MOOAA-

Service Manual

GALANT

1989-1990-1991-1992-1993 Volume 2 Body & Electrical

FOREWORD

This Service Manual has been prepared with the latest service information available at the time of publication. It is subdivided into various group categories and each section contains diagnostic, disassembly, repair, and installation procedures along with complete specifications and tightening references. Use of this manual will aid in properly performing any servicing necessary to maintain or restore the high levels of performance and reliability designed into these outstanding vehicles.

This BACKUP DSM manual is to be used ONLY as a BACKUP. Please DO NOT REDISTRIBUTE WHOLE SECTIONS. This BACKUP was sold to you under the fact that you do indeed OWN a GENUINE DSM MANUAL. It CANNOT BE considered a REPLACEMENT (Unless your original manual was lost or destroyed.)

Please See README.TXT or README.HTML for additional information.

Thank you. Gimmiemymanual@hotmail.com

WE SUPPORT
VOLUNTARY TECHNICIAN
CERTIFICATION THROUGH

National Institute for
AUTOMOTIVE
SERVICE
EXCELLENCE



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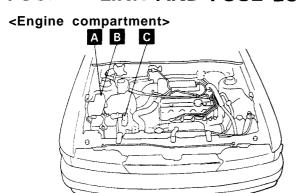
General	
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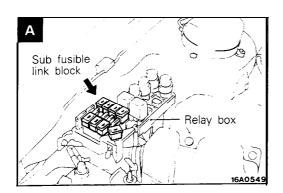
NOTE:

For information concerning all components other than the electrical system and onvehicle service procedures for engines and transmissions, refer to Volume 1 "Chassis & Body" of this paired Service Manual. For overhaul procedures of engines or transmissions, refer to the separately issued Engine Service Manual or Manual/Automatic Transmission Service Manual.

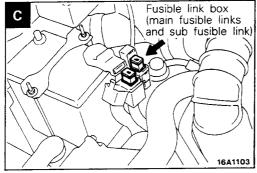
FUSIBLE LINK AND FUSE LOCATION

M16BA--

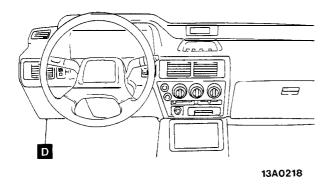


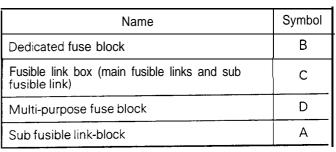


<Up to 1990 models (vehicles without ABS)>



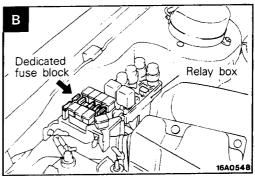
<Interior>



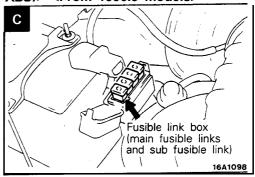


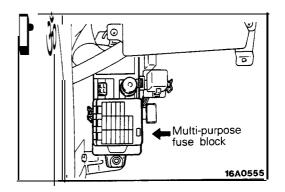
NOTE

- (1) For details of fusible link and fuse, refer to P.12. (2) The "Name" column is arranged in alphabetical order.



<Up to 1990 models (vehicles with ABS)> <From 1990.5 models>





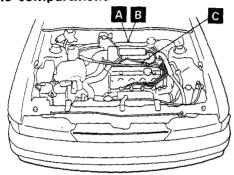
INSPECTION TERMINAL LOCATION

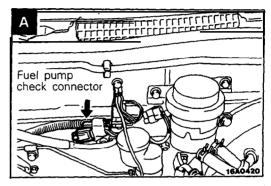
Name	Symbol	Name	Symbol
Engine speed detection connector* < DOHC>	С	Oxgen sensor check connector <dohc></dohc>	D
Fuel pump check connector	Α	Data link connector	E
Ignition timing adjustment connector	R		ı

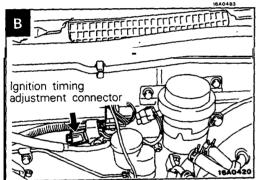
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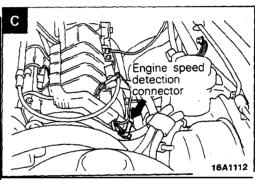
(1)*: <From 1990 models> (2) The "Name" column is arranged in alphabetical

<Engine compartment>



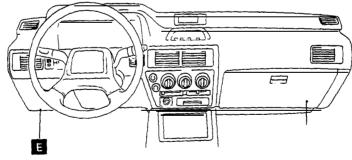


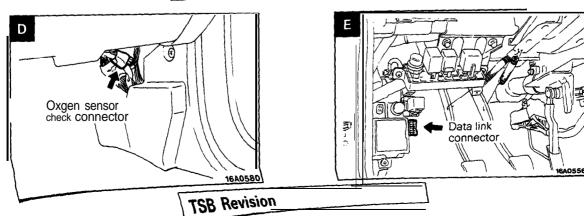




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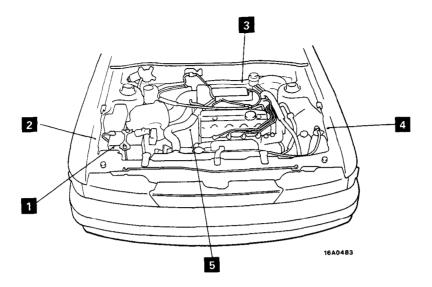


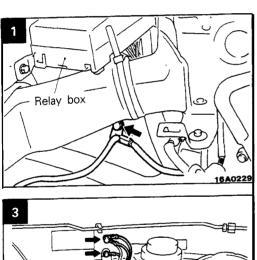


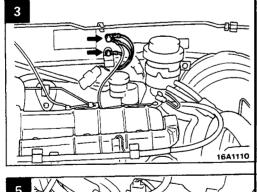


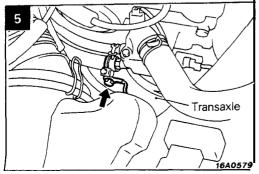
GROUNDING LOCATION

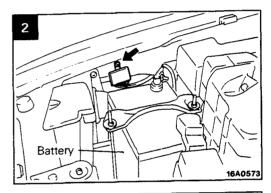
<Engine compartment>

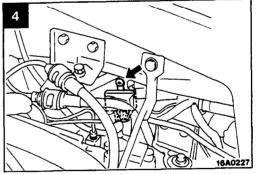


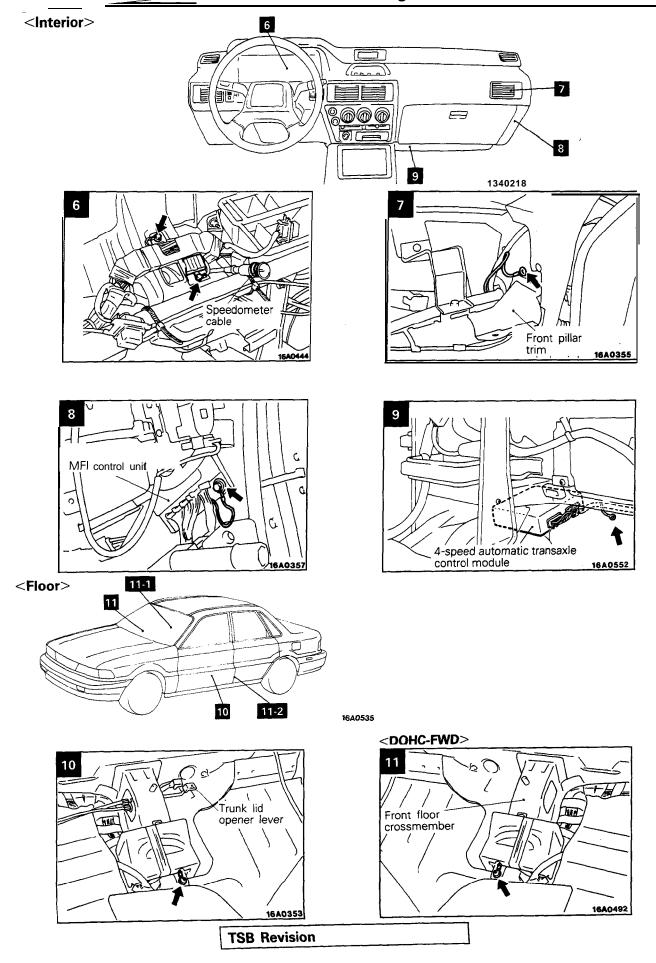




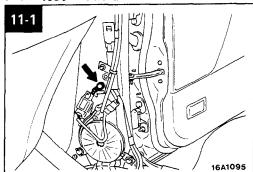




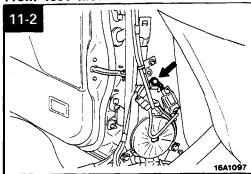




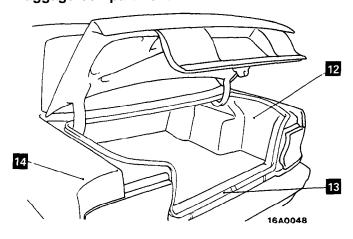
From 1990 models



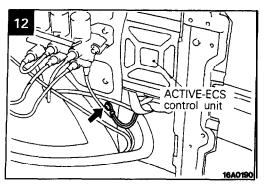
From 1990 models



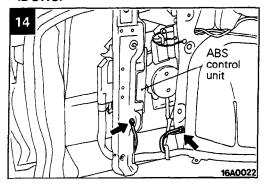
< Luggage compartment>



<DOHC-FWD>



<DOHC>



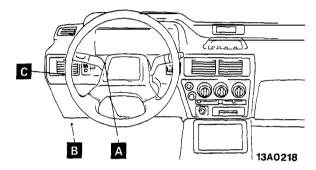
DIODE LOCATION

Name	Symbol	Name	Symbol
Diode (4WS fluid level warning light circuit)	А	Diode (auto-cruise control circuit) <up 1990="" models="" to=""></up>	А
Diode (ABS circuit)	В		
Diode (ACTIVE-ESC circuit)	C	Diode (sunroof circuit) <from 1="" 199="" models=""></from>	С
		Diode (theft-alarm system circuit)	A,C
Diode (A/T fluid temperature warning light circuit) <awd-a t=""></awd-a>	Α		

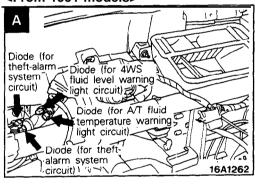
NOTE

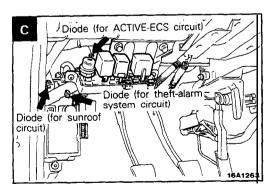
The "Name" column is arranged in alphabetical order.

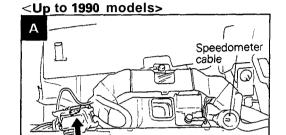
<Interior>



<From 1991 models>



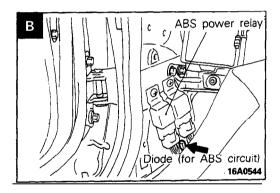


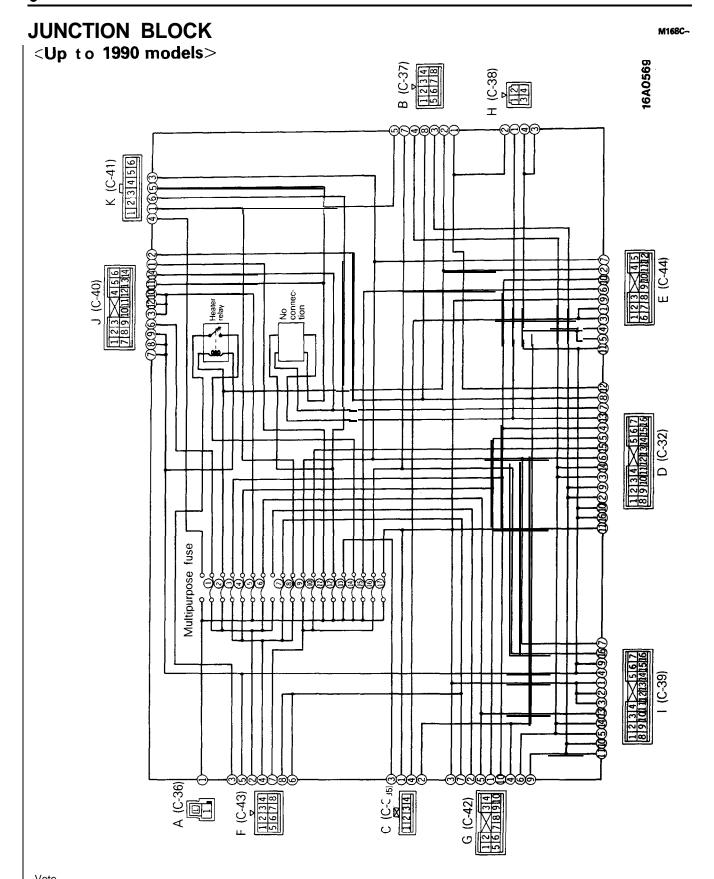


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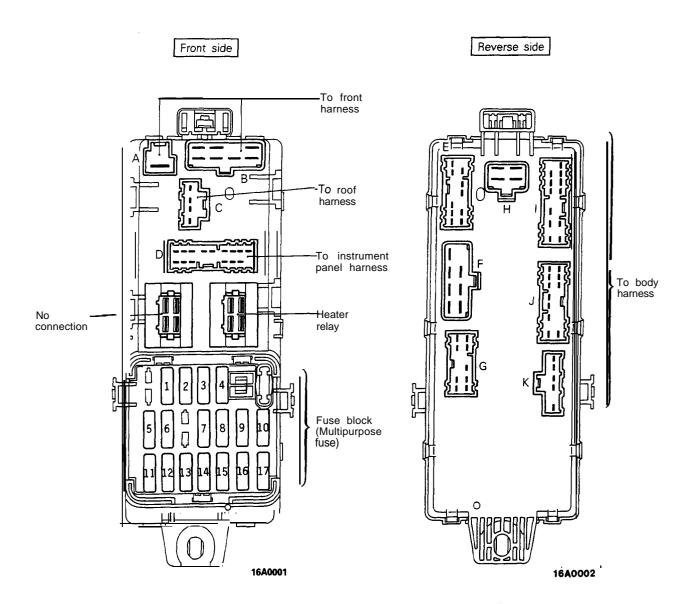
Diode

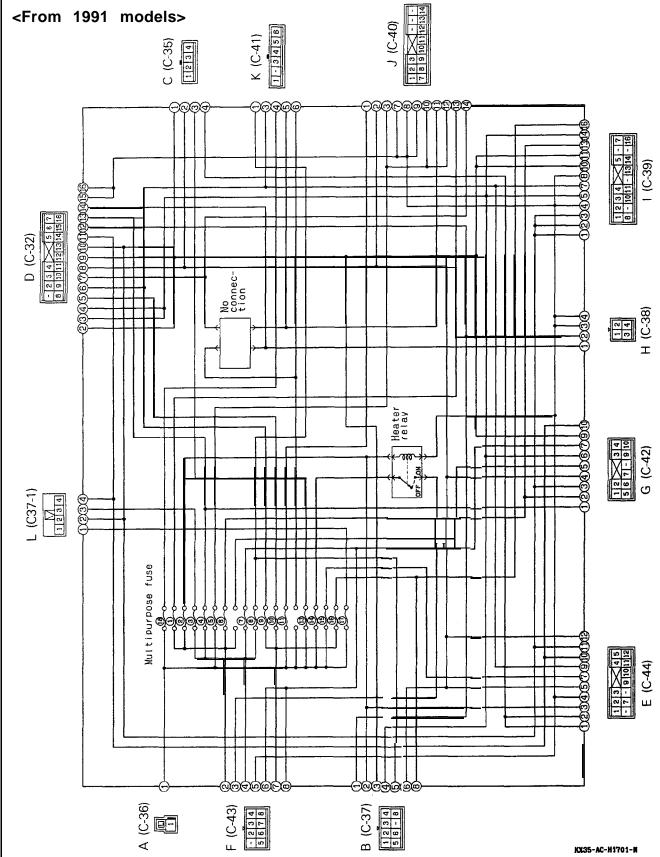
(for auto cruise control circuit)





Vote
1) The alphabetical symbols used for connectors correspond to the alphabetical symbols for connectors on next page.
2) The () indicates the connection terminal at the harness side.

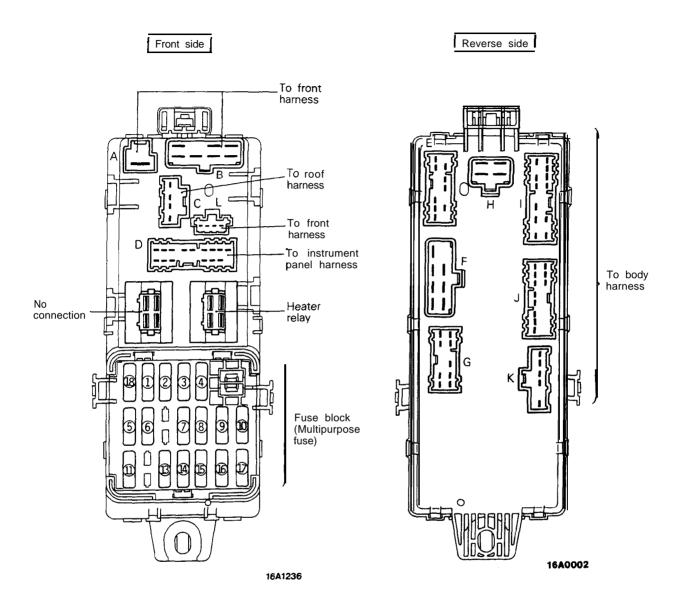




NOTE

(1) The alphabetical symbols used for connectors correspond to the alphabetical symbols for connectors on next page.

(2) The () indicates the connection terminal at the harness side.



CENTRALIZED JUNCTION

M16BB--

MAIN FUSIBLE LINK (direct connection to battery's positive terminal)

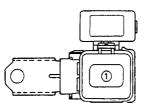
No.	Circuit	Housing color	Rated capacity (A)
1	Generator circuit	Black*', Blue* ²	80* ¹ , 100* ²
2	ABS circuit (control unit power supply)	Blue	20
3	ABS circuit (hydraulic unit power supply)	Yellow	60

NOTE

- *1:<1989 models>
- *2: <From 1990 models>

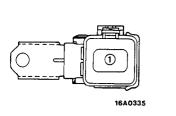
<Vehicles without ABS>

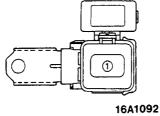


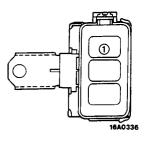


1990 models

From 1990.5 models



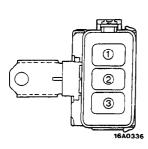


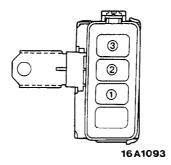


<Vehicles with ABS>

1989 models

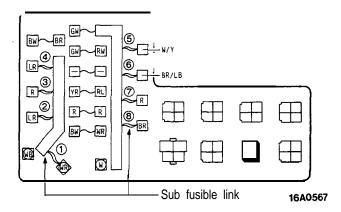
From 1990 models





SUB FUSIBLE LINK (relay box inside engine compartment, fusible link box)

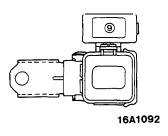
No.	Circuit	Housing color	Rated capacity (A)
1	Junction block (Multipurpose fuse ⑤, ⑪, ⑫, ⑬, ⑭, ⑮, ⑰) A/C circuit	Yellow	60
2	Power window circuit	Pink	30
3	ACTIVE-ECS circuit	Green	40
4	Defogger circuit	Pink	30
5	ignition switch and generator circuit	Pink	30
6	Radiator fan motor and condenser fan motor circuit	Pink	30
7	Headlight and tail light circuit	Green	40
8	MFI circuit	Blue	20
9	Automatic seatbelt circuit <from 1990="" models=""></from>	Pink	30



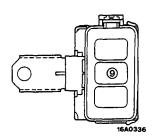
<Vehicles without ABS>

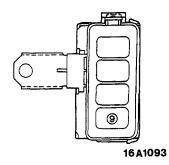
<Vehicles with ABS>





From 1990.5 models

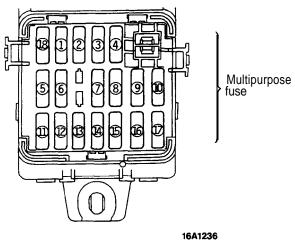




MULTI-PURPOSE FUSE (inside junction block)

Power supply	/ circuit	No.	Rated capacity (A)	Load circuit
Ignition switch	IG2	1	10	EPS control unit
SWILCH		2	10	Heater relay, blower switch, defogger timer, power window relay (Vehicles without ETACS), sunroof power relay (Vehicles without ETACS), ABS power relay, ACTIVE-ECS power relay
	ACC	3	10	Clock, motor antenna, radio, ETACS control unit*4
		4	15	Remote-controlled mirror switch, cigarette lighter
Battery		5	15	Door lock relay
gnition switch	IG2	6	10	Power/Economy change over switch , over drive switch , park/neutral position switch , ELC 4-speed automatic transaxle control module, auto-cruise control unit
	ACC	7	15	Wiper and washer, ETACS control unit*3, wiper relay
		8	10	Headlight relay, horn
	IG1	9	10	Combination meter, auto-cruise control switch, motor antenna, ETACS control unit, seat belt timer*', clutch pedal position switch
		10	10	Hazard switch
3attery		11	20	ACTIVE-ECS power relay
	·	12	20	_
		13	20	Sunroof relay
		14	30	Heater relay
		15	15	Stop light, auto-cruise control unit < M/T>
gnition witch	IG1	16	10	Back-up light <m t="">, park/neutral position switch </m>
lattery		17	10	MFI control unit, clock, dome light, luggage compartment light, door light, map light (Vehicles without sunroof), radio, ETACS control unit, sunroof relay (Vehicles with ETACS), combination meter, ELC 4-speed automatic transaxle control module, key reminder switch, automatic seatbelt control unit*2
		18	10	-

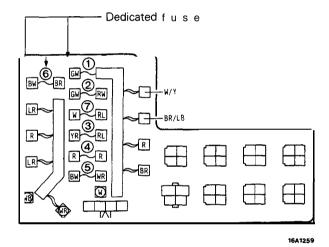
NOTE
*1:<1989 models>
*2: <From 1990 models>
*3: <Up to 1990 models>
*4: <From 1991 models>



DEDICATED FUSE (relay box inside engine compartment)

Power supply circuit	No.	Rated capacity (A)	Housing color	Circuit
Battery	1	10	Red	Hazard light circuit
Taillight relay (Battery)	2	10	Red	Taillight circuit
Headlight relay (Battery)	3	10	Red	Upper beam indicator
Battery	4	15 1	Blue	ECS circuit
	5	10	Red	A/C compressor circuit
	6	25, 30*	transparent	Condenser fan motor circuit
Headlight relay (Battery)	7	15	Blue	Fog light circuit

NOTE
*: DOHC <From 1992 models>



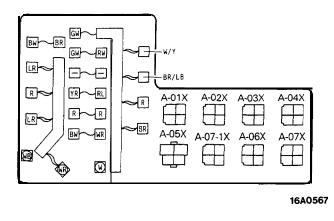
CENTRALIZED RELAY

Classification		Name	Classification		Name
Relay box in-	A-01X	Headlight relay	Passenger	C-72X	Power window relay
side engine compartment	nent A-02X Taillight relay relay	compartment relay box	C-73X	Door lock relay	
	A-03X	Radiator fan motor relay (HI)		C-74X	Seat belt timer*1 Theft-alarm starter relay*2
	A-04X	Radiator fan motor relay (LO)		C-75X	
	A-05X	Generator relay		C-75A	Defogger timer
	A-06X	ACTIVE-ECS solenoid valve power relay			
	A-07X	A/C compressor clutch relay			
	A-07-1X	Fog light relay			

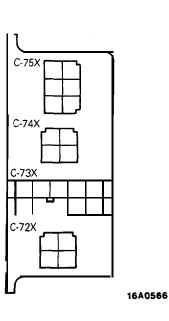
NOTE

- *1:<1989 models>
- *2: <From 1991 models>

<Relay box inside engine compartment>



<Passenger
compartment
relay box>



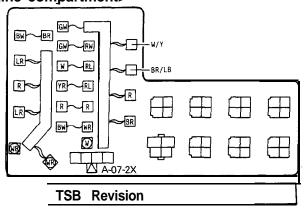
IOD or STORAGE CONNECTOR <From 1991 models>

Classification	Name			
Relay box inside engine compartment	Relay box inside engine compartment A-07-2X			

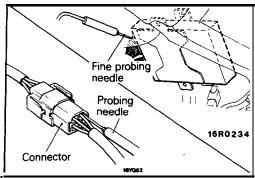
NOTE

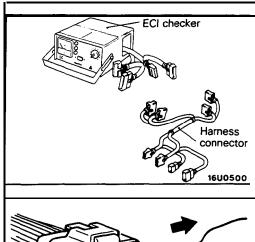
IOD: Ignition Off Draw

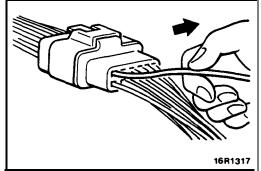
<Relay box inside engine compartment>



16A1259







INSPECTION OF HARNESS CONNECTOR M16CAAA

CONTINUITY AND VOLTAGE TEST FOR CONNECTOR

Following procedures shall be followed for testing continuity and voltage at connector in order to prevent improper contact and deterioration of waterproof in connector.

CONVENTIONAL (NON-WATERPROOF) CONNECTOR

Check shall be done by inserting a probing needle from harness side

WATER PROOF CONNECTOR

Caution

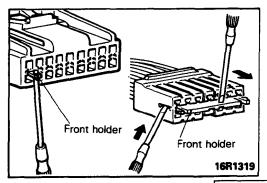
Do not insert probing needle from harness side as it will deteriorates waterproof and cause for rusting. To inspect the energized circuit, use the **ECI** checker.

CHECK FOR IMPROPER ENGAGEMENT OF **TERMINAL**

When terminal stopper of connector is out of order, engagement of male and female terminals becomes improper even when connector itself is engaged perfectly and terminal sometimes slips out to rear side of connector. Ascertain, therefore, that each terminal does not come off connector by pulling each harness wire.

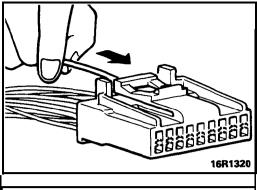
ENGAGING AND DISENGAGING OF CONNECTOR TERMINAL

Connector which gives loose engagement shall be rectified by removing female terminal from connector housing and raise its lance to establish securer engagement. Removal of connector housing and raise its lance to establish securer engagement. Removal of connector terminal used for ECI and ELC 4 A/T control circuit shall be done in the following manner.

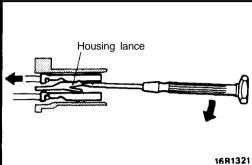


COMPUTER CONNECTOR

(1) Insert screwdriver [1.4 mm (.06 in.) width] as shown in the figure, disengage front holder and remove it.



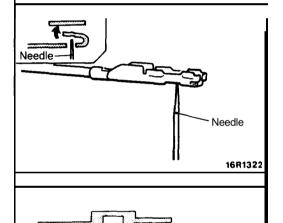
(2) Insert harness of terminal to be rectified deep into connector from harness side and hold it there.



(3) Insert tip of screwdriver [1.4 mm (.06 in.) width] into connector in a manner as shown in the figure, raise housing lance slightly with it and pull out harness.

Caution

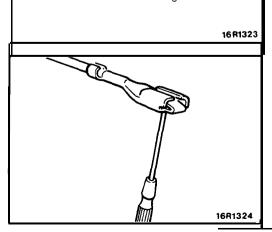
Tool No. 753787-1 supplied by AMP can be used instead of screwdriver.



(4) Insert needle through a hole provided on terminal and raise contact point of male terminal.

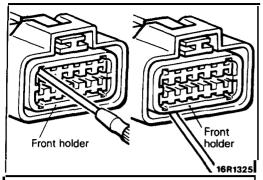


- (1) Remove waterproof cap by using a screwdriver.
- (2) Insert tip of screwdriver [1.4 mm (.06 in.) or 2.0 mm (.08 in.) width] into connector in a manner as shown in the figure, raise housing lance slightly with it and pull out harness.



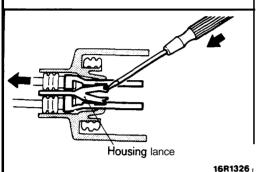
Housing lance

(3) Insert screwdriver through a hole provided on terminal and raise contact point of male terminal.



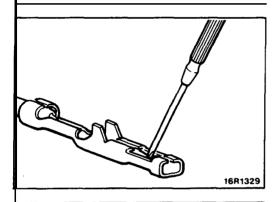
RECTANGULAR WATERPROOF CONNECTOR

(1) Disengage front holder by using a screwdriver and remove it.

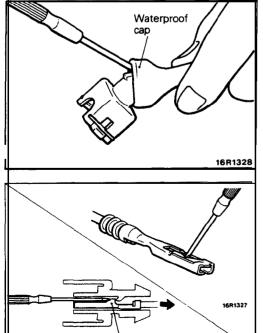


(2) Insert tip of screwdriver [*0.8 mm (.03 in.) width] into connector in a manner as shown in the figure, push it lightly to raise housing lancer and pull out harness.

*If right size screwdriver is not available, convert a conventional driver to suit the size.



(3) Press contact point of male terminal down by holding a screwdriver [1.4 mm (.06 in.) width] in a manner as shown in the figure.



Terminal lance

INJECTOR CONNECTOR

(1) Remove waterproof cap.

- (2) Insert tip of screwdriver [1.4 mm (.06 in.) width] into connector in a manner as shown in the figure, press in terminal lance and pull out harness.
- (3) Press contact point of male terminal down by holding a screwdriver [1.4 mm (.06 in.) width] in a manner as shown in the figure.

Caution

Correct lancer to be in proper condition before terminal is inserted into connector.

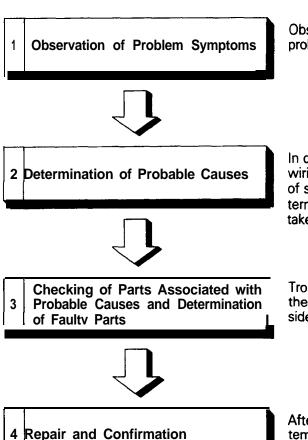
HOW TO DIAGNOSE

M16DAAC

The most important point in troubleshooting is to determine "Probable Causes". Once the probable causes are determined, parts to be checked can be limited to those associated with such probable causes. Therefore, unnecessary checks can be eliminated. The determination of the probable causes must be based on a theory and be supported by facts and must not be based on intuition only.

TROUBLESHOOTING STEPS

If an attempt is made to solve a problem without going through correct steps for troubleshooting, the problem symptoms could become more complicated, resulting in failure to determine the causes correctly and making incorrect repairs. The four steps below should be followed in troubleshooting.



Observe the symptom carefully. Check if there are also other problems.

In determining the probable causes, it is necessary to check the wiring diagram to understand the circuit as a system. Knowledge of switches, relays and other parts is necessary for accurate determination. The causes of similar problems in the past must be taken into account.

Troubleshooting is carried out by making step by step checks until the true cause is found. Always go through the procedures considering what check is to be made where for the best results.

After the problems are corrected, be sure to check that the system operates correctly. Also check that new problems have not been caused by the repair.

INFORMATION FOR DIAGNOSTIC

This manual contains the cable diagrams as well as the individual circuit drawings, operational explanations, and troubleshooting hints for each component required to facilitate the task of troubleshooting. The information is compiled in the following manner:

- (1) Cable diagrams show the connector positions, etc., on the actual vehicle as well as the harness path.
- (2) Circuit drawings show the configuration of the circuit with all switches in their normal positions.
- (3) Operational explanations include circuit drawings of voltage flow when the switch is operated and how the component operates in reaction.
- (4) Troubleshooting hints include numerous examples of problems which might occur, traced backward in a common-sense manner to the origin of the trouble. Problems whose origins may not be found in this manner are pursued through the various system circuits.

NOTE

Components of ECI, ETACS, ECS, etc. with ECU do not include 3 and 4 above. For this information, refer to a manual which includes details of these components.