EQUIPMENT

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E9FAZAE

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GENERAL INFORMATION

Newly developed devices and functions are incorporated for enriching the equipment arrangement.

FEATURES

Improvement in reliability

1. Gold plated on terminals of electronic control circuits
2. MWP (multipole water proof) type connectors adopted

Betterment in visibility and safety

1. Large-type combination meter
2. High-mount stop lamp having light-emitting diodes
3. Double-action ignition switch employed
4. Rear check back-up lamp for allowing the driver to check a backward distance behind the automobile when moving it back
5. Headlamp washer for cleaning the surface of headlamp lens

Enhancement in usability and convenience

1. Plug-in-type accessory sockets equipped at the front and rear seats

Improvement in serviceability

1. Diagnosis connector adopted
2. Ignition timing adjust terminal employed
3. Check terminal for fuel pump operation
4. Inspection lamp to allow checkup/maintenance at nighttime

Enrichment in product quality

1. Multi-meter combination including the oil temperature gauge, voltmeter, altimeter, inclinometer, inside/outside thermometer, electronic compass, etc.

WIRING HARNESS

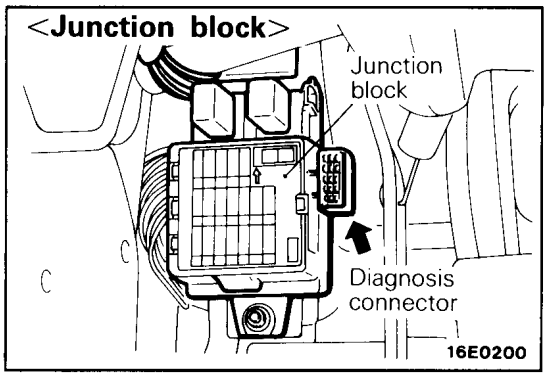
E9FLAAA

The wiring harness comprises the main harness wires (front harness, body harness, control harness) and the sub-harness wires (front door harness, back door harness, transmission harness, roof harness, frame harness). The advantageous features of wiring harness are as follows:

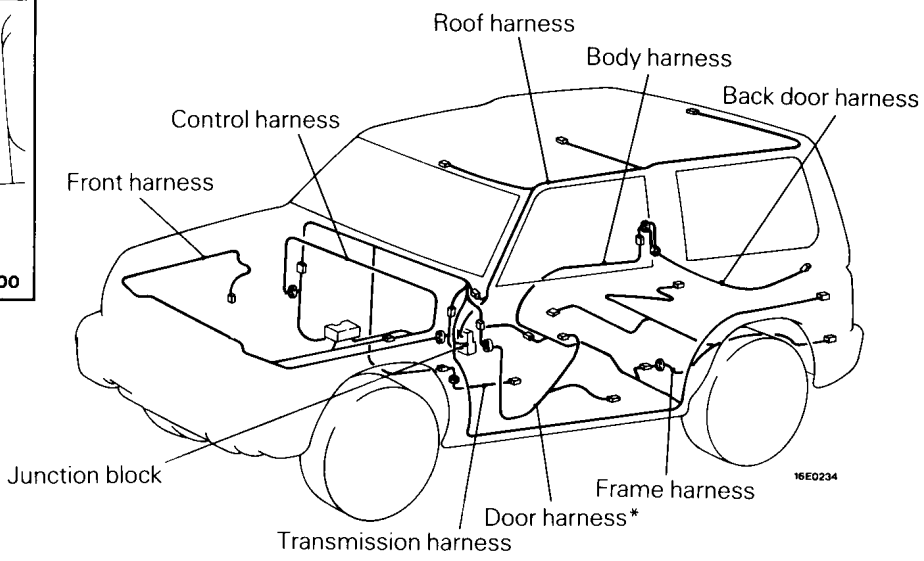
- To improve reliability, the junction block is employed in which the intermediate harness connectors, fuse box and relay box are incorporated.
- The CAVS (compact-stranded thin-core low-voltage) wires are adopted for harness, contributing to reduction in weight.
- For improvement in serviceability, the diagnosis connector is equipped to enable centralized diagnostic checkup of each electronic control circuit.
- The gold-plated connector terminals are used in the control unit, sensors and other engine control circuits where minuscule current is applied. This ensures higher reliability of electric conduction.

STRUCTURAL DIAGRAM

<Junction block>



<Standard wheelbase>



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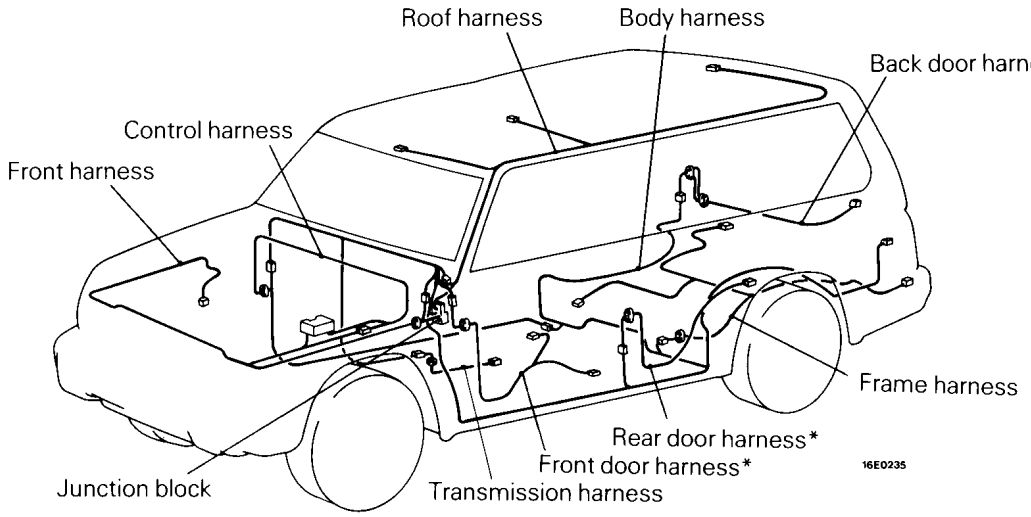
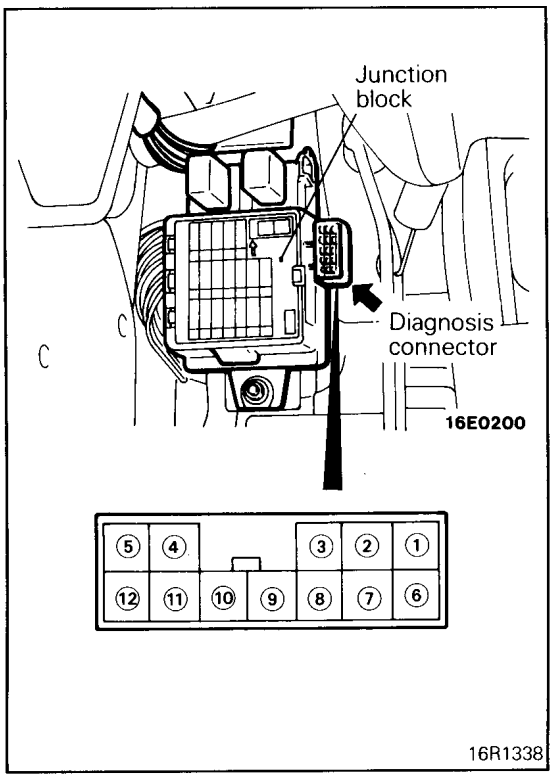


Remarks
Only the major harness connections are indicated above.
The asterisk mark (*) means that the same harness is provided on the right side also.

DIAGNOSIS SYSTEM

The diagnosis system is designed for improvement in serviceability. The following functions are provided in this system.

Functions \ Electronic system	MPI	ABS-4WD	Auto-cruise control
Self-diagnosis code output (low-speed signal)	○	○	○
Self-diagnosis code output (high-speed signal)	○	○	
Service data output (high-speed signal)	○	○	
Actuator test (high-speed signal)	○	○	
Simplified check code output (same indication pattern as self-diagnosis code)			○
Diagnosis data storing	○ Effective until battery goes off		
Diagnosis data deletion with multi-use tester	○	○	



DIAGNOSIS CONNECTOR

The diagnosis connector box for checking each of the following electronic systems is equipped at the right side of the junction block.

① MPI
② –
③ –
④ ABS
⑤ Auto-cruise control
⑥ –
⑦ –
⑧ –
⑨ –
⑩ Diagnosis control
⑪ –
⑫ Earth

BATTERY

E9FMAAA

Shown below are the specification of battery.

SPECIFICATIONS

Vehicles for Europe

Items \ Models		Petrol-Powered Vehicles	Diesel-Powered Vehicles
Type		65D23R [75D26R]	95D31R [95D31R x 2*]
Capacity (5HR)	Ah	52 [52]	64 [64]
Reserve capacity	min.	111 [123]	159 [159]
Cold cranking current	A	420 [490]	622 [622]

NOTE
*: <LH drive vehicles>
[ ]: Optional equipment

Vehicles for General Export and GCC

Items \ Models		Petrol-Powered Vehicles		Diesel-Powered Vehicles
		2600	3000	
Type		48D26R [75D26R]	55D23R [95D31R*1, 75D26R*2]	95D31R
Capacity (5HR)	Ah	40 [52]	48 [64, 52]	64
Reserve capacity	min.	81 [123]	99 [159, 123]	159
Cold cranking current	A	278 [490]	356 [622, 490]	622

NOTE
*1: Vehicles for General Export
*2: Vehicles for GCC
[ ]: Optional equipment

Vehicles for Australia

Items \ Models		Petrol-Powered Vehicles		Diesel-Powered Vehicles
		2600	3000	
Type		48D26R	55D23R	95D31R
Capacity (5HR)	Ah	40	48	64
Reserve capacity	min.	81	99	159
Cold cranking current	A	278	356	622

LIGHTING

E9FJAAC

The flush-surfaced square two-headlamp is employed in the vehicles for Europe, Australia and GCC. The round two-headlamp is employed in the vehicles for General Export. In the vehicles for Europe, the headlamp leveling system is also adopted for adjusting the main beam of headlamp to a proper illumination angle according to the vehicle's posture that varies with the person or cargo loading condition.

The rear combination lamp is equipped on the quarter panel and rear bumper. The separate lamp arrangement is designed in the vehicles for Europe and Australia, and the self-contained lamp arrangement on the quarter panel is made in the vehicles for General Export and GCC. Further, in the vehicles for General Export and GCC, the rear check back-up lamp is provided so that the driver can recognize a backward distance when reversing.

SPECIFICATIONS

Vehicles for Europe

Items \ Body types / Models	Standard wheelbase			Long wheelbase		
	Vehicles with canvas top	Vehicles without wide fender	Vehicles with wide fender	Vehicles without wide fender		Vehicles with wide fender
				GL	GLX	
Exterior lamps W						
Headlamp						
Semi-shielded beam (halogen lamp type)	60/55	60/55	60/55	60/55	60/55	60/55
Front combination lamp						
Turn-signal lamp	21	21	21	21	21	21
Clearance lamp	5	5	5	5	5	5
Side turn-signal lamp	5	5	5	5	5	5
Rear combination lamp						
Stop and tail lamp	21/5*1	21/5*1	21/5*1	21/5*1	21/5*1	21/5*1
Turn-signal lamp	21*1	21*1	21*1	21*1	21*1	21*1
Back-up lamp	21*2	21*2	21*2	21*2	21*2	21*2
Rear fog lamp	21*2	21*2	21*2	21*2	21*2	21*2
License plate lamp	10	10	10	10	10	10
Interior lamps W						
Room lamp	10	8 x 2	8 x 2	8 x 2	8 x 2	8 x 2
Map lamp			8 x 2*3	8 x 2*4	8 x 2	8 x 2
Spot lamp		8 x 2*4	8 x 2*4			
Cargo space lamp		10*4	10*4	10	10*4	10

NOTE
*1: Rear combination lamp mounted on the rear bumper
*2: Rear combination lamp mounted on the quarter panel
*3: Vehicles without sun-roof
*4: Vehicles with sun-roof

Vehicles for General Export

Items \ Body types / Models	Standard wheelbase			Long wheelbase		
	Vehicles with canvas top	Vehicles without wide fender	Vehicles with wide fender	Vehicles without wide fender		Vehicles with wide fender
				L	H	
Exterior lamps W						
Headlamp						
Shielded beam						
Incandescent lamp type	60/50	60/50		60/50	60/50	
Halogen lamp type	60/50*1	60/50*1	60/50*3	60/50*1	60/50*1	60/50*3
Semi-shielded beam						
Halogen lamp type	60/55*2	60/55*2	60/55*4	60/55*2	60/55*2	60/55*4
Front combination lamp						
Turn-signal lamp	21	21	21	21	21	21
Clearance lamp	5	5	5	5	5	5
Side turn-signal lamp			5			5
Rear combination lamp						
Stop and tail lamp	21/5 x 2	21/5 x 2	21/5 x 2	21/5 x 2	21/5 x 2	21/5 x 2
Turn-signal lamp	21	21	21	21	21	21
Back-up lamp	21	21	21	21	21	21
License plate lamp	10	10	10	10	10	10
High mounted stop lamp						
Back-door-window-equipped type			5 x 4		5 x 4	5 x 4
Roof-spoiler-equipped type			LED			
Interior lamps W						
Room lamp	10	8 x 2	8 x 2	8 x 2	8 x 2	8 x 2
Map lamp			8 x 2*5		8 x 2*6	8 x 2
Spot lamp			8 x 2*6			
Cargo space lamp				10	10	10

NOTE
*1: Optional equipment for LH drive vehicles
*2: Optional equipment for RH drive vehicles
*3: LH drive vehicles
*4: RH drive vehicles
*5: Vehicles without sun-roof
*6: Vehicles with sun-roof
LED: Light Emitting Diode

Vehicles for GCC

Items \ Body types / Models	Standard wheelbase		Long wheelbase		
	Vehicles without wide fender	Vehicles with wide fender	Vehicles without wide fender		Vehicles with wide fender
			L	H	
Exterior lamps W					
Headlamp					
Semi-shielded beam					
Incandescent lamp type	45/40		45/40	45/40	
Halogen lamp type	60/55*1	60/55	60/55*1	60/55*1	60/55
Front combination lamp					
Turn-signal lamp	21	21	21	21	21
Clearance lamp	5	5	5	5	5
Side turn-signal lamp		5			5
Rear combination lamp					
Stop and tail lamp	21/5 x 2	21/5 x 2	21/5 x 2	21/5 x 2	21/5 x 2
Turn-signal lamp	21	21	21	21	21
Back-up lamp	21	21	21	21	21
License plate lamp	10	10	10	10	10
High mounted stop lamp					
Back-door-window-equipped type	5 x 4	5 x 4		5 x 4	5 x 4
Roof-spoiler-equipped type		LED			
Interior lamps W					
Room lamp	8 x 2	8 x 2	8 x 2	8 x 2	8 x 2
Map lamp		8 x 2*2		8 x 2*3	8 x 2
Spot lamp	8 x 2*3	8 x 2*3			
Cargo space lamp	10*3	10*3	10	10	10

NOTE
*1: Optional equipment
*2: Vehicles without sun-roof
*3: Vehicles with sun-roof
LED: Light Emitting Diode

Vehicles for Australia

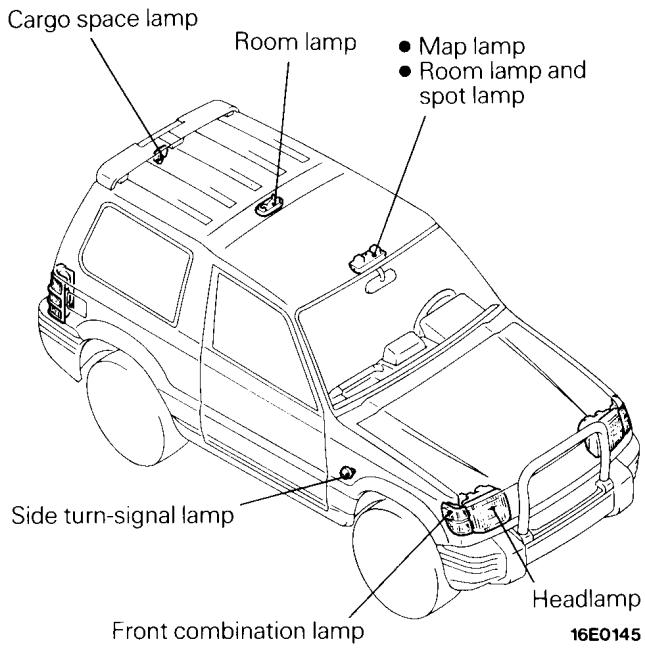
Items \ Body types / Models	Standard wheelbase		Long wheelbase		
	Vehicles without wide fender	Vehicles with wide fender	Vehicles without wide fender		Vehicles with wide fender
			GL	GLX	
Exterior lamps W					
Headlamp					
Semi-shielded beam (halogen lamp type)	60/55	60/55	60/55	60/55	60/55
Front combination lamp					
Turn-signal lamp	21	21	21	21	21
Clearance lamp	5	5	5	5	5
Side turn-signal lamp	5	5	5	5	5
Rear combination lamp					
Stop and tail lamp	21/5*1	21/5*1	21/5*1	21/5*1	21/5*1
Turn-signal lamp	21*1	21*1	21*1	21*1	21*1
Back-up lamp	21*2	21*2	21*2	21*2	21*2
Rear fog lamp	21*2	21*2	21*2	21*2	21*2
License plate lamp	10	10	10	10	10
High mounted stop lamp					
Back-door-window-equipped type		5 x 4			5 x 4
Roof-spoiler-equipped type		LED			
Interior lamps W					
Room lamp	8 x 2	8 x 2	8 x 2	8 x 2	8 x 2
Map lamp		8 x 2*3	8 x 2*4	8 x 2	8 x 2
Spot lamp	8 x 2*4	8 x 2*4			
Cargo space lamp	10*4	10*4	10	10	10

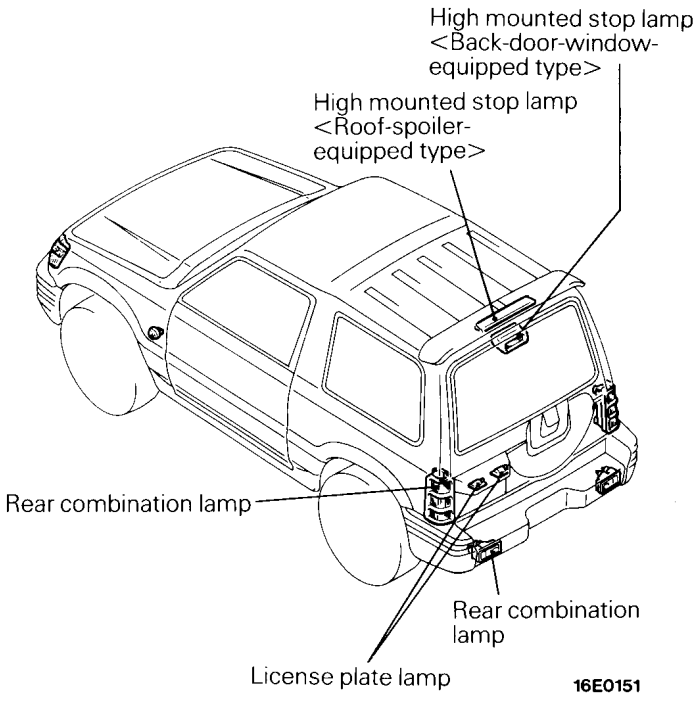
NOTE
*1: Rear combination lamp mounted on the rear bumper
*2: Rear combination lamp mounted on the quarter panel
*3: Vehicles without sun-roof
*4: Vehicles with sun-roof

STRUCTURAL DIAGRAM

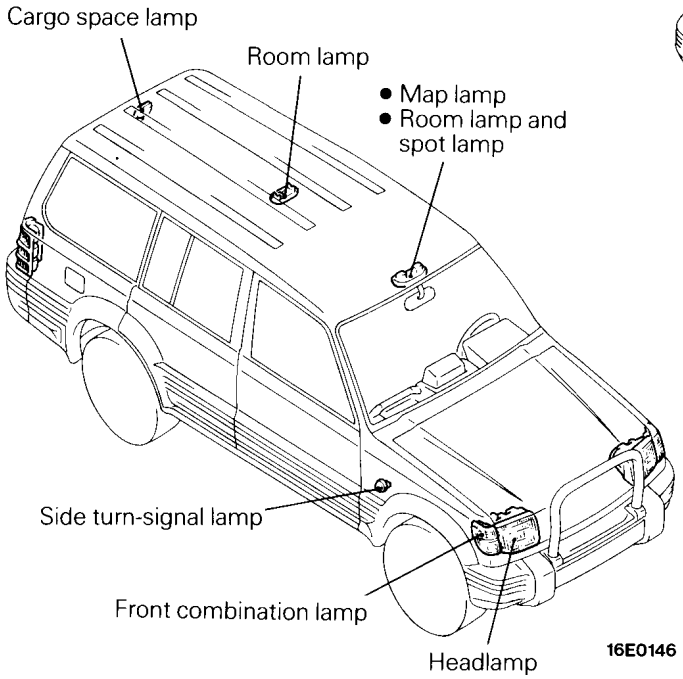
Vehicles for Europe, Australia and GCC

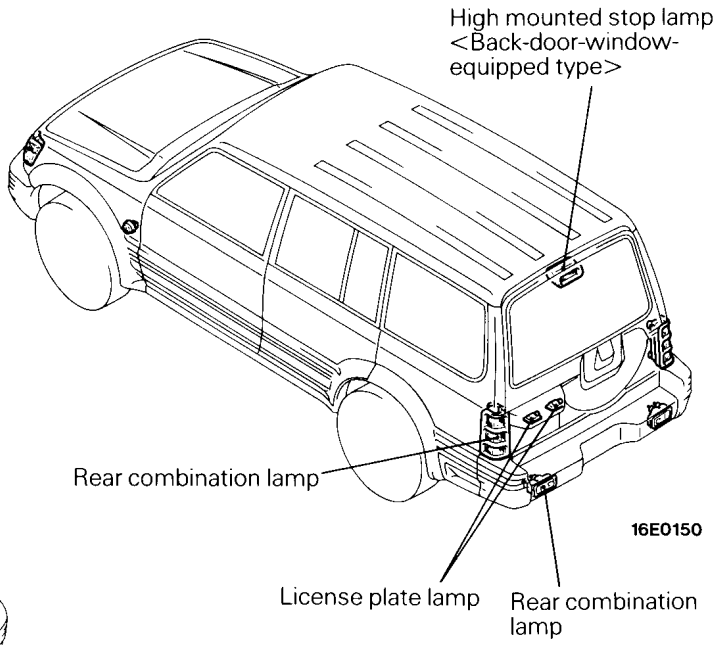
<Standard Wheelbase>





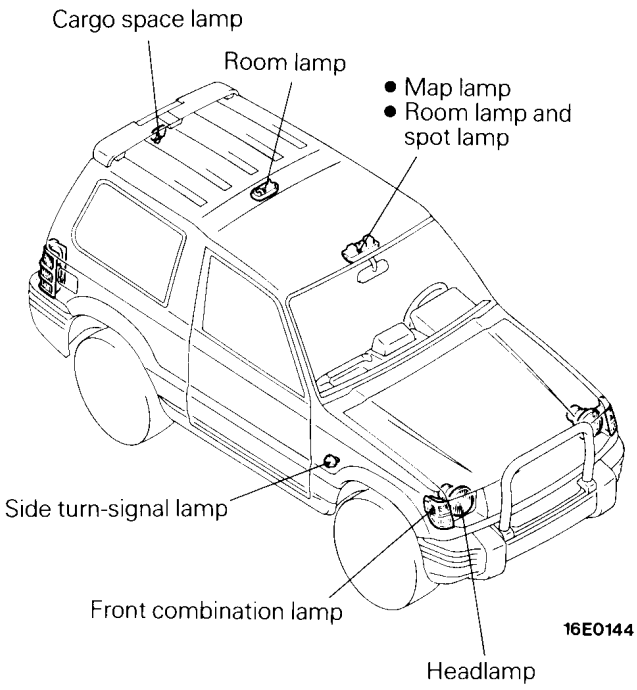
<Long Wheelbase>

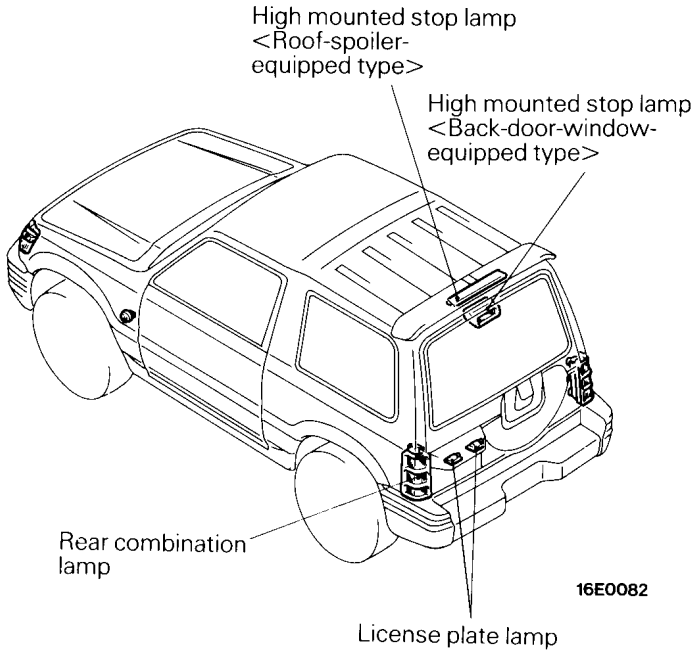




Vehicles for General Export

<Standard Wheelbase>





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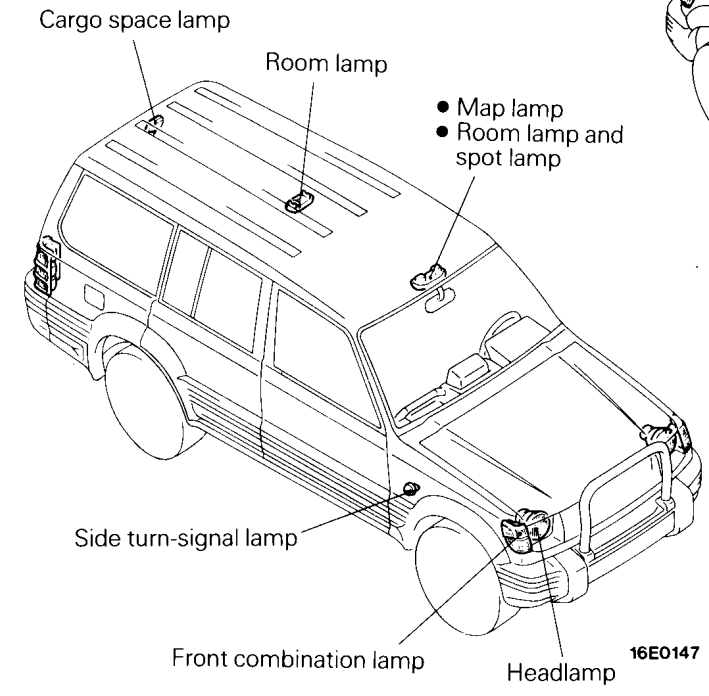
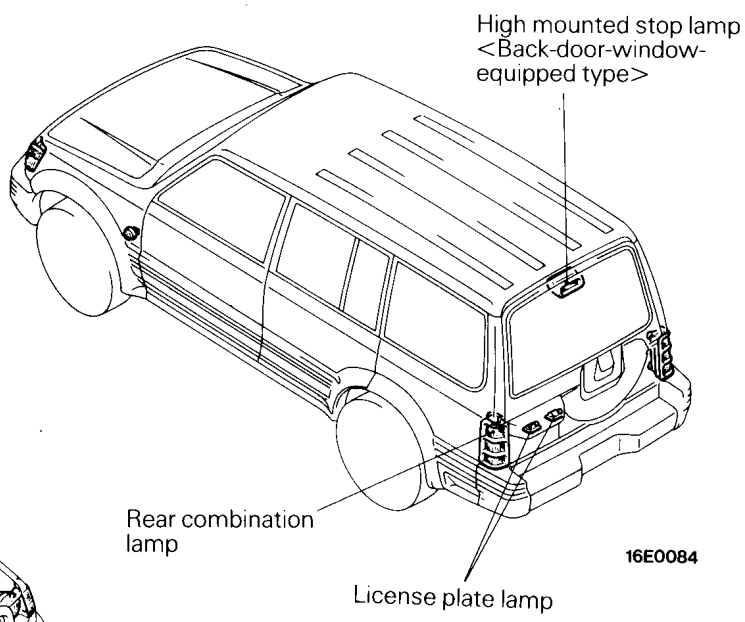
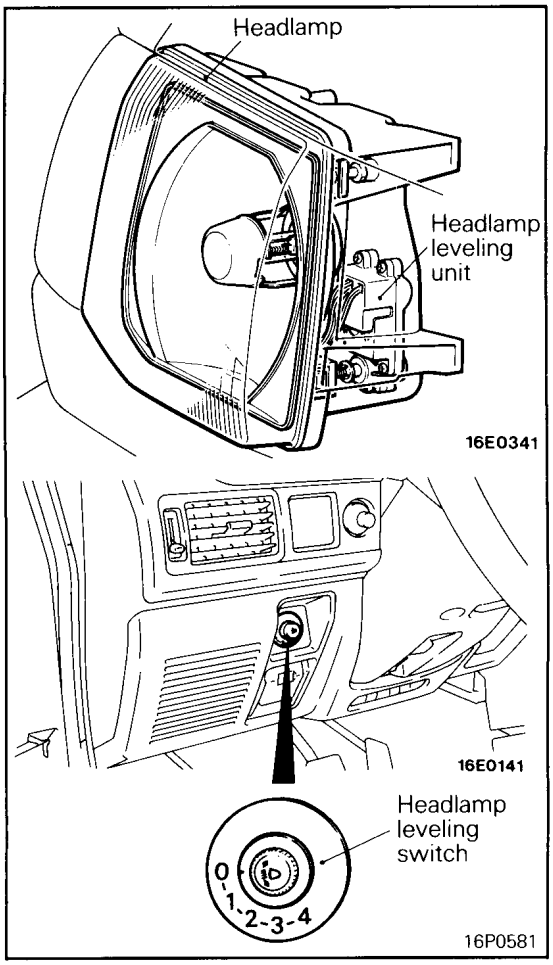






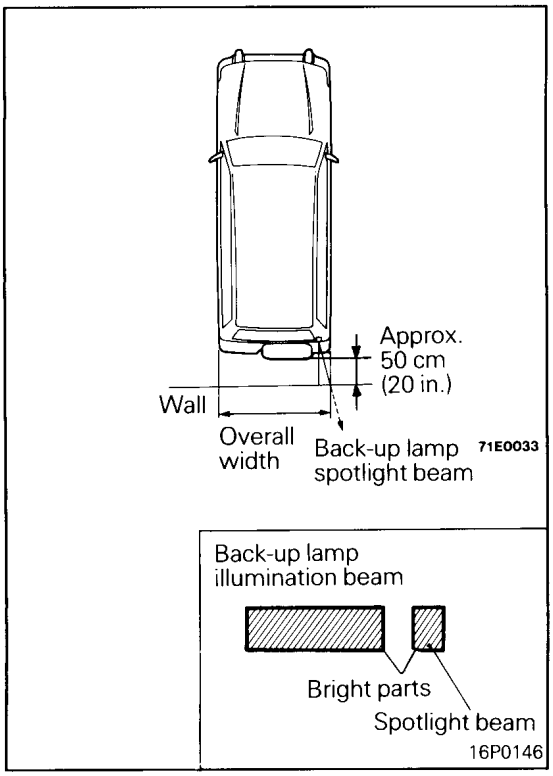
HEADLAMP LEVELING SYSTEM

The headlamps leveling system is a system that the driver can, if desired, use to change the headlamps illumination angle in the vertical direction so as to prevent approaching vehicles from being subjected to excessive brighteness due to a change in the attitude of this vehicle because of the number of people or the amount of load carried. This system is composed of the headlamp leveling unit (installed to the rear of the headlamps) and the headlamp leveling switch (located at the lower left part of the instrument panel).

When the headlamps are illuminated, the illumination angle in the vertical direction (lower beam only) can be set to any one of four steps by using the headlamp leveling switch.

NOTE

The basic structure and operating principle are the same as those in the current version of PAJERO.



REAR CHECK BACK-UP LAMPS

The rear check back-up lamps are back-up lamps that can be used to check distances behind the vehicle according to the position where the spotlights provided on the back-up lamps are shining.

As shown in the illustration, the spot beams of light from the back-up lamps intersect the (imaginary) lines drawn backward as an extension of the side lines of the vehicle. This intersection by the beam of light is a point approximately 50 cm (20 in.) from the rear end of the spare tyre.

This means that, when the vehicle is being backed at night toward a wall or other object behind the vehicle, the driver will know that the wall or other object is only about 50 cm (20 in.) from the rear end of the spare tyre when the point at which the beams from the spotlights cross the imaginary lines extending back from the sides of the vehicle.

INSPECTION LAMP

E9FNAAA

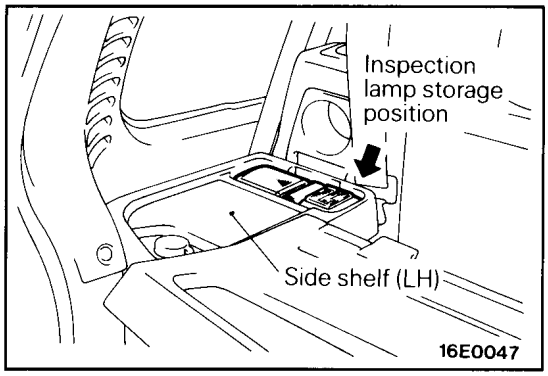
The small-type inspection lamp is available for convenience in checkup or maintenance at night-time. Its power can be supplied from the accessory socket located at the front seat or rear seat. This widens the workable range of inspection lamp to enhance serviceability. The features of inspection lamp are as follows:

- The housing with slide cover is provided at the bottom of lamp case. The plug-ended cord approx. 3 m (9.84 ft.) long can be contained in this housing.
- The magnet is provided at the rear of lamp case so that the lamp can be snapped on/off its metal storage position in the vehicle. (Magnet snap-on/off type)
- The head swinging design of this lamp allows changing its illuminating direction through 11 steps.

NOTE
For the accessory socket, see P.7-27.

STRUCTURAL DIAGRAM

<Standard Wheelbase>



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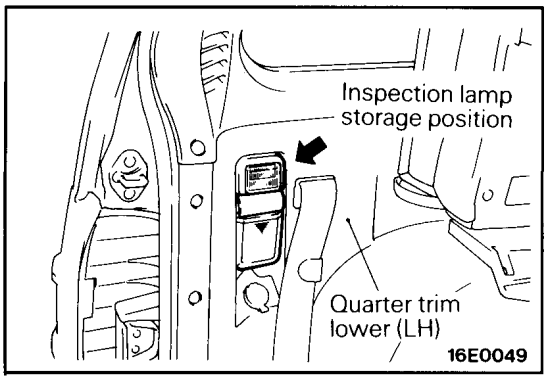
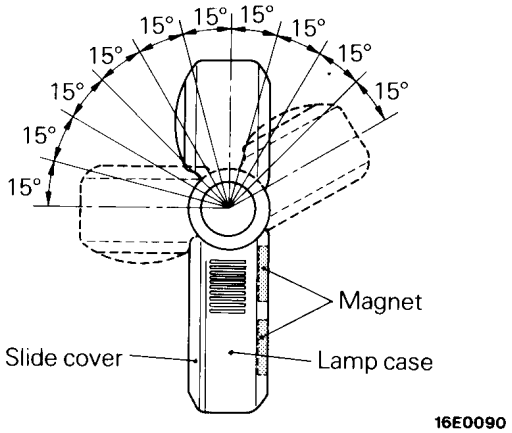
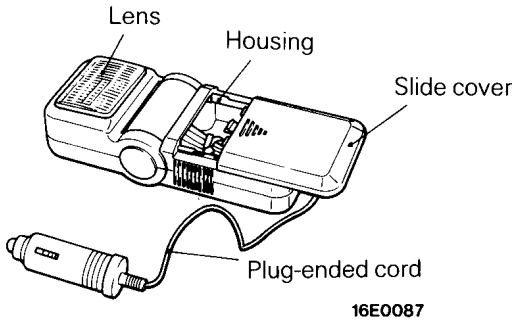






METERS AND GAUGES

E9FOAAA

COMBINATION METERS

The combination meter board has easy-to-read large meters of needle type, indicator lamps, and warning lamps. Two kinds of combination meter panels are designed for the diesel-powered vehicles and petrol-powered vehicles.

SPECIFICATIONS

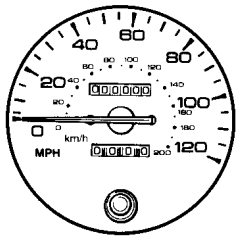
Items	Specifications
Speedometer	Reed switch type (cross-coil design)
Tachometer	Pulse type (cross-coil design)
Fuel gauge	Fixed needle type (cross-coil design)
Fuel gauge unit	Variable resistor type
Engine coolant temperature gauge	Mid-temperature stabilized type (cross-coil design)
Engine coolant temperature gauge unit	Thermistor type

STRUCTURAL DIAGRAM

Vehicles for Europe

<Petrol-Powered Vehicles>

MPH indication speedometer, with Km/h scaling



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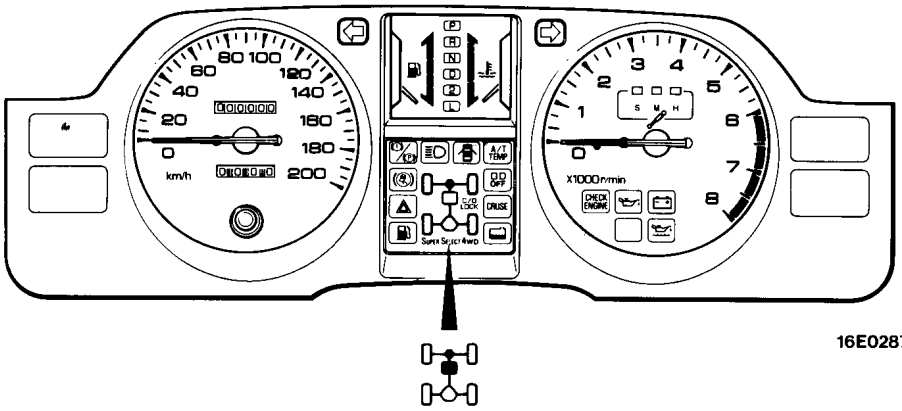

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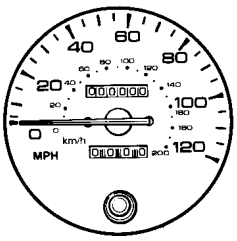
<Diesel-Powered Vehicles>

MPH indication speedometer, with Km/h scaling



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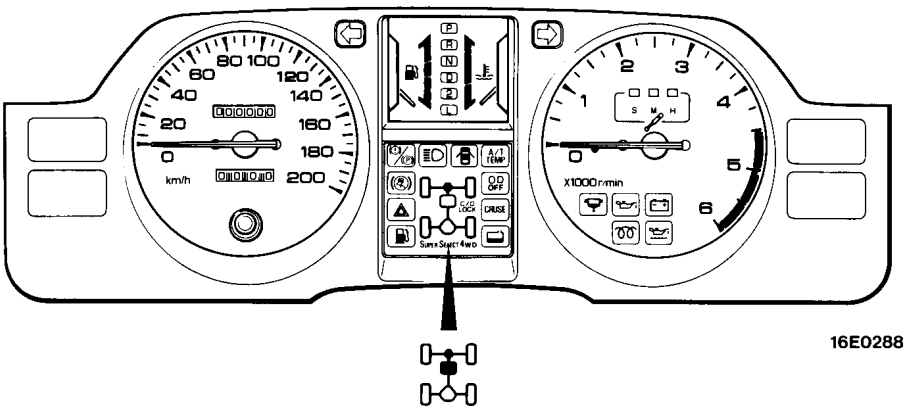

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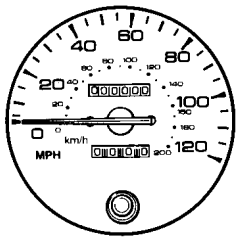
Vehicles for General Export

<Petrol-Powered Vehicles>

MPH indication speedometer, with Km/h scaling



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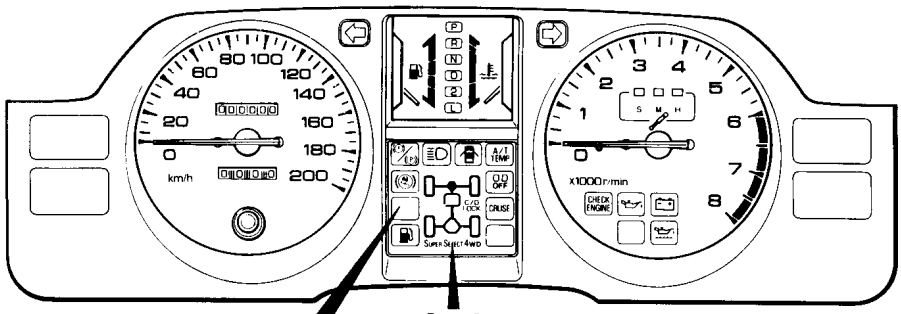

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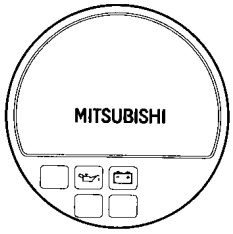
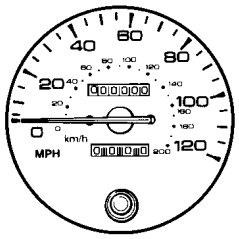
Vehicles without tachometer



16E0296

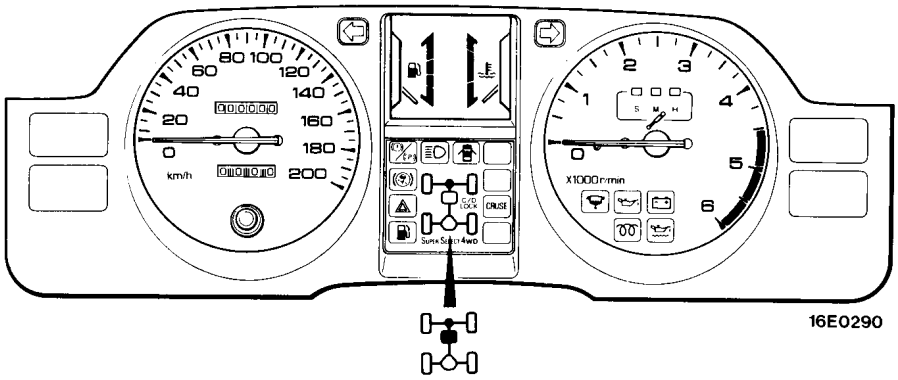
<Diesel-Powered Vehicles>

MPH indication speedometer, with Km/h scaling



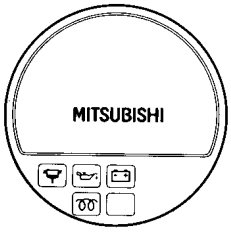
16E0297

(P) or ⚠



16E0290

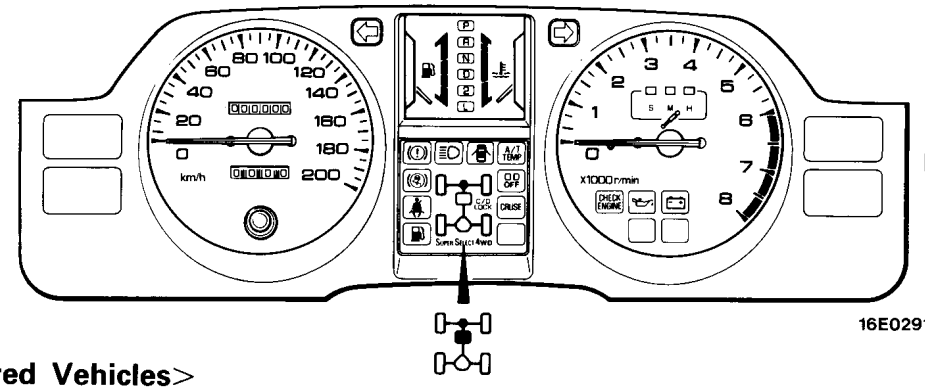
Vehicles without tachometer



16E0295

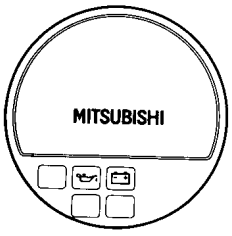
Vehicles for GCC

<Petrol-Powered Vehicles>



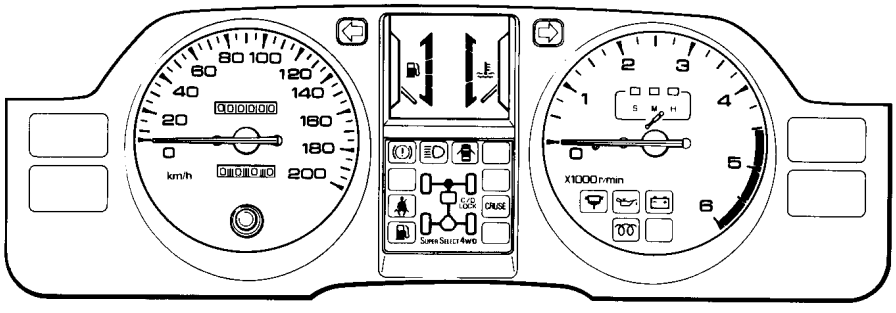
16E0291

Vehicles without tachometer



16E0296

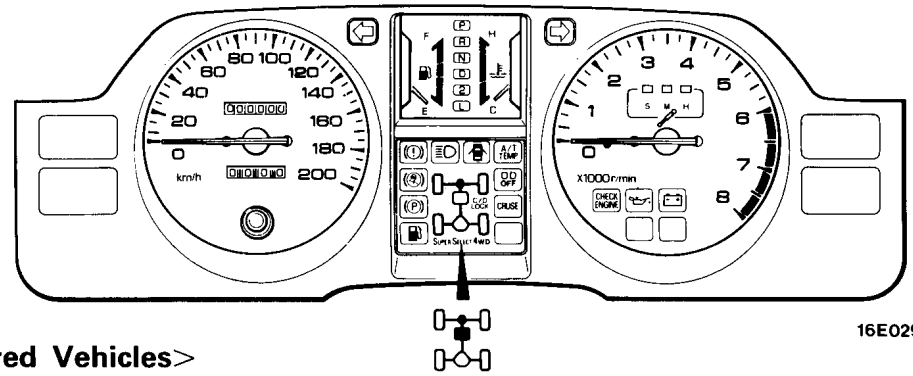
<Diesel-Powered Vehicles>



16E0292

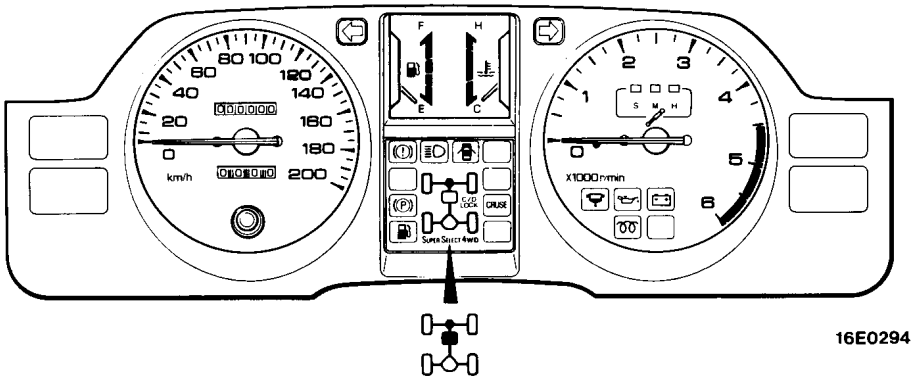
Vehicles for Australia

<Petrol-Powered Vehicles>



16E0293

<Diesel-Powered Vehicles>



16E0294

MULTI-METERS

The multi-meter board located at the top centre of instrument panel is designed for a combination of the electronic compass, inside/outside thermometer, altimeter, inclinometer, oil pressure gauge, and voltmeter. These meters and gauges are arranged as follows.

In vehicles for Europe, General Export and GCC:

- Electronic compass, inside/outside thermometer, inclinometer, altimeter

In vehicles for Australia:

- Oil pressure gauge, inclinometer, voltmeter

NOTE

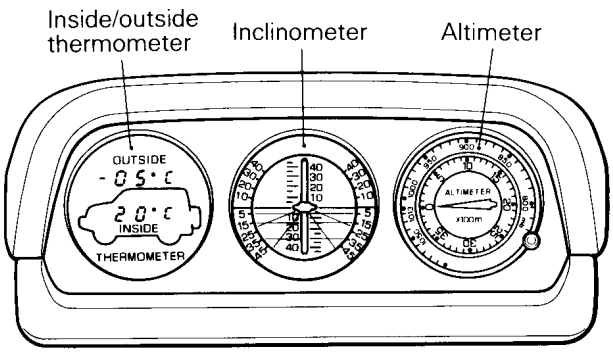
The basic structure and operating principle of the altimeter, inclinometer, oil pressure gauge and inside/outside thermometer are the same as those in the current version of PAJERO.

SPECIFICATIONS

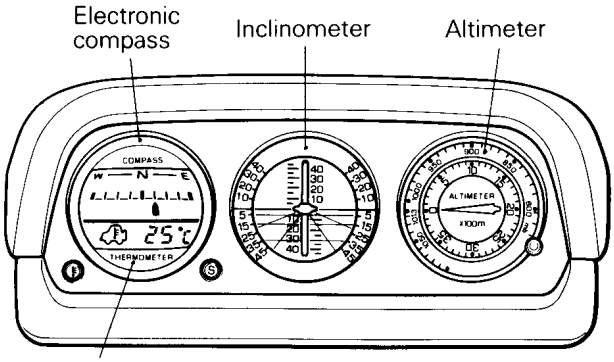
Items	Specifications
Altimeter	Aneroid type
Inclinometer	Gravity sensing type
Inside/outside thermometer	Temperature sensing type
Electronic compass	Terrestrial magnetism sensing type
Oil pressure gauge	Bimetal type
Oil pressure gauge unit	Bimetal type
Voltmeter	Bimetal type

STRUCTURAL DIAGRAM

<Vehicles for Europe, General Export and GCC>

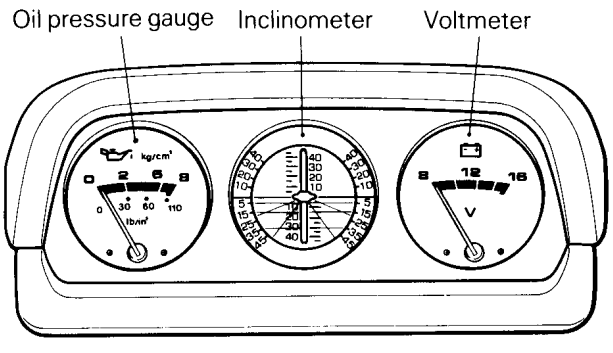


16E0164



16E0165

<Vehicles for Australia>



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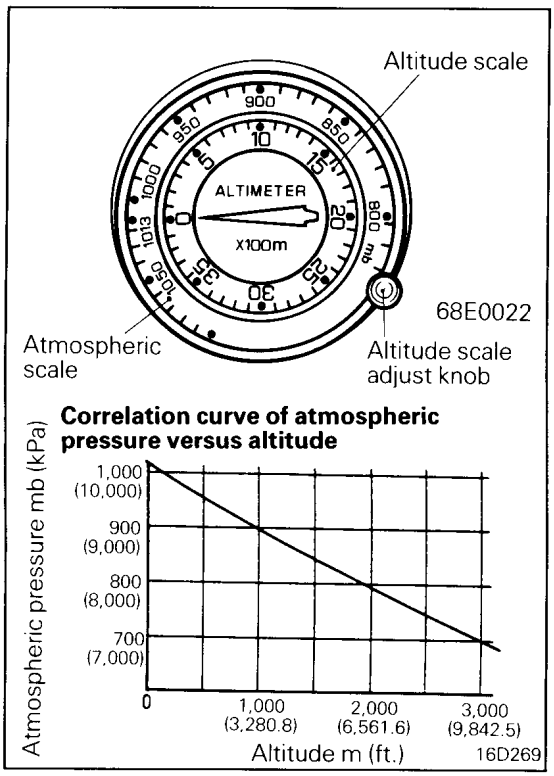


ALTIMETER

The altimeter can indicate an atmospheric pressure at the current location on a principle of proportional relationship between altitude above ground level (above sea level) and atmospheric pressure. The atmospheric pressure scale is provided around the altitude scale for ease of reading.

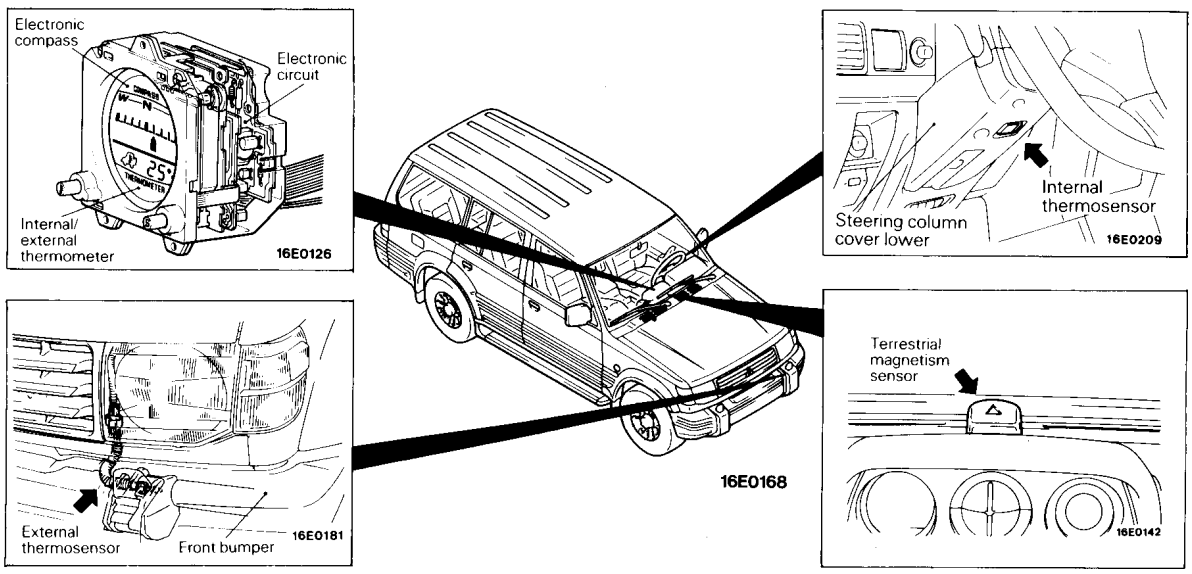
ELECTRONIC COMPASS AND INTERNAL/EXTERNAL THERMOMETER

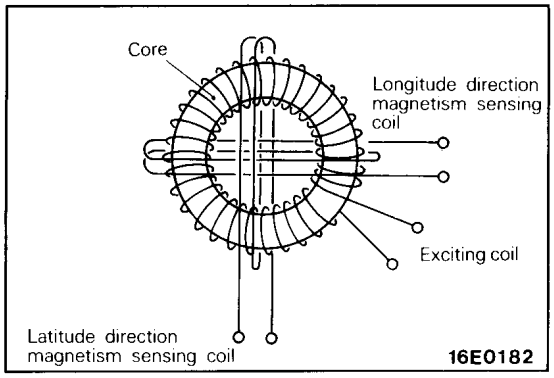
The electronic compass detects terrestrial magnetism components in the longitude and latitude directions of the vehicle, using the terrestrial magnetism sensor. The detected magnetism components are computed through the electronic circuit, and the current azimuth is indicated on the LCD in increments of 1/16 bearing angles. The major features of the electronic compass are as follows.

- Azimuth changeover indication (north-south switching) for ease of recognizing the driving direction of vehicle.
- Excellent response characteristic, and high accuracy of indication.
- Body magnetization correcting function to readily offset for an error due to magnetization on the body of vehicle.
- Declination correcting function for ready adjustment against deviation in the electronic compass with respect to the azimuth on map.

The internal/external thermometer receives temperature data from the internal or external thermosensor and carries out computation on temperature data. The internal/external temperature is thus indicated on the LCD. With the internal/external temperature select switch, the driver can read the internal or external thermometer indication.

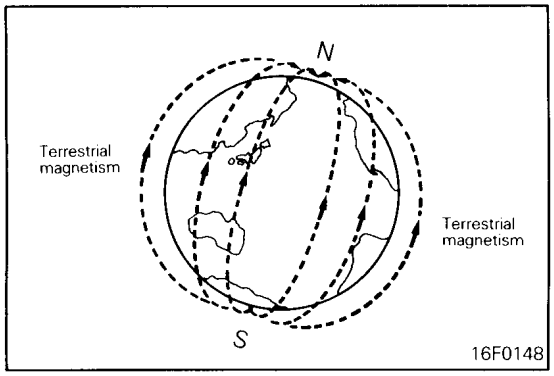
System Structural Diagram





TERRESTRIAL MAGNETISM SENSOR

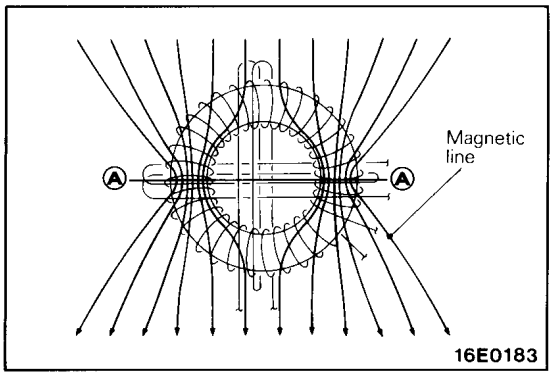
The terrestrial magnetism sensor is of a flux gate type in which the exciting coil, longitudinal direction magnetism sensing coil, and latitudinal direction magnetism sensing coil are wound around the strong magnetic core ring.



Terrestrial Magnetism

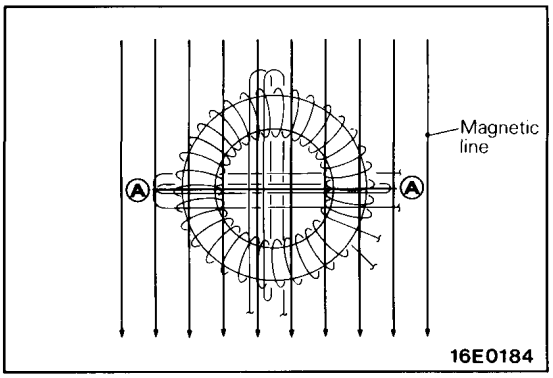
The earth can be regarded as an enormous magnet, and the magnetic field produced around it is known as terrestrial magnetism. In principle, the terrestrial magnetic lines are oriented from south to north, but the intensity of terrestrial magnetism is far weaker than an ordinary magnet. At some locations, the direction and intensity of terrestrial magnetism vary significantly.

NOTE
The terrestrial magnetism tends to be disturbed particularly at such places as tunnel, railway crossing, area along railway, elevated road, urban area crowded with high-storied buildings, area above subway, etc.



Operating Principle

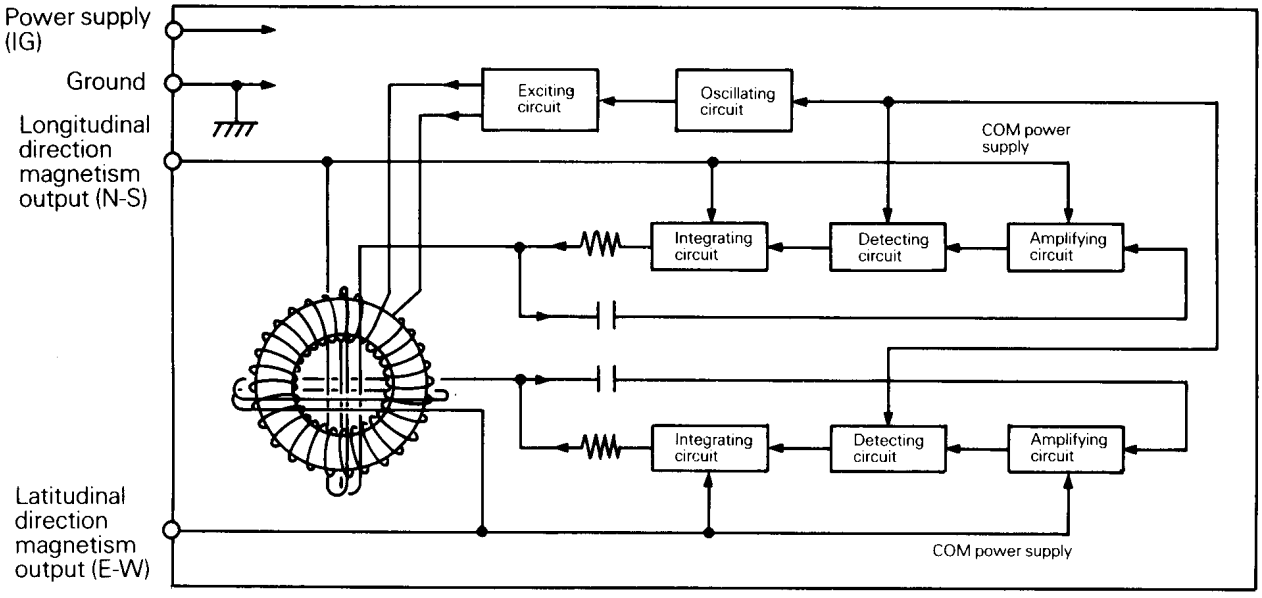
(1) When current is not applied to the exciting oil, the magnetic lines across the surrounding space having high magnetic resistance are bent toward the strong magnetic core. In this state, the density of magnetism passing through the Ⓐ – Ⓐ sensing coil is increased.



(2) When current is applied to the exciting coil, the magnetism in the strong magnetic core is increased to its saturation level. In this state, the magnetic resistance of the strong magnetic core is almost equal to that of the surrounding space (with respect to the external condition). The surrounding magnetic lines can hence go straight without being bent toward the strong magnetic core. This reduces the density of magnetism passing through the Ⓐ – Ⓐ sensing coil.

(3) The magnetism passing through the Ⓐ – Ⓐ sensing coil changes its state repetitively, i.e. the above steps (1) and (2) are repeated cyclically. Thus, the density of magnetism is altered continuously for converting minuscule terrestrial magnetism (DC characteristic) into AC form.

(4) The minuscule magnetism converted to have AC characteristic is detected as AC signal through the Ⓐ – Ⓐ sensing coil. Then, the AC signal is subjected to the amplifying and detecting circuits, and the DC signal output is delivered through the integrating circuit for distinctive indication of terrestrial magnetism.

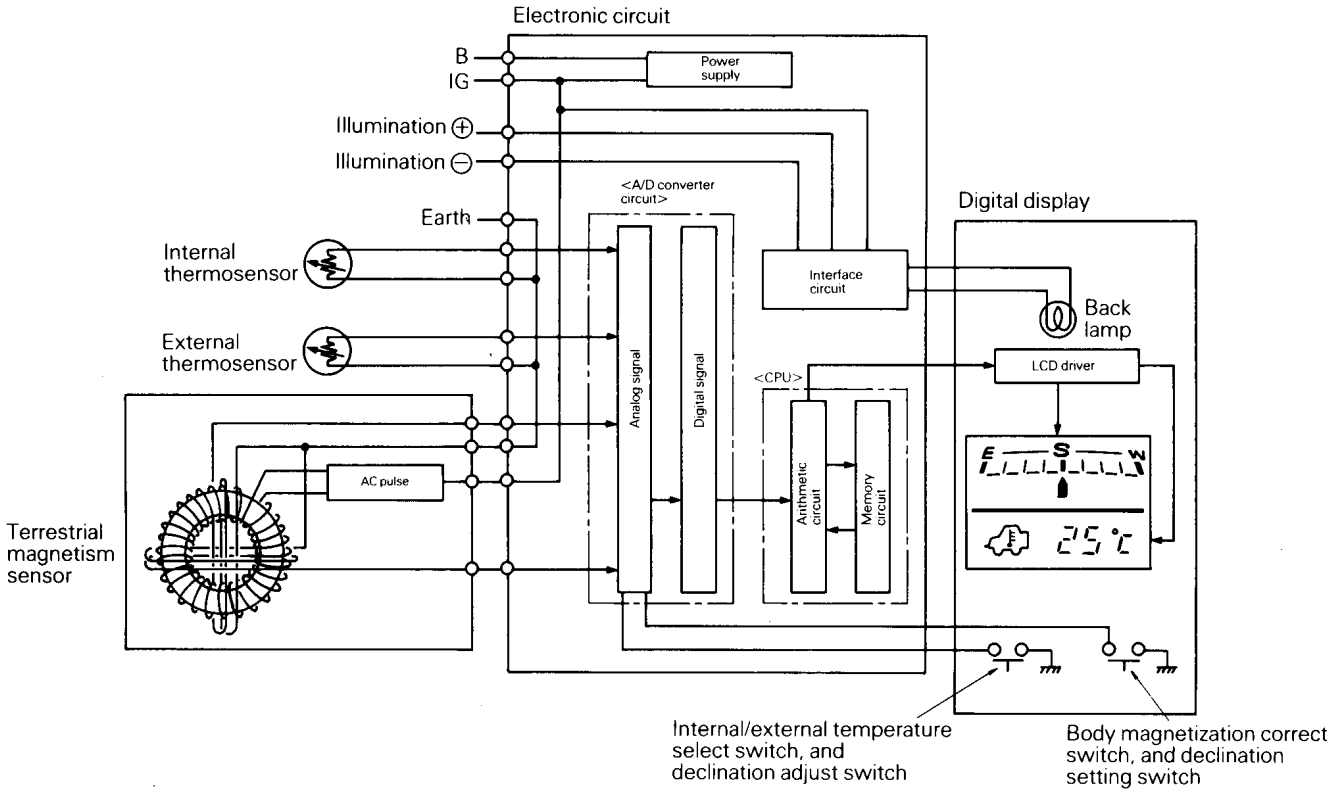


16E0187

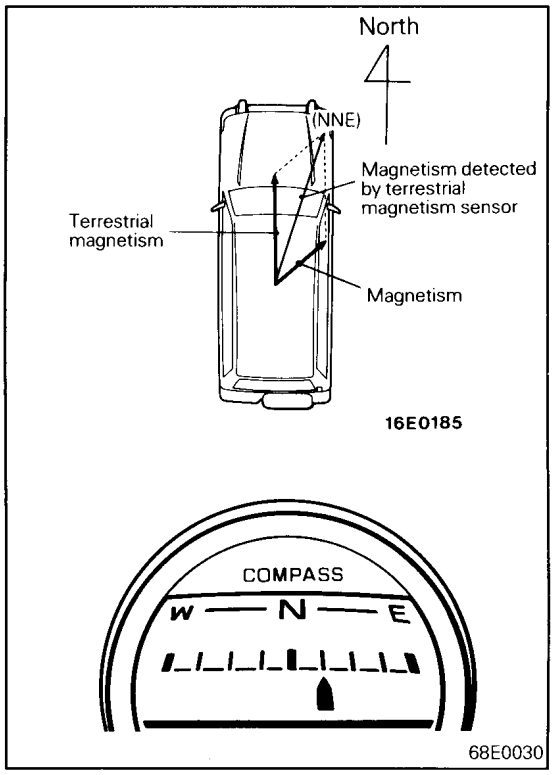
ELECTRONIC CIRCUIT

Operating Principle

Receiving the temperature data from the internal/external thermosensors or the DC signal output from the terrestrial magnetism sensor (longitudinal/latitudinal direction magnetism output), the electronic circuit carries out analog-to-digital conversion (A/D converter circuit). The digital signal thus attained is subjected to the arithmetic circuit of CPU, and the result of computation is indicated on the LCD. Further, the interface function for reducing LCD illumination is provided for improvement in visibility at nighttime.

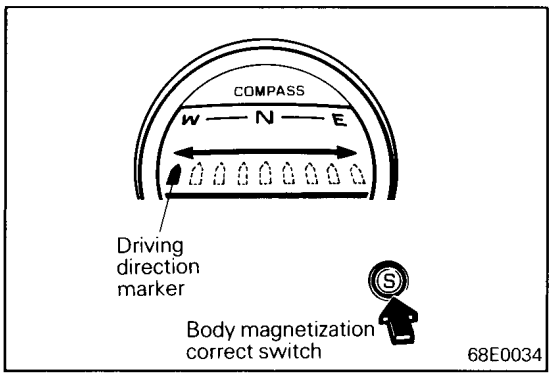


16E0186



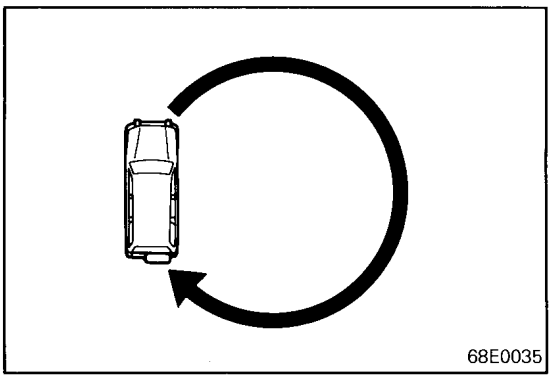
BODY MAGNETIZATION CORRECTING FUNCTION

The magnetism of the vehicle body mainly consisting of steel, which is likely to bear strong magnetism, varies depending on the driving condition. This may cause deviation from the exact azimuth of magnetism. For instance, if the body of vehicle is magnetized, the terrestrial magnetism sensor detects a vector consisting of magnetism of body and terrestrial magnetism, causing deviation from the exact azimuth. The body magnetism correcting function is provided to compensate for an effect due to magnetism of vehicle body.



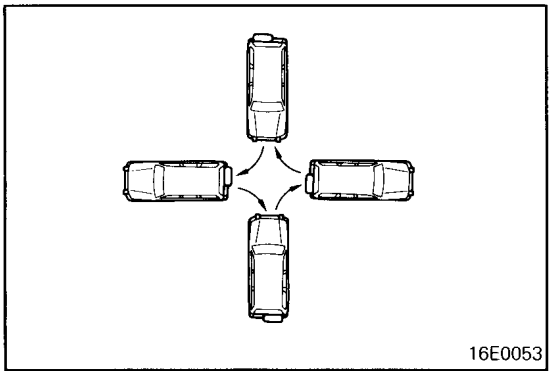
Procedural instruction for correcting magnetism of vehicle body

(1) Press the body magnetism correct switch for more than 0.5 sec. The driving direction marker disappears from the current position, and it shifts left/right on an increment-by-increment basis.



(2) Turn the vehicle through 360° slowly. This completes magnetism correction automatically.

NOTE
For magnetism correction, the vehicle may be turned clockwise or counterclockwise.



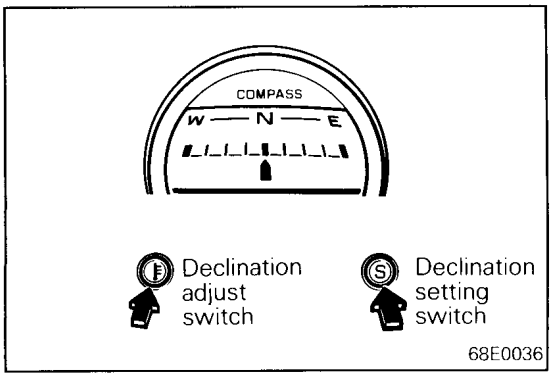
(3) If the place is too small to turn the vehicle through 360°, give a full turn by repetition of changing its direction at right angle with forward/backward movement.

NOTE
For magnetism correction, the vehicle may be angled clockwise or counterclockwise.

(4) On completion of magnetism correction, the driving direction marker appears at the exact position.

DECLINATION CORRECTING FUNCTION

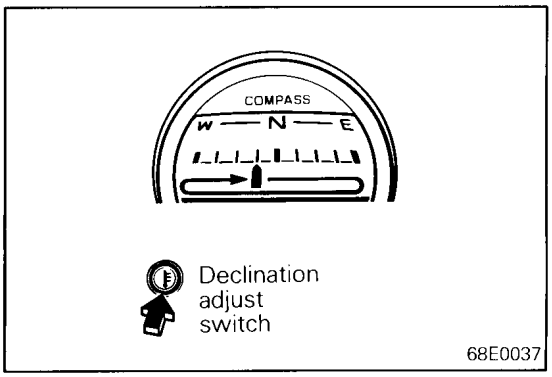
The north on map deviated from that on compass (magnetic north) due to axial tilt of the earth. The declination correcting function is provided to compensate for this error over a range from 20° west to 20° east in increments of 5°.



Procedural instruction for correcting declination

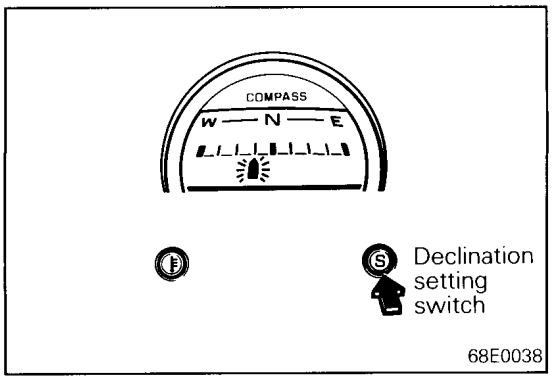
<Example>
In case that the north on compass (magnetic north) has deviation of 5° toward west from the north on map:

(1) Press the declination adjust switch and the declination setting switch at the same time for 1 to 2 seconds. The north direction indication (W-N-E), scale and driving direction marker come on, and 22.5° graduation on scale is changed to 5° graduation.

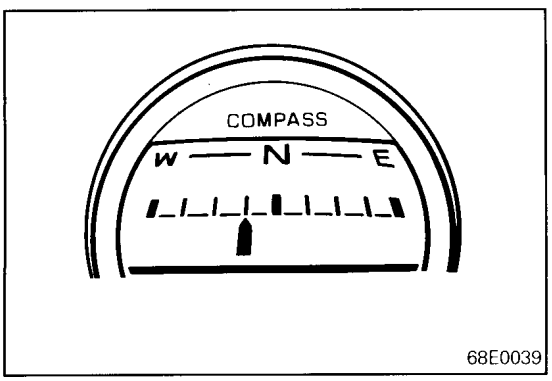


(2) Each press of the declination adjust switch causes the driving direction marker to shift from left to right in increment of each graduation. Hold down this switch until the driving direction marker reaches the 5° west position.

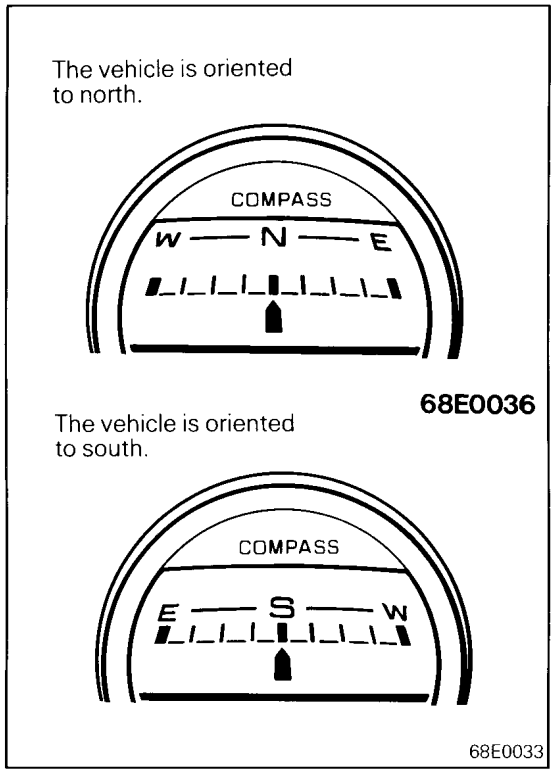
NOTE
By holding down the declination adjust switch, the driving direction marker shifts continuously. It stops immediately when releasing the declination adjust switch.



(3) Press the declination setting switch for 1 to 2 seconds. Then, the driving direction marker blinks at the currently stopped pisition.

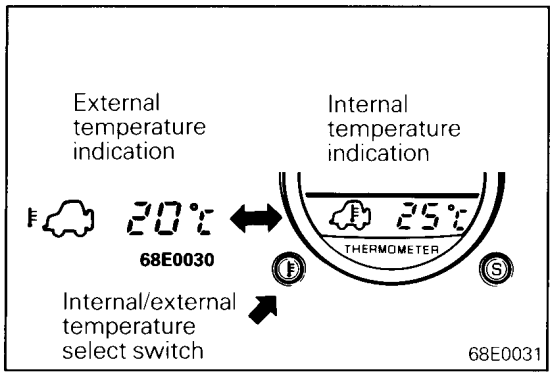


(4) The driving direction marker becomes lit steadily from blinking. This completes correction of declination.



AZIMUTH CHANGEOVER INDICATION (NORTH-SOUTH SWITCHING)

The vehicle driving azimuth indication is automatically toggled between the north azimuth indication (driving toward north) and the south azimuth indication (driving toward south) as the driving direction of vehicle is changed.



INTERNAL/EXTERNAL TEMPERATURE SELECT SWITCH

The internal/external temperature indication can be chosen by the internal/external temperature select switch.

WIPERS AND WASHERS

E9FFAAF

The windshield wiper/washer is available in two types; time-fixed intermittent wiper, and timevariable intermittent wiper. The features of windshield wiper/washer are as follows.

- The mist wiper function is provided to increase usability.
- The washer of 2-nozzle 4-jet type is employed, and the washer tank is mounted between the fender and its shield at the front left position.
- The wiper/washer switch is incorporated in the column switch, and it can be made active with the ignition switch turned at "ACC" or "ON".

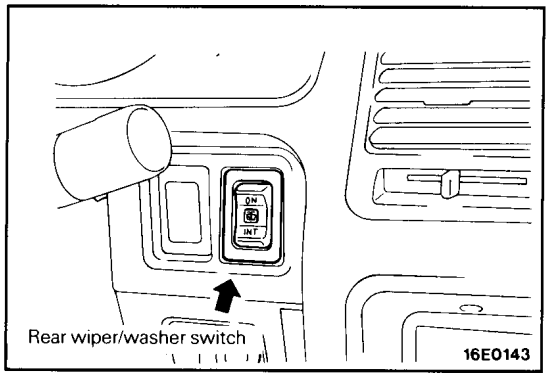
The rear wiper/washer of time-fixed intermittent type is adopted. This leads to improvement in rearviewing during driving in rain.
The features of rear wiper/washer are as follows.

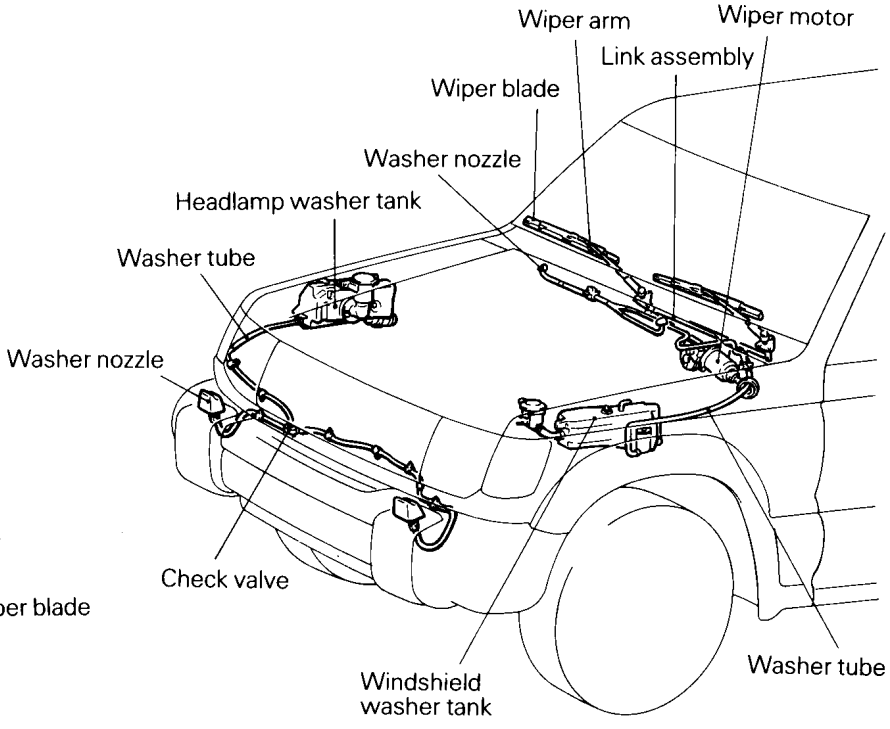
- The washer of 1-nozzle 2-jet type is employed, and the washer tank is mounted at the centre of back door.
- The wiper/washer switch can be made active with the ignition switch turned at "ACC" or "ON".

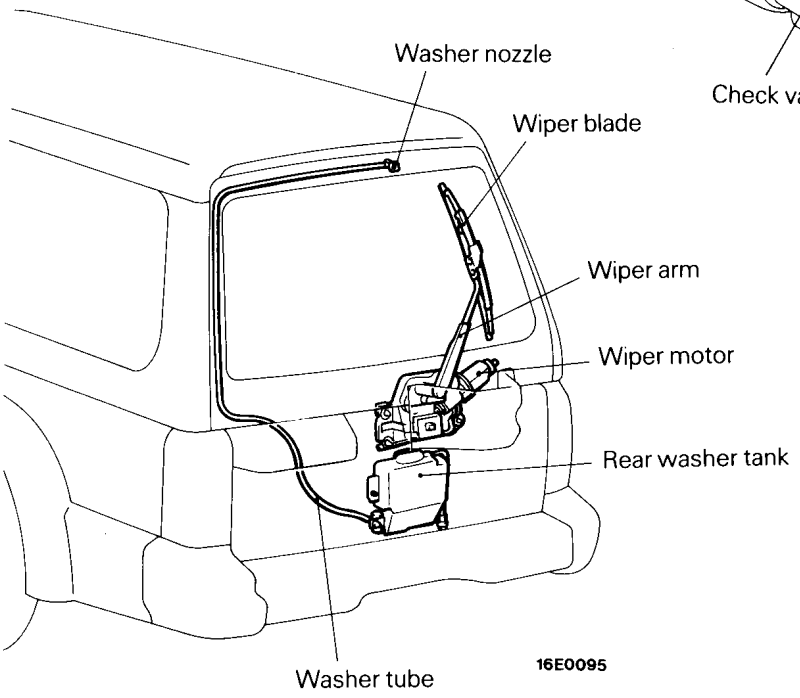
The headlamp washer is equipped to remove dirt or dust from the surface of headlamp lens. This leads to improvement in safety during driving at nighttime. The features of headlamp washer are as follows.

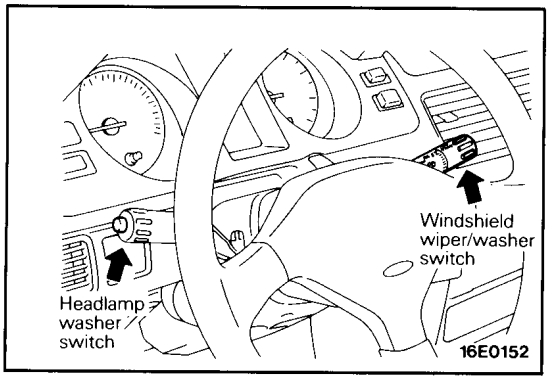
- The washer of 2-nozzle 4-jet type is employed. High-pressure washing solution is jetted through the left and right nozzles (connected with the tube and check valve). The washer tank is mounted between the fender and its shield at the right front position.
- The headlamp washer switch is incorporated in the column switch, and it can be made active with the ignition switch turned at "ON" and the lighting switch turned at "TAIL" or "HEAD".

STRUCTURAL DIAGRAM









AUDIO SYSTEM

The radio, cassette player, speaker and antenna are equipped as indicated below.

Radio and cassette player

Vehicles for Europe

- LW/MW/FM electronic tuning radio with cassette player integrated type
- AM/FM electronic tuning radio with cassette player integrated type
- AM/FM electronic tuning radio (type 1)

Vehicles for General Export and GCC

- AM/FM electronic tuning radio with cassette player integrated type
- AM/FM electronic tuning radio (type 1 or type 2)
- AM electronic tuning radio
- AM/FM electronic tuning radio (type 2) with cassette player separated type <Except GCC>

Vehicles for Australia

- AM/FM electronic tuning radio with cassette player integrated type
- AM/FM electronic tuning radio (type 1)
- AM electronic tuning radio

Speaker

Vehicles for Europe

- 2-speaker (Front speaker: 10 cm (3.9 in.) double corn)
- 4-speaker (Front speaker: 10 cm (3.9 in.) double corn, rear speaker: 16 cm (6.2 in.) double corn)

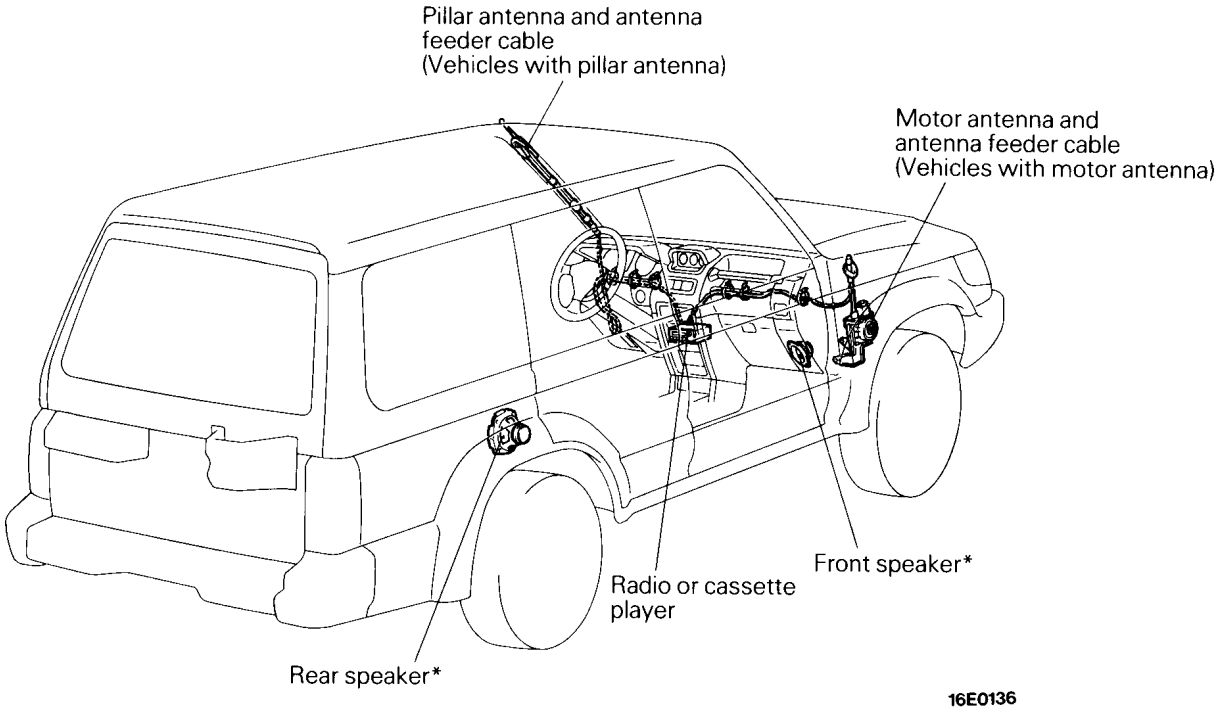
Vehicles for General Export, GCC and Australia

- 1-speaker (Front speaker – driver's side: 10 cm (3.9 in.) single corn)
- 2-speaker (Front speaker: 10 cm (3.9 in.) double corn)
- 4-speaker (Front speaker: 10 cm (3.9 in.) double corn, rear speaker: 16 cm (6.2 in.) double corn)

Antenna

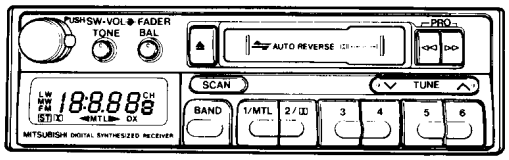
- Pillar antenna [Entire length: 700 mm (27.5 in.)]
- Motor antenna [Entire length: 900 mm (35.4 in.)]

STRUCTURAL DIAGRAM



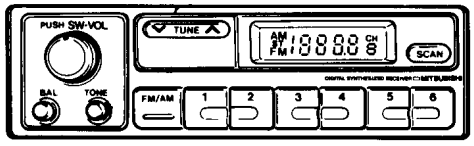
NOTE
The broken line indicates the feeder cabling for pole antenna.
The asterisk mark (*) means that the same item is provided on the left side also.

LW/MW/FM electronic tuning radio with cassette player integrated type



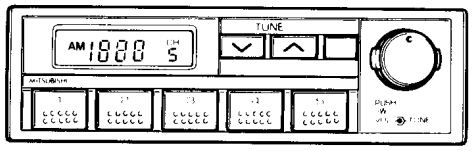
16N0598

AM/FM electronic tuning radio (type 1)



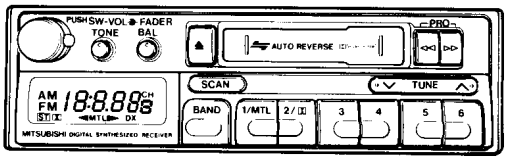
16E0162

AM electronic tuning radio



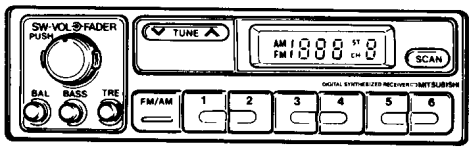
16E0161

AM/FM electronic tuning radio with cassette player integrated type



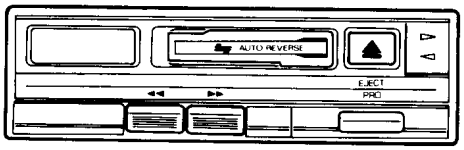
16N0597

AM/FM electronic tuning radio (type 2)



70P0068

Cassette player separated type



16E0163

ACCESSORY SOCKET

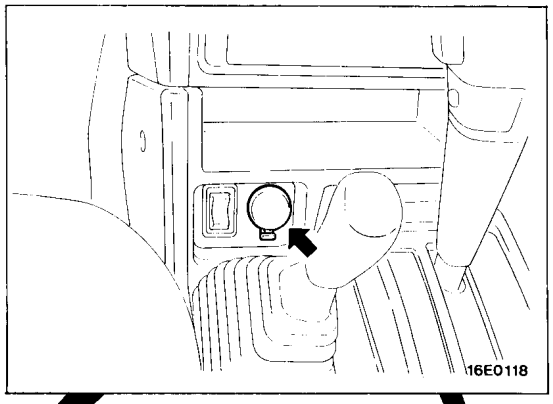
E9FPAAA

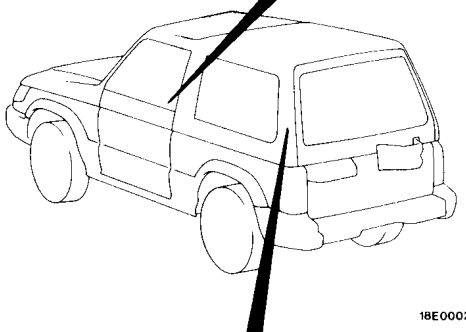
The accessory socket is equipped at each of the front and rear seats. Having a maximum load rating of 120 W, this plug-in type socket is usable for supplying power to an accessory device or inspection lamp.

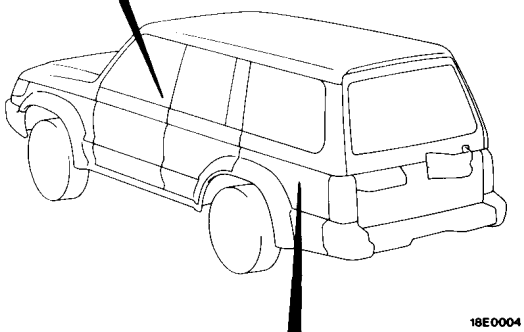
NOTE
For the inspection lamp, see P.7-13.

STRUCTURAL DIAGRAM

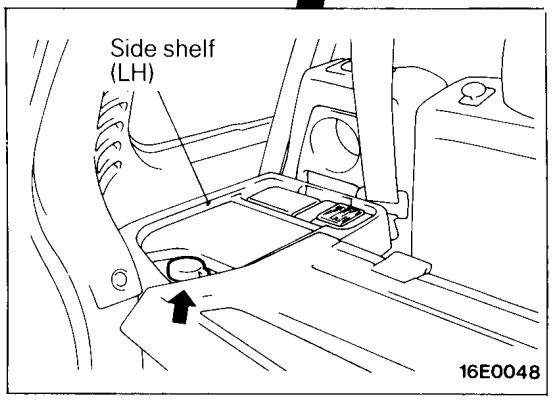
<Front seat>



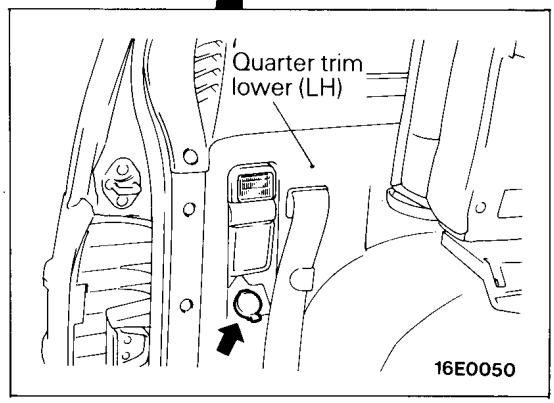




<Rear seat – Standard wheelbase>



<Rear seat – Long wheelbase>



HEATERS AND AIR CONDITIONING

E9FICAA

GENERAL INFORMATION

The front heater is of a three-way-flow full-air-mix type that is excellent in temperature control response characteristic. With this heater, the cool air bypassing function is available for preventing a rush of blood to the person's face in the FOOT, FOOT/DEF., or DEF. mode.

The rear heater of air-mix type is employed which enables control of blowing air temperature.
The air conditioner of refrigerant-saving type is used to meet the freon restriction regulations on ozone layer preservation.

FEATURES

More comfortable environment
1. Three-way-flow full-air-mix heater employed <Front heater>
2. Air distribution system with shower foot duct arrangement
3. Cool air bypassing function incorporated in heater unit <Front heater>
4. Full-air-mix rear heater employed

Safety regarding visual field
1. Side defroster independent distribution system employed
2. Constant blowing from side ventilator

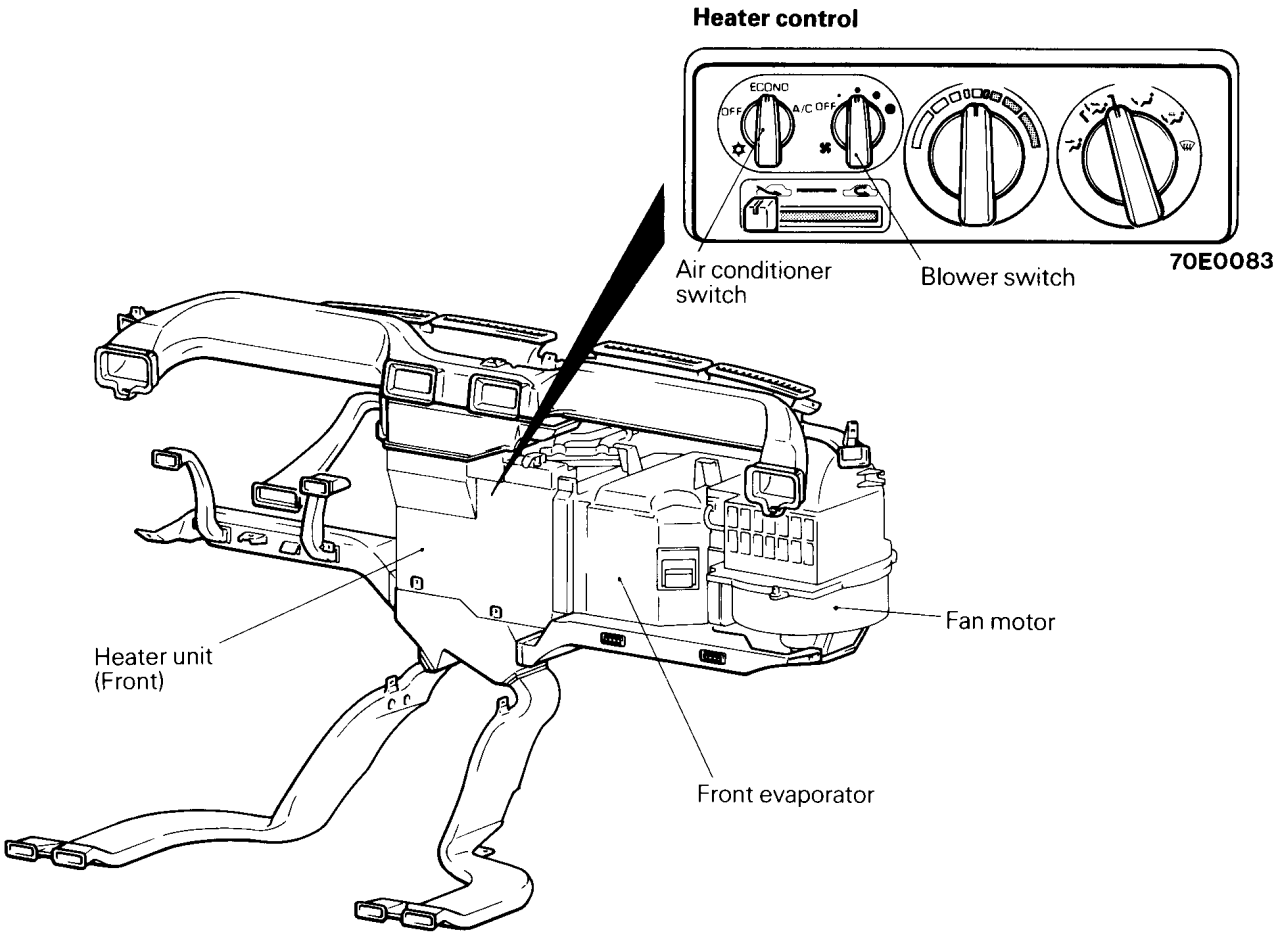
Improvement of reliability and serviceability
1. Refrigerant-saving system adopted
2. Water valve eliminated

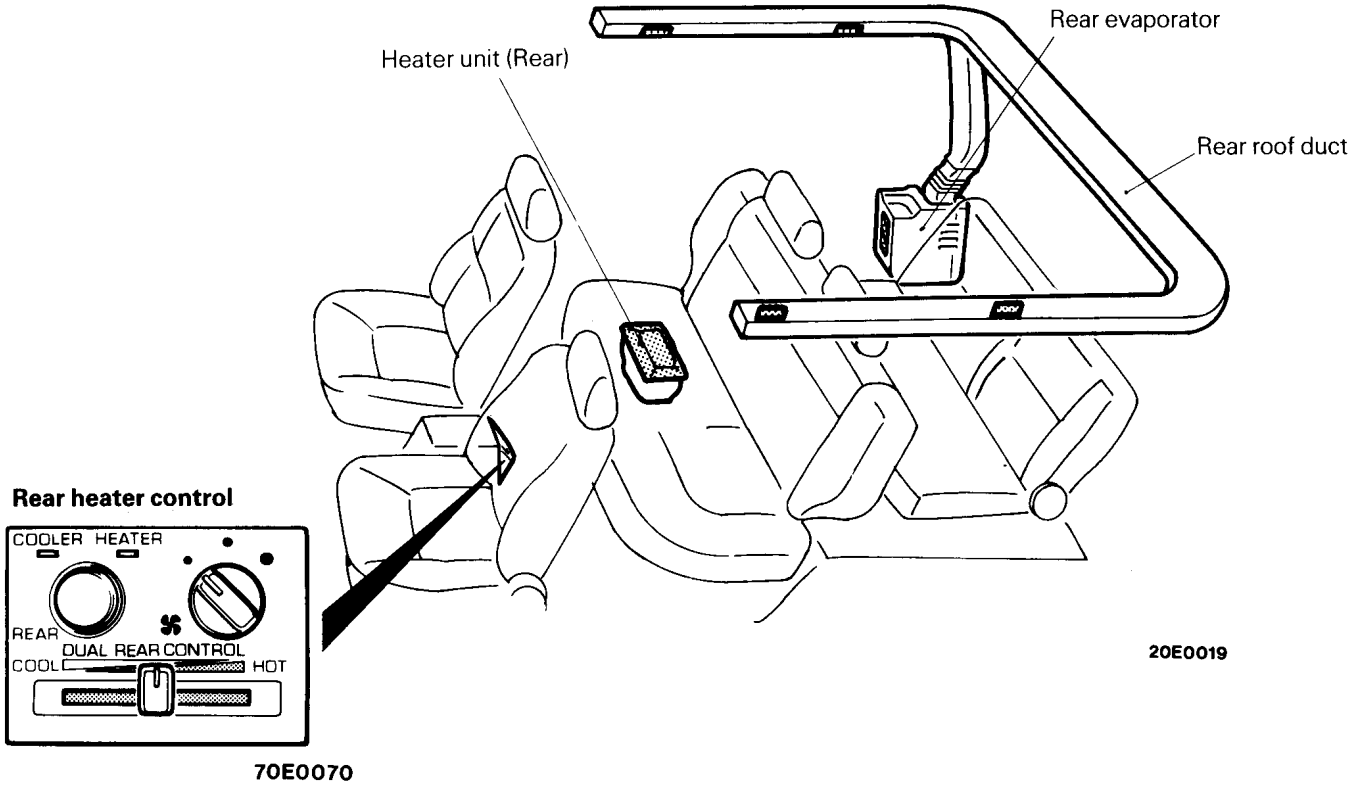
SPECIFICATIONS

Items		Specifications	
Heater unit			
Type		<Front> Three-way-flow full-air-mix system <Rear> Air-mix system	
Heater control switch		Dial type	
Compressor			
Model		10PA15 Inclined-plate type, 10PA17 Inclined-plate type*1	
No. of cylinders and displacement	cm^3 (cu.in.)	10 cylinders 155.3 (9.5), 10 cylinders 177.7 (10.8)*1	
Compressor oil	cm^3 (cu.in.)	DENSO oil 6 80 ± 20 (4.88 ± 1.22) 150 ± 20 (9.1 ± 1.22)*2	
V-belt size	mm (in.)	<6G72, 4D56> 920 (36.2) <4G64> 980 (38.6) <4G54> 1,390 (54.7)	
Condenser			
Type		Aluminum film type	
Dual-pressure switch			
High pressure switch	kPa (kg/cm^2, psi)	OFF: 2,700 (27, 384)	ON: 2,100 (21, 299)
Low pressure switch	kPa (kg/cm^2, psi)	OFF: 200 (2.0, 28)	ON: 210 (2.1, 30)
Freezer prevention (Temperature of blowing air from evaporator)	°C (°F)	OFF: 3 (37)	ON: 4 (39)
Refrigerant and quantity	g (oz)	R-12 <Single Air Conditioner> MAX. 800 (28.22) <Dual Air Conditioner> MAX. 1,300 (45.86)	

NOTE
(1) The *1 symbol indicates vehicles for GCC with air conditioner.
(2) The *2 symbol indicates vehicles with dual air conditioner.

COMPONENTS



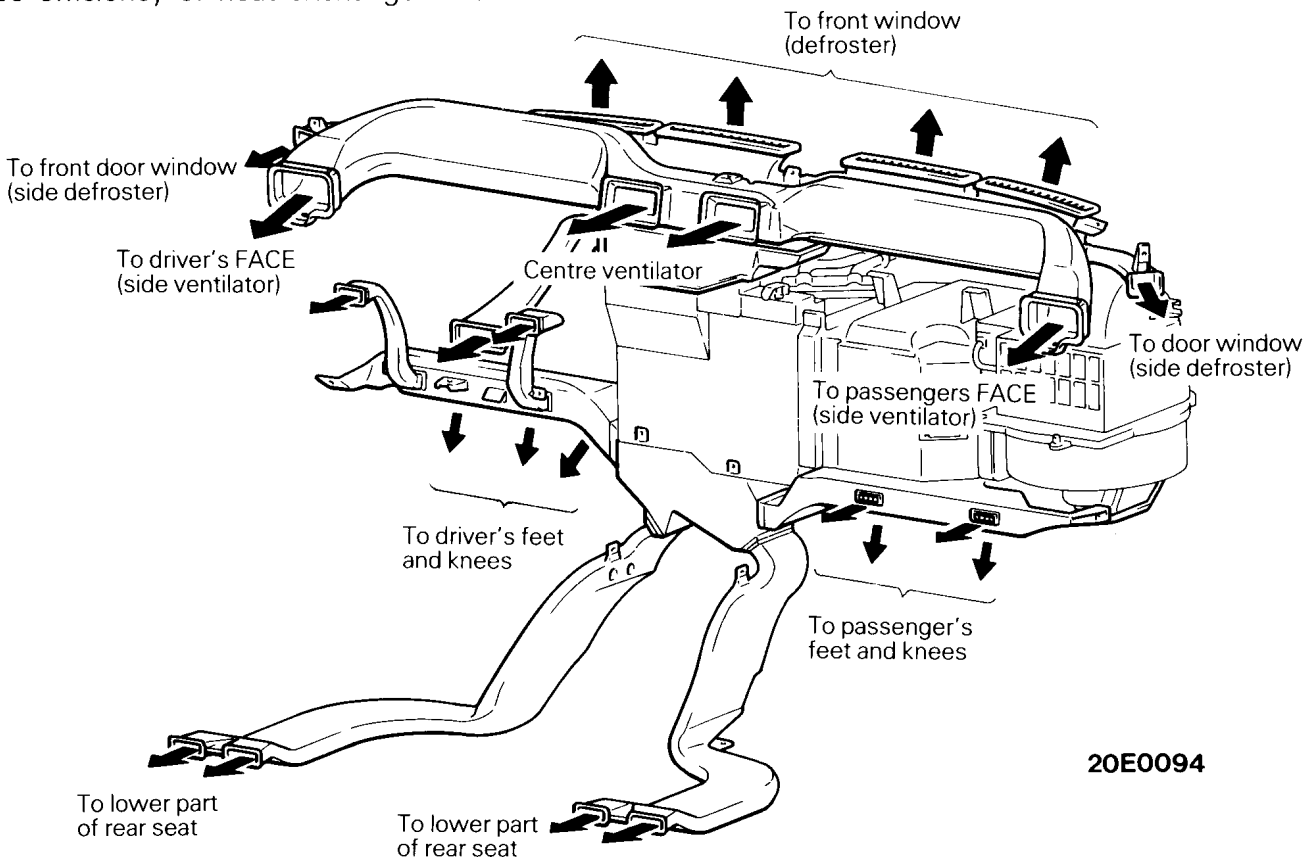


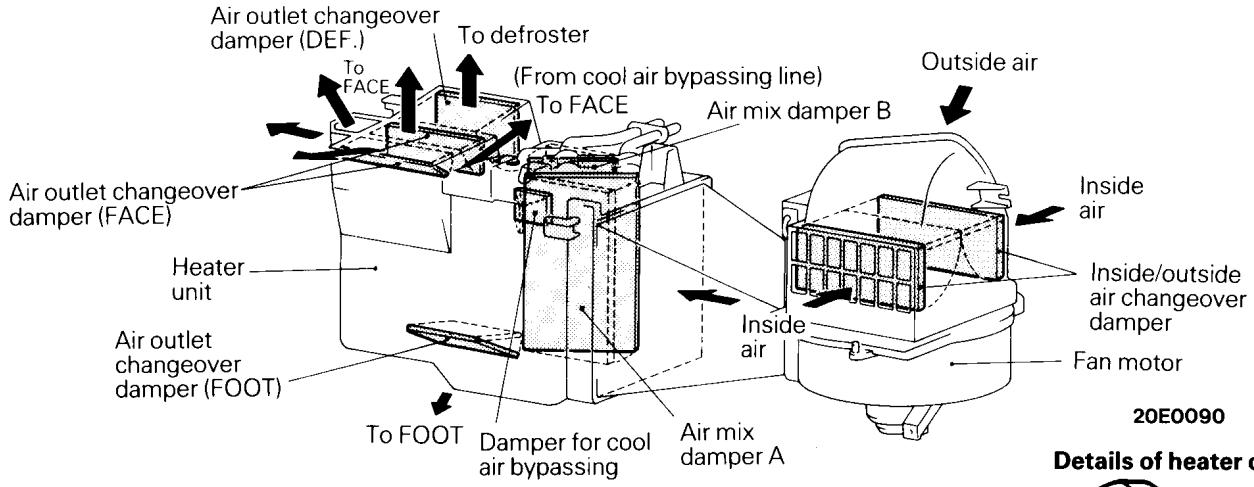
Rear heater control

70E0070

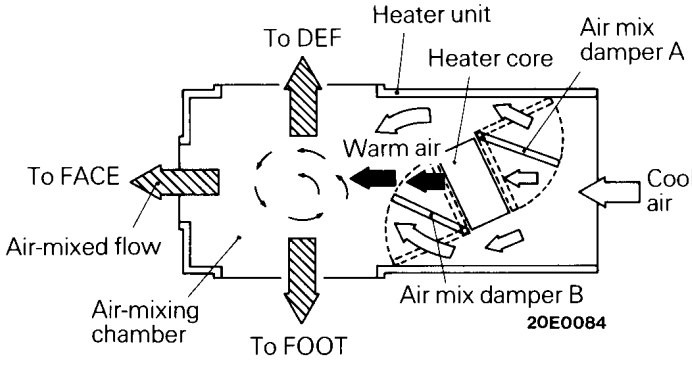
FRONT HEATER

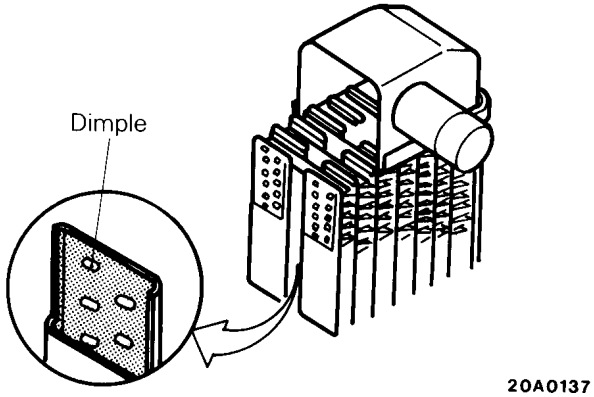
The three-way-flow full-air-mix heater is employed which has excellent response characteristic of temperature control. Also, the prolate dimple (convex) is provided on the heater core tubing to increase efficiency of heat exchange. The cool air bypassing system is adopted to prevent a rush of blood to the person's face in the FOOT, FOOT/DEF., or DEF. mode. To ensure safety regarding visual field, air is constantly blown from the side ventilator.





Details of heater core

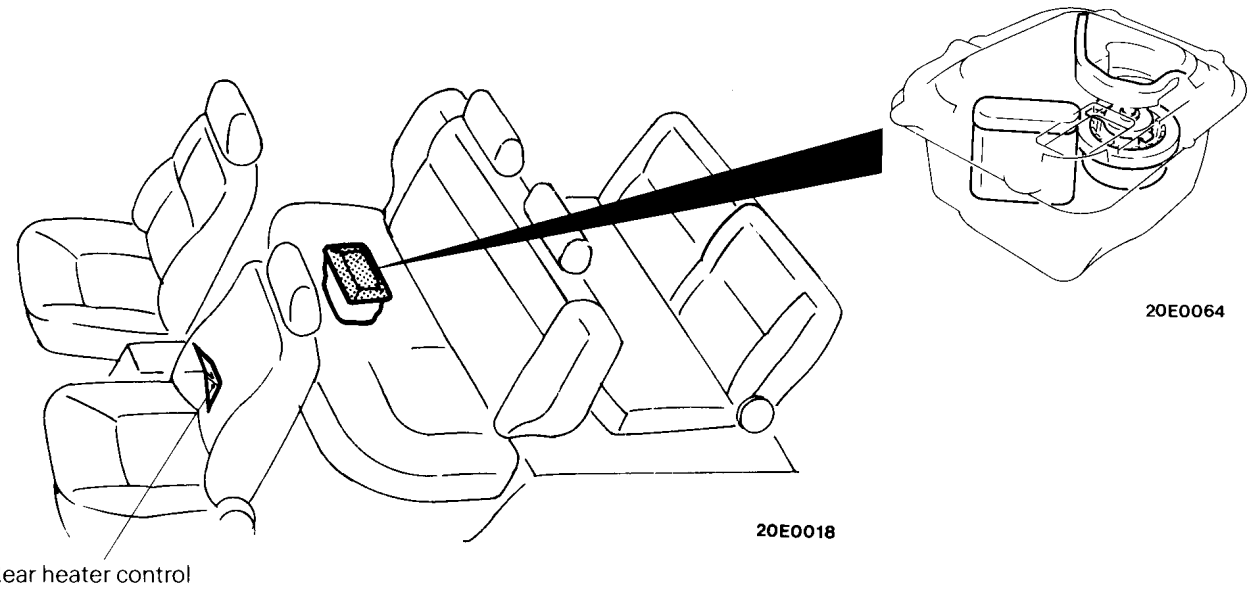


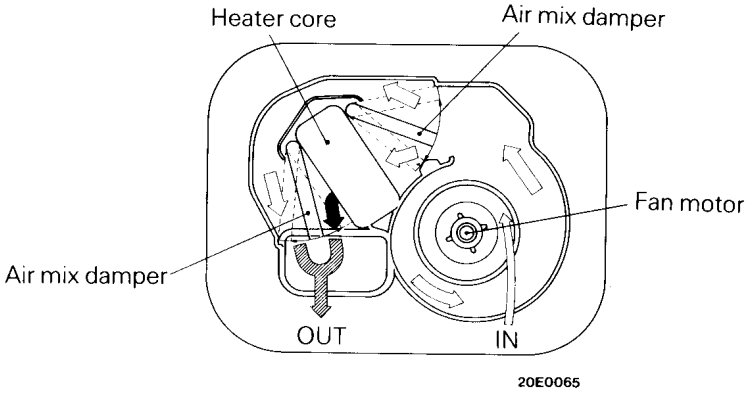


REAR HEATER

The full-air-mix heater is built on the rear seat floor (for exclusive use at rear seat), allowing control of the temperature of blowing air.

Rear heater unit

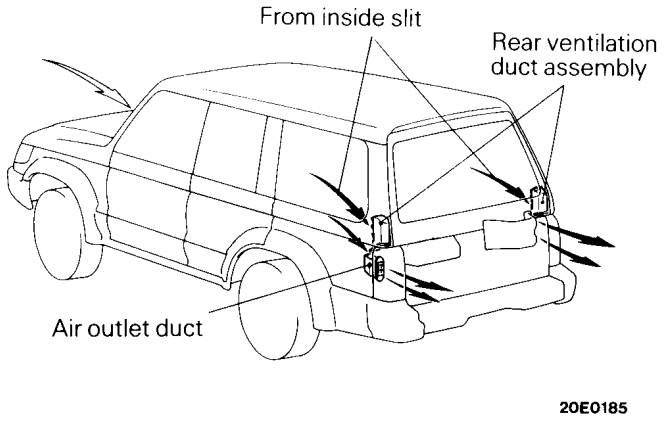




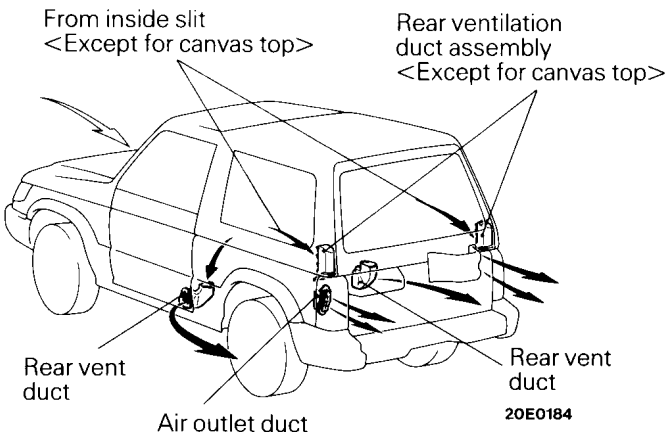
VENTILATION <AIR INLET AND AIR OUTLET>

The outside air is introduced through the front deck section, and the inside air comes out through the rear combination lamp slit section and the rear door opening <long wheelbase>. The check valve is equipped at the rear ventilation duct to prevent intrusion of wind, rain, dust, etc. from the outside.

<Long Wheelbase>

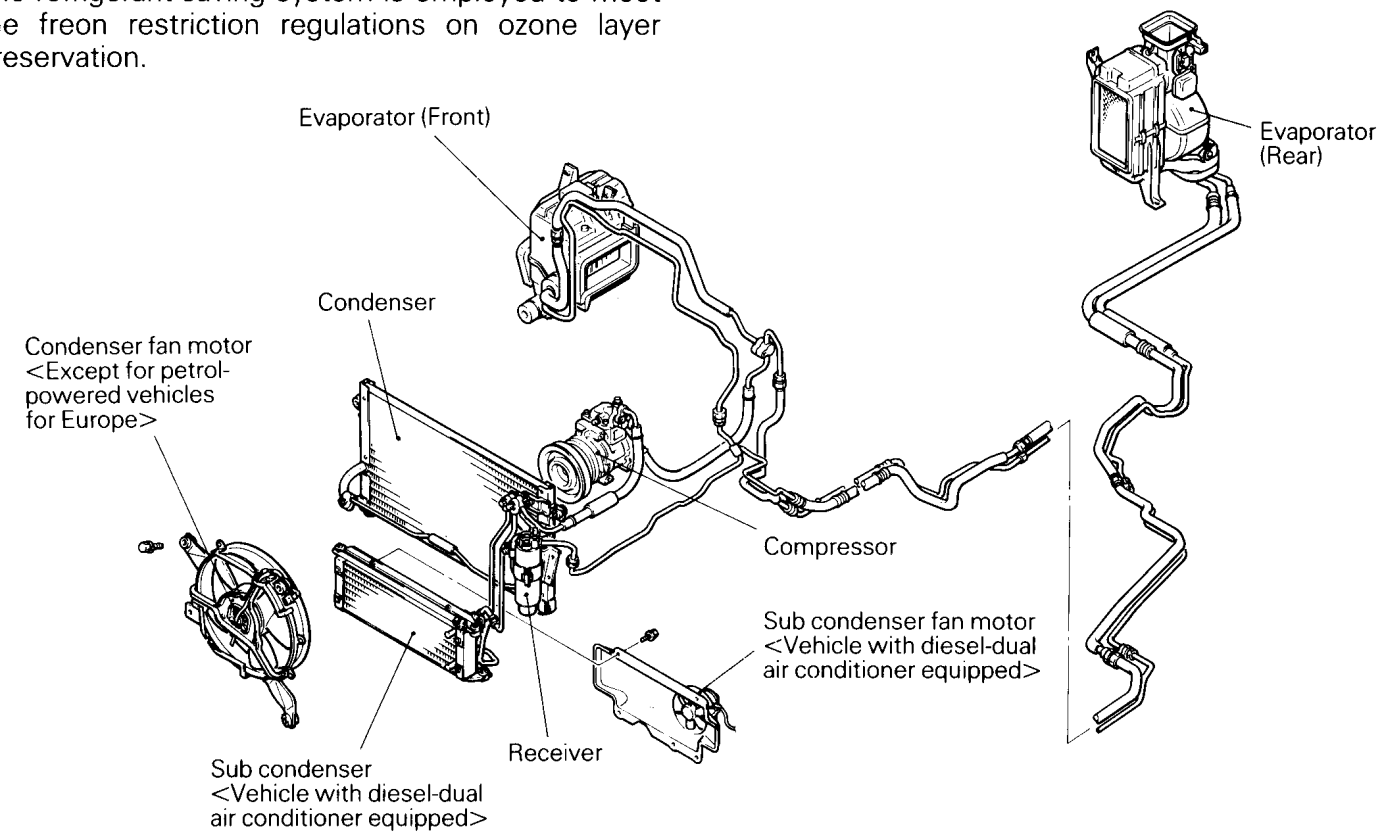


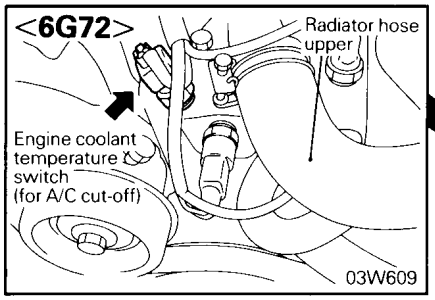
<Except for Long Wheelbase>

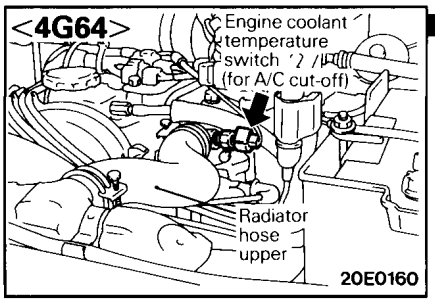


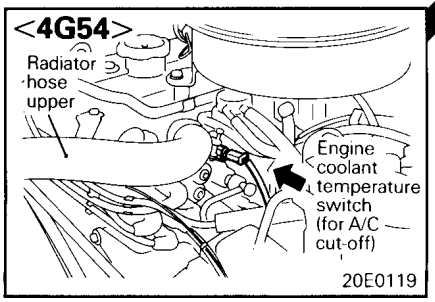
AIR CONDITIONER

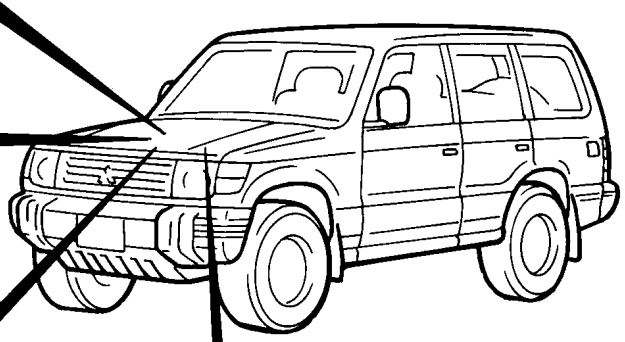
The refrigerant-saving system is employed to meet the freon restriction regulations on ozone layer preservation.











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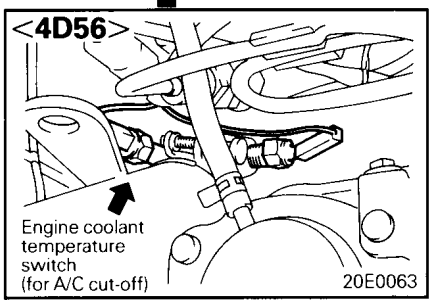
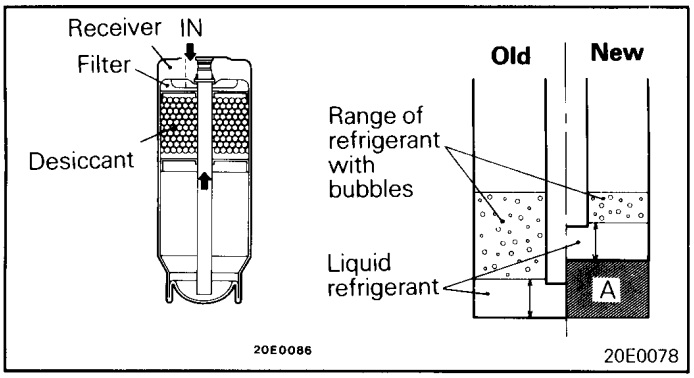


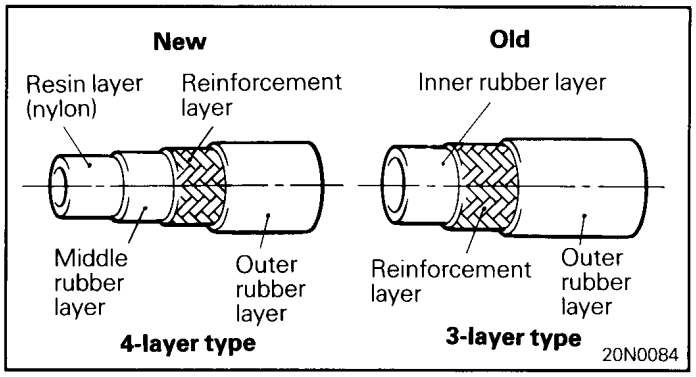
REFRIGERANT-SAVING SYSTEM

From July 1989, the consumption and production of specially designated chloro-fluoro carbon have been regulated world-wide to protect the ozone layer. Chloro-fluoro carbon R-12, used as the refrigerant in automobile air conditioners, is the object of those regulations and there is a need to control the amount of chloro-fluoro carbon used as much as possible. To meet these regulations, the components of air conditioner are designed for realizing refrigerant-saving.



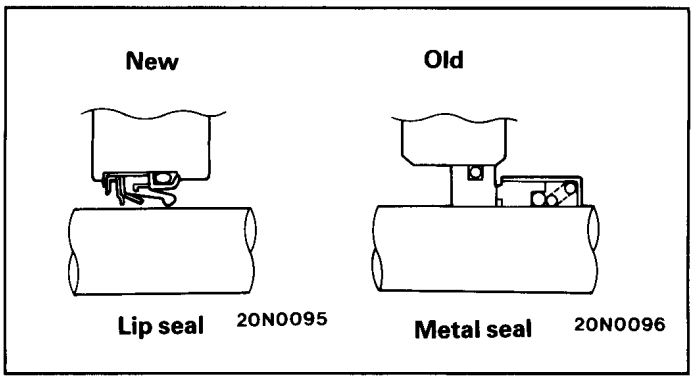
Receiver

The desiccant in the receiver is located at a position closer to the refrigerant inlet. Thereby, bubbling in the receiver can be suppressed significantly. Consequently, as shown in the figure, the range of liquid refrigerant mixed in the bubbles can be reduced. As a result, the amount of refrigerant can be reduced (Figure on the left A).



Refrigerant Line

The 3-layer type hose that was used up to now was replaced by a 4-layer type hose in order to reduce the amount of refrigerant permeated into the refrigerant line rubber hose.

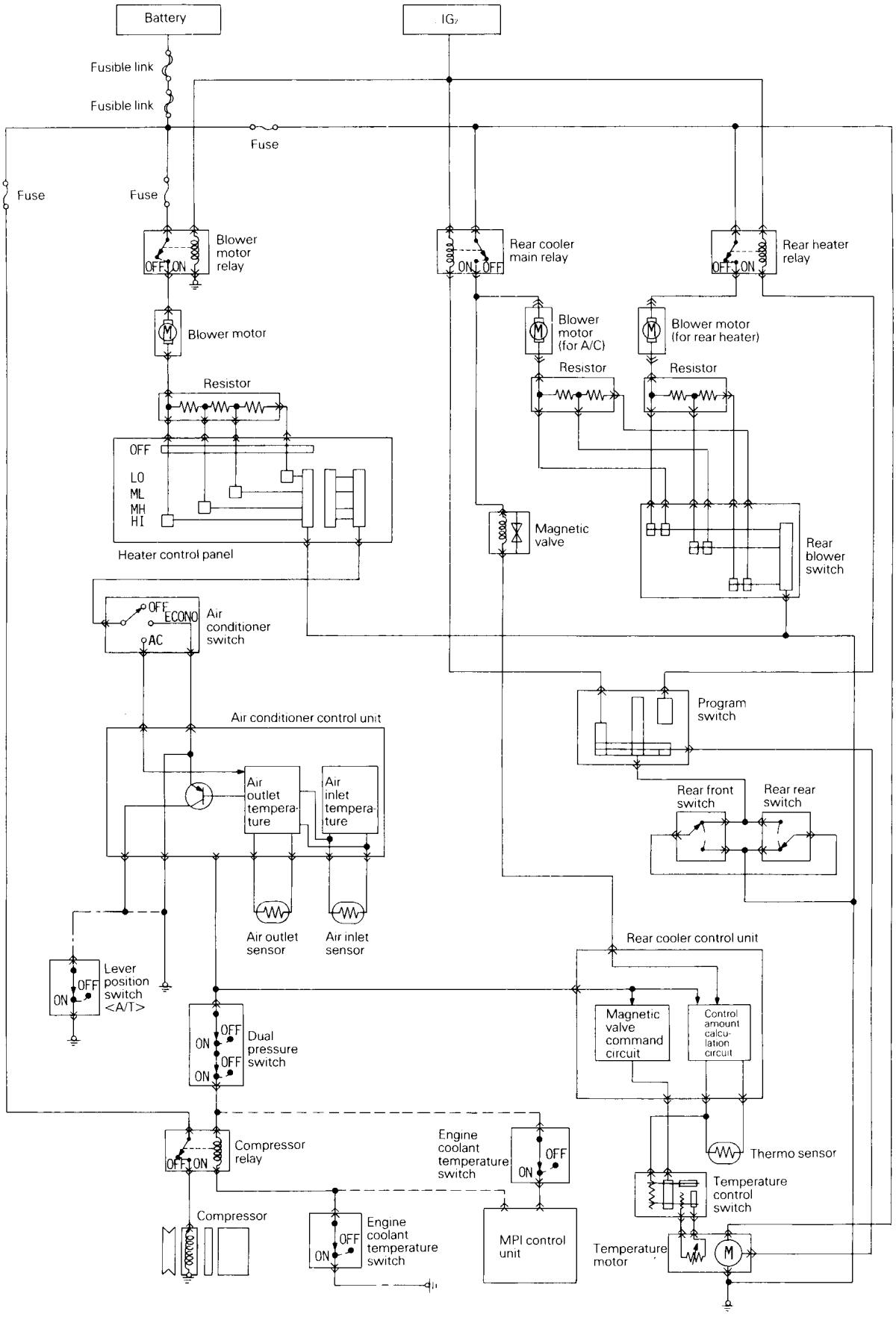


Compressor

Leakage of refrigerant from bearings has been reduced by changing the compressor bearings from metal seal to lip seal type.

COMPRESSOR CONTROL

Circuit Diagram



If any one of the following switches and sensors is turned off, the magnet clutch of the compressor is turned off.

Switch and sensor	Operating condition of compressor
Blower switch Air conditioner switch	Manual ON, OFF
Dual-pressure switch kPa (kg/cm², psi)	
High pressure switch	OFF at 200 (2.0, 28.4) or less, ON at 210 (2.1, 29.9) or more
Low pressure switch	OFF at 2,700 (27, 384) or more, ON at 2,000 (20, 284) or less
Engine coolant temperature switch (For air conditioner cut-off) °C(°F)	
Petrol-powered vehicles	OFF at 115 (239) or more, ON at 108 (226) or less
Diesel-powered vehicles	OFF at 116 (241) or more, ON at 109 (228) or less
Air inlet sensor Air thermo sensor	See the characteristic diagram

Compressor Magnet Clutch Control Characteristic Diagram