

**DATSUN 280Z
MODEL S30 SERIES**

SECTION RA

REAR AXLE & REAR SUSPENSION

RA

DESCRIPTION	RA- 2
REAR AXLE	RA- 4
REAR SUSPENSION	RA- 7
SERVICE DATA AND SPECIFICATIONS	RA-11
TRouble DIAGNOSES AND CORRECTIONS	RA-13
SPECIAL SERVICE TOOLS	RA-14



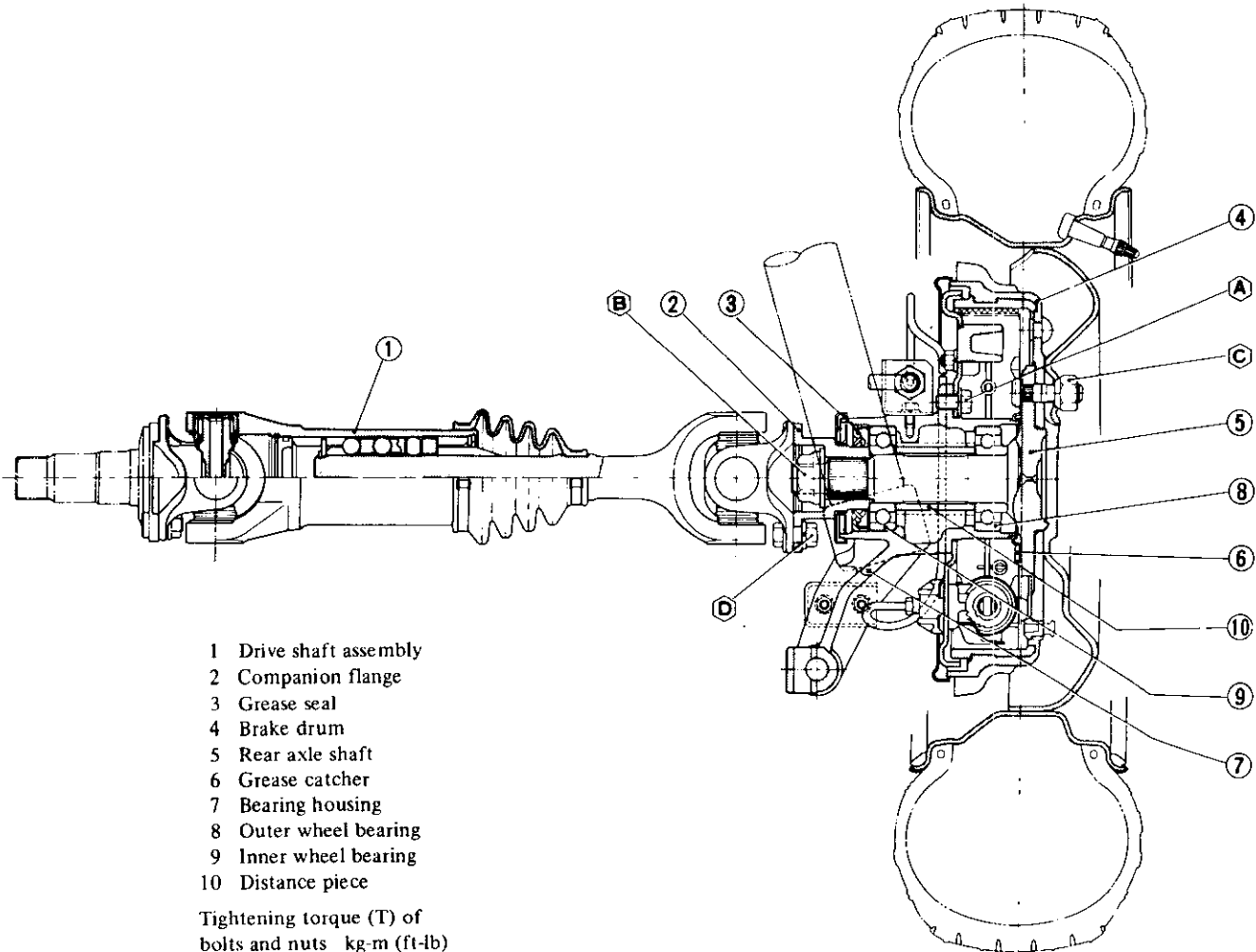
NISSAN MOTOR CO., LTD.
TOKYO, JAPAN

DESCRIPTION

The rear suspension is a strut type independent suspension. Briefly, this means that the rear wheel is supported by the strut and transverse link, the gear carrier is aligned independently and separately from the suspension, and the gear carrier is installed directly on the body with rubber insulators. Thus, the three major rear suspension elements supporting the left wheel, right wheel, and gear carrier, are separated, and very high suspension performance is obtained.

As regards construction, the rear axle housing is brazed on the lower end of the strut which has a self-contained shock absorber, and the lower side is connected to the transverse link through rubber bushing. On the intermediate position of the strut, the body is suspended with a coil spring, the upper end is installed on the body through a rubber insulator, and the transverse link is also directly installed on the body with rubber bushings.

A horizontal leaf spring is connected to the rear end of the gear carrier, and the gear carrier is installed on the body at three positions (both ends of the leaf spring and the front end of the gear carrier) through rubber insulators. Driving power is transmitted to the rear axle shaft by the freely extensible drive shaft through side flanges on both ends of the gear carrier. The rear axle shaft is supported by two ball bearings in the axle housing.



- 1 Drive shaft assembly
- 2 Companion flange
- 3 Grease seal
- 4 Brake drum
- 5 Rear axle shaft
- 6 Grease catcher
- 7 Bearing housing
- 8 Outer wheel bearing
- 9 Inner wheel bearing
- 10 Distance piece

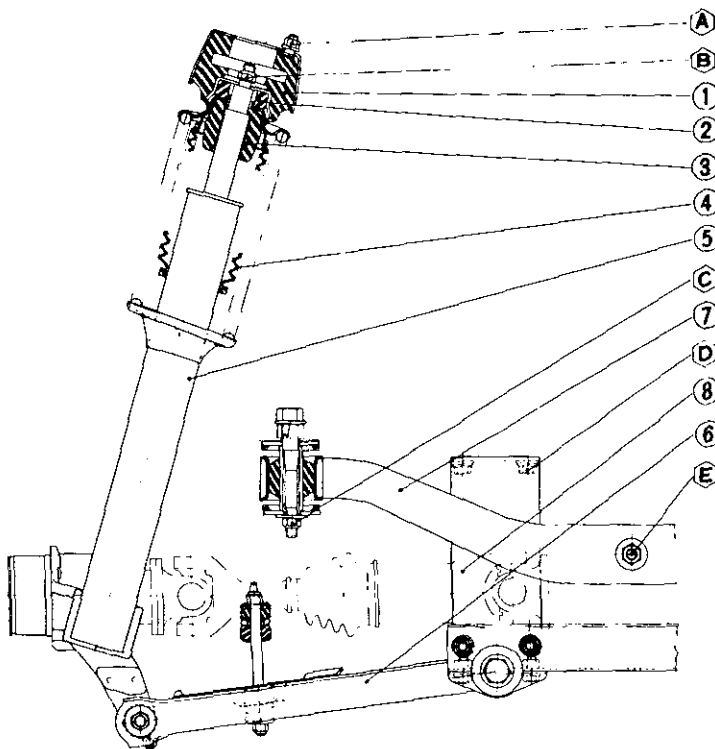
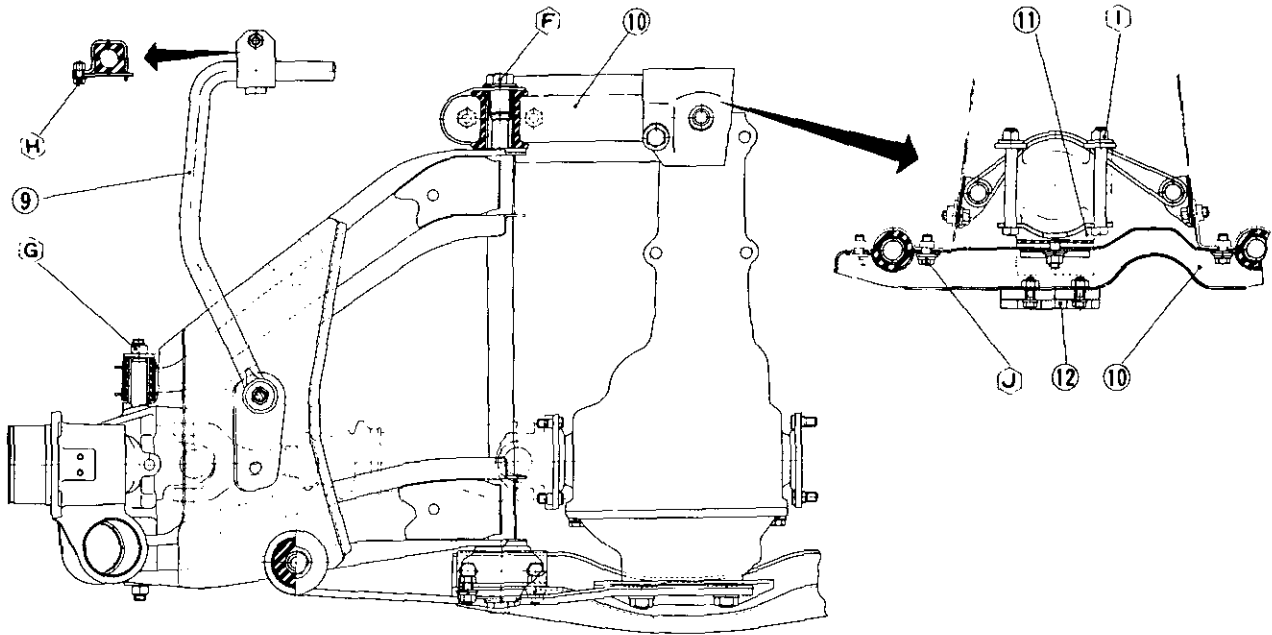
Tightening torque (T) of bolts and nuts kg-m (ft-lb)

- (A) T : 4.0 to 5.3 (29 to 38)
- (B) T : 25 to 33 (181 to 239)
- (C) T : 8.0 to 9.0 (58 to 65)
- (D) T : 5 to 6 (36 to 43)

RA315

Fig. RA-1 Cross sectional view of rear axle

Rear Axle & Rear Suspension



- 1 Rear strut mounting insulator
- 2 Spacer
- 3 Bound bumper rubber
- 4 Dust cover
- 5 Strut assembly
- 6 Transverse link
- 7 Differential case mounting member
- 8 Link mounting brace
- 9 Stabilizer bar
- 10 Differential case mounting front member
- 11 Differential case mounting front insulator
- 12 Damper plate

Tightening torque (T) of bolts and nuts kg-m (ft-lb)

- A T : 2.5 to 3.5 (18 to 25)
- B T : 7.5 to 9.5 (54 to 69)
- C T : 7.5 to 9.5 (54 to 69)
- D T : 4.6 to 6.1 (33 to 44)
- E T : 7.5 to 9.5 (54 to 69)
- F T : 14 to 16 (101 to 116)
- G T : 7.5 to 9.5 (54 to 69)
- H T : 1.0 to 1.2 (7 to 9)
- I T : 6.0 to 8.0 (43 to 58)
- J T : 4.6 to 6.1 (33 to 44)

RA316

Fig. RA-2 Rear suspension system

REAR AXLE

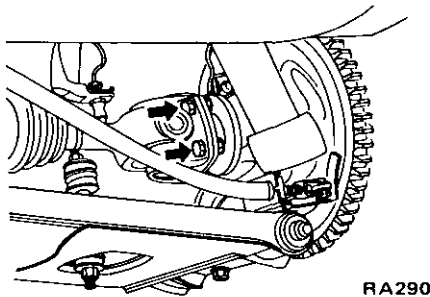
CONTENTS

WHEEL BEARING, OIL SEAL AND REAR AXLE SHAFT	RA-4	DRIVE SHAFT	RA-5
REMOVAL	RA-4	REMOVAL	RA-6
INSPECTION	RA-4	DISASSEMBLY	RA-6
INSTALLATION	RA-4	INSPECTION	RA-6
INSTRUCTIONS FOR ASSEMBLY OF REAR WHEEL BEARING	RA-4	ASSEMBLY	RA-6

WHEEL BEARING, OIL SEAL AND REAR AXLE SHAFT

REMOVAL

1. Chock front wheels.
2. Loosen wheel nuts, jack up the car, and support it with stands.
3. Remove wheel nuts and wheels.
4. Remove drive shaft installation bolts (wheel side). Refer to Figure RA-3.



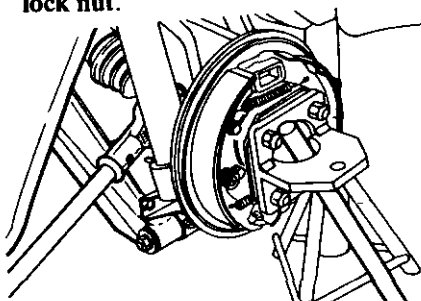
RA290

Tightening torque:
5.0 to 6.0 kg-m (36 to 43 ft-lb)

Fig. RA-3 Removing drive shaft

5. Remove rear wheel bearing lock nut. See Figure RA-4.

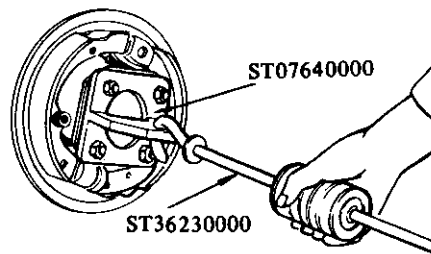
Note: Do not release caulking when removing the rear wheel bearing lock nut.



Tightening torque: RA295
25 to 33 kg-m (181 to 239 ft-lb)

Fig. RA-4 Removing rear wheel bearing lock nut

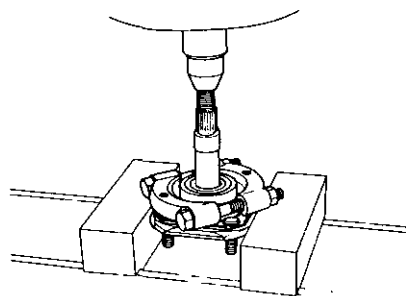
6. Remove the rear axle shaft with Rear Axle Stand ST07640000 and Sliding Hammer ST36230000. See Figure RA-5.



RA120

Fig. RA-5 Removing rear axle shaft

7. Remove companion flange and bearing washer.
8. Remove inner rear wheel bearing and grease seal.
9. Remove outer rear wheel bearing from rear axle shaft. See Figure RA-6.



RA296

Fig. RA-6 Removing rear wheel bearing (outer side)

Note: Do not reuse bearing after removal.

INSPECTION

1. Check wheel bearing for end play, the rolling surface for flaking, wear, seizure, and grease seal for cracks or deformation.

Replace wheel bearing as required.

2. Check rear axle shaft for cracks or seizure.

Replace rear axle shaft and wheel bearing, as required.

3. Check grease seal lip for damage or wear.

INSTALLATION

Install wheel bearing, grease seal and rear axle shaft in reverse sequence of removal.

Note: Replace grease seal every disassembly.

INSTRUCTIONS FOR ASSEMBLY OF REAR WHEEL BEARING

1. Outer bearing has a seal on one side. Install outer bearing to the rear axle shaft so that the side to which the seal is attached faces the wheel. See Figure RA-8.
2. Relationship between rear bearing housing and distance piece is shown in Figure RA-7.

A mark "A", "B", or "C" is stamped on housing. Select a distance piece having a mark corresponding to the mark on housing. When a distance piece is reused, make sure that both ends are not collapsed or deformed.

Rear Axle & Rear Suspension

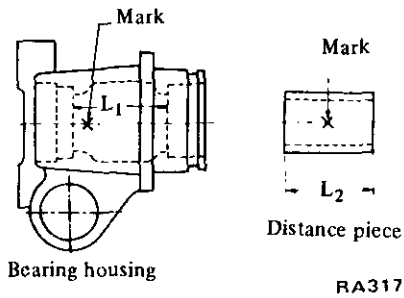
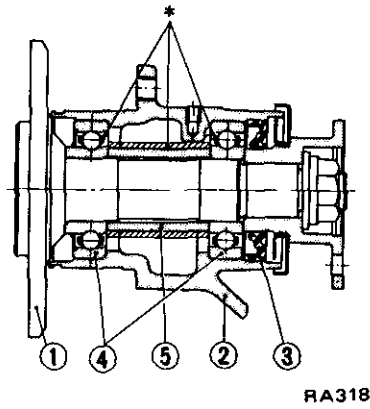


Fig. RA-7 Rear bearing housing and distance piece

3. For wheel bearing grease, use recommended multi-purpose grease. Fill the portions indicated by asterisk (*) in Figure RA-8.



- 1 Rear axle shaft
2 Bearing housing
3 Grease seal
4 Wheel bearing
5 Distance piece

Fig. RA-8 Lubrication chart of rear axle

4. Tighten wheel bearing lock nut, and measure the preload and rear axle shaft end play. Readjust as required.

Tightening torque of wheel bearing lock nut:
25 to 33 kg-m
(181 to 239 ft-lb)

Wheel bearing preload:
4.5 kg-cm (3.9 in-lb)
At the hub bolt 790 gr (27.9 oz) or less

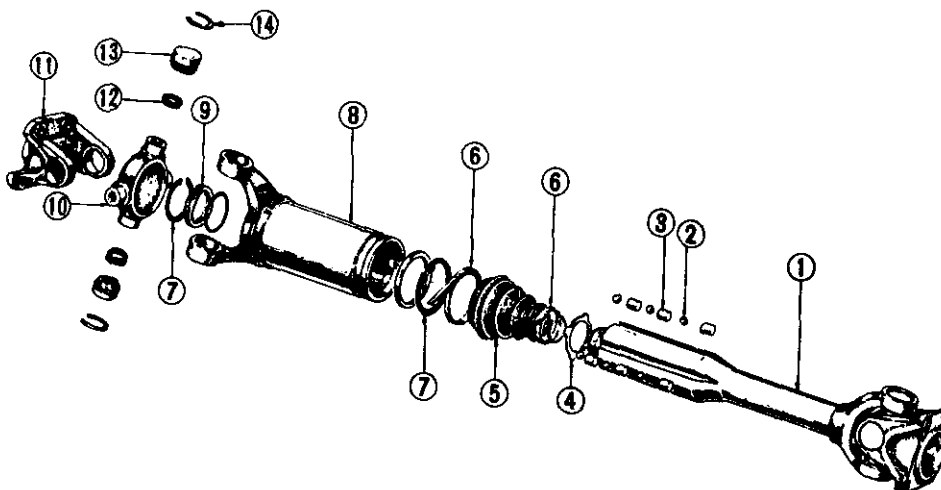
Rear axle shaft end play:
0 to 0.15 mm (0 to 0.0059 in)

Note: Use new lock nuts every disassembly.

5. Caulk wheel bearing lock nuts securely after tightening.
6. When fitting outer rear wheel bearing, use Rear Axle Shaft Outer Bearing Drift ST37780000.

Rear bearing housing		Distance piece	
Mark	Size mm (in)	Mark	Size mm (in)
A	52.63 (2.0720) to 52.73 (2.0760)	A	52.60 (2.0709) to 52.66 (2.0732)
B	52.53 (2.0681) to 52.63 (2.0720)	B	52.50 (2.0669) to 52.56 (2.0693)
C	52.43 (2.0642) to 52.53 (2.0681)	C	52.40 (2.0630) to 52.46 (2.0654)

DRIVE SHAFT



- 1 Drive shaft
2 Drive shaft ball
3 Ball spacer
4 Drive shaft stopper
5 Rubber boot
6 Boot band
7 Snap ring
8 Sleeve yoke
9 Sleeve yoke plug
10 Spider journal
11 Side yoke
12 Oil seal
13 Needle bearing
14 Snap ring

RA043

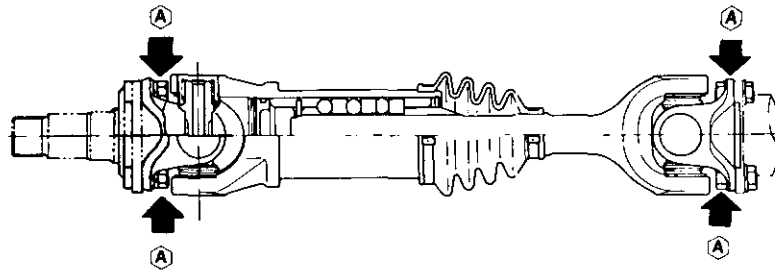
Fig. RA-9 Drive shaft components

REMOVAL

Remove drive shaft universal joint yoke flange bolts from both sides. See Figure RA-10.

Note: The drive shaft is easily damaged; handle it carefully.
Lubricate needle bearings at specified intervals. Do not disassemble it when lubricating.

RA304



Tightening torque:

(A) : 5.0 to 6.0 kg-m (36 to 43 ft-lb)

Fig. RA-10 Removing drive shaft

DISASSEMBLY

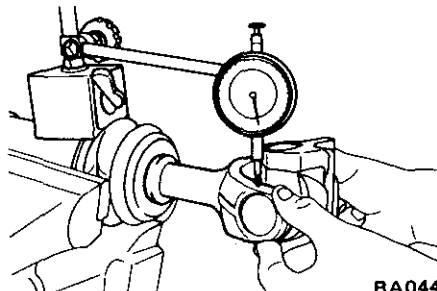
Drive shaft should be disassembled only when lubricating the ball spline.

Lubrication is required at specified intervals.

1. Remove universal joint spider from the differential side.
2. Remove snap ring from sleeve yoke plug and remove plug. Use Drive Shaft Snap Ring Plier ST38300000.

Depress drive shaft and remove snap ring from stopper.

Remove stopper. Disconnect boot and separate drive shaft carefully so as not to lose balls and spacers.



RA044

Fig. RA-11 Measuring drive shaft play

ASSEMBLY

Assemble drive shaft in reverse sequence of disassembly noting the following:

1. Correctly align yokes, and make sure that steel balls and spacers are installed in the correct order.
2. Selecting a suitable snap ring, adjust the axial play of universal joint to within 0.02 mm (0.0008 in). Snap rings of seven different thicknesses are available.

Universal joint bearing snap ring

Thickness mm (in)	Color identification
1.09 (0.0587)	White
1.52 (0.0598)	Yellow
1.55 (0.0610)	Red
1.58 (0.0622)	Green
1.61 (0.0634)	Blue
1.64 (0.0646)	Light brown
1.67 (0.0657)	Black

INSPECTION

1. Replace the boot and O-ring of sleeve yoke plug, if damaged.
2. Check drive shaft for straightness, cracks, damage, wear or distortion.

Replace drive shaft assembly as required.

3. Check steel balls and sleeve yoke for damage, wear or distortion.

Replace drive shaft assembly as required.

4. If faulty condition is detected, replace universal joint.

5. Thoroughly remove grease from sleeve yoke, drive shaft ball rolling groove and oil groove, and clean them.

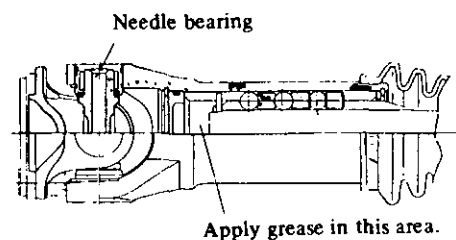
6. Measure the drive shaft play as shown in Figure RA-11. If play exceeds 0.1 mm (0.0039 in), replace drive shaft assembly. Be sure to measure the drive shaft play with drive shaft completely compressed.

3. Apply an adequate amount of recommended multi-purpose grease [approximately 10 gr (0.35 oz)] to ball rolling groove and oil groove.

Moreover, apply approximately 35 gr (1.23 oz) of grease to the area shown in Figure RA-12.

Note: Drive shaft components are not available as separate parts.

Therefore, drive shaft must be replaced as an assembly, even if only one component is faulty.



RA045

Fig. RA-12 Cross-sectional view of drive shaft

REAR SUSPENSION

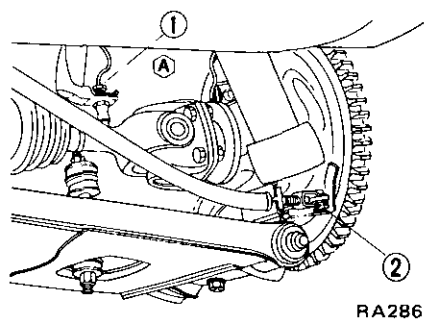
CONTENTS

REAR STRUT AND COIL SPRING	RA- 7	TRANSVERSE LINK	RA- 9
REMOVAL	RA- 7	REMOVAL	RA- 9
INSTALLATION	RA- 8	INSPECTION	RA-10
GEAR CARRIER AND DIFFERENTIAL		INSTALLATION	RA-10
MOUNTING MEMBER	RA- 8	STABILIZER	RA-10
REMOVAL	RA- 8	REMOVAL	RA-10
INSPECTION	RA- 9	INSPECTION	RA-10
INSTALLATION	RA- 9	INSTALLATION	RA-10

REAR STRUT AND COIL SPRING

REMOVAL

1. Chock the front wheels.
2. Loosen wheel nuts, jack up car, and support body with stands.
3. Remove wheel nuts and remove wheels.
4. Disconnect brake line connector (body side) ① and side brake linkage ②. See Figure RA-13.

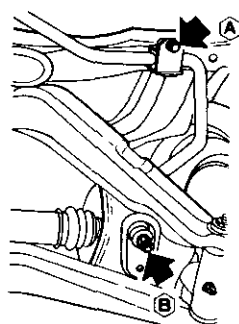


Tightening torque:

(A) : 1.5 to 1.8 kg-m (11 to 13 ft-lb)

Fig. RA-13 Removing brake hose and side brake linkage

5. Remove stabilizer bar from transverse link. See Figure RA-14.



RA287

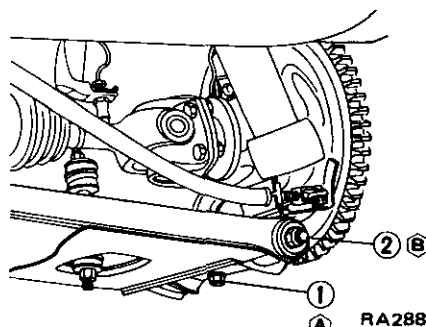
Tightening torque:

(A) : 1.0 to 1.2 kg-m (7.2 to 8.7 ft-lb)

(B) : 1.2 to 1.7 kg-m (8.7 to 12.3 ft-lb)

Fig. RA-14 Removing stabilizer from transverse link

6. Remove transverse link outer self-lock nuts ② and lock bolt ① of rear transverse spindle from the lower end of bearing housing. See Figure RA-15.



RA288

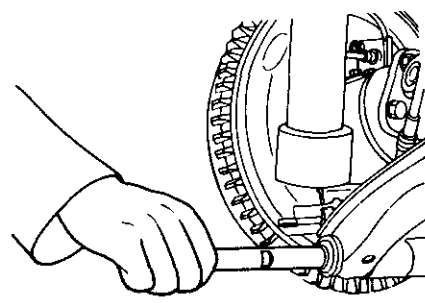
Tightening torque:

(A) : 1.0 to 1.2 kg-m (7.2 to 8.7 ft-lb)

(B) : 7.5 to 9.5 kg-m (54 to 69 ft-lb)

Fig. RA-15 Removing lock bolt and self-lock nuts

7. Withdraw spindle, and separate transverse link from strut assembly. See Figure RA-16.

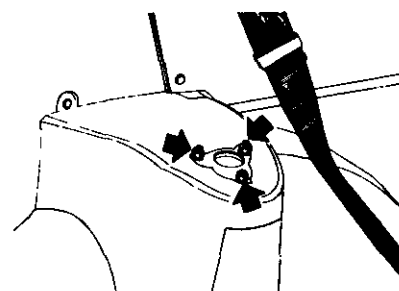


RA289

Fig. RA-16 Removing spindle

8. Disconnect drive shaft (wheel side).

9. Remove strut installation nuts (from the passenger compartment side). The strut assembly can be removed downward. See Figures RA-17 and RA-18.



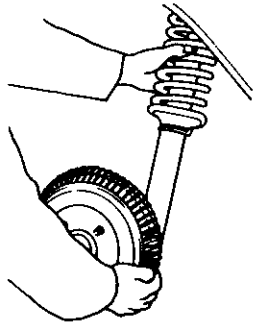
RA291

Tightening torque:

2.5 to 3.5 kg-m (18 to 25 ft-lb)

Fig. RA-17 Removing strut installation nuts

Rear Axle & Rear Suspension



RA292

Fig. RA-18 Removing strut assembly

Note: When removing strut assembly, place a jack under the lower end of strut, and remove it gradually.

9. For the removal and reinstallation of spring, disassembly of strut, inspection and adjustment, apply the instructions for front strut assembly.

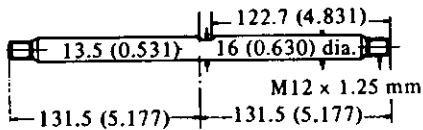
Refer to Section FA.

INSTALLATION

Install strut assembly in reverse sequence of removal.

Notes:

- a. Install spindle so that the shorter side (when measured from the position where the lock bolt is installed) faces the front of car. See Figure RA-19.



Unit: mm (in)

RA325

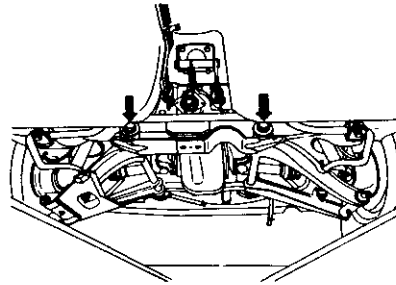
Fig. RA-19 Spindle

- b. After installing wheels and placing car under the standard load, tighten transverse link outer self-lock nut completely.
- c. When installing spring, make sure that it is correctly seated on spring seat.

GEAR CARRIER AND DIFFERENTIAL MOUNTING MEMBER REMOVAL

1. Chock front wheels.

2. Jack up car, and support body with stands.
3. Remove main muffler. Refer to Section FE.
4. Separate propeller shaft from gear carrier. Refer to Section PD.
5. Loosen front side transverse link inner bolts. See Figure RA-20.



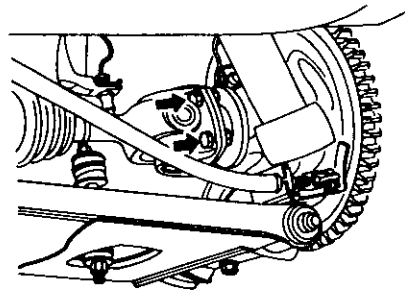
RA274

Tightening torque:

14 to 16 kg-m (101 to 116 ft-lb)

Fig. RA-20 Removing transverse link inner bolts

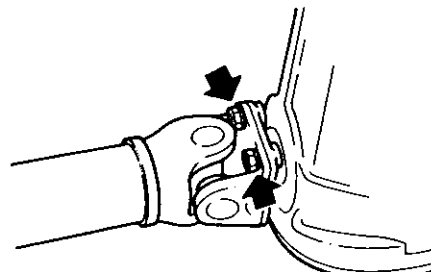
6. Remove drive shaft installation bolts (wheel side and gear carrier side), and separate drive shaft from the gear carrier. See Figures RA-21 and RA-22.



Tightening torque:

5.0 to 6.0 kg-m (36 to 43 ft-lb)

Fig. RA-21 Removing drive shaft installation bolts (wheel side)

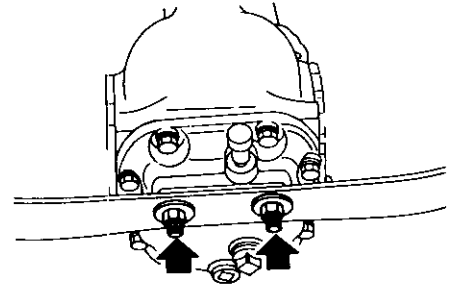


Tightening torque:

5.0 to 6.0 kg-m (36 to 43 ft-lb)

Fig. RA-22 Loosening drive shaft installation bolts (gear carrier side)

7. Place a jack beneath gear carrier and raise it.
8. Remove differential mounting rear member installation nut. See Figure RA-23.



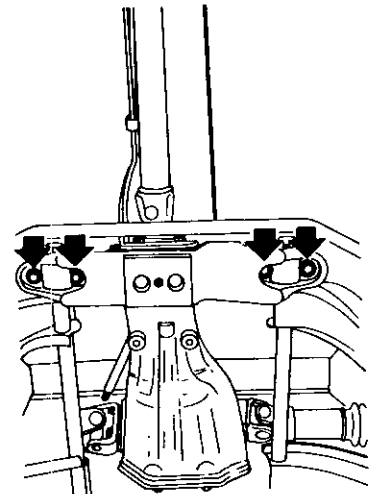
RA306

Tightening torque:

7.5 to 9.5 kg-m (54 to 69 ft-lb)

Fig. RA-23 Removing differential mounting rear member

9. Remove differential mounting front member installation bolts, lower the jack slowly, and remove gear carrier and front mounting member as an assembly. See Figure RA-24.



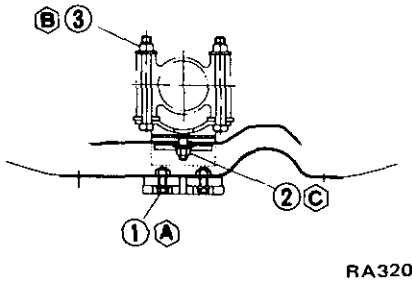
RA319

Tightening torque:

4.6 to 6.1 kg-m (33 to 44 ft-lb)

Fig. RA-24 Removing differential mounting front member

10. Remove front mounting damper and differential mounting front insulator. Gear carrier can then be removed. See Figure RA-25.



RA320

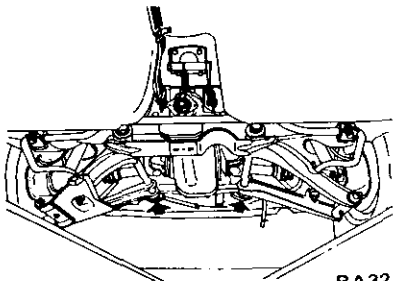
- 1 Front mounting damper plate installation bolt
- 2 Front mounting member and front insulator installation nut
- 3 Gear carrier and front insulator installation nut

Tightening torque:

- (A) : 1.6 to 2.1 kg-m (12 to 15 ft-lb)
- (B) : 3.2 to 4.3 kg-m (23 to 31 ft-lb)
- (C) : 6.0 to 8.0 kg-m (43 to 58 ft-lb)

Fig. RA-25 Removing damper plate bolts and mounting front insulator nuts

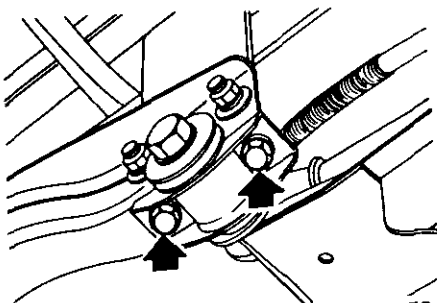
11. Loosen rear side transverse link inner bolts. See Figure RA-26.



RA321

Fig. RA-26 Removing transverse link inner bolts

12. Remove link mounting rear bracket. See Figure RA-27.

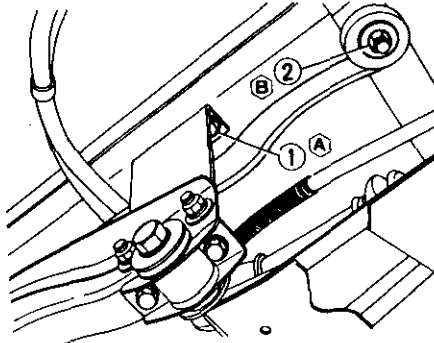


RA278

Tightening torque:
3.2 to 4.3 kg-m (23 to 31 ft-lb)

Fig. RA-27 Removing rear bracket

13. Remove transverse link mounting brace and body installation bolts (1) and differential mounting rear insulator and body installation bolts (2). See Figure RA-28.



RA276

- 1 Transverse link mounting brace installation bolt
- 2 Differential mounting rear insulator installation bolt

Tightening torque:

- (A) : 4.6 to 6.1 kg-m (33 to 44 ft-lb)
- (B) : 7.5 to 9.5 kg-m (54 to 69 ft-lb)

Fig. RA-28 Removing link mounting brace and differential mounting member installation bolts

INSPECTION

1. Check gear carrier assembly. Refer to Section PD.
2. Check differential mounting front and rear members for cracks, deformation or damage. Replace as required.
3. Replace differential mounting front insulator if the dimension "A" is 9 mm (0.354 in) or greater, 2 mm (0.079 in) or smaller (unloaded). See Figure RA-29.

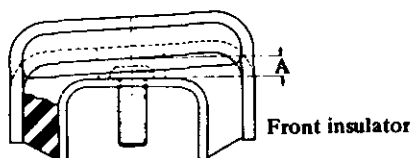


Fig. RA-29 Sectional view of differential mounting insulators

INSTALLATION

Install gear carrier and differential mounting member in reverse sequence of removal.

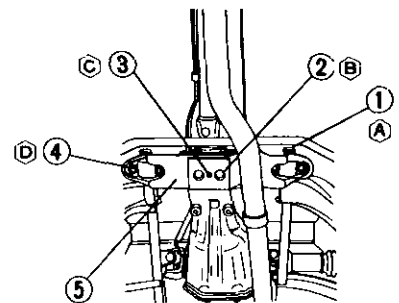
Notes:

- a. Tighten transverse link inner bolts after installing wheels and placing car on ground under the standard load.
- b. Install differential front insulator carefully with arrow towards the front.

TRANSVERSE LINK

REMOVAL

1. Chock front wheels.
2. Loosen wheel nuts, jack up car, and support body with stands.
3. Remove wheel nuts, and remove wheels.
4. Remove stabilizer bar from transverse link.
5. Separate transverse link from the strut. (Refer to the paragraph on Strut and Coil Spring.)
6. Place a jack beneath gear carrier, and raise it.
7. Loosen transverse link inner bolts (1) and damper plate installation bolts (2). See Figure RA-30.
8. Remove the differential mount front insulator installation nut (3)
9. Remove differential mounting front member installation nuts (4) and remove differential mounting front member (5)



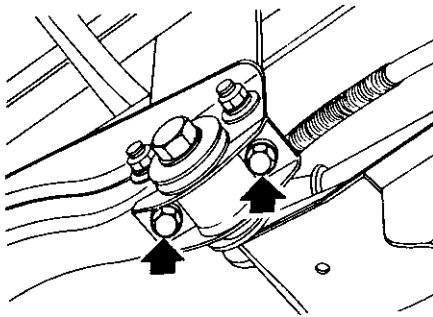
RA275

Tightening torque:

- (A) : 13 to 14 kg-m (94 to 101 ft-lb)
- (B) : 1.6 to 2.1 kg-m (12 to 15 ft-lb)
- (C) : 3.2 to 4.3 kg-m (23 to 31 ft-lb)
- (D) : 3.0 to 4.6 kg-m (22 to 33 ft-lb)

Fig. RA-30 Removing differential mounting front member

10. Remove link mounting rear bracket. Transverse link can now be removed. See Figure RA-31.

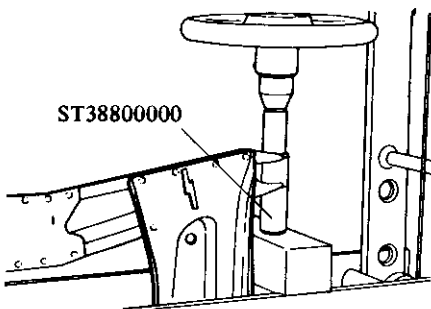


RA278

Tightening torque:
3.2 to 4.3 kg-m (23 to 31 ft-lb)

Fig. RA-31 Removing transverse link

11. Remove outer bushing from transverse link with Rear Transverse Link Bushing Replacer ST38800000. See Figure RA-32.



RA280

Fig. RA-32 Removing transverse link outer bushing

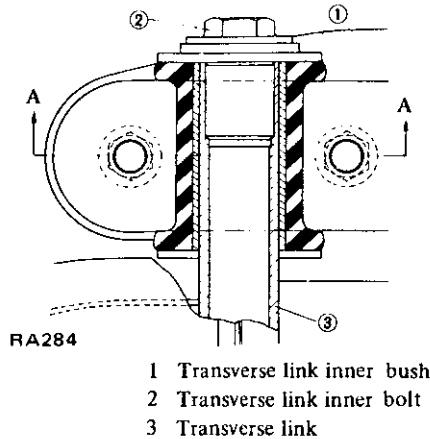
INSPECTION

1. Check transverse link differential mounting front member for cracks, deformation, or damage. Replace as required.
2. Check rubber bushing for decline, wear, or other faulty conditions and replace as required.

INSTALLATION

1. Install transverse link in reverse sequence of removal.
 2. Install transverse link inner bushing by the following instructions. Figures RA-33 and RA-34.
- (1) Install inner bushing to link shaft.

- (2) Align projection on bushing (directed to the axis direction) horizontally.
- (3) Align the center of bushing (directed toward the axis direction) to the center of bracket.



RA284

Fig. RA-33 Cross-sectional view of transverse link inner bushing (I)

- (4) First, tighten bolts supported in the vertical direction (differential mounting front member or link mounting rear bracket).

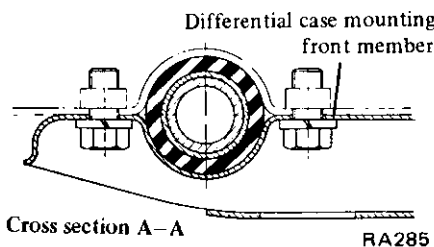


Fig. RA-34 Cross-sectional view of transverse link inner bushing (II)

- (5) Temporarily tighten transverse link inner bolts.

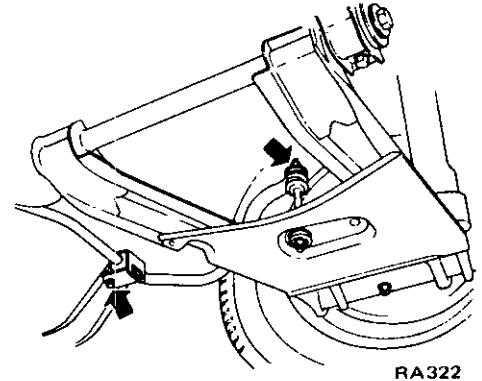
Notes:

- a. Tighten transverse link inner bolts and outer self-lock nuts after installing wheels and placing car on ground under the standard load.
- b. Install differential carrier front insulator carefully with arrow towards the front.

STABILIZER

REMOVAL

1. Remove main muffler. Refer to Section FE.
2. Remove stabilizer bar from side member and remove connecting rod. See Figure RA-35.



RA322

Fig. RA-35 Removing stabilizer

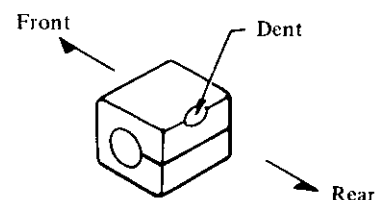
INSPECTION

1. Check stabilizer for condition. Discard if it is found damaged or cracked.
2. Check that bushings are in good condition. If necessary, replace.

INSTALLATION

To install stabilizer, reverse the above procedure, being sure that bushing on side member is properly seated.

Note: Make sure that the dent in rubber bushing faces towards the rear upper side. See Figure RA-36.



RA323

Fig. RA-36 Rubber bushing

SERVICE DATA AND SPECIFICATIONS

Wheel alignment (unladen)

		S30	GS30 (2+2 seats)
Camber	degree	-3' to 1°27'	-9' to 1°21'
Toe-in	mm (in)	-5 to 5 (-0.197 to 0.197)	-5 to 5 (-0.197 to 0.197)

Coil spring

Active turns of coil		8.5
Free length	mm (in)	392 (15.4)
Spring constant	kg/mm (lb/in)	2.28 (197.7)

Strut assembly

Damping force at piston speed 0.3 m (0.98 ft)/sec		
Expansion/Compression	kg (lb)/kg (lb)	55 (121)/30 (66)
Rear axle end play	mm (in)	0 to 0.15 (0 to 0.0059)

Tightening torque

Drive shaft installation bolts		
Gear carrier side	kg-m (ft-lb)	5.0 to 6.0 (36 to 43)
Wheel side	kg-m (ft-lb)	5.0 to 6.0 (36 to 43)
Strut installation nut	kg-m (ft-lb)	2.5 to 3.5 (18 to 25)
Strut rod self-lock nut	kg-m (ft-lb)	7.5 to 9.5 (54 to 69)
Gland packing	kg-m (ft-lb)	7 to 13 (51 to 94)
Rear axle bearing lock nut	kg-m (ft-lb)	25 to 33 (181 to 239)
Brake disc installation bolt	kg-m (ft-lb)	2.7 to 3.7 (20 to 27)
Brake hose (line) clamp nut	kg-m (ft-lb)	1.5 to 1.8 (11 to 13)
Wheel nut	kg-m (ft-lb)	8 to 9 (58 to 65)
Bearing housing spindle lock bolt	kg-m (ft-lb)	1.0 to 1.2 (7.2 to 8.7)
Transverse link outer self-lock nut	kg-m (ft-lb)	7.5 to 9.5 (54 to 69)
Transverse link inner bolt	kg-m (ft-lb)	14 to 16 (101 to 106)
Rear link mounting bracket installation bolt	kg-m (ft-lb)	3.2 to 4.3 (23 to 31)

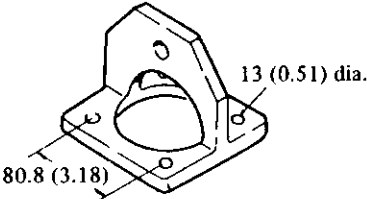
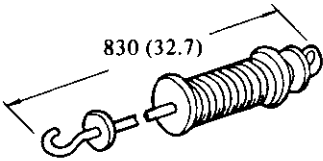
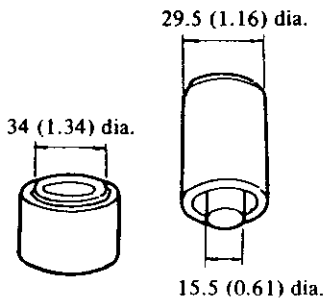
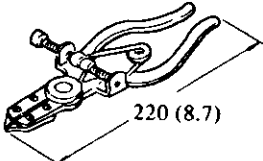
Rear Axle & Rear Suspension

Front differential mounting member installation bolt	kg-m (ft-lb)	4.6 to 6.1 (33 to 44)
Front differential mounting member and front differential mounting insulator installation nut	kg-m (ft-lb)	3.2 to 4.3 (23 to 31)
Front mounting damper plate installation bolt	kg-m (ft-lb)	1.6 to 2.1 (12 to 15)
Gear carrier and differential mounting front insulator installation nut	kg-m (ft-lb)	6.0 to 8.0 (43 to 58)
Belt fitting self-lock nut	kg-m (ft-lb)	11.3 to 13.8 (82 to 100)
Belt fitting bracket installation bolt	kg-m (ft-lb)	3.2 to 4.3 (23 to 31)
Rear differential mounting member installation nut	kg-m (ft-lb)	7.5 to 9.5 (54 to 69)
Rear differential mounting insulator installation nut	kg-m (ft-lb)	7.5 to 9.5 (54 to 69)
Transverse link mounting brace installation bolt	kg-m (ft-lb)	4.6 to 6.1 (33 to 44)
Propeller shaft and differential companion flange installation nut	kg-m (ft-lb)	4.0 to 4.5 (29 to 33)

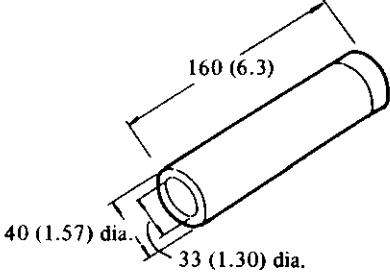
TROUBLE DIAGNOSES AND CORRECTIONS

Condition	Probable cause	Corrective action
Noise (unusual sound) It is difficult to definitely distinguish noise, or unusual sounds, emanating from the rear axle from other noises (unusual sounds) generated by the differential carrier and propeller shaft. If an unusual sound is present, therefore, check closely to be sure that the noise is in fact coming from the rear axle.	1) Loose joint. 2) Unbalanced tires. 3) Insufficient lubrication, improper adjustment, worn, or damaged wheel bearing. 4) Damaged transverse link rubber bushing. 5) Faulty shock absorber (in strut). 6) Damaged differential mount insulator. 7) Damaged universal joint. 8) Worn or seized drive shaft ball spline. 9) Broken coil spring.	Retighten. Adjust. Lubricate, adjust, or replace. Replace. Replace. Replace. Replace. Replace. Replace.
Unstable running. This problem is also related to the front suspension. For trouble diagnosis, refer to the paragraph covering the front suspension, also.	1) Loose wheel nut(s). 2) Damaged transverse link bushing. 3) Reduced shock absorber damping force. 4) Seized or damaged drive shaft ball spline. 5) Weakened spring.	Retighten. Replace. Replace. Replace. Replace.
Oil leakage	1) Damaged drive shaft dust cover. 2) Worn or damaged rear axle shaft grease seal.	Disassemble, clean, and reassemble, or replace dust cover. Replace.

SPECIAL SERVICE TOOLS

No.	Tool number & Tool name	Description Unit: mm (in)	For use on	Reference page or Figure No.
1.	ST07640000	Rear axle stand.  SE063	S30 B110 510 W510 V510 610 W610 V610 C130 KC130 C110 GC110	Fig. RA-4 Fig. RA-5
2.	ST36230000	Sliding hammer.  SE059	All models	Fig. RA-5
3.	ST38800000 Rear transverse link bushing replacer	For assembly and disassembly of the rear transverse link bushing 	S30	Fig. RA-32
4.	ST38300000 (ST49210000) Drive shaft snap ring plier	For removal of the drive shaft snap ring 	S30 510 610 KC130 GC110	Page RA-9

Rear Axle & Rear Suspension

No.	Tool number & tool name	Description Unit: mm (in)	For use on	Reference page or Figure No.
5.	ST37780000 Rear axle shaft outer bearing drift	For assembly of the rear wheel bearing (outer side) 	S30	Page RA-8



509 Debby Lane
Adamsville, AL 35005
<http://www.zcarcreations.com>
cborden@zcarcreations.com

NISSAN FACTORY SERVICE MANUAL CDROM END-USER LICENSE AGREEMENT

NOTICE TO USER: THIS IS A CONTRACT. BY PURCHASING AND USING THE SERVICE MANUAL ON CDROM, YOU ACCEPT ALL THE TERMS AND CONDITIONS OF THIS AGREEMENT.

This End User License Agreement accompanies the Service Manual on CDROM product and related explanatory materials. Please read this Agreement carefully. By purchasing and using the Service Manual on CDROM, you are implying that you have carefully read, agree with, and will adhere to the conditions set forth in this agreement. If you do not wish to accept the terms of this End User Agreement please do not use the Service Manual on CDROM. You will not be permitted to use the Service Manual on CDROM without consenting to this end user agreement.

Upon your acceptance of this Agreement, Z Car Creations, LLC grants to you a nonexclusive license to use the Service Manual on CDROM, provided that you agree to the following:

USE OF SOFTWARE

You may install the contents of the CD on a hard disk or other storage device for personal use only. Each Service Manual on CDROM comes with a single user license. Under no circumstances should the contents of the Service Manual CDROM be placed on a server for purposes of distributing or allowing access to the material over a network.

COPYRIGHT AND TRADEMARK RIGHTS

The Service Manual CDROM is owned by Z Car Creations, LLC and its structure and organization, all graphics and coding are considered intellectual property of Z Car Creations, LLC. The manual content itself is property of Nissan Motors. The Service Manual on CDROM is also protected by United States Copyright Law and International Treaty provisions. This Agreement does not grant you any intellectual property or resale rights to the Service Manual CDROM.

RESTRICTIONS

You agree not to modify, adapt, translate, reverse engineer, decompile or disassemble the PDF file on the Service Manual CDROM. The Service Manual on CDROM is licensed and distributed by Z Car Creations, LLC for single user utilization of its contents only. Licensed users will be permitted to use the contents of the Service Manual CDROM for multimedia presentation to an audience from a single machine using a large display or projection device but the Service Manual CDROM may not otherwise be distributed, sold to or made accessible to multiple users.

NO WARRANTY

The software is being delivered to you AS IS and Z Car Creations, LLC makes no warranty as to its use or performance. Z CAR CREATIONS, LLC DOES NOT AND CANNOT WARRANT THE PERFORMANCE OR RESULTS YOU MAY OBTAIN BY USING THE SERVICE MANUAL CDROM OR DOCUMENTATION, NOR MAKES ANY WARRANTIES, EXPRESS OR IMPLIED, AS TO NONINFRINGEMENT OF THIRD-PARTY RIGHTS, MERCHANTABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE. IN NO EVENT WILL Z CAR CREATIONS, LLC BE LIABLE TO YOU FOR ANY CONSEQUENTIAL, INCIDENTAL, OR SPECIAL DAMAGES FOR ANY REASON.



509 Debby Lane
Adamsville, AL 35005
<http://www.zcarcreations.com>
cborden@zcarcreations.com

GOVERNING LAW AND GENERAL PROVISIONS

This Agreement will be governed by the laws of the State of Alabama, USA, excluding the application of its conflicts of law rules. This Agreement will not be governed by the United Nations Convention on Contracts for the International Sale of Goods, the application of which is expressly excluded. If any part of this Agreement is found void and unenforceable, it will not affect the validity of the balance of the Agreement, which shall remain valid and enforceable according to its terms. You agree that the Service Manual on CDROM will not be shipped, transferred or exported into any country or used in any manner prohibited by the United States Export Administration act or any other export laws, restrictions or regulations. This Agreement shall automatically terminate upon failure by you to comply with its terms. This Agreement may only be modified in writing signed by and authorized officer for Z Car Creations, LLC.

Craig Borden
Z Car Creations, LLC
509 Debby Lane
Adamsville, AL 35005
USA

YOUR ACCEPTANCE OF THE FOREGOING AGREEMENT IS IMPLIED UPON PURCHASING AND USING THE SERVICE MANUAL CDROM.