



Technical Guide

SUPPLEMENT 1

**XJ6 & XJ12 RANGE
1995 MODEL YEAR
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BY APPOINTMENT TO
HER MAJESTY QUEEN ELIZABETH II
MANUFACTURERS OF DAIMLER AND JAGUAR CARS
JAGUAR CARS LIMITED COVENTRY



BY APPOINTMENT TO
HER MAJESTY QUEEN ELIZABETH
THE QUEEN MOTHER
MANUFACTURERS OF DAIMLER AND JAGUAR CARS
JAGUAR CARS LIMITED COVENTRY



BY APPOINTMENT TO
HIS ROYAL HIGHNESS THE PRINCE OF WALES
MANUFACTURERS OF DAIMLER AND JAGUAR CARS
JAGUAR CARS LIMITED COVENTRY

Technical Guide

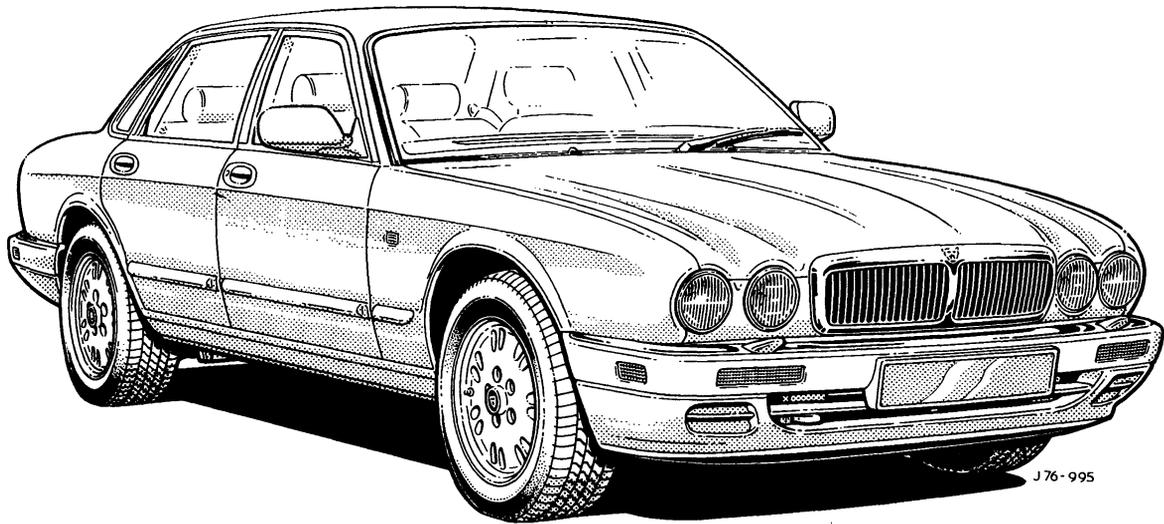
XJ6 & XJ12 RANGE 1995 MODEL YEAR SUPPLEMENT 1

This Technical Guide is produced as an outline description of the changes to the new XJ Series Sedan range, since its introduction at 1995 model year, for Jaguar Dealer workshop personnel. It is intended to complement updates to the Service Manual. By providing the information as a cohesive package, developments can be seen in isolation, in contrast with their dispersed nature in the Service Manual. Where a feature is restricted to certain countries, it is identified as such in the text. Major changes are described, but no attempt is made to cover every technical detail. Some of the changes are programmed for vehicle volume production in early February 1995. Some are running changes to be included as close as possible to this date.

The information contained in this publication should be considered as preliminary information and is accurate at the time of printing. The right is reserved to make changes at any time without notice.

The information given in this Technical Guide will not be updated. Until the release of the next Technical Guide, information on changes to the XJ Sedan range can be obtained from Service Bulletins and revisions to the Service Manual.

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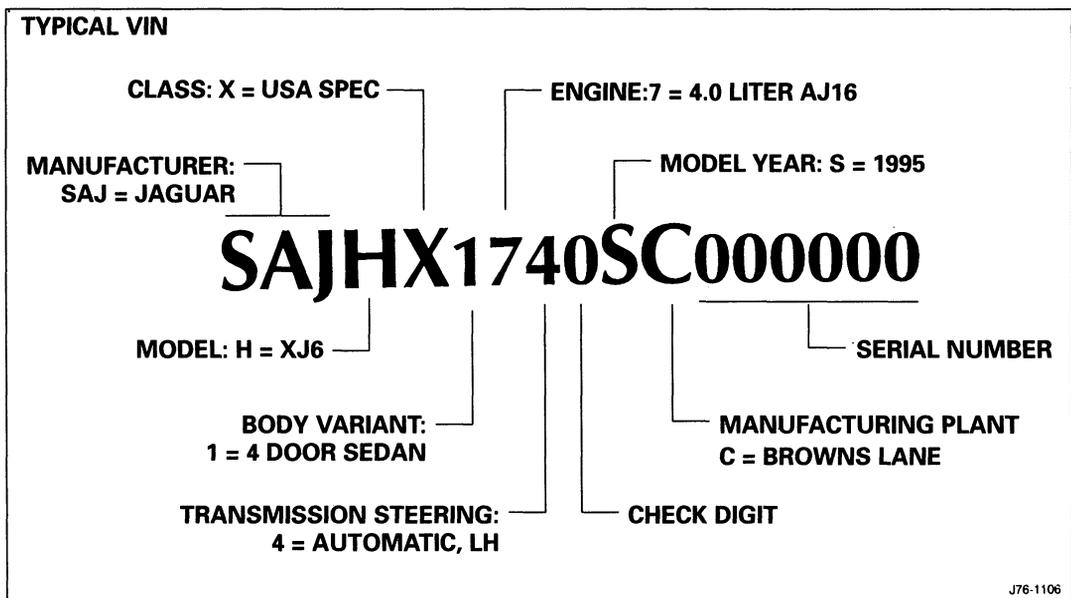
There are no major changes at this Model Year Update but several minor changes are covered.

A lockable, illuminated glovebox with a Handbook stowage section is the most noticeable visual addition.

Other changes of note are revised control and bulb failure monitoring of the exterior lighting systems, and a reduced size CD autochanger.

Refinements to the engine camshaft, brake booster and parking brake are made and a number of minor improvements to the electrical/electronic systems are embodied.

Vehicle Identification Number (VIN)



Exterior Trim

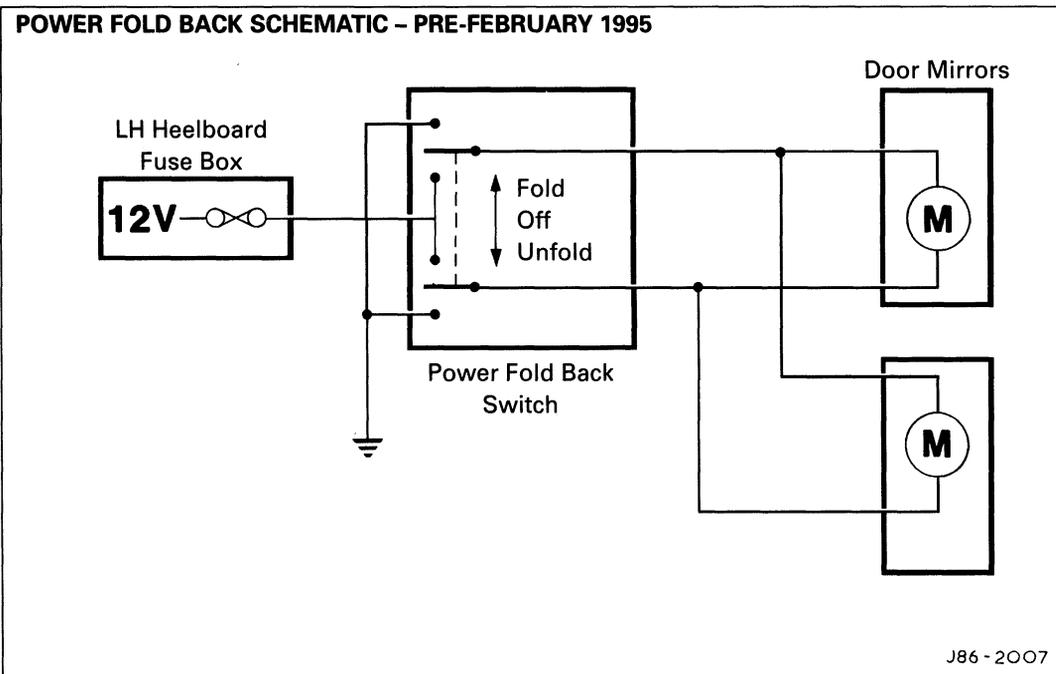
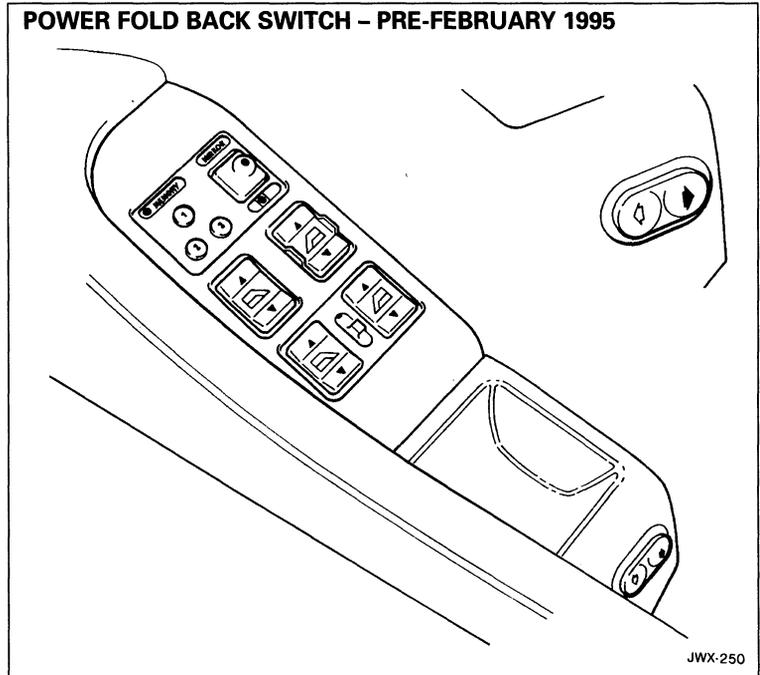
Power Fold Back Door Mirrors

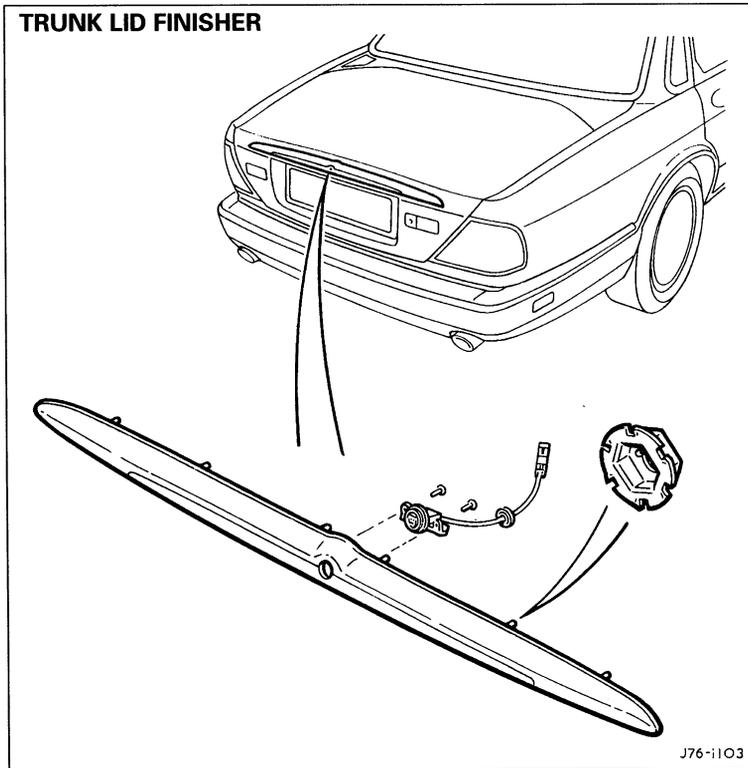
The power fold back facility for the door mirrors is standard in Japan and available as an option in all other markets except the USA. The fold back operation is controlled by a switch on the rear of the coin box in the driver's door pocket.

On pre-February 1995 built vehicles, the fold back switch is a three position rocker-switch, spring-loaded to the center off position. Pressing and holding the inboard side of the switch turns the mirror bodies inboard to the folded back position. Pressing and holding the outboard end of the switch turns the mirror bodies outboard to the normal driving position. The mirrors stop turning when they reach the fold back or normal driving position, or immediately the switch is released.

From February 1995, the rocker-switch is replaced by a two position rotary switch. The new switch retains the same inboard/outboard relationship with the mirrors as before, but can be released immediately after a new selection is made. The mirrors then turn to the required position and automatically de-energize the turning motors.

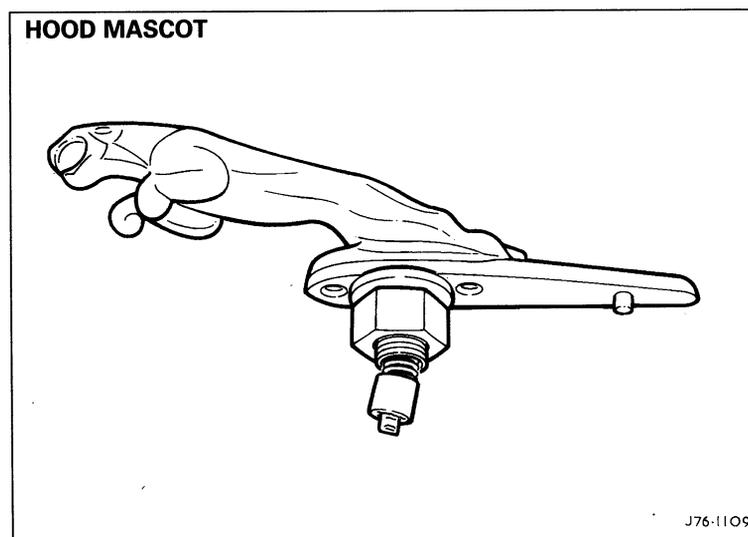
If a mirror is turned manually or under impact, it should not be re-set manually. The fold back switch should be used to turn the mirrors through a full cycle, to reset the mirror turning mechanism.





Trunk Lid Finisher

With the exception of the Daimler version, the trunk lid finisher substrate material is changed from a zinc die cast material to a plastic. The finisher is chrome plated or color-key painted according to the model derivative, as in the previous model year condition. This together with no styling change, renders it practically indistinguishable from the die cast version. Securing the finisher between the lid's inner and outer skin is now made with a 'Palnut' to the six finisher studs. The palnut self-taps a thread onto the stud as it is turned to the tightened position.



Hood Mascot

The chrome-plated 'leaping' jaguar mascot on the front edge of the hood is now installed on all vehicles except those for European markets. The mascot consists of a jaguar figure attached to a plinth by a steel cable, a spring and a spring retainer. A nylon nut and a metal reinforcement plate (nylon washer in USA) attach the plinth to the hood.

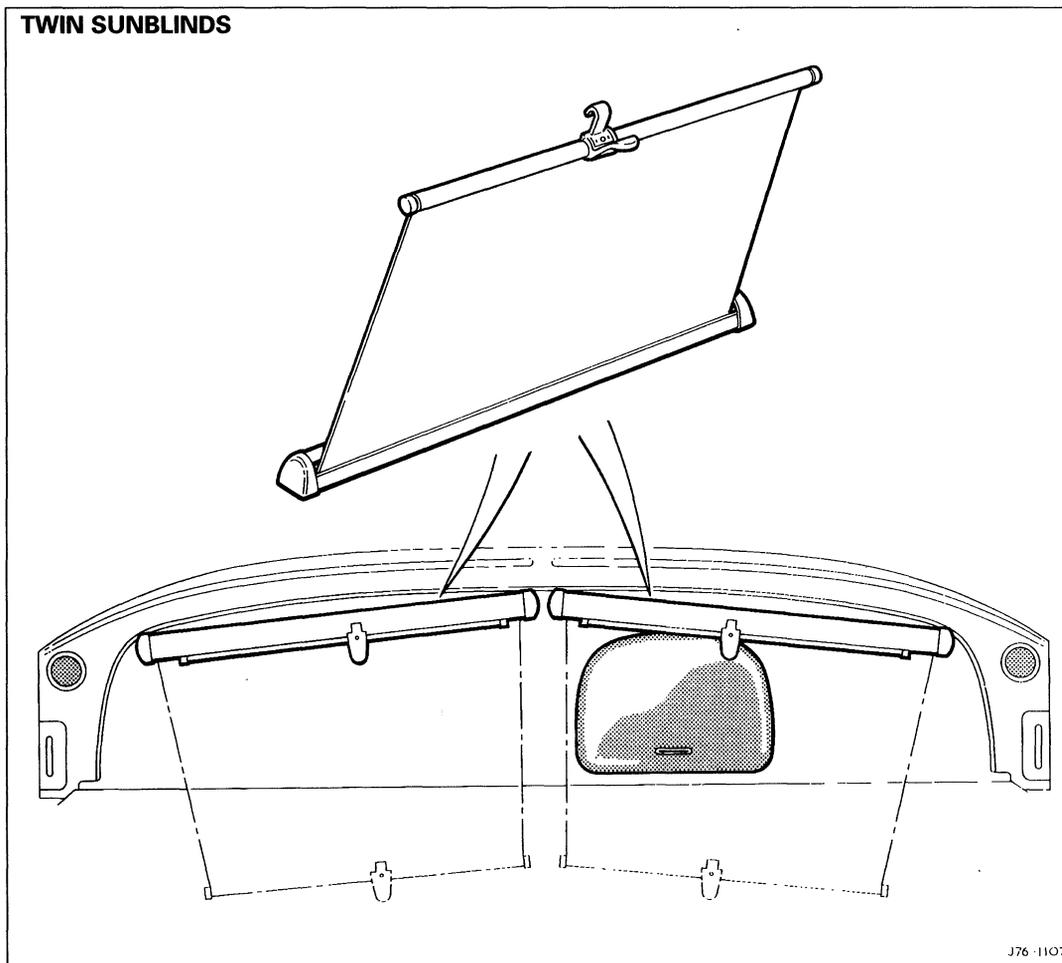
Under impact, the jaguar figure tilts about the axis of the steel cable, against spring pressure, then returns to its original position. If subjected to an impact above a pre-determined load, once the maximum tilt angle is reached a crimp on the steel cable is pulled through the spring retainer and the jaguar figure separates from the plinth. The jaguar figure can also rotate through 360° about the cable axis, with an indexed position every 90°.

Two set-screws lock the jaguar figure to the plinth for vehicle transit to the Dealer. These set-screws must be removed prior to delivery of the vehicle to the customer.

Interior Trim

Twin Blinds

Twin sunblinds are standard on Daimler models and available as an option on other models with the premium audio system. The full width sunblind would foul the extra speaker fitted on the rear parcel shelf of these vehicles. By fitting half-width twin blinds and locating them at a slight angle to accommodate the curve of the rear screen, sufficient clearance is achieved. Similar fittings to the full width sunblind are used.



Passenger Glovebox

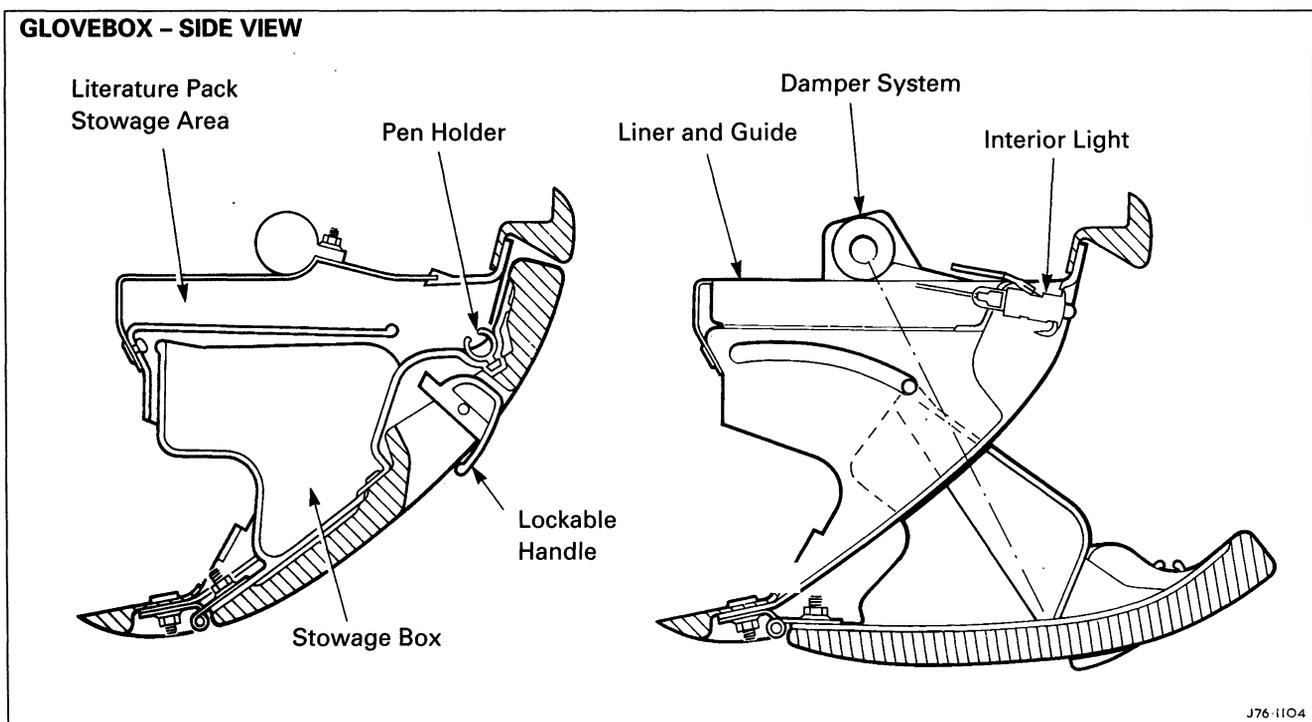
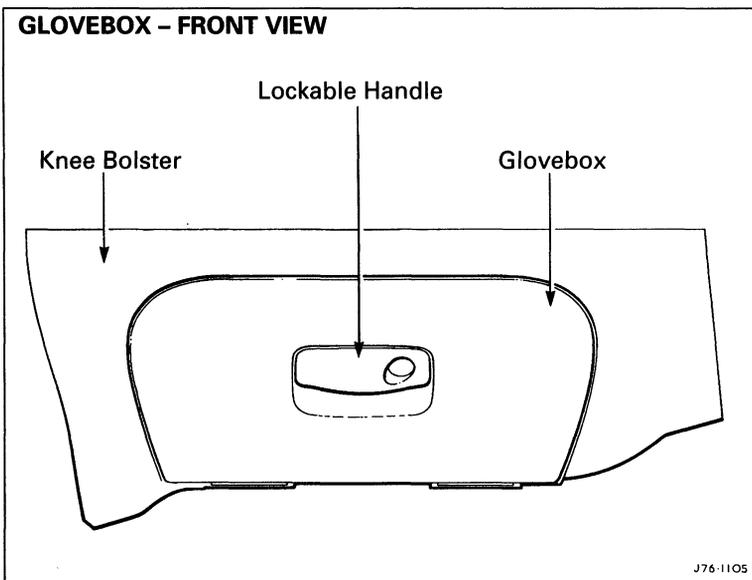
Since the passenger side air bag occupies the upper fascia position, the glovebox is positioned in the lower fascia. The glovebox door is made from foam, covered with a skin of vacuum formed plastic. The glovebox is lockable, has a centrally located handle and is flush with the bolster when closed. The stowage box section of the glovebox (not just the lid) pivots open on two exposed hinges (vertical and lateral adjustment available).

The glovebox comprises a number of serviceable parts:

- Stowage box (hopper)
- Lid, handle and lock
- Liner, housing a latch plate and literature pack section
- Damper system
- Interior light.

The stowage box interior is covered in flock to give a 'soft feel' finish. The glovebox is secured in the closed position by a latch plate in the liner which is capable of adjustment. A damping system controls the rate of the stowage box opening as it slides along the guides in the liner. A rubber buffer helps absorb closing shock loads and provides a positive engagement feel.

The interior light has an integral plunger switch and a flying lead connector to fit the console harness. It is secured in the liner as a 'snap fit'. A pen holder is located inside and near the top of the lid.



Engine – Mechanical

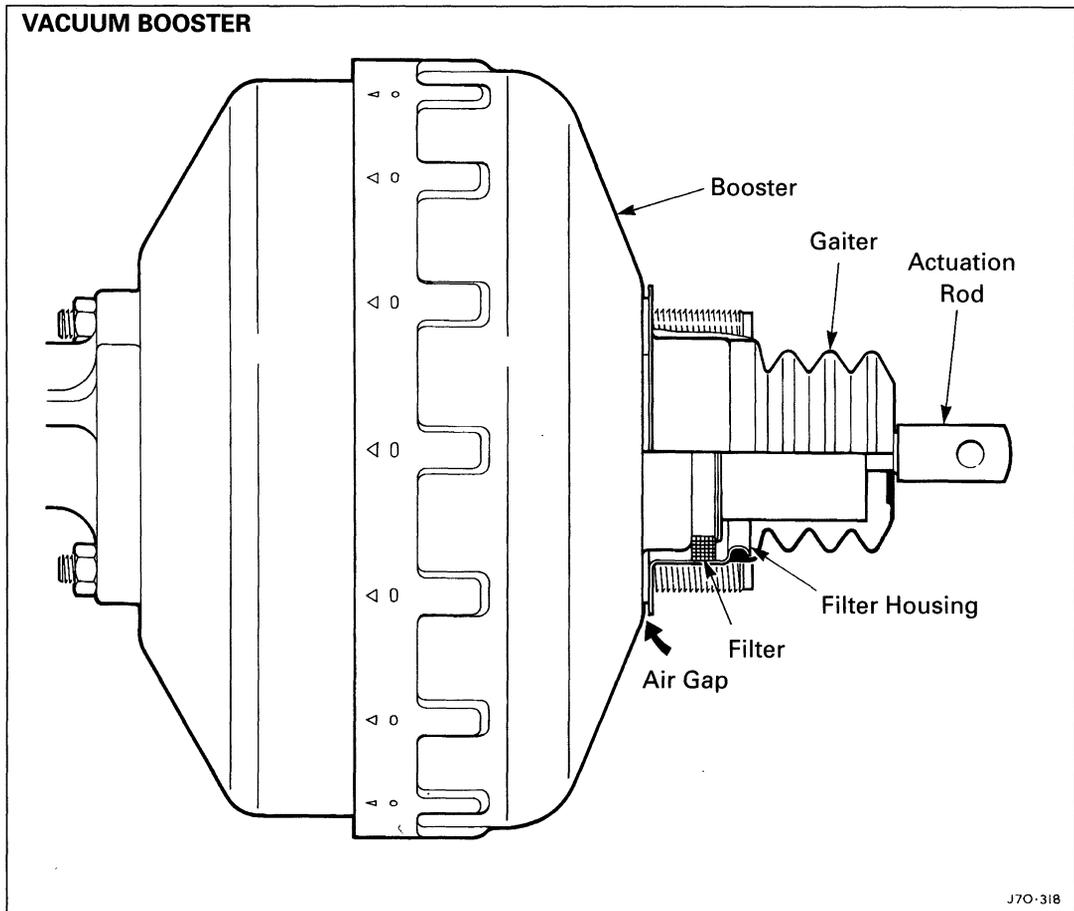
Camshafts

New camshafts enable the introduction of smaller valve clearances, to improve engine rpm stability at idle and to reduce tappet noise. The camshafts have cams with an increased base circle diameter. The clearance for both the inlet and the outlet valves is now 0.25 to 0.30 mm (0.010 to 0.012 in) instead of 0.30 to 0.35 mm (0.012 to 0.014 in).

Foundation Brakes

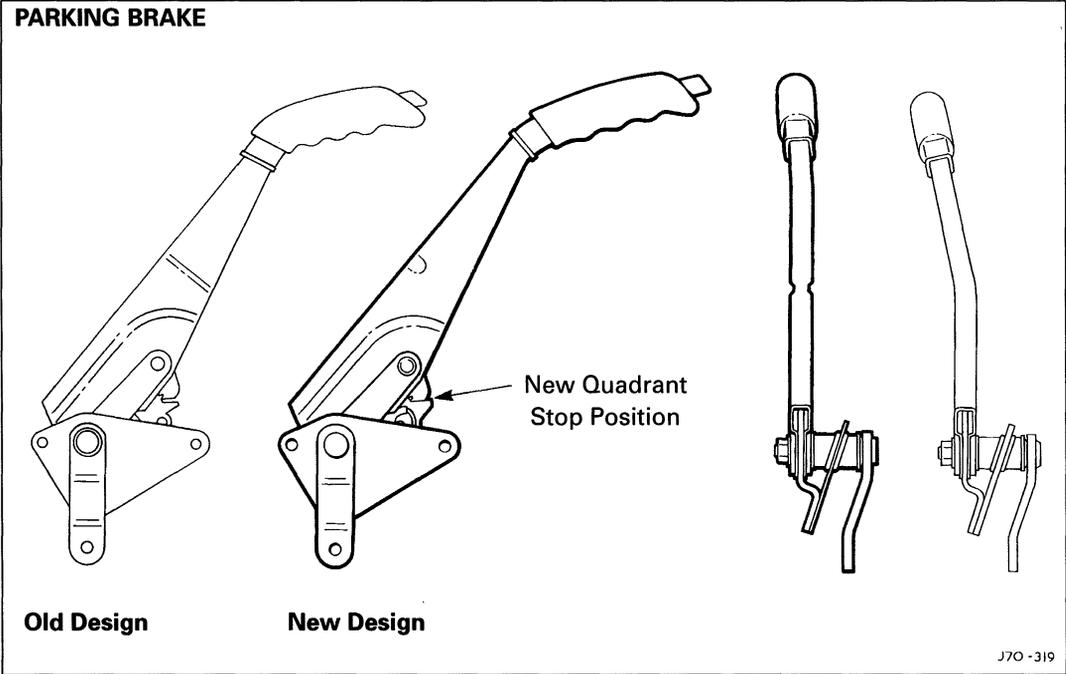
Vacuum Booster

The vacuum booster is modified as a noise refinement improvement. An air filter is now installed and a gaiter is fitted to the filter housing to cover the actuation rod. The filter housing is spaced away from the booster body to provide air intake from inside the engine bay, instead of from the passenger compartment.



Parking Brake

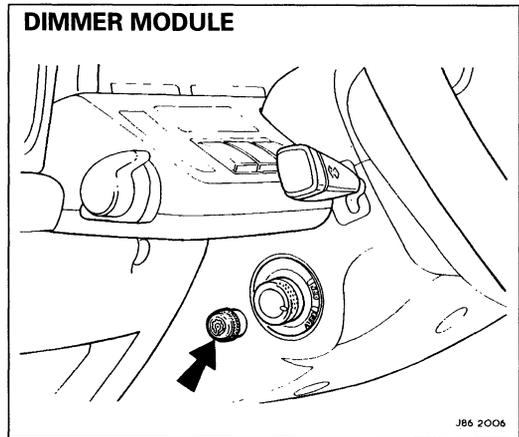
In response to an ergonomic clinic report, the crank angle of the parking brake handle has been reduced. This results in its button release end being further away from the driver. Additionally, the quadrant stop position is raised so that the ratchet begins from a higher position, i.e. the 'Off' position is raised.



Switchgear

Dimmer Module

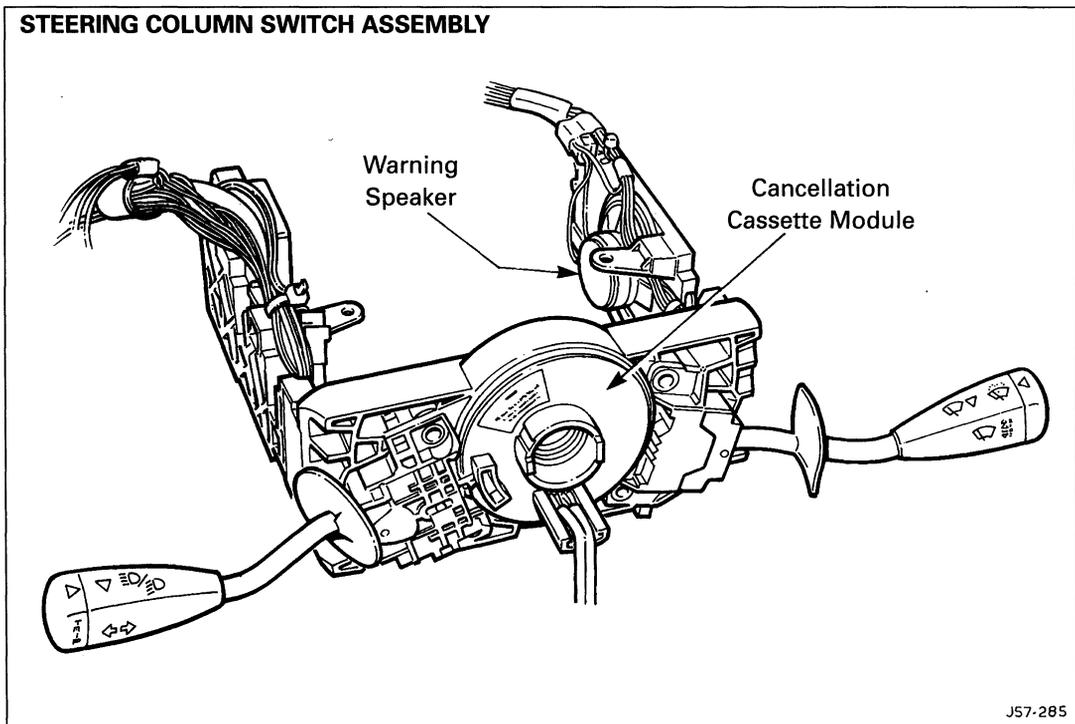
A single output dimmer module is introduced. With the new dimmer module, the instrument panel and switch/control background lighting goes off if the ignition is selected off while the headlamps or side lamps are selected on. Formerly the lighting remained on as a visual reminder that exterior lamps were still on (the audible 'lights on' reminder remains).



Steering Column Switch Assembly

The two multi-function switches and the warning speaker are integrated into the harnesses on the sides of the steering column switch assembly, eliminating the connector between each component and related harness. The bolts attaching the steering column switch assembly to the steering column are changed to 30 mm long torx headed bolts in place of the 35 mm long hexagon headed bolts used previously. The torque tightening figure for the new bolts is 4 to 5 Nm (36 to 44 lbf.in).

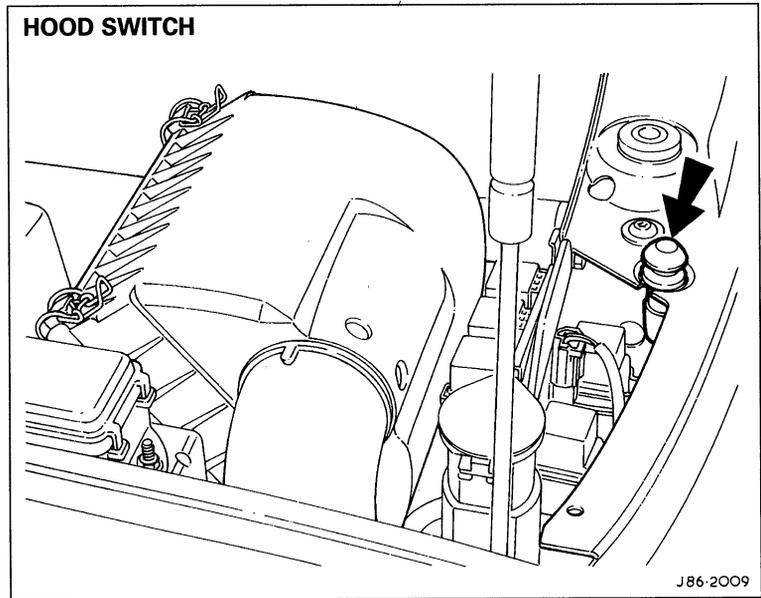
Already introduced, as a running change, is a revised cancellation cassette module. The new cassette module contains less cable than previously. The revised length is more accurately matched to the length required to accommodate the number of turns, lock to lock, made with the steering wheel.



Security System

Hood Switch

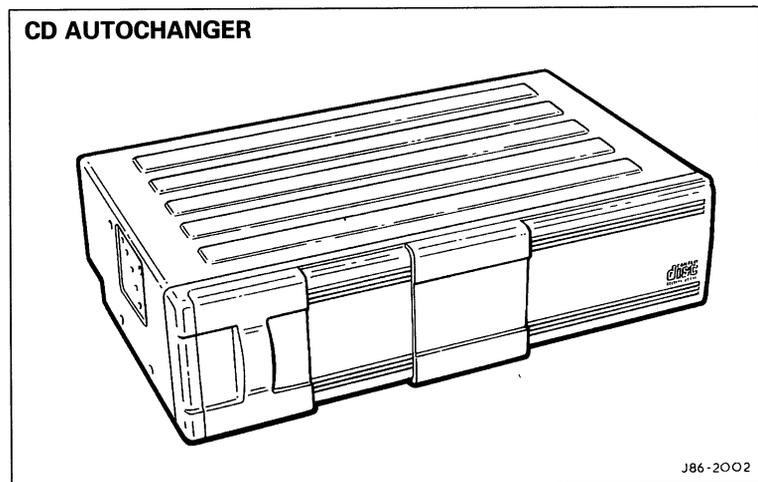
The hood switch is no longer installed on vehicles for North America and Taiwan. Consequently the perimeter sensing feature of their security systems no longer includes the hood.



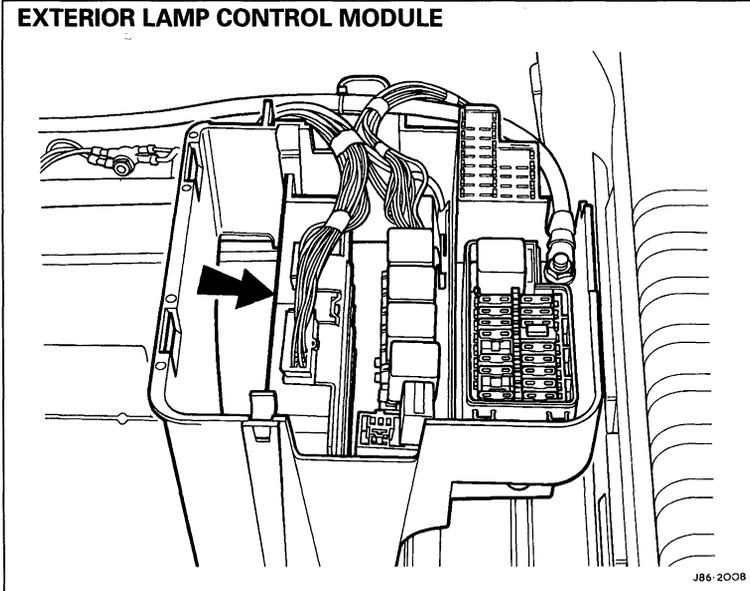
In-car Entertainment

CD Autochanger (Where Fitted)

A smaller six disc autochanger is introduced. New brackets secure it in the trunk on the underside of the rear parcel shelf. The new autochanger is approximately 30% smaller by volume than the previous model, and has a new design of disc magazine. The new magazine is not interchangeable with the one used on previous autochangers.

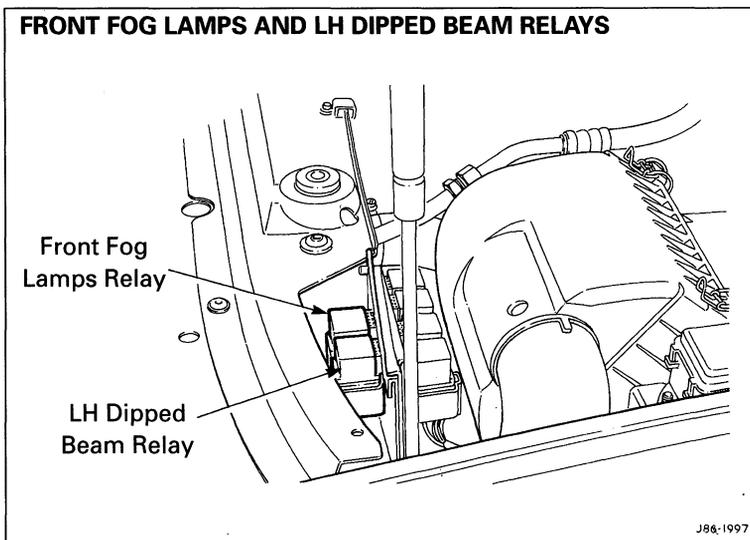


EXTERIOR LAMP CONTROL MODULE



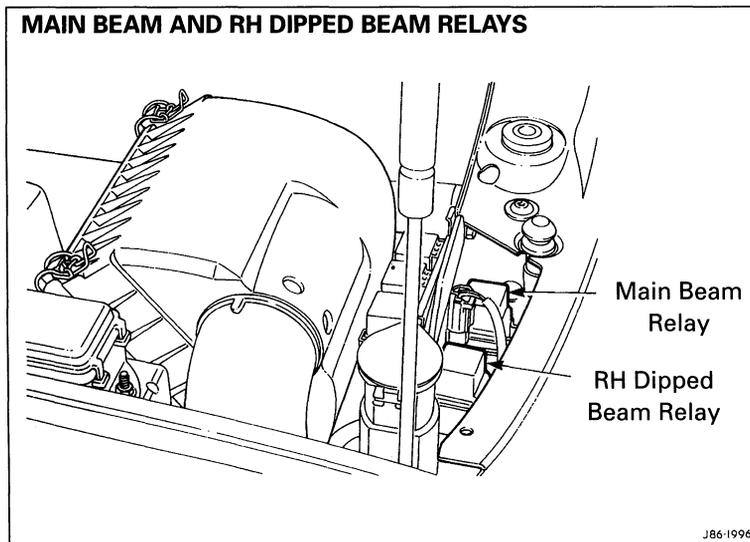
J86-2008

FRONT FOG LAMPS AND LH DIPPED BEAM RELAYS



J86-1997

MAIN BEAM AND RH DIPPED BEAM RELAYS



J86-1996

Exterior Lighting

The exterior lighting systems are revised to replace the previous three control modules with a single exterior lamp control module and four relays. New wiring harnesses accommodate the revised systems. Front fog lamps are introduced as standard on all vehicles.

Exterior Lamp Control Module

The new exterior lamp control module controls the application of power to all of the exterior lamps, except for the headlamps and the front fog lamps, in response to inputs from the body processor unit, brake switch and transmission selector switch.

The module also monitors the circuits of the front and rear direction indicator lamps, the tail lamps and the left and right stop lamps, when they are on. If a failure is detected (eg. failed bulb or fuse), the module produces an output to the body processor unit or the instrument panel, to turn on the bulb failure indicator. On receipt of a direction indicator failure input, the body processor unit also flashes the remaining operative bulbs on the affected side, and the related tell-tale, at twice the normal rate.

The module is installed in the trunk electrical carrier in the space previously occupied by the rear lamp control module. Although the casing and electrical connectors are the same as on the module it replaces, the new module and related harnesses are not interchangeable. A cautionary statement on the module's part description label, and new colors for the connector housings (blue instead of black and green instead of white), highlight the identity of the new module.

Relays

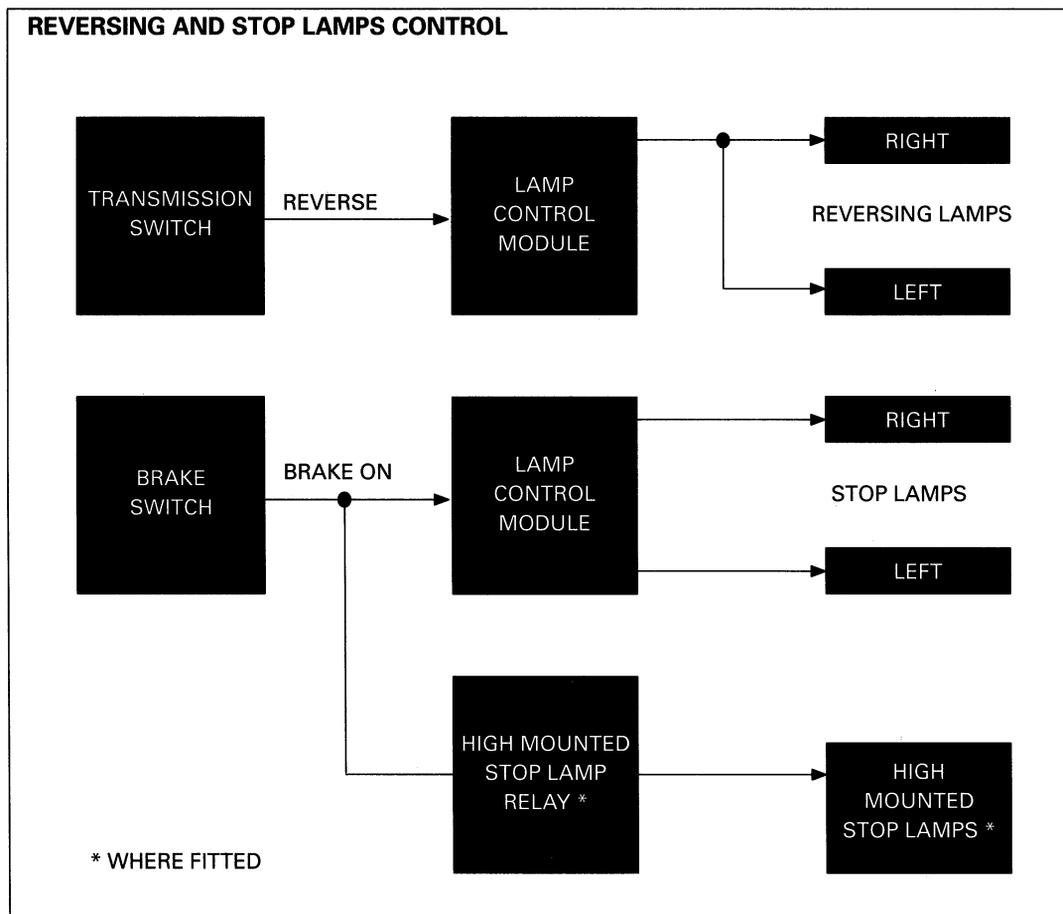
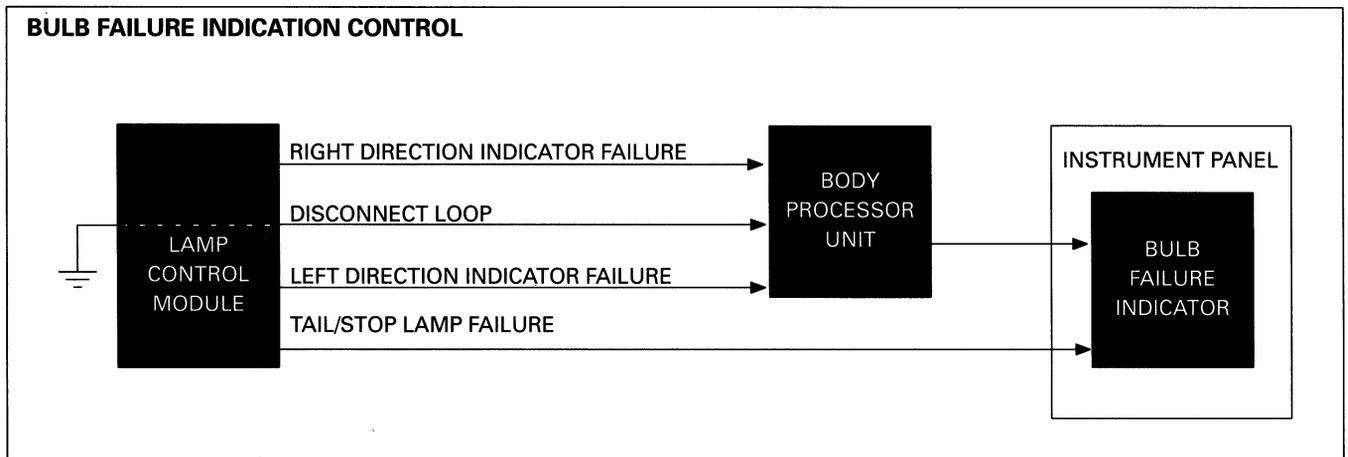
The new relays control the application of power to the headlamps and the front fog lamps in response to inputs from the body processor unit.

The relays are sealed to prevent moisture ingress, and installed on brackets behind the headlamps.

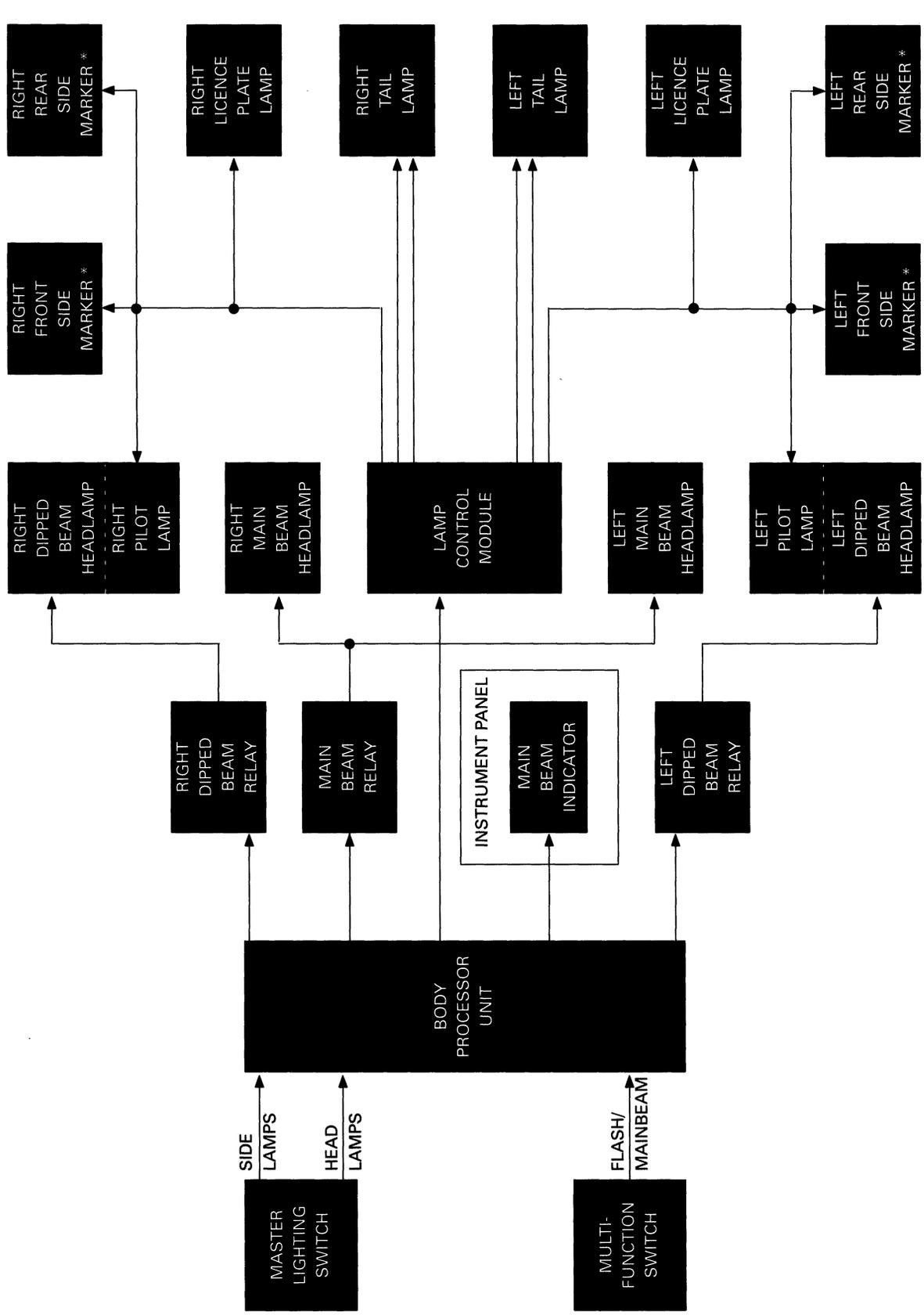
Body Processor Unit

The body processor unit is unchanged. However, with the introduction of the new relays, only one of the two main beam outputs it produces is utilized: the one on pin 041 of connector FC001. The disconnect loop, through the connectors of the lamp control module to ground, enables the body processor to confirm that the harness connectors are correctly installed in the module

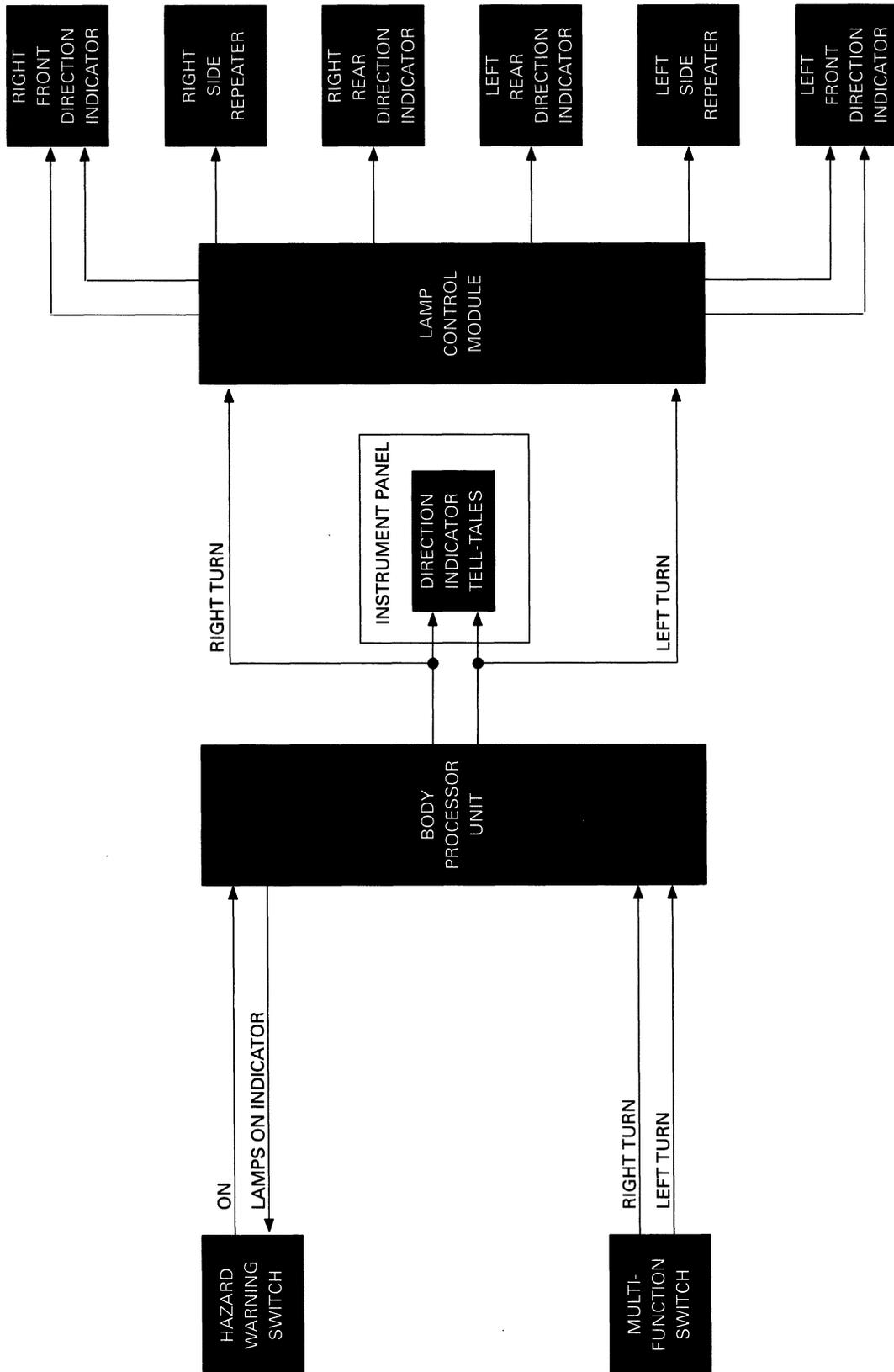
connectors. If the body processor detects an open circuit in the disconnect loop, it signals the bulb failure indicator to come on (without the direction indicator, tail or stop lamps circuit being on).



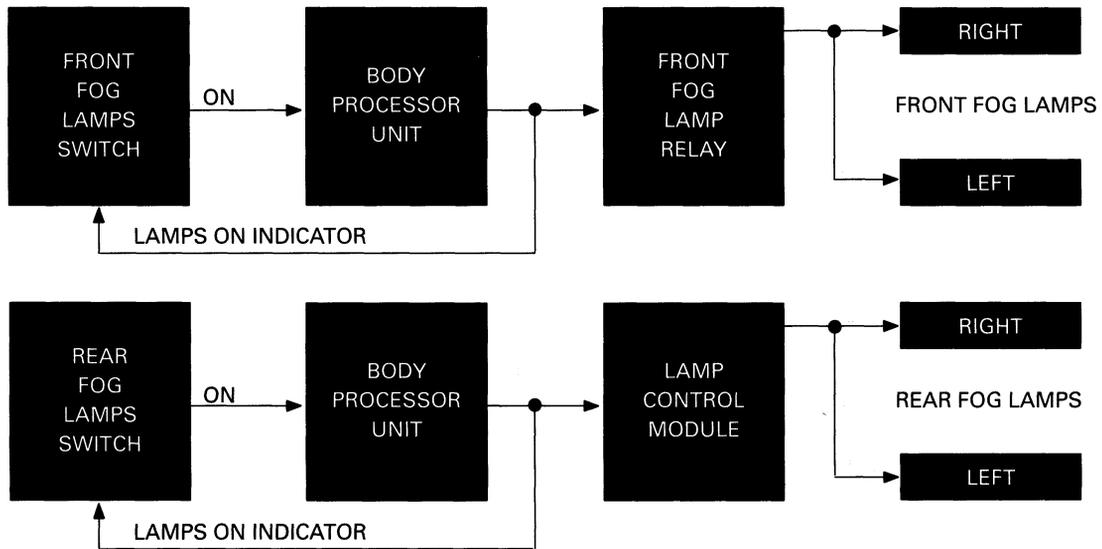
SIDE LAMPS AND HEADLAMPS CONTROL



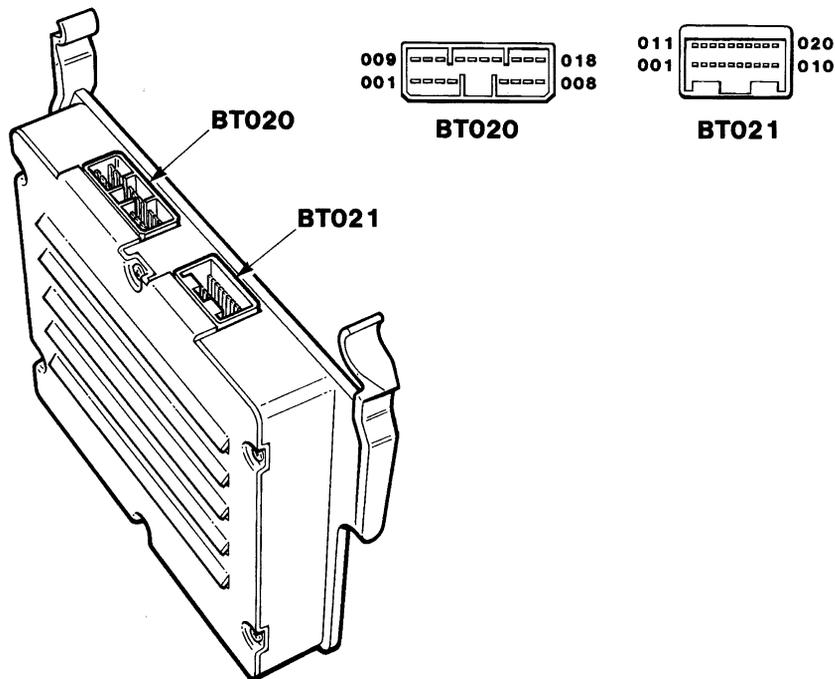
DIRECTION INDICATOR LAMPS CONTROL



FOG LAMPS CONTROL



EXTERIOR LAMP CONTROL MODULE PIN CONNECTIONS

**Connector BT020 (Green Housing)**

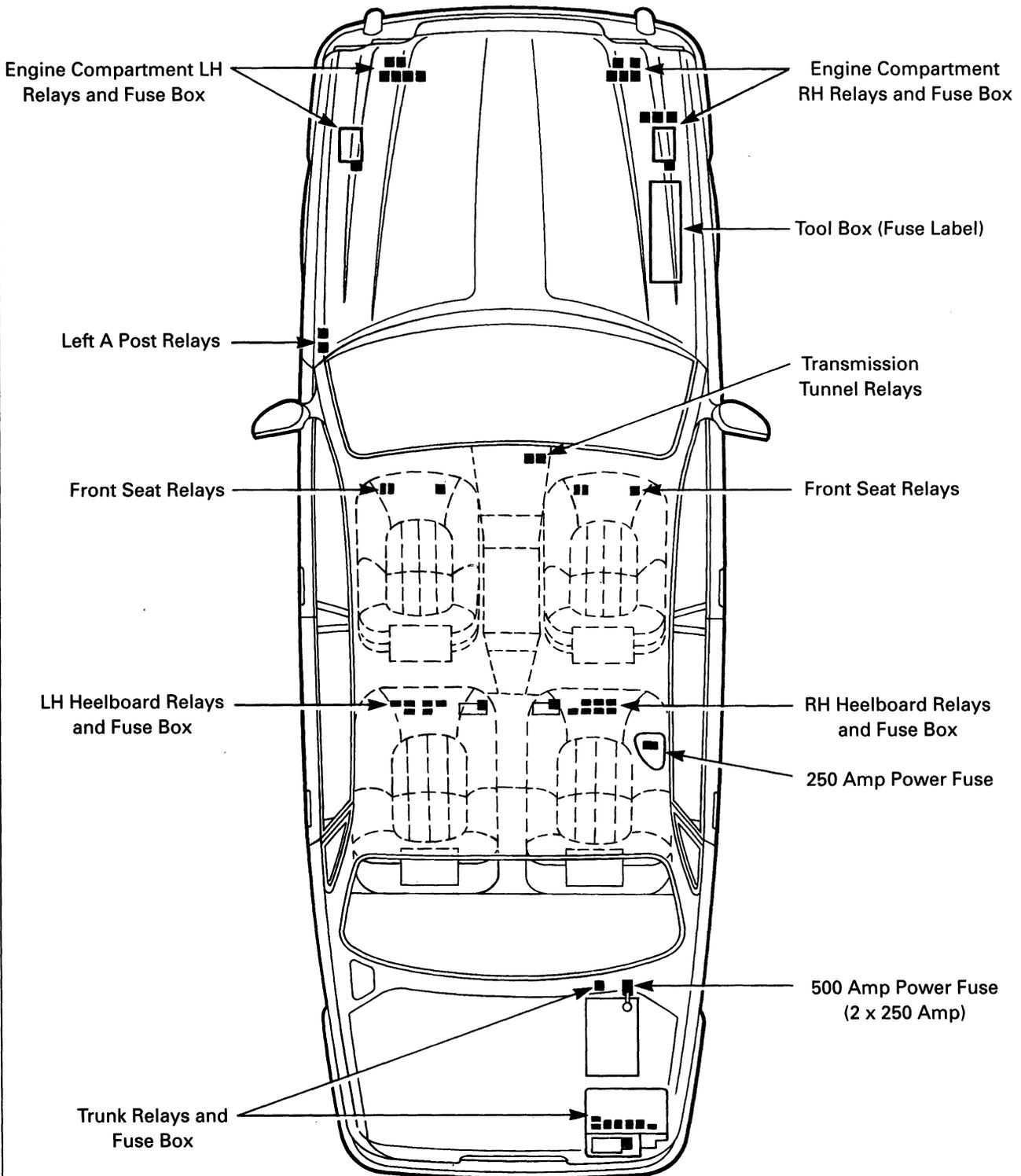
- 001 Rear Fog Lamps: Output
- 002 Left Front Direction Indicator Lamp (Bulb 1): Output
- 003 Left Front Direction Indicator Lamp (Bulb 2): Output
- 004 Left Rear Direction Indicator Lamp: Output
- 005 Right Direction Indicator Lamps Supply: Input
- 006 Stop Lamps Positive Supply: Input
- 007 Right Stop Lamp: Output
- 008 Left Stop Lamp: Output
- 009 Reversing Lamps Supply: Input
- 010 Reversing Lamps: Output
- 011 Rear Fog Lamps Supply: Input
- 012 Left Direction Indicator Lamps Supply: Input
- 013 Logic Zero Volt (Disconnect Ground Loop): Input
- 014 Right Rear Direction Indicator Lamp: Output
- 015 Right Front Direction Indicator Lamp (Bulb 1): Output
- 016 Right Front Direction Indicator Lamp (Bulb 2): Output
- 017 Left Tail, Licence Plate, Pilot and Side Marker Lamps Supply: Input
- 018 Right Tail, Licence Plate, Pilot and Side Marker Lamps Supply: Input

Connector BT021 (Blue Housing)

- 001 Right Side Repeater Lamp: Output
- 002 Right Tail Lamp (Bulb 2): Output
- 003 Left Side Repeater Lamp: Output
- 004 Test Output
- 005 Right Direction Indicator Lamps Control: Input
- 006 Left Direction Indicator Failure: Output
- 007 Right Licence Plate, Pilot and Side Marker Lamps: Output
- 008 Right Tail Lamp (Bulb 1): Output
- 009 Left Tail Lamp (Bulb 1): Output
- 010 Left Tail Lamp (Bulb 2): Output
- 011 Rear Fog Lamps Control: Input
- 012 Reversing Lamps Control: Input
- 013 Stop/Tail Failure: Output
- 014 Stop Lamps Control: Input
- 015 Left Direction Indicator Lamps Control: Input
- 016 Right Direction Indicator Failure: Output
- 017 Tail, Licence Plate, Pilot and Side Marker Lamps Control: Input
- 018 Disconnect Ground Loop: Output
- 019 Ignition Switch Controlled Supply: Input
- 020 Left Licence Plate, Pilot and Side Marker Lamps: Output

Relays, Fuses and Control Modules

RELAY, POWER FUSE AND FUSE BOX LOCATIONS

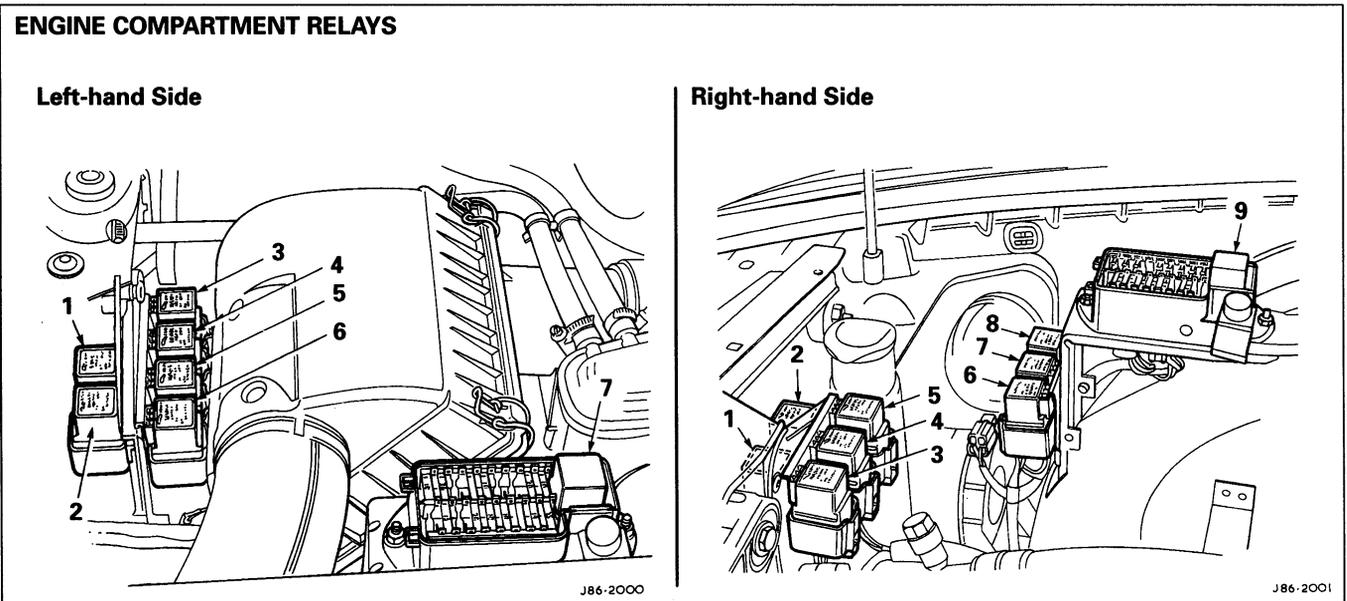


For details see relay and fuse identification Tables

J86-2003

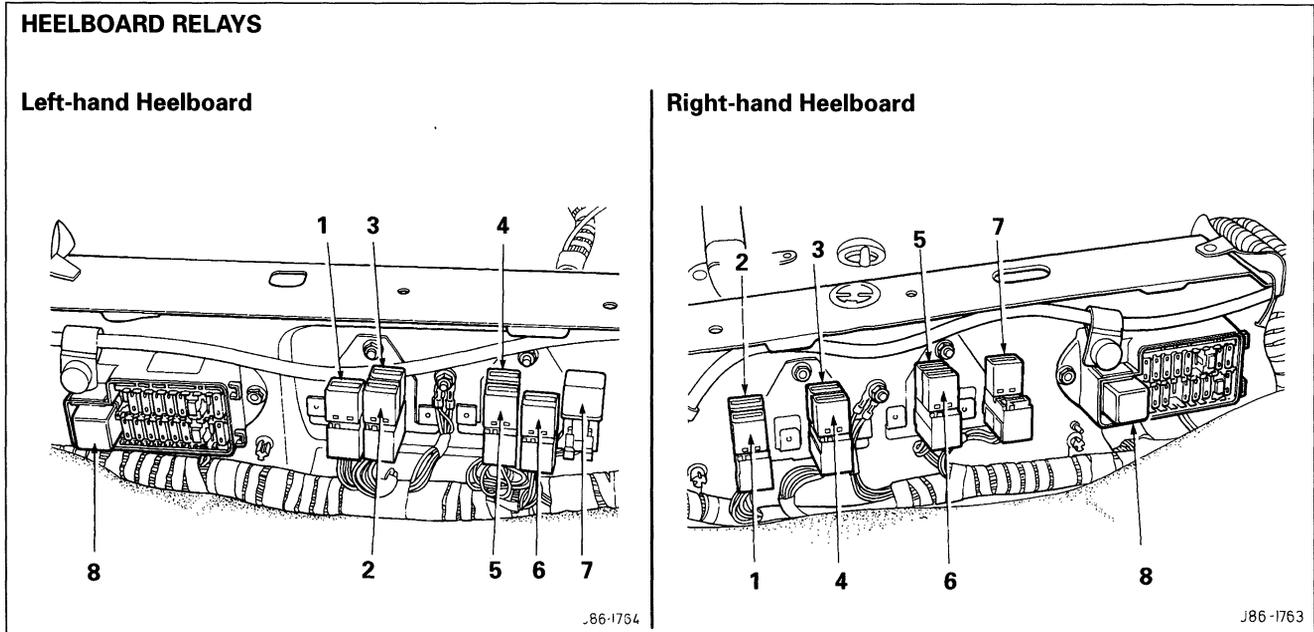
Relay Identification Tables

Note: In the engine compartment, if a relay is not required on a particular model variant it is replaced by a dummy relay. Dummy relays have a black case with a white stripe.



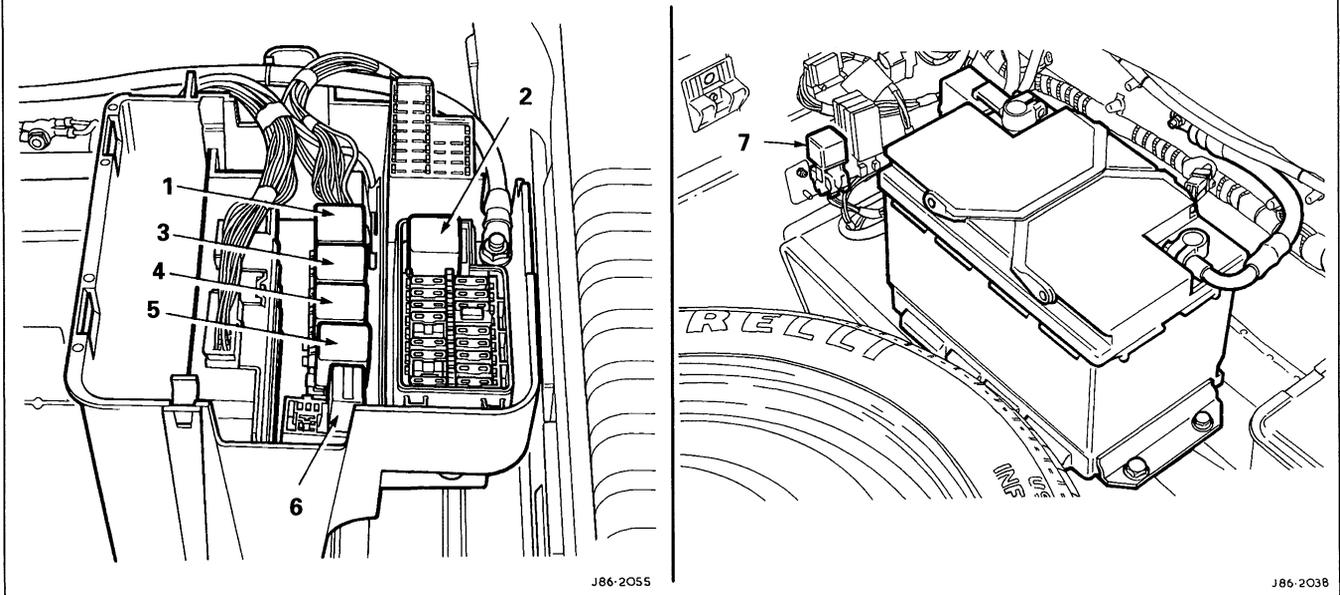
Location/ Number	Relay	Color	
		Case	Base
Engine Compartment LH Side			
* 1	Front fog lamps	Black	Black
* 2	LH dipped beam	Black	Black
3	Starter solenoid	Black	Black
4	Air conditioning/heater coolant pump	Black	Black
5	Wiper motor FAST/SLOW	Black	Black
6	Wiper motor ON/OFF	Black	Black
7	Horn	Blue	Black
Engine Compartment RH Side			
* 1	Main beam	Black	Black
* 2	RH dipped beam	Black	Black
3	Air conditioning clutch (where fitted)	Black	Black
4	Secondary air injection control (where fitted)	Black	Black
5	Engine management system control (AJ16 engine)	Black	Black
	Fuel injection main (V12 engine)	Black	Black
6	Ignition coil (V12 engine)	Black	Black
7	Screen wash	Black	Black
8	Headlamp power washers (where fitted)	Black	Black
9	Ignition	Blue	Black

* = Change from previous Technical Guide



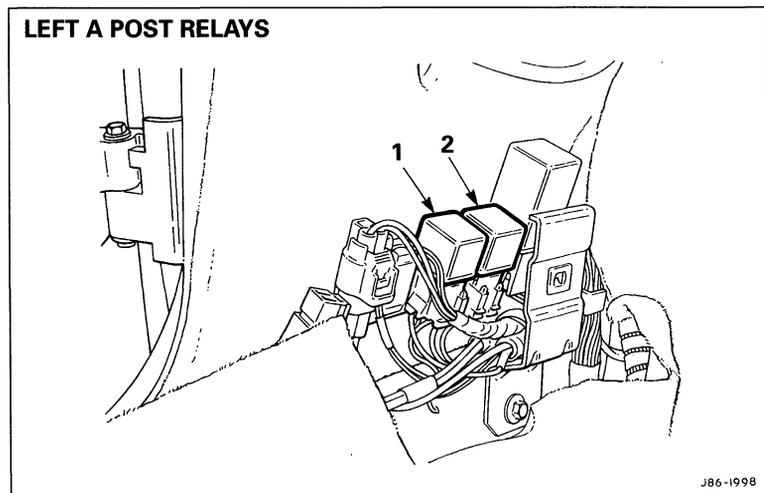
Location/ Number	Relay	Color	
		Case	Base
LH Heelboard			
1	Driver's side unlock (North America only)	Black/Violet	Violet
2	Door unlock	Black/Violet	Violet
3	Door lock	Black/Violet	Violet
4	Deadlock, front left and rear right doors (all except USA and Japan)	Black/Violet	Violet
5	Deadlock, front right and rear left doors (all except USA and Japan)	Black/Violet	Violet
6	Fuel filler flap lock	Black/Violet	Violet
7	Door courtesy/warning lamps	Blue	Yellow
8	Ignition	Blue	Black
RH Heelboard			
1	LH high speed air blower	Black/Blue	Blue
2	LH air blower	Black/Blue	Blue
3	RH air blower	Black/Blue	Blue
4	RH high speed air blower	Black/Blue	Blue
5	Air conditioning isolator	Black/Blue	Blue
6	Cigar lighter	Black/Blue	Blue
7	Door mirror heaters	Black/Blue	Blue
8	Ignition	Blue	Black

TRUNK RELAYS

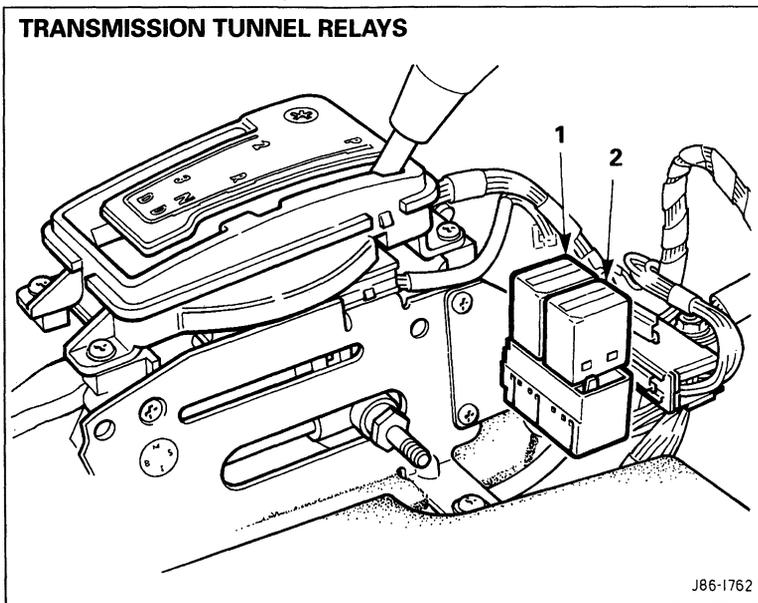


Location/ Number	Relay	Color	
		Case	Base
Trunk			
1	High mounted stop lamp (where fitted)	Blue	Red
2	Auxiliary positive	Blue	Blue
3	Fuel pump	Blue	Green
4	Accessory (Dealer fitted option)	Blue	Black
5	Rear window heater	Blue	Yellow
6	Trunk release	Black/Violet	Violet
7	Second fuel pump (V12 and supercharged AJ16 engines)	Blue	Yellow

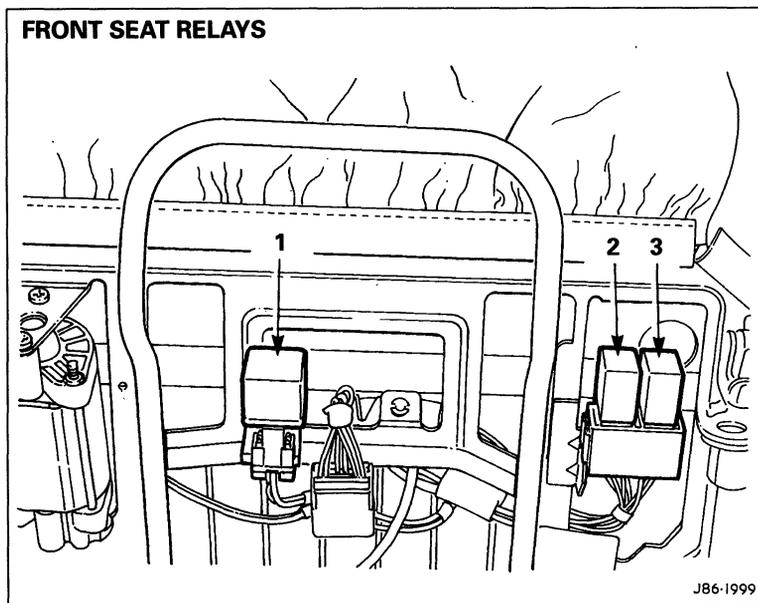
LEFT A POST RELAYS



Location/ Number	Relay	Color	
		Case	Base
Left A Post			
1	Windshield RH heater (where fitted)	Blue	Black
2	Windshield LH heater (where fitted)	Blue	Black



Location/ Number	Relay	Color	
		Case	Base
Transmission Tunnel			
1	Gearshift interlock (automatic transmission)	Black/Blue	Blue
2	Keylock (automatic transmission)	Black/Blue	Blue



Location/ Number	Relay	Color	
		Case	Base
Front Seats			
1	Seat heaters (manually adjustable front seats)	Blue	Black
2	Seat height UP (manually adjustable front seats)	Black/Violet	Blue
3	Seat height DOWN (manually adjustable front seats)	Black/Violet	Blue

Fuse Identification Table

Note: Number 1 fuse is next to the input stud in all fuse boxes.

Fuse Box/ Number	Color	Rating (Amperes)	Circuit
Engine Compartment LH			
1	Natural	25	RH heated front screen (where fitted)
* 2	–	–	Not used
3	Natural	25	Starter solenoid
4	Red	10	LH dipped beam
* 5	Red	10	LH tail/LH licence plate and front side lamps/LH front and rear side markers
6	Yellow	20	Wiper system
7	–	–	Not used
8	Blue	15	Coolant pump (air conditioning/heater)
9	–	–	Not used
10	Red	10	Horn 1
11	Green	30	Cooling fans (series/parallel)
12	–	–	Not used
13	–	–	Not used
14	Red	10	Horn 2
15	Natural	25	LH heated front screen (where fitted)
16	–	–	Not used
* 17	Green	30	Cooling fans (parallel)
* 18	Blue	15	Front fog lamps
Engine Compartment RH			
1	–	–	Not used
* 2	Blue	15	LH and RH main beam
3	–	–	Not used
4	Red	10	RH dipped beam
* 5	–	–	Not used
6	Tan	5	Engine management system electronic control module
7	Natural	25	Air pump (AJ16 engine, where fitted) Ignition coils (V12 engine)
* 8	Red	10	Air conditioning clutch/Security sounder
9	–	–	Not used
* 10	Tan	5	Ignition control, low current: Generator/Air conditioning clutch/Screen wash and headlamp power wash heaters and relays/Breather heater relay (AJ16 engine)
* 11	Yellow	20	Engine management system relay supply/Fuel injectors
12	Red	10	Engine management system/Starter relay/Ignition coil sensing/Air pump relay (AJ16 engine) Fuel injection relay and engine management sensing (V12 engine)
13	Red	10	Screen wash pump
14	Red	10	Heated oxygen sensor heaters/Idle speed control valve
15	–	–	Not used
16	Red	10	Engine ancillaries (where fitted): Air pump control/Solenoid vacuum valve (V12 engine) Supercharger coolant pump (supercharged AJ16 engine)
17	Green	30	Headlamp power wash pump
* 18	Red	10	RH tail/RH licence plate and front side lamps/RH front and rear side markers

* = Change from previous Technical Guide

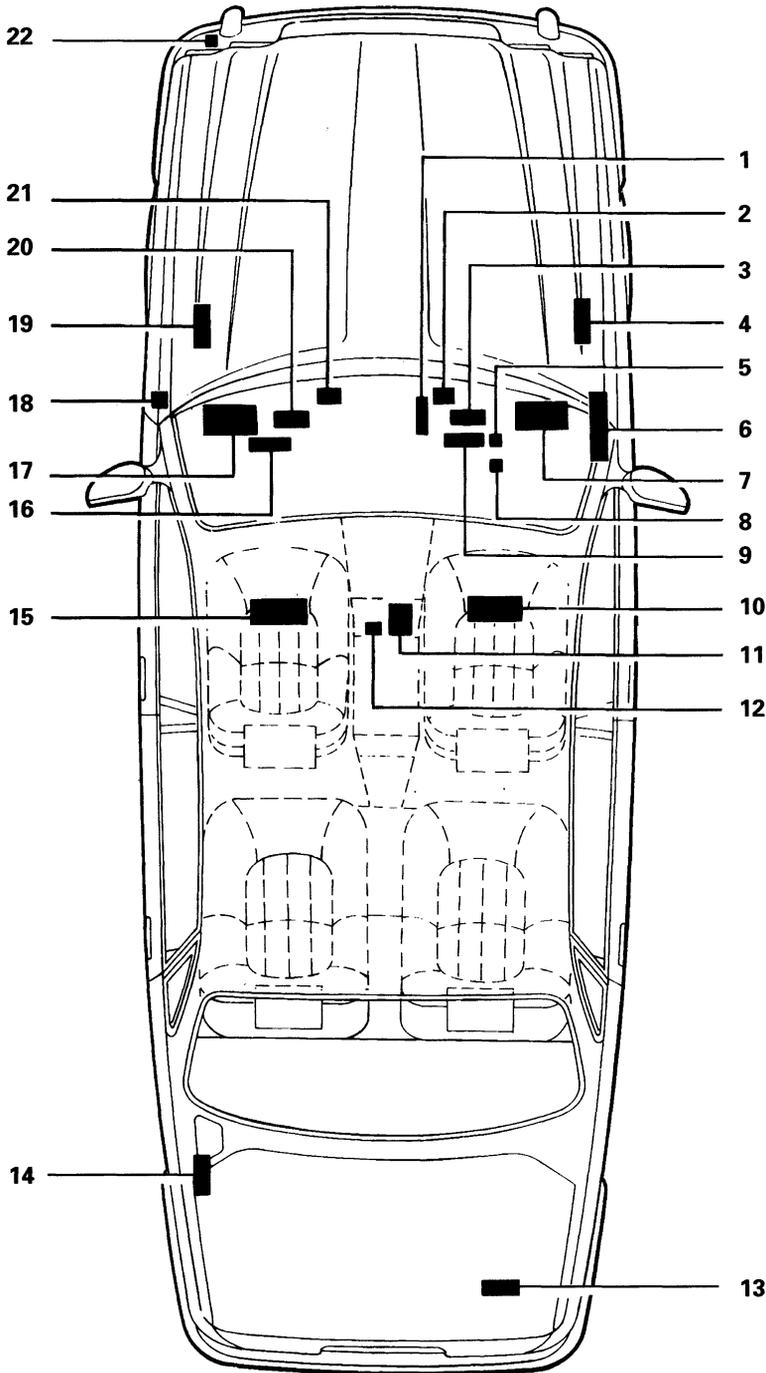
Fuse Box/ Number	Color	Rating (Amperes)	Circuit
LH Heelboard			
* 1	Red	10	Rear fog lamps
2	Red	10	Heated door mirrors/Instrument illumination dimmer
* 3	Yellow	20	RH seat motors
* 4	Yellow	20	RH seat motors
5	Red	10	Instrument pack
* 6	Tan	5	Seat control modules/Low power door switch packs
7	Green	30	Anti-lock braking system pump (via control module)
* 8	Red	10	LH direction indicator lamps (front, side repeater and rear)
9	Yellow	20	Cigar lighters
10	Tan	5	Speed (cruise) control
11	Yellow	20	LH air conditioning blower motor
12	Tan	5	Instrument pack
13	Blue	15	Steering column electric power tilt/axial operation
14	Red	10	Automatic transmission, ignition supply
15	Green	30	LH window lift (front and rear)
16	Tan	5	Anti-lock braking system ignition supply
* 17	Red	10	Electrochromic mirror/Reversing lamps
18	Red	10	Air conditioning supply
RH Heelboard			
1	Blue	15	Central door locking/Dead locking (where fitted)
* 2	Tan	5	Gear shift interlock/Column control module/Center console switchpack/Exterior lighting switches/Mirror movement
* 3	Yellow	20	LH seat motors
* 4	Yellow	20	LH seat motors
5	Tan	5	Automatic transmission control module
* 6	Red	10	Stop lamps
7	Green	30	Anti-lock braking system control (via control module)
* 8	Red	10	Interior lights/Garage door opener (where fitted)
9	Natural	25	Seat heaters
10	Tan	5	Jaguar diagnostic system/Fuel pump relay coil
11	Yellow	20	RH air conditioning blower motor
12	Red	10	Air conditioning/Seat control modules/Mirror heaters relay/Power assisted steering
* 13	Red	10	RH direction indicator lamps (front, side repeater and rear)
* 14	Red	10	Mirrors/Heated rear window/Cigar lighter/Exterior lamps control module/High mounted stop lamp (where fitted)/Rear seat control (where fitted)
15	Green	30	RH window lift (front and rear)
* 16	Red	10	Wiper system/Front screen heaters/Coolant pump relay/Headlamp levelling (where fitted)/Clock
17	Blue	15	Air bags
18	Blue	15	Sunroof (where fitted)

* = Change from previous Technical Guide

Fuse Box/ Number	Color	Rating (Amperes)	Circuit
Trunk			
1	Natural	25	Power amplifier/Radio cassette and compact disc player (where fitted)
* 2	Tan	5	Trunk lamps
* 3	Yellow	20	Rear seat movement (where fitted)
4	Red	10	Security system
5	Red	10	Body processor unit
* 6	Red	10	Jaguar diagnostic system/Radio telephone (where fitted)
7	Green	30	Fuel pump
8	Blue	15	Trunk remote release/Antenna/Radio cassette and compact disc player memory supply
* 9	Yellow	20	Rear seat movement (where fitted)
10	Tan	5	Radio cassette and compact disc player control relay
11	Natural	25	Caravan (trailer) module
12	Tan	5	Accessories and telephone relay
13	Red	10	Accessories
* 14	Tan	5	Mirror fold back
15	Natural	25	Heated rear window
16	Tan	5	Air bag warning
* 17	Blue	15	Rear seat heaters (where fitted)
* 18	–	–	Not used

* = Change from previous Technical Guide

CONTROL MODULE LOCATIONS



- 1 Air Conditioning
- 2 Speed Control, RH Steering
- 3 Body Processor, LH Steering
- 4 Brakes, LH Steering
- 5 Steering Column/Mirror Movement
- 6 Engine
- 7 Transmission, LH Steering
- 8 Reader/Exciter
- 9 Supplementary Restraint System (SRS) Air Bag Diagnostic, LH Steering
- 10 Seat and Mirror Memory
- 11 Sunroof
- 12 Universal Garage Door Opener
- 13 Exterior Lamp
- 14 Security
- 15 Seat and Mirror Memory
- 16 SRS Air Bag Diagnostic, RH Steering
- 17 Transmission, RH Steering
- 18 Steering
- 19 Brakes, RH Steering
- 20 Body Processor, RH Steering
- 21 Speed Control, LH Steering
- 22 Engine Cooling Fans

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