panel.
2. Install the instrument cluster panel finish panel S/A to the instrument panel.
(See page 9-82.)

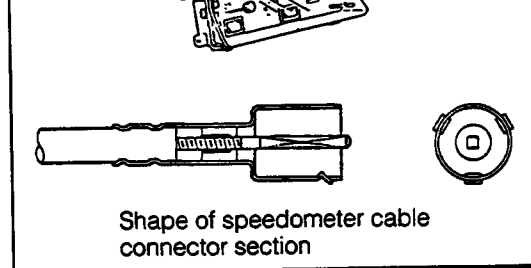


Fig. 10-50

WR-10056

- ① Combination meter glass
- ② Combination meter cover
- ③ Speedometer Ay
- ④ Trip counter knob
- ⑤ Gauge Ay
- ⑥ Lens
- ⑦ Meter case
- ⑧ Meter bracket
- ⑨ Meter circuit plate S/A
- ⑩ Buzzer Ay (for GCC)
- ⑪ Socket
- ⑫ Bulb

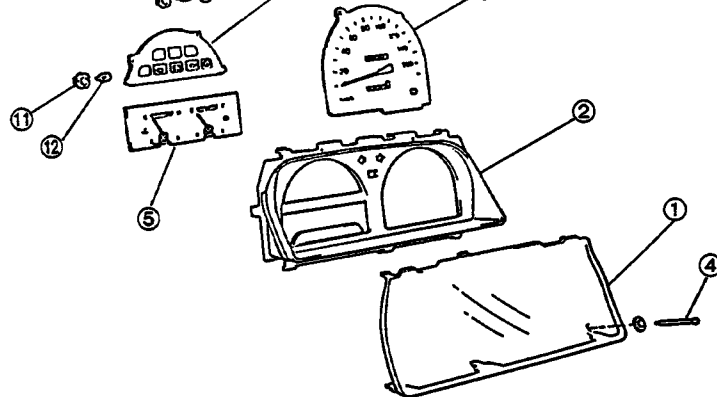


Fig. 10-51

WR-10057

Two-meter type standard

(For Automatic Transmission-equipped vehicle)

- ① Combination meter glass
- ② Combination meter cover
- ③ Speedometer Ay
- ④ Engine tachometer Ay
- ⑤ Fuel receiver gauge Ay
- ⑥ Water temperature receiver gauge Ay
- ⑦ Lens
- ⑧ Meter circuit plate S/A (dim circuit)
- ⑨ Meter case
- ⑩ Meter bracket plate S/A
- ⑪ Meter circuit
- ⑫ Buzzer Ay (for GCC)
- ⑬ Socket
- ⑭ Bulb

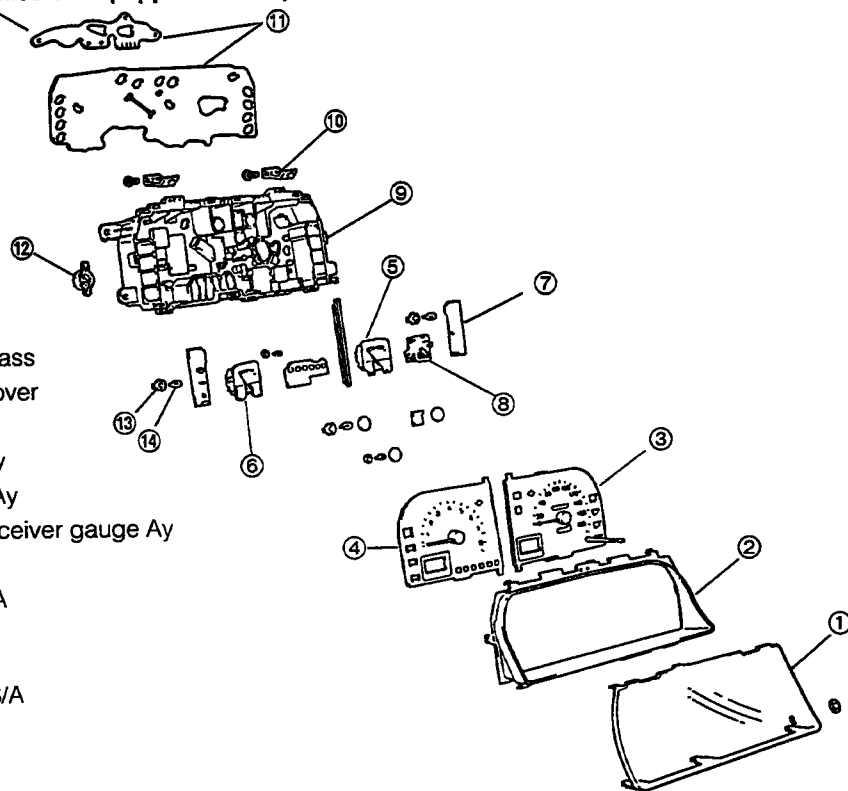


Fig. 10-52

WR-10058

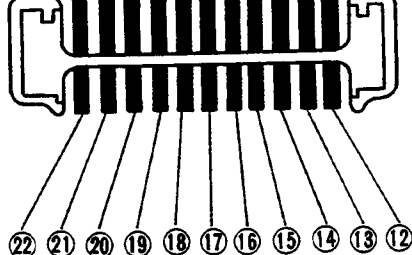


Fig. 10-53

WR-10059

Circuit diagram

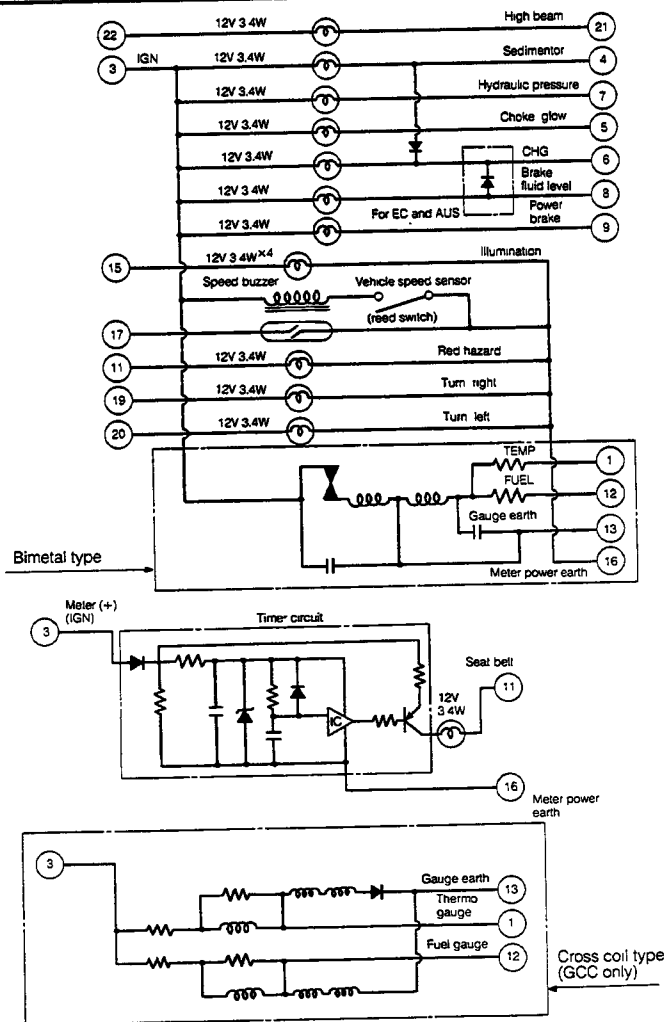


Fig. 10-54

WR-10060

No.	Connecting terminal at vehicle side
1	Thermo gauge
2	Blank
3	Meter (+) terminal (IGN)
4	Fuel sedimentor
5	Glow or choke
6	Charge (-) terminal
7	Oil pressure switch
8	Brake fluid level switch, parking brake switch (except for ECE & EEC, Australian and New Zealand specifications)
9	Parking brake switch (ECE & EEC, Australian and New Zealand specifications only)
10	Blank
11	Seat belt switch (GCC only) or red hazard (-) terminal
12	Fuel sender gauge
13	Gauge earth
14	Blank
15	Illumination (+) terminal
16	Meter power earth
17	Vehicle speed sensor (+) terminal (A/T only)
18	Blank
19	Turn signal switch, right
20	Turn signal switch, left
21	Headlamp (-) terminal
22	Headlamp (+) terminal

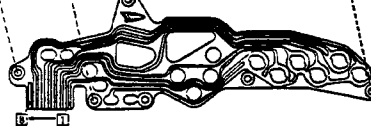
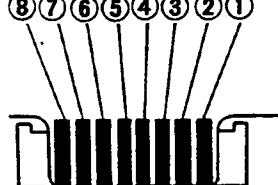
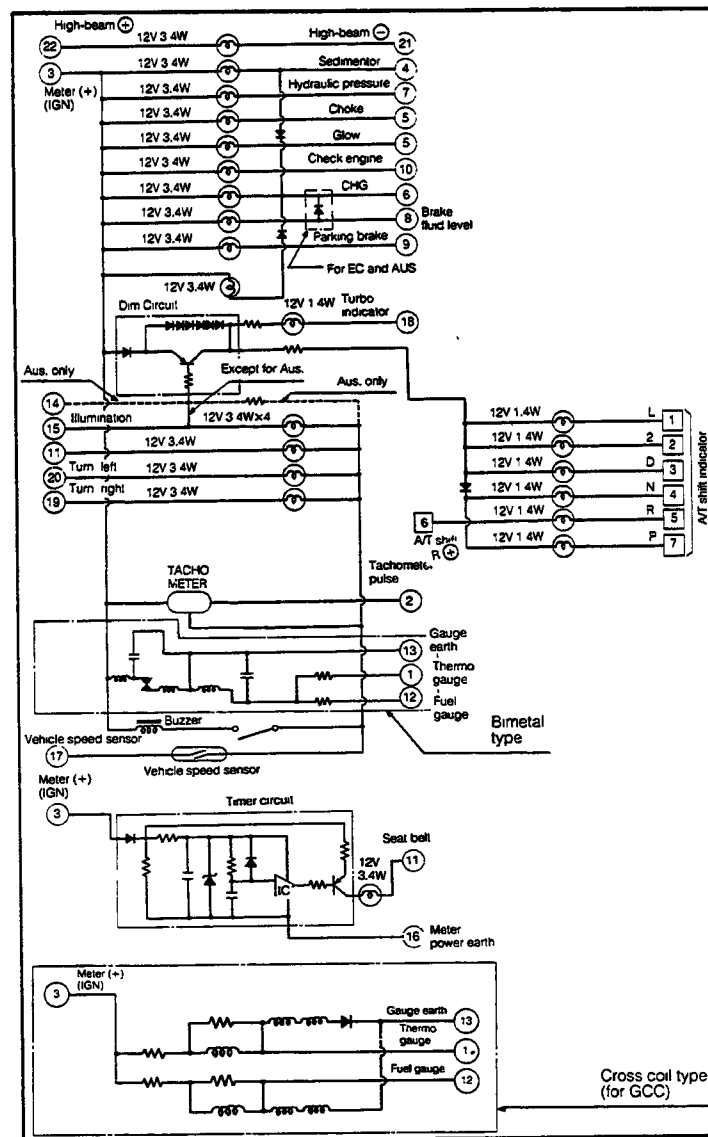


Fig. 10-55

WR-10061

Circuit diagram



No.	Connecting terminal at vehicle side
1	Thermo gauge
2	Tachometer pulse
3	Meter (+) terminal (IGN)
4	Fuel sedimentor
5	Choke or glow
6	Charge (-) terminal
7	Oil pressure switch
8	Brake fluid level switch, parking brake switch (except for ECE & EEC, AUS and N.Z specifications)
9	Parking brake switch (ECE & EEC, Australian and New Zealander specifications only)
10	Check engine terminal (only vehicle mounted with Type CB-80 engine)
11	Seat belt switch (for GCC) or red hazard (-) terminal
12	Fuel sender gauge
13	Gauge earth
14	Dim signal (Australian and N-Z specifications only)
15	Illumination (+) terminal
16	Meter power earth
17	Vehicle speed sensor (+) terminal (3-speed A/T or Type CB-80 engine-mounted vehicle)
18	Turbo indicator (-) terminal
19	Turn signal switch, right
20	Turn signal switch, left
21	Headlamp (-) terminal
22	Headlamp (+) terminal
1	A/T position switch L
2	A/T position switch 2
3	A/T position switch D
4	A/T position switch N
5	A/T position switch R ⊖
6	A/T shift indicator R ⊕ terminal
7	A/T position switch P
8	Blank

Fig. 10-56

WR-10062

Item	Meter indication	Remarks
Indication error	For Australia within +10% - -10% For ECE & EEC within +10% - 0%	Relative to tester reading at a time when the actual vehicle speed is 35 km/h (22 mph) or more
Pointer fluctuation	Within ± 1 km/h (0.6 mph)	—
Speed warning device operating speed	124 ± 4 km/h	GCC specifications only

2. Speed warning buzzer check (GCC specifications only)

Apply the battery voltage across the terminals of the buzzer unit. Ensure that the buzzer is set off.

NOTE:

Be sure to connect the buzzer's side having a (+) mark to the positive (+) terminal of the battery.

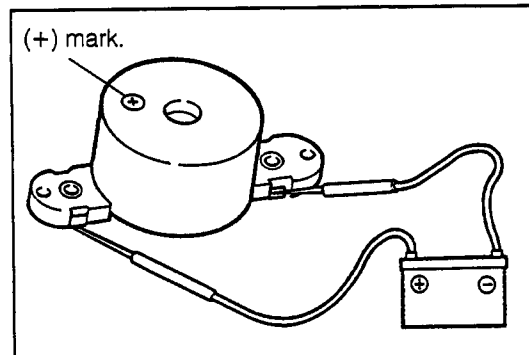


Fig. 10-57

WR-10064

3. Checking of reed switch for vehicle speed sensor use (Only vehicles mounted with 3-speed A/T or Type CB-80 engine)

- (1) Remove the combination meter.
- (2) Ensure that continuity occurs four times at the reed switch (between ⑥ and ⑦) while the speedometer drive shaft completes a turn.

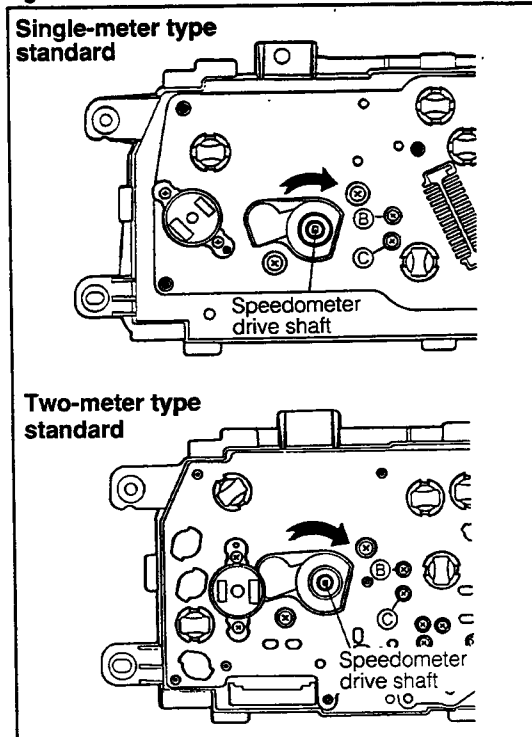


Fig. 10-58

WR-10065

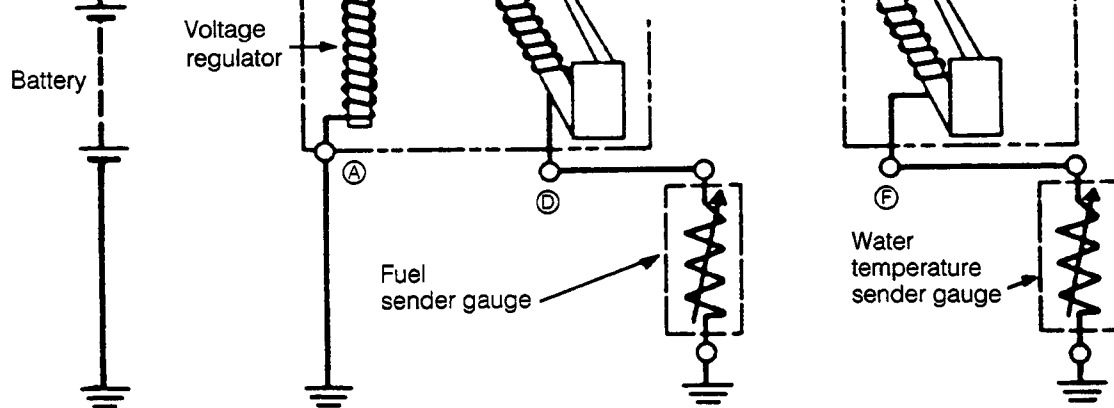


Fig. 10-59

WR-10066

FUEL RECEIVER GAUGE

1. In-Vehicle Inspection

Disconnect the connector located at the upper part of the fuel tank. Carry out the following checks at the terminal at the receiver side.

- (1) Disconnect the connector from the harness of the fuel sender gauge. Ground the gauge through a test lamp (12 V - 3.4 W).
- (2) Turn ON the engine switch. Ensure that the test lamp goes on and, several seconds later, the test lamp starts flashing.
- (3) Ensure that the pointer of the receiver gauge starts to rise gradually.

NOTE:

In case that the fuel sender earth terminal is used, in advance, make sure that it has continuity with the body earth.

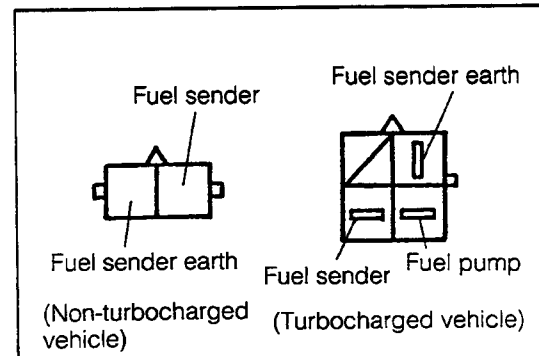


Fig. 10-60

WR-10067

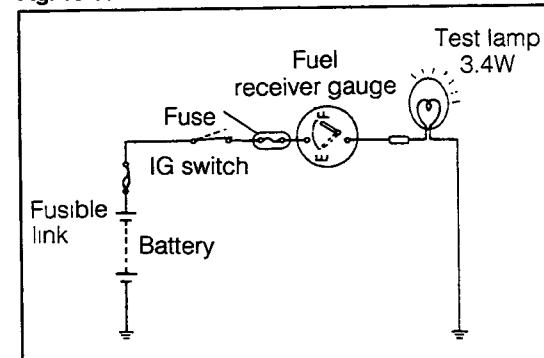


Fig. 10-61

WR-10068

FUEL SENDER GAUGE

The fuel sender gauge is located at the upper part of the fuel tank.

1. Measurement of Resistance of Fuel Sender Gauge

(1) Ensure that the resistance varies when the float is moved from the upper position to the lower position.

(2) Measure the resistance between the fuel terminal and the body at each float level.

Float position	Resistance (Ω)	Reference dimension mm (inch)	
		Type CB-23, CL-11 and CL-61 engines	Type CB-61 and CB-80 engines
F	1 - 5	40 (1.56)	28 (1.1)
1/2	28.5 - 36.5	91 (3.58)	86 (3.4)
E	103 - 117	129 (5.08)	133 (5.2)

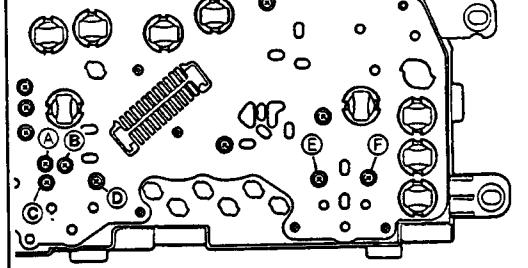


Fig. 10-62

WR-10069

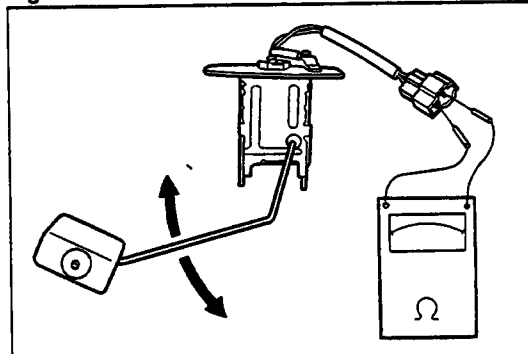


Fig. 10-63

WR-10070

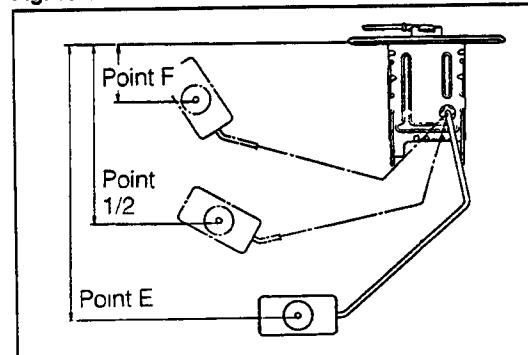


Fig. 10-64

WR-10071

- (1) Remove the combination meter.
- (2) Measure the resistance between the terminals ⑤ and ⑥.

Specified Value: Approx. 25 Ω

- (3) Connect the multi-pole connector to the combination meter. Turn ON the engine key. Ensure that the battery voltage is applied between the terminal ③ and the body earth.
- (4) Under the conditions in the step (3), ensure that a voltage varying approximately from 2 to 7 V is applied between the terminal ⑤ and the body earth.

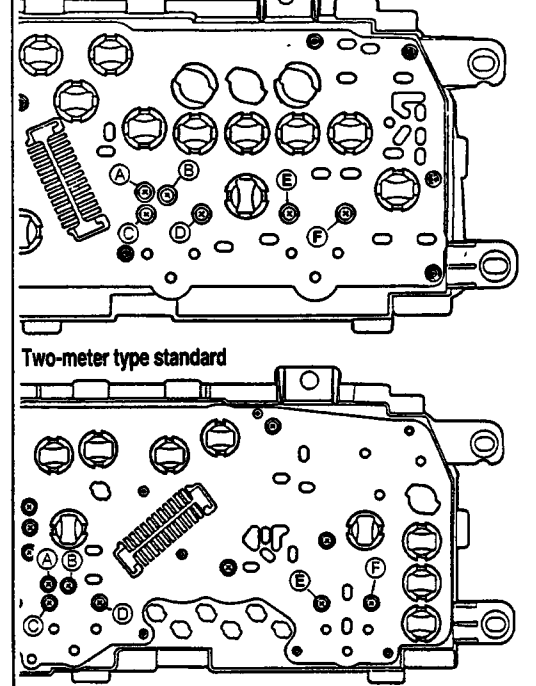


Fig. 10-66

WR-10073

WATER TEMPERATURE SENDER GAUGE

The water temperature sensor gauge is located at the following points given below:

- Type CB engine ... Rear end of cylinder head
- Type CL engine ... Left/rear section of cylinder head

Unit Inspection

Measure the resistance between the terminal and the earth, as indicated in the right figure.

Temperature (°C)	Resistance (Ω)
50	$226 \pm \begin{smallmatrix} 34 \\ 37 \end{smallmatrix}$
115	$26.4 \pm \begin{smallmatrix} 1.71 \\ -2.20 \end{smallmatrix}$

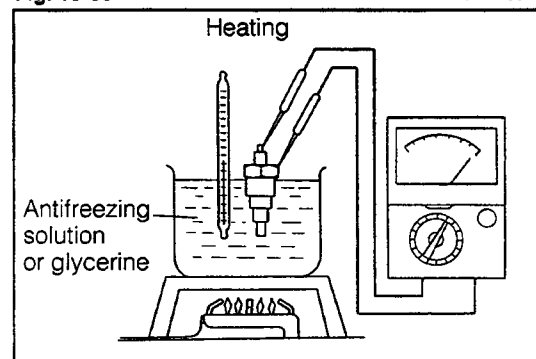


Fig. 10-67

WR-10074

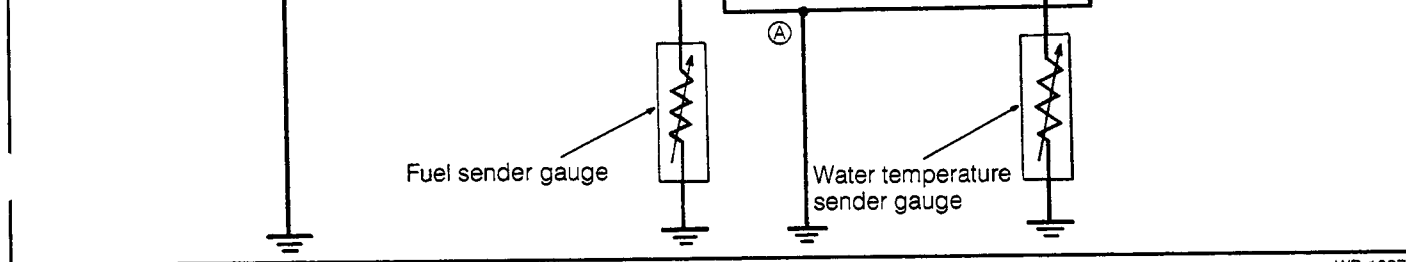


Fig. 10-68

WR-10075

FUEL RECEIVER GAUGE (POINTER REMAINING TYPE)

1. In-Vehicle Inspection

- (1) Disconnect the connector of the fuel sender gauge located at the upper part of the fuel tank. Under this condition, turn ON the engine switch. Ensure that the pointer of the receiver gauge returns to the position "E".
- (2) Turn OFF the engine switch. Ground the harness connector of the fuel sender gauge. Under this condition, turn ON the engine switch. Ensure that the pointer of the receiver gauge rises gradually and registers the position "F".
- (3) Turn OFF the engine switch. Ensure that the pointer of the receiver gauge remains stationary and registers the position "F".

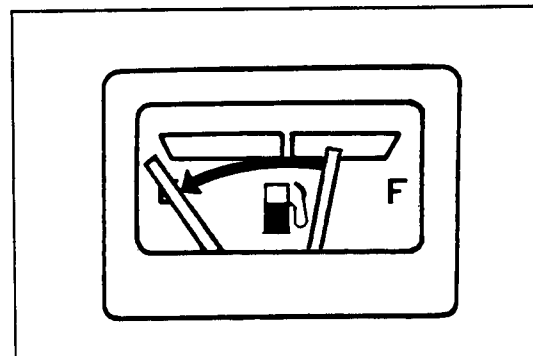


Fig. 10-69

WR-10076

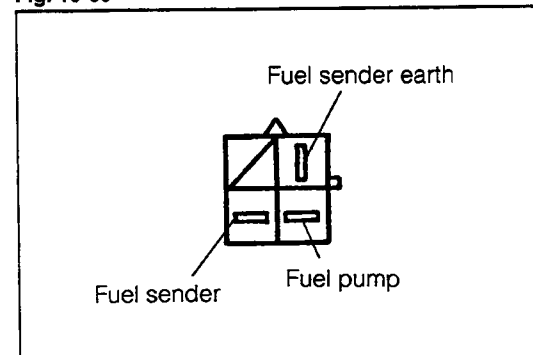


Fig. 10-70

WR-10077

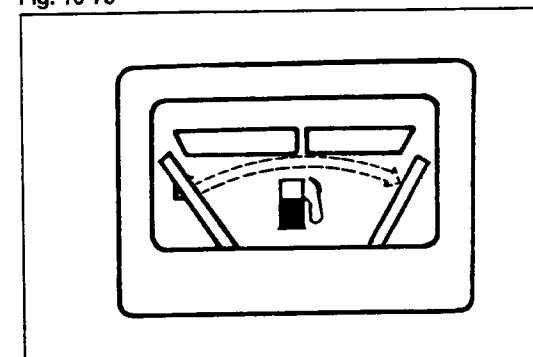


Fig. 10-71

WR-10078

Remove the sender gauge located at the upper part of the fuel tank. Measure the resistance between the terminal and the body at each float level.

Float position	Resistance (Ω)	Reference dimension mm (inch)
F	1 - 5	28 ± 3 (1.1 ± 0.12)
1/2	28.5 - 36.5	86.4 (3.40)
E	103 - 117	133 ± 3 (5.24 ± 0.12)

WATER TEMPERATURE RECEIVER GAUGE

1. In-Vehicle Inspection

- (1) Disconnect the connector from the harness of the water temperature sender gauge. Ground the gauge through a test lamp (12 V - 3.4 W).
- (2) Turn ON the engine switch. Ensure that the test lamp goes on and the pointer of the receiver gauge starts to rise gradually.

2. Unit Check

- (1) Remove the combination meter. Measure the resistance between the terminals ② and ③.
Specified Value: Approx. 134 Ω
- (2) Connect the multi-pole connector to the combination meter. Turn ON the engine switch. Ensure that the battery voltage is applied between the terminal ③ and the body earth.

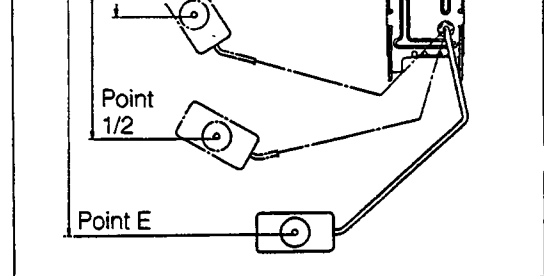


Fig. 10-73

WR-10080

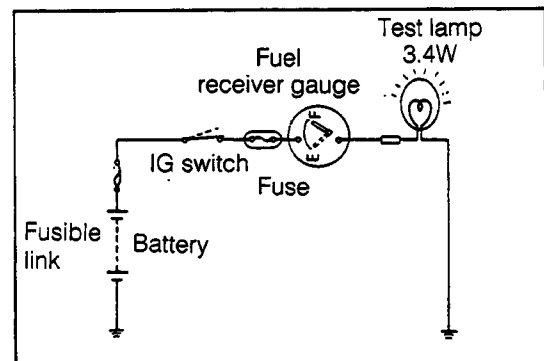


Fig. 10-74

WR-10081

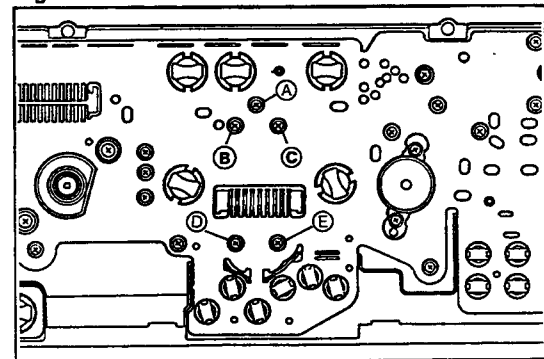


Fig. 10-75

WR-10082

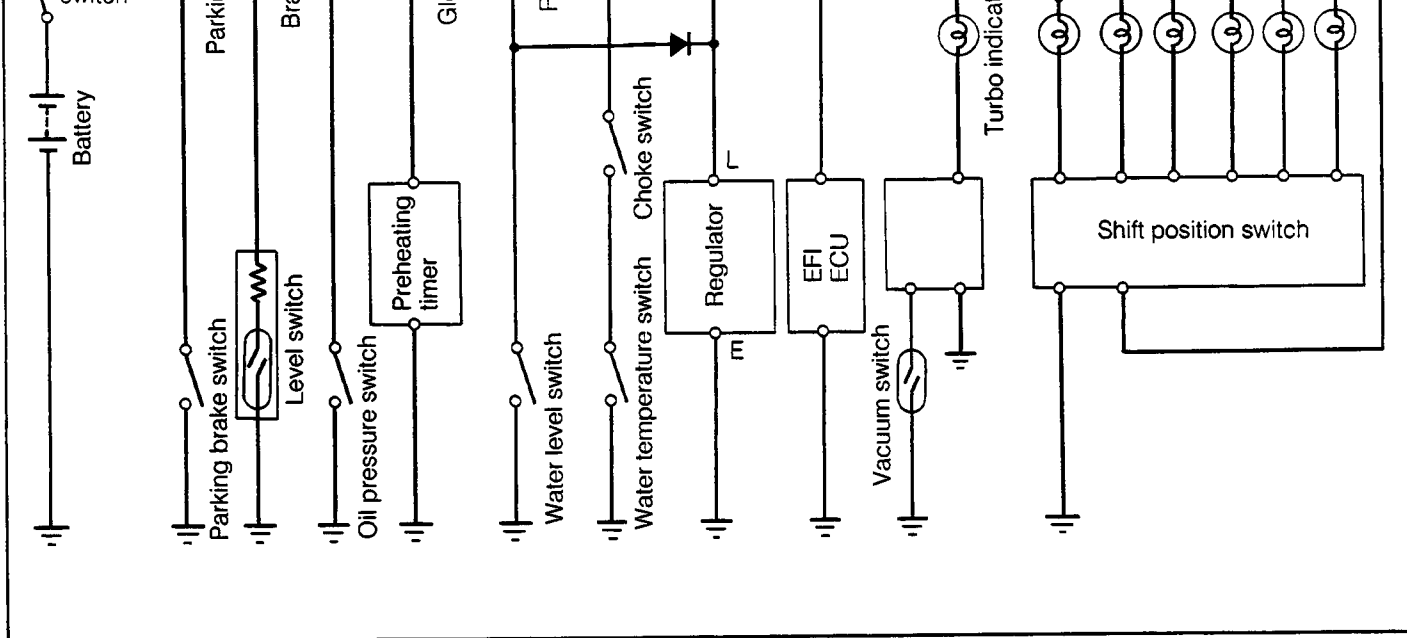


Fig. 10-77

WR-10084

BRAKE LEVEL WARNING LAMP

Inspection

1. Start the engine.
2. Return the parking brake lever to the original position.
(General specifications only)
3. Pull out the connector of the brake fluid level warning switch and short the connector at the harness side. Ensure that the level warning lamp glows.

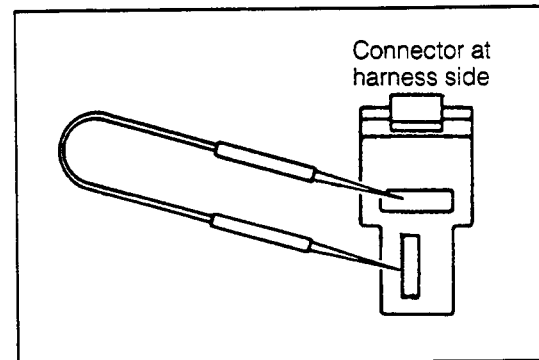


Fig. 10-78

WR-10085

PARKING BRAKE SWITCH

Inspection

1. Pull out the connector of the parking brake switch and conduct continuity checks between the terminal and the body earth.
 - (1) Ensure that continuity exists between the terminals when the parking brake lever is pulled upward.
 - (2) Ensure that no continuity exists between the terminals when the parking brake lever is returned.

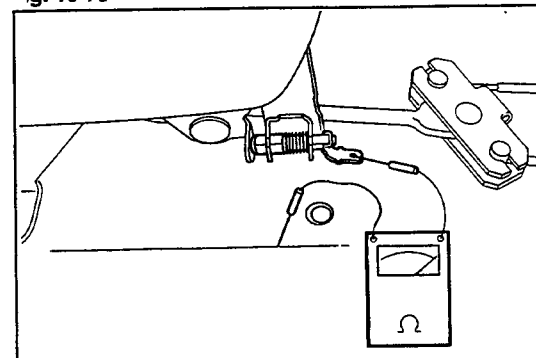


Fig. 10-79

WR-10086

terminals.

NOTE:

As for a rod to be used for pressing down the float, be sure to thoroughly clean it. Special care must be exercised to ensure that no dust nor water gets into the reservoir.

OIL PRESSURE WARNING LAMP

Inspection

1. Pull out the connector located at the right/rear part of the cylinder block. Ground the connector at the harness side.
2. Ensure that the oil pressure warning lamp glows when the engine switch is turned ON.

OIL PRESSURE SWITCH

Inspection

1. Pull out the connector located at the right/rear part of the cylinder block.
2. Ensure that continuity exists between the oil pressure switch terminal and the earth.

NOTE:

It should be noted that continuity exists while the engine is stopped, whereas no continuity exists while the engine is running.

FUEL DRAIN WARNING LAMP (DIESEL-POWERED VEHICLES ONLY)

Inspection

1. Start the engine. Disconnect the connector of the sedimentor.
2. Ensure that the warning lamp glows when short is made between the terminals of the connector at the harness side.

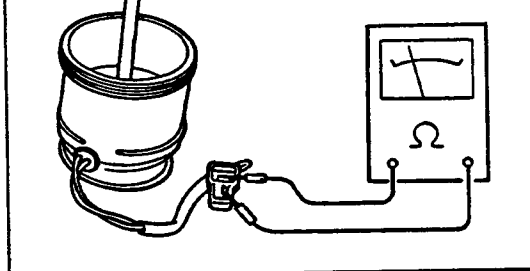


Fig. 10-81

WR-10088

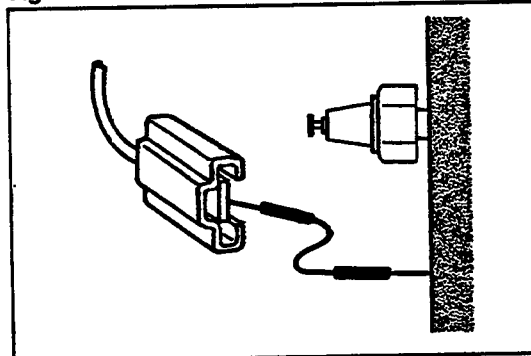


Fig. 10-82

WR-10089

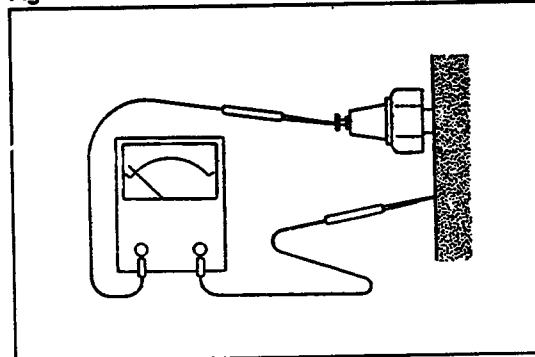


Fig. 10-83

WR-10090

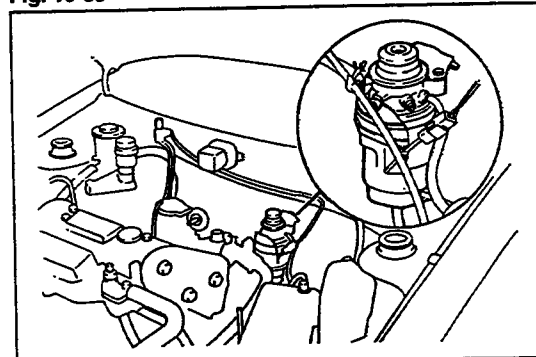


Fig. 10-84

WR-10091

1. Remove the combination meter. Disconnect the connector (8-pole) for shift indicator use.

2. With the ignition switch turned OFF, perform continuity check for each terminal of the connector for shift indicator use (at the vehicle harness side).

- (1) Ensure that continuity exists between ⑤ and the body earth.
- (2) Ensure that continuity exists between ① and ⑤ when the range [L] is selected.
- (3) Ensure that continuity exists between ② and ⑤ when the range [2] is selected.
- (4) Ensure that continuity exists between ③ and ⑤ when the range [D] is selected.
- (5) Ensure that continuity exists between ④ and ⑤ when the range [N] is selected.
- (6) Ensure that continuity exists between ⑦ and ⑤ when the range [P] is selected.
- (7) Turn ON the ignition switch. Ensure that the battery voltage is applied between ⑥ and the body earth when the range [R] is selected.

3. Under conditions where the connector for shift indicator use and other connectors are installed, turn ON the ignition switch. Ensure that the indicator lamp goes on in accordance with each relevant shift position.

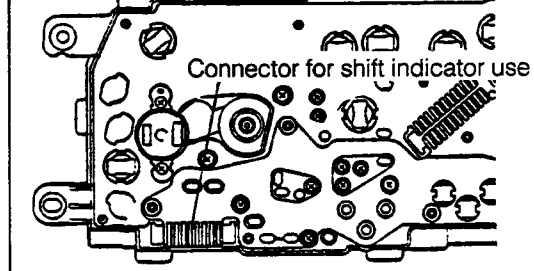


Fig. 10-86

WR-10093

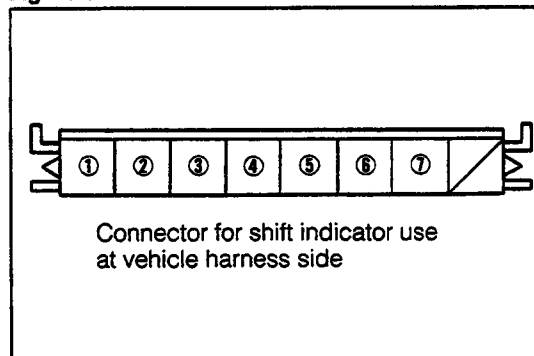


Fig. 10-87

WR-10094

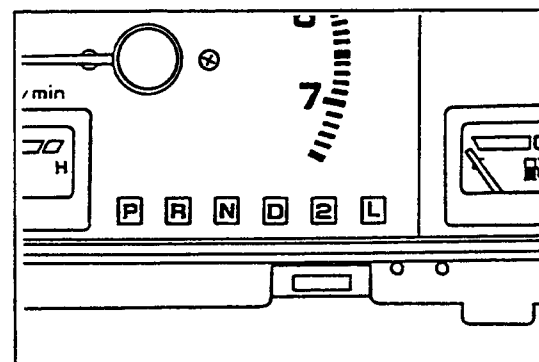


Fig. 10-88

WR-10095

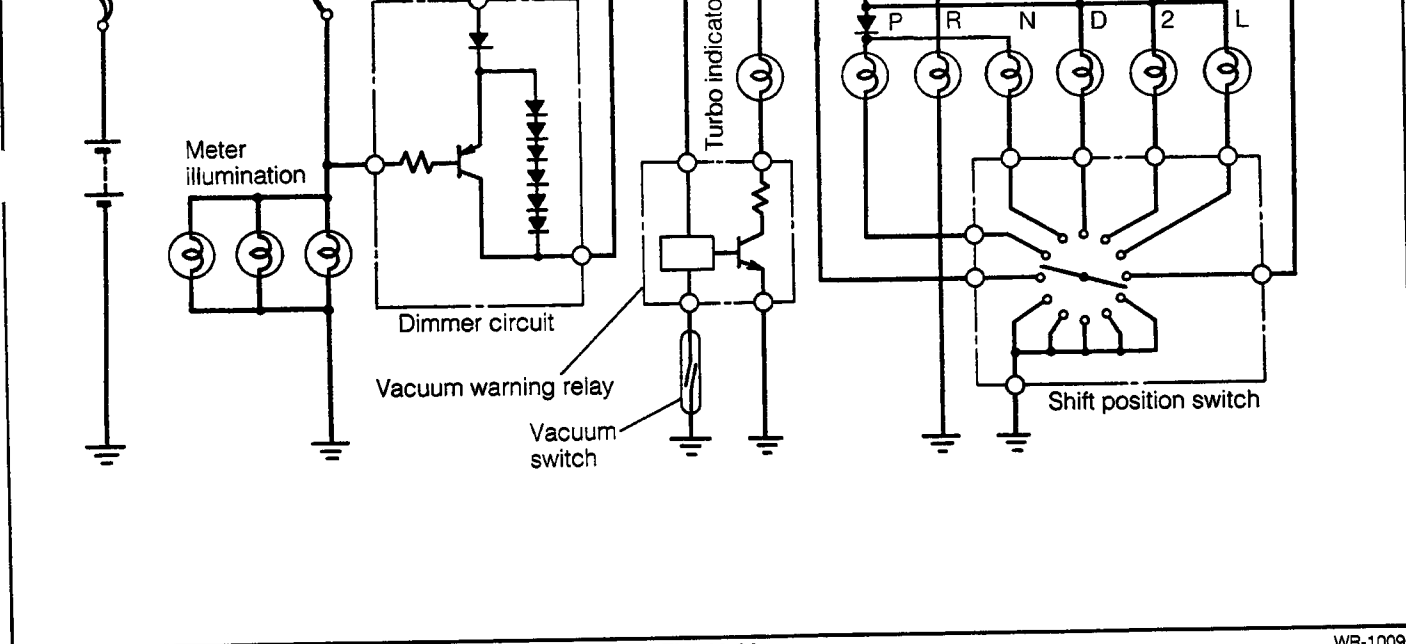


Fig. 10-89

WR-10096

In-Vehicle Check

1. Remove the combination meter (with the connector in a connected state) and turn ON the ignition switch. Ensure that the battery voltage is applied between the terminal ① and the body earth.
2. Ensure that a voltage of 10.5 to 11.5 V is applied between the terminal ② and the body earth when the turbo indicator terminal (multi-pole connector section) is grounded in the case of the turbocharged vehicle. Also, ensure that the same voltage is applied between the terminal ③ and the body earth when the shift switch is turned ON (L, 2, D, N and P) in the case of the automatic transmission-equipped vehicle.
At this point, the indicator should be illuminated normally.
3. Under the conditions described above, turn ON the side lamp switch. Ensure that a voltage of 6.0 to 6.5 V is applied between the terminal ④ and the body earth.
At this point, the indicator should be illuminated dimly.

NOTE:

For the turbo indicator terminal at the connector section, see page 10-22.

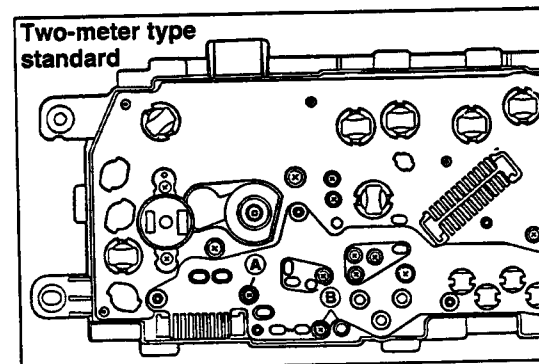
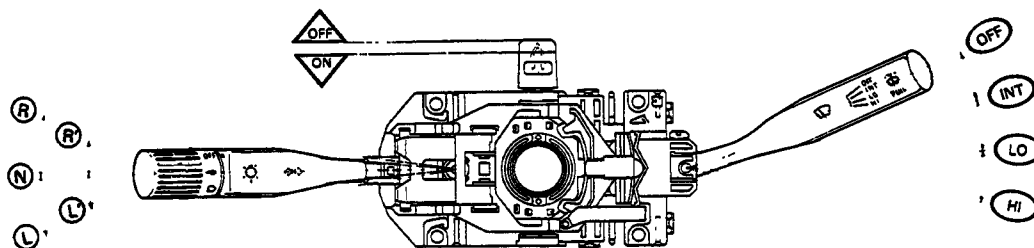


Fig. 10-90

WR-10097

R.H.D. vehicle



L.H.D. vehicle

Fig. 10-91

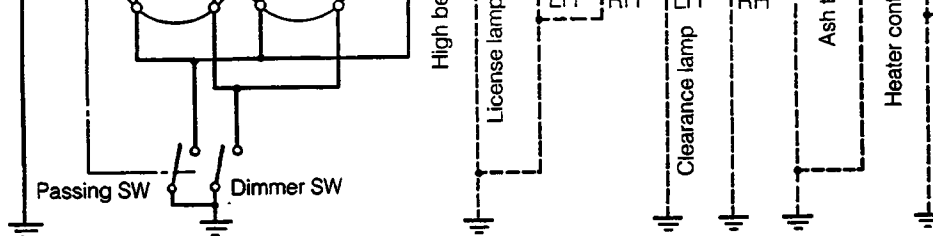
WR-10098

INSPECTION

1. Ensure that each of the turn signal, dimmer, lighting, hazard warning and front wiper switches is functioning smoothly with a positive dent feeling.
2. Disconnect the connector for multi-use lever switch. Ensure that continuity exists between the respective terminals in accordance with the continuity table in pages 10-38 through 10-46.

Code	Kind of wires
TB	0.5 R (2W in case of West German specifications)
L	0.5GY
+2	0.5L
R	0.5GW
WB	0.5LW
E	1.25WB
HS	0.85RY
HO	0.3G
B ₁	0.5GR
HM	0.85RW
+1	0.5LY
S	0.5 RG (2WG in case of West German specifications)
W	0.3LG
WS	0.5LR
F	0.5GO
F ₁	0.5GB
INT	0.5LB
DM	0.5GL
M	0.5G
RF	0.5Lg
B ₂	0.5GL
D1	2RW
D2	2R

WR-10099



Standard specifications

Fig. 10-92

WR-10100

○—○ Continuity exists.

R.H.D. vehicles with general specifications and Australian specifications (without intermittent wiper)

L.H.D. vehicles with general specifications

(L.H.D.) (R.H.D)

R.H.D. vehicles with ECE & EEC and Australian specifications (with intermittent wiper)

L.H.D. vehicles with ECE & EEC Specifications (except for West Germany)

Light & Dimmer Passing Switch

Terminal Dimmer passing		Terminal						
		HM	HS	E	TB	S	D1	D2
Light OFF	HF	○ — ○		○			○ — ○	
	HL							
	HU							
I	HF	○ — ○		○	○ — ○	○ — ○	○ — ○	○ — ○
	HL				○ — ○			
	HU				○ — ○			
II	HF	○ — ○		○	○ — ○	○ — ○	○ — ○	○ — ○
	HL		○ — ○	○ — ○	○ — ○	○ — ○	○ — ○	○ — ○
	HU	○ — ○		○ — ○	○ — ○	○ — ○	○ — ○	○ — ○

TB B1
L
+2 HM
R +1
WB S
W
WS
E F
HS F1
HO INT

B2
D1
D2

Light & Dimmer Passing Switch

Terminal Dimmer passing		Terminal							
		HM	HS	E	TB	S	RF	D1	D2
Light OFF	HF	○ — ○		○					○ — ○
	HL								
	HU								
I	HF	○ — ○		○	○ — ○			○ — ○	
	HL				○ — ○				
	HU				○ — ○				
II	HF	○ — ○		○	○ — ○	○ — ○		○ — ○	
	HL		○ — ○		○ — ○	○ — ○	○ — ○		○ — ○
	HU	○ — ○		○	○ — ○	○ — ○		○ — ○	

TB B1
L
+2 HM
R +1
WB S
W
WS
E F
HS F1
HO INT

RF
D1
D2

West German specifications

Light & Dimmer Passing Switch

Light	Dimmer passing	Terminal								
		HM	HS	E	TB	S	D1	D2	DM	RF
OFF	HF	○	○				○	○		
	HL									
	HU									
I	HF	○	○	○	○	○	○	○		
	HL				○	○				
	HU				○	○				
II	HF	○	○	○	○	○	○	○	○	○
	HL		○	○	○	○	○	○	○	○
	HU	○	○	○	○	○	○	○	○	○

B1
L
+2 HM
R +1
WB S
W
WS
E F
HS F1
HO INT

DM D1
M TB
RF S
B2 D2

L.H.D. vehicles with day-light feature

Light & Dimmer Passing Switch

Terminal Dimmer passing		Terminal							
		HM, ⑩	HS, ⑥	E	⑧	TB, ④	RF	D1	D2
Light OFF	HF	○	—	○				○	○
	HL								
	HU								
I	HF	○	—	○	○			○	○
	HL			○	○				
	HU			○	○				
II	HF	○	—	○	○	○	○	○	○
	HL		○	○	○	○	○	○	○
	HU	○	—	○	○	○	○	○	○

TB B1
L
+2 HM
R +1
WB S
W
WS
E F
HS F1
HO INT

B2
D1
D2
RF
M

Fig. 10-93

WR-10101

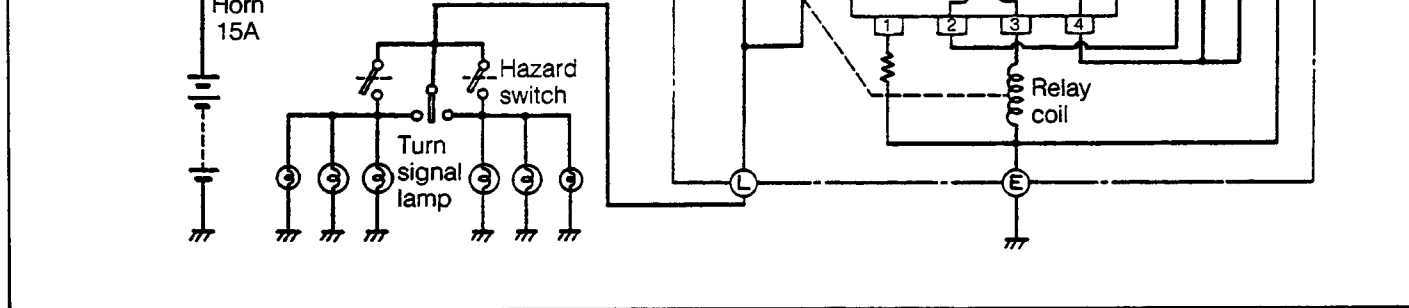


Fig. 10-94

WR-10102

INSPECTION

Disconnect the multi-pole connector. Ensure that continuity exists between the respective terminals as indicated in the continuity table below.

NOTE:

Upon completion of the inspection, make sure that each connector is connected positively.

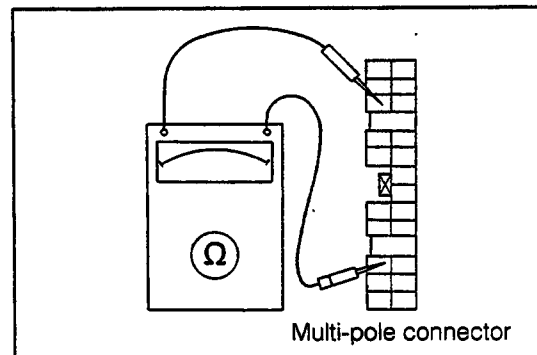


Fig. 10-95

WR-10103

L.H.D. Vehicles with General Specifications

○—○ Continuity exists.

Hazard	Turn signal	Terminal					
		F	L	R	B ₂	B ₁	F ₁
OFF	ⓁⓁ	○—○			○—○		○—○
	Ⓝ				○—○		○—○
	ⓇⓇ	○—○		○—○	○—○		○—○
ON	ⓁⓃⓇ	○—○	○—○	○—○		○—○	

Code	Kind of wires
F	0.5GO
L	0.5GY
R	0.5GW
M	0.5G
B ₂	0.5GL
B ₁	0.5GR
F ₁	0.5GB

WR-10104

Vehicles Other Than L.H.D. with General Specifications

Hazard	Turn signal	Terminal						
		F	L	R	M	B ₂	B ₁	F ₁
OFF	ⓁⓁ	○—○				○—○		○—○
	Ⓝ					○—○		○—○
	ⓇⓇ	○—○		○—○		○—○		○—○
ON	ⓁⓃⓇ	○—○	○—○	○—○	○—○		○—○	

Specified Flashing Speed: 85 ± 10 times/min.

NOTE:

If any of the front or rear turn signal lamps has open wire, the flashing speed will exceed 120 times /min.

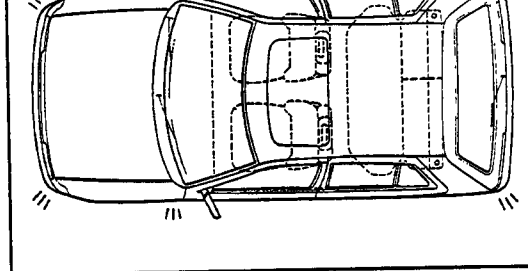


Fig. 10-97

WR-10106

FRONT WIPER AND WASHER SWITCH

INSPECTION

Disconnect the multi-pole connector. Ensure that continuity exists between the respective terminals as indicated in the continuity table below.

Switch with Intermittent Wiper

○—○ Continuity exists.

Lever position \ Terminal		WS	+1	+2	INT	E	WB	W
Wiper switch	OFF	○—○						
	INT	○—○			○—○			
	LO		○—○				○—○	
	HI			○—○			○—○	
Washer switch	OFF							
	ON					○—○		○—○

Code	Kind of wires
WS	0.5LR
+1	0.5LY
+2	0.5L
INT	0.5LB
E	1.25WB
WB	0.5LW
W	0.3LG

WR-10107

Switch without Intermittent Wiper

○—○ Continuity exists.

Lever position \ Terminal		WS	+1	+2	E	WB	W
Wiper switch	OFF	○—○					
	LO		○—○			○—○	
	HI			○—○		○—○	
Washer switch	OFF						
	ON				○—○		○—○

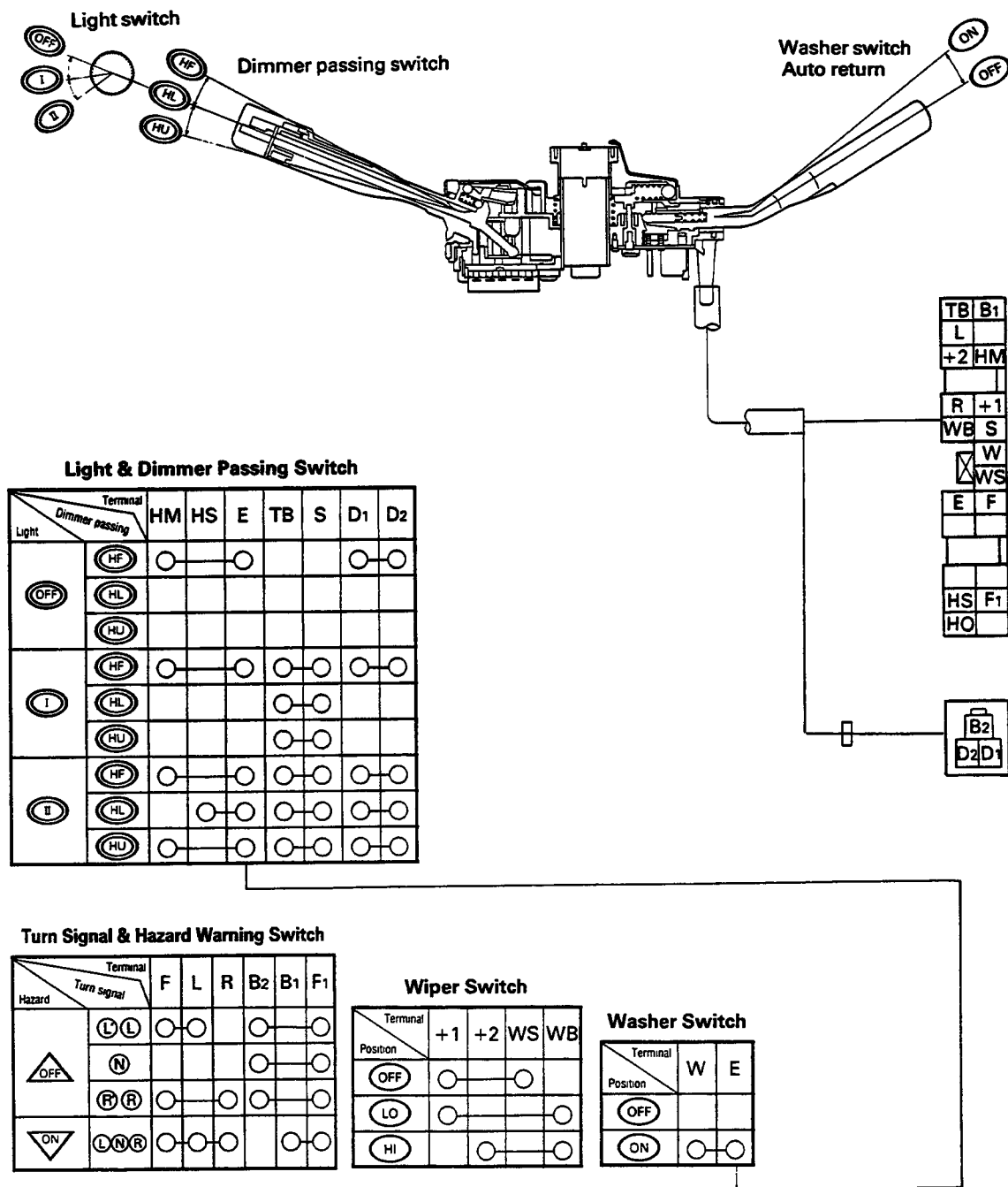
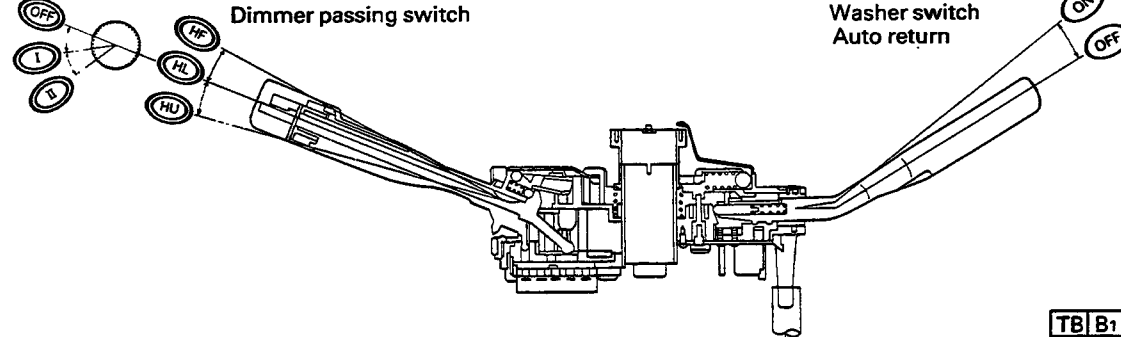


Fig. 10-98

TR86-08019



Light & Dimmer Passing Switch

Terminal		HM	HS	E	TB	S	D1	D2
Light	Dimmer passing							
OFF	HF	○	○				○	○
	HL							
	HU							
I	HF	○	○		○	○	○	○
	HL				○	○		
	HU				○	○		
II	HF	○	○		○	○	○	○
	HL		○		○	○	○	○
	HU	○			○	○	○	○

TB	B1
L	
+2	HM
R	+1
WB	S
	W
	WS
E	F
HS	F1
HO	INT

B2
D2 D1

Turn Signal & Hazard Warning Switch

Terminal		F	L	R	B2	B1	F1
Hazard	Turn signal						
OFF	L L	○	○		○		○
	N				○		○
	R R	○		○	○		○
ON	L N R	○	○	○			○

Wiper Switch

Terminal		WS	+1	+2	INT	E	WB
Position							
OFF		○	○				
INT		○	○		○	○	
LO			○				○
HI				○			○

Washer Switch

Terminal		W	E
Position			
OFF			
ON		○	○

Fig. 10-99

TR86-08020

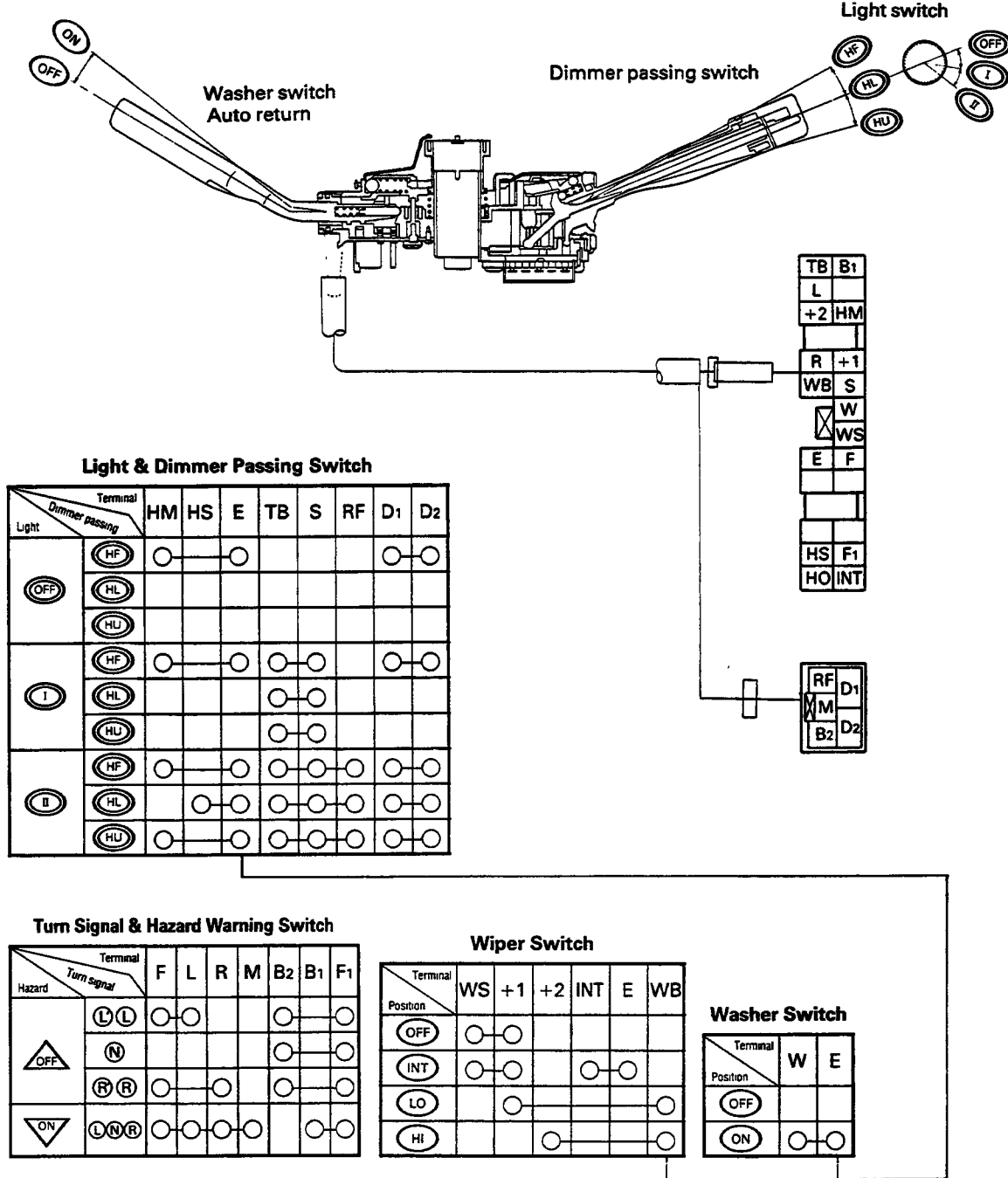
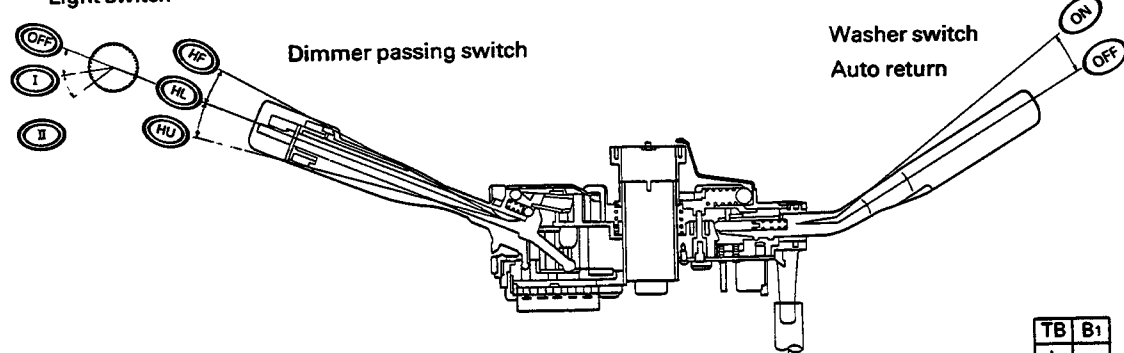


Fig. 10-100

TR86-08021



Light & Dimmer Passing Switch

Terminal Dimmer passing		HM	HS	E	TB	S	RF	D1	D2
Light OFF	HF	○	○					○	○
	HL								
	HU								
I	HF	○	○	○	○	○		○	○
	HL				○	○			
	HU				○	○			
II	HF	○	○	○	○	○	○	○	○
	HL		○	○	○	○	○	○	○
	HU	○	○	○	○	○	○	○	○

TB	B1
L	
+2	HM
R	+1
WB	S
W	WS
E	F
HS	F1
HO	

RF	D1
M	D2
B2	

Turn Signal & Hazard Warning Switch

Terminal Turn signal		F	L	R	M	B2	B1	F1
Hazard OFF	L (L)	○	○			○	○	○
	N					○	○	○
	R (R)	○	○			○	○	○
ON	L (N R)	○	○	○	○		○	○

Wiper Switch

Terminal Position		+1	+2	WS	WB
OFF		○	○		
	LO	○			○
	HI		○		○

Washer Switch

Terminal Position		W	E
OFF			
	ON	○	○

Fig. 10-101

TR86-08022

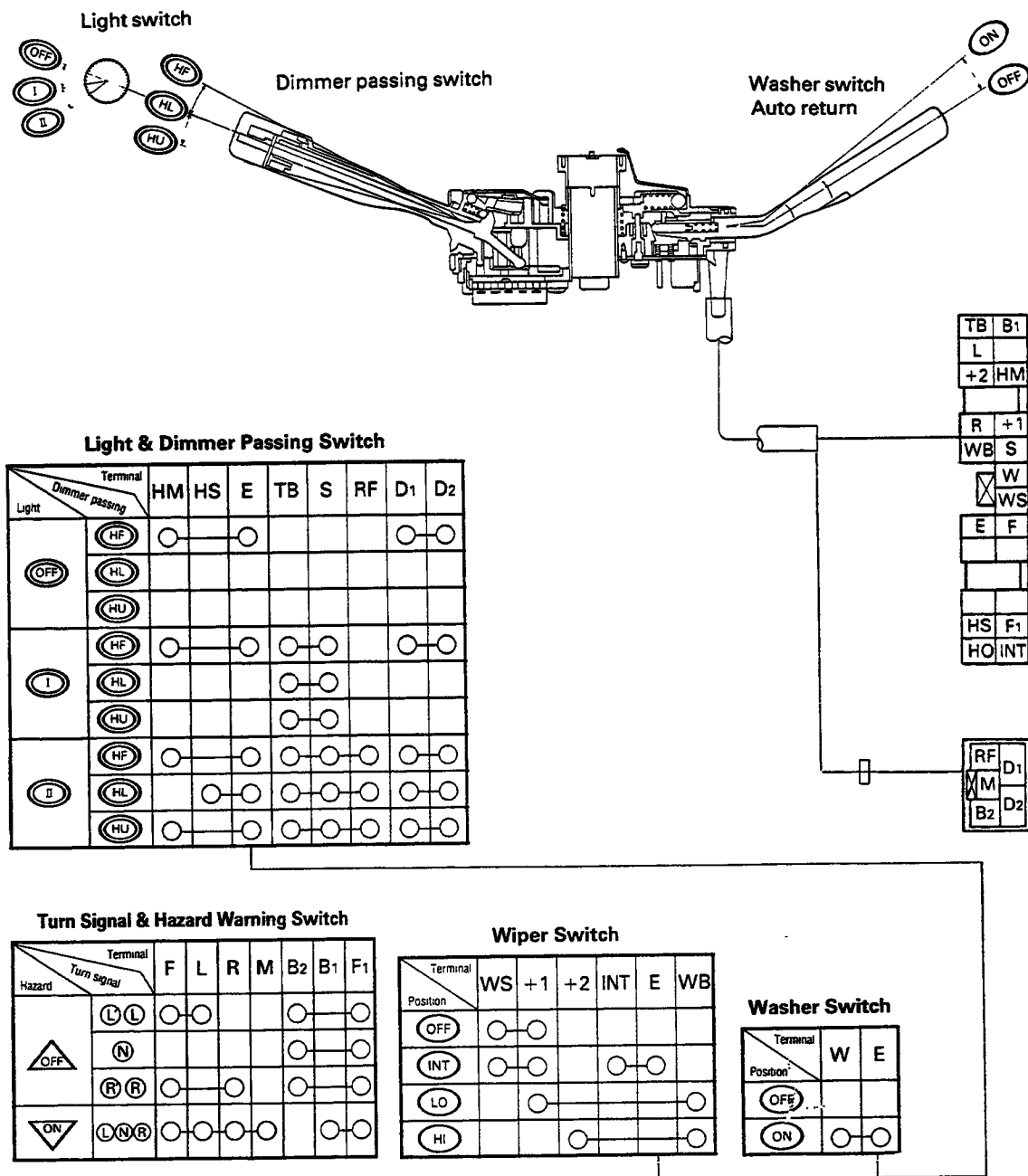


Fig. 10-102

TR86-08023

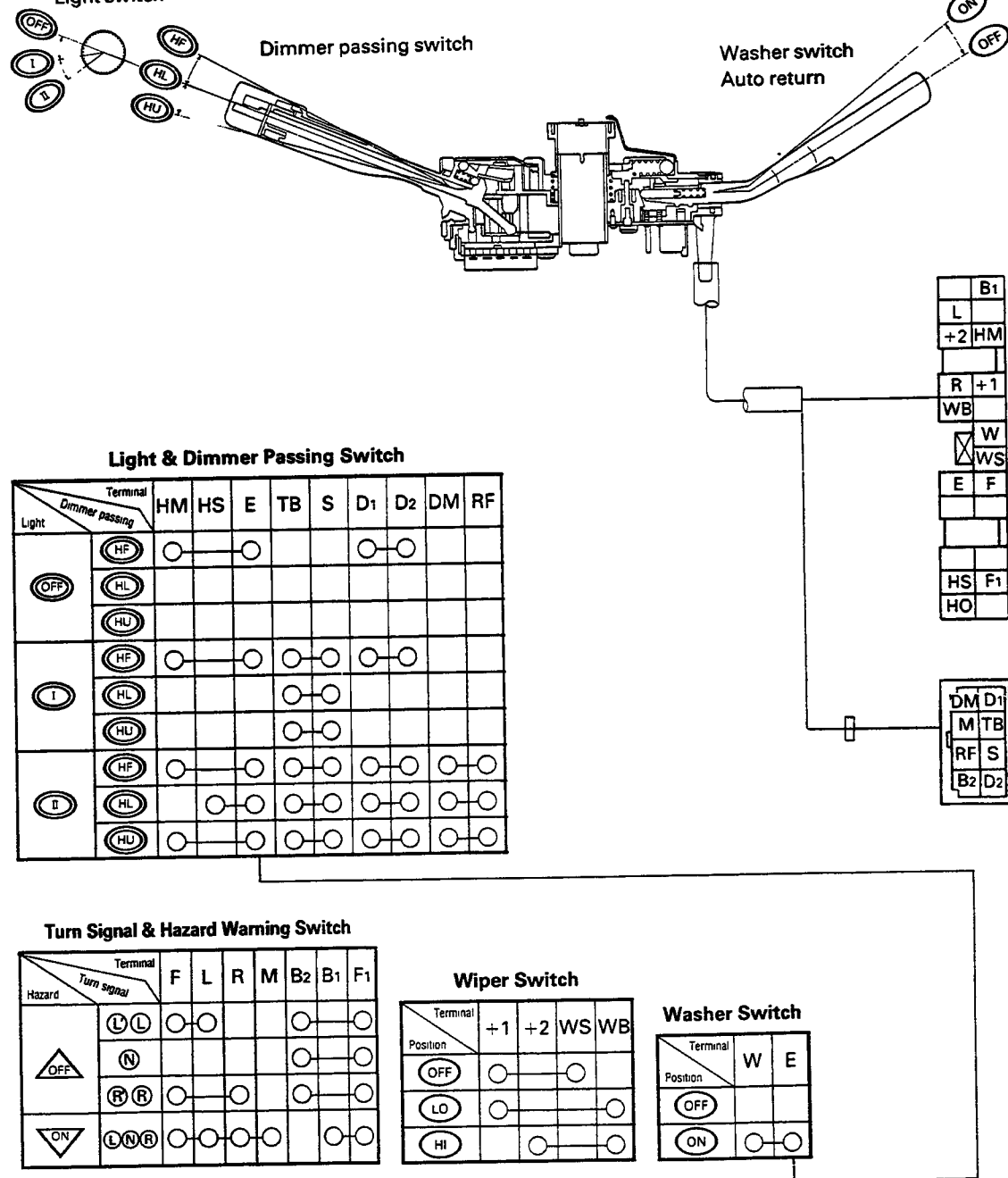
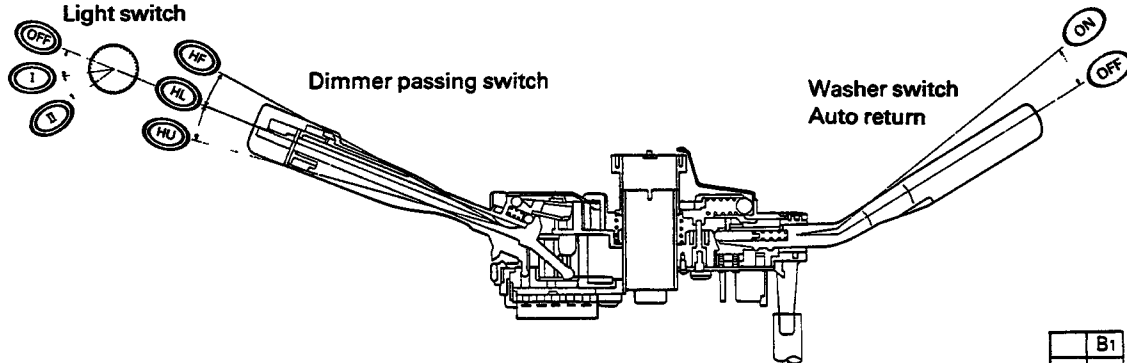


Fig. 10-103

TR86-0824



Light & Dimmer Passing Switch

Terminal		HM	HS	E	TB	S	D1	D2	DM	RF
Light	Dimmer passing									
	OFF	HF	○—○				○—○			
		HL								
I		HU								
		HF	○—○	○—○	○—○	○—○				
		HL		○—○						
II		HU		○—○						
		HF	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○
		HL		○—○	○—○	○—○	○—○	○—○	○—○	○—○
		HU	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○

B1
L
+2 HM
R +1
WB
W
WS
E F
HS F1
HO INT

DM D1
M TB
RF S
B2 D2

Turn Signal & Hazard Warning Switch

Terminal		F	L	R	M	B2	B1	F1
Hazard	Turn signal							
	OFF	L L	○—○			○—○	○—○	○—○
		N				○—○	○—○	○—○
ON		R R	○—○	○—○		○—○	○—○	○—○
		L N R	○—○	○—○	○—○		○—○	

Wiper Switch

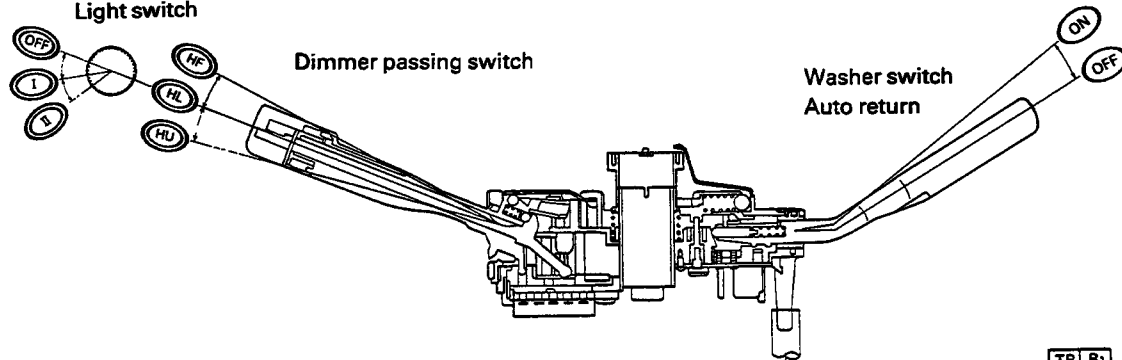
Terminal		WS	+1	+2	INT	E	WB
Position	OFF	○—○					
	INT	○—○			○—○		
	LO		○—○			○—○	
	HI			○—○			○—○

Washer Switch

Terminal		W	E
Position	OFF		
	ON	○—○	

Fig. 10-104

TR86-0825



Light & Dimmer Passing Switch

Terminal Dimmer passing		HM, 10	HS, 6	E	8	TB, 4	RF	D1	D2
Light OFF	HF	○	○					○	○
	HL								
	HU								
I	HF	○	○	○				○	○
	HL			○	○				
	HU			○	○				
II	HF	○	○	○	○	○	○	○	○
	HL		○	○	○	○	○	○	○
	HU	○		○	○	○	○	○	○

TB	B1
L	
+2	HM
R	+1
WB	S
	W
	WS
E	F
HS	F1
HO	INT

10	B2
8	D1
6	D2
5	RF
4	M

Turn Signal & Hazard Warning Switch

Terminal Turn signal		F	L	R	M	B2	B1	F1
Hazard OFF	L L	○	○			○	○	○
	N					○	○	○
	R R	○	○			○	○	○
ON	L N R	○	○	○	○		○	○

Wiper Switch

Terminal Position	WS	+1	+2	INT	E	WB
OFF	○	○				
INT	○	○		○	○	
LO		○				○
HI			○			○

Washer Switch

Terminal Position	W	E
OFF		
ON	○	○

Fig. 10-105

TR86-0826

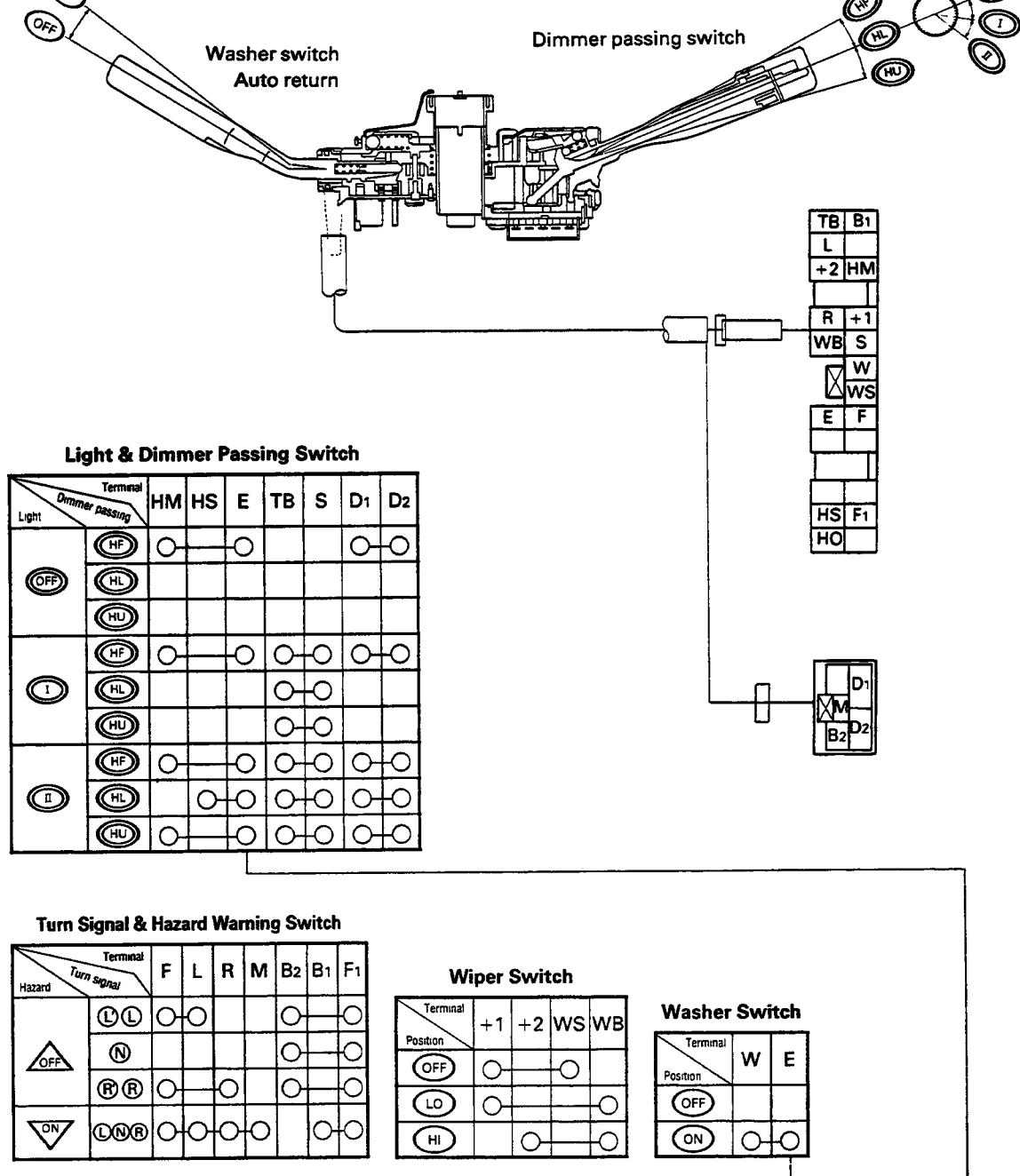


Fig. 10-106

TR86-08027

that continuity exists between the respective terminals as indicated in the continuity table.

Continuity Table (Except for GT_{II})

	AM	ACC	IG	ST
LOCK				
ACC	○ — ○			
ON	○ — ○ — ○			
START	○ — ○ — ○ — ○			

Continuity Table (For GT_{II})

	AM	ACC	IG ₁	IG ₂	ST
LOCK					
↕					
ACC	○ — ○				
↕	○ — ○				
ON	○ — ○ — ○ — ○				
↕	○ — ○ — ○ — ○				
START	○ — ○ — ○ — ○ — ○				

STOP LAMP SWITCH

The stop lamp switch is located at the pedal bracket section.

INSPECTION

- 1. Disconnect the connector of the stop lamp switch.
- 2. Ensure that continuity exists between the terminals when the brake pedal is depressed.

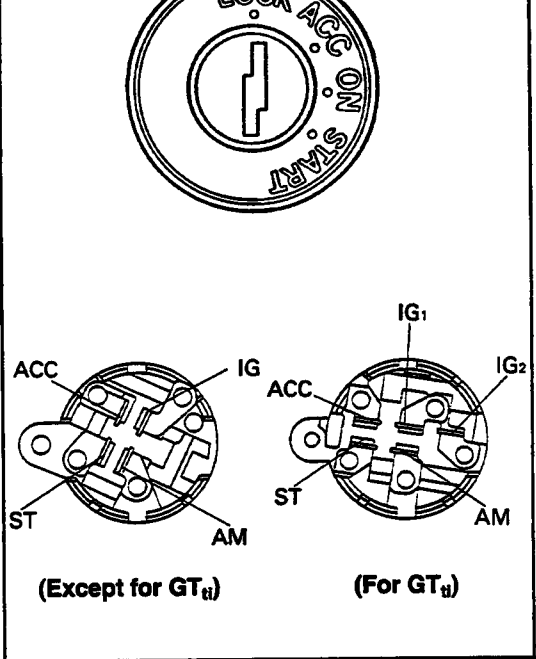


Fig. 10-108

WR-10109

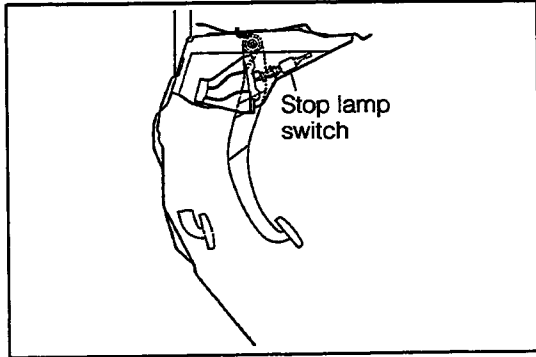


Fig. 10-109

WR-10110

located at the right side of the instrument cluster finish panel. On the L.H.D. vehicles, this switch is located at the left side of the instrument cluster finish panel.

Removal

1. Remove the four screws. Pull the instrument cluster finish panel assembly toward your side.
2. Remove the switch by removing the connector and two screws.

INSPECTION

Disconnect the connector. Ensure that continuity exists between the respective terminals as indicated in the continuity table below.

Continuity Table

○—⊕—○: Bulb in installed state

Knob position \ Terminal	B	D	E
OFF		○—⊕—○	○—⊕—○
ON	○—⊕—○	○—⊕—○	○—⊕—○

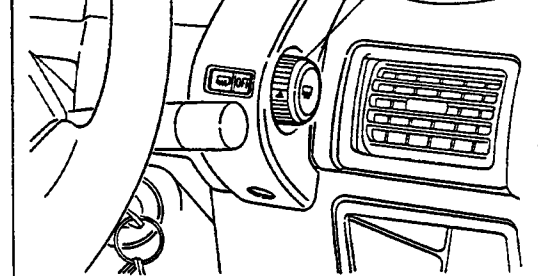


Fig. 10-111

WR-10112

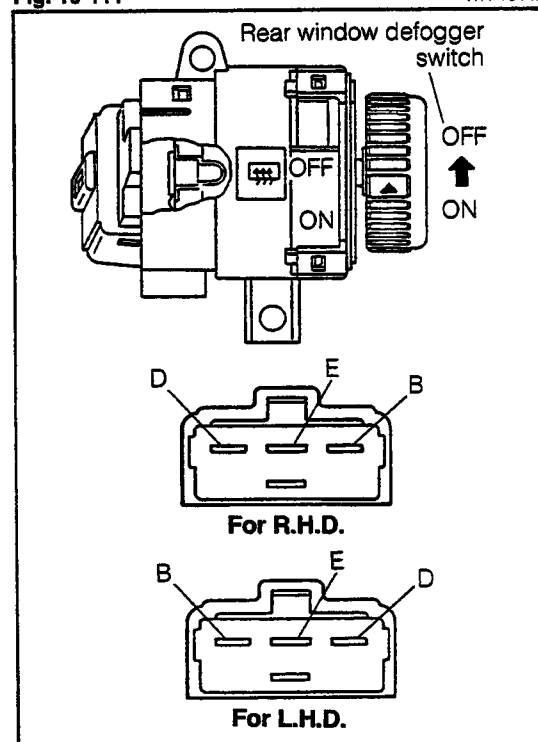


Fig. 10-112

WR-10113

INSTALLATION

1. Install the defogger switch to the cluster finish panel with the two screws.
2. Connect the connector securely.
3. Attach the cluster finish panel to the instrument panel by tightening the two screws.

WR-10114

1. Open wire check

- (1) Turn ON the ignition key switch.
- (2) Turn ON the defogger switch so as to energize the defogger wire.
- (3) Check the voltage at the center section of each heat wire.

Voltage	Judgement criteria
Approx. 5 V	Good (No open wire)
Approx. 10 V or 0 V	Open wire

Reference:

If the voltage is 10 V, it means that open wire exists between the center of the wire and the end of the positive $\oplus$ side. If the voltage is 0 V, it means that open wire exists between the center of the wire and the end of the earth side.

2. Locating Point of Open Wire

- (1) Connect the positive $\oplus$ terminal of the voltmeter to the positive $\oplus$ side of the defogger wire.
- (2) Slide the voltmeter's negative $\ominus$ terminal wrapped with foil strip on the defogger wire from its positive $\oplus$ side to its negative $\ominus$ side.
- (3) The voltmeter reading changes from 0 V to several volts at the point where open wire exists.

3. Repairing Point of Open Wire

- (1) Clean the point of open wire with white gasoline.
- (2) Affix masking tapes to both upper and lower portions of the point to be repaired.
- (3) Stir repair agent (Du Pont Paste No. 4817) thoroughly. Apply a small amount of the repair agent to the repairing point, using a fine brush.
- (4) Two to three minutes later, peel off the masking tapes.
- (5) Do not energize the defogger wire within 24 hours after the repair.

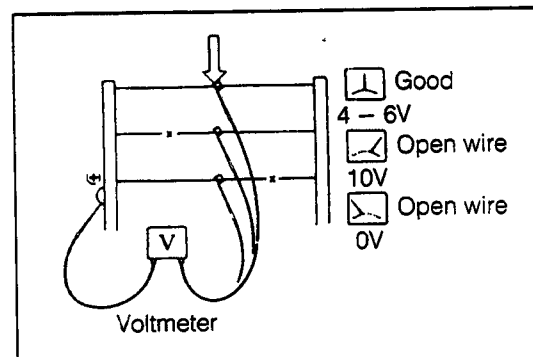


Fig. 10-114

WR-10116

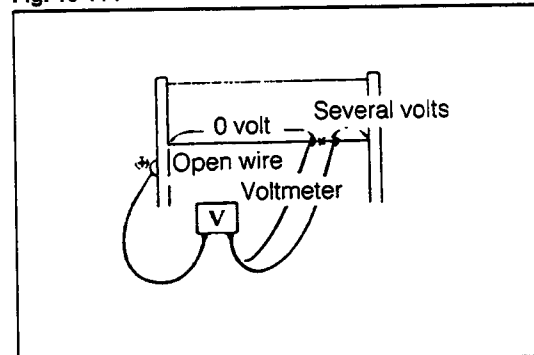


Fig. 10-115

WR-10117

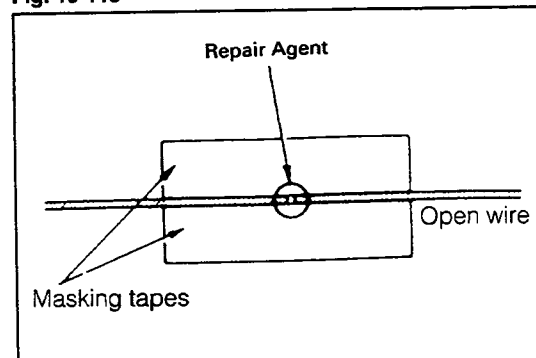


Fig. 10-116

WR-10118

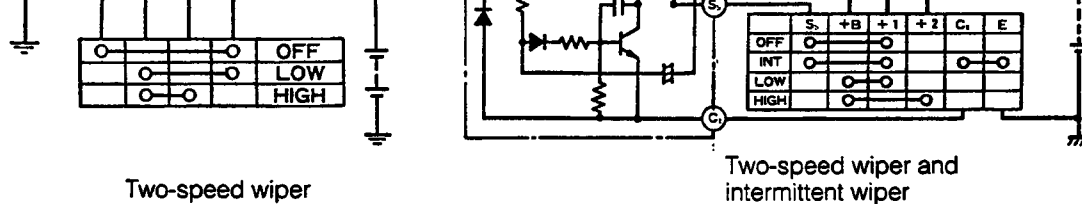


Fig. 10-117

WR-10119

FRONT WIPER AND BLADES COMPONENTS

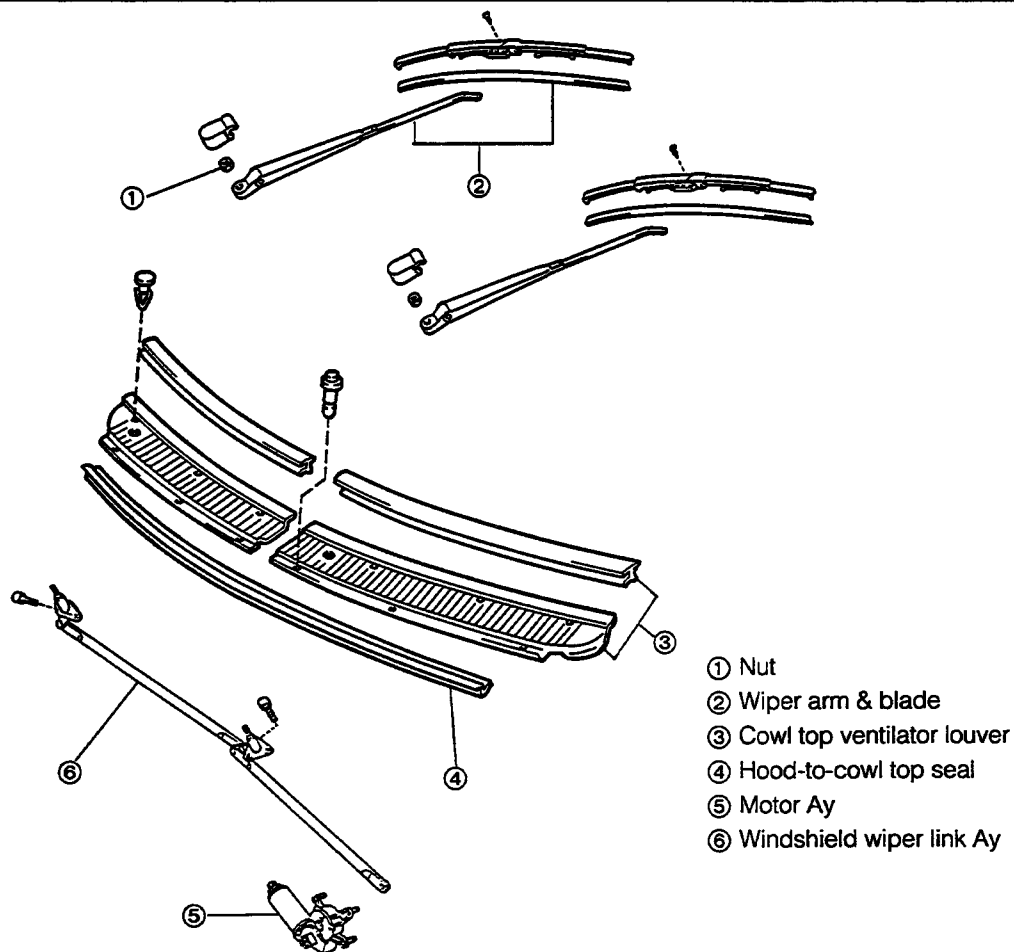


Fig. 10-118

WR-10120

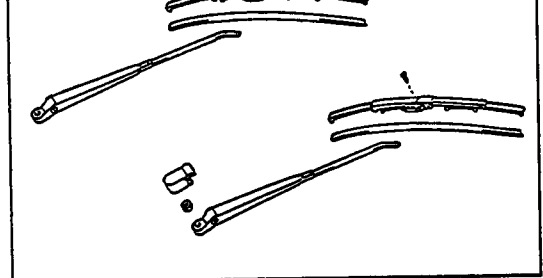


Fig. 10-120

WR-10122

3. Remove the cowl top ventilator louver.
4. Remove the hood-to-cowl top seal.

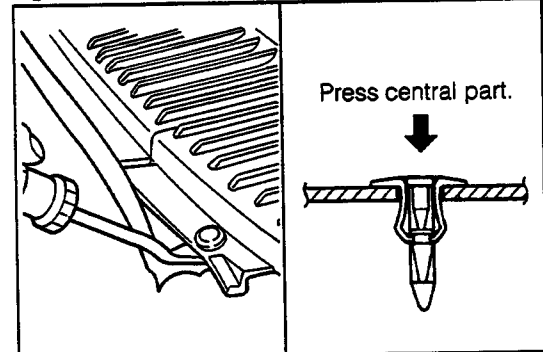


Fig. 10-121

WR-10123

5. Remove the wiper motor assembly.
 - (1) Disconnect the connector.
 - (2) Remove the set bolt.
 - (3) Disconnect the motor from the link. Remove the motor.

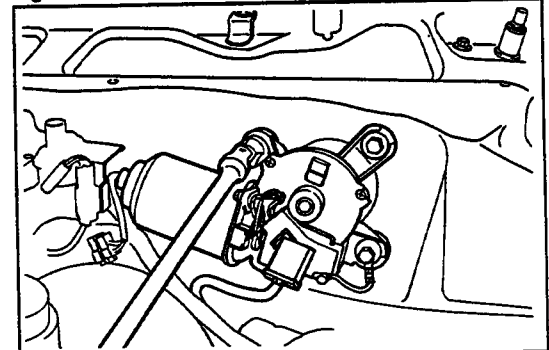


Fig. 10-122

WR-10124

6. Remove the wiper link assembly.
 - (1) Remove the set bolt.

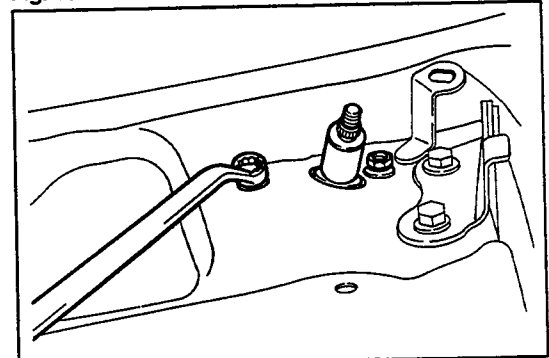


Fig. 10-123

WR-10125

- (1) Connect the terminal +1 to the positive $\oplus$ terminal of the battery; the body to the negative $\ominus$ terminal of the battery. Ensure that the wiper operates at the low speed.

2. High Speed Operation Check

- (1) Connect the terminal +2 to the positive $\oplus$ terminal of the battery; the body to the negative $\ominus$ terminal of the battery. Ensure that the wiper operates at the high speed.

3. OFF Operation Check

With the wiper motor body connected to the negative $\ominus$ terminal of the battery, perform the following checks.

- (1) Connect the terminal B to the positive $\oplus$ terminal of the battery.
- (2) Operate the wiper at the low speed by connecting the terminal +1 to the positive $\oplus$ terminal of the battery.

- (3) Under the operating conditions in the step (2), disconnect the terminal +1 so as to interrupt the wiper motor operation.

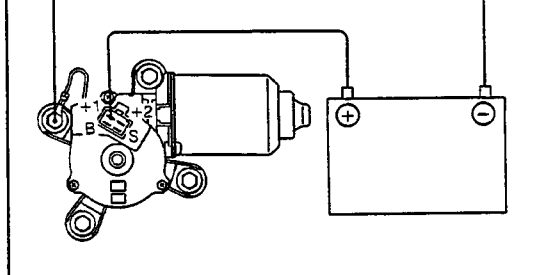


Fig. 10-125

WR-10127

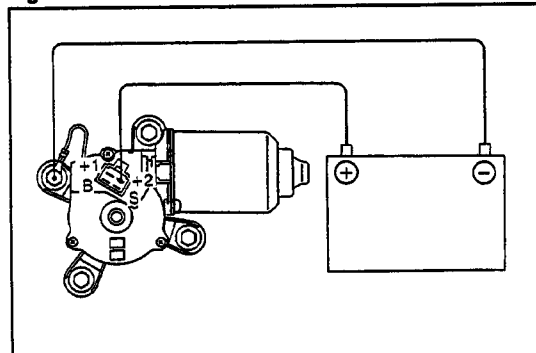


Fig. 10-126

WR-10128

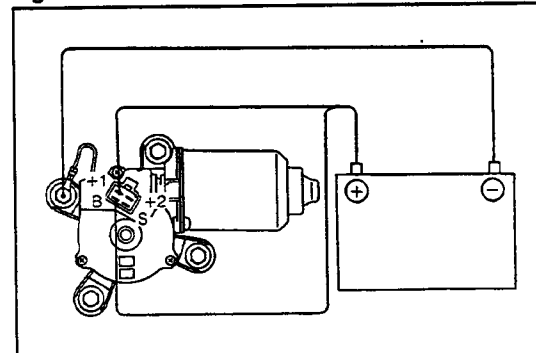


Fig. 10-127

WR-10129

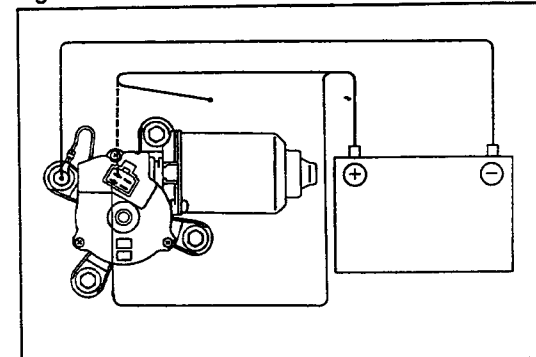


Fig. 10-128

WR-10130

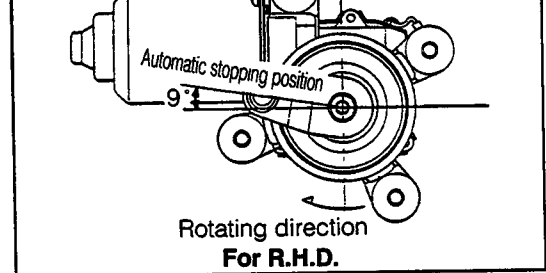
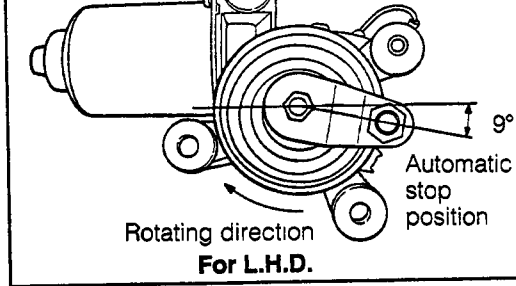


Fig. 10-130

WR-10131

INSTALLATION

1. Install the windshield wiper link assembly.
2. Install the motor assembly.

NOTE:

Connect the motor assembly with the link securely.

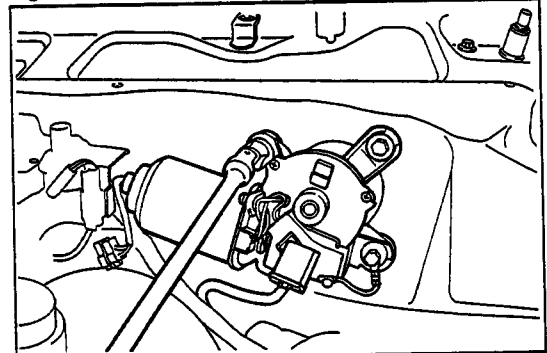


Fig. 10-131

WR-10132

3. Install the hood-to-cowl top seal. Install the cowl top ventilator louver.

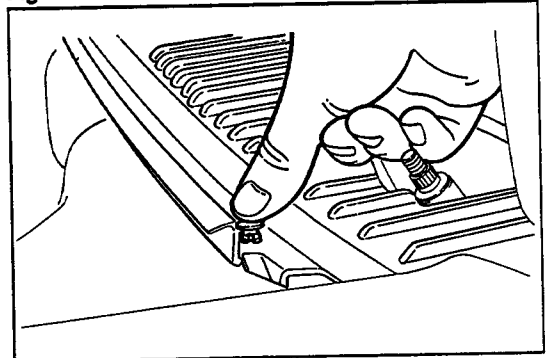


Fig. 10-132

WR-10133

4. Install the wiper arm and blade.
 - (1) Operate the wiper arm and set it to the automatic stopping position.
 - (2) Set the wiper arm to the position as indicated in the right figure.
5. Install the front wiper arm cover.

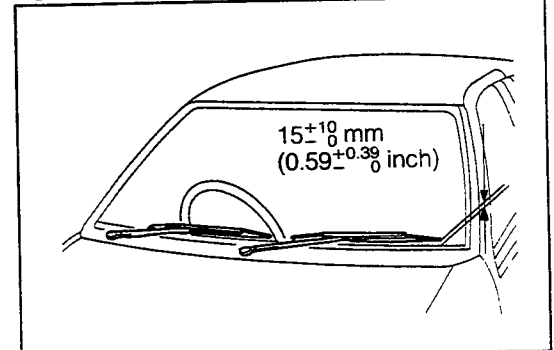
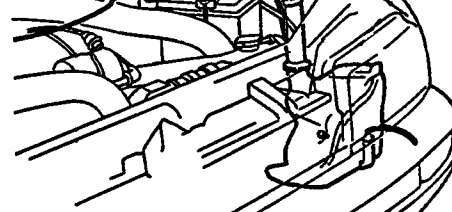


Fig. 10-133

WR-10134

REMOVAL (VEHICLES MOUNTED WITH TURBOCHARGED ENGINE OR ECE & EEC SPECIFICATIONS)

1. Remove the front part of the left front fender liner.
2. Remove the left headlamp assembly.
3. Remove the left clearance lamp.
4. Remove the washer tank assembly.
 - (1) Remove the connector, hose, two bolts (one is to be removed during the fender liner removal) and nut.



Vehicles mounted with turbocharged engine or those having ECE & EEC Specifications

Fig. 10-135

WR-10136

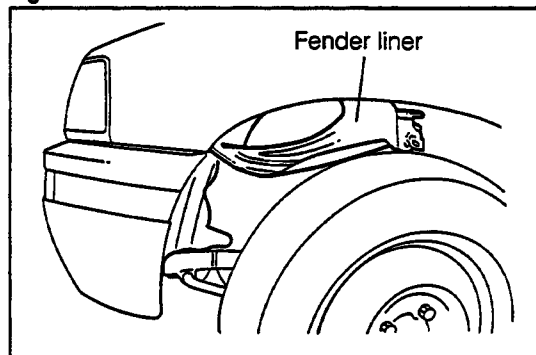


Fig. 10-136

WR-10137

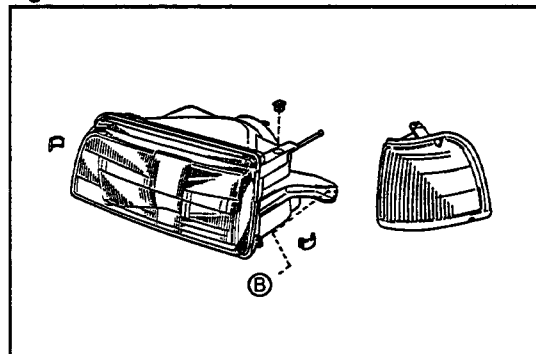


Fig. 10-137

WR-10138

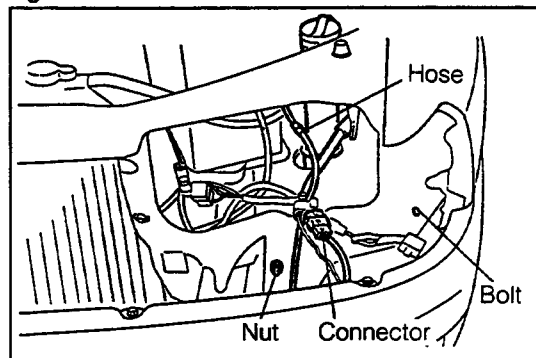


Fig. 10-138

WR-10139

2. Install the left headlamp assembly.
3. Install the left clearance lamp.
4. Install the left front fender liner.

FRONT WIPER CONTROL RELAY

The front wiper control relay is located at the upper side of the fuse block.

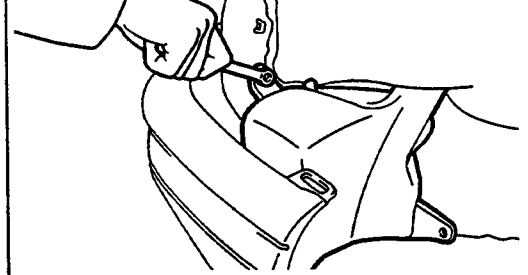


Fig. 10-140

WR-10141

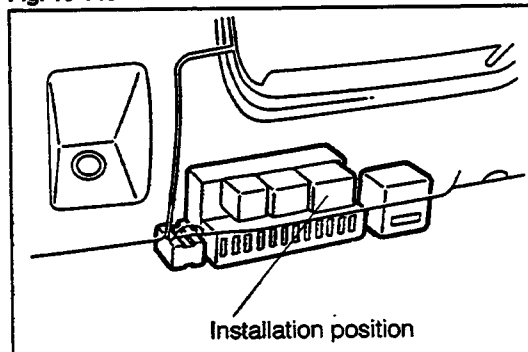


Fig. 10-141

WR-10142

INSPECTION

1. Perform continuity checks between terminals given below.

- (1) Between terminals ② and ③ ... Continuity exists.
- (2) Between terminals ② and ④ ... No continuity exists.

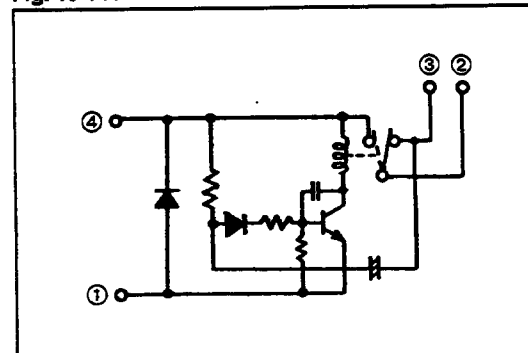


Fig. 10-142

WR-10143

2. Relay operation check

Connect the terminal ④ to the positive $\oplus$ terminal of the battery; terminal ① to the negative $\ominus$ terminal of the battery. Ensure that the relay emits an operating sound (clicking sound).

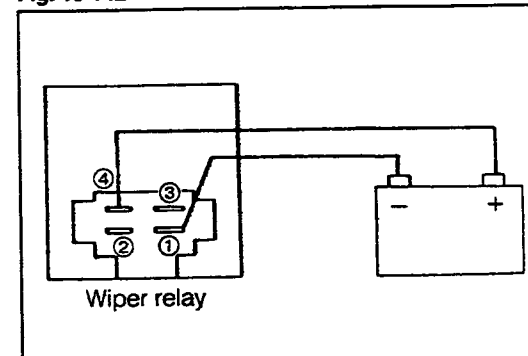


Fig. 10-143

WR-10144

terminal ③.

(The relay emits an operating sound.): The relay is turned OFF.

- (3) Ensure that, about four seconds later, the relay emits an operating sound (intermittent operation).

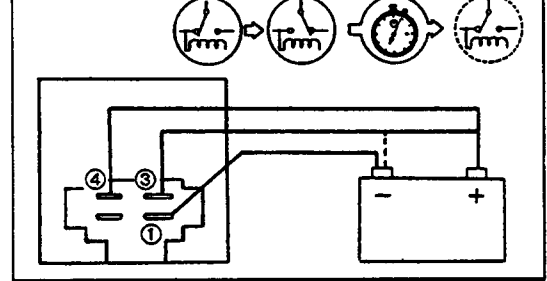


Fig. 10-145

WR-10146

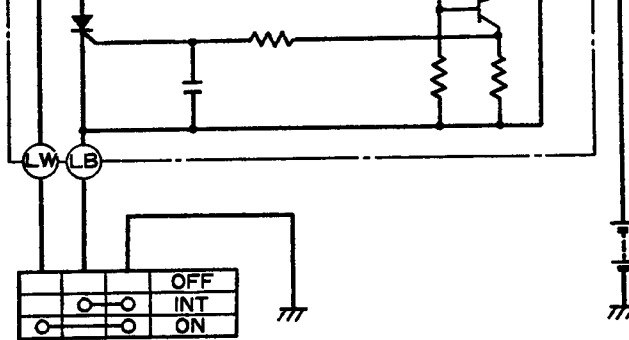


Fig. 10-146

WR-10147

REAR WIPER MOTOR AND BLADE COMPONENTS

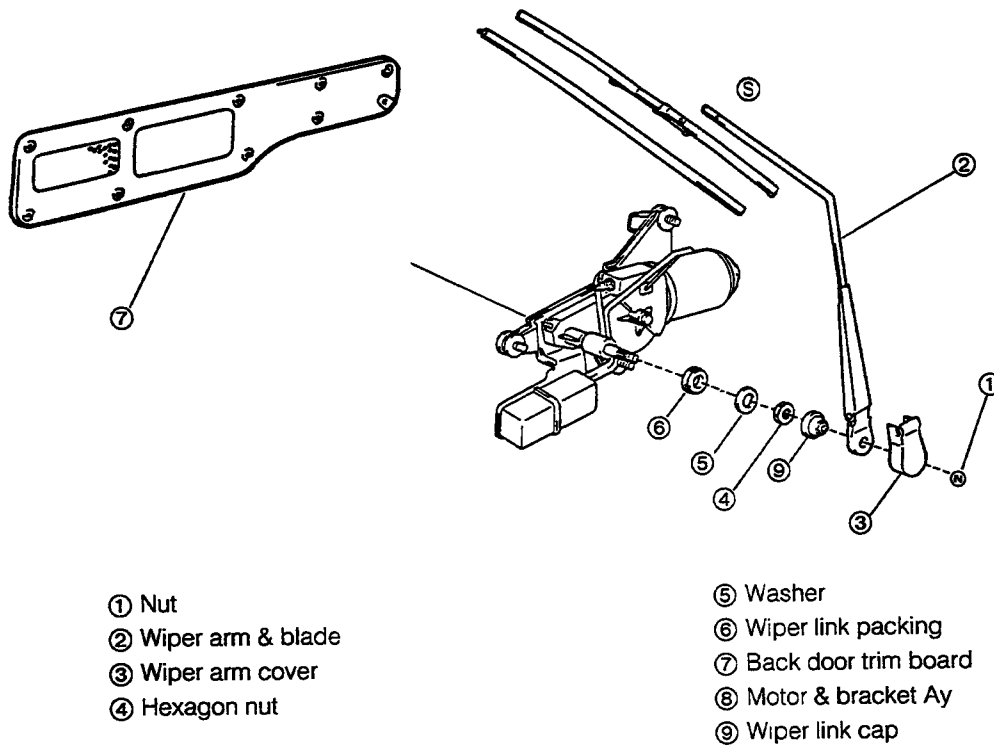


Fig. 10-147

WR-10148

3. Remove the wiper link cap.
Remove the washer and wiper link packing by removing the hexagon nut.

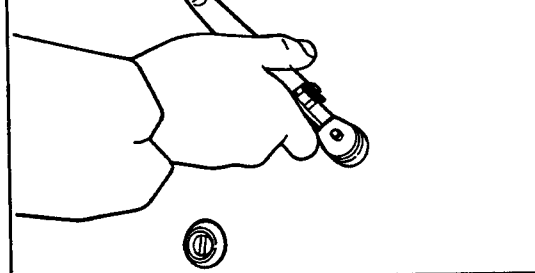


Fig. 10-149

WR-10150

4. Remove the back door trim board, as follows:
 - (1) Release the lock by pushing the center section of the clip. Then, detach the clip.
 - (2) Remove the back door trim board (10 pieces of clips).

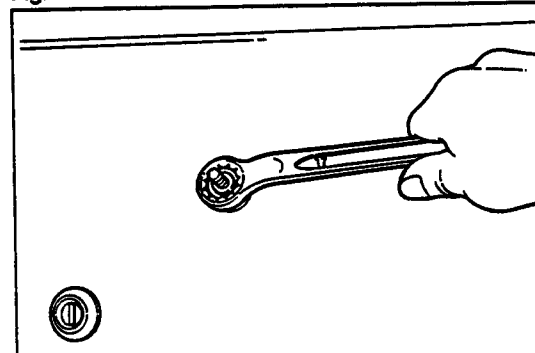


Fig. 10-150

WR-10151

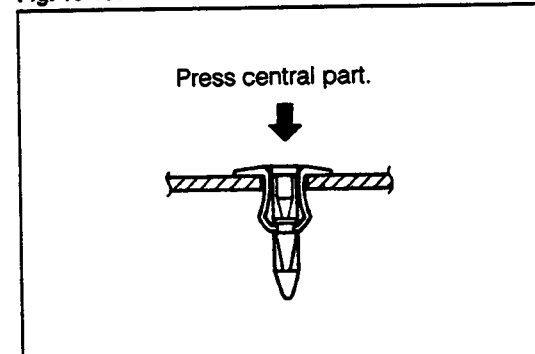


Fig. 10-151

WR-10152

5. Disconnect the connector. Remove the rear wiper motor assembly.

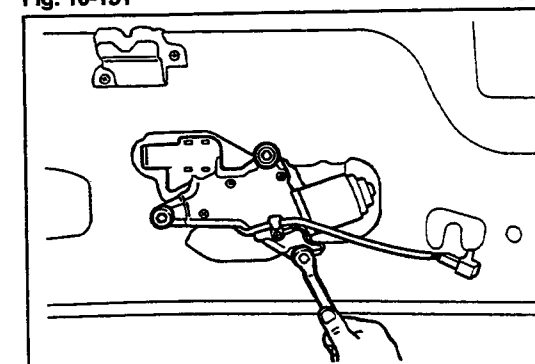


Fig. 10-152

WR-10153

stopping position.

3. Connect the terminal L to the positive $\oplus$ terminal of the battery; terminal LB to the negative $\ominus$ terminal of the battery. Ensure that the wiper operates intermittently.
4. Disconnect the terminal LB from the negative $\ominus$ terminal of the battery. Ensure that the wiper stops at the automatic stopping position.

INSTALLATION

1. Install the rear wiper motor assembly, as follows:
 - (1) Install the rear wiper motor assembly by tightening the set bolt.

NOTE:

Make sure that the body earth is provided properly.

- (2) Connect the connector.

2. Install the back door trim, as follows:
 - (1) Pull out the center section of the clip. Attach the clip to the trim. Push the center section so as to lock the clip.
 - (2) Install the back door trim boards (10 pieces).

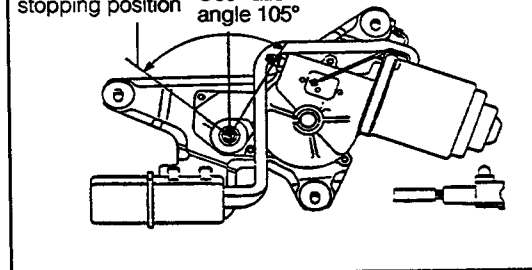


Fig. 10-154

WR-10155

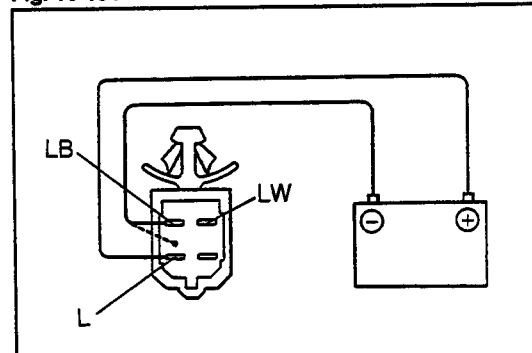


Fig. 10-155

WR-10156

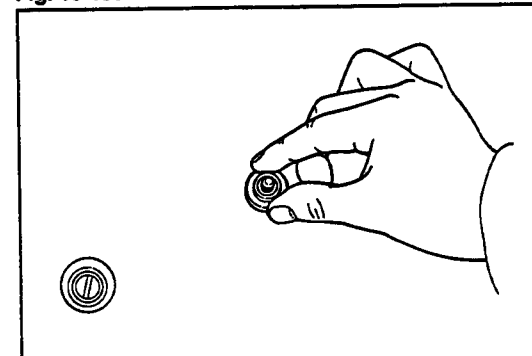


Fig. 10-156

WR-10157

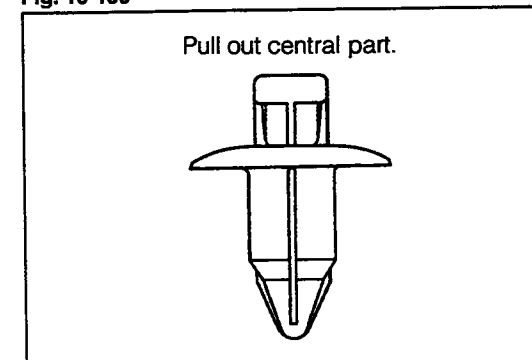


Fig. 10-157

WR-10158

automatic stopping position.

- (2) Align the blade with the bottom line of the defogger pattern.

Installation position:

Bottom line of pattern ± 5 mm (± 0.2 inch)

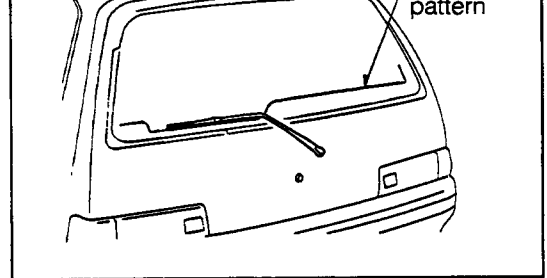


Fig. 10-159

WR-10160

5. Tighten the nut. Install the wiper arm cover.

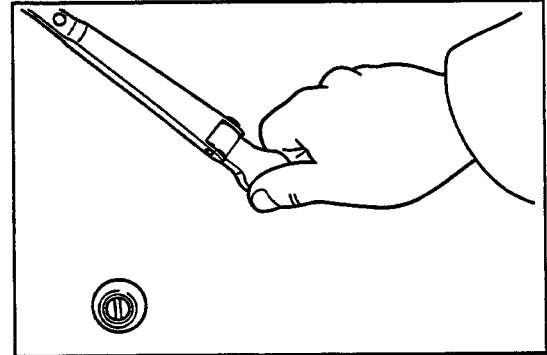
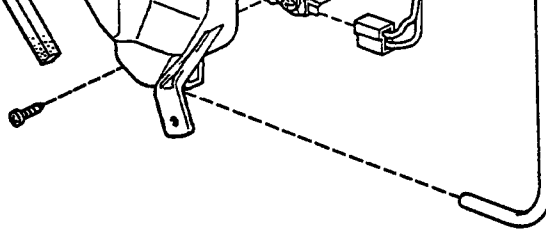


Fig. 10-160

WR-10161



① Jar & washer pump Ay

Fig. 10-161

WR-10162

REMOVAL

1. Remove the deck side trim RH.
2. Disconnect the connector and water hose. Remove the washer tank assembly.

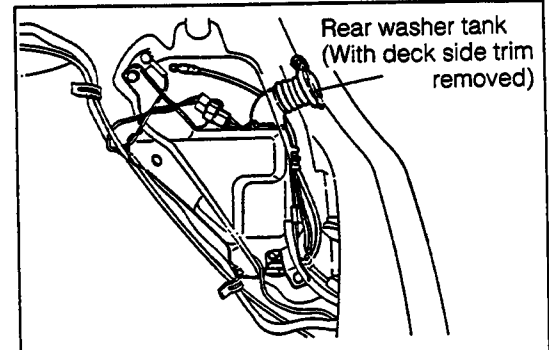


Fig. 10-162

WR-10163

INSTALLATION

1. Install the washer tank assembly by tightening the screws (2 pcs.).
2. Connect the connector and water hose.

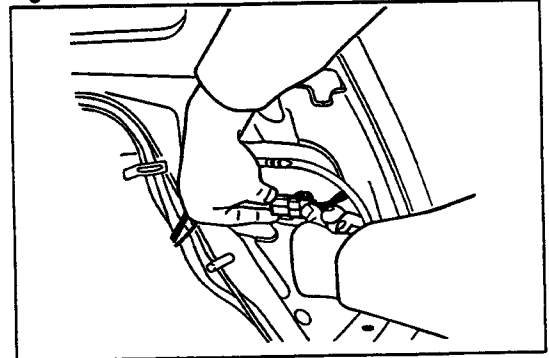


Fig. 10-163

WR-10164

3. Install the deck side trim RH.

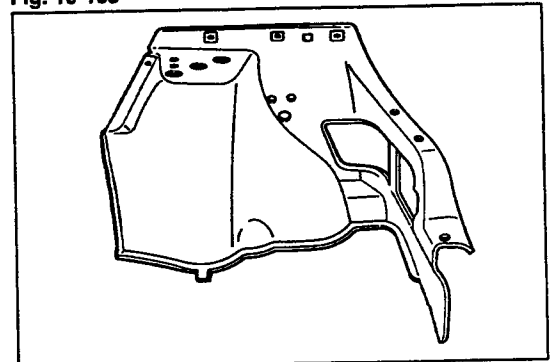


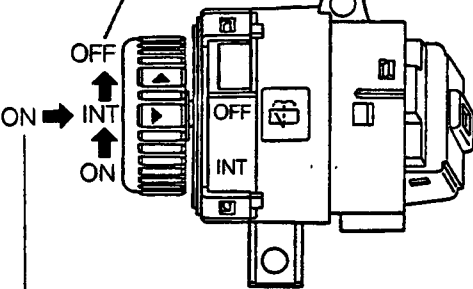
Fig. 10-164

WR-10165

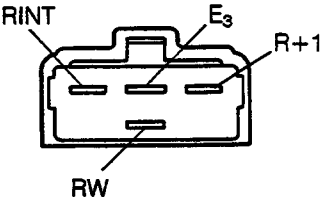
as indicated in the continuity table.

○—○ Continuity exists.

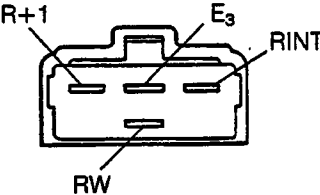
Knob position \ Terminal		R+1	RINT	E ₃	RW
Wiper switch	OFF				
	INT		○—○		
	ON	○—○			
Washer switch	OFF				
	ON			○—○	○—○



Rear washer switch



For R.H.D. vehicles



For L.H.D. vehicles

Fig. 10-166

WR-10167

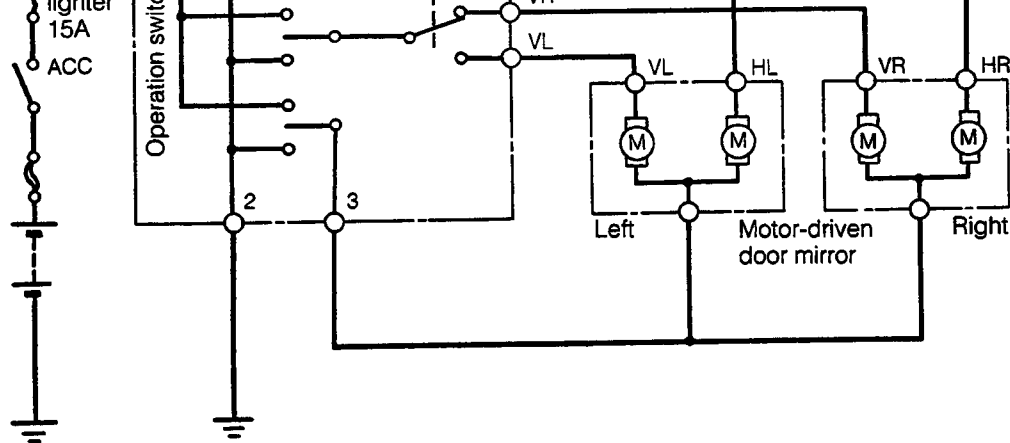


Fig. 10-167

WR-10168

DOOR MIRROR SWITCH

INSTALLATION POSITION

H.D. vehicles ... Right side of steering post

L.H.D. vehicles ... Left side of steering post

REMOVAL

Working from the back side of the instrument panel, push the switch toward your side.

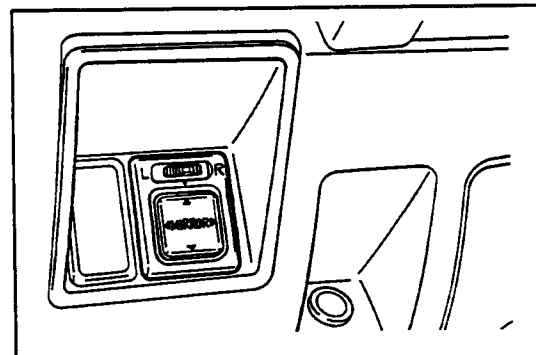


Fig. 10-168

WR-10169

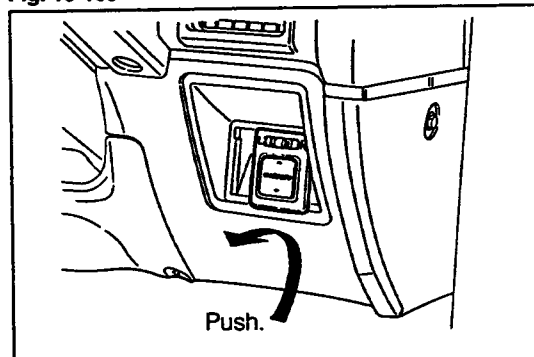


Fig. 10-169

WR-10170

Mirror	Left					Right			
Terminal Switch position	7	6	1	2	3	2	1	5	4
UP									
DOWN									
LEFT									
RIGHT									

WR-10172

ELECTRICAL REMOTE CONTROL DOOR MIRROR RELATED PARTS

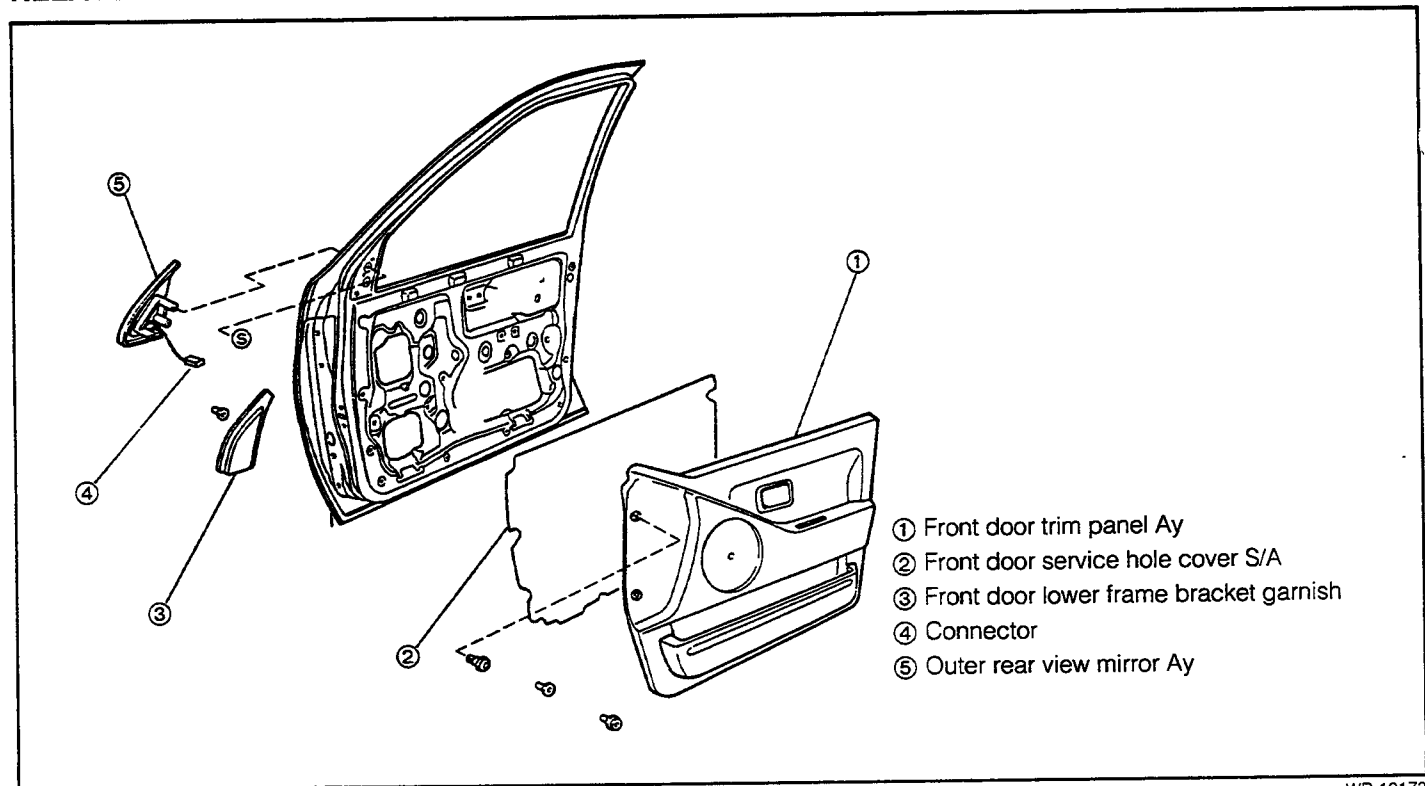


Fig. 10-171

WR-10173

4. Disconnect the door mirror connector. Remove the outer rear view mirror assembly by removing the attaching bolt.

INSPECTION

1. Apply the battery voltage to each terminal, as indicated in the table below. Ensure that the mirror operates properly.

Terminal	Right door mirror	COM	MVR	MHR	Operation direction
	Left door mirror	COM	MVL	MHL	
Connection		⊖	⊕		UP
		⊕	⊖		Down
		⊖		⊕	Left
		⊕		⊖	Right

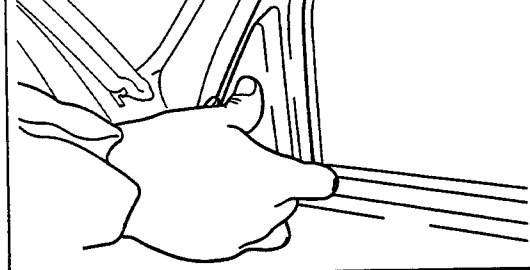


Fig. 10-173

WR-10175

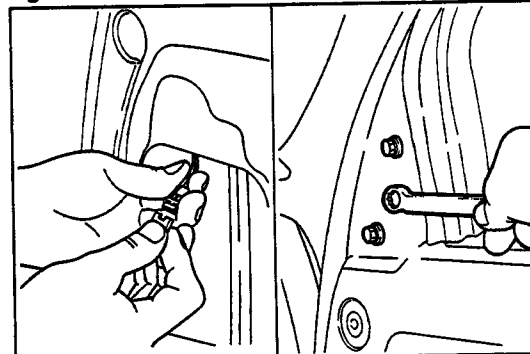


Fig. 10-174

WR-10176

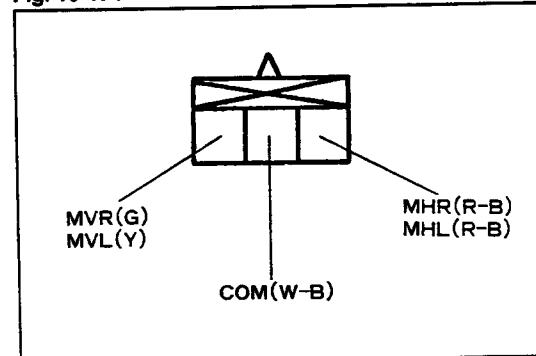


Fig. 10-175

WR-10177

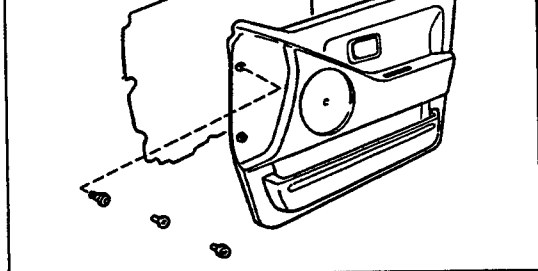


Fig. 10-177

WR-10179

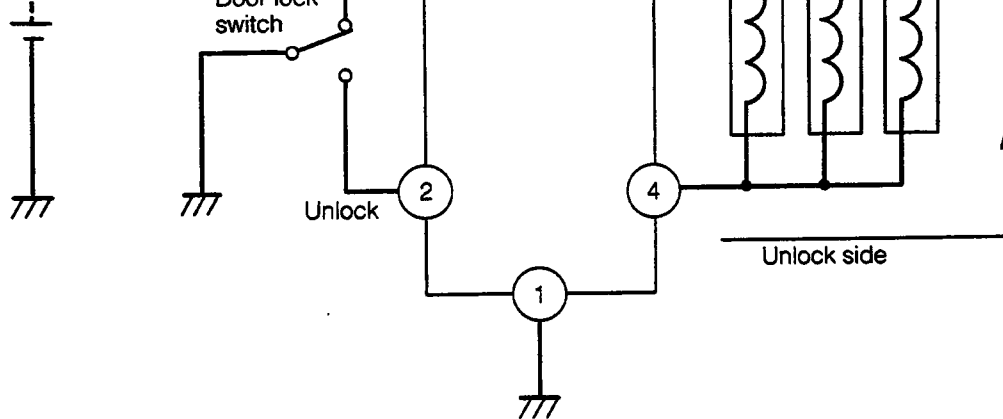


Fig. 10-178

WR-10180

DOOR LOCK SWITCH AND SOLENOID RELATED PARTS

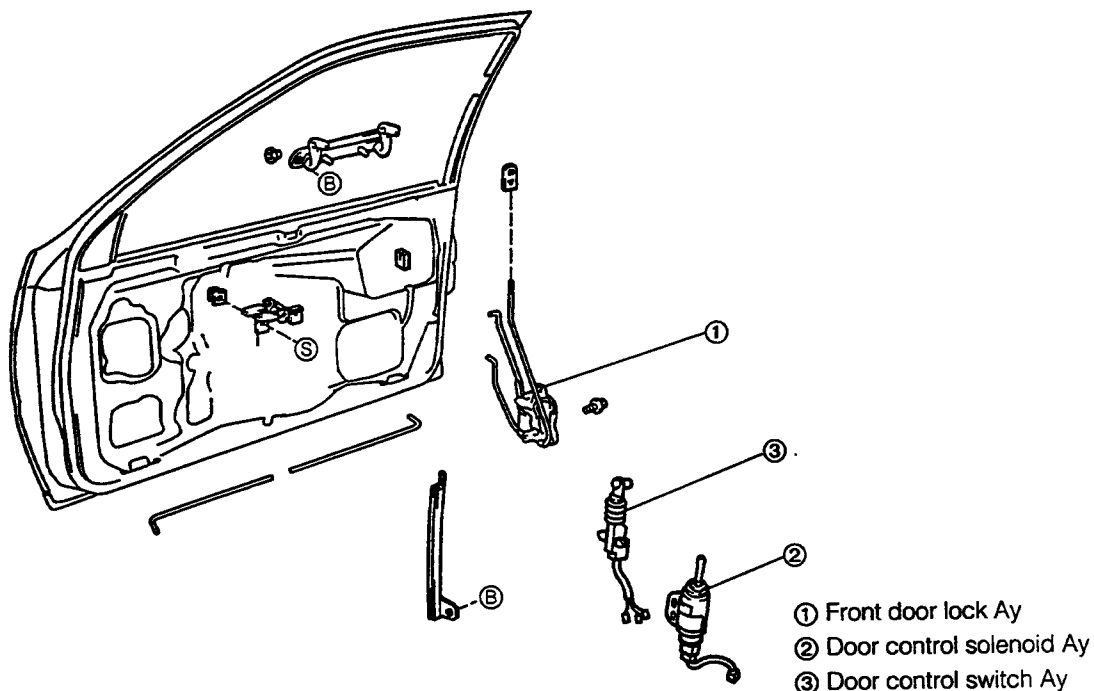


Fig. 10-179

WR-10181

attaching bolt.

3. Disconnect the connector. Remove the door control solenoid assembly or switch assembly by removing the attaching bolt.

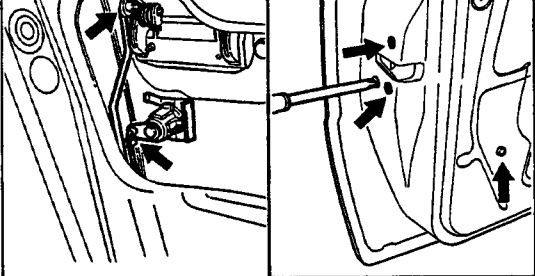


Fig. 10-181

WR-10183

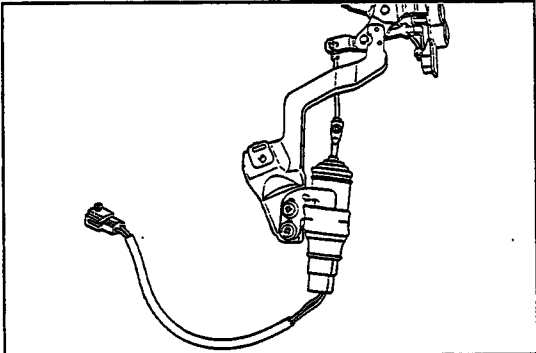


Fig. 10-182

WR-10184

INSPECTION

Solenoid Assembly

(Front Doors on 3-Door Vehicles and 5-Door Vehicles)

Apply a voltage of 12 V between the following two terminals. Ensure that the plunger operates in accordance with the table below.

Operation direction \ Terminal	①	②
UNLOCK	+	-
LOCK	-	+

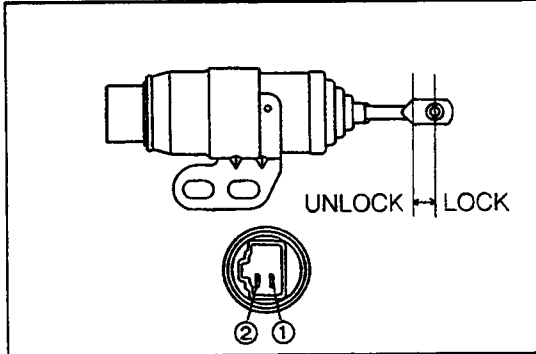


Fig. 10-183

WR-10185

(Rear Doors on 5-Door Vehicles)

Apply a voltage of 12 V between the following two terminals. Ensure that the plunger operates in accordance with the table below.

Operation direction \ Terminal	①	②
LOCK	+	-
UNLOCK	-	+

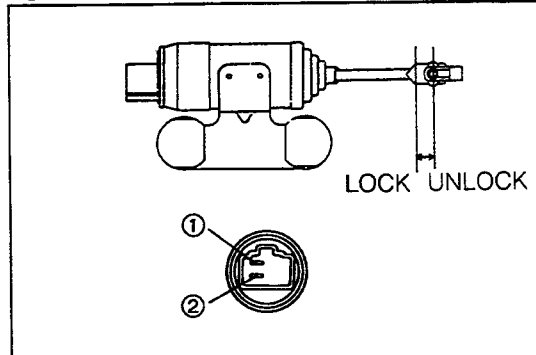


Fig. 10-184

WR-10186

2. Install the door control solenoid assembly.

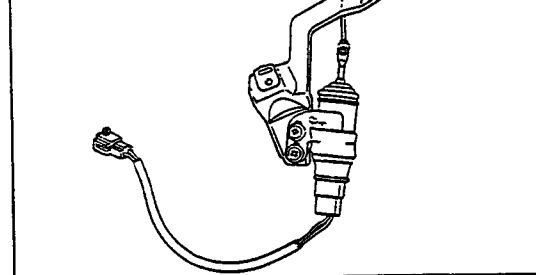


Fig. 10-186

WR-10188

3. Install the front door lock assembly. Install the link and lock knob.

4. Install the service hole cover subassembly and front door trim panel assembly.

(See page 9-39.)

NOTE:

Before connecting the battery, make sure that the lock knob is in an unlocked state.

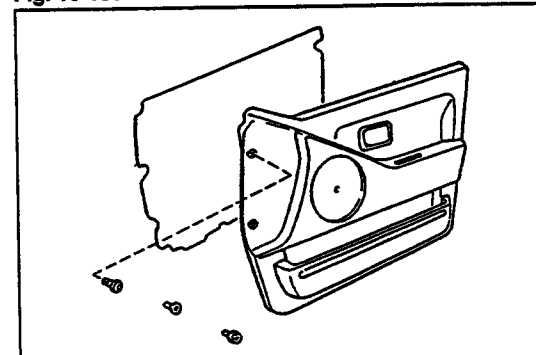


Fig. 10-187

WR-10189

DOOR CONTROL RELAY

CIRCUIT DIAGRAM

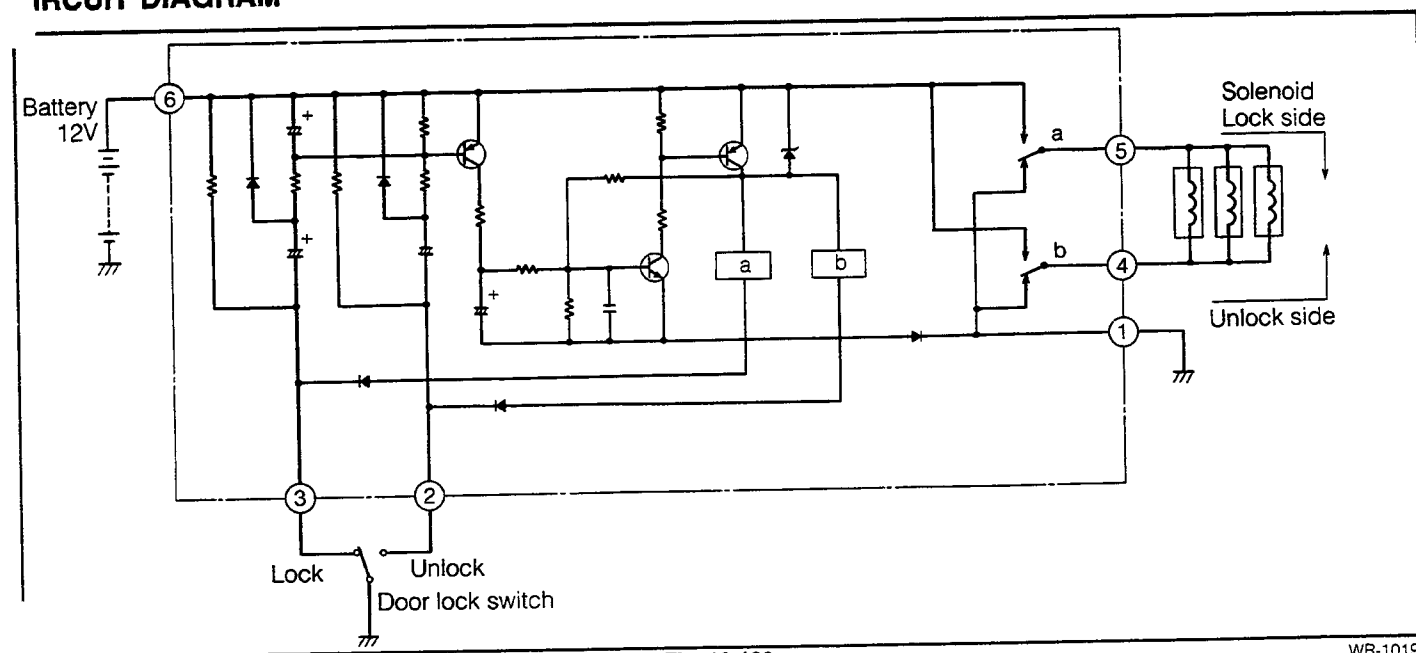


Fig. 10-188

WR-10190

battery; terminal ① to the negative $\ominus$ terminal. Perform the following checks.

1. When the negative $\ominus$ terminal is connected to the terminal ③, ensure that the relay operates as follows: The relay "a" is turned ON, accompanying an operating sound. A voltage of 12 V is applied to the terminal ⑤. Immediately after this (about 0.2 seconds later), the relay is turned OFF, accompanying an operating sound. Then, the voltage at the terminal ⑤ drops to 0 V.
2. When the negative $\ominus$ terminal is connected to the terminal ②, ensure that the relay operates as follows: The relay "b" is turned ON, accompanying an operating sound. A voltage of 12 V is applied to the terminal ④. Immediately after this (about 0.2 seconds later), the relay is turned OFF, accompanying an operating sound. Then, the voltage at the terminal ④ drops to 0 V.

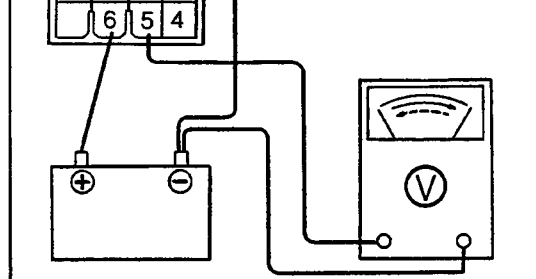


Fig. 10-190

WR-10192

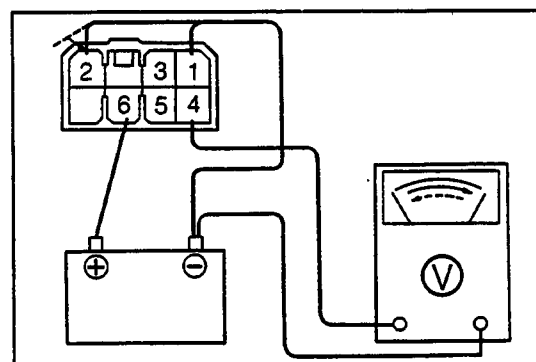


Fig. 10-191

WR-10193

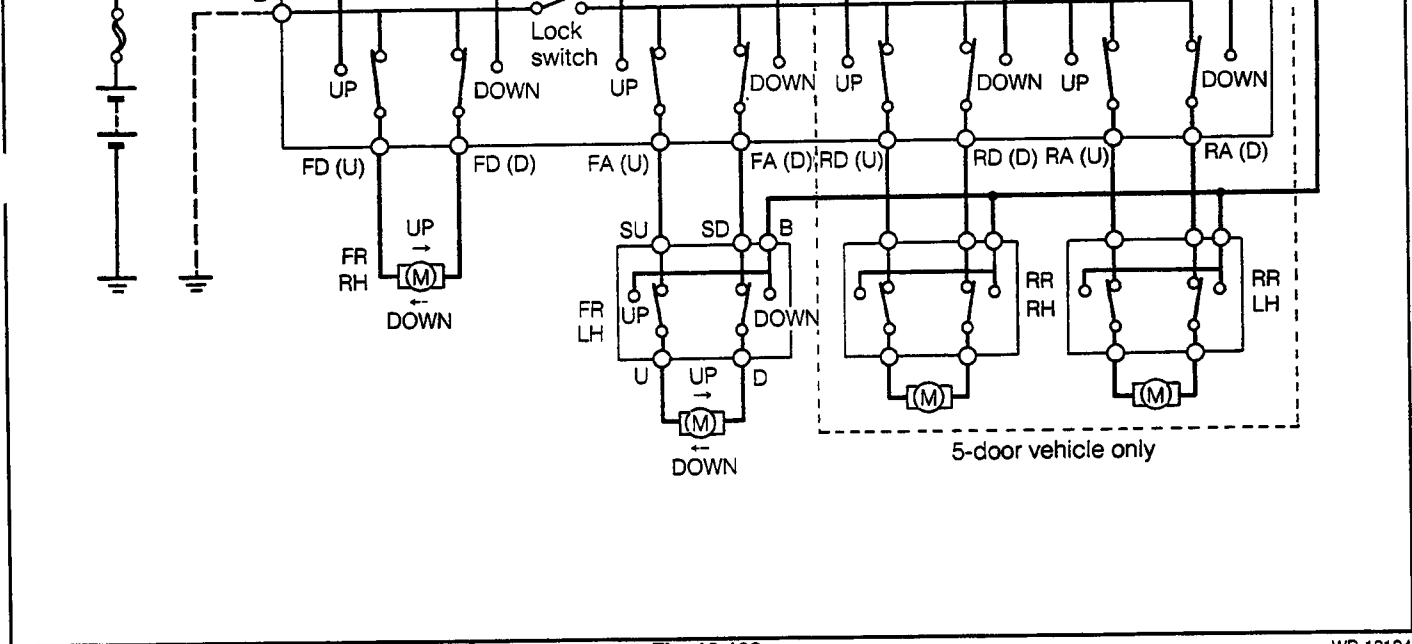


Fig. 10-192

WR-10194

POWER WINDOW MASTER SWITCH

The power window master switch is located at the door trim at the driver's seat side.

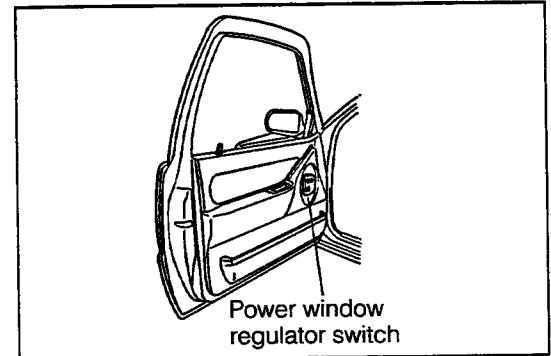


Fig. 10-193

WR-10195

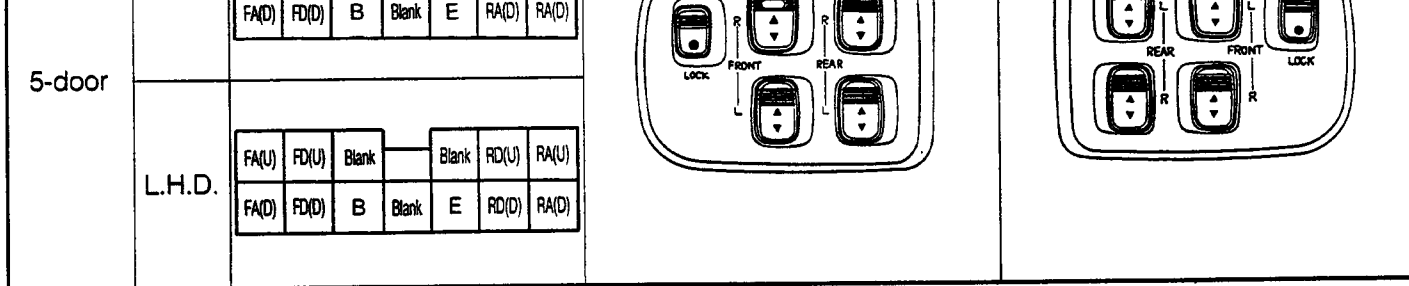


Fig. 10-194

WR-10196

REMOVAL

1. Remove the front door trim panel Ay.
See page 9-39.

2. Remove the power window master switch from the door trim, as follows:
 - (1) Disconnect the connector.
 - (2) Remove the master switch from the door trim.

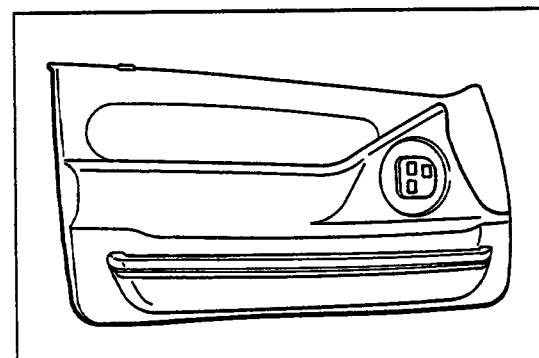


Fig. 10-195

WR-10197

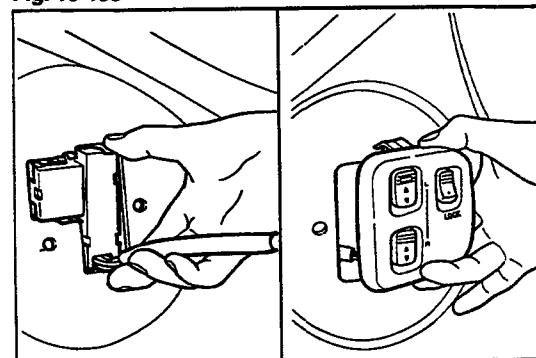
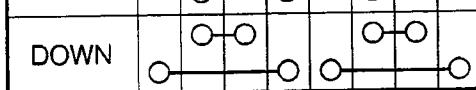


Fig. 10-196

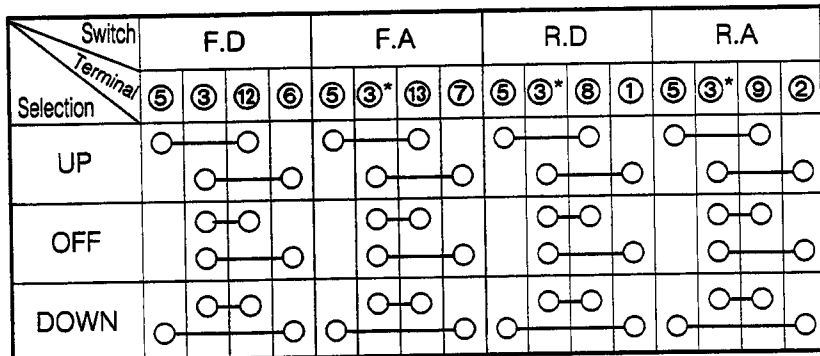
WR-10198



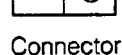
*: Make sure that the lock switch is in the lock state.

2. 5-Door Vehicle (R.H.D. vehicles)

○—○ Continuity exists.



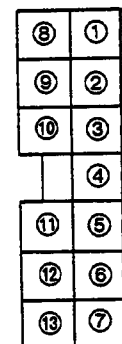
*: Make sure that the lock switch is in the lock state.



Connector



WR-10199



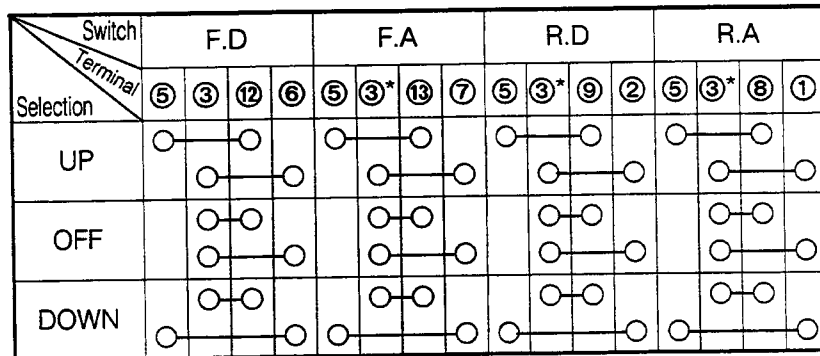
Connector

No.	Terminal	Kind of wire
①	R.D (D)	2 RB
②	R.A (D)	2 RY
③	E	2 WB
④		Blank
⑤	B	2 L
⑥	F.D (D)	2 R
⑦	F.A (D)	2 RL
⑧	R.D (U)	2 LB
⑨	R.A (U)	2 GY
⑩		Blank
⑪		Blank
⑫	F.D (U)	2 G
⑬	F.A (U)	2 LW

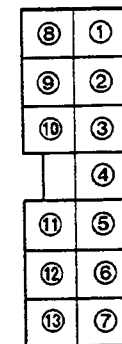
WR-10200

3. 5-Door Vehicle (L.H.D. vehicles)

○—○ Continuity exists.



*: Make sure that the lock switch is in the lock state.



Connector

No.	Terminal	Kind of wire
①	R.A (D)	2 RY
②	R.D (D)	2 RB
③	E	2 WB
④		Blank
⑤	B	2 L
⑥	F.D (D)	2 R
⑦	F.A (D)	2 RL
⑧	R.A (U)	2 GY
⑨	R.D (U)	2 LB
⑩		Blank
⑪		Blank
⑫	F.D (U)	2 G
⑬	F.A (U)	2 LW

WR-10201

for that at the driver's seat side.

NOTE:

For the removal/installation procedure for the door trim, see page 9-39.

INSPECTION

Ensure that continuity exists between the respective terminals as indicated in the continuity table.

Terminal Selection	B	SU	SD	U	D
UP	○		○	○	○
OFF		○	○	○	○
DOWN	○	○		○	○

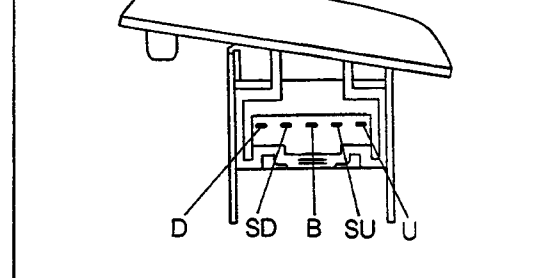


Fig. 10-198

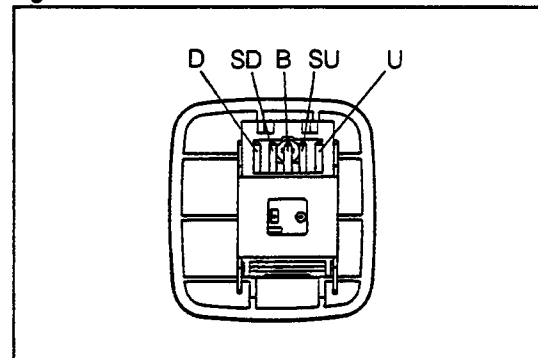


Fig. 10-199

WR-10203

POWER WINDOW REGULATOR MOTOR RELATED PARTS

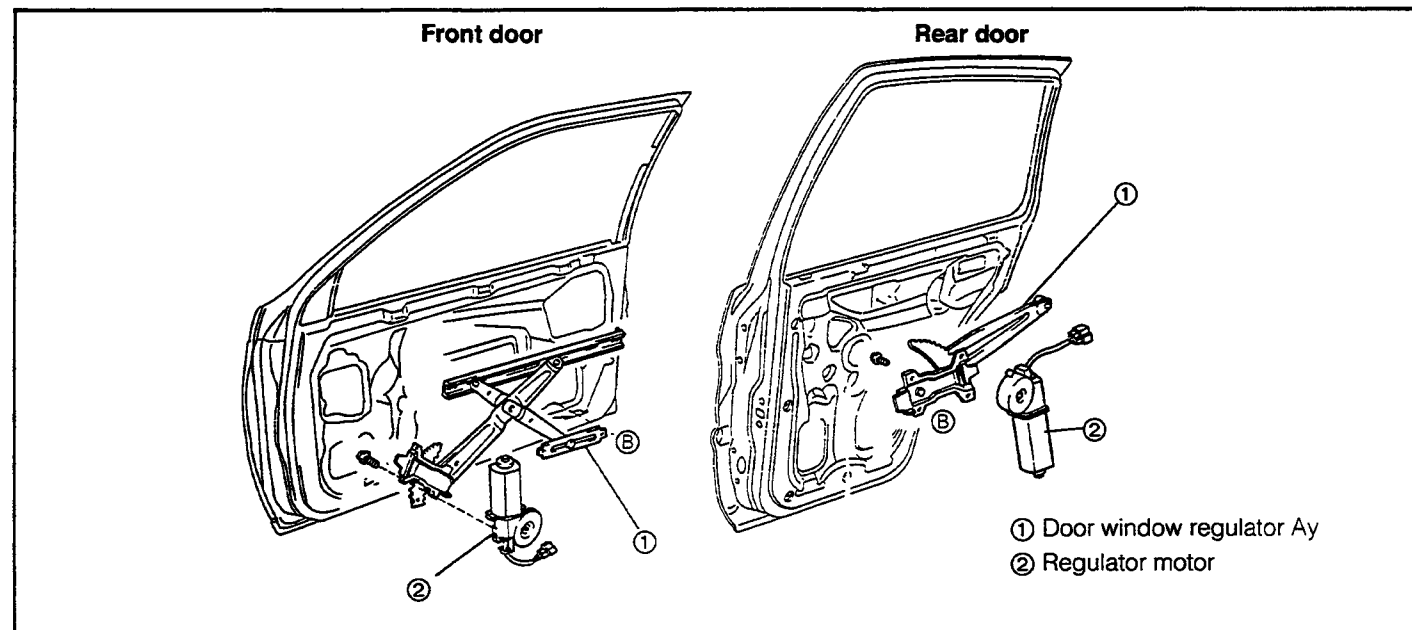


Fig. 10-200

WR-10204

viewed from the driving shaft.

(For Right side door)

The motor rotates opposite direction of the left side door motor.

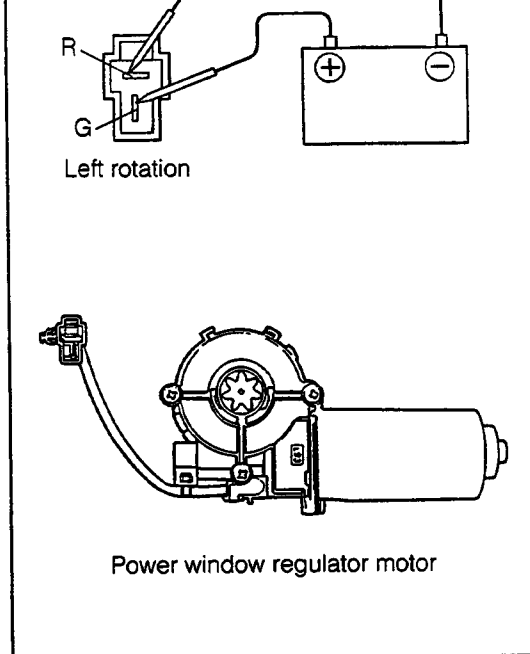


Fig. 10-201

WR-10205

CIRCUIT BREAKER

The circuit breaker is located inside of the sub-fuse block.

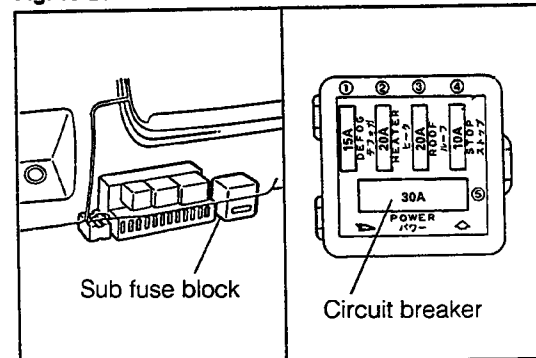


Fig. 10-202

WR-10206

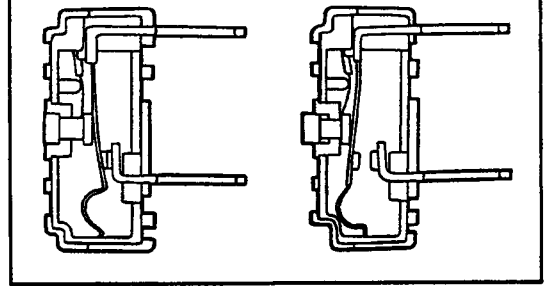


Fig. 10-203

WR-10207

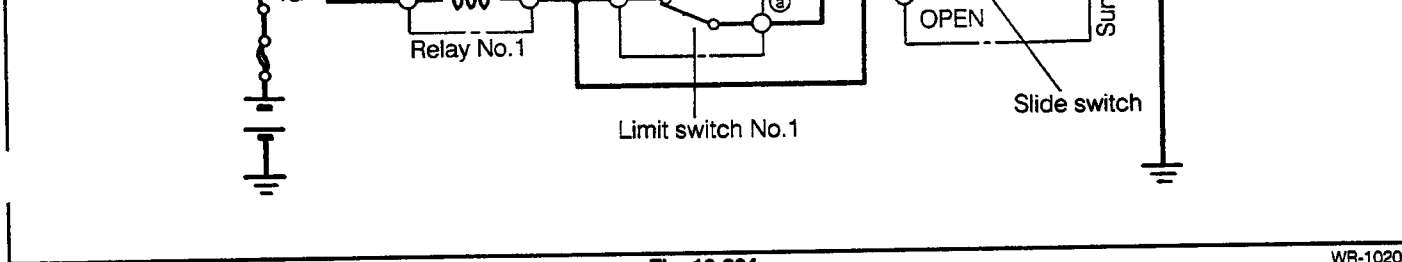


Fig. 10-204

WR-10208

SUN ROOF SWITCH

The sun roof switch is located at the front end of the roof.

NOTE:

For the removal/installation procedure for the sun roof switch, see page 9-61.

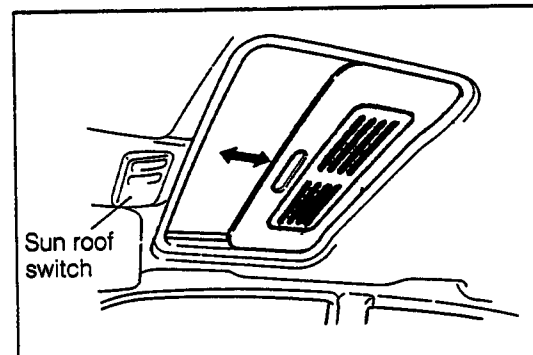


Fig. 10-205

WR-10209

INSPECTION

When the tilt switch and slide switch are operated, ensure that continuity exists between the respective terminals as indicated in the continuity table.

Terminal		①	②	③	④	⑤
Slide switch	Operation					
	OPEN	○				○
	OFF					
Tilt switch	CLOSE		○			○
	UP				○	○
	DOWN			○		○

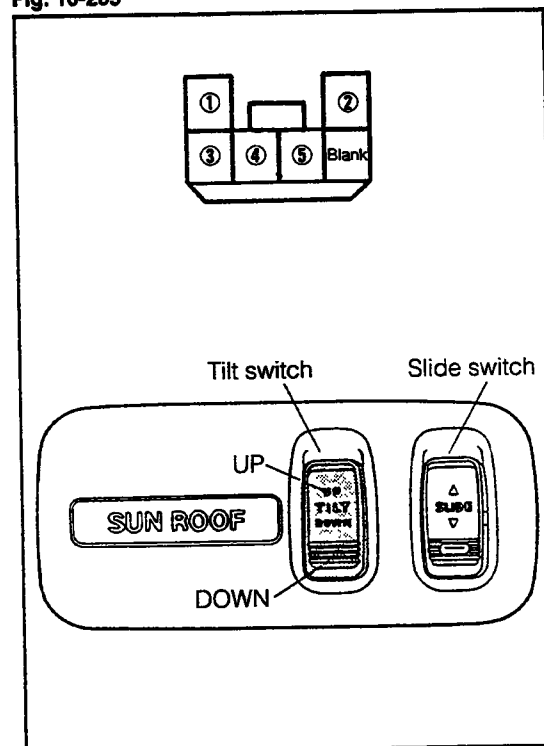


Fig. 10-206

WR-10210

battery; the terminal ② to the negative $\ominus$ terminal of the battery. Ensure that the drive gear rotates to the right.

2. Connect the terminal ① to the negative $\ominus$ terminal of the battery; the terminal ② to the positive $\oplus$ terminal of the battery. Ensure that the drive gear rotates to the left.

Limit Switch Check

Remove the limit switch from the motor.

1. Limit switch No.1

Ensure that no continuity exists between ① and ② when the switch is turned ON. Ensure that continuity exists between ① and ② when the switch is turned OFF.

2. Limit switch No.2

Ensure that continuity exists between ③ and ④ when the switch is turned ON. Ensure that no continuity exists between ③ and ④ when the switch is turned OFF.

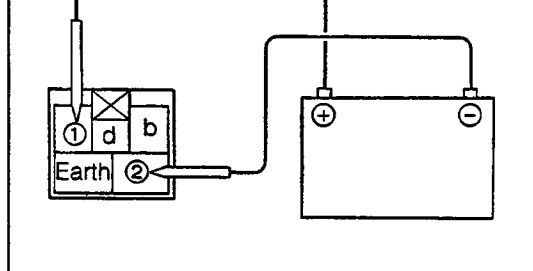


Fig. 10-208

WR-10212

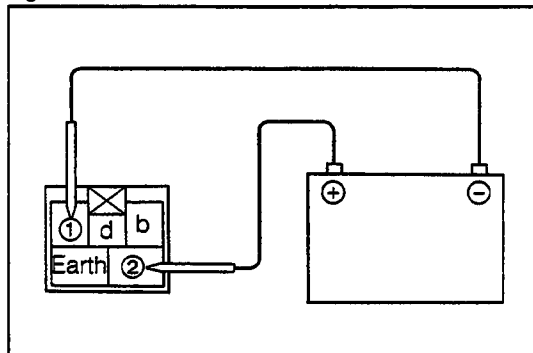


Fig. 10-209

WR-10213

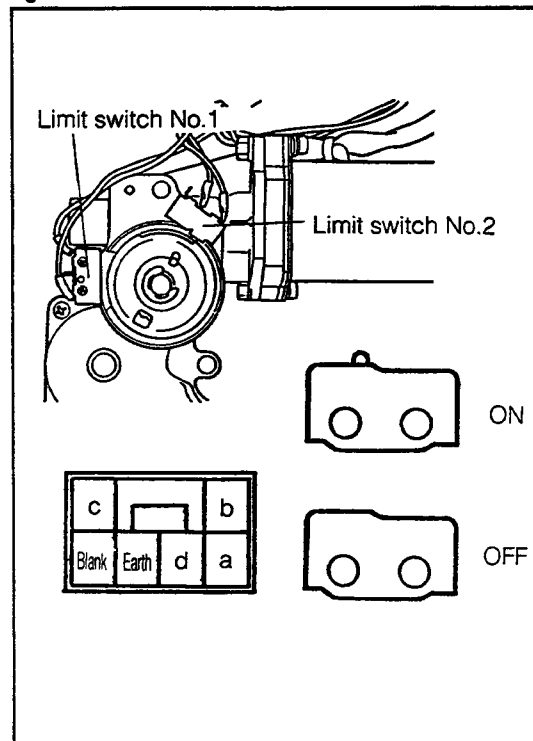


Fig. 10-210

WR-10214

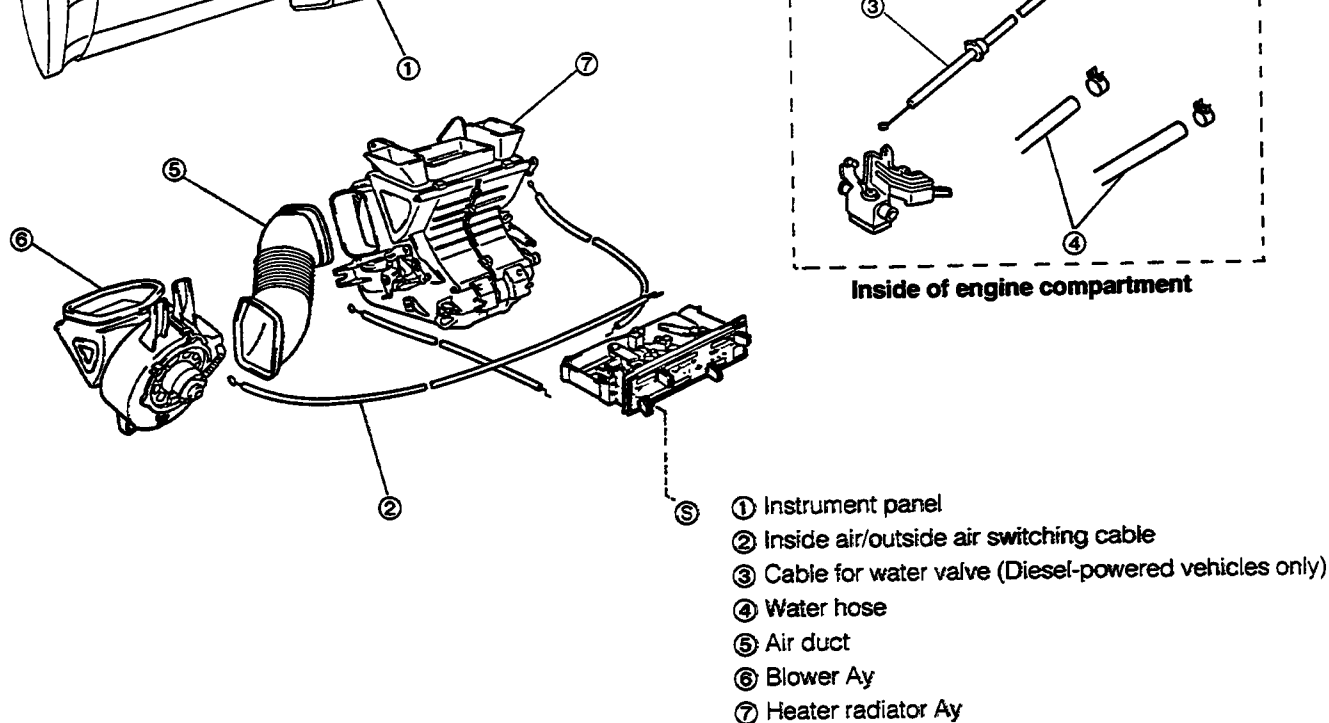


Fig. 10-211

WR-10215

OPERATION PRIOR TO REMOVAL

1. Disconnect the negative $\ominus$ terminal of the battery.
2. Drain the cooling water from the radiator. (As for the diesel-powered vehicles, perform this operation with the temperature regulating lever of the heater control set to the **WARM** side.)

WR-10216

REMOVAL

1. Remove the instrument panel.
See page 9-78.

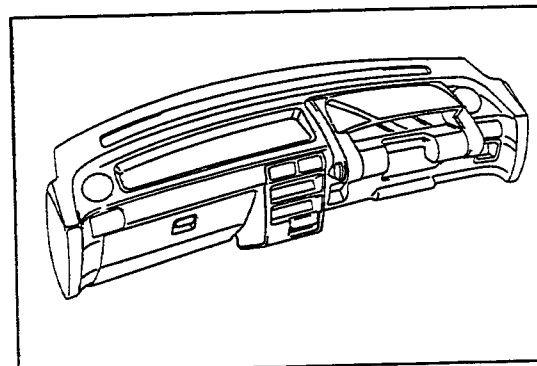


Fig. 10-212

WR-10217

4. Disconnect the two water hoses from the heater assembly.

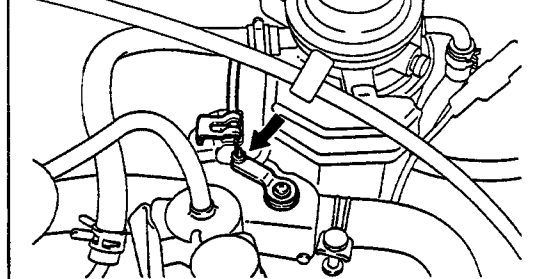


Fig. 10-214

WR-10219

5. Remove the air duct.

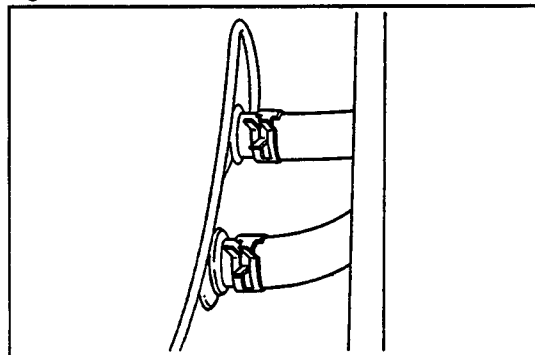


Fig. 10-215

WR-10220

6. Remove the blower assembly by removing the two nuts, bolt and connector.

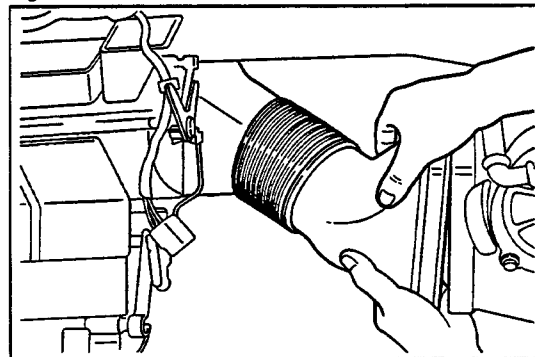


Fig. 10-216

WR-10221

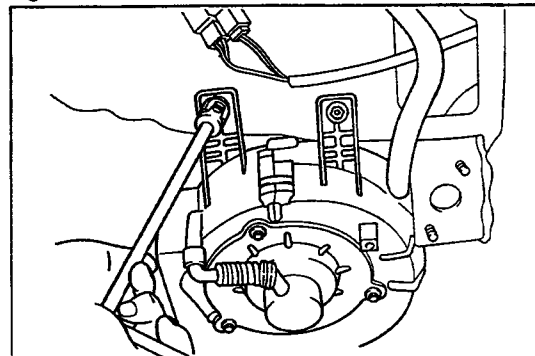


Fig. 10-217

WR-10222

Ensure that the resistance between the respective terminals conforms to the specifications below.

Specified Values:

Between Terminals (L) and (M₁): 1.37Ω

Between Terminals (L) and (M₂): 2.10Ω

Between Terminals (H) and (M₂): 0Ω

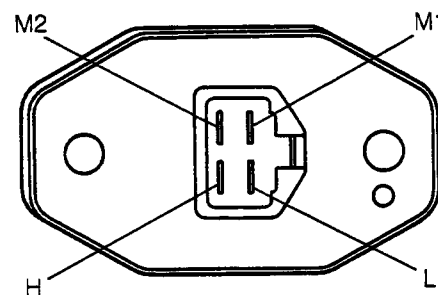
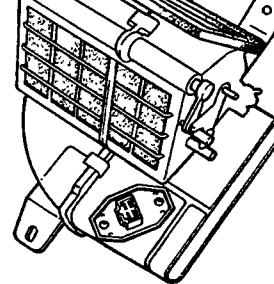


Fig. 10-219

WR-10224

2. Blower Motor

Connect the connector positive ⊕ terminal of the blower motor to the positive ⊕ terminal of the battery; the negative ⊖ terminal of the blower motor to the negative ⊖ terminal of the battery. Ensure that the motor rotates.

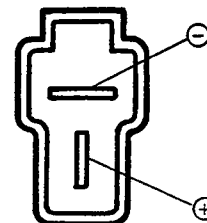
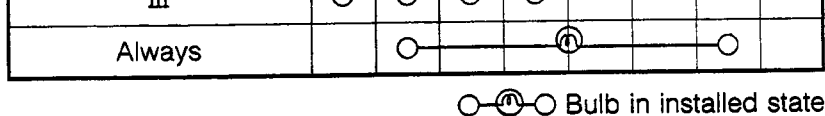


Fig. 10-220

WR-10225



INSTALLATION

1. Install the radiator heater assembly to the dash panel.
2. Install the blower register and blower motor connector to the blower assembly.
3. Install the blower assembly by tightening the two nuts and one bolt.
4. Install the air duct. Connect the water hose at the engine compartment side to the heater assembly.
NOTE:
Connect the hose securely and clamp it.
5. Install the cable for the water valve, as follows:
(Diesel-powered vehicle only)
Set the water valve in the engine compartment to the close mode; the mode switching lever of the heater unit to the COOL side. Then, insert and clamp the cable.

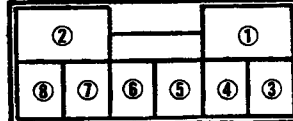


Fig. 10-221

WR-10226

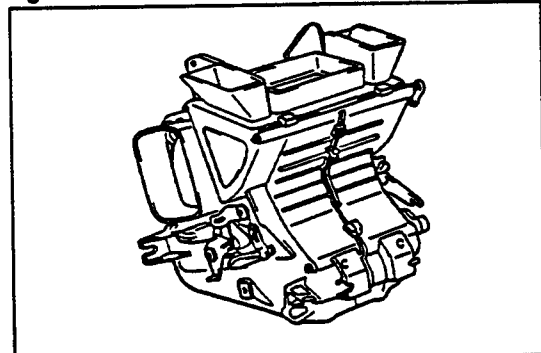


Fig. 10-222

WR-10227

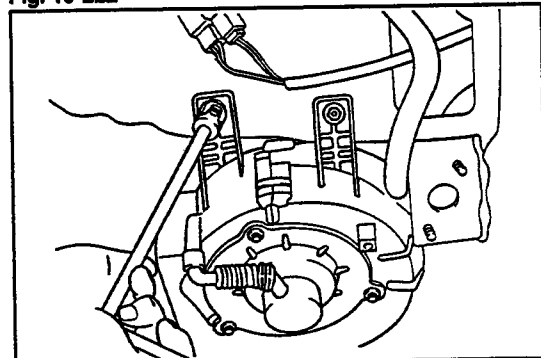


Fig. 10-223

WR-10228

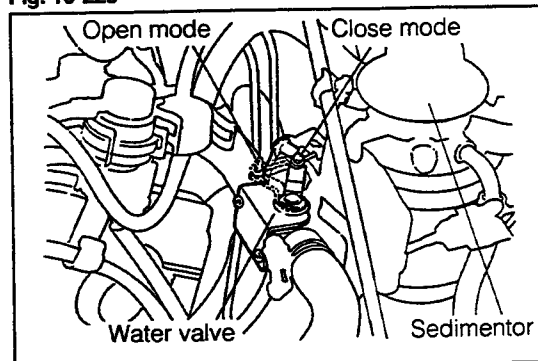


Fig. 10-224

WR-10229

1. Fill the cooling water. (For the diesel-powered vehicles, perform this operation with the temperature regulating lever of the heater control set to the WARM side.)
2. Install the negative terminal $\ominus$ of the battery.
3. As for the vehicle equipped with a clock, set the time.

Inspection After Installation

Ensure that the air amount and air flowing direction vary correctly in accordance with the position of the heater control lever.

WR-10231

HEATER CONTROL ASSEMBLY RELATED PARTS

* This figure shows the parts for R.H.D. vehicles.

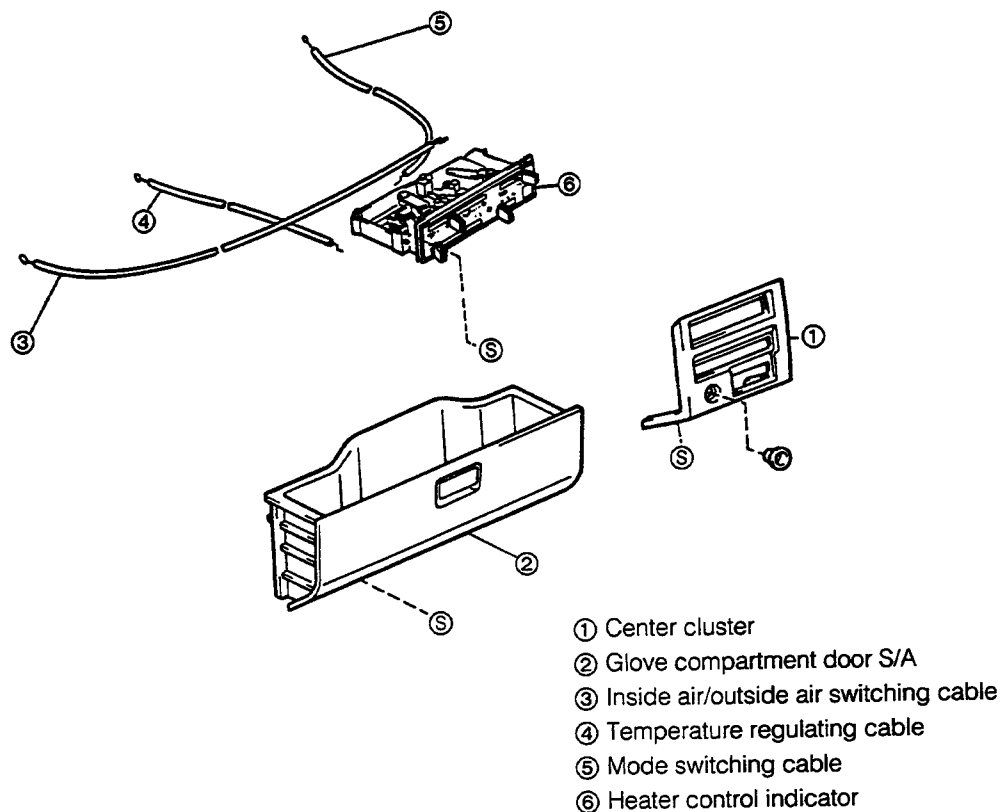


Fig. 10-226

WR-10232

3. Disconnect the inside air/outside air switching cable from the blower assembly.

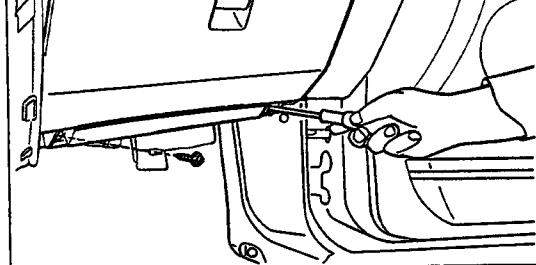


Fig. 10-228

WR-10234

4. Disconnect the temperature regulating cable and mode switching cable from the heater assembly.

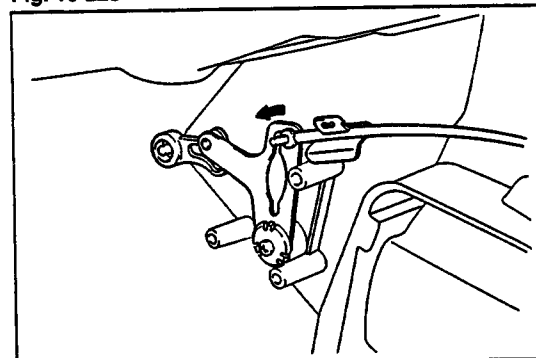


Fig. 10-229

WR-10235

5. Remove the heater control indicator, as follows:
- (1) Remove the three screws. Remove the heater control indicator toward the back side of the instrument panel.
 - (2) Take out the heater control indicator from the glove compartment door section.

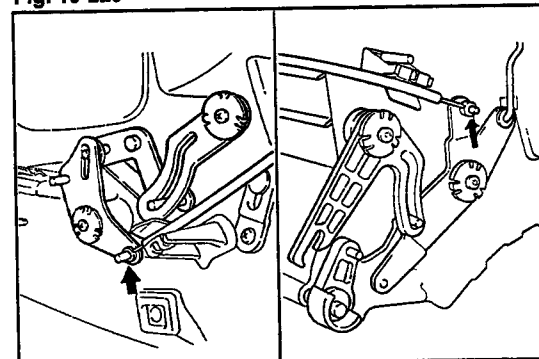


Fig. 10-230

WR-10236

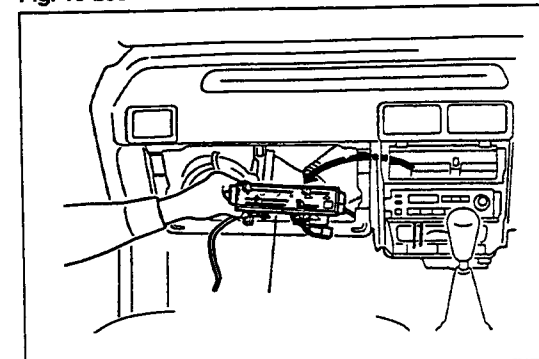
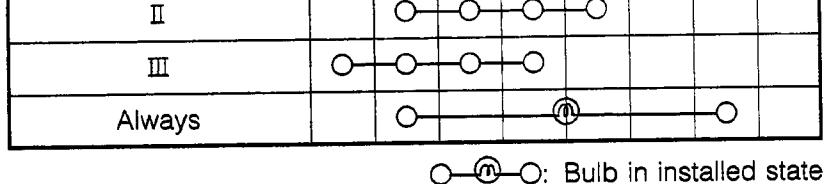


Fig. 10-231

WR-10237



INSTALLATION

1. Install the heater control indicator by tightening the three screws.
2. Install the mode switching cable, as follows:
 - (1) Set the mode switching lever of the heater control to the  (DEF) side; the mode switching lever of the heater unit to the DEF side.
 - (2) Connect the mode switching cable. Insert it into the clamp securely.
3. Install the temperature regulating cable, as follows:
 - (1) Set the temperature regulating lever of the heater control to the  (COOL) side; the temperature regulating lever of the heater unit to the COOL side.
 - (2) Connect the temperature regulating cable. Insert it into the clamp securely.

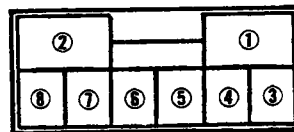


Fig. 10-232

WR-10238

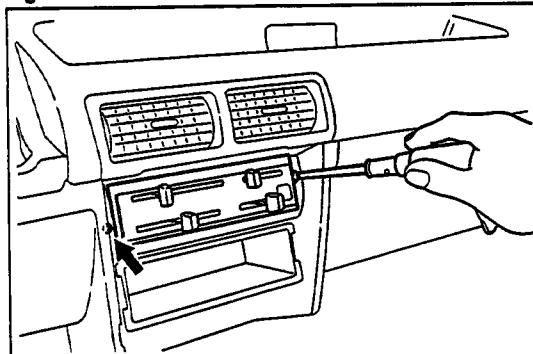


Fig. 10-233

WR-10239

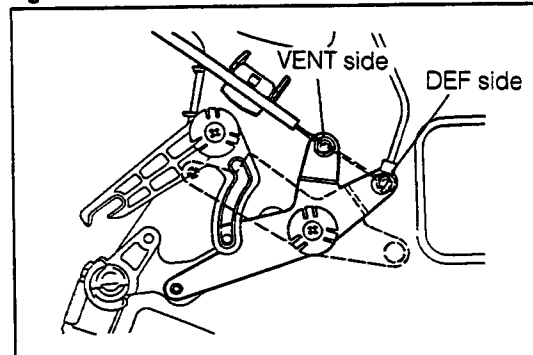


Fig. 10-234

WR-10240

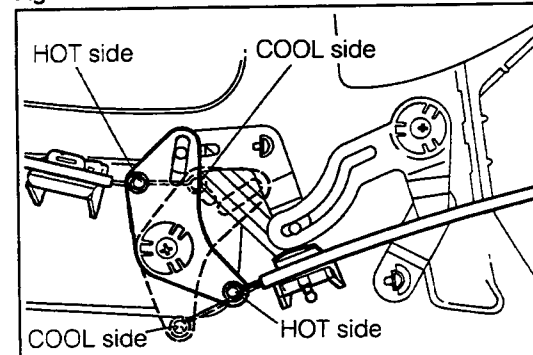


Fig. 10-235

WR-10241

6. Install the center cluster by tightening the four screws.

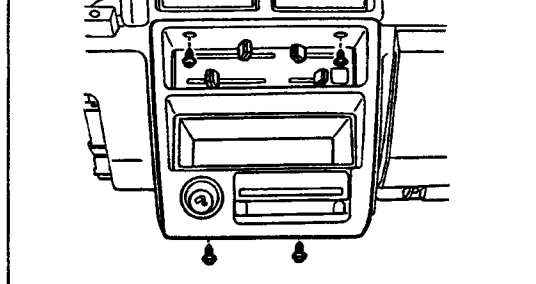


Fig. 10-237

WR-10243

Inspection After Installation

Ensure that the air amount and air flowing direction vary correctly in accordance with the position of the heater control lever.

WR-10244

②

⑤

②

① Center cluster

② Connector (For cigar lighter)

③ Radio Ay

Fig. 10-238

WR-10245

REMOVAL

1. Remove the center cluster by removing the four screws.

2. Disconnect the connector for the cigar lighter.
3. Remove the radio assembly.

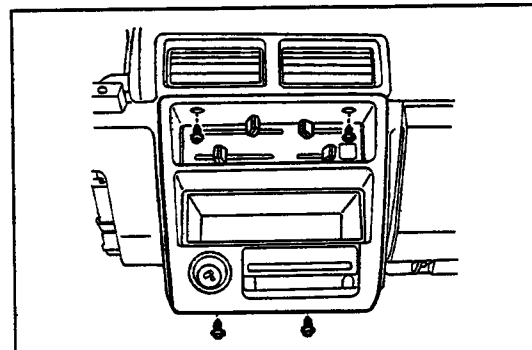


Fig. 10-239

WR-10246

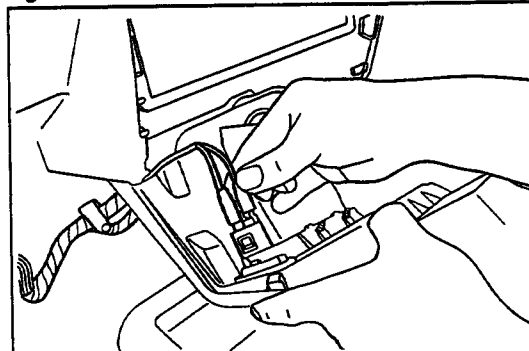


Fig. 10-240

WR-10247

INSTALLATION

1. Install the radio assembly.
2. Connect the connector for the cigar lighter.
3. Install the center cluster by tightening the four screws.

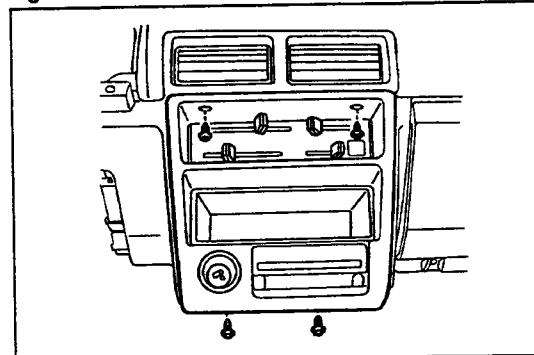
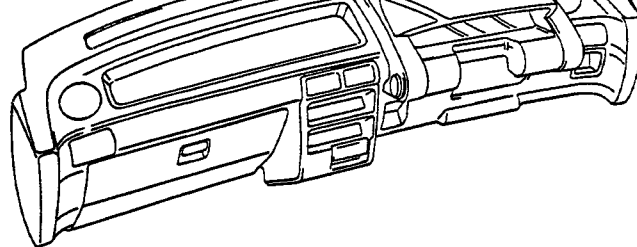


Fig. 10-241

WR-10248



- ① Instrument panel
- ② Speaker Ay
- ③ Antenna Ay

Fig. 10-242

WR-10249

SPEAKER REMOVAL

1. Remove the instrument panel.
See page 9-78.
2. Disconnect the connector of the speaker. Remove the speaker assembly.

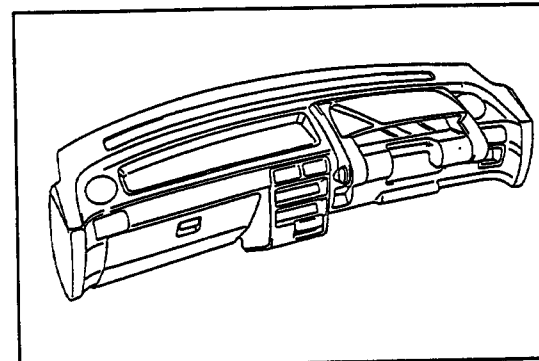


Fig. 10-243

WR-10250

ANTENNA REMOVAL

1. Disconnect the feeder cord connector.

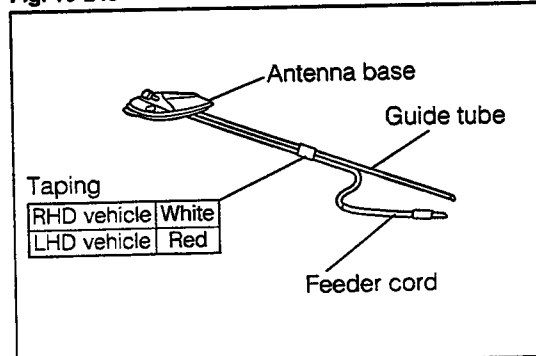


Fig. 10-244

WR-10251

2. Remove the antenna base, using a Torx bit.

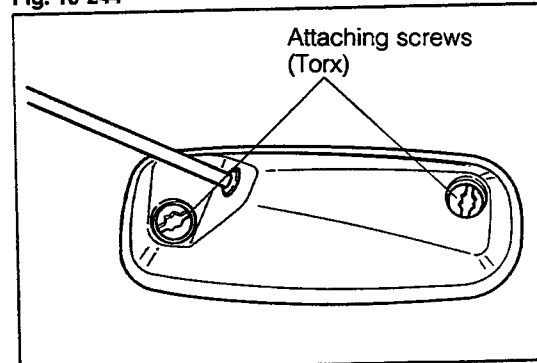


Fig. 10-245

WR-10252

1. As for the intersection of the feeder wire and the vehicle harness section, route wiring in such a way that the feeder wire comes under the harness section. ... ①
2. As for the heater unit section, make sure that the link does not interfere with other parts when it is moved. ②

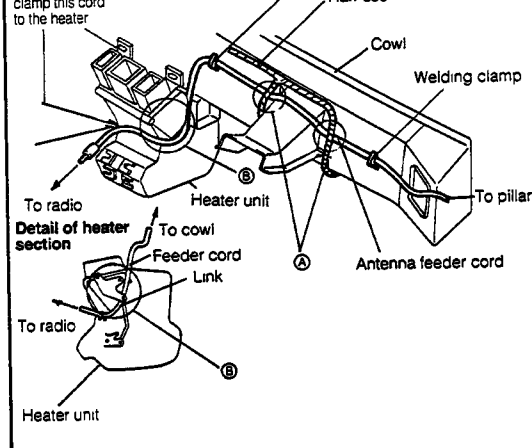


Fig. 10-247

L.H.D. vehicles

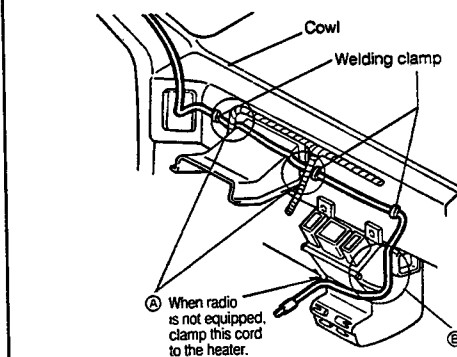


Fig. 10-248

WR-10254

SPEAKER INSTALLATION

1. Connect the connector for the speaker. Install the speaker to the instrument panel.
2. Install the instrument panel.
See page 9-82.

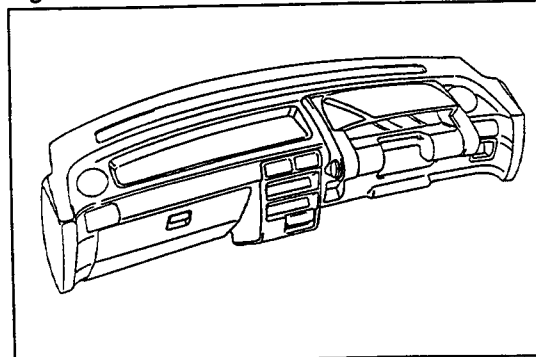


Fig. 10-249

WR-10255

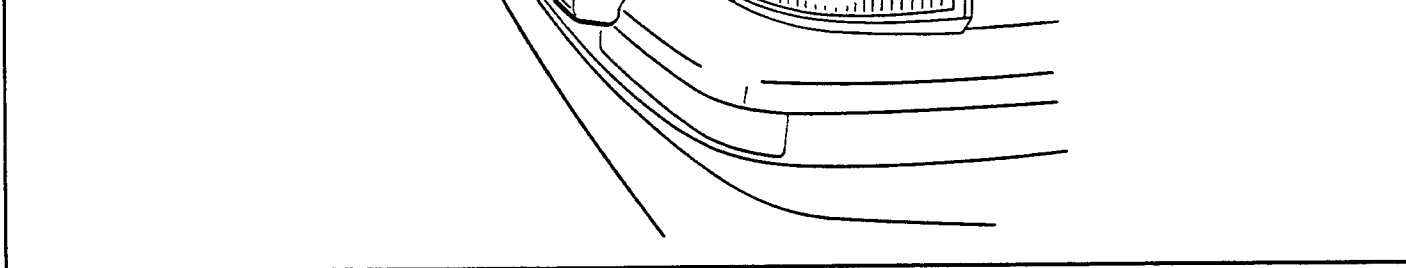


Fig. 10-250

WR-10256

OPERATION CHECK

1. Vehicles with Day-Light Feature

While the engine is running, carry out the following check. Operate the washer switch one time. Within about 0.8 second, operate the washer switch again. Ensure that the cleaner motor operates for about 0.5 second, regardless of the position of the lighting switch.

2. Vehicles without Day-Light Feature

While the ignition switch is turned ON, carry out the following check: Operate the washer switch one time. Within about 0.8 second, operate the washer switch again. Ensure that the cleaner motor operates for about 0.5 second.

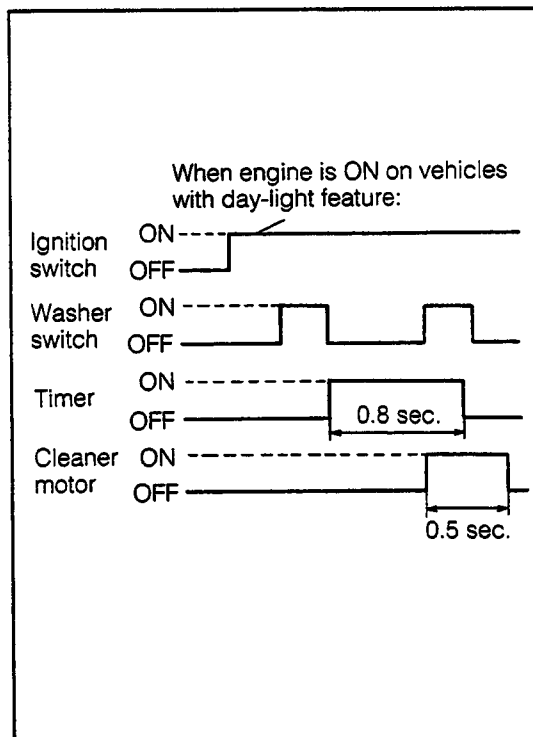


Fig. 10-251

WR-10257

NOZZLE

Removal

1. Remove the front bumper. (See page 9-9.)
2. Disconnect the water hose joint section located at the back side of the bumper.
3. Remove the nozzle assembly by slackening the two nuts.

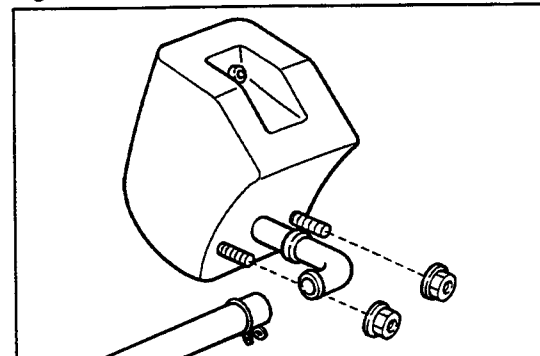


Fig. 10-252

WR-10258

NOZZLE INJECTION ANGLE

Operation Prior to Adjustment

1. Perform the headlamp aiming operation.
(See page 10–13.)

Adjustment

1. Set the nozzle so that the center of squirt comes to the bulb installation position of the headlamp. (Bulb center: point a)
2. Ensure that the variation in the squirting angle is within the allowable range.

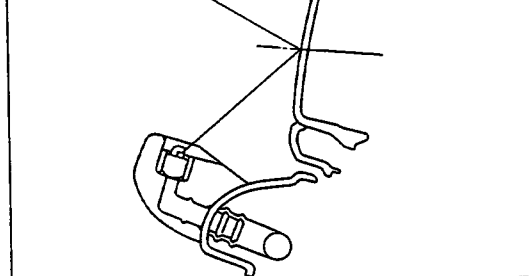


Fig. 10-254

WR-10260

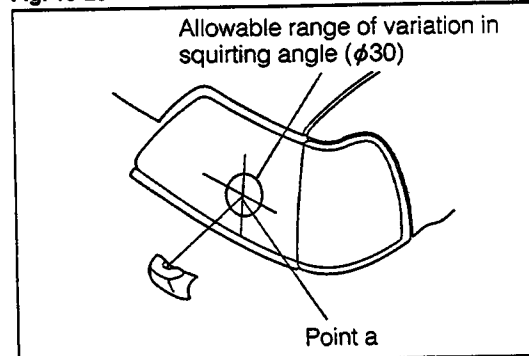


Fig. 10-255

WR-10261

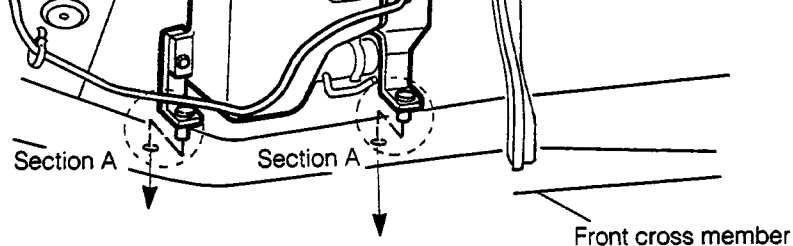


Fig. 10-256

WR-10262

Removal

1. Remove the front grille and front bumper.
See page 9-78.
2. Disconnect the water hose from the washer motor. Disconnect the harness clamp.
3. Remove the washer tank assembly by removing the two bolts.

Installation

1. Insert the washer tank into the front cross member (at two points).
2. Working from the engine compartment, tighten the bolt at the vehicle outside. Working from the front of the vehicle, tighten the bolt at the vehicle inside together with the hood lock.

3. Connect the water hose to the washer motor. Connect the harness connector.

NOTE:

Tighten the clamp securely.

4. Install the front bumper and front grille.
See page 9-10.

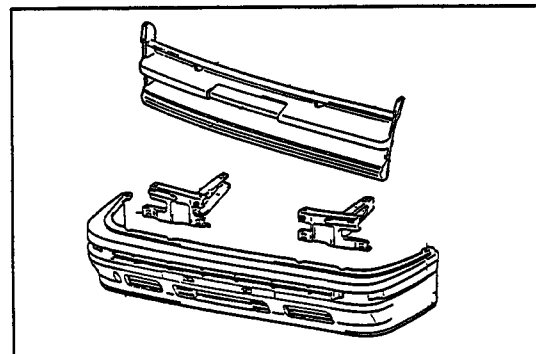


Fig. 10-257

WR-10263

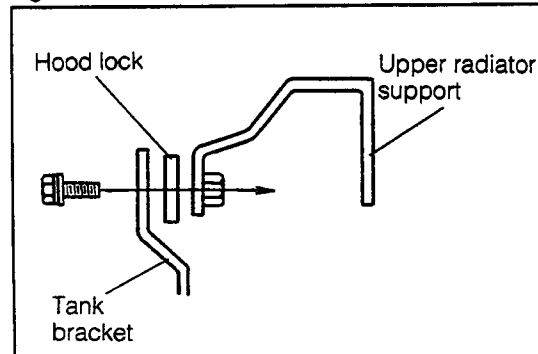


Fig. 10-258

WR-10264

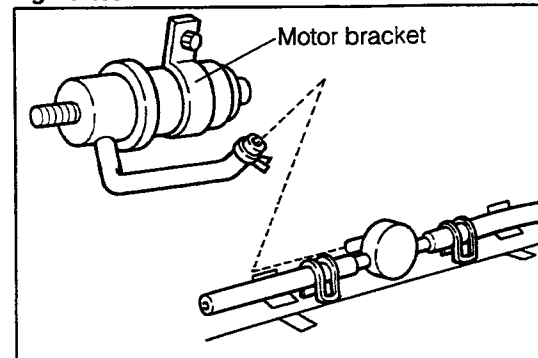


Fig. 10-259

WR-10265

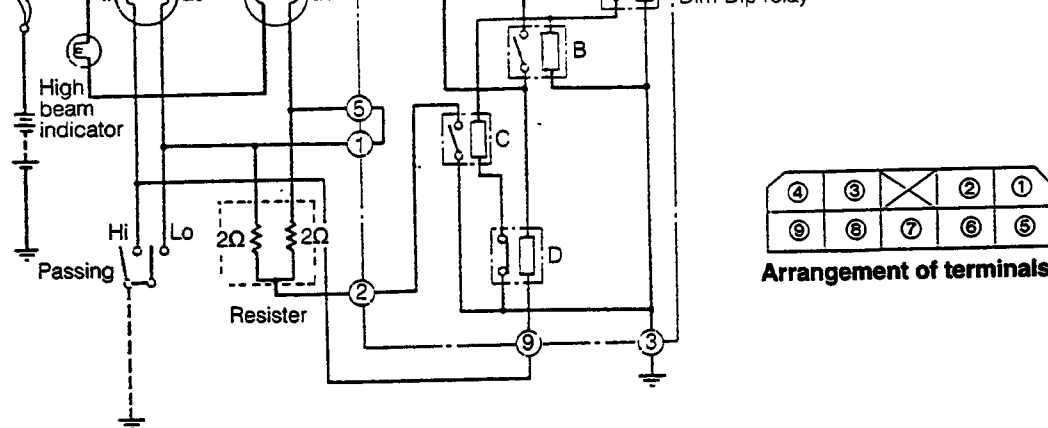


Fig. 10-260

WR-10266

OPERATION CHECK

Under the conditions given below, ensure that the luminous intensity of the dim-dip lamp is reduced 10% compared with the normal operation.

Switch condition				Headlamp condition	Remarks
Ignition switch	Tail switch	Lighting switch L	Lighting switch H		
OFF	OFF	OFF	OFF	OFF	
	ON	OFF	OFF	OFF	Tail lamp only goes on.
	ON	ON	OFF	Lo	
	ON	OFF	ON	Hi	
	OFF	OFF	ON	Hi	Passing
ON	OFF	OFF	OFF	OFF	
	ON	OFF	OFF	Dim-dip	
	ON	ON	OFF	Lo	
	ON	OFF	ON	Hi	
	OFF	OFF	ON	Hi	Passing

WR-10267

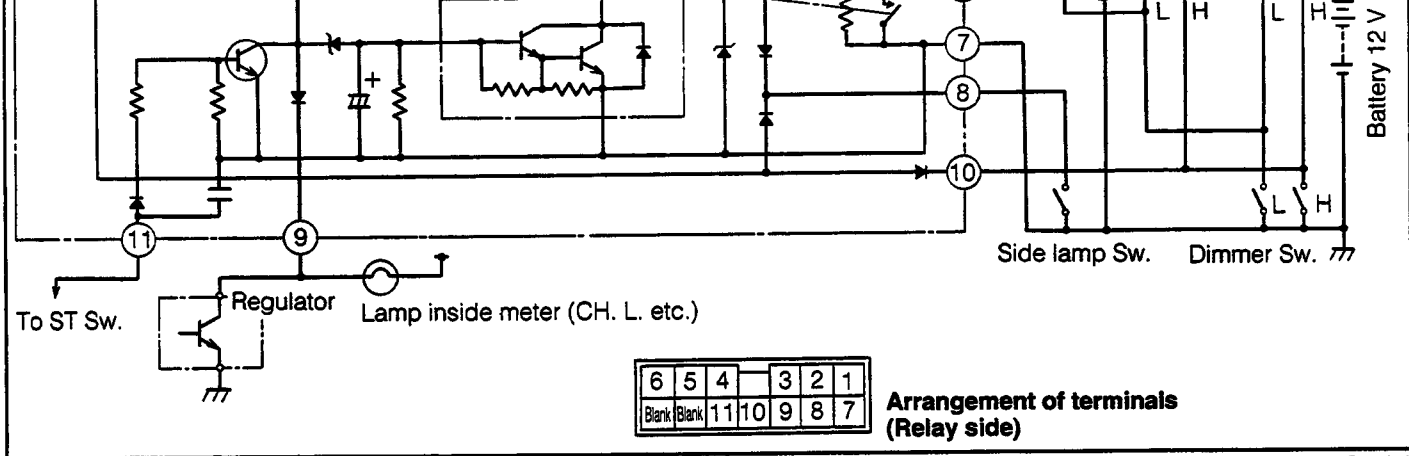


Fig. 10-261

WR-10268

OPERATION CHECK

While the engine is rotating, ensure that the day-light goes on under the conditions given below.

○ ... Goes on
x ... Goes off.

Engine	Ignition switch	Side lamp switch	Lighting switch	Dimmer switch	Tail & license lamp	Headlamp	
						Lo	Hi
STOP	ON	Normal glowing mode					
	OFF						
RUN	ON	OFF	OFF	OFF	○	○	×
	ON	ON	OFF	OFF	○	×	×
	ON	ON	ON	Lo	○	○	×
	ON	ON	ON	Hi	○	×	○
	ON	ON	Passing	Passing	○	×	○

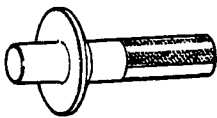
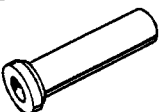
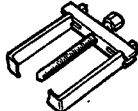
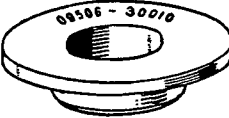
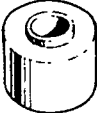
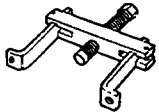
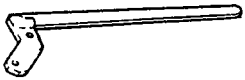
WR-10269

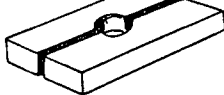
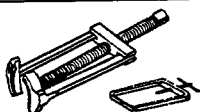
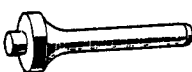
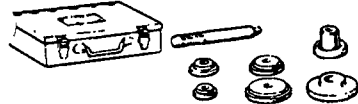
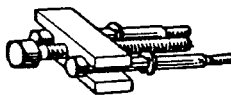
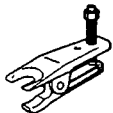
SECTION 11

APPENDIX

SST (Special Service Tools)	11- 2
SERVICE SPECIFICATIONS	11- 6
CLUTCH	11- 6
MANUAL TRANSMISSION AND DIFFERENTIAL	11- 6
AUTOMATIC TRANSMISSION	11- 7
STEERING	11- 8
BRAKE PEDAL	11- 9
FRONT BRAKE	11- 9
REAR BRAKE	11- 9
SUSPENSION	11-10
TIGHTENING TORQUE	11-11
METHOD TO IDENTIFY STRENGTH DIVISION	
OF BOLTS	11-11
CLUTCH, MANUAL TRANSMISSION	11-13
AUTOMATIC TRANSMISSION	11-13
DRIVE SHAFT, FRONT SUSPENSION	11-14
REAR AXLE, REAR SUSPENSION	11-14
STEERING	11-15
BRAKE	11-15
BODY AND OTHERS	11-15
WIRING DIAGRAMS	11-16
SYSTEM INDEX	11-16
WIRING DIAGRAM FOR TYPE CB ENGINE	11-17
WIRING DIAGRAM FOR TYPE CL ENGINE	11-21

WR-11001

	09301-87202-000 Clutch guide tool	☐	☐						
	87701 09302-87701-000 Clutch diaphragm spring height No.4 gauge	☐							
	09306-87302-000 Counter gear front bearing puller		☐						
	09308-00010-000 Oil seal puller		☐						
	09309-87201-000 Transmission bearing replacer		☐				☐		
	09334-87201-000 Transmission bearing puller				☐				
	09506-30011-000 Differential rear bearing cone replacer				☐				
	09506-87302-000 Differential drive pinion bearing cone replacer				☐				
	09510-87301-000 Front hub & drum puller				☐	☐		☐	
	09511-87202-000 Brake drum stopper				☐				
	09515-87201-000 Rear axle shaft bearing replacer		☐						

	Rear axle shaft bearing remover				☐								
	09547-87301-000 Differential drive pinion bearing cone remover				☐								
	09547-87501-000 Differential drive pinion bearing cone remover				☐								
	09602-87301-000 Counter gear bearing puller		☐										
	09550-10012-000 Replacer set "B"				☐								
	09606-87201-000 Front hub bearing remover & replacer		☐										
	09608-12010-000 Front hub & drive pinion bearing replacer set				☐	☐							
	09608-30011-000 Front hub & drive pinion bearing tool set			☐									
	09608-87501-000 Axle hub & drive pinion bearing tool set				☐								
	09609-20011-000 Steering wheel puller								☐				
	09611-87701-000 Tie rod end puller		☐		☐			☐					

WR-11003

MANUAL TRANSMISSION AND DIFFERENTIAL

Unit: mm (inch)

Item		Specified value	Allowable limit	Remarks
2nd gear bush	Inner diameter	28.870 - 28.885 (1.1366 - 1.1372)	28.840 (1.1354)	
	Outer diameter	36.920 - 36.960 (1.4535 - 1.4551)	36.890 (1.4524)	
	Overall length	32.470 - 32.530 (1.2783 - 1.2807)	32.470 (1.2783)	
4th and 5th gear bush	Inner diameter	25.027 - 25.042 (0.9853 - 0.9859)	25.020 (0.9850)	
	Outer diameter	36.920 - 36.960 (1.4535 - 1.4551)	36.890 (1.4524)	
	Overall length	28.970 - 29.030 (1.1405 - 1.1429)	28.970 (1.1405)	
	Thickness	2.940 - 3.060 (0.1157 - 0.1205)	2.940 (0.1157)	Flange section
End play	1st gear	0.10 - 0.37 (0.0039 - 0.0146)	0.5 (0.0197)	
	2nd gear	0.10 - 0.23 (0.0039 - 0.0091)	0.4 (0.0157)	
	3rd gear	0.10 - 0.37 (0.0039 - 0.0146)	0.5 (0.0197)	
	4th gear	0.10 - 0.23 (0.0039 - 0.0091)	0.4 (0.0157)	
	5th gear	0.10 - 0.23 (0.0039 - 0.0091)	0.4 (0.0157)	
Gear oil clearance		0.040 - 0.105 (0.0016 - 0.0041)	0.160 (0.0063)	
Gear width	1st gear	32.23 - 32.30 (1.2689 - 1.2717)	32.20 (1.2677)	Except for GTti model
		30.23 - 30.30 (1.1902 - 1.1930)	30.20 (1.1890)	GTti model
	2nd gear	32.30 - 32.37 (1.2717 - 1.2744)	32.20 (1.2677)	
	3rd gear	27.23 - 27.30 (1.0720 - 1.0748)	27.20 (1.0709)	
	4th gear	25.80 - 25.87 (1.0157 - 1.0185)	25.70 (1.0118)	
	5th gear	25.80 - 25.87 (1.0157 - 1.0185)	25.70 (1.0118)	

WR-11007

Synchronizer ring-to-gear clearance		0.85 - 1.45 (0.0335 - 0.0571)	0.5 (0.0197)	
Differential pinion	Gear inner diameter	15.003 - 15.008 (0.5907 - 0.0571)	15.03 (0.5917)	
	Shaft outer diameter	14.950 - 14.968 (0.5886 - 0.5893)	14.97 (0.5894)	
	Gear-to-shaft clearance	0.035 - 0.053 (0.0014 - 0.0021)	0.06 (0.0024)	
Differential side gear-to-pinion back- lash		0.02 - 0.20 (0.0008 - 0.0079)	—	
Shift fork	Fork tip end section thickness	7.0 (0.276)	6.3 (0.248)	
	Shift inner lever con- tact groove width	12.1 - 12.2 (0.476 - 0.480)	12.7 (0.500)	
	Reverse shift arm pin contact groove width	14.957 - 15.000 (0.5889 - 0.5906)	15.100 (0.5945)	
Reverse shift arm	Pin diameter	14.907 - 14.950 (0.5869 - 0.5886)	14.850 (0.5846)	
	Tip end section width	7.884 - 7.920 (0.3104 - 0.3118)	7.800 (0.3071)	

WR-11008

AUTOMATIC TRANSMISSION

Item	Specified value	Allowable limit	Remarks
Stall revolution speed rpm	2100 - 2300	—	
Time lag N→D second	1.0 or less	—	
Time lag N→R second	1.4 or less	—	
Line pressure [at 2000rpm] kg/cm ² (psi)	7 - 8 (100 - 114)	—	'L', 'D' and 'R' line pressure of each range

WR-11009

	1st & reverse brake clearance	0.58 - 1.92 (0.023 - 0.075)	—	
Gear	Counter gear backlash	0.1 or less (0.0039)	0.1 or less (0.0039)	
Input shaft	End play	0.3 - 0.9 (0.012 - 0.035)	—	
Planetary gear	Side clearance	0.20 - 0.50 (0.0079 - 0.020)	0.7 (0.028)	
Drive plate	Drive plate runout	—	0.2 (0.008)	
Clutch	Clutch disc thickness	2.5 (0.098)	2.3 (0.091)	
	Clutch plate thickness	1.6 (0.063)	—	

WR-11010

STEERING

Item			Specified value	Allowable limit	Remarks
Front wheel alignment	Camber		$0^{\circ}20' \pm 1^{\circ}$ <i>+40' - 20'</i>	<i>Pos.</i> —	Difference between RH & LH — 1°
	Caster		$2^{\circ}55' \pm 1^{\circ}$	<i>Pos</i> —	Difference between RH & LH — 1°
	Kingpin inclination angle		$12^{\circ}00' \pm 30'$	—	Difference between RH & LH — 1°
	Turning angle	Inner	$39^{\circ}55' \pm 2^{\circ}$	—	Difference between RH & LH — 2°
		Outer	$35^{\circ}00' \pm 2^{\circ}$	—	Difference between RH & LH — 2°
	Toe-in	mm (inch)	$\begin{matrix} -1 - +3 \\ (-0.039 - +0.118) \end{matrix}$	<i>max</i> $\pm 2 \text{ mm.}$	
	Sideslip	mm (inch)	$\begin{matrix} -3 - +3 \\ (-0.118 - +0.118) \end{matrix}$	—	
Rear wheel alignment	Camber		$-0^{\circ}40' \pm 35'$	—	
	Toe-in	mm (inch)	$5 (0.197) \pm 3$	—	
	Sideslip	mm (inch)	$\begin{matrix} +1 - +7 \\ (+0.039 - +0.276) \end{matrix}$	—	
Steering wheel play		mm (inch)	Within 10 (0.39)	—	

WR-11011

FRONT BRAKE

FRONT BRAKE

Item			Specified value	Allowable limit	Remarks
Wheel cylinder inner diameter or caliper bore mm (inch)	General specifications mounted with Type CB-23, CL-11, 61 engines		48.1 (1.89)	—	
	Except for vehicles above		50.8 (2.0)	—	
Pad thickness mm (inch)			10 (0.394)	1 (0.039)	Effective disc diameter: 179 (7.05)
			9 (0.354)	1 (0.039)	Effective disc diameter: 189 (7.44)
Disc mm (inch)	Thickness	Solid type	11 (0.433)	10 (0.394)	
		Ventilated type	18 (0.709)	17 (0.669)	

WB 111

WR-11013

REAR BRAKE

Item				Specified value	Allowable limit	Remarks
Wheel cylinder inner diameter mm (inch)				15.87 (0.62)	—	General specifications mounted with Type CB-23, CL-11, 61 engines
				17.46 (0.69)	—	Except for vehicles above
Brake drum inner diameter mm (inch)				180 (7.09)	181 (7.126)	
Brake lining thickness mm (inch)				4.0 (0.16)	1.0 (0.039)	
Disc brake	Wheel cylinder inner diameter mm (inch)			30.16 (1.187)	—	
	Pad thickness mm (inch)			9 (0.35)	1 (0.039)	Effective disc diameter: 202 (7.95)
	Disc	Thickness mm (inch)		10 (0.39)	9 (0.354)	
		Runout mm (inch)		—	0.08 (0.003)	Position 108 mm from center
	Parking brake lever working travel Notch			5 - 9	—	Pulling force: 20 kg

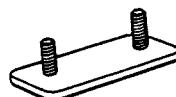
WR-11014

Free length or rear coil spring mm (inch)	Standard	331 (13.0)	—	Identification color: Green
	European standard	331 (13.0)	—	Identification color: Yellow
	Hard	331 (13.0)	—	Identification color: Red

WR-11015

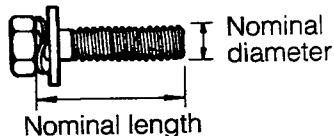
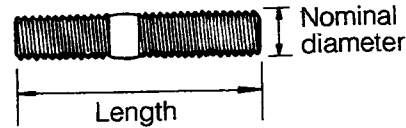
METHOD TO IDENTIFY STRENGTH DIVISION OF BOLTS

1. Identification Method by Checking Bolts Themselves

1. Identification Method by Checking Bolts Themselves							
	Configuration and how to determine strength division		Strength division		Configuration and how to determine strength division		Strength division
Hexagon bolt		Bolt having an embossed or stamped figure at its head section	4 = 4T 5 = 5T 6 = 6T 7 = 7T	Welded bolt			4T
		No mark	4T			No mark	4T
		Bolt having two embossed lines at its head section	5T 6T	Stud bolt			6T
		Bolt having three embossed lines at its head section	7T				

WT-13026

2. Identification Method by Part Numbers

Hexagon Bolt Part number example 9 1 1 1 1 - 4 0 6 2 0 Nominal length (mm) 4 Nominal diameter (mm) 6 Strength division 2 	Stud Bolt Part number example 9 2 1 3 2 - 4 0 6 2 0 Nominal length (mm) 4 Nominal diameter (mm) 6 Strength division 2 
--	--

	16	2	9.10 (65.8)	7.1 - 10.8 (51 - 77.5)
5T (Bolt having a mark of "5" at its head section) Example of part number (910000 - 500000)	6	1	0.71 (5.1)	0.6 - 0.9 (4.3 - 6.5)
	8	1.25	1.66 (12.0)	1.5 - 2.2 (11 - 16)
	10	1.25	3.37 (24.4)	3.0 - 4.5 (22 - 33)
	10	1.5	3.20 (23.1)	2.7 - 4.2 (19.5 - 30.5)
	12	1.25 (ISO)	5.84 (42.2)	5.0 - 7.0 (36 - 51)
	12	1.5	5.84 (42.2)	5.0 - 7.0 (36 - 51)
	12	1.75	5.60 (40.5)	4.8 - 6.8 (34 - 49)
	13	1.5	7.63 (55.2)	6.5 - 9.0 (47 - 65)
	14	1.5	9.50 (68.7)	7.5 - 11.0 (54 - 79.5)
	14	2	8.90 (64.4)	7.0 - 10.5 (51 - 76)
	16	1.5	14.36 (103.9)	12.0 - 17.0 (87 - 123)
	16	2	13.58 (98.2)	11.5 - 16.5 (83 - 119)
6T (Bolt having a mark of "6" at its head section) Example of part number (910000 - 600000)	6	1	0.71 (5.1)	0.6 - 0.9 (4.3 - 6.5)
	8	1.25	1.66 (12.0)	1.5 - 2.2 (11 - 16)
	10	1.25	3.37 (24.4)	3.0 - 4.5 (22 - 33)
	10	1.5	3.20 (23.1)	2.7 - 4.2 (19.5 - 30.5)
	12	1.25 (ISO)	5.84 (42.2)	5.0 - 7.0 (36 - 51)
	12	1.5	5.84 (42.2)	5.0 - 7.0 (36 - 51)
	12	1.75	5.61 (40.6)	4.8 - 6.8 (35 - 49)
7T (Bolt having a mark of "7" at its head section) Example of part number (910000 - 700000)	6	1	0.95 (6.87)	0.8 - 1.2 (5.8 - 8.7)
	8	1.25	2.20 (15.9)	2.0 - 3.0 (14.5 - 22)
	10	1.25	4.50 (32.5)	4.0 - 5.5 (29 - 40)
	10	1.5	4.30 (31.1)	3.7 - 5.2 (27 - 38)
	12	1.25 (ISO)	7.78 (56.3)	7.0 - 9.0 (51 - 65)
	12	1.5	7.78 (56.3)	7.0 - 9.0 (51 - 65)
	12	1.75	7.48 (54.1)	6.0 - 8.5 (43 - 61.5)
	13	1.5	10.17 (73.6)	8.0 - 12.0 (58 - 88)
	14	1.5	12.67 (91.6)	10.0 - 15.0 (72 - 108)
	14	2	11.86 (85.8)	9.5 - 14.0 (69 - 101)
	16	1.5	19.15 (138.5)	15.0 - 23.0 (108 - 166)
	16	2	18.11 (131.0)	14.9 - 22.0 (108 - 159)

WT-13028

Breather plug	4.5 - 5.5 (33 - 29)
Differential ring gear	0.7 - 1.0 (5.1 - 7.2)
Clutch cover	3.0 - 4.0 (22 - 29)
Clutch release lever × Prelease lever yoke	Bolt 4.0 - 5.0 (29 - 36) Nut 2.0 - 3.0 (14.5 - 22)
Shift & selector shaft × Shift inner lever	2.0 - 3.0 (14.5 - 22)
Shift & selector shaft × Transmission case	8.0 - 9.0 (58 - 65)
Differential case × Differential ring gear	

WR-11016

AUTOMATIC TRANSMISSION

Unit: kg-m (ft-lb)

Tightening component		Tightening torque
Transmission case × Torque converter housing		1.6 - 2.3 (12 - 16)
Transmission case × Oil pan		0.4 - 0.6 (3.0 - 4.3)
Transmission case × Oil filler tube		0.3 - 0.7 (2.4 - 5.1)
Transmission case × Valve body Ay		0.80 - 1.20 (6.0 - 8.5)
Transmission case × Side cover		0.7 - 0.9 (5.1 - 6.5)
Transmission case × Rear cover	Bolt	1.6 - 2.3 (12 - 16)
Transmission case × Rear cover	Nut	1.1 - 1.5 (8 - 10)
Transmission case × Oil pump Ay		1.8 - 2.7 (14 - 19)
Transmission case × Neutral start switch		1.6 - 2.3 (12 - 16)
Transmission case × Test plug		0.6 - 0.9 (4.3 - 6.5)
Transmission case × Lower left mounting bracket		3.0 - 4.5 (22 - 33)
Valve body × Valve body cover		0.5 - 0.6 (3.6 - 4.3)
Valve body × Throttle valve cam		0.6 - 0.9 (4.3 - 6.5)
Valve body × Solenoid Ay		0.64 - 0.96 (4.6 - 6.9)
Valve body × Oil strainer		0.4 - 0.6 (3.0 - 4.3)
Upper valve body × Lower valve body		0.50 - 0.60 (3.6 - 4.3)
Oil pan × Drain bolt (plug)		1.8 - 2.3 (13 - 17)
Oil pump body × Stator shaft		0.8 - 1.2 (6.0 - 8.5)
Torque converter × Drive plate		1.5 - 2.2 (11 - 16)
Torque converter housing × Cylinder block		5.0 - 7.0 (36 - 51)
Manual shift shaft × Manual value outer lever		2.7 - 3.3 (20 - 24)
Reduction driven gear × Counter shaft		11 - 15 (80 - 108)

WR-11017

Front shock absorber × Steering knuckle	9.0 - 13.0 (65 - 94)
Drive shaft × Front axle hub	18.0 - 23.0 (130 - 166)
Disc wheel × Front axle hub	9.0 - 12.0 (65 - 87)
Front drive bearing shaft × Bracket	3.0 - 4.5 (22 - 32)

WR-11018

REAR AXLE, REAR SUSPENSION

Unit: kg-m (ft-lb)

Tightening Component	Tightening torque
Rear stabilizer × Stabilizer link	1.0 - 1.6 (7.2 - 11.6)
Stabilizer bracket × Rear suspension arm	1.0 - 1.6 (7.2 - 11.6)
Stabilizer bracket × Stabilizer bracket No.2	1.9 - 3.1 (14 - 22)
Rear suspension arm No.1 × Body	7.5 - 10.5 (54 - 76)
Rear suspension arm No.1 × Rear axle carrier	7.5 - 10.5 (54 - 76)
Rear suspension arm No.2 × Body	7.1 - 8.8 (51 - 64)
Rear suspension arm No.2 × Rear axle carrier	7.5 - 10.5 (54 - 76)
Rear strut rod × Body	7.5 - 10.5 (54 - 76)
Rear strut rod × Rear axle carrier	7.5 - 10.5 (54 - 76)
Rear axle carrier × Rear shock absorber	9.0 - 12.0 (65 - 87)
Suspension support × Body	1.0 - 1.6 (7.2 - 11.6)
Rear axle shaft × Brake drum (disc)	6.0 - 10.0 (43 - 72)
Rear brake hub × Disc wheel	9.0 - 12.0 (65 - 87)
Rear axle carrier × Rear brake backing plate	4.0 - 5.5 (29 - 40)

WR-11019

BRAKE

Unit: kg-m (ft-lb)

Tightening component	Tightening torque
Master cylinder x Brake booster	1.2 - 1.8 (8.7 - 13.0)
Brake booster x Body x Pedal support	1.0 - 1.6 (7.2 - 11.6)
Disc brake caliper x Knuckle	3.2 - 4.2 (23 - 30)
Caliper x Bleeder plug	0.7 - 1.0 (5.1 - 7.2)
Rear wheel cylinder Backing plate	1.0 - 1.3 (7.2 - 9.4)
Rear wheel cylinder x Bleeder plug	0.7 - 1.0 (5.1 - 7.2)
Brake tube each union nut	1.3 - 1.8 (9.4 - 13.0)

BODY AND OTHERS

Unit: kg-m (ft-lb)

Tightening component	Tightening torque
Back door hinge x Body	2.5 - 3.0 (18 - 22)
Back door stay x Quarter panel	1.8 - 2.3 (13 - 16.6)
Back door stay x Back door	1.6 - 2.3 (11.6 - 16.6)
Engine lower mounting x Body	1.2 - 2.2 (8.7 - 16)
Exhaust manifold x Exhaust front pipe	3.0 - 5.0 (22 - 36)
Exhaust front pipe x Exhaust tail pipe	3.0 - 5.0 (22 - 36)

WR-11021

Central Door Lock	2-7	2-4	Radiator Fan Motor	1-6	1-4
Cigar Lighter	2-5	2-3	Radio	2-5	2-2
Clock	2-5	2-2	Rear Window Defogger	3-6	3-4
Combination Meter	3-2	2-6	Rear Wiper & Washer	3-7	3-6
Daylight Relay	2-3	2-1	Room Lamp	3-5	3-3
Dim-dip Relay	2-4	1-7	Side Lamp	2-1	1-5
Distributor	1-1	—	Sun Roof	3-1	2-5
EFI ECU (CB-80)	4-5	—	Starter	1-1	1-1
Electronic Door Mirror	2-6	2-3	Stop Lamp	3-6	3-4
Fuel Pump (Turbo)	1-3	—	Turn Signal & Hazard Lamp	3-4	3-1
Front Wiper & Washer	3-7	3-5			
Glow Plug	—	1-2			
Headlamp	2-3	1-7, 2-1			
Headlamp Cleaner	3-7	3-5			
Heater	1-7	1-5			
Horn	3-5	3-2			
Ignition Coil	1-1, 4-3	—			

TR86-09002