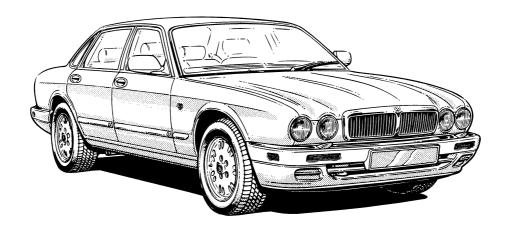


Sedan Range 1997 Electrical Guide



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Electrical Guide Format



This Electrical Guide is made up of two major sections. The first section, at the front of the book, provides general information for and about the use of the book. Included are a Table of Contents, a Component Index, a description of the layout of the book, definitions of symbols and abbreviations used, and illustrations which identify the type and location of common vehicle components.

The second section includes the Figures, which are the basis of the book. Each Figure is identified by a Figure Number (i.e. Fig. 01.1) and Title, and is accompanied by a page of data containing information specific to that Figure.

It is recommended that the user read through the front section of the book to develop a familiarity with the layout of the book and with the system of symbols and abbreviations used. The Table of Contents on the following pages should help to guide the user.

Standard Abbreviations

The following abbreviations are used throughout this Electrical Guide:

DI Direction Indicator

LH Left-Hand

LHD Left-Hand Drive LWB Long Wheelbase NA Normally Aspirated

NAS North American Specification

RH Right-Hand

RHD Right-Hand Drive ROW Rest of World SC Super Charged

SRS Supplementary Restraint System

SWB Short Wheelbase

VIN Vehicle Identification Number

Refer to the vehicle Service Manual for a glossary of standard terms and their abbreviations.

Vehicle Identification Numbers (VIN)

VIN ranges are presented throughout the book in the following manner:

→ VIN 123456 indicates "up to VIN 123456"; VIN 123456 → indicates "from VIN 123456 on".

Market Variants

This Electrical Guide includes information for all market variants and specifications of the 1997 Sedan Range. The user must be certain to refer to the appropriate Figure (Fig.) in order to ensure that the information is specific to the particular vehicle. Market variants are detailed in the Table of Contents.

Vehicle Features – ROW

⚠ This Electrical Guide includes all new / revised features for vehicles manufactured from VIN 787954 on (1997 Model Year).

Vehicle Features - NAS

This Electrical Guide includes all new / revised features for vehicles manufactured from VIN 787954 on (1997 Model Year). Fifty percent (50%) of NAS AJ16 NA vehicles will be equipped with On-board Vapor Recovery Systems. Figure 04.1 includes this system. On AJ16 NA vehicles without On-board Vapor Recovery, the Canister Close Valve and the Fuel Tank Pressure Sensor are deleted. The basic EMS (PI) wiring harness is identical for both vehicles.



Component Index	6 – 12
User Instructions	13 – 17
Harness Layout and Connectors	18 – 19
Control Module Identification and Location	20 – 21
Control Module Connector Pin Identification and Location	22 – 25
Relay and Fuse Box Identification and Location	26
Ground Point Identification and Location	27

FIGURE	29	
Fig.	Description	Variant
01	Power Distribution	
- "	Battery Power Distribution – Main	All Vehicles
	Battery Power Distribution – Heel Board Fuse Boxes	
01.3	Battery Power Distribution – Engine Bay, Trunk Fuse Boxes	All Vehicles
01.4	Ignition Switched Power Distribution	All Vehicles
02	Ground Distribution	
02.1	Ignition Switched Ground Distribution	All Vehicles
02.2	Logic Ground Distribution	All Vehicles
03	Battery; Starter; Generator	
03.1	Battery; Starter; Generator – AJ16 4.0L NA Automatic	AJ16 4.0L NA Automatic Transmission Vehicles
03.2	Battery; Starter; Generator – AJ16 4.0L SC and 3.2L Automatic	AJ16 4.0L SC and 3.2L
		Automatic Transmission Vehicles
03.3	Battery; Starter; Generator – Manual	Manual Transmission Vehicles
03.4	Battery; Starter; Generator – V12	V12 Vehicles
04	Engine Management	
	AJ16 NA NAS Engine Management	
	AJ16 NA ROW Engine Management	
	AJ16 SC Engine Management	
	V12 ROW Engine Management, Part 1	
04.5	V12 ROW Engine Management, Part 2	V12 ROW Vehicles
05	Transmission	
	AJ16 4.0L NA Automatic Transmission	
	AJ16 SC Automatic Transmission	
	AJ16 3.2L Automatic Transmission	
	V12 Automatic Transmission	
05.5	Gearshift Interlock	All Automatic Transmission Vehicles
06	Anti-Lock Braking; Traction Control	
	Anti-Lock Braking; Traction Control – LHD	
06.2	Anti-Lock Braking; Traction Control – RHD	RHD Vehicles
07	Radiator Cooling; Air Conditioning Compressor	
	Radiator Cooling; Air Conditioning Compressor – AJ16	
07.2	Radiator Cooling; Air Conditioning Compressor – V12	V12 Vehicles

DATE OF ISSUE: JANUARY 1997

08.1 Cruise control All Vehicles

08

Cruise control



FIGURES

Fig.	Description	Variant
09	Exterior Lighting	
09.1	Headlamps; Front Fog Lamps; Front Side Lamps	. All Vehicles
09.2	Tail Lamps; Rear Fog Lamps; Rear Side Lamps	. All Vehicles
	Stop Lamps; Reverse Lamps	
09.4	Direction Indicators; Hazard Warning Lamps	. All Vehicles
09.5	Headlamp Leveling; Clock	. All Vehicles
10	Interior Lighting	
10.1	Interior Lighting	. All Vehicles
10.2	Dimmer Controlled Lighting – SWB	. SWB Vehicles
10.3	Dimmer Controlled Lighting – LWB	. LWB Vehicles
11	Instrument Pack	
	Instrument Normal Display	. All Vehicles
	Instrument Hazard / Warning Display	
	Audible Warnings	
12	Climate Control	
	AJ16 Climate Control System, Part 1	
	V12 Climate Control System, Part 1	
12.3	AJ16 and V12 Climate Control Systems, Part 2	. All Venicles
13	Steering	
	Variable Power Steering – LHD and RHD	
	Column and Mirror Movement – Memory, LHD	
	Column and Mirror Movement – Memory, RHD	
	Mirror Movement – LHD	
13.5	Mirror Movement – RHD	. RHD Manual Column Vehicles
14	Seat Systems	
14.1	Driver Seat – Memory, ROW	. ROW Memory Seat Vehicles
14.2	Driver Seat – Memory, NAS	. NAS Vehicles
	Driver Seat – Non-Memory	•
	Driver Seat – Raise / Lower Only	
	Passenger Seat – Memory, ROW/SWB	
	Passenger Seat – Memory, ROW/LWB	
	Passenger Seat – Memory, NAS/SWB	
	Passenger Seat – Memory, NAS/LWB	
	Passenger Seat – Non-Memory	
	Passenger Seat – Raise / Lower Only	
	Passenger Seat – Manual (Heater Only)	
	Rear Seats – Powered	
14.13	Rear Seat Heaters	. Heated Rear Seat Vehicles

FIGURES

Fig.	Description	Variant
15.1 15.2 15.3 15.4	Door Locking; Security Central Door Locking – LHD Central Door Locking – NAS Central Door Locking – RHD Security System – ROW Security System – NAS	NAS Vehicles RHD Vehicles ROW Vehicles
16	Wash / Wipe System	
16.1	Wash / Wipe System	All Vehicles
	Window Lifts; Sliding Roof Window Lifts; Sliding Roof – LHD Window Lifts; Sliding Roof – RHD	
	In-Car Entertainment; Telephone	
	In-Car Entertainment	
	Premium In-Car Entertainment	
19	Supplementary Restraint System	
19.1	Air Bag System	Air Bag Vehicles
20 20.1	Ancillaries Ancillaries: Horns; Cigar Lighters; Electrochromic Rear View Mirror; Caravan / Trailer Connector; Accessory Connectors; Universal Garage Door Opener; Fold Back	
21	Serial Communication	
21.1	Serial Communication Data Link	All Vehicles



ABS / TRACTION CONTROL CONTROL MODULE (LHD)			BODY
	Fig.	21.1	
ABS / TRACTION CONTROL CONTROL MODULE (RHD)	Fig.	06.2	
	Fig.	21.1	
ACCESSORY CONNECTORS	Fia.	20.1	BRAK
	_		BRAK
AIR BAG DIAGNOSTIC MONITOR	Fig.	19.1	
AIR BAGS	Fig.	19.1	
AIR CONDITIONING COMPRESSOR CLUTCH	Eia	07.1	
AIT CONDITIONING CONFILESSON CLOTCH			
	Ū		
AIR CONDITIONING CONTROL MODULE			
	_		
	_		CAMS
			CAMS
AIR CONDITIONING CONTROL PANEL			CANIS
			CAINI
			CARA
			CATA
AMBIENT TEMPERATURE SENSOR			
	Fig.	12.2	CATA
AMBIENT TEMPERATURE SWITCH	Fig.	12.3	CATA
	Fig.	16.1	
ASPIRATOR MOTOR	Fia.	12.1	CD A
AUTO TILT SWITCH (COLUMN SWITCHGEAR)	Eia	12.2	CENT
AOTO TIET SWITCH (COLDIVIN SWITCHGEAN)	_		
	Ŭ		
BATTERY	-		
BLOWER MOTORS	Fig	12.3	
	-		
BODY PROCESSOR MODULE			
	_		
	_		
	_		
	_		
	_		
	Fig.	11.2	
	_		
			CIGA
			CIGA
	_		
	_		CLOC
	_		
	_		CLUT
	_		CLUT
	_		
	Fig.	14.11	COIL
	_		COLU
	rıg.	15.5	

BODY PROCESSOR MODULE (CONTINUED)	Fig. Fig.	17.1 17.2
BRAKE FLUID LEVEL SWITCH	Fig.	11.2
BRAKE SWITCH	Fig. Fig. Fig. Fig. Fig. Fig.	05.4 05.5 06.1 06.2 08.1 09.3 14.1 14.2
CAMSHAFT POSITION SENSOR (AJ16)	Fig.	04.2
CAMSHAFT POSITION SENSOR (V12)	Fig.	04.4
CANISTER CLOSE VALVE	Fig.	04.1
CARAVAN / TRAILER CONNECTOR	Fig.	20.1
CATALYST SWITCHING MODULE	Fig. Fig.	04.2 04.4
CATALYST THERMOCOUPLES		
CD AUTO CHANGER	Fig. Fig.	18.1 18.2
CICAR LIGHTERS	Fig. Fig. Fig. Fig. Fig. Fig. Fig. Fig.	09.4 10.2 10.3 11.3 14.1 14.2 14.3 14.4 14.5 14.6 14.7 14.8 14.9 14.10 15.1 15.2 15.3 15.4 17.2
CIGAR LIGHTERS	Fig.	10.3
CLOCK (PART OF CENTER CONSOLE SWITCH PACK)	Fig.	09.5
CLUTCH SWITCH (MANUAL TRANSMISSION)		
CLUTCH SWITCH LINK (AUTOMATIC TRANSMISSION)		
COIL (COLUMN SWITCHGEAR)		
COLUMN / MIRROR MOVEMENT CONTROL MODULE	Fig.	



COLUMN JOYSTICK (COLUMN SWITCHGEAR)		
COMPRESSOR LOCK SENSOR	Fig.	12.2
COOL AIR BYPASS SERVO	Fig. Fig.	12.1 12.2
COOLANT LEVEL SWITCH		
COOLANT TEMPERATURE SENSOR	Fig.	11.1
CRANKSHAFT POSITION SENSOR	Fig. Fig.	04.2 04.3
DATA LINK CONNECTOR	Fig.	21.1
DECODER MODULE	Fig. Fig.	03.1 05.1
DEFROST SERVO	Fig. Fig.	12.1 12.2
DIFFERENTIAL CONTROL POTENTIOMETER	Fig. Fig.	12.1 12.2
DIMMER MODULE (COLUMN SWITCHGEAR)	Fig. Fig.	10.2 10.3
DIMMER CONTROL (COLUMN SWITCHGEAR)	Fig. Fig.	10.2 10.3
DIODE (BT51) – HIGH MOUNTED STOP LAMP	Fig.	09.3
DIODE (CA115) – AMBIENT TEMPERATURE SWITCH	Fig.	12.3
DIODE (FC58) – WASH / WIPE SWITCH	Fig.	16.1
DIODE (FC59) – RH DI INDICATOR	Fig.	09.4
DIODE (FC60) – LH DI INDICATOR	Fig.	09.4
DIODE (FC61) – WASH / WIPE SWITCH	Fig.	16.1
DIODE (PI81) – AIRP SOLENOID SUPPRESSION	Fig.	04.2
DIRECTION INDICATOR SWITCHES		
(COLUMN SWITCHGEAR)	Fig.	11.3
DIRECTION INDICATORS	Fig.	09.4
DOOR KEY BARREL SWITCH – DRIVER	Fig.	15.2
DOOR LOCK ACTUATOR – DRIVER	Fig. Fig. Fig.	15.2 15.3 15.4
DOOR LOCK ACTUATOR – PASSENGER	Fig. Fig. Fig. Fig.	15.1 15.2 15.3 15.4
DOOR LOCK ACTUATOR – LH REAR	Fig.	15.2

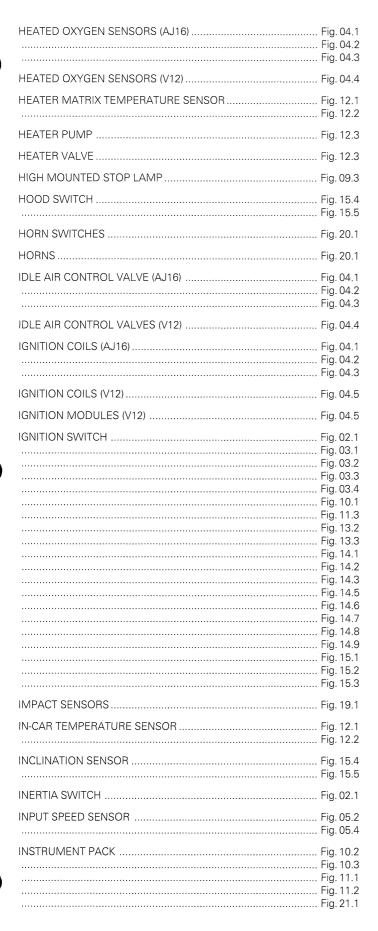
DOOR LOCK ACTUATOR – RH REAR	Fig. Fig.	15.2 15.3
DOOR MIRROR MOTORS	Fig. Fig.	13.3 13.4
DOOR SWITCH PACK – DRIVER	Fig. Fig. Fig. Fig. Fig. Fig. Fig. Fig.	10.2 10.3 11.2 11.3 13.2 13.3 13.4 13.5 14.1 14.2 14.3 17.1
DOOR SWITCH PACK – PASSENGER	Fig. Fig. Fig. Fig. Fig. Fig. Fig.	10.2 10.3 11.2 14.5 14.6 14.7 14.8
DOOR SWITCH PACK – LH REAR	Fig. Fig.	10.2 10.3
DOOR SWITCH PACK – RH REAR	Fig. Fig. Fig.	10.2 10.3 11.2
DOOR SWITCH – DRIVER	Fig. Fig. Fig. Fig. Fig. Fig. Fig.	11.2 11.3 13.2 13.3 14.1 14.2 14.3 15.4
DOOR SWITCH – PASSENGER	Fig. Fig. Fig. Fig. Fig. Fig.	11.2 14.5 14.6 14.7 14.8 14.9 15.4
DOOR SWITCH – LH REAR	Fig. Fig.	11.2



DOOR SWITCH – RH REAR	Fig. 1 Fig. 1 Fig. 1 Fig. 1	0.1 1.2 5.4 5.5
DUMP VALVE	Fig. 0	8.1
E-POST LAMPS		
EGR TEMPERATURE SENSOR	Fig. 0	4.3
EGR VALVE	Fig. 0 Fig. 0)4.1)4.3
ELECTROCHROMIC REAR VIEW MIRROR	-	
ENGINE CONTROL MODULE (AJ16)	Fig. 0)3.2)3.3)4.1
ENGINE CONTROL MODULE (V12)	Fig. 0)3.4)4.4
ENGINE COOLANT TEMPERATURE SENSOR (AJ16)	Fig. 0	4.1
ENGINE COOLANT TEMPERATURE SENSOR (V12)		
ENGINE SPEED SENSOR	Fig. 0	4.4
EVAPORATIVE EMISSION CONTROL VALVE (AJ16)	Fig. 0 Fig. 0 Fig. 0)4.1)4.2)4.3
EVAPORATIVE EMISSION CONTROL VALVES (V12)	Fig. 0	4.5
EVAPORATOR TEMPERATURE SENSOR	Fig. 1	2.2
FAN CONTROL RELAY MODULE		
FASCIA SWITCH PACK	Fig. C Fig. 1 Fig. 1	06.1 06.2 10.2 10.3
FASCIA TRUNK RELEASE SWITCH	Fig. 1	15.2
FLUID TEMPERATURE SENSOR	_	
FOG LAMPS		
FOLD-BACK MIRROR SWITCH	_	
FOLD-BACK MIRRORS	_	
FOOT WELL SERVO		
FRESH / RECIRCULATION SERVOS		

FUEL FILLER FLAP ACTUATOR	Fig.	15.2
FUEL INJECTORS (V12)	_	
FUEL INJECTORS (AJ16 1, 2, 3)	Fig.	04.2
FUEL INJECTORS (AJ16 4, 5, 6)	Fig.	04.1
FUEL LEVEL SENSOR	Fig.	11.1
FUEL PUMP 1	Fig.	04.2
FUEL PUMP 2		
FUEL PUMP CONTROL MODULE	Fig.	04.3
FUEL TANK PRESSURE SENSOR	Fig.	04.1
FUSE BOX – LH ENGINE BAY	Fig.	01.3
FUSE BOX – LH HEELBOARD	Fig.	01.2
FUSE BOX – RH ENGINE BAY	Fig.	01.3
FUSE BOX – RH HEELBOARD	Fig.	01.2
FUSE BOX – TRUNK	Fig.	01.3
GEAR SELECTOR INDICATOR MODULE (AJ16 3.2L, 4.0L SC; V12)	Fig.	05.3
GEAR SELECTOR INDICATOR MODULE (AJ16 4.0L)		
GEARSHIFT INTERLOCK SOLENOID	Fig.	05.5
GENERATOR	Fig.	03.2
GLOVE BOX LAMP	Fig.	10.1
HAND BRAKE SWITCH	Fig. Fig. Fig.	13.2 13.3 14.1 14.2
HEADLAMP FLASH SWITCH (COLUMN SWITCHGEAR)	Fig.	.09.1
HEADLAMP LEVELING ACTUATORS	Fig.	.09.5
HEADLAMPS		
HEATED BACKLIGHT	Fig.	. 12.3





INTAKE AIR TEMPERATURE SENSOR (AJ16)	Fig.	04.2
INTAKE AIR TEMPERATURE SENSOR (V12)	Fig.	04.4
INTERIOR / MAP LAMPS CONSOLE	Fig.	10.2
INTRUSION SENSORS		
KEYLOCK SOLENOID (COLUMN SWITCHGEAR)	Fig.	05.5
KICKDOWN SWITCH	Fig.	05.2
KNOCK SENSORS	Fig.	04.2
LAMP CONTROL MODULE	Fig.	09.3
LIGHTING SWITCHES	Fig. Fig.	09.2 10.2 10.3
	Fig.	16.1
LINEAR GEAR POSITION SWITCHES	Fig. Fig. Fig.	03.4 05.2 05.3 05.4
MANIFOLD ABSOLUTE PRESSURE SENSORS		
MASS AIR FLOW SENSOR	Fig.	04.2 04.3
MICROPHONE		18.3
MID-BASS SPEAKERS		
MIRRORS	Fig.	12.3
MODE SWITCH	Fig.	05.2
NOT IN-PARK MICROSWITCH	Fig.	05.5 11.3
	Fig. Fig.	13.3 14.1 14.2
	Fig.	15.1 15.2
NUMBER PLATE LAMPS	-	
OIL PRESSURE SWITCH	Fig.	11.1



OUTPUT SHAFT SENSOR	Fig.	05.2
POWER AMPLIFIER		
POWER STEERING PRESSURE SWITCH	_	
POWER WASH PUMP		
PRESSURE REGULATOR	Fig.	05.1
PRESSURE SWITCH MANIFOLD		
PUDDLE LAMPS	Fig.	10.1
RADIATOR COOLING FANS		
RADIATOR THERMOSTATIC SWITCH	Fig.	07.1
RADIO	Fig.	10.2
RADIO ANTENNA		
TABLE ANTENIA	Fig.	18.2
RADIO ANTENNA MOTOR		
RADIO CASSETTE	Fig. Fig.	18.1 18.2
READER / EXCITER CONTROL MODULE	Fig.	15.4
REFRIGERANT DUAL PRESSURE SWITCH	Fig.	07.2
REFRIGERANT SINGLE PRESSURE SWITCH	Fig.	07.1
REFRIGERANT TRIPLE PRESSURE SWITCH	Fig.	07.1
REPEATERS	Fig.	09.4
REVERSE SWITCH (AJ16 MANUAL)		
	Fig.	13.2
DOTA DV QUAITOU		
ROTARY SWITCH	Fig.	05.1
SAFING SENSOR	Fig.	19.1
SEAT BELT SWITCH		
	Fig.	11.3
SEAT CONTROL MODULE – DRIVER (NAS VEHICLES)		
	Fig.	21.1
SEAT CONTROL MODULE – DRIVER (ROW, MEMORY SEAT VEHICLES)	Fig.	11.2
	Fig.	11.3
	_	
SEAT CONTROL MODULE – PASSENGER		
(NAS VEHICLES)		

SEAT CONTROL MODULE – PASSENGER		
(ROW, MEMORY SEAT VEHICLES)	Fig. Fig. Fig. Fig. Fig.	14.5 14.6 14.7 14.8 21.1
SEAT CONTROL MODULE – REAR	Fig.	14.12
SEAT CUSHION – DRIVER	Fig. Fig.	14.2 14.3
SEAT CUSHION – PASSENGER	Fig. Fig. Fig. Fig.	14.6 14.7 14.8 14.9 14.10
SEAT CUSHION – LH REAR	Fig. Fig.	14.12 14.13
SEAT CUSHION – RH REAR	Fig. Fig.	14.12 14.13
SEAT FORE/AFT MOTOR – LH REAR	Fig.	14.12
SEAT FORE/AFT MOTOR – RH REAR	Fig.	14.12
SEAT FORE/AFT SWITCH – LH REAR		
SEAT FORE/AFT SWITCH – RH REAR	Fig. Fig.	10.3 14.12
SEAT FORE/AFT SWITCHES – PASSENGER, REAR	Fig.	14.6
SEAT HEADREST MOTOR – LH REAR	Fig.	14.12
SEAT HEADREST MOTOR – RH REAR	Fig.	14.12
SEAT HEADREST SWITCH – LH REAR		
SEAT HEADREST SWITCH – RH REAR		
SEAT HEATER TIMER – LH REAR	-	
SEAT HEATER TIMER – RH REAR		
SEAT HEATER SWITCH – LH REAR	Fig.	10.3 14.12
SEAT HEATER SWITCH – RH REAR	Fig.	10.3 14.12
SEAT LUMBAR PUMP – DRIVER	Fig. Fig.	14.1 14.2





SEAT LUMBAR PUMP – PASSENGER	Fig.	14.6 14.7
SEAT LUMBAR PUMP – LH REAR		
SEAT LUMBAR PUMP – RH REAR	Fig.	14.12
SEAT LUMBAR SWITCH – LH REAR		
SEAT LUMBAR SWITCH – RH REAR	_	
SEAT MOTORS – DRIVER	Fig.	14.2
SEAT MOTOR – DRIVER (RAISE / LOWER SEAT VEHICLES)	Fig.	14.4
SEAT MOTORS – PASSENGER	Fig. Fig. Fig.	14.6 14.7 14.8
SEAT MOTOR – PASSENGER (RAISE / LOWER SEAT VEHICLES)	Fig.	14.10
SEAT RECLINE SWITCHES – PASSENGER, REAR	Fig.	14.6
SEAT SQUAB – DRIVER	Fig. Fig.	14.2 14.3
SEAT SQUAB – PASSENGER	Fig. Fig. Fig. Fig. Fig.	14.6 14.7 14.8 14.9 14.10
SEAT SQUAB – LH REAR		
SEAT SQUAB – RH REAR	_	
SEAT SWITCH PACK – DRIVER	Fig.	14.2
SEAT SWITCH PACK - DRIVER (RAISE / LOWER SEAT VEHICLES)	Fig.	14.4
SEAT SWITCH PACK – PASSENGER	Fig. Fig. Fig.	14.6 14.7 14.8
SEAT SWITCH PACK – PASSENGER (SEAT RAISE / LOWER VEHICLES)	Fig.	14.10
SECONDARY AIR INJECTION CLUTCH	Fig.	04.5
SECONDARY AIR INJECTION PUMP	Fig.	04.2
SECONDARY AIR INJECTION SWITCHING VALVE	Fig.	04.5

SECURITY AND LOCKING CONTROL MODULE		
	Fig.	.03.3
	Fig.	03.4
	Fig.	. 15.2
	Fig.	15.5
SECURITY ANTENNA	Fig.	. 15.4 . 15.5
SECURITY SOUNDER		
	Fig.	15.5
SHIFT SOLENOIDS	Fig.	05.2
SHORTING LINK		
	Fig.	. 15.3
SIDE MARKER LAMPS	Fig.	09.1
SLIDING ROOF CONTROL MODULE		
SLIDING ROOF MOTOR	Fig.	17.1
SLIDING ROOF SWITCH		
SEBING 11001 SWITCH		
SOLAR SENSOR	Fig.	12.1
SPEAKER (COLUMN SWITCHGEAR)		
CRUISE CONTROL BRAKE SWITCH		
CRUISE CONTROL CONTROL MODULE		
CRUISE CONTROL SWITCHES		
STARTER MOTOR		
	Fig.	. 03.2
	Fig.	. 03.3 . 03.4
STEERING COLUMN MOTORS		
	Fig.	. 13.3
SUBWOOFER		
SUNVISOR LAMPS		
SUPERCHARGER INTERCOOLER COOLANT PUMP		
SUPPRESSION MODULE		
	Fig.	.03.3
TAIL LAMP UNITS		
TELEPHONE ANTENNA		
TELEPHONE HANDSET	_	
TELEPHONE TRANSCEIVER	Fig.	18.3
THROTTLE POSITION SENSOR (AJ16)		
	rig.	04.2

Component Index



THROTTLE POSITION SENSOR (V12)	Fig. 04.4
TORQUE CONVERTER CLUTCH SOLENOID	Fig. 05.2 Fig. 05.4
TRACTION CONTROL ACTUATOR (LHD)	Fig. 06.1
TRACTION CONTROL ACTUATOR (RHD)	Fig. 06.2
TRANSMISSION CONTROL MODULE (AJ16 NA)	Fig. 05.1 Fig. 21.1
TRANSMISSION CONTROL MODULE (V12 & AJ16 SC)	Fig. 05.4 Fig. 07.1 Fig. 07.2 Fig. 21.1
TRANSMISSION SOLENOID VALVES	
TRANSMISSION TEMPERATURE SENSOR	Fig. 05.2 Fig. 05.4
TRIP CYCLE (COLUMN SWITCHGEAR)	Fig. 11.1
TRUNK LAMPS	
TRUNK RELEASE ACTUATOR	Fig. 15.2
TRUNK RELEASE SWITCH	Fig. 15.2
TRUNK SWITCH	Fig. 10.1 Fig. 11.2 Fig. 15.4 Fig. 15.5
TWEETERS	Fig. 18.1 Fig. 18.2
VACUUM PUMP AND CONTROL VALVE	Fig. 08.1
VALET SWITCH	Fig. 15.2 Fig. 15.3 Fig. 15.4
VARIABLE FORCE MOTOR	Fig. 05.2 Fig. 05.4
VARIABLE POWER STEERING CONTROL MODULE	Fig. 13.1
VARIABLE STEERING CONVERTER	Fig. 13.1
VENT SERVO	Fig. 12.1 Fig. 12.2
WASH / WIPE SWITCHES (COLUMN SWITCHGEAR)	Fig. 16.1
WASHER FLUID LEVEL SWITCH	Fig. 11.2 Fig. 16.1
WHEEL SPEED SENSORS	Fig. 06.2
WINDOW LIFT MOTORS	Fig. 17.2
WINDOW LIFT SWITCH PACKS	Fig. 17.1 Fig. 17.2
MAINIDCHIELD HEATEDC	Fig. 10.0

WINDSHIELD WASH HEATERS	Fig.	16.1
WINDSHIELD WASH PUMP	Fig.	16.1
WIPER MOTOR	Fig.	16.1

Figure and Data Page Layout

Figure Pages

Each Figure represents a specific electrical system of the vehicle. The Figures are arranged numerically by system (01 – Power Distribution, 02 – Ground Distribution, etc.) with variations in the system identified by a numeral following a decimal point (01.1, 01.2, etc.). Refer to the Table of Contents for a complete list of the Figures.

The Figures **01 – Power Distribution** detail the distribution of power to each of the systems. Numbered reference symbols refer the user <u>to</u> a specific Figure and <u>from</u> a specific Figure back to the Power Distribution Figures. This eliminates the need to include detailed Power Distribution information on each of the Figures. Similarly, the Figures **02 – Ground Distribution** detail the vehicle ground distribution. The reference symbols are defined on page 17.

Each Figure appears on a right-hand page with a corresponding Data page to the left. The Figure and Data pages are folding pages. The user must fold out both pages in order to access all the information provided.

Data Pages

The Data page includes information to assist the user in identifying and locating components, connectors and grounds. This information is supplemented by the illustrations in this front section of the book.

In addition, where circuits include a Control Module, Pin Out information is provided with values for "active" and "inactive" states. The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "inactive" means a load is not applied or a switch is OFF. This information is provided to assist the user in understanding circuit operation and should be used FOR REFERENCE ONLY.

Samples of the Figure and Data pages are shown on the following page.





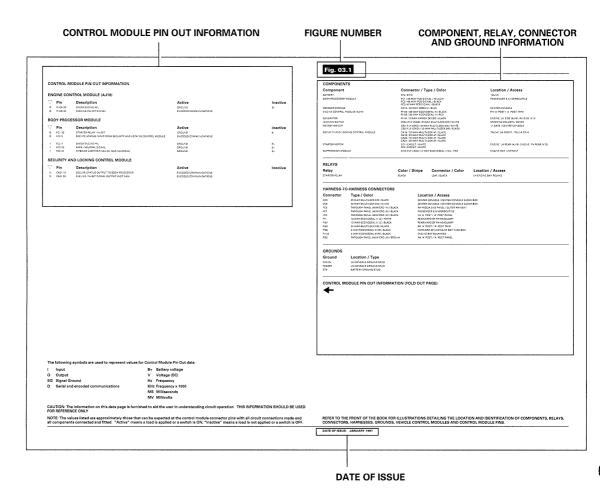
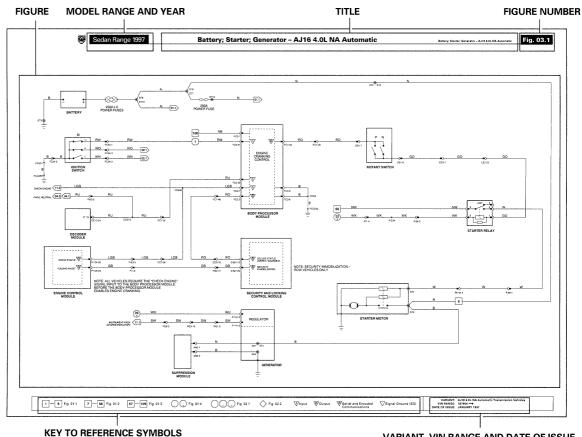


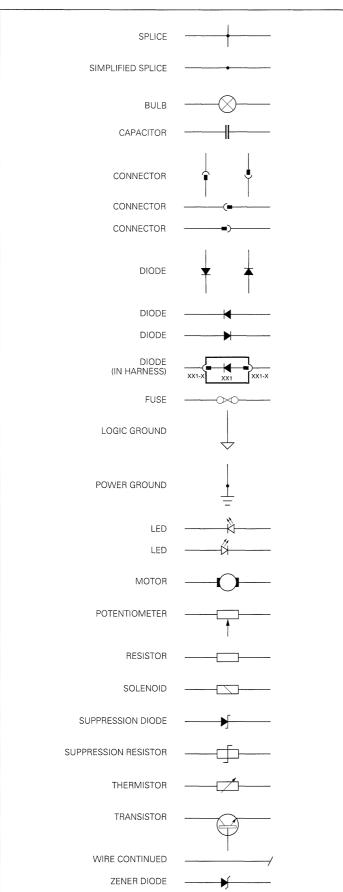
FIGURE PAGE



VARIANT, VIN RANGE AND DATE OF ISSUE



Wiring Symbols



Wiring Color Codes

Ν	Brown	0	Orange
В	Black	S	Slate
W	White	L	Light
K	Pink	U	Blue
G	Green	Р	Purple
R	Red	BRD	Braid
Υ	Yellow		

When a wire has two or more color code letters, the first letter indicates the main color and the subsequent letter(s) indicate the tracer color(s).

Wiring Harness Codes				
Code	Description			
AB	Air bag			
AN	Generator suppression			
BB	Rear powered seat			
BL	Front bumper – left Front bumper – right			
BR	Front bumper – right			
BS	Rear seat			
BT	Boot (trunk)			
CA	Cabin			
CC	Center console			
CF	Cooling fan link			
CL	Air bag impact sensor link – left			
CR	Air bag impact sensor link – right			
CS	Clutch shorting link			
CV	Canister valve			
DD	Driver door			
DL	Non dead locking shorting link			
EL	Evaporation pressure sensor link			
FC	Facia			
FU GB	Fuel pump			
GI	Automatic transmission Glove box link			
IC				
LL	In-car entertainment Variable steering converter			
LS	Left forward			
ML	Manual seat link			
OL	Octane select link			
PD	Passenger door – front			
PI	Engine management			
PL	Powered seat link			
RD	Rear door (suffix L – left, suffix R – right)			
RF	Roof security			
RS	Right forward			
RT	Radio telephone			
SA	Starter solenoid			
SH	Front screen (windshield) heater			
SL	Starter solenoid link			
SM	Memory seat			
SR	Side marker link (rear)			
TL	Tail lamps			
TS	Traction shorting link			

DATE OF ISSUE: JANUARY 1997 15



NOTE: In the examples shown on these pages, an 'X' is used where a number would appear on an actual Figure.

Harness Component Numbers

Connectors

HARNESS CODE + CONNECTOR NUMBER + PIN NUMBER

EXAMPLE: FC7-24 (pin number is separated by a dash)

NOTE: Door harnesses use common connector numbers with D, P, L or R added to indicate the door – Driver, Passenger, Left rear, Right rear.

Splices

HARNESS CODE + S + IDENTIFICATION NUMBER

EXAMPLE: CAS3 (no dash is used)

NOTE: In order to avoid unnecessary circuit complication, multiple splices (more than two wires) within components, in wires leading from input components to multiple circuits and in harness 'ground' sides are simplified so as not to show wires from other circuits.

EXAMPLE: ----

Grounds

HARNESS CODE + G + IDENTIFICATION NUMBER

EXAMPLE: BTG14 (no dash is used)

NOTE: Ground identifications that include 'L' or 'R' after the number indicate that the eyelet has two 'legs'. The 'L' or 'R' identifies the particular leg of the eyelet to which the wire is connected.

Diodes

Harness diodes occur at connectors and are depicted as components and identified by a connector number.

EXAMPLE:



Relay Connectors

Relay connector numbers are shown within the relay. The harness code is shown in the upper portion of the relay; the pin (terminal) number is shown adjacent to the pin.

NOTE: Certain relays are paired and share a modular connector. In this instance, the relay terminal code is included in parentheses.

EXAMPLE:





Reference Symbols

Reference symbols are used for three purposes:

- to allow the user to complete the individual system circuit to power supply or ground
- to refer the user to a related circuit
- to identify control module inputs, outputs and signal grounds

x Battery Power Supply

This symbol represents a direct battery power supply and refers the user to Figure 01.1, 01.2 or 01.3.

(XX) (XX) Ignition Switched Power Supply

This symbol represents ignition switched power supply and refers the user to Figure 01.4.

The suffix I indicates auxiliary power. Power is supplied in ignition switch key positions I (AUXILIARY) and II (IGNITION).

The suffix II indicates ignition power. Power is supplied in ignition switch key positions II (IGNITION) and III (ENGINE CRANK).

(XX) (XX) (XX) Ignition Switched Ground

This symbol represents an ignition switched ground and refers the user to Figure 02.1.

No suffix indicates CRANK. Ground is completed in ignition switch key position III (ENGINE CRANK).

The suffix I indicates auxiliary ground. Ground is completed in ignition switch key positions I (AUXILIARY) and II (IGNITION).

The suffix II indicates ignition ground. Ground is completed in ignition switch key positions II (IGNITION) and III (ENGINE CRANK).

x Logic Ground

This symbol represents a logic ground and refers the user to Figure 02.2.

XX.X BPM Figure Number Reference Flag

This symbol refers the reader to a figure number only. It does not refer to a flag with the same number on a different figure.

As used in Figures 01.1 through 02.2, the reference flag refers the user to a continuation of the circuit. In this instance, the user matches the number to a Power Supply or Ground symbol to trace the circuit.

In most other cases, it is not necessary to refer to another figure for completion of a circuit, as the reference flags are used to indicate parallel circuits and circuits that share components. Most of the circuits where this situation occurs are overlapped to avoid the necessity for cross-referencing to another figure. Exceptions to this rule are instances where signals are transmitted to or received from other system circuits.

BPM Because the Body Processor Module appears numerous times, the abbreviation BPM is used in the reference flag on Figure 01.3 in order to conserve space.

Control Module Input, Output, Data Line and Signal Ground

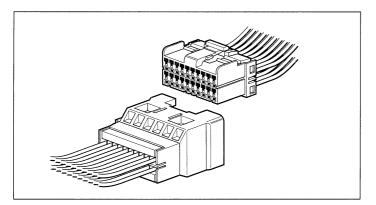
These four symbols are employed to assist the user in visualizing the 'logic' of circuits containing control modules. The symbols identify control module input, output, data line and signal ground pins. These symbols are also employed on the corresponding data page.



The following connectors are the common harness-to-harness connectors used throughout the vehicle.

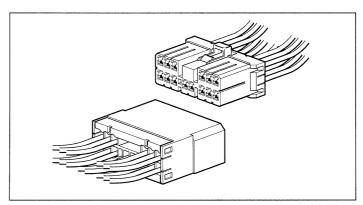
Multilock 040

Low current (used as harness and 'direct' connection connector).



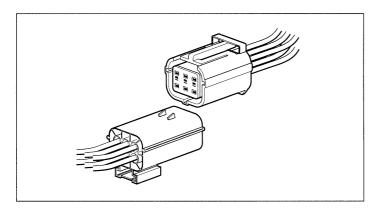
Multilock 070

High current (used as harness and 'direct' connection connector).



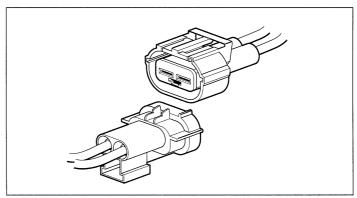
Econoseal III LC

Low current sealed connector.



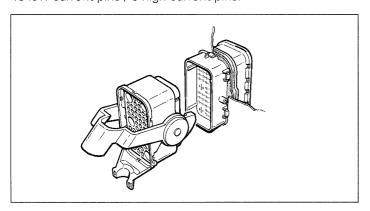
Econoseal III HC

High current sealed connector.



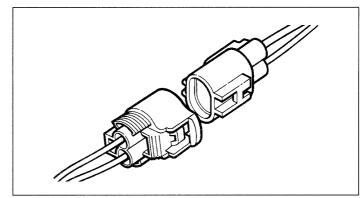
Through-Panel

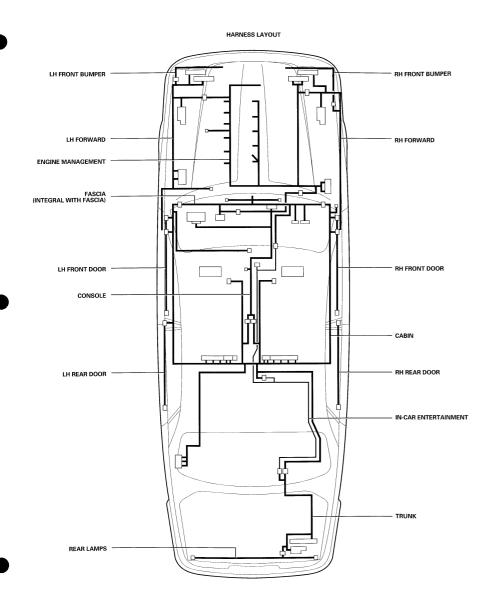
48 low-current pins / 6 high-current pins.

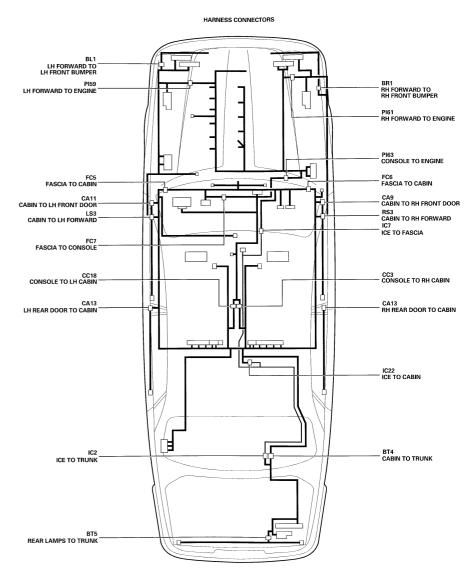


Ford Card

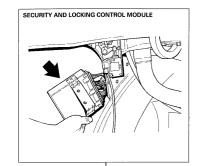
Used for SRS only.

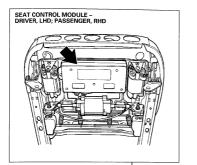


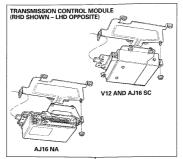


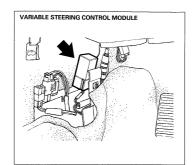


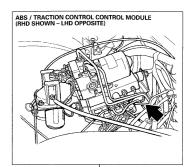


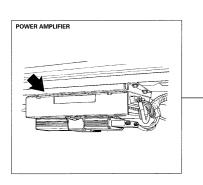


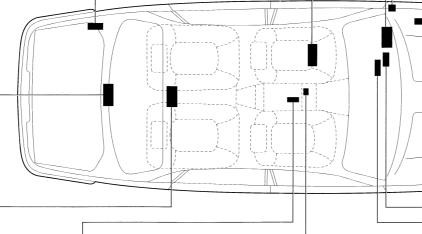


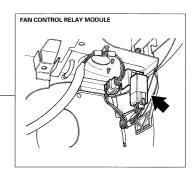


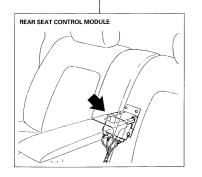


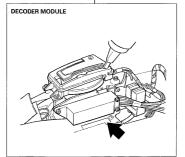


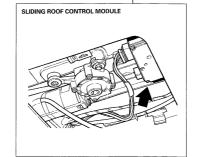


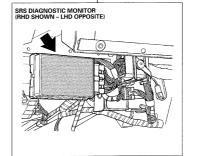


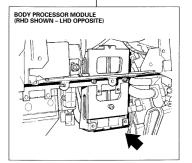


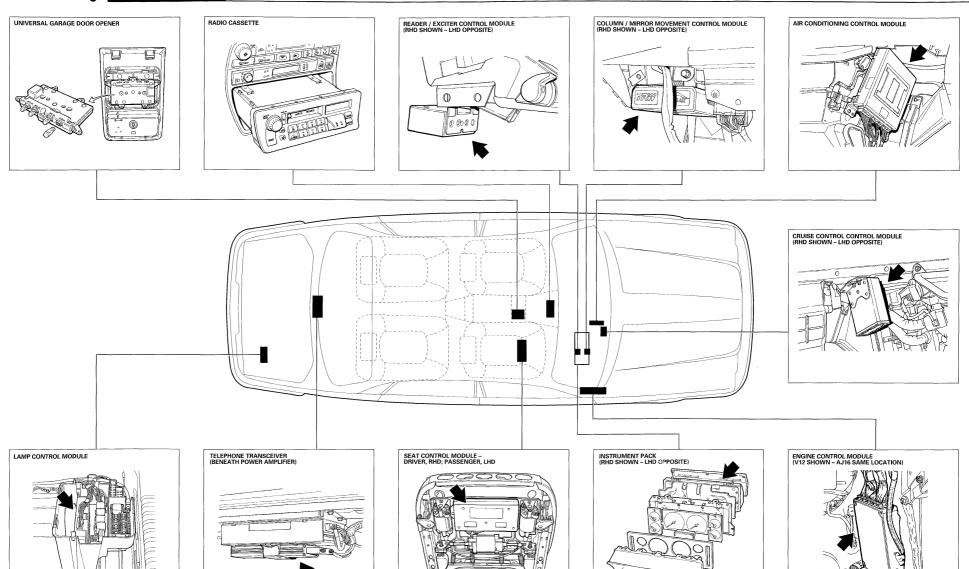






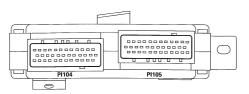








ENGINE CONTROL MODULE - AJ16



PI104 / 36-WAY / BLACK (AJ16 NA FEDERAL)



PI105 / 36-WAY / RED (AJ16 NA FEDERAL)



PI104 / 36-WAY / BLACK (AJ16 NA ROW)

12
24 23 22 21 20 19 18 17 16 15 14 13 BR W PY RY LGB GY NP KR OB BS BR
36 35 34 33 32 31 30 29 28 27 26 25 B PW GN — OG OR BO O BP

PI105 / 36-WAY / RED (AJ16 NA ROW)

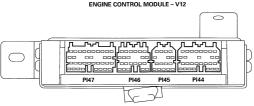
25	
13 14 15 16 17 18 19 20 21 22 23 24 LT GI	J
1 2 3 4 5 6 7 8 9 10 11 UB ULG — GK — BG UP U O UW	12 GY

PI104 / 36-WAY / BLACK (AJ16 SC)



PI105 / 36-WAY / RED (AJ16 SC)





PI47 / 34-WAY / SLATE



PI46 / 22-WAY / SLATE



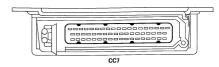
PI45 / 16-WAY / SLATE

4 3	2
GY OY	RW RG
7	6 5
UW	UP UY
11 10 R G	9 8 —
16 15 1	14 13 12
BG BP	B PB WO

PI44 / 28-WAY / SLATE



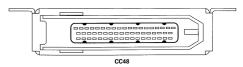
TRANSMISSION CONTROL MODULE - AJ16 NA



CC7 / 55-WAY / NATURAL



TRANSMISSION CONTROL MODULE - V12 AND AJ16 SC



CC48 / 55-WAY / BLACK (AJ16 SC)



CC48 / 55-WAY / BLACK (V12)



DECODER MODULE

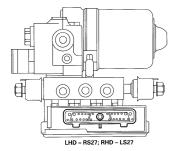


CC13 / 26-WAY / BLUE

14 15 SR SP	16 17	18	19	20 B	21 B	22	23 SB	24 25 RU —	26 —
1 2 SW SU	3 4 SG S	5	6	7	8	9	10 WS	11 12 LGP LGW	13 LGB



ABS / TRACTION CONTROL CONTROL MODULE

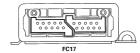


RS27, LS27 / 28-WAY / SLATE





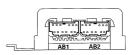
CRUISE CONTROL CONTROL MODULE



FC17 / 20-WAY / BLACK



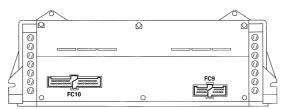
SRS DIAGNOSTIC MONITOR



AB1 / 12-WAY / SLATE



INSTRUMENT PACK



FC10 / 48-WAY / BLACK



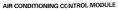
FC9 / 24-WAY / BLACK

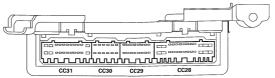


DATE OF ISSUE: JANUARY 1997

23







CC31 / 22-WAY / WHITE

	CC30 / 12-WAY / SLATE (AJ16 NA)	
22	7 8 9 10 11 12 KU	
11 PW	1 2 3 4 5 6 UG	
	CC30 / 12-WAY / SLATE (AJ16 SC)	

2-WAY / SLATE (AJ16 NA) CC29 / 16-WAY / YELLOW

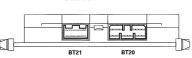


	CC28 / 26-WAY / SLATE
14 15 KR KS	16 17 18 19 20 21 22 23 24 25 26 GU
1 2 RLG U	3 4 5 6 7 8 9 10 11 12 13 UW UO

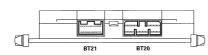
COLUMN / MIRROR MOVEMENT CONTROL MODULE

0

FC47



LAMP CONTROL MODULE



BT21 / 20-WAY / BLUE

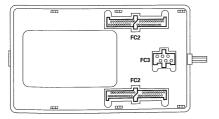








BODY PROCESSOR MODULE



FC2 / 48-WAY / BLACK (LHD)					
1 2 3 4 5 6 7 8 9 10 11 12 RY SK ULG UP RO PO LGB — KR — OY	13 14 15 16 17 18 19 20 21 22 23 24 LGY				
25	37 38 39 40 41 42 43 44 45 46 47 48 PG OP LGG OLG RW KU RLG KU PLG YN LGR UR				

FC2 / 48-WAY / BLACK (RHD)







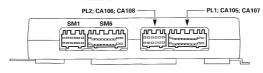
FC1 / 48-WAY / YELLOW







FRONT SEAT CONTROL MODULE



SM1-D / 12-WAY / WHITE

6 KO		4 UO			1 RS	
12 GO	11 GS	10 R	9 B	8 PS	7 PO	

PL2-D, CA106 / 12-WAY / BLUE

PL1-D, CA105 / 22-WAY / BLUE

SM1-P / 12-WAY / WHITE

				2 RO	
12	11	10	9	8	7
GO	GS	R	B	PS	PO



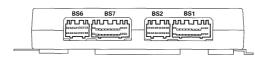
SM6-D / 22-WAY / WHITE

GN 10 9 8 7 6 5 4 3 WB W



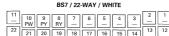


REAR SEAT CONTROL MODULE



BS6 / 12-WAY / WHITE

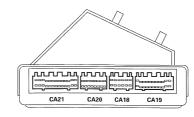
-	6	5	4	3	2	1
	GO	GS	PO	PS	OU	OS
	12 GR	11 GW	10 OW	9	8 PW	7 PR







SECURITY AND LOCKING CONTROL MODULE



CA21 / 26-WAY / SLATE

13 12 11	10 9 8 7 6 5 4 3	2 1
WB NU PW	RO LGP UP OY YO U — —	PLG OW
26 25 24 WO B GU	23 22 21 20 19 18 17 16 SK YLG UN GB S — —	OY OR

CA20 / 16-WAY / SLATE

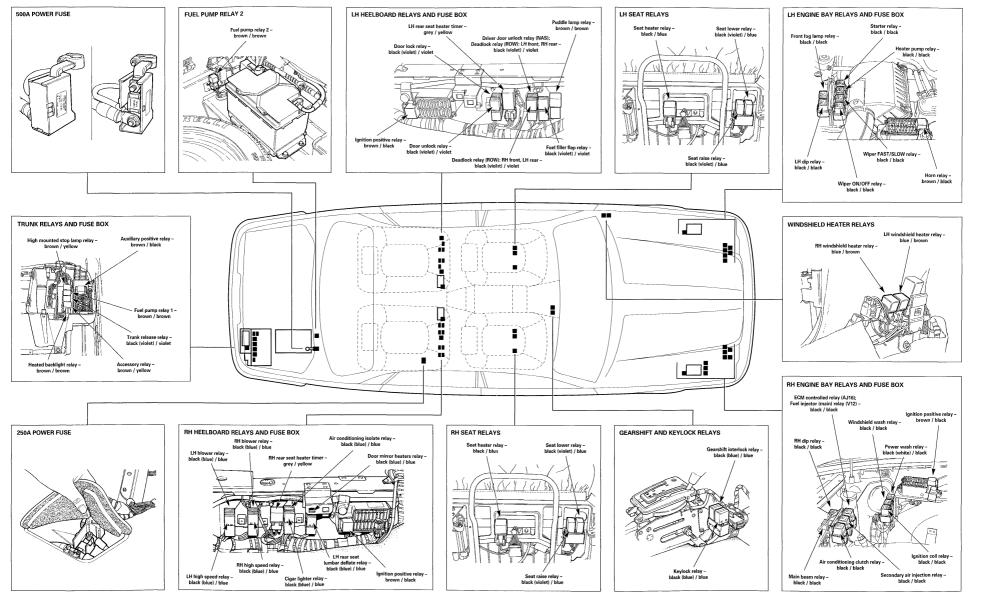
			5 RW				
16	15	14	13	12	11	10	9
K	WN	B	RB	U	UB	BRD	

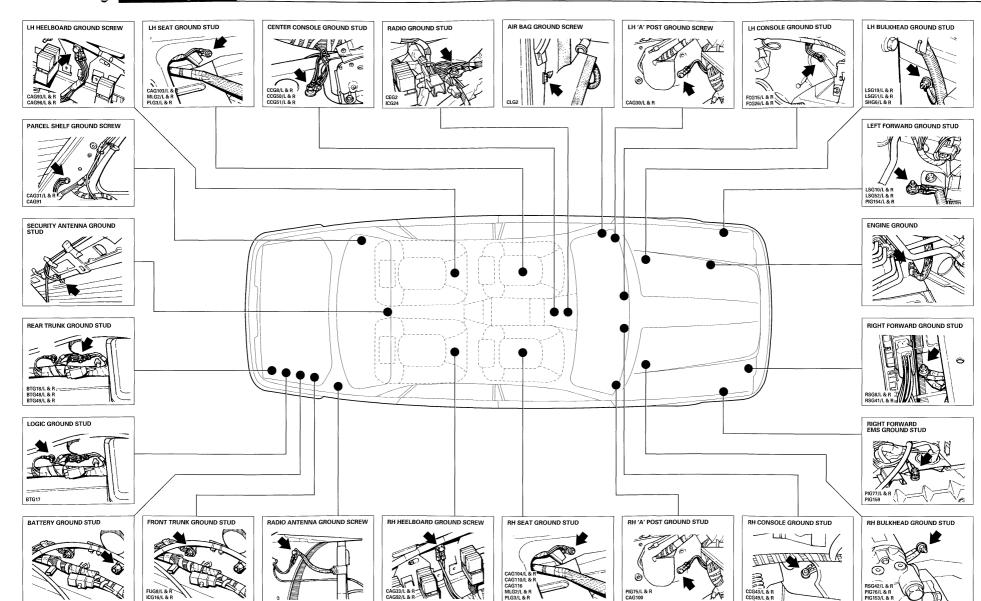
CA18 / 12-WAY / SLATE

CA19 / 22-WAY / SLATE

11 SR	10 GP	9 UW	8 PG	7 LGS	6 YW	5	4	3	2	1 R
22 PO	21 G	20 RY	19 SG	18 UR	17 WO	16 	15	14	13 PO	12 KN

NOTE: RELAY COLORS ARE WRITTEN AS CASE COLOR (STRIPE) / CONNECTOR COLOR. FOR EXAMPLE, BLACK (BLUE) / BLUE INDICATES A RELAY HAVING A BLACK CASE WITH A BLUE STRIPE AND A BLUE CONNECTOR. IF THERE IS NO COLOR SHOWN IN PARENTHESES, THE RELAY CASE DOES NOT HAVE A STRIPE.





CONTROL MODULE PIN OUT INFORMATION

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-13	TRANSIT ISOLATION DEVICE	GROUND	B+
1	FC2-31	IGNITION SWITCHED GROUND	GROUND	Ra.

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

MV Millivolts

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 01.1

COMPONENTS

Location / Access

TRUNK PASSENGER'S UNDERSCUTTLE

ENGINE BAY, LH FRONT

ENGINE BAY, RH FRONT

LH HEELBOARD

TRUNK ELECTRICAL CARRIER

RELAYS

FUSE BOX - TRUNK

Relay	Color / Stripe	Connector / Color	Location / Access
AUXILIARY POSITIVE RELAY (TRUNK FUSE BOX)	BROWN	- / BLACK	TRUNK FUSE BOX
HORN RELAY (LH ENGINE BAY FUSE BOX)	BROWN	/ BLACK	LH ENGINE BAY FUSE BOX
IGNITION POSITIVE RELAY (LH HEELBOARD FUSE BOX)	BROWN	/ BLACK	LH HEELBOARD FUSE BOX
IGNITION POSITIVE RELAY (RH HEELBOARD FUSE BOX)	BROWN	/ BLACK	RH HEELBOARD FUSE BOX
IGNITION POSITIVE RELAY (RH ENGINE BAY FUSE BOX)	BROWN	/ BLACK	RH ENGINE BAY FUSE BOX
TRANSIT ISOLATION DEVICE	Acres .	BT37 / —	BATTERY POSITIVE POST

BT9 / 10-WAY UTA / BLACK BT35 / 10-WAY UTA / NATURAL

0-1-- / 04-1-- 0---- / 0 1-

HARNESS-TO-HARNESS CONNECTORS

 Connector
 Type / Color
 Location / Access

 BT4
 THROUGH-PANEL (48 MICRO / 6) / BLACK
 ABOVE FUEL TANK / TRIEL

 FC16
 20-WAY MULTILOCK 040 / BLACK
 PASSENGER'S UNDERSCUTTLE

 FC6
 THROUGH-PANEL (48 MICRO / 6) / 6) / BLACK
 RH FASCIA END PANEL / OUTER AIR VENT

GROUNDS

Ground Location / Type

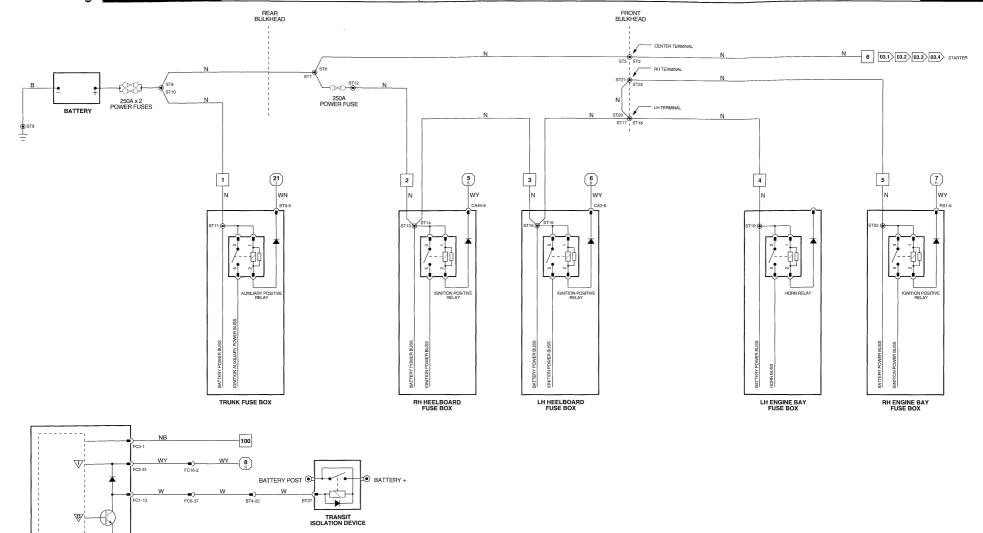
FCG15L LH CONSOLE GROUND STUD

ST9 BATTERY GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.







FC3-5













Signal Ground (SG)

VARIANT: All Vehicles VIN RANGE: 787954 →
DATE OF ISSUE: JANUARY 1997

BODY PROCESSOR MODULE

Fig. 01.2

COMPONENTS

Component

FUSE BOX - LH HEELBOARD

Connector / Type / Color

CA1 / 10-WAY UTA / NATURAL CA2 / 10-WAY UTA / BLACK CA36 / 10-WAY UTA / NATURAL CA44 / 10-WAY UTA / BLACK Location / Access

LH HEELBOARD

HARNESS-TO-HARNESS CONNECTORS

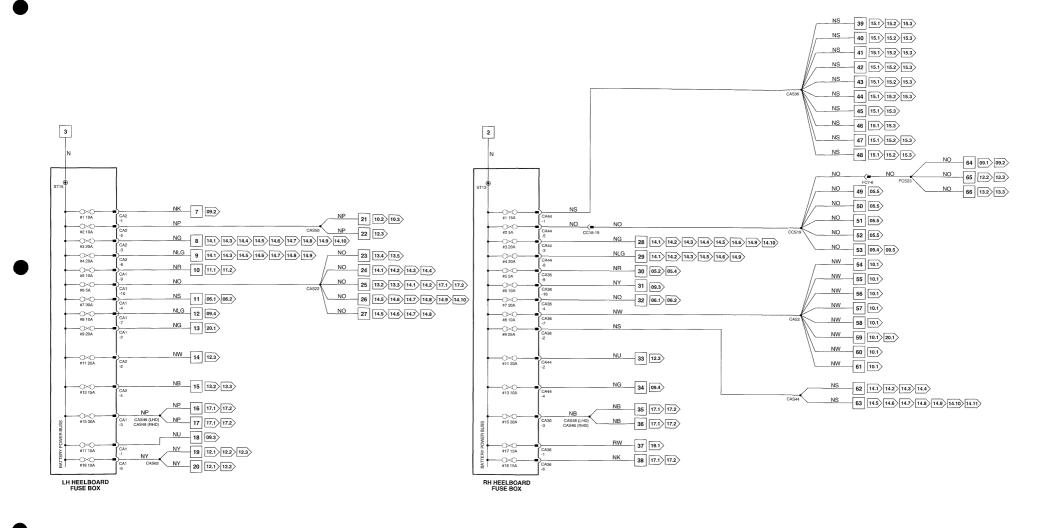
Connector

Type / Color

20-WAY MULTILOCK 070 / YELLOW THROUGH-PANEL (48 MICRO / 6) / BLACK Location / Access

CENTER CONSOLE / CENTER CONSOLE GLOVE BOX PASSENGER'S UNDERSCUTTLE

REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

















Signal Ground (SG)

VARIANT: All Vehicles
VIN RANGE: 787954 →
DATE OF ISSUE: JANUARY 1997

Fig. 01.3

COMPONENTS

Component

FUSE BOX - LH ENGINE BAY

FUSE BOX - RH ENGINE BAY

FUSE BOX - TRUNK

Connector / Type / Color

LS1 / 10-WAY UTA / BLACK LS37 / 10-WAY UTA / NATURAL RS1/10-WAY UTA/NATURAL RS1/10-WAY UTA/BLACK RS6/10-WAY UTA/BLACK BT9/10-WAY UTA/BLACK BT35/10-WAY UTA/NATURAL

Location / Access

ENGINE BAY, LH FRONT ENGINE BAY, RH FRONT

TRUNK ELECTRICAL CARRIER

HARNESS-TO-HARNESS CONNECTORS

Connector

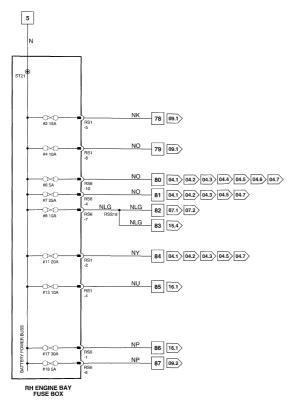
Type / Color

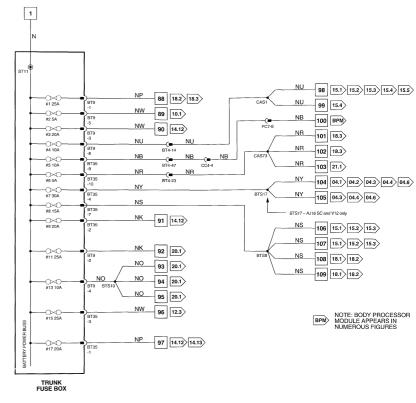
BT4 THROUGH-PANEL (48 MICRO / 6) / BLACK 14-WAY MULTILOCK 070 / WHITE CC4 FC7 THROUGH-PANEL (48 MICRO / 6) / BLACK

Location / Access

ABOVE FUEL TANK / FUEL TANK TRIM CENTER CONSOLE / CENTER CONSOLE GLOVE BOX PASSENGER'S UNDERSCUTTLE

REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.





LH ENGINE BAY

FUSE BOX















Signal Ground (SG)

VARIANT: All Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

Fig. 01.4

COMPONENTS

Component

FUSE BOX - RH ENGINE BAY

FUSE BOX – LH HEELBOARD

FUSE BOX - TRUNK

Connector / Type / Color

RS1 / 10-WAY UTA / BLACK RS6 / 10-WAY UTA / BLACK CA1 / 10-WAY UTA / BLACK CA2 / 10-WAY UTA / BLACK CA36 / 10-WAY UTA / BLACK BT9 / 10-WAY UTA / BLACK BT9 / 10-WAY UTA / BLACK BT9 / 10-WAY UTA / BLACK BT95 / 10-WAY UTA / MATURAL

BROWN

BROWN

BROWN

Location / Access

ENGINE BAY, RH FRONT

LH HEELBOARD

TRUNK ELECTRICAL CARRIER

RELAYS

Relay

AUXILIARY POSITIVE RELAY (TRUNK FUSE BOX)
IGNITION POSITIVE RELAY (LH HEELBOARD FUSE BOX)
IGNITION POSITIVE RELAY (RH HEELBOARD FUSE BOX)
IGNITION POSITIVE RELAY (RH ENGINE BAY FUSE BOX)

Color / Stripe Connector / Color
BROWN -/ BLACK

— / BLACK — / BLACK — / BLACK — / BLACK Location / Access
TRUNK FUSE BOX

LH HEELBOARD FUSE BOX RH HEELBOARD FUSE BOX RH ENGINE BAY FUSE BOX

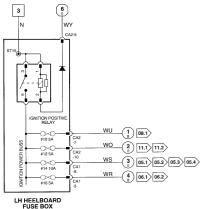
HARNESS-TO-HARNESS CONNECTORS

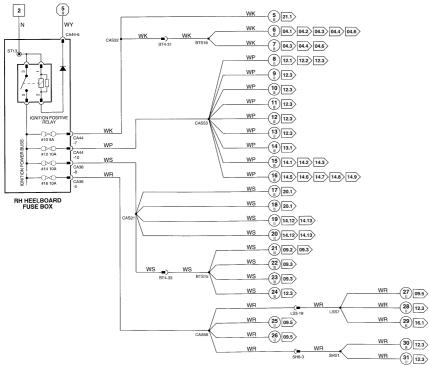
Connector Type / Color

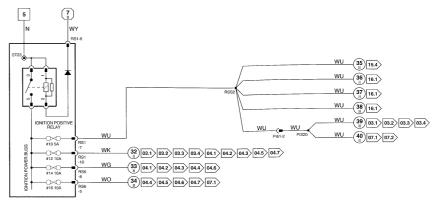
Location / Access

ABOVE FUEL TANK / FUEL TANK TRIM LH 'A' POST / 'A' POST PANEL REARWARD OF RH HEADLAMP LH 'A' POST / 'A' POST PANEL

REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.







RH ENGINE BAY FUSE BOX

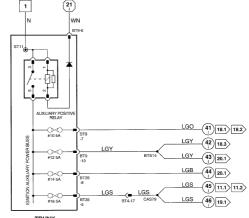


Fig. 02.1

COMPONENTS

Component IGNITION SWITCH INERTIA SWITCH Connector / Type / Color

FC54 (FLY LEAD) / 8-WAY MULTILOCK 070 / WHITE CA6 / 3-WAY ECONOSEAL III LC / BLACK Location / Access

STEERING COLUMN / COVER RH 'A' POST

HARNESS-TO-HARNESS CONNECTORS

 Connector
 Type / Color

 BTA
 THROUGH-PANEL (48 MICRO / 6) / BLACK

 CC5
 29-WAY MULTILOCK 070 / WHITE

 FC5
 THROUGH-PANEL (48 MICRO / 6) / BLACK

 FC6
 THROUGH-PANEL (48 MICRO / 6) / BLACK

 RS3
 THROUGH-PANEL (48 MICRO / 6) / BROWN

Location / Access

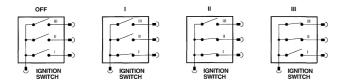
ABOVE FUEL TANK / FUEL TANK TRIM
CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
LH FASCIA END PANEL / OUTER AIR VENT
RH FASCIA END PANEL / OUTER AIR VENT
RH "A" POST / "A" POST PANEL

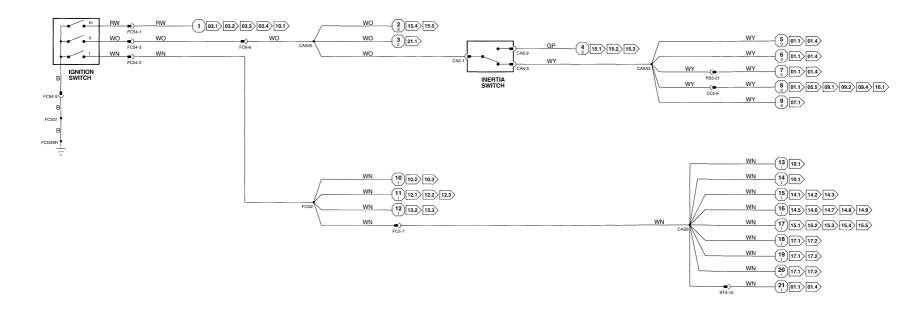
GROUNDS Ground

Location / Type

LH CONSOLE GROUND STUD

REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



















VARIANT: All Vehicles Signal Ground (SG) VIN RANGE: 787954 →
DATE OF ISSUE: JANUARY 1997

Fig. 02.2

COMPONENTS

BATTERY

Component Connector / Type / Color

ST8, ST10

Location / Access

TRUNK

HARNESS-TO-HARNESS CONNECTORS

Connector Type / Color

THROUGH-PANEL (48 MICRO / 6) / BLACK
CAB 20-WAY MULTILOCK 040 / GREEN
CA11 20-WAY MULTILOCK 040 / WHITE
CA66 3-WAY MULTILOCK 070 / WHITE
CC4 14-WAY MULTILOCK 070 / WHITE

14-WAY MULTILOCK 070 / WHITE THROUGH-PANEL (48 MICRO / 6) / BLACK Location / Access

ABOVE FUEL TANK / FUEL TANK TRIM DRIVER'S 'A' POST / 'A' POST TRIM PASSENGER'S UNDERSCUTTLE / ECM TRUNK, LH FRONT / TRUNK TRIM

CENTER CONSOLE / CENTER CONSOLE GLOVE BOX

PASSENGER'S UNDERSCUTTLE

GROUNDS Ground

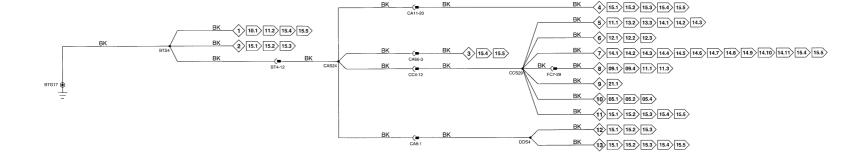
FC7

BTG17

Location / Type

REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

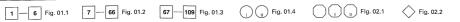


















ENGINE CONTROL MODULE (AJ16)

∇	Pin	Description	Active	Inactive
0	PI104-20	CHECK ENGINE MIL	GROUND	B+
D	PI105-35	FUELING INHIBIT SIGNAL	ENCODED COMMUNICATIONS	

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-33	STARTER RELAY INHIBIT	GROUND	B+
D	FC2-5	SECURE STATUS INPUT FROM SECURITY AND LOCKING CONTROL MODULE	ENCODED COMMUNICATIONS	
1	FC2-7	CHECK ENGINE MIL	GROUND	B+
1	FC2-20	PARK / NEUTRAL SIGNAL	GROUND	B+
	EC2.41	INTERIOR LAMP EXTINGUISH DURING CRANK	GROUND	B+

SECURITY AND LOCKING CONTROL MODULE

∇	Pin	Description	Active	Inactive
D	CA21-10	SECURE STATUS OUTPUT TO BODY PROCESSOR	ENCODED COMMUNICATIONS	
D	CA21-20	FUELING INHIBIT SIGNAL OUTPUT (NOT NAS)	ENCODED COMMUNICATIONS	

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "lnactive" means a load is not applied or a switch is OFF.

Fig. 03.

COMPONENTS

 Component
 Connector / Type / Color

 BATTERY
 \$18, \$110

 BODY PROCESSOR MODULE
 FC1 / 48-WAY PC8 SIGNAL / YELLOW

 FC2 / 48-WAY PC8 SIGNAL / BLACK
 FC2 / 48-WAY PC8 SIGNAL / BLACK

 FC3 / 68-WAY PC8 SIGNAL / BLACK
 FC3 / 68-WAY PC8 SIGNAL / BLACK

| FL27 48-WAY PCB SIGNAL / BLACK | FC2 / 48-WAY PCB SIGNAL / BLACK | FC3 / 8-WAY PCB SIGNAL / BLACK | FC3 / 8-WAY PCB SIGNAL / BLACK | FC3 / 8-WAY MODULE | FC3 / 8-WAY MODULE | FC3 / 8-WAY MODULE | FC3 / 8-WAY ECONOSEAL III / BLACK | FC3 / 8-WAY

AND LOCKING CONTROL MODULE

CA19, 72-WAY MULTILLOCK 47, SLATE

CA20, 16-WAY MULTILLOCK 47, SLATE

CA20, 16-WAY MULTILLOCK 47, SLATE

CA21, 72-WAY MULTILLOCK 47, SLATE

STARTER MOTOR ST1 / EYELET / WHITE ST2 / EYELET / WHITE

SUPPRESSION MODULE AN3 (FLY LEAD) / 2-WAY ECONOSEAL III LC / RED

Location / Access

TRUNK PASSENGER'S UNDERSCUTTLE

> CENTER CONSOLE RH 'A' POST / 'A' POST TRIM

ENGINE, LH SIDE (AJ16), RH SIDE (V12) STEERING COLUMN / COVER 'J' GATE / CENTER CONSOLE

TRUNK, LH FRONT / TRUNK TRIM

ENGINE, LH REAR (AJ16); ENGINE, RH REAR (V12)

ENGINE BAY, LH FRONT

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
CTARTER RELAY	BLACK	LCAZ / BLACV	LH ENGINE RAY RELAYS

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC5	20-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
LS3	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH 'A' POST / 'A' POST PANEL
PI1	13-WAY ECONOSEAL III LC / WHITE	REARWARD OF RH HEADLAMP
PI61	13-WAY ECONOSEAL III LC / BLACK	REARWARD OF RH HEADLAMP
PI63	20-WAY MULTILOCK 040 / BLACK	RH 'A' POST / 'A' POST TRIM
PI66	2-WAY ECONOSEAL III HC / BLACK	FORWARD OF LH ENGINE BAY FUSE BOX
PI142	2-WAY ECONOSEAL III HC / BLACK	ENGINE BAY BULKHEAD
RS3	THROUGH-PANEL (48 MICRO / 6) / BROWN	RH 'A' POST / 'A' POST PANEL

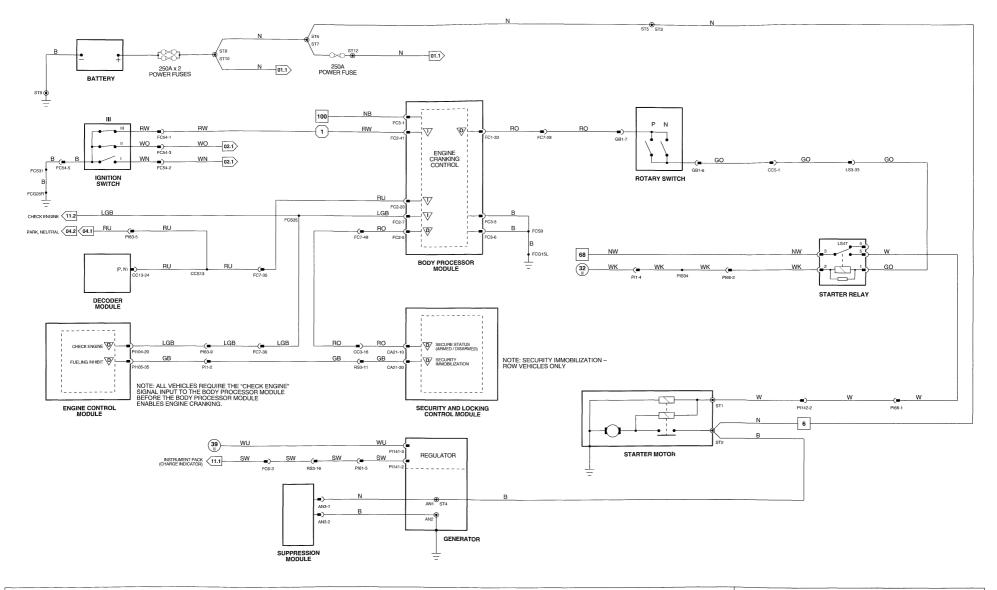
GROUNDS

Ground	Location / Type
FCG15L	LH CONSOLE GROUND STUD
FCG26R	LH CONSOLE GROUND STUD
CT0	RATTERY GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

















Signal Ground (SG)

VARIANT: AJ16 4.0L NA Automatic Transmission Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

ENGINE CONTROL MODULE (AJ16)

∇	Pin	Description	Active	Inactive
0	PI104-20	CHECK ENGINE MIL	GROUND	B+
D	PI105-35	FUELING INHIBIT SIGNAL	ENCODED COMMUNICATIONS	

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-33	STARTER RELAY INHIBIT	GROUND	B+
D	FC2-5	SECURE STATUS INPUT FROM SECURITY AND LOCKING CONTROL MODULE	ENCODED COMMUNICATIONS	
1	FC2-7	CHECK ENGINE MIL	GROUND	B+
1	FC2-20	PARK / NEUTRAL SIGNAL	GROUND	B+
- 1	FC2-41	INTERIOR LAMP EXTINGUISH DURING CRANK	GROUND	B+

SECURITY AND LOCKING CONTROL MODULE

∇	Pin	Description	Active	Inactive
D	CA21-10	SECURE STATUS OUTPUT TO BODY PROCESSOR	ENCODED COMMUNICATIONS	
D	CA21-20	ELIELING INMIRIT SIGNAL OLITPLIT (NOT NAS)	ENCODED COMMUNICATIONS	

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "lnactive" means a load is not applied or a switch is OFF.

Fig. 03.

COMPONENTS

Component Connector / Type / Color

 BATTERY
 ST8, ST10

 BODY PROCESSOR MODULE
 FC1 / 48-WAY PCB SIGNAL, YELLOW

 FC2 / 48-WAY PCB SIGNAL, BLACK
 FC2 / 6-WAY PCB SIGNAL, BLACK

 ENGINE CONTROL MODULE IAJ161
 PIN42 / 36-WAY ECONOSCAL III PLACK

 ENGINE CONTROL MODULE (AJ16)
 P1104 / 36-WAY ECONOSEAL III / BLACK

 GENERATOR
 P1104 / 38-WAY NEPON DE NOSO / BLACK

 (BNITION SWITCH
 FCS4 (FE V LEAD) / 8-WAY MULTILOCK 670 / WHITE

 LINEAR GEAR POSITION SWITCHES
 CC21 / 26-WAY MULTILOCK 640 / BLACK

 SECURITY AND LOCKING CONTROL MODULE
 CA18 / 12 WAY MULTILOCK 47 / SLATE

 CA19 / 22-WAY MULTILOCK 47 / SLATE
 CA19 / 22-WAY MULTILOCK 47 / SLATE

CA19 / 22-WAY MULTILOCK 47 / SLATE
CA20 / 16-WAY MULTILOCK 47 / SLATE
CA21 / 26-WAY MULTILOCK 47 / SLATE
STARTER MOTOR
ST1 / EVELET / WHITE
ST2 / EVELET / WHITE

SUPPRESSION MODULE AN3 (FLY LEAD) / 2-WAY ECONOSEAL III LC / RED

Location / Access

TRUNK PASSENGER'S UNDERSCUTTLE

RH 'A' POST / 'A' POST TRIM

ENGINE, LH SIDE (AJ18), RH SIDE (V12) STEERING COLUMN / COVER 'J' GATE / CENTER CONSOLE TRUNK, LH FRONT / TRUNK TRIM

ENGINE, LH REAR (AJ16); ENGINE, RH REAR (V12)

ENGINE BAY, LH FRONT

RELAYS

Relay Color / Stripe Connector / Color Location / Access
STARTER RELAY BLACK LS47/BLACK LH ENGINE BAY RELAYS

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC5	20-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
LS3	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH 'A' POST / 'A' POST PANEL
PI1	13-WAY ECONOSEAL III LC / WHITE	REARWARD OF RH HEADLAMP
PI61	13-WAY ECONOSEAL III LC / BLACK	REARWARD OF RH HEADLAMP
PI63	20-WAY MULTILOCK 040 / BLACK	RH 'A' POST / 'A' POST TRIM
PI66	2-WAY ECONOSEAL III HC / BLACK	FORWARD OF LH ENGINE BAY FUSE BOX
PI142	2-WAY ECONOSEAL III HC / BLACK	ENGINE BAY BULKHEAD
RS3	THROUGH-PANEL (48 MICRO / 6) / BROWN	RH 'A' POST / 'A' POST PANEL

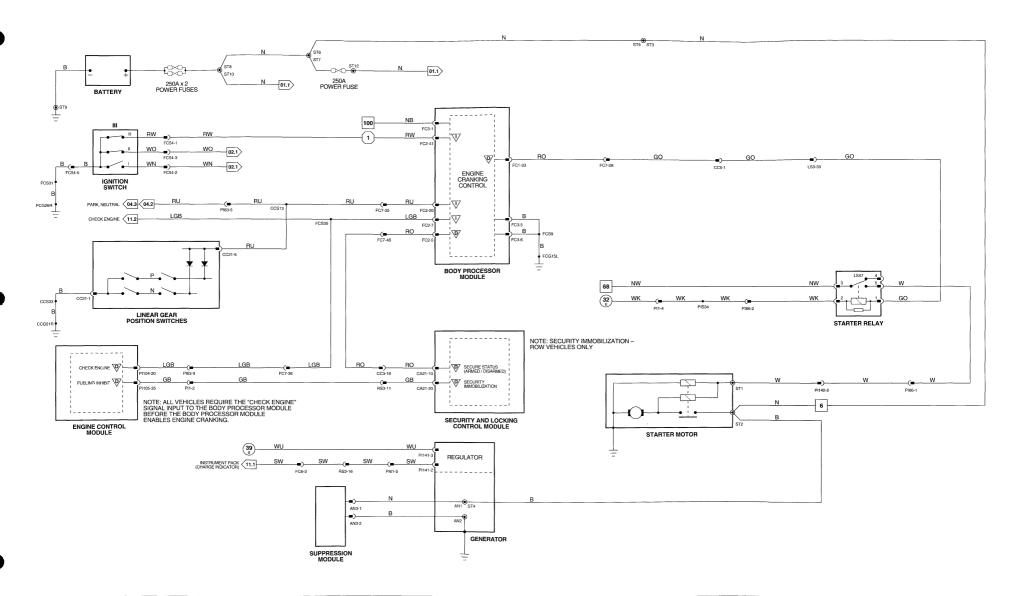
GROUNDS

Ground	Location / Type
CCG51R	CENTER CONSOLE GROUND ST
FCG15L	LH CONSOLE GROUND STUD
FCG26R	LH CONSOLE GROUND STUD
ST9	BATTERY GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



















Signal Ground (SG)

VARIANT: AJ16 4.0L SC and 3.2L Automatic Transmission Vehicles VIN RANGE: 787954 →
DATE OF ISSUE: JANUARY 1997

ENGINE CONTROL MODULE (AJ16)

∇	Pin	Description	Active	Inactive
0	P1104-20	CHECK ENGINE MIL	GROUND	B+
D	PI105-35	FUELING INHIBIT SIGNAL	ENCODED COMMUNICATIONS	

BODY PROCESSOR MODULE

\vee	Pin	Description	Active	Inactive
0	FC1-33	STARTER RELAY INHIBIT	GROUND	B+
D	FC2-5	SECURE STATUS INPUT FROM SECURITY AND LOCKING CONTROL MODULE	ENCODED COMMUNICATIONS	
- 1	FC2-7	CHECK ENGINE MIL	GROUND	B+
- 1	FC2-20	PARK / NEUTRAL SIGNAL	GROUND	B+
- 1	FC2-41	INTERIOR LAMP EXTINGUISH DURING CRANK	GROUND	B+

SECURITY AND LOCKING CONTROL MODULE

∇	Pin	Description	Active	Inactive
D	CA21-10	SECURE STATUS OUTPUT TO BODY PROCESSOR	ENCODED COMMUNICATIONS	
D	CA21-20	FUELING INHIBIT SIGNAL OUTPUT (NOT NAS)	ENCODED COMMUNICATIONS	

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 03.3

COMPONENTS

Component Connector / Type / Color
BATTERY ST8, ST10

BODY PROCESSOR MODULE FC1 ,48-WAY PCB SIGNAL / YELLOW FC2 ,48-WAY PCB SIGNAL / BLACK FC3 ,68-WAY PCB SIGNAL | BLACK FC3 ,68-

GENERATOR P1105 / 38-WAY ECONOSEAL III / IRED GENERATOR P1141 / 3-WAY NIPPON DENSO / BLACK IGNITION SWITCH FC64 (FLY LEAD) / 8-WAY MULTILOCK 970 / WHITE SECURITY AND LOCKING CONTROL MODULE CA18 / 12-WAY MULTILOCK 47 / SLATE CA19 / 22-WAY MULTILOCK 47 / SLATE

SUPPRESSION MODULE AN3 (FLY LEAD) / 2-WAY ECONOSEAL III LC / RED

Location / Access

TRUNK PASSENGER'S UNDERSCUTTLE

RH 'A' POST / 'A' POST TRIM

ENGINE, LH SIDE (AJ16), RH SIDE (V12) STEERING COLUMN / COVER TRUNK, LH FRONT / TRUNK TRIM

ENGINE, LH REAR (AJ16); ENGINE, RH REAR (V12)

ENGINE BAY, LH FRONT

RELAYS

Relay Color / Stripe Connector / Color Location / Access
STARTER RELAY BLACK LS47 / BLACK LH ENGINE BAY RELAYS

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC5	20-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
LS3	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH 'A' POST / 'A' POST PANEL
PI1	13-WAY ECONOSEAL III LC / WHITE	REARWARD OF RH HEADLAMP
PI61	13-WAY ECONOSEAL III LC / BLACK	REARWARD OF RH HEADLAMP
PI63	20-WAY MULTILOCK 040 / BLACK	RH 'A' POST / 'A' POST TRIM
PI66	2-WAY ECONOSEAL III HC / BLACK	FORWARD OF LH ENGINE BAY FUSE BOX
PI142	2-WAY ECONOSEAL III HC / BLACK	ENGINE BAY BULKHEAD
RS3	THROUGH-PANEL (48 MICRO / 6) / BROWN	RH 'A' POST / 'A' POST PANEL

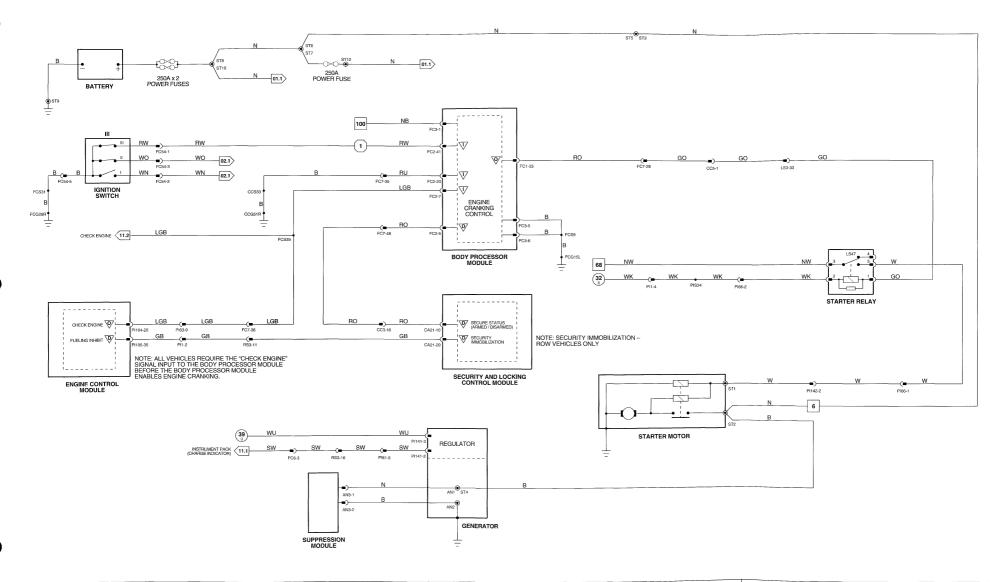
GROUNDS

Ground	Location / Type	
FCG15L	LH CONSOLE GROUND STUD	
FCG26R	LH CONSOLE GROUND STUE	
ST9	BATTERY GROUND STUD	

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

















VARIANT: Manual Transmission Vehicles VIN RANGE: 787954 → Signal Ground (SG) DATE OF ISSUE: JANUARY 1997

ENGINE CONTROL MODULE (V12)

∇	Pin	Description	Active	Inactive
0	PI44-2	CHECK ENGINE MIL	GROUND	B+
D	PI44-14	START INHIBIT	GROUND	B+

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-33	STARTER RELAY INHIBIT	GROUND	B+
D	FC2-5	SECURE STATUS INPUT FROM SECURITY AND LOCKING CONTROL MODULE	ENCODED COMMUNICATIONS	
1	FC2-7	CHECK ENGINE MIL	GROUND	B+
1	FC2-20	PARK / NEUTRAL SIGNAL	GROUND	B+
1	FC2-41	INTERIOR LAMP EXTINGUISH DURING CRANK	GROUND	B+

SECURITY AND LOCKING CONTROL MODULE

∇	Pin	Description	Active	Inactive
D	CA21-10	SECURE STATUS OUTPUT TO BODY PROCESSOR	ENCODED COMMUNICATIONS	
D	CA21-20	FUELING INHIBIT SIGNAL OUTPUT (NOT NAS)	ENCODED COMMUNICATIONS	

The following symbols are used to represent values for Control Module Pin Out data:

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NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "lnactive" means a load is not applied or a switch is OFF.

Fig. 03.4

COMPONENTS

Component Connector / Type / Color
BATTERY ST8, ST10

BAT HERY

FC1 / 48-WAY PCS SIGNAL / YELLOW

EQUIPMOCESSOR MODULE

FC2 / 48-WAY PCS SIGNAL / YELLOW

FC3 / 6-WAY PCS SIGNAL / BLACK

FC3 / 6-WAY PCS SIGNAL / BLACK

FC3 / 6-WAY PCS SIGNAL / BLACK

FC4 / 48-WAY MULTILOCK (40) FSLATE

FC4 / 48-WAY MULTILOCK (40) FSLATE

FC4 / 48-WAY MULTILOCK (40) FSLATE

FC4 / 54-WAY MULTILOCK (40) FSLATE

FC4 / 54-WAY MULTILOCK (40) FSLATE

STARTER MOTOR ST1/EYELET/WHITE ST2/EYELET/WHITE

SUPPRESSION MODULE AN3 (FLY LEAD) / 2-WAY ECONOSEAL III LC / RED

Location / Access

TRUNK
PASSENGER'S UNDERSCUTTLE

RH 'A' POST / 'A' POST TRIM

ENGINE, LH SIDE (AJ16), RH SIDE (V12) STEERING COLUMN / COVER 'J' GATE / CENTER CONSOLE TRUNK, LH FRONT / TRUNK TRIM

ENGINE, LH REAR (AJ16); ENGINE, RH REAR (V12)

ENGINE BAY, LH FRONT

RELAYS

 Relay
 Color / Stripe
 Connector / Color
 Location / Access

 STARTER RELAY
 BLACK
 LS47/BLACK
 LH ENGINE BAY RELAYS

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC5	20-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
LS3	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH 'A' POST / 'A' POST PANEL
PI1	13-WAY ECONOSEAL III LC / WHITE	REARWARD OF RH HEADLAMP
PI61	13-WAY ECONOSEAL III LC / BLACK	REARWARD OF RH HEADLAMP
PI63	20-WAY MULTILOCK 040 / BLACK	RH 'A' POST / 'A' POST TRIM
PI66	2-WAY ECONOSEAL III HC / BLACK	FORWARD OF LH ENGINE BAY FUSE BOX
PI142	2-WAY ECONOSEAL III HC / BLACK	ENGINE BAY BULKHEAD
RS3	THROUGH-PANEL (48 MICRO / 6) / BROWN	RH 'A' POST / 'A' POST PANEL

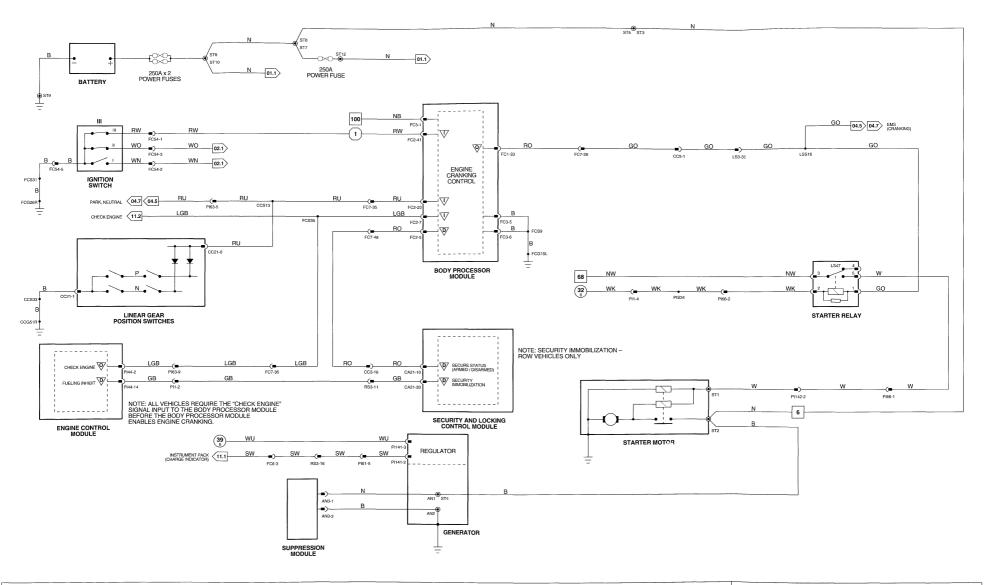
GROUNDS

Ground	Location / Type
CCG51R	CENTER CONSOLE GROUND STUD
FCG15L	LH CONSOLE GROUND STUD
FCG26R	LH CONSOLE GROUND STUD
ST9	BATTERY GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

















VARIANT: V12 Vehicles Signal Ground (SG) VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

ENGINE CONTROL MODULE (AJ16)

∇	Pin	Description	Active	Inactive
0	PI104-2	INJECTOR 1	GROUND PULSE, 2 8 MS @ IDLE	B+
0	PI104-3	IDLE SPEED CONTROL 1	12 V, 0 V	8 V (NOT MOVING)
0	PI104-4	DOWNSTREAM HO2S HEATERS	0 4-13 V, 10 Hz @ IDLE	* * (
0	PI104-5	IGNITION COIL 4	GROUND PULSE, 1000 RPM 15 Hz	
0	PI104-6	IGNITION COIL 3	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI104-7	SECONDARY AIR INJECTION RELAY	GROUND	B+
0	PI104-8	IGNITION COIL 2	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI104-9	IGNITION COIL 5	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI104-10	IGNITION COIL 1	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI104-11	IGNITION COIL 6	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI104-13	INJECTOR 4	GROUND PULSE, 2 8 MS @ IDLE	B+
0	PI104-14	INJECTOR 3	GROUND PULSE, 2 8 MS @ IDLE	B+
0	PI104-15	INJECTOR 2	GROUND PULSE, 2 8 MS @ IDLE	B+
o	PI104-16	IDLE SPEED CONTROL 4	12 V, 0 V	8 V (NOT MOVING)
0	PI104-17	FUEL USED	GROUND PULSE, 6 Hz @ IDLE	o v (nor movino)
ō	PI104-18	ECM CONTROLLED RELAY	GROUND	B+
0	PI104-19	FUEL PUMP RELAY 1	GROUND	B+
0	PI104-20	CHECK ENGINE MIL	GROUND	B+
0	PI104-21	AIR CONDITIONING CLUTCH RELAY	GROUND	B+
0	PI104-21	ENGINE SPEED SIGNAL	5 V @ 1000 RPM = 45 Hz, 2000 RPM = 90 Hz	J. T
ı	PI104-22	CRANKSHAFT POSITION SENSOR	GROUND @ 1000 RPM = 900 Hz, 2000 RPM = 1800 Hz	
o	PI104-25	INJECTOR 6	GROUND PULSE, 2 8 MS @ IDLE	B+
SG	PI104-26	CRANKSHAFT POSITION SENSOR GROUND	GROUND	GROUND
0	PI104-26	INJECTOR 5	GROUND PULSE, 2 8 MS @ IDLE	B+
0	PI104-27	IDLE SPEED CONTROL 3	12 V, 0 V	8 V (NOT MOVING)
0			12 V, 0 V	
0	PI104-29 PI104-30	IDLE SPEED CONTROL 2 UPSTREAM HO2S HEATERS	0 4-13 V, 10 Hz @ IDLE	8 V (NOT MOVING)
0			0V 13 V, 10 HZ @ IDEE	R+
~	PI104-31	CANISTER CLOSE VALVE THROTTLE POSITION	125 V @ IDLE	4 9 V @ FULL THROTTLE
0	PI104-32		10 4 V (NO LOAD), DECREASING WITH LOAD INCREASE	4 9 V @ FULL THROTTLE
0	PI104-33	ENGINE TORQUE	8+	
0	PI104-34	EVAPORATIVE EMISSION CONTROL VALVE	8+ 01-9V	GROUND
0	P1104-35	EGR VALVE SOLENOID	01=9V	
		INTAKE AIR TEMPERATURE SENSOR	0 98 V @ 10° C, DECREASING WITH TEMPERATURE	
1	PI105-1			
1	PI105-2	ELECTRICAL LOAD: HEATED WINDSHIELD, HEATED BACKLIGHT, OR BLOWERS ON HIGH SPEED	B+	GROUND
	PI105-3	EGR TEMPERATURE SENSOR	49 V @ IDLE (NO EGR), DECREASES WITH EGR FLOW INCREASE	
	PI105-4	MASS AIR FLOW SENSOR	1 2 V @ IDLE, INCREASES WITH RPM INCREASE	
0	PI105-5	FUEL TANK PRESSURE SENSOR FEEDBACK	49V = LOW PRESSURE 0 2V = HIGH PRESSURE	
ı	P1105-5	UPSTREAM H02S FEEDBACK - CYLINDERS 1, 2, 3	0.1 – 4 7 V @ IDLE (SWING)	
SG	PI105-7	SENSOR COMMON REFERENCE GROUND	GROUND	GROUND
SG	PI105-7 PI105-8	HO2S COMMON SIGNAL GROUND	GROUND	GROUND
SG	PI105-8	KNOCK SENSORS COMMON REFERENCE GROUND	GROUND	GROUND
		SERIAL COMMUNICATION (BI-DIRECTIONAL)	GROUND	GROOND
D	PI105-10 PI105-11	SENSOR COMMONICATION (SI-DIRECTIONAL)	5 V	5 V
0			06 V @ IDLE	4 9 V = FULL THROTTLE
1	PI105-12	THROTTLE POSITION SENSOR FEEDBACK		* a A = LOFF IMMOLITE
1	PI105-14	ENGINE COOLANT TEMPERATURE SENSOR	0 41 V @ 90° C, DECREASING WITH TEMPERATURE INCREASE	5 V = MAXIMUM EGR
1	PI105-15	EGR VALVE POSITION FEEDBACK	07 V @ IDLE (NO EGR)	5 V = MAXIMUM EGH
1	PI105-16	DOWNSTREAM HO2S FEEDBACK - CYLINDERS 1, 2, 3	0 1 - 4 7 V @ IDLE (SWING)	
1	PI105-18	DOWNSTRAM HO2S FEEDBACK - CYLINDERS 4, 5, 6	0 1 – 4 7 V @ IDLE (SWING)	
1	P1105-19	UPSTREAM H02S FEEDBACK - CYLINDERS 4, 5, 6	0.1 – 4 7 V @ IDLE (SWING)	
1	PI105-20	LOW FUEL LEVEL	GROUND	B+
1	PI105-21	KNOCK SENSOR – A BANK	0 Hz = NO KNOCK, 2 – 20 Hz = KNOCK	
0	P1105-24	CAMSHAFT POSITION SENSOR SUPPLY	B+	B+
1	PI105-26	TORQUE REDUCTION REQUEST	GROUND PULSE @ SHIFT	9 4 V @ IDLE
1	PI105-27	PARK / NEUTRAL	GROUND	B+
1	PI105-28	VEHICLE SPEED	GROUND PULSE @ 10 MPH (16 KPH) - 20 Hz, 20 MPH (32 KPH) = 40 Hz	
SG	PI105-29	MASS AIR FLOW SENSOR GROUND	GROUND	GROUND
SG	PI105-30	SENSOR COMMON SIGNAL GROUND	GROUND	GROUND
SG	PI105-31	ENGINE COOLANT TEMPERATURE SENSOR GROUND	GROUND	GROUND
1	PI105-32	KNOCK SENSOR - B BANK	0 Hz = NO KNOCK, 2 - 20 Hz = KNOCK	
	PI105-34	CAMSHAFT POSITION SENSOR SIGNAL	1000 RPM = 45 Hz, 2000 RPM = 90 Hz	
1				
I D	PI105-34	FUELING INHIBIT SIGNAL	ENCODED COMMUNICATIONS	B+

The following symbols are used to represent values for Control Module Pin Out data:

		_	B 44 - 15
1	Input	B+	Battery voltage
0	Output	V	Voltage (DC)
SG	Signal Ground	Hz	Frequency
D	Serial and encoded communications	KHz	Frequency x 1000
		MS	Milliseconds
		MV	Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 04.

COMPONENTS Component

CMPS: CAMSHAFT POSITION SENSOR (AJ16)	PI112 / 3-WAY JUNIOR TIMER / BLACK
CANISTER CLOSE VALVE	CV2 (FLY LEAD) / 2-WAY YAZAKI 090 / BLACK
CKPS: CRANKSHAFT POSITION SENSOR	PI111 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK
DIODE (PIB1) - AIRP SOLENOID SUPPRESSION	PI81 / DIODE / BLACK
EGRT SENSOR: EGR TEMPERATURE SENSOR	PI110 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK
ENGINE CONTROL MODULE (AJ16)	PI104 / 36-WAY ECONOSEAL III / BLACK PI105 / 36-WAY ECONOSEAL III / RED
ECTS: ENGINE COOLANT TEMPERATURE SENSOR (AJ16)	PI107 / 2-WAY JUNIOR TIMER / BLACK
EVAPP: EVAPORATIVE EMISSION CONTROL VALVE (AJ16)	PI130 / 2-WAY JUNIOR TIMER / BLACK
FUEL INJECTOR (AJ16 1)	PI120 / 2-WAY JUNIOR TIMER / SLATE
FUEL INJECTOR (AJ16 2)	PI121 / 2-WAY JUNIOR TIMER / SLATE
FUEL INJECTOR (AJ16 3)	PI122 / 2-WAY JUNIOR TIMER / SLATE
FUEL INJECTOR (AJ16 4)	PI123 / 2-WAY JUNIOR TIMER / SLATE
FUEL INJECTOR (AJ16 5)	PI124 / 2-WAY JUNIOR TIMER / SLATE
FUEL INJECTOR (AJ16 6)	PI125 / 2-WAY JUNIOR TIMER / SLATE
FUEL PUMP (1)	BT6 (FLY LEAD) / 4-WAY SUMITOMO 90 / NATURAL
FUEL TANK PRESSURE SENSOR	EL1 / 3-WAY REINSHAGEN TRIPACK 150 / BLACK
HO2S: HEATED OXYGEN SENSOR (AJ16 - 1,2,3 DOWNSTREAM)	PI126 (FLY LEAD) / 4-WAY ECONOSEAL III LC / BLACK
HO2S: HEATED OXYGEN SENSOR (AJ16 - 4,5,6 DOWNSTREAM)	PI127 (FLY LEAD) / 4-WAY ECONOSEAL III LC / BLACK
HO2S: HEATED OXYGEN SENSOR (AJ16 - 1,2,3 UPSTREAM)	PI128 (FLY LEAD) / 4-WAY ECONOSEAL III LC / BLACK
HO2S: HEATED OXYGEN SENSOR (AJ16 - 4,5,6 UPSTREAM)	PI129 (FLY LEAD) / 4-WAY ECONOSEAL III LC / BLACK
IACV: IDLE AIR CONTROL VALVE (AJ16)	PI113 / 4-WAY PACKARD / BLACK
IGNITION COIL (AJ16 1)	PI131 / 2-WAY SUMITOMO 90 / BROWN
IGNITION COIL (AJ16 2)	PI132 / 2-WAY SUMITOMO 90 / BROWN
IGNITION COIL (AJ16 3)	PI133 / 2-WAY SUMITOMO 90 / BROWN
IGNITION COIL (AJ16 4)	PI134 / 2-WAY SUMITOMO 90 / BROWN
IGNITION COIL (AJ16 5)	Pi135 / 2-WAY SUMITOMO 90 / BROWN
IGNITION COIL (AJ16 6)	PI136 / 2-WAY SUMITOMO 90 / BROWN
IATS: INTAKE AIR TEMPERATURE SENSOR (AJ16)	PI106 / 2-WAY JUNIOR TIMER / BLACK
KS: KNOCK SENSOR (A)	PI108 / 2-WAY JUNIOR TIMER / BLACK
KS: KNOCK SENSOR (B)	PI109 / 2-WAY JUNIOR TIMER / BLACK
MAFS: MASS AIR FLOW SENSOR	PI116 / 3-WAY JUNIOR TIMER / BLACK
SECONDARY AIR INJECTION PUMP	PI115 / 3-WAY PACKARD / BLACK
TPS: THROTTLE POSITION SENSOR (AJ16)	PI118 / 3-WAY JUNIOR TIMER / BLACK

Location / Access

THROTTLE BODY

ENGINE RH SIDE RH REAR UNDER FLOOR PANEL ENGINE TIMING COVER EMS HARNESS / SECONDARY AIR INJECTION PUMP INTAKE MANIFOLD RH 'A' POST / 'A' POST TRIM ENGINE THERMOSTAT HOUSING BELOW LH FRONT RELAYS FUEL RAIL, INTAKE MANIFOLD FUEL RAIL, INTAKE MANIFOLD FUEL BAIL, INTAKE MANIFOLD FUEL RAIL, INTAKE MANIFOLD FUEL RAIL, INTAKE MANIFOLD FUEL RAIL, INTAKE MANIFOLD FUEL TANK / FUEL TANK TRIM FUEL TANK EVAPORATIVE FLANGE EXHAUST, DOWNSTREAM OF PRIMARY CATALYST EXHAUST, DOWNSTREAM OF PRIMARY CATALYST EXHAUST, UPSTREAM OF PRIMARY CATALYST EXHAUST, UPSTREAM OF PRIMARY CATALYST THROTTLE BODY CAMSHAFT COVER CAMSHAFT COVER CAMSHAFT COVER CAMSHAFT COVER CAMSHAFT COVER CAMSHAFT COVER ENGINE AIR INTAKE ELBOW ENGINE BLOCK, LH FRONT ENGINE BLOCK, LH REAR ENGINE AIR INTAKE ENGINE, LH FRONT

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
ECM CONTROLLED RELAY (AJ16)	BLACK	PI119 / BLACK	RH ENGINE BAY RELAYS
FUEL PUMP RELAY (1)	BROWN	BT26 / BROWN	TRUNK ELECTRICAL CARRIER
SECONDARY AIR INJECTION RELAY (AJ16)	BLACK	PI146 / BLACK	RH ENGINE BAY RELAYS

Connector / Type / Color

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BT4	THROUGH-PANEL (48 MICRO / 6) / BLACK	ABOVE FUEL TANK / FUEL TANK TRIM
CV1	6-WAY MULTILOCK 070 / WHITE	LH REAR INNER FENDER / TRUNK TRIM
CV3	4-WAY MULTILOCK 040 / BLACK	ABOVE FUEL TANK / FUEL TANK TRIM
PI1	13-WAY ECONOSEAL III LC / WHITE	REARWARD OF RH HEADLAMP
PI61	13-WAY ECONOSEAL III LC / BLACK	REARWARD OF RH HEADLAMP
PI63	20-WAY MULTILOCK 040 / BLACK	RH 'A' POST / 'A' POST TRIM
PI161	6-WAY MULTILOCK 070 / WHITE	RH 'A' POST / 'A' POST TRIM
RS3	THROUGH-PANEL (48 MICRO / 6) / BROWN	RH 'A' POST / 'A' POST PANEL

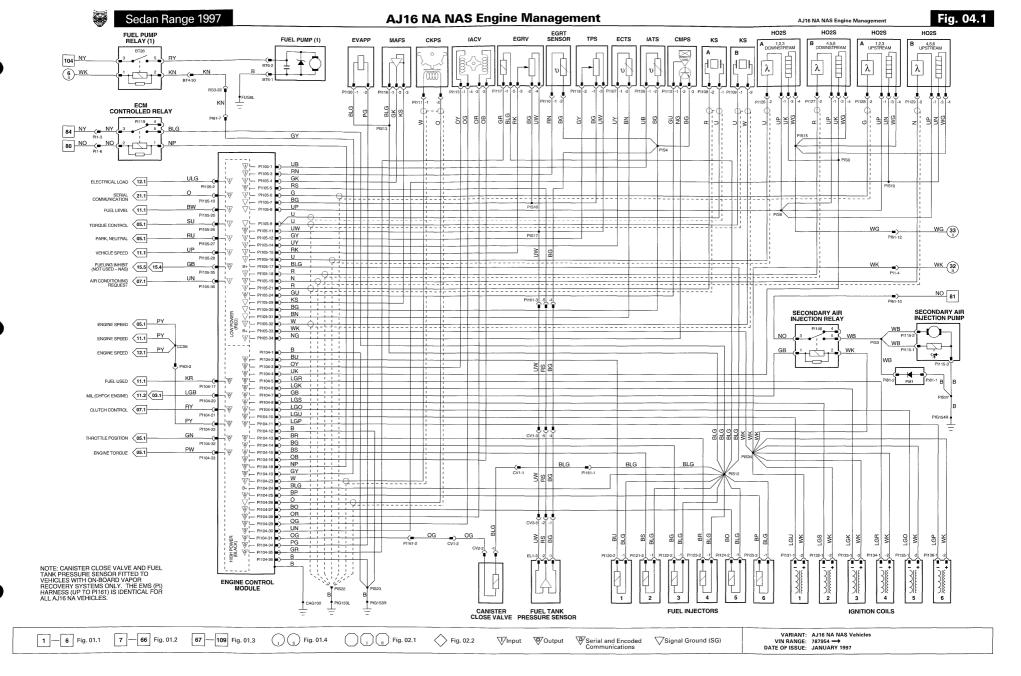
GROUNDS

Ground	Location / Type
CAG100	RH 'A' POST GROUND STUD
FUG8L	FRONT TRUNK GROUND STUD
PIG153L	RH BULKHEAD GROUND STUD
PIG153R	RH BULKHEAD GROUND STUD
PIG154R	LEFT FORWARD GROUND STU

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



ENGINE CONTROL MODULE (AJ16)

∇	Pin	Description	Active	Inactive
0	PI104-2	INJECTOR 1	GROUND PULSE, 2 8 MS @ IDLE	B+
0	PI104-3	IDLE SPEED CONTROL 1	12 V, 0 V	8 V (NOT MOVING)
0	PI104-4	HO2S HEATERS	0 4 - 13 V, 10 Hz @ IDLE	
0	PI104-5	IGNITION COIL 4	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI104-6	IGNITION COIL 3	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI104-7	SECONDARY AIR INJECTION RELAY	GROUND	B+
0	PI104-8	IGNITION COIL 2	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI104-9	IGNITION COIL 5	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI104-10	IGNITION COIL 1	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI104-11	IGNITION COIL 6	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI104-13	INJECTOR 4	GROUND PULSE, 2 8 MS @ IDLE	B+
0	PI104-14	INJECTOR 3	GROUND PULSE, 2 8 MS @ IDLE	B+
0	P1104-15	INJECTOR 2	GROUND PULSE, 2 8 MS @ IDLE	B+
0	P1104-16	IDLE SPEED CONTROL 4	12 V, 0 V	8 V (NOT MOVING)
0	P1104-17	FUEL USED	GROUND PULSE, 6 Hz @ IDLE	
0	PI104-18	ECM CONTROLLED RELAY	GROUND	B+
0	PI104-19	FUEL PUMP RELAY 1	GROUND	B+
0	PI104-20	CHECK ENGINE MIL	GROUND	B+
0	PI104-21	AIR CONDITIONING CLUTCH RELAY	GROUND	B+
0	Pi104-22	ENGINE SPEED SIGNAL	5 V @ 1000 RPM = 45 Hz, 2000 RPM = 90 Hz	
1	PI104-23	CRANKSHAFT POSITION SENSOR	GROUND @ 1000 RPM = 900 Hz, 2000 RPM = 1800 Hz	
0	PI104-25	INJECTOR 6	GROUND PULSE, 2 8 MS @ IDLE	B+
SG	PI104-26	CRANKSHAFT POSITION SENSOR GROUND	GROUND	GROUND
0	PI104-27	INJECTOR 5	GROUND PULSE, 2 8 MS @ IDLE	B+
0	PI104-28	IDLE SPEED CONTROL 3	12 V, 0 V	8 V (NOT MOVING)
0	PI104-29	IDLE SPEED CONTROL 2	12 V, 0 V	8 V (NOT MOVING)
0	PI104-32	THROTTLE POSITION	1 25 V @ IDLE	4 9 V @ FULL THROTTLE
0	PI104-33	ENGINE TORQUE	10 4 V (NO LOAD), DECREASING WITH LOAD INCREASE	
0	PI104-34	EVAPORATIVE EMISSION CONTROL VALVE	B+	GROUND
	PI105-1	INTAKE AIR TEMPERATURE SENSOR	0.98 V @ 10° C, DECREASING WITH TEMPERATURE	
	PI105-2	ELECTRICAL LOAD: HEATED WINDSHIELD, HEATED BACKLIGHT,	B+	GROUND
,	F1105-2	OR BLOWERS ON HIGH SPEED		dilodilo
1	PI105-4	MASS AIR FLOW SENSOR	1 2 V @ IDLE, INCREASES WITH RPM INCREASE	
SG	P1105-7	SENSOR COMMON REFERENCE GROUND	GROUND	GROUND
SG	PI105-8	HO2S COMMON SIGNAL GROUND	GROUND	GROUND
SG	PI105-9	KNOCK SENSORS COMMON REFERENCE GROUND	GROUND	GROUND
D	PI105-10	SERIAL COMMUNICATION (BI-DIRECTIONAL)		
0	PI105-11	SENSOR COMMON REFERENCE VOLTAGE	5 V	5 V
1	PI105-12	THROTTLE POSITION SENSOR FEEDBACK	0 6 V @ IDLE	4 9 V = FULL THROTTLE
i	PI105-14	ENGINE COOLANT TEMPERATURE SENSOR	0 41 V @ 90° C, DECREASING WITH TEMPERATURE INCREASE	
1	PI105-16	HO2S FEEDBACK - CYLINDERS 1, 2, 3	0 1 - 4 7 V @ IDLE (SWING)	
1	PI105-18	HO2S FEEDBACK - CYLINDERS 4, 5, 6	0 1 - 4 7 V @ IDLE (SWING)	
i	PI105-20	LOW FUEL LEVEL	GROUND	B+
1	PI105-21	KNOCK SENSOR - A BANK	0 Hz = NO KNOCK, 2 - 20 Hz = KNOCK	
0	PI105-24	CAMSHAFT POSITION SENSOR SUPPLY	B+	B+
i	PI105-26	TORQUE REDUCTION REQUEST	GROUND PULSE @ SHIFT	9 4 V @ IDLE
1	PI105-27	PARK / NEUTRAL	GROUND	B+
i	PI105-28	VEHICLE SPEED	GROUND PULSE @ 10 MPH (16 KPH) = 20 Hz, 20 MPH (32 KPH) = 40 Hz	
SG	PI105-29	MASS AIR FLOW SENSOR GROUND	GROUND	GROUND
SG	PI105-30	SENSOR COMMON SIGNAL GROUND	GROUND	GROUND
SG	PI105-31	ENGINE COOLANT TEMPERATURE SENSOR GROUND	GROUND	GROUND
1	PI105-32	KNOCK SENSOR B BANK	0 Hz = NO KNOCK, 2 - 20 Hz = KNOCK	
i	PI105-34	CAMSHAFT POSITION SENSOR SIGNAL	1000 RPM = 45 Hz, 2000 RPM = 90 Hz	
D	PI105-35	FUELING INHIBIT SIGNAL	ENCODED COMMUNICATIONS	
ī	PI105-36	AIR CONDITIONING REQUEST	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

ı	Input	B+	Battery voltage
0	Output	V	Voltage (DC)
SG	Signal Ground	Hz	Frequency
D	Serial and encoded communications	KHz	Frequency x 1000
		MS	Milliseconds
		MV	Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 04.2

COMPONENTS Component

CMPS: CAMSHAFT POSITION SENSOR (AJ16) PI112 / 3-WAY JUNIOR TIMER / BLACK CATALYST SWITCHING MODULE PI155 / 8-WAY MULTILOCK 070 / WHITE CATALYST THERMOCOUPLES PI156 (FLY LEAD) / 4-WAY ECONOSEAL III LC / BLACK CKPS: CRANKSHAFT POSITION SENSOR PI111 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK DIODE (PI81) - AIRP SOLENOID SUPPRESSION PI81 / DIODE / BLACK ENGINE CONTROL MODULE (AJ16) PI104 / 36-WAY ECONOSEAL III / BLACK PI105 / 36-WAY FCONOSEAL III / DED ECTS: ENGINE COOLANT TEMPERATURE SENSOR (AJ16) PI107 / 2-WAY JUNIOR TIMER / BLACK EVAPP: EVAPORATIVE EMISSION CONTROL VALVE (AJ16) PI130 / 2-WAY JUNIOR TIMER / BI ACK FUEL INJECTOR (AJ16.1) PI120 / 2-WAY JUNIOR TIMER / SI ATE FUEL INJECTOR (AJ16.2) PI121 / 2-WAY JUNIOR TIMER / SLATE FUEL INJECTOR (AJ16.3) PI122 / 2-WAY JUNIOR TIMER / SLATE FUEL INJECTOR (AJ16 4) PI123 / 2-WAY JUNIOR TIMER / SLATE FUEL INJECTOR (AJ16 5) PI124 / 2-WAY JUNIOR TIMER / SLATE FUEL INJECTOR (AJ16 6) PI125 / 2-WAY JUNIOR TIMER / SLATE FUEL PUMP (1) BT6 (FLY LEAD) / 4-WAY SUMITOMO 90 / NATURAL HO2S: HEATED OXYGEN SENSOR (AJ16 = 1,2,3) PI126 (FLY LEAD) / 4-WAY ECONOSEAL III LC / BLACK HO2S: HEATED OXYGEN SENSOR (AJ16 - 4,5,6) PI127 (FLY LEAD) / 4-WAY ECONOSEAL III LC / BLACK IACV: IDLE AIR CONTROL VALVE (AJ16) PI113 / 4-WAY PACKARD / BLACK IGNITION COIL (AJ16 1) PI131 / 2-WAY SUMITOMO 90 / BROWN IGNITION COIL (AJ16 2) PI132 / 2-WAY SUMITOMO 90 / BROWN IGNITION COIL (AJ16 3) PI133 / 2-WAY SUMITOMO 90 / BROWN IGNITION COIL (AJ16 4) PI134 / 2-WAY SUMITOMO 90 / BROWN IGNITION COIL (AJ16 5) PI135 / 2-WAY SUMITOMO 90 / BROWN IGNITION COIL (AJ16 6) PI136 / 2-WAY SUMITOMO 90 / BROWN IATS: INTAKE AIR TEMPERATURE SENSOR (AJ16) PI106 / 2-WAY JUNIOR TIMER / BLACK PI108 / 2-WAY JUNIOR TIMER / BLACK KS: KNOCK SENSOR (A) KS: KNOCK SENSOR (B) PI109 / 2-WAY JUNIOR TIMER / BLACK MAFS: MASS AIR FLOW SENSOR PI116 / 3-WAY JUNIOR TIMER / BLACK SECONDARY AIR INJECTION PUMP PI115 / 3-WAY PACKARD / BLACK TPS: THROTTLE POSITION SENSOR (AJ16) PI118 / 3-WAY JUNIOR TIMER / BLACK

Connector / Type / Color

Location / Access

THROTTLE BODY

ENGINE RH SIDE RH 'A' POST, ECM / 'A' POST TRIM REAR OF ENGINE ENGINE TIMING COVER EMS HARNESS / SECONDARY AIR INJECTION PUMP RH 'A' POST / 'A' POST TRIM ENGINE THERMOSTAT HOUSING BELOW LH FRONT RELAYS FUEL RAIL, INTAKE MANIFOLD FUEL RAIL, INTAKE MANIFOLD FUEL RAIL INTAKE MANIFOLD FUEL BAIL INTAKE MANIFOLD FUEL BAIL. INTAKE MANIFOLD FUEL RAIL. INTAKE MANIFOLD FUEL TANK / FUEL TANK TRIM EXHAUST DOWNSTREAM OF PRIMARY CATALYST EXHAUST, DOWNSTREAM OF PRIMARY CATALYST THROTTLE BODY CAMSHAFT COVER CAMSHAFT COVER CAMSHAFT COVER CAMSHAFT COVER CAMSHAFT COVER CAMSHAFT COVER ENGINE AIR INTAKE ELBOW ENGINE BLOCK, LH FRONT ENGINE BLOCK, LH REAR ENGINE AIR INTAKE ENGINE, LH FRONT

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
ECM CONTROLLED RELAY (AJ16)	BLACK	PI119 / BLACK	RH ENGINE BAY RELAYS
FUEL PUMP RELAY (1)	BROWN	BT26 / BROWN	TRUNK ELECTRICAL CARRIER
SECONDARY AIR IN JECTION RELAY (A J16)	BLACK	PI146 / RI ACK	RH ENGINE BAY RELAYS

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BT4	THROUGH-PANEL (48 MICRO / 6) / BLACK	ABOVE FUEL TANK / FUEL TANK TRIM
PI1	13-WAY ECONOSEAL III LC / WHITE	REARWARD OF RH HEADLAMP
PI61	13-WAY ECONOSEAL III LC / BLACK	REARWARD OF RH HEADLAMP
PI63	20-WAY MULTILOCK 040 / BLACK	RH 'A' POST / 'A' POST TRIM
RS3	THROUGH-PANEL (48 MICRO / 6) / BROWN	RH 'A' POST / 'A' POST PANEL

GROUNDS

arouna -	Location / Type
AG100	RH 'A' POST GROUND STUD
UG8L	FRONT TRUNK GROUND STUD
1G153L	RH BULKHEAD GROUND STUD
1G153R	RH BULKHEAD GROUND STUD
'IG154L	LEFT FORWARD GROUND STUI
1G154R	LEFT FORWARD GROUND STUI

Landing (Toma

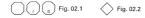
CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.











ENGINE CONTROL MODULE (AJ16)

∇	Pin	Description	Active	Inactive
0	PI104-2	INJECTOR 1	GROUND PULSE, 2 8 MS @ IDLE	B+
o	PI104-3	IDLE SPEED CONTROL 1	12 V, 0 V	8 V (NOT MOVING)
0	Pl104-4	DOWNSTREAM HO2S HEATERS	0 4 - 13 V, 10 Hz @ IDLE	
0	PI104-5	IGNITION COIL 4	GROUND PULSE, 1000 RPM = 15 Hz	
o	PI104-6	IGNITION COIL 3	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI104-7	SECONDARY AIR INJECTION RELAY	GROUND	B+
0	PI104-8	IGNITION COIL 2	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI104-9	IGNITION COIL 5	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI104-10	IGNITION COIL 1	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI104-11	IGNITION COIL 6	GROUND PULSE, 1000 RPM = 15 Hz	
o	PI104-13	INJECTOR 4	GROUND PULSE, 2 8 MS @ IDLE	B+
0	PI104-14	INJECTOR 3	GROUND PULSE, 2 8 MS @ IDLE	B+
ō	PI104-15	INJECTOR 2	GROUND PULSE, 2 8 MS @ IDLE	B+
0	PI104-16	IDLE SPEED CONTROL 4	12 V, 0 V	8 V (NOT MOVING)
0	PI104-17	FUEL USED	GROUND PULSE, 6 Hz @ IDLE	
o	PI104-18	ECM CONTROLLED RELAY	GROUND	B+
0	PI104-19	FUEL PUMP RELAY 1	GROUND	B+
ō	PI104-20	CHECK ENGINE MIL	GROUND	B+
0	PI104-21	AIR CONDITIONING CLUTCH RELAY	GROUND	B+
0	P1104-22	ENGINE SPEED SIGNAL	5 V @ 1000 RPM = 45 Hz, 2000 RPM = 90 Hz	
i i	PI104-23	CRANKSHAFT POSITION SENSOR	GROUND @ 1000 RPM = 900 Hz, 2000 RPM = 1800 Hz	
0	PI104-25	INJECTOR 6	GROUND PULSE, 2 8 MS @ IDLE	B+
SG	PI104-26	CRANKSHAFT POSITION SENSOR GROUND	GROUND	GROUND
0	PI104-27	INJECTOR 5	GROUND PULSE, 2 8 MS @ IDLE	B+
0	PI104-28	IDLE SPEED CONTROL 3	12 V, 0 V	8 V (NOT MOVING)
0	PI104-29	IDLE SPEED CONTROL 2	12 V, 0 V	8 V (NOT MOVING)
o	PI104-30	UPSTREAM HO2S HEATERS	0 4 13 V, 10 Hz @ IDLE	
0	PI104-32	THROTTLE POSITION	1 25 V @ IDLE	4 9 V @ FULL THROTTLE
0	PI104-33	ENGINE TORQUE	10 4 V (NO LOAD), DECREASING WITH LOAD INCREASE	
o	PI104-34	EVAPORATIVE EMISSION CONTROL VALVE	B+	GROUND
0	PI104-35	EGR VALVE SOLENOID	0 1 – 9 V	
1	PI105-1	INTAKE AIR TEMPERATURE SENSOR	0 98 V @ 10° C, DECREASING WITH TEMPERATURE	
- 1	PI105-2	ELECTRICAL LOAD: HEATED WINDSHIELD, HEATED BACKLIGHT, OR BLOWERS ON HIGH SPEED	B÷	GROUND
1	PI105-3	EGR TEMPERATURE SENSOR	4.9 V @ IDLE (NO EGR), DECREASES WITH EGR FLOW INCREASE	
- 1	PI105-4	MASS AIR FLOW SENSOR	1 2 V @ IDLE, INCREASES WITH RPM INCREASE	
- 1	PI105-6	UPSTREAM H02S FEEDBACK - CYLINDERS 1, 2, 3	0 1 - 4 7 V @ IDLE (SWING)	
SG	PI105-7	SENSOR COMMON REFERENCE GROUND	GROUND	GROUND
SG	PI105-8	HO2S COMMON SIGNAL GROUND	GROUND	GROUND
SG	PI105-9	KNOCK SENSORS COMMON REFERENCE GROUND	GROUND	GROUND
D	PI105-10	SERIAL COMMUNICATION (BI-DIRECTIONAL)		
0	PI105-11	SENSOR COMMON REFERENCE VOLTAGE	5 V	5 V
1	PI105-12	THROTTLE POSITION SENSOR FEEDBACK	0 6 V @ IDLE	49 V = FULL THROTTLE
1	PI105-14	ENGINE COOLANT TEMPERATURE SENSOR	0 41 V @ 90° C, DECREASING WITH TEMPERATURE INCREASE	
1	PI105-15	EGR VALVE POSITION FEEDBACK	0 7 V @ IDLE (NO EGR)	5 V = MAXIMUM EGR
1	PI105-16	DOWNSTREAM HO2S FEEDBACK - CYLINDERS 1, 2, 3	0 1 – 4 7 V @ IDLE (SWING)	
1	PI105-18	DOWNSTREAM HO2S FEEDBACK - CYLINDERS 4, 5, 6	0 1 - 4 7 V @ IDLE (SWING)	
1	PI105-19	UPSTREAM H02S FEEDBACK - CYLINDERS 4, 5, 6	0 1 - 4 7 V @ IDLE (SWING)	
1	PI105-20	LOW FUEL LEVEL	GROUND	B+
1	PI105-21	KNOCK SENSOR – A BANK	0 Hz = NO KNOCK, 2 - 20 Hz = KNOCK	
0	PI105-24	CAMSHAFT POSITION SENSOR SUPPLY	B+	B+
- 1	PI105-26	TORQUE REDUCTION REQUEST	GROUND PULSE @ SHIFT	9 4 V @ IDLE
1	PI105-27	PARK / NEUTRAL	GROUND	B+
1	PI105-28	VEHICLE SPEED	GROUND PULSE @ 10 MPH (16 KPH) = 20 Hz, 20 MPH (32 KPH) = 40 Hz	
SG	PI105-29	MASS AIR FLOW SENSOR GROUND	GROUND	GROUND
SG	PI105-30	SENSOR COMMON SIGNAL GROUND	GROUND	GROUND
SG	PI105-31	ENGINE COOLANT TEMPERATURE SENSOR GROUND	GROUND	GROUND
1	PI105-32	KNOCK SENSOR - B BANK	0 Hz = NO KNOCK, 2 - 20 Hz = KNOCK	
1	PI105-34	CAMSHAFT POSITION SENSOR SIGNAL	1000 RPM = 45 Hz, 2000 RPM = 90 Hz	
D	PI105-35	FUELING INHIBIT SIGNAL	ENCODED COMMUNICATIONS	
1	PI105-36	AIR CONDITIONING REQUEST	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

0	Input Output	٧	Battery voltage Voltage (DC)
SG	Signal Ground		Frequency
D	Serial and encoded communications		Frequency x 1000
		MS	Milliseconds
		MV	Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component	Connector / Type / Color	Location / Access
CMPS: CAMSHAFT POSITION SENSOR (AJ16)	PI112 / 3-WAY JUNIOR TIMER / BLACK	ENGINE RH SIDE
CKPS: CRANKSHAFT POSITION SENSOR	PI111 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK	ENGINE TIMING COVER
DIODE (PI81) - AIRP SOLENOID SUPPRESSION	PIB1 / DIODE / BLACK	EMS HARNESS / SECONDARY AIR INJECTION PUMP
EGRT SENSOR: EGR TEMPERATURE SENSOR	PI110 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK	INTAKE MANIFOLD
EGRV: EGR VALVE	PI117 / 5-WAY PACKARD / BLACK	INTAKE MANIFOLD
ENGINE CONTROL MODULE (AJ16)	PI104 / 36-WAY ECONOSEAL III / BLACK PI105 / 36-WAY ECONOSEAL III / RED	RH 'A' POST / 'A' POST TRIM
ECTS; ENGINE COOLANT TEMPERATURE SENSOR (AJ16)	P1107 / 2-WAY JUNIOR TIMER / BLACK	ENGINE THERMOSTAT HOUSING
EVAPP: EVAPORATIVE EMISSION CONTROL VALVE (AJ16)	PI130 / 2-WAY JUNIOR TIMER / BLACK	BELOW LH FRONT RELAYS
FUEL INJECTORS (AJ16 1)	PI120 / 2-WAY JUNIOR TIMER / SLATE	FUEL RAIL, INTAKE MANIFOLD
FUEL INJECTORS (AJ16 2)	PI121 / 2-WAY JUNIOR TIMER / SLATE	FUEL RAIL, INTAKE MANIFOLD
FUEL INJECTORS (AJ16 3)	PI122 / 2-WAY JUNIOR TIMER / SLATE	FUEL RAIL, INTAKE MANIFOLD
FUEL INJECTOR (AJ16 4)	PI123 / 2-WAY JUNIOR TIMER / SLATE	FUEL RAIL, INTAKE MANIFOLD
FUEL INJECTOR (AJ16 5)	PI124 / 2-WAY JUNIOR TIMER / SLATE	FUEL RAIL, INTAKE MANIFOLD
FUEL INJECTOR (AJ16 6)	PI125 / 2-WAY JUNIOR TIMER / SLATE	FUEL RAIL, INTAKE MANIFOLD
FUEL PUMP (1)	BT6 (FLY LEAD) / 4-WAY SUMITOMO 90 / NATURAL	FUEL TANK / FUEL TANK TRIM
FUEL PUMP (2)	BT6 (FLY LEAD) / 4-WAY SUMITOMO 90 / NATURAL	FUEL TANK / FUEL TANK TRIM
FUEL PUMP CONTROL MODULE	FU3 / RELAY CONNECTOR / BLACK	TRUNK, RH FRONT / TRUNK TRIM
HO2S: HEATED OXYGEN SENSOR (AJ16 - 1,2,3 DOWNSTREAM)	PI126 (FLY LEAD) / 4-WAY ECONOSEAL III LC / BLACK	EXHAUST, DOWNSTREAM OF PRIMARY CATALYST
HO2S: HEATED OXYGEN SENSOR (AJ16 ~ 4,5,6 DOWNSTREAM)	PI127 (FLY LEAD) / 4-WAY ECONOSEAL III LC / BLACK	EXHAUST, DOWNSTREAM OF PRIMARY CATALYST
HO2S: HEATED OXYGEN SENSOR (AJ16 - 1,2,3 UPSTREAM)	PI128 (FLY LEAD) / 4-WAY ECONOSEAL III LC / BLACK	EXHAUST, UPSTREAM OF PRIMARY CATALYST
HO2S: HEATED OXYGEN SENSOR (AJ16 - 4,5,6 UPSTREAM)	PI129 (FLY LEAD) / 4-WAY ECONOSEAL III LC / BLACK	EXHAUST, UPSTREAM OF PRIMARY CATALYST
IACV: IDLE AIR CONTROL VALVE (AJ16)	PI113 / 4-WAY PACKARD / BLACK	THROTTLE BODY
IGNITION COIL (AJ16 1)	PI131 / 2-WAY SUMITOMO 90 / BROWN	CAMSHAFT COVER
IGNITION COIL (AJ16 2)	PI132 / 2-WAY SUMITOMO 90 / BROWN	CAMSHAFT COVER
IGNITION COIL (AJ16 3)	PI133 / 2-WAY SUMITOMO 90 / BROWN	CAMSHAFT COVER
IGNITION COIL (AJ16 4)	PI134 / 2-WAY SUMITOMO 90 / BROWN	CAMSHAFT COVER
IGNITION COIL (AJ16 5)	PI135 / 2-WAY SUMITOMO 90 / BROWN	CAMSHAFT COVER
IGNITION COIL (AJ16 6)	PI136 / 2-WAY SUMITOMO 90 / BROWN	CAMSHAFT COVER
IATS: INTAKE AIR TEMPERATURE SENSOR (AJ16)	PI106 / 2-WAY JUNIOR TIMER / BLACK	ENGINE AIR INTAKE ELBOW
KS: KNOCK SENSOR (A)	PI108 / 2-WAY JUNIOR TIMER / BLACK	ENGINE BLOCK, LH FRONT
KS: KNOCK SENSOR (B)	PI109 / 2-WAY JUNIOR TIMER / BLACK	ENGINE BLOCK, LH REAR
MAFS: MASS AIR FLOW SENSOR	PI116 / 3-WAY JUNIOR TIMER / BLACK	ENGINE AIR INTAKE
SECONDARY AIR INJECTION PUMP	PI115 / 3-WAY PACKARD / BLACK	ENGINE, LH FRONT
TPS: THROTTLE POSITION SENSOR (AJ16)	PI118 / 3-WAY JUNIOR TIMER / BLACK	THROTTLE BODY

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
FUEL PUMP RELAY (1)	BROWN	BT26 / BROWN	TRUNK ELECTRICAL CARRIER
FUEL PUMP RELAY (2)	BLUE	FU2/ YELLOW	BATTERY COVER
ECM CONTROLLED RELAY (AJ16)	BLACK	PI119 / BLACK	RH ENGINE BAY RELAYS
SECONDARY AIR INJECTION RELAY (AJ16)	BLACK	PI146 / BLACK	RH ENGINE BAY RELAYS

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BT4	THROUGH-PANEL (48 MICRO / 6) / BLACK	ABOVE FUEL TANK / FUEL TANK TRIM
CC4	14-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FU1	6-WAY MULTILOCK 070 / WHITE	FUEL TANK TRIM / BATTERY COVER
PI1	13-WAY ECONOSEAL III LC / WHITE	REARWARD OF RH HEADLAMP
PI61	13-WAY ECONOSEAL III LC / BLACK	REARWARD OF RH HEADLAMP
PI63	20-WAY MULTILOCK 040 / BLACK	RH 'A' POST / 'A' POST TRIM
RS3	THROUGH-PANEL (48 MICRO / 6) / BROWN	RH 'A' POST / 'A' POST PANEL

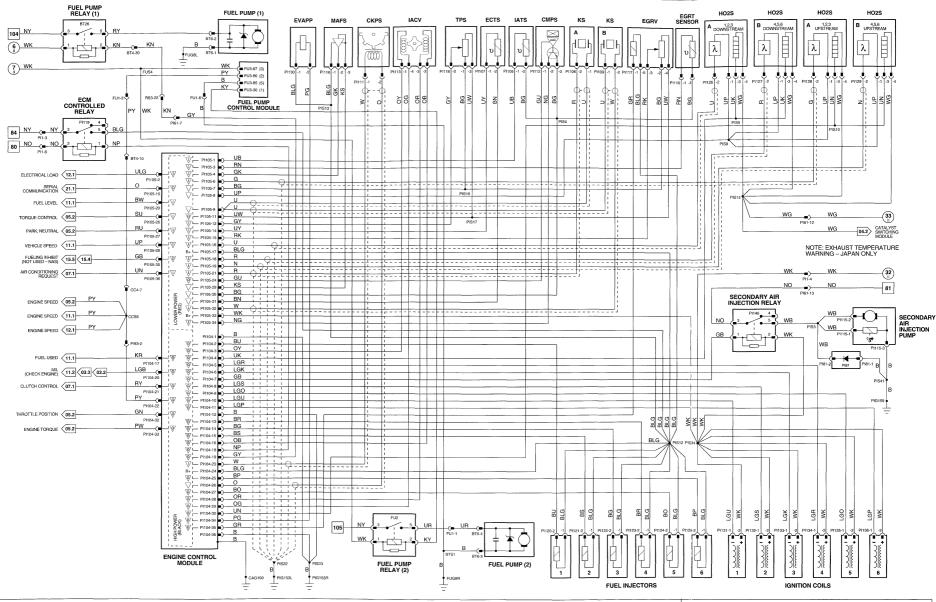
GROUNDS

Ground	Location / Type
CAG100	RH 'A' POST GROUND STUD
FUG8L	FRONT TRUNK GROUND STUD
FUG8R	FRONT TRUNK GROUND STUD
PIG153L	RH BULKHEAD GROUND STUD
PIG153R	RH BULKHEAD GROUND STUD
PIG 159	RIGHT FORWARD EMS GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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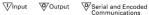














VARIANT: XJR Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

ENGINE CONTROL MODULE (V12)

∇	Pin	Description	Active	Inactive
1	P144-26	FLEXIBLE FUEL SELECT LINK (DEALER FIT)	GROUND (FITTED)	B+
1	PI45-1	MAP SENSOR FEEDBACK - B BANK	17 V @ IDLE, INCREASING WITH MANIFOLD ABSOLUTE PRESSURE	
1	PI45-2	MAP SENSOR FEEDBACK - A BANK	1 7 V @ IDLE, INCREASING WITH MANIFOLD ABSOLUTE PRESSURE	
1	PI45-3	IDLE SWITCH	GROUND	B+
1	PI45-4	THROTTLE POSITION SENSOR FEEDBACK VOLTAGE	0 58 V @ IDLE, 4 75 V @ FULL THROTTLE	
1	P145-5	COOLANT TEMPERATURE SENSOR	0 41 V @ 90° C, DECREASING WITH TEMPERATURE	
1	PI45-6	INTAKE AIR TEMPERATURE SENSOR	0 59 V @ 10° C, DECREASING WITH TEMPERATURE	
0	PI45-7	COMMON SENSOR REFERENCE VOLTAGE	5 V	5 V
1	PI45-10	UPSTREAM HO2S FEEDBACK - B BANK	0 1 - 0 8 V (SWING)	
1	PI45-11	UPSTREAM HO2S FEEDBACK - A BANK	0 1 ~ 0 8 V (SWING)	
SG	P145-15	COMMON SENSOR SHIELD GROUND	GROUND	GROUND
SG	PI45-16	COMMON SENSOR REFERENCE GROUND	GROUND	GROUND
0	PI46-5	UPSTREAM HO2S HEATER GROUND - B BANK	GROUND	B+
0	PI46-6	UPSTREAM HO2S HEATER GROUND - A BANK	GROUND	B+
1	PI46-8	CAMSHAFT POSITION SENSOR	GROUND PULSE @ 1000 RPM = 8 Hz, 2000 RPM = 16 Hz	
SG	PI46-12	CAMSHAFT POSITION SENSOR	GROUND	GROUND
1	PI46-13	CRANKSHAFT POSITION SENSOR	GROUND PULSE @ 1000 RPM = 15 Hz, 2000 RPM = 30 Hz	
1	PI46-14	ENGINE SPEED SENSOR	GROUND PULSE @ 1000 RPM = 175 Hz, 2000 RPM = 350 Hz	
SG	PI46-18	CRANKSHAFT POSITION SENSOR	GROUND	GROUND
SG	PI46-19	ENGINE SPEED SENSOR	GROUND	
0	P147-1	IDLE AIR CONTROL VALVE CLOSE - B BANK	48 V @ IDLE	
0	P147-2	IDLE AIR CONTROL VALVE OPEN B BANK	9 8 V @ IDLE	
0	PI47-3	IDLE AIR CONTROL VALVE CLOSE - A BANK	48 V @ IDLE	
0	P147-4	IDLE AIR CONTROL VALVE OPEN - A BANK	9 8 V @ IDLE	
0	PI47-12	FUEL PUMP RELAY 2	GROUND	B+
0	P147-29	FUEL PUMP RELAY 1	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

B+ Battery voltage Input O Output Voltage (DC) SG Signal Ground Hz Frequency D Serial and encoded communications KHz Frequency x 1000 MS Milliseconds MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Connector / Type / Color Component PI3 (FLY LEAD) / 2-WAY ECONOSEAL J2 / BLACK CMPS: CAMSHAFT POSITION SENSOR (V12) CATALYST SWITCHING MODULE PI155 / 8-WAY MULTILOCK 070 / WHITE CATALYST THERMOCOUPLES PI156 (FLY LEAD) / 4-WAY ECONOSEAL III LC / BLACK CKPS: CRANKSHAFT POSITION SENSOR PI2 (FLY LEAD) / 2-WAY ECONOSEAL J2 / BLACK ENGINE CONTROL MODULE (V12) PI44 / 28-WAY MULTU OCK DAD / SLATE

FCTS: ENGINE COOLANT TEMPERATURE SENSOR (V12) PI5 / 2-WAY ECONOSEAL J2 / SLATE RPM SENSOR: ENGINE SPEED SENSOR

EUEL PUMP 1 FLIFE PLIMP 2 HO2S: HEATED OXYGEN SENSOR (V12 A BANK) HO2S: HEATED OXYGEN SENSOR (V12 B BANK) IACV- IDLE AIR CONTROL VALVE (V12 A BANK) IACV: IDLE AIR CONTROL VALVE (V12 B BANK) IATS: INTAKE AIR TEMPERATURE SENSOR (V12) MAPS: MANIFOLD ABSOLUTE PRESSURE SENSOR (V12 A BANK) PI9 / 3-WAY SUMITOMO 90 / RI ACK MAPS: MANIFOLD ABSOLUTE PRESSURE SENSOR (V12 B BANK) PI50 / 3-WAY SUMITOMO 90 / BLACK

PI45 / 16-WAY MULTILOCK 040 / SLATE PI46 / 22-WAY MULTILOCK 040 / SLATE PI47 / 34-WAY MULTILOCK 040 / SLATE PI23 (FLY LEAD) / 2-WAY ECONOSEAL J2 / BLACK BT6 (FLY LEAD) / 4-WAY SUMITOMO 90 / NATURAL BT6 (FLY LEAD) / 4-WAY SUMITOMO 90 / NATURAL PI25 (FLY LEAD) / 4-WAY SUMITOMO 90 / SI ATF PI27 (FLY LEAD) / 4-WAY SUMITOMO 90 / SLATE PI29 / 3-WAY SUMITOMO 90/ SLATE PI30 / 3-WAY SUMITOMO 90/ SLATE PI6 / 2-WAY JUNIOR TIMER / RLACK

Location / Access

A BANK CAMSHAFT COVER RH 'A' POST, ECM / 'A' POST TRIM REAR OF ENGINE ENGINE TIMING COVER RH 'A' POST/ 'A' POST TRIM

B BANK THERMOSTAT HOUSING ENGINE VEE, REAR FUEL TANK / FUEL TANK TRIM FUEL TANK / FUEL TANK TRIM A BANK EXHAUST, DOWNSTREAM OF PRIMARY CATALYST B BANK EXHAUST, DOWNSTREAM OF PRIMARY CATALYST A BANK THROTTLE BODY B BANK THROTTLE BODY A BANK AIR INTAKE A BANK INTAKE MANIFOLD, REAR B BANK INTAKE MANIEOLD BEAR THROTTLE TURNTABLE

RELAYS

BT4

FU1

PI1

PI61

PI73

RS3

TPS: THROTTLE POSITION SENSOR (V12)

Relay Color / Stripe Connector / Color Location / Access TRUNK ELECTRICAL CARRIER FUEL PUMP RELAY 1 BROWN BT26 / BROWN FUEL PUMP RELAY 2 BROWN FU2 / BROWN BATTERY COVER

PI7 / 4-WAY ECONOSEAL J / BLACK

HARNESS-TO-HARNESS CONNECTORS

Connector Type / Color Location / Access THROUGH-PANEL (48 MICRO / 6) / BLACK ABOVE FUEL TANK / FUEL TANK TRIM 6-WAY MULTILOCK 070 / WHITE FUEL TANK TRIM / BATTERY COVER 13-WAY ECONOSEAL III LC / WHITE REARWARD OF BH HEAD! AMP 13-WAY ECONOSEAL III LC / BLACK REARWARD OF RH HEADLAME 2-WAY MULTILOCK 070 / YELLOW RH 'A' POST/ 'A' POST TRIM THROUGH-PANEL (48 MICRO / 6) / BROWN RH 'A' POST/ 'A' POST PANEL

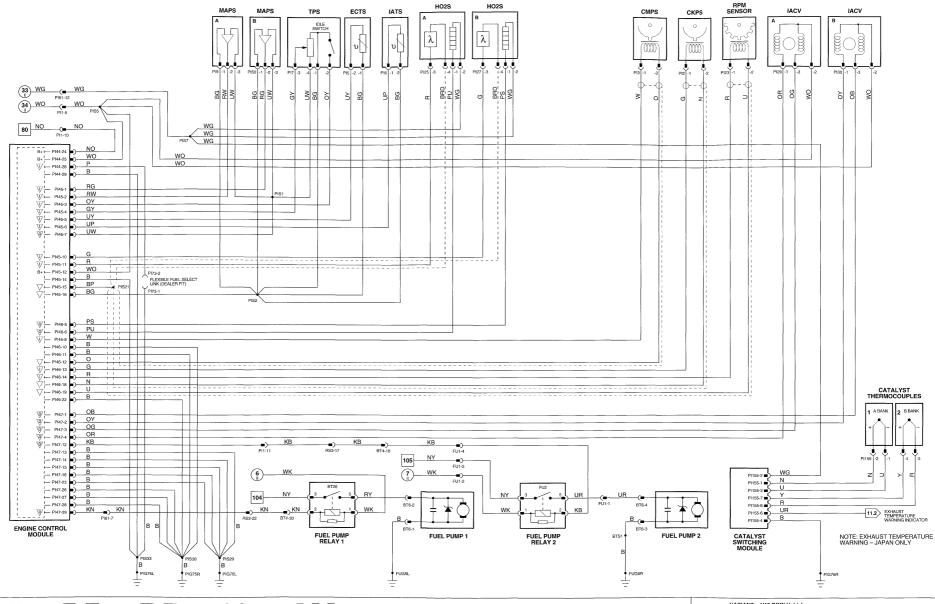
GROUNDS

Ground Location / Type FUG8L FRONT TRUNK GROUND STUD FUG8R FRONT TRUNK GROUND STUD PIG75L RH 'A' POST GROUND STUD PIG75R RH 'A' POST GROUND STUD PIG76L RH BULKHEAD GROUND STUD PIG76R RH BULKHEAD GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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Signal Ground (SG)

VARIANT: V12 ROW Vehicles VIN RANGE: 787954 ---> DATE OF ISSUE: JANUARY 1997

ENGINE CONTROL MODULE (V12)

∇	Pin	Description	Active	Inactive
0	PI44-1	FUEL USED	GROUND PULSE, 10 Hz @ IDLE	
0	PI44-2	CHECK ENGINE MIL	GROUND	B+
0	PI44-3	ENGINE TORQUE SIGNAL	11 5 V @ IDLE, DECREASING WITH TORQUE INCREASE	
0	PI44-4	THROTTLE POSITION	1 4 V @ IDLE, 9 V @ FULL THROTTLE	
0	PI44-5	LOAD INHIBIT SIGNAL	GROUND	B+
1	PI44-6	TORQUE REDUCTION	GROUND PULSE @ SHIFT	11 5 V @ IDLE
1.0	PI44-7	VEHICLE SPEED	GROUND	B+
0	PI44-10	ENGINE SPEED	5 V @ 1000 RPM = 45 Hz, 2000 RPM = 90 Hz	
- 1	PI44-12	ELECTRICAL LOAD: HEATED WINDSHIELD, HEATED BACKLIGHT, OR BLOWERS ON HIGH SPEED	GROUND	B+
- 1	PI44-13	AIR CONDITIONING REQUEST	B+	GROUND
D	PI44-14	FUELING INHIBIT SIGNAL	ENCODED COMMUNICATIONS	
1	PI44-18	PARK / NEUTRAL	GROUND	B+
1	PI44-21	FUEL LEVEL	B+	GROUND
D	PI44-22	SERIAL COMMUNICATION INPUT		
D	PI44-23	SERIAL COMMUNICATION OUTPUT		
1	P144-26	FLEXIBLE FUEL SELECT LINK (DEALER FIT)	GROUND (FITTED)	B+
1	PI45-13	POWER STEERING PRESSURE SWITCH	GROUND	B+
1	PI46-7	CRANK SIGNAL	GROUND	B+
0	PI46-16	AIR CONDITIONING CLUTCH RELAY	GROUND	B+
0	PI46-17	SECONDARY AIR INJECTION RELAY	GROUND	B+
1	PI46-20	IGNITION FAILURE - B BANK	B+	17 V
1	PI46-21	IGNITION FAILURE - A BANK	B+	17 V
0	PI47-5	FUEL INJECTORS 3 & 5 - B BANK	GROUND PULSE, 3.5 MS @ IDLE	
0	P147-6	FUEL INJECTORS 2 & 4 – A BANK	GROUND PULSE, 3 5 MS @ IDLE	
0	PI47-7	FUEL INJECTORS 1 & 4 – B BANK	GROUND PULSE, 3 5 MS @ IDLE	
0	PI47-8	FUEL INJECTORS 3 & 6 – A BANK	GROUND PULSE, 3 5 MS @ IDLE	
0	PI47-9	FUEL INJECTORS 2 & 6 – B BANK	GROUND PULSE, 3 5 MS @ IDLE	
0	PI47-10	FUEL INJECTORS 1 & 5 – A BANK	GROUND PULSE, 3 5 MS @ IDLE	
0	PI47-11	SECONDARY AIR VACUUM SOLENOID VALVE	B+	GROUND
0	PI47-17	IGNITION MODULE NEGATIVE - 3B	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI47-18	IGNITION MODULE NEGATIVE – 2B	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI47-19	IGNITION MODULE NEGATIVE - 1B	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI47-20	IGNITION MODULE NEGATIVE - 3A	GROUND PULSE, 1000 RPM = 15 Hz	
0	PI47-21	IGNITION MODULE NEGATIVE - 2A	GROUND PULSE, 1000 RPM = 15 Hz	
0	P147-22	IGNITION MODULE NEGATIVE - 1A	GROUND PULSE, 1000 RPM = 15 Hz	
0	P147-33	EVAP VALVE - B BANK	B+	GROUND
0	PI47-34	EVAP VALVE - A BANK	B+	GROUND

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 04.

COMPONENTS

Connector / Type / Color Location / Access Component EMS HARNESS / SECONDARY AIR INJECTION PUMP DIODE (PI81) - AIRP SOLENOID SUPPRESSION PI81 / DIODE / BLACK PI44 / 28-WAY MULTILOCK 040 / SLATE PI45 / 16-WAY MULTILOCK 040 / SLATE ENGINE CONTROL MODULE (V12) RH 'A' POST/ 'A' POST TRIM PI46 / 22-WAY MULTILOCK 040 / SLATE PI47 / 34-WAY MULTILOCK 040 / SLATE BELOW LH FRONT RELAYS EVAPORATIVE EMISSION CONTROL VALVE (V12 A BANK) PI18 / 2-WAY JUNIOR TIMER / BLACK BELOW LH FRONT RELAYS EVAPORATIVE EMISSION CONTROL VALVE (V12 B BANK) PI19 / 2-WAY JUNIOR TIMER / BLACK FUEL INJECTOR (V12 A BANK 1) PI32 / 2-WAY JUNIOR TIMER / SLATE FUEL RAIL, INTAKE MANIFOLD FUEL RAIL, INTAKE MANIFOLD FUEL INJECTOR (V12 A BANK 2) PI33 / 2-WAY JUNIOR TIMER / SLATE FUEL INJECTOR (V12 A BANK 3) PI34 / 2-WAY JUNIOR TIMER / SLATE FUEL BAIL, INTAKE MANIFOLD FUEL INJECTOR (V12 A BANK 4) PI35 / 2-WAY JUNIOR TIMER / SLATE FUEL RAIL, INTAKE MANIFOLD FUEL INJECTOR (V12 A BANK 5) PI36 / 2-WAY JUNIOR TIMER / SLATE FUEL RAIL, INTAKE MANIFOLD FUEL INJECTOR (V12 A BANK 6) PI37 / 2-WAY JUNIOR TIMER / SLATE FUEL RAIL, INTAKE MANIFOLD PI38 / 2-WAY JUNIOR TIMER / SLATE FUEL RAIL, INTAKE MANIFOLD FUEL INJECTOR (V12 B BANK 1) PI39 / 2-WAY JUNIOR TIMER / SLATE FUEL RAIL, INTAKE MANIFOLD FUEL INJECTOR (V12 B BANK 2) FUEL INJECTOR (V12 B BANK 3) PI40 / 2-WAY JUNIOR TIMER / SLATE FUEL RAIL, INTAKE MANIFOLD FUEL INJECTOR (V12 B BANK 4) PI41 / 2-WAY JUNIOR TIMER / SLATE FUEL RAIL, INTAKE MANIFOLD PI42 / 2-WAY JUNIOR TIMER / SLATE FUEL RAIL, INTAKE MANIFOLD FUEL INJECTOR (V12 B BANK 5) FUEL INJECTOR (V12 B BANK 6) PI43 / 2-WAY JUNIOR TIMER / SLATE FUEL RAIL, INTAKE MANIFOLD IGNITION COIL (V12 A BANK) PI12 / 4-WAY SUB-MINIATURE / BLACK ENGINE VEE PI13 / 4-WAY SUB-MINIATURE / BLACK ENGINE VEE IGNITION COIL (V12 B BANK) PI10 / 8-WAY SUMITOMO 90 / SLATE ENGINE BAY, RH INNER FENDER IGNITION MODULE (V12 A BANK) ENGINE BAY, RH INNER FENDER IGNITION MODIJI E (V12 B BANK) PI11 / 8-WAY SUMITOMO 90 / SLATE POWER STEERING PUMP POWER STEERING PRESSURE SWITCH PI68 / 2-WAY JUNIOR TIMER / BLACK SECONDARY AIR INJECTION CLUTCH PI21 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK SECONDARY AIR INJECTION PUMP A BANK INTAKE MANIFOLD / REAR SECONDARY AIR INJECTION SWITCHING VALVE PI22 / 2-WAY DENSO / BLUE

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
FUEL INJECTOR RELAY (MAIN RELAY) (V12)	BLACK	PI20 / BLACK	RH ENGINE BAY RELAYS
IGNITION COIL RELAY (V12)	BLACK	PI53 / BLACK	RH ENGINE BAY RELAYS
GEOGRAPHY AIR IN JECTION BELLAY (1/12)	DIACK	DIEG / DI ACV	DIJ ENGINE BAY BELAVS

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
PI1	13-WAY ECONOSEAL III LC / WHITE	REARWARD OF RH HEADLAMP
PI59	13-WAY ECONOSEAL III LC / BLACK	FORWARD OF LH ENGINE BAY FUSE BOX
PI61	13-WAY ECONOSEAL HI LC / BLACK	REARWARD OF RH HEADLAMP
PI63	20-WAY MULTILOCK 040 / BLACK	RH 'A' POST/ 'A' POST TRIM
PI73	2-WAY MULTILOCK 070 / YELLOW	RH 'A' POST/ 'A' POST TRIM

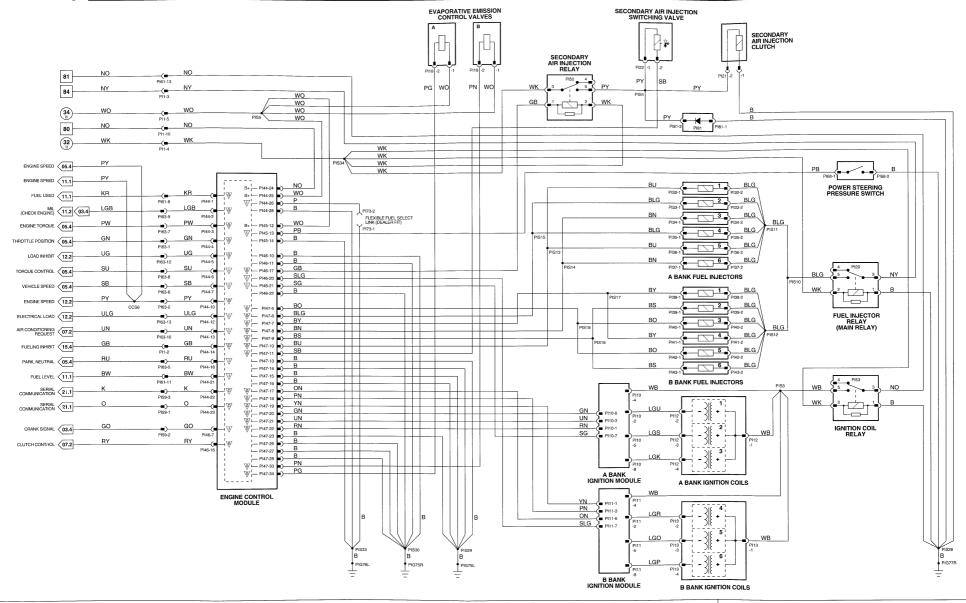
GROUNDS

Ground	Location / Type
PIG75L	RH 'A' POST GROUND STUD
PIG75R	RH 'A' POST GROUND STUD
PIG76L	RH BULKHEAD GROUND STUD
DIGIND.	DIGUT FORWARD FAIC CROUND CTUE

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



DECODER MODULE

D CC7-51

∇	Pin	Description	Active	Inactive
0	CC13-1	GEAR POSITION 3	GROUND	5 V
0	CC13-2	GEAR POSITION 2	GROUND	5 V
0	CC13-3	GEAR POSITION 'R'	GROUND	5 V
0	CC13-4	GEAR POSITION 'D'	GROUND	5 V
1	CC13-11	GEAR POSITION 'Y'	GROUND = R, N, D, 3	2 V = P, 2
L	CC13-12	GEAR POSITION 'Z'	GROUND = D, 3, 2	2 V = P, R, N
1	CC13-13	GEAR POSITION 'X'	GROUND = P, R, 3, 2	2 V = N, D
0	CC13-14	GEAR SELECTOR 'NEUTRAL' ILLUMINATION	GROUND - N	5 V = P, R, D, 3, 2
0	CC13-15	GEAR SELECTOR 'PARK' ILLUMINATION	GROUND = P	5 V = R, N, D, 3, 2
0	CC13-23	CRUISE CONTROL INHIBIT	GROUND = D, 3, 2	B+ = P, R, N
0	CC13-24	PARK, NEUTRAL OUTPUT	GROUND - P, N	B+ = R, D, 3, 2

TRANSMISSION CONTROL MODULE (AJ16 NA)

SERIAL COMMUNICATION OUTPUT

	The termination of the party that the termination of the termination o						
∇	Pin	Description	Active	Inactive			
1	CC7-2	OUTPUT SHAFT SPEED SENSOR	1 51 V @ 10 MPH (16 KPH) = 280 Hz, 20 MPH (32 KPH) = 560 Hz				
- 1	CC7-3	ENGINE SPEED SENSOR	5 V @ 1000 RPM = 45 Hz, 2000 RPM = 90 Hz				
1	CC7-4	MODE SWITCH SELECTION	GROUND = NORMAL	B+ = SPORT			
0	CC7-5	SHIFT SOLENOID 1 (MV1)	GROUND = 2, 3	B+ = P, N, D, 1, 4			
0	CC7-6	PRESSURE REGULATOR	9 5V @ IDLE, DECREASING WITH PRESSURE INCREASE				
i	CC7-14	POSITION CODE 'Y'	GROUND = R, N, D, 3	2 V = P, 2			
D	CC7-15	SERIAL COMMUNICATION INPUT					
0	CC7-16	TRANSMISSION MIL	GROUND	9 4 V			
0	CC7-19	PRESSURE REGULATOR / SHIFT SOLENOIDS SUPPLY	B+	B+			
1	CC7-21	ENGINE TORQUE	10 4 V = NO LOAD, DECREASING WITH ENGINE LOAD				
0	CC7-24	SHIFT SOLENOID 2 (MV2)	GROUND = P, N, D, 2, 1	B+ = 3, 4			
- 1	CC7-29	TRACTION ACTIVE	GROUND PULSE	B+			
0	CC7-32	TORQUE REDUCTION REQUEST	GROUND PULSE @ SHIFT (7 8 V)	9 4 V @ IDLE			
- 1	CC7-33	POSITION CODE 'Z'	GROUND = D, 3, 2	B+ = P, R, N			
SG	CC7-38	OUTPUT SHAFT SPEED SENSOR	GROUND	GROUND			
1	CC7-41	KICK DOWN SWITCH	GROUND	B+			
0	CC7-42	LOCK UP SOLENOID (MV3)	GROUND	B+			
SG	CC7-44	FLUID TEMPERATURE SENSOR	1 31 V				
1	CC7-46	FLUID TEMPERATURE SENSOR	1 15 V @ 90° C				
1	CC7-47	THROTTLE POSITION SENSOR FEEDBACK VOLTAGE	1 31 V @ IDLE, 4 9 V = FULL THROTTLE				
0	CC7-49	SPORT MODE INDICATOR	GROUND	B+			
1	CC7-50	POSITION CODE 'X'	GROUND = P, R, 3, 2	2 V = D, N			

The following symbols are used to represent values for Control Module Pin Out data:

I Input B+ Battery voltage
O Output V Voltage (DC)
SG Signal Ground Hz Frequency
D Serial and encoded communications KHz Frequency x 1000
MS Milliseconds
MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 05.1

COMPONENTS

Component

DECODER MODULE FLUID TEMPERATURE SENSOR GEAR SELECTOR INDICATOR MODULE (AJ16 4 0L) KICKDOWN SWITCH

MODE SWITCH OUTPUT SHAFT SENSOR PRESSURE REGULATOR ROTARY SWITCH

TRANSMISSION CONTROL MODULE (AJ16 NA) TRANSMISSION SOLENOID VALVES

Connector / Type / Color

CC13 / 26-WAY MODU 4 / BLUE
GB3 / 9-WAY HELLERMAN DEUTSCH / BLACK
CC41 / 12-WAY MULTILOCK 90 / BLACK
CA74 GRHO; FEV LEAD) / 3-WAY MULTILOCK 970 / SLATE
CC51 (LHO) FEV LEAD) / 3-WAY MULTILOCK 970 / SLATE
CC11 / 6-WAY MULTILOCK 90 / BLACK
GB3 / 9-WAY HELLERMAN DEUTSCH / BLACK
GC7 / 55-WAY SOSCH / NATURAL

Location / Access

TRANSMISSION / SUMP
'J' GATE / CENTER CONSOLE
UNDER ACCELERATOR
CENTER CONSOLE

CENTER CONSOLE
TRANSMISSION
TRANSMISSION / SUMP
'J' GATE / CENTER CONSOLE

PASSENGER'S UNDERSCUTTLE TRANSMISSION / SUMP

HARNESS-TO-HARNESS CONNECTORS

Connector Type / Color
CC5 20-WAY MULTILOCK C

20-WAY MULTILOCK 070 / WHITE THROUGH-PANEL (48 MICRO / 6) / BLACK 20-WAY MULTILOCK 040 / BLACK

Location / Access

GB3 / 9-WAY HELLERMAN DEUTSCH / BLACK

CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
PASSENGER'S UNDERSCUTTLE
BH 'A' POST / 'A' POST TRIM

GROUNDS

FC7 PI63

Ground Location / Type

CCGBL CENTER CONSOLE GROUND STUD

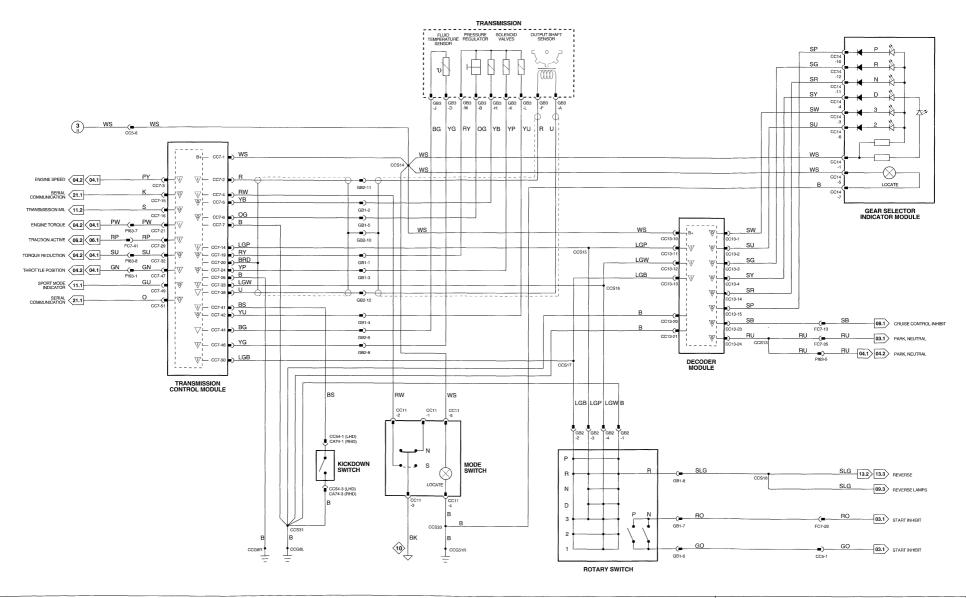
CCGBH CENTER CONSOLE GROUND STUD

CCG51R CENTER CONSOLE GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

















Signal Ground (SG)

VARIANT: AJ16 4.0L NA Automatic Transmission Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

TRANSMISSION CONTROL MODULE (AJ16 SC)

∇	Pin	Description	Active	Inactive
1	CC48-2	AIR CONDITIONING CLUTCH RELAY	GROUND	B+
1	CC48-3	PRESSURE SWITCH MANIFOLD	B+	B+
1	CC48-4	PRESSURE SWITCH MANIFOLD	B+	B+
1	CC48-5	MODE SWITCH	GROUND = SPORT	B+ = NORMAL
1	CC48-6	CALIBRATION SELECT LINK (DEALER FIT)	GROUND = (FITTED)	B+
0	CC48-7	TORQUE REDUCTION	GROUND PULSE @ SHIFT	11 5 V @ IDLE
1	CC48-11	THROTTLE POSITION	1 4 V @ IDLE	9 V @ FULL THROTTLE
1	CC48-12	ENGINE TORQUE	11 5 V @ IDLE, DECREASING WITH TORQUE INCREASE	
SG	CC48-14	TRANSMISSION TEMPERATURE SENSOR	GROUND	GROUND
D	CC48-16	SERIAL COMMUNICATION INPUT		
1	CC48-22	PRESSURE SWITCH MANIFOLD	GROUND	GROUND
- 1	CC48-23	TRACTION ACTIVE	GROUND	B+
1	CC48-24	KICK DOWN SWITCH	GROUND	B+
1	CC48-25	BRAKE SWITCH	GROUND	B+
1	CC48-26	TRANSMISSION TEMPERATURE SENSOR	193 V @ 90° C	
1	CC48-30	ENGINE SPEED SIGNAL	5 V @ 1000 RPM = 45 Hz, 2000 RPM = 90 Hz	
SG	CC48-36	OUTPUT SPEED SENSOR	GROUND	GROUND
SG	CC48-37	INPUT SPEED SENSOR	GROUND	GROUND
0	CC48-39	SHIFT SOLENOID 'A'	GROUND = 1, 4	B+ = 2, 3
0	CC48-40	TRANSMISSION MIL	GROUND	B+
0	CC48-41	SPORT MODE INDICATOR LAMP	GROUND	B+
0	CC48-42	TORQUE CONVERTER CLUTCH SOLENOID	GROUND	B+
0	CC48-43	SHIFT SOLENOID 'B'	GROUND = 3, 4	B+ = 1, 2
D	CC48-45	SERIAL COMMUNICATION OUTPUT		
0	CC48-49	VARIABLE FORCE MOTOR	13 V @ IDLE, DECREASING WITH PRESSURE INCREASE	
1	CC48-50	INPUT SPEED SENSOR	GROUND @ 1000 RPM = 450 Hz, 2000 RPM = 900 Hz	
F.	CC48-51	OUTPUT SPEED SENSOR	GROUND @ 10 MPH (16 KPH) = 300 Hz, 20 MPH (32 KPH) = 600 Hz	
0	CC48-52	VARIABLE FORCE MOTOR	7 7 V @ IDLE, DECREASING WITH PRESSURE INCREASE	

The following symbols are used to represent values for Control Module Pin Out data:

B+ Battery voltage Input O Output V Voltage (DC) SG Signal Ground Hz Frequency D Serial and encoded communications KHz Frequency x 1000 MS Milliseconds MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component

BRAKE SWITCH GEAR SELECTOR INDICATOR MODULE (AJ16 3 2L, 4 0L SC; V12) INPUT SPEED SENSOR KICKDOWN SWITCH

LINEAR GEAR POSITION SWITCHES MODE SWITCH OUTPUT SPEED SENSOR PRESSURE SWITCH MANIFOLD SHIFT SOLENOID (A) SHIFT SOLENOID (B) TORQUE CONVERTER CLUTCH SOLENOID

TRANSMISSION CONTROL MODULE (V12 & AJ16 SC) TRANSMISSION TEMPERATURE SENSOR

VARIABLE FORCE MOTOR

Connector / Type / Color

CA72 / 4-WAY MULTILOCK 070 / WHITE GB11 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK GB14 (FLY LEAD) / 2-WAY PACKARD / BLACK CA74 (RHD) (FLY LEAD) / 3-WAY MULTILOCK 070 / SLATE CC54 (LHD) (FLY LEAD) / 3-WAY MULTILOCK 070 / SLATE CC21 / 20-WAY MULTILOCK 040 / BLACK CC11 / 6-WAY MULTILOCK 040 / BLACK

GB13 (FLY LEAD) / 2-WAY PACKARD / BLACK GB12 / 12-WAY HELLERMAN DEUTSCH / BLACK GB12 / 12-WAY HELLERMAN DELITSCH / BLACK GB12 / 12-WAY HELLERMAN DEUTSCH / BLACK GB12 / 12-WAY HELLERMAN DEUTSCH / BLACK CC48 / 55-WAY AMP 55 / BLACK GB12 / 12-WAY HELLERMAN DEUTSCH / BLACK GB12 / 12-WAY HELLERMAN DEUTSCH / BLACK

Location / Access

DRIVER'S UNDERSCUTTLE 'J' GATE / CENTER CONSOLE TRANSMISSION, LH SIDE UNDER ACCELERATOR

'J' GATE / CENTER CONSOLE CENTER CONSOLE TRANSMISSION, LH SIDE TRANSMISSION / SUMP TRANSMISSION / SUMP TRANSMISSION / SUMP TRANSMISSION / SUMP PASSENGER'S UNDERSCUTTLE TRANSMISSION / SUMP TRANSMISSION / SUMP

HARNESS-TO-HARNESS CONNECTORS

Connector Type / Color 20-WAY MULTILOCK 070 / SLATE CC3 14-WAY MULTILOCK 070 / WHITE CC4 20-WAY MULTILOCK 070 / WHITE CC5 CC38 2-WAY MULTILOCK 070 / YELLOW FC7 THROUGH-PANEL (48 MICRO / 6) / BLACK 12-WAY MULTILOCK 040 / BLACK GB10

PASSENGER'S UNDERSCUTTLE PASSENGER'S UNDERSCUTTLE CENTER CONSOLE 'J' GATE / LH SIDE 8-WAY MULTILOCK 070 / WHITE CENTER CONSOLE 'J' GATE / LH SIDE 20-WAY MULTILOCK 040 / BLACK

Location / Access

CENTER CONSOLE / CENTER CONSOLE GLOVE BOX CENTER CONSOLE / CENTER CONSOLE GLOVE BOX CENTER CONSOLE / CENTER CONSOLE GLOVE BOX RH 'A' POST / 'A' POST TRIM

GROUNDS

GB15 PI63

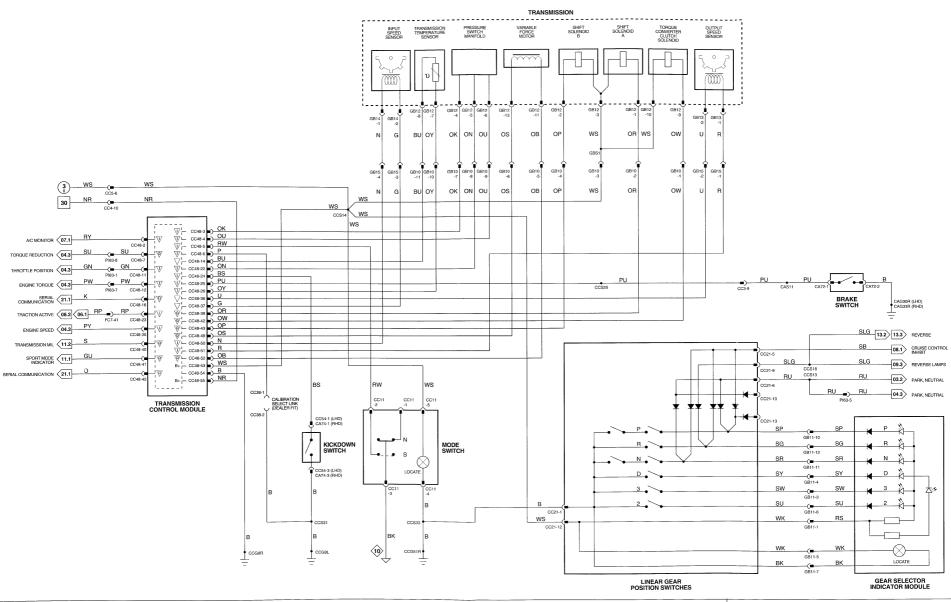
Location / Type Ground

CAG30R LH 'A' POST GROUND SCREW CAG33R RH HEELBOARD GROUND SCREW CCG51R CENTER CONSOLE GROUND STUD CCG8L CENTER CONSOLE GROUND STUD CENTER CONSOLE GROUND STUD CCG8R

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



1 — 6 Fig. 01.1 7 — 66 Fig. 01.2 67 — 109 Fig. 01.3











Fig. 05.3

COMPONENTS

Component

LINEAR GEAR POSITION SWITCHES

GEAR SELECTOR INDICATOR MODULE (AJ16 3 2L, 4 0L SC; V12)

Connector / Type / Color

CC21 / 20-WAY MULTILOCK 040 / BLACK GB11 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK Location / Access

'J' GATE / CENTER CONSOLE 'J' GATE / CENTER CONSOLE

HARNESS-TO-HARNESS CONNECTORS

Connector Type / Color

20-WAY MULTILOCK 040 / BLACK

Location / Access

CENTER CONSOLE / CENTER CONSOLE GLOVE BOX

RH 'A' POST / 'A' POST TRIM

GROUNDS

CC5

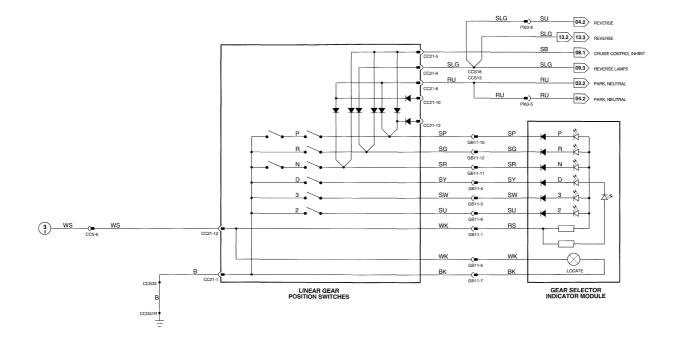
PI63

Ground

Location / Type

CENTER CONSOLE GROUND STUD CCG51R

REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



















VARIANT: AJ16 3.2L Automatic Transmission Vehicles
VIN RANGE: 787954 →
DATE OF ISSUE: JANUARY 1997 Signal Ground (SG)

TRANSMISSION CONTROL MODULE (V12)

∇	Pin	Description	Active	Inactive
- 1	CC48-2	AIR CONDITIONING CLUTCH RELAY	GROUND	B+
1	CC48-3	PRESSURE SWITCH MANIFOLD	B+	B+
1	CC48-4	PRESSURE SWITCH MANIFOLD	B+	B+
1	CC48-5	MODE SWITCH	GROUND = SPORT	B+ = NORMAL
1	CC48-6	CALIBRATION SELECT LINK (DEALER FIT)	GROUND = (FITTED)	B+
0	CC48-7	TORQUE REDUCTION	GROUND PULSE @ SHIFT	11 5 V @ IDLE
1	CC48-11	THROTTLE POSITION	1 4 V @ IDLE	9 V @ FULL THROTTLE
1	CC48-12	ENGINE TORQUE	11 5 V @ IDLE, DECREASING WITH TORQUE INCREASE	
SG	CC48-14	TRANSMISSION TEMPERATURE SENSOR	GROUND	GROUND
D	CC48-16	SERIAL COMMUNICATION INPUT		
1	CC48-22	PRESSURE SWITCH MANIFOLD	GROUND	GROUND
1	CC48-23	TRACTION ACTIVE	GROUND	B+
1	CC48-24	KICK DOWN SWITCH	GROUND	B+
1	CC48-25	BRAKE SWITCH	GROUND	B+
1	CC48-26	TRANSMISSION TEMPERATURE SENSOR	1 93 V @ 90° C	
1	CC48-30	ENGINE SPEED SIGNAL	5 V @ 1000 RPM = 45 Hz, 2000 RPM = 90 Hz	
0	CC48-34	VEHICLE SPEED SIGNAL	GROUND	B+
SG	CC48-36	OUTPUT SPEED SENSOR	GROUND	GROUND
SG	CC48-37	INPUT SPEED SENSOR	GROUND	GROUND
0	CC48-39	SHIFT SOLENOID 'A'	GROUND = 1, 4	B+ = 2, 3
0	CC48-40	TRANSMISSION MIL	GROUND	B+
0	CC48-41	SPORT MODE INDICATOR LAMP	GROUND	B+
0	CC48-42	TORQUE CONVERTER CLUTCH SOLENOID	GROUND	B+
0	CC48-43	SHIFT SOLENOID 'B'	GROUND = 3, 4	B+ = 1, 2
D	CC48-45	SERIAL COMMUNICATION OUTPUT		
0	CC48-49	VARIABLE FORCE MOTOR	13 V @ IDLE, DECREASING WITH PRESSURE INCREASE	
1	CC48-50	INPUT SPEED SENSOR	GROUND @ 1000 RPM = 450 Hz, 2000 RPM = 900 Hz	
1	CC48-51	OUTPUT SPEED SENSOR	GROUND @ 10 MPH (16 KPH) = 300 Hz, 20 MPH (32 KPH) = 600 Hz	
0	CC48-52	VARIABLE FORCE MOTOR	7 7 V @ IDLE, DECREASING WITH PRESSURE INCREASE	

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "lnactive" means a load is not applied or a switch is OFF.

Fig. 05.4

COMPONENTS

Component

BRAKE SWITCH
GEAR SELECTOR INDICATOR MODULE (AJ16 3.2L, 4 0L SC; V12)
INPUT SPEED SENSOR
KICKDOWN SWITCH

LINEAR GEAR POSITION SWITCHES MODE SWITCH OUTPUT SPEED SENSOR PRESSURE SWITCH MANIFOLD SHIFT SOLENOID (A)

SHIFT SOLENOID (B)
TORQUE CONVERTER CLUTCH SOLENOID
TRANSMISSION CONTROL MODULE (V12 & AJ16 SC)
TRANSMISSION TEMPERATURE SENSOR

VARIABLE FORCE MOTOR

Connector / Type / Color

CA22 / 4-WAY MULTILOCK 079 / WHITE
GB11 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK
GB14 (FLY LEAD) / 2-WAY PACKARD) BLACK
CA24 (RHD) (FLY LEAD) / 3-WAY MULTILOCK 070 / SLATE
CC41 / 20 WAY MULTILOCK 040 / BLACK
CC21 / 20 WAY MULTILOCK 040 / BLACK
CC11 / 6-WAY MULTILOCK 040 / BLACK
GB13 (FLY LEAD) / 2-WAY MUSTILOCK
GB13 (FLY LEAD) / 2-WAY PACKARD) BLACK
GB13 (FLY LEAD) / 2-WAY PACKARD) / BLACK

GB12/12-WAY HELLERMAN DEUTSCH / BLACK GB12 / 12-WAY HELLERMAN DEUTSCH / BLACK GB12 / 12-WAY HELLERMAN DEUTSCH / BLACK GB12 / 12-WAY HELLERMAN DEUTSCH / BLACK CG49 / 56-WAY AMP 95 / BLACK GB12 / 12-WAY HELLERMAN DEUTSCH / BLACK GB12 / 12-WAY HELLERMAN DEUTSCH / BLACK Location / Access

DRIVER'S UNDERSCUTTLE
'J' GATE / CENTER CONSOLE
TRANSMISSION, LH SIDE
UNDER ACCELERATOR

"GATE / CENTER CONSOLE CENTER CONSOLE TRANSMISSION, LI SIDE TRANSMISSION / SUMP TRANSMISSION / SUMP TRANSMISSION / SUMP PASSENGER'S UNDERSCUTTLE TRANSMISSION / SUMP TRANSMISSION / SUMP

HARNESS-TO-HARNESS CONNECTORS

Connector Type / Color

20-WAY MULTILOCK 070 / SLATE CC3 14-WAY MULTILOCK 070 / WHITE CC4 20-WAY MULTILOCK 070 / WHITE CC5 2-WAY MULTILOCK 070 / YELLOW CC38 FC7 THROUGH-PANEL (48 MICRO / 6) / BLACK 12-WAY MULTILOCK 040 / BLACK GB10 8-WAY MULTILOCK 070 / WHITE GR15 20-WAY MULTILOCK 040 / BLACK P163

Location / Access

CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CENTER CONSOLE / CENTER CONSOLE
CENTER CONSOLE / CENTER CONSOLE
CENTER CONSOLE / CENTER CONSOLE
CENTER CONSOLE / GATE / LH SIDE
CENTER CONSOLE / GATE / LH SIDE
CENTER CONSOLE / GATE / LH SIDE
HI / A POST / TAIN

GROUNDS

Ground Location / Type

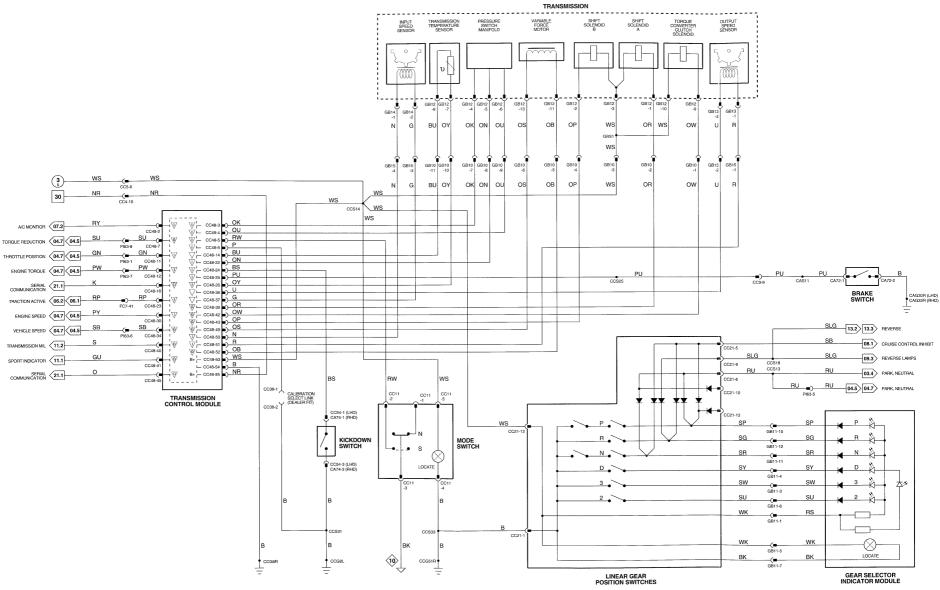
CAG30R LH 'A' POST GROUND SCREW
CAG33R RH HEELBOARD GROUND SCREW
CCGSIR CENTER CONSOLE GROUND STUD
CCGBL CENTER CONSOLE GROUND STUD
CCGBR CENTER CONSOLE GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

Fig. 05.4



BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-25	KEY LOCK SOLENOID RELAY	GROUND	B+
0	FC1-28	GEARSHIFT INTERLOCK RELAY	GROUND	B+
1	FC2-16	NOT IN PARK MICRO SWITCH	GROUND	B+
1	FC2-31	IGNITION SWITCHED GROUND	GROUND	B+
	EC2-35	BRAKE SWITCH	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

B+ Battery voltage Input O Output V Voltage (DC) SG Signal Ground Hz Frequency KHz Frequency x 1000 D Serial and encoded communications MS Milliseconds MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component

BRAKE SWITCH GEARSHIFT INTERLOCK SOLENOID

BODY PROCESSOR MODULE

NOT IN-PARK MICROSWITCH

Connector / Type / Color FC1 / 48-WAY PCB SIGNAL / YELLOW FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK

CA72 / 4-WAY MULTILOCK 070 / WHITE CC12 / 2-WAY MULTILOCK 070 / WHITE SC6 / 2-WAY MULTILOCK 040 / BLUE CC42 (FLY LEAD) / 2-WAY MULTILOCK 040 / BLACK Location / Access

PASSENGER'S UNDERSCUTTLE

DRIVER'S UNDERSCUTTLE 'J' GATE / CENTER CONSOLE STEERING COLUMN / COVER 'J' GATE / CENTER CONSOLE

RELAYS

Relay GEARSHIFT INTERLOCK RELAY KEYLOCK SOLENOID RELAY

Color / Stripe Connector / Color BLUE BLACK / BLUE

CC23 / BLUE CC23 / BLUE

Location / Access CENTER CONSOLE

CENTER CONSOLE

HARNESS-TO-HARNESS CONNECTORS

Type / Color Connector

KEYLOCK SOLENOID (COLUMN SWITCHGEAR)

20-WAY MULTILOCK 070 / SLATE CC3 THROUGH PANEL (48 MICRO / 6) / BLACK FC7 20-WAY MULTILOCK 040 / BLACK FC16 12-WAY MULTILOCK 040 / BLACK FC8

Location / Access

DRIVER'S UNDERSCUTTLE

CENTER CONSOLE / CENTER CONSOLE GLOVE BOX PASSENGER'S UNDERSCUTTLE PASSENGER'S UNDERSCUTTLE

GROUNDS

Ground

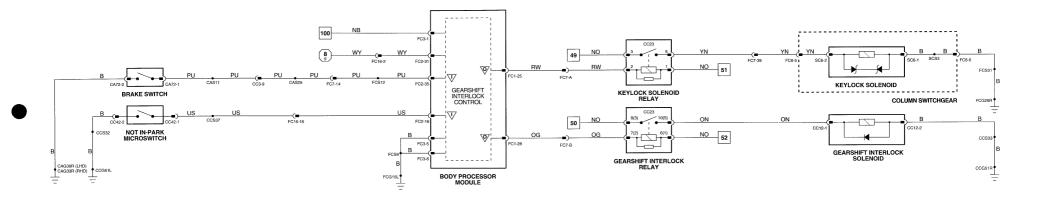
Location / Type

LH 'A' POST GROUND SCREW CAG30R RH HEELBOARD GROUND SCREW CAG33R CENTER CONSOLE GROUND STUD CCG51L CENTER CONSOLE GROUND STUD CCG51R FCG15L LH CONSOLE GROUND STUD FCG26R LH CONSOLE GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

















Signal Ground (SG)

VARIANT: All Automatic Transmission Vehicles VIN RANGE: 787954 →
DATE OF ISSUE: JANUARY 1997

SG RS27-27

D RS27-28

ABS / TRACTION CONTROL CONTROL MODULE (LHD)

ACTUATOR POTENTIOMETER REFERENCE GROUND

SERIAL COMMUNICATION (BI-DIRECTIONAL)

∇	Pin	Description	Active	Inactive
0	RS27-3	TRACTION CONTROL ACTIVE SIGNAL TO TCM	GROUND	B+
0	RS27-4	CRUISE CONTROL INHIBIT REQUEST	GROUND	B+
1	RS27-5	LH FRONT WHEEL SPEED SENSOR	2 5 V @ 10 MPH (16 KPH) = 100 Hz; 20 MPH (32 KPH) = 200 Hz	
SG	RS27-6	LH FRONT WHEEL SPEED SENSOR GROUND	2 5 V (AT REST)	25 V
1	RS27-7	RH FRONT WHEEL SPEED SENSOR	2 5 V @ 10 MPH (16 KPH) = 100 Hz; 20 MPH (32 KPH) = 200 Hz	
SG	RS27-8	RH FRONT WHEEL SPEED SENSOR GROUND	2 5 V (AT REST)	2 5 V
1	RS27-9	LH REAR WHEEL SPEED SENSOR	2 5 V @ 10 MPH (16 KPH) = 100 Hz; 20 MPH (32 KPH) = 200 Hz	
SG	RS27-10	LH REAR WHEEL SPEED SENSOR GROUND	2 5 V (AT REST)	25 V
1	RS27-11	RH REAR WHEEL SPEED SENSOR	2 5 V @ 10 MPH (16 KPH) = 100 Hz; 20 MPH (32 KPH) = 200 Hz	
SG	RS27-12	RH REAR WHEEL SPEED SENSOR GROUND	2 5 V (AT REST)	25 V
0	RS27-16	TRACTION CONTROL ACTUATOR MOTOR	GROUND	7 V
0	RS27-17	TRACTION CONTROL ACTUATOR MOTOR	GROUND	7 V
1	RS27-18	TRACTION CONTROL INHIBIT SWITCH	GROUND	B+
1	RS27-20	BRAKE SWITCH INPUT	GROUND	8+
0	RS27-21	ABS FAILURE LAMP	GROUND	23 V
0	RS27-23	TRACTION INDICATOR LAMP	B+	FAILURE = GROUND TRACTION OFF = 4 Hz GROUND PULSE
0	RS27-24	VEHICLE SPEED SIGNAL	B+@ 10 MPH (16 KPH) = 200 Hz; 20 MPH (32 KPH) = 400 Hz	
0	RS27-25	ACTUATOR POTENTIOMETER REFERENCE VOLTAGE	5 V	5 V
1	RS27-26	ACTUATOR POTENTIOMETER FEEDBACK	0 - 5 V (FLUCTUATING)	0 47 V (AT REST)

GROLIND

GROUND

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "lnactive" means a load is not applied or a switch is OFF.



COMPONENTS

Component

ABS / TRACTION CONTROL CONTROL MODULE (LHD)
BRAKE SWITCH
FASCIA SWITCH PACK

TRACTION CONTROL ACTUATOR (LHD)
WHEEL SPEED SENSOR – LH FRONT
WHEEL SPEED SENSOR – LH REAR
WHEEL SPEED SENSOR – RH FRONT
WHEEL SPEED SENSOR – RH FRONT

Connector / Type / Color RS27 / 28-WAY FORD GTE / SLATE

CA72, 4-WAY MULTILOCK 079 / WHITE
FCT8 / 16-WAY MULTILOCK 040 / BLACK
RSS9 (FLY LEAD) / 2-WAY FORD / BLACK
RSS9 (3-WAY JUNIOR TIMER / BLACK
LSS4 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK
CA48 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK
CA47 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK
CA47 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK
CA47 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK

Location / Access

ENGINE BAY / RH REAR
DRIVER'S UNDERSCUTTLE
STEERING COLUMN / DRIVER'S UNDERSCUTTLE
ENGINE BAY, LH REAR

LH FRONT WHEEL LH REAR WHEEL RH FRONT WHEEL RH REAR WHEEL

HARNESS-TO-HARNESS CONNECTORS

Connector Type / Color FC5 THROUGH-PANEL (48 MICRO / 6) / BLACK FC6 THROUGH-PANEL (48 MICRO / 6) / BLACK

FC6 THROUGH-PANEL (48 MICRO / 6) / BLACK FC57 12-WAY MULTILOCK 040 / BLACK LS3 THROUGH-PANEL (48 MICRO / 6) / BLACK RS3 THROUGH-PANEL (48 MICRO / 6) / BROWN Location / Access

LH FASCIA END PANEL / OUTER AIR VENT RH FASCIA END PANEL / OUTER AIR VENT PASSENGER'S UNDERSCUTTLE LH 'A' POST / 'A' POST PANEL RH 'A' POST / 'A' POST PANEL

GROUNDS

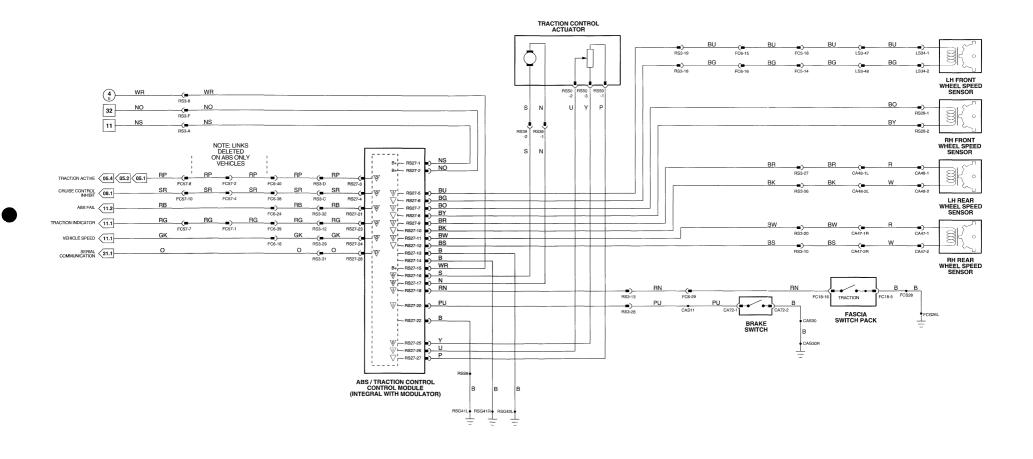
Ground Location / Type

CAG30R LH 'A' POST GROUND SCREW
FCG26L LH CONSOLE GROUND STUD
RSG41L RIGHT FORWARD GROUND STUD
RSG41R RIGHT FORWARD GROUND STUD
RSG42L RH BULKHEAD GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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VARIANT: LHD Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

ABS / TRACTION CONTROL CONTROL MODULE (RHD)

SERIAL COMMUNICATION (BI-DIRECTIONAL)

D LS27-28

∇	Pin	Description	Active	Inactive	
0	LS27-3	TRACTION CONTROL ACTIVE SIGNAL TO TCM	GROUND	В+	
ő	LS27-4	CRUISE CONTROL INHIBIT REQUEST	GROUND	B+	
ï	LS27-5	LH FRONT WHEEL SPEED SENSOR	2 5 V @ 10 MPH (16 KPH) = 100 Hz; 20 MPH (32 KP	H) = 200 Hz	
SG	LS27-6	LH FRONT WHEEL SPEED SENSOR GROUND	2 5 V (AT REST)	2 5 V	
- 1	LS27-7	RH FRONT WHEEL SPEED SENSOR	2 5 V @ 10 MPH (16 KPH) = 100 Hz; 20 MPH (32 KP	H) = 200 Hz	
SG	LS27-8	RH FRONT WHEEL SPEED SENSOR GROUND	2 5 V (AT REST)	2 5 V	
1	LS27-9	LH REAR WHEEL SPEED SENSOR	2 5 V @ 10 MPH (16 KPH) = 100 Hz; 20 MPH (32 KP	H) = 200 Hz	
SG	LS27-10	LH REAR WHEEL SPEED SENSOR GROUND	2.5 V (AT REST	2 5 V	
1	LS27-11	RH REAR WHEEL SPEED SENSOR	2 5 V @ 10 MPH (16 KPH) = 100 Hz; 20 MPH (32 KPH) = 200 Hz		
SG	LS27-12	RH REAR WHEEL SPEED SENSOR GROUND	2 5 V (AT REST)	2 5 V	
0	LS27-16	TRACTION CONTROL ACTUATOR MOTOR	GROUND	7 V	
0	LS27-17	TRACTION CONTROL ACTUATOR MOTOR	GROUND	7 V	
1	LS27-18	TRACTION CONTROL INHIBIT SWITCH	GROUND	B+	
1	LS27-20	BRAKE SWITCH INPUT	GROUND	B+	
0	LS27-21	ABS FAILURE LAMP	GROUND	2 3V	
0	LS27-23	TRACTION INDICATOR LAMP	B+	FAILURE = GROUND TRACTION OFF = 4 Hz GROUND PULSE	
0	LS27-24	VEHICLE SPEED SIGNAL	B+ @ 10 MPH (16 KPH) = 200 Hz; 20 MPH (32 KPH) = 400 Hz		
0	LS27-25	ACTUATOR POTENTIOMETER REFERENCE VOLTAGE	5 V	5 V	
1	LS27-26	ACTUATOR POTENTIOMETER FEEDBACK	0 - 5 V (FLUCTUATING)	0 47 V (AT REST)	
SG	LS27-27	ACTUATOR POTENTIOMETER REFERENCE GROUND	GROUND	GROUND	

The following symbols are used to represent values for Control Module Pin Out data:

B+ Battery voltage O Output V Voltage (DC) SG Signal Ground Hz Frequency D Serial and encoded communications KHz Frequency x 1000 MS Milliseconds MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component FASCIA SWITCH PACK

ABS / TRACTION CONTROL CONTROL MODULE (RHD) BRAKE SWITCH

TRACTION CONTROL ACTUATOR (RHD) WHEEL SPEED SENSOR - LH FRONT

WHEEL SPEED SENSOR - LH REAR WHEEL SPEED SENSOR - RH FRONT WHEEL SPEED SENSOR - RH REAR

Connector / Type / Color

LS27 / 28-WAY FORD GTE / SLATE CA72 / 4-WAY MULTILOCK 070 / WHITE FC18 / 16-WAY MULTILOCK 040 / BLACK LS39 (FLY LEAD) / 2-WAY FORD / BLACK LS50 / 3-WAY JUNIOR TIMER / BLACK

LS34 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK CA48 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK RS28 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK CA47 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK

Location / Access

ENGINE BAY / LH REAR DRIVER'S UNDERSCUTTLE STEERING COLUMN / DRIVER'S UNDERSCUTTLE ENGINE BAY BH BEAR

LH FRONT WHEEL LH REAR WHEEL RH FRONT WHEEL RH REAR WHEEL

HARNESS-TO-HARNESS CONNECTORS

Connector Type / Color THROUGH-PANEL (48 MICRO / 6) / BLACK

FC5 FC6 THROUGH-PANEL (48 MICRO / 6) / BLACK FC57 12-WAY MULTILOCK 040 / BLACK THROUGH-PANEL (48 MICRO / 6) / BLACK LS3 THROUGH-PANEL (48 MICRO / 6) / BROWN RS3

Location / Access

LH FASCIA END PANEL / OUTER AIR VENT RH FASCIA END PANEL / OUTER AIR VENT PASSENGER'S UNDERSCUTTLE LH 'A' POST / 'A' POST PANEL RH 'A' POST / 'A' POST PANEL

GROUNDS

Ground Location / Type CAG33R RH HEELBOARD GROUND SCREW

FCG26L LH CONSOLE GROUND STUD LSG10R LEFT FORWARD GROUND STUD LSG19R LH BULKHEAD GROUND STUD LH BULKHEAD GROUND STUD LSG51L

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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AIR CONDITIONING CONTROL MODULE

∇	Pin	Description	Active	Inactive
1	CC28-1	COMPRESSOR CLUTCH ON SIGNAL	B+	GROUND
0	CC31-9	COMPRESSOR CLUTCH REQUEST	GROUND	8+
1	CC31-17	REFRIGERANT TRIPLE PRESSURE SWITCH - 4.0L REFRIGERANT DUAL PRESSURE SWITCH - V12	GROUND	B+

ENGINE CONTROL MODULE (AJ16)

∇	Pin	Description	Active	Inactive
0	PI104-21	AIR CONDITIONING CLUTCH RELAY	GROUND	B+
	DIAGE OF	AIR CONDITIONING REQUEST	GROUND	

TRANSMISSION CONTROL MODULE (V12 AND AJ16 SC)

∇	Pin	Description	Active	Inactive
1	CC48-2	AIR CONDITIONING CLUTCH RELAY	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

I Input B+ Battery voltage O Output V Voltage (DC) SG Signal Ground Hz Frequency D Serial and encoded communications KHz Frequency x 1000 MS Milliseconds MV Millivolts

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NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.



COMPONENTS

Component

AIR CONDITIONING COMPRESSOR CLUTCH AIR CONDITIONING CONTROL MODULE

ENGINE CONTROL MODULE (AJ16)

FAN CONTROL RELAY MODULE RADIATOR COOLING FAN (LH) RADIATOR COOLING FAN (RH) RADIATOR THERMOSTATIC SWITCH REFRIGERANT SINGLE PRESSURE SWITCH REFRIGERANT TRIPLE PRESSURE SWITCH SUPERCHARGER INTERCOOLER COOLANT PUMP

TRANSMISSION CONTROL MODULE (V12 & AJ16 SC)

Connector / Type / Color

PI138 / 1-WAY SUMITOMO 090 A TYPE / NATURAL CC28 / 26-WAY MULTILOCK 47 / SLATE CC29 / 16-WAY MULTILOCK 47 / SLATE CC30 / 12-WAY MULTILOCK 47 / SLATE CC31 / 22-WAY MULTILOCK 47 / WHITE

PI104 / 36-WAY ECONOSEAL III / BLACK PI105 / 36-WAY ECONOSEAL III / RED LS18 / 8-WAY TRW / BLACK CF1 / 2-WAY REINSHAGEN / BLACK CF2 / 2-WAY REINSHAGEN / BLACK

LS12 / 3-WAY JUNIOR TIMER / BLACK PI102 (FLY LEAD) / 2-WAY ECONOSEAL III LC / WHITE PI103 (FLY LEAD) / 4-WAY ECONOSEAL III LC / BLACK PI143 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK

CC48 / 55-WAY AMP 55 / BLACK

Location / Access

A/C COMPRESSOR A/C UNIT, RH SIDE / RH UNDERSCUTTLE

RH 'A' POST / 'A' POST TRIM

BELOW LH HEADLAMPS ENGINE BAY, FRONT ENGINE BAY, FRONT RADIATOR, LOWER LH SIDE ENGINE BAY, RH REAR ENGINE BAY, RH REAR ENGINE BAY, LH FRONT PASSENGER'S UNDERSCUTTLE

RELAYS

Relay Color / Stripe Connector / Color Location / Access RH ENGINE BAY RELAYS AIR CONDITIONING CLUTCH RELAY

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
LS11	4-WAY ECONOSEAL III HC / BLACK	SPOILER, LH SIDE / SPOILER
PI1	13-WAY ECONOSEAL III LC / WHITE	REARWARD OF RH HEADLAMP
PI59	13-WAY ECONOSEAL III LC / BLACK	FORWARD OF LH ENGINE BAY FUSE BOX
PI61	13-WAY ECONOSEAL III LC / BLACK	REARWARD OF RH HEADLAMP
PI63	20-WAY MULTILOCK 040 / BLACK	RH 'A' POST / 'A' POST TRIM
BS3	THROUGH-PANEL (48 MICRO / 6) / BROWN	RH 'A' POST / 'A' POST PANEL

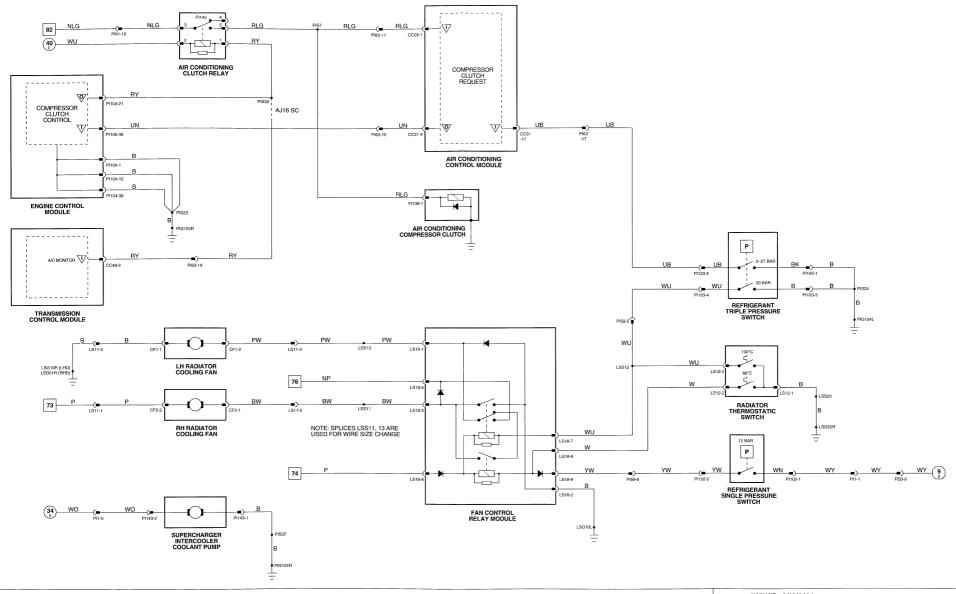
GROUNDS

Ground	Location / Type
LSG10L	LEFT FORWARD GROUND STUD
LSG10R	LEFT FORWARD GROUND STUD
LSG51R	LH BULKHEAD GROUND STUD
LSG52R	LEFT FORWARD GROUND STUD
PIG153R	RH BULKHEAD GROUND STUD
PIG154L	LEFT FORWARD GROUND STUD
PIG154R	LEFT FORWARD GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



AIR CONDITIONING CONTROL MODULE

∇	Pin	Description	Active	Inactive
- 1	CC28-1	COMPRESSOR CLUTCH ON SIGNAL	B+	GROUND
0	CC31-9	COMPRESSOR CLUTCH REQUEST	GROUND	B+
ı	CC31-17	REFRIGERANT TRIPLE PRESSURE SWITCH - 4.0L REFRIGERANT DUAL PRESSURE SWITCH - V12	GROUND	B+

ENGINE CONTROL MODULE (V12)

∇	Pin	Description	Active	Inactive
- 1	PI44-13	AIR CONDITIONING REQUEST	B+	GROUND
	DIAC 10	AIR CONDITIONING CLUTCH RELAY	GROUND	R.

TRANSMISSION CONTROL MODULE (V12 AND AJ16 SC)

∇	Pin	Description	Active	Inactive
	0040.0	AIR CONDITIONING OFFITCH BELAY	GROLIND	D.

The following symbols are used to represent values for Control Module Pin Out data:

B+ Battery voltage Innut V Voltage (DC) O Output Hz Frequency SG Signal Ground KHz Frequency x 1000 D Serial and encoded communications MS Milliseconds MV Millivolts

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COMPONENTS

Component

AIR CONDITIONING COMPRESSOR CLUTCH

AIR CONDITIONING CONTROL MODULE

FINGINE CONTROL MODULE (V12)

FAN CONTROL RELAY MODULE RADIATOR COOLING FAN (LH) PADIATOR COOLING FAN (BH) RADIATOR THERMOSTATIC SWITCH

REFRIGERANT DUAL PRESSURE SWITCH TRANSMISSION CONTROL MODULE (V12 & AJ16 SC) Connector / Type / Color

PI16 / 1-WAY SUMITOMO 090 A TYPE / NATURAL CC28 / 26-WAY MULTILOCK 47 / SLATE CC29 / 16-WAY MULTILOCK 040 / YELLOW

CC30 / 12-WAY MULTILOCK 47 / SLATE CC31 / 22-WAY MULTILOCK 47 / WHITE PI44 / 28-WAY MULTILOCK 040 / SLATE PI45 / 16-WAY MULTILOCK 040 / SLATE PI46 / 22-WAY MULTILOCK 040 / SLATE PI47 / 34-WAY MULTILOCK 040 / SLATE LS18 / 8-WAY TRW / BLACK

CF1 / 2-WAY REINSHAGEN / BLACK CF2 / 2-WAY REINSHAGEN / BLACK LS12 / 3-WAY JUNIOR TIMER / BLACK PI54 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK

Connector / Color

CC48 / 55-WAY AMP 55 / BLACK

Location / Access

A/C COMPRESSOR A/C UNIT, RH SIDE / RH UNDERSCUTTLE

RH 'A' POST / 'A' POST TRIM

BELOW LH HEADLAMPS ENGINE BAY, FRONT ENGINE BAY, FRONT RADIATOR, LOWER LH SIDE ENGINE BAY, RH REAR PASSENGER'S UNDERSCUTTLE

RELAYS

Color / Stripe Relay AIR CONDITIONING CLUTCH RELAY

PI17 / BLACK

Location / Access

RH ENGINE BAY RELAYS

HARNESS-TO-HARNESS CONNECTORS

Type / Color Location / Access Connector SPOILER, LH SIDE / SPOILER 4-WAY ECONOSEAL III HC / BLACK 1511 REARWARD OF RH HEADLAMP 13-WAY ECONOSEAL III LC / BLACK PI61 20-WAY MULTILOCK 040 / BLACK RH 'A' POST / 'A' POST TRIM P163

GROUNDS

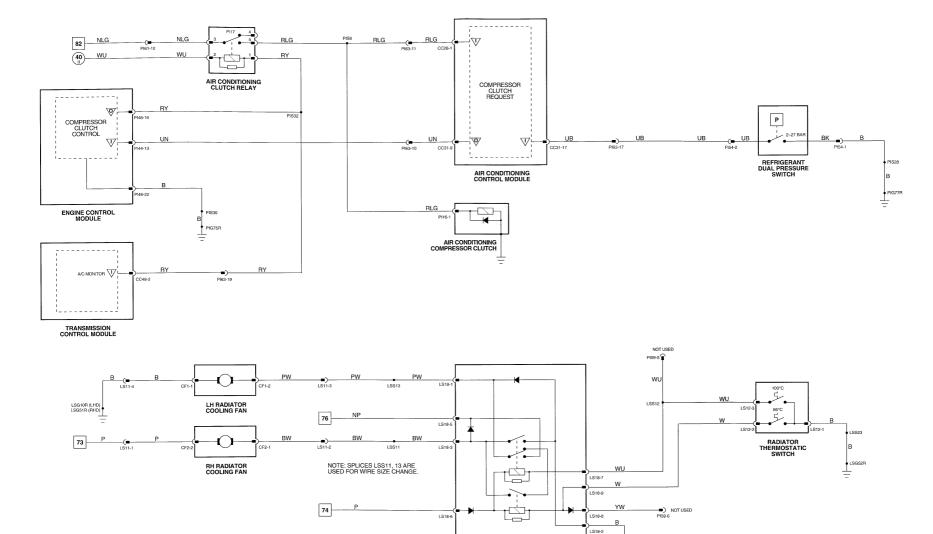
Location / Type Ground

LEFT FORWARD GROUND STUD 156101 LEFT FORWARD GROUND STUD LSG10B LSG51R LH BULKHEAD GROUND STUD LEFT FORWARD GROUND STUD LSG52R RH 'A' POST GROUND STUD PIG75R PIG77R RIGHT FORWARD FMS GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



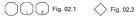
REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.















FAN CONTROL RELAY MODULE



LSG10L

Signal Ground (SG)

VARIANT: V12 Vehicles
VIN RANGE: 787954 →
DATE OF ISSUE: JANUARY 1997

CRUISE CONTROL CONTROL MODULE

∇	Pin	Description	Active	Inactive
0	FC17-3	DUMP VALVE, VACUUM PUMP & CONTROL VALVE POWER FEED	B+	B+
1	FC17-6	VEHICLE SPEED INPUT	GROUND @ 10 MPH (16 KPH) = 20 Hz, 20 MPH (32 KPH) = 40 Hz	
1	FC17-9	ANTI-LOCK / TRACTION ACTIVE INHIBIT	GROUND	B+
0	FC17-10	CONTROL VALVE GROUND	GROUND	GROUND
1	FC17-12	CRUISE CONTROL BRAKE / CLUTCH SWITCH	B+	GROUND
0	FC17-14	DUMP VALVE GROUND	GROUND	B+
1	FC17-15	BRAKE LIGHT SWITCH	GROUND	B+
1	FC17-17	SET / ACCELERATE / RESUME SWITCH	SET / ACCELERATE = 2 7 V, RESUME / COAST = 5 5 V	
1	FC17-18	PARK / NEUTRAL CRUISE CONTROL INHIBIT	GROUND = D, 3, 2	B+ = P, R, N
0	EC17-20	VACUUM PUMP GROUND	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

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NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 08.

COMPONENTS

Component

BRAKE SWITCH
CLUTCH SWITCH (MANUAL TRANSMISSION)
CLUTCH SWITCH LINK (AUTOMATIC TRANSMISSION)
DUMP VALVE
CRUISE CONTROL CONTROL MODULE

CRUISE CONTROL CONTROL MODULE CRUISE CONTROL BRAKE SWITCH CRUISE CONTROL SWITCHES VACUUM PUMP AND CONTROL VALVE

Connector / Type / Color

CA72 / 4-WAY MULTILOCK 670 / WHITE
CA73 / 2-WAY MULTILOCK 670 / YELLOW
CA73 / 2-WAY MULTILOCK 670 / YELLOW
LS22 / 2-WAY FCONOSEAL III LC / BLACK
CT/1 / 20-WAY PCB / BLACK
CA72 / 4-WAY MULTILOCK 670 / WHITE
FC18 / 16-WAY MULTILOCK 600 / BLACK
LS23 / 3-WAY CRUISE CONTROL / NATURAL

Location / Access

DRIVER'S UNDERSCUTTLE ABOVE CLUTCH PEDAL DRIVER'S UNDERSCUTTLE BELOW LH FRONT RELAYS DRIVER'S UNDERSCUTTLE DRIVER'S UNDERSCUTTLE FASCIA SWITCH PACK ENGINE BAY, LH FRONT

HARNESS-TO-HARNESS CONNECTORS

 Connector
 Type / Color

 CC3
 29-WAY MULTILOCK 070 / SLATE

 FC5
 THROUGH-PANEL (48 MICRO / 6) / BLACK

 FC7
 THROUGH-PANEL (48 MICRO / 6) / BLACK

 LS3
 THROUGH-PANEL (48 MICRO / 6) / BLACK

Location / Access

CENTER CONSOLE / CENTER CONSOLE GLOVE BOX LH FASCIA END PANEL / OUTER AIR VENT PASSENGER'S UNDERSCUTTLE LH 'A' POST /'A' POST PANEL

GROUNDS

Ground Location / Type

CAGGOR LH 'A' POST GROUND SCREW

CAG33R RH HEELBOARD GROUND SCREW FCG28L LH CONSOLE GROUND STUD

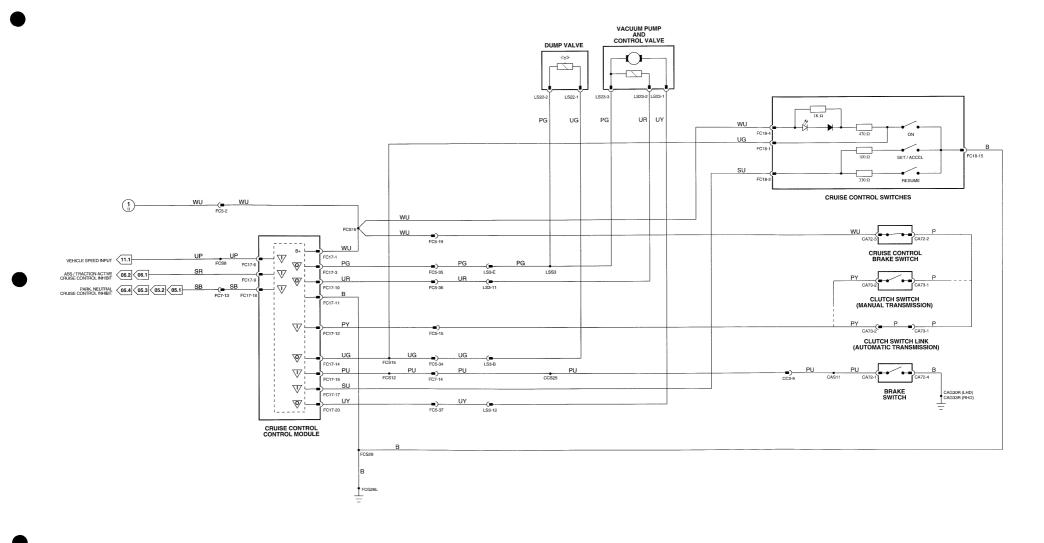
CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

Fig. 08.1





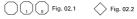


















Signal Ground (SG)

VARIANT: All Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

BODY PROCESSOR MODULE

\vee	Pin	Description	Active	Inactiv
0	FC1-18	FRONT FOG LAMPS AND STATE LAMP ON	GROUND	B+
0	FC1-29	LH DIPPED BEAM ON	GROUND	B+
0	FC1-32	HEADLAMP MAIN BEAM INDICATOR	GROUND	B+
0	FC1-39	RH DIPPED BEAM ON	GROUND	B+
0	FC1-41	MAIN BEAM ON	GROUND	B+
1	FC2-3	SIDE LAMPS ON	GROUND	B+
1	FC2-6	HEADLAMP CONVENIENCE	GROUND PULSE	B+
1	FC2-31	IGNITION SWITCHED GROUND	GROUND	B+
1	FC2-37	HEADLAMP FLASH SWITCH	GROUND	B+
1	FC2-40	HEADLAMPS ON	GROUND	B+
- 1	FC2-43	FRONT FOG LAMPS	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

B+ Battery voltage Input O Output V Voltage (DC) SG Signal Ground Hz Frequency KHz Frequency x 1000 D Serial and encoded communications MS Milliseconds MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component

BODY PROCESSOR MODULE

FOG LAMP - LH

FOG LAMP - RH HEADLAMP FLASH SWITCH (COLUMN SWITCHGEAR)

HEADLAMP - LH HEADLAMP - RH LIGHTING SWITCHES

SIDE MARKER LAMP -- LH (NAS ONLY)

SIDE MARKER LAMP - RH (NAS ONLY)

Connector / Type / Color

FC1 / 48-WAY PCB SIGNAL / YELLOW FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK

BL4 / 2-WAY JUNIOR TIMER / BLACK BR4 / 2-WAY JUNIOR TIMER / BLACK SC3 / 6-WAY MULTILOCK 070 / WHITE

LS38 / 6-WAY ECONOSEAL III LC / BLACK RS38 / 6-WAY ECONOSEAL III LC / BLACK FC12 / 16-WAY MULTILOCK 040 / BLUE BL5 / 2-WAY JUNIOR TIMER / BLACK BR5 / 2-WAY JUNIOR TIMER / BLACK

Location / Access

PASSENGER'S UNDERSCUTTLE

LH REAR LAMP UNIT RH REAR LAMP UNIT STEERING COLUMN / COVER

LH HEADLAMP RH HEADLAMP FASCIA SWITCH PACK LH FRONT LAMP UNIT RH FRONT LAMP UNIT

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
DIP RELAY - LH	BLACK	LS54 / BLACK	ENGINE BAY, LH FRONT
DIP RELAY - RH	BLACK	RS47 / BLACK	ENGINE BAY, RH FRONT
FRONT FOG LAMP RELAY	BLACK	LS55 / BL'ACK	ENGINE BAY, LH FRONT
MAIN REAM RELAY	BLACK	RS46 / BLACK	ENGINE BAY, RH FRONT

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BL1	13-WAY ECONOSEAL III LC / BLACK	LH FRONT WHEEL ARCH LINER / SPOILER AND SPOILER TRAY
BR1	13-WAY ECONOSEAL III LC / BLACK	RH FRONT WHEEL ARCH LINER / SPOILER AND SPOILER TRAY
FC4	20-WAY MULTILOCK 040 / BLUE	DRIVER'S UNDERSCUTTLE
FC5	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH FASCIA END PANEL / OUTER AIR VENT
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
FC16	20-WAY MULTILOCK 040 / BLACK	PASSENGER'S UNDERSCUTTLE
LS3	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH 'A' POST/ 'A' POST PANEL
PI1	13-WAY ECONOSEAL III LC / WHITE	REARWARD OF RH HEADLAMP
PI59	13-WAY ECONOSEAL III LC / BLACK	FORWARD OF LH ENGINE BAY FUSE BOX
BS3	THROUGH-PANEL (48 MICRO / 6) / BROWN	RH 'A' POST/ 'A' POST PANEL

GROUNDS

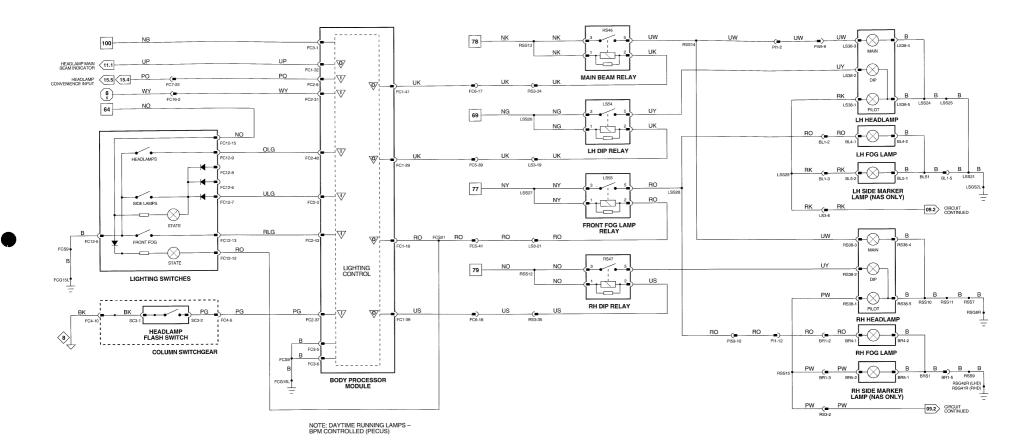
Location / Type Ground

LH CONSOLE GROUND STUD FCG15L LEFT FORWARD GROUND STUD 156521 RIGHT FORWARD GROUND STUD RSGRR RIGHT FORWARD GROUND STUD BSG41R BSG42B RH BULKHEAD GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



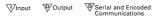














BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-14	LH PILOT BEAM, SIDE LAMPS AND TAIL LAMPS ON	GROUND	B+
0	FC1-47	REAR FOG LAMPS AND STATE LAMP ON	GROUND	B+
1	FC2-3	SIDE LAMPS ON	GROUND	B+
- 1	FC2-31	IGNITION SWITCHED GROUND	GROUND	B+
1	FC2-45	REAR FOG GUARD LAMP REQUEST	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.



COMPONENTS

TAIL LAMP UNIT - RH

Component Connector / Type / Color

FC1 / 48-WAY PCB SIGNAL / YELLOW BODY PROCESSOR MODULE FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK BT20 / 18-WAY MULTILOCK 070 / GREEN BT21 / 20-WAY MULTILOCK 040 / BLUE LAMP CONTROL MODULE FC12 / 16-WAY MULTILOCK 040 / BLUE LIGHTING SWITCHES NUMBER PLATE LAMP - LH BT27 / 2-WAY POSILOCK / BLACK NUMBER PLATE LAMP - RH BT11 / 2-WAY POSILOCK / BLACK SR1-L / 2-WAY JUNIOR TIMER / BLACK SIDE MARKER LAMP -- LH SR1-R / 2-WAY JUNIOR TIMER / BLACK SIDE MARKER LAMP - RH TL4 / 7-WAY JUNIOR TIMER / BLACK TAIL LAMP UNIT - LH

Location / Access

PASSENGER'S UNDERSCUTTLE

TRUNK ELECTRICAL CARRIER

FASCIA SWITCH PACK
TRUNK LID / TRUNK LID TRIM
TRUNK LID / TRUNK LID TRIM
LIH FRONT LAMP UNIT
RH FRONT LAMP UNIT
LH REAR / TRUNK TRIM
RH REAR / TRUNK TRIM

HARNESS-TO-HARNESS CONNECTORS

Type / Color Location / Access ABOVE FUEL TANK / FUEL TANK TRIM THROUGH-PANEL (48 MICRO / 6) / BLACK BT4 BT50 18-WAY MULTILOCK 070 / WHITE ADJACENT TO TRUNK FUSE BOY 20-WAY MULTILOCK 070 / SLATE CENTER CONSOLE / CENTER CONSOLE GLOVE BOX CC3 LH FASCIA END PANEL / OUTER AIR VENT FC5 THROUGH-PANEL (48 MICRO / 6) / BLACK RH FASCIA END PANEL / OUTER AIR VENT FC6 THROUGH-PANEL (48 MICRO / 6) / BLACK PASSENGER'S UNDERSCUTTLE FC16 20-WAY MULTILOCK 040 / BLACK LS3 THROUGH-PANEL (48 MICRO / 6) / BLACK TH 'A' POST / 'A' POST PANEL THROUGH-PANEL (48 MICRO / 6) / BROWN RH 'A' POST / 'A' POST TL5 2-WAY MULTILOCK 040 / GREEN ADJACENT TO RH TAIL LAMP CLUSTER 2-WAY MULTILOCK 040 / GREEN ADJACENT TO LH TAIL LAMP CLUSTER

TL3 / 7-WAY JUNIOR TIMER / BLACK

GROUNDS

Ground Location / Type

BTG48L REAR TRUNK GROUND STUD

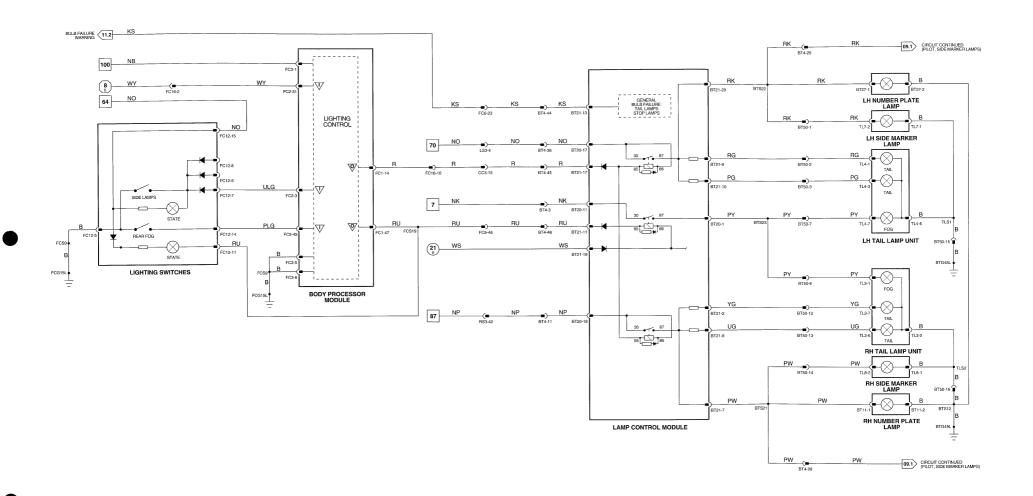
BTG49L REAR TRUNK GROUND STUD

FCG15L LH CONSOLE GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.













COMPONENTS

Component

BRAKE SWITCH DIODE (BT51) - HIGH MOUNTED STOP LAMP HIGH MOUNTED STOP LAMP LAMP CONTROL MODULE

LINEAR GEAR POSITION SWITCHES REVERSE SWITCH (AJ16 MANUAL) ROTARY SWITCH

TAIL LAMP UNIT - LH TAIL LAMP UNIT - RH

Connector / Type / Color

CA72 / 4-WAY MULTILOCK 070 / WHITE BT51 / DIODE / BLACK CA35 / 3-WAY MT EDGE / SLATE BT20 / 18-WAY MULTILOCK 070 / GREEN BT21 / 20-WAY MULTILOCK 040 / BLUE CC21 / 20-WAY MULTILOCK 040 / BLACK CC45 / 2-WAY SUMITOMO 90 / NATURAL

GB1 (FLY LEAD) / 8-WAY MULTILOCK 070 / WHITE GB2 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK TL4 / 7-WAY JUNIOR TIMER / BLACK TL3 / 7-WAY JUNIOR TIMER / BLACK

Location / Access

DRIVER'S UNDERSCUTTLE TRUNK HARNESS, ADJACENT TO BATTERY / RH FLOOR PANEL BACKLIGHT

TRUNK ELECTRICAL CARRIER

'J' GATE / CENTER CONSOLE

TRANSMISSION TUNNEL / CENTER CONSOLE 'J' GATE / CENTER CONSOLE

LH REAR / TRUNK TRIM RH REAR / TRUNK TRIM

RELAYS

Relay HIGH MOUNTED STOP LAMP RELAY Color / Stripe BROWN

Connector / Color

BT13 / YELLOW

Location / Access

TRUNK ELECTRICAL CARRIER

HARNESS-TO-HARNESS CONNECTORS

Type / Color Connector

THROUGH-PANEL (48 MICRO / 6) / BLACK BT4 18-WAY MULTILOCK 070 / WHITE BT50 CC3 20-WAY MULTILOCK 070 / SLATE THROUGH-PANEL (48 MICRO / 6) / BLACK FC6

Location / Access ABOVE FUEL TANK / FUEL TANK TRIM

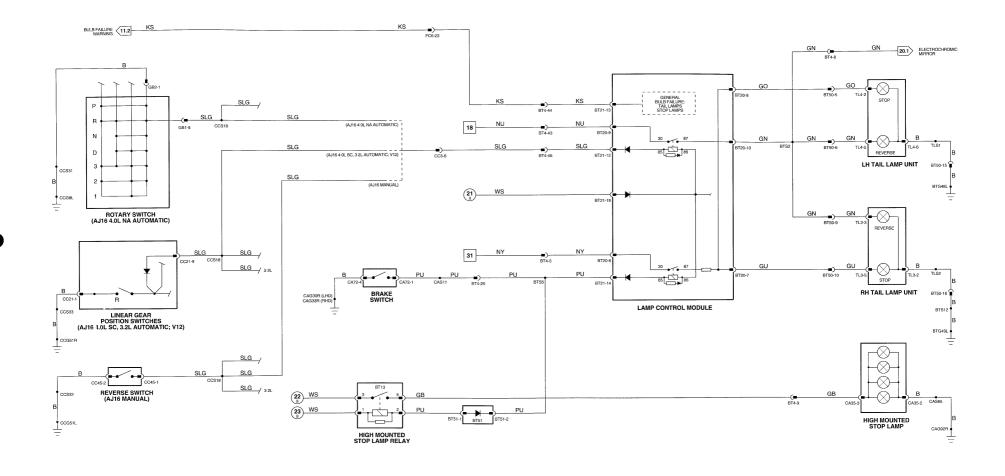
ADJACENT TO TRUNK FUSE BOX CENTER CONSOLE / CENTER CONSOLE GLOVE BOX RH FASCIA END PANEL / OUTER AIR VENT

GROUNDS

Ground Location / Type REAR TRUNK GROUND STUD RTG18L REAR TRUNK GROUND STUD BTG49L LH 'A' POST GROUND SCREW CAGROR RH HEELBOARD GROUND SCREW CAG33R RH HEELBOARD GROUND SCREW CAG92R CENTER CONSOLE GROUND STUD CCG51L CENTER CONSOLE GROUND STUD CCG51R CENTER CONSOLE GROUND STUD CCG8L

DATE OF ISSUE: JANUARY 1997

REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



















VARIANT: All Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-17	LH DI INDICATOR	GROUND PULSE	B+
0	FC1-19	RH DI INDICATOR	GROUND PULSE	B+
0	FC1-38	HAZARD WARNING STATE LAMP	GROUND PULSE	B+
0	FC1-46	DI BULB FAIL WARNING LAMP	GROUND	B+
1	FC2-10	LH DI BULB FAILURE	GROUND	B+
1	FC2-18	RH DI REQUEST	GROUND	B+
1	FC2-27	HAZARD LAMPS REQUEST	GROUND	B+
1	FC2-31	IGNITION SWITCHED GROUND	GROUND	B+
1	FC2-34	RH DI FAILURE	GROUND	B+
- 1	FC2-42	RH GROUND DISCONNECT LOOP	GROUND	B+
1	FC2-44	LH GROUND DISCONNECT LOOP	GROUND	B+
1	FC2-46	LH DI REQUEST	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

I Input B+ Battery voltage
O Output V Voltage (DC)
SG Signal Ground Hz Frequency
D Serial and encoded communications KHz Frequency x 1000
MS Millisoonds
MV Willivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 09.4

COMPONENTS

Connector / Type / Color Component FC1 / 48-WAY PCB SIGNAL / YELLOW BODY PROCESSOR MODULE FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK CENTER CONSOLE SWITCH PACK CC1 / 16-WAY MULTILOCK 040 / BLACK DIODE (FC59) - RH DI INDICATOR FC59 / DIODE / BLACK DIODE (FC60) - LH DI INDICATOR FC60 / DIODE / BLACK DIRECTION INDICATOR SWITCHES (COLUMN SWITCHGEAR) SC3 / 6-WAY MULTILOCK 070 / WHITE DIRECTION INDICATORS - LH FRONT BL2 / 3-WAY JUNIOR TIMER / BLACK DIRECTION INDICATORS - RH FRONT BR2 / 3-WAY JUNIOR TIMER / BLACK BT20 / 18-WAY MULTILOCK 070 / GREEN

 LAMP CONTROL MODULE
 B720 / 18-WAY MULTILOCK 907 (GREE B727 / 20-WAY MUNOR TIMER / BLACK STAND / 20-WAY MUNOR TIMER / 20-WAY MUNOR

Location / Access

PASSENGER'S UNDERSCUTTLE

CENTER CONSOLE
FASCIA HARNESS / INSTRUMENT PACK
FASCIA HARNESS / INSTRUMENT PACK
STEERING COLUMN / COVER
LH FRONT / SPOILER
TRUNK ELECTRICAL CARRIER

LH FRONT FENDER

LH FRONT FENDER RH FRONT FENDER LH REAR / TRUNK TRIM RH REAR / TRUNK TRIM

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BL1	13-WAY ECONOSEAL III LC / BLACK	LH FRONT WHEEL ARCH LINER / SPOILER AND SPOILER TRAY
BR1	13-WAY ECONOSEAL III LC / BLACK	RH FRONT WHEEL ARCH LINER / SPOILER AND SPOILER TRAY
BT4	THROUGH-PANEL (48 MICRO / 6) / BLACK	ABOVE FUEL TANK / FUEL TANK TRIM
BT50	18-WAY MULTILOCK 070 / WHITE	ADJACENT TO TRUNK FUSE BOX
FC16	20-WAY MULTILOCK 040 / BLACK	PASSENGER'S UNDERSCUTTLE
FC4	20-WAY MULTILOCK 040 / BLUE	DRIVER'S UNDERSCUTTLE
FC5	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH FASCIA END PANEL / OUTER AIR VENT
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
FC16	20-WAY MULTILOCK 040 / BLACK	PASSENGER'S UNDERSCUTTLE
LS3	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH 'A' POST/ 'A' POST PANEL
RS3	THROUGH-PANEL (48 MICRO / 6) / BROWN	RH 'A' POST/ 'A' POST PANEL

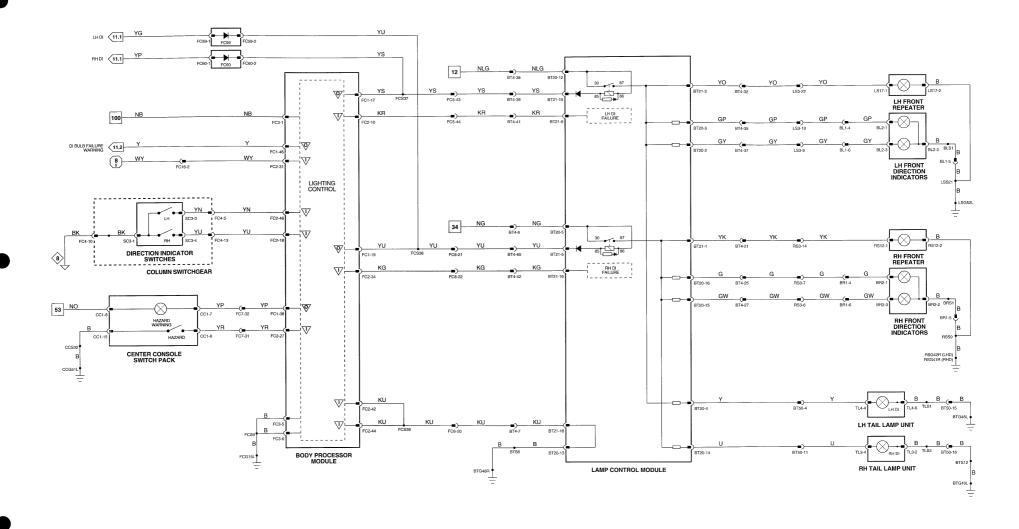
GROUNDS

Ground	Location / Type
BTG48L	REAR TRUNK GROUND STUD
BTG48R	REAR TRUNK GROUND STUD
BTG49L	REAR TRUNK GROUND STUD
CCG51L	CENTER CONSOLE GROUND STUD
FCG15L	LH CONSOLE GROUND STUD
LSG19R	LH BULKHEAD GROUND STUD
LSG52L	LEFT FORWARD GROUND STUD
RSG41R	RIGHT FORWARD GROUND STUD
RSG42R	RH BULKHEAD GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.





COMPONENTS

Component

CENTER CONSOLE SWITCH PACK AND CLOCK HEADLAMP LEVELING ACTUATOR - LH HEADLAMP LEVELING ACTUATOR - RH

Connector / Type / Color

CC1 / 16-WAY MULTILOCK 040 / BLACK LS41 / 3-WAY REINSHAGEN / BLACK RS22 / 3-WAY REINSHAGEN / BLACK

Location / Access

CENTER CONSOLE LH HEADLAMP, REAR RH HEADLAMP, REAR

HARNESS-TO-HARNESS CONNECTORS

Connector cc3

CC5

LS3

RS3

Type / Color

20-WAY MULTILOCK 070 / SLATE
20-WAY MULTILOCK 070 / WHITE
THROUGH-PANEL (48 MICRO / 6) / BLACK
THROUGH-PANEL (48 MICRO / 6) / BROWN

Location / Access

CENTER CONSOLE / CENTER CONSOLE GLOVE BOX CENTER CONSOLE / CENTER CONSOLE GLOVE BOX LH 'A' POST / 'A' POST PANEL RH 'A' POST / 'A' POST PANEL

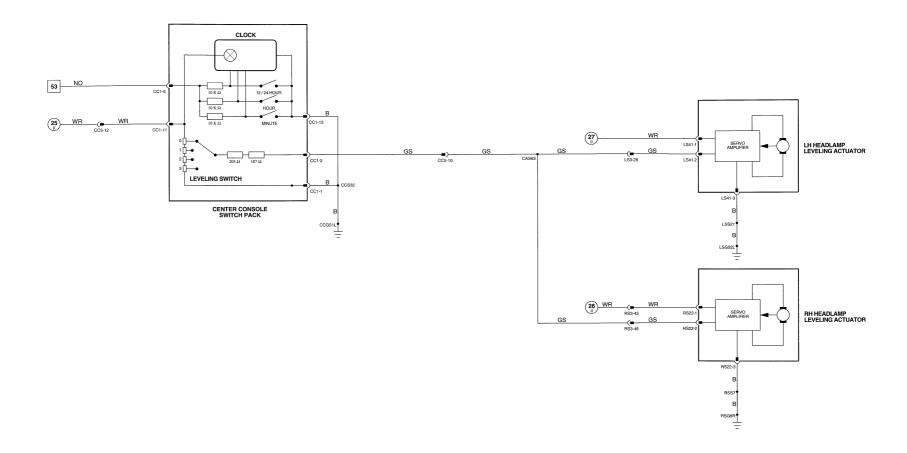
GROUNDS

Ground Location / Type

CCG51L CENTER CONSOLE GROUND STUD LSG52L LEFT FORWARD GROUND STUD RSG8R RIGHT FORWARD GROUND

REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

Fig. 09.5





















BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive	
0	FC1-12	RH TRUNK LAMP	GROUND	B+	
0	FC1-15	LH TRUNK LAMP	GROUND	B+	
0	FC1-24	INTERIOR AND COURTESY LAMPS	GROUND	B+	
0	FC1-30	PUDDLE LAMP RELAY	GROUND	B+	
,	FC2-2	INTERIOR LAMPS ON	GROUND	B+	
- 1	FC2-29	CONSOLE INTERIOR LAMP SWITCH	GROUND	B+	
- 1	FC2-30	PASSENGER DOOR AJAR	GROUND	B+	
- 1	FC2-32	TRUNK AJAR	GROUND	B+	
1	FC2-33	DRIVER DOOR AJAR	GROUND	B+	
1	FC2-41	INTERIOR LAMP EXTINGUISH DURING CRANK	GROUND	B+	
1	FC2-48	KEY IN IGNITION SWITCH	GROUND	B+	

The following symbols are used to represent values for Control Module Pin Out data:

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NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 10.1

COMPONENTS

Connector / Type / Color Location / Access Component FC1 / 48-WAY PCB SIGNAL / YELLOW PASSENGER'S UNDERSCUTTLE BODY PROCESSOR MODULE EC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK DD1 / 12-WAY MULTILOCK 47 / WHITE DD2 / 22-WAY MULTILOCK 47 / WHITE ARM REST / TOP ROLL DOOR SWITCH PACK - DRIVER RD1-L / 12-WAY MULTILOCK 070 / WHITE DOOR CASING DOOR SWITCH PACK - LH REAR PD1 / 26-WAY MULTILOCK 47 / SLATE ARM REST / TOP ROLL DOOR SWITCH PACK - PASSENGER RD1-R / 12-WAY MULTILOCK 070 / WHITE DOOR CASING DOOR SWITCH PACK - RH REAR DD3 / 13-WAY ECONOSEAL III LC / BLACK DOOR CASING DOOR SWITCH - DRIVER RD3-L / 6-WAY ECONOSEAL III LC / BLACK DOOR CASING DOOR SWITCH - LH REAR PD3 / 13-WAY ECONOSEAL III LC / BLACK DOOR CASING DOOR SWITCH - PASSENGER RD3-R / 6-WAY ECONOSEAL III LC / BLACK DOOR CASING DOOR SWITCH - RH REAR CA89 / 4-WAY MULTILOCK 040 / BLACK 'E' POST LAMP E-POST LAMP - LH E-POST LAMP - RH CA90 / 4-WAY MULTILOCK 040 / BLACK 'E' POST LAMP GI1 / LUCAR / NATURAL GLOVE BOX LAMP GLOVE BOX GI2 / LUCAR / NATURAL GLOVE BOX FC54 (FLY LEAD) / 8-WAY MULTILOCK 070 / WHITE STEERING COLUMN / COVER IGNITION SWITCH INTERIOR / MAP LAMPS CONSOLE CA83 / 8-WAY MULTILOCK 040 / BLACK ROOF CONSOLE PUDDLE LAMP - DRIVER DOOR DD14 / 2-WAY JUNIOR TIMER / BLACK DOOR CASING RD7L / LUCAR / WHITE RD8L / LUCAR / WHITE PUDDLE LAMP - LH REAR DOOR DOOR CASING PD14 / 2-WAY JUNIOR TIMER / BLACK DOOR CASING PLIDDLE LAMP - PASSENGER DOOR RD7R / LUCAR / WHITE DOOR CASING PUDDLE LAMP - RH REAR DOOR RDRR / LUCAR / WHITE SUNVISOR LAMP - LH CA69 / 2-WAY MULTILOCK 040 / BLACK LH SUNVISOR CA70 / 2-WAY MULTILOCK 040 / BLACK RH SUNVISOR SUNVISOR LAMP - RH BT46 / 2-WAY JUNIOR TIMER / BLACK TRUNK, LH SIDE, REAR TRUNK LAMP - LH TRUNK LAMP - RH RT47 / 2-WAY ILINIOR TIMER / RLACK TRUNK BHISIDE BEAR TRUNK LID / TRUNK LID TRIM TRUNK SWITCH BT15 / 2-WAY FORD DIAGNOSTIC / BLACK

RELAYS

 Relay
 Color / Stripe
 Connector / Color
 Location / Access

 PUDDLE LAMP RELAY - DRIVER
 BROWN
 CAS3 / BROWN
 LH HEELBOARD

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BT4	THROUGH-PANEL (48 MICRO / 6) / BLACK	ABOVE FUEL TANK / FUEL TANK TRIM
CA8	20-WAY MULTILOCK 040 / GREEN	DRIVER'S 'A' POST / 'A' POST TRIM
CA9	20-WAY MULTILOCK 040 / BLACK	DRIVER'S 'A' POST / 'A' POST TRIM
CA10	8-WAY MULTILOCK 070 / WHITE	DRIVER'S 'A' POST / 'A' POST TRIM
CA11	20-WAY MULTILOCK 040 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA12	14-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA13	6-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA14	4-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA15	6-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CA16	4-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CA79	4-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA80	4-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC4	14-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC5	20-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC18	20-WAY MULTILOCK 070 / YELLOW	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC53	2-WAY MULTILOCK 040 / BLACK	PASSENGER'S UNDERSCUTTLE
FC5	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH FASCIA END PANEL / OUTER AIR VENT
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
FC16	20-WAY MULTILOCK 040 / BLACK	PASSENGER'S UNDERSCUTTLE

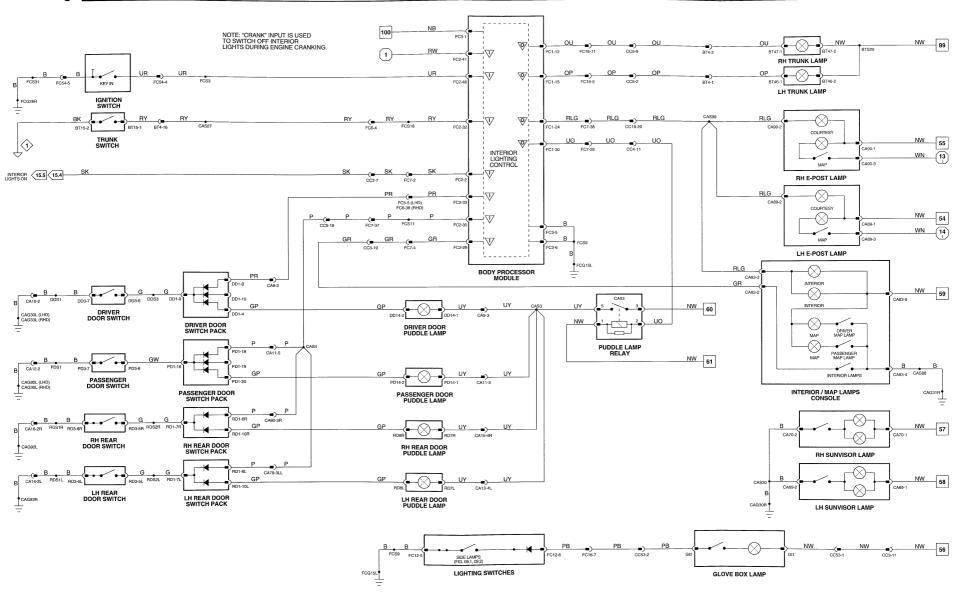
GROUNDS

Ground	Location / Type	Ground	Location / Type
CAG30L	LH 'A' POST GROUND SCREW	CAG92L	RH HEELBOARD GROUND SCREW
CAG30R	LH 'A' POST GROUND SCREW	CAG93R	LH HEELBOARD GROUND SCREW
CAG31R	PARCEL SHELF GROUND SCREW	FCG15L	LH CONSOLE GROUND STUD
CAG33L	RH HEELBOARD GROUND SCREW	FCG26R	LH CONSOLE GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



















Description

DIMMER ∇ Pin O SC1-1

0	SC1-1	ILLUMINATION SUPPLY
1	SC1-2	SIDE LAMPS ON
0	SC1-7	ILLUMINATION SUPPLY
SG	G	DIMMER POTENTIOMETER GROUND
1	Υ	DIMMER POTENTIOMETER FEEDBACK VOLTAGE
0	U	DIMMER POTENTIOMETER REFERENCE VOLTAGE

Active 0 6 V 1 27V = DIM, 1 46V = BRIGHT

1 27V = DIM, 4 10V = BRIGHT

3 91V - DIM, 4 10V = BRIGHT

GROUN
B+
GROUN

Inactive

The following symbols are used to represent values for Control Module Pin Out data:

1	Input	B+	Battery voltage
0	Output	V	Voltage (DC)
SG	Signal Ground	Hz	Frequency
D	Serial and encoded communications	KHz	Frequency x 1000
		MS	Milliseconds
		MV	Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component

AIR CONDITIONING CONTROL MODULE

AIR CONDITIONING CONTROL PANEL CENTER CONSOLE SWITCH PACK CIGAR LIGHTER - FRONT

CIGAR LIGHTER - REAR

DIMMER MODULE (COLUMN SWITCHGEAR) DIMMER CONTROL (COLUMN SWITCHGEAR) DOOR SWITCH PACK - DRIVER

DOOR SWITCH PACK - LH REAR DOOR SWITCH PACK - PASSENGER DOOR SWITCH PACK - RH REAR FASCIA SWITCH PACK INSTRUMENT PACK

INTERIOR / MAP LAMPS CONSOLE LIGHTING SWITCHES SEAT HEATER SWITCH - LH REAR SEAT HEATER SWITCH - RH REAR RADIO

Connector / Type / Color

CC28 / 26-WAY MULTILOCK 47 / SLATE CC29 / 16-WAY MULTILOCK 040 / YELLOW CC30 / 12-WAY MULTILOCK 47 / SLATE CC31 / 22-WAY MULTILOCK 47 / WHITE CC2 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLUE

CC1 / 16-WAY MULTILOCK 040 / BLACK CC9 / 2-WAY SERIES 250 / BLACK CC10 / LUCAR / BLACK CC16 / 2-WAY SERIES 250 / BLACK CC17 / LUCAR / BLACK

SC1 / 8-WAY MULTILOCK 040 / WHITE NO CODE / 6-WAY MULTILOCK 040 / NO COLOR DD1 / 12-WAY MULTILOCK 47 / WHITE DD2 / 22-WAY MULTILOCK 47 / WHITE RD1-L / 12-WAY MULTILOCK 070 / WHITE PD1 / 26-WAY MULTILOCK 47 / SLATE RD1-R / 12-WAY MULTILOCK 070 / WHITE

FC18 / 16-WAY MULTILOCK 040 / BLACK FC9 / 24-WAY AMP PCB SIGNAL / BLACK FC10 / 48-WAY AMP PCB SIGNAL / BLACK CAR3 / 8-WAY MULTILOCK 040 / RLACK FC12 / 16-WAY MULTILOCK 040 / BLUE BS8 / 10-WAY AMP MOL / BLACK

BS9 / 10-WAY AMP MQL / NATURAL IC1 / 20-WAY MULTILOCK 070 / WHITE Location / Access

A/C UNIT, RH SIDE / RH UNDERSCUTTLE

CENTER CONSOLE CENTER CONSOLE CENTER CONSOLE

CENTER CONSOLE

STEERING COLUMN / COVER STEERING COLUMN / COVER ARM REST / TOP ROLL

DOOR CASING ARM REST / TOP ROLL DOOR CASING

STEERING COLUMN / DRIVER'S UNDERSCUTTLE

INSTRUMENT PACK

ROOF CONSOLE FASCIA SWITCH PACK CENTER CONSOLE / REAR CENTER CONSOLE / REAR CENTER CONSOLE

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access	
CA9	20-WAY MULTILOCK 040 / BLACK	DRIVER'S 'A' POST / 'A' POST TR	
CA10	8-WAY MULTILOCK 070 / WHITE	DRIVER'S 'A' POST / 'A' POST TR	
CA11	20-WAY MULTILOCK 040 / WHITE	PASSENGER'S UNDERSCUTTLE /	
CA12	14-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE /	
CA13	6-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL	
CA14	4-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL	
CA15	6-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL	
CA16	4-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL	
CA109	12-WAY MULTILOCK 070 / WHITE	RH REAR SEAT / UNDER	
CC18	20-WAY MULTILOCK 070 / YELLOW	CENTER CONSOLE / CENTER COI	
FC4	20-WAY MULTILOCK 040 / BLUE	DRIVER'S UNDERSCUTTLE	
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE	
IC7	8-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE	

Access

ST / 'A' POST TRIM ST / 'A' POST TRIM INDERSCUTTLE / ECM INDERSCUTTLE / ECM BC' POST PANEL BC' POST PANEL BC' POST PANEL BC' POST PANEL UNDER LE / CENTER CONSOLE GLOVE BOX RSCUTTLE INDERSCUTTLE

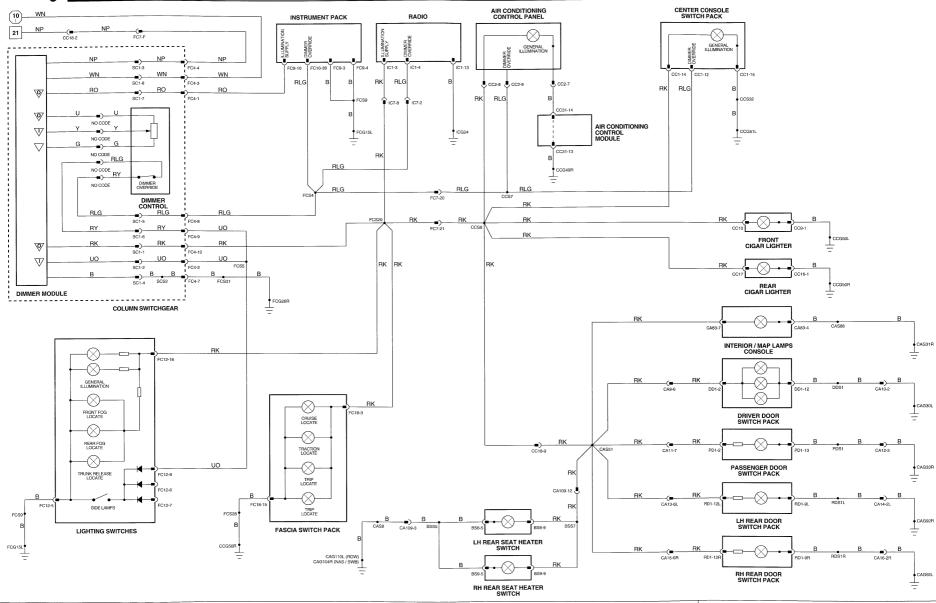
GROUNDS

Ground	Location / Type
CAG30L	LH 'A' POST GROUND SCREW
CAG31R	PARCEL SHELF GROUND SCREW
CAG33R	RH HEELBOARD GROUND SCREW
CAG92L	RH HEELBOARD GROUND SCREW
CAG92R	RH HEELBOARD GROUND SCREW
CCG49R	RH CONSOLE GROUND STUD
CCG50L	CENTER CONSOLE GROUND
CCG50R	CENTER CONSOLE GROUND
CCG51L	CENTER CONSOLE GROUND STU
FCG15L	LH CONSOLE GROUND STUD
FCG26R	LH CONSOLE GROUND STUD
ICG24	RADIO GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



Description

DIMMER

	SC1-1	ILLUMINATION SUPPLY	B+
	SC1-2	SIDE LAMPS ON	0 6 V
	SC1-7	ILLUMINATION SUPPLY	B+
ò	G	DIMMER POTENTIOMETER GROUND	1 27V = DIM, 1 46V = BRIGHT
	Υ	DIMMER POTENTIOMETER FEEDBACK VOLTAGE	1 27V = DIM, 4 10V = BRIGHT

DIMMER POTENTIOMETER REFERENCE VOLTAGE

Active

3 91V = DIM. 4 10V = BRIGHT

The following symbols are used to represent values for Control Module Pin Out data:

ı	Input	B+	Battery voltage
0	Output	V	Voltage (DC)
SG	Signal Ground	Hz	Frequency
D	Serial and encoded communications	KHz	Frequency x 1000
		MS	Milliseconds
		MΥ	Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Inactive GROUND

GROUND

COMPONENTS		
Component	Connector / Type / Color	Location / Access
AIR CONDITIONING CONTROL MODULE	CC28 / 28-WAY MULTILOCK 47 / SLATE CC29 / 18-WAY MULTILOCK 040 / YELLOW CC30 / 12-WAY MULTILOCK 47 / SLATE CC31 / 22-WAY MULTILOCK 47 / WHITE	A/C UNIT, RH SIDE / RH UNDERSCUTTLE
AIR CONDITIONING CONTROL PANEL	CC2 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLUE	CENTER CONSOLE
CENTER CONSOLE SWITCH PACK	CC1 / 16-WAY MULTILOCK 040 / BLACK	CENTER CONSOLE
CIGAR LIGHTER - FRONT	CC9 / 2-WAY SERIES 250 / BLACK CC10 / LUCAR / BLACK	CENTER CONSOLE
CIGAR LIGHTER - REAR	CC16 / 2-WAY SERIES 250 / BLACK CC17 / LUCAR / BLACK	CENTER CONSOLE
DIMMER MODULE (COLUMN SWITCHGEAR)	SC1 / 8-WAY MULTILOCK 040 / WHITE	STEERING COLUMN / COVER
DIMMER CONTROL (COLUMN SWITCHGEAR)	NO CODE / 6-WAY MULTILOCK 040 / NO COLOR	STEERING COLUMN / COVER
DOOR SWITCH PACK - DRIVER	DD1 / 12-WAY MULTILOCK 47 / WHITE DD2 / 22-WAY MULTILOCK 47 / WHITE	ARM REST / TOP ROLL
DOOR SWITCH PACK - LH REAR	RD1-L / 12-WAY MULTILOCK 070 / WHITE	DOOR CASING
DOOR SWITCH PACK - PASSENGER	PD1 / 26-WAY MULTILOCK 47 / SLATE	ARM REST / TOP ROLL
DOOR SWITCH PACK - RH REAR	RD1-R / 12-WAY MULTILOCK 070 / WHITE	DOOR CASING
FASCIA SWITCH PACK	FC18 / 16-WAY MULTILOCK 040 / BLACK	STEERING COLUMN / DRIVER'S UNDERSCUTTL
INSTRUMENT PACK	FC9 / 24-WAY AMP PCB SIGNAL / BLACK FC10 / 48-WAY AMP PCB SIGNAL / BLACK	INSTRUMENT PACK
INTERIOR / MAP LAMPS CONSOLE	CA83 / 8-WAY MULTILOCK 040 / BLACK	ROOF CONSOLE
LIGHTING SWITCHES	FC12 / 16-WAY MULTILOCK 040 / BLUE	FASCIA SWITCH PACK
RADIO	IC1 / 20-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE
SEAT CONTROL MODULE – PASSENGER (NAS VEHICLES)	CA107 / 22-WAY MULTILOCK 47 / WHITE CA108 / 12-WAY MULTILOCK 47 / WHITE SM1-P / 12-WAY MULTILOCK 47 / BLUE SM6-P / 16-WAY MULTILOCK 040 / BLACK	PASSENGER'S SEAT
SEAT CONTROL MODULE – PASSENGER (ROW, MEMORY SEAT VEHICLES)	PL1 / 22-WAY MULTILOCK 47 / WHITE PL2 / 12-WAY MULTILOCK 47 / WHITE SM1-P / 12-WAY MULTILOCK 47 / BLUE SM6-P / 16-WAY MULTILOCK 040 / BLACK	PASSENGER'S SEAT
SEAT FORE/AFT SWITCH LH REAR	BC3 / 10-WAY AMP MQL / BLACK	REAR SEAT SWITCH PACK / UNDER
SEAT FORE/AFT SWITCH - RH REAR	BC5 / 10-WAY AMP MQL / BLACK	REAR SEAT SWITCH PACK / UNDER
SEAT FORE/AFT SWITCHES - PASSENGER, REAR	SM19 / 10-WAY AMP MQL / BLACK	FRONT LOWER SEAT / INSIDE
SEAT HEADREST SWITCH - LH REAR	BC4 / 10-WAY AMP MQL / BLACK	REAR SEAT SWITCH PACK / UNDER
SEAT HEADREST SWITCH - RH REAR	BC7 / 10-WAY AMP MQL / BLACK	REAR SEAT SWITCH PACK / UNDER
SEAT HEATER SWITCH LH REAR	BC1 / 10-WAY AMP MQL / BLACK	CENTER CONSOLE / REAR
SEAT HEATER SWITCH - RH REAR	BC2 / 10-WAY AMP MQL / BLACK	CENTER CONSOLE / REAR
SEAT LUMBAR SWITCH - LH REAR	BC8 / 10-WAY AMP MQL / BLACK	REAR SEAT SWITCH PACK / UNDER
SEAT LUMBAR SWITCH - RH REAR	BC6 / 10-WAY AMP MQL / BLACK	REAR SEAT SWITCH PACK / UNDER
SEAT RECLINE SWITCHES - PASSENGER, REAR	SM20 / 10-WAY AMP MQL / NATURAL	FRONT LOWER SEAT / INSIDE

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BS4	20-WAY MULTILOCK 070 / WHITE	REAR SEAT CONSOLE / UNDER
CA9	20-WAY MULTILOCK 040 / BLACK	DRIVER'S 'A' POST / 'A' POST TRIM
CA10	8-WAY MULTILOCK 070 / WHITE	DRIVER'S 'A' POST / 'A' POST TRIM
CA11	20-WAY MULTILOCK 040 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA12	14-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA13	6-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA14	4-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA15	6-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CA16	4-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CA27	6-WAY MULTILOCK 070 / WHITE	PASSENGER'S SEAT / UNDER
CA109	12-WAY MULTILOCK 070 / WHITE	RH REAR SEAT / UNDER
CC18	20-WAY MULTILOCK 070 / YELLOW	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC4	20-WAY MULTILOCK 040 / BLUE	DRIVER'S UNDERSCUTTLE
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
IC7	8-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE

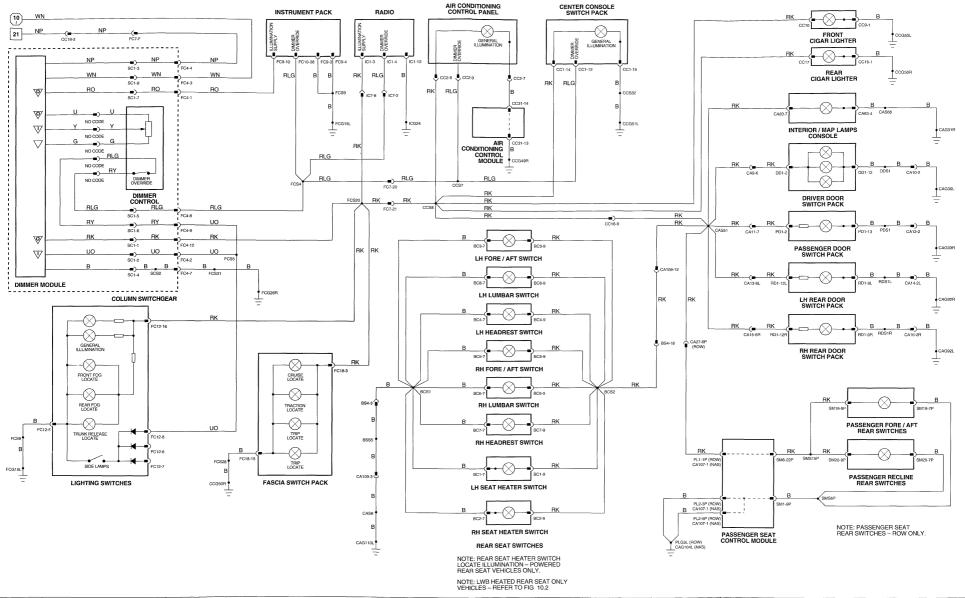
GROUNDS

Ground	Location / Type	Ground	Location / Type
CAG30L	LH 'A' POST GROUND SCREW	CCG50L	CENTER CONSOLE GROUND
CAG31R	PARCEL SHELF GROUND SCREW	CCG50R	CENTER CONSOLE GROUND
CAG33R	RH HEELBOARD GROUND SCREW	CCG51L	CENTER CONSOLE GROUND STUD
CAG92L	RH HEELBOARD GROUND SCREW	FCG15L	LH CONSOLE GROUND STUD
CAG92R	RH HEELBOARD GROUND SCREW	FCG26R	LH CONSOLE GROUND STUD
CAG104L	RH SEAT GROUND STUD	ICG24	RADIO GROUND STUD
CAG110L	RH SEAT GROUND STUD	PLG3L	LH SEAT GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



1 6 Fig. 01.1 7 66 Fig. 01.2 67 109 Fig. 01.3













Serial and Encoded Communications

Signal Ground (SG)

VARIANT: LWB Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

INSTRUMENT PACK

∇	Pin	Description	Active	Inactive
D	FC9-13	SERIAL COMMUNICATION INPUT		
D	FC9-14	SERIAL COMMUNICATION OUTPUT		
- 1	FC9-15	VEHICLE SPEED INPUT	B+@ 10 MPH = 200 Hz, 20 MPH = 400 Hz	
1	FC9-19	COOLANT TEMPERATURE INDICATOR LAMP	GROUND	B+
- 1	FC9-20	FUEL LEVEL	GROUND = FULL	B+ = EMPTY
- 1	FC9-21	ENGINE OIL PRESSURE	GROUND - MAXIMUM PRESSURE	B+ = MINIMUM PRESSURE
0	FC9-22	ENGINE COOLANT TEMPERATURE	2 5 V @ 90° C, INCREASING WITH TEMPERATURE INCREASE	
- 1	FC9-24	TACHOMETER	GROUND PULSE @ 1000 RPM = 15 Hz	
0	FC10-2	VEHICLE SPEED SIGNAL	B+@ 10 MPH (16 KPH) = 20 Hz, 20 MPH (32 KPH) = 40 Hz	
0	FC10-3	VEHICLE SPEED SIGNAL	GROUND @ 10 MPH (16 KPH) = 20 Hz, 20 MPH (32 KPH) = 40 Hz	
1	FC10-4	TRIP STALK CYCLE	GROUND	B+
1	FC10-9	GENERATOR INDICATOR VOLTAGE	< 10 4 V OR > 15 6 V	10 5-15 5 V
1	FC10-12	TRIP RESET	GROUND	B+
1	FC10-14	TRANSMISSION SPORT MODE	GROUND = SPORT	B+
1	FC10-17	PARK BRAKE ON	GROUND	B+
	FC10-24	MAIN BEAM	GROUND	B+
- 1	FC10-35	TRACTION CONTROL STATUS	B+	FAILURE = GROUND TRACTION OFF = 4 Hz GROUND PULSE
1	FC10-36	TRIP CLEAR	GROUND	B+
1	FC10-40	LH DI ON	GROUND PULSE	B+
1	FC10-41	RH DI ON	GROUND PULSE	B+
1	FC10-42	MPH / KPH	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

B+ Battery voltage Input O Output Voltage (DC) SG Signal Ground Hz Frequency KHz Frequency x 1000 D Serial and encoded communications MS Milliseconds

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

MV Millivolts

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component

COOLANT TEMPERATURE SENSOR FASCIA SWITCH PACK FUEL LEVEL SENSOR

HAND BRAKE SWITCH INSTRUMENT PACK

OIL PRESSURE SWITCH

TRIP CYCLE (COLUMN SWITCHGEAR)

Connector / Type / Color

PI140 / LUCAR / BLACK

FC18 / 16-WAY MULTILOCK 040 / BLACK BT32 / LUCAR / WHITE BT33 / LUCAR / WHITE CC52 / 2-WAY MULTILOCK 040 / BLACK FC9 / 24-WAY AMP PCB SIGNAL / BLACK FC10 / 48-WAY AMP PCR SIGNAL / BLACK

PI139 / LUCAR / BLACK SC3 / 6-WAY MULTILOCK 070 / WHITE

RH 'A' POST / 'A' POST TRIM

RH 'A' POST / 'A' POST PANEL

Location / Access

ENGINE THERMOSTAT HOUSING STEERING COLUMN / DRIVER'S UNDERSCUTTLE FUEL TANK / FUEL TANK TRIM

CENTER CONSOLE, LH SIDE INSTRUMENT PACK

ENGINE BLOCK, LH SIDE (AJ16); ENGINE VEE, REAR (V12) STEERING COLUMN / COVER

HARNESS-TO-HARNESS CONNECTORS

Location / Access Connector Type / Color

THROUGH-PANEL (48 MICRO / 6) / BLACK ABOVE FUEL TANK / FUEL TANK TRIM CENTER CONSOLE / CENTER CONSOLE GLOVE BOX 20-WAY MULTILOCK 070 / WHITE 20-WAY MULTILOCK 040 / BLUE DRIVER'S UNDERSCUTTLE THROUGH-PANEL (48 MICRO / 6) / BLACK LH FASCIA END PANEL / OUTER AIR VENT THROUGH-PANEL (48 MICRO / 6) / BLACK RH FASCIA END PANEL / OUTER AIR VENT THROUGH-PANEL (48 MICRO / 6) / BLACK PASSENGER'S LINDERSCLITTLE PASSENGER'S UNDERSCUTTLE 20-WAY MULTILOCK 040 / BLACK 8-WAY MULTILOCK 070 / WHITE PASSENGER'S UNDERSCUTTLE 13-WAY ECONOSEAL III LC / WHITE REARWARD OF RH HEADLAMP REARWARD OF RH HEAD! AMP 13-WAY ECONOSEAL III LC / BLACK

GROUNDS

CC5

FC4

FC5

FC6 FC7

FC16

IC7

PI61

P163

RS3

Ground Location / Type

BTG48R REAR TRUNK GROUND STUD LH CONSOLE GROUND STUD FCG15L FCG26L LH CONSOLE GROUND STUD

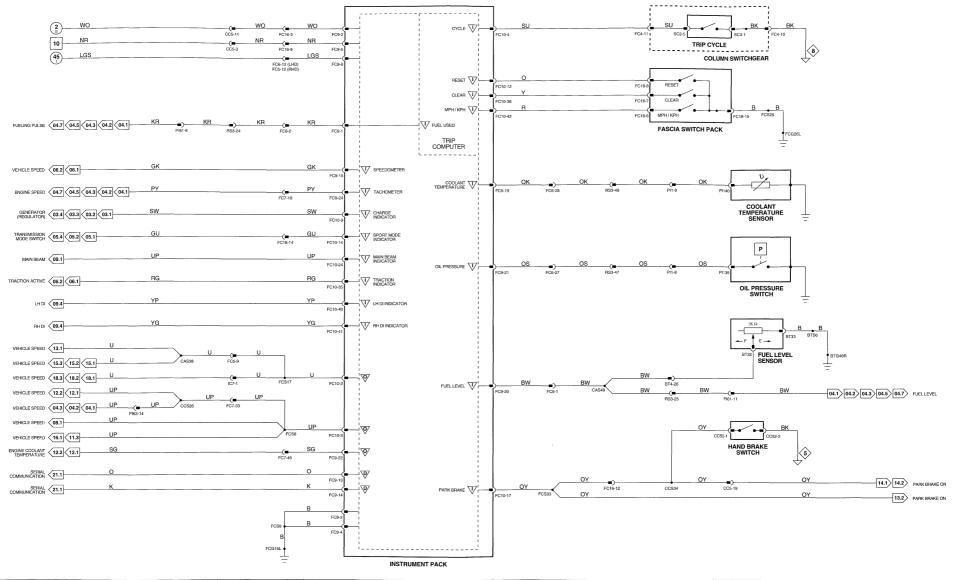
CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)

20-WAY MULTILOCK 040 / BLACK

THROUGH-PANEL (48 MICRO / 6) / BROWN



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.













Signal Ground (SG)

VARIANT: All Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-26	SEAT BELT WARNING LAMP	GROUND	B+
1	FC2-24	SEAT BELT WARNING LAMP	GROUND	B+

DRIVER SEAT CONTROL MODULE (NAS)

∇	Pin	Description	Active	Inactive
0	CA105-20	SEAT BELT WARNING	GROUND	B+
		OF AT DELT FACTENED	GROUND	Ω.

DRIVER SEAT CONTROL MODULE (ROW)

∇	Pin	Description	Active	Inactive
0	PL1-20D	SEAT BELT WARNING	GROUND	B+
1	SM6-21D	SEAT BELT FASTENED	GROUND	B+

Active

INSTRUMENT PACK

V	PIN	Description	Active	mactive
- 1	FC9-7	ANTI-LOCK FAILURE	< 5 V OR > 11 9 V	5 1 - 11 8 V
D	FC9-13	SERIAL COMMUNICATION INPUT		
D	FC9-14	SERIAL COMMUNICATION OUTPUT		
1	FC10-10	BRAKE FLUID LEVEL	GROUND	B+
i	FC10-13	WASHER FLUID LEVEL	GROUND	B+
- 1	FC10-15	SEAT BELT WARNING	GROUND	B+
- 1	FC10-16	TRUNK AJAR	GROUND	79 V
1	FC10-18	DI BULB FAILURE	GROUND (INDICATOR OFF)	B+ (INDICATOR ON)
1	FC10-22	CHECK ENGINE MIL	GROUND	B+
1	FC10-23	EXHAUST TEMPERATURE (JAPAN ONLY)	GROUND	B+
1	FC10-37	COOLANT LEVEL	GROUND	B+
1	FC10-43	GENERAL BULB FAIL	GROUND	B+
1	FC10-44	TRANSMISSION MIL	GROUND	B+
- 1	FC10-45	AIR BAG FAILURE	GROUND	B+
1	FC10-46	DRIVER DOOR AJAR	GROUND	79 V
1	FC10-47	PASSENGER DOOR AJAR	GROUND	79 V

The following symbols are used to represent values for Control Module Pin Out data:

I Input B+ Battery voltage
O Output V Voltage (DC)
SG Signal Ground Hz Frequency
D Serial and encoded communications KHz Frequency x 1000
MS Milliseonds
MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 11.2

COMPONENTS

Component FC1 / 48-WAY PCB SIGNAL / YELLOW BODY PROCESSOR MODULE FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK BRAKE FLUID LEVEL SWITCH (LHD) LS28 / 2-WAY JUNIOR TIMER / BLACK BRAKE FLUID LEVEL SWITCH (RHD) RS36 / 2-WAY JUNIOR TIMER / BLACK LS33 / 2-WAY JUNIOR TIMER / BROWN COOLANT LEVEL SWITCH RD1-L / 12-WAY MULTILOCK 070 / WHITE DOOR SWITCH PACK - LH REAR DOOR SWITCH PACK - PASSENGER PD1 / 26-WAY MULTILOCK 47 / SLATE DOOR SWITCH PACK - RH REAR RD1-R / 12-WAY MULTILOCK 070 / WHITE DD3 / 13-WAY ECONOSEAL III LC / BLACK DOOR SWITCH - DRIVER RD3-L / 6-WAY ECONOSEAL III LC / BLACK DOOR SWITCH - LH REAR PD3 / 13-WAY ECONOSEAL III LC / BLACK DOOR SWITCH - PASSENGER DOOR SWITCH -- RH REAR RD3-R / 6-WAY ECONOSEAL III LC / BLACK FC9 / 24-WAY AMP PCB SIGNAL / BLACK FC10 / 48-WAY AMP PCB SIGNAL / BLACK INSTRUMENT PACK SMB / 2-WAY MULTILOCK 040 / BLACK

SEAT BELT SWITCH SEAT CONTROL MODULE - DRIVER (NAS VEHICLES)

SEAT CONTROL MODULE - DRIVER (ROW, MEMORY SEAT VEHICLES)

TRUNK SWITCH

Connector / Type / Color

B SIGNAL / YELLOW
B SIGNAL / SELOW
SIGNAL / BLACK
S

Location / Access

DRIVER'S SEAT

DRIVER'S SEAT

CA106 / 12-WAY MULTILOCK 47 / BLUE SMM-D / 12-WAY MULTILOCK 47 / WHITE SMM-D / 22-WAY MULTILOCK 47 / WHITE PL / 12-WAY MULTILOCK 47 / BLUE PL / 12-WAY MULTILOCK 47 / BLUE SMM-D / 22-WAY MULTILOCK 47 / BLUE SMM-D / 22-WAY MULTILOCK 47 / WHITE

CA105 / 22-WAY MULTILOCK 47 / BLUE

BT15 / 2-WAY FORD DIAGNOSTIC / BLACK TRUNK LID / TRUNK

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BT4	THROUGH-PANEL (48 MICRO / 6) / BLACK	ABOVE FUEL TANK / FUEL TANK TRIM
CA9	20-WAY MULTILOCK 040 / BLACK	DRIVER'S 'A' POST / 'A' POST TRIM
CA10	8-WAY MULTILOCK 070 / WHITE	DRIVER'S 'A' POST / 'A' POST TRIM
CA11	20-WAY MULTILOCK 040 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA12	14-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA14	4-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA16	4 WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CA23	20-WAY MULTILOCK 040 / BLACK	DRIVER'S SEAT / UNDER
CA25	3-WAY MULTILOCK 070 / YELLOW	RH 'A' POST, ECM / 'A' POST PANEL
CA79	4-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA80	4-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CC5	20-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC18	20-WAY MULTILOCK 070 / YELLOW	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC5	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH FASCIA END PANEL / OUTER AIR VENT
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
FC16	20-WAY MULTILOCK 040 / BLACK	PASSENGER'S UNDERSCUTTLE
LS3	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH 'A' POST / 'A' POST PANEL
ML1-D	10-WAY MULTILOCK 070 / WHITE	DRIVER'S SEAT / UNDER
PI61	13-WAY ECONOSEAL III LC / BLACK	REARWARD OF RH HEADLAMP
PI63	20-WAY MULTILOCK 040 / BLACK	RH 'A' POST / 'A' POST TRIM
RS3	THROUGH-PANEL (48 MICRO / 6) / BROWN	RH 'A' POST / 'A' POST PANEL

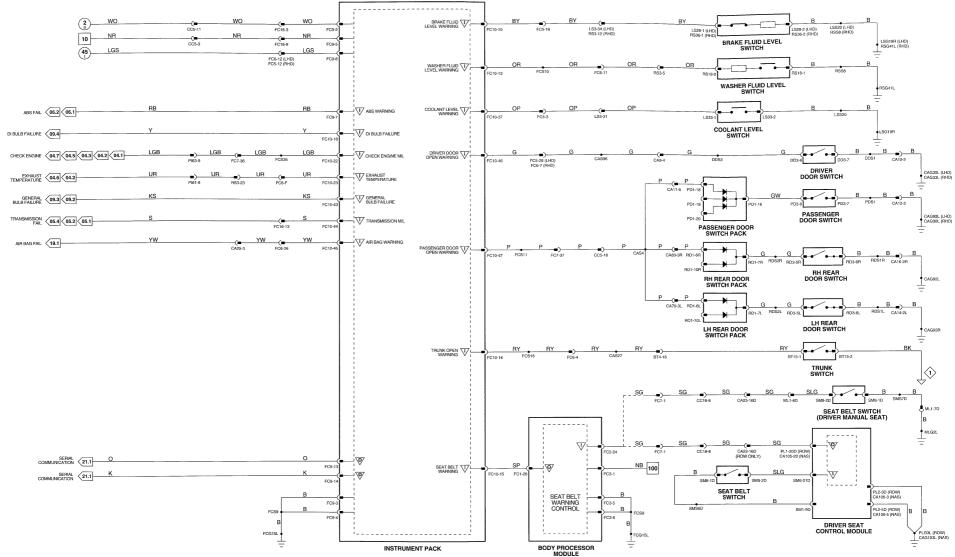
GROUNDS

Ground	Location / Type
CAG30L	LH 'A' POST GROUND SCREW
CAG33L	RH HEELBOARD GROUND SCREW
CAG92L	RH HEELBOARD GROUND SCREW
CAG93R	LH HEELBOARD GROUND SCREW
CAG103L	LH SEAT GROUND STUD
FCG15L	LH CONSOLE GROUND STUD
LSG19R	LH BULKHEAD GROUND STUD
MLG2L	LH SEAT GROUND STUD
PLG3L	LH SEAT GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-21	AUDIBLE TONE SPEAKER		
0	FC1-22	AUDIBLE TONE SPEAKER		
-	FC2-3	SIDE LAMPS ON	GROUND	B+
1	FC2-4	VEHICLE SPEED SENSOR	GROUND PULSE @ 10 MPH (16 KPH) = 20 Hz, 20 MPH (32 KPH) = 40 Hz	
1	FC2-16	NOT IN PARK MICRO SWITCH	GROUND	B+
1	FC2-18	RH DI REQUEST	GROUND	B+
1	FC2-24	SEAT BELT WARNING LAMP	GROUND	8+
1	FC2-25	SEAT MEMORY AUDIBLE WARNING	GROUND	B+
1	FC2-27	HAZARD LAMPS REQUEST	GROUND	B+
1	FC2-33	DRIVER DOOR AJAR	GROUND	B+
1	FC2-46	LH DI REQUEST	GROUND	B+
1	FC2-48	KEY IN IGNITION SWITCH	GROUND	B+

DRIVER SEAT CONTROL MODULE (NAS)

Description

SEAT BELT WARNING

SEAT BELT FASTENED

 ∇ Pin

O PL 1-20D

SM6-21D

DKI	DRIVER SEAT CONTROL MODULE (NAS)			
∇	Pin	Description	Active	Inactive
0	CA105-20	SEAT BELT WARNING	GROUND	B+
1	SM6-21D	SEAT BELT FASTENED	GROUND	B+
DRIVER SEAT CONTROL MODULE (ROW)				

Active

GROUND

GROUND

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 11.3

COMPONENTS

Component

BODY PROCESSOR MODULE

CENTER CONSOLE SWITCH PACK
DIRECTION INDICATOR SWITCHES (COLUMN SWITCHGEAR)
DOOR SWITCH - DRIVER

DOOR SWITCH PACK - DRIVER

SEAT CONTROL MODULE - DRIVER (NAS VEHICLES)

SEAT CONTROL MODULE - DRIVER (ROW, MEMORY SEAT VEHICLES)

IGNITION SWITCH LIGHTING SWITCHES NOT IN-PARK MICROSWITCH SEAT BELT SWITCH Connector / Type / Color

COTINECTOR / 1997 / COION FC/1 / 48 WAY PCB SIGNAL / FLLOW FC2 / 48 WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK CCC 1 / 16 WAY MULTILOCK 600 / BLACK CCC 1 / 16 WAY MULTILOCK 600 / BLACK CSC / 6-WAY MULTILOCK 70 / WHITE DD3 / 13 -WAY MULTILOCK 47 / WHITE DD2 / 22 WAY MULTILOCK 47 / FULUE CA106 / 12 WAY MULTILOCK 47 / FULUE CA106 / 12 WAY MULTILOCK 47 / WHITE SMED / 22 WAY MULTILOCK 47 / WHITE SMED / 22 WAY MULTILOCK 47 / WHITE SMED / 22 WAY MULTILOCK 47 / WHITE

FLY 1/4-WAY MULTILOCK AT / BAUE SWH-D; 1/2-WAY MULTILOCK AT / WHITE SM6-D; 2/2-WAY MULTILOCK AT / WHITE FCS4 (FLY LEAD) / 8-WAY MULTILOCK 070 / WHITE FC12 / 16-WAY MULTILOCK 040 / BLUE CC42 (FLY LEAD) / 2-WAY MULTILOCK 040 / BLACK SWM / 2-WAY MULTILOCK 040 / BLACK

SPEAKER (COLUMN SWITCHGEAR) SC4 / 3-WAY MULTILOCK 070 / WHITE

Location / Access

PASSENGER'S UNDERSCUTTLE

CENTER CONSOLE STEERING COLUMN / COVER DOOR CASING ARM REST / TOP ROLL

DRIVER'S SEAT

STEERING COLUMN / COVER

STEERING COLUMN / COVER FASCIA SWITCH PACK 'J' GATE / CENTER CONSOLE DRIVER'S SEAT / UNDER STEERING COLUMN / COVER

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
CA8	20-WAY MULTILOCK 040 / GREEN	DRIVER'S 'A' POST / 'A' POST TRIM
CA10	8-WAY MULTILOCK 070 / WHITE	DRIVER'S 'A' POST / 'A' POST TRIM
CA23	20-WAY MULTILOCK 040 / BLACK	DRIVER'S SEAT / UNDER
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC18	20-WAY MULTILOCK 070 / YELLOW	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC4	20-WAY MULTILOCK 040 / BLUE	DRIVER'S UNDERSCUTTLE
FC5	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH FASCIA END PANEL / OUTER AIR VENT
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
FC16	20-WAY MULTILOCK 040 / BLACK	PASSENGER'S UNDERSCUTTLE
MI 1-D	10-WAY MULTILOCK 070 / WHITE	DRIVER'S SEAT / UNDER

GROUNDS

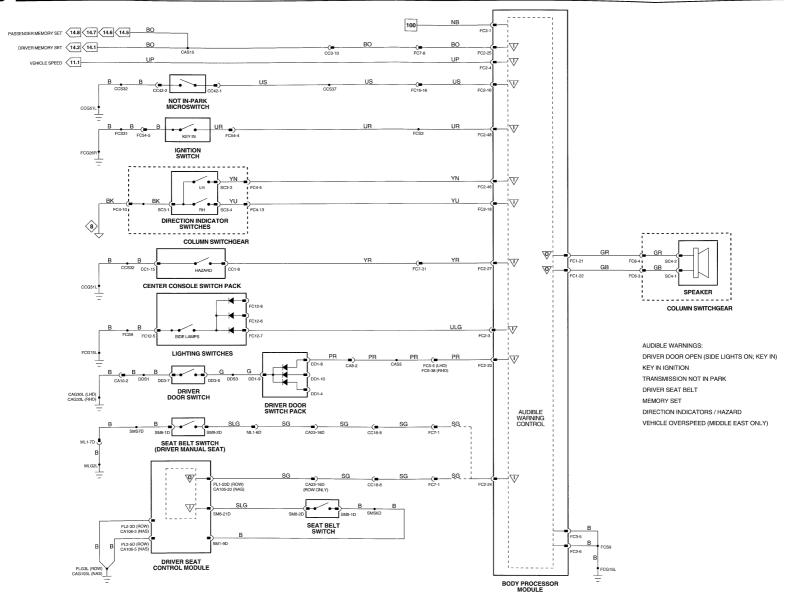
Inactive

Ground	Location / Type		
CAG30L	LH 'A' POST GROUND SCREW		
CAG33L	RH HEELBOARD GROUND SCREW		
CAG103L	LH SEAT GROUND STUD		
CCG51L	CENTER CONSOLE GROUND STU		
FCG15L	LH CONSOLE GROUND STUD		
FCG26R	LH CONSOLE GROUND STUD		
MLG2L	LH SEAT GROUND STUD		
PLG3L	LH SEAT GROUND STUD		

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.















√Input

Output

Serial and Encoded Communications

Signal Ground (SG)

VARIANT: All Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

AIR CONDITIONING CONTROL MODULE

∇	Pin	Description	Active	Inactive
1	CC28-1	COMPRESSOR CLUTCH ON SIGNAL	B+	GROUND
0	CC28-6	DEFROST VENT SERVO MOTOR	B+	GROUND
0	CC28-7	CENTER VENT SERVO MOTOR	B+	GROUND
0	CC28-8	LH RECIRCULATION VENT SERVO MOTOR	B+	GROUND
0	CC28-9	RH RECIRCULATION VENT SERVO MOTOR	B+	GROUND
0	CC28-12	FOOTWELL VENT SERVO MOTOR	B+	GROUND
0	CC28-13	COOL AIR BY-PASS VENT SERVO MOTOR	B+	GROUND
0	CC28-19	DEFROST VENT SERVO MOTOR	B+	GROUND
0	CC28-20	CENTER VENT SERVO MOTOR	B+	GROUND
0	CC28-21	LH RECIRCULATION VENT SERVO MOTOR	B+	GROUND
0	CC28-22	RH RECIRCULATION VENT SERVO MOTOR	B+	GROUND
0	CC28-25	FOOTWELL VENT SERVO MOTOR	B+	GROUND
0	CC28-26	COOL AIR BY-PASS VENT SERVO MOTOR	B+	GROUND
1	CC29-1	SOLAR SENSOR FEEDBACK VOLTAGE	0 75 - 4.75 V, INCREASING WITH LAMP BRIGHTNESS	
1	CC29-2	CENTER VENT POTENTIOMETER FEEDBACK VOLTAGE	> 3 5 V (OPEN)	< 1 V (CLOSED)
- 1	CC29-3	RH RECIRCULATION POTENTIOMETER FEEDBACK VOLTAGE	> 3 5 V (OPEN)	< 1 V (CLOSED)
1	CC29-5	COOL AIR BY-PASS POTENTIOMETER FEEDBACK VOLTAGE	> 3 5 V (OPEN)	< 1 V (CLOSED)
1	CC29-6	COOLANT TEMPERATURE SIGNAL	2 5 V @ 90° C, DECREASING WITH TEMPERATURE	
- 1	CC29-9	TEMPERATURE DIFFERENTIAL POTENTIOMETER FEEDBACK	0 75V = RED; 4 75V = BLUE	
1	CC29-10	DEFROST VENT POTENTIOMETER FEEDBACK	> 3 5 V (OPEN)	< 1 V (CLOSED)
- 1	CC29-11	LH RECIRCULATION POTENTIOMETER FEEDBACK	> 3 5 V (OPEN); < 1 V (CLOSED)	
- 1	CC29-13	FOOTWELL VENT POTENTIOMETER FEEDBACK	> 3 5 V (OPEN); < 1 V (CLOSED)	
0	CC30-1	AIR CONDITIONING ELECTRICAL LOAD SIGNAL	B+	GROUND
0	CC30-2	CLOCK	B+ (1 45 KHz)	B+
D	CC30-3	SERIAL DATA OUTPUT TO CONTROL PANEL		
- 1	CC30-5	AMBIENT TEMPERATURE SENSOR FEEDBACK	2 18 V @ 25° C, DECREASING WITH TEMPERATURE	
- 1	CC30-6	HEATER MATRIX AIR TEMPERATURE SENSOR FEEDBACK	2 25 V @ 20° C, DECREASING WITH TEMPERATURE	
D	CC30-7	SERIAL DATA INPUT FROM CONTROL PANEL		GROUND
0	CC30-8	START	B+	GROUND
1	CC30-11	IN CAR TEMPERATURE SENSOR FEEDBACK	3 25 V @ 0° C, DECREASING WITH TEMPERATURE 3 25 V @ 0° C, DECREASING WITH TEMPERATURE	
ı	CC30-12	EVAPORATOR TEMPERATURE SENSOR FEEDBACK	3 25 V @ 0° C, DECREASING WITH TEMPERATURE	
1	CC31-3	IGNITION SWITCHED GROUND	GROUND	B+
0	CC31-4	IGNITION SWITCHED POWER SUPPLY TO CONTROL PANEL	B+	GROUND
1	CC31-6	ENGINE SPEED SIGNAL	5 V @ 1000 RPM = 45 Hz, 2000 RPM = 90 Hz	
0	CC31-8	SERVO POTENTIOMETER COMMON REFERENCE VOLTAGE	5V	5 V
0	CC31-9	COMPRESSOR CLUTCH REQUEST	GROUND	B+
D	CC31-10	SERIAL COMMUNICATION INPUT		
0	CC31-12	BATTERY POWER SUPPLY TO CONTROL PANEL	B+	B+
0	CC31-15	AIR CONDITIONING ISOLATE RELAY	B+	GROUND
- 1	CC31-16	VEHICLE SPEED SIGNAL	B+ @ 10 MPH (16 KPH) = 20 Hz, 20 MPH (32 KPH) = 40 Hz	
- 1	CC31-17	REFRIGERANT TRIPLE PRESSURE SWITCH – 4.0L REFRIGERANT DUAL PRESSURE SWITCH – V12	GROUND	B+
0	CC31-18	ASPIRATOR MOTOR	B+	GROUND
SG	CC31-19	SERVO POTENTIOMETER COMMON REFERENCE GROUND	GROUND	GROUND
D	CC31-21	SERIAL COMMUNICATION OUTPUT		

AIR CONDITIONING CONTROL PANEL

∇	Pin	Description	Active	Inactive
1	CC2-1	CLOCK	B+ (1 45 KHz)	B+
1	CC2-2	START	B+	GROUND
D	CC2-3	SERIAL DATA OUTPUT TO A/C CONTROL MODULE		
D	CC2-4	SERIAL DATA INPUT FROM A/C CONTROL MODULE		
11	CC2-5	IGNITION SWITCHED POWER SUPPLY	B+	GROUND
- 1	CC2-6	BATTERY POWER SUPPLY	B+	B+

The following symbols are used to represent values for Control Module Pin Out data:

1	Input	B+	Battery voltage
0	Output	٧	Voltage (DC)
SG	Signal Ground	Hz	Frequency
D	Serial and encoded communications	KHz	Frequency x 1000
		MS	Milliseconds
		MV	Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component

AIR CONDITIONING CONTROL MODULE

AIR CONDITIONING CONTROL PANEL AMBIENT TEMPERATURE SENSOR ASPIRATOR MOTOR COOL AIR BYPASS SERVO DEFROST SERVO DIFFERENTIAL CONTROL POTENTIOMETER EVAPORATOR TEMPERATURE SENSOR FOOT WELL SERVO FRESH / RECIRCULATION SERVO - LH FRESH / RECIRCULATION SERVO - RH HEATER MATRIX TEMPERATURE SENSOR IN-CAR TEMPERATURE SENSOR

Connector / Type / Color

CC28 / 26-WAY MULTILOCK 47 / SLATE CC29 / 16-WAY MULTILOCK 040 / YELLOW CC30 / 12-WAY MULTILOCK 47 / SLATE CC31 / 22-WAY MULTILOCK 47 / WHITE CC2 (FLV LEAD) / 12 WAY MULTILOCK DAD / BLUE BLB (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK FC40 (FLY LEAD) / 4-WAY MULTILOCK 070 / WHITE CC34 (FLY LEAD) 12-WAY MULTILOCK 040 / BLACK FC42 (FLY LEAD) / 12-WAY MULTILOCK 040 / BI ACK FC20 (FLY LEAD) / 3-WAY MULTILOCK 070 / WHITE CC34 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK CC34 (FLY LEAD) / 12-WAY MULTILOCK 040 / RLACK CC32 (FLY LEAD) / 15-WAY SUMITOMO 90 / GREEN CC33 (FLY LEAD) / 15-WAY SUMITOMO 90 / GREEN CC34 (FLY LEAD) / 12-WAY MULTILOCK 040 / BI ACK FC40 (FLY LEAD) / 4-WAY MULTILOCK 070 / WHITE FC34 (FLY LEAD) / 2-WAY MULTILOCK 040 / BLACK

FC42 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK

Color / Stripe

BLACK / BLUE

Location / Access

CENTER CONSOLE

A/C UNIT, RH SIDE / RH UNDERSCUTTLE

LH FRONT WHEEL ARCH LINER / SPOILER TRAY DRIVER'S UNDERSCUTTLE A/C UNIT, LH SIDE; /LH UNDERSCUTTLE A/C UNIT, RH SIDE; FASCIA A/C UNIT, LH SIDE; FASCIA A/C UNIT, LH SIDE / LH UNDERSCUTTLE A/C UNIT, LH SIDE / LH UNDERSCUTTLE BLOWER HOUSING BLOWER HOUSING A/C UNIT, LH SIDE / LH UNDERSCUTTLE DRIVER'S UNDERSCUTTLE FASCIA, TOP FRONT

A/C UNIT, LH SIDE / LH UNDERSCUTTLE

RELAYS

SOLAR SENSOR

VENT SERVO

Relay AIR CONDITIONING ISOLATE RELAY Connector / Color CA57 / BLUE

Location / Access

RH HEELBOARD

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color		
BL1	13-WAY ECONOSEAL III LC / BLACK		
CC5	20-WAY MULTILOCK 070 / WHITE		
CC18	20-WAY MULTILOCK 070 / YELLOW		
FC5	THROUGH-PANEL (48 MICRO / 6) / BLAC		
FC6	THROUGH-PANEL (48 MICRO / 6) / BLAC		
FC7	THROUGH-PANEL (48 MICRO / 6) / BLAC		
FC16	20-WAY MULTILOCK 040 / BLACK		
LS3	THROUGH-PANEL (48 MICRO / 6) / BLAC		
PI63	20-WAY MULTILOCK 040 / BLACK		

Location / Access

LH FRONT WHEEL ARCH LINER / SPOILER AND SPOILER TRAY CENTER CONSOLE / CENTER CONSOLE GLOVE BOX CENTER CONSOLE / CENTER CONSOLE GLOVE BOX LH FASCIA END PANEL / OUTER AIR VENT RH FASCIA END PANEL / OUTER AIR VENT PASSENGER'S UNDERSCUTTLE PASSENGER'S UNDERSCUTTLE LH 'A' POST / 'A' POST PANEL RH 'A' POST / 'A' POST TRIM

GROUNDS

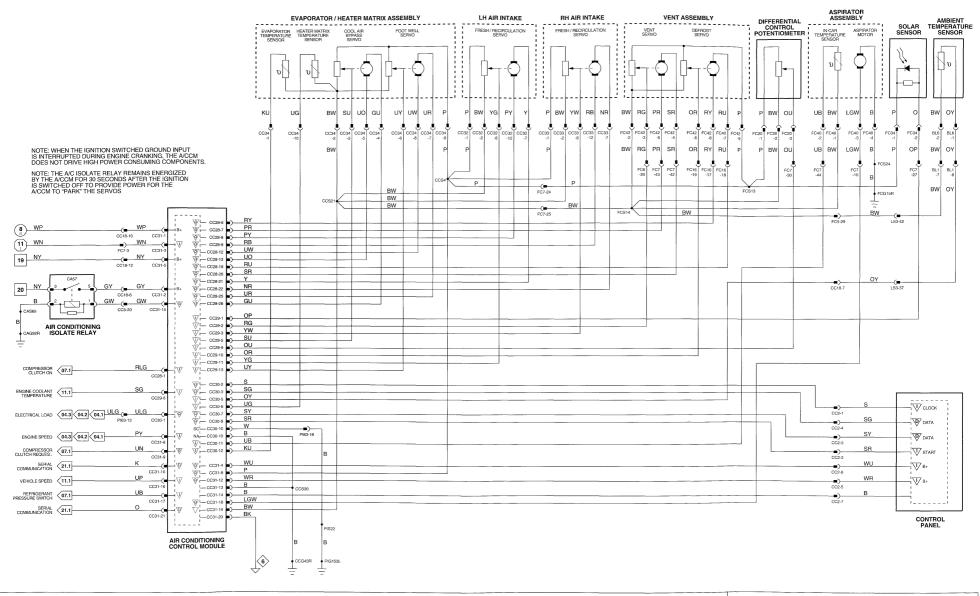
Location / Type Ground

RH HEELBOARD GROUND SCREW CAG92R CCG43R RH CONSOLE GROUND STUD RH CONSOLE GROUND STUD CCG49B ECG15B LH CONSOLE GROUND STUD RH BULKHEAD GROUND STUD PIG153L

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS. RELAYS. CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.





















VARIANT: AJ16 Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

AIR CONDITIONING CONTROL MODULE

∇	Pin	Description	Active	Inactive
- 1	CC28-1	COMPRESSOR CLUTCH ON SIGNAL	B+	GROUND
0	CC28-6	DEFROST VENT SERVO MOTOR	B+	GROUND
0	CC28-7	CENTER VENT SERVO MOTOR	B+	GROUND
0	CC28-8	LH RECIRCULATION VENT SERVO MOTOR	8+	GROUND
0	CC28-9	RH RECIRCULATION VENT SERVO MOTOR	B+	GROUND
0	CC28-12	FOOTWELL VENT SERVO MOTOR	B+	GROUND
0	CC28-13	COOL AIR BY-PASS VENT SERVO MOTOR	B+	GROUND
0	CC28-19	DEFROST VENT SERVO MOTOR	B+	GROUND
0	CC28-20	CENTER VENT SERVO MOTOR	B+	GROUND
0	CC28-21	LH RECIRCULATION VENT SERVO MOTOR	B+	GROUND
0	CC28-22	RH RECIRCULATION VENT SERVO MOTOR	B+	GROUND
0	CC28-25	FOOTWELL VENT SERVO MOTOR	B+	GROUND
0	CC28-26	COOL AIR BY-PASS VENT SERVO MOTOR	B+	GROUND
1	CC29-1	SOLAR SENSOR FEEDBACK VOLTAGE	0 75 - 4 75 V, INCREASING WITH LAMP BRIGHTNESS	
- 1	CC29-2	CENTER VENT POTENTIOMETER FEEDBACK VOLTAGE	> 3 5 V (OPEN)	< 1 V (CLOSED)
- 1	CC29-3	RH RECIRCULATION POTENTIOMETER FEEDBACK VOLTAGE	> 3 5 V (OPEN)	< 1 V (CLOSED)
- 1	CC29-5	COOL AIR BY-PASS POTENTIOMETER FEEDBACK VOLTAGE	> 3 5 V (OPEN)	< 1 V (CLOSED)
- 1	CC29-6	COOLANT TEMPERATURE SIGNAL	2 5 V @ 90° C, DECREASING WITH TEMPERATURE	
- 1	CC29-9	TEMPERATURE DIFFERENTIAL POTENTIOMETER FEEDBACK	0 75V = RED; 4 75V = BLUE	
- 1	CC29-10	DEFROST VENT POTENTIOMETER FEEDBACK	> 3 5 V (OPEN)	< 1 V (CLOSED)
- 1	CC29-11	LH RECIRCULATION POTENTIOMETER FEEDBACK	> 3 5 V (OPEN); < 1 V (CLOSED)	
- 1	CC29-13	FOOTWELL VENT POTENTIOMETER FEEDBACK	> 35 V (OPEN); < 1 V (CLOSED)	
0	CC30-1	AIR CONDITIONING ELECTRICAL LOAD SIGNAL	B+	GROUND
0	CC30-2	CLOCK	B+ (1 45 KHz)	B+
D	CC30-3	SERIAL DATA OUTPUT TO CONTROL PANEL		
- 1	CC30-4	COMPRESSOR LOCK SIGNAL (V12 ONLY)	0 43 V	GROUND
- 1	CC30-5	AMBIENT TEMPERATURE SENSOR FEEDBACK	2 18 V @ 25° C, DECREASING WITH TEMPERATURE	
- 1	CC30-6	HEATER MATRIX AIR TEMPERATURE SENSOR FEEDBACK	2 25 V @ 20° C, DECREASING WITH TEMPERATURE	
D	CC30-7	SERIAL DATA INPUT FROM CONTROL PANEL		
0	CC30-8	START	B+	GROUND
- 1	CC30-11	IN CAR TEMPERATURE SENSOR FEEDBACK	3 25 V @ 0° C, DECREASING WITH TEMPERATURE	
1	CC30-12	EVAPORATOR TEMPERATURE SENSOR FEEDBACK	3 25 V @ 0° C, DECREASING WITH TEMPERATURE	
1	CC31-3	IGNITION SWITCHED GROUND	GROUND	B+
0	CC31-4	IGNITION SWITCHED POWER SUPPLY TO CONTROL PANEL	B+	GROUND
- 1	CC31-6	ENGINE SPEED SIGNAL	5 V @ 1000 RPM = 45 Hz, 2000 RPM = 90 Hz	
- 1	CC31-7	LOAD INHIBIT (V12 ONLY)	GROUND	B+
0	CC31-8	SERVO POTENTIOMETER COMMON REFERENCE VOLTAGE	5V	5 V
0	CC31-9	COMPRESSOR CLUTCH REQUEST	GROUND	B+
D	CC31-10	SERIAL COMMUNICATION INPUT		
0	CC31-12	BATTERY POWER SUPPLY TO CONTROL PANEL	Β+	B+
0	CC31-15	AIR CONDITIONING ISOLATE RELAY	B+	GROUND
- 1	CC31-16	VEHICLE SPEED SIGNAL	B+@ 10 MPH (16 KPH) = 20 Hz, 20 MPH (32 KPH) = 40 Hz	
1	CC31-17	REFRIGERANT TRIPLE PRESSURE SWITCH – 4.0L REFRIGERANT DUAL PRESSURE SWITCH – V12	GROUND	B+
0	CC31-18	ASPIRATOR MOTOR	B+	GROUND
SG	CC31-19	SERVO POTENTIOMETER COMMON REFERENCE GROUND	GROUND	GROUND
D	CC31-21	SERIAL COMMUNICATION OUTPUT		

AIR CONDITIONING CONTROL PANEL

∇	Pin	Description	Active	Inactive
1	CC2-1	CLOCK	B+ (1 45 KHz)	B+
1	CC2-2	START	B+	GROUND
D	CC2-3	SERIAL DATA OUTPUT TO A/C CONTROL MODULE		
D	CC2-4	SERIAL DATA INPUT FROM A/C CONTROL MODULE		
1	CC2-5	IGNITION SWITCHED POWER SUPPLY	B+	GROUND
1	CC2-6	BATTERY POWER SUPPLY	B+	B+

The following symbols are used to represent values for Control Module Pin Out data:

ı	Input	B+	Battery voltage
0	Output	v	Voltage (DC)
SG	Signal Ground	Hz	Frequency
D	Serial and encoded communications	KHz	Frequency x 1000
		MS	Milliseconds
		8417	8.81111

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS Component

AIR CONDITIONING CONTROL MODULE AIR CONDITIONING CONTROL PANEL AMBIENT TEMPERATURE SENSOR ASPIRATOR MOTOR FC40 (FLY LEAD) / 4-WAY MULTILOCK 070 / WHITE COMPRESSOR LOCK SENSOR COOL AIR BYPASS SERVO DEFROST SERVO DIFFERENTIAL CONTROL POTENTIOMETER

EVAPORATOR TEMPERATURE SENSOR FOOT WELL SERVO FRESH / RECIRCULATION SERVO - LH FRESH / RECIRCULATION SERVO - RH HEATER MATRIX TEMPERATURE SENSOR IN-CAR TEMPERATURE SENSOR

SOLAR SENSOR VENT SERVO

Connector / Type / Color

CC28 / 26-WAY MULTILOCK 47 / SLATE CC29 / 16-WAY MULTILOCK 47 / SLATE CC30 / 12-WAY MULTILOCK 47 / SLATE CC31 / 22-WAY MULTILOCK 47 / SLATE CC2 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLUE BL6 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK

PI57 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK CC34 (FLY LEAD) 12-WAY MULTILOCK 040 / RLACK FC42 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK FC20 (FLY LEAD) / 3-WAY MULTILOCK 070 / WHITE CC34 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK CC34 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK CC32 (FLY LEAD) / 15-WAY SUMITOMO 90 / GREEN CC33 (FLY LEAD) / 15-WAY SUMITOMO 90 / GREEN CC34 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK

FC40 (FLY LEAD) / 4-WAY MULTILOCK 070 / WHITE FC34 (FLY LEAD) / 2-WAY MULTILOCK 040 / BLACK FC42 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK Location / Access

A/C UNIT, RH SIDE / RH UNDERSCUTTLE

CENTER CONSOLE LH FRONT WHEEL ARCH LINER / SPOILER TRAY DRIVER'S UNDERSCUTTLE A/C COMPRESSOR A/C UNIT, LH SIDE; /LH UNDERSCUTTLE A/C UNIT, RH SIDE; FASCIA

A/C UNIT, LH SIDE; FASCIA A/C UNIT, LH SIDE / LH UNDERSCUTTLE A/C UNIT, LH SIDE / LH UNDERSCUTTLE BLOWER HOUSING BLOWER HOUSING A/C UNIT, LH SIDE / LH UNDERSCUTTLE

DRIVER'S UNDERSCUTTLE FASCIA, TOP FRONT

A/C UNIT, LH SIDE / LH UNDERSCUTTLE

Location / Access

RELAYS

Color / Stripe Connector / Color Relay BLACK / BLUE

AIR CONDITIONING ISOLATE RELAY

CA57 / BLUE RH HEELBOARD

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color		
BL1	13-WAY ECONOSEAL III LC / BLACK		
CC5	20-WAY MULTILOCK 070 / WHITE		
CC18	20-WAY MULTILOCK 070 / YELLOW		
FC5	THROUGH-PANEL (48 MICRO / 6) / BLACE		
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACI		
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACI		
FC16	20-WAY MULTILOCK 040 / BLACK		
LS3	THROUGH-PANEL (48 MICRO / 6) / BLACE		

13-WAY ECONOSEAL III LC / WHITE

20-WAY MULTILOCK 040 / BLACK

Location / Access

LH FRONT WHEEL ARCH LINER / SPOILER AND SPOILER TRAY CENTER CONSOLE / CENTER CONSOLE GLOVE BOX CENTER CONSOLE / CENTER CONSOLE GLOVE BOX LH FASCIA END PANEL / OUTER AIR VENT RH FASCIA END PANEL / OUTER AIR VENT PASSENGER'S UNDERSCUTTLE PASSENGER'S UNDERSCUTTLE LH 'A' POST / 'A' POST PANEL REARWARD OF RH HEADLAMP RH 'A' POST / 'A' POST TRIM

GROUNDS

PI1

PI63

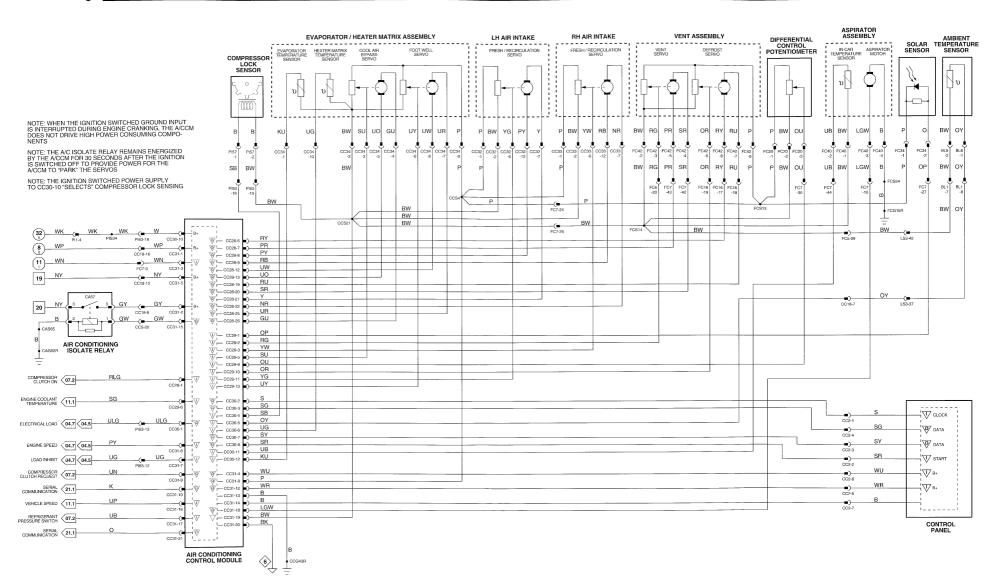
Ground	Location / Typ
	Location / Typ

RH HEELBOARD GROUND SCREW CAG92R RH CONSOLE GROUND STUD CCG43B LH CONSOLE GROUND STUD ECG15B

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



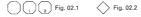




















VARIANT: V12 Vehicles VIN RANGE: 787954 →

AIR CONDITIONING CONTROL MODULE

∇	Pin	Description	Active	Inactive
0	CC28-2	HEATER VALVE SUPPLY	B+	GROUND
0	CC28-3	R/H BLOWER MOTOR RELAY	GROUND	B+
o	CC28-4	LH AND RH WINDSHIELD HEATER RELAYS	GROUND	B+
0	CC28-5	DOOR MIRROR HEATER RELAY	GROUND	B+
ō	CC28-14	RH HIGH SPEED BLOWER RELAY	GROUND	B+
o	CC28-15	LH HIGH SPEED BLOWER RELAY	GROUND	B+
0	CC28-16	LH BLOWER MOTOR RELAY	GROUND	B+
0	CC28-17	HEATER PUMP RELAY	GROUND	B+
0	CC28-18	HEATED BACKLIGHT RELAY	GROUND	B+
	CC29-7	RH BLOWER SPEED FEEDBACK	7 6 V = LOW SPEED; 0 83 V = HIGH SPEED	
0	CC29-8	RH BLOWER SPEED CONTROL DRIVE SIGNAL	13V = LOW SPEED; OV = HIGH SPEED	
ï	CC29-15	LH BLOWER SPEED FEEDBACK	7 6 V = LOW SPEED; 0 83 V = HIGH SPEED	
0	CC29-16	LH BLOWER SPEED CONTROL DRIVE SIGNAL	13 V = LOW SPEED; 0 V = HIGH SPEED	
	CC31-3	IGNITION SWITCHED GROUND	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

B+ Battery voltage Input V Voltage (DC) Output SG Signal Ground Hz Frequency

KHz Frequency x 1000 Serial and encoded communications MS Milliseconds MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component

AIR CONDITIONING CONTROL MODULE

AMBIENT TEMPERATURE SWITCH

BLOWER MOTOR -- LH BLOWER MOTOR -- RH

DIODE (CA115) - AMBIENT TEMPERATURE SWITCH

HEATED BACKLIGHT

HEATER PUME HEATER VALVE MIRROR - DRIVER MIRROR - PASSENGER WINDSHIELD HEATER - LH WINDSHIFLD HEATER - RH

Connector / Type / Color

CC28 / 26-WAY MULTILOCK 47 / SLATE CC29 / 16-WAY MULTILOCK 47 / SLATE CC30 / 12-WAY MULTILOCK 47 / SLATE CC31 / 22-WAY MULTILOCK 47 / WHITE BR7 / 2-WAY ECONOSEAL BLLC / WHITE

CC32 (FLY LEAD) / 15-WAY SUMITOMO 090 / GREEN CC33 (FLY LEAD) / 15-WAY SUMITOMO 090 / GREEN CA115 / DIODE / BLACK CA17 / LUCAR / BLACK CA42 / LUCAR / BLACK

LS7 (FLY LEAD) / 2-WAY ECONOSEAL III LC / BLACK LS15 (FLY LEAD) / 2-WAY ECONOSEAL III LC / WHITE DD10 / 12-WAY MULTILOCK 040 / BLACK PD10 / 12-WAY MULTILOCK 040 / BLACK SH4 / 2-WAY SERIES 187C / SLATE

SH5 / 2-WAY SERIES 187C / SLATE

Location / Access

A/C UNIT, RH SIDE / RH UNDERSCUTTLE

I H FRONT WHEEL ARCH LINER / SPOILER TRAY I H UNDERSCUTTLE RH UNDERSCUTTLE

LH HEELBOARD COMPONENT PANEL BACKLIGHT / LH 'E' POST TRIM BACKLIGHT / RH 'E' POST TRIM ENGINE BAY, LH REAR ENGINE BAY, LH REAR MIRROR ASSEMBLY MIRROR ASSEMBLY

WINDSHIELD / WINDSHIELD BASE, ENGINE BAY WINDSHIELD / WINDSHIELD BASE, ENGINE BAY

RELAYS

Color / Stripe Connector / Color Location / Access Relay BLACK / BLUE CA59 / BLUE BLOWER MOTOR RELAY - LH BLACK / BLUE CA58 / BLUE BLOWER MOTOR RELAY - RH CA54 / BLUE VIOLET DOOR MIRROR HEATER RELAY BT42 / BROWN BROWN HEATED BACKLIGHT RELAY HEATER PLIMP RELAY BLACK LS46 / BLACK BLACK / BLUE CA59 / BLUE HIGH SPEED RELAY - LH BLACK / BLUE CA58 / BLUE HIGH SPEED RELAY - RH SH2 / BROWN WINDSHIELD HEATER RELAY - LH BLUE BLUE SH3 / BROWN WINDSHIELD HEATER RELAY - RH

RH HEELBOARD RH HEELBOARD RH HEELBOARD TRUNK ELECTRICAL CARRIER LH ENGINE BAY RELAYS RH HEELBOARD RH HEELBOARD TH'A' POST LH 'A' POST

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BR1	13-WAY ECONOSEAL III LC / BLACK	RH FRONT WHEEL ARCH LINER / SPOILER AND SPOILER TRAY
3T4	THROUGH-PANEL (48 MICRO / 6) / BLACK	ABOVE FUEL TANK / FUEL TANK TRIM
CA9	20-WAY MULTILOCK 040 / BLACK	DRIVER'S 'A' POST / 'A' POST TRIM
CA10	8-WAY MULTILOCK 070 / WHITE	DRIVER'S 'A' POST / 'A' POST TRIM
CA11	20-WAY MULTILOCK 040 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA12	14-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC4	14-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC5	20-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE
C7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
.S3	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH 'A' POST / 'A' POST PANEL
RS3	THROUGH-PANEL (48 MICRO / 6) / BROWN	RH 'A' POST / 'A' POST
SH1	2-WAY AMP 87C SERIES / SLATE	LH 'A' POST / 'A' POST PANEL
SH8	4-WAY MULTILOCK 070 / WHITE	LH 'A' POST / 'A' POST PANEL

GROUNDS

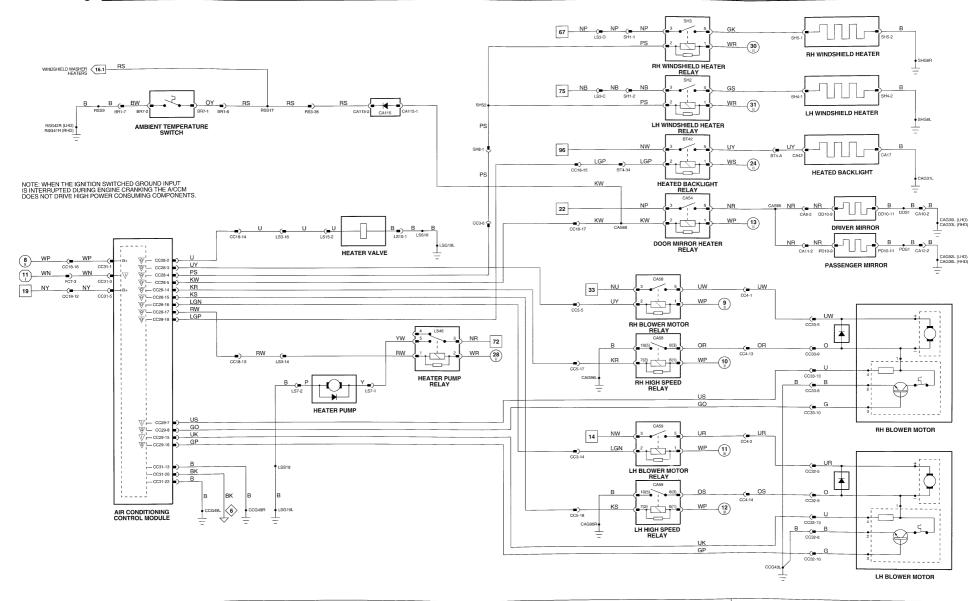
Ground	Location / Type
CAG30L	LH 'A' POST GROUND SCREW
CAG31L	PARCEL SHELF GROUND SCREW
CAG33L	RH HEELBOARD GROUND SCREW
CAG92L	RH HEELBOARD GROUND SCREW
CAG96L	LH HEELBOARD GROUND SCREW
CAG96R	LH HEELBOARD GROUND SCREW
CCG43L	RH CONSOLE GROUND STUD
CCG43R	RH CONSOLE GROUND STUD
CCG49L	RH CONSOLE GROUND STUD
LSG19L	LH BULKHEAD GROUND STUD
SHG6L	LH BULKHEAD GROUND STUD
SHG6R	LH BULKHEAD GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

Fig. 12.3

















VARIANT: All Vehicles Signal Ground (SG) VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

VARIABLE STEERING CONTROL MODULE

∇	Pin	Description
0	CA32-2	TRANSDUCER NEGATIVE
1	CA32-4	VEHICLE SPEED
0	CA32-5	TRANSDUCER POSITIVE

Inactive

Active 2 V @ IDLE, DECREASING WITH VEHICLE SPEED B+ @ 10 MPH (16 KPH) = 20 Hz, 20 MPH (32 KPH) = 40 Hz 9 V @ IDLE, INCREASING WITH VEHICLE SPEED

The following symbols are used to represent values for Control Module Pin Out data:

B+ Battery voltage Input O Output V Voltage (DC) SG Signal Ground Hz Frequency KHz Frequency x 1000 D Serial and encoded communications MS Milliseconds MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component

Connector / Type / Color

CA32 / 9-WAY RISTS / BLACK VARIABLE POWER STEERING CONTROL MODULE VARIABLE STEERING CONVERTER LL3 / 2-WAY JUNIOR TIMER / BLACK Location / Access

LH 'A' POST / 'A' POST TRIM STEERING RACK, PINION HOUSING

HARNESS-TO-HARNESS CONNECTORS

Type / Color Connector

3-WAY ECONOSEAL III LC / BLACK LL2 THROUGH-PANEL (48 MICRO / 6) / BLACK LS3 13-WAY ECONOSEAL III LC / BLACK

PI59 13-WAY ECONOSEAL III LC / BLACK PI61

Location / Access

REARWARD OF RH HEADLAMP

LH FRONT WHEEL ARCH LINER LH 'A' POST / 'A' POST PANEL FORWARD OF LH ENGINE BAY FUSE BOX

GROUNDS

Ground

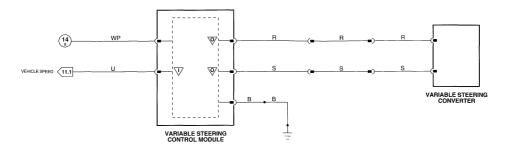
Location / Type

LH 'A' POST GROUND SCREW CAGSOR

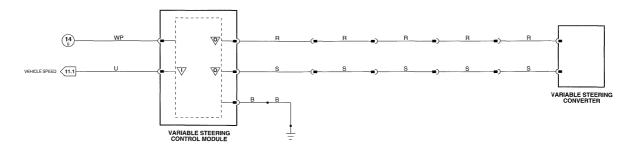
CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



LHD



RHD









COLUMN / MIRROR MOVEMENT CONTROL MODULE

SERIAL COMMUNICATION OUTPUT

SERIAL COMMUNICATION INPUT

D FC47-5

∇	Pin	Description	Active	Inactive
0	FC45-1	PASSENGER MIRROR UP / DOWN MOTOR	B+ (UP)	GROUND
0	FC45-2	STEERING COLUMN TILT MOTOR	B+ (UP)	GROUND
İ	FC45-4	PASSENGER MIRROR RIGHT / LEFT POTENTIOMETER FEEDBACK	0 5 V (LEFT), 4 V (RIGHT)	
1	FC45-5	STEERING COLUMN MOVEMENT JOYSTICK	6.8 V (OUT), 8.5 V (IN) 10 1 V (UP), 12 1 V (DOWN)	GROUND GROUND
1	FC45-6	PASSENGER MIRROR UP / DOWN REQUEST	B+ (UP), GROUND (DOWN)	OPEN CIRCUIT
1	FC45-7	DRIVER MIRROR UP / DOWN REQUEST	B+ (UP), GROUND (DOWN)	OPEN CIRCUIT
1	FC45-8	PASSENGER MIRROR RIGHT / LEFT REQUEST	B+ (RIGHT), GROUND (LEFT)	OPEN CIRCUIT
1	FC45-9	DRIVER MIRROR RIGHT / LEFT REQUEST	B+ (RIGHT), GROUND (LEFT)	OPEN CIRCUIT
1	FC45-10	MIRROR SELECT	SAME AS DIRECTIONAL REQUEST IN USE	OPEN CIRCUIT
0	FC45-11	DRIVER MIRROR UP / DOWN MOTOR	B+ (UP)	
0	FC45-12	STEERING COLUMN REACH MOTOR	B+ (IN)	GROUND
0	FC45-13	DRIVER MIRROR RIGHT / LEFT MOTOR	B+ (RIGHT)	GROUND
0	FC45-14	STEERING COLUMN TILT MOTOR	B+ (DOWN)	GROUND
0	FC45-15	STEERING COLUMN REACH MOTOR	B+ (OUT)	GROUND
SG	FC45-16	COLUMN AND MIRROR POTENTIOMETER COMMON REFERENCE GROUND	GROUND	GROUND
1	FC45-17	MEMORY 3 SWITCH REQUEST	B+	GROUND
1	FC45-18	MEMORY 2 SWITCH REQUEST	B+	GROUND
1	FC45-19	MEMORY 1 SWITCH REQUEST	B+	GROUND
- 10	FC45-20	MEMORY SET SWITCH REQUEST	B+	GROUND
1	FC45-22	KEY IN IGNITION SWITCH SIGNAL	GROUND	B+
1	FC45-23	IGNITION SWITCHED GROUND	GROUND	B+
0	FC45-24	COLUMN AND MIRROR POTENTIOMETER COMMON REFERENCE VOLTAGE	5 V	5 V
0	FC45-25	PASSENGER MIRROR RIGHT / LEFT MOTOR	B+ (RIGHT)	GROUND
0	FC45-26	DRIVER AND PASSENGER MIRROR MOTORS COMMON	B+ (LEFT), GROUND (RIGHT)	GROUND
1	FC46-1	DRIVER MIRROR RIGHT / LEFT POTENTIOMETER FEEDBACK	0 5 V (LEFT), 4 V (RIGHT)	
1	FC46-2	PASSENGER MIRROR UP / DOWN POTENTIOMETER FEEDBACK	0 5 V (DOWN), 4 V (UP)	
1	FC46-3	DRIVER MIRROR UP / DOWN POTENTIOMETER FEEDBACK	0 5 V (DOWN), 4 V (UP)	
1	FC46-4	STEERING COLUMN TILT POTENTIOMETER FEEDBACK	0 5 V (DOWN), 4 V (UP)	
1	FC46-5	STEERING COLUMN REACH POTENTIOMETER FEEDBACK	0 5 V (OUT), 4 V (IN)	
- 1	FC46-6	IGNITION VOLTAGE	B+	GROUND
- 1	FC46-7	AUTO / MANUAL TILT SELECTION SWITCH	GROUND = AUTO	B+ = OFF
1	FC46-8	NOT IN PARK	GROUND	B+
1	FC46-9	HANDBRAKE ON	GROUND	B+
- 1	FC46-10	DRIVER DOOR AJAR	GROUND	79 V
1	FC46-11	REMOTE SEAT / MIRROR / COLUMN REQUEST	GROUND PULSE	B+

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 13.2

COMPONENTS

Component

AUTO TILT SWITCH (COLUMN SWITCHGEAR)
COLUMN / MIRROR MOVEMENT CONTROL MODULE

COLUMN JOYSTICK (COLUMN SWITCHGEAR)
DOOR MIRROR MOTORS – DRIVER
DOOR MIRROR MOTORS – PASSENGER
DOOR SWITCH – DRIVER
DOOR SWITCH PACK – DRIVER

HAND BRAKE SWITCH
IGNITION SWITCH
LINEAR GEAR POSITION SWITCHES
NOT IN-PARK MICROSWITCH
REVERSE SWITCH (AJ16 MANUAL)

STEERING COLUMN MOTORS

ROTARY SWITCH

Connector / Type / Color

SCS IFLY LEAD) / 8-WAY GROTE AND HARTMAN / BLACK FORA / 28-WAY MULTILOCK AY / SLATE FORA / 18-WAY MULTILOCK AY / SLATE FORA / 18-WAY MULTILOCK AY / SLATE SCS IFLY LEAD) / 8-WAY GROTE AND HARTMAN / BLACK DDI IFLY LEAD) / 12-WAY MULTILOCK 040 / BLACK DDI / 12-WAY FORA / SLATE / S

CC42 (FLY LEAD) / 2-WAY MULTILOCK 040 / BLACK CC45 / 2-WAY SUMITOMO 90 / NATURAL GB1 (FLY LEAD) / 8-WAY MULTILOCK 070 / WHITE GB2 (FLY LEAD) / 12-WAY MULTILOCK 070 / WHITE FC90 (FLY LEAD) / 8-WAY MULTILOCK 070 / WHITE FC90 (FLY LEAD) / 8-WAY MULTILOCK 070 / YELLOW

'J' GATE / CENTER CONSOLE

Location / Access STEERING COLUMN / COVER RH UNDERSCUTTLE

STEERING COLUMN / COVER MIRROR ASSEMBLY MIRROR ASSEMBLY DOOR CASING ARM REST / TOP ROLL

CENTER CONSOLE, LH SIDE
STEERING COLUMN / COVER
'J' GATE / CENTER CONSOLE
'J' GATE / CENTER CONSOLE
TRANSMISSION TUNNEL / CENTER CONSOLE

STEERING COLUMN / DRIVER'S UNDERSCUTTLE

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
CAB	20-WAY MULTILOCK 040 / GREEN	DRIVER'S 'A' POST / 'A' POST TRIM
CA9	20-WAY MULTILOCK 040 / BLACK	DRIVER'S 'A' POST / 'A' POST TRIM
CA10	8-WAY MULTILOCK 070 / WHITE	DRIVER'S 'A' POST / 'A' POST TRIM
CA11	20-WAY MULTILOCK 040 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA12	14-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC4	20-WAY MULTILOCK 040 / BLUE	DRIVER'S UNDERSCUTTLE
FC5	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH FASCIA END PANEL / OUTER AIR VENT
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
FC16	20-WAY MULTILOCK 040 / BLACK	PASSENGER'S UNDERSCUTTLE

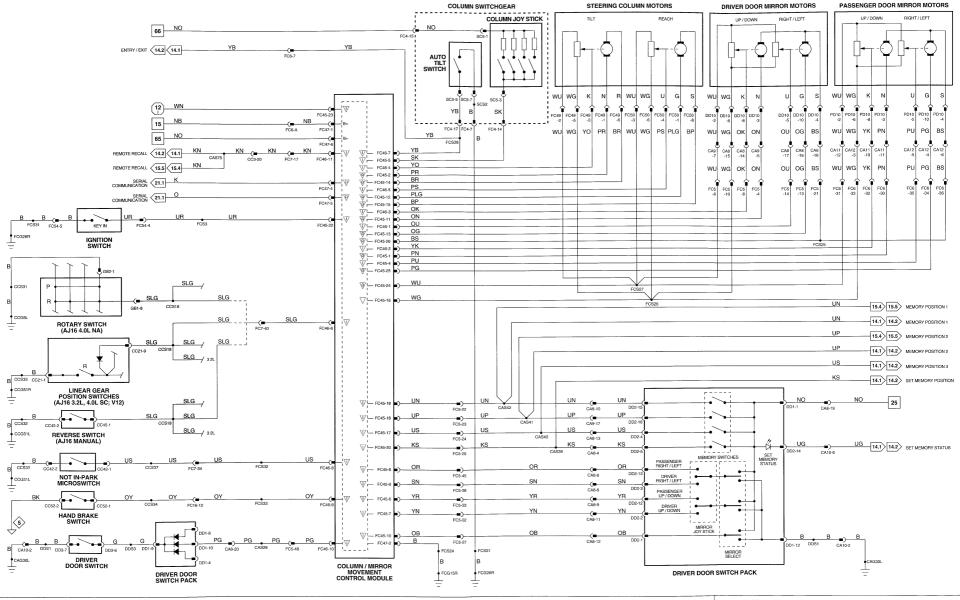
GROUNDS

Ground	Location / Type
CAG30L	LH 'A' POST GROUND SCREW
CCG51L	CENTER CONSOLE GROUND STUD
CCG51R	CENTER CONSOLE GROUND STUD
CCG8L	CENTER CONSOLE GROUND STUD
FCG15R	LH CONSOLE GROUND STUD
ECG26D	LH CONSOLE GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.











Signal Ground (SG)

VARIANT: LHD Memory Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

FC47-4

FC47-5

COLUMN / MIRROR MOVEMENT CONTROL MODULE

SERIAL COMMUNICATION OUTPUT SERIAL COMMUNICATION INPUT

∇	Pin	Description	Active	Inactive
0	FC45-1	PASSENGER MIRROR UP / DOWN MOTOR	B+ (UP)	GROUND
ō	FC45-2	STEERING COLUMN TILT MOTOR	B+ (UP)	GROUND
1	FC45-4	PASSENGER MIRROR RIGHT / LEFT POTENTIOMETER FEEDBACK	0 5 V (LEFT), 4 V (RIGHT)	
Ī	FC45-5	STEERING COLUMN MOVEMENT JOYSTICK	6.8 V (OUT), 8.5 V (IN) 10 1 V (UP), 12 1 V (DOWN)	GROUND GROUND
- 1	FC45-6	PASSENGER MIRROR UP / DOWN REQUEST	B+ (UP), GROUND (DOWN)	OPEN CIRCUIT
- 1	FC45-7	DRIVER MIRROR UP / DOWN REQUEST	B+ (UP), GROUND (DOWN)	OPEN CIRCUIT
1	FC45-8	PASSENGER MIRROR RIGHT / LEFT REQUEST	B+ (RIGHT), GROUND (LEFT)	OPEN CIRCUIT
1	FC45-9	DRIVER MIRROR RIGHT / LEFT REQUEST	B+ (RIGHT), GROUND (LEFT)	OPEN CIRCUIT
- 1	FC45-10	MIRROR SELECT	SAME AS DIRECTIONAL REQUEST IN USE	OPEN CIRCUIT
0	FC45-11	DRIVER MIRROR UP / DOWN MOTOR	B+ (UP)	
0	FC45-12	STEERING COLUMN REACH MOTOR	B+ (IN)	GROUND
0	FC45-13	DRIVER MIRROR RIGHT / LEFT MOTOR	B+ (RIGHT)	GROUND
0	FC45-14	STEERING COLUMN TILT MOTOR	B+ (DOWN)	GROUND
0	FC45-15	STEERING COLUMN REACH MOTOR	B+ (OUT)	GROUND
SG	FC45-16	COLUMN AND MIRROR POTENTIOMETER COMMON REFERENCE GROUND	GROUND	GROUND
1	FC45-17	MEMORY 3 SWITCH REQUEST	B+	GROUND
- 1	FC45-18	MEMORY 2 SWITCH REQUEST	B+	GROUND
- 1	FC45-19	MEMORY 1 SWITCH REQUEST	B+	GROUND
- 1	FC45-20	MEMORY SET SWITCH REQUEST	B+	GROUND
- 1	FC45-22	KEY IN IGNITION SWITCH SIGNAL	GROUND	B+
1	FC45-23	IGNITION SWITCHED GROUND	GROUND	B+
0	FC45-24	COLUMN AND MIRROR POTENTIOMETER COMMON REFERENCE VOLTAGE	5 V	5 V
0	FC45-25	PASSENGER MIRROR RIGHT / LEFT MOTOR	B+ (RIGHT)	GROUND
0	FC45-26	DRIVER AND PASSENGER MIRROR MOTORS COMMON	B+ (LEFT), GROUND (RIGHT)	GROUND
1	FC46-1	DRIVER MIRROR RIGHT / LEFT POTENTIOMETER FEEDBACK	0.5 V (LEFT), 4 V (RIGHT)	
1	FC46-2	PASSENGER MIRROR UP / DOWN POTENTIOMETER FEEDBACK	0 5 V (DOWN), 4 V (UP)	
1	FC46-3	DRIVER MIRROR UP / DOWN POTENTIOMETER FEEDBACK	0 5 V (DOWN), 4 V (UP)	
1	FC46-4	STEERING COLUMN TILT POTENTIOMETER FEEDBACK	0 5 V (DOWN), 4 V (UP)	
1	FC46-5	STEERING COLUMN REACH POTENTIOMETER FEEDBACK	0 5 V (OUT), 4 V (IN)	
1	FC46-6	IGNITION VOLTAGE	B+	GROUND
1	FC46-7	AUTO / MANUAL TILT SELECTION SWITCH	GROUND = AUTO	B+ = OFF
1	FC46-8	NOT IN PARK	GROUND	B+
1	FC46-9	HANDBRAKE ON	GROUND	B+
- 1	FC46-10	DRIVER DOOR AJAR	GROUND	79 V
- 1	FC46-11	REMOTE SEAT / MIRROR / COLUMN REQUEST	GROUND PULSE	B+

The following symbols are used to represent values for Control Module Pin Out data:

I Input B+ Battery voltage
O Output V Voltage (DC)
SG Signal Ground Hz Frequency
D Serial and encoded communications KHz Frequency x 1000
MS Millisoconds
MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 13.3

COMPONENTS

Component

AUTO TILT SWITCH (COLUMN SWITCHGEAR)
COLUMN / MIRROR MOVEMENT CONTROL MODULE

COLUMN JOYSTICK (COLUMN SWITCHGEAR)
DOOR MIRROR MOTORS – DRIVER
DOOR MIRROR MOTORS – PASSENGER
DOOR SWITCH – DRIVER
DOOR SWITCH PACK – DRIVER

HAND BRAKE SWITCH

ROTARY SWITCH

IGNITION SWITCH LINEAR GEAR POSITION SWITCHES NOT IN-PARK MICROSWITCH REVERSE SWITCH (AJ16 MANUAL)

STEERING COLUMN MOTORS

Connector / Type / Color

SC5 (FLY LEAD) / 8-WAY GROTE AND HARTMAN / BLACK FC69 ; 28-WAY MULTILOCK 47 / SLATE FC69 ; 18-WAY MULTILOCK 47 / SLATE FC67 ; 12-WAY MULTILOCK 37 / SLATE FC67 ; 12-WAY MULTILOCK 37 / SLATE SC5 (FLY LEAD) ; 12-WAY MULTILOCK 90 ; BLACK DOTO (FLY LEAD) ; 12-WAY MULTILOCK 90 ; BLACK DOS ; 13-WAY COPOSEAL III LC / BLACK DOS ; 13-WAY MULTILOCK 90 / SLACK DOS ; 13-WAY MULTILOCK 90 / SLACK DOS ; 12-WAY MULTILOCK 90 / SLACK DOS ; 12-WAY MULTILOCK 97 / WHITE DOZ ; 22-WAY MULTILOCK 77 / WHITE COSC ; 22-WAY MULTILOCK 67 / BLACK

FCS4 (FLY LEAD) / 8-WAY MULTILOCK 070 / WHITE CC21 / 20-WAY MULTILOCK 040 / BLACK CC24 (FLY LEAD) / 2-WAY MULTILOCK 040 / BLACK CC45 / 2-WAY SUNITOMO 90 / NATURAL GBI (FLY LEAD) / 8-WAY MULTILOCK 070 / WHITE GS2 (FLY LEAD) / 8-WAY MULTILOCK 040 / BLACK FC49 (FLY LEAD) / 8-WAY MULTILOCK 070 / WHITE FC50 (FLY LEAD) / 8-WAY MULTILOCK 070 / YELTOW

Location / Access

STEERING COLUMN / COVER

STEERING COLUMN / COVER MIRROR ASSEMBLY MIRROR ASSEMBLY DOOR CASING ARM REST / TOP ROLL

ARM REST/TOP FOLD:

CENTER CONSOLE, LH SIDE

STEERING COLUMM / COVER

"J" GATE / CENTER CONSOLE

STEERING COLUMN / DRIVER'S UNDERSCUTTLE

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
CAB	20-WAY MULTILOCK 040 / GREEN	DRIVER'S 'A' POST / 'A' POST TRIM
CA9	20-WAY MULTILOCK 040 / BLACK	DRIVER'S 'A' POST / 'A' POST TRIM
CA10	8-WAY MULTILOCK 070 / WHITE	DRIVER'S 'A' POST / 'A' POST TRIM
CA11	20-WAY MULTILOCK 040 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA12	14-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC4	20-WAY MULTILOCK 040 / BLUE	DRIVER'S UNDERSCUTTLE
FC5	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH FASCIA END PANEL / OUTER AIR VENT
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
FC16	20-WAY MULTILOCK 040 / BLACK	PASSENGER'S UNDERSCUTTLE

GROUNDS

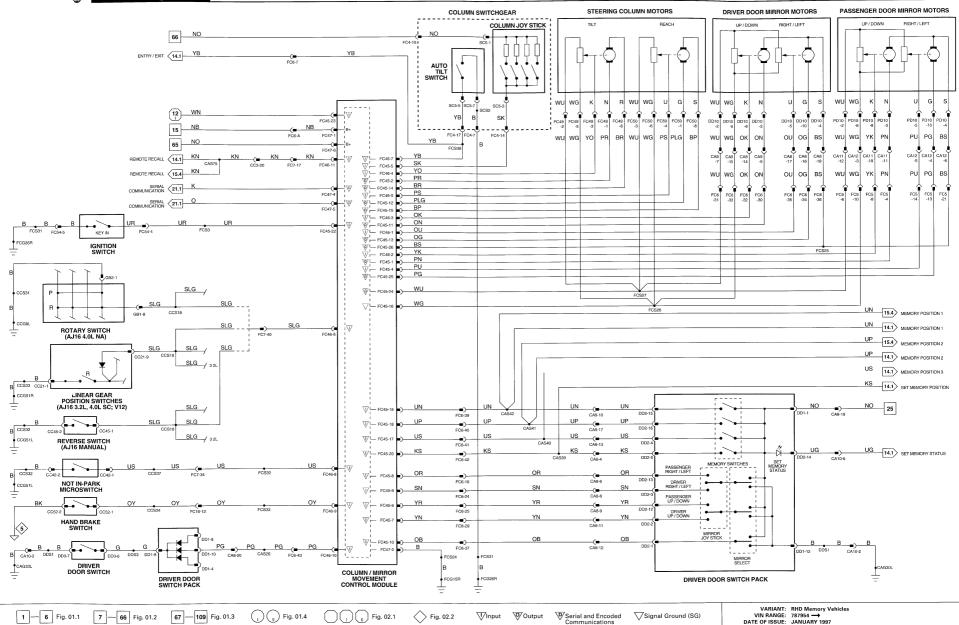
Ground Location / Type

CAG33L	RH HEELBOARD GROUND SCREW
CCG51L	CENTER CONSOLE GROUND STUD
CCG51R	CENTER CONSOLE GROUND STUD
CCG8L	CENTER CONSOLE GROUND STUD
FCG15R	LH CONSOLE GROUND STUD
FCG26R	LH CONSOLE GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.





COMPONENTS

Component

DOOR MIRROR MOTORS – DRIVER DOOR MIRROR MOTORS – PASSENGER DOOR SWITCH PACK – DRIVER

Connector / Type / Color

DD10 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK PD10 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK DD1 / 12-WAY MULTILOCK 47 / WHITE DD2 / 22-WAY MULTILOCK 47 / WHITE

Location / Access

MIRROR ASSEMBLY MIRROR ASSEMBLY ARM REST / TOP ROLL

HARNESS-TO-HARNESS CONNECTORS

 Connector
 Type / Color

 CAB
 20 WAY MULTILOCK 040 / GREEN

 CA9
 20 WAY MULTILOCK 040 / BLACK

 CA10
 8-WAY MULTILOCK 070 / WHITE

 CA11
 20-WAY MULTILOCK 070 / WHITE

 CA12
 14-WAY MULTILOCK 070 / WHITE

 FC5
 THROUGH-PANEL (48 MICRO / 6) / BLACK

 FC6
 THROUGH-PANEL (48 MICRO / 6) / BLACK

Location / Access

DRIVER'S 'A' POST / 'A' POST TRIM
DRIVER'S 'A' POST / 'A' POST TRIM
DRIVER'S 'A' POST / 'A' POST TRIM
PASSENGER'S UNDERSCUTTLE / ECM
PASSENGER'S UNDERSCUTTLE / ECM
LH FASCIA END PANEL / OUTER AIR VENT
RH FASCIA END PANEL / OUTER AIR VENT

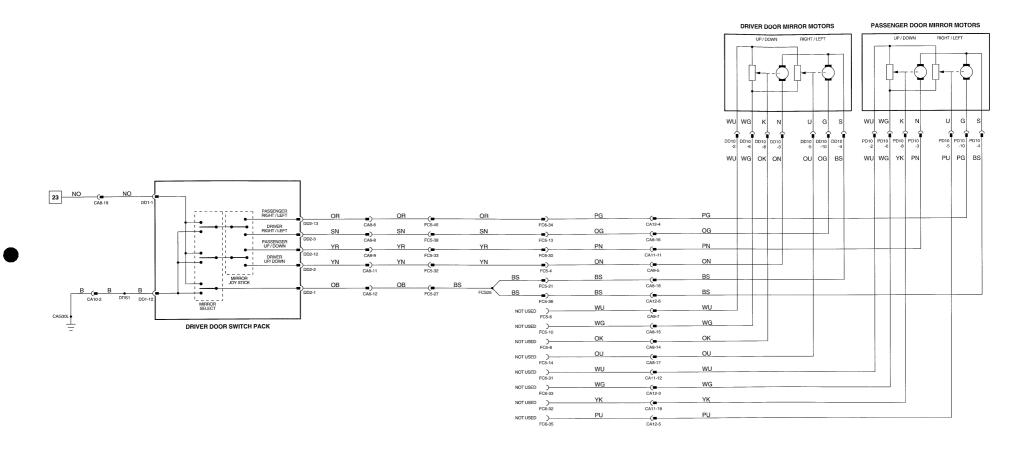
GROUNDS

Ground Location / Type

CAG30L LH 'A' POST GROUND SCREW

REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.







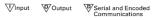












Signal Ground (SG)

VARIANT: LHD Manual Column Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

Fig. 13.

COMPONENTS

Component

DOOR MIRROR MOTORS - DRIVER DOOR MIRROR MOTORS - PASSENGER DOOR SWITCH PACK - DRIVER

Connector / Type / Color

DD10 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK PD10 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK DD1 / 12-WAY MULTILOCK 47 / WHITE DD2 / 22-WAY MULTILOCK 47 / WHITE

Location / Access

MIRROR ASSEMBLY MIRROR ASSEMBLY ARM REST / TOP ROLL

HARNESS-TO-HARNESS CONNECTORS

 Connector
 Type / Color

 CA8
 20-WAY MULTILOCK 040 / GREEN

 CA9
 20-WAY MULTILOCK 040 / BLACK

 CA10
 8-WAY MULTILOCK 070 / WHITE

 CA11
 20-WAY MULTILOCK 070 / WHITE

 CA12
 14-WAY MULTILOCK 070 / WHITE

 FC5
 THROUGH-PANEL (48 MICRO / 6) / BLACK

 FC6
 THROUGH-PANEL (48 MICRO / 6) / BLACK

Location / Access

DRIVER'S 'A' POST /'A' POST TRIM
DRIVER'S 'A' POST /'A' POST TRIM
DRIVER'S 'A' POST /'A' POST TRIM
PASSENGER'S UNDERSCUTTLE / ECM
PASSENGER'S UNDERSCUTTLE / ECM
LH FASCIA END PANEL / OUTER AIR VENT
RH FASCIA END PANEL / OUTER AIR VENT

GROUNDS

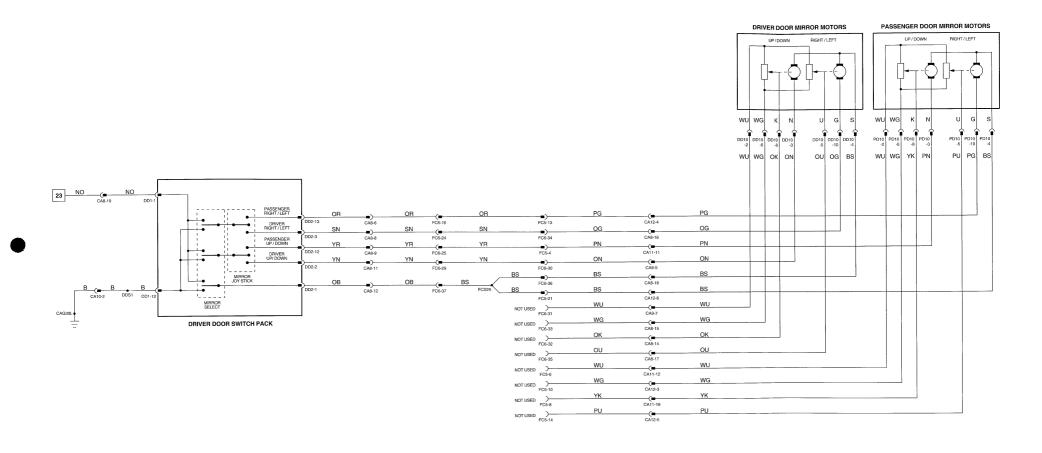
CAG30L

Ground Location / Type

DATE OF ISSUE: JANUARY 1997

LH 'A' POST GROUND SCREW

REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



















VARIANT: RHD Manual Column Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

DRIVER SEAT CONTROL MODULE (ROW, MEMORY SEAT VEHICLES)

∇	Pin	Description	Active	Inactive
0	PL1-2D	SEAT HEATER ON (STATE)	B+	GROUND
ĭ	PL1-3D	IGNITION SWITCHED GROUND	GROUND	B+
i	PL1-4D	MEMORY POSITION 1 REQUEST	B+	GROUND
- i	PL1-5D	MEMORY POSITION 2 REQUEST	B+	GROUND
i i	PL1-6D	MEMORY POSITION 3 REQUEST	B+	GROUND
ò	PL1-8D	SET MEMORY STATUS (STATE)	GROUND	B+
ĭ	PL1-9D	ENTRY / EXIT SIGNAL	GROUND	B+
- ;	PL1-10D	SEAT HEATER REQUEST	GROUND	B+
- ;	PL1-12D	REMOTE RECALL REQUEST	GROUND PULSE ON UNLOCK	B+
- 1	PL1-12D	NOT IN PARK	GROUND	B+
- ;	PL1-13D PL1-14D	HANDBRAKE ON	GROUND	B+
	PL1-15D	KEY IN IGNITION	GROUND	B+
ò	PL1-16D	MEMORY SET	GROUND	B+
ı	PL1-18D	BRAKE SWITCH	GROUND	B+
i	PL1-18D	SEAT MEMORY POSITION REQUEST	B+	GROUND
- ;	PL1-21D	DRIVER'S DOOR AJAR	GROUND	79 V
	PL1-22D	DRIVER S DOOR AJAR	GIOGNO	734
D	PL2-1D	SERIAL COMMUNICATION INPUT		
D	PL2-1D PL2-2D	SERIAL COMMUNICATION OUTPUT		
D	PLZ-ZD	SERIAL COMMONICATION COTFOT		
0	SM1-1D	SQUAB RECLINE FORE / AFT MOTOR	B+ (AFT)	GROUND
0	SM1-2D	SQUAB RECLINE FORE / AFT MOTOR	B+ (FORE)	GROUND
0	SM1-3D	SEAT FRONT RAISE / LOWER MOTOR	B+(RAISE)	GROUND
0	SM1-4D	SEAT FRONT RAISE / LOWER MOTOR	B+ (LOWER)	GROUND
0	SM1-5D	SEAT PROOF IN SE / LOWER MOTOR	B+ (RAISE)	GROUND
0	SM1-6D	SEAT REAR RAISE / LOWER MOTOR	B+ (LOWER)	GROUND
0	SM1-7D	SEAT FORE / AFT MOTOR	B+ (AFT)	GROUND
0	SM1-8D	SEAT FORE / AFT MOTOR	B+ (FORE)	GROUND
,	SM1-9D	COMMON GROUND	GROUND	GROUND
Ö	SM1-10D	HEATER ELEMENT SUPPLY	B+	GROUND
0	SM1-11D	HEADREST RAISE / LOWER MOTOR	B+ (RAISE)	GROUND
0	SM1-11D SM1-12D	HEADREST RAISE / LOWER MOTOR	B+ (LOWER)	GROUND
0	3M1-12D	READREST MAISE / COWCIT MOTOR	or (correctly	GROOND
0	SM6-1D	POTENTIOMETER COMMON REFERENCE VOLTAGE	5 V	5 V
SG	SM6-2D	POTENTIOMETER COMMON REFERENCE GROUND	GROUND	GROUND
0	SM6-3D	HEADREST POTENTIOMETER FEEDBACK	0 5 V (DOWN), 4 V (UP)	
o	SM6-4D	SQUAB RECLINE POTENTIOMETER FEEDBACK	0 5 V (BACK), 4 V (FORWARD)	
o	SM6-5D	SEAT FORE / AFT POTENTIOMETER FEEDBACK	0 5 V (BACK), 4 V (FORWARD)	
0	SM6-6D	SEAT REAR RAISE / LOWER POTENTIOMETER FEEDBACK	0 5 V (LOWER), 4 V (RAISE)	
0	SM6-7D	SEAT FRONT BAISE / LOWER POTENTIOMETER FEEDBACK	0 5 V (LOWER), 4 V (RAISE)	
i	SM6 8D	RECLINE AFT MOVEMENT REQUEST	B+	GROUND
i	SM6-9D	SEAT AFT MOVEMENT REQUEST	B+	GROUND
- i	SM6-10D	SEAT FORE MOVEMENT REQUEST	B+	GROUND
ò	SM6-11D	LUMBAR SWITCH POWER SUPPLY	B+	B+
ï	SM6-14D	HEADREST LOWER MOVEMENT REQUEST	B+	GROUND
i	SM6-15D	HEADREST RAISE MOVEMENT REQUEST	B+	GROUND
i	SM6-16D	SEAT REAR LOWER MOVEMENT REQUEST	B+	GROUND
i i	SM6-17D	SEAT REAR BAISE MOVEMENT REQUEST	B+	GROUND
- ;	SM6-18D	SEAT FRONT LOWER MOVEMENT REQUEST	B+	GROUND
i	SM6-19D	SEAT FRONT RAISE MOVEMENT REQUEST	B+	GROUND
i i	SM6-20D	RECLINE FORE MOVEMENT REQUEST	B+	GROUND

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-23	DRIVER SEAT HEATER ON	GROUND	B+
1	FC2-38	DRIVER SEAT HEATER REQUEST	GROUND	R+

The following symbols are used to represent values for Control Module Pin Out data:

I Input B+ Battery voltage
O Output V Voltage (DC)
SG Signal Ground Hz Frequency
D Serial and encoded communications KHz Frequency x 1000
MS Milliseconds
MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE. The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 14.

COMPONENTS

IGNITION SWITCH

NOT IN-PARK MICROSWITCH

Connector / Type / Color Location / Access Component FC1 / 48-WAY PCB SIGNAL / YELLOW BODY PROCESSOR MODULE PASSENGER'S UNDERSCUTTLE FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK CA72 / 4-WAY MULTILOCK 070 / WHITE BRAKE SWITCH DRIVER'S UNDERSCUTTLE CENTER CONSOLE SWITCH PACK CC1 / 16-WAY MULTILOCK 040 / BLACK CENTER CONSOLE DD3 / 13-WAY ECONOSEAL III LC / BLACK DOOR CASING DOOR SWITCH - DRIVER DD1 / 12-WAY MULTILOCK 47 / WHITE DOOR SWITCH PACK - DRIVER ARM REST / TOP ROLL DD2 / 22-WAY MULTILOCK 47 / WHITE PL1 / 22-WAY MULTILOCK 47 / BLUE SEAT CONTROL MODULE - DRIVER (ROW, MEMORY SEAT VEHICLES) DRIVER'S SEAT PL2 / 12-WAY MULTILOCK 47 / BLUE SM1-D / 12-WAY MULTILOCK 47 / WHITE SM6-D / 22-WAY MULTILOCK 47 / WHITE SM7-D / 3-WAY MULTILOCK 070 / YELLOW DRIVER'S SEAT / UNDER SEAT CUSHION - DRIVER SM10-D / 3-WAY MULTILOCK 070 / YELLOW DRIVER'S SEAT / SOUAB SEAT LUMBAR PUMP - DRIVER SM2-D / 6-WAY MULTILOCK 070 / WHITE DRIVER'S SEAT / UNDER DRIVER'S SEAT / UNDER DRIVER'S SEAT / UNDER SEAT MOTORS - DRIVER SM3-D / 6-WAY MULTILOCK 070 / YELLOW SM4-D / 6-WAY MULTILOCK 070 / SLATE SM11-D / 6-WAY MULTILOCK 070 / WHITE SM13-D / 6-WAY MULTILOCK 070 / YELLOW DRIVER'S SEAT / SOLIAR DRIVER'S SEAT / UNDER SEAT SWITCH PACK - DRIVER SM5-D / 16-WAY MULTILOCK 040 / BLACK DRIVER'S SEAT SM9-D / 3-WAY MULTILOCK 070 / SLATE SQUAB - DRIVER DRIVER'S SEAT CC52 / 2-WAY MULTILOCK 040 / BLACK HAND BRAKE SWITCH CENTER CONSOLE, LH SIDE

FC54 (FLY LEAD) / 8-WAY MULTILOCK 070 / WHITE

CC42 (FLY LEAD) / 2-WAY MULTILOCK 040 / BLACK

STEERING COLUMN / COVER

'J' GATE / CENTER CONSOLE

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
CA8	20-WAY MULTILOCK 040 / GREEN	DRIVER'S 'A' POST / 'A' POST TRIM
CA9	20-WAY MULTILOCK 040 / BLACK	DRIVER'S 'A' POST / 'A' POST TRIM
CA10	8-WAY MULTILOCK 070 / WHITE	DRIVER'S 'A' POST / 'A' POST TRIM
CA23	20-WAY MULTILOCK 040 / BLACK	DRIVER'S SEAT / UNDER
CA24	6-WAY MULTILOCK 070 / WHITE	DRIVER'S SEAT / UNDER
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC4	14-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC5	20-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC5	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH FASCIA END PANEL / OUTER AIR VENT
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE

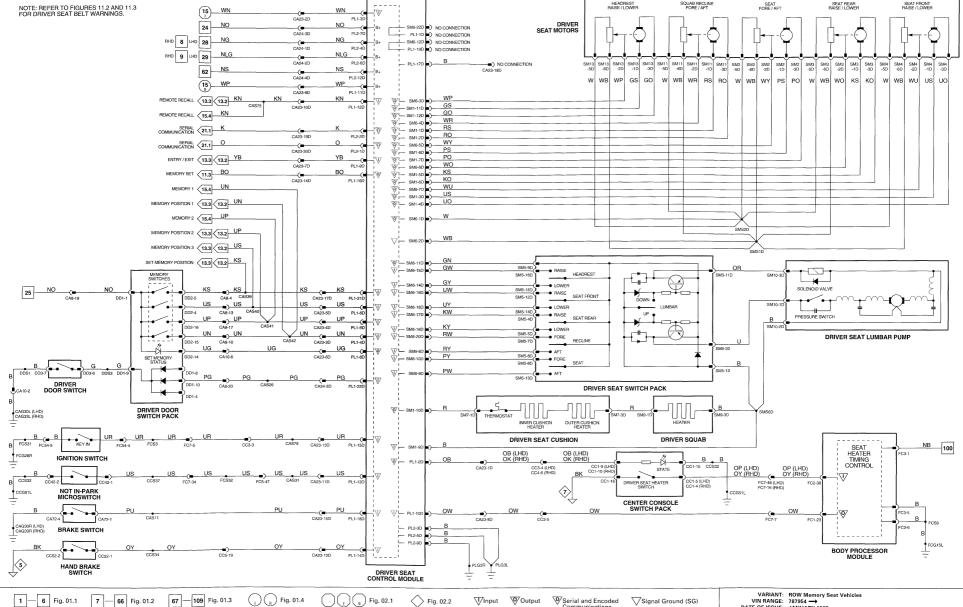
GROUNDS

Ground	Location / Type
CAG30L	LH 'A' POST GROUND SCREW
CAG30R	LH 'A' POST GROUND SCREW
CAG33L	RH HEELBOARD GROUND SCREW
CAG33R	RH HEELBOARD GROUND SCREW
CCG51L	CENTER CONSOLE GROUND STUD
FCG15L	LH CONSOLE GROUND STUD
FCG26R	LH CONSOLE GROUND STUD
PLG3L	LH SEAT GROUND STUD
PLG3R	LH SEAT GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



DRIVER SEAT CONTROL MODULE (NAS VEHICLES)

∇	Pin	Description	Active	Inactive
0	CA105-2	SEAT HEATER ON LED	B+	GROUND
i i	CA105-3	IGNITION SWITCHED GROUND	GROUND	B+
1	CA105-4	MEMORY POSITION 1 REQUEST	B+	GROUND
i i	CA105-5	MEMORY POSITION 2 REQUEST	B+	GROUND
1	CA105-6	MEMORY POSITION 3 REQUEST	B+	GROUND
ò	CA105-8	SEAT MEMORY STATUS LED	GROUND	B+
- î	CA105-9	ENTRY / EXIT SIGNAL	GROUND	B+
i i	CA105-10	SEAT HEATER REQUEST	GROUND	B+
1	CA105-12	REMOTE RECALL REQUEST	GROUND PULSE ON UNLOCK	B+
1	CA105-13	NOT IN PARK SIGNAL	GROUND	B+
1	CA105-14	PARK BRAKE ON SIGNAL	GROUND	B+
1	CA105-15	KEY IN IGNITION SIGNAL	GROUND	B+
0	CA105-16	MEMORY SET	GROUND	B+
1	CA105-18	BRAKE SWITCH SIGNAL	GROUND	B+
1	CA105-21	SET MEMORY POSITION REQUEST	B+	GROUND
1	CA105-22	DRIVER DOOR AJAR	GROUND	79 V
D	CA106-1	SERIAL COMMUNICATION INPUT		
D	CA106-2	SERIAL COMMUNICATION OUTPUT		
	SM1-1D	SQUAB RECLINE FORE / AFT MOTOR	B+ (AFT)	GROUND
0	SM1-1D SM1-2D	SQUAB RECLINE FORE / AFT MOTOR SQUAB RECLINE FORE / AFT MOTOR	B+ (FORE)	GROUND
0		SEAT FRONT / RAISE LOWER MOTOR	B+ (UP)	GROUND
0	SM1-3D SM1-4D	SEAT FRONT / RAISE LOWER MOTOR	B+ (DOWN)	GROUND
0		SEAT FRONT / RAISE LOWER MOTOR SEAT REAR RAISE / LOWER MOTOR	B+ (UP)	GROUND
-	SM1-5D		B+ (DOWN)	GROUND
0	SM1-6D	SEAT REAR RAISE / LOWER MOTOR	B+ (AFT)	GROUND
0	SM1-7D	SEAT FORE / AFT MOTOR	B+ (FORE)	GROUND
	SM1-8D SM1-9D	SEAT FORE / AFT MOTOR COMMON GROUND	GROUND	GROUND
0	SM1-9D SM1-10D	HEATER ELEMENT SUPPLY	B+	GROUND
0	SM1-11D	HEADREST RAISE / LOWER MOTOR	B+ (RAISE)	GROUND
0	SM1-11D SM1-12D	HEADREST RAISE / LOWER MOTOR	B+ (LOWER)	GROUND
U	SW11-12D	READREST NAISE / LOWER MOTOR	DT ILOWEIU	GILOUND
0	SM6-1D	POTENTIOMETER COMMON REFERENCE VOLTAGE	5 V	5 V
SG	SM6-2D	POTENTIOMETER COMMON REFERENCE GROUND	GROUND	GROUND
0	SM6-3D	HEADREST FEEDBACK VOLTAGE	0 5 V (DOWN), 4 V (UP)	
0	SM6-4D	SQUAB RECLINE FEEDBACK VOLTAGE	0 5 V (BACK), 4 V (FORWARD)	
0	SM6-5D	SEAT FORE / AFT FEEDBACK VOLTAGE	0 5 V (AFT), 4 V (FORE)	
0	SM6-6D	SEAT REAR RAISE / LOWER FEEDBACK VOLTAGE	0 5 V (DOWN), 4 V (UP)	
0	SM6-7D	SEAT FRONT RAISE / LOWER FEEDBACK VOLTAGE	0 5 V (DOWN), 4 V (UP)	
1	SM6-8D	RECLINE AFT MOVEMENT REQUEST	B+	GROUND
1	SM6-9D	SEAT AFT MOVEMENT REQUEST	B+	GROUND
1	SM6-10D	SEAT FORE MOVEMENT REQUEST	B+	GROUND
0	SM6-11D	LUMBAR SWITCH POWER SUPPLY	B+	B+
1	SM6-14D	HEADREST LOWER MOVEMENT REQUEST	B+	GROUND
1	SM6-15D	HEADREST RAISE MOVEMENT REQUEST	B+	GROUND
1	SM6-16D	SEAT REAR LOWER MOVEMENT REQUEST	B+	GROUND
1	SM6-17D	SEAT REAR RAISE MOVEMENT REQUEST	B+	GROUND
1	SM6-18D	SEAT FRONT LOWER MOVEMENT REQUEST	B+	GROUND
- 1	SM6-19D	SEAT FRONT RAISE MOVEMENT REQUEST	B+	GROUND
- 1	SM6-20D	RECLINE FORE MOVEMENT REQUEST	B+	GROUND

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-23	DRIVER SEAT HEATER ON	GROUND	B+
1	FC2-38	DRIVER SEAT HEATER REQUEST	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

ı	Input	B+	Battery voltage
0	Output	V	Voltage (DC)
SG	Signal Ground	Hz	Frequency
D	Serial and encoded communications	KHz	Frequency x 1000
		MS	Milliseconds
		ΜV	Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 14.2

COMPONENTS

Connector / Type / Color Location / Access Component FC1 / 48-WAY PCB SIGNAL / YELLOW BODY PROCESSOR MODULE PASSENGER'S UNDERSCUTTLE FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK CA72 / 4-WAY MULTILOCK 070 / WHITE BRAKE SWITCH DRIVER'S UNDERSCUTTLE CC1 / 16-WAY MULTILOCK 040 / BLACK CENTER CONSOLE SWITCH PACK CENTER CONSOLE DD3 / 13-WAY ECONOSEAL III LC / BLACK DOOR CASING DOOR SWITCH - DRIVER DD1 / 12-WAY MULTILOCK 47 / WHITE DOOR SWITCH PACK - DRIVER ARM REST / TOP ROLL DD2 / 22-WAY MULTILOCK 47 / WHITE CA105 / 22-WAY MULTILOCK 47 / BLUE SEAT CONTROL MODULE - DRIVER (NAS VEHICLES) DRIVER'S SEAT CA106 / 12-WAY MULTILOCK 47 / BLUE SM1-D / 12-WAY MULTILOCK 47 / WHITE SM6-D / 22-WAY MULTILOCK 47 / WHITE SM7-D / 3-WAY MULTILOCK 070 / YELLOW SEAT CUSHION - DRIVER DRIVER'S SEAT / UNDER SM10-D / 3-WAY MULTILOCK 070 / YELLOW DRIVER'S SEAT / SQUAB SEAT LUMBAR PUMP - DRIVER SM2-D / 6-WAY MULTILOCK 070 / WHITE DRIVER'S SEAT / UNDER DRIVER'S SEAT / UNDER DRIVER'S SEAT / UNDER SEAT MOTORS - DRIVER SM3-D / 6-WAY MULTILOCK 070 / YELLOW SM4-D / 6-WAY MULTILOCK 070 / SLATE SM11-D / 6-WAY MULTILOCK 070 / WHITE DRIVER'S SEAT / SOLIAF SM13-D / 6-WAY MULTILOCK 070 / YELLOW DRIVER'S SEAT / UNDER SEAT SWITCH PACK - DRIVER SM5-D / 16-WAY MULTILOCK 040 / BLACK DRIVER'S SEAT SM9-D / 3-WAY MULTILOCK 070 / SLATE DRIVER'S SEAT CC52 / 2-WAY MULTILOCK 040 / BLACK HAND BRAKE SWITCH CENTER CONSOLE, LH SIDE

ECSA (ELY LEAD) / 8-WAY MULTILOCK 070 / WHITE

CC42 (FLY LEAD) / 2-WAY MULTILOCK 040 / BLACK

STEERING COLUMN / COVER

'J' GATE / CENTER CONSOLE

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
CAB	20-WAY MULTILOCK 040 / GREEN	DRIVER'S 'A' POST / 'A' POST TRIM
CA9	20-WAY MULTILOCK 040 / BLACK	DRIVER'S 'A' POST / 'A' POST TRIM
CA10	8-WAY MULTILOCK 070 / WHITE	DRIVER'S 'A' POST / 'A' POST TRIM
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC5	20-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC5	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE

GROUNDS

IGNITION SWITCH

NOT IN-PARK MICROSWITCH

Ground	Location / Type
CAG30L	LH 'A' POST GROUND SCREW
CAG30R	LH 'A' POST GROUND SCREW
CAG103L	LH SEAT GROUND STUD
CAG103R	LH SEAT GROUND STUD
CCG51L	CENTER CONSOLE GROUND STUD
FCG15L	LH CONSOLE GROUND STUD
FCG26R	LH CONSOLE GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

25

CAG30

FCS31

CCS32

CAG30F

(5)

1 — 6 Fig. 01.1 7 — 66 Fig. 01.2 67 — 109 Fig. 01.3 VInput Output Serial and Encoded Communications Fig. 01.4 Fig. 02.1 Fig. 02.2 Signal Ground (SG) VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

DRIVER SEAT CONTROL MODULE (ROW, MEMORY SEAT VEHICLES)

∇	Pin	Description	Active	Inactive
0	PL1-2D	SEAT HEATER ON (STATE)	B+	GROUND
1	PL1-3D	IGNITION SWITCHED GROUND	GROUND	B+
- 1	PL1-10D	SEAT HEATER REQUEST	GROUND	B+
1	PL1-13D	NOT IN PARK	GROUND	B+
1	PL1-14D	HANDBRAKE ON	GROUND	B+
1	PL1-15D	KEY IN IGNITION	GROUND	B+
1	PL1-18D	BRAKE SWITCH	GROUND	B+
- 1	PL1-22D	DRIVER'S DOOR AJAR	GROUND	79 V
D	PL2-1D	SERIAL COMMUNICATION INPUT		
D	PL2-2D	SERIAL COMMUNICATION OUTPUT		
0	SM1-1D	SQUAB RECLINE FORE / AFT MOTOR	B+(AFT)	GROUND
0	SM1-2D	SQUAB RECLINE FORE / AFT MOTOR	B+ (FORE)	GROUND
0	SM1-3D	SEAT FRONT RAISE / LOWER MOTOR	B+ (RAISE)	GROUND
0	SM1-4D	SEAT FRONT RAISE / LOWER MOTOR	B+ (LOWER)	GROUND
0	SM1-5D	SEAT REAR RAISE / LOWER MOTOR	B+ (RAISE)	GROUND
0	SM1-6D	SEAT REAR RAISE / LOWER MOTOR	B+ (LOWER)	GROUND
0	SM1-7D	SEAT FORE / AFT MOTOR	B+ (AFT)	GROUND
0	SM1-8D	SEAT FORE / AFT MOTOR	B+ (FORE)	GROUND
1	SM1-9D	COMMON GROUND	GROUND	GROUND
0	SM1-10D	HEATER ELEMENT SUPPLY	B+	GROUND
0	SM1-11D	HEADREST RAISE / LOWER MOTOR	B+ (RAISE)	GROUND
0	SM1-12D	HEADREST RAISE / LOWER MOTOR	B+ (LOWER)	GROUND
1	SM6-8D	RECLINE AFT MOVEMENT REQUEST	B+	GROUND
1	SM6-9D	SEAT AFT MOVEMENT REQUEST	B+	GROUND
- 1	SM6-10D	SEAT FORE MOVEMENT REQUEST	B+	GROUND
0	SM6-11D	LUMBAR SWITCH POWER SUPPLY	B+	B+
1	SM6-14D	HEADREST LOWER MOVEMENT REQUEST	B+	GROUND
- 1	SM6-15D	HEADREST RAISE MOVEMENT REQUEST	B+	GROUND
1	SM6-16D	SEAT REAR LOWER MOVEMENT REQUEST	B+	GROUND
- 1	SM6-17D	SEAT REAR RAISE MOVEMENT REQUEST	B+	GROUND
- 1	SM6-18D	SEAT FRONT LOWER MOVEMENT REQUEST	B+	GROUND
- 1	SM6-19D	SEAT FRONT RAISE MOVEMENT REQUEST	B+	GROUND
1	SM6-20D	RECLINE FORE MOVEMENT REQUEST	B+	GROUND

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-23	DRIVER SEAT HEATER ON	GROUND	B+
1	FC2-38	DRIVER SEAT HEATER REQUEST	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

Input B+ Battery voltage O Output V Voltage (DC) SG Signal Ground Hz Frequency D Serial and encoded communications KHz Frequency x 1000 MS Milliseconds MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.



COMPONENTS

Component FC1 / 48-WAY PCB SIGNAL / YELLOW FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK BODY PROCESSOR MODULE CA72 / 4-WAY MULTILOCK 070 / WHITE BRAKE SWITCH CC1 / 16-WAY MULTILOCK 040 / BLACK CENTER CONSOLE SWITCH PACK DD3 / 13-WAY ECONOSEAL HILLC / BLACK DOOR SWITCH - DRIVER DD1 / 12-WAY MULTILOCK 47 / WHITE DOOR SWITCH PACK - DRIVER DD2 / 22-WAY MULTILOCK 47 / WHITE SEAT CONTROL MODULE - DRIVER (ROW, MEMORY SEAT VEHICLES) PL1 / 22-WAY MULTILOCK 47 / BLUE PL2 / 12-WAY MULTILOCK 47 / BLUE SM1-D / 12-WAY MULTILOCK 47 / WHITE SM6-D / 22-WAY MULTILOCK 47 / WHITE SEAT CUSHION - DRIVER SM7-D / 3-WAY MULTILOCK 070 / YELLOW SEAT LUMBAR PUMP - DRIVER SM10-D / 3-WAY MULTILOCK 070 / YELLOW SM2-D / 6-WAY MULTILOCK 070 / WHITE SM3-D / 6-WAY MULTILOCK 070 / YELLOW SM4-D / 6-WAY MULTILOCK 070 / SLATE SEAT MOTORS - DRIVER

SEAT SWITCH PACK ~ DRIVER SQUAB - DRIVER HAND BRAKE SWITCH IGNITION SWITCH

Connector / Type / Color

NOT IN-PARK MICROSWITCH

Location / Access

PASSENGER'S UNDERSCUTTLE

DRIVER'S UNDERSCUTTLE CENTER CONSOLE DOOR CASING ARM REST / TOP ROLL

DRIVER'S SEAT

DRIVER'S SEAT / UNDER DRIVER'S SEAT / SQUAB DRIVER'S SEAT / UNDER DRIVER'S SEAT / UNDER DRIVER'S SEAT / UNDER DRIVER'S SEAT / SQUAB DRIVER'S SEAT / UNDER DRIVER'S SEAT DRIVER'S SEAT CENTER CONSOLE, LH SIDE STEERING COLUMN / COVER 'J' GATE / CENTER CONSOLE

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
CA8	20-WAY MULTILOCK 040 / GREEN	DRIVER'S 'A' POST / 'A' POST TRIM
CA10	8-WAY MULTILOCK 070 / WHITE	DRIVER'S 'A' POST / 'A' POST TRIM
CA23	20-WAY MULTILOCK 040 / BLACK	DRIVER'S SEAT / UNDER
CA24	6-WAY MULTILOCK 070 / WHITE	DRIVER'S SEAT / UNDER
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC4	14-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC5	20-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC5	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH FASCIA END PANEL / OUTER AIR VENT
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
EC?	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S LINDERSCLITTLE

SM11-D / 6-WAY MUI TH OCK 070 / WHITE SM13-D / 6-WAY MULTILOCK 070 / YELLOW

SM5-D / 16-WAY MULTILOCK 040 / BLACK

FC54 (FLY LEAD) / 8-WAY MULTILOCK 070 / WHITE

CC42 (FLY LEAD) / 2-WAY MULTILOCK 040 / BLACK

SM9-D / 3-WAY MULTILOCK 070 / SLATE

CC52 / 2-WAY MULTILOCK 040 / BLACK

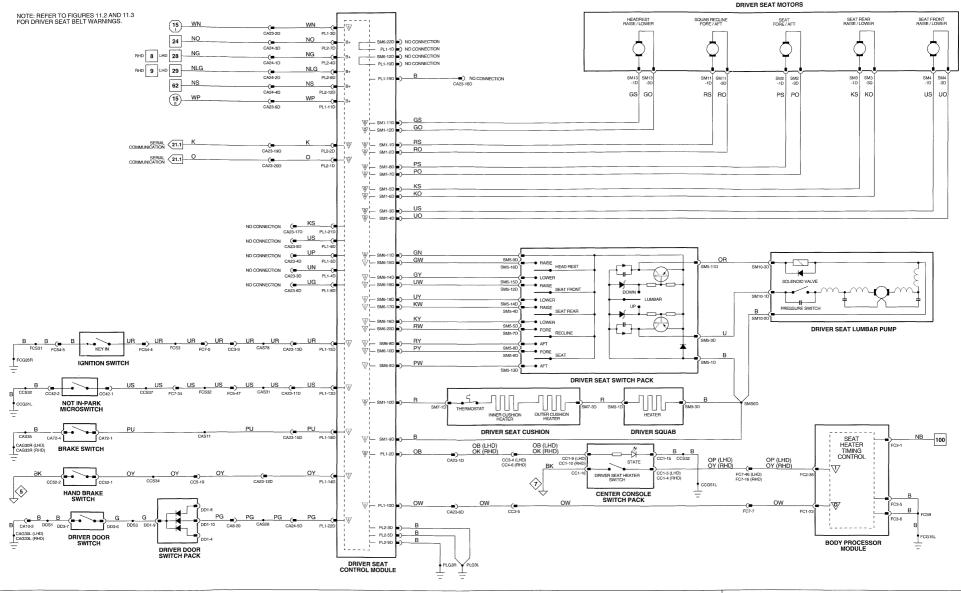
GROUNDS

Ground	Location / Type
CAG30L	LH 'A' POST GROUND SCREW
CAG30R	LH 'A' POST GROUND SCREW
CAG33L	RH HEELBOARD GROUND SCREW
CAG33R	RH HEELBOARD GROUND SCREW
CCG51L	CENTER CONSOLE GROUND STUD
FCG15L	LH CONSOLE GROUND STUD
FCG26R	LH CONSOLE GROUND STUD
PLG3L	LH SEAT GROUND STUD
PLG2B	LU SEAT GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.















Serial and Encoded Communications

Signal Ground (SG)

VARIANT: Non-Memory Seat Vehicles VIN BANGE: 787954 ---DATE OF ISSUE: JANUARY 1997

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-23	DRIVER SEAT HEATER ON	GROUND	B+
	EC2.28	DRIVER SEAT HEATER REQUEST	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

B+ Battery voltage O Output Voltage (DC) SG Signal Ground Hz Frequency KHz Frequency x 1000 D Serial and encoded communications MS Milliseconds MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component

BODY PROCESSOR MODULE

CENTER CONSOLE SWITCH PACK SEAT CUSHION - DRIVER SEAT MOTOR - DRIVER (RAISE / LOWER SEAT VEHICLES) SEAT SWITCH PACK - DRIVER (RAISE / LOWER SEAT VEHICLES)

SQUAB - DRIVER

Connector / Type / Color

FC1 / 48-WAY PCB SIGNAL / YELLOW FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK CC1 / 16-WAY MULTILOCK 040 / BLACK SM7-D / 3-WAY MULTILOCK 070 / YELLOW SM16-D / 6-WAY MULTILOCK 070 / SLATE SM17-D / 16-WAY MULTILOCK 040 / BLACK

SM9-D / 3-WAY MULTILOCK 070 / SLATE

Location / Access

PASSENGER'S UNDERSCUTTLE

CENTER CONSOLE DRIVER'S SEAT / UNDER DRIVER'S SEAT / UNDER DRIVER'S SEAT

DRIVER'S SEAT

RELAYS

Color / Stripe Connector / Color Location / Access Relay SEAT HEATER RELAY - DRIVER BLACK SM18-D / BLUE DRIVER'S SEAT BLACK / VIOLET SM14-D / BLUE DRIVER'S SEAT SEAT LOWER RELAY - DRIVER SEAT RAISE RELAY - DRIVER BLACK / VIOLET SM14-D / BLUE DRIVER'S SEAT

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
CA23-D	20-WAY MULTILOCK 040 / BLACK	DRIVER'S SEAT / UNDER
CA24-D	6-WAY MULTILOCK 070 / WHITE	DRIVER'S SEAT / UNDER
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC4	14-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
ML1-D	10-WAY MULTILOCK 070 / WHITE	DRIVER'S SEAT / UNDER

GROUNDS

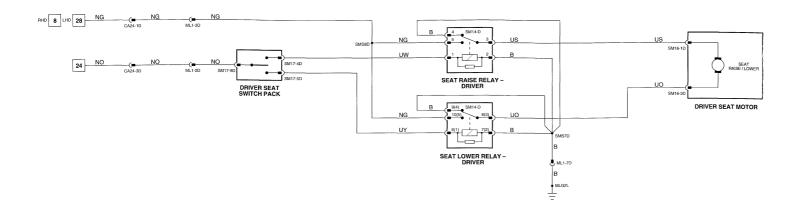
Location / Type Ground

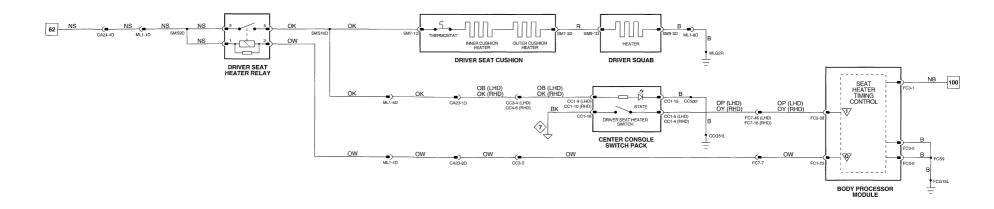
CCG51L CENTER CONSOLE GROUND STUD LH CONSOLE GROUND STUD FCG15L LH SEAT GROUND STUD MLG2L LH SEAT GROUND STUD MLG2B

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.















Signal Ground (SG)

VARIANT: Raise / Lower Seat Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

PASSENGER SEAT CONTROL MODULE (ROW, MEMORY SEAT VEHICLES)

∇	Pin	Description	Active	Inactive
0	PL1-2P	SEAT HEATER ON STATE	B+	GROUND
- 1	PL1-3P	IGNITION SWITCHED POWER	GROUND	B+
i.	PL1-4P	MEMORY POSITION 1 REQUEST	B+	GROUND
i	PL1-5P	MEMORY POSITION 2 REQUEST	B+	GROUND
i.	PL1-6P	MEMORY POSITION 3 REQUEST	B+	GROUND
0	PL1-8P	SEAT MEMORY STATUS STATE	GROUND	B+
ï	PL1-10P	SEAT HEATER REQUEST	GROUND	B+
i i	PL1-15P	KEY IN IGNITION SIGNAL	GROUND	B+
o	PL1-16P	MEMORY SET AUDIBLE TONE	GROUND	B+
- 1	PL1-21P	SET MEMORY POSITION REQUEST	B+	GROUND
1	PL1-22P	PASSENGER DOOR AJAR	GROUND	7 9 V
D	PL2-1P	SERIAL COMMUNICATION INPUT		
D	PL2-2P	SERIAL COMMUNICATION OUTPUT		
0	SM1-1P	SQUAB RECLINE FORE / AFT MOTOR	B+ (AFT)	GROUND
0	SM1-2P	SQUAB RECLINE FORE / AFT MOTOR	B+ (FORE)	GROUND
0	SM1-3P	SEAT FRONT RAISE / LOWER MOTOR	B+ (UP)	GROUND
0	SM1-4P	SEAT FRONT RAISE / LOWER MOTOR	B+ (DOWN)	GROUND
0	SM1-5P	SEAT REAR RAISE / LOWER MOTOR	B+ (UP)	GROUND
0	SM1-6P	SEAT REAR RAISE / LOWER MOTOR	B+ (DOWN)	GROUND
0	SM1-7P	SEAT FORE / AFT MOTOR	B+ (AFT)	GROUND
0	SM1-8P	SEAT FORE / AFT MOTOR	B+ (FORE)	GROUND
1	SM1-9P	COMMON GROUND	GROUND	GROUND
0	SM1-10P	HEATER ELEMENT SUPPLY	B+	B+
0	SM1-11P	HEADREST RAISE / LOWER MOTOR	B+ (UP)	GROUND
0	SM1-12P	HEADREST RAISE / LOWER MOTOR	B+ (DOWN)	GROUND
0	SM6-1P	POTENTIOMETER COMMON REFERENCE VOLTAGE	5 V	5 V
SG	SM6-2P	POTENTIOMETER COMMON REFERENCE GROUND	GROUND	GROUND
0	SM6-3P	HEADREST FEEDBACK VOLTAGE	0 5 V (DOWN), 4 V (UP)	
0	SM6-4P	SQUAB RECLINE FEEDBACK VOLTAGE	0 5 V (BACK), 4 V (FORWARD)	
0	SM6-5P	SEAT FORE / AFT FEEDBACK VOLTAGE	0 5 V (AFT), 4 V (FORE)	
0	SM6-6P	SEAT REAR RAISE / LOWER FEEDBACK VOLTAGE	0 5 V (DOWN), 4 V (UP)	
0	SM6-7P	SEAT FRONT RAISE / LOWER FEEDBACK VOLTAGE	0 5 V (DOWN), 4 V (UP)	
1	SM6-8P	RECLINE AFT MOVEMENT REQUEST	B+	GROUND
- 1	SM6-9P	SEAT AFT MOVEMENT REQUEST	B+	GROUND
1	SM6-10P	SEAT FORE MOVEMENT REQUEST	B+	GROUND
0	SM6-11P	LUMBAR SWITCH POWER SUPPLY	B+	B+
1	SM6-14P	HEADREST LOWER MOVEMENT REQUEST	B+	GROUND
- 1	SM6-15P	HEADREST RAISE MOVEMENT REQUEST	B+	GROUND
- 1	SM6-16P	SEAT REAR LOWER MOVEMENT REQUEST	B+	GROUND
1	SM6-17P	SEAT REAR RAISE MOVEMENT REQUEST	B+	GROUND
- 1	SM6-18P	SEAT FRONT LOWER MOVEMENT REQUEST	B+	GROUND
- 1	SM6-19P	SEAT FRONT RAISE MOVEMENT REQUEST	B+	GROUND
	SM6-20P	RECLINE FORE MOVEMENT REQUEST	B+	GROUND

BODY PROCESSOR MODULE

7	7	Pin	Description	Active	Inactive
()	FC1-42	PASSENGER SEAT HEATER REQUEST	GROUND	B+
		EC2.12	PASSENGER SEAT HEATER SWITCH	GROUND	R+

The following symbols are used to represent values for Control Module Pin Out data:

Input B+ Battery voltage V Voltage (DC) O Output SG Signal Ground Hz Frequency Serial and encoded communications KHz Frequency x 1000 MS Milliseconds MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component

BODY PROCESSOR MODULE

CENTER CONSOLE SWITCH PACK IGNITION SWITCH DOOR SWITCH PACK - PASSENGER DOOR SWITCH - PASSENGER SEAT CONTROL MODULE - PASSENGER (ROW, MEMORY SEAT VEHICLES)

SEAT CUSHION - PASSENGER SEAT LUMBAR PUMP - PASSENGER SEAT MOTORS - PASSENGER

SEAT SWITCH PACK - PASSENGER SQUAB - PASSENGER

Connector / Type / Color

FC1 / 48-WAY PCB SIGNAL / YELLOW FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK CC1 / 16-WAY MULTILOCK 040 / BLACK FC54 (FLY LEAD) / 8-WAY MULTILOCK 070 / WHITE PD1 / 26-WAY MULTILOCK 47 / SLATE PD3 / 13-WAY ECONOSEAL III LC / BLACK PL1 / 22-WAY MULTILOCK 47 / BLUE PL2 / 12-WAY MULTILOCK 47 / BLUE SM1-P / 12-WAY MULTILOCK 47 / WHITE SM6-P / 22-WAY MULTILOCK 47 / WHITE SM7-P / 3-WAY MULTILOCK 070 / YELLOW SM10-P / 3-WAY MULTILOCK 070 / YELLOW

SM1:P / 6-WAY MULTILOCK 070 / YELLOW SM2:P / 6-WAY MULTILOCK 070 / YELLOW SM4:P / 6-WAY MULTILOCK 070 / SLATE SM11:P / 6-WAY MULTILOCK 070 / WHITE SM13:P / 6-WAY MULTILOCK 070 / YELLOW SM5-P / 16-WAY MULTILOCK 040 / BLACK

SM9-P / 3-WAY MULTILOCK 070 / SLATE

Location / Access

PASSENGER'S UNDERSCUTTLE

CENTER CONSOLE STEERING COLUMN / COVER ARM REST / TOP ROLL DOOR CASING PASSENGER'S SEAT

PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / SQUAB PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / SQUAB PASSENGER'S SEAT / UNDER PASSENGER'S SEAT PASSENGER'S SEAT

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access	
CA11	20-WAY MULTILOCK 040 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM	
CA12	14-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM	
CA27	6-WAY MULTILOCK 070 / WHITE	PASSENGER'S SEAT / UNDER	
CA28	20-WAY MULTILOCK 040 / BLACK	PASSENGER'S SEAT / UNDER	
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX	
CC4	14-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX	
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT	
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE	

GROUNDS

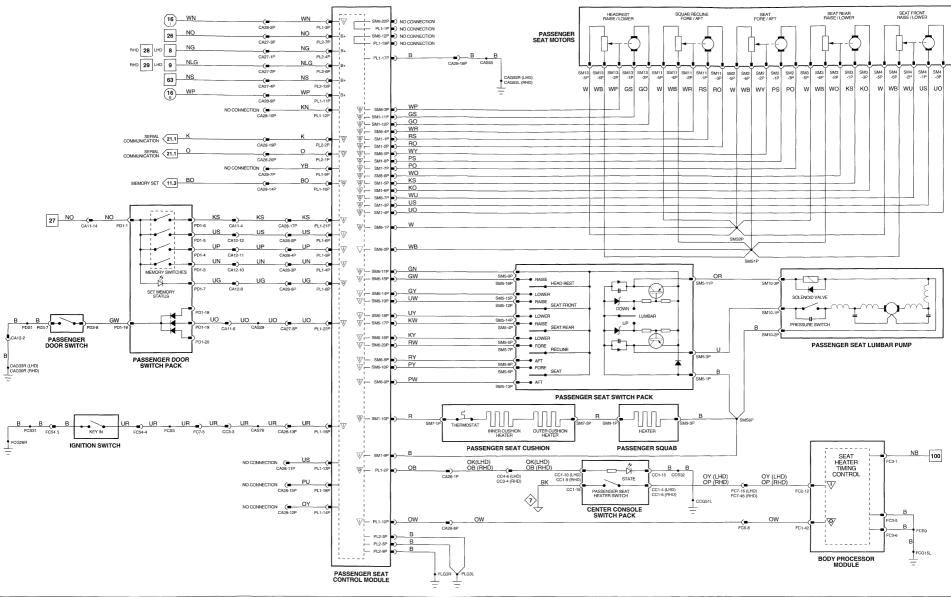
Ground	Location / Type
CAG30R	LH 'A' POST GROUND SCREW
CAG33R	RH HEELBOARD GROUND SCREW
CAG92R	RH HEELBOARD GROUND SCREW
CAG93L	LH HEELBOARD GROUND SCREW
CG51L	CENTER CONSOLE GROUND STUD
CG15L	LH CONSOLE GROUND STUD
CG26R	LH CONSOLE GROUND STUD
PLG3L	LH SEAT GROUND STUD
PLG3R	LH SEAT GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

Fig. 14.5











Serial and Encoded Communications

Signal Ground (SG)

VARIANT: ROW / SWB Memory Seat Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

PASSENGER SEAT CONTROL MODULE (ROW, MEMORY SEAT VEHICLES)

∇	Pin	Description	Active	Inactive
0	PL1-2P	SEAT HEATER ON STATE	B+	GROUND
1	PL1-3P	IGNITION SWITCHED POWER	GROUND	B+
1	PL1-4P	MEMORY POSITION 1 REQUEST	B+	GROUND
1	PL1-5P	MEMORY POSITION 2 REQUEST	B+	GROUND
1	PL1-6P	MEMORY POSITION 3 REQUEST	B+	GROUND
0	PL1-8P	SEAT MEMORY STATUS STATE	GROUND	B+
1	PL1-10P	SEAT HEATER REQUEST	GROUND	B+
1	PL1-15P	KEY IN IGNITION SIGNAL	GROUND	B+
0	PL1-16P	MEMORY SET AUDIBLE TONE	GROUND	B+
1	PL1-21P	SET MEMORY POSITION REQUEST	B+	GROUND
t	PL1-22P	PASSENGER DOOR AJAR	GROUND	79 V
D	PL2-1P	SERIAL COMMUNICATION INPUT		
D	PL2-2P	SERIAL COMMUNICATION OUTPUT		
0	SM1-1P	SQUAB RECLINE FORE / AFT MOTOR	B+ (AFT)	GROUND
0	SM1-2P	SQUAB RECLINE FORE / AFT MOTOR	B+ (FORE)	GROUND
0	SM1-3P	SEAT FRONT RAISE / LOWER MOTOR	B+ (UP)	GROUND
0	SM1-4P	SEAT FRONT RAISE / LOWER MOTOR	B+ (DOWN)	GROUND
0	SM1-5P	SEAT REAR RAISE / LOWER MOTOR	B+ (UP)	GROUND
0	SM1-6P	SEAT REAR RAISE / LOWER MOTOR	B+ (DOWN)	GROUND
0	SM1-7P	SEAT FORE / AFT MOTOR	B+ (AFT)	GROUND
0	SM1-8P	SEAT FORE / AFT MOTOR	B+ (FORE)	GROUND
F	SM1-9P	COMMON GROUND	GROUND	GROUND
0	SM1-10P	HEATER ELEMENT SUPPLY	B+	B+
0	SM1-11P	HEADREST RAISE / LOWER MOTOR	B+ (UP)	GROUND
0	SM1-12P	HEADREST RAISE / LOWER MOTOR	B+ (DOWN)	GROUND
0	SM6-1P	POTENTIOMETER COMMON REFERENCE VOLTAGE	5 V	5 V
SG	SM6-2P	POTENTIOMETER COMMON REFERENCE GROUND	GROUND	GROUND
0	SM6-3P	HEADREST FEEDBACK VOLTAGE	0 5 V (DOWN), 4 V (UP)	
0	SM6-4P	SQUAB RECLINE FEEDBACK VOLTAGE	0 5 V (BACK), 4 V (FORWARD)	
0	SM6-5P	SEAT FORE / AFT FEEDBACK VOLTAGE	0 5 V (AFT), 4 V (FORE)	
0	SM6-6P	SEAT REAR RAISE / LOWER FEEDBACK VOLTAGE	0 5 V (DOWN), 4 V (UP)	
0	SM6-7P	SEAT FRONT RAISE / LOWER FEEDBACK VOLTAGE	0 5 V (DOWN), 4 V (UP)	
l l	SM6-8P	RECLINE AFT MOVEMENT REQUEST	B+	GROUND
1	SM6-9P	SEAT AFT MOVEMENT REQUEST	B+	GROUND
1	SM6-10P	SEAT FORE MOVEMENT REQUEST	B+	GROUND
0	SM6-11P	LUMBAR SWITCH POWER SUPPLY	B+	B+
1	SM6-14P	HEADREST LOWER MOVEMENT REQUEST	B+	GROUND
ŧ	SM6-15P	HEADREST RAISE MOVEMENT REQUEST	B+	GROUND
1	SM6-16P	SEAT REAR LOWER MOVEMENT REQUEST	B+	GROUND
E	SM6-17P	SEAT REAR RAISE MOVEMENT REQUEST	B+	GROUND
t	SM6-18P	SEAT FRONT LOWER MOVEMENT REQUEST	B+	GROUND
1	SM6-19P	SEAT FRONT RAISE MOVEMENT REQUEST	B+	GROUND
1	SM6-20P	RECLINE FORE MOVEMENT REQUEST	B+	GROUND

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-42	PASSENGER SEAT HEATER REQUEST	GROUND	B+
	FC2-12	BACCENICED CEAT HEATER CHITCH	GROUND	D.

The following symbols are used to represent values for Control Module Pin Out data:

Input B+ Battery voltage O Output V Voltage (DC) SG Signal Ground Hz Frequency D Serial and encoded communications KHz Frequency x 1000 MS Milliseconds MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component

BODY PROCESSOR MODULE

CENTER CONSOLE SWITCH PACK IGNITION SWITCH DOOR SWITCH PACK - PASSENGER DOOR SWITCH - PASSENGER SEAT CONTROL MODULE - PASSENGER (ROW, MEMORY SEAT VEHICLES)

SEAT CUSHION - PASSENGER SEAT FORE/AFT SWITCHES - PASSENGER, REAR SEAT LUMBAR PUMP - PASSENGER SEAT MOTORS - PASSENGER

SEAT RECLINE SWITCHES - PASSENGER, REAR SEAT SWITCH PACK - PASSENGER

Connector / Type / Color

FC1 / 48-WAY PCB SIGNAL / YELLOW FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK CC1 / 16-WAY MULTILOCK 040 / BLACK FC54 (FLY LEAD) / 8-WAY MULTILOCK 070 / WHITE PD1 / 26-WAY MULTILOCK 47 / SLATE

PD3 / 13-WAY ECONOSEAL III LC / BLACK PL1 / 22-WAY MULTILOCK 47 / BLUE PL2 / 12-WAY MULTILOCK 47 / BLUE SM1-P / 12-WAY MULTILOCK 47 / WHITE SM6-P / 22-WAY MULTILOCK 47 / WHITE SM7-P / 3-WAY MULTILOCK 070 / YELLOW SM19 / 10-WAY AMP MOL / BLACK

SM10-P / 3-WAY MULTILOCK 070 / YELLOW SM2-P / 6-WAY MULTILOCK 070 / WHITE SM3-P / 6-WAY MULTILOCK 070 / YELLOW SM4-P / 6-WAY MULTILOCK 070 / SLATE SM11-P / 6-WAY MULTILOCK 070 / WHITE SM13-P / 6-WAY MULTILOCK 070 / YELLOW SM20 / 10-WAY AMP MQL / NATURAL

SM5-P / 16-WAY MULTILOCK 040 / BLACK SM9-P / 3-WAY MULTILOCK 070 / SLATE SQUAB - PASSENGER

Location / Access

PASSENGER'S UNDERSCUTTLE

CENTER CONSOLE STEERING COLUMN / COVER ARM REST / TOP ROLL DOOR CASING PASSENGER'S SEAT

PASSENGER'S SEAT / UNDER FRONT LOWER SEAT / INSIDE PASSENGER'S SEAT / SQUAB PASSENGER'S SEAT / UNDER FRONT LOWER SEAT / INSIDE PASSENGER'S SEAT PASSENGER'S SEAT

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color
CA11	20-WAY MULTILOCK 040 / WHITE
CA12	14-WAY MULTILOCK 070 / WHITE
CA27	6-WAY MULTILOCK 070 / WHITE
CA28	20-WAY MULTILOCK 040 / BLACK
CC3	20-WAY MULTILOCK 070 / SLATE
CC4	14-WAY MULTILOCK 070 / WHITE
FC6	THROUGH-PANEL (48 MICRO / 6) / BLAC
EC7	THROUGH-PANEL (AS MICRO / 6) / BLAC

Location / Access

PASSENGER'S UNDERSCUTTLE / ECM PASSENGER'S UNDERSCUTTLE / ECM PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / UNDER CENTER CONSOLE / CENTER CONSOLE GLOVE BOX CENTER CONSOLE / CENTER CONSOLE GLOVE BOX RH FASCIA END PANEL / OUTER AIR VENT PASSENGER'S UNDERSCUTTLE

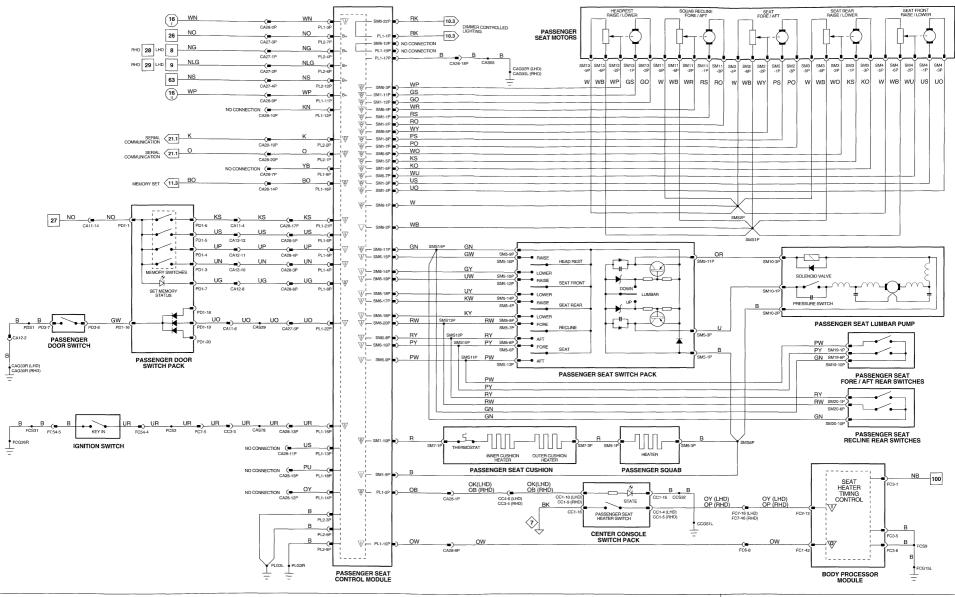
GROUNDS

Ground	Location / Type
CAG30R	LH 'A' POST GROUND SCREW
CAG33R	RH HEELBOARD GROUND SCREW
CAG92R	RH HEELBOARD GROUND SCREW
CAG93L	LH HEELBOARD GROUND SCREW
CCG51L	CENTER CONSOLE GROUND STU
CG15L	LH CONSOLE GROUND STUD
CG26R	LH CONSOLE GROUND STUD
PLG3L	LH SEAT GROUND STUD
PLG3R	LH SEAT GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

















VARIANT: ROW / LWB Memory Seat Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

PASSENGER SEAT CONTROL MODULE (NAS VEHICLES)

CA107-2 CA107-3 CA107-4 CA107-5 CA107-6 CA107-8 CA107-10 CA107-15 CA107-16 CA107-21 CA107-21	SEAT HEATER ON STATE (GINTION SWITCHED GROUND MEMORY POSITION I REQUEST MEMORY POSITION 2 REQUEST MEMORY POSITION 3 REQUEST SEAT MEMORY STATUS STATE SEAT HEATER REQUEST KEY IN GINTION SWITCH MEMORY STATUDIELT FOR	B* GROUND B* B* GROUNO GROUNO GROUNO	GROUND B+ GROUND GROUND GROUND B+ B+
CA107-3 CA107-4 CA107-5 CA107-6 CA107-8 CA107-10 CA107-15 CA107-16 CA107-21	MEMORY POSITION 1 REQUEST MEMORY POSITION 2 REQUEST MEMORY POSITION 3 REQUEST SEAT MEMORY STATUS STATE SEAT HEATER REQUEST KEY IN IGNITION SWITCH	B+ B+ B+ GROUND GROUND	GROUND GROUND GROUND B+
CA107-5 CA107-6 CA107-8 CA107-10 CA107-15 CA107-16 CA107-21	MEMORY POSITION 2 REQUEST MEMORY POSITION 2 REQUEST SEAT MEMORY STATUS STATE SEAT HEATER REQUEST KEY IN (REVINION SWITCH	B+ B+ GROUND GROUND	GROUND GROUND B+
CA107-6 CA107-8 CA107-10 CA107-15 CA107-16 CA107-21	MEMORY POSITION 3 REQUEST SEAT MEMORY STATUS STATE SEAT HEATER REQUEST KEY IN IGNITION SWITCH	B+ GROUND GROUND	GROUND B+
CA107-8 CA107-10 CA107-15 CA107-16 CA107-21	SEAT MEMORY STATUS STATE SEAT HEATER REQUEST KEY IN IGNITION SWITCH	GROUND GROUND	B+
CA107-10 CA107-15 CA107-16 CA107-21	SEAT HEATER REQUEST KEY IN IGNITION SWITCH	GROUND	
CA107-10 CA107-15 CA107-16 CA107-21	KEY IN IGNITION SWITCH		D.
CA107-15 CA107-16 CA107-21		GROUND	D+
CA107-16 CA107-21	MEMORY SET AUDIBLE TONE		B+
		GROUND	B+
	SET MEMORY POSITION REQUEST	B+	GROUND
CA107-22	PASSENGER DOOR SWITCH	GROUND	B+
CA108-1	SERIAL COMMUNICATION INPUT		
CA108-2	SERIAL COMMUNICATION OUTPUT		
SM1-1P	SQUAB RECLINE FORE / AFT MOTOR	B+ (AFT)	GROUND
SM1-2P	SQUAB RECLINE FORE / AFT MOTOR	B+ (FORE)	GROUND
SM1-3P	SEAT FRONT RAISE / LOWER MOTOR	B+ (UP)	GROUND
SM1-4P	SEAT FRONT RAISE / LOWER MOTOR	B+ (DOWN)	GROUND
SM1-5P	SEAT REAR RAISE / LOWER MOTOR	B+ (UP)	GROUND
SM1-6P	SEAT REAR RAISE / LOWER MOTOR	B+ (DOWN)	GROUND
SM1-7P	SEAT FORE / AFT MOTOR	B+ (AFT)	GROUND
SM1-8P	SEAT FORE / AFT MOTOR	B+ (FORE)	GROUND
SM1-9P	COMMON GROUND	GROUND	GROUND
SM1-10P	HEATER ELEMENT SUPPLY	B+	B+
SM1-11P	HEADREST RAISE / LOWER MOTOR	B+ (UP)	GROUND
SM1-12P	HEADREST RAISE / LOWER MOTOR	B+ (DOWN)	GROUND
SM6-1P	POTENTIOMETER COMMON REFERENCE VOLTAGE	5 V	5 V
SM6-2P	POTENTIOMETER COMMON REFERENCE GROUND	GROUND	GROUND
SM6-3P	HEADREST FEEDBACK VOLTAGE	0 5 V (DOWN), 4 V (UP)	
SM6-4P	SQUAB RECLINE FEEDBACK VOLTAGE	0 5 V (BACK), 4 V (FORWARD)	
SM6-5P	SEAT FORE / AFT FEEDBACK VOLTAGE	0 5 V (BACK), 4V (FORWARD)	
SM6-6P	SEAT REAR RAISE / LOWER FEEDBACK VOLTAGE	0 5 V (DOWN), 4 V (UP)	
SM6-7P	SEAT FRONT RAISE / LOWER FEEDBACK VOLTAGE	0 5 V (DOWN), 4 V (UP)	
SM6-8P	RECLINE AFT MOVEMENT REQUEST	B+	GROUND
SM6-9P	SEAT AFT MOVEMENT REQUEST	B+	GROUND
SM6-10P	SEAT FORE MOVEMENT REQUEST	B+	GROUND
SM6-11P	LUMBAR SWITCH POWER SUPPLY	B+	B+
SM6-14P	HEADREST LOWER MOVEMENT REQUEST	B+	GROUND
SM6-15P	HEADREST RAISE MOVEMENT REQUEST	B+	GROUND
SM6-16P	SEAT REAR LOWER MOVEMENT REQUEST	B+	GROUND
SM6-17P	SEAT REAR RAISE MOVEMENT REQUEST	B+	GROUND
SM6-18P	SEAT FRONT LOWER MOVEMENT REQUEST	B+	GROUND
SM6-19P	SEAT FRONT RAISE MOVEMENT REQUEST	B+	GROUND
SM6-20P	RECLINE FORE MOVEMENT REQUEST	B+	GROUND
	CA108-1 CA108-2 SM1-1P SM1-2P SM1-3P SM1-3P SM1-3P SM1-3P SM1-3P SM1-1P SM1-1P SM1-1P SM1-1P SM1-1P SM1-1P SM1-1P SM1-1P SM6-2P SM6-3P SM6-4P SM6-6P SM6-1P	CA108-1 SERIAL COMMUNICATION INPUT CA108-2 SERIAL COMMUNICATION OUTPUT SM1-1-P SQUAR RECLINE FORE / ATF MOTOR SM1-1-P SQUAR RECLINE FORE / ATF MOTOR SM1-1-P SQUAR RECLINE FORE / ATF MOTOR SM1-1-P SEAT FRONT RAISE / LOWER MOTOR SM1-1-P SEAT FRONT RAISE / LOWER MOTOR SM1-1-P SEAT FRONT RAISE / LOWER MOTOR SM1-1-P SEAT REAR FAISE / LOWER MOTOR SM1-1-P SEAT FORE / ATF MOTOR SM1-1-P SEAT FORE / ATF MOTOR SM1-1-P SM1-1-P LEAT FEEL FRONT SM1-1-P LEAT FEEL FEEL FRONT SM1-1-P LEADREST FAISE / LOWER MOTOR SM1-1-P HEADREST FAISE / LOWER MOTOR SM1-1-P POTENTIOMETER COMMON REFERENCE GROUND HEADREST FAISE / LOWER MOTOR SM6-1-P POTENTIOMETER COMMON REFERENCE GROUND HEADREST FAISE / LOWER MOTOR SM6-1-P SQUAR RECLINE FEEDBACK VOLTAGE SM6-9-P SEAT FINEAR FEEDBACK VOLTAGE SM6-9-P SEAT FORE / ATF FEEDBACK VOLTAGE SM6-9-P SEAT FEED	SERIAL COMMUNICATION INPUT

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-42	PASSENGER SEAT HEATER REQUEST	GROUND	B+
	FC0 40	DACCENCED CEAT HEATED CHITCH	GROUND	B.

The following symbols are used to represent values for Control Module Pin Out data:

B+ Battery voltage O Output V Voltage (DC) Hz Frequency SG Signal Ground Serial and encoded communications KHz Frequency x 1000 MS Milliseconds MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component

BODY PROCESSOR MODULE

(NAS VEHICLES)

CENTER CONSOLE SWITCH PACK IGNITION SWITCH DOOR SWITCH PACK -- PASSENGER DOOR SWITCH - PASSENGER SEAT CONTROL MODULE - PASSENGER

SEAT CUSHION - PASSENGER

SEAT LUMBAR PUMP - PASSENGER SEAT MOTORS - PASSENGER

SEAT SWITCH PACK - PASSENGER SQUAB - PASSENGER

Connector / Type / Color

FC1 / 48-WAY PCB SIGNAL / YELLOW FC2 / 48-WAY PCB SIGNAL / BLACK EC3 / 6-WAY PCB SIGNAL / BLACK CC1 / 16-WAY MULTILOCK 040 / BLACK EC54 (FLY LEAD) / 8-WAY MULTILOCK 070 / WHITE PD1 / 26-WAY MULTILOCK 47 / SI ATE PD3 / 13-WAY ECONOSEAL III LC / BLACK

CA107 / 22-WAY MULTILOCK 47 / BLUE CA107 / 22-WAY MULTILOCK 47 / BLUE SM1-P / 12-WAY MULTILOCK 47 / BLUE SM6-P / 22-WAY MULTILOCK 47 / BLUE SM7-P / 3-WAY MULTILOCK 070 / YELLOW SM10-P / 3-WAY MULTILOCK 070 / YELLOW

SM2-P / 6-WAY MULTILOCK 070 / WHITE SM3-P / 6-WAY MULTILOCK 070 / YELLOW SM4-P / 6-WAY MULTILOCK 070 / SLATE SM11-P / 6-WAY MULTILOCK 070 / WHITE SM13-P / 6-WAY MULTILOCK 070 / YELLOW

SM5-P / 16-WAY MULTILOCK 040 / BLACK SM9-P / 3-WAY MULTILOCK 070 / SLATE

Location / Access

PASSENGER'S UNDERSCUTTLE

CENTER CONSOLE STEERING COLUMN / COVER ARM REST / TOP ROLL DOOR CASING PASSENGER'S SEAT

PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / SQUAB PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / SQUAR PASSENGER'S SEAT / UNDER PASSENGER'S SEAT PASSENGER'S SEAT

HARNESS-TO-HARNESS CONNECTORS

Type / Color Location / Access Connector PASSENGER'S UNDERSCUTTLE / ECM 20-WAY MULTILOCK 040 / WHITE 14-WAY MULTILOCK 070 / WHITE PASSENGER'S UNDERSCUTTLE / ECM 20-WAY MULTILOCK 070 / SLATE CENTER CONSOLE / CENTER CONSOLE GLOVE BOX 14-WAY MULTILOCK 070 / WHITE CENTER CONSOLE / CENTER CONSOLE GLOVE BOX THROUGH-PANEL (48 MICRO / 6) / BLACK RH FASCIA END PANEL / OUTER AIR VENT THROUGH-PANEL (48 MICRO / 6) / BLACK PASSENGER'S UNDERSCUTTLE

GROUNDS

CA11 CA12

CC3

CC4 FC6

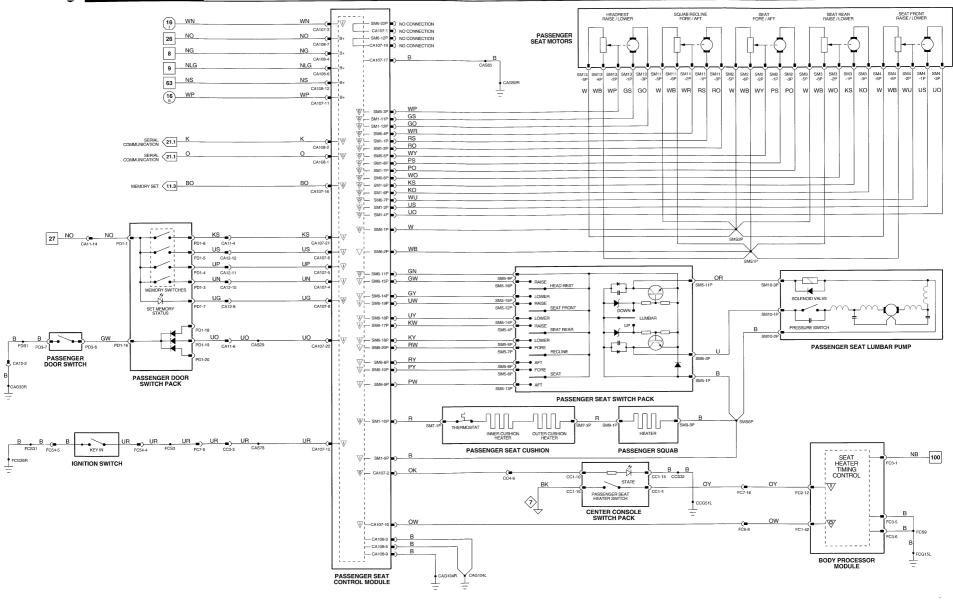
FC7

Ground	Location / Type
CAG104L	RH SEAT GROUND STUD
CAG104R	RH SEAT GROUND STUD
CAG33R	RH HEELBOARD GROUND SCREW
CAG92R	RH HEELBOARD GROUND SCREW
CCG51L	CENTER CONSOLE GROUND STUD
FCG15L	LH CONSOLE GROUND STUD
FCG26R	LH CONSOLE GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



PASSENGER SEAT CONTROL MODULE (NAS VEHICLES)

∇	Pin	Description	Active	Inactive
0	CA107-2	SEAT HEATER ON STATE	B+	GROUND
ī	CA107-3	IGNITION SWITCHED GROUND	GROUND	B+
i	CA107-4	MEMORY POSITION 1 REQUEST	B+	GROUND
i	CA107-5	MEMORY POSITION 2 REQUEST	B+	GROUND
i	CA107-6	MEMORY POSITION 3 REQUEST	B+	GROUND
o	CA107-8	SEAT MEMORY STATUS STATE	GROUND	B+
ī	CA107-10	SEAT HEATER REQUEST	GROUND	B+
i	CA107-15	KEY IN IGNITION SWITCH	GROUND	B+
0	CA107-16	MEMORY SET AUDIBLE TONE	GROUND	B+
ī	CA107-21	SET MEMORY POSITION REQUEST	B+	GROUND
i	CA107-22	PASSENGER DOOR SWITCH	GROUND	8+
D	CA108-1	SERIAL COMMUNICATION INPUT		
D	CA108-2	SERIAL COMMUNICATION OUTPUT		
0	SM1-1P	SQUAB RECLINE FORE / AFT MOTOR	B+ (AFT)	GROUND
0	SM1-2P	SQUAB RECLINE FORE / AFT MOTOR	B+ (FORE)	GROUND
0	SM1-3P	SEAT FRONT RAISE / LOWER MOTOR	B+ (UP)	GROUND
0	SM1-4P	SEAT FRONT RAISE / LOWER MOTOR	B+ (DOWN)	GROUND
0	SM1-5P	SEAT REAR RAISE / LOWER MOTOR	B+ (UP)	GROUND
0	SM1-6P	SEAT REAR RAISE / LOWER MOTOR	B+ (DOWN)	GROUND
0	SM1-7P	SEAT FORE / AFT MOTOR	B+ (AFT)	GROUND
0	SM1-8P	SEAT FORE / AFT MOTOR	B+ (FORE)	GROUND
0	SM1-9P	COMMON GROUND	GROUND	GROUND
0	SM1-10P	HEATER ELEMENT SUPPLY	B+	B+
0	SM1-11P	HEADREST RAISE / LOWER MOTOR	B+ (UP)	GROUND
0	SM1-12P	HEADREST RAISE / LOWER MOTOR	B+ (DOWN)	GROUND
0	SM6-1P	POTENTIOMETER COMMON REFERENCE VOLTAGE	5 V	5 V
SG	SM6-2P	POTENTIOMETER COMMON REFERENCE GROUND	GROUND	GROUND
0	SM6-3P	HEADREST FEEDBACK VOLTAGE	0 5 V (DOWN), 4 V (UP)	
o	SM6-4P	SQUAB RECLINE FEEDBACK VOLTAGE	0.5 V (BACK), 4 V (FORWARD)	
o	SM6-5P	SEAT FORE / AFT FEEDBACK VOLTAGE	0 5 V (BACK), 4V (FORWARD)	
o	SM6-6P	SEAT REAR RAISE / LOWER FEEDBACK VOLTAGE	0 5 V (DOWN), 4 V (UP)	
0	SM6-7P	SEAT FRONT RAISE / LOWER FEEDBACK VOLTAGE	0 5 V (DOWN), 4 V (UP)	
i	SM6-8P	RECLINE AFT MOVEMENT REQUEST	B+	GROUND
1	SM6-9P	SEAT AFT MOVEMENT REQUEST	B+	GROUND
1	SM6-10P	SEAT FORE MOVEMENT REQUEST	B+	GROUND
0	SM6-11P	LUMBAR SWITCH POWER SUPPLY	B+	B+
1	SM6-14P	HEADREST LOWER MOVEMENT REQUEST	B+	GROUND
1	SM6-15P	HEADREST RAISE MOVEMENT REQUEST	B+	GROUND
- 1	SM6-16P	SEAT REAR LOWER MOVEMENT REQUEST	B+	GROUND
1	SM6-17P	SEAT REAR RAISE MOVEMENT REQUEST	B+	GROUND
- 1	SM6-18P	SEAT FRONT LOWER MOVEMENT REQUEST	B+	GROUND
- 1	SM6-19P	SEAT FRONT RAISE MOVEMENT REQUEST	B+	GROUND
- 1	SM6-20P	RECLINE FORE MOVEMENT REQUEST	B+	GROUND

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-42	PASSENGER SEAT HEATER REQUEST	GROUND	B+
	EC2 12	DACCENCED CEAT HEATED CIVITOR	GROUND	R ₊

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 14.8

COMPONENTS

Component

BODY PROCESSOR MODULE

CENTER CONSOLE SWITCH PACK
IGNITION SWITCH
DOOR SWITCH PACK - PASSENGER
DOOR SWITCH - PASSENGER

SEAT CONTROL MODULE - PASSENGER (NAS VEHICLES)

SEAT CUSHION - PASSENGER
SEAT FORE/AFT SWITCHES - PASSENGER, REAR
SEAT LUMBAR PUMP - PASSENGER
SEAT MOTORS - PASSENGER

SEAT RECLINE SWITCHES - PASSENGER, REAR SEAT SWITCH PACK - PASSENGER SOLIAR - PASSENGER

Connector / Type / Color

FE) 1.8 WAY FOR SIGNAL / YELLOW FE2 / 80 WAY FOR SIGNAL / BLACK FC2 / 8 WAY FOR SIGNAL / BLACK FC2 / 8 WAY FOR SIGNAL / BLACK FC2 / 1.6 WAY MULTILOCK 409 / 8 MACK FC54 (FLY LEAD) / 8 WAY MULTILOCK 970 / WHITE FD3 / 13 WAY ECONOSEAL III LC / BLACK CA107 / 22 WAY MULTILOCK 47 / BLUE SM1-7 / 12 WAY MULTILOCK 47 / BLUE

SM7-P; 3-WAY MULTILOCK 979 / YELLOW SM19 / 10-WAY AM PMQL/ BLACK SM10-P; 3-WAY MULTILOCK 970 / YELLOW SM2-P; 6-WAY MULTILOCK 970 / YELLOW SM2-P; 8-WAY MULTILOCK 970 / YELLOW SM2-P; 8-WAY MULTILOCK 970 / SLATE

Location / Access

PASSENGER'S UNDERSCUTTLE

CENTER CONSOLE STEERING COLUMN / COVER ARM REST / TOP ROLL DOOR CASING PASSENGER'S SEAT

PASSENGER'S SEAT / UNDER FRONT LOWER SEAT / INSIDE PASSENGER'S SEAT / SQUAB PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / SQUAB PASSENGER'S SEAT / SQUAB PASSENGER'S SEAT / SQUAB PASSENGER'S SEAT / INSIDE
HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color
CA11	20-WAY MULTILOCK 040 / WHITE
CA12	14-WAY MULTILOCK 070 / WHITE
CC3	20-WAY MULTILOCK 070 / SLATE
CC4	14-WAY MULTILOCK 070 / WHITE
FC6	THROUGH-PANEL (48 MICRO / 6) / BLAC
FC7	THROUGH-PANEL (48 MICRO / 6) / BLAC

Location / Access

PASSENGER'S UNDERSCUTTLE / ECM
PASSENGER'S UNDERSCUTTLE / ECM
CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
RH FASCIA END PANEL / OUTER AIR VENT
PASSENGER'S UNDERSCUTTLE

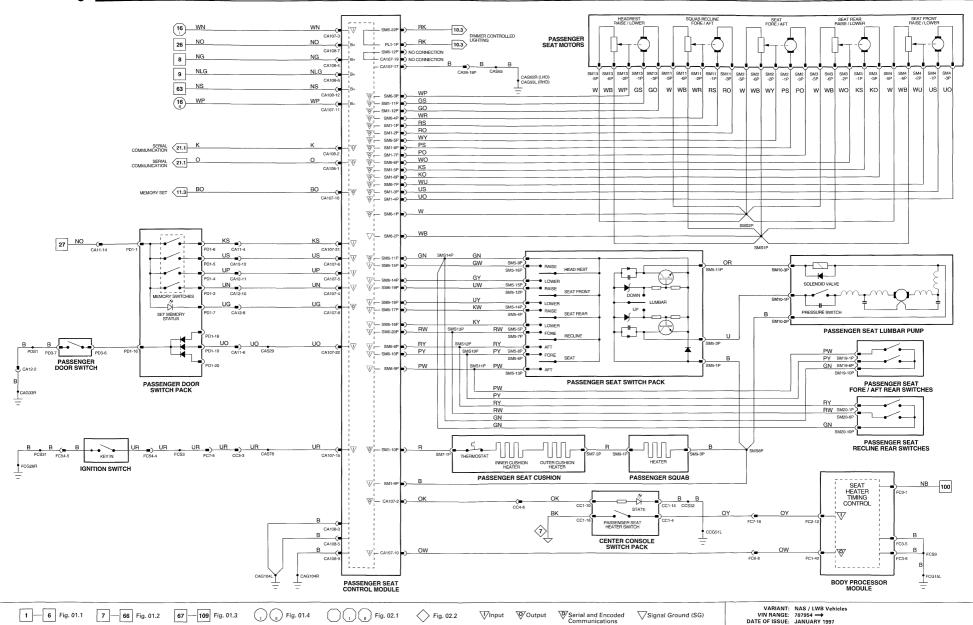
GROUNDS

Ground	Location / Type
CAG104L	RH SEAT GROUND STUD
CAG104R	RH SEAT GROUND STUD
CAG33R	RH HEELBOARD GROUND SCREW
CAG92R	RH HEELBOARD GROUND SCREW
CCG51L	CENTER CONSOLE GROUND STUE
FCG15L	LH CONSOLE GROUND STUD
FCG26R	LH CONSOLE GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



PASSENGER SEAT CONTROL MODULE (ROW, MEMORY SEAT VEHICLES)

∇	Pin	Description	Active	Inactive
0	PL1-2P	SEAT HEATER ON STATE	B+	GROUND
1	PL1-3P	IGNITION SWITCHED POWER	GROUND	B+
1	PL1-10P	SEAT HEATER REQUEST	GROUND	8+
1	PL1-15P	KEY IN IGNITION SIGNAL	GROUND	B+
- 1	PL1-22P	PASSENGER DOOR AJAR	GROUND	7 9 V
D	PL2-1P	SERIAL COMMUNICATION INPUT		
D	PL2-2P	SERIAL COMMUNICATION OUTPUT		
0	SM1-1P	SQUAB RECLINE FORE / AFT MOTOR	B+ (AFT)	GROUND
0	SM1-2P	SQUAB RECLINE FORE / AFT MOTOR	B+ (FORE)	GROUND
0	SM1-3P	SEAT FRONT RAISE / LOWER MOTOR	B+ (UP)	GROUND
0	SM1-4P	SEAT FRONT RAISE / LOWER MOTOR	B+ (DOWN)	GROUND
0	SM1-5P	SEAT REAR RAISE / LOWER MOTOR	B+ (UP)	GROUND
0	SM1-6P	SEAT REAR RAISE / LOWER MOTOR	B+ (DOWN)	GROUND
0	SM1-7P	SEAT FORE / AFT MOTOR	B+ (AFT)	GROUND
0	SM1-8P	SEAT FORE / AFT MOTOR	B+ (FORE)	GROUND
1	SM1-9P	COMMON GROUND	GROUND	GROUND
0	SM1-10P	HEATER ELEMENT SUPPLY	B+	B+
0	SM1-11P	HEADREST RAISE / LOWER MOTOR	B+ (UP)	GROUND
0	SM1-12P	HEADREST RAISE / LOWER MOTOR	B+ (DOWN)	GROUND
1	SM6-8P	RECLINE AFT MOVEMENT REQUEST	B+	GROUND
1	SM6-9P	SEAT AFT MOVEMENT REQUEST	B+	GROUND
- 1	SM6-10P	SEAT FORE MOVEMENT REQUEST	B+	GROUND
0	SM6-11P	LUMBAR SWITCH POWER SUPPLY	B+	B+
1	SM6-14P	HEADREST LOWER MOVEMENT REQUEST	B+	GROUND
- 1	SM6-15P	HEADREST RAISE MOVEMENT REQUEST	B+	GROUND
1	SM6-16P	SEAT REAR LOWER MOVEMENT REQUEST	B+	GROUND
1	SM6-17P	SEAT REAR RAISE MOVEMENT REQUEST	B+	GROUND
1	SM6-18P	SEAT FRONT LOWER MOVEMENT REQUEST	B+	GROUND
1	SM6-19P	SEAT FRONT RAISE MOVEMENT REQUEST	B+	GROUND
- 1	SM6-20P	RECLINE FORE MOVEMENT REQUEST	B+	GROUND

BODY PROCESSOR MODULE

\sim	Pin	Description	Active	Inactive
0	FC1-42	PASSENGER SEAT HEATER REQUEST	GROUND	B+
1	FC2-12	PASSENGER SEAT HEATER SWITCH	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

B+ Battery voltage Input O Output Voltage (DC) SG Signal Ground Hz Frequency D Serial and encoded communications KHz Frequency x 1000 MS Milliseconds MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component

BODY PROCESSOR MODULE

CENTER CONSOLE SWITCH PACK IGNITION SWITCH DOOR SWITCH -- PASSENGER

DOOR SWITCH PACK - PASSENGER SEAT CONTROL MODULE - PASSENGER (ROW, MEMORY SEAT VEHICLES)

SEAT CUSHION - PASSENGER SEAT LUMBAR PUMP - PASSENGER SEAT MOTORS - PASSENGER

SEAT SWITCH PACK - PASSENGER SQUAB - PASSENGER

Connector / Type / Color

FC1 / 48-WAY PCB SIGNAL / YELLOW FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK CC1 / 16-WAY MULTILOCK 040 / BLACK

FC54 (FLY LEAD) / 8-WAY MULTILOCK 070 / WHITE PD3 / 13-WAY ECONOSEAL III LC / BLACK PD1 / 26-WAY MULTILOCK 47 / SLATE PL1 / 22-WAY MULTILOCK 47 / BLUE PL2 / 12-WAY MULTILOCK 47 / BLUE SM1-P / 12-WAY MULTILOCK 47 / WHITE SM6-P / 22-WAY MULTILOCK 47 / WHITE

SM7-P / 3-WAY MULTILOCK 070 / YELLOW SM10-P / 3-WAY MULTILOCK 070 / YELLOW SM2-P / 6-WAY MULTILOCK 070 / WHITE SM3-P / 6-WAY MULTILOCK 070 / YELLOW SM4-P / 6-WAY MULTILOCK 070 / SLATE SM11-P / 6-WAY MULTILOCK 070 / WHITE SM13-P / 6-WAY MULTILOCK 070 / YELLOW SM5-P / 16-WAY MULTILOCK 040 / BLACK

SM9-P / 3-WAY MULTILOCK 070 / SLATE

Location / Access

PASSENGER'S UNDERSCUTTLE

CENTER CONSOLE STEERING COLUMN / COVER DOOR CASING ARM REST / TOP ROLL PASSENGER'S SEAT

PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / SQUAB PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / SQUAB PASSENGER'S SEAT / UNDER PASSENGER'S SEAT PASSENGER'S SEAT

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
CA11	20-WAY MULTILOCK 040 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA12	14-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA27	6-WAY MULTILOCK 070 / WHITE	PASSENGER'S SEAT / UNDER
CA28	20-WAY MULTILOCK 040 / BLACK	PASSENGER'S SEAT / UNDER
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC4	14-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE

GROUNDS

Ground	Location / Type
CAG30R	LH 'A' POST GROUND SCREW
CAG33R	RH HEELBOARD GROUND SCREW
CAG92R	RH HEELBOARD GROUND SCREW
CAG93L	LH HEELBOARD GROUND SCREW
CCG51L	CENTER CONSOLE GROUND STUD
CG15L	LH CONSOLE GROUND STUD
CG26R	LH CONSOLE GROUND STUD
PLG3L	LH SEAT GROUND STUD
PLG3R	LH SEAT GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

NB 100

FC3-1

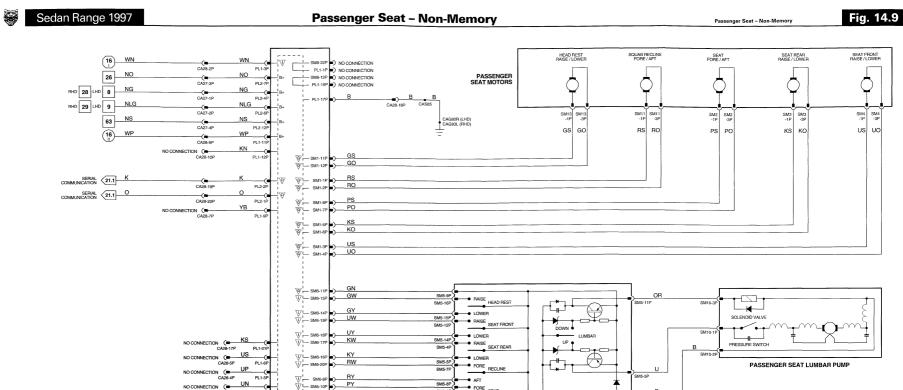
FC3-5

SEAT

TIMING

CONTROL

BODY PROCESSOR MODULE



- FORE

OUTER CUSHION HEATER

CC1-9 (RHD

CC1-1

OK (LHD) OB (RHD)

 \bigcirc

INNER CUSHION HEATER

PASSENGER SEAT CUSHION

CC4-6 (LHD) CC3-4 (RHD)

PASSENGER SEAT SWITCH PACK

HEATER

PASSENGER SQUAB

STATE

PASSENGER SEAT HEATER SWITCH

CENTER CONSOLE

SWITCH PACK

CC1-15 CCS32

SM5-1P

OY (LHD)

OP (RHD)

FC7-16 (LHD) FC7-46 (RHD)

FC2-12

FC1-42



PLG3F PLG3L

CA28-3P

CA28-11P

CA28-15P

CA28-12P

CA27-5P

UO UO

NO CONNECTION (OY

NO CONNECTION (=-

PI 1-8

PL1-13

PU

 ∇

V - PL1-10P

PL2-3P

- PL2-5P

PL2-9P

PASSENGER SEAT

CONTROL MODULE

NO CONNECTION (=

CAS78

CAS29

UR UR UR

UO ____ UO

PASSENGER DOOR SWITCH PACK

CA11-6

CC3-3

KEY IN

IGNITION SWITCH

PASSENGER

FC54-5

B CA12-2

CAG33R (LHD) CAG30R (RHD)

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-42	PASSENGER SEAT HEATER REQUEST	GROUND	B+
	FC2 12	DACCENCER CEAT HEATER SMITCH	GROUND	Re

The following symbols are used to represent values for Control Module Pin Out data:

B+ Battery voltage Output V Voltage (DC) SG Signal Ground Hz Frequency KHz Frequency x 1000 D Serial and encoded communications

MS Milliseconds

MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component

BODY PROCESSOR MODULE

SQUAB - PASSENGER

CENTER CONSOLE SWITCH PACK SEAT CUSHION - PASSENGER SEAT MOTOR - PASSENGER (SEAT RAISE / LOWER VEHICLES) SEAT SWITCH PACK - PASSENGER (SEAT RAISE / LOWER VEHICLES) Connector / Type / Color FC1 / 48-WAY PCB SIGNAL / YELLOW

FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK CC1 / 16-WAY MULTILOCK 040 / BLACK SM7-P / 3-WAY MULTILOCK 070 / YELLOW SM16-P / 6-WAY MULTILOCK 070 / SLATE

SM17-P / 16-WAY MULTILOCK 040 / BLACK

SM9-P / 3-WAY MULTILOCK 070 / SLATE

Location / Access

PASSENGER'S UNDERSCUTTLE

CENTER CONSOLE PASSENGER'S SEAT / UNDER PASSENGER'S SEAT / UNDER

PASSENGER'S SEAT PASSENGER'S SEAT

RELAYS

Color / Stripe Connector / Color Relay Location / Access RLACK SM18-P / BLUE SEAT HEATER RELAY - PASSENGER PASSENGER'S SEAT SEAT LOWER RELAY - PASSENGER BLACK / VIOLET SM14-P / BLUE PASSENGER'S SEAT BLACK / VIOLET SM14-P / BLUE SEAT RAISE RELAY - PASSENGER PASSENGER'S SEAT

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
	• •	
CA27	6-WAY MULTILOCK 070 / WHITE	PASSENGER'S SEAT / UNDER
CA28	20-WAY MULTILOCK 040 / BLACK	PASSENGER'S SEAT / UNDER
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC4	14-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
ML1-P	10-WAY MULTILOCK 070 / WHITE	PASSENGER'S SEAT / UNDER

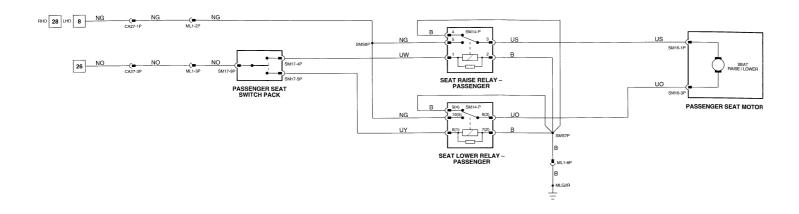
GROUNDS

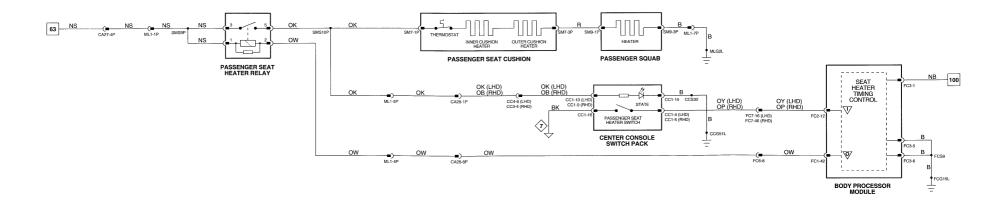
Ground	Location / Type
CCG51L	CENTER CONSOLE GROUND STUI
FCG15L	LH CONSOLE GROUND STUD
MLG2L	LH SEAT GROUND STUD
MLG2B	LH SEAT GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



















Signal Ground (SG) VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

VARIANT: Raise / Lower Seat Vehicles

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-42	PASSENGER SEAT HEATER REQUEST	GROUND	B+
- 1	FC2-12	PASSENGER SEAT HEATER SWITCH	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 14.11

COMPONENTS

Component

BODY PROCESSOR MODULE

FC1 / 48-WAY PCB SIGNAL / YELLOW FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK CC1 / 18-WAY MULTILOCK 040 / BLACK SM7-P / 3-WAY MULTILOCK 070 / YELLOW SM9-P / 3-WAY MULTILOCK 070 / SLATE

CENTER CONSOLE SWITCH PACK SEAT CUSHION - PASSENGER SQUAB - PASSENGER Connector / Type / Color Location / Access

PASSENGER'S UNDERSCUTTLE

CENTER CONSOLE
PASSENGER'S SEAT / UNDER
PASSENGER'S SEAT

RELAYS

Relay SEAT HEATER RELAY - PASSENGER Color / Stripe Connecte

Connector / Color SM18-P / BLUE Location / Access
PASSENGER'S SEAT

HARNESS-TO-HARNESS CONNECTORS

 Connector
 Type / Color

 CA27
 6-WAY MULTILOCK 979 / WHITE

 CA28
 20-WAY MULTILOCK 909 / BLACK

 CG3
 20-WAY MULTILOCK 970 / SIATE

 CC4
 14-WAY MULTILOCK 970 / WHITE

 FC6
 THROUGH-PANEL (48 MICRO / 6) / BLACK

 FC7
 THROUGH-PANEL (48 MICRO / 6) / BLACK

Location / Access
PASSENGER'S SEAT / UNDER
PASSENGER'S SEAT / UNDER

CENTER CONSOLE / CENTER CONSOLE GLOVE BOX CENTER CONSOLE / CENTER CONSOLE GLOVE BOX RH FASCIA END PANEL / OUTER AIR VENT PASSENGER'S UNDERSCUTTLE PASSENGER'S SEAT / UNDER

GROUNDS

ML1-P

Ground Location / Type

CCG51L CENTER CONSOLE GROUND STUD

FCG15L LH CONSOLE GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)

LH SEAT GROUND STUD

10-WAY MULTILOCK 070 / WHITE



MLG2L

REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

REAR SEAT CONTROL MODULE

∇	Pin	Description	Active	Inactive
1	BS1-11	LH LUMBAR SWITCH INFLATE	B+	0V
0	BS6-1	RH REAR SEAT LUMBAR PUMP FEED	B+	B+
0	BS6-2	RH REAR SEAT LUMBER DEFLATE SOLENOID VALVE	B+	0V
0	BS6-3	LH REAR SEAT MOTOR - FORE / AFT MOTOR	B+	0V
0	BS6-4	LH REAR SEAT MOTOR - FORE / AFT MOTOR	B+	0V
0	BS6-5	LH REAR SEAT - HEADREST MOTOR	B+	0V
0	BS6-6	LH REAR SEAT - HEADREST MOTOR	B+	0V
0	BS6-7	RH REAR SEAT MOTOR - FORE / AFT MOTOR	B+	0V
0	BS6-8	RH REAR SEAT MOTOR FORE / AFT MOTOR	B+	0V
0	BS6-10	LH REAR SEAT LUMBAR PUMP FEED	B+	B+
0	BS6-11	RH REAR SEAT - HEADREST MOTOR	B+	0V
0	BS6-12	RH REAR SEAT HEADREST MOTOR	B+	0V
	BS7-8	RH LUMBAR SWITCH - INFLATE REQUEST	B+	ov
i	BS7-9	RH FORE / AFT SWITCH ~ AFT REQUEST	B+	0V
i	BS7-10	RH FORE / AFT SWITCH - FORE REQUEST	B+	0V
i	BS7-14	RH HEADREST SWITCH LOWER REQUEST	B+	ov
1	BS7-15	RH HEADREST SWITCH - RAISE REQUEST	B+	ov
- 1	BS7-16	LH HEADREST SWITCH - LOWER REQUEST	B+	0V
1	BS7-17	LH HEADREST SWITCH - RAISE REQUEST	B+	0V
i	BS7-18	LH FORE / AFT SWITCH - AFT REQUEST	B+	0V
1	BS7-19	LH FORE / AFT SWITCH - FORE REQUEST	B+	0V
i	BS7-20	RH LUMBAR SWITCH - DEFLATE REQUEST	B+	0V

The following symbols are used to represent values for Control Module Pin Out data:

I Input B+ Battery voltage
O Output V Voltage (DC)
SG Signal Ground Hz Frequency
D Serial and encoded communications KHz Frequency x 1000
MS Milliseconds
MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 14.12

COMPONENTS

Connector / Type / Color Location / Access Component BS1 / 22-WAY MULTILOCK 47 / BLUE REAR SEATS, CENTER / BEHIND SEAT CONTROL MODULE - REAR BS2 / 12-WAY MULTILOCK 47 / BLUE BS6 / 12-WAY MULTILOCK 47 / WHITE REAR SEATS, CENTER / BEHIND REAR SEATS, CENTER / BEHIND REAR SEATS, CENTER / BEHIND BS7 / 22-WAY MULTILOCK 47 / WHITE SEAT CUSHION - LH REAR BB1-L / 3-WAY MULTILOCK 070 / YELLOW LH REAR SEAT / INSIDE SEAT CUSHION - RH REAR BRILE / 3-WAY MULTILOCK 070 / VELLOW RH REAR SEAT / INSIDE SEAT FORE/AFT MOTOR - LH REAR BB2-L / 3-WAY MULTILOCK 070 / WHITE LH REAR SEAT / INSIDE SEAT FORE/AFT MOTOR - RH REAR BR2-R / 3-WAY MULTILOCK 070 / WHITE RH REAR SEAT / INSIDE SEAT FORE/AFT SWITCH - LH REAR BC3 / 10-WAY AMP MQL / BLACK REAR SEAT SWITCH PACK / UNDER BC5 / 10-WAY AMP MQL / BLACK REAR SEAT SWITCH PACK / UNDER SEAT FORE/AFT SWITCH - RH REAR SEAT HEADREST MOTOR - LH REAR BB3-L / 6-WAY MULTILOCK 070 / YELLOW LH REAR SEAT / INSIDE SEAT HEADREST MOTOR - RH REAR BB3-R / 6-WAY MULTILOCK 070 / YELLOW RH REAR SEAT / INSIDE SEAT HEADREST SWITCH - LH REAR BC4 / 10-WAY AMP MQL / BLACK REAR SEAT SWITCH PACK / UNDER BC7 / 10-WAY AMP MQL / BLACK REAR SEAT SWITCH PACK / UNDER SEAT HEADREST SWITCH - RH REAR BC1 / 10-WAY AMP MQL / BLACK CENTER CONSOLE / REAR SEAT HEATER SWITCH - LH REAR SEAT HEATER SWITCH - RH REAR BC2 / 10-WAY AMP MQL / BLACK CENTER CONSOLE / REAR SEAT HEATER TIMER - LH REAR CA111 / 5-WAY RELAY BASE / YELLOW LH HEELBOARD / HEELBOARD COVER CA112 / 5-WAY RELAY BASE / YELLOW RH HEELBOARD / HEELBOARD COVER SEAT HEATER TIMER - RH REAR SEAT LUMBAR PUMP - LH REAR BB4-L / 3-WAY MULTILOCK 070 / YELLOW LH REAR SEAT / INSIDE SEAT LUMBAR PUMP - RH REAR BB4-R / 3-WAY MULTILOCK 070 / YELLOW RH REAR SEAT / INSIDE SEAT LUMBAR SWITCH - LH REAR BC8 / 10-WAY AMP MQL / BLACK REAR SEAT SWITCH PACK / UNDER BC6 / 10-WAY AMP MQL / BLACK REAR SEAT SWITCH PACK / UNDER SEAT LUMBAR SWITCH - RH REAR BB5-L / 3-WAY MULTILOCK 070 / SLATE SEAT SOLIAR - LH REAR LH REAR SEAT / INSIDE BB5-R / 3-WAY MULTILOCK 070 / SLATE SEAT SQUAB - RH REAR RH REAR SEAT / INSIDE

RELAYS

Relay Color / Stripe Connector / Color Location / Access
LUMBAR DEFLATE RELAY - LH REAR BLACK / BLUE CA54 / BLUE RH HEELBOARD

HARNESS-TO-HARNESS CONNECTORS

Connector Type / Color Location / Access LH REAR SEAT / UNDER BS3 8-WAY MULTILOCK 070 / YELLOW 20-WAY MULTILOCK 070 / WHITE REAR SEAT CONSOLE / UNDER BS4 8-WAY MULTILOCK 070 / YELLOW RH REAR SEAT / UNDER BS5 BT4 THROUGH-PANEL (48 MICRO / 6) / BLACK PARCEL SHELF / FUEL TANK TRIM 12-WAY MULTILOCK 070 / WHITE RH REAR SEAT / UNDER CA109

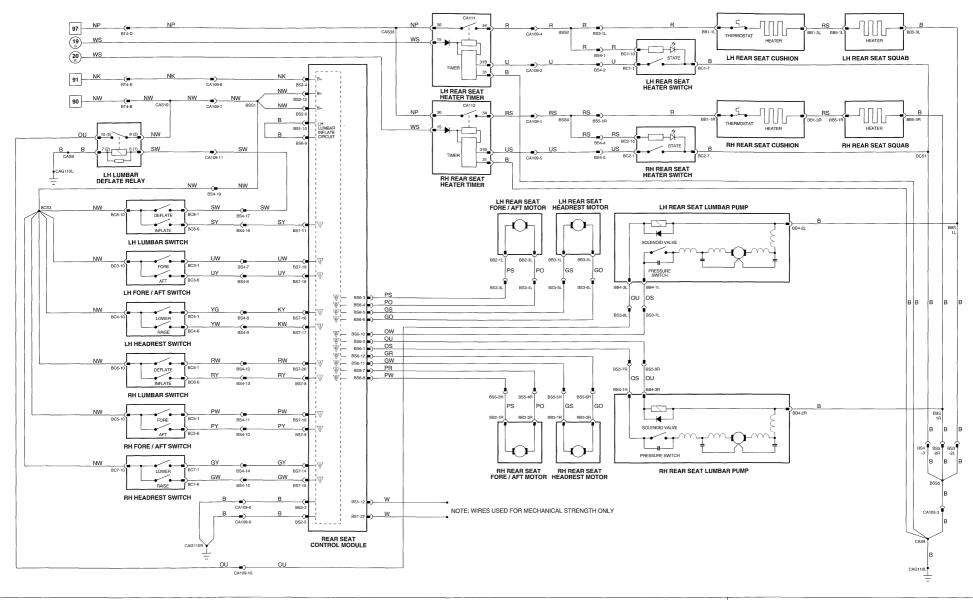
GROUNDS

Ground Location / Type
CAG110L RH SEAT GROUND STUD
CAG110R RH SEAT GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.





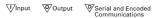












Signal Ground (SG)

VARIANT: ROW / LWB Powered Rear Seat Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

Fig. 14.13

COMPONENTS

Component

SEAT CUSHION - LH REAR
SEAT CUSHION - RH REAR
SEAT HEATER SWITCH - LH REAR
SEAT HEATER SWITCH - RH REAR
SEAT HEATER TIMER - LH REAR
SEAT HEATER TIMER - RH REAR
SEAT SQUAB - LH REAR
SEAT SQUAB - RH REAR

Connector / Type / Color

BB1-L/3-WAY MULTILOCK 070 / YELLOW BB1-R/3-WAY MULTILOCK 070 / YELLOW BS8 / 10-WAY AMP MOL / BLACK BS9 / 10-WAY AMP MOL / NATURAL CA111 / 5-WAY RELAY BASE / YELLOW CA112 / 5-WAY MULTILOCK 070 / SLATE BBS-R/3-WAY MULTILOCK 070 / SLATE

Location / Access

LH REAR SEAT / INSIDE
RH REAR SEAT / INSIDE
CENTER CONSOLE / REAR
CENTER CONSOLE / REAR
LH HEELBOARD / HEELBOARD COVER
RH HEELBOARD / HEELBOARD COVER
LH REAR SEAT / INSIDE
RH REAR SEAT / INSIDE

HARNESS-TO-HARNESS CONNECTORS

 Connector
 Type / Color

 8510
 3-WAY MULTILOCK 070 / YELLOW

 BS11
 3-WAY MULTILOCK 070 / YELLOW

 B14
 THROUGH-PANEL (48 MICRO / 6) / BLACK

 CA109
 12-WAY MULTILOCK 070 / WHITE

Location / Access
LH REAR SEAT / UNDER
RH REAR SEAT / UNDER
PARCEL SHELF / FUEL TANK TRIM
RH REAR SEAT / UNDER

GROUNDS

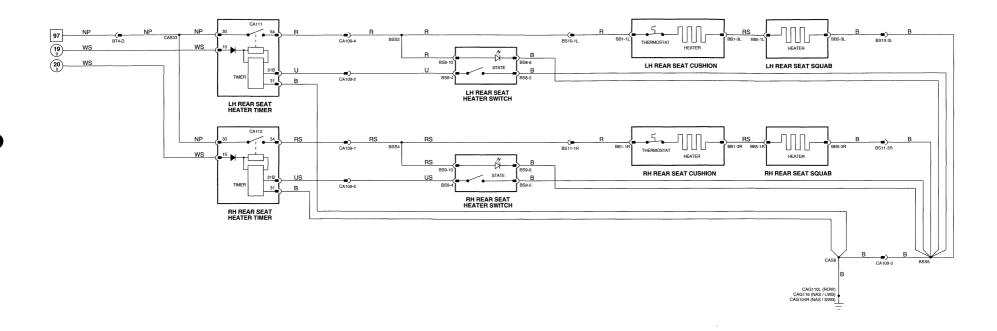
Ground Location / Type

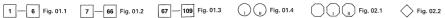
CAG104R LH SEAT GROUND STUD

CAG110L RH SEAT GROUND STUD

CAG116 RH SEAT GROUND STUD

REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



















Signal Ground (SG)

VARIANT: Heated Rear Seat Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

SECURITY AND LOCKING CONTROL MODULE

∇	Pin	Description	Active	Inactive
1	CA18-2	EXTERNAL TRUNK LID SWITCH	GROUND	174 V
1	CA18-3	NOT IN PARK MICROSWITCH	GROUND	B+
1	CA18-4	PASSENGER DOOR LOCK STATUS	GROUND = LOCKED	174 V = UNLOCKED
1	CA18-6	DRIVER DOOR LOCK BARREL UNLOCK / DISARM REQUEST	MOMENTARY GROUND	1 74 V
1	CA18-10	DRIVER DOOR LOCK STATUS	GROUND = LOCKED	174 V = UNLOCKED
1	CA18-12	DRIVER DOOR LOCK BARREL LOCK / ARM REQUEST	MOMENTARY GROUND	1 74 V
0	CA19-1	FUEL FILLER FLAP LOCK REQUEST	GROUND PULSE	B+
1	CA19-6	VALET SWITCH	MOMENTARY GROUND	2 V
1	CA19-8	FASCIA TRUNK RELEASE SWITCH	MOMENTARY GROUND	2 7 V
1	CA19-18	KEY IN IGNITION SWITCH	GROUND	9 5 V
t	CA19-19	CENTRAL LOCKING SWITCH ALL CLOSE REQUEST	GROUND	B+
0	CA19-22	DOOR UNLOCK RELAY	GROUND PULSE	B+
D	CA20-8	SERIAL COMMUNICATION INPUT		
Đ	CA20-16	SERIAL COMMUNICATION OUTPUT		
0	CA21-1	RHF & LHR DOOR DEADLOCK RELAY (NOT NAS)	GROUND PULSE	B+
1	CA21-5	VEHICLE SPEED INPUT	B+@ 10 MPH = 20 Hz, 20 MPH = 40 Hz	
0	CA21-11	TRUNK RELEASE RELAY	GROUND PULSE	B+
0	CA21-14	LHF & RHR DOOR DEADLOCK RELAY	GROUND PULSE	B+
0	CA21-15	DOOR LOCK RELAY	GROUND PULSE	B+

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

MV Millivolts

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 15.

COMPONENTS

Component
CENTER CONSOLE SWITCH PACK
COOTR KEY BARREL SWITCH - DRIVER
DOOR LOCK ACTUATOR - - DRIVER
DOOR LOCK ACTUATOR - - DRIVER
DOOR LOCK ACTUATOR - - PASSENGER
DOOR LOCK ACTUATOR - - PASSENGER
DOOR LOCK ACTUATOR - - PR

SECURITY AND LOCKING CONTROL MODULE

SHORTING LINK TRUNK RELEASE ACTUATOR TRUNK RELEASE SWITCH VALET SWITCH Connector / Type / Color

CC1 / 16 WAY MULTILOCK 940 / BLACK
DDS / 13-WAY ECONOSEAL III LC / BLACK
DDS / 13-WAY ECONOSEAL III LC / BLACK
DDS / 13-WAY ECONOSEAL III LC / BLACK
PDS / 13-WAY LABINAL / NATURAL
CABS / 2-WAY LABINAL / NATURAL
CABS / 2-WAY LABINAL / NATURAL
CASS / 12-WAY MULTILOCK 900 / BLACK
CASS / 13-WAY MULTILOCK 900 / SLACK
CASS / 13-WAY MULTILOCK 907 / SLATE
CASS / 15-WAY MULTILOCK 907 / SLATE
CASS / 15-WAY MULTILOCK 97 / SLATE
CASS / 15-WAY MULTILOCK 97 / SLATE
CASS / 15-WAY MULTILOCK 97 / SLATE

CA21 / 28-WAY MULTILOCK 47 / SLATE CA43 / 6-WAY MULTILOCK 070 / YELLOW BT8 / 2-WAY LABINAL / BROWN BT10 / 2-WAY MULTILOCK 040 / GREEN CC47 / 2-WAY MULTILOCK 040 / BLACK Location / Access

CENTER CONSOLE DOOR CASING DOOR CASING DOOR CASING DOOR CASING DOOR CASING

STEERING COLUMN / DRIVER'S UNDERSCUTTLE

TRUNK, LF FRONT / TRUNK TRIM STEERING COLUMN / COVER 'J' GATE / CENTER CONSOLE TRUNK, LH FRONT / TRUNK TRIM

REAR SEAT, LH SIDE / UNDER TRUNK LID / TRUNK LID TRIM TRUNK LID / TRUNK LID TRIM CENTER CONSOLE GLOVE BOX

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
DEADLOCK RELAY DRIVER, RH REAR	VIOLET	CA55 / VIOLET	LH HEELBOARD
DEADLOCK RELAY - PASSENGER, LH REAR	VIOLET	CA55 / VIOLET	LH HEELBOARD
DOOR LOCK RELAY	VIOLET	CA50 / VIOLET	LH HEELBOARD
DOOR UNLOCK RELAY	VIOLET	CA50 / VIOLET	LH HEELBOARD
FUEL FILLER FLAP RELAY	VIOLET	CA97 / VIOLET	LH HEELBOARD
TRUNK RELEASE RELAY	BLACK / VIOLET	BT43 / VIOLET	TRUNK ELECTRICAL CARRIER

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BT4	THROUGH-PANEL (48 MICRO / 6) / BLACK	ABOVE FUEL TANK / FUEL TANK TRIM
CA8	20-WAY MULTILOCK 040 / GREEN	DRIVER'S 'A' POST / 'A' POST TRIM
CA9	20-WAY MULTILOCK 040 / BLACK	DRIVER'S 'A' POST / 'A' POST TRIM
CA11	20-WAY MULTILOCK 040 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA12	14-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA13	6-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA14	4-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA15	6-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CA16	4-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CC18	20-WAY MULTILOCK 070 / YELLOW	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC5	20-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC5	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE

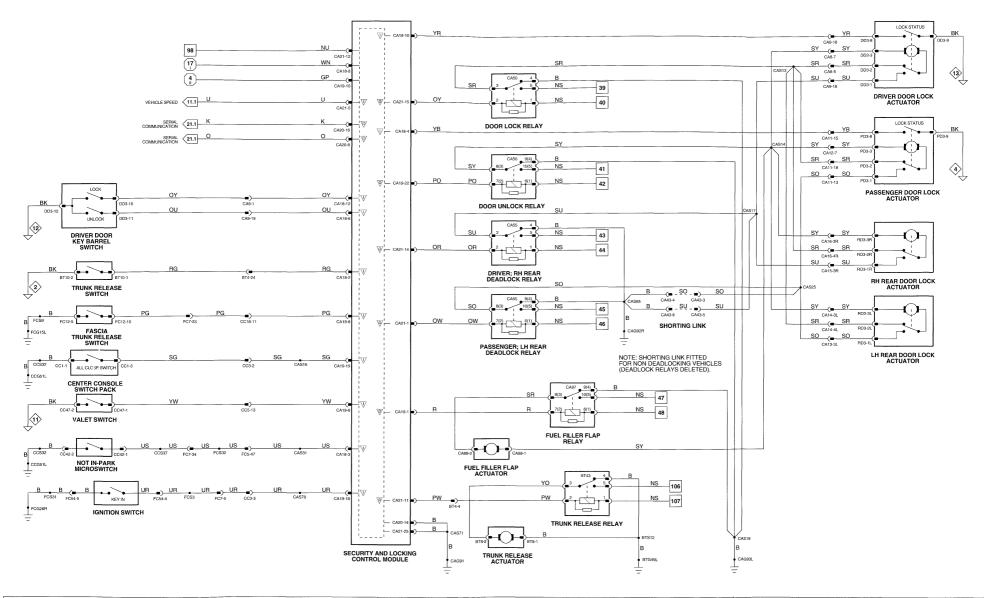
GROUNDS

Ground	Location / Type
BTG49L	REAR TRUNK GROUND STUD
CAG91	PARCEL SHELF GROUND SCREW
CAG92R	RH HEELBOARD GROUND SCREW
CAG93L	LH HEELBOARD GROUND SCREW
CCG51L	CENTER CONSOLE GROUND STUD
FCG15L	LH CONSOLE GROUND STUD
FCG26R	LH CONSOLE GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.















Serial and Encoded Communications

Signal Ground (SG)

VARIANT: LHD ROW Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

SECURITY AND LOCKING CONTROL MODULE

∇	Pin	Description	Active	Inactive
- 1	CA18-2	EXTERNAL TRUNK LID SWITCH	GROUND	1 74 V
1	CA18-3	NOT IN PARK MICROSWITCH	GROUND	B+
1	CA18-4	PASSENGER DOOR LOCK STATUS	GROUND = LOCKED	1 74 V = UNLOCKED
1	CA18-6	DRIVER DOOR LOCK BARREL UNLOCK / DISARM REQUEST	MOMENTARY GROUND	1.74 V
- 1	CA18-10	DRIVER DOOR LOCK STATUS	GROUND = LOCKED	1 74 V = UNLOCKED
1	CA18-12	DRIVER DOOR LOCK BARREL LOCK / ARM REQUEST	MOMENTARY GROUND	1 74 V
_		FUEL FILLER FLAP LOCK REQUEST	GROUND PULSE	B+
0	CA19-1 CA19-6	VALET SWITCH	MOMENTARY GROUND	2 V
		FASCIA TRUNK RELEASE SWITCH	MOMENTARY GROUND	27 V
	CA19-8	KEY IN IGNITION SWITCH	GROUND	95 V
- 1	CA19-18	Me i mi ami ami ami ami ami ami ami ami am	GROUND	95 V B+
- 1	CA19-19	CENTRAL LOCKING SWITCH ALL CLOSE REQUEST		
0	CA19-22	DOOR UNLOCK RELAY	GROUND PULSE	B+
D	CA20-8	SERIAL COMMUNICATION INPUT		
D	CA20-16	SERIAL COMMUNICATION OUTPUT		
0	CA21-2	DRIVER DOOR UNLOCK RELAY (TWO STAGE REMOTE UNLOCKING)	GROUND PULSE	B+
,	CA21-5	VEHICLE SPEED INPUT	B+@ 10 MPH = 20 Hz, 20 MPH = 40 Hz	
0	CA21-11	TRUNK BELEASE BELAY	GROUND PULSE	B+
_	CA21-11	DOOR LOCK BELAY	GROUND PULSE	B+
0	CAZ I-1b	DOOR LOCK RELAT	GIOGRAP I GEGE	0.7

The following symbols are used to represent values for Control Module Pin Out data:

I Input B+ Battery voltage
O Output V Voltage (DC)
SG Signal Ground Hz Frequency
D Serial and encoded communications KHz Frequency x 1000
MS Milliseconds
MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 15.2

COMPONENTS

Component

CENTER CONSOLE SWITCH PACK
DOOR KEY BARREL SWITCH - DRIVER
DOOR LOCK ACTUATOR - DRIVER
DOOR LOCK ACTUATOR - LY REAR
DOOR LOCK ACTUATOR - PASSENGER
DOOR LOCK ACTUATOR - PASSENGER
DOOR LOCK ACTUATOR - PASSENGER
FASCIA THUNK RELEASE SWITCH
FULE FILLER FLAP ACTUATOR
IGNITION SWITCH
NOT IN-PARK MICROSWITCH
SECURITY AND LOCKING CONTROL MODULE

TRUNK RELEASE ACTUATOR TRUNK RELEASE SWITCH VALET SWITCH Connector / Type / Color

CC1 / 16-WAY MULTILOCK 049 / BLACK
DD3 / 13-WAY ECONOSEAL III LC / BLACK
DD3 / 13-WAY ECONOSEAL III LC / BLACK
DD3 / 13-WAY ECONOSEAL III LC / BLACK
DD3 / 16-WAY ECONOSEAL III LC / BLACK
DD3 / 16-WAY ECONOSEAL III LC / BLACK
DD3 / 16-WAY ECONOSEAL III LC / BLACK
FC12 / 18 WAY MULTILOCK 609 / BLUE
CASB / 2-WAY LABIAL / NATURAL
FC56 /FLY LEAD / 8-WAY MULTILOCK 709 / WHITE
CC26 /FLY LEAD / 8-WAY MULTILOCK 609 / BLACK
CA18 / 12-WAY MULTILOCK 47 / SLATE
CA20 / 18-WAY MULTILOCK 47 / SLATE
CA20 / 18-WAY MULTILOCK 47 / SLATE
CA20 / 18-WAY MULTILOCK 47 / SLATE

BT10 / 2-WAY MULTILOCK 040 / GREEN

CC47 / 2-WAY MULTILOCK 040 / BLACK

TRUNK LID / TRUNK LID TRIM TRUNK LID / TRUNK LID TRIM CENTER CONSOLE GLOVE BOX

Location / Access

CENTER CONSOLE
DOOR CASING
DOOR CASING
DOOR CASING
DOOR CASING
DOOR CASING

STEERING COLUMN / DRIVER'S UNDERSCUTTLE TRUNK, LF FRONT / TRUNK TRIM

STEERING COLUMN / COVER
'J' GATE / CENTER CONSOLE
TRUNK, LH FRONT / TRUNK TRIM

RELAYS

Relay Color / Stripe Connector / Color Location / Access DRIVER DOOR UNLOCK RELAY VIOLET CA7 / VIOLET LH HEELBOARD VIOLET CA50 / VIOLET LH HEELBOARD DOOR LOCK RELAY DOOR UNLOCK RELAY VIOLET CA50 / VIOLET LH HEELBOARD VIOLET CA97 / VIOLET LH HEELBOARD FUEL FILLER FLAP RELAY TRUNK RELEASE RELAY BLACK / VIOLET BT43 / VIOLET TRUNK ELECTRICAL CARRIER

HARNESS-TO-HARNESS CONNECTORS

Connector Type / Color Location / Access THROUGH-PANEL (48 MICRO / 6) / BLACK ABOVE FUEL TANK / FUEL TANK TRIM BT4 20-WAY MULTILOCK 040 / GREEN DRIVER'S 'A' POST / 'A' POST TRIM CA8 DRIVER'S 'A' POST / 'A' POST TRIM CA9 20-WAY MULTILOCK 040 / BLACK PASSENGER'S UNDERSCUTTLE / ECM CA11 20-WAY MULTILOCK 040 / WHITE 14-WAY MULTILOCK 070 / WHITE PASSENGER'S UNDERSCUTTLE / ECM CA12 6-WAY MULTILOCK 070 / WHITE LH 'BC' POST / 'BC' POST PANEL CA13 CA14 4-WAY MULTILOCK 070 / WHITE LH 'BC' POST / 'BC' POST PANEL 6-WAY MULTILOCK 070 / WHITE RH 'BC' POST / 'BC' POST PANEL CA15 RH 'BC' POST / 'BC' POST PANEL 4-WAY MULTILOCK 070 / WHITE CA16 20-WAY MULTILOCK 070 / YELLOW CENTER CONSOLE / CENTER CONSOLE GLOVE BOX CC18 CENTER CONSOLE / CENTER CONSOLE GLOVE BOX 20-WAY MULTILOCK 070 / SLATE CC3 CENTER CONSOLE / CENTER CONSOLE GLOVE BOX CCE 20-WAY MULTILOCK 070 / WHITE THROUGH-PANEL (48 MICRO / 6) / BLACK LH FASCIA END PANEL / OUTER AIR VENT FC5 PASSENGER'S UNDERSCUTTLE THROUGH-PANEL (48 MICRO / 6) / BLACK EC7

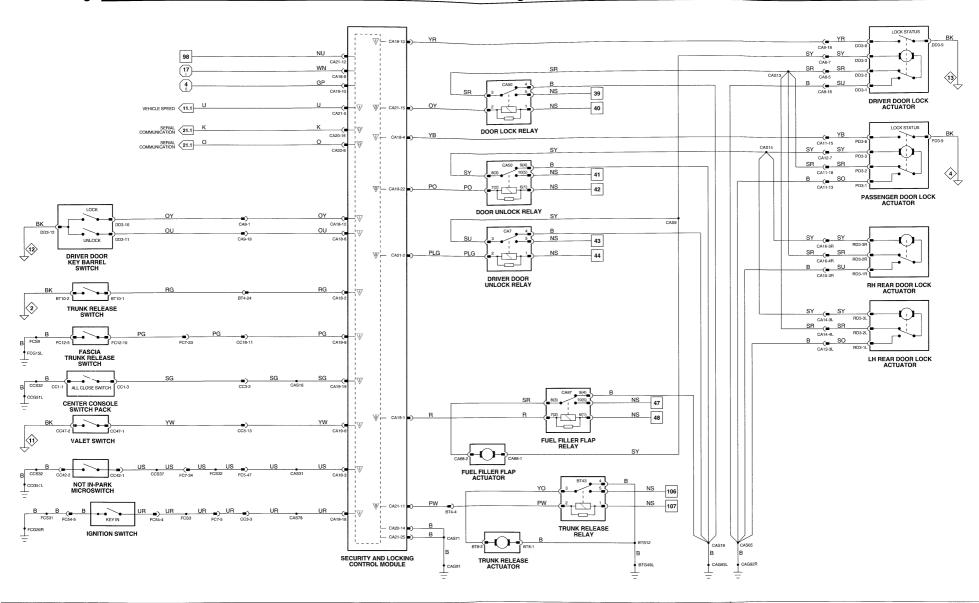
GROUNDS

Ground Location / Type REAR TRUNK GROUND STUD RTG49I CAG91 PARCEL SHELF GROUND SCREW CAG92B BH HEEL BOARD GROUND SCREW CAG93L LH HEELROARD GROUND SCREW CCG51I CENTER CONSOLE GROUND STUD ECG15I LH CONSOLE GROUND STUD FCG26R LH CONSOLE GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



1 — 6 Fig. 01.1 7 — 66 Fig. 01.2 67 — 109 Fig. 01.3

Fig. 01.4

| Fig. 02.1

Fig. 02.2

V Input V Output

Serial and Encoded Communications

Signal Ground (SG)

VARIANT: NAS Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

SECURITY AND LOCKING CONTROL MODULE

∇	Pin	Description	Active	Inactive
1	CA18-2	EXTERNAL TRUNK LID SWITCH	GROUND	1.74 V
1	CA18-3	NOT IN PARK MICROSWITCH	GROUND	B+
1	CA18-4	DRIVER DOOR LOCK STATUS	GROUND = LOCKED	1 74 V = UNLOCKED
- 1	CA18-6	DRIVER DOOR LOCK BARREL UNLOCK / DISARM REQUEST	MOMENTARY GROUND	174 V
1	CA18-10	PASSENGER DOOR LOCK STATUS	GROUND = LOCKED	1 74 V = UNLOCKED
1	CA18-12	DRIVER DOOR LOCK BARREL LOCK / ARM REQUEST	MOMENTARY GROUND	1 74 V
0	CA19-1	FUEL FILLER FLAP LOCK REQUEST	GROUND PULSE	B+
1	CA19-6	VALET SWITCH	MOMENTARY GROUND	2 V
- 1	CA19-8	FASCIA TRUNK RELEASE SWITCH	MOMENTARY GROUND	2 7 V
- 1	CA19-18	KEY IN IGNITION SWITCH	GROUND	9 5 V
1	CA19-19	CENTRAL LOCKING SWITCH ALL CLOSE REQUEST	GROUND	B+
0	CA19-22	DOOR UNLOCK RELAY	GROUND PULSE	B+
D	CA20-8	SERIAL COMMUNICATION INPUT		
D	CA20-16	SERIAL COMMUNICATION OUTPUT		
0	CA21-1	RHF & LHR DOOR DEADLOCK RELAY (NOT NAS)	GROUND PULSE	B+
i	CA21-5	VEHICLE SPEED INPUT	B+ @ 10 MPH = 20 Hz. 20 MPH = 40 Hz	
0	CA21-11	TRUNK RELEASE RELAY	GROUND PULSE	B+
0	CA21-14	LHF & RHR DOOR DEADLOCK RELAY	GROUND PULSE	B+
0	CA21-15	DOOR LOCK RELAY	GROUND PULSE	B+

The following symbols are used to represent values for Control Module Pin Out data:

B+ Battery voltage Input O Output V Voltage (DC) Hz Frequency SG Signal Ground KHz Frequency x 1000 Serial and encoded communications MS Milliseconds MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component CENTER CONSOLE SWITCH PACK DOOR KEY BARREL SWITCH - DRIVER DOOR LOCK ACTUATOR - DRIVER DOOR LOCK ACTUATOR - LH REAR DOOR LOCK ACTUATOR - PASSENGER DOOR LOCK ACTUATOR - RH REAR FASCIA TRUNK RELEASE SWITCH FUEL FILLER FLAP ACTUATOR IGNITION SWITCH NOT IN-PARK MICROSWITCH SECURITY AND LOCKING CONTROL MODULE

SHORTING LINK TRUNK RELEASE ACTUATOR

TRUNK RELEASE SWITCH

Connector / Type / Color

CC1 / 16-WAY MULTILOCK 040 / BLACK DD3 / 13-WAY ECONOSEAL III LC / BLACK DD3 / 13-WAY ECONOSEAL III LC / BLACK RD3-L / 6-WAY ECONOSEAL III LC / BLACK PD3 / 13-WAY ECONOSEAL III LC / BLACK RD3-R / 6-WAY ECONOSEAL III LC / BLACK FC12 / 16-WAY MULTILOCK 040 / BLUE CABB / 2-WAY LABINAL / NATURAL FC54 (FLY LEAD) / 8-WAY MULTILOCK 070 / WHITE CC42 (FLY LEAD) / 2-WAY MULTILOCK 040 / BLACK CA18 / 12-WAY MULTILOCK 47 / SLATE

CA20 / 16-WAY MULTILOCK 47 / SLATE CA21 / 26-WAY MULTILOCK 47 / SLATE BT8 / 2-WAY LABINAL / BROWN

CA19 / 22-WAY MULTILOCK 47 / SLATE

CA43 / 6-WAY MULTILOCK 070 / YELLOW BT10 / 2-WAY MULTILOCK 040 / GREEN CC47 / 2-WAY MULTILOCK 040 / BLACK

Location / Access

CENTER CONSOLE DOOR CASING DOOR CASING DOOR CASING DOOR CASING DOOR CASING

STEERING COLUMN / DRIVER'S UNDERSCUTTLE TRUNK, LF FRONT / TRUNK TRIM STEERING COLUMN / COVER

'J' GATE / CENTER CONSOLE TRUNK, LH FRONT / TRUNK TRIM

REAR SEAT, LH SIDE / UNDER TRUNK LID / TRUNK LID TRIM TRUNK LID / TRUNK LID TRIM CENTER CONSOLE GLOVE BOX

RELAYS

VALET SWITCH

Relay	Color / Stripe	Connector / Color	Location / Access
DEADLOCK RELAY - DRIVER, LH REAR	VIOLET	CA55 / VIOLET	LH HEELBOARD
DEADLOCK RELAY - PASSENGER, RH REAR	VIOLET	CA55 / VIOLET	LH HEELBOARD
DOOR LOCK RELAY	VIOLET	CA50 / VIOLET	LH HEELBOARD
DOOR UNLOCK RELAY	VIOLET	CA50 / VIOLET	LH HEELBOARD
FUEL FILLER FLAP RELAY	VIOLET	CA97 / VIOLET	LH HEELBOARD
TRUNK RELEASE RELAY	BLACK / VIOLET	BT43 / VIOLET	TRUNK ELECTRICAL CARRIER

1 ---4:-- / 4 -----

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BT4	THROUGH-PANEL (48 MICRO / 6) / BLACK	ABOVE FUEL TANK / FUEL TANK TRIM
CA8	20-WAY MULTILOCK 040 / GREEN	DRIVER'S 'A' POST / 'A' POST TRIM
CA9	20-WAY MULTILOCK 040 / BLACK	DRIVER'S 'A' POST / 'A' POST TRIM
CA11	20-WAY MULTILOCK 040 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA12	14-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA13	6-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA14	4-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA15	6-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CA16	4-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CC18	20-WAY MULTILOCK 070 / YELLOW	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC5	20-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC5	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE

GROUNDS

Ground	Location / Type
BTG49L	REAR TRUNK GROUND STUD
CAG91	PARCEL SHELF GROUND SCREW
CAG92R	RH HEELBOARD GROUND SCREW
CAG93L	LH HEELBOARD GROUND SCREW
CCG51L	CENTER CONSOLE GROUND STU
FCG15L	LH CONSOLE GROUND STUD
FCG26R	LH CONSOLE GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

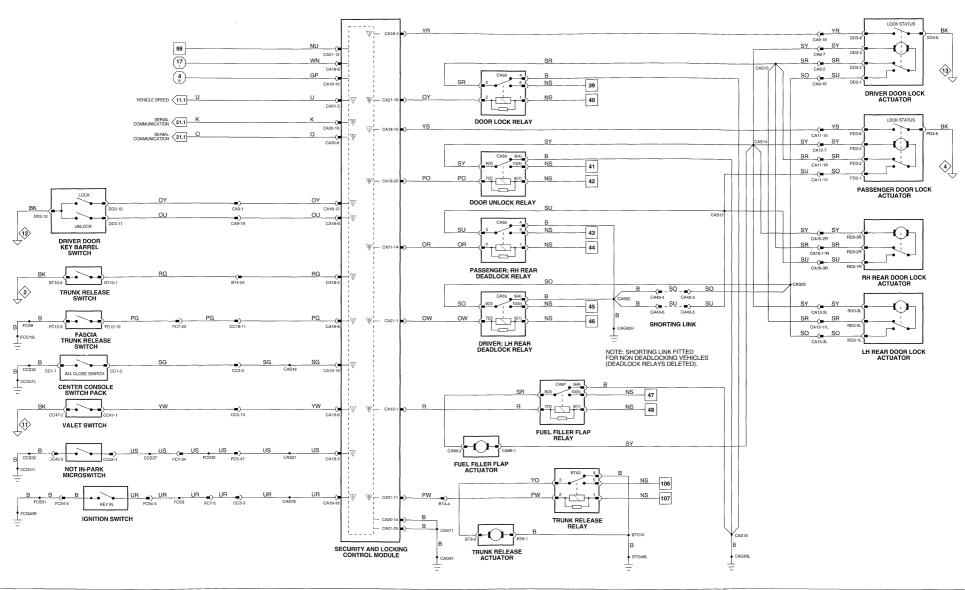


Fig. 02.2

Vinput Output

Serial and Encoded Communications

Signal Ground (SG)

VARIANT: RHD Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-14	LH PILOT BEAM, SIDE LAMPS AND TAIL LAMPS ON	GROUND	B+
0	FC1-16	REAR WINDOW RAISE	GROUND	B+
0	FC1-24	INTERIOR AND COURTESY LAMPS	GROUND	B+
0	FC1-29	LH DIPPED BEAM ON	GROUND	B+
0	FC1-31	FRONT PASSENGER WINDOW RAISE	GROUND	B+
0	FC1-33	STARTER RELAY INHIBIT	GROUND	B+
0	FC1-35	LH MAIN BEAM ON	GROUND	B+
0	FC1-36	SLIDING ROOF CLOSE	GROUND	B+
0	FC1-37	DRIVER WINDOW RAISE	GROUND	B+
0	FC1-39	RH DIPPED BEAM ON	GROUND	B+
0	FC1-41	RH MAIN BEAM ON	GROUND	B+
ł	FC2-2	INTERIOR LAMPS ON	GROUND	B+
D	FC2-5	SECURE STATUS INPUT FROM SECURITY AND LOCKING CONTROL MODULE	ENCODED COMMUNICATIONS	
1	FC2-6	HEADLAMP CONVENIENCE	GROUND PULSE	B+
1	FC2-26	SECURITY SYSTEM VISUAL WARNING	GROUND PULSE	B+
ě	FC2-28	REMOTE ALL CLOSE REQUEST	GROUND	B+

SECURITY AND LOCKING CONTROL MODULE

∇	Pin	Description	Active	Inactive
1	CA18-1	PASSENGER DOOR AJAR	GROUND	1 74 V
1	CA18-4	PASSENGER DOOR LOCK STATUS	GROUND = LOCKED	1.74 V = UNLOCKED
1	CA18-7	DRIVER DOOR AJAR	GROUND	79 V
D	CA18-9	TRANSPONDER IMMOBILIZATION OUTPUT (NOT NAS)	ENCODED COMMUNICATIONS	
- 1	CA18-10	DRIVER DOOR LOCK STATUS	GROUND = LOCKED	1 74 V = UNLOCKED
1	CA19-6	VALET SWITCH	MOMENTARY GROUND	2 V
1	CA19-7	INCLINATION SENSOR VIOLATION	GROUND PULSE	1 3 V
1	CA19-9	HOOD AJAR	GROUND	17 V
D	CA19-11	TRANSPONDER IMMOBILIZATION ON OUTPUT (NOT NAS)	ENCODED COMMUNICATIONS	
0	CA19-12	MEMORY SEAT REMOTE INDICATOR	GROUND PULSE	B+
0	CA19-13	HEADLAMP CONVENIENCE	GROUND PULSE	7 89 V
1	CA19-19	CENTRAL LOCKING SWITCH ALL CLOSE REQUEST	GROUND	B+
1	CA19-20	TRUNK LID AJAR	GROUND	7 9 V
- 1	CA19-21	REAR PASSENGER DOOR AJAR	GROUND	79 V
1	CA20-4	RH INTRUSION SENSOR (NOT NAS)	SIGNAL	GROUND
0	CA20-5	RH INTRUSION SENSOR VOLTAGE FEED (NOT NAS)	8 V	GROUND
0	CA20-6	READER / EXCITER CONTROL MODULE GROUND (NOT NAS)	GROUND	GROUND
D	CA20-8	SERIAL COMMUNICATION INPUT		
1	CA20-12	LH INTRUSION SENSOR (NOT NAS)	SIGNAL	GROUND
0	CA20-13	LH INTRUSION SENSOR VOLTAGE FEED (NOT NAS)	8 V	GROUND
D	CA20-16	SERIAL COMMUNICATION OUTPUT		
0	CA21-6	INCLINATION SENSOR GROUND	GROUND	GROUND
D	CA21-7	INTELLIGENT SOUNDER OUTPUT	ENCODED COMMUNICATIONS	
0	CA21-8	MEMORY POSITION 2 REQUEST	B+ PULSE	GROUND
0	CA21-9	VISUAL WARNING	GROUND PULSE	8+
D	CA21-10	SECURE STATUS OUTPUT TO BODY PROCESSOR	ENCODED COMMUNICATIONS	
0	CA21-19	SECURITY ACTIVE LED	9V PULSE	GROUND
D	CA21-20	FUELING INHIBIT SIGNAL OUTPUT (NOT NAS)	ENCODED COMMUNICATIONS	
0	CA21-21	MEMORY POSITION 1 REQUEST	B+ PULSE	GROUND
0	CA21-22	ALL CLOSE REQUEST	GROUND	7 8 V
0	CA21-23	INTERIOR LIGHTS ON	GROUND PULSE	7 8 V
0	CA21-24	HORN	GROUND PULSE	B+

The following symbols are used to represent values for Control Module Pin Out data:

ı	Input	B+	Battery voltage
0	Output	٧	Voltage (DC)
SG	Signal Ground	Hz	Frequency
D	Serial and encoded communications	KHz	Frequency x 1000
		MS	Milliseconds
		ΜV	Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component FC1 / 48-WAY PCB SIGNAL / YELLOW BODY PROCESSOR MODULE FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK CENTER CONSOLE SWITCH PACK COIL (COLUMN SWITCHGEAR) DOOR LOCK ACTUATOR - DRIVER DOOR LOCK ACTUATOR - PASSENGER DOOR SWITCH PACK - PASSENGER DOOR SWITCH - DRIVER DOOR SWITCH - LH REAR DOOR SWITCH - PASSENGER DOOR SWITCH - RH REAR HOOD SWITCH IS1 / 6-WAY CS-25 / ORANGE INCLINATION SENSOR RF6 / 4-WAY MODU / BLACK INTRUSION SENSOR - LH RF5 / 4-WAY MODU / BLACK INTRUSION SENSOR - RH READER / EXCITER CONTROL MODULE

Connector / Type / Color

CC1 / 16-WAY MULTILOCK 040 / BLACK SC11 / 2-WAY MULTILOCK 040 / GREEN DD3 / 13-WAY ECONOSEAL III LC / BLACK PD3 / 13-WAY ECONOSEAL III LC / BLACK PD1 / 26-WAY MULTILOCK 47 / SLATE DD3 / 13-WAY ECONOSEAL III LC / BLACK RD3-L / 6-WAY ECONOSEAL III LC / BLACK PD3 / 13-WAY ECONOSEAL III LC / BLACK RD3-R / 6-WAY ECONOSEAL III LC / BLACK RS17 / 2-WAY ECONOSEAL III LC / BLACK FC53 / 20-WAY MULTILOCK 040 / BLACK CA18 / 12-WAY MULTILOCK 47 / SLACK CA18 / 12-WAY MULTILOCK 47 / SLATE CA19 / 22-WAY MULTILOCK 47 / SLATE CA20 / 16-WAY MULTILOCK 47 / SLATE CA21 / 26-WAY MULTILOCK 47 / SLATE

RS21 (FLY LEAD) / 6-WAY ECONOSEAL III LC / BLACK

BT15 / 2-WAY FORD DIAGNOSTIC / BLACK

CC47 / 2-WAY MULTILOCK 040 / BLACK

CA26 / LUCAR / BLACK

SECURITY ANTENNA SECURITY SOUNDER TRUNK SWITCH VALET SWITCH

SECURITY AND LOCKING CONTROL MODULE

Location / Access

PASSENGER'S UNDERSCUTTLE

CENTER CONSOLE STEERING COLUMN / COVER DOOR CASING DOOR CASING ARM REST / TOP ROLL DOOR CASING DOOR CASING DOOR CASING DOOR CASING ENGINE BAY, RH FRONT TRUNK, LH FRONT / TRUNK TRIM HEAD LINER, LH SIDE HEAD LINER, RH SIDE DRIVER'S UNDERSCUTTLE TRUNK, LH FRONT / TRUNK TRIM

BACKLIGHT ENGINE BAY, BH FRONT TRUNK LID / TRUNK LID TRIM CENTER CONSOLE GLOVE BOX

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BT4	THROUGH-PANEL (48 MICRO / 6) / BLACK	ABOVE FUEL TANK / FUEL TANK TRIM
CA8	20-WAY MULTILOCK 040 / GREEN	DRIVER'S 'A' POST / 'A' POST TRIM
CA9	20-WAY MULTILOCK 040 / BLACK	DRIVER'S 'A' POST / 'A' POST TRIM
CA10	8-WAY MULTILOCK 070 / WHITE	DRIVER'S 'A' POST / 'A' POST TRIM
CA11	20-WAY MULTILOCK 040 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA12	14-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA14	4-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA16	4-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CA66	3-WAY MULTILOCK 070 / WHITE	TRUNK, LH FRONT / TRUNK TRIM
CA79	4-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA80	4-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC5	20-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC18	20-WAY MULTILOCK 070 / YELLOW	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC5	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH FASCIA END PANEL / OUTER AIR VENT
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
FC8	12-WAY MULTILOCK 040 / BLACK	DRIVER'S UNDERSCUTTLE
FC16	20-WAY MULTILOCK 040 / BLACK	PASSENGER'S UNDERSCUTTLE
PI1	13-WAY ECONOSEAL III LC / WHITE	REARWARD OF RH HEADLAMP
PI63	20 WAY MULTILOCK 040 / BLACK	RH 'A' POST / 'A' POST TRIM
RF4	12-WAY MULTILOCK 040 / BLACK	ROOF CONSOLE
RS3	THROUGH-PANEL (48 MICRO / 6) / BROWN	RH 'A' POST / 'A' POST PANEL

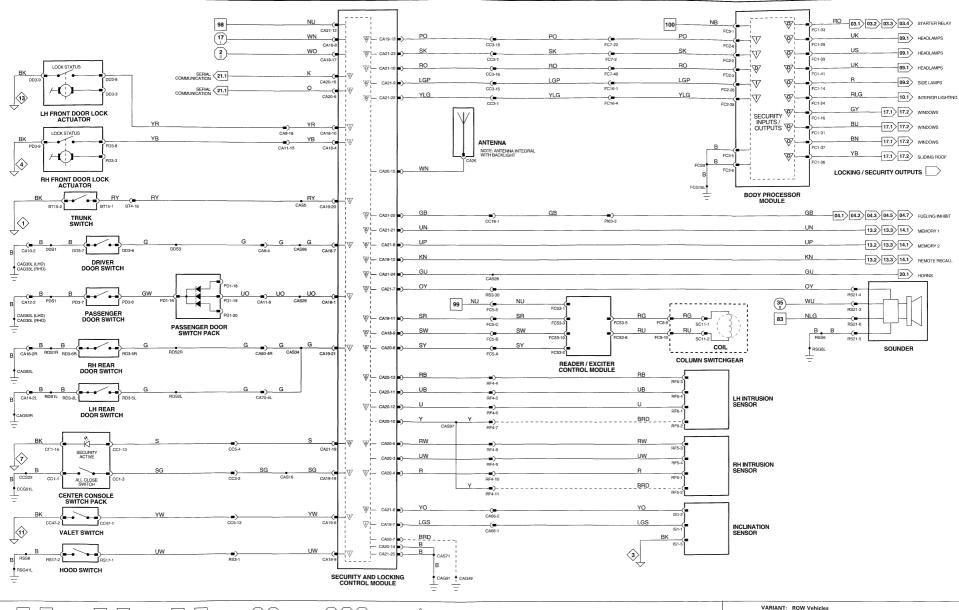
GROUNDS

Ground	Location / Type
CAG30L	LH 'A' POST GROUND SCREW
CAG33L	RH HEELBOARD GROUND SCREW
CAG49	RH CONSOLE GROUND STUD
CAG91	PARCEL SHELF GROUND SCREW
CAG92L	RH HEELBOARD GROUND SCREW
CAG93R	LH HEELBOARD GROUND SCREW
CCG51L	CENTER CONSOLE GROUND STUD
FCG15L	LH CONSOLE GROUND STUD
RSG41L	RIGHT FORWARD GROUND STUD
RSG8L	RIGHT FORWARD GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



1 6 Fig. 01.1 7 66 Fig. 01.2 67 109 Fig. 01.3













Signal Ground (SG)

VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-14	LH PILOT BEAM, SIDE LAMPS AND TAIL LAMPS ON	GROUND	B+
0	FC1-16	REAR WINDOW RAISE	GROUND	B+
0	FC1-24	INTERIOR AND COURTESY LAMPS	GROUND	B+
0	FC1-29	LH DIPPED BEAM ON	GROUND	B+
0	FC1-31	FRONT PASSENGER WINDOW RAISE	GROUND	B+
0	FC1-33	STARTER RELAY INHIBIT	GROUND	B+
0	FC1-35	LH MAIN BEAM ON	GROUND	B+
0	FC1-36	SLIDING ROOF CLOSE	GROUND	B+
0	FC1-37	DRIVER WINDOW RAISE	GROUND	B+
0	FC1-39	RH DIPPED BEAM ON	GROUND	B+
0	FC1-41	RH MAIN BEAM ON	GROUND	B+
	FC2-2	INTERIOR LAMPS ON	GROUND	B+
D	FC2-5	SECURE STATUS INPUT FROM SECURITY AND LOCKING CONTROL MODULE	ENCODED COMMUNICATIONS	
1	FC2-6	HEADLAMP CONVENIENCE	GROUND PULSE	B+
1	FC2-26	SECURITY SYSTEM VISUAL WARNING	GROUND PULSE	B+
1	FC2-28	REMOTE ALL CLOSE REQUEST	GROUND	B+

SECURITY AND LOCKING CONTROL MODULE

∇	Pin	Description	Active	Inactive
1	CA18-1	PASSENGER DOOR AJAR	GROUND	174 V
i	CA18-4	PASSENGER DOOR LOCK STATUS	GROUND = LOCKED	174 V = UNLOCKED
- 1	CA18-7	DRIVER DOOR AJAR	GROUND	79 V
1	CA18-10	DRIVER DOOR LOCK STATUS	GROUND = LOCKED	1 74 V = UNLOCKED
	CA19-6	VALET SWITCH	MOMENTARY GROUND	2 V
- :	CA19-6 CA19-7	INCLINATION SENSOR VIOLATION	GROUND PULSE	1.3 V
- 1	CA19-7	HOOD AJAR	GROUND	1.5 V
0	CA19-9 CA19-12	MEMORY SEAT REMOTE INDICATOR	GROUND PULSE	B+
0		HEADLAMP CONVENIENCE	GROUND PULSE	7 89 V
	CA19-13 CA19-19	CENTRAL LOCKING SWITCH ALL CLOSE REQUEST	GROUND	7 69 V B+
- 1	CA19-19 CA19-20	TRUNK LID AJAB	GROUND	79 V
- 1		REAR PASSENGER DOOR AJAR	GROUND	79 V
	CA19-21	REAR PASSENGER DOOR AJAN	GROUND	/9 V
1	CA20-4	RH INTRUSION SENSOR (NOT NAS)	SIGNAL	GROUND
0	CA20-5	RH INTRUSION SENSOR VOLTAGE FEED (NOT NAS)	8 V	GROUND
D	CA20-8	SERIAL COMMUNICATION INPUT		
- 1	CA20-12	LH INTRUSION SENSOR (NOT NAS)	SIGNAL	GROUND
0	CA20-13	LH INTRUSION SENSOR VOLTAGE FEED (NOT NAS)	8 V	GROUND
D	CA20-16	SERIAL COMMUNICATION OUTPUT		
0	CA21-6	INCLINATION SENSOR GROUND	GROUND	GROUND
Ö	CA21-8	MEMORY POSITION 2 REQUEST	B+ PULSE	GROUND
0	CA21-9	VISUAL WARNING	GROUND PULSE	B+
D	CA21-10	SECURE STATUS OUTPUT TO BODY PROCESSOR	ENCODED COMMUNICATIONS	
0	CA21-13	SECURITY SOUNDER	5 V (480 – 1900 Hz)	GROUND
0	CA21-19	SECURITY ACTIVE LED	9V PULSE	GROUND
D	CA21-20	FUELING INHIBIT SIGNAL OUTPUT (NOT NAS)	ENCODED COMMUNICATIONS	
0	CA21-21	MEMORY POSITION 1 REQUEST	B+ PULSE	GROUND
0	CA21-22	ALL CLOSE REQUEST	GROUND	7.8 V
0	CA21-23	INTERIOR LIGHTS ON	GROUND PULSE	78 V
0	CA21-24	HORN	GROUND PULSE	B+
0	CA21-26	SECURITY SOUNDER	5 V (480 – 1900 Hz)	GROUND
	O. L. 1 20	OLOGINI OCCIONI		

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "lnactive" means a load is not applied or a switch is OFF.

Fig. 15.

COMPONENTS

Component

BODY PROCESSOR MODULE

CENTER CONSOLE SWITCH PACK
DOOR LOCK ACTUATOR – DRIVER
DOOR LOCK ACTUATOR – DRIVER
DOOR SWITCH PACK – PASSENGER
DOOR SWITCH – DRIVER
DOOR SWITCH – LIREAR
DOOR SWITCH – HAEAR
DOOR SWITCH – HAEAR

HOOD SWITCH
INCLINATION SENSOR
INTRUSION SENSOR – LH
INTRUSION SENSOR – RH
SECURITY AND LOCKING CONTROL MODULE

SECURITY ANTENNA SECURITY SOUNDER TRUNK SWITCH VALET SWITCH Connector / Type / Color

FC1.78 WAY PCS SIGNAL / YELLOW FC2.78 WAY PCS SIGNAL / SLACK FC3.76 WAY PCS SIGNAL / SLACK CC1.71 EWAY MILITLOCK GOG PLACK DO3.71 WAY ECONOSEAL III. C.7 SLACK PD1.72 WAY ECONOSEAL III. C.7 SLACK PD1.72 WAY ECONOSEAL III. C.7 SLACK RD3.12 WAY ECONOSEAL III. C.7 SLACK RD1.72 WAY ECONOSEAL III. C.7 SLACK

RF5 / 4-WAY MODU / BLACK CA18 / 12-WAY MULTILOCK 47 / SLATE CA19 / 22-WAY MULTILOCK 47 / SLATE CA20 / 16-WAY MULTILOCK 47 / SLATE CA21 / 26-WAY MULTILOCK 47 / SLATE CA25 / LUCAY MULTILOCK 47 / SLATE CA26 / LUCAY MULTILOCK

RS21 (FLY LEAD) / 6-WAY ECONOSEAL III LC / BLACK BT15 / 2-WAY FORD DIAGNOSTIC / BLACK CC47 / 2-WAY MULTILOCK 040 / BLACK Location / Access

PASSENGER'S UNDERSCUTTLE

CENTER CONSOLE
DOOR CASING
DOOR CASING
ARM REST/TOP ROLL
DOOR CASING
DOOR CASING
DOOR CASING
DOOR CASING
ENGING
TOON TRUNK, HE FRONT
TRUNK, LH FRONT/TRUNK TRIM

BACKLIGHT
ENGINE BAY, RH FRONT
TRUNK LID / TRUNK LID TRIM
CENTER CONSOLE GLOVE BOX

TRUNK, LH FRONT / TRUNK TRIM

HEAD LINER LH SIDE

HEAD LINER, RH SIDE

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BT4	THROUGH-PANEL (48 MICRO / 6) / BLACK	ABOVE FUEL TANK / FUEL TANK TRIM
CA8	20-WAY MULTILOCK 040 / GREEN	DRIVER'S 'A' POST / 'A' POST TRIM
CA9	20-WAY MULTILOCK 040 / BLACK	DRIVER'S 'A' POST / 'A' POST TRIM
CA10	8-WAY MULTILOCK 070 / WHITE	DRIVER'S 'A' POST / 'A' POST TRIM
CA11	20-WAY MULTILOCK 040 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA12	14-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA14	4-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA16	4-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CA66	3-WAY MULTILOCK 070 / WHITE	TRUNK, LH FRONT / TRUNK TRIM
CA79	4-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA80	4-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC5	20-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC18	20-WAY MULTILOCK 070 / YELLOW	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
FC16	20-WAY MULTILOCK 040 / BLACK	PASSENGER'S UNDERSCUTTLE
PI1	13-WAY ECONOSEAL III LC / WHITE	REARWARD OF RH HEADLAMP
PI63	20-WAY MULTILOCK 040 / BLACK	RH 'A' POST / 'A' POST TRIM
RF4	12-WAY MULTILOCK 040 / BLACK	ROOF CONSOLE
RS3	THROUGH-PANEL (48 MICRO / 6) / BROWN	RH 'A' POST / 'A' POST PANEL

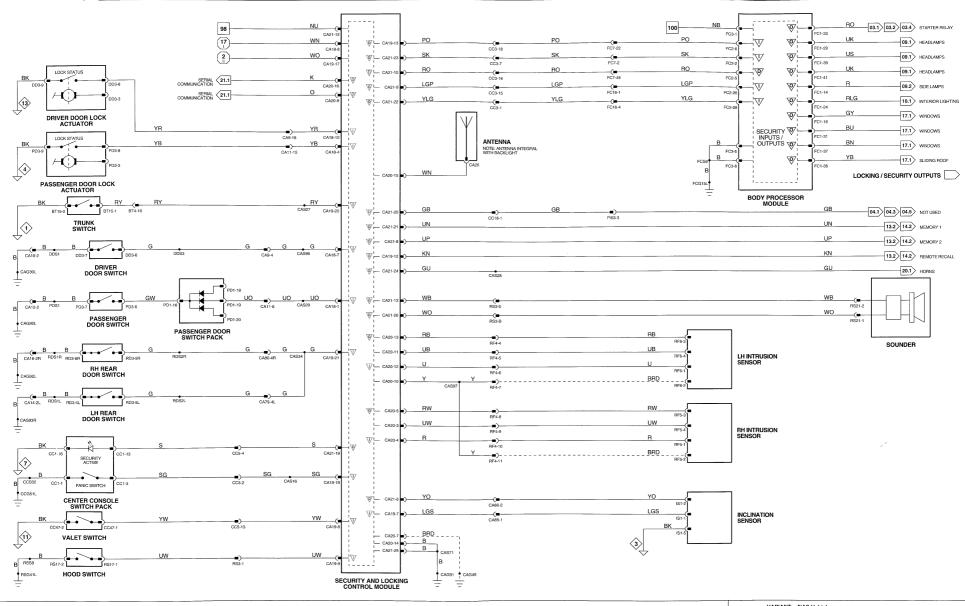
GROUNDS

Ground	Location / Type
CAG30L	LH 'A' POST GROUND SCREW
CAG49	RH CONSOLE GROUND STUD
CAG91	PARCEL SHELF GROUND SCREW
CAG92L	RH HEELBOARD GROUND SCREW
CAG93R	LH HEELBOARD GROUND SCREW
CCG51L	CENTER CONSOLE GROUND STUD
FCG15L	LH CONSOLE GROUND STUD
RSG41L	RIGHT FORWARD GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



1 — 6 Fig. 01.1 7 — 66 Fig. 01.2 67 — 109 Fig. 01.3

| Fig. 01.4

Fig. 02.1

Fig. 02.2

VInput Output Serial and Encoded Communications

Signal Ground (SG)

VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-27	WIPER RELAY	GROUND	B+
0	FC1-34	WINDSHIELD WASH PUMP RELAY	GROUND	B+
o	FC1-40	HEADLAMP POWER WASH PUMP RELAY	GROUND	B+
	FC2-1	WIPER MOTOR PARK SWITCH	GROUND	B+
i.	FC2-3	SIDE LAMPS ON	GROUND	B+
i	FC2-4	VEHICLE SPEED SENSOR	GROUND PULSE @ 10 MPH (16 KPH) = 20 Hz, 20 MPH (32 KPH) = 40 Hz	
i	FC2-14	WASH (PRE-PROGRAMMED)	GROUND	B+
i	FC2-22	WASHER FLUID LEVEL	GROUND	B+
i	FC2-31	IGNITION SWITCHED GROUND	GROUND	B+
i	FC2-39	WIPER DELAY	GROUND	B+
1	EC2-47	SLOW / FLICK WIPER	GROUND	B+

The following symbols are used to represent values for Control Module Pin Out data:

B+ Battery voltage 1 Input V Voltage (DC) O Output SG Signal Ground Hz Frequency KHz Frequency x 1000 Serial and encoded communications MS Milliseconds MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component

AMBIENT TEMPERATURE SWITCH

BODY PROCESSOR MODULE

DIODE (FC58) - WASH / WIPE SWITCH

DIODE (FC61) - WASH / WIPE SWITCH LIGHTING SWITCHES

POWER WASH PUMP WASH / WIPE SWITCHES (COLUMN SWITCHGEAR)

WASHER FLUID LEVEL SWITCH WINDSHIELD WASH HEATER - LH WINDSHIELD WASH HEATER - RH WINDSHIFLD WASH PUMP

WIPER MOTOR

Connector / Type / Color

BR7 / 2-WAY ECONOSEAL III LC / WHITE FC1 / 48-WAY PCB SIGNAL / YELLOW FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 8-WAY PCB SIGNAL / BLACK FC58 / DIODE / BLACK

FC61 / DIODE / BLACK

FC12 / 16-WAY MULTILOCK 040 / BLUE RS26 / 2-WAY ECONOSEAL III HC / BLACK SC2 / 6-WAY MULTILOCK 070 / WHITE RS18 / 2-WAY ECONOSEAL III LC / RED PI71 / 2-WAY SUMITOMO 90 / WHITE PI72 / 2-WAY SUMITOMO 90 / WHITE RS25 / 2-WAY ECONOSEAL III LC / BLACK LS9 / 6-WAY ECONOSEAL III LC / BLACK

Location / Access

LH FRONT WHEEL ARCH LINER / SPOILER TRAY PASSENGER'S UNDERSCUTTLE

FASCIA HARNESS / PASSENGER AIR BAG (PASSENGER SIDE FASCIA TRIM) FASCIA HARNESS / PASSENGER AIR BAG (PASSENGER SIDE FASCIA TRIM) FASCIA SWITCH PACK ENGINE BAY, RH INNER FENDER STEERING COLUMN / COVER WASHER FLUID RESERVOIR PLENUM CHAMBER / COVER PLENUM CHAMBER / COVER

WASHER FLUID RESERVOIR

PLENUM CHAMBER / COVER

RELAYS

WIPER ON / OFF RELAY

Color / Stripe Connector / Color Location / Access Relay POWER WASH PUMP RELAY BLACK / WHITE RS20 / BLACK RH ENGINE BAY RELAYS BLACK RS2 / BLACK RH ENGINE BAY RELAYS WINDSHIELD WASH PUMP RELAY BLACK LS49 / BLACK LH ENGINE BAY RELAYS WIPER FAST / SLOW RELAY LS48 / BLACK LH ENGINE BAY RELAYS

HARNESS-TO-HARNESS CONNECTORS

Type / Color	Location / Access
13-WAY ECONOSEAL III LC / BLACK	RH FRONT WHEEL ARCH LINER / SPOILER AND SPOILER TRAY
THROUGH-PANEL (48 MICRO / 6) / BLACK	LH FASCIA END PANEL / OUTER AIR VENT
THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
12-WAY MULTILOCK 040 / BLACK	DRIVER'S UNDERSCUTTLE
20-WAY MULTILOCK 040 / BLACK	PASSENGER'S UNDERSCUTTLE
THROUGH-PANEL (48 MICRO / 6) / BLACK	LH 'A' POST / 'A' POST PANEL
13-WAY ECONOSEAL III LC / WHITE	REARWARD OF RH HEADLAMP
13-WAY ECONOSEAL III LC / BLACK	REARWARD OF RH HEADLAMP
THROUGH-PANEL (48 MICRO / 6) / BROWN	RH 'A' POST / 'A' POST PANEL
	THROUGH-PANEL (48 MICRO / 6) / BLACK THROUGH-PANEL (48 MICRO / 6) / BLACK 12-WAY MULTILOCK 940 / BLACK 20-WAY MULTILOCK 940 / BLACK THROUGH-PANEL (48 MICRO / 6) / BLACK 13-WAY ECONOSEAL III LC / WHITE 13-WAY ECONOSEAL III LC / BLACK

GROUNDS

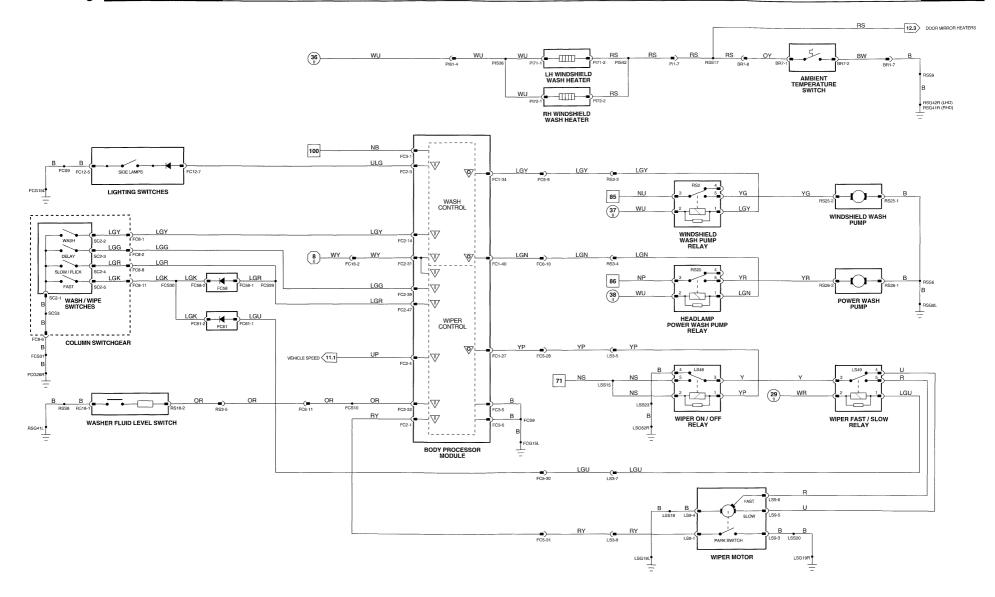
Ground	Location / Type
CG15L	LH CONSOLE GROUND STUD
CG26R	LH CONSOLE GROUND STUD
SG19L	LH BULKHEAD GROUND STUD
SG19R	LH BULKHEAD GROUND STUD
SG52R	LEFT FORWARD GROUND STUD
SG41L	RIGHT FORWARD GROUND STUD
SG41R	RIGHT FORWARD GROUND STUD
SG42R	RH BULKHEAD GROUND STUD
SGRI	RIGHT FORWARD GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

Fig. 16.1



1 - 6 Fig. 01.1 7 - 66 Fig. 01.2 67 - 109 Fig. 01.3 , Fig. 01.4 , Fig. 02.1 Fig. 02.2











VInput Output Serial and Encoded Communications

Signal Ground (SG)

VARIANT: All Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-16	REAR WINDOW RAISE	GROUND	B+
0	FC1-31	FRONT PASSENGER WINDOW RAISE	GROUND	B+
0	FC1-36	SLIDING ROOF CLOSE	GROUND	B+
0	FC1-37	DRIVER WINDOW RAISE	GROUND	B+
1	FC2-28	REMOTE ALL CLOSE REQUEST	GROUND	B+

SLIDING ROOF CONTROL MODULE

∇	Pin	Description	Active	Inactive
- 1	CA84-2	ALL CLOSE REQUEST	GROUND	B+
- 1	CA84-4	ALL CLOSE REQUEST TO BM	GROUND	B+
1	CA84-5	TILT OPEN / SLIDE CLOSE REQUEST	GROUND	B+
- 1	CA84-6	TILT CLOSE / SLIDE OPEN REQUEST	GROUND	B+
0	SR1-1	SLIDING ROOF MOTOR	B+	GROUND
0	SR1-3	SLIDING ROOF MOTOR	B+	GROUND

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 17.

COMPONENTS

Component

BODY PROCESSOR MODULE

CENTER CONSOLE SWITCH PACK DOOR SWITCH PACK - DRIVER

DOOR SWITCH PACK - DRIVER

SLIDING ROOF CONTROL MODULE SLIDING ROOF MOTOR

SLIDING ROOF SWITCH WINDOW LIFT MOTOR - DRIVER WINDOW LIFT MOTOR - LH REAR WINDOW LIFT MOTOR - PASSENGER WINDOW LIFT MOTOR - RH REAR

WINDOW LIFT SWITCH PACK – LH REAR WINDOW LIFT SWITCH PACK – PASSENGER WINDOW LIFT SWITCH PACK – RH REAR Connector / Type / Color

FC1 / 48-WAY PCB SIGNAL / YELLOW FC2 / 48-WAY PCB SIGNAL / BLACK FC3 / 6-WAY PCB SIGNAL / BLACK

CC1 / 16-WAY MULTILOCK 040 / BLACK DD1 / 12-WAY MULTILOCK 47 / WHITE DD2 / 22-WAY MULTILOCK 47 / WHITE CA84 / 6-WAY MULTILOCK 070 / WHITE SR1 / 3-WAY MULTILOCK 070 / WHITE SR1 / 3-WAY MULTILOCK 070 / WHITE CA83 / 8-WAY MULTILOCK 040 / BLACK

DD5 / 2-WAY ECONOSEAL III LC / BLACK RD5 L / 2-WAY ECONOSEAL III LC / BLACK PD5 / 2-WAY ECONOSEAL III LC / BLACK RD5-R / 2-WAY ECONOSEAL III LC / BLACK RD1-L / 26-WAY MULTILOCK 47 / SLATE RD1-R / 26-WAY MULTILOCK 47 / SLATE RD1-R / 26-WAY MULTILOCK 47 / SLATE Location / Access

PASSENGER'S UNDERSCUTTLE

CENTER CONSOLE

ROOF CONSOLE

ROOF CONSOLE ROOF CONSOLE DRIVER'S DOOR / DOOR CASING

LH REAR DOOR / DOOR CASING
PASSENGER'S DOOR / DOOR CASING
RH DOOR / DOOR CASING
LH REAR DOOR ARM REST / TOP ROLL
PASSENGER'S DOOR ARM REST / TOP ROLL
RH REAR DOOR ARM REST / TOP ROLL

HARNESS-TO-HARNESS CONNECTORS

HANNESS-1	HANNESS-TO-HANNESS CONNECTIONS		
Connector	Type / Color	Location / Access	
CA8	20-WAY MULTILOCK 040 / GREEN	DRIVER'S 'A' POST / 'A' POST TRIM	
CA9	20-WAY MULTILOCK 040 / BLACK	DRIVER'S 'A' POST / 'A' POST TRIM	
CA10	8-WAY MULTILOCK 070 / WHITE	DRIVER'S 'A' POST / 'A' POST TRIM	
CA11	20-WAY MULTILOCK 040 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM	
CA12	14-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM	
CA13	6-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL	
CA14	4-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL	
CA15	6-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL	
CA16	4-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL	
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX	
CC18	20-WAY MULTILOCK 070 / YELLOW	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX	
FC5	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH FASCIA END PANEL / OUTER AIR VENT	
FC16	20-WAY MULTILOCK 040 / BLACK	PASSENGER'S UNDERSCUTTLE	

GROUNDS

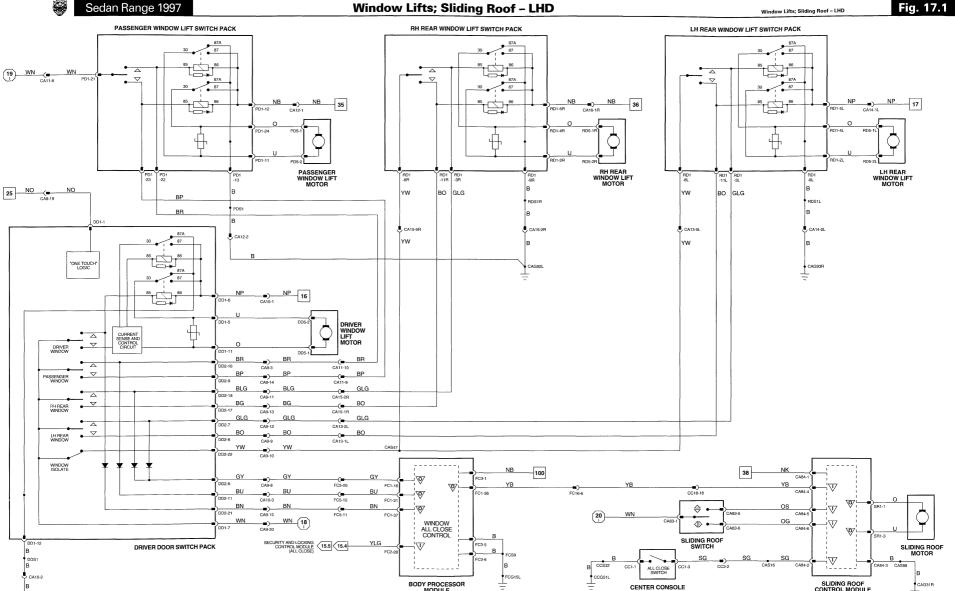
Ground	Location / Type
CAG30L	LH 'A' POST GROUND SCREW
CAG31R	PARCEL SHELF GROUND SCREW
CAG92L	RH HEELBOARD GROUND SCREW
CAG93R	LH HEELBOARD GROUND SCREW
CCG51L	CENTER CONSOLE GROUND STUD
FCG15L	LH CONSOLE GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

SLIDING ROOF CONTROL MODULE













BODY PROCESSOR MODULE





VARIANT: LHD Vehicles Signal Ground (SG) VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

CENTER CONSOLE SWITCH PACK

BODY PROCESSOR MODULE

∇	Pin	Description	Active	Inactive
0	FC1-16	REAR WINDOW RAISE	GROUND	B+
0	FC1-31	FRONT PASSENGER WINDOW RAISE	GROUND	B+
0	FC1-36	SLIDING ROOF CLOSE	GROUND	B+
0	FC1-37	DRIVER WINDOW RAISE	GROUND	B+
1	FC2-28	REMOTE ALL CLOSE REQUEST	GROUND	B+

SLIDING ROOF CONTROL MODULE

∇	Pin	Description	Active	Inactive
- 1	CA84-2	ALL CLOSE REQUEST	GROUND	B+
1	CA84-4	ALL CLOSE REQUEST TO BPM	GROUND	B+
1	CA84-5	TILT OPEN / SLIDE CLOSE REQUEST	GROUND	B+
- 1	CA84-6	TILT CLOSE / SLIDE OPEN REQUEST	GROUND	B+
0	SR1-1	SLIDING ROOF MOTOR	B+	GROUND
0	SR1-3	SLIDING ROOF MOTOR	B+	GROUND

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 17.2

COMPONENTS

Component

BODY PROCESSOR MODULE

CENTER CONSOLE SWITCH PACK

DOOR SWITCH PACK - DRIVER SLIDING ROOF CONTROL MODULE

SLIDING ROOF MOTOR
SLIDING ROOF SWITCH
WINDOW LIFT MOTOR – DRIVER
WINDOW LIFT MOTOR – LH REAR
WINDOW LIFT MOTOR – PASSENGER
WINDOW LIFT MOTOR – RH REAR
WINDOW LIFT SWITCH PACK – LH REAR
WINDOW LIFT SWITCH PACK – LH REAR
WINDOW LIFT SWITCH PACK – PASSENGER

WINDOW LIFT SWITCH PACK - RH REAR

Connector / Type / Color

FC1 / 48 WAY PCS SIGNAL / YELLOW
FC2 / 48 WAY PCS SIGNAL / BLACK
FC3 / 6 WAY PCS SIGNAL / BLACK
FC3 / 6 WAY PCS SIGNAL / BLACK
FC1 / 6 WAY MULTILOCK 40 / PLACK
DD1 / 12 WAY MULTILOCK 47 / WHITE
FC1 / 22 WAY MULTILOCK 47 / WHITE
FC1 / 22 WAY MULTILOCK 47 / WHITE
FC1 / 22 WAY MULTILOCK 70 / WHITE
FC1 / 22 WAY MULTILOCK 70 / WHITE
FC1 / 23 WAY FC1 / FC1 / WHITE
FC1 / 23 WAY FC1 / FC1 / FC1 / WHITE
FC1 / 23 WAY FC1 / FC1

PD1 / 26-WAY MULTILOCK 47 / SLATE

RD1-R / 26-WAY MULTILOCK 47 / SLATE

Location / Access

PASSENGER'S UNDERSCUTTLE

CENTER CONSOLE ARM REST / TOP ROLL

ROOF CONSOLE

RODF CONSOLE
DRIVER'S DOOR / DOOR CASING
LH REAR DOOR / DOOR CASING
PASSENGER'S DOOR / DOOR CASING
RH DOOR / DOOR CASING
LH REAR DOOR AAM REST / TOP ROLL
PASSENGER'S DOOR ARM REST / TOP ROLL
H REAR DOOR ARM SET / TOP ROLL
H REAR DOOR ARM SET / TOP ROLL

HARNESS-TO-HARNESS CONNECTORS

TO ALL THE CONTROL OF		
Connector	Type / Color	Location / Access
CA8	20-WAY MULTILOCK 040 / GREEN	DRIVER'S 'A' POST / 'A' POST TRIM
CA9	20-WAY MULTILOCK 040 / BLACK	DRIVER'S 'A' POST / 'A' POST TRIM
CA10	8-WAY MULTILOCK 070 / WHITE	DRIVER'S 'A' POST / 'A' POST TRIM
CA11	20-WAY MULTILOCK 040 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA12	14-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA13	6-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA14	4-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA15	6-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CA16	4-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC18	20-WAY MULTILOCK 070 / YELLOW	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC6	THROUGH-PANEL (48 MICRO / 6) / BLACK	RH FASCIA END PANEL / OUTER AIR VENT
FC16	20-WAY MULTILOCK 040 / BLACK	PASSENGER'S UNDERSCUTTLE

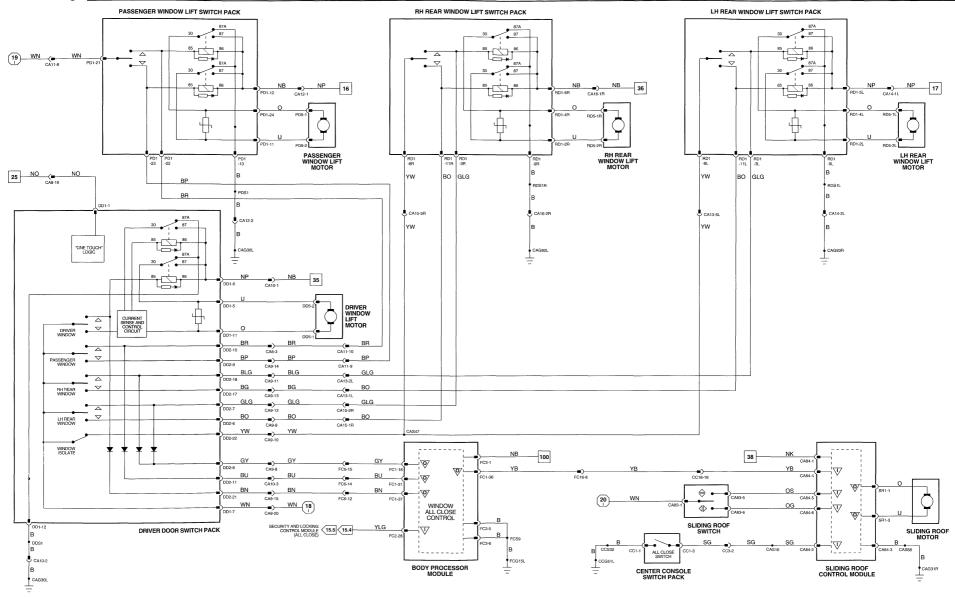
GROUNDS

Ground	Location / Type
CAG30L	LH 'A' POST GROUND SCREW
CAG31R	PARCEL SHELF GROUND SCREW
CAG92L	RH HEELBOARD GROUND SCREW
CAG93R	LH HEELBOARD GROUND SCREW
CCG51L	CENTER CONSOLE GROUND STUD
FCG15L	LH CONSOLE GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



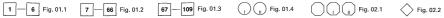
REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.















VInput VOutput VSerial and Encoded Communications

Signal Ground (SG)

VARIANT: RHD Vehicles VIN RANGE: 787954 →
DATE OF ISSUE: JANUARY 1997

RADIO CASSETTE

 V Pin 0
 Description Description
 Active Description
 Inactive Description

 0 IC1-5 0
 AMTENIA UP
 B+
 GROUND

The following symbols are used to represent values for Control Module Pin Out data:

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

Fig. 18.

COMPONENTS

Component

CD AUTO CHANGER MID-BASS - LH FRONT

MID-BASS - LH REAR MID-BASS - RH FRONT

MID-BASS – RH REAR RADIO ANTENNA RADIO ANTENNA MOTOR RADIO CASSETTE

TWEETER – LH FRONT, STANDARD ICE TWEETER – LH REAR, STANDARD ICE TWEETER – RH FRONT, STANDARD ICE TWEETER – RH REAR, STANDARD ICE

Connector / Type / Color

IC5 / 2-WAY ANTENNA / BLACK

DD6 (LHD) (FLY LEAD) / 2-WAY GROTE AND HARTMAN / BLACK PD6 (RHD) (FLY LEAD) / 2-WAY GROTE AND HARTMAN / BLACK RD6-L (FLY LEAD) / 2-WAY GROTE AND HARTMAN / BLACK DD6 (RHD) (FLY LEAD) / 2-WAY GROTE AND HARTMAN / BLACK PD6 (LHD) (FLY LEAD) / 2-WAY GROTE AND HARTMAN / BLACK RD6-R (FLY LEAD) / 2-WAY GROTE AND HARTMAN / BLACK RD6-R (FLY LEAD) / 2-WAY GROTE AND HARTMAN / BLACK

IC12 / 2-WAY ANTENNA CONNECTOR / BLACK BT44 / 6-WAY YAZAKI / WHITE IC12 / 20-WAY MULTILOCK OF / WHITE IC13 / 2-WAY ANTENNA CONNECTOR / WHITE IC19 / CD AUTOCHANGER CONNECTOR FC32 (EV. YEAD) / 2-WAY MODU / BLACK

Location / Access

PARCEL SHELF DOOR CASING

DOOR CASING DOOR CASING

DOOR CASING
RH REAR FENDER / TRUNK TRIM
TRUNK, RH SIDE / TRUNK TRIM
CENTER CONSOLE

FASCIA, LH SIDE PARCEL SHELF, LH SIDE FASCIA, LH SIDE PARCEL SHELF, RH SIDE

HARNESS-TO-HARNESS CONNECTORS

Connector Type / Color CA77 2-WAY MULTILOCK 070 / YELLOW CA78 2-WAY MULTILOCK 070 / YELLOW 4-WAY MULTILOCK 070 / WHITE CA79 CA80 4-WAY MULTILOCK 070 / WHITE 8-WAY MULTILOCK 070 / WHITE IC2 8-WAY MULTILOCK 070 / WHITE IC7 18-WAY MULTILOCK 070 / WHITE IC22 4-WAY MULTILOCK 040 / BLACK IC23

12-WAY MULTILOCK 040 / BLACK

Location / Access

DRIVER'S 'A' POST / A' POST PANEL
PASSENGER'S 'A' POST / A' POST PANEL
HI 'GC' POST PA''CC' POST PANEL
HI 'GC' POST 'A''CC' POST PANEL
HI 'GC' POST / 'GC' POST PANEL
HI 'GC' POST / 'GC' POST PANEL
HI 'GC' POST PANEL
HI HEAR SEAT / UNDER
HI HEAR SEAT / UNDER
HI HELBOARD / HEELBOARD COVER
PARELS SHELF / UNDER

GROUNDS

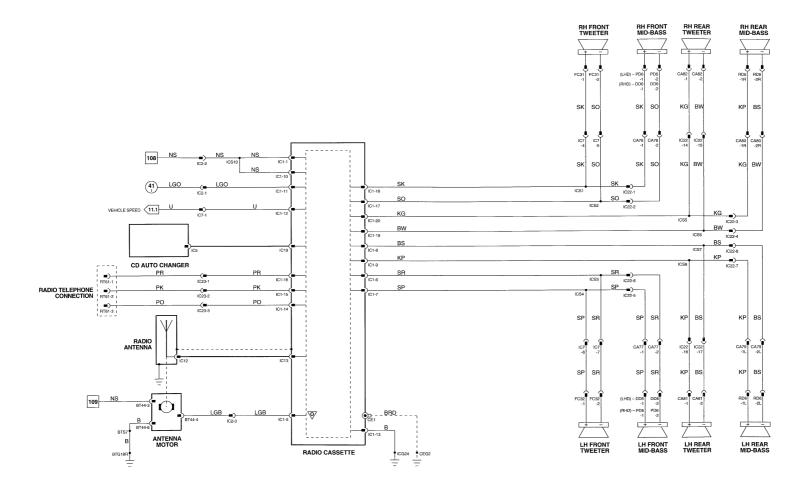
BT61

Ground	Location / Type
STG18R	REAR TRUNK GROUND STUD
CEG2	RADIO GROUND STUD
CC24	PADIO GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

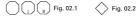


















Signal Ground (SG)

VARIANT: Standard ICE Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

POWER AMPLIFIER

∇	Pin	Description	Active	Inactiv
- 1	IC30-1	RH REAR CHANNEL LOW LEVEL INPUT	0 - 30 MV	0 MV
1	IC30-2	RH FRONT CHANNEL LOW LEVEL INPUT	0 - 30 MV	0 MV
SG	1C30-3	SIGNAL GROUND	GROUND	GROUND
1	IC30-6	LH REAR CHANNEL LOW LEVEL INPUT	0 - 30 MV	0 MV
1	IC30-7	LH FRONT CHANNEL LOW LEVEL INPUT	0 - 30 MV	0 MV

RADIO CASSETTE

∇	Pin	Description	Active	Inactive
0	IC1-5	ANTENNA UP / AMPLIFIER ON SIGNAL	B+	GROUND
0	IC34-1	RH FRONT CHANNEL LOW LEVEL OUTPUT	0 - 30 MV	0 MV
0	IC34-2	LH FRONT CHANNEL LOW LEVEL OUTPUT	0 - 30 MV	0 MV
SG	IC34-3	SIGNAL GROUND	GROUND	GROUND
0	IC34-4	LH REAR CHANNEL LOW LEVEL OUTPUT	0 - 30 MV	0 MV
ο	IC34-5	RH REAR CHANNEL LOW LEVEL OUTPUT	0 - 30 MV	0 MV

The following symbols are used to represent values for Control Module Pin Out data:

B+ Battery voltage I Input O Output V Voltage (DC) SG Signal Ground Hz Frequency KHz Frequency x 1000 D Serial and encoded communications MS Milliseconds MV Millivolts

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted. "Active" means a load is applied or a switch is ON; "Inactive" means a load is not applied or a switch is OFF.

COMPONENTS

Component	Connector / Type / Col
CD AUTO CHANGER	IC5 / 2-WAY ANTENNA / BLACK
MID-BASS - LH FRONT	DD6 (LHD) (FLY LEAD) / 2-WAY GRO PD6 (RHD) (FLY LEAD) / 2-WAY GRO
MID-BASS - LH REAR	RD6-L (FLY LEAD) / 2-WAY GROTE A
MID-BASS - RH FRONT	DD6 (RHD) (FLY LEAD) / 2-WAY GRO PD6 (LHD) (FLY LEAD) / 2-WAY GRO
MID-BASS - RH REAR	RD6-R (FLY LEAD) / 2-WAY GROTE A
POWER AMPLIFIER	IC30 / 12-WAY MULTILOCK 070 / WH IC31 / 18-WAY MULTILOCK 070 / WH
RADIO ANTENNA	IC12 / 2-WAY ANTENNA CONNECTO
RADIO ANTENNA MOTOR	BT44 / 6-WAY YAZAKI / WHITE

RADIO CASSETTE

TWEETER - LH FRONT, PREMIUM ICE	
TWEETER - LH REAR, PREMIUM ICE	
TWEETER - RH FRONT, PREMIUM ICE	
TWEETER - RH REAR, PREMIUM ICE	

lor

OTE AND HARTMAN / BLACK AND HARTMAN / BLACK OTE AND HARTMAN / BLACK OTE AND HARTMAN / BLACK AND HARTMAN / BLACK HITE HITE OR / BLACK BT44 / 6-WAY YAZAKI / WHITE IC1 / 20-WAY MULTILOCK 076 / WHITE IC13 / 2-WAY ANTENNA CONNECTOR / WHITE IC19 / CD AUTOCHANGER CONNECTOR

IC34 / 6-WAY DIN /SLATE IC32 (FLY LEAD) / 2-WAY GROTE AND HARTMAN / BLACK IC33 (FLY LEAD) / 2-WAY GROTE AND HARTMAN / BLACK CA102 (FLY LEAD) / 2-WAY MULTILOCK 040 / BLACK

MB1-L (FLY LEAD) / 2-WAY MODU / BLACK CA101 (FLY LEAD) / 2-WAY MULTILOCK 040 / BLACK MB1-R (FLY LEAD) / 2-WAY MODU / BLACK

TRUNK, RH SIDE / TRUNK TRIM CENTER CONSOLE

Location / Access

PARCEL SHELF / TRUNK TRIM

PARCEL SHELF / TRUNK TRIM

RH REAR FENDER / TRUNK TRIM

PARCEL SHELF

DOOR CASING

DOOR CASING

DOOR CASING

DOOR CASING

FASCIA, LH SIDE PARCEL SHELF, LH SIDE FASCIA, RH SIDE PARCEL SHELF, RH SIDE

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
CA77	2-WAY MULTILOCK 070 / YELLOW	DRIVER'S 'A' POST / 'A' POST PANEL
CA78	2-WAY MULTILOCK 070 / YELLOW	PASSENGER'S 'A' POST / 'A' POST PANE
CA79	4-WAY MULTILOCK 070 / WHITE	LH 'BC' POST / 'BC' POST PANEL
CA80	4-WAY MULTILOCK 070 / WHITE	RH 'BC' POST / 'BC' POST PANEL
IC2	8-WAY MULTILOCK 070 / WHITE	ABOVE FUEL TANK / FUEL TANK TRIM
IC7	8-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE
IC22	18-WAY MULTILOCK 070 / WHITE	RH REAR SEAT / UNDER
IC23	4-WAY MULTILOCK 040 / BLACK	LH HEELBOARD / HEELBOARD COVER
RT61	12-WAY MULTILOCK 040 / BLACK	PARCEL SHELF / UNDER

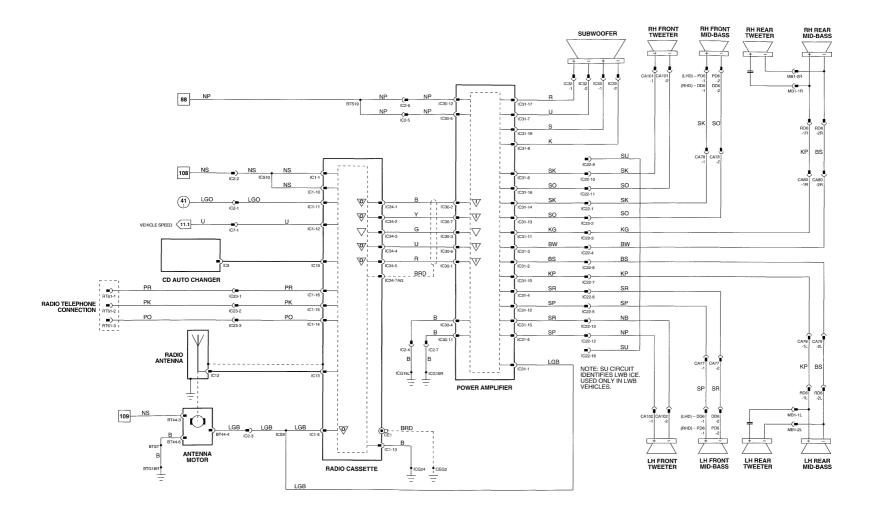
GROUNDS

Ground	Location / Type
BTG18R	REAR TRUNK GROUND STUD
CEG2	RADIO GROUND STUD
CG16L	FRONT TRUNK GROUND STUD
CG16R	FRONT TRUNK GROUND STUD
CG24	RADIO GROUND STUD

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.





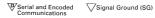












VARIANT: Premium ICE Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

Fig. 18.3

COMPONENTS

Component

HANDSET

MICROPHONE TELEPHONE ANTENNA TELEPHONE TRANSCEIVER Connector / Type / Color

RT63 / 8-WAY PHONE / BLACK RT67 / 2-WAY MULTILOCK 040 / BLUE CA67 / 2-WAY MULTILOCK 040 / BLUE RT65 / ANTENNA CONNECTOR / BLACK RT62 / 25-WAY D TYPE / BLACK RT64 / ANTENNA CONNECTOR / BLACK Location / Access

CENTER CONSOLE

ROOF CONSOLE HEADLINER, REAR PARCEL SHELF / TRUNK TRIM

HARNESS-TO-HARNESS CONNECTORS

Connector

Type / Color

 BT4
 THROUGH-PANEL (48 MICRO / 6) / BLACK

 RT61
 12-WAY MULTILOCK 040 / BLACK

 RT70
 COAXIAL CONNECTOR

Location / Access

ABOVE FUEL TANK / FUEL TANK TRIM PARCEL SHELF / UNDER CENTER CONSOLE / UNDER GLOVE BOX

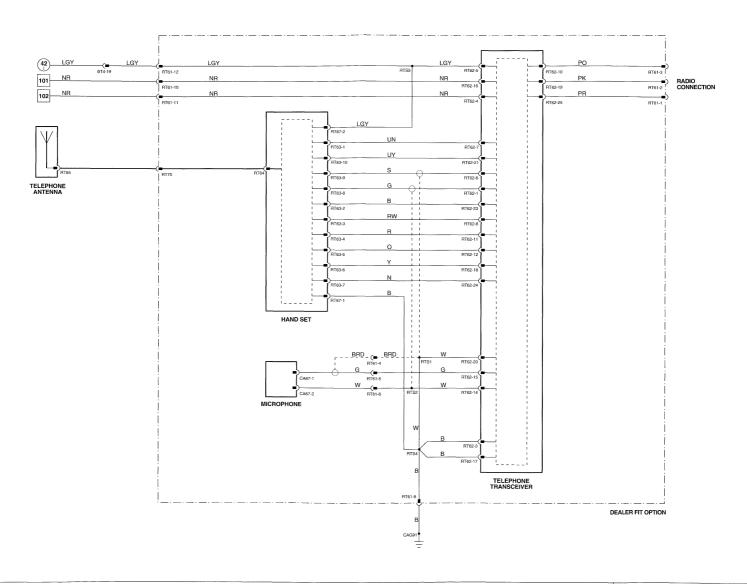
GROUNDS

CAG91

Ground

Location / Type
PARCEL SHELF GROUND SCREW

REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.























VARIANT: All Vehicles VIN RANGE: 787954 →
DATE OF ISSUE: JANUARY 1997

Fig. 19.

COMPONENTS

Component

AIR BAG DIAGNOSTIC MONITOR

AIR BAG - DRIVER SIDE AIR BAG - PASSENGER SIDE IMPACT SENSOR - LH IMPACT SENSOR - RH SAFING SENSOR

Connector / Type / Color

AB1 / 12-WAY FORD CARD / SLATE
AB2 / 12-WAY FORD CARD / BLACK
AB6 (FLY LEAD) / 3-WAY EPC / YELLOW
AB8 (FLY LEAD) / 3-WAY EPC / YELLOW
CL1 / 4-WAY FORD CARD / NATURAL
CR1 / 4-WAY FORD CARD / NATURAL
AB3 / 8-WAY FORD NAAO / NATURAL

Location / Access

PASSENGER'S UNDERSCUTTLE

STEERING WHEEL
PASSENGER'S FASCIA
BEHIND LH HEADLAMP
BEHIND RH HEADLAMP
RH 'A' POST / 'A' POST TRIM

HARNESS-TO-HARNESS CONNECTORS

 Connector
 Type / Color

 AB7
 3-WAY CARDELL / BLACK

 AB11
 4-WAY CARDELL / NATURAL

 AB12
 4-WAY CARDELL / NATURAL

 CA25
 3-WAY MULTILOCK 070 / YELLOW

 FG6
 THROUGH-PANEL (448 MICRO) 6/1 BLACK

Location / Access

COLUMN SWITCHGEAR / BEHIND
RH "A" POST / "A" POST PANEL
LH "A" POST / "A" POST PANEL
RH 'A' POST , ECM / 'A' POST PANEL
RH FASCIA END PANEL / OUTER AIR VENT

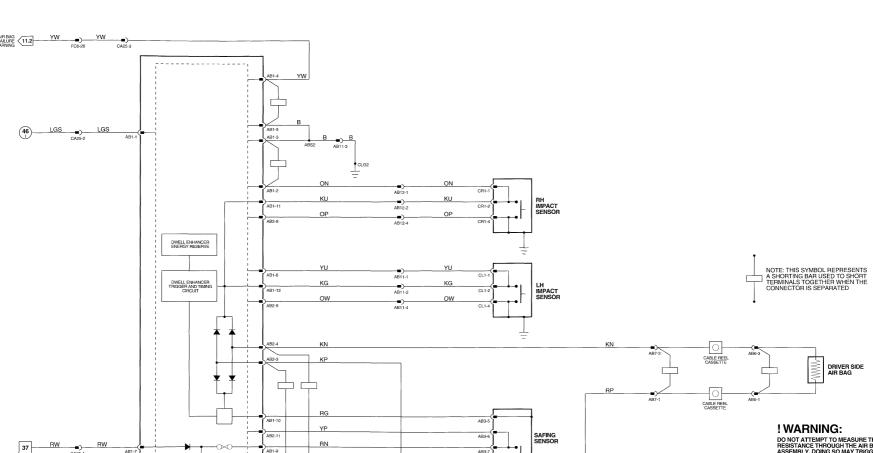
GROUNDS

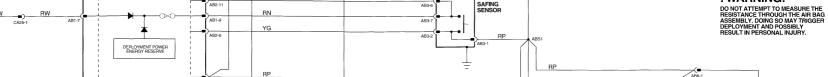
Ground Location / Type

CLG2 AIR BAG GROUND SCREW

REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

Fig. 19.1





AIR BAG DIAGNOSTIC MONITOR







RP







Signal Ground (SG)

VARIANT: Air Bag Vehicles VIN RANGE: 787954 → DATE OF ISSUE: JANUARY 1997

PASSENGER SIDE AIR BAG

COMPONENTS

Component

ACCESSORY CONNECTOR - CABIN

ACCESSORY CONNECTOR - TRUNK CARAVAN / TRAILER CONNECTOR CIGAR LIGHTER - FRONT

CIGAR LIGHTER - REAR

DOOR MIRROR - DRIVER DOOR MIRROR - PASSENGER ELECTROCHROMIC REAR VIEW MIRROR FOLD-BACK MIRROR SWITCH

FOLD-BACK MIRROR - DRIVER FOLD-BACK MIRROR - PASSENGER

HORN SWITCHES HORN - LH

HORN - RH

FUSE BOX - LH ENGINE BAY

UNIVERSAL GARAGE DOOR OPENER (INTERIOR MAP LAMP CONSOLE)

HORN RELAY (LH ENGINE BAY FUSE BOX)

Connector / Type / Color

CA71 / 3-WAY SERIES 250 / BLACK

BT12 / 3-WAY SERIES 250 / BLACK BT19 / 2-WAY ECONOSEAL III HC / BLACK CC9 / 2-WAY SERIES 250 / BLACK CC10 / LUCAR / BLACK CC16 / 2-WAY SERIES 250 / BLACK

CC17 / LUCAR / BLACK DD10 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK PD10 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK

CA85 / 4-WAY MULTILOCK 070 / WHITE FM1 / 7-WAY FORD / BLACK

DD10 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK PD10 (FLY LEAD) / 12-WAY MULTILOCK 040 / BLACK

SC9 / 2-WAY MULTILOCK 040 / BLACK LS43 / LUCAR / BLACK LS44 / LUCAR / BLACK LS44 / LUCAR / BLACK RS44 / LUCAR / BLACK RS44 / LUCAR / BLACK LS1 / 10-WAY UTA / BLACK LS37 / 10-WAY UTA / NATURAL

RIBBON CONNECTOR

Location / Access

SWB: LH 'A' POST / 'A' POST TRIM
LWB: RH HEELBOARD
TRUNK ELECTRICAL CARRIER
BEHIND BATTERY / TRUNK FLOOR TRIM

CENTER CONSOLE

CENTER CONSOLE MIRROR ASSEMBLY MIRROR ASSEMBLY

ROOF CONSOLE DRIVER'S DOOR SWITCH PACK / TOP ROLL, ARM REST

MIRROR ASSEMBLY MIRROR ASSEMBLY STEERING WHEEL

BEHIND FRONT GRILLE BEHIND FRONT GRILLE

ENGINE BAY, LH FRONT

ROOF CONSOLE

RELAYS Relay

CIGAR LIGHTER RELAY

Color / Stripe ACCESSORY RELAY

BROWN BLACK / BLUE BROWN

Connector / Color BT7 / YELLOW CA57 / BLUE

-/BLACK

Location / Access TRUNK ELECTRICAL CARRIER RH HEELBOARD LH ENGINE BAY FUSE BOX

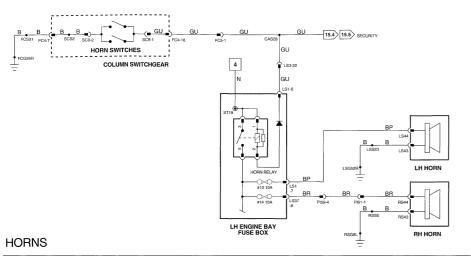
HARNESS-TO-HARNESS CONNECTORS

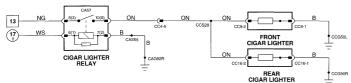
Connector	Type / Color	Location / Access
BT4	THROUGH-PANEL (48 MICRO / 6) / BLACK	ABOVE FUEL TANK / FUEL TANK TRIM
CA8	20-WAY MULTILOCK 040 / GREEN	DRIVER'S 'A' POST / 'A' POST TRIM
CA9	20-WAY MULTILOCK 040 / BLACK	DRIVER'S 'A' POST / 'A' POST TRIM
CA10	8-WAY MULTILOCK 070 / WHITE	DRIVER'S 'A' POST / 'A' POST TRIM
CA11	20-WAY MULTILOCK 040 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA12	14-WAY MULTILOCK 070 / WHITE	PASSENGER'S UNDERSCUTTLE / ECM
CA83	8-WAY MULTILOCK 040 / BLACK	ROOF CONSOLE
CC4	14-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
DD16	6-WAY MULTILOCK 040 / BLACK	DRIVER'S DOOR / DOOR CASING
FC4	20-WAY MULTILOCK 040 / BLUE	DRIVER'S UNDERSCUTTLE
FC5	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH FASCIA END PANEL / OUTER AIR VENT
LS3	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH 'A' POST / 'A' POST PANEL
P159	13-WAY ECONOSEAL III LC / BLACK	FORWARD OF LH ENGINE BAY FUSE BOX
PI61	13-WAY ECONOSEAL III LC / BLACK	REARWARD OF RH HEADLAMP

GROUNDS

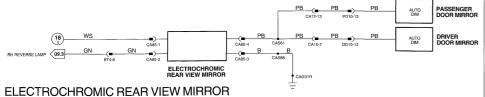
Ground	Location / Type
BTG18L	REAR TRUNK GROUND STUD
BTG18R	REAR TRUNK GROUND STUD
BTG49R	REAR TRUNK GROUND STUD
CAG30L	LH 'A' POST GROUND SCREW
CAG30R	LH 'A' POST GROUND SCREW
CAG31R	PARCEL SHELF GROUND SCREW
CAG33L	RH HEELBOARD GROUND SCREW
CAG92R	RH HEELBOARD GROUND SCREW
CCG50L	CENTER CONSOLE GROUND
CCG50R	CENTER CONSOLE GROUND
FCG26R	LH CONSOLE GROUND STUD
RSG8L	RIGHT FORWARD GROUND STUD

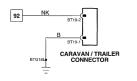
REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.



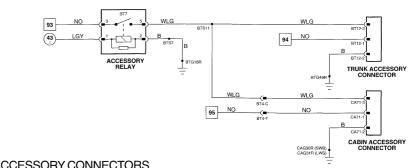


CIGAR LIGHTERS

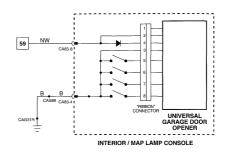




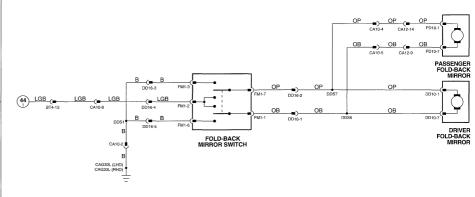
CARAVAN / TRAILER CONNECTOR



ACCESSORY CONNECTORS



UNIVERSAL GARAGE DOOR OPENER



FOLD-BACK MIRRORS

Fig. 21.

COMPONENTS

Component

ABS / TRACTION CONTROL CONTROL MODULE (LHD)
ABS / TRACTION CONTROL CONTROL MODULE (RHD)
AIR CONDITIONING CONTROL MODULE

BODY PROCESSOR MODULE

COLUMN / MIRROR MOVEMENT CONTROL MODULE

DATA LINK CONNECTOR ENGINE CONTROL MODULE (AJ16)

ENGINE CONTROL MODULE (V12)

INSTRUMENT PACK

SEAT CONTROL MODULE - DRIVER

(NAS VEHICLES)

SEAT CONTROL MODULE - DRIVER (ROW, MEMORY SEAT VEHICLES)

SEAT CONTROL MODULE - PASSENGER (NAS VEHICLES)

SEAT CONTROL MODULE -- PASSENGER (ROW, MEMORY SEAT VEHICLES)

SECURITY AND LOCKING CONTROL MODULE

TRANSMISSION CONTROL MODULE (AJ16 NA) TRANSMISSION CONTROL MODULE (V12) Connector / Type / Color

RS27 / 28-WAY FORD GTE / SLATE LS27 / 28-WAY FORD GTE / SLATE CC28 / 28-WAY MULTILOCK 47 / SLATE CC29 / 16-WAY MULTILOCK 40 / YELLOW CC30 / 12-WAY MULTILOCK 47 / SLATE CC31 / 22-WAY MULTILOCK 47 / WHITE FC1 / 48-WAY PCB SIGNAL / YELLOW

CC31/22-WAY MULTILOCK 47/WHITE FC1/48-WAY PCB SIGNAL / YELLOW FC2/48-WAY PCB SIGNAL / BLACK FC3/5-WAY PCB SIGNAL / BLACK FC45/28-WAY MULTILOCK 47/SLATE FC46/18-WAY MULTILOCK 47/SLATE FC47/12-WAY MULTILOCK 47/SLATE CC6/16-WAY ODD II/BLACK

P1104 / 36-WAY ECONOSEAL III / BLACK P1105 / 36-WAY ECONOSEAL III / RED P144 / 28-WAY MULTILOCK 040 / SLATE P145 / 16-WAY MULTILOCK 040 / SLATE P146 / 22-WAY MULTILOCK 040 / SLATE P147 / 34-WAY MULTILOCK 040 / SLATE

FC9 / 24-WAY AMP PCB SIGNAL / BLACK FC10 / 48-WAY AMP PCB SIGNAL / BLACK CA105 / 22-WAY MULTILOCK 47 / BLUE CA106 / 12-WAY MULTILOCK 47 / BLUE SM1-D / 12-WAY MULTILOCK 47 / BLUE SM6-D / 22-WAY MULTILOCK 47 / WHITE PL1 / 22-WAY MULTILOCK 47 / BLUE

PL2, 12-WAY MULTILOCK 47 / BLUE SMi-D / 12-WAY MULTILOCK 47 / BLUE SMi-D / 16-WAY MULTILOCK 40 / BLUE CA107 / 22-WAY MULTILOCK 47 / BLUE CA108 / 12-WAY MULTILOCK 47 / BLUE SMi-P / 12-WAY MULTILOCK 47 / WHITE PL2 / 12-WAY MULTILOCK 47 / WHITE PL2 / 12-WAY MULTILOCK 47 / BLUE PL2 / 12-WAY MULTILOCK 47 / BLUE SMi-P / 12-WAY MULTILOCK 47 / WHITE PL2 / 12-WAY MULTILOCK 47 / WHITE

SM6-P / 22-WAY MULTILOCK 47 / WHITE CA18 / 12-WAY MULTILOCK 47 / SLATE CA19 / 22-WAY MULTILOCK 47 / SLATE CA20 / 16-WAY MULTILOCK 47 / SLATE CA21 / 26-WAY MULTILOCK 47 / SLATE CC2 / 45-WAY MULTILOCK 47 / SLATE

CC7 / 55-WAY BOSCH / NATURAL CC48 / 55-WAY AMP 55 / BLACK Location / Access

ENGINE BAY / RH REAR ENGINE BAY / LH REAR A/C UNIT, RH SIDE / RH UNDERSCUTTLE

PASSENGER'S UNDERSCUTTLE

RH UNDERSCUTTLE

DRIVER'S 'A' POST RH 'A' POST / 'A' POST TRIM

RH 'A' POST / 'A' POST TRIM

INSTRUMENT PACK

DRIVER'S SEAT

DRIVER'S SEAT

PASSENGER'S SEAT

PASSENGER'S SEAT

TRUNK, LH FRONT / TRUNK TRIM

PASSENGER'S UNDERSCUTTLE PASSENGER'S UNDERSCUTTLE

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
CA23	20-WAY MULTILOCK 040 / BLACK	DRIVER'S SEAT / UNDER
CA28	20-WAY MULTILOCK 040 / BLACK	PASSENGER'S SEAT / UNDER
CC18	20-WAY MULTILOCK 070 / YELLOW	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
CC3	20-WAY MULTILOCK 070 / SLATE	CENTER CONSOLE / CENTER CONSOLE GLOVE BOX
FC7	THROUGH-PANEL (48 MICRO / 6) / BLACK	PASSENGER'S UNDERSCUTTLE
LS3	THROUGH-PANEL (48 MICRO / 6) / BLACK	LH 'A' POST / 'A' POST PANEL
Pf59	13-WAY ECONOSEAL III LC / BLACK	FORWARD OF LH ENGINE BAY FUSE BOX
RS3	THROUGH-PANEL (48 MICRO / 6) / BROWN	RH 'A' POST / 'A' POST PANEL

GROUNDS

Ground	Location / Type
CG51L	CENTER CONSOLE GROUND STUD

REFER TO THE FRONT OF THE BOOK FOR ILLUSTRATIONS DETAILING THE LOCATION AND IDENTIFICATION OF COMPONENTS, RELAYS, CONNECTORS, HARNESSES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

