

GENERAL

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HOW TO USE THIS MANUAL

SCOPE OF MAINTENANCE, REPAIR AND SERVICING EXPLANATIONS

This manual provides explanations, etc. concerning procedures for the inspection, maintenance, repair and servicing of the subject model. Note, however, that for engine and transmission-related component parts, this manual covers only on-vehicle inspections, adjustments, and the removal and installation procedures for major components.

For detailed information concerning the inspection, checking, adjustment, disassembly and reassembly of the engine, transmission and major components after they have been removed from the vehicle, please refer to separate manuals covering the engine and the transmission.

ON-VEHICLE SERVICE

“On-vehicle Service” is procedures for performing inspections and adjustments of particularly important locations with regard to the construction and for maintenance and servicing, but other inspection (for looseness, play, cracking, damage, etc.) must also be performed.

INSPECTION

Under this title are presented inspection and checking procedures to be performed by using special tools and measuring instruments and by feeling, but, for actual maintenance and servicing procedures, visual inspections should always be performed as well.

DEFINITION OF TERMS

STANDARD VALUE

Indicates the value used as the standard for judging the quality of a part or assembly on inspection or the value to which the part or assembly is corrected and adjusted. It is given by tolerance.

LIMIT

Shows the standard for judging the quality of a part or assembly on inspection and means the maximum or minimum value within which the part or assembly must be kept functionally or in strength. It is a value established outside the range of standard value.

REFERENCE VALUE

Indicates the adjustment value prior to starting the work (presented in order to facilitate assembly and adjustment procedures, and so they can be completed in a shorter time).

CAUTION

Indicates the presentation of information particularly vital to the worker during the performance of maintenance and servicing procedures in order to avoid the possibility of injury to the worker, or damage to component parts, or a reduction of component or vehicle function or performance, etc.

INDICATION OF TIGHTENING TORQUE

Tightening torques (units: N·m) are set to take into account the central value and the allowable tolerance. The central value is the target value, and the allowable tolerance provides the checking range for tightening torques. If bolts and nuts are not provided with tightening torques, refer to P.00-39.

MODEL INDICATIONS

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

GDI: Indicates the gasoline direct injection.

DOHC: Indicates an engine with the double overhead camshaft, or models equipped with such an engine.

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.

A/C: Indicates the air conditioner.

EXPLANATION OF MANUAL CONTENTS

Indicates procedures to be performed before the work in that section is started, and procedures to be performed after the work in that section is finished.

Component Diagram

A diagram of the component parts is provided near the front of each section in order to give a reader a better understanding of the installed condition of component parts.

Indicates (by symbols) where lubrication is necessary.

Maintenance and Servicing Procedures

The numbers provided within the diagram indicate the sequence for maintenance and servicing procedures.

- Removal steps:
The part designation number corresponds to the number in the illustration to indicate removal steps.
- Disassembly steps:
The part designation number corresponds to the number in the illustration to indicate disassembly steps.
- Installation steps:
Specified in case installation is impossible in reverse order of removal steps. Omitted if installation is possible in reverse order of removal steps.
- Reassembly steps:
Specified in case reassembly is impossible in reverse order of disassembly steps. Omitted if reassembly is possible in reverse order of disassembly steps.

Classifications of Major Maintenance/Service Points

When there are major points relative to maintenance and servicing procedures (such as essential maintenance and service points, maintenance and service standard values, information regarding the use of special tools, etc.), these are arranged together as major maintenance and service points and explained in detail.

- ◀A▶ : Indicates that there are essential points for removal or disassembly.
▶A◀ : Indicates that there are essential points for installation or reassembly.

Symbols for Lubrication, Sealants and Adhesives

Information concerning the locations for lubrication and for application of sealants and adhesives is provided, by using symbols, in the diagram of component parts or on the page following the component parts page, and explained.

-  : Grease
(multipurpose grease unless there is a brand or type specified)
-  : Sealant or adhesive
-  : Brake fluid or automatic transmission fluid
-  : Engine oil, gear oil or air conditioner compressor oil
-  : Adhesive tape or butyl rubber tape

Indicates the group title.

Indicates the section title.

Indicates the group number.

Indicates the page number.

STEERING - Power Steering Oil Pump

37A-29

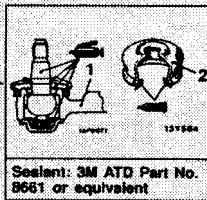
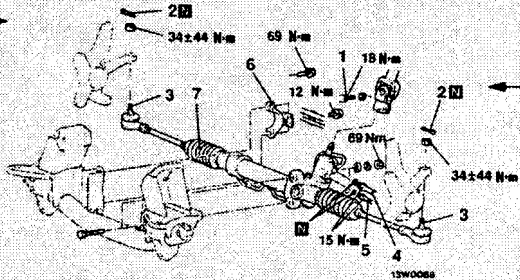
POWER STEERING GEAR BOX REMOVAL AND INSTALLATION

120000039

Pre-removal Operation

- (1) Power Steering Fluid Draining (Refer to P. 37A-10.)
- (2) Air Cleaner Assembly Removal
- (3) Under Cover Removal (Refer to GROUP 42 - Under Cover)

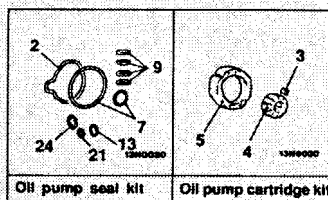
<2WD>



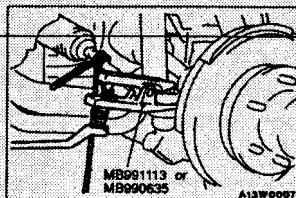
Sealant: 3M ATD Part No. 8661 or equivalent

Removal steps

1. Lower shaft assembly and gear box connecting bolt
2. Split pin
3. Connection for tie-rod and knuckle
4. Connection for return tube



5. Connection for pressure tube
6. Clamp
7. Gear box assembly



REMOVAL SERVICE POINTS

TIE-ROD END DISCONNECTION

Caution

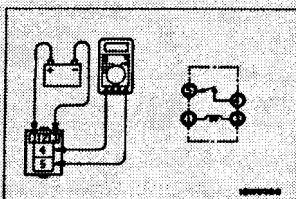
1. Using the special tool, loosen the tie rod end mounting nut. Only loosen the nut; do not remove it from the ball joint.
2. Support the special tool with a cord, etc. to prevent it from coming off.

N denotes non-reusable part.

Denotes tightening torque. For bolts and nuts which do not have a tightening torque listed, refer to the "Standard Parts-tightening-torque Table".

Repair kit or set parts are shown. (Only very frequently used parts are shown.)

Operating procedures, cautions, etc. on removal, installation, disassembly and reassembly are described.



HEADLAMP RELAY CONTINUITY INSPECTION

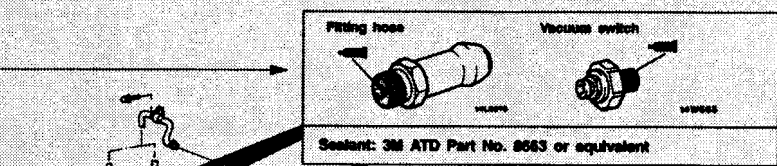
Battery voltage	Terminal No.			
	1	3	4	5
Power is not supplied	○	○	○	○
Power is supplied	⊕	⊖	○	○

○—○ indicates that there is a continuity between the terminals.

⊕—⊖ indicates terminals to which battery voltage is applied.

35A-26 BASIC BRAKE SYSTEM - Master Cylinder and Brake Booster

Lubrication and sealing points



The title of the page (following the page on which the diagram of component parts is presented) indicating the locations of lubrication and sealing procedures.

HOW TO USE TROUBLESHOOTING/INSPECTION SERVICE POINTS

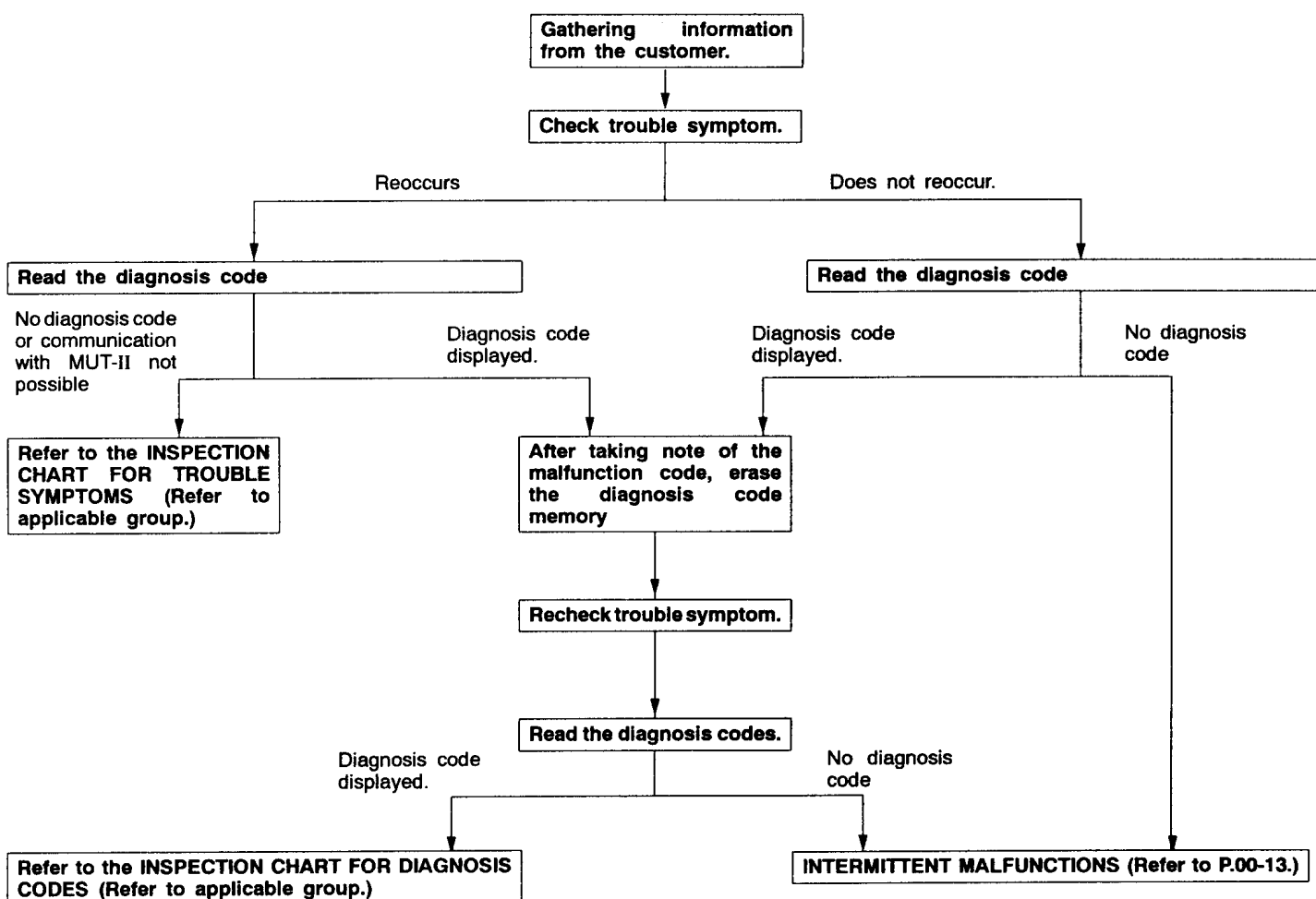
Troubleshooting of electronic control systems for which the MUT-II can be used follows the basic outline described below. Furthermore, even in systems for which the MUT-II cannot be used, part of these systems still follow this outline.

TROUBLESHOOTING CONTENTS

1. STANDARD FLOW OF DIAGNOSIS TROUBLESHOOTING

The troubleshooting sections follow the basic diagnosis flow which is given below. If the diagnosis flow is different from that given below, or if additional explanation is required, the details of such differences or additions will also be listed.

Diagnosis method



2. SYSTEM OPERATION AND SYMPTOM VERIFICATION TESTS

If verification of the trouble symptoms is difficult, procedures for checking operation and verifying trouble symptoms are shown.

3. DIAGNOSIS FUNCTION

Details which are different from those in the "Diagnosis Function" section on the next page are listed.

4. INSPECTION CHART FOR DIAGNOSIS CODES**5. INSPECTION PROCEDURE FOR DIAGNOSIS CODES**

Indicates the inspection procedures corresponding to each diagnosis code. (Refer to P.00-10 for how to use the inspection procedures.)

6. INSPECTION CHART FOR TROUBLE SYMPTOMS

If there are trouble symptoms even though the results of inspection using the MUT-II show that all diagnosis codes are normal, inspection procedures for each trouble symptom will be found by means of this chart.

7. INSPECTION PROCEDURE FOR TROUBLE SYMPTOM

Indicates the inspection procedures corresponding to each trouble symptoms classified in the Inspection Chart for Trouble Symptoms. (Refer to P.00-10 for how to use the inspection procedures.)

8. SERVICE DATA REFERENCE TABLE

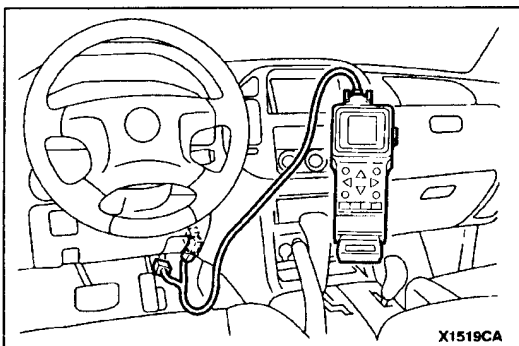
Inspection items and normal judgement values have been provided in this chart as reference information.

9. CHECK AT ECU TERMINALS

Terminal numbers for the ECU connectors, inspection items and standard values have been provided in this chart as reference information.

10. INSPECTION PROCEDURES USING AN OSCILLOSCOPE

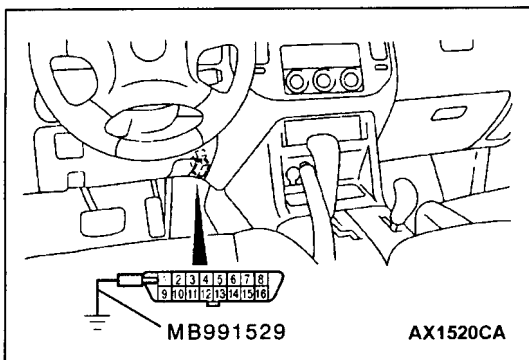
When there are inspection procedures using an oscilloscope, these are listed here.

**DIAGNOSIS FUNCTION****METHOD OF READING DIAGNOSIS CODES****WHEN USING THE MUT-II**

Connect the MUT-II to the diagnosis connector and take a reading of the diagnosis codes.

Caution

Turn the ignition switch to “LOCK(OFF)” position before connecting or disconnecting the MUT-II.



WHEN USING THE WARNING LAMP

1. Use the special tool to earth No.1 terminal (diagnosis control terminal) of the diagnosis connector.
2. Turn on the ignition switch.
3. Read out a diagnosis code by observing how the warning lamp flashes.

Applicable systems

System name	Warning lamp name
A/T	Neutral position indicator lamp
ABS	ABS warning lamp
SS4 II	4WD warning lamp
Hydraulic Brake Booster(HBB)	Brake warning lamp

Indication of diagnosis code by warning lamp

When the diagnosis code No.24 is output	When no diagnosis code is output*

NOTE

*: Even if the ABS system is normal, removing the valve relay causes the diagnosis code No.52 to be output.

METHOD OF ERASING DIAGNOSIS CODES

WHEN USING THE MUT-II

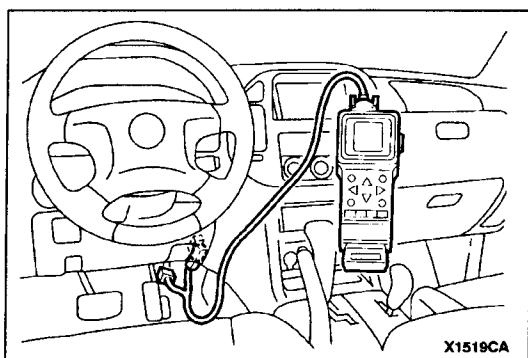
Connect the MUT-II to the diagnosis connector and erase the diagnosis code.

Caution

Turn the Ignition switch to “LOCK (OFF)” position before connecting or disconnecting the MUT-II.

WHEN NOT USING THE MUT-II

1. Turn the ignition switch to “LOCK(OFF)” position.
2. After disconnecting the battery cable from the battery (–) terminal for 10 seconds or more, reconnect the cable.
3. After the engine has warmed up, run it at idle for about 15 minutes.

**INPUT SIGNAL CHECK <SWS>****WHEN USING THE MUT-II**

- (1) Connect the MUT-II to the diagnosis connector and erase the diagnosis code.

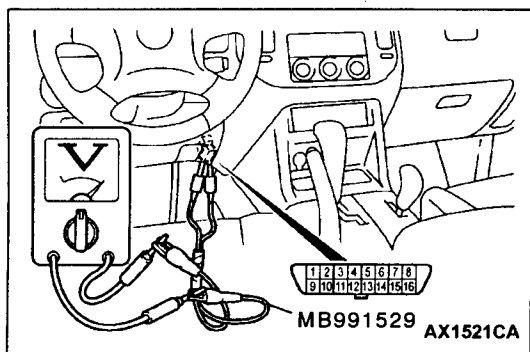
Caution

Turn the ignition switch to “LOCK (OFF)” position before connecting or disconnecting the MUT-II.

- (2) If the MUT-II buzzer sounds once when each switch is operated (ON/OFF), the input signal for that switch circuit system is normal.

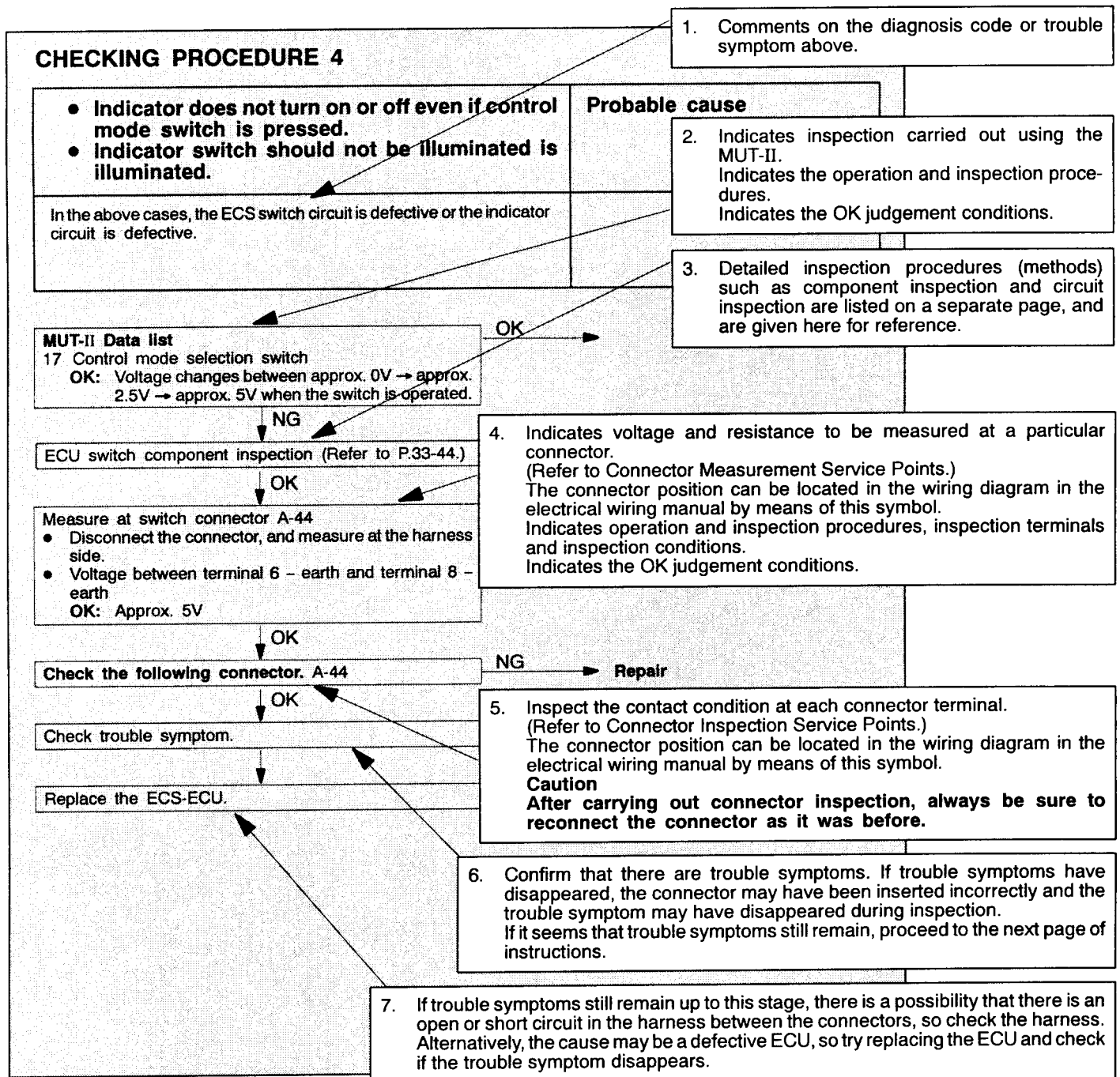
WHEN USING A VOLTMETER

- (1) Use the special tool to connect the ETACS terminal (terminal 9) and the earth terminals (terminals 4 and 5) of the diagnosis connector to the voltage meter.
- (2) If the needle of the voltage meter flickers once when each switch is operated (ON/OFF), the input signal for that switch circuit system is normal.



HOW TO USE THE INSPECTION PROCEDURES

The causes of a high frequency of problems occurring in electronic circuitry are generally the connectors, components, the ECU and the harnesses between connectors, in that order. These inspection procedures follow this order, and they first try to discover a problem with a connector or a defective component.



HARNESS INSPECTION

Check for an open or short circuit in the harness between the terminals which were defective according to the connector measurements. Carry out this inspection while referring to the electrical wiring manual. Here, "Check harness between power supply and terminal xx" also includes checking for blown fuses. For inspection service points when there is a blown fuse, refer to "Inspection Service Points for a Blown Fuse."

MEASURES TO TAKE AFTER REPLACING THE ECU

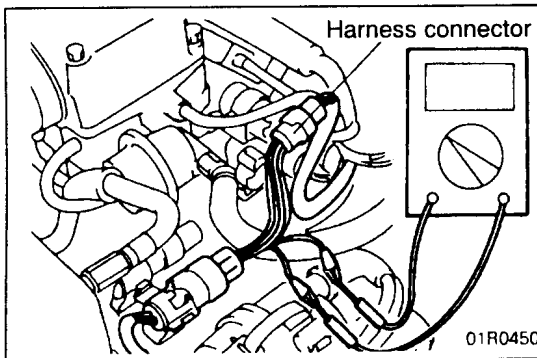
If the trouble symptoms have not disappeared even after replacing the ECU, repeat the inspection procedure from the beginning.

CONNECTOR MEASUREMENT SERVICE POINTS

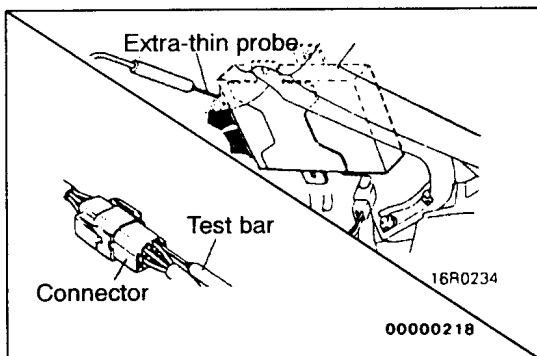
Turn the ignition switch to OFF when connecting/disconnecting the connectors, and turn the ignition switch to ON when measuring if there are no instructions to be contrary.

IF INSPECTING WITH THE CONNECTOR CONNECTED (WITH CIRCUIT IN A CONDITION OF CONTINUITY)**Waterproof Connectors**

Be sure to use the special tool (harness connector). Never insert a test bar from the harness side, because to do so will reduce the waterproof performance and result in corrosion.

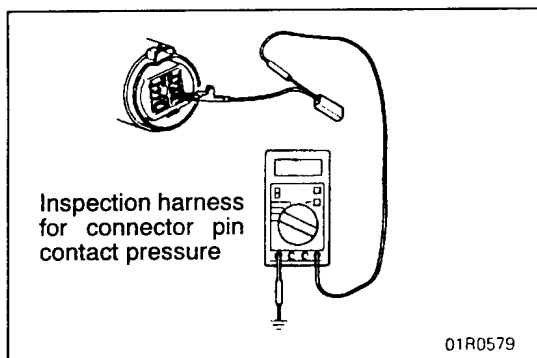
**Ordinary (non-waterproof) Connectors**

Check by inserting the test bar from the harness side. Note that if the connector (control unit, etc.) is too small to permit insertion of the test bar, it should not be forced; use a special tool (the extra-thin probe in the harness set for checking for this purpose).

**IF INSPECTING WITH THE CONNECTOR DISCONNECTED****<When Inspecting a Female Pin>**

Use the special tool (inspection harness for connector pin contact pressure in the harness set for inspection).

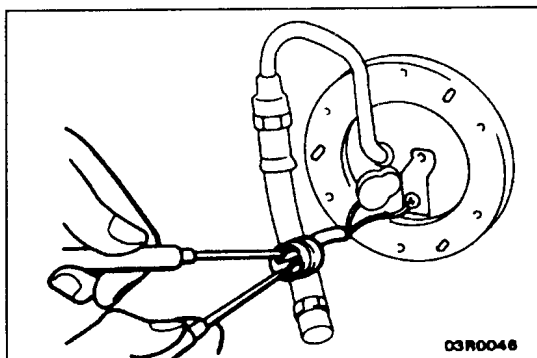
The inspection harness for connector pin contact pressure should be used. the test bar should never be forcibly inserted, as it may cause a defective contact.

**<When Inspecting a Male Pin>**

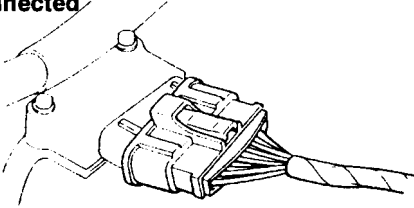
Touch the pin directly with the test bar.

Caution

At this time, be careful not to short the connector pins with the test bars. To do so may damage the circuits inside the ECU.

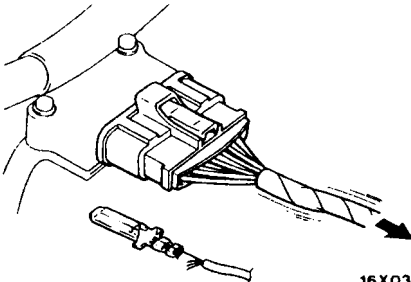


Connector disconnected or improperly connected



16S0256

Defective connector contact



16X0369

Harness wire breakage at terminal section

Low contact pressure



16S0254
00000219

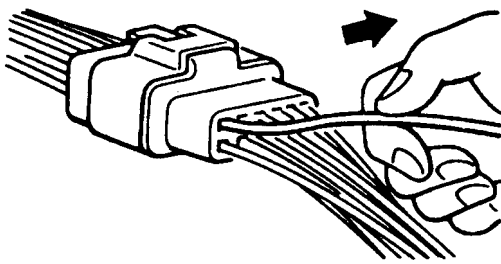
CONNECTOR INSPECTION

VISUAL INSPECTION

- Connector is disconnected or improperly connected
- Connector pins are pulled out
- Due to harness tension at terminal section
- Low contact pressure between male and female terminals
- Low connection pressure due to rusted terminals or foreign matter lodged in terminals

CONNECTOR PIN INSPECTION

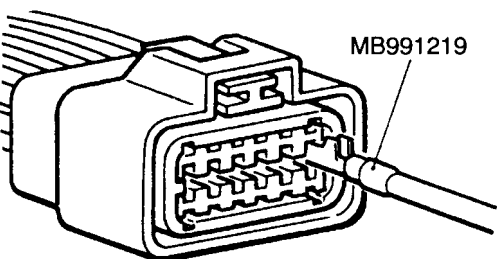
If the connector pin stopper is damaged, the terminal connections (male and female pins) will not be perfect even if the connector body is connected, and the pins may pull out of the reverse side of the connector. Therefore, gently pull the harnesses one by one to make sure that no pins pull out of the connector.



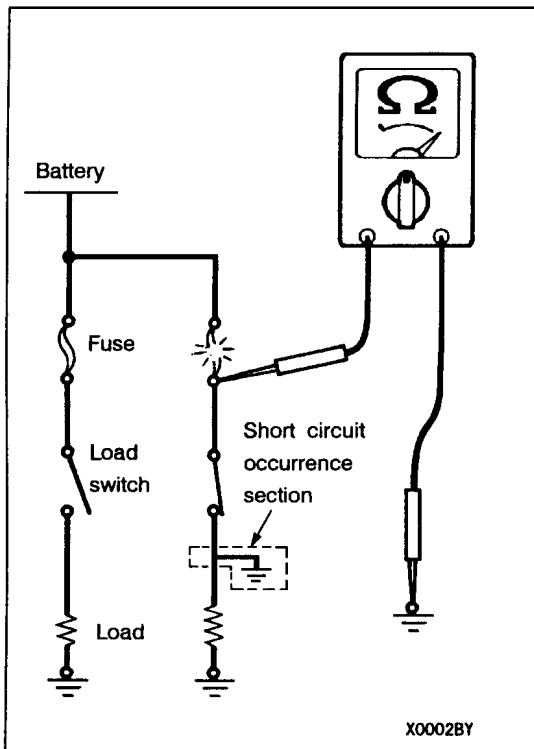
16R1317

CONNECTOR ENGAGEMENT INSPECTION

Use the special tool (connector pin connection pressure inspection harness of the inspection harness set) to inspect the engagement of the male pins and females pins. (Pin drawing force : 1 N or more)



16R1318



INSPECTION SERVICE POINTS FOR A BLOWN FUSE

Remove the blown fuse and measure the resistance between the load side of the blown fuse and the earth. Set the switches of all circuits which are connected to this fuse to a condition of continuity. If the resistance is almost $0\ \Omega$ at this time, there is a short somewhere between these switches and the load. If the resistance is not $0\ \Omega$, there is no short at the present time, but a momentary short has probably caused the fuse to blow.

The main causes of a short circuit are the following.

- Harness being clamped by the vehicle body
- Damage to the outer casing of the harness due to wear or heat
- Water getting into the connector or circuitry
- Human error (mistakenly shorting a circuit, etc.)

POINTS TO NOTE FOR INTERMITTENT MALFUNCTIONS

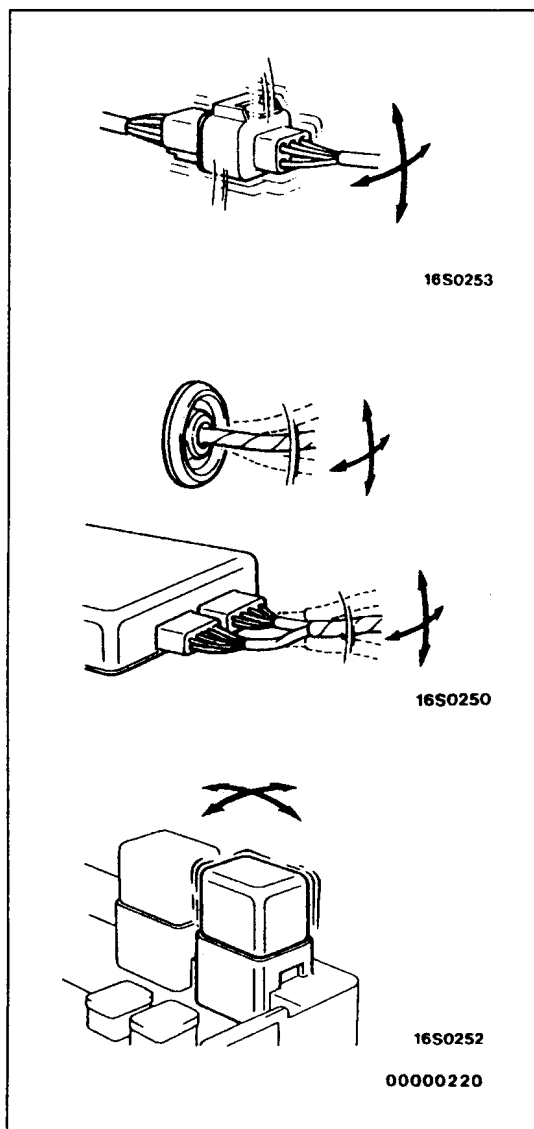
Intermittent malfunctions often occur under certain conditions, and if these conditions can be ascertained, determining the cause becomes simple. In order to ascertain the conditions under which an intermittent malfunction occurs, first ask the customer for details about the driving conditions, weather conditions, frequency of occurrence and trouble symptoms, and then try to recreate the trouble symptoms. Next, ascertain whether the reason why the trouble symptom occurred under these conditions is due to vibration, temperature or some other factor. If vibration is thought to be the cause, carry out the following checks with the connectors and components to confirm whether the trouble symptom occurs.

The objects to be checked are connectors and components which are indicated by inspection procedures or given as probable causes (which generates diagnosis codes or trouble symptoms.)

- Gently shake the connector up, down and to the left and right.
- Gently shake the wiring harness up, down and to the left and right.
- Gently rock each sensor and relay, etc. by hand.
- Gently shake the wiring harness at suspensions and other moving parts.

NOTE

If determining the cause is difficult, the flight recorder function of the MUT-II can also be used.

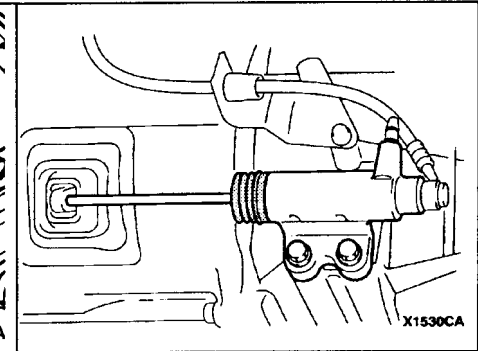
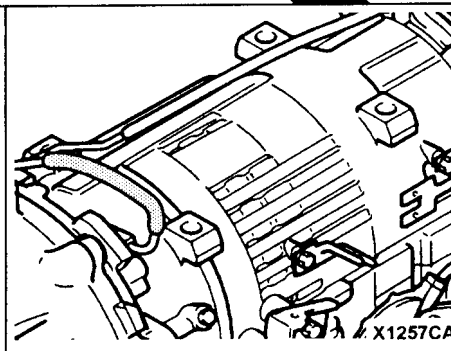
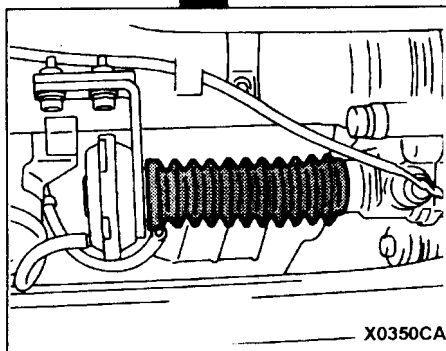
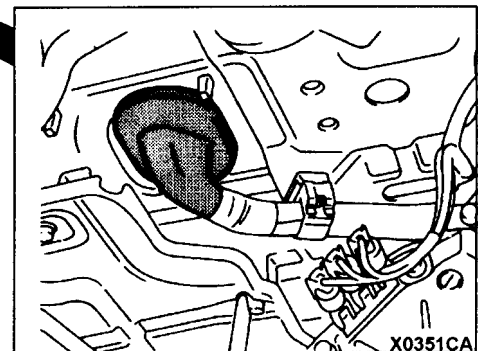
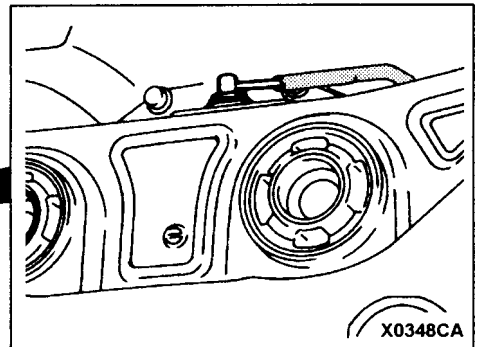
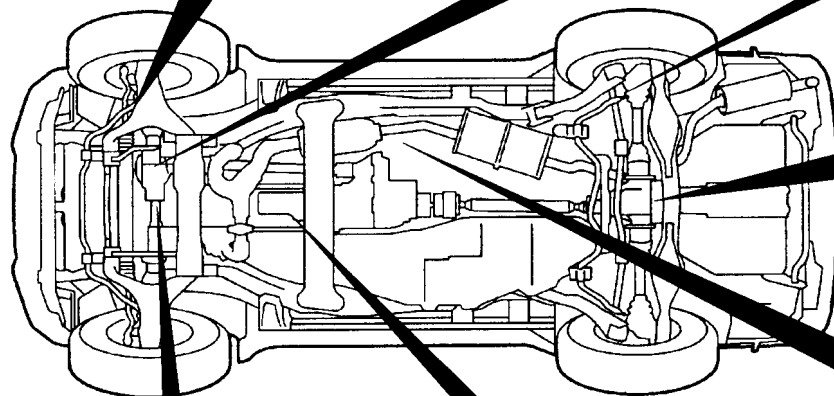
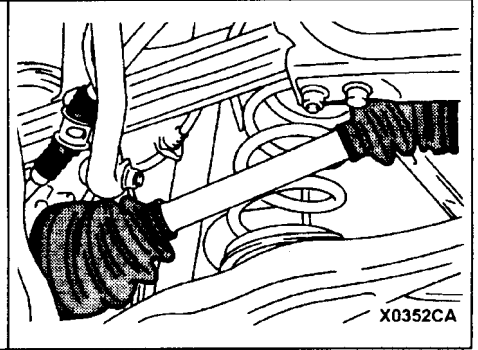
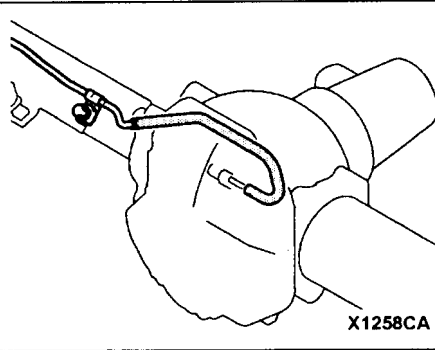
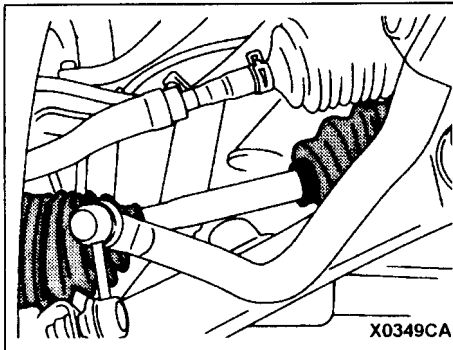


TREATMENT BEFORE/AFTER FORDING A STREAM

INSPECTION AND SERVICE BEFORE FORDING A STREAM

Vehicles which are driven through water, or which may possibly be driven through water, should be subjected to the following inspections and maintenance procedures in advance.

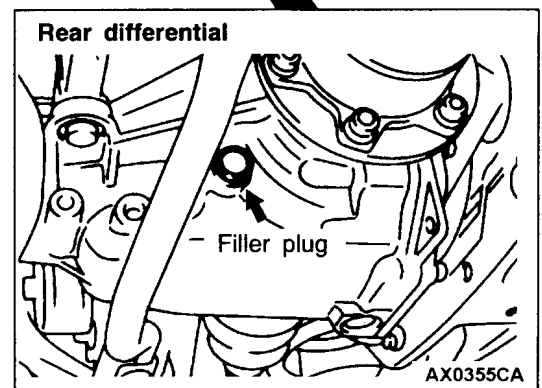
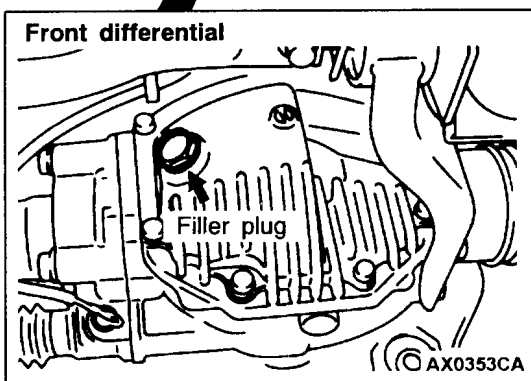
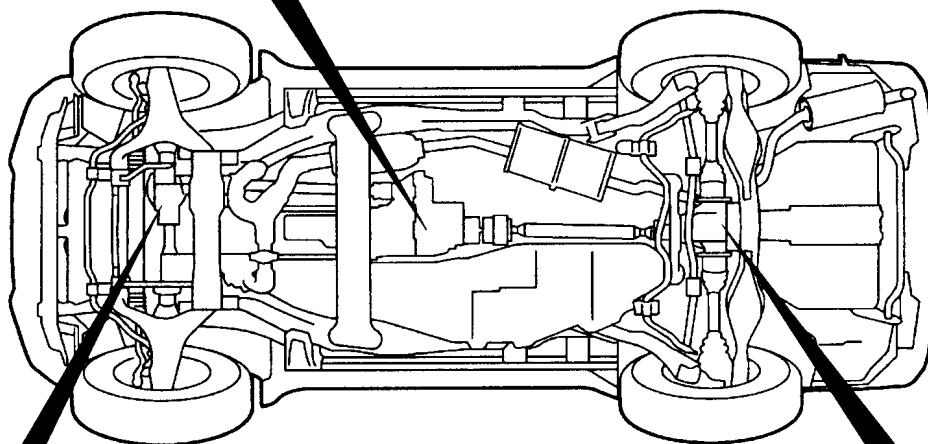
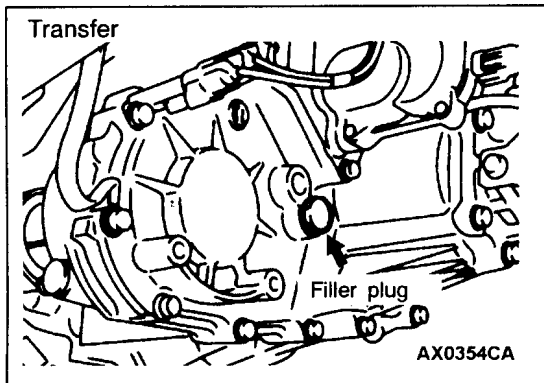
- Inspect the dust boot and breather hose for cracks or damage, and replace them if cracks or damage are found.

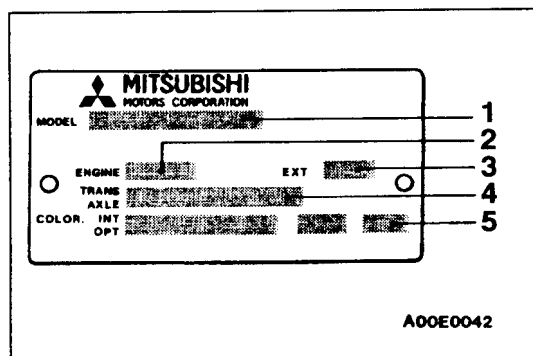
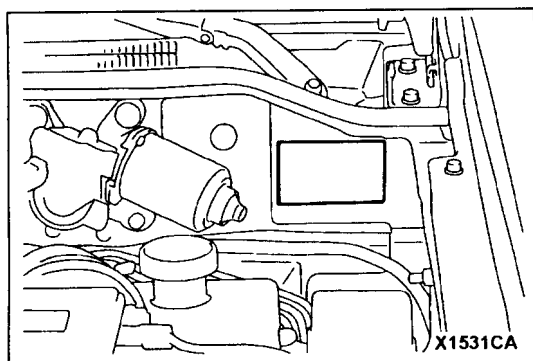


INSPECTION AND SERVICE AFTER FORDING A STREAM

After fording a stream, check the following points. If abnormal condition is evident, clean, replace or lubricate.

- Check for water, mud, sand, etc. in the rear brake drum, clutch housing, starter motor, brake pipe and fuel pipe.
- Check for water in the fluid or oil inside the front differential, rear differential, transmission and transfer.
- Check all boots and breather hoses for cracks and damage.





VEHICLE IDENTIFICATION

VEHICLE INFORMATION CODE PLATE

LOCATION

Vehicle information code plate is riveted on the toeboard inside the engine compartment.

CODE PLATE DESCRIPTION

The plate shows model code, engine model, transmission model, and body colour code.

No.	Item	Contents	
1	MODEL	V65W MYHCL6	V65W: Vehicle model
			MYHCL6: Model series
2	ENGINE	6G74GDI	Engine model
3	EXT	S74B	Exterior code
4	TRANS AXLE	V5A51	Transmission code
5	COLOR INT OPT	S74 15Q Z06	S74: Body colour code
			15Q: Interior code
			Z06: Equipment code

For monotone colour vehicles, the body colour code shall be indicated. For two-tone or three-way two-tone colour vehicles, each colour code only shall be indicated in series.

MODELS

<Short wheelbase>

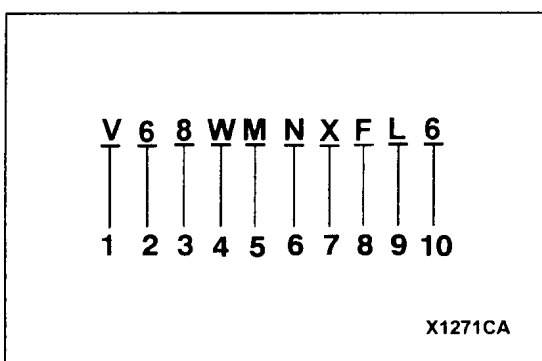
Model code		Engine model	Transmission model	Fuel supply system
V64W	MNDFL6	4D56 Intercooler Turbo (2,477 ml)	V5MT1 <5M/T>	Injection
	MNHFL6		V5M31 <5M/T>	
	MNHFR6			
	MNXFL6			
	MNXFR6			

Model code		Engine model	Transmission model	Fuel supply system
V68W	MNDFL6	4M41-DOHC Intercooler Turbo (3,200 mℓ)	V5M31 <5M/T>	Electronically-controlled high pressure fuel distribution
	MNHFL6			
	MYHFL6		V5A51 <5A/T>	
	MNXFL6		V5M31 <5M/T>	
	MNXFR6			
	MYXFL6		V5A51 <5A/T>	
	MYXFR6			
V65W	MNHCL6	6G74GDI (3,496 mℓ)	V5M31 <5M/T>	GDI
	MNHCR6			
	MYHCL6		V5A51 <5A/T>	
	MYHCR6			
	MNXCL6		V5M31 <5M/T>	
	MNXCR6			
	MYXCL6		V5A51 <5A/T>	
	MYXCR6			

<Long wheelbase>

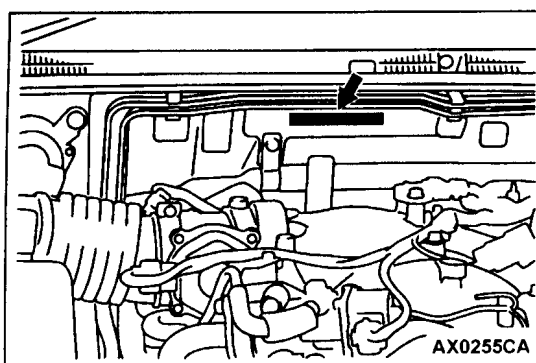
Model code		Engine model	Transmission model	Fuel supply system
V74W	LNDFL6	4D56 Intercooler Turbo (2,477 mℓ)	V5MT1 <5M/T>	Injection
	LNHFL6		V5M31 <5M/T>	
	LNXFL6			
V78W	LNDFL6	4M41-DOHC Intercooler Turbo (3,200 mℓ)	V5M31 <5M/T>	Electronically-controlled high pressure fuel distribution
	LNHFL6			
	LNHFR6			
	LYHFL6		V5A51 <5A/T>	
	LYHFR6			
	LNXFL6		V5M31 <5M/T>	
	LNXFR6			
	LYXFL6		V5A51 <5A/T>	
	LYXFR6			

Model code		Engine model	Transmission model	Fuel supply system
V75W	LNHCL6	6G74GDI (3,496 ml)	V5M31 <5M/T>	GDI
	LNHCR6			
	LYHCL6		V5A51 <5A/T>	
	LYHCR6			
	LNXCCL6		V5M31 <5M/T>	
	LNXCRC6			
	LYXCCL6		V5A51 <5A/T>	
	LYXCRC6			



MODEL CODE

No.	Items	Contents
1	Development	V: MITSUBISHI PAJERO
2	wheelbase	6: Short wheelbase 7: Long wheelbase
3	Engine type	4: 2,477 ml diesel engine 5: 3,496 ml petrol engine 8: 3,200 ml diesel engine
4	Sort	W: Wagon
5	Body style	M: 3-door L: 5-door
6	Transmission type	N: 5-speed manual transmission Y: 5-speed automatic transmission
7	Trim level	D: GL H: GLX X: GLS
8	Specification engine feature	C: GDI F: Intercooler Turbocharger
9	Steering wheel location	L: Left hand R: Right hand
10	Destination	6: For Europe

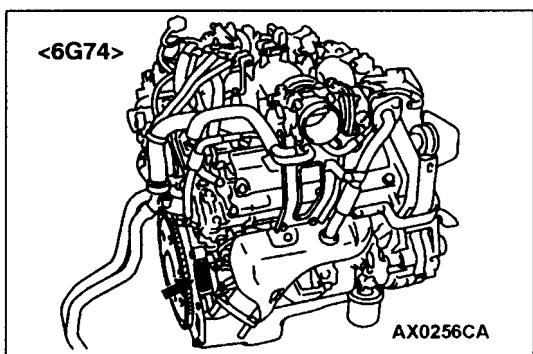
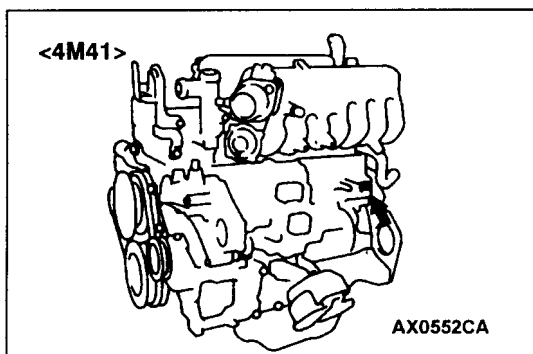
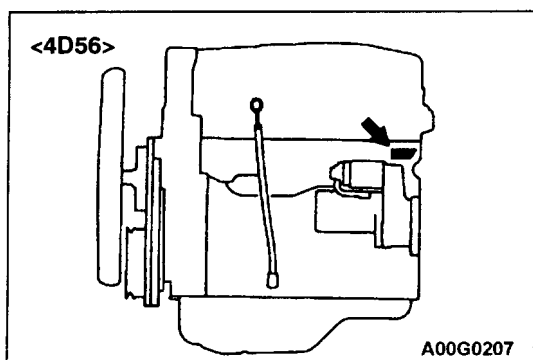
**CHASSIS NUMBER**

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

▲ J M B M N V6 4 W 1 J 000001 ▲
 1 2 3 4 5 6 7 8 9 10 11

X1428CA

No.	Items		Contents
1	Fixed figure	J	Asia
2	Distribution channel	M	Japan channel
3	Destination	A	For Europe, right hand drive
		B	For Europe, left hand drive
4	Body style	M	3-door
		L	5-door
5	Transmission type	N	5-speed manual transmission
		Y	5-speed automatic transmission
6	Development order	V6	MITSUBISHI PAJERO short wheelbase
		V7	MITSUBISHI PAJERO long wheelbase
7	Engine	4	4D56: 2,477 mℓ diesel engine
		5	6G74: 3,496 mℓ petrol engine
		8	4M41: 3,200 mℓ diesel engine
8	Sort	W	Station wagon
9	Model year	1	2001
10	Plant	J	Nagoya-3
11	Serial number	–	–



ENGINE MODEL NUMBER

1. The engine model number is stamped at the cylinder block as shown in the following.

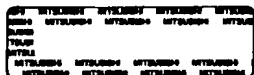
Engine model	Engine displacement ml
4D56	2,477
4M41	3,200
6G74	3,496

2. The engine serial number is stamped near the engine model number.

Engine serial number	AA0201 to YY9999
----------------------	------------------

THEFT PROTECTION LABEL FOR MAIN OUTER PANELS

[FOR ORIGINAL PARTS]



[FOR REPLACEMENT PARTS]



X1629CA

THEFT PROTECTION<R.H.D.>

In order to protect against theft, a Vehicle Identification Number (VIN) is attached as a plate or label to the following major parts of the main outer panels:

Fender, Doors, Back door, Quarter panel, Hood, Bumpers

In addition, a theft-protection label is attached to replacement parts for the body outer panel main components.

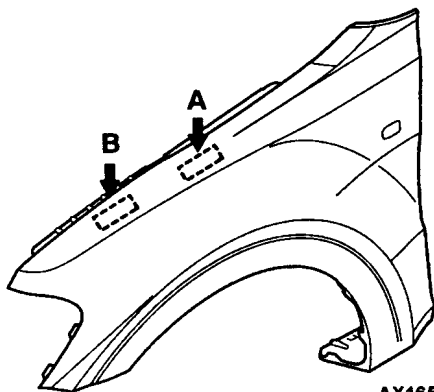
Cautions regarding panel repairs:

1. When repainting original parts, do so after first masking the theft-protection label, and, after painting, be sure to peel off the masking tape.
2. The theft-protection label for replacement parts is covered by masking tape, so such parts can be painted as is. The masking tape should be removed after painting is finished.
3. The theft-protection label should not be removed from original parts or replacement parts.

LOCATIONS

TARGET AREA (A: FOR ORIGINAL EQUIPMENT PARTS, B: FOR REPLACEMENT PARTS)

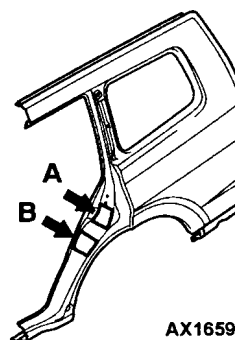
Fender



AX1658CA

The illustration indicates left outer side. Right side is symmetrically opposite.

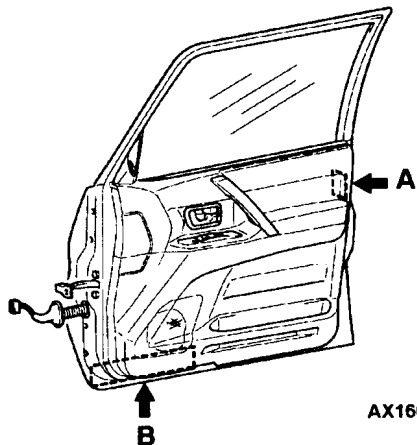
Quarter panel



AX1659CA

The illustration indicates left outer side. Right side is symmetrically opposite.

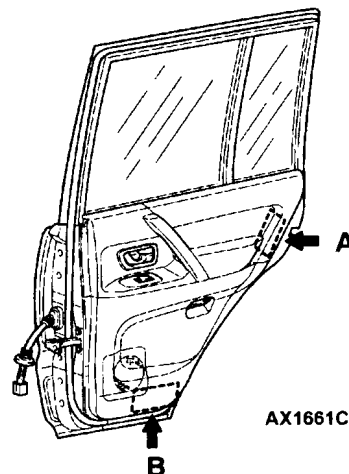
Front door



AX1660CA

The illustration indicates right outer side. Left side is symmetrically opposite.

Rear door

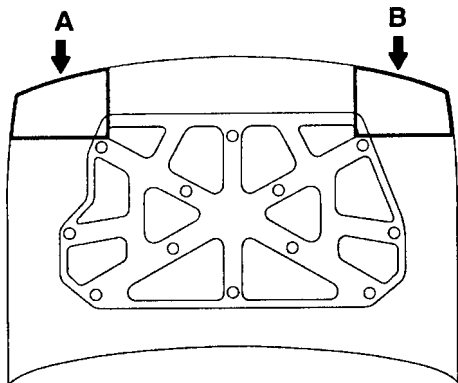


AX1661CA

The illustration indicates right outer side. Left side is symmetrically opposite.

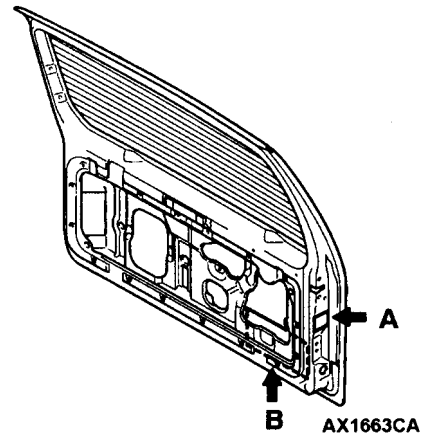
TARGET AREA (A: FOR ORIGINAL EQUIPMENT PARTS, B: FOR REPLACEMENT PARTS)

Hood



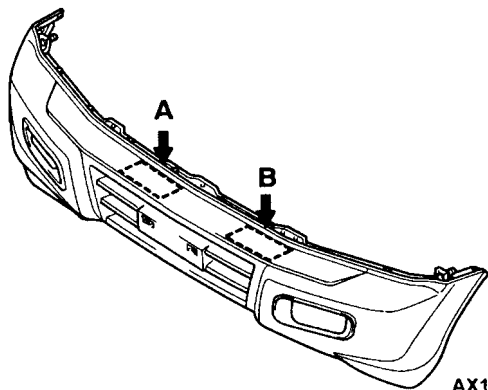
AX1662CA

Back door



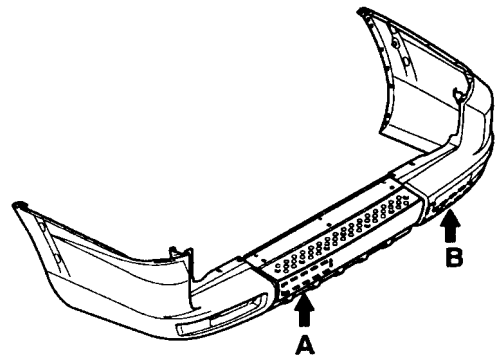
AX1663CA

Front bumper



AX1664CA

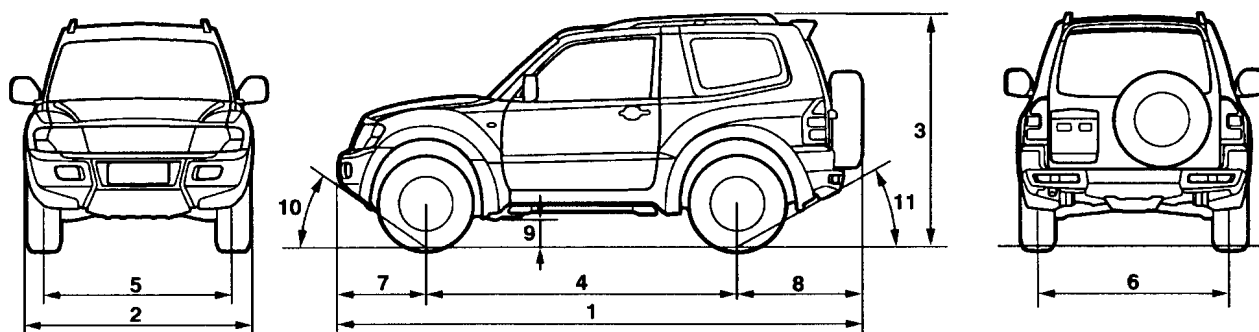
Rear bumper



AX1665CA

MAJOR SPECIFICATIONS

<Short wheelbase>



X1508CA

Items			V64W			V68W	
			MNDFL6	MNHFL6, MNHFR6	MNXFL6, MNXFR6	MNDFL6	MNHFL6
Vehicle dimensions mm	Overall length	1	4,260		4,280	4,260	
	Overall width	2	1,845		1,875	1,845	
	Overall height (unladen)	3	1,845, 1,875* ¹				
	Wheelbase	4	2,545				
	Track-front	5	1,560				
	Track-rear	6	1,560				
	Overhang-front	7	710				
	Overhang-rear	8	1,005* ² , 1,025* ³				
	Ground clearance (unladen)	9	235			225	
	Angle of approach degrees	10	42°				
	Angle of departure degrees	11	33.5°				
Vehicle weight kg	Kerb weight		1,865	1,900	1,920	1,975	1,980
	Max. gross vehicle weight		2,510				
	Max. axle weight rating-front		1,070	1,090	1,100	1,165	
	Max. axle weight rating-rear		1,440	1,420	1,410	1,345	
Seating capacity			5				
Engine	Model No.		4D56 Intercooler Turbo			4M41-DOHC Intercooler Turbo	
	Total displacement ml		2,477			3,200	
Transmission	Model No.		V5MT1	V5M31			
	Type		5-speed manual				
Fuel system	Fuel supply system		Injection			Electronically-controlled high pressure fuel distribution	

NOTE:

*1: Vehicles with roof rails

*2: Vehicles with 235/80R16 Tyre

*3: Vehicles with 265/70R16 Tyre

Items			V68W			V65W	
			MYHFL6	MNXFL6, MNXFR6	MYXFL6, MYXFR6	MNHCL6, MNHCR6	MYHCL6, MYHCR6
Vehicle dimensions mm	Overall length	1	4,260	4,280			
	Overall width	2	1,845	1,875		1,845	
	Overall height (unladen)	3	1,845, 1,875* ¹				
	Wheelbase	4	2,545				
	Track-front	5	1,560				
	Track-rear	6	1,560				
	Overhang-front	7	710				
	Overhang-rear	8	1,005* ² , 1,025* ³				
	Ground clearance (unladen)	9	225			235	
	Angle of approach degrees	10	42°				
	Angle of departure degrees	11	33.5°				
Vehicle weight kg	Kerb weight		1,980	2,000		1,915	
	Max. gross vehicle weight		2,510				
	Max. axle weight rating-front		1,165	1,170		1,075	
	Max. axle weight rating-rear		1,345	1,340		1,435	
Seating capacity			5				
Engine	Model No.		4M41-DOHC Intercooler Turbo			6G74GDI	
	Total displacement ml		3,200			3,496	
Transmission	Model No.		V5A51	V5M31	V5A51	V5M31	V5A51
	Type		5-speed automatic	5-speed manual	5-speed automatic	5-speed manual	5-speed automatic
Fuel system	Fuel supply system		Electronically-controlled high pressure fuel distribution			GDI	

NOTE:

*¹: Vehicles with roof rails*²: Vehicles with 235/80R16 Tyre*³: Vehicles with 265/70R16 Tyre

Items			V65W	
			MNXCL6, MNXCR6	MYXCL6, MYXCR6
Vehicle dimensions mm	Overall length	1	4,280	
	Overall width	2	1,875	
	Overall height (unladen)	3	1,845, 1,875* ¹	
	Wheelbase	4	2,545	
	Track-front	5	1,560	
	Track-rear	6	1,560	
	Overhang-front	7	710	
	Overhang-rear	8	1,005* ² , 1,025* ³	
	Ground clearance (unladen)	9	235	
	Angle of approach degrees	10	42°	
	Angle of departure degrees	11	33.5°	
Vehicle weight kg	Kerb weight		1,935	
	Max. gross vehicle weight		2,510	
	Max. axle weight rating-front		1,080	
	Max. axle weight rating-rear		1,430	
Seating capacity			5	
Engine	Model No.		6G74GDI	
	Total displacement mℓ		3,496	
Transmis- sion	Model No.		V5M31	V5A51
	Type		5-speed manual	5-speed automatic
Fuel system	Fuel supply system		GDI	

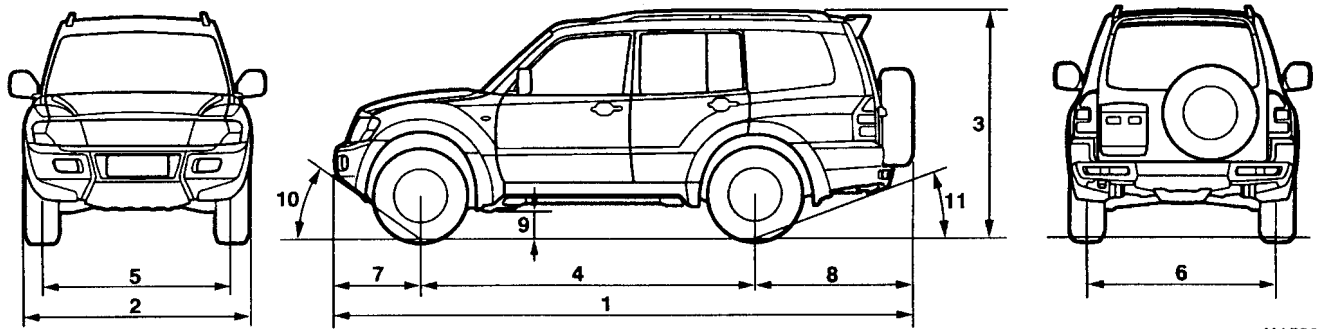
NOTE:

*1: Vehicles with roof rails

*2: Vehicles with 235/80R16 Tyre

*3: Vehicles with 265/70R16 Tyre

<Long wheelbase>



X1509CA

Items			V74W			V78WL	
			LNDFL6	LNHFL6	LNKFL6	LNDFL6	LNHFL6, LNHFR6
Vehicle dimensions mm	Overall length	1	4,775		4,795	4,775	
	Overall width	2	1,845		1,875	1,845	
	Overall height (unladen)	3	1,855,1,885* ¹				
	Wheelbase	4	2,780				
	Track-front	5	1,560				
	Track-rear	6	1,560				
	Overhang-front	7	710				
	Overhang-rear	8	1,285* ² , 1,305* ³				
	Ground clearance (unladen)	9	235			225	
	Angle of approach degrees	10	42°				
	Angle of departure degrees	11	24°				
Vehicle weight kg	Kerb weight		2,015	2,055	2,090	2,120	2,125
	Max. gross vehicle weight		2,760				
	Max. axle weight rating-front		1,110	1,110	1,125	1,160	
	Max. axle weight rating-rear		1,650	1,650	1,635	1,600	
Seating capacity			7				
Engine	Model No.		4D56 Intercooler Turbo			4M41-DOHC Intercooler Turbo	
	Total displacement ml		2,477			3,200	
Transmission	Model No.		V5MT1	V5M31			
	Type		5-speed manual				
Fuel system	Fuel supply system		Injection			Electronically-controlled high pressure fuel distribution	

NOTE:

*1: Vehicles with roof rails

*2: Vehicles with 235/80R16 Tyre

*3: Vehicles with 265/70R16 Tyre

Items			V78W			V75W	
			LYHFL6, LYHFR6	LNXFL6, LNXFR6	LYXFL6, LYXFR6	LNHCL6, LNHCR6	LYHCL6, LYHCR6
Vehicle dimensions mm	Overall length	1	4,775	4,795			
	Overall width	2	1,845	1,875		1,845	
	Overall height (unladen)	3	1,855,1,885* ¹				
	Wheelbase	4	2,780				
	Track-front	5	1,560				
	Track-rear	6	1,560				
	Overhang-front	7	710				
	Overhang-rear	8	1,285* ² , 1,305* ³				
	Ground clearance (unladen)	9	225			235	
	Angle of approach degrees	10	42°				
	Angle of departure degrees	11	24°				
Vehicle weight kg	Kerb weight		2,125	2,155		2,060	
	Max. gross vehicle weight		2,760		2,800	2,760	
	Max. axle weight rating-front		1,160			1,110	
	Max. axle weight rating-rear		1,600			1,650	
Seating capacity			7				
Engine	Model No.		4M41-DOHC Intercooler Turbo			6G74GDI	
	Total displacement ml		3,200			3,496	
Transmission	Model No.		V5A51	V5M31	V5A51	V5M31	V5A51
	Type		5-speed automatic	5-speed manual	5-speed auto- matic	5-speed manual	5-speed automatic
Fuel system	Fuel supply system		Electronically-controlled high pressure fuel distribution			GDI	

NOTE:

*¹: Vehicles with roof rails*²: Vehicles with 235/80R16 Tyre*³: Vehicles with 265/70R16 Tyre

Items			V75W	
			LNXCCL6, LNXCRC6	LYXCCL6, LYXCRC6
Vehicle dimensions mm	Overall length	1	4,795	
	Overall width	2	1,875	
	Overall height (unladen)	3	1,855, 1,885* ¹	
	Wheelbase	4	2,780	
	Track-front	5	1,560	
	Track-rear	6	1,560	
	Overhang-front	7	710	
	Overhang-rear	8	1,285* ² , 1,305* ³	
	Ground clearance (unladen)	9	235	
	Angle of approach degree	10	42°	
	Angle of departure degree)	11	24°	
Vehicle weight kg	Kerb weight		2,095	
	Max. gross vehicle weight		2,760	
	Max. axle weight rating-front		1,110	
	Max. axle weight rating-rear		1,650	
Seating capacity			7	
Engine	Model No.		6G74GDI	
	Total displacement mℓ		3,496	
Transmission	Model No.		V5M31	V5A51
	Type		5-speed manual	5-speed automatic
Fuel system	Fuel supply system		GDI	

NOTE:

*1: Vehicles with roof rails

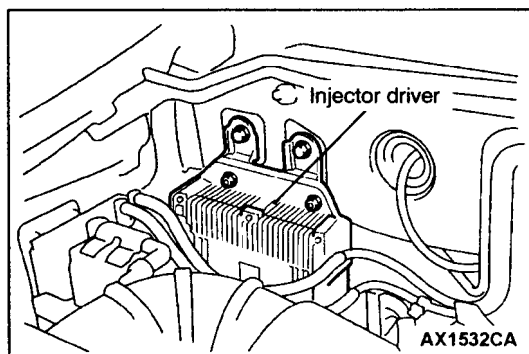
*2: Vehicles with 235/80R16 Tyre

*3: Vehicles with 265/70R16 Tyre

PRECAUTIONS BEFORE SERVICE

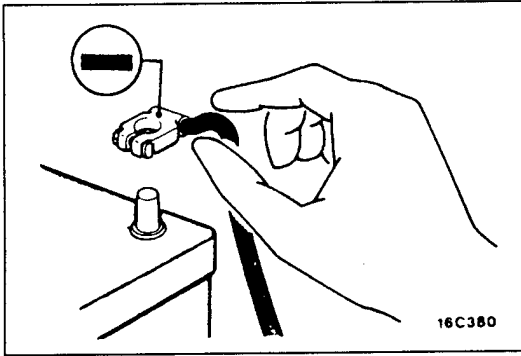
SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

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. Warning labels are located in the following locations.
 - Hood
 - Sun visor
 - Glove box
 - SRS-ECU
 - Steering wheel
 - Steering gearbox
 - Air bag module (driver's side and front passenger's side)
 - Front impact sensor
 - Clock spring
 - Side air bag module
 - Side impact sensor
 - (4) Always use the designated special tools and test equipment.
 - (5) Store components removed from the SRS in a clean and dry place.
The air bag module 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-ECU, air bag module, clock spring).
 - (7) Whenever you finish servicing the SRS, check the SRS warning lamp operation to make sure that the system functions properly.
 - (8) Be sure to deploy the air bag before disposing of the air bag module or disposing of a vehicle equipped with an air bag. (Refer to GROUP 52B – Air Bag Module Disposal Procedures.)
2. Observe the following when carrying out operations on places where SRS components are installed, including operations not directly related to the SRS air bag.
 - (1) When removing or installing parts do not allow any impact or shock to the SRS components.
 - (2) SRS components should not be subjected to heat, so remove the SRS components before drying or baking the vehicle after painting.
 - SRS-ECU, air bag module, clock spring, front and side impact sensors: 93°C or moreAfter re-installing them, check the SRS warning lamp operation to make sure that the system functions properly.



SERVICING INJECTOR DRIVER

After driving the vehicle, the injector driver will be hot. In addition, high voltages and high currents are supplied to the injector driver and the injectors while the engine is running, so take sufficient care when handling the injector driver and surrounding components at such times.



SERVICING THE ELECTRICAL SYSTEM

Before replacing a component related to the electrical system and before undertaking any repair procedures involving the electrical system, be sure to first disconnect the negative (-) cable from the battery in order to avoid damage caused by short-circuiting.

Caution

Before connecting or disconnecting the negative (-) cable, be sure to turn off the ignition switch and the lighting switch.

(If this is not done, there is the possibility of semiconductor parts being damaged.)

APPLICATION OF ANTI-CORROSION AGENTS AND UNDERCOATS

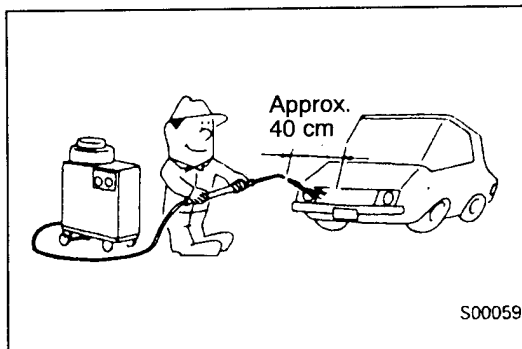
If oil or grease gets onto the oxygen sensor, it will cause a drop in the performance of the sensor.

Cover the oxygen sensor with a protective cover when applying anti-corrosion agents and undercoats.

PRE-INSPECTION CONDITION

“Pre-inspection condition” refers to the condition that the vehicle must be in before proper engine inspection can be carried out. If you see the words “Set the vehicle to the pre-inspection condition”. in this manual, it means to set the vehicle to the following condition.

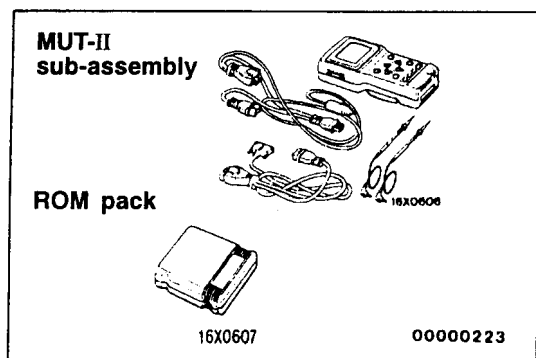
- Engine coolant temperature: 80–90°C
- Lamps, electric cooling fan and all accessories: OFF
- M/T: Neutral
- A/T: P range



VEHICLE WASHING

If high-pressure car-washing equipment or steam car-washing equipment is used to wash the vehicle, be sure to note the following information in order to avoid damage to plastic components, etc.

- Spray nozzle distance: Approx. 40 cm or more
- Spray pressure: 3,900 kPa or less
- Spray temperature: 82°C or less
- Time of concentrated spray to one point: within 30 sec.



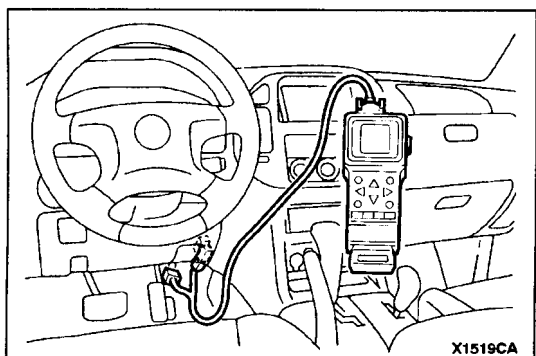
MUT-II

Refer to the "MUT-II REFERENCE MANUAL" or "MUT-II OPERATING INSTRUCTIONS" for instructions on handling the MUT-II.

Connect the MUT-II to the diagnosis connector as shown in the illustration.

Caution

Connection and disconnection of the MUT-II should always be made with the ignition switch in the "LOCK(OFF)" position.



IN ORDER TO PREVENT VEHICLES FROM FIRE

"Improper installation of electrical or fuel related parts could cause a fire. In order to retain the high quality and safety of the vehicle, it is important that any accessories that may be fitted or modifications/repairs that may be carried out which involve the electrical or fuel systems, MUST be carried out in accordance with MMC's information/Instructions".

ENGINE OILS

Health Warning

Prolonged and repeated contact with mineral oil will result in the removal of natural fats from the skin, leading to dryness, irritation and dermatitis. In addition, used engine oil contains potentially harmful contaminants which may cause skin cancer. Adequate means of skin protection and washing facilities must be provided.

Recommended Precautions

The most effective precaution is to adapt working practices which prevent, as far as practicable, the risk of skin contact with mineral oils, for example by using enclosed systems for handling used engine oil and by degreasing components, where practicable, before handling them.

Other precautions:

- Avoid prolonged and repeated contact with oils, particularly used engine oils.
- Wear protective clothing, including impervious gloves where practicable.
- Avoid contaminating clothes, particularly underpants, with oil.
- Do not put oily rags in pockets, the use of overalls without pockets will avoid this.
- Do not wear heavily soiled clothing and oil-impregnated foot-wear. Overalls must be cleaned regularly and kept separately from personal clothing.
- Where there is a risk of eye contact, eye protection should be worn, for example, chemical goggles or face shields; in addition an eye wash facility should be provided.
- Obtain First Aid treatment immediately for open cuts and wounds.
- Wash regularly with soap and water to ensure all oil is removed, especially before meals (skin cleansers and nail brushes will help). After cleaning, the application of preparations containing lanolin to replace the natural skin oils is advised.
- Do not use petrol, kerosine, diesel fuel, gas oil, thinners or solvents for cleaning skin.
- Use barrier creams, applying them before each work period, to help the removal of oil from the skin after work.
- If skin disorders develop, obtain medical advice without delay.

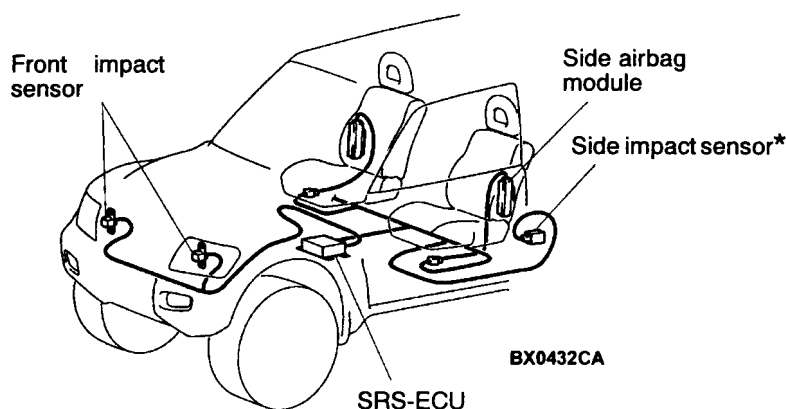
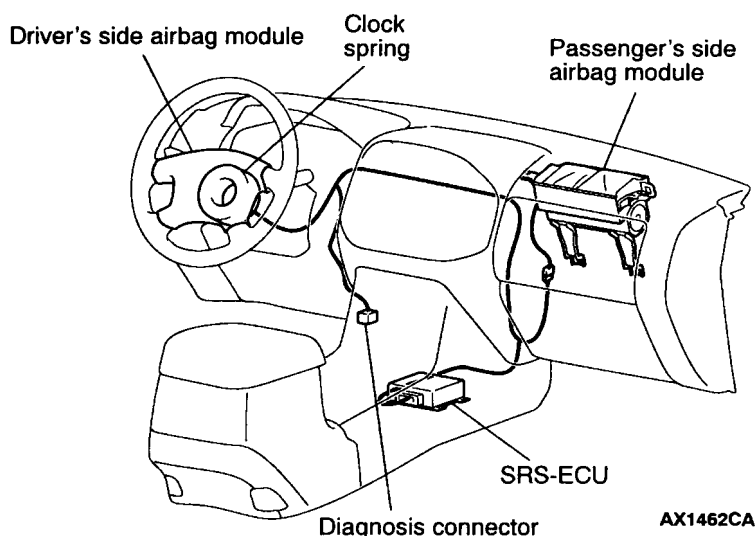
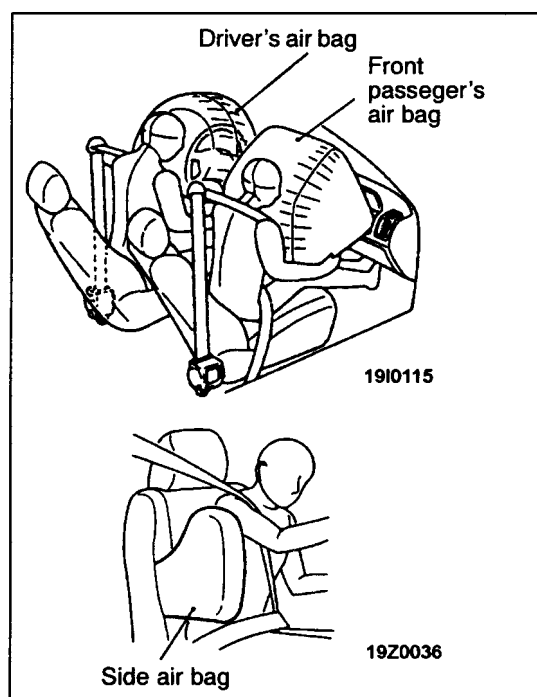
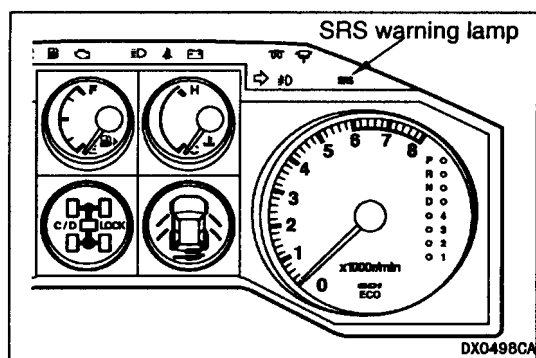
SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

To improve safety, the SRS is available as optional parts. This system enhances collision safety by restraining the front occupants in case of an accident.

The SRS consists of four air bag modules, SRS air bag control unit (SRS-ECU), front and side impact sensors, SRS warning lamp and clock spring. The air bags are located in the centre of the steering wheel, above the glove box, and built into the front seat back assemblies. Each air bag has a folded air bag and an inflator unit. The SRS-ECU under the floor console monitors the system and has a safing G-sensor and an analog G-sensor. The front impact sensors are installed in the headlamp support. The side impact sensors are installed inside the center pillars or the quarter panels, inner monitor any shocks coming from the

side of the vehicle. The warning lamp on the instrument panel indicates the operational status of the SRS. The clock spring is installed in the steering column.

The SRS side air bags deploy if an impact received at the front or side of the vehicle is stronger than a certain set value, in order to protect the front seat occupant's torso in the event of a collision. Only authorized service personnel should do work on or around the SRS components. Those service personnel should read this manual carefully before starting any such work. Extreme care must be used when servicing the SRS to avoid injury to the service personnel (by inadvertent deployment of the air bags) or the driver (by rendering the SRS inoperative).



NOTE

*: Indicates the parts equipped on the right and left sides.

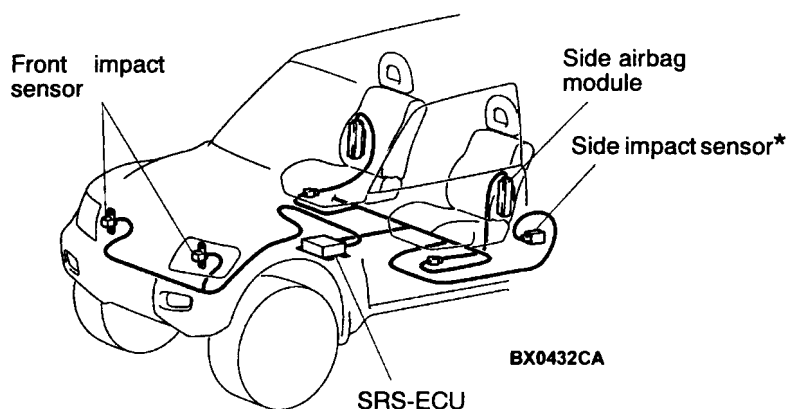
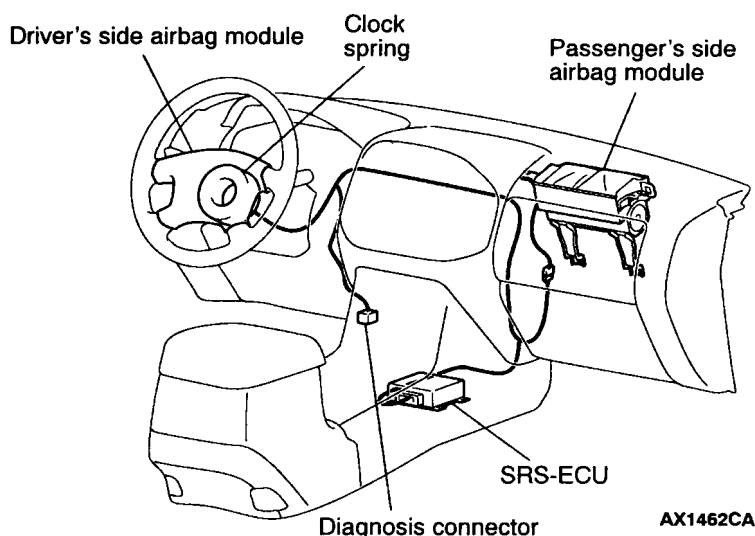
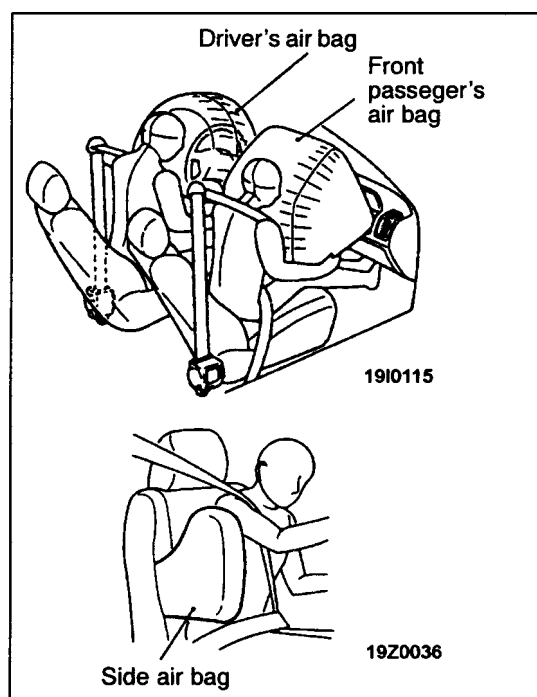
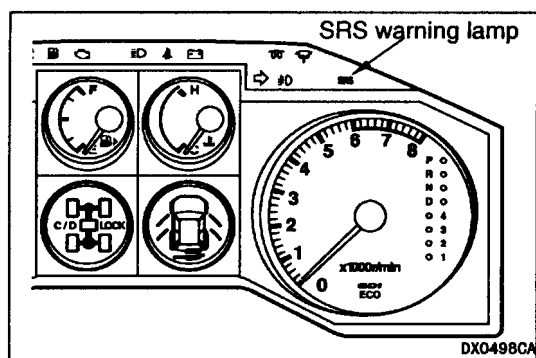
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NOTE

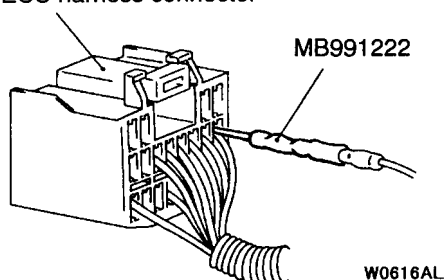
*: Indicates the parts equipped on the right and left sides.

SRS-ECU Terminal No.	Destination of harness	Corrective action
1, 2, 3, 4	Instrument panel wiring harness → Front wiring harness → Front impact sensor	Repair or replace each wiring harness
7	Instrument panel wiring harness → Earth	Repair or replace Instrument panel wiring harness
8	Instrument panel wiring harness → Combination meter (SRS warning lamp)	
9, 10	Instrument panel wiring harness → Front passenger's air bag module	
11, 12	Instrument panel wiring harness → Clock spring → Driver's air bag module)	Repair or replace the Instrument panel wiring harness. Replace clock spring.
13	Instrument panel wiring harness → Junction block (fuse No.8)	Repair or replace Instrument panel wiring harness.
16	Instrument panel wiring harness → Junction block (fuse No.6)	
20	Instrument panel wiring harness → Diagnosis connector	
21, 22	Side air bag wiring harness → Side air bag module (L.H.)	Repair or replace side air bag wiring harness.
23, 24	Side air bag wiring harness → Side air bag module (R.H.)	
34, 35, 36	Side air bag wiring harness → Floor wiring harness → Side impact sensor (L.H.)	Repair or each wiring harness.
40, 41, 42	Side air bag wiring harness → Floor wiring harness → 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 (probe, MB991222, in the harness set) into the connector from harness side (rear side), and connect the tester to this probe. If any tool than specified is used, damage to the harness and other components will result. 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.

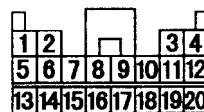
<Vehicles without SRS side air bag>

SRS-ECU harness connector



W0616AL

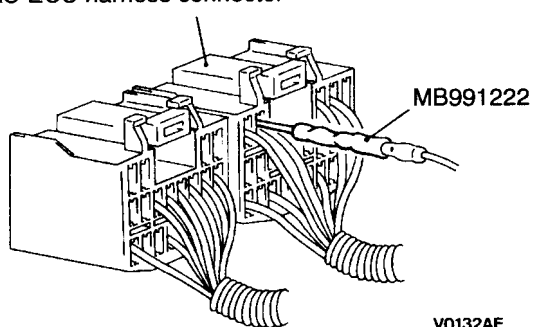
SRS-ECU harness connector (rear view)



W0999AL

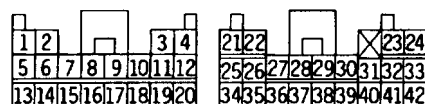
<Vehicles with SRS side air bag>

SRS-ECU harness connector



V0132AE

SRS-ECU harness connector (rear view)



W0584AU

7. SRS components should not be subjected to temperature over 93°C, so remove the SRS-ECU, driver's and front passenger's air bag modules, clock spring, side impact sensors and front seat assemblies (side air bag modules) before drying or baking the vehicle after painting.
8. Whenever you finish servicing the SRS, check warning lamp operation to make sure that the system functions properly. (Refer to GROUP 52B.)
9. Make certain that the ignition switch is LOCK (OFF) position 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.

SUPPORT LOCATIONS FOR LIFTING AND JACKING

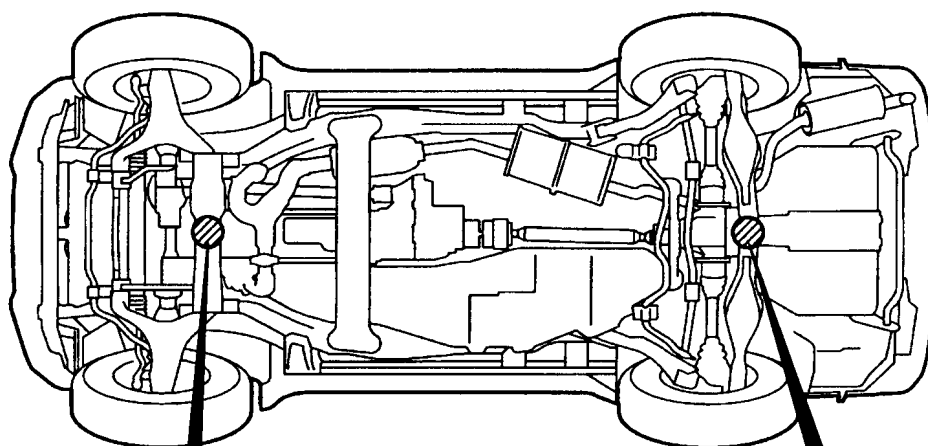
Caution

Do not support the vehicles at locations other than specified supporting points. If do so, this will cause damage, etc.

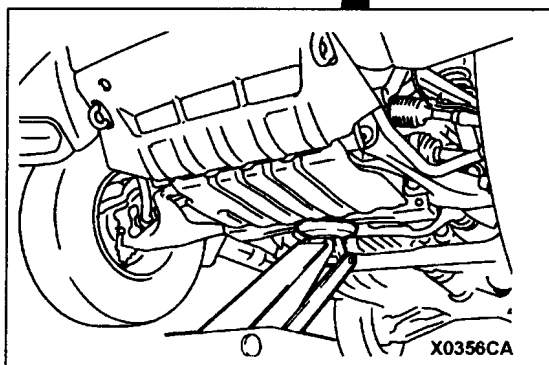
SUPPORT POSITIONS FOR A GARAGE JACK

Caution

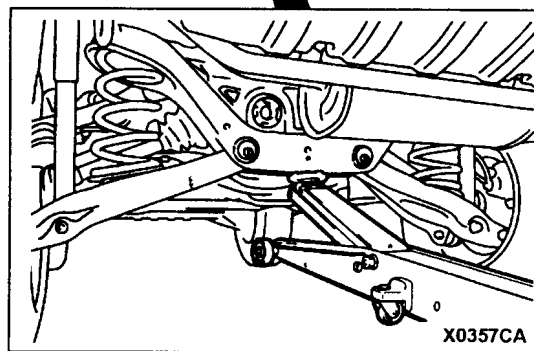
Never support any point other than the specified one, or it will be deformed.



X0417CA



X0356CA



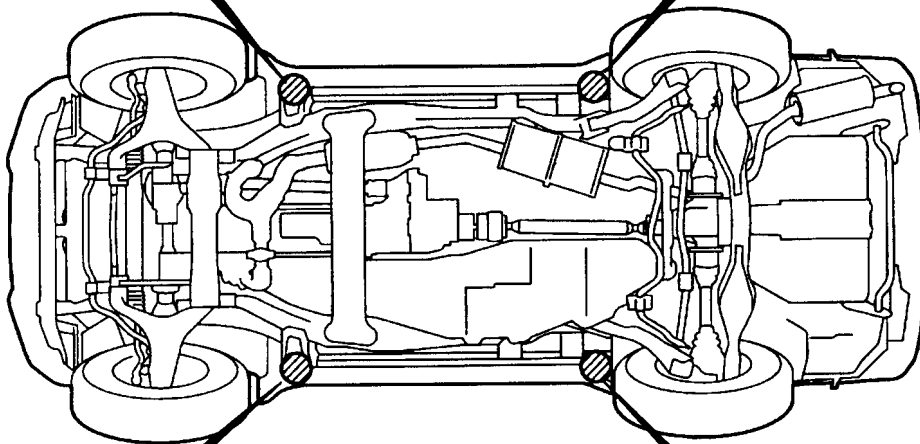
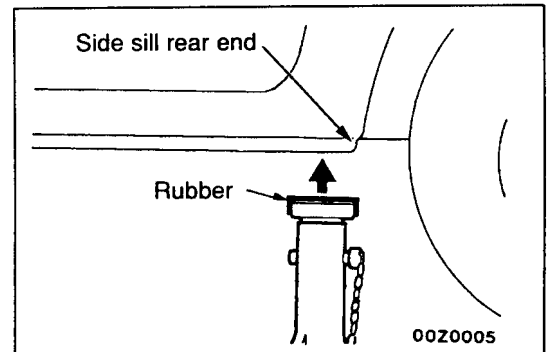
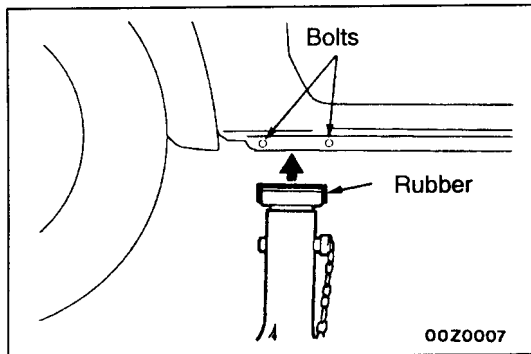
X0357CA

SUPPORT POSITIONS FOR AXLE STANDS AND A SINGLE-POST LIFT OR DOUBLE-POST LIFT

Caution

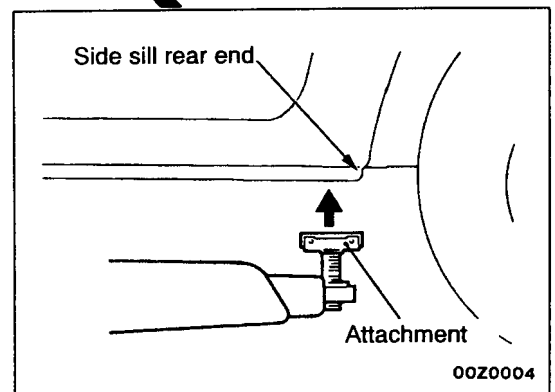
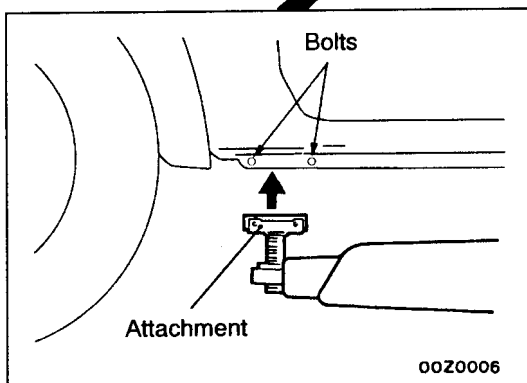
1. If rubber attachments with grooves that are too thick are used at the front support positions, the front fender may become bent, so be sure to use rubber attachments with groove thicknesses of 18 mm or less.
2. If attachments which are not high enough are used, they may damage areas such as the side sill. Be sure to use attachments which are high enough, or remove the side sill if not using attachments.

AXLE STANDS



CX0418CA

SINGLE-POST LIFT OR DOUBLE-POST LIFT



STANDARD PART/TIGHTENING-TORQUE TABLE

Each torque value in the table is a standard value for tightening under the following conditions.

- (1) Bolts, nuts and washers are all made of steel and plated with zinc.
- (2) The threads and bearing surface of bolts and nuts are all in dry condition.

The values in the table are not applicable:

- (1) If toothed washers are inserted.
- (2) If plastic parts are fastened.
- (3) If bolts are tightened to plastic or die-cast inserted nuts.
- (4) If self-tapping screws or self-locking nuts are used.

Standard bolt and nut tightening torque

Thread size		Torque N·m		
Bolt nominal diameter (mm)	Pitch (mm)	Head mark "4"	Head mark "7"	Head mark "8"
M5	0.8	2.5 ± 0.5	5.0 ± 1.0	6.0 ± 1.0
M6	1.0	5.0 ± 1.0	9.0 ± 2.0	10 ± 2
M8	1.25	12 ± 2	22 ± 4	25 ± 4
M10	1.25	24 ± 4	44 ± 10	53 ± 7
M12	1.25	41 ± 8	83 ± 12	98 ± 12
M14	1.5	73 ± 12	140 ± 20	155 ± 25
M16	1.5	110 ± 20	210 ± 30	235 ± 35
M18	1.5	165 ± 25	300 ± 40	340 ± 50
M20	1.5	225 ± 35	410 ± 60	480 ± 70
M22	1.5	300 ± 40	555 ± 85	645 ± 95
M24	1.5	395 ± 55	735 ± 105	855 ± 125

Flange bolt and nut tightening torque

Thread size		Torque N·m		
Bolt nominal diameter (mm)	Pitch (mm)	Head mark "4"	Head mark "7"	Head mark "8"
M6	1.0	5.0 ± 1.0	10 ± 2	12 ± 2
M8	1.25	13 ± 2	24 ± 4	27 ± 5
M10	1.25	26 ± 4	49 ± 9	58 ± 7
M10	1.5	24 ± 4	45 ± 8	55 ± 10
M12	1.25	46 ± 8	95 ± 15	105 ± 15
M12	1.75	43 ± 8	83 ± 12	98 ± 12

NOTE

1. Be sure to use only the specified bolts and nuts, and always tighten them to the specified torques.
2. Bolts marked with indications such as 4T or 7T are reinforced bolts. The larger the number, the greater the bolt strength.