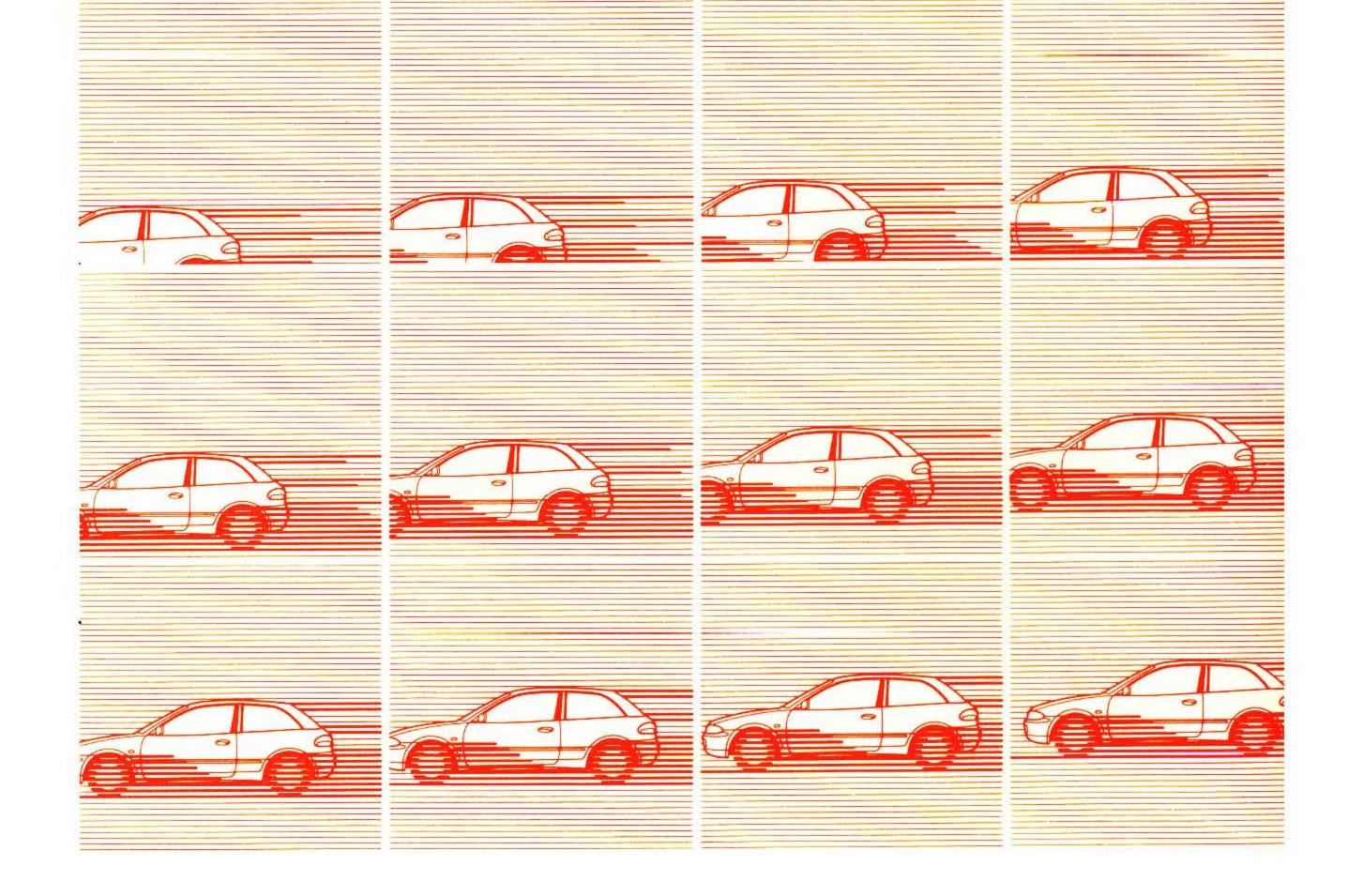


# Workshop Manual

# chassis

# Supplement

# COLT/LANCER



# **MITSUBISHI** COLT/LANCER

# WORKSHOP MANUAL **SUPPLEMENT**

## FOREWORD

This manual outlines changes in servicing procedures related to the chassis including vehicle inspections, adjustments and improvements in the newly equipped models. Use the following manuals in combination with this manual as required.

TECHNICAL INFORMATION MANUAL

WORKSHOP MANUAL

**PYME9501** 

CHASSIS GROUP	PWME9511
ENGINE GROUP	PWEE
	(Looseleaf edition)
ELECTRICAL WIRING	PHME9511
	PHME9511-A
	(Supplement)
BODY REPAIR MANUAL	PBME9501
PARTS CATALOGUE	B606F006A

All information. illustrations and product descriptions contained in this manual are current as at the time of publication. We, however, reserve the right to make changes at any time without prior notice or obligation.

# A MITSUBISHI MOTORS CORPORATION

General	00
Body	42
Exterior	51
Interior and Supplemental Restraint System (SRS)	52
Chassis Electrical	54
Heater, Air Conditioner and Ventilation	55

#### WARNING!

- (1) Improper service or maintenance of any component of the SRS and seat belt with pre-tensioner, or any SRS-related component, can lead to personal injury or death to service personnel (from inadvertent firing of the air bag and seat belt with pre-tensioner) or to the driver and passenger (from rendering the SRS inoperative).
- (2) SRS components and seat belt with pre-tensioner should not be subjected to heat, so remove the SRS-ECU, air bag module (driver's side and front passenger's side), clock spring, side impact sensor, front seat assembly (side air bag module) and seat belt with pre-tensioner before drying or baking the vehicle after painting. SRS-ECU, air bag module, clock spring and side impact sensor: 93°C or more Seat belt with pre-tensioner: 90°C or more
- (3) Service or maintenance of any SRS component and seat belt with pre-tensioner or SRS-related component must be performed only at an authorized MITSUBISHI dealer.
- (4) MITSUBISHI dealer personnel must thoroughly review this manual, and especially its GROUP 52B – Supplemental Restraint System (SRS), before beginning any service or maintenance of any component of the SRS and seat belt with pre-tensioner or any SRS-related component.

#### NOTE

Section titles with asterisks (\*) in the table of contents in each group indicate operations requiring warnings.

# GENERAL

#### CONTENTS

HOW TO USE THIS MANUAL	2
Model Indications	2
VEHICLE IDENTIFICATION	3

Chassis Number	4
MAJOR SPECIFICATIONS	5
PRECAUTIONS BEFORE SERVICE	7

# HOW TO USE THIS MANUAL

#### **MODEL INDICATIONS**

The following abbreviations are used in this manual for classification of model types.

- M/T: Indicates the manual transmission, or models equipped with the manual transmission.
- A/T: Indicates the automatic transmission, or models equipped with the automatic transmission.
- SOHC: Indicates an engine with the single overhead camshaft, or a model equipped with such an engine.
- MVV: Indicates the Mitsubishi Vertical Vortex engine, or models equipped with that engine.
- MPI: Indicates the multi-point injection, or engines equipped with the multi-point injection.
- 2WD: Indicates the front wheel-drive vehicles.

# **VEHICLE IDENTIFICATION**

.

#### MODELS

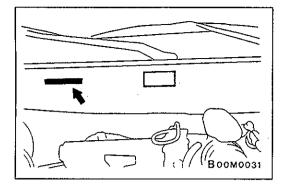
#### <Hatchback>

.

Model cod	le	Engine model	Transmission model	Fuel supply system
CJ1A	MNDEL6	4G13-SOHC (1,299 mℓ)	F5M41 (2WD-5M/T)	MPI
	MNDGL6			
	MNDER6	· · · · · · · · · · · · · · · · · · ·		
	MNJEL6			
	MNJGL6	—		
	MNJER6			
-	MRJEL6		F4A41 (2WD-4A/T)	
	MRJER6			
CJ4A	MNJEL6	4G92-SOHC (1,597 mℓ)	F5M41 (2WD-5M/T)	
	MNJGL6			
	MNJER6			
	MRJEL6		F4A41 (2WD-4A/T)	
	MRJGL6			
	MRJER6	7		
	MNDAL6		F5M41 (2WD-5M/T)	MPI (MVV)
	MNDAR6			

#### <Sedan>

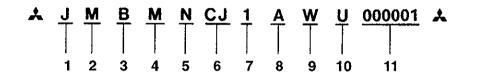
Model cod	le	Engine model	Transmission model	Fuel supply system
CK1A	SNDEL6	4G13-SOHC (1,299 mℓ)	F5M41 (2WD-5M/T)	MPI
	SNDGL6			
	SNDER6			
	SNJEL6			
	SNJGL6			
	SNJER6			
	SRJEL6		F4A41 (2WD-4A/T)	
	SRJER6			



#### **CHASSIS NUMBER**

The chassis number is stamped on the toeboard inside the engine compartment.

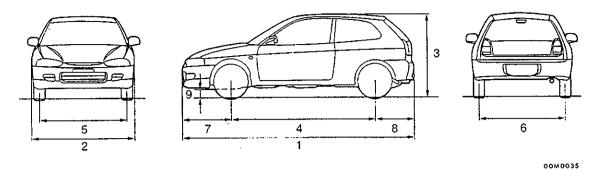
00M0089



No.	Items		Contents
1	Fixed figure	J	Asia
2	Distribution channel	М	Japan channel
3	Destination	A	For Europe, right hand drive
		в	For Europe, left hand drive
4	Body style	м	2-door hatchback
		S	4-door sedan
5	Transmission type	N	5-speed manual transmission
		R	4-speed automatic transmission
6	Development order	CJ	COLT
		СК	LANCER
7	Engine	1	4G13: 1,299 mℓ petrol engine
		4	4G92: 1,597 mℓ petrol engine
8	Sort	A	Passenger car
9	Model year	w	1998
10	Plant	U	Mizushima Motor Vehicle Works
11	Serial number	-	

00-4

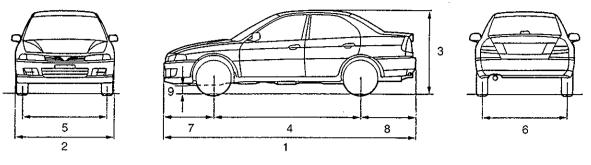
## MAJOR SPECIFICATIONS <HATCHBACK>



ltems			CJ1A MNDEL6, MNDGL6, MNDER6	CJ1A MNJEL6, MNJGL6, MNJER6	CJ1A MRJEL6, MRJER6	CJ4A MNJEL6, MNJGL6, MNJER6	CJ4A MRJEL6, MRJGL6, MRJER6	CJ4A MNDAL6, MNDAR6
Vehicle	Overall length	1	3,900	3,900	3,900	3,900	3,900	3,900
dimensions mm	Overall width	2	1,680	1,680	1,680	1,680	1,680	1,680
	Overall height (unladen)	3	1,365, 1,385* <sup>1</sup>	1,365, 1,385* <sup>1</sup>	1,365, 1,385* <sup>1</sup>	1,365, 1,385*1, 1,380* <sup>3</sup> , 1,400* <sup>1*3</sup>	1,365, 1,385 <sup>*1</sup> , 1,380 <sup>*3</sup> , 1,400 <sup>*1*3</sup>	1,365, 1,385* <sup>1</sup> ,
	Wheelbase	4	2,415	2,415	2,415	2,415	2,415	2,415
	Track-front	5	1,450	1,450	1,450	1,450	1,450	1,450
	Track-rear	6	1,460	1,460	1,460	1,460	1,460	1,460
	Overhang-front	7	825	825	825	825	825	825
	Overhang-rear	8	660	660	660	660	660	660
	Ground clearance (unladen)	9	150	150	150	150, 165* <sup>3</sup>	150, 165* <sup>3</sup>	150
Vehicle	Kerb weight		945	950	970	975	995	975
weight kg	Max. gross vehicle weight rating		1,445, 1,495* <sup>2</sup>	1,445, 1,495* <sup>2</sup>	1,465, 1,515* <sup>2</sup>	1,470, 1,520* <sup>2</sup>	1,480, 1,530* <sup>2</sup>	1,470, 1,520* <sup>2</sup>
	Max. axle weight rating-front		810	810	810	810	810	810
	Max. axle weight rating-rear		705, 770* <sup>2</sup>	705, 770 <sup>*2</sup>	705, 77 <u>0</u> *2	705, 770* <sup>2</sup>	705, 770* <sup>2</sup>	705, 770* <sup>2</sup>
Seating capa	acity		5					
Engine	Model No.		4G13			4G92		
	Total displacement mℓ		1,299			1,597		
Transmis-	Model No.		F5M41		F4A41	F5M41	F4A41	F5M41
sion	Туре		5-speed manual		4-speed automatic	5-speed manual	4-speed automatic	5-speed manual
Fuel system	Fuel supply system		Electronic	controlled mu	ltipoint fuel in	jection		

NOTE \*1: Vehicles with roof spoiler \*2: In case of towing \*3: For vehicles with high ground suspension

### <SEDAN>



00M0036

Items			CK1A SNDEL6, SNDGL6, SNDER6	CK1A SNJEL6, SNJGL6, SNJER6	CK1A SRJEL6, SRJER6
Vehicle	Overall length	1	4,295	4,295	4,295
dimensions mm	Overall width	2	1,690	1,690	1,690
	Overall height (unladen)	3	1,395	1,395	1,395
	Wheelbase	4	2,500	2,500	2,500
	Track-front	5	1,450	1,450	1,450
	Track-rear	6	1,460	1,460	1,460
	Overhang-front	7	845	845	845
	Overhang-rear	8	950	950	950
	Ground clearance (unladen)	9	150 ·	150	150
Vehicle	Kerb weight		995	1,000	1,020
weight kg	Max. gross vehicle weight rating		1,485, 1,535*	1,485, 1,535*	1,500, 1,550*
	Max. axle weight rating-front		820	820	820
	Max. axle weight rating-rear		720, 790*	720, 790*	720, 790*
Seating capa	acity		5		······
Engine	Model No.		4G13		
	Total displacement m	l	1,299		
Transmis-	Model No.		F5M41		F4A41
sion	Туре		5-speed manual 4-speed automa		
Fuel system	Fuel supply system		Electronic controlled	multipoint fuel injection	· · · ·

NOTE \*: In case of towing

# PRECAUTIONS BEFORE SERVICE

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS), SEAT BELT WITH PRE-TENSIONER

1. Items to follow when servicing SRS

(1) Be sure to read GROUP 52B – Supplemental Restraint System (SRS). For safe operations, please follow the directions and heed all warnings.

- (2) Wait at least 60 seconds after disconnecting the battery cable before doing any further work. The SRS system is designed to retain enough voltage to deploy the air bag even after the battery has been disconnected. Serious injury may result from unintended air bag deployment if work is done on the SRS system immediately after the battery cable is disconnected.
- (3) Warning labels must be heeded when servicing or handling SRS components and seat belt with pre-tensioner. Warning labels are located in the following locations.
  - Sun visor
  - Glove box
  - SRS air bag control unit
  - Steering wheel
  - Steering gear and linkage
  - Air bag module (driver's side and front passenger's side)
  - Clock spring
  - Seat belt with pre-tensioner
  - Side air bag module
  - Side impact sensor
- (4) Always use the designated special tools and test equipment.
- (5) Store components removed from the SRS and seat belt with pre-tensioner in a clean and dry place.

The air bag module and seat belt with pre-tensioner should be stored on a flat surface and placed so that the pad surface is facing upward.

Do not place anything on top of it.

- (6) Never attempt to disassemble or repair the SRS components (SRS air bag control unit, air bag module, clock spring and side impact sensor) and seat belt with pre-tensioner.
- (7) Whenever you finish servicing the SRS and seat belt with pre-tensioner, check the SRS warning lamp operation to make sure that the system functions properly.
- (8) Be sure to deploy the air bag and seat belt with pre-tensioner before disposing of the air bag module and seat belt with pre-tensioner or disposing of a vehicle equipped with an air bag and seat belt with pre-tensioner. (Refer to GROUP 52B – Air Bag Module and Seat Belt Pre-tensioner Disposal Procedures.)
- Observe the following when carrying out operations on places where SRS components and seat belt with pre-tensjoner are installed, including operations not directly related to the SRS air bag and seat belt with pre-tensioner.
  - (1) When removing or installing parts do not allow any impact or shock to the SRS components and seat belt with pre-tensioner.
  - (2) SRS components and seat belt with pre-tensioner should not be subjected to heat, so remove the SRS components and seat belt with pre-tensioner before drying or baking the vehicle after painting.
    - SRS components: 93°C or more
    - Seat belt with pre-tensioner 90°C or more

After re-installing them, check the SRS warning lamp operation to make sure that the system functions properly.

# GROUP 42 BODY

### **GENERAL**

#### **OUTLINE OF CHANGES**

To correspond to the abolition of manual operation in the event of a sunroof problem, a function which releases the clamping prevention mechanism and allows operation to continue until fully closed (for a distance of 30 mm) has been provided for cases when reversing occurs repeatedly for 5 times or more due to deformation (clamping prevention mechanism is operating). The sunroof wrench has also been abolished.

# **GROUP 51 EXTERIOR**

# GENERAL

#### **OUTLINE OF CHANGES**

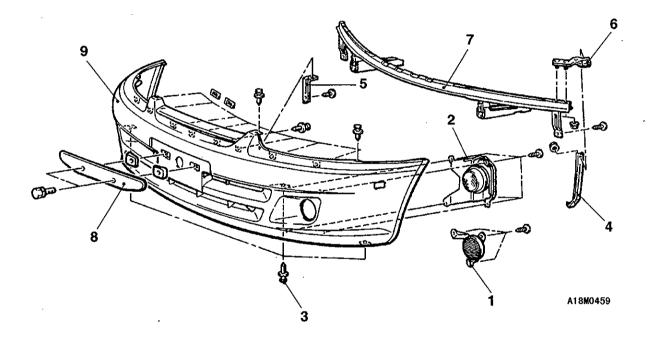
Following items have been changed. The service procedures for these items have been now established.

- Front bumper ۲
- Fog lamp
- Aero parts

# FRONT BUMPER

#### DISASSEMBLY AND REASSEMBLY

<Hatchback>



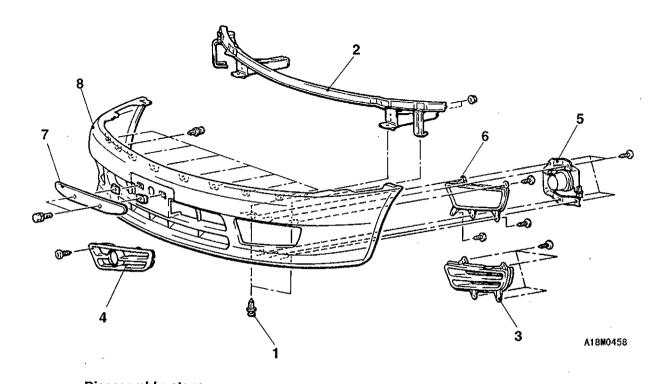
#### **Disassembly steps**

- Air intake bezel <Vehicles without fog lamp>
   Front fog lamp assembly <Vehicles with fog lamp>
   Clip

- - 4. Side rear plate

- 5. Center upper plate
   6. Side upper plate
   7. Front bumper reinforcement
- 8. Licence plate bracket 9. Bumper face

<Sedan>



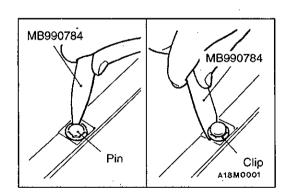
#### **Disassembly steps**

- 1. Clip
- 2. Front bumper reinforcement

.

- Air intake bezel
   <Vehicles without fog lamp>
   Front fog lamp bezel
   <Vehicles with fog lamp>

- 5. Front fog lamp assembly <Vehicles with fog lamp>
   6. Front fog lamp bezel plate <Vehicles with fog lamp>
   7. Licence plate bracket
   8. Bumper face



**DISASSEMBLY SERVICE POINT** 

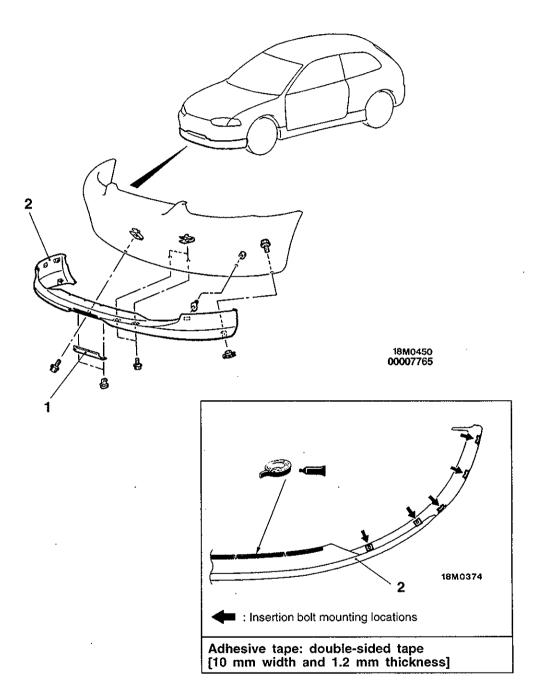
#### A CLIP REMOVAL

(1) Use the special tool to pull up the centre pin in the clip. (2) Remove the clip.

# **AERO PARTS**

#### **REMOVAL AND INSTALLATION**

<Hatchback>

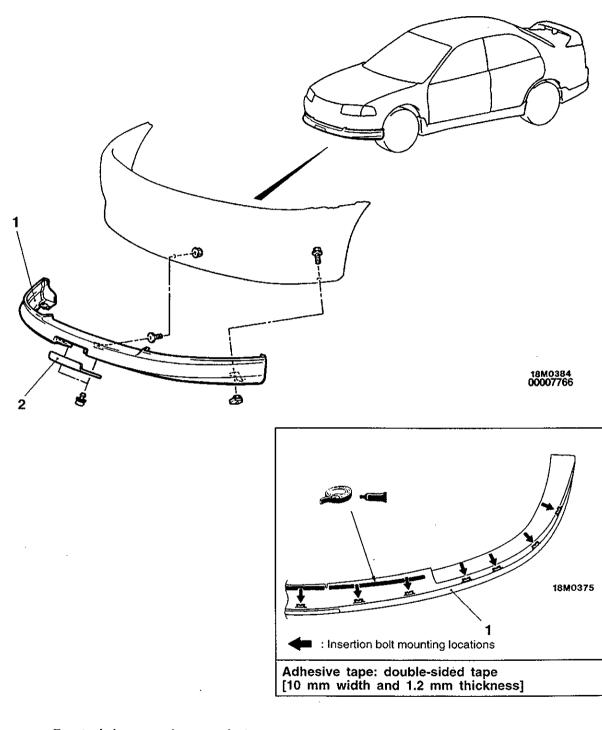


#### Front airdam panel removal steps

1. Center cover 2. Front airdam panel

•A <

NOTE For each service point, refer to Basic Manual. <Sedan>



#### Front airdam panel removal steps

A 1. Front airdam panel
A 2. Center cover

NOTE For each service point, refer to Basic Manual.

# INTERIOR AND SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

#### CONTENTS

INTERIOR	52A
SUPPLEMENTAL RESTRAINT SYSTEM (SRS)	52B

# GROUP 52A

# GENERAL

#### **OUTLINE OF CHANGES**

The following maintenance service points have been added to correspond to the addition of an SRS side air bag. Maintenance service points not

## SEAT

#### FRONT SEAT REMOVAL AND INSTALLATION

#### Pre-removal and Post-installation Operation

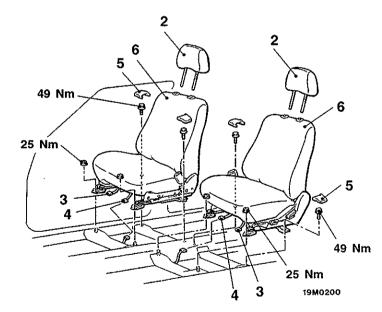
 Rear Floor Console Assembly Removal and Installation (Refer to '96 COLT/LANCER Basic Manual.)

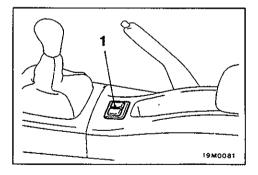
#### CAUTION: SRS

When removing and installing the rear floor console (vehicles equipped with SRS), do not let it bump against the SRS-ECU.

listed below are the same as those given in the '96 COLT/LANCER Basic Manual (Pub. No. PWME9511).

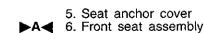
 Before removal of the seat equipped with the side air bag module, refer to GROUP 52B – SRS Service Precautions and Air Bag Module.





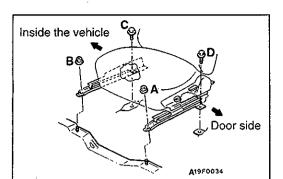
00007767

- Heated seat switch <vehicles with heated seat>
   Headrestraint
- Front seat assembly removal steps
- 3. Harness connector <vehicles with heated seat>
- 4. Harness connector



#### NOTE

After provisionally tightening the seat assembly mounting nuts and bolts in every installation location, fully tighten them to the specified torque.

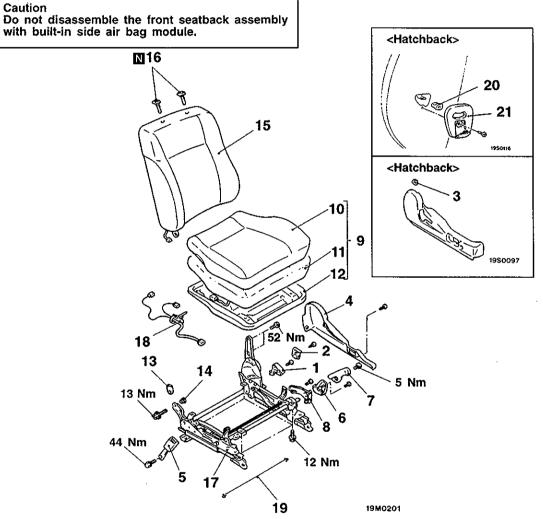


# INSTALLATION SERVICE POINT

#### ►A FRONT SEAT ASSEMBLY INSTALLATION

Tighten the front seat mounting bolts in the order A, B, C, and D.

#### DISASSEMBLY AND REASSEMBLY



#### **Disassembly steps**

- 1. Reclining adjuster knob 2. Slide adjuster knob
- 3. Walk-in knob <Hatchback>
- 4. Front seat side shield cover
- 5. Inner seat belt
- 6. Height adjuster inner lever
- 7. Height adjuster lever
- 8. Inner cover
- 9. Front seat cushion assembly
- 10. Front seat cushion cover
- 11. Front seat cushion pad

- 00007768
- 12. Front seat cushion frame
- 13. Protector
- 14. Bushing

- 15. Seatback assembly
   16. Headrestraint guide
   17. Seat adjuster assembly
- 18. Seat heater wiring harness <Vehicles with heated seat>
- 19. Wire
- 20. Knob <Hatchback>
- 21. Cover <Hatchback>

#### NOTES

.

# SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

#### CONTENTS

GENERAL 2	WARNING/CAUTION LABELS 19
SRS SERVICE PRECAUTIONS 2	AIR BAG MODULES 19
SPECIAL TOOLS 4	SIDE IMPACT SENSOR 20
TROUBLESHOOTING 5	SIDE AIR BAG MODULE DISPOSAL PROCEDURES
SRS MAINTENANCE 16	Undeployed Side Air Bag Module Disposal 22
POST-COLLISION DIAGNOSIS	Deployed Side Air Bag Module Disposal Procedures 25
INDIVIDUAL COMPONENT SERVICE 18	

CAUTION

- Carefully read and observe the information in the SERVICE PRECAUTIONS (P.52B-2.) prior to any service.
- For information concerning troubleshooting or maintenance, always observe the procedures in the Troubleshooting (P.52B-5.) section.
- If any SRS components are removed or replaced in connection with any service procedures, be sure to follow the
  procedures in the INDIVIDUAL COMPONENT SERVICE section (P.52B-18.) for the components involved.
- If you have any questions about the SRS, please contact your local distributor.

# GENERAL

#### **OUTLINE OF CHANGES**

The following maintenance service points have been established to correspond to the addition of an SRS side air bag. Maintenance service points

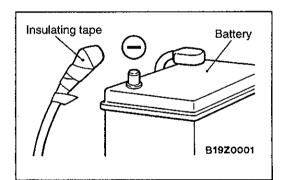
# SRS SERVICE PRECAUTIONS

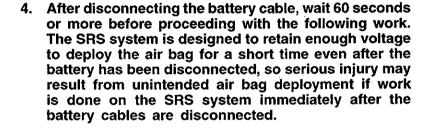
- 1. In order to avoid injury to yourself or others from accidental deployment of the air bag and accidental operation of the seat belt with pre-tensioner during servicing, read and carefully follow all the precautions and procedures described in this manual.
- Do not use any electrical test equipment on or near SRS components, except those specified on P.52B-5. <Refer to '96 COLT/LANCER Basic Manual (Pub. No. PWME9511)>

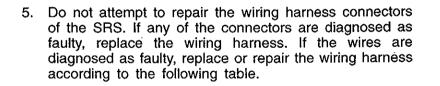
not listed below are the same as those given in the '96 COLT/LANCER Basic Manual (Pub. No. PWME9511).

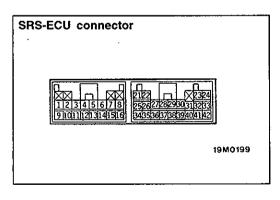
- 3. Never Attempt to Repair the Following Components:
  - Side air bag module
  - Side impact sensor

NOTE If any of these components are diagnosed as faulty, they should only be replaced, in accordance with the INDIVIDUAL COM-PONENTS SERVICE procedures in this manual, starting at page 52B-18.





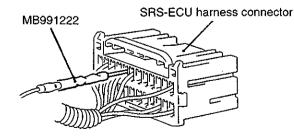




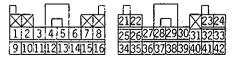
SRS-ECU Terminal No.	Destination of harness	Corrective action
1, 2	– ·	-
3	Body wiring harness $\rightarrow$ Earth	Correct or replace the body wiring harness.
4	Body wiring harness $\rightarrow$ SRS warning lamp	Correct or replace each wiring harness.
5, 6	Body wiring harness $\rightarrow$ Air bag module (Front Passenger's side)	Correct or replace the body wiring harness.
7, 8	Body wiring harness $\rightarrow$ Clock spring $\rightarrow$ Air bag module (Driver's side)	Correct or replace the body wiring harness. Replace the clock spring.
9	Body wiring harness $\rightarrow$ Junction block (fuse No.2)	Correct or replace the body wiring harness.
10, 11		
12	Body wiring harness $\rightarrow$ Junction block (fuse No.4)	
13	-	
14	Body wiring harness $\rightarrow$ Earth	
16	Body wiring harness $\rightarrow$ Diagnosis connector	
17 to 20	-	
21, 22	Body wiring harness $\rightarrow$ Side air bag module (L.H.)	
23, 24	Body wiring harness $\rightarrow$ Side air bag module (R.H.)	
25 to 33	-	-
34, 35, 36	Body wiring harness $\rightarrow$ Side impact sensor (L.H.)	Correct or replace each wiring harness.
37 to 39	-	
40, 41, 42	Body wiring harness $\rightarrow$ Side impact sensor (R.H.)	

6. Inspection of the SRS-ECU harness connector should be carried out by the following procedure. Insert the special tool (narrow probe in the harness set) into connector from harness side (rear side), and connect the tester to this probe. If any to other than the special tool is used, it may cause damage to the harness and other components. Furthermore, measurement should not be carried out by touching the probe directly against the terminals from the front of the connector. The terminals are plated to increase their conductivity, so that if they are touched directly by the probe, the plating may break, which will cause drops in reliability.

19R0052



SRS-ECU harness connector (rear side)



1910099 00005711

- 7. SRS components and seat belt with pre-tensioner should not be subjected to heat, so remove the SRS-ECU, air bag module (driver's side and front passenger's side), clock spring, side impact sensors, front seat assemblies (side air bag module), and seat belts with pre-tensioner before drying or baking the vehicle after painting.
  - SRS-ECU, air bag module, clock spring, side impact sensor: 93°C or more
  - Seat belt with pre-tensioner: 90°C or more
- 8. Whenever you finish servicing the SRS, check warning lamp operation to make sure that the system functions properly.
- 9. Make certain that the ignition switch is OFF when the MUT-II is connected or disconnected.
- 10. If you have any questions about the SRS, please contact your local distributor.

NOTE

SERIOUS INJURY CAN RESULT FROM UNINTENDED AIR BAG DEPLOYMENT, SO USE ONLY THE PROCEDURES AND EQUIPMENT SPECIFIED IN THIS MANUAL.

# SPECIAL TOOLS

Tool	Number	Name	Use
B991502	MB991502	MUT-II sub assembly	<ul> <li>Reading diagnosis codes</li> <li>Erasing diagnosis code</li> <li>Reading trouble period</li> <li>Reading erase times</li> </ul>
19U0039	MB991613	SRS check har- ness	Checking the SRS electrical circuitry
A B C	MB991223 A: MB991219 B: MB991220 C: MB991221 D: MB991222	Harness set A: Check harness B: LED harness C: LED harness adapter D: Probe	Checking the continuity and measuring the voltage at the SRS-ECU harness connector
D C991223			
B686560	MB686560	SRS air bag adapter harness A	Deployment of side air bag module outside the vehicle

# TROUBLESHOOTING

#### STANDARD FLOW OF DIAGNOSTIC TROUBLESHOOTING

Refer to GROUP 00 - How to Use Troubleshooting/Inspection Service Points.

#### DIAGNOSIS FUNCTION

#### DIAGNOSIS CODES CHECK

Connect the MUT-II to the diagnosis connector (16-pin) under the instrument under cover, then check diagnosis codes.

(Refer to GROUP 00 - How to Use Troubleshooting/Inspection Service Points.)

#### ERASING DIAGNOSIS CODES

Refer to GROUP 00 - How to Use Troubleshooting/Inspection Service Points.

#### **INSPECTION CHART FOR DIAGNOSIS CODES**

Inspect according to the inspection chart that is appropriate for the malfunction code.

Code No.	Diagnosis Item		Reference page
14	Analog G-sensor system in the SRS-ECU		52B-6
15, 16	Front impact safing G sensor system in	Front impact safing G sensor system inside SRS-ECU	
17	Side impact safing G sensor system in	side SRS-ECU	52B-6
21, 22, 61, 62	Driver's side air bag module (squib) sy	Driver's side air bag module (squib) system	
24, 25, 64, 65	Front passenger's side air bag module	(squib) system	52B-8
31, 32	SRS-ECU capacitor system		52B-8
34*	Connector lock system	Connector lock system	
35	SRS-ECU (deployed air bag) system		52B-9
41*	IG <sub>1</sub> (A) power circuit system		52B-9
42*	IG <sub>1</sub> (B) power circuit system		52B-9
43	SRS warning lamp drive circuit	Lamp does not illuminate.*	52B-10
	system	Lamp does not switch off.	52B-10
44*	SRS warning lamp drive circuit system		52B-10
45	Internal circuit system of non-volatile memory (EEPROM) inside SRS-ECU		52B-11
51, 52	Driver's side air bag module (squib ignition drive circuit) system		52B-11
54, 55	Front passenger's side air bag module	Front passenger's side air bag module (squib ignition drive circuit) system	
71, 72, 75, 76	Side air bag module (R.H) (squib) syst	Side air bag module (R.H) (squib) system	
73, 74	Side air bag module (R.H.) (squib) ign	Side air bag module (R.H.) (squib) ignition drive circuit system	
79, 93	Side impact sensor (L.H.) communicat	Side impact sensor (L.H.) communication system	
81, 82, 85, 86	Side air bag module (L.H.) (squib) sys	Side air bag module (L.H.) (squib) system	
83, 84	Side air bag module (L.H.) (squib) ignition drive circuit system		52B-13

Code No.	Diagnosis Item	Reference page
89, 96	Side impact sensor (R.H.) communication system	52B-13
91*	Side impact sensor (L.H.) power supply circuit system	52B-13
92	Side impact sensor (L.H.) system	52B-13
94*	Side impact sensor (R.H.) power supply circuit system	52B-14
95	Side impact sensor (R.H.) system	52B-14

NOTE

- (1) \*: If the vehicle condition returns to normal, the diagnosis code will be automatically erased, and the SRS warning lamp will return to normal.
- (2) If the vehicle has a discharged battery it will store the fault codes 41 or 42. When these diagnosis codes are displayed, check the battery.

## **INSPECTION PROCEDURE CLASSIFIED BY DIAGNOSIS CODE**

Code No.14 Analog G-sensor system in the SRS-ECU	Probable cause	
<ul> <li>The SRS-ECU monitors the output of the analog G-sensor inside the SRS-ECU.</li> <li>It outputs this code when any of the following are detected.</li> <li>When the analog G-sensor is not operating</li> <li>When the characteristics of the analog G-sensor are abnormal</li> <li>When the output from the analog G-sensor is abnormal</li> </ul>	Malfunction of SRS-ECU	

Replace the SRS-ECU.

Code No.15 or 16 Front impact safing G sensor system inside SRS-ECU	Probable cause
These diagnosis codes are output if there is a short or open circuit between the terminals of the safing G-sensor inside the SRS-ECU. The trouble causes for each diagnosis code No. are as follows.	Malfunction of SRS-ECU

Code No.	Trouble cause
15	Short circuit in the safing G-sensor
16	Open circuit in the safing G-sensor

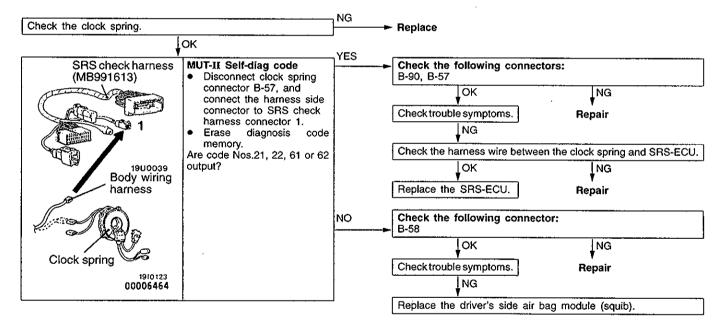
Replace the SRS-ECU.

Code No.17 Side impact safing G sensor system inside SRS-ECU	Probable cause
<ul> <li>This code is output if the following are detected from the side impact safing G sensor output.</li> <li>Safing G sensor is not operating</li> <li>Safing G sensor characteristics are abnormal</li> <li>Safing G sensor output is abnormal</li> </ul>	Malfunction of SRS-ECU

Replace the SRS-ECU.

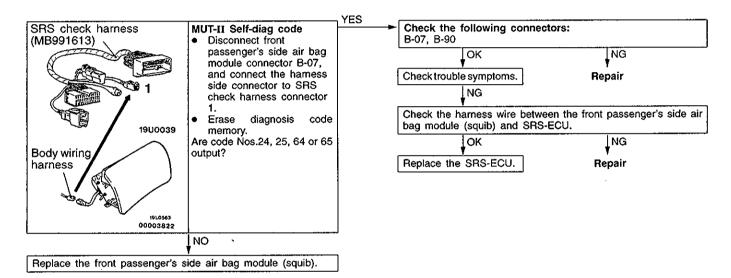
Code No.21, 22, 61 or 62 Driver's side air bag module (squib) system	Probable cause
These diagnosis codes are output if there is abnormal resistance between the input terminals of the driver's side air bag module (squib). The trouble causes for each diagnosis code No. are as follows.	<ul> <li>Malfunction of clock spring</li> <li>Partial disconnection due to incorrect clock spring neutral position</li> <li>Malfunction of wiring harnesses or connectors</li> <li>Malfunction of driver's side air bag module (squib)</li> <li>Malfunction of SRS-ECU</li> </ul>

Code No.	Trouble cause	
21	<ul> <li>Short in driver's side air bag module (squib) or harness short</li> <li>Short in clock spring</li> </ul>	
22	<ul> <li>Open circuit in driver's side air bag module (squib) or open harness</li> <li>Open circuit in clock spring</li> <li>Disconnected driver's side air bag module (squib) connector</li> <li>Partial disconnection due to incorrect clock spring neutral position</li> <li>Malfunction of connector contact</li> </ul>	
61	Short in driver's side air bag module (squib) harness leading to the power supply	
62	Short in driver's side air bag module (squib) harness leading to the earth	



Code No.24, 25, 64 or 65 Front passenger's side air bag module (squib) system	Probable cause
These diagnosis codes are output if there is abnormal resistance between the input terminals of the front passenger's side air bag module (squib). The trouble causes for each diagnosis code No. are as follows.	<ul> <li>Malfunction of wiring harnesses or connectors</li> <li>Malfunction of front passenger's side air bag module (squib)</li> <li>Malfunction of SRS-ECU</li> </ul>

Code No.	Trouble cause	
24	Short in front passenger's side air bag module (squib) or harness short	
25	<ul> <li>Open circuit in front passenger's side air bag module (squib) or open harness</li> <li>Malfunction of connector contact</li> </ul>	
64	<ul> <li>Short in front passenger's side air bag module (squib) harness leading to the power supply</li> </ul>	
65	• Short in front passenger's side air bag module (squib) harness leading to the earth	



Code No.31 or 32 SRS-ECU capacitor system	Probable cause
These diagnosis codes are output if the voltage at the SRS-ECU capacitor terminals is higher (No.31) or lower (No.32) than the specified value for 5 seconds or more. However, if diagnosis code Nos.41 and 42 are being output due to a drop in battery voltage, code No.32 will not be detected.	Malfunction of SRS-ECU

Replace the SRS-ECU.

Code No.34 Connector lock system	Probable cause	
This diagnosis code is output if a poor connection of the SRS-ECU is detected. However, if the vehicle condition returns to normal, diagnosis code No.34 will be automatically erased, and the SRS warning lamp will switch off.	<ul> <li>Malfunction of connectors</li> <li>Malfunction of SRS-ECU</li> </ul>	

Check the following connector: B-89, B-90	NG ► Repair
ок	
Replace the SRS-ECU.	

Code No.35 SRS-ECU (deployed air bag) system	Probable cause
This diagnosis code is output after the air bag deploys. If this code is output before the air bag has deployed, the cause is probably a malfunction inside the SRS-ECU.	Malfunction of SRS-ECU

Replace the SRS-ECU.

. [

Code No.41 IG <sub>1</sub> (A) power circuit system	Probable cause
This diagnosis code is output if the voltage between the $IG_1$ (A) terminal and the earth is lower than the specified value for a continuous period of 5 seconds or more. However, if the vehicle condition returns to normal, diagnosis code No.41 will be automatically erased, and the SRS warning lamp will switch off.	<ul> <li>Malfunction of wiring harnesses or connectors</li> <li>Malfunction of SRS-ECU</li> </ul>

Measure at SRS-ECU connector B-90. • Disconnect the connector, and measure at the harness side	NG	Check the following connector B-70, B-73, B-90	ors:
<ul> <li>connector.</li> <li>Connect the battery (-) terminal.</li> <li>Ignition switch: ON</li> <li>Voltage between terminal 12 and body earth</li> <li>OK: 9 V or more</li> </ul>		OK Check trouble symptoms.	NG ▼ Repair
Replace the SRS-ECU.	]	Check the harness wire between IG1, and repair if necessary.	the SRS-ECU and ignition switch

Code No.42 IG <sub>1</sub> (B) power circuit system	Probable cause
This diagnosis code is output if the voltage between the $IG_1$ (B) terminal and the earth is lower than the specified value for a continuous period of 5 seconds or more. However, if the vehicle condition returns to normal, diagnosis code No.42 will be automatically erased, and the SRS warning lamp will switch off.	<ul> <li>Malfunction of wiring harnesses or connectors</li> <li>Malfunction of SRS-ECU</li> </ul>

. . .

	NG		
Measure at SRS-ECU connector B-90. • Disconnect the connector, and measure at the harness side		Check the following connec B-70, B-73, B-90	tors:
<ul> <li>connector.</li> <li>Connect the battery (-) terminal.</li> <li>Ignition switch: ON</li> </ul>		ОК	NG
<ul> <li>Voltage between terminal 9 and body earth</li> </ul>		Check trouble symptoms.	Repair
OK: 9 V or more	}	NG	
OK	•	Check the harness wire betwee	n the SRS-ECU and ignition switch
Replace the SRS-ECU.	}	IG1, and repair if necessary.	
	1		

,

Code No.43 SRS warning lamp drive circuit s does not illuminate.)	system (Lamp	Probable ca	use
This diagnosis code is output when an open circuit occurs for a of 5 seconds while the SRS-ECU in monitoring the SRS warning is OFF (transistor OFF). However, if this code is output due to an open circuit, if the vehic to normal, this diagnosis code No.43 will be automatically erased, a lamp will return to normal.	lamp and the lamp	<ul> <li>Blown bulb</li> <li>Malfunction of</li> </ul>	wiring harnesses or connectors SRS-ECU combination meter
	NG	hadle francisco atta a	
<ul> <li>Measure at SRS-ECU connector B-90.</li> <li>Disconnect the connector, and measure at the harness side</li> </ul>	Blown	bulb inspection	]
<ul> <li>connector.</li> <li>Connect the battery (-) terminal.</li> <li>Ignition switch: ON</li> </ul>			♥ Repair
• Connect terminal 4 to the body earth. OK: Lamp illuminates		the following cor	
Įок	J [B-70,	B-69, B-02, B-03, E	NG
Replace the SRS-ECU.	Check	trouble symptoms.	y Repair
		NG	
		the harness wire bet nition switch IG1.	ween the SRS-ECU, combination meter
		ок	NG
	Replace meter.	e the combination	Repair
Code No.43 SRS warning lamp drive circuit (Lamp does not switch off.)	system	Probable cau	ıse
This diagnosis code is output when a short to earth occurs in th the lamp and the SRS-ECU while SRS-ECU is monitoring the and the lamp is ON.		<ul> <li>Malfunction of</li> </ul>	wiring harnesses or connectors SRS-ECU combination meter
NO Check the	fellowing comparts	NG	Repair
<ul> <li>SRS warning lamp inspection</li> <li>Connect the battery (-) terminal.</li> <li>Ignition switch: ON</li> </ul>		rs:	перан
Does lamp switch off when     SRS-ECU connector B-90 is     Check troub	OK De symptoms.	NG	Check the harness wire between the
disconnected?			SRS-ECU and combination meter.
Replace the SRS-ECU.			OK NG Repair
		_	Перан
			Replace the combination meter.
			· · · · · · · · · · · · · · · · · · ·

Code No.44 SRS warning lamp drive circuit system	Probable cause
This diagnosis code is output when a short occurs in the lamp drive circuit or a malfunction of the output transistor inside the SRS-ECU is detected while the SRS-ECU is monitoring the SRS warning lamp drive circuit. However, if the vehicle condition returns to normal, diagnosis code No.44 will be automatically erased, and the SRS warning lamp will switch off.	<ul> <li>Malfunction of wiring harnesses or connectors</li> <li>Malfunction of SRS-ECU</li> </ul>

	- OK		
Check the SRS warning lamp drive circuit system.		Replace the	SRS-ECU.
(Refer to P.52B-10.)	1		
	ļ		

•

#### SRS - Troubleshooting

Code No.45 Internal circuit system of non-volatile memory (EEPROM) inside SRS-ECU	Probable cause
This diagnosis code is output if there is an internal problem with the non-volatile memory (EEPROM) ,etc. inside the SRS-ECU.	Malfunction of SRS-ECU

Replace the SRS-ECU.

# Code No.51 or 52 Driver's side air bag module (squib ignition drive circuit) system Probable cause This diagnosis code is output if a short (No.51) or an open circuit (No.52) is detected in the circuit for the driver's seat. • Malfunction of SRS-ECU

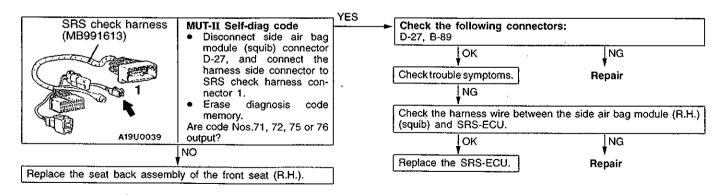
Replace the SRS-ECU.

Code No.54 or 55 Front passenger's side air bag module (squib ignition drive circuit) system	Probable cause	
This diagnosis code is output if a short (No.54) or an open circuit (No.55) is detected in the circuit for the passenger's seat.	Malfunction of SRS-ECU	

Replace the SRS-ECU.

Code No.71, 72, 75 or 76 Side air bag module (R.H.) (squib) system	Probable cause
These diagnosis codes are output if the resistance value between the side air bag module (R.H.) (squib) input terminals of the SRS-ECU is abnormal. The problems which cause these codes to be output are as follows.	<ul> <li>Malfunction of wiring harnesses or connectors</li> <li>Malfunction of side air bag module (R.H.) (squib)</li> <li>Malfunction of SRS-ECU</li> </ul>

Code No.	Trouble cause
71	Short in side air bag module (R.H.) (squib) or harness short
72	<ul> <li>Open circuit in side air bag module (R.H.) (squib) or open harness</li> <li>Malfunction of connector contact</li> </ul>
75	Short in side air bag module (R.H.) (squib) harness leading to the power supply
76	Short in side air bag module (R.H.) (squib) harness leading to the earth



Code No.73 or 74 Side air bag module (R.H.) (squib) ignition drive circuit system	Probable cause
These diagnosis codes are output if there is a short-circuit (code No.73) or an open circuit (code No.74) in the squib ignition drive circuit.	Malfunction of SRS-ECU

Replace the SRS-ECU.

# Code No.79 or 93 Side impact sensor (L.H.) communication system

These diagnosis codes are output if communication between the side impact sensor (L.H.) and the SRS-ECU is not possible (code No.79) or abnormal (code No.93).

Malfunction of wiring harnesses or connectors
 Malfunction of side impact sensor (L.H.)
 Malfunction of SRS-ECU

**Probable cause** 

	. NO			
MUT-II Self-diag code	·····	Check the following connectors:		
• Switch over the right side impact sensor (R.H.) and the side	1	D-28, B-89		
impact sensor (L.H.).		Ток		ING
• Erase diagnosis code memory. Are code Nos.79 and 93 erased and code Nos.89 and 96 output?		V	<u>.</u>	
	J	Check trouble symp	otoms.	Repair
YES	_	NG		
Replace the side impact sensor (L.H.).	]	Check the harness and SRS-ECU.	wire between the	side impact sensor (L.H.)
		↓oκ		NG
		Replace the SRS-	ECU.	Repair

Code No.81, 82, 85 or 86 Side air bag module (L.H.) (squib) system	Probable cause
These diagnosis codes are output if the resistance value between the side air bag module (L.H.) (squib) input terminals of the SRS-ECU is abnormal. The problems which cause these codes to be output are as follows.	<ul> <li>Malfunction of wiring harnesses or connectors</li> <li>Malfunction of side air bag module (L.H.) (squib)</li> <li>Malfunction of SRS-ECU</li> </ul>

Code No.	Trouble cause
81	Short in side air bag module (L.H.) (squib) or harness short
82	<ul> <li>Open circuit in side air bag module (L.H.) (squib) or open harness</li> <li>Malfunction of connector contact</li> </ul>
85	Short in side air bag module (L.H.) (squib) harness leading to the power supply
86	Short in side air bag module (L.H.) (squib) harness leading to the earth

SRS check harness (MB991613)	MUT-II Self-diag code • Disconnect side air bag	YES	Check the D-30, B-89	following connectors	:
	module (L.H.) (squib) con- nector D-30, and connect the harness side connector		Checktroub	OK le symptoms.	↓NG ▼ Repair
	to SRS check harness connector 1. • Erase diagnosis code			NG	•
	memory. Are code Nos.81, 82, 85 or 86		Check the h (squib) and		he side air bag module (L.H.)
A19U0039	output?			Lok	l∎NG
	NO		Replace the	SRS-ECU.	Repair
Replace the seat back assemi	bly of the front seat (L.H.).			· · · · · · · · · · · · · · · · · · ·	-

### SRS - Troubleshooting

52B-13

.

•

Code No.83 or 84 Side air bag module (L.H.) (signition drive circuit system	squib)	Probable cause	
These diagnosis codes are output if there is a short-circuit (code No.83) or circuit (code No.84) in the squib ignition drive circuit.	an open	Malfunction of SRS-ECU	J
Replace the SRS-ECU.			
Code No.89 or 96 Side impact sensor (R.H.) communication system		Probable cause	
These diagnosis codes are output if communication between the side impact (R.H.) and the SRS-ECU is not possible (code No.89) or abnormal (code	ct sensor e No.96).	<ul> <li>Malfunction of wiring</li> <li>Malfunction of side i</li> <li>Malfunction of SRS-</li> </ul>	
MUT-II Self-diag code	Check	the following connecto	
<ul> <li>Switch over the side impact sensor (R.H.) and the side impact</li> </ul>	D-29,	B-89	
sensor (L.H.).     Erase diagnosis code memory.		lok	NG
Are code Nos.89 and 96 erased and code Nos.79 and 93 output?	Check	trouble symptoms.	Repair
YES		NG	
Replace the side impact sensor (R.H.).	Check and S	the harness wire between RS-ECU.	n the side impact sensor (L.H
		Tok.	LNG
	<u> </u>	the SRS-ECU.	Repair
Code No.91 Side impact sensor (L.H.) power supply of system This diagnosis code is output if the power supply voltage of the side impact (L.H.) drops below the rated value for a continuous period of 5 seconds However, code No.91 will be automatically cleared and the SRS warning for the second se	circuit ct sensor or more.	Probable cause	Repair Repair
<b>system</b> This diagnosis code is output if the power supply voltage of the side impact (L.H.) drops below the rated value for a continuous period of 5 seconds However, code No.91 will be automatically cleared and the SRS warning is switch off if the condition returns to normal.	circuit ct sensor or more.	the SRS-ECU.     Probable cause     Malfunction of wiring     Malfunction of side	Repair     Arnesses or connectors mpact sensor (L.H.)
system This diagnosis code is output if the power supply voltage of the side impact (L.H.) drops below the rated value for a continuous period of 5 seconds However, code No.91 will be automatically cleared and the SRS warning the second sec	circuit ct sensor or more. lamp will	te the SRS-ECU.  Probable cause Malfunction of wiring Malfunction of side i Malfunction of SRS- te following connector	♥ Repair harnesses or connectors mpact sensor (L.H.) ECU
system         This diagnosis code is output if the power supply voltage of the side impact (L.H.) drops below the rated value for a continuous period of 5 seconds However, code No.91 will be automatically cleared and the SRS warning is switch off if the condition returns to normal.         Measure at side impact sensor (L.H.) connector D-29.         • Disconnect the connector, and measure at the harness side connector.	circuit ct sensor or more. lamp will	te the SRS-ECU.  Probable cause Malfunction of wiring Malfunction of side i Malfunction of SRS- te following connector	Repair Repair harnesses or connectors mpact sensor (L.H.) ECU
system         This diagnosis code is output if the power supply voltage of the side impact (L.H.) drops below the rated value for a continuous period of 5 seconds However, code No.91 will be automatically cleared and the SRS warning is switch off if the condition returns to normal.         Measure at side impact sensor (L.H.) connector D-29.         • Disconnect the connector, and measure at the harmess side connector.         • Voltage between terminal 1 and body earth OK: 9 V or more	circuit ct sensor or more. lamp will Check D-29,	te the SRS-ECU.  Probable cause Malfunction of wiring Malfunction of side i Malfunction of SRS- Malfunction of SRS- te following connector B-89	Repair g harnesses or connectors impact sensor (L.H.) ECU
system         This diagnosis code is output if the power supply voltage of the side impact (L.H.) drops below the rated value for a continuous period of 5 seconds However, code No.91 will be automatically cleared and the SRS warning is switch off if the condition returns to normal.         Measure at side impact sensor (L.H.) connector D-29.         • Disconnect the connector, and measure at the harness side connector.         • Voltage between terminal 1 and body earth         OK: 9 V or more Continuity between terminal 3 and body earth	circuit ct sensor or more. lamp will Check D-29,	te the SRS-ECU.  Probable cause  Malfunction of wiring Malfunction of side i Malfunction of SRS- Malfunction of SRS- the following connecto B-89 OK	Y Repair harnesses or connectors impact sensor (L.H.) ECU ors: ↓NG
system         This diagnosis code is output if the power supply voltage of the side impact (L.H.) drops below the rated value for a continuous period of 5 seconds However, code No.91 will be automatically cleared and the SRS warning is switch off if the condition returns to normal.         Measure at side impact sensor (L.H.) connector D-29.         • Disconnect the connector, and measure at the harmess side connector.         • Voltage between terminal 1 and body earth OK: 9 V or more	circuit ct sensor or more. lamp will Check D-29, Check	trouble symptoms.	Repair harnesses or connectors impact sensor (L.H.) ECU rs: NG Repair
system         This diagnosis code is output if the power supply voltage of the side impact (L.H.) drops below the rated value for a continuous period of 5 seconds However, code No.91 will be automatically cleared and the SRS warning is switch off if the condition returns to normal.         Measure at side impact sensor (L.H.) connector D-29.         • Disconnect the connector, and measure at the harness side connector.         • Voltage between terminal 1 and body earth         OK	circuit ct sensor or more. lamp will Check D-29, Check	te the SRS-ECU.  Probable cause Malfunction of wiring Malfunction of side i Malfunction of SRS- the following connecto B-89 OK trouble symptoms. NG	Repair harnesses or connectors impact sensor (L.H.) ECU rs: NG Repair
system         This diagnosis code is output if the power supply voltage of the side impact (L.H.) drops below the rated value for a continuous period of 5 seconds However, code No.91 will be automatically cleared and the SRS warning is switch off if the condition returns to normal.         Measure at side impact sensor (L.H.) connector D-29.         • Disconnect the connector, and measure at the harness side connector.         • Voltage between terminal 1 and body earth         OK	circuit ct sensor or more. lamp will Check D-29, Check and S	the harness wire betwee RS-ECU.	Repair harnesses or connectors impact sensor (L.H.) ECU rs: NG Repair n the side impact sensor (L.H.)
system         This diagnosis code is output if the power supply voltage of the side impact (L.H.) drops below the rated value for a continuous period of 5 seconds However, code No.91 will be automatically cleared and the SRS warning is switch off if the condition returns to normal.         Measure at side impact sensor (L.H.) connector D-29.         • Disconnect the connector, and measure at the harness side connector.         • Voltage between terminal 1 and body earth OK: 9 V or more Continuity between terminal 3 and body earth         OK         Replace the side impact sensor (L.H.).	circuit ct sensor or more. lamp will Check D-29, Check and S	trouble symptoms. NG	Repair Repair harnesses or connectors impact sensor (L.H.) ECU ors: NG Repair n the side impact sensor (L.H
system         This diagnosis code is output if the power supply voltage of the side impact (L.H.) drops below the rated value for a continuous period of 5 seconds However, code No.91 will be automatically cleared and the SRS warning is switch off if the condition returns to normal.         Measure at side impact sensor (L.H.) connector D-29.         • Disconnect the connector, and measure at the harness side connector.         • Voltage between terminal 1 and body earth         OK	circuit ct sensor or more. lamp will Check D-29, Check and S Replac	te the SRS-ECU.  Probable cause Malfunction of wiring Malfunction of side i Malfunction of SRS- Malfunction of SRS- Constraints Nalfunction of SRS- NG NG The harness wire betwee RS-ECU. OK	Repair Repair a harnesses or connectors mpact sensor (L.H.) ECU Ins: NG Repair n the side impact sensor (L.H.) NG Repair

Replace the side impact sensor (L.H.).

r supply Probable cause	
nds or more.   Malfunction of side	ng harnesses or connectors impact sensor (R.H.) S-ECU
Check the following connect     D-28, B-89	ors:
OK	NG
Check trouble symptoms.	Repair
NG	
Check the harness wire betwee and SRS-ECU.	en the side impact sensor (R.H.)
ок	NG
Replace the SRS-ECU.	Repair
1	Indes or more. Image in the image is a second stress of the image is a second stres

Code No.95 Side impact sensor (R.H.) system	Probable cause
<ul> <li>This diagnosis code is output if the following are detected from the analog G-sensor output.</li> <li>Analog G-sensor is not operating.</li> <li>Analog G-sensor characteristics are abnormal.</li> <li>Analog G-sensor output is abnormal.</li> </ul>	<ul> <li>Malfunction of side impact sensor (R.H.)</li> </ul>

Replace the side impact sensor (R.H.).

#### INSPECTION CHART FOR TROUBLE SYMPTOMS

Get an understanding of the trouble symptoms and check according to the inspection procedure chart.

Trouble symptom		Inspection procedure No.	Reference page
Communication with MUT-II is not possible.	Communication with all systems is not possible.	1	52B-14
	Communication is not possible with SRS only.	2	52B-15
When the ignition key is warning lamp does not i	turned to ON (engine stopped), the SRS Iluminate.	Refer to diagnosis code No.43.	52B-10
	is turned to ON, the SRS warning lamp ately 7 seconds have passed.	Refer to diagnosis code No.43, 44.	52B-10

#### INSPECTION PROCEDURE FOR TROUBLE SYMPTOMS

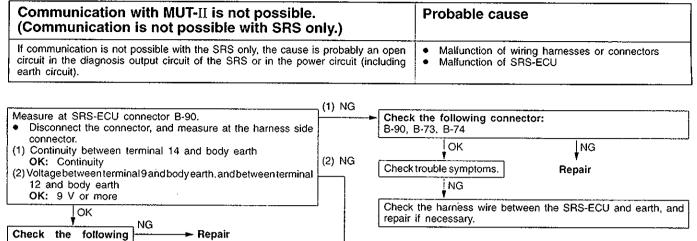
#### **Inspection Procedure 1**

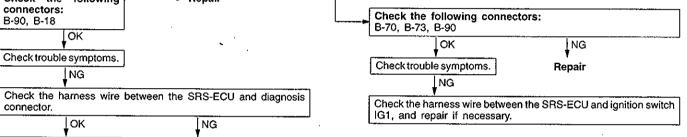
Communication with MUT-II is not possible. (Communication with all systems is not possible.)	Probable cause
The cause is probably a power supply system (including earth circuit) of the diagnosis line.	<ul> <li>Malfunction of connectors</li> <li>Malfunction of wiring harness</li> </ul>

Refer to GROUP 13A - Troubleshooting.

Replace the SRS-ECU.

Repair

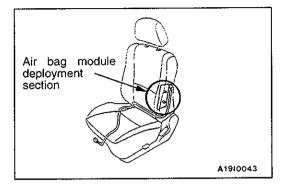


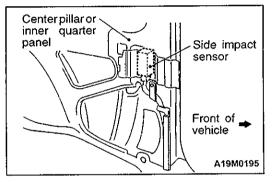


52B-15

# SRS MAINTENANCE

The SRS must be inspected by an authorized dealer 10 years after the date of vehicle registration.





#### SRS COMPONENT VISUAL CHECK

# FRONT SEAT BACK ASSEMBLY (SIDE AIR BAG MODULE)

- 1. Check that there is no abnormality in the seat air bag module deployment section.
- 2. Check that there is no connector damage, bent terminals or clamping of the harness.

#### SIDE IMPACT SENSORS

- 1. Check that there is no bending or corrosion in the center pillar or inner quarter panel.
- 2. Check that there is no denting, breakage, bending or corrosion of the side impact sensor.
- 3. Check that there is no clamping of the harness, connector damage or bent terminals.

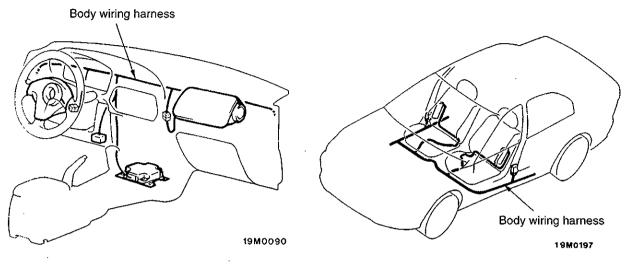
#### NOTE

The illustration at left shows the side impact sensor (L.H.). The position of the side impact sensor (R.H.) is symmetrical to this.

#### Caution

The SRS may not activate if the side impact sensors are not installed properly, which could result in serious injury or death to the vehicle's driver or front passenger.

#### BODY WIRING HARNESS/FLOOR WIRING HARNESS



00007769

- 1. Check connector for poor connection.
- 2. Check harnesses for binds, connectors for damage, and terminals for deformation.

REPLACE ANY CONNECTORS OR HARNESSES THAT FAIL THE VISUAL INSPECTION. (Refer to P.52B-3.) Caution

The SRS may not activate if SRS harnesses or connectors are damaged or improperly connected, which could result in serious injury or death to the vehicle's driver or front passenger.

# **POST-COLLISION DIAGNOSIS**

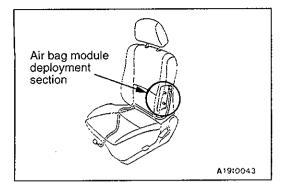
To inspect and service the SRS after a collision (whether or not the air bags have deployed), perform the following steps.

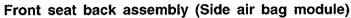
#### **REPAIR PROCEDURE**

#### WHEN SRS SIDE AIR BAG DEPLOYS OR SEAT BELT PRE-TENSIONER OPERATES IN A COLLISION

1. Replace the following parts with new ones.

- SRS-ECU (Refer to '96 COLT/LANCER Basic Manual.)
- Side impact sensor (Refer to P.52B-20.)
- Front seat back assembly (Refer to GROUP 52A Seat.)
- 2. Check harnesses for binding, connectors for damage, poor connections, and terminals for deformation. (Refer to P.52B-3.)





- 1. Check that there is no abnormality in the seat air bag module deployment section.
- 2. Check that there is no connector damage, bent terminals or clamping of the harness.

#### Side impact sensor

- 1. Check that there is no bending or corrosion in the center pillar or inner quarter panel.
- 2. Check that there is no denting, breakage or bending of the side impact sensor.
- Check that there is no clamping of the harness, connector damage or bent terminals. NOTE

The illustration at left shows the side impact sensor(L.H.). The position of the side impact sensor (R.H.) is symmetrical to this.

# INDIVIDUAL COMPONENT SERVICE

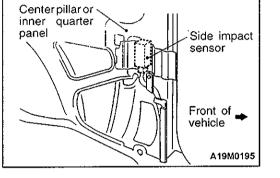
If the SRS components are to be removed or replaced as a result of maintenance, troubleshooting, etc., follow each procedure (P.52B-18 – P.52B-21).

#### Caution

- 1. SRS components should not be subjected to heat, so remove the SRS-ECU, front seat assemblies (side air bag module) and side impact sensors before drying or baking the vehicle after painting.
  - SRS-ECU, side impact sensor: 93°C or more

Recheck SRS system operability after re-installing them.

2. If the SRS components are removed for the purpose of check, sheet metal repair, painting, etc., they should be stored in a clean, dry place until they are reinstalled.



## WARNING/CAUTION LABELS

Side air bag module (driver's seat and front

passenger's seat)

A number of caution labels relating to the SRS are found in the vehicle, as shown in the following illustration. Follow label instructions when servicing SRS. If labels are dirty or damaged, replace them with new ones.

Side impact sensor Center pillar or inner quarter panel

# AIR BAG MODULES

Caution

1. When a side air bag has been deployed, the front seat back assembly (driver's seat or passenger's seat) should be replaced with a new assembly.

1910091

2. An undeployed air bag module should only be disposed of in accordance with the procedures (Refer to P.52B-22.)

#### **REMOVAL AND INSTALLATION**

#### <Side air bag module>

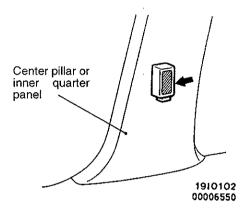
For removal and installation of the front seat back assembly with side air bag module, refer to GROUP 52A - Front Seat.

Air bag module deployment section	
	A1910043

#### INSPECTION

#### FRONT SEAT BACK ASSEMBLY WITH SIDE AIR BAG MODULE CHECK

If any improper part is found during the following inspection, replace the front seat back assembly with a new one. Dispose the old one according to the specified procedure. (Refer to P.52B-22.)



# SIDE IMPACT SENSOR

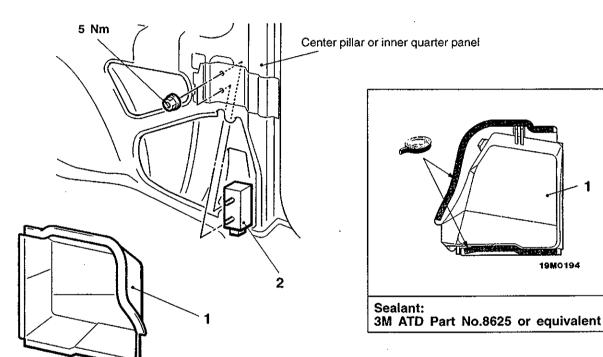
#### Caution

- 1. Disconnect the battery (-) terminal and wait for 60 seconds or more before starting work. Furthermore, the disconnected battery terminal should be covered with tape to insulate it. (Refer to P.52B-2.)
- 2. Never attempt to disassemble or repair the side impact sensor. If faulty, replace it.

#### REMOVAL AND INSTALLATION

Pre-removal Operation Turn the ignition key to the "LOCK" position.

- Do not drop or subject the side impact 3. sensor to impact or vibration. If denting, cracking, deformation, or rust are discovered in the side impact sensor, replace it with a new side impact sensor. Discard the old one.
- After deployment of an air bag, replace the 4. side impact sensor with a new one.



19M0196

#### **Removal steps**

- Post-installation inspection ⊳C∢
  - Negative (-) battery cable connection
  - Quarter trim <Hatchback> •
  - Center pillar lower trim <Sedan>
  - Seat belt with pre-tensioner
  - 1. Water proof cover <Sedan>
- 2. Side impact sensor -B∢
- Pre-installation inspection ►Α◄

#### NOTE

The illustration above shows the side impact sensor (L.H.). The position of the side impact sensor (R.H.) is symmetrical to this.

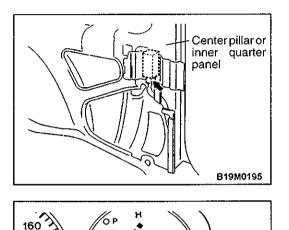
19M0194

00007770

## INSTALLATION SERVICE POINTS

#### ►A PRE-INSTALLATION INSPECTION

Check the side impact sensor for dents, breakage and bending and measure the resistance between the terminals, even when installing a new side impact sensor.



OR

O N

O D

02

SRS warning lamp

and the second 03

A16M0235

(i)) ()

180

200

#### ►B SIDE IMPACT SENSOR INSTALLATION

Securely connect the connector.

#### Caution

If the side impact sensor is not installed securely and correctly, the side air bag may not operate normally.

#### ►C POST-INSTALLATION INSPECTION

- 1. Reconnect the negative battery terminal.
- Turn the ignition key to the "ON" position. 2.
- 3. Does the SRS warning lamp illuminate for about 7 seconds, and then remain extinguished for at least 5 seconds after turning the ignition key to "OFF" position?
- 4. If ves, SRS system is functioning properly. If no, consult page 52B-5.

#### INSPECTION

- Check the side impact sensor and bracket for dents, cracks or deformation.
- Check connector for damage, and terminals for deformation.

#### Caution

If a dent, crack, deformation or rust is discovered, replace the side impact sensor with a new one.

#### NOTE

For checking of the side impact sensor other than described above, refer to the section concerning troubleshooting. (Refer to P.52B-5.)

Check that there is no bending or corrosion in the center pillar or inner quarter panel.

## SIDE AIR BAG MODULE DISPOSAL PROCEDURES

Before disposing of a vehicle which is equipped with air bags or when disposing of the air bags themselves, the following procedures must be used to deploy the air bags before disposal.

# UNDEPLOYED SIDE AIR BAG MODULE DISPOSAL

Caution

- 1. If the vehicle is to be scrapped or otherwise disposed of, deploy the air bags inside the vehicle.
- 2. If the vehicle will continue to be operated and only the front seat back assembly is to be disposed of, deploy the air bag outside the vehicle.
- 3. Since a large amount of smoke is produced when the air bag is deployed, avoid residential areas whenever possible.
- 4. Since there is a loud noise when the air bags are deployed, avoid residential areas whenever possible. If anyone is nearby, give warning of the impending noise.
- 5. Suitable ear protection should be worn by personnel performing these procedures or by people in the immediate area.

#### **Deployment Inside the Vehicle**

- 1. Move the vehicle to an isolated spot.
- 2. Disconnect the negative (--) and positive (+) battery cables from the battery terminals, and then remove the battery from the vehicle.

#### Caution

Wait at least 60 seconds after disconnecting the battery cables before doing any further work. (Refer to P.52B-2.)

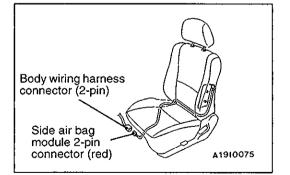
3. Remove the connection between the side air bag module connector (red 2-pin) and the body wiring harness connector.

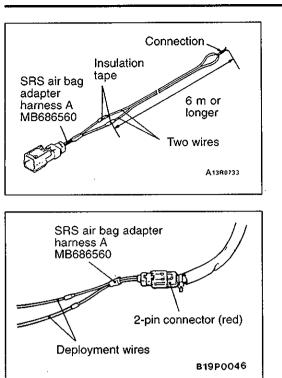
#### Caution

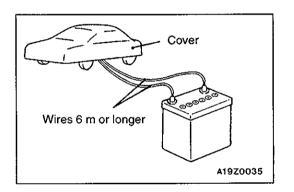
# The side air bag modules for both the driver's-side and passenger's-side should be deployed.

#### NOTE

If the side air bag module connector is disconnected from the dash wiring harness, both electrodes of the side air bag module connector will be automatically shorted to prevent unintended deployment of the side air bag due to static electricity, etc.







- 4. Connect two wires, each six meters or longer, to the two leads of SRS air bag adapter harness A and cover the connections with insulation tape. The other ends of the two wires should be connected to each other (short-circuited), to prevent sudden unexpected deployment of the air bag.
- 5. Connect the side air bag module 2-pin connector (red) to SRS air bag adapter harness A and pass the deployment wires out of the vehicles.

6. Fully close all door windows, close the doors and place a cover over the vehicle to minimize the amount of noise.

#### Caution

# If the glass is damaged, it may break, so the car must be covered.

7. At a location as far away from the vehicle as possible, disconnect the two connected wires from each other, and connect them to the two terminals of the battery (which has been removed from the vehicle) to deploy the air bag.

#### Caution

- (1) Before deploying the air bag in this manner, first check to be sure that there is no one in or near the vehicle. Wear safety glasses.
- (2) The inflator will be quite hot immediately following the deployment, so wait at least 30 minutes to allow it to cool before attempting to handle it. Although not poisonous, do not inhale gas from air bag deployment.

See Deployed Side Air Bag Module Disposal Procedures (P.52B-25.) for post-deployment handling instructions.

- (3) If the side air bag module fails to deploy when the procedures above are followed, do not go near the module. Contact your local distributor.
- 8. After deployment, dispose of side air bag module according to the Deployed Side Air Bag Module Disposal Procedures. (Refer to P.52B-25.)

Deployment Outside the Vehicle

Caution

- 1. This should be carried out in a wide, flat area at least 6 m away from obstacles and other people.
- 2. Do not perform deployment outside, if a strong wind is blowing, and if there is even a slight breeze, the air bag module should be placed and deployed downwind from the battery.
- 1. Disconnect the negative (-) and positive (+) battery cables from the battery terminals, and then remove the battery from the vehicle.

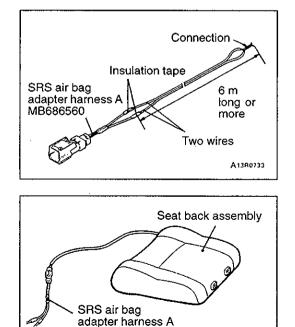
#### Caution

Wait at least 60 seconds after disconnecting the battery cables before doing any further work. (Refer to P.52B-2.)

 Remove the front seat back assemblies with built-in side air bag module from the vehicle. (Refer to GROUP 52A – Front Seat.)

Caution

The air bag modules should be stored on flat surface and placed so that the air bag deployment surfaces are facing upward. Do not place anything on top of them.



A19Z0034

MB686560

- 3. Connect two wires, each six meters or longer, to the two leads of SRS air bag adapter harness A, and cover the connections with insulation tape. The other ends of the two wires should be connected to each other (short-circuited), to prevent sudden unexpected deployment of the air bag module.
- 4. Set the air bag modules as follows:
  - (1) Place the seat back assembly so that the rear of the assembly is lying on the ground.
  - (2) Connect SRS air bag adapter harness A (which is connected to the deployment harness) to the side air bag module connector.

ł

5. At a location as far away from the side air bag module as possible, and from a shielded position, disconnect the two connected wires from each other, and connect them to the two terminals of the battery (which has been removed from the vehicle) to deploy the air bag.

#### Caution

- (1) Before deployment, check carefully to be sure that no one is nearby.
- (2) The inflator will be quite hot immediately following deployment, so wait at least 30 minutes to allow it to cool before attempting to handle it. Although the gas resulting from air bag deployment is not poisonous, it should not be inhaled. Refer to the Deployed Side Air Bag Module Disposal Procedures (P.52B-25) for post-deployment handling instructions.
- (3) If the air bag fails to deploy when the procedures above are followed, do not go near the module. Contact your local distributor.
- 6. After deployment, remove the side air bag module from the seat back and dispose of side air bag module according to the Deployed Side Air Bag Module Disposal Procedures. (Refer to P.52B-25.)

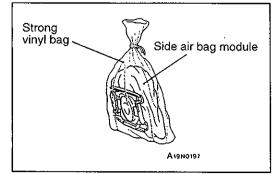
#### DEPLOYED SIDE AIR BAG MODULE DISPOSAL PROCEDURES

After deployment or operation, the side air bag module should be disposed of in the same manner as any other scrap parts, adhering to local laws and/or legislation that may be in force except that the following points should be carefully noted during disposal.

- 1. The inflator will be quite hot immediately following deployment, so wait at least 30 minutes to allow it cool before attempting to handle it.
- 2. Do not put water or oil on the side air bag after deployment.
- 3. There may be, adhered to the deployed side air bag module, material that could irritate the eye and/or skin, so wear gloves and safety glasses when handling a deployed side air bag module. IF AFTER FOLLOWING THESE PRECAUTIONS, ANY MATERIAL DOES GET INTO THE EYES OR ON THE SKIN, IMMEDIATELY RINSE THE AFFECTED AREA WITH A LARGE AMOUNT OF CLEAN WATER.

IF ANY IRRITATION DEVELOPS, SEEK MEDICAL ATTENTION.

- 4. Tightly seal the side air bag module in a strong vinyl bag for disposal.
- 5. Be sure to always wash your hands after completing this operation.



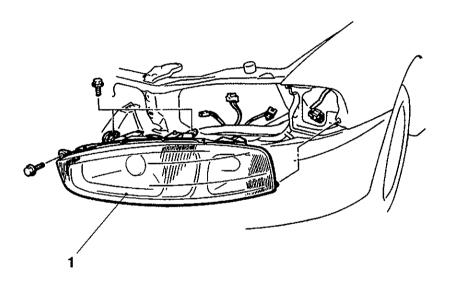
# GROUP 54 CHASSIS ELECTRICAL

# HEADLAMP AND FRONT TURN-SIGNAL LAMP <HATCHBACK> GENERAL

#### **OUTLINE OF CHANGE**

The following maintenance service points have been established to correspond to changes in the shape of the headlamps and front turn signal lamps.

#### **REMOVAL AND INSTALLATION**





1. Headlamp

# 

# REMOVAL SERVICE POINT

After removing the inside of the headlamp while pulling the bumper towards you as shown in the illustration, remove the outside, and then remove the headlamp.

A16M0448

## FRONT FOG LAMP

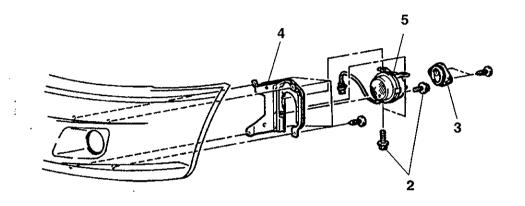
# **GENERAL**

## **OUTLINE OF CHANGE**

The following maintenance service points have been established to correspond to changes in the shape of the fog lamps.

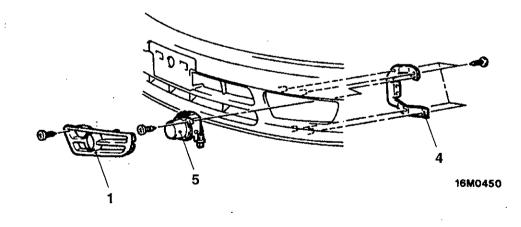
## **REMOVAL AND INSTALLATION**

<Hatchback>



#### <Sedan>

16M0449



00007771

#### Fog lamp unit removal steps

- 1. Fog lamp bezel
- 2. Fog lamp unit mounting boit
- <Hatchback> 3. Cap
- 4. Fog lamp unit

#### Fog lamp bracket removal steps

- Front bumper (Refer to GROUP 51.)2. Fog lamp unit mounting bolt
- <Hatchback>
- 4. Fog lamp bracket 5. Fog lamp unit

#### REMOVAL SERVICE POINT <HATCHBACK> A FOG LAMP UNIT MOUNTING BOLT/CAP/FOG LAMP UNIT REMOVAL

1

Remove the fog lamp unit mounting bolt and the fog lamp unit cap. Then pull the fog lamp unit out through the gap at the front bumper.

# GROUP 55 HEATER, AIR CONDITIONER AND VENTILATION

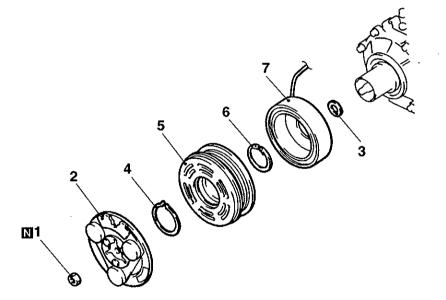
# GENERAL

#### **OUTLINE OF CHANGE**

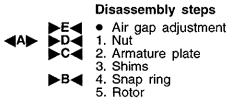
The following maintenance service points have been established to correspond to changes in the compressor.

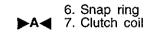
# **COMPRESSOR AND TENSION PULLEY**

MAGNETIC CLUTCH DISASSEMBLY AND REASSEMBLY



A20M0100





NOTE For each service point, refer to Basic Manual.

## NOTES

.

•