



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



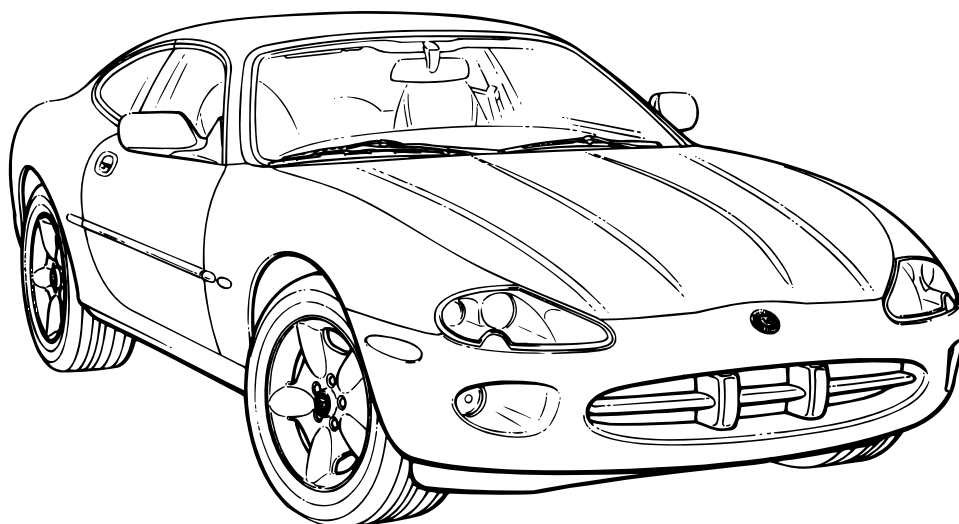
BY APPOINTMENT TO
HER MAJESTY QUEEN ELIZABETH
THE QUEEN MOTHER
MANUFACTURERS OF DAIMLER AND JAGUAR CARS
JAGUAR CARS LIMITED COVENTRY



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

JAGUAR **XK8**

1997 Range 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, and information and illustrations to aid in the understanding of the XK8 electrical / electronic systems, as well as the location and identification of 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:

B+	Battery Voltage
CAN	Controller Area Network
COUPE	Coupe Vehicles
CONV.	Convertible Vehicles
DI	Direction Indicator
LH	Left-Hand
LHD	Left-Hand Drive
NAS	North American Specification
RH	Right-Hand
RHD	Right-Hand Drive
ROW	Rest of World
SCP	Standard Corporate Protocol Network
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”.

XK8 Electrical System Architecture

The XK8 system “architecture” is new to Jaguar vehicles and features vehicle multiplexing. Multiplexing allows for greatly simplified wiring harnesses, while at the same time allowing flexibility in programming market variants. Two data networks are used in the system: a controller area network (CAN) for the engine, drive train and related systems, and a standard corporate protocol network (SCP) for the body systems. Any vehicle subsystem depicted on the figures with the CAN or SCP included uses data derived from the network, or transmits data via the network to achieve control. Messages for both networks are cataloged in the Appendix of this book. When appropriate, the user will be referred to the Appendix by a note on the Data page. In addition to the two networks, the XK8 uses a serial data bus (ISO) for diagnostics and for the programming of certain control modules.

The XK8 uses both power and logic grounds; however, it does not use a common logic ground stud connection as in previous vehicles.



Component Index	5 – 9
User Instructions	10 – 15
Connectors	16
Main Power Distribution; Ground Point Identification and Location	17
Harness Layout	18
Control Module Identification and Location	19
Control Module Connector Pin Identification and Location	20 – 22
Relay and Fuse Box Identification and Location	23

NOTE: The Appendix, which contains a catalog of CAN and SCP Network messages, follows the Figure and Data pages.

**FIGURES**

Fig.	Description	Variant
01	Power Distribution	
01.1	Main Power Distribution	All Vehicles
01.2	Battery Power Distribution – Driver and Passenger Fuse Boxes	All Vehicles
01.3	Battery Power Distribution – Trunk, Engine Compartment, EMS Fuse Boxes	All Vehicles
01.4	Ignition Switched Power Distribution	All Vehicles
01.5	Engine Management Switched Power Distribution	All Vehicles
02	Ground Distribution	
02.1	Ignition Switched Ground Distribution	All Vehicles
03	Battery; Starter; Generator	
03.1	Battery; Starter; Generator	All Vehicles
04	Engine Management	
04.1	AJ26 NAS Engine Management, Part 1	AJ26 NAS Vehicles
04.2	AJ26 NAS Engine Management, Part 2	AJ26 NAS Vehicles
04.3	AJ26 ROW Engine Management, Part 1	AJ26 ROW Vehicles
04.4	AJ26 ROW Engine Management, Part 2	AJ26 ROW Vehicles
05	Transmission	
05.1	AJ26 Automatic Transmission	All Vehicles
05.2	Gear Shift Interlock	All Vehicles
06	Anti-Lock Braking; Traction Control	
06.1	Anti-Lock Braking; Traction Control	All Vehicles
07	Climate Control	
07.1	Climate Control, Part 1	All Vehicles
07.2	Climate Control, Part 2	All Vehicles
08	Instrumentation; Audible Warnings	
08.1	Instrument Packs	All Vehicles
08.2	Audible Warnings	All Vehicles
09	Exterior Lighting	
09.1	Exterior Lighting – Front	All Vehicles
09.2	Exterior Lighting – Rear	All Vehicles
09.3	Headlamp Leveling	Headlamp Leveling Vehicles



FIGURES

Fig.	Description	Variant
10	Interior Lighting	
10.1	Interior Lighting	All Vehicles
10.2	Dimmer-Controlled Lighting	All Vehicles
11	Steering; Mirrors; Suspension	
11.1	Power Assisted Steering	All Vehicles
11.2	Steering Column Movement	All Vehicles
11.3	Mirror Movement	All Vehicles
11.4	Mirror Electrochromic Tint; Fold-Back Mirrors	All Vehicles
11.5	Suspension Adaptive Damping	Adaptive Damping Vehicles
12	Seat Systems	
12.1	Driver's Seat – Memory	Memory Seat Vehicles
12.2	Driver's Seat – Non Memory	Non Memory Seat Vehicles
12.3	Passenger's Seat – 3-Way Movement	3-Way Movement Vehicles
12.4	Passenger's Seat – 2-Way Movement	2-Way Movement Vehicles
13	Door Locking	
13.1	Central Door Locking	All Vehicles
14	Wash / Wipe System	
14.1	Wash / Wipe System	All Vehicles
15	Window Lifts; Convertible Top	
15.1	Window Lifts	All Vehicles
15.2	Convertible Top	Convertible Vehicles
16	In-Car Entertainment; Telephone	
16.1	Standard In-Car Entertainment – Convertible	Convertible Vehicles
16.2	Standard In-Car Entertainment – Coupe	Coupe Vehicles
16.3	Premium In-Car Entertainment	Premium ICE Vehicles
16.4	Radio Telephone	All Vehicles
17	Supplementary Restraint System	
17.1	Airbag System	All Vehicles
18	Ancillaries	
18.1	Ancillaries: Horns; Cigar Lighters; Accessory Connectors; Garage Door Opener	All Vehicles
19	Vehicle Network Systems	
19.1	Networks; Serial Data Links	All Vehicles



ABS / TRACTION CONTROL CONTROL MODULE	Fig. 06.1	BRAKE SWITCH – LHD	Fig. 04.1
.....	Fig. 19.1	.....	Fig. 04.3
ACCELEROMETERS	Fig. 11.5	.....	Fig. 05.2
ACTIVE SECURITY SOUNDER	Fig. 13.2	.....	Fig. 06.1
ADAPTIVE DAMPING CONTROL MODULE	Fig. 11.5	.....	Fig. 09.2
.....	Fig. 19.1	.....	Fig. 11.5
AIR CONDITIONING COMPRESSOR CLUTCH	Fig. 04.2	BRAKE SWITCH – RHD	Fig. 04.1
.....	Fig. 04.4	.....	Fig. 04.3
.....	Fig. 07.2	.....	Fig. 05.2
AIR CONDITIONING CONTROL MODULE	Fig. 04.2	.....	Fig. 06.1
.....	Fig. 04.4	.....	Fig. 09.2
.....	Fig. 07.1	.....	Fig. 11.5
.....	Fig. 07.2	CAMSHAFT POSITION SENSOR	Fig. 04.1
.....	Fig. 19.1	.....	Fig. 04.3
AIR CONDITIONING CONTROL PANEL	Fig. 07.1	CATALYST SWITCHING MODULE	Fig. 04.3
.....	Fig. 10.2	CATALYST THERMOCOUPLES	Fig. 04.3
AIR INTAKE – LH	Fig. 07.1	CD AUTO-CHANGER	Fig. 16.1
AIR INTAKE – RH	Fig. 07.1	.....	Fig. 16.2
AIRBAG / SRS CONTROL MODULE	Fig. 17.1	.....	Fig. 16.3
.....	Fig. 19.1	CENTER CONSOLE SWITCH PACK	Fig. 09.1
AIRBAG INTERROGATION CONNECTOR	Fig. 17.1	.....	Fig. 09.2
AIRBAGS	Fig. 17.1	.....	Fig. 10.2
AMBIENT TEMPERATURE SENSOR	Fig. 07.1	CIGAR LIGHTERS	Fig. 10.2
ANTENNA MOTOR	Fig. 16.3	.....	Fig. 18.1
ASPIRATOR ASSEMBLY	Fig. 07.1	COLUMN JOY STICK (COLUMN SWITCHGEAR)	Fig. 11.2
AUDIBLE WARNING SPEAKER (COLUMN SWITCHGEAR)	Fig. 08.2	COMPRESSOR LOCK SENSOR	Fig. 07.1
AUTO TILT SWITCH (COLUMN SWITCHGEAR)	Fig. 11.2	CONVERTIBLE TOP DOWN SWITCH	Fig. 11.4
BATTERY	Fig. 01.1	CONVERTIBLE TOP PUMP	Fig. 15.2
.....	Fig. 03.1	CONVERTIBLE TOP SWITCH	Fig. 10.2
BLOWER MOTORS	Fig. 07.2	.....	Fig. 15.2
BODY PROCESSOR MODULE	Fig. 03.1	COOLANT LEVEL SWITCH	Fig. 08.1
.....	Fig. 05.2	CRUISE CONTROL ON / OFF SWITCH	Fig. 10.2
.....	Fig. 08.2	CRUISE CONTROL SWITCH	Fig. 04.2
.....	Fig. 09.1	.....	Fig. 04.4
.....	Fig. 09.2	CRUISE CONTROL SWITCHES (STEERING WHEEL)	Fig. 04.2
.....	Fig. 10.1	.....	Fig. 04.4
.....	Fig. 11.2	D – 4 SWITCH	Fig. 05.1
.....	Fig. 11.3	DAMPER SOLENOIDS	Fig. 11.5
.....	Fig. 12.1	DATA LINK CONNECTOR	Fig. 19.1
.....	Fig. 12.2	DELAY TIMER	Fig. 01.1
.....	Fig. 12.3	DIFFERENTIAL CONTROL POTENTIOMETER	Fig. 07.1
.....	Fig. 12.4	DIMMER CONTROL (COLUMN SWITCHGEAR)	Fig. 10.2
.....	Fig. 13.1	DIMMER MODULE	Fig. 10.2
.....	Fig. 13.2	DIODE (BT29) – TRUNK SWITCH	Fig. 10.1
.....	Fig. 13.3	DIODE (LT2) – TRANSIT ISOLATION	Fig. 01.1
.....	Fig. 14.1		
.....	Fig. 15.1		
.....	Fig. 18.1		
.....	Fig. 19.1		
BRAKE CANCEL SWITCH – LHD	Fig. 04.2		
.....	Fig. 04.4		
BRAKE CANCEL SWITCH – RHD	Fig. 04.2		
.....	Fig. 04.4		
BRAKE FLUID RESERVOIR	Fig. 06.1		



DOOR CONTROL MODULE – DRIVER	Fig. 10.1	FASCIA ACCESSORY CONNECTOR	Fig. 18.1
.....	Fig. 11.2	FOOTWELL LAMPS	Fig. 10.1
.....	Fig. 11.3	FRONT FOG LAMPS	Fig. 09.1
.....	Fig. 11.4	FRONT LAMP UNITS	Fig. 09.1
.....	Fig. 12.1	FUEL FILL FLAP SOLENOID	Fig. 13.1
.....	Fig. 13.1	FUEL INJECTORS	Fig. 04.2
.....	Fig. 13.2	.....	Fig. 04.4
.....	Fig. 13.3	FUEL LEVEL SENSOR	Fig. 08.1
.....	Fig. 15.1	FUEL PUMP	Fig. 04.2
.....	Fig. 15.2	.....	Fig. 04.4
.....	Fig. 19.1	FULL RANGE SPEAKERS	Fig. 16.1
DOOR CONTROL MODULE – PASSENGER	Fig. 10.1	.....	Fig. 16.2
.....	Fig. 11.3	FUSE BOX – DRIVER SIDE	Fig. 01.1
.....	Fig. 13.1	.....	Fig. 01.2
.....	Fig. 13.2	.....	Fig. 01.4
.....	Fig. 13.3	FUSE BOX – ENGINE COMPARTMENT	Fig. 01.1
.....	Fig. 15.1	.....	Fig. 01.3
.....	Fig. 15.2	.....	Fig. 01.4
.....	Fig. 19.1	.....	Fig. 07.2
DOOR LOCK ACTUATORS	Fig. 13.1	.....	Fig. 09.1
DOOR LOCK SWITCH – PASSENGER	Fig. 13.1	.....	Fig. 13.2
DOOR LOCK SWITCHES – DRIVER	Fig. 10.1	.....	Fig. 13.3
.....	Fig. 13.1	.....	Fig. 14.1
.....	Fig. 13.2	.....	Fig. 18.1
.....	Fig. 13.3	FUSE BOX – ENGINE MANAGEMENT	Fig. 01.1
.....	Fig. 15.1	.....	Fig. 01.3
DOOR MIRROR MOTORS	Fig. 11.3	.....	Fig. 01.5
DOOR MIRRORS	Fig. 07.2	FUSE BOX – PASSENGER SIDE	Fig. 01.1
.....	Fig. 11.4	.....	Fig. 01.2
DOOR SWITCH – DRIVER	Fig. 10.1	.....	Fig. 01.4
.....	Fig. 11.2	FUSE BOX – TRUNK	Fig. 01.1
.....	Fig. 11.3	.....	Fig. 01.3
.....	Fig. 13.1	.....	Fig. 01.4
.....	Fig. 13.2	.....	Fig. 04.2
.....	Fig. 13.3	.....	Fig. 04.4
DOOR SWITCH – PASSENGER	Fig. 10.1	.....	Fig. 07.2
.....	Fig. 13.1	.....	Fig. 09.2
.....	Fig. 13.2	.....	Fig. 18.1
.....	Fig. 13.3	GARAGE DOOR OPENER (ROOF CONSOLE)	Fig. 18.1
ECM AND TCM COOLING FAN	Fig. 04.1	GEAR SELECTOR MODULE	Fig. 05.1
.....	Fig. 04.3	.....	Fig. 05.2
EGR VALVES	Fig. 04.1	.....	Fig. 10.2
ENGINE COMPARTMENT SECURITY SWITCH	Fig. 13.2	.....	Fig. 19.1
.....	Fig. 13.3	GEARSHIFT INTERLOCK SOLENOID	Fig. 05.2
ENGINE CONTROL MODULE	Fig. 03.1	GENERATOR	Fig. 03.1
.....	Fig. 04.1	GLASS BREAKAGE SENSOR (ROOF CONSOLE)	Fig. 13.2
.....	Fig. 04.2	GLOVE BOX LAMP	Fig. 10.1
.....	Fig. 04.3	HANDSET	Fig. 16.4
.....	Fig. 04.4	HEADLAMP LEVELING ACTUATORS	Fig. 09.3
.....	Fig. 05.2	HEATED BACKLIGHT	Fig. 07.2
.....	Fig. 07.2	HEATED OXYGEN SENSORS	Fig. 04.1
.....	Fig. 13.2	.....	Fig. 04.3
.....	Fig. 13.3	HEATER PUMP	Fig. 07.2
.....	Fig. 19.1	HEATER VALVE	Fig. 07.2
ENGINE COOLANT TEMPERATURE SENSOR	Fig. 04.1	HIGH MOUNT STOP LAMP (CONV.)	Fig. 09.2
.....	Fig. 04.3		
ENGINE SPEED SENSOR	Fig. 04.1		
.....	Fig. 04.3		
EVAPORATIVE EMISSION CONTROL VALVE	Fig. 04.1		
.....	Fig. 04.3		
EVAPORATOR / HEATER MATRIX ASSEMBLY	Fig. 07.1		



HIGH MOUNT STOP LAMP (COUPE)	Fig. 09.2	MAJOR INSTRUMENT PACK	Fig. 05.2
HIGH POWER PROTECTION MODULE	Fig. 01.1	.....	Fig. 08.1
.....	Fig. 03.1	.....	Fig. 09.1
HORN SWITCHES (STEERING WHEEL)	Fig. 18.1	.....	Fig. 09.2
HORNS	Fig. 13.2	.....	Fig. 10.2
.....	Fig. 13.3	.....	Fig. 11.2
.....	Fig. 18.1	.....	Fig. 11.3
IGNITION COILS	Fig. 04.2	.....	Fig. 11.4
.....	Fig. 04.4	.....	Fig. 12.1
IGNITION MODULES	Fig. 04.2	.....	Fig. 13.2
.....	Fig. 04.4	.....	Fig. 13.3
IGNITION SWITCH (KEY-IN SWITCH)	Fig. 10.1	.....	Fig. 15.1
.....	Fig. 11.2	.....	Fig. 15.2
.....	Fig. 13.1	.....	Fig. 16.1
.....	Fig. 13.3	.....	Fig. 16.2
IGNITION SWITCH	Fig. 02.1	.....	Fig. 16.3
.....	Fig. 03.1	.....	Fig. 19.1
IMPACT SENSORS	Fig. 17.1	MASS AIR FLOW SENSOR	Fig. 04.1
INCLINATION SENSOR	Fig. 13.2	.....	Fig. 04.3
INERTIA SWITCH	Fig. 02.1	MICROPHONE (TELEPHONE)	Fig. 16.4
INTERIOR REAR VIEW MIRROR (ELECTROCHROMIC)	Fig. 11.4	MID-BASS SPEAKERS	Fig. 16.3
KEY FOB ANTENNAS	Fig. 13.1	MINOR INSTRUMENT PACK	Fig. 08.1
.....	Fig. 13.2	.....	Fig. 10.2
.....	Fig. 13.3	MIRROR JOYSTICK (DRIVER DOOR SWITCH PACK)	Fig. 11.3
KEY TRANSPONDER MODULE	Fig. 03.1	.....	Fig. 11.4
.....	Fig. 13.2	MODE SWITCH (TRANSMISSION)	Fig. 05.1
.....	Fig. 19.1	.....	Fig. 10.2
KEYLOCK SOLENOID (COLUMN SWITCHGEAR)	Fig. 05.2	NEUTRAL SWITCH	Fig. 03.1
KICKDOWN SWITCH – LHD	Fig. 05.1	NOT-IN-PARK MICROSWITCH	Fig. 05.2
KICKDOWN SWITCH – RHD	Fig. 05.1	.....	Fig. 11.2
KNOCK SENSORS	Fig. 04.1	.....	Fig. 11.3
.....	Fig. 04.3	.....	Fig. 13.1
LAMP CONTROL MODULE	Fig. 09.2	NUMBER PLATE LAMPS	Fig. 09.2
LATCH CONTROL VALVE	Fig. 15.2	OIL PRESSURE SWITCH	Fig. 08.1
LEVELING SWITCH (CENTER CONSOLE SWITCH PACK)	Fig. 09.3	PARKING BRAKE SWITCH	Fig. 04.1
LIGHTING STALK (COLUMN SWITCHGEAR)	Fig. 09.1	.....	Fig. 04.3
.....	Fig. 09.2	PASSIVE SECURITY SOUNDER	Fig. 13.2
.....	Fig. 10.2	PEDAL POSITION AND MECHANICAL GUARD SENSORS	Fig. 04.1
.....	Fig. 11.4	.....	Fig. 04.3
.....	Fig. 14.1	POWER AMPLIFIER	Fig. 16.3
MAIN CONTROL VALVE	Fig. 15.2	POWER ASSISTED STEERING CONTROL MODULE	Fig. 11.1
		POWER WASH PUMP	Fig. 14.1
		PUDDLE LAMPS	Fig. 10.1
		QUARTER LIGHT LIFTS	Fig. 15.2
		RADIATOR FAN CONTROL RELAY MODULE	Fig. 04.2
		.....	Fig. 04.4
		.....	Fig. 07.2
		RADIATOR FANS	Fig. 04.2
		.....	Fig. 04.4
		.....	Fig. 07.2
		RADIO / CASSETTE HEAD UNIT	Fig. 16.1
		.....	Fig. 16.2
		.....	Fig. 16.3
		.....	Fig. 16.4
		RADIO ANTENNA	Fig. 16.1
		.....	Fig. 16.2
		.....	Fig. 16.3



RADIO CONTROL SWITCHES (STEERING WHEEL)	Fig. 16.1	SIDE MARKERS (NAS ONLY)	Fig. 09.1
.....	Fig. 16.2	.....	Fig. 09.2
.....	Fig. 16.3	SOLAR SENSOR	Fig. 07.1
RADIO ILLUMINATION	Fig. 10.2	SQUAB (HEATERS) – DRIVER	Fig. 12.1
READER / EXCITER COIL (COLUMN SWITCHGEAR)	Fig. 13.2	.....	Fig. 12.2
REAR INTERIOR LAMP (COUPE ONLY)	Fig. 10.1	SQUAWKERS (FASCIA)	Fig. 16.3
REAR QUARTER FULL RANGE SPEAKERS	Fig. 16.1	STABILITY / TRACTION CONTROL SWITCH	
.....	Fig. 16.2	(CENTER CONSOLE SWITCH PACK)	Fig. 06.1
REAR QUARTER MID-RANGE SPEAKERS	Fig. 16.3	STARTER MOTOR	Fig. 03.1
REAR SUB-WOOFERS	Fig. 16.3	STEERING COLUMN MOTORS	Fig. 11.2
REFRIGERANT 4-WAY PRESSURE SWITCH	Fig. 04.2	SUPPRESSION MODULE	Fig. 03.1
.....	Fig. 04.4	SWITCH PACK – DRIVER DOOR	Fig. 10.2
.....	Fig. 07.2	SWITCH PACK – DRIVER DOOR MEMORY	Fig. 10.2
REGULATOR	Fig. 03.1	.....	Fig. 11.2
ROOF CONSOLE	Fig. 10.1	.....	Fig. 11.3
SEAT BELT SWITCH	Fig. 12.1	.....	Fig. 12.1
.....	Fig. 12.2	SWITCH PACK – DRIVER SEAT	Fig. 12.1
SEAT CONTROL MODULE – DRIVER	Fig. 11.4	.....	Fig. 12.2
.....	Fig. 12.1	SWITCH PACK – PASSENGER DOOR	Fig. 10.2
.....	Fig. 12.2	SWITCH PACK – PASSENGER SEAT	Fig. 12.3
.....	Fig. 19.1	.....	Fig. 12.4
SEAT CONTROL MODULE – PASSENGER	Fig. 11.4	TAIL LAMP UNITS	Fig. 09.2
.....	Fig. 12.3	TELEPHONE ANTENNA	Fig. 16.4
.....	Fig. 12.4	TELEPHONE TRANSCEIVER	Fig. 16.4
.....	Fig. 19.1	THROTTLE MOTOR	Fig. 04.1
SEAT CUSHION (HEATER) – DRIVER	Fig. 12.1	.....	Fig. 04.3
.....	Fig. 12.2	THROTTLE POSITION SENSOR	Fig. 04.1
SEAT CUSHION (HEATER) – PASSENGER	Fig. 12.3	.....	Fig. 04.3
.....	Fig. 12.4	TOP CLOSED SWITCH	Fig. 15.2
SEAT HEATER SWITCH		TOP DOWN SWITCH	Fig. 15.2
(CENTER CONSOLE SWITCH PACK)	Fig. 12.1	TOP LATCH CLOSED SWITCH	Fig. 15.2
.....	Fig. 12.2	TOP RAISED SWITCH	Fig. 15.2
.....	Fig. 12.3	TOP READY-TO-LATCH SWITCH	Fig. 15.2
.....	Fig. 12.4	TRANSIT ISOLATION DEVICE	Fig. 01.1
SEAT LUMBAR PUMP – DRIVER	Fig. 12.1	TRANSMISSION CONTROL MODULE	Fig. 05.1
.....	Fig. 12.2	.....	Fig. 19.1
SEAT LUMBAR PUMP – PASSENGER	Fig. 12.3	TRANSMISSION ELECTRICS	Fig. 05.1
SEAT MOTORS – DRIVER	Fig. 12.1	TRANSMISSION ROTARY SWITCH	Fig. 05.1
.....	Fig. 12.2	TRIP COMPUTER SWITCH PACK	Fig. 08.1
SEAT MOTORS – PASSENGER	Fig. 12.3	.....	Fig. 10.2
.....	Fig. 12.4	TRIP CYCLE SWITCH (COLUMN SWITCHGEAR)	Fig. 08.1
SECURITY ACTIVE INDICATOR		TRUNK ACCESSORY CONNECTOR	Fig. 01.1
(GEAR SELECTOR MODULE)	Fig. 13.2	.....	Fig. 18.1
.....	Fig. 13.3	TRUNK AND FUEL FILL RELEASE SWITCH	Fig. 10.2
SECURITY AND LOCKING CONTROL MODULE	Fig. 09.2	.....	Fig. 13.1
.....	Fig. 11.4	TRUNK LAMP S	Fig. 10.1
.....	Fig. 13.1	TRUNK RELEASE SOLENOID	Fig. 13.1
.....	Fig. 13.2		
.....	Fig. 13.3		
.....	Fig. 15.1		
.....	Fig. 15.2		
.....	Fig. 19.1		
SECURITY SOUNDER	Fig. 13.3		
SIDE DI REPEATERS (ROW)	Fig. 09.1		
.....	Fig. 09.1		



TRUNK SWITCH	Fig. 10.1
.....	Fig. 13.1
.....	Fig. 13.2
.....	Fig. 13.3
TWEETERS	Fig. 16.3
VACUUM SWITCHING VALVES	Fig. 04.1
.....	Fig. 04.3
VALET SWITCH	Fig. 10.2
.....	Fig. 13.1
.....	Fig. 13.2
.....	Fig. 13.3
VANITY LAMPS	Fig. 10.1
VARIABLE STEERING CONVERTER – LHD	Fig. 11.1
VARIABLE STEERING CONVERTER – RHD	Fig. 11.1
VARIABLE VALVE TIMING SOLENOID VALVES	Fig. 04.1
.....	Fig. 04.3
VENT ASSEMBLY	Fig. 07.1
VOICE RECOGNITION ACTIVATION SWITCH (NAS VEHICLES ONLY)	Fig. 10.2
.....	Fig. 16.4
WASH / WIPE STALK (COLUMN SWITCHGEAR)	Fig. 14.1
WHEEL SPEED SENSORS	Fig. 06.1
WINDOW LIFT SWITCHES – DRIVER DOOR (DRIVER DOOR SWITCH PACK)	Fig. 15.1
WINDOW LIFT SWITCHES – PASSENGER DOOR (PASSENGER DOOR SWITCH PACK)	Fig. 15.1
WINDOW LIFTS	Fig. 15.1
WINDSHIELD HEATERS	Fig. 07.2
WINDSHIELD WASH PUMP AND FLUID LEVEL SENSOR	Fig. 14.1
WIPER MOTOR	Fig. 14.1



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 to a specific Figure and from a specific Figure back to the Power Distribution Figures. This method eliminates the need to include detailed Power Distribution information on each of the Figures. Similarly, the Figure **02 – Ground Distribution** details the ignition switched ground distribution. The reference symbols are defined on page 12.

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.

When network data is required for the understanding of a particular circuit, the user is directed to the Appendix.

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.



CONTROL MODULE PIN OUT INFORMATION

FIGURE NUMBER

COMPONENT, RELAY, CONNECTOR AND GROUND INFORMATION

CONTROL MODULE PIN OUT INFORMATION				Fig. 03.1			
ENGINE CONTROL MODULE				COMPONENTS			
Pin	Description	Active	Inactive	Component	Connector / Type / Color	Location / Access	
D	EM5-17 SECURITY ACKNOWLEDGE	ENCODED COMMUNICATIONS		BATTERY	BT01 / 10-17	TRUNK, RIGHT HAND SIDE	
D	EM5-18 ON TO START - ENCODED COMMUNICATIONS			BODY PROCESSOR MODULE	PC101 20-WAY W/AL TUCK 001 / SLATE	PASSENGER SIDE FUSION / HARNESS BUNDLE	
I	EM11-4 ENGINE CRANK	GROUND (CHASSIS)	B+	ENGINE CONTROL MODULE	EM01 20-WAY W/AL TUCK 001 / SLATE	ENGINE COMPARTMENT / CONTROL MODULE ENCLOSURE	
KEY TRANSPONDER MODULE (OPTIONAL)				GENERATOR	GT01 10-17	ENGINE COMPARTMENT / RIGHT FRONT	
D	PC20-9 GLASS BREAKAGE / ON TO START (ENCODED COMMUNICATION)	Active	Inactive	HIGH POWER PROTECTION MODULE	HP01 10-17	TRUNK / ADJACENT TO BATTERY	
D	PC20-10 ON TO START (ENCODED COMMUNICATION)			IGNITION SWITCH (KEY-IN SWITCH)	IS01 10-17	STEERING COLUMN	
D	PC20-11 SECURITY ACKNOWLEDGE (ENCODED COMMUNICATION)			KEY TRANSPONDER MODULE	KT01 10-17	ADJACENT TO PASSENGER SIDE FUSE BOX	
D	PC20-12 SECURITY ACKNOWLEDGE (ENCODED COMMUNICATION)			NEUTRAL SWITCH	NS01 10-17	GEAR SELECTOR ASSEMBLY	
D	PC20-13 SECURITY ACKNOWLEDGE (ENCODED COMMUNICATION)			REGULATOR (GENERATOR)	RG01 2-WAY W/AL TUCK 002 / BLACK	ENGINE COMPARTMENT / GENERATOR	
D	PC20-14 SECURITY ACKNOWLEDGE (ENCODED COMMUNICATION)			STARTER MOTOR	ST01 10-17	ENGINE BLOCK	
D	PC20-15			SUPPRESSION MODULE	SM01 10-17	ENGINE COMPARTMENT / FORWARD OF GENERATOR	
D	PC20-16						
D	PC20-17						
D	PC20-18						
D	PC20-19						
D	PC20-20						
D	PC20-21						
D	PC20-22						
D	PC20-23						
D	PC20-24						
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D	PC20-28						
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D	PC20-275						
D	PC20-276						



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

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

Battery Power Supply

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

Ignition Switched Power Supply

This symbol represents ignition switched power supply and refers the user to Figure 01.1, 01.4 or 01.5.

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).

The suffix E indicates engine management switched power. Power is supplied in ignition switch key positions II (IGNITION) and III (ENGINE CRANK) under ECM control.

Ignition Switched Ground

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

This symbol without a 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).

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 02.1, 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. When circuits are not overlapped, they are noted by (CIRCUIT CONTINUED).

BPM Because the Body Processor Module appears numerous times, the abbreviation BPM is used in the reference flags on Figures 01.2 and 02.1 in order to conserve space.

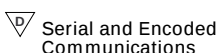
Control Module Input, Output, Data Link, Signal Ground and Network(s)



Input



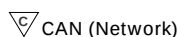
Output



Serial and Encoded
Communications



Signal Ground (SG)



CAN (Network)

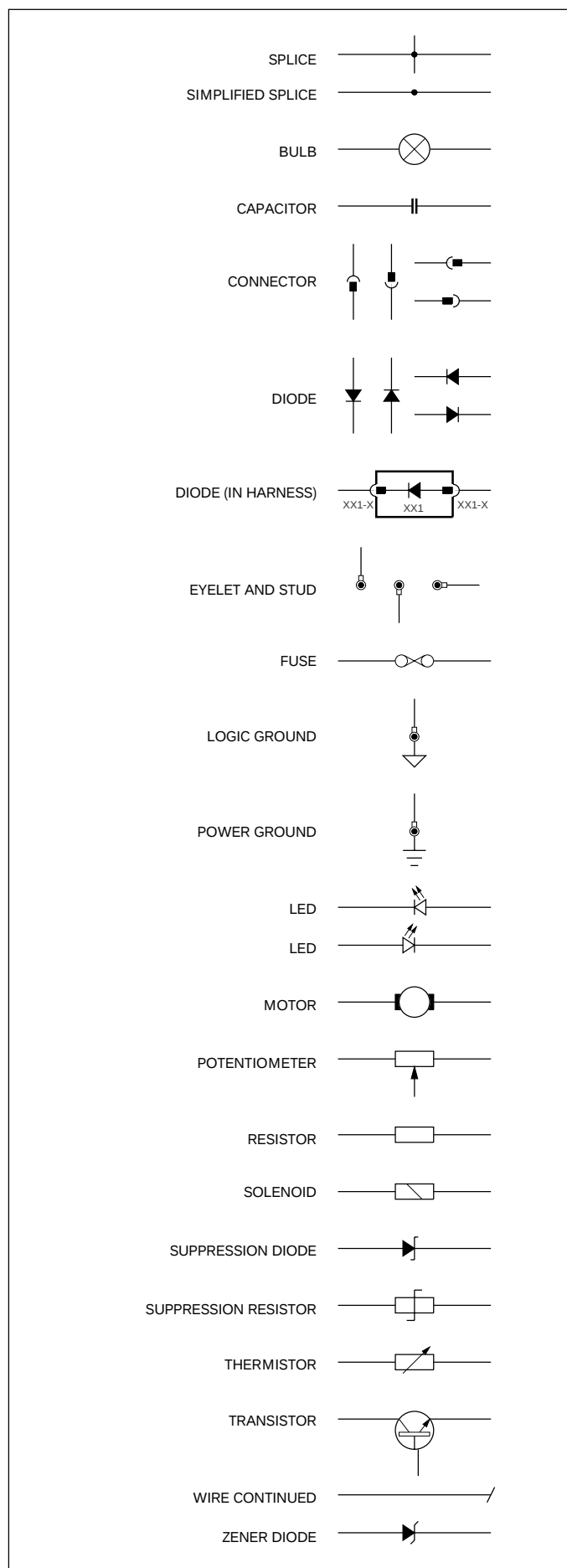


SCP Network

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



Wiring Symbols



Wiring Color Codes

N	Brown	O	Orange
B	Black	S	Slate
W	White	L	Light
K	Pink	U	Blue
G	Green	P	Purple
R	Red	T	Tan
Y	Yellow	BRD	Braid

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
AC	Air Conditioning (Climate Control)
AN	Generator Suppression Module
AS	Generator to Starter
BB	Trunk Bridging Link
BC	Main Power Distribution
BL	Trunk Lid
BT	Trunk
DD	Door, Driver
DP	Door, Passenger
EL	Engine Management Cruise Control Link
EM	Engine Management
EN	Engine Management Side Marker Link
FC	Fascia
FL	LH Front Wheel
FR	RH Front Wheel
IC	In-Car Entertainment
IS	Inclination Sensor Link
LF	Left Forward
LL	Power Steering Link
PI	Engine
QL	Convertible LH Quarter Light Link
QR	Convertible RH Quarter Light Link
RF	Roof
RH	Rearward
RL	LH Rear Wheel
RR	RH Rear Wheel
RT	Radio Telephone
SA	Starter to Generator Link
SC	Column Switchgear
SD	Seat, Driver
SP	Seat, Passenger
SW	Steering Wheel
TL	Telephone

Code Numbering

When numbering connectors, grounds and splices, Jaguar Engineering uses a three-position format: AC001, AC002, etc. Because space is limited in this Electrical Guide, the codes have been shortened. Thus AC001-001 becomes AC1-1, AC002-001 becomes AC2-1, etc.



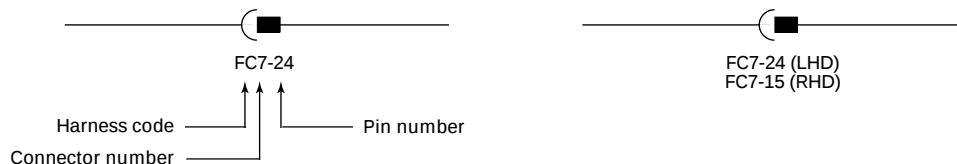
Harness Component Numbers

Connectors

HARNESS CODE + CONNECTOR NUMBER + PIN NUMBER

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

Where the pin number differs from LHD to RHD, the connector number will be further identified by (LHD) or (RHD).

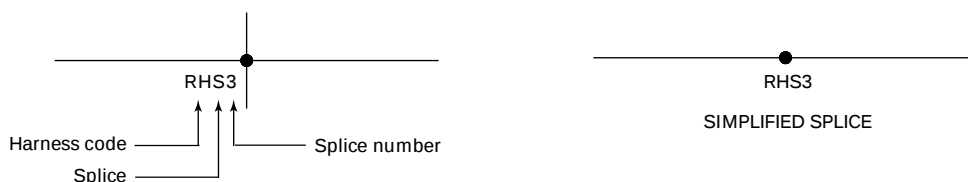


Splices

HARNESS CODE + S (SPLICE) + SPLICE NUMBER

EXAMPLE: RHS3 (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.



Diodes

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

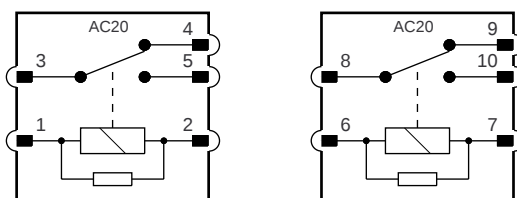
EXAMPLE:



Relay Connectors

Relay connector numbers are shown within the relay. The connector number is shown in the upper portion of the relay; the pin (terminal) number is shown adjacent to the pin. Certain relays are paired and share a modular connector. In this instance, the connector number remains the same for both relays while the pin numbers of the second relay are identified by numbers 6 – 10.

EXAMPLE:





Grounds

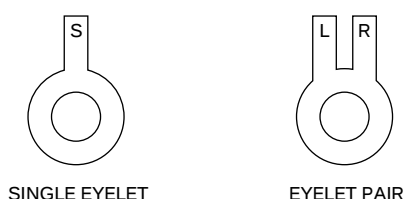
HARNESS CODE + GROUND STUD NUMBER + EYELET STUD POSITION (A,B,C) + EYELET DESIGNATION (S,L,R)

Eyelet stud position

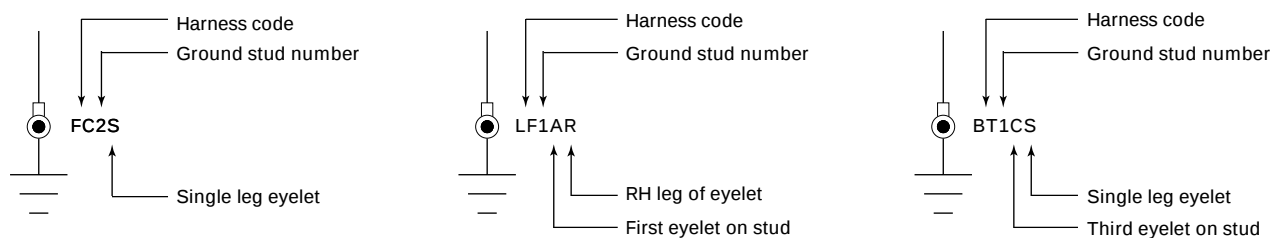
There may be up to three eyelets on one stud. A, B and C are used to indicate the position of the eyelet on the stud: A – first (bottom), B – second (middle), C – third (top).

Eyelet designation

Two eyelet variations are used: a single eyelet and an eyelet pair. The single eyelet has a single 'leg', which is identified by an S; the eyelet pair has two 'legs', identified as L (left) or R (right).



EXAMPLES:



Where the ground designation differs from LHD to RHD, the RHD ground is shown in parentheses. If the ground designation is the same for LHD and RHD, only one ground designation is used.

EXAMPLES:

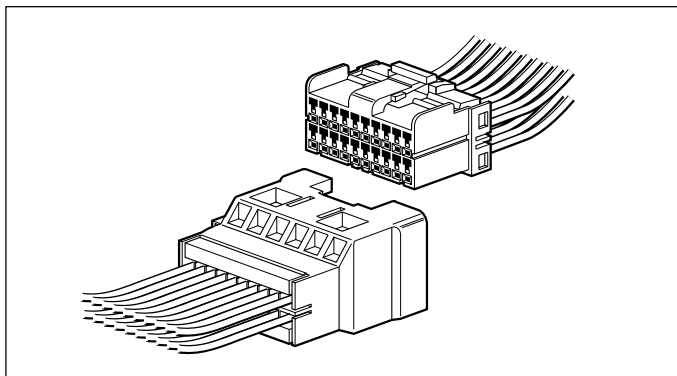




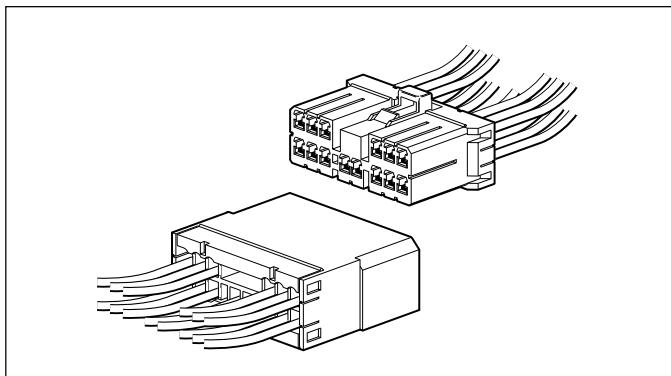
The following connectors are the common harness-to-harness connectors used throughout the vehicle.

Multilock 040

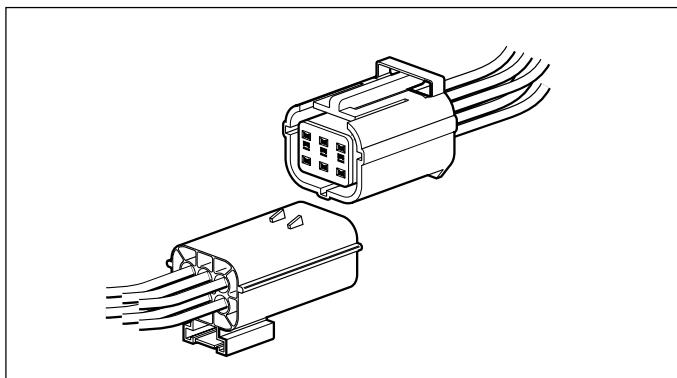
Low current (used as harness and 'direct' connection connector).

**Multilock 070**

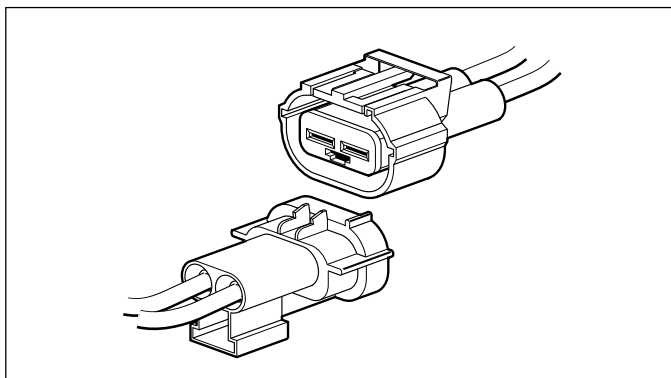
High current (used as harness and 'direct' connection connector).

**Econoseal III LC**

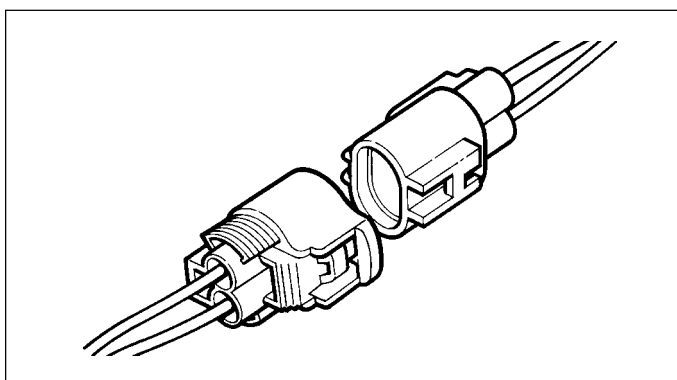
Low current sealed connector.

**Econoseal III HC**

High current sealed connector.

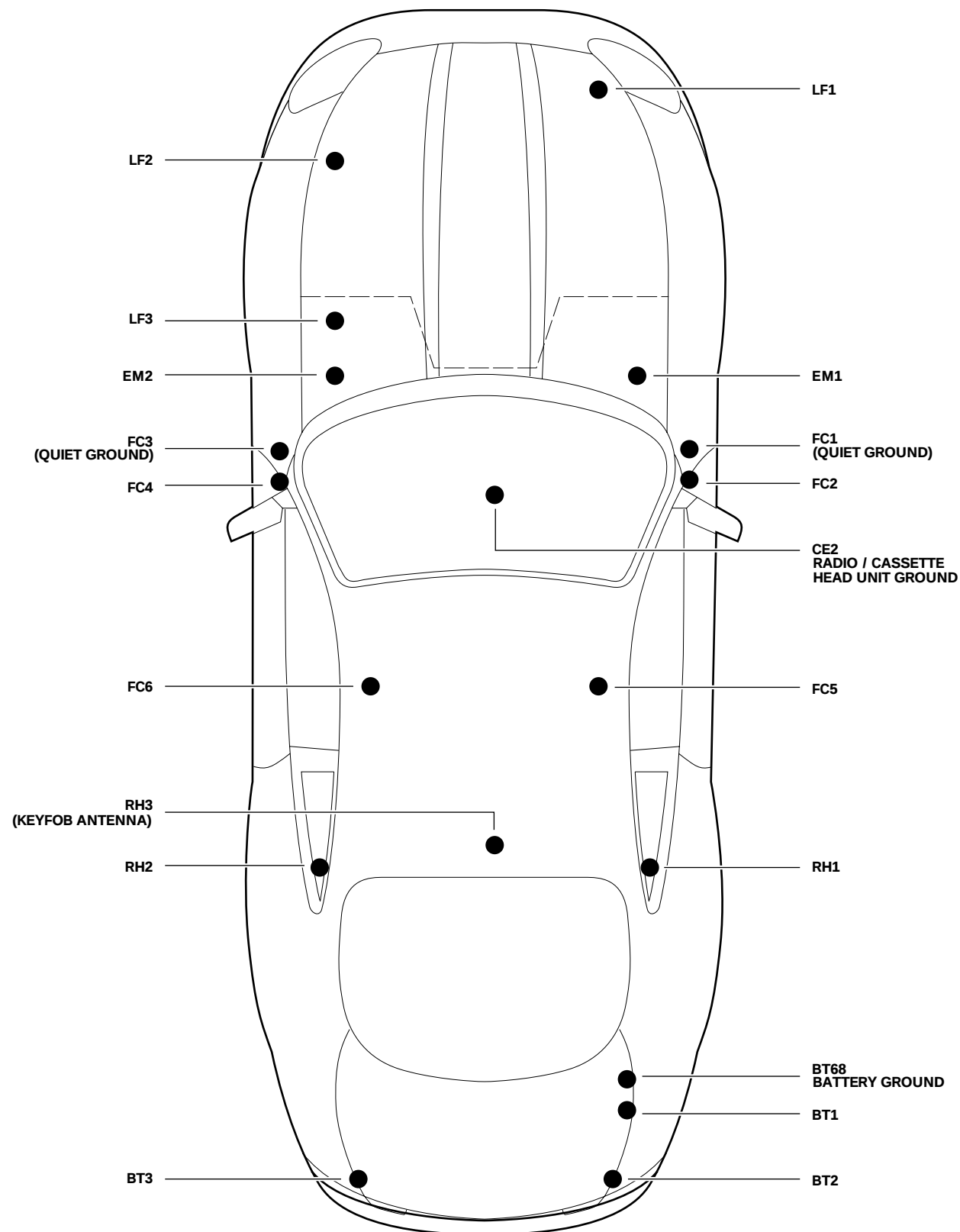
**Ford Card**

Used for SRS only.

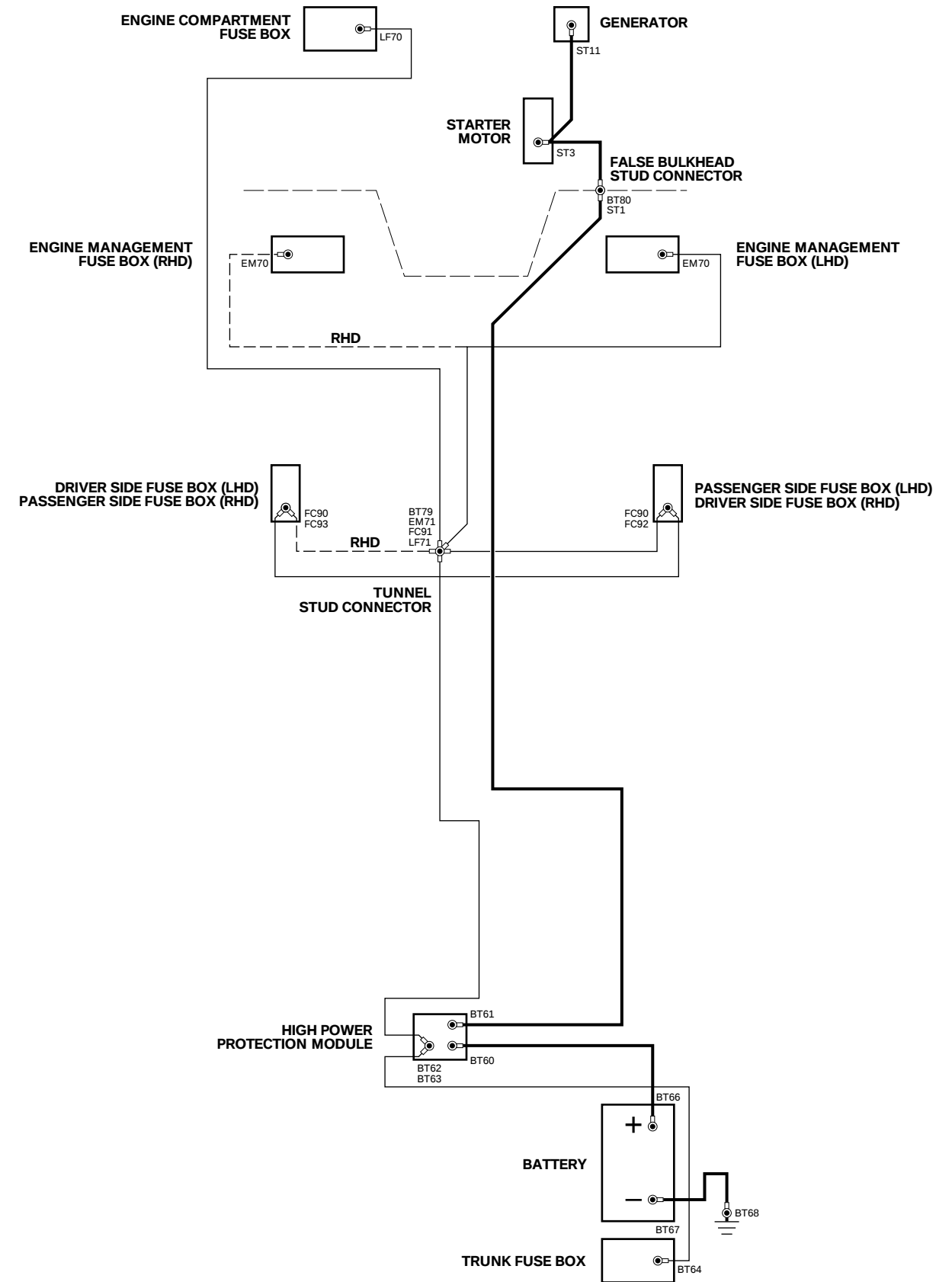




GROUND POINTS

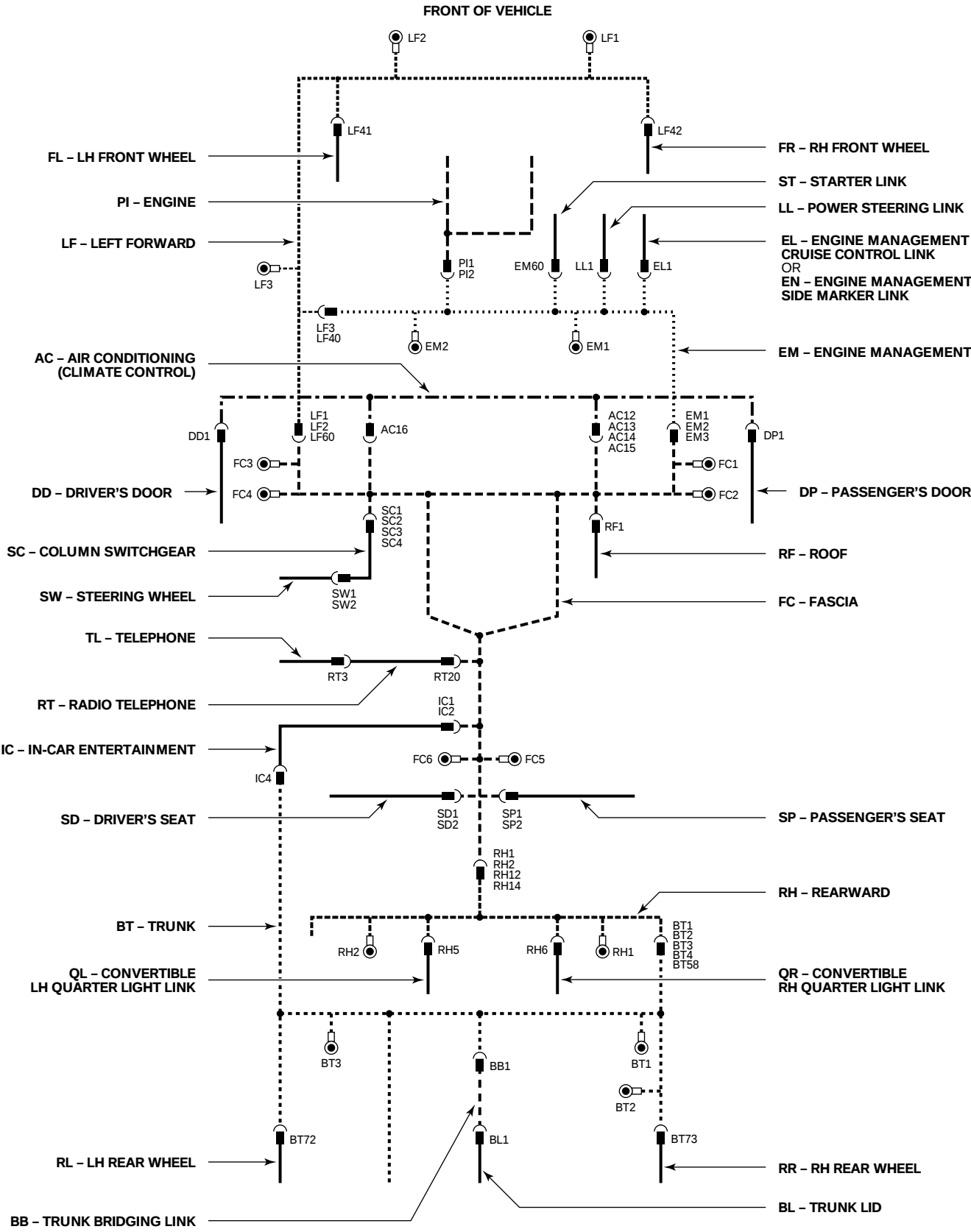


MAIN POWER DISTRIBUTION

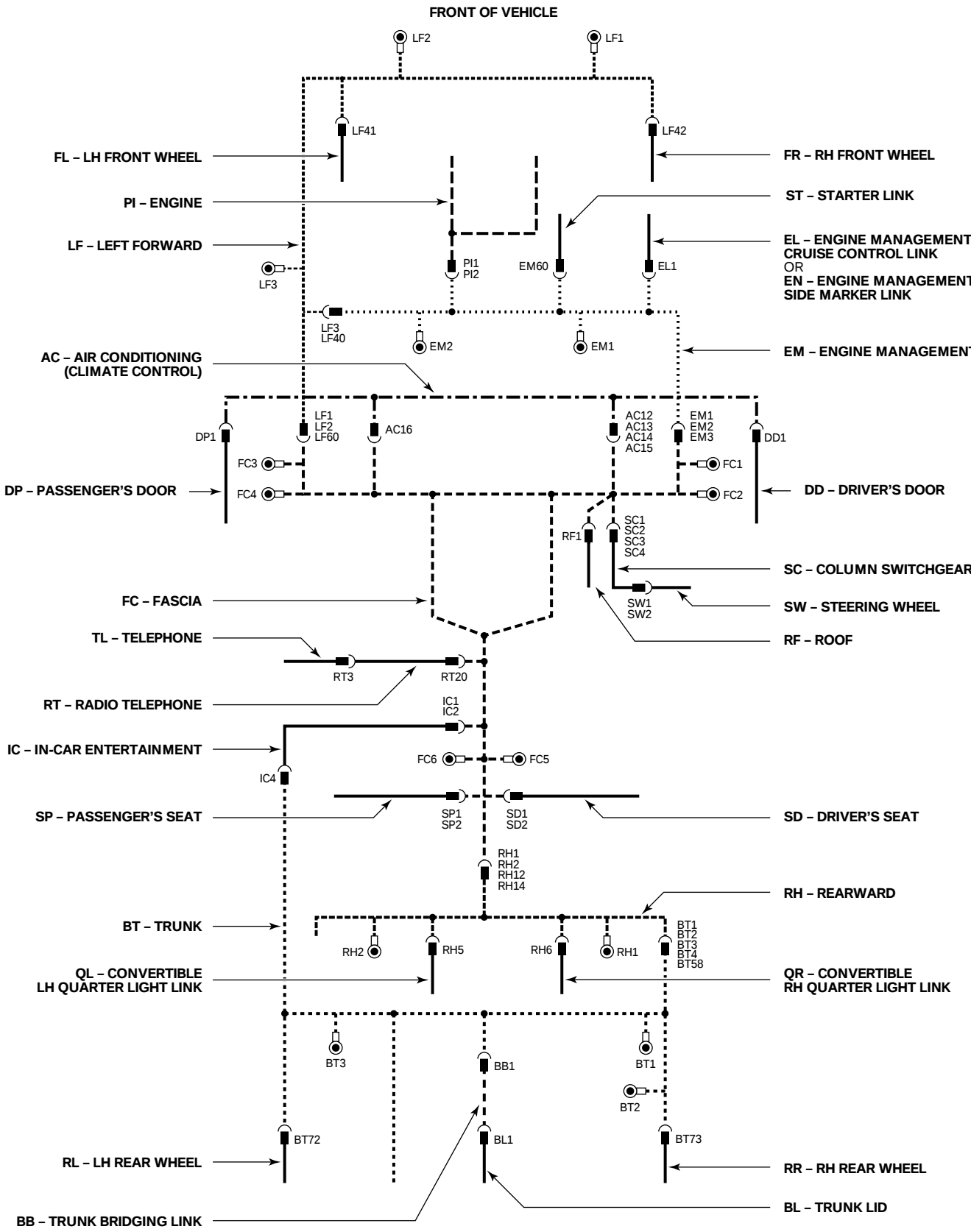




LHD

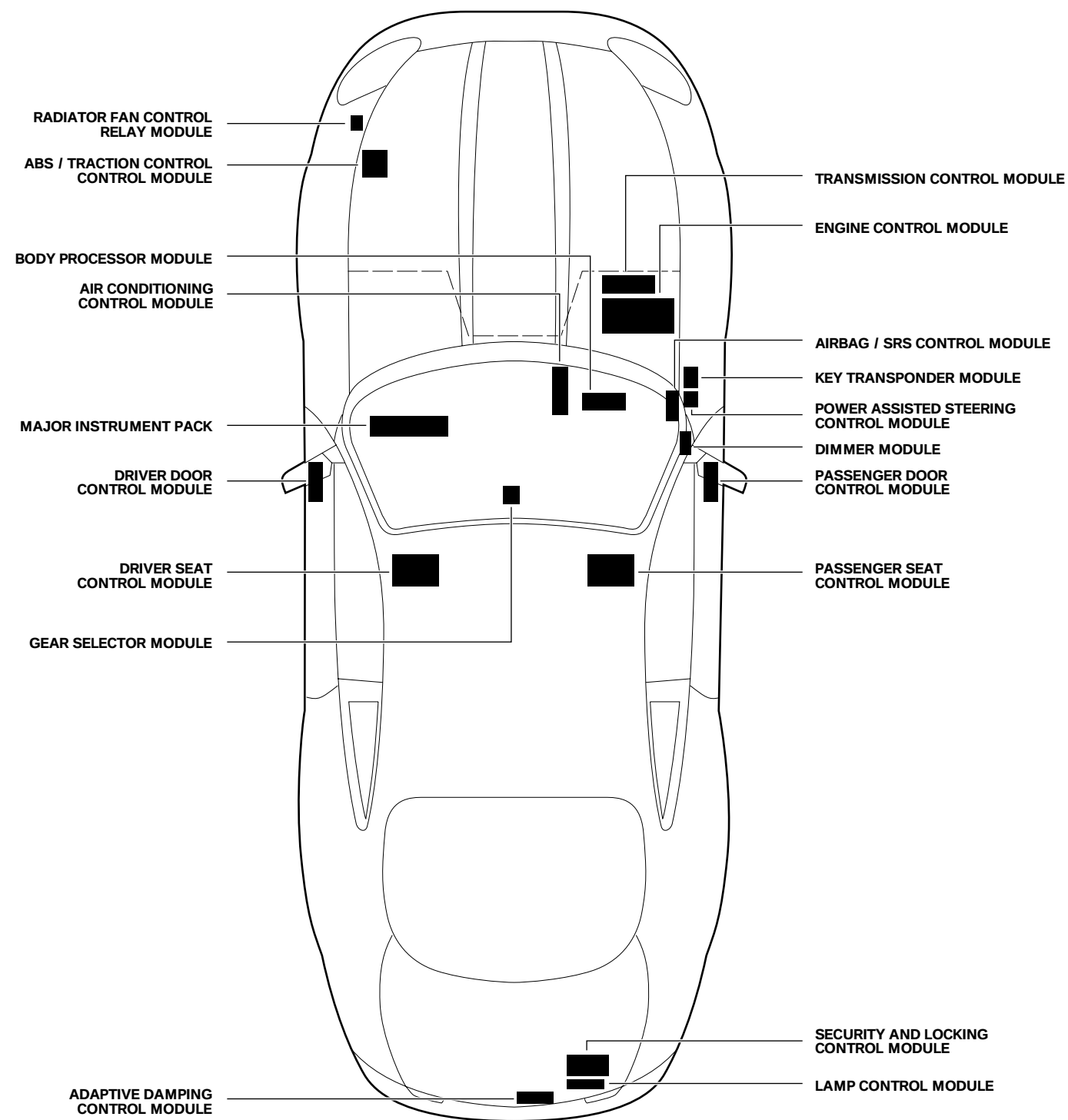


RHD

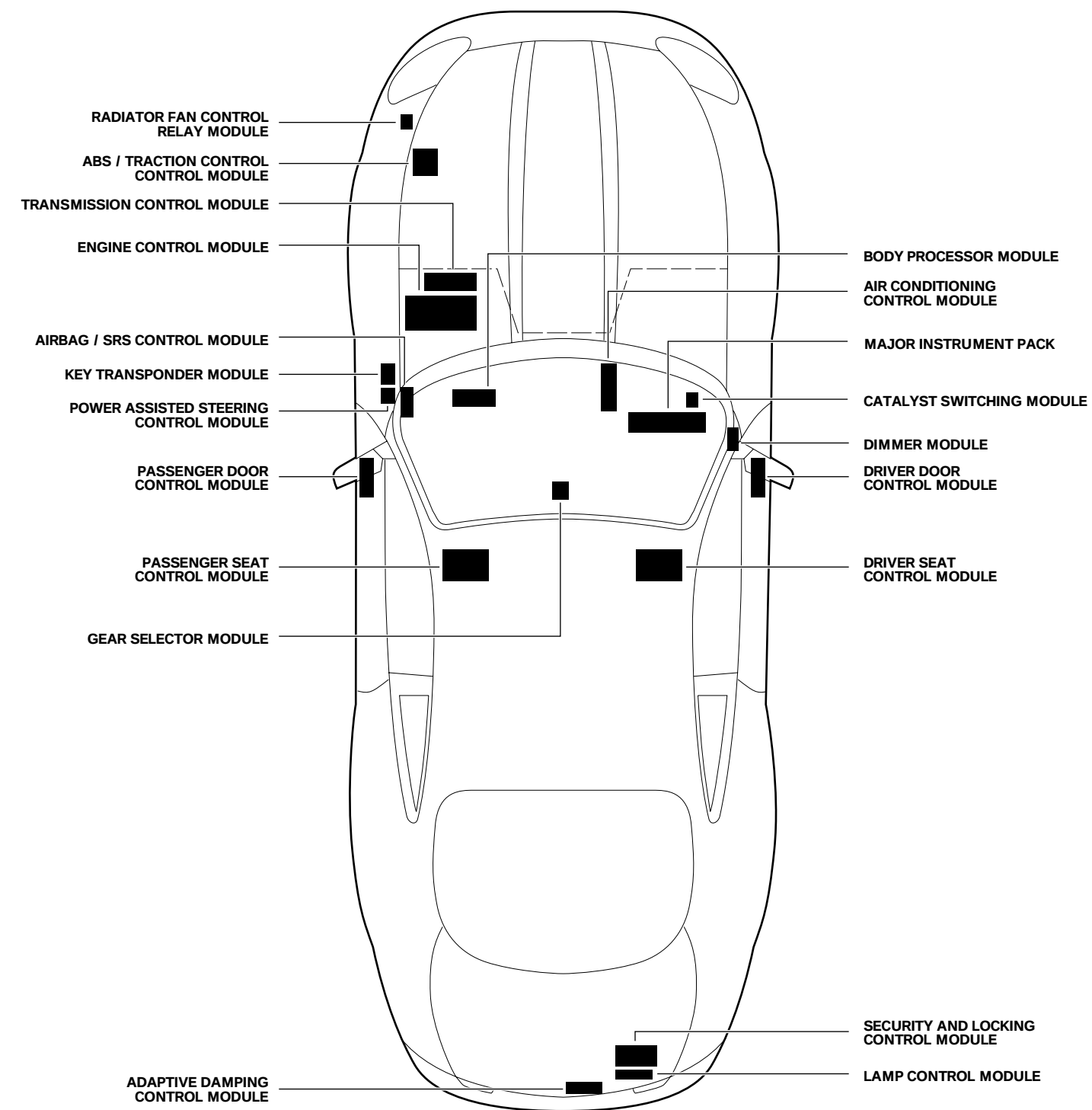




LHD

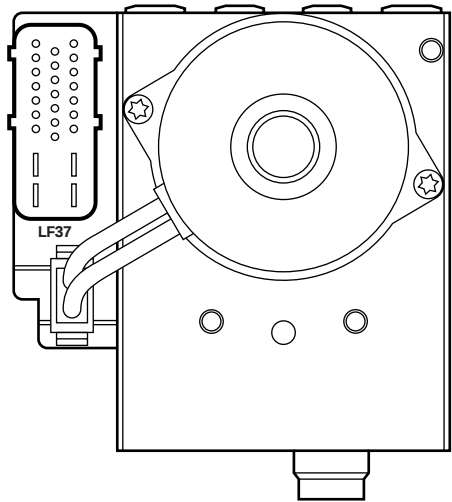


RHD





ABS / TRACTION CONTROL CONTROL MODULE

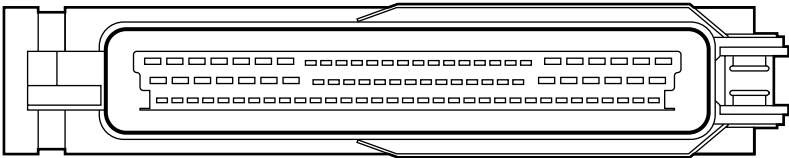


LF37 / 25-WAY AMP HYBRID / BLACK

TOP

17 W	18 R	19 UP	20 WU	21 P	22 U	23 —	24 B	25 WY
10 —	11 —	12 —	13 UB	14 R	15 G	16 RY		
1 UO	2 US	3 S	4 G	5 Y	6 Y	7 O	8 B	9 NR

TRANSMISSION CONTROL MODULE

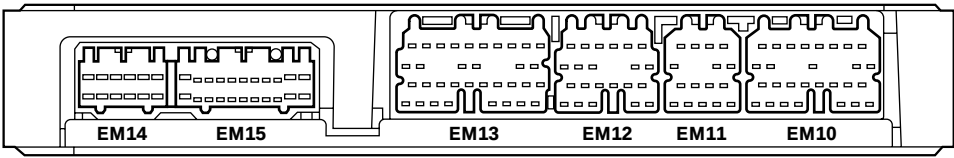


EM7

EM7 / 88-WAY BOSCH / BLACK

28 BY	27 —	26 ND	25 —	24 —	23 BRD	22 UY			21 BU	20 —	19 —	18 BS	17 —	16 U	15 BRD	14 N	13 US	12 RP	11 —	10 —	9 W	8 RB	7 —			6 B	5 OG	4 OK	3 —	2 RS	1 OU	
		55 WB	54 WB	53 RU	52 RY	51 OB	50 —	49 —			48 —	47 —	46 —	45 RG	44 R	43 —	42 G	41 —	40 —	39 —	38 —	37 Y	36 S	35 —			34 B	33 YP	32 YU	31 —	30 YB	29 OR
88 —	87 —	86 Y	85 G	84 —	83 Y	82 G	81 —	80 —	79 —	78 —	77 —	76 —	75 —	74 —	73 —	72 —	71 —	70 —	69 —	68 —	67 —	66 —	65 —	64 —	63 —	62 —	61 —	60 —	59 —	58 —	57 —	56 —

ENGINE CONTROL MODULE



EM14 / 12-WAY MULTILOCK 47 / WHITE

6 R	5 R	4 BK	3 WR	2 GY	1 GY
12 G	11 G	10 B	9 B	8 B	7 B

EM15 / 22-WAY MULTILOCK 47 / WHITE

11 B	10 —	9 RY	8 RG	7 BU	6 BW	5 BY	4 BO	3 PN	2 PU	1 PS
22 B	21 —	20 —	19 —	18 BS	17 BN	16 BG	15 BP	14 —	13 —	12 B

EM13 / 34-WAY MULTILOCK 040 / SLATE

10 —	9 —	8 —	7 —	6 —	5 —	4 —	3 SP	2 W	1 KN
16 WU	15 W		14 GR	13 PY		12 RW	11 PW		
26 LGU	25 LGW	24 LGO	23 LGK	22 UB	21 —	20 B	19 Y	18 S	17 N
34 LPG	33 LGS	32 LGR	31 LGY		30 —	29 O	28 P	27 BG	

EM12 / 22-WAY MULTILOCK 040 / SLATE

6 YW	5 WU	4 YR	3 YN	2 YG	1 YU
11 —	10 RY	9 SG		8 SLG	7 —
17 U	16 N	15 R	14 G	13 GY	12 UP
22 BP	21 —	20 —		19 BY	18 BY

EM11 / 16-WAY MULTILOCK 040 / SLATE

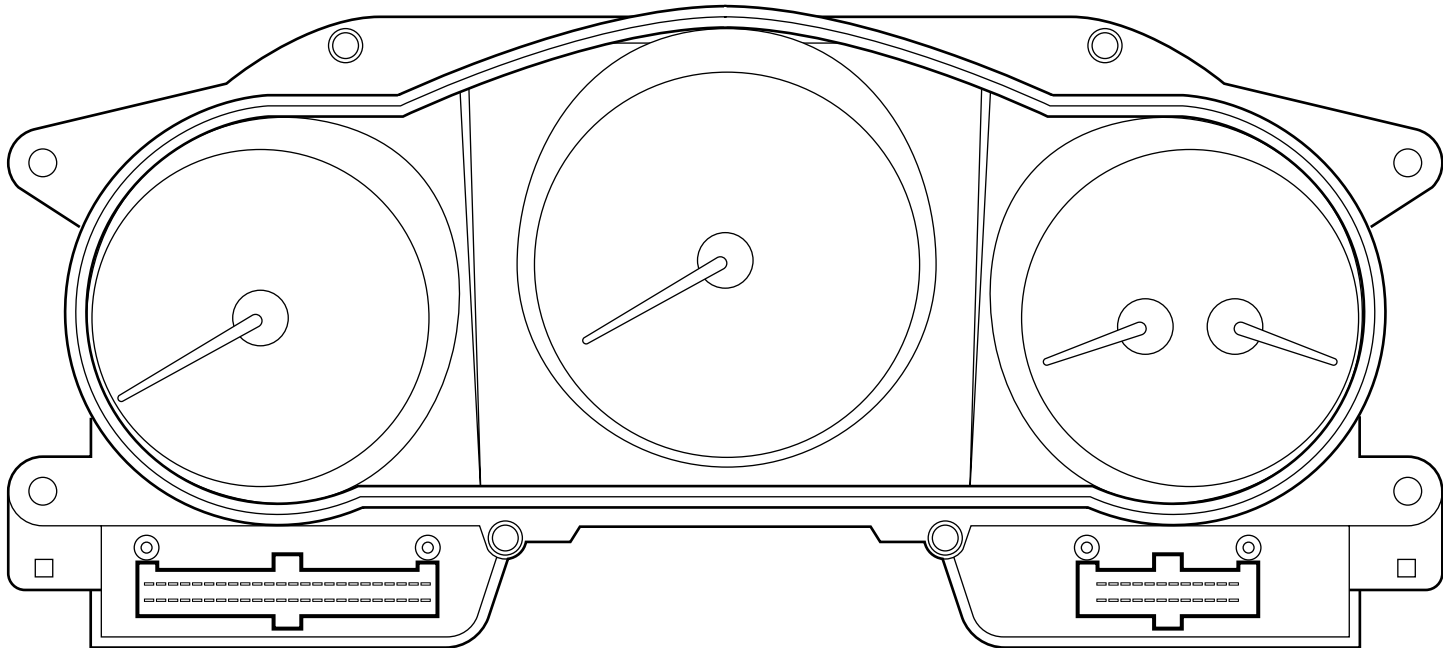
4 WU	3 P	2 —	1 SR
7 —		6 GO	5 SG
11 U	10 G	9 UY	8 UW
16 K	15 R	14 BG	13 BY

EM10 / 28-WAY MULTILOCK 040 / SLATE

	8 —	7 —	6 O	5 WK	4 UN	3 ULG	2 UG	1 WR
13 O	12 K				11 PG		10 US	9 NO
	21 UW	20 BG	19 —	18 —	17 Y	16 PK	15 G	14 OU
28 Y	27 G	26 Y	25 G			24 —	23 BK	22 B



MAJOR INSTRUMENT PACK



FC25

FC26

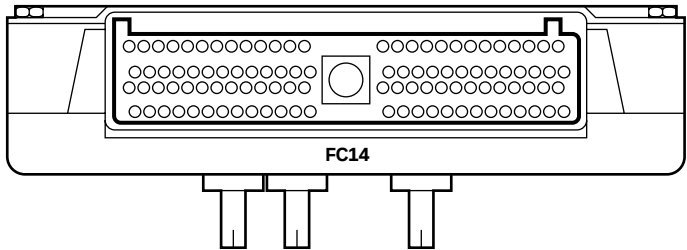
FC25 / 48-WAY AMP PCB SIGNAL / BLACK

FC26 / 24-WAY AMP PCB SIGNAL / BLACK

1 BK	2 WG	3 RN	4 —	5 —	6 SO	7 —	8 —	9 —	10 SU	11 —	12 —	13 UY	14 R	15 —	16 —	17 —	18 —	19 S	20 U	21 —	22 —	23 Y	24 Y
25 NR	26 B	27 RO	28 RO	29 —	30 —	31 —	32 —	33 BR	34 —	35 Y	36 O	37 —	38 —	39 —	40 —	41 —	42 —	43 —	44 —	45 —	46 —	47 G	48 G

1 RK	2 OW	3 PY	4 SG	5 OU	6 UB	7 ON	8 RG	9 RS	10 OB	11 RB	12 RU
13 BW	14 RW	15 OU	16 YW	17 OS	18 OG	19 OS	20 UW	21 RLG	22 SW	23 OP	24 UR

BODY PROCESSOR MODULE



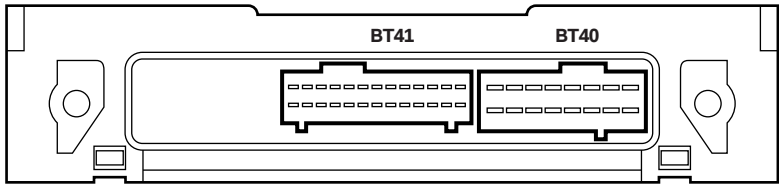
FC14

FC14 / 104-WAY AMP EEEC / SLATE

79 NG	80 NB	81 GR	82 GR	83 GB	84 U	85 S	86 ON	87 SK	88 YG	89 LGR	90 BG	91 BW	92 SU	93 YK	94 LGO	95 RS	96 PW	97 —	98 GB	99 PN	100 BR	101 PW	102 NY	103 B	104 NY
53 RK	54 RB	55 SP	56 UW	57 —	58 SB	59 PY	60 RY	61 KG	62 LGU	63 SW	64 —	65 BK	66 PU	67 UR	68 US	69 OK	70 GS	71 SR	72 —	73 GO	74 RW	75 —	76 GK	77 GP	78 PG
27 GO	28 RW	29 S	30 U	31 SW	32 WN	33 RG	34 LGK	35 OU	36 LGW	37 LGR	38 OR	39 Y	40 WU	41 RW	42 UY	43 BLG	44 OY	45 UG	46 —	47 —	48 OG	49 —	50 GY	51 RW	52 BS
1 RY	2 GY	3 GK	4 GU	5 SO	6 YW	7 RU	8 —	9 LGU	10 SR	11 YB	12 OP	13 GO	14 UB	15 WO	16 RY	17 OS	18 YS	19 WLG	20 OG	21 —	22 WB	23 WO	24 NW	25 B	26 YG

NOTE: (NAS) PIN 13 NOT USED

SECURITY AND LOCKING CONTROL MODULE



BT41 / 26-WAY FORD IDC / BLACK (NAS)

13 —	12 —	11 —	10 —	9 —	8 —	7 YP	6 —	5 RY	4 —	3 LGY	2 —	1 R
26 —	25 —	24 —	23 —	22 —	21 —	20 —	19 YR	18 —	17 —	16 —	15 —	14 —

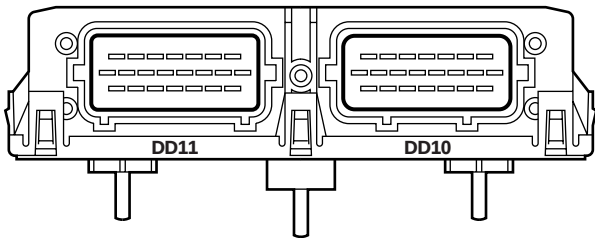
BT40 / 16-WAY FORD 2.8 TIMER / BLACK

8 S	7 OG	6 NK	5 YW	4 GW	3 UG	2 OB	1 OR
16 U	15 NY	14 BK	13 BK	12 —	11 UO	10 —	9 GR

BT41 / 26-WAY FORD IDC / BLACK (ROW)

13 —	12 —	11 —	10 BK	9 —	8 LGS	7 —	6 —	5 RY	4 —	3 —	2 —	1 —
26 YO	25 —	24 —	23 —	22 —	21 —	20 —	19 YR	18 —	17 —	16 —	15 —	14 —

DRIVER DOOR CONTROL MODULE



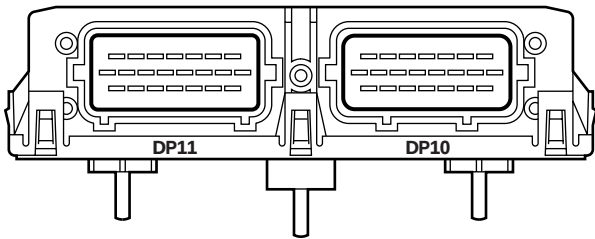
DD11 / 22-WAY FORD 2.8 TIMER / BLACK

7 BP	6 KS	5 LGU	4 OU	3 SN	2 UG	1 OB	
15 WG	14 —	13 —	12 OY	11 —	10 YO	9 YN	8 —
22 UN	21 UP	20 GY	19 —	18 —	17 OR	16 —	

DD10 / 22-WAY FORD 2.8 TIMER / BLUE

7 OB	6 SU	5 SY	4 PN	3 PG	2 BY	1 N	
15 OU	14 GW	13 PO	12 PW	11 PB	10 BG	9 U	8 BK
22 PK	21 PU	20 WU	19 BR	18 BO	17 B	16 S	

PASSENGER DOOR CONTROL MODULE

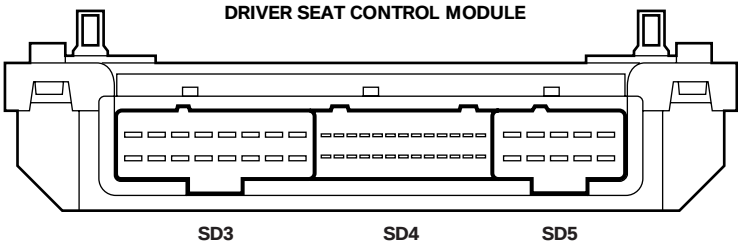


DP11 / 22-WAY FORD 2.8 TIMER / BLACK

7 —	6 —	5 LGU	4 —	3 —	2 —	1 —	
15 —	14 —	13 —	12 —	11 —	10 —	9 —	8 —
22 —	21 —	20 GY	19 —	18 —	17 —	16 —	

DP10 / 22-WAY FORD 2.8 TIMER / BLUE

7 OB	6 SU	5 SY	4 PN	3 PG	2 PY	1 N	
15 OU	14 GW	13 PO	12 PW	11 PB	10 BG	9 U	8 BK
22 PK	21 PU	20 WU	19 —	18 BO	17 B	16 S	



SD3 / 16-WAY FORD 2.8 TIMER / BLACK

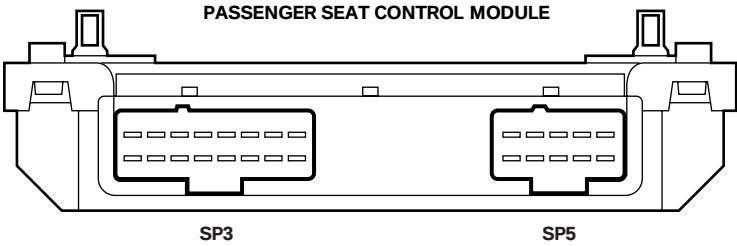
9 UY	10 UW	11 KW	12 KY	13 GN	14 GP	15 GW	16 GY
1 PS	2 PO	3 OK	4 R	5 OB	6 OR	7 KS	8 KO

SD4 / 26-WAY FORD IDC / BLACK

14 WP	15 —	16 —	17 —	18 WB	19 —	20 —	21 —	22 —	23 —	24 —	25 —	26 —
1 WG	2 WU	3 B	4 —	5 W	6 WN	7 —	8 —	9 —	10 WR	11 WY	12 WO	13 —

SD5 / 10-WAY FORD 2.8 TIMER / BLACK

6 —	7 —	8 G	9 S	10 U
1 B	2 B	3 US	4 UO	5 NK

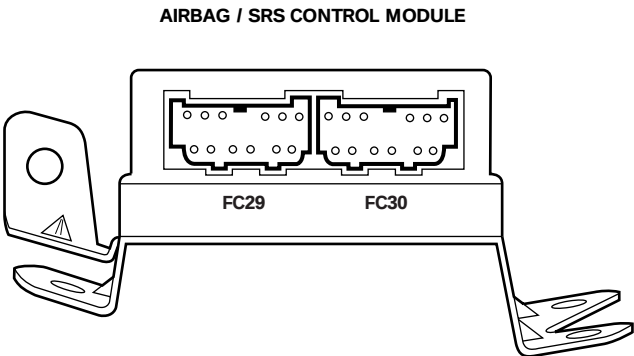


SP3 / 16-WAY FORD 2.8 TIMER / BLACK

9 UY	10 UW	11 KW	12 KY	13 GN	14 GP	15 GW	16 GY
1 PS	2 PO	3 OK	4 R	5 OB	6 OR	7 KS	8 KO

SP5 / 10-WAY FORD 2.8 TIMER / BLACK

6 —	7 —	8 G	9 S	10 U
1 B	2 B	3 US	4 UO	5 NK



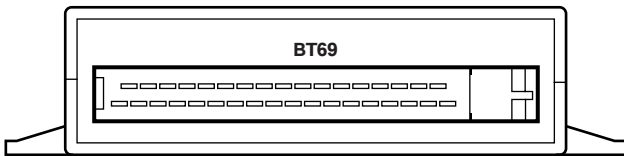
FC29 / 12-WAY FORD CARD / BLACK

7 WK	8 OW	9 OP	10 —	11 YU	12 ON
1 —	2 —	3 —	4 BK	5 YW	6 R

FC30 / 12-WAY FORD CARD / SLATE

12 BK	11 RS	10 KU	9 KG	8 RW	7 RW
6 WK	5 RG	4 KP	3 KN	2 RP	1 —

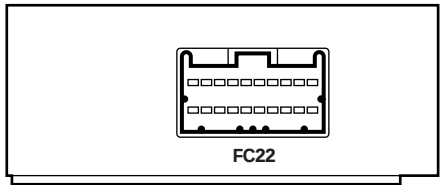
ADAPTIVE DAMPING CONTROL MODULE



BT69 / 35-WAY AMP / BLACK

19 —	20 PB	21 UB	22 RB	23 —	24 ON	25 U	26 US	27 NS	28 K	29 —	30 OB	31 OW	32 OK	33 OY	34 OU	35 —	
1 SO	2 UP	3 UW	4 —	5 —	6 —	7 —	8 —	9 —	10 O	11 WR	12 —	13 OR	14 OG	15 OP	16 —	17 —	18 B

KEY TRANSPONDER MODULE

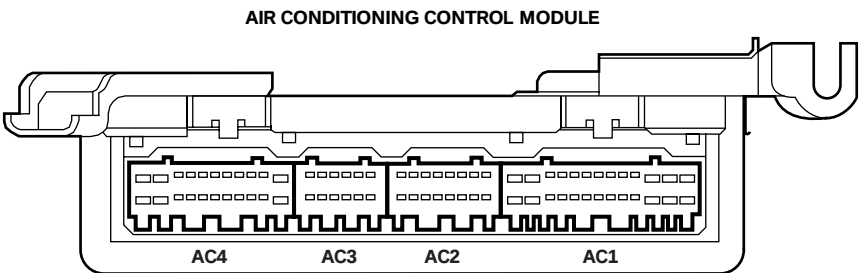


FC22 / 20-WAY MULTILOCK 040 / GREEN (NAS)

10 —	9 SU	8 —	7 —	6 O	5 —	4 —	3 —	2 —	1 —
20 —	19 —	18 —	17 Y	16 O	15 —	14 —	13 —	12 —	11 —

FC22 / 20-WAY MULTILOCK 040 / GREEN (ROW)

10 —	9 SU	8 OG	7 OR	6 O	5 —	4 NR	3 —	2 —	1 SB
20 —	19 —	18 —	17 Y	16 O	15 —	14 WO	13 WN	12 BK	11 —



AC4 / 22-WAY MULTILOCK 47 / SLATE

12 WR	13 B	14 B	15 GW	16 OU	17 UB	18 LGW	19 BW	20 BK	21 O	22 —
1 WP	2 GY	3 WN	4 WU	5 NY	6 PY	7 UG	8 P	9 UN	10 K	11 —

AC3 / 12-WAY MULTILOCK 47 / SLATE

7 SY	8 SR	9 —	10 WP	11 UB	12 KU
1 ULG	2 S	3 SG	4 SB	5 OY	6 UG

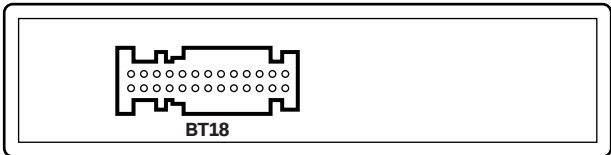
AC2 / 16-WAY MULTILOCK 47 / SLATE

9 OU	10 OR	11 YG	12 —	13 UY	14 —	15 UK	16 GP
1 OP	2 RG	3 YW	4 —	5 SU	6 SG	7 US	8 GO

AC1 / 26-WAY MULTILOCK 47 / SLATE

14 —	15 —	16 LGN	17 RW	18 LGP	19 RU	20 SR	21 Y	22 NR	23 —	24 —	25 UR	26 GU
1 RLG	2 U	3 UY	4 PS	5 LGR	6 RY	7 PR	8 PY	9 RB	10 —	11 —	12 UW	13 UO

LAMP CONTROL MODULE

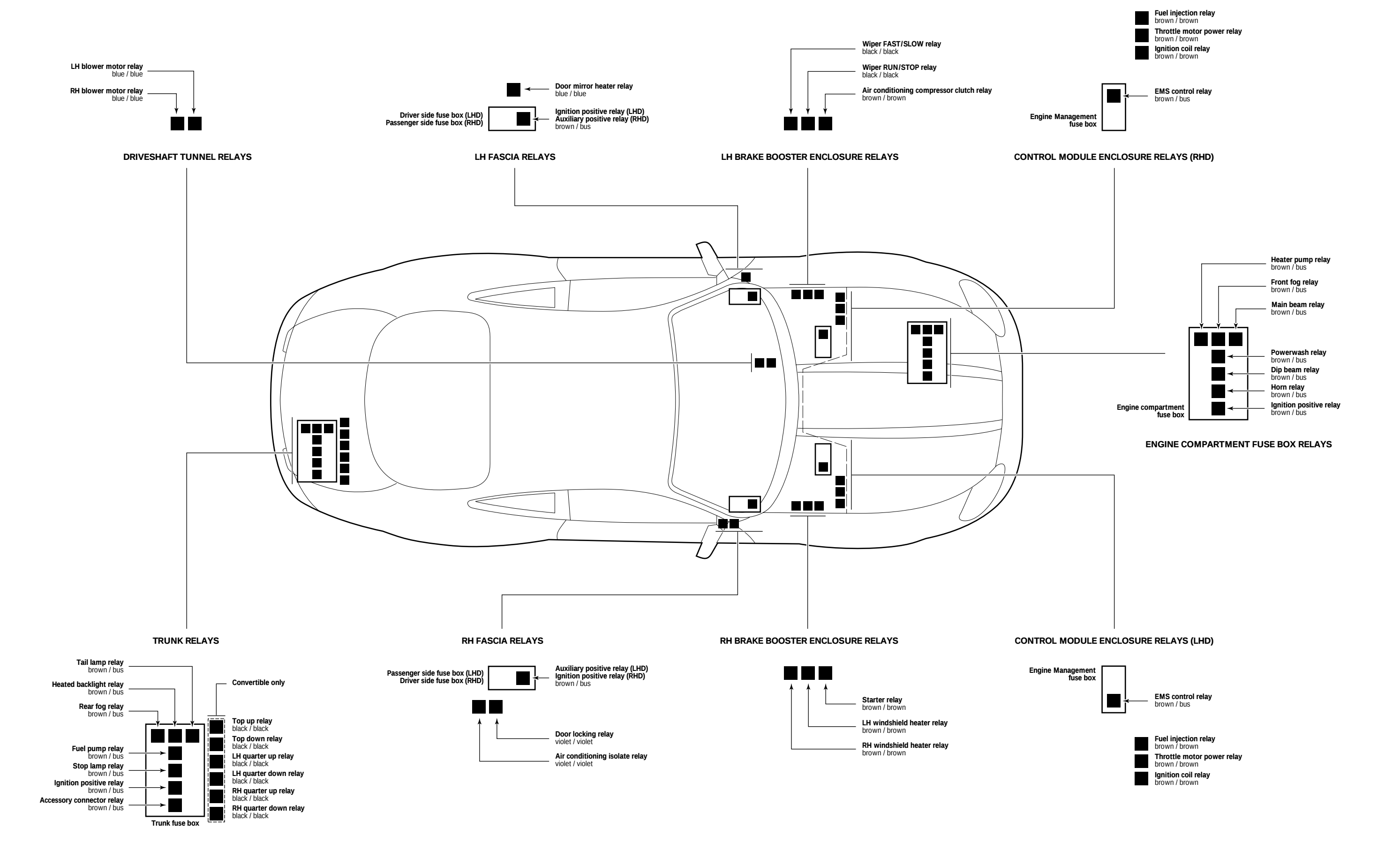


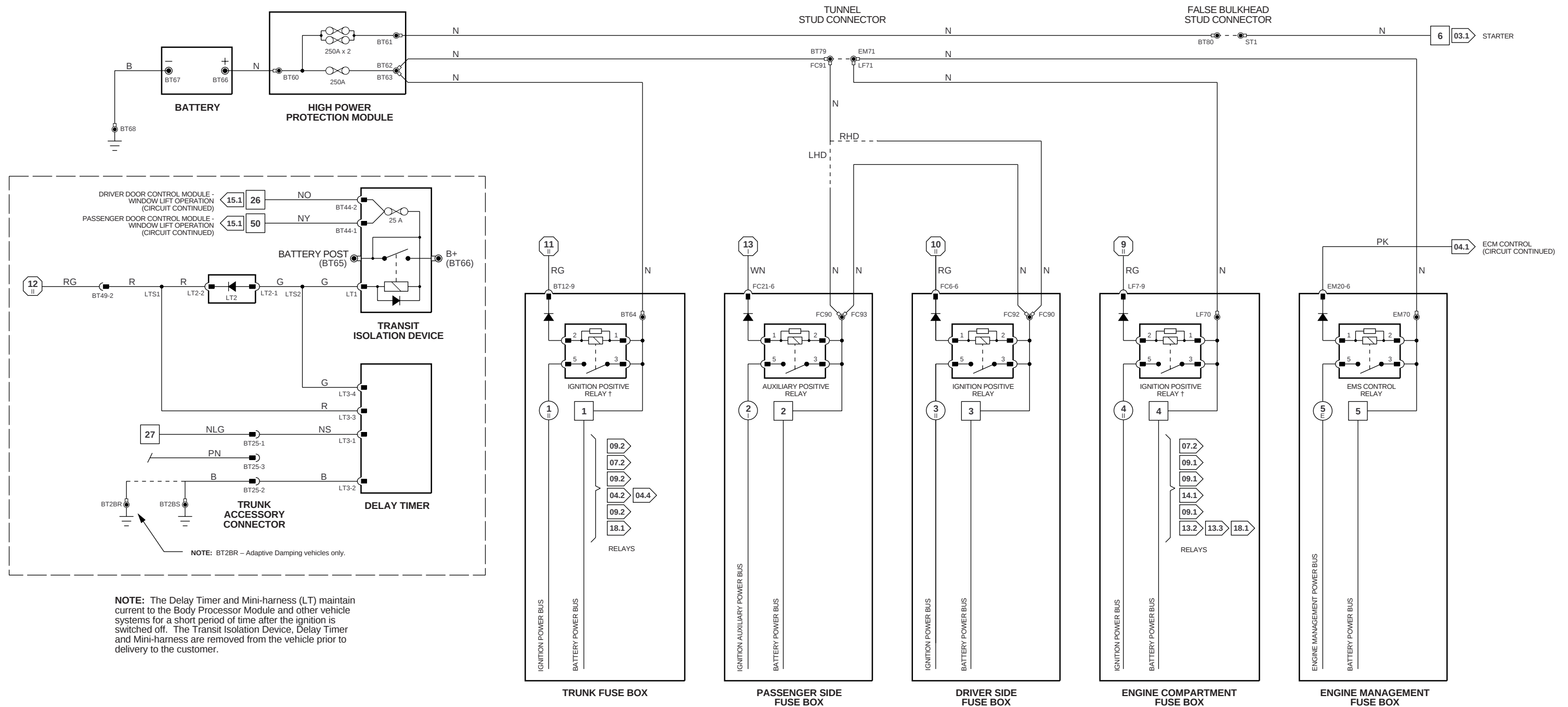
BT18 / 26-WAY AMP MQS / YELLOW

1 —	2 —	3 —	4 —	5 —	6 —	7 —	8 —	9 —	10 —	11 —	12 —	13 —
14 UP	15 UO	16 RY	17 RK	18 RU	19 UB	20 UW	21 RO	22 RG	23 RW	24 WG	25 R	26 BK



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. SOME RELAYS CONNECT DIRECTLY TO A FUSE BOX BUS. THE CONNECTOR COLOR FOR THESE RELAYS IS IDENTIFIED AS "BUS".





† **NOTE:** Early production vehicles (→ VIN 003300) have connector pin numbers that differ from the volume production pin numbers shown. Use the wire color code for pin identification on early production vehicles.

1 - 6 Fig. 01.1
1 - 5 Fig. 01.1

7 - 53 Fig. 01.2
54 - 84 Fig. 01.3

6 - 40 Fig. 01.4
41 - 58 Fig. 01.5

1 - 19 Fig. 02.1

Input
Signal Ground (SG)

Output
CAN (Network)

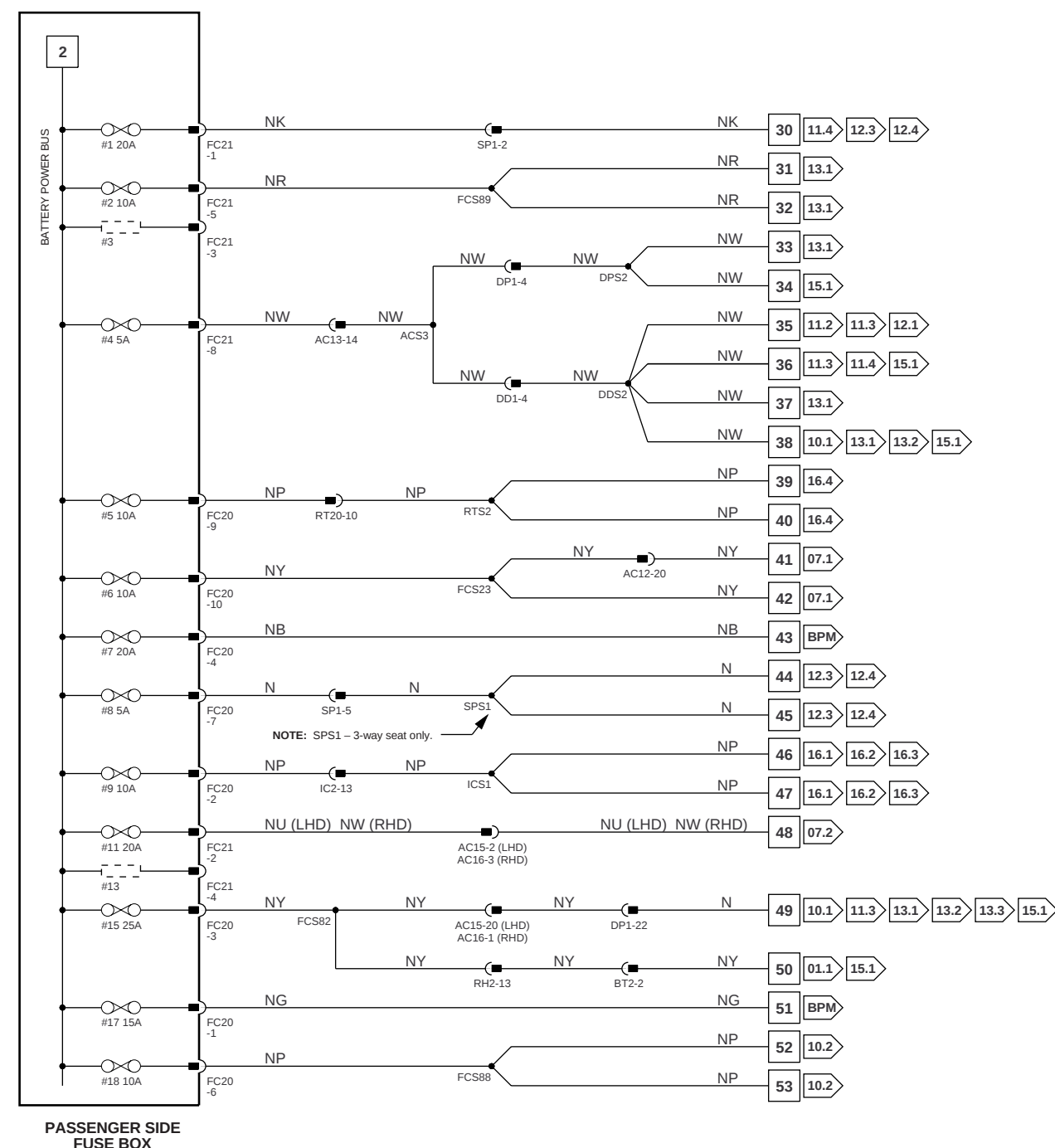
Serial and Encoded Communications
SCP Network

VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996

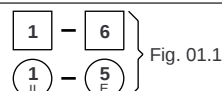


Battery Power Distribution – Driver and Passenger Side Fuse Boxes

Fig. 01.2



NOTE: Body Processor Module appears in numerous Figures.



$$\begin{array}{r} 7 \\ 54 \end{array} - \begin{array}{r} 53 \\ 84 \end{array}$$

 Fig. 01.4
 Fig. 01.5

1 — 19 Fig. 02.1

▽ Input

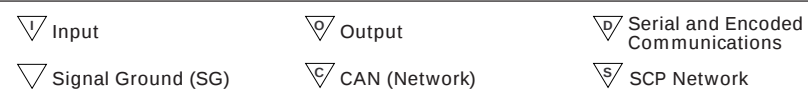
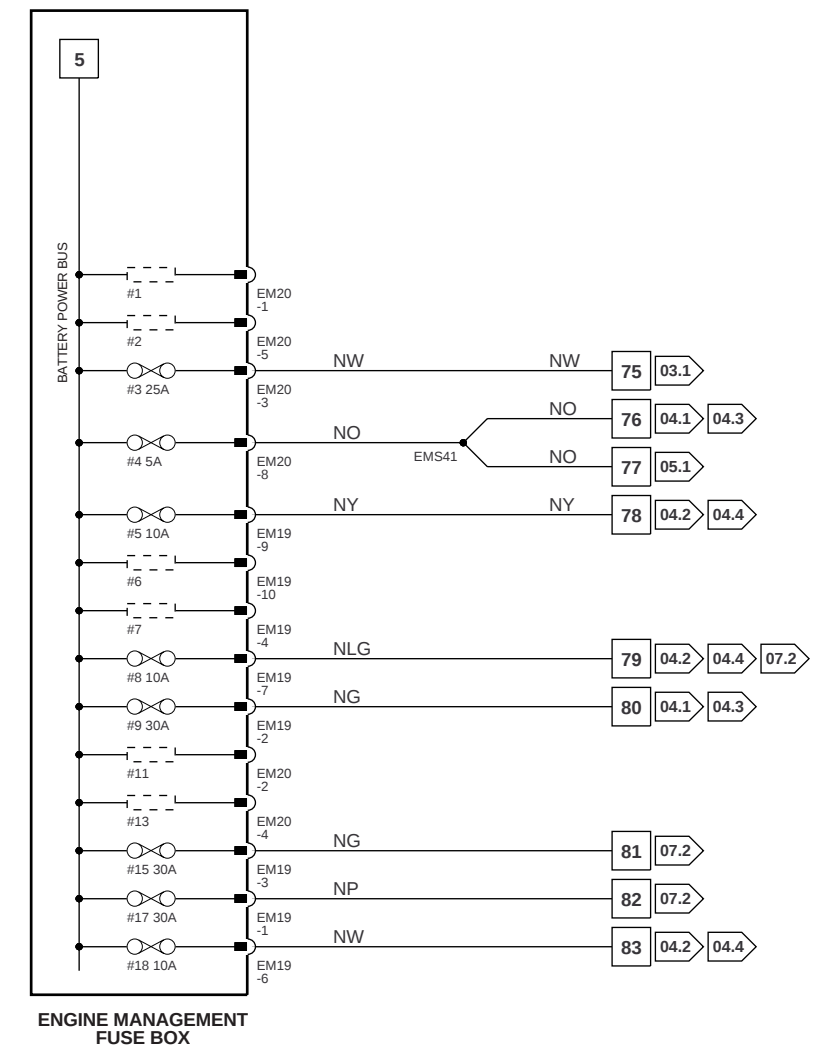
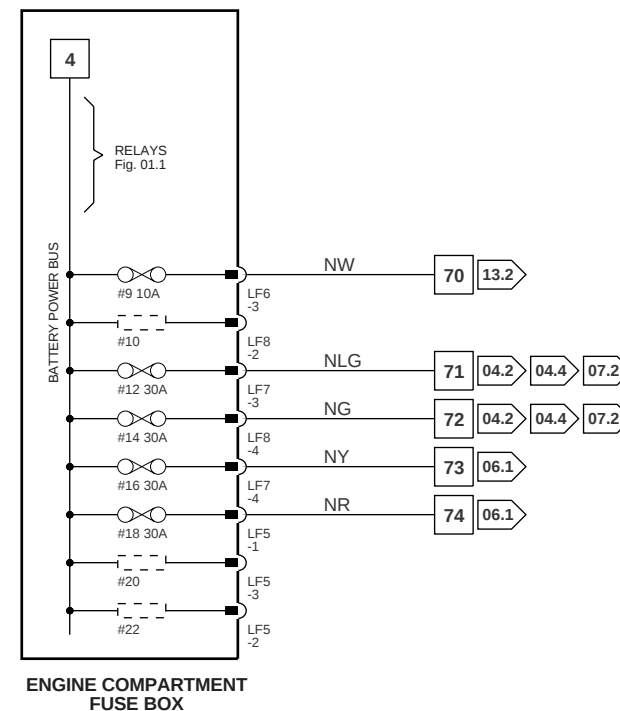
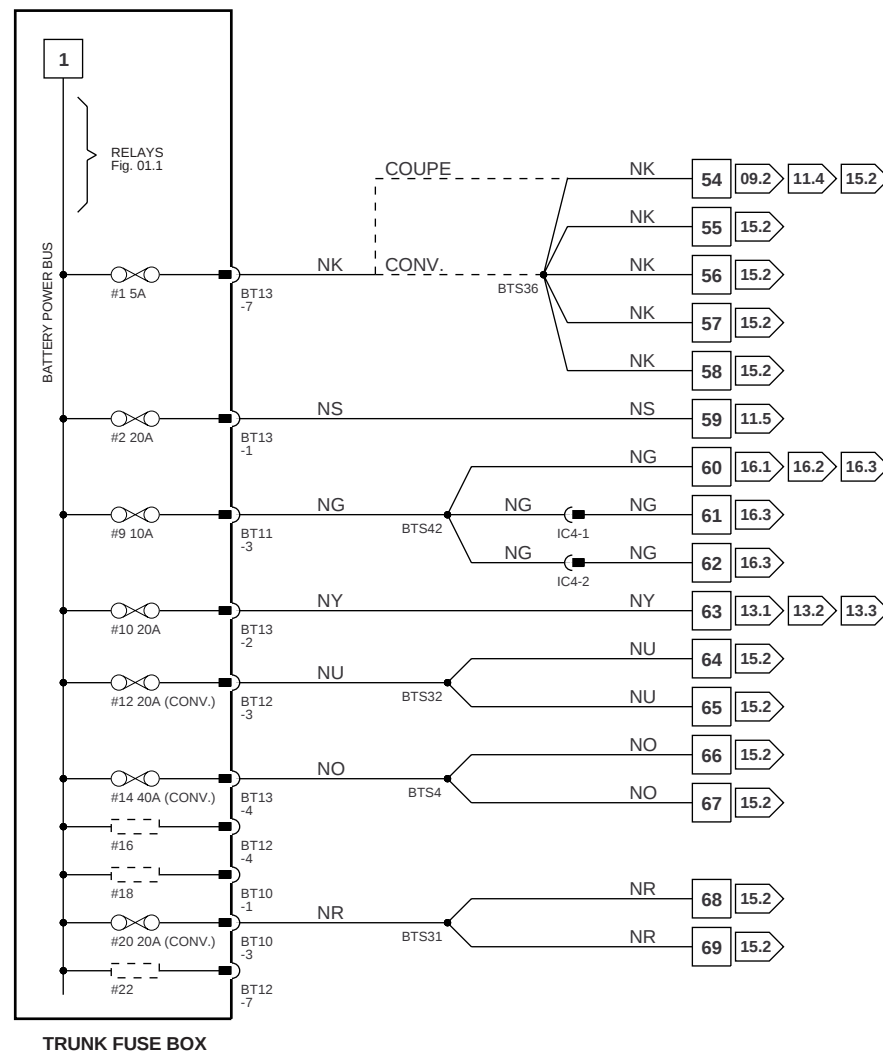
▽ Signal Ground (SG)

▽ Output

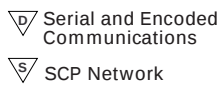
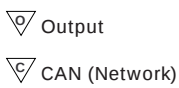
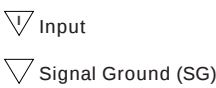
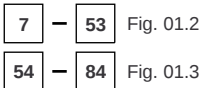
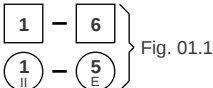
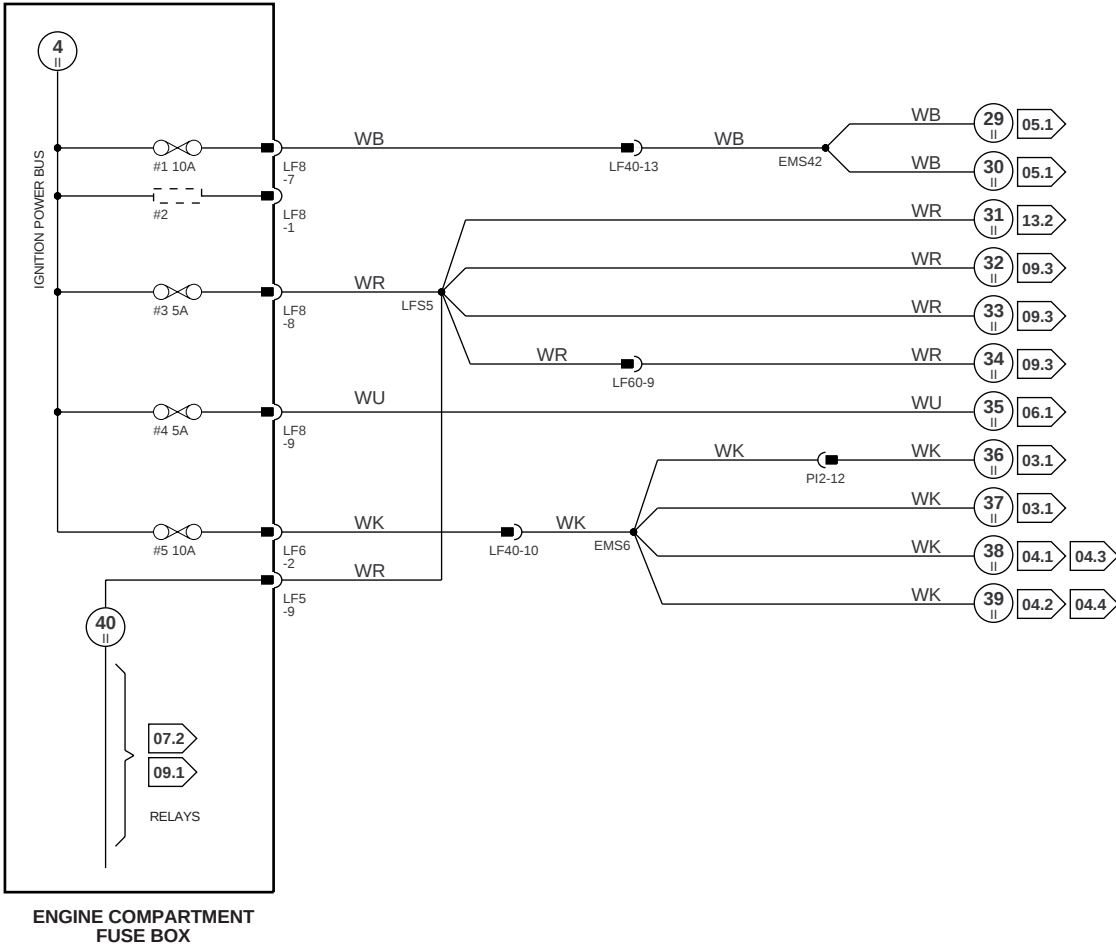
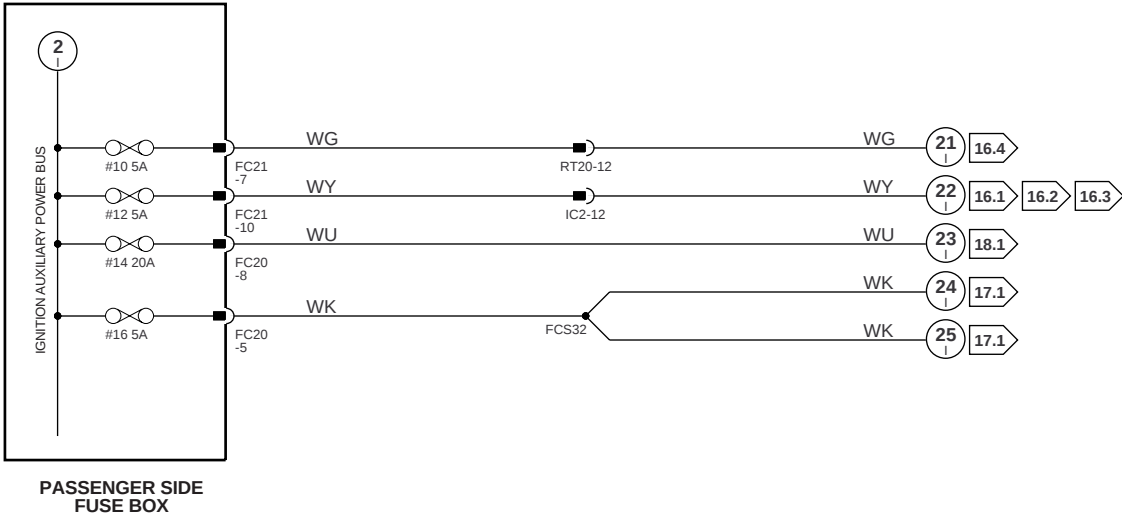
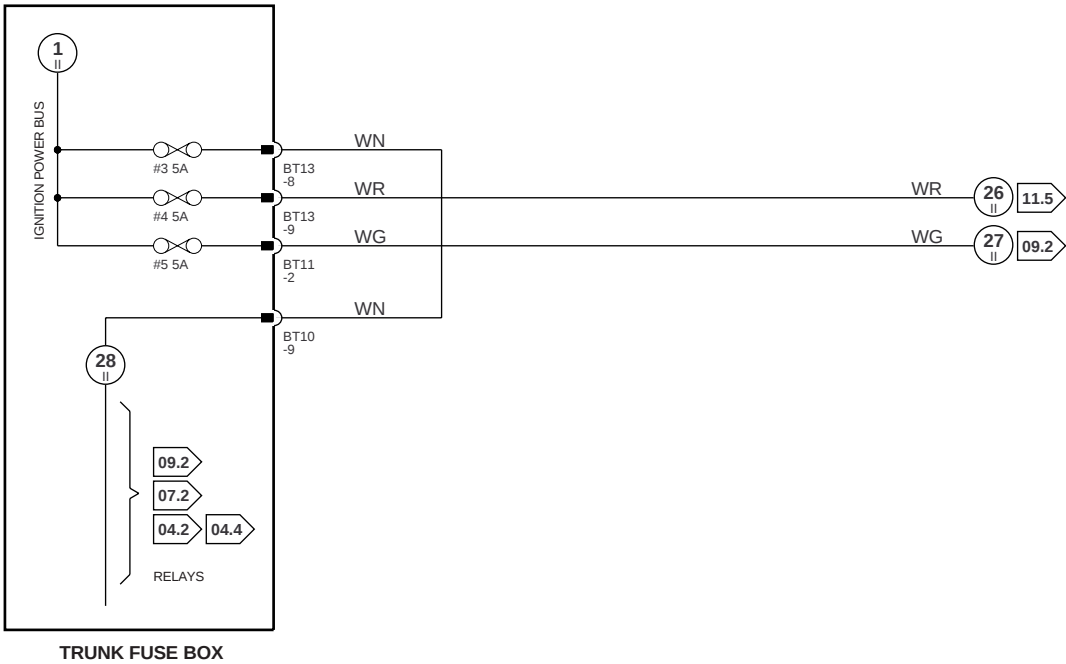
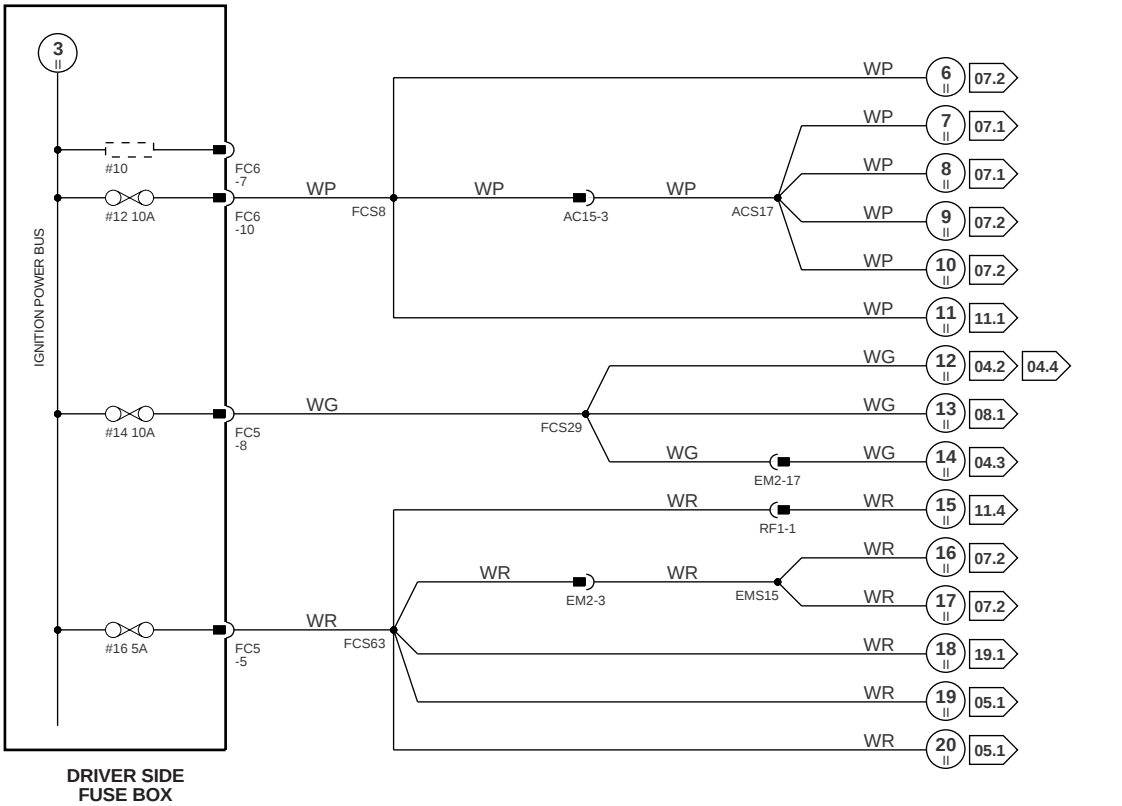
▽ CAN (Network)

-  Serial and Encoded Communications
-  SCP Network

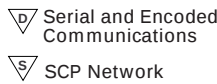
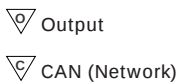
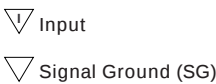
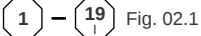
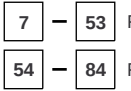
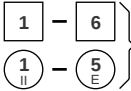
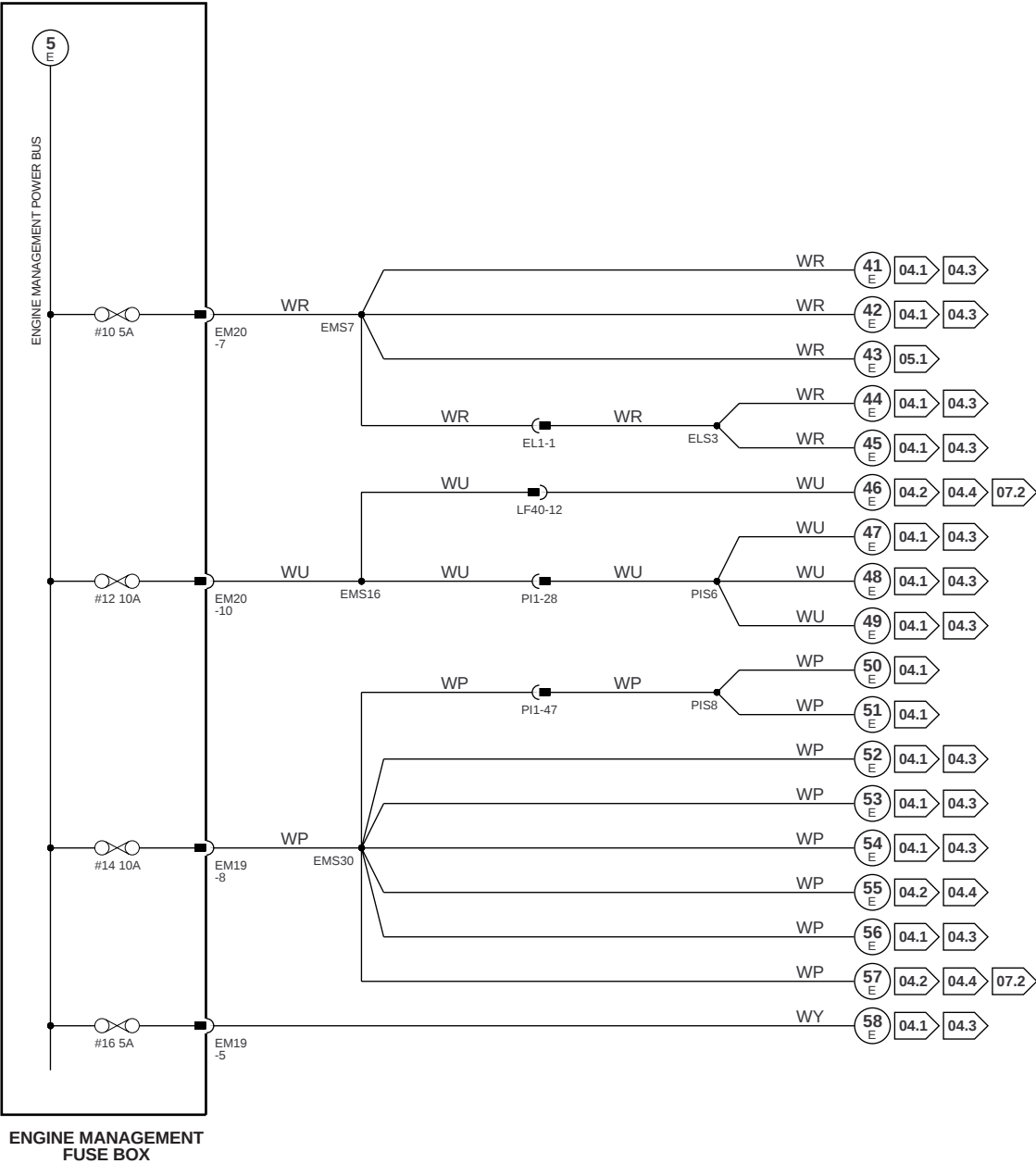
VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



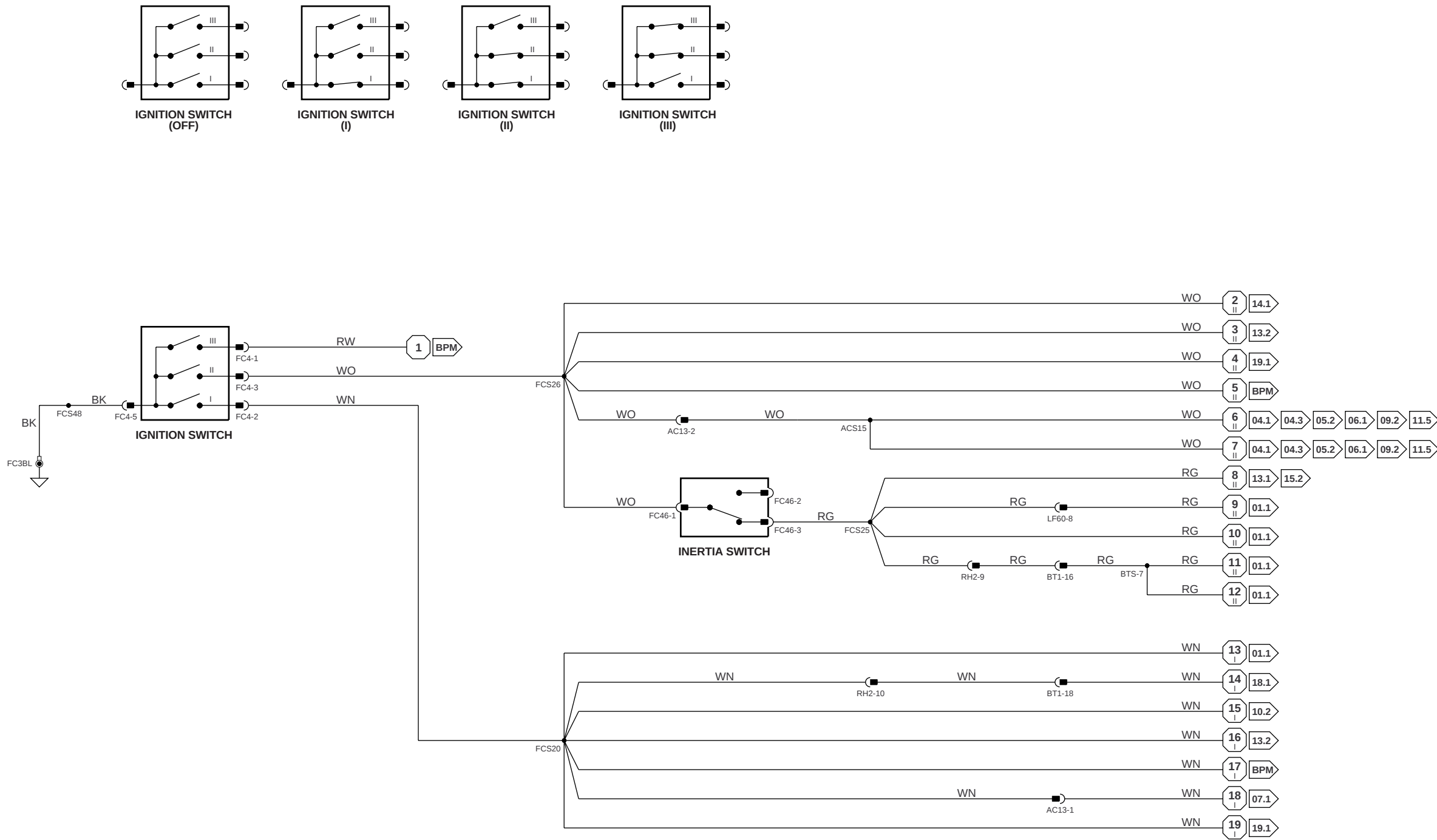
VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



BPM NOTE: Body Processor Module appears in numerous Figures.

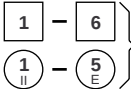


Fig. 01.1

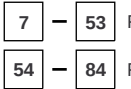


Fig. 01.2

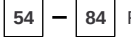


Fig. 01.3



Fig. 01.4



Fig. 01.5



Fig. 02.1

Input

Signal Ground (SG)

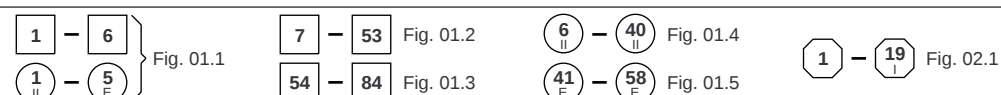
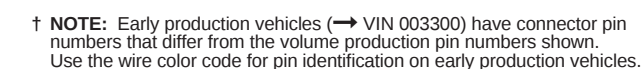
Output

CAN (Network)

Serial and Encoded Communications

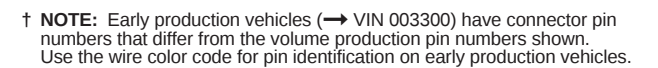
SCP Network

VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



 Input	 Output	 Serial and Encoded Communications
 Signal Ground (SG)	 CAN (Network)	 SCP Network

VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



 Input

 Output

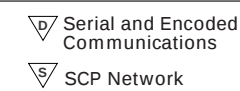
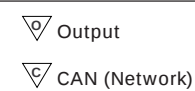
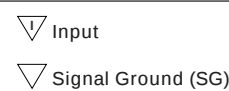
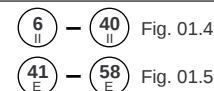
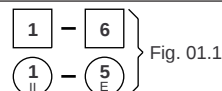
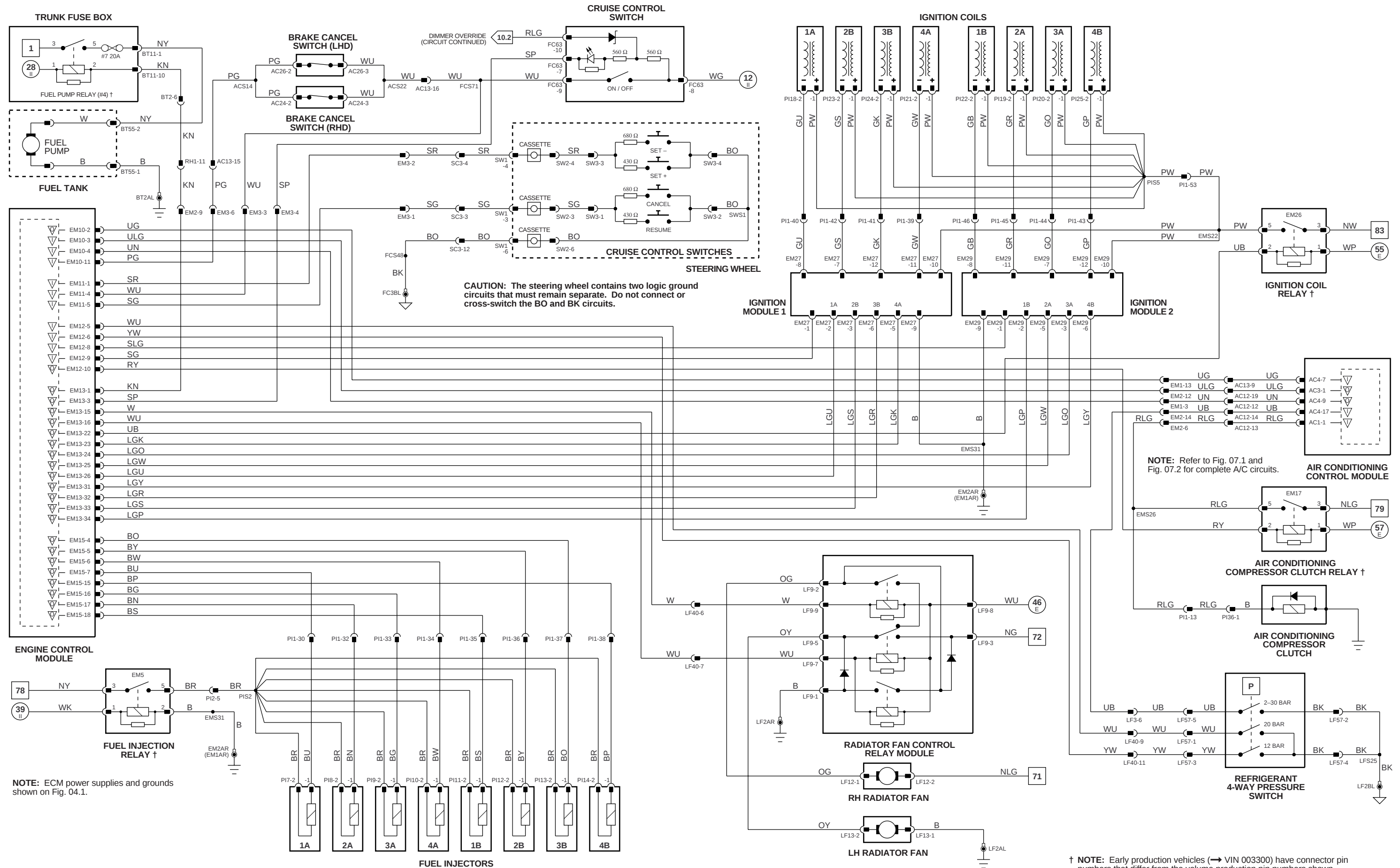
Serial and Encoded Communications

▽ Signal Ground (SG)

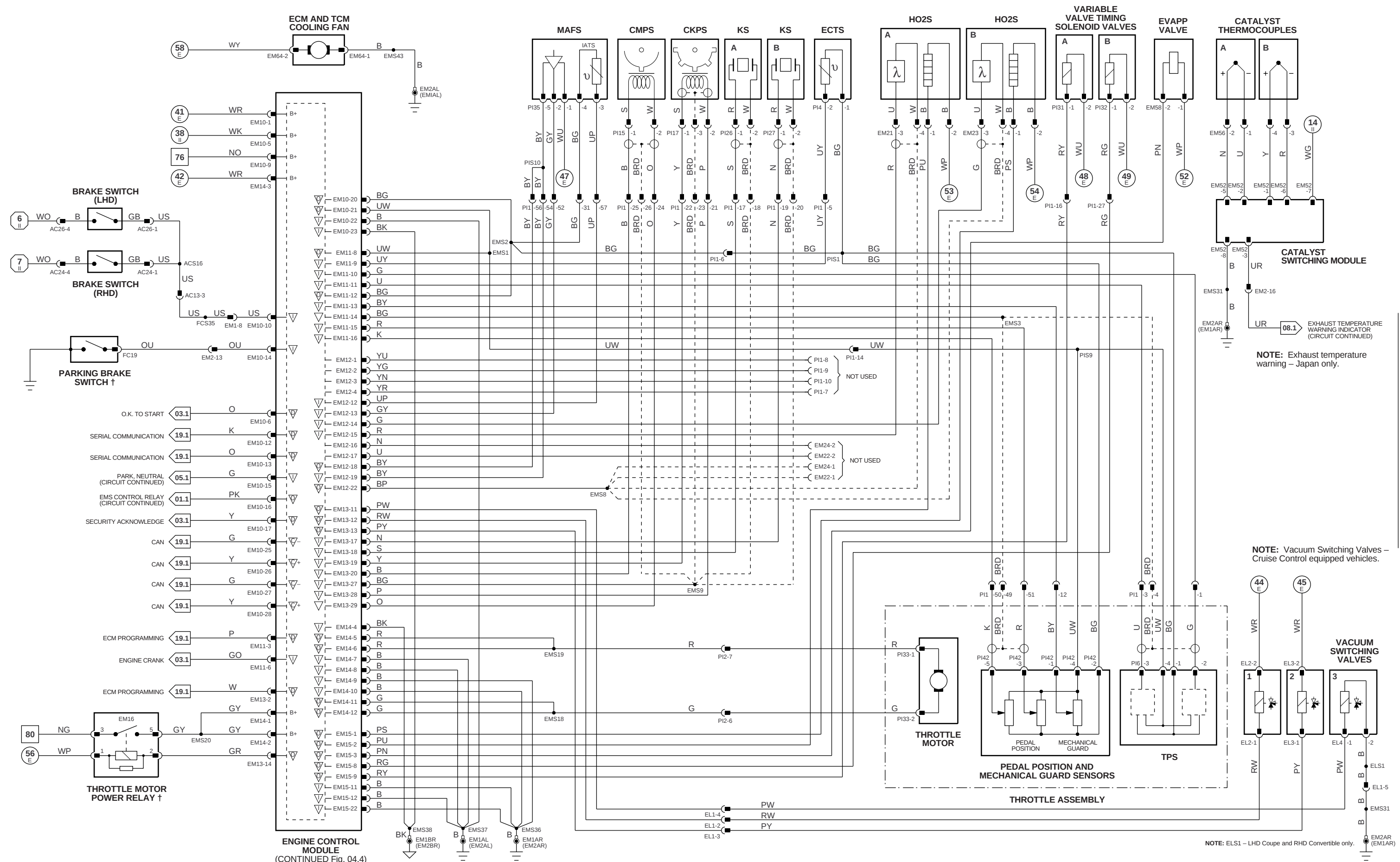
 CAN (Network)

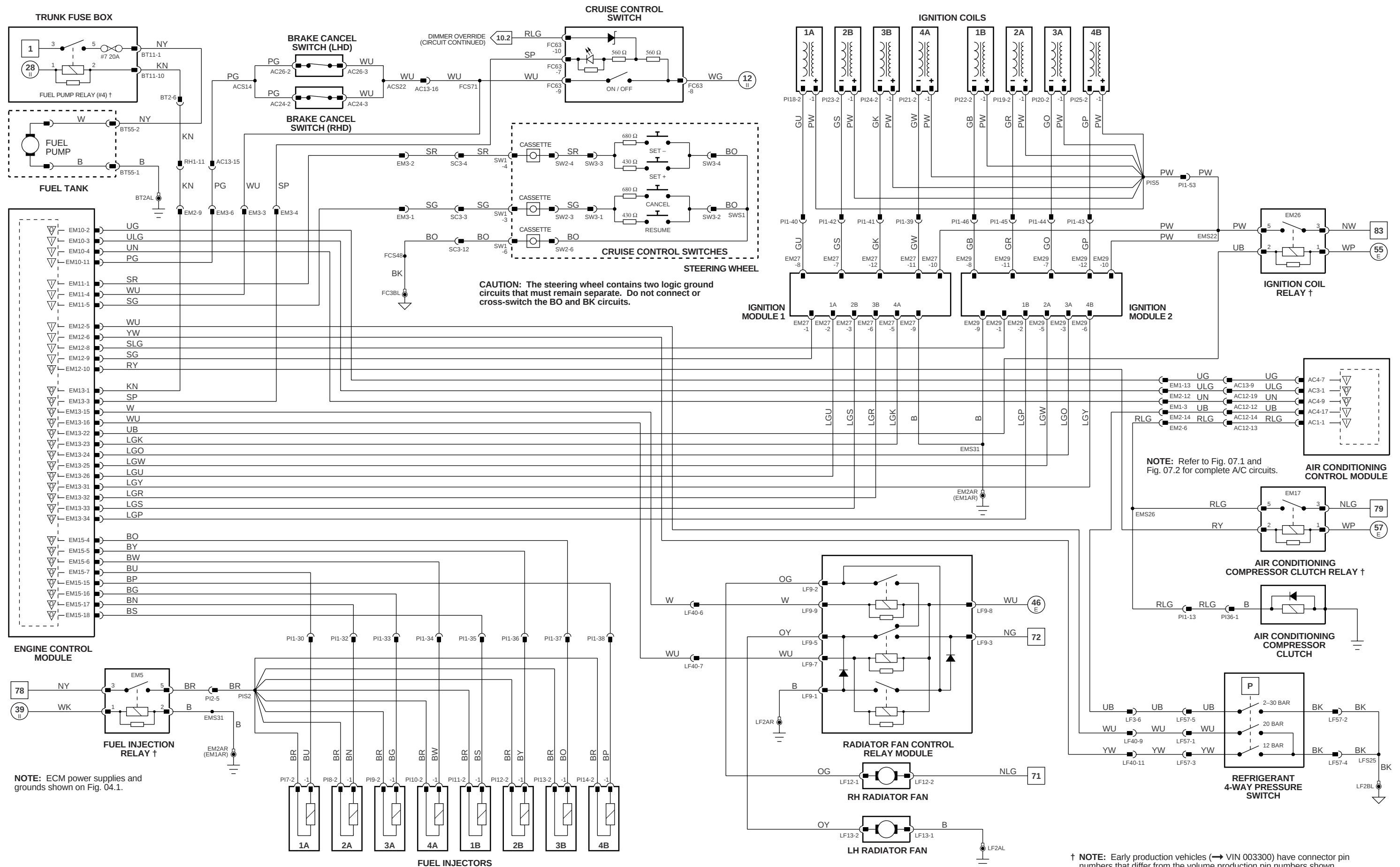
 SCP Network

VARIANT: AJ26 NAS Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996

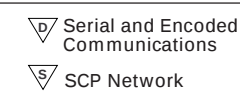
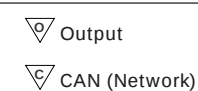
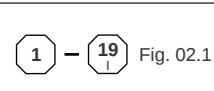
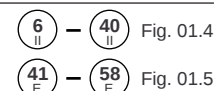
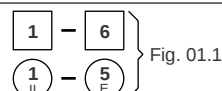


VARIANT: AJ26 NAS Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996





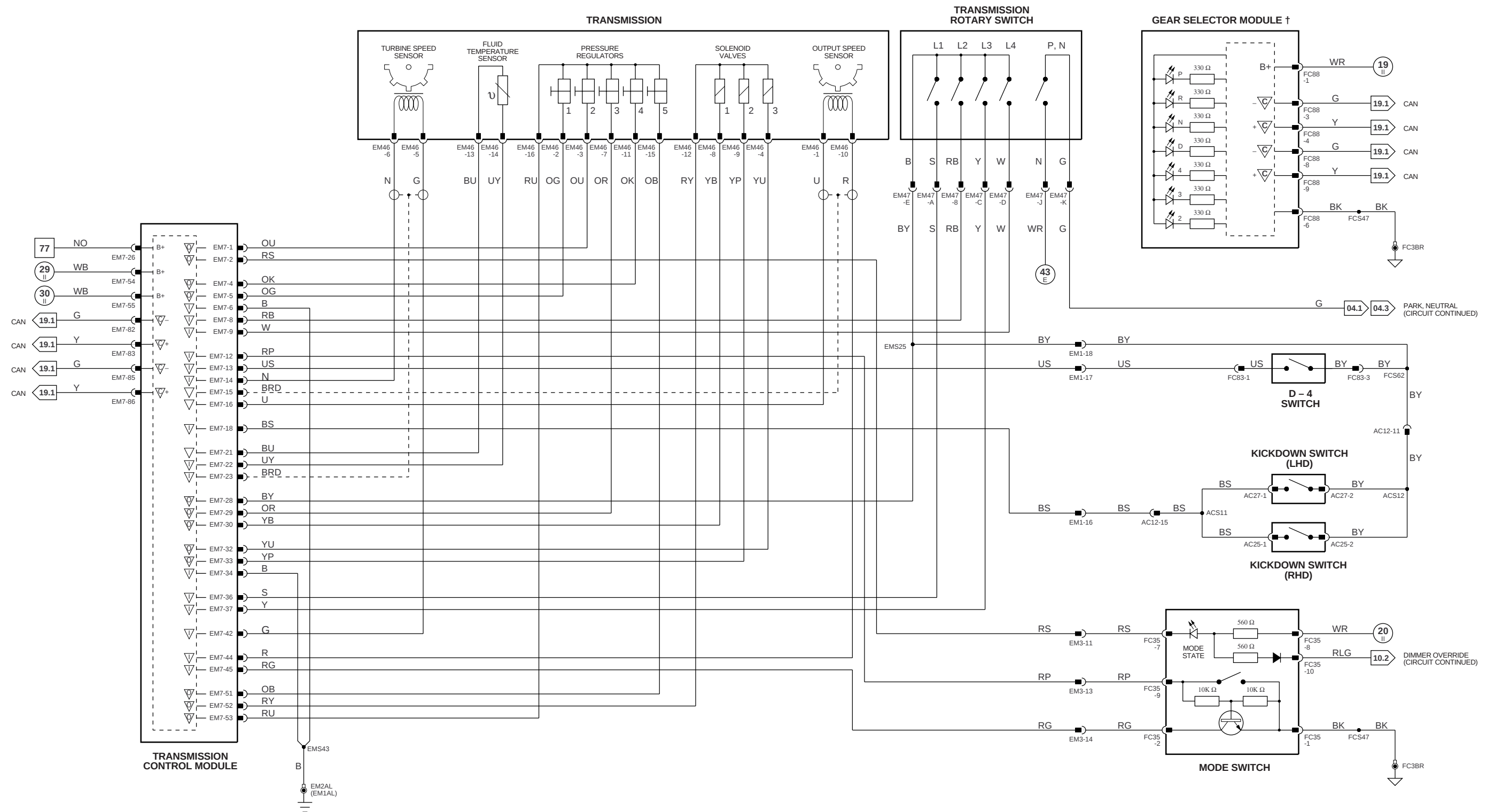
† NOTE: Early production vehicles (→ VIN 003300) have connector pin numbers that differ from the volume production pin numbers shown. Use the wire color code for pin identification on early production vehicles.



VARIANT: AJ26 ROW Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



NOTE: Gear Selector Module – CAN 'Listen only' node for gear selector position indicators.



† NOTE: Early production vehicles (→ VIN 003300) have connector pin numbers that differ from the volume production pin numbers shown. Use the wire color code for pin identification on early production vehicles.

1 - 6 Fig. 01.1
1 - 5

7 - 53 Fig. 01.2
54 - 84 Fig. 01.3

6 - 40 Fig. 01.4
41 - 58 Fig. 01.5

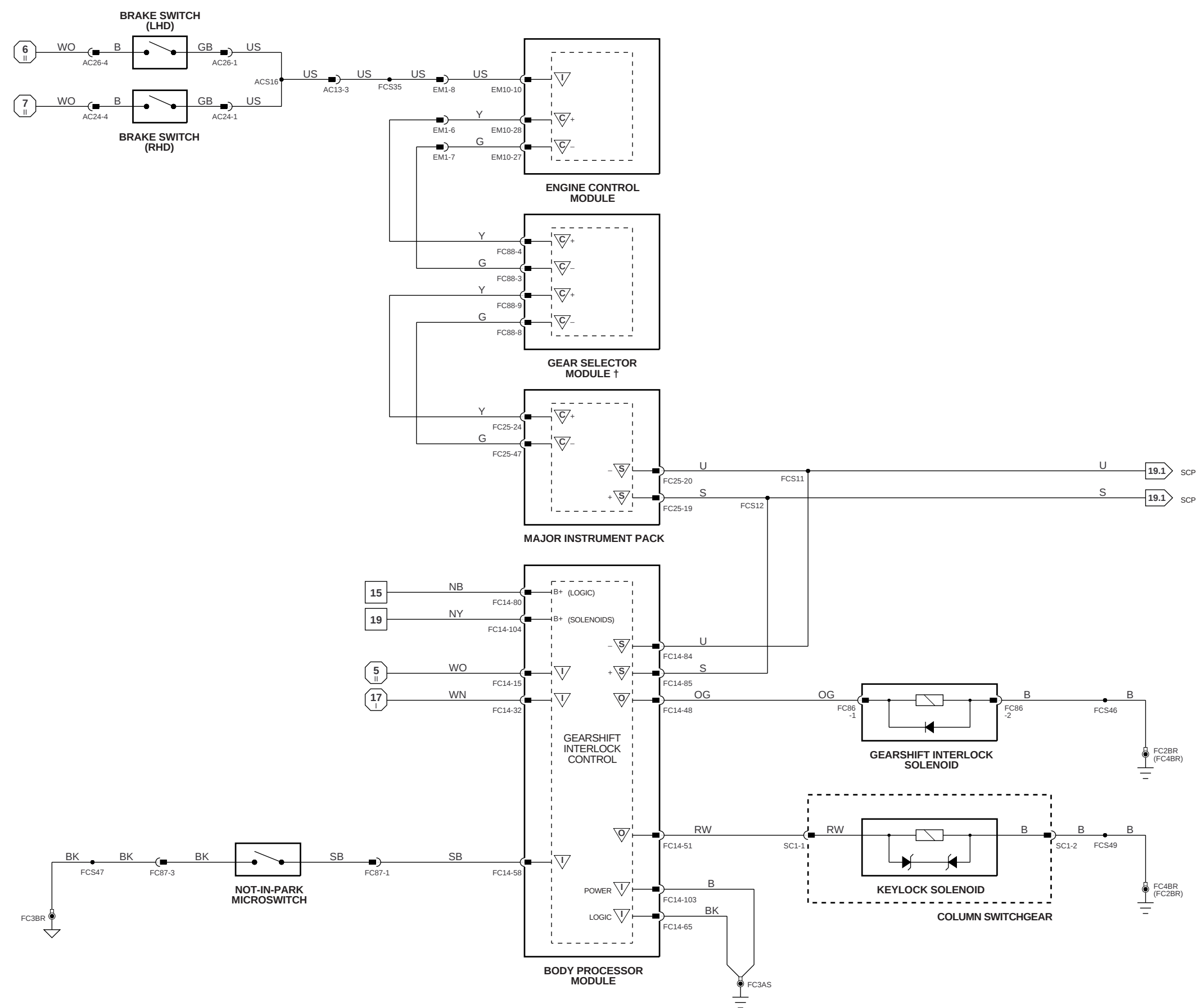
1 - 19 Fig. 02.1

Input
Signal Ground (SG)

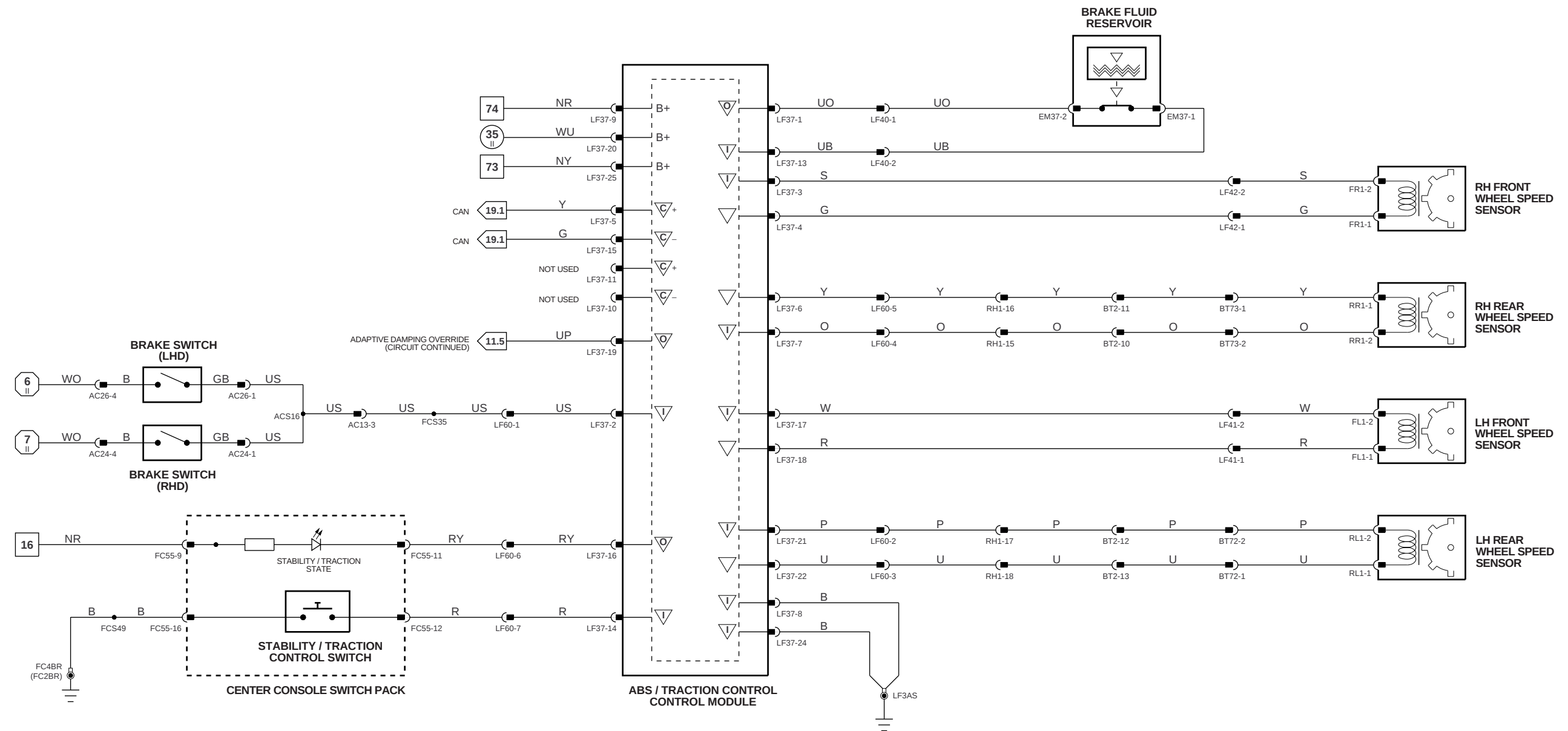
Output
CAN (Network)

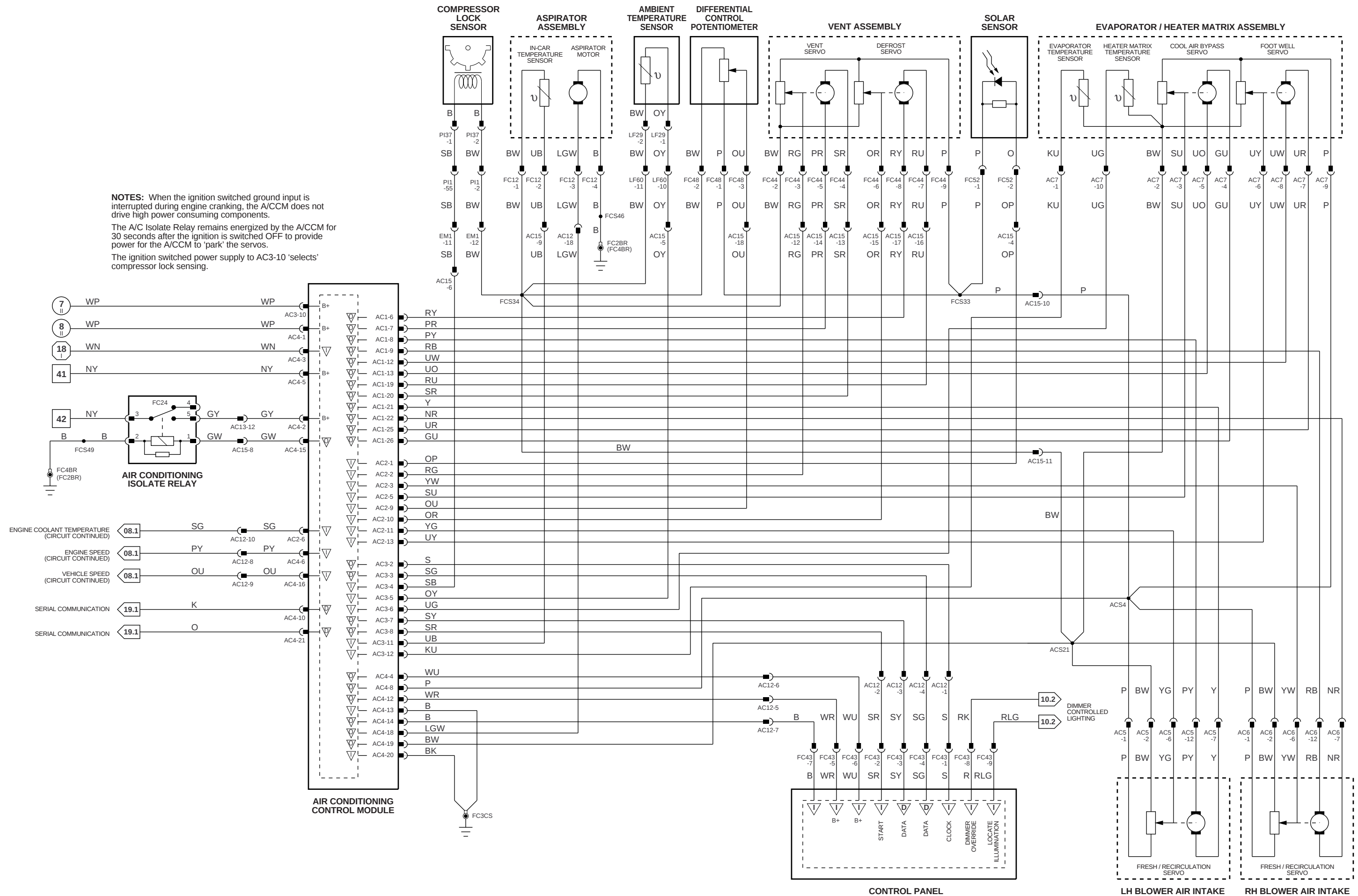
Serial and Encoded Communications
SCP Network

VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



† NOTE: Early production vehicles (→ VIN 003300) have connector pin numbers that differ from the volume production pin numbers shown. Use the wire color code for pin identification on early production vehicles.





1 - 6 Fig. 01.1
1 - 5 Fig. 01.1

7 - 53 Fig. 01.2
54 - 84 Fig. 01.3

6 - 40 Fig. 01.4
41 - 58 Fig. 01.5

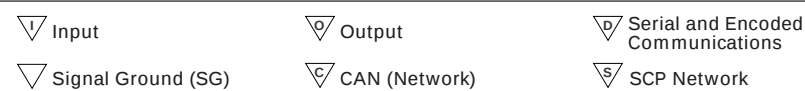
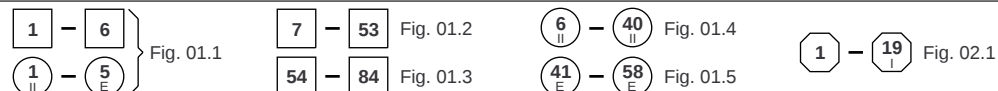
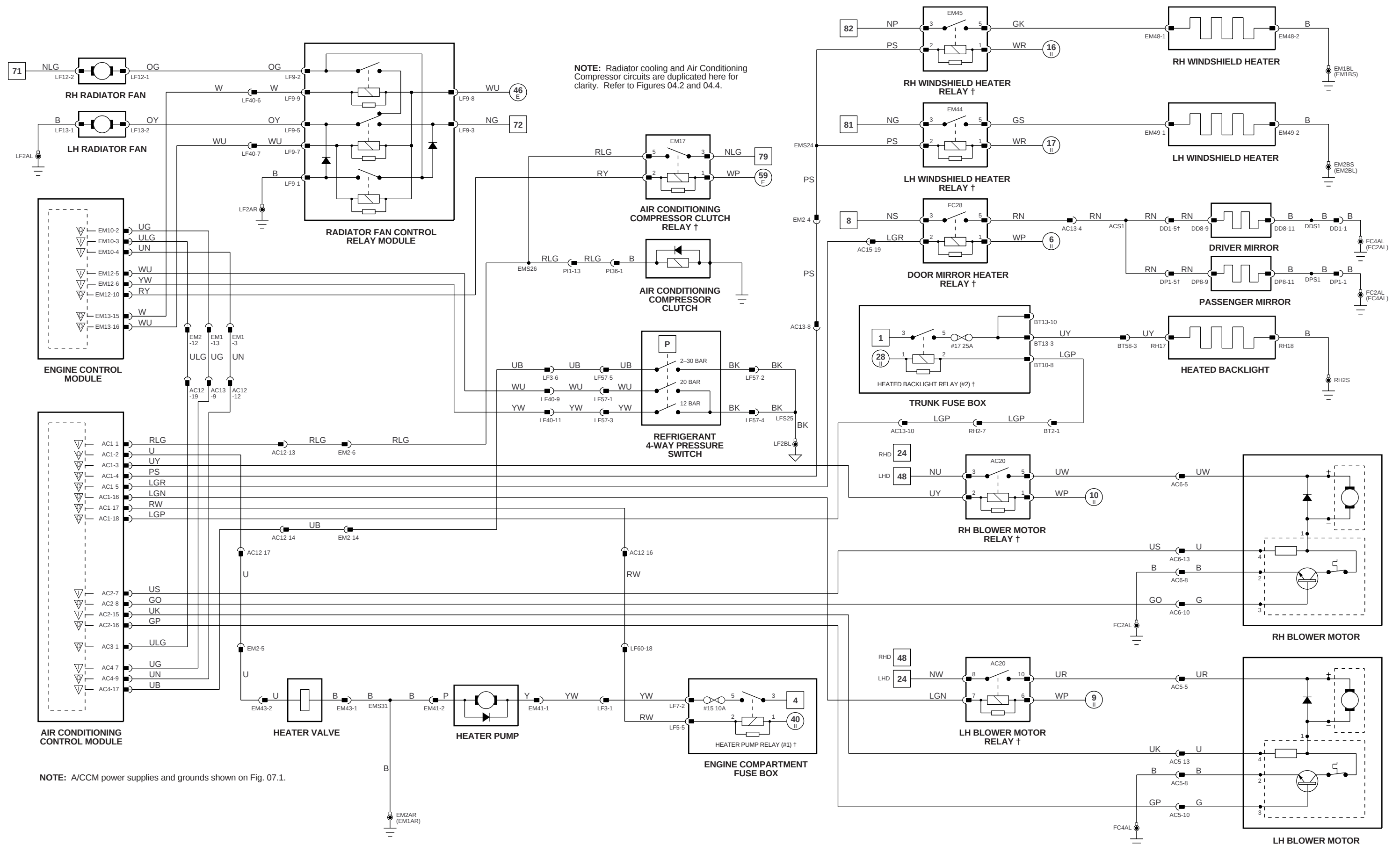
1 - 19 Fig. 02.1

Input
Signal Ground (SG)

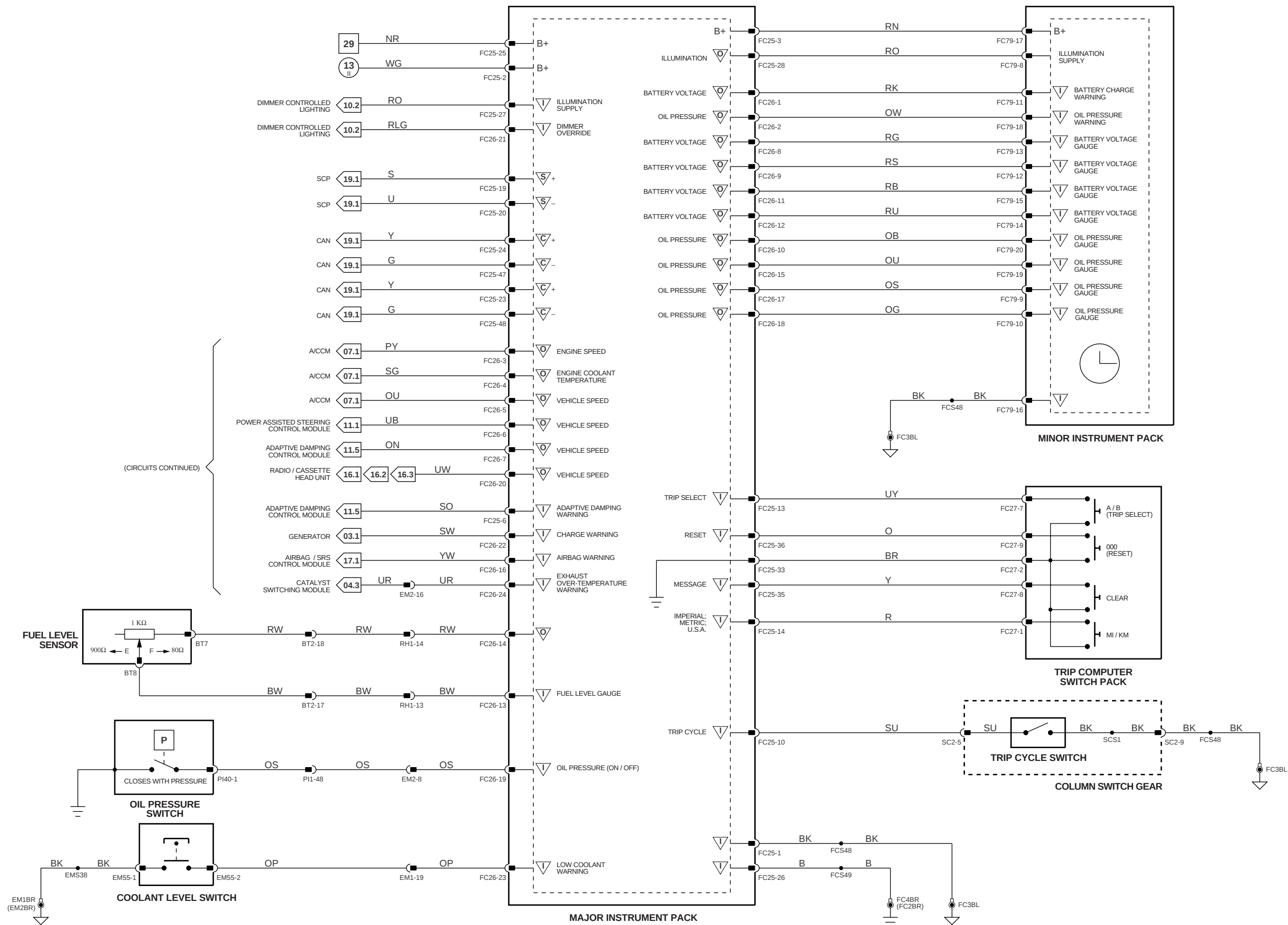
Output
CAN (Network)

Serial and Encoded Communications
SCP Network

VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



1 - 6 Fig. 01.1
1 - 5 Fig. 01.1

7 - 53 Fig. 01.2
54 - 84 Fig. 01.3

6 - 40 Fig. 01.4
41 - 58 Fig. 01.5

1 - 19 Fig. 02.1

Input
Signal Ground (SG)

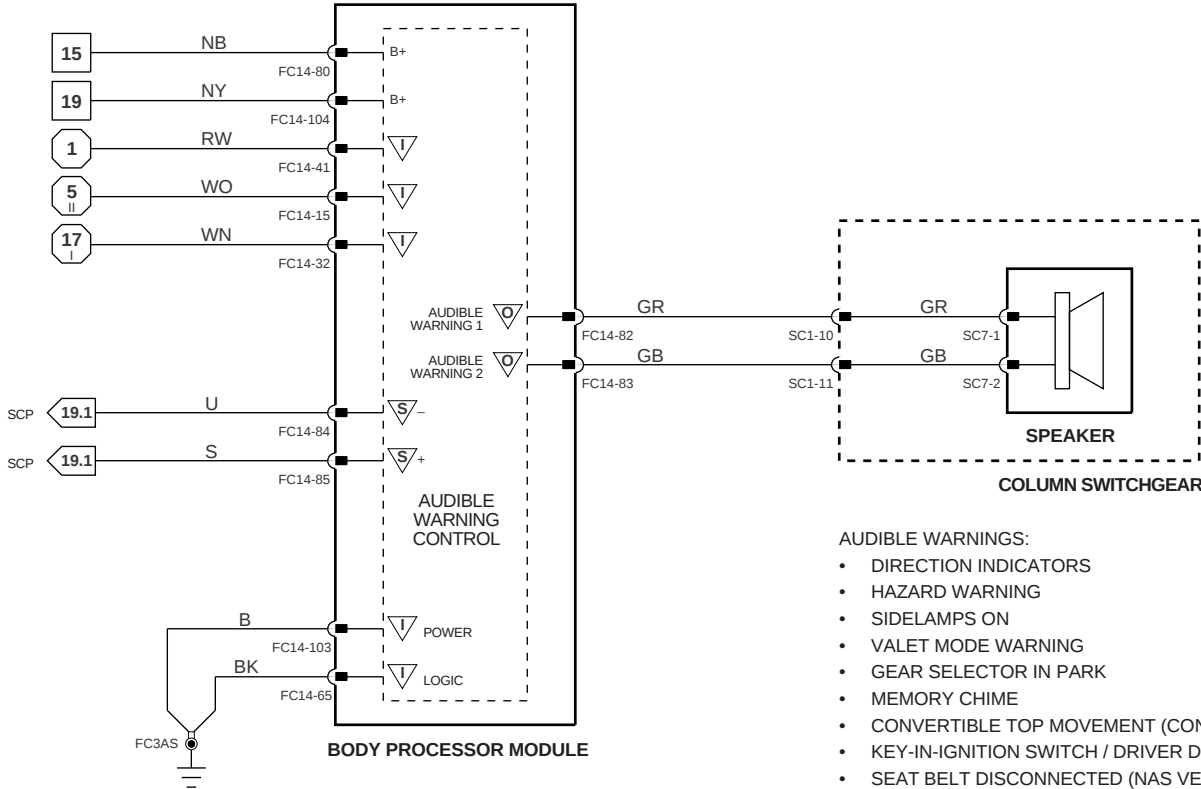
Output
CAN (Network)

Serial and Encoded Communications
SCP Network

VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



- SCP SOURCES:
- DIRECTION INDICATORS; HAZARD WARNING; SIDELAMPS – Fig. 09.1, Fig. 09.2
 - VALET SWITCH; TRUNK RELEASE – Fig. 13.1
 - MEMORY – Fig. 12.1
 - CONVERTIBLE TOP MOVEMENT – Fig. 15.2
 - KEY-IN-IGNITION SWITCH / DRIVER DOOR SWITCH – Fig. 13.1
 - NOT-IN-PARK SWITCH – Fig. 05.2
 - SEAT BELT SWITCH – Fig. 12.1



- AUDIBLE WARNINGS:
- DIRECTION INDICATORS
 - HAZARD WARNING
 - SIDELAMPS ON
 - VALET MODE WARNING
 - GEAR SELECTOR IN PARK
 - MEMORY CHIME
 - CONVERTIBLE TOP MOVEMENT (CONVERTIBLE VEHICLES)
 - KEY-IN-IGNITION SWITCH / DRIVER DOOR AJAR (NAS VEHICLES ONLY)
 - SEAT BELT DISCONNECTED (NAS VEHICLES ONLY)

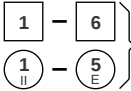


Fig. 01.1

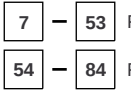


Fig. 01.2

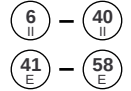


Fig. 01.4

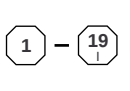


Fig. 02.1

Input

Signal Ground (SG)

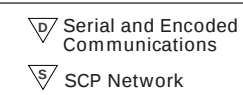
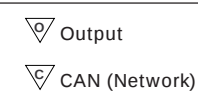
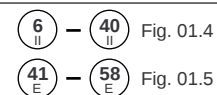
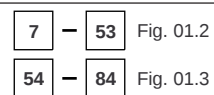
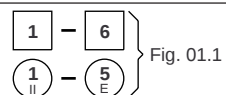
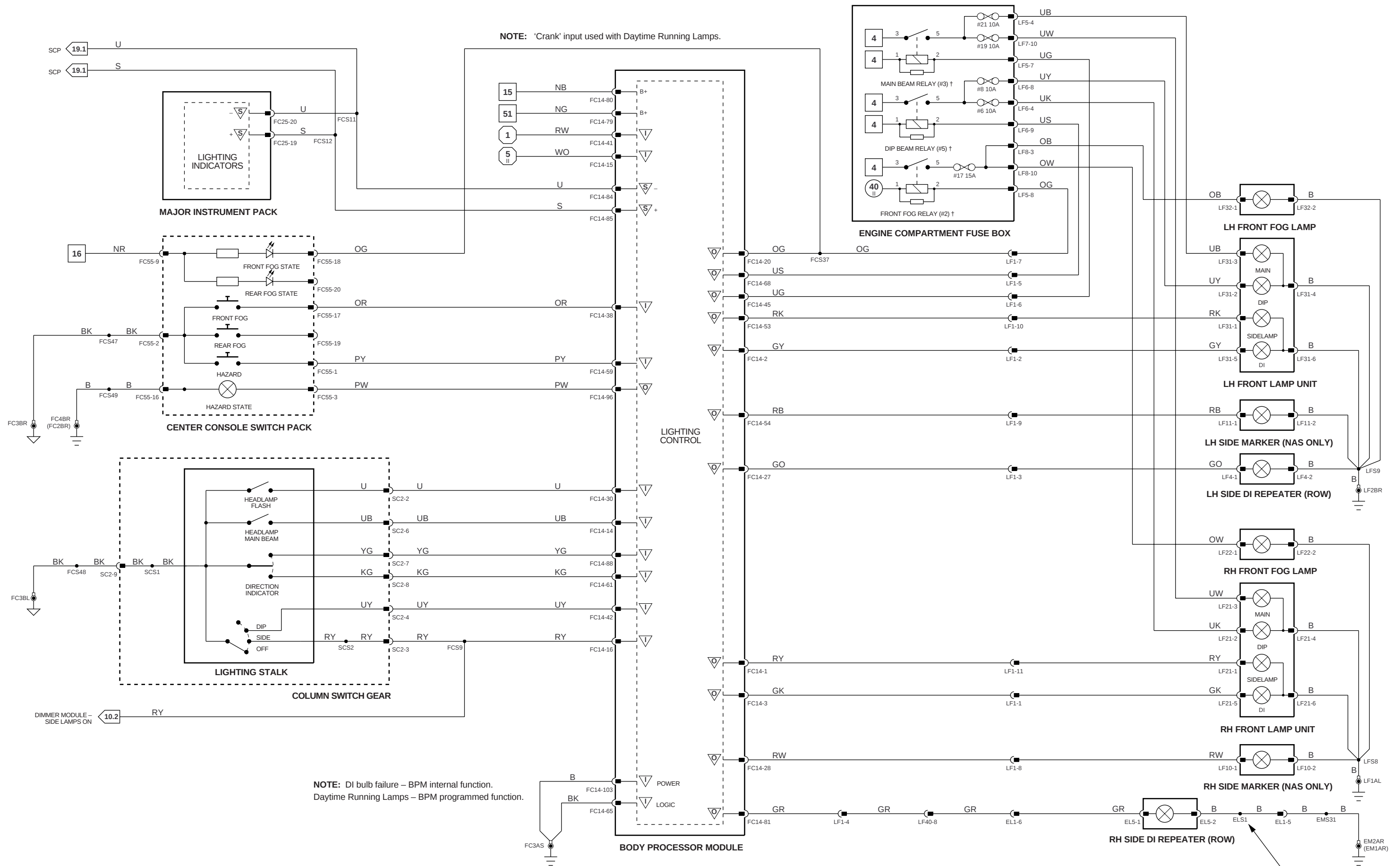
Output

CAN (Network)

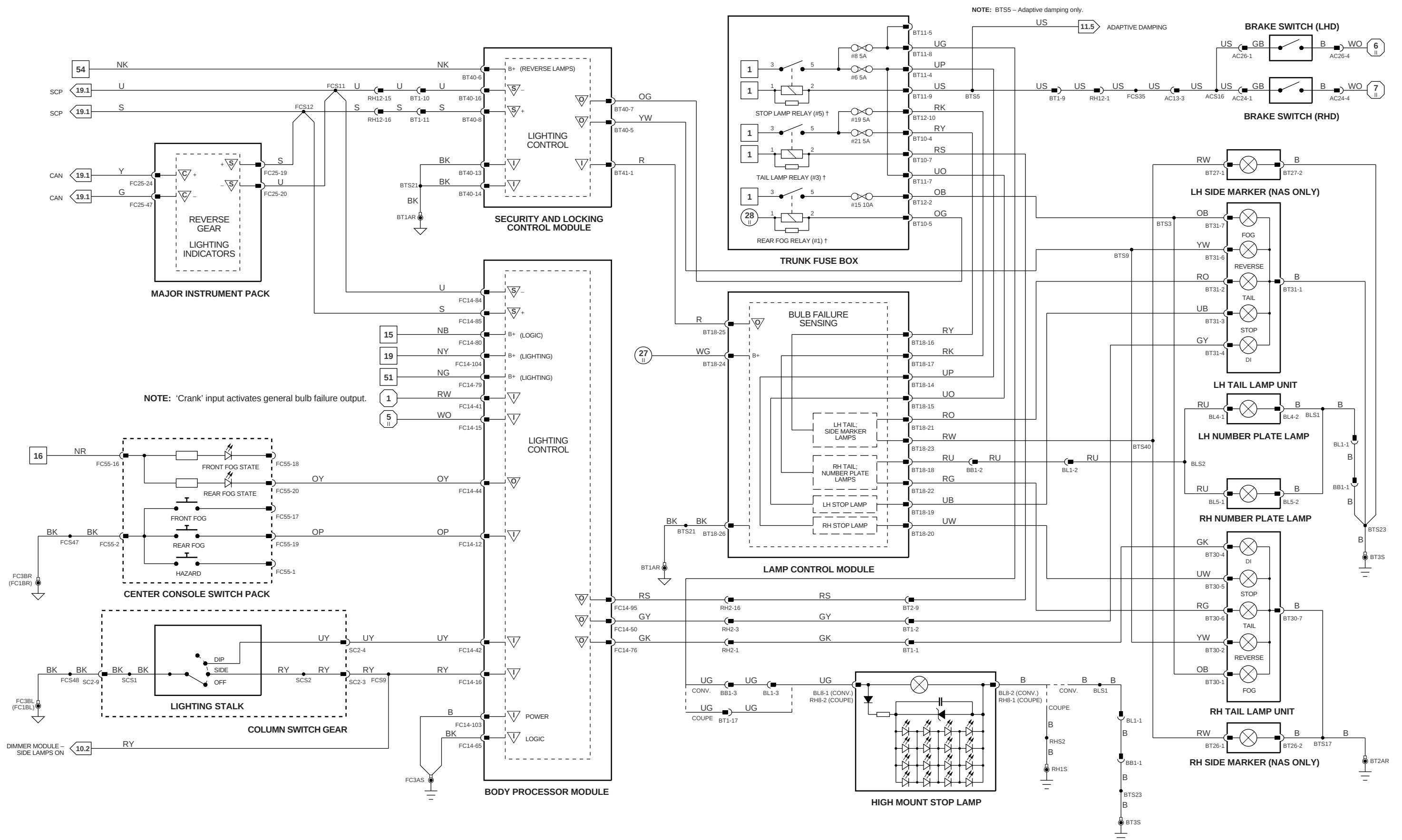
Serial and Encoded Communications

SCP Network

VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



† NOTE: Early production vehicles (→ VIN 003300) have connector pin numbers that differ from the volume production pin numbers shown. Use the wire color code for pin identification on early production vehicles.

1 - 6 Fig. 01.1
1 - 5 Fig. 01.1

7 - 53 Fig. 01.2
54 - 84 Fig. 01.3

6 - 40 Fig. 01.4
41 - 58 Fig. 01.5

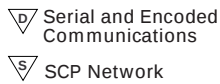
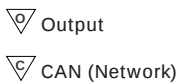
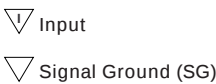
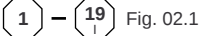
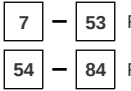
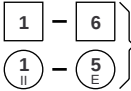
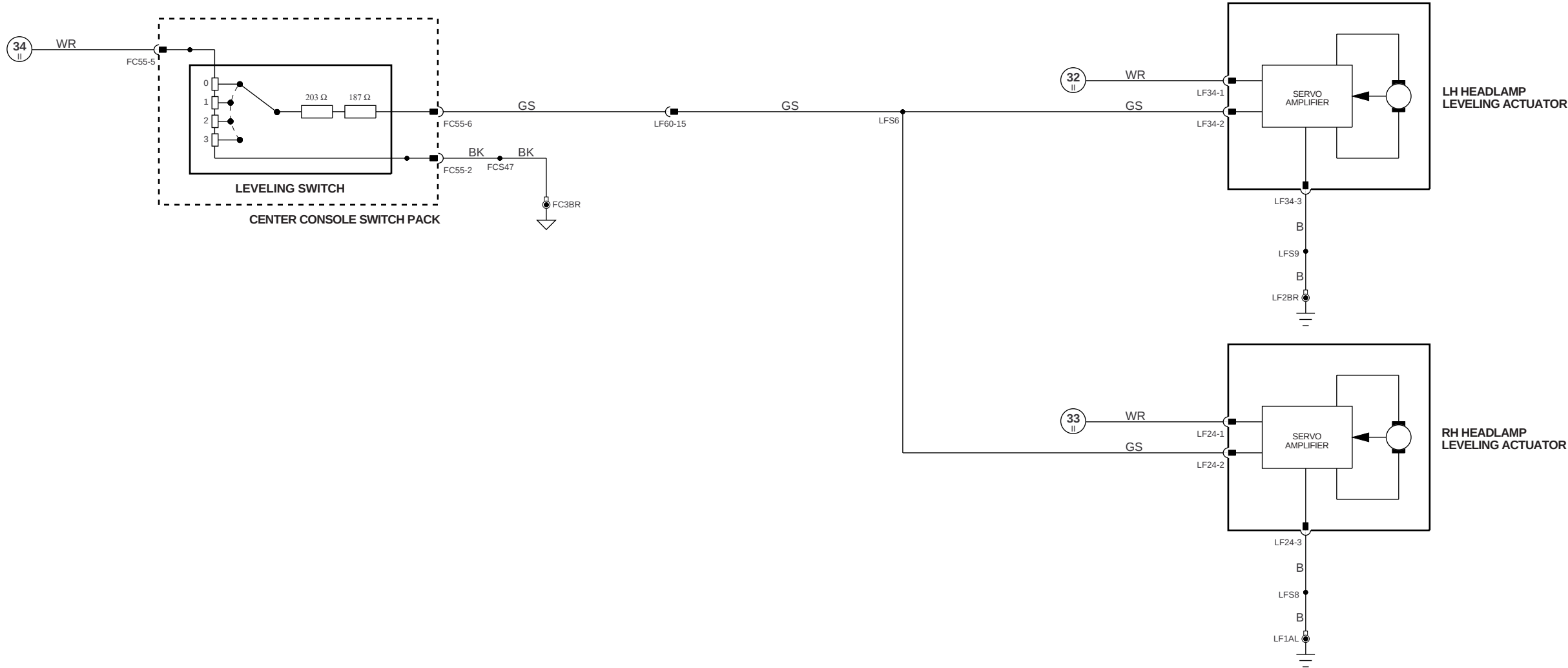
1 - 19 Fig. 02.1

Input
Signal Ground (SG)

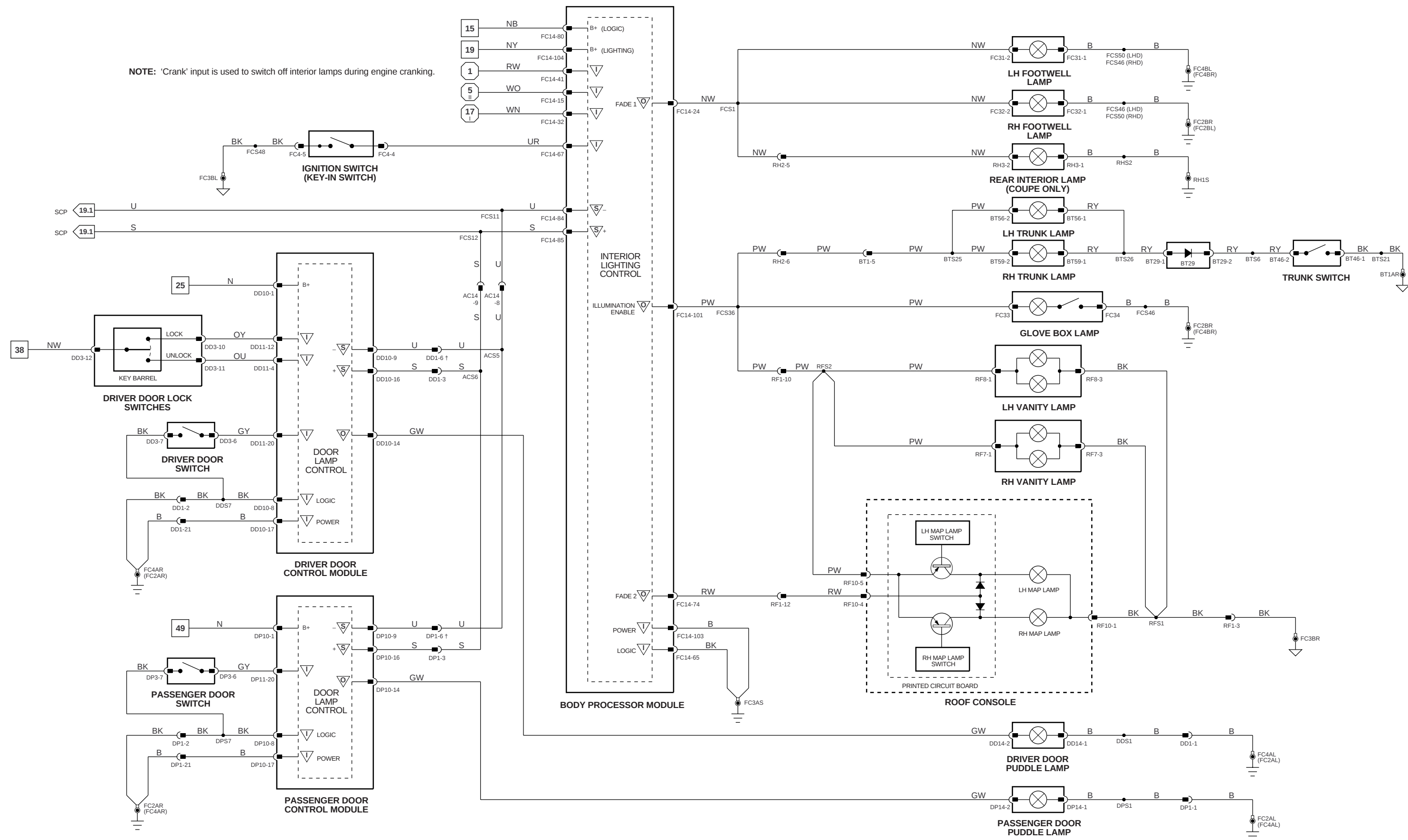
Output
CAN (Network)

Serial and Encoded Communications
SCP Network

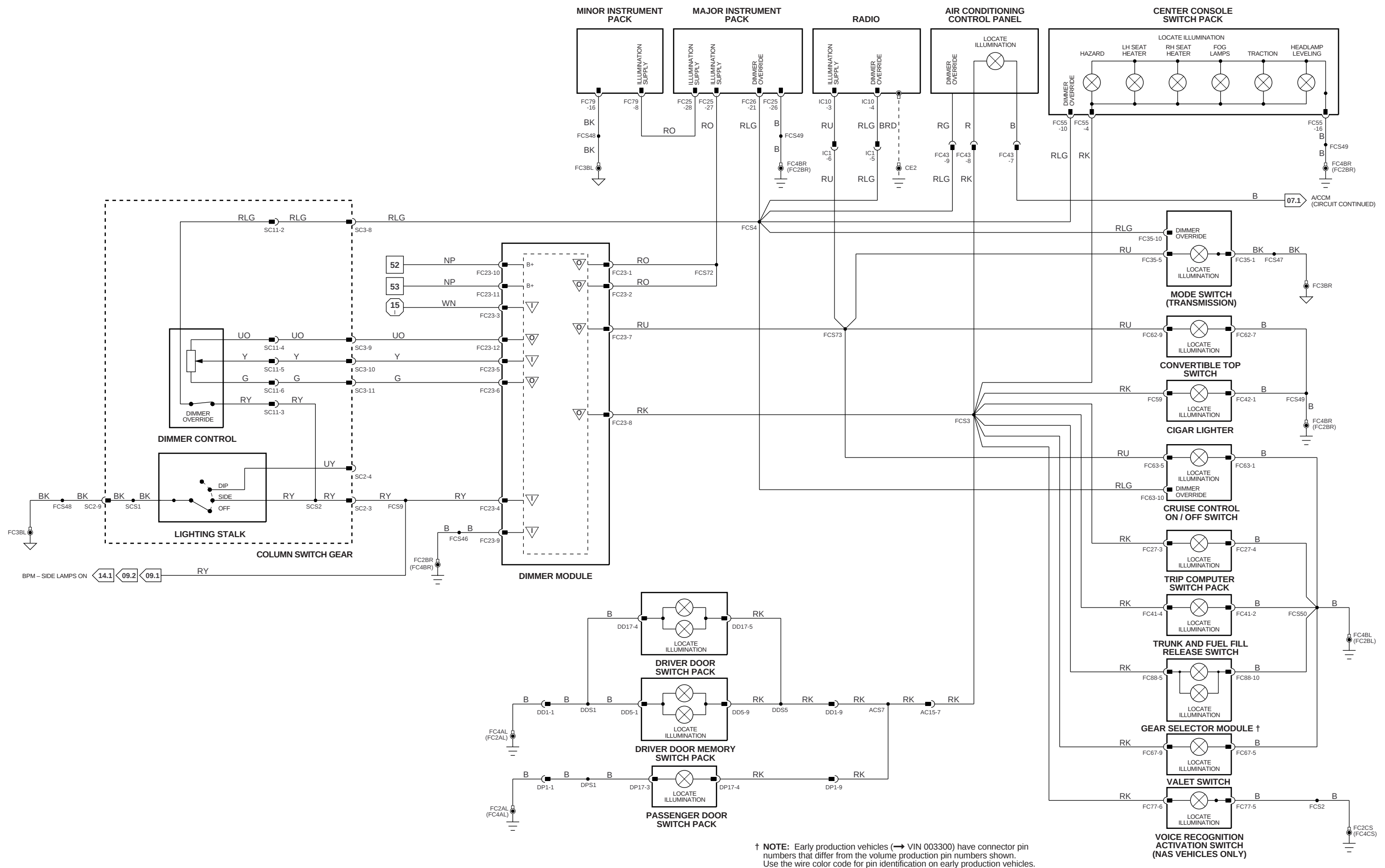
VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



VARIANT: Headlamp Leveling Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



† **NOTE:** Early production vehicles (→ VIN 003300) have connector pin numbers that differ from the volume production pin numbers shown. Use the wire color code for pin identification on early production vehicles.



1 - 6 Fig. 01.1
1 - 5 Fig. 01.1

7 - 53 Fig. 01.2
54 - 84 Fig. 01.3

6 - 40 Fig. 01.4
41 - 58 Fig. 01.5

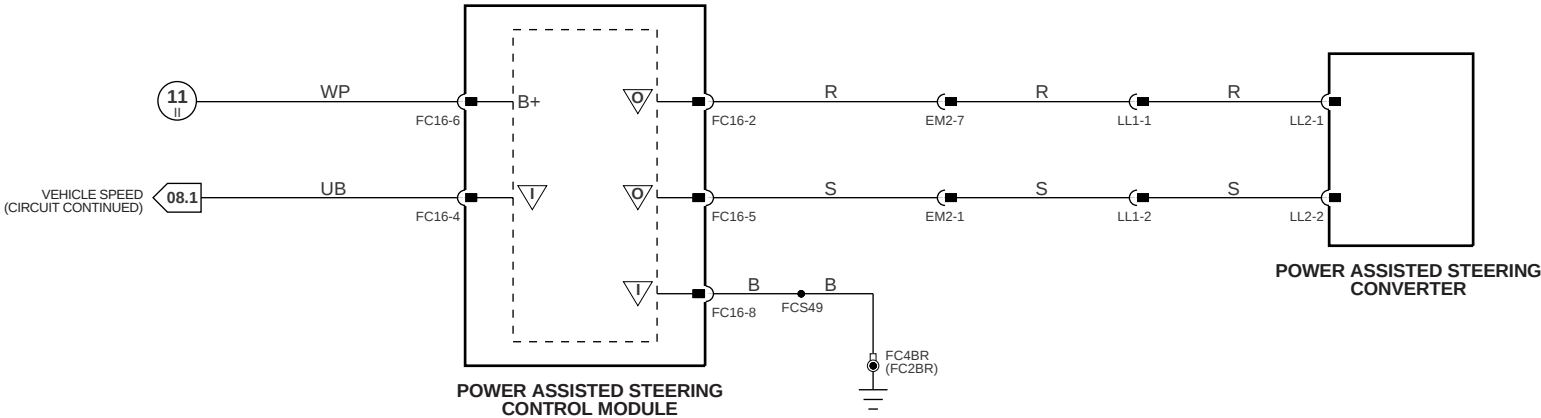
1 - 19 Fig. 02.1

Input
Signal Ground (SG)

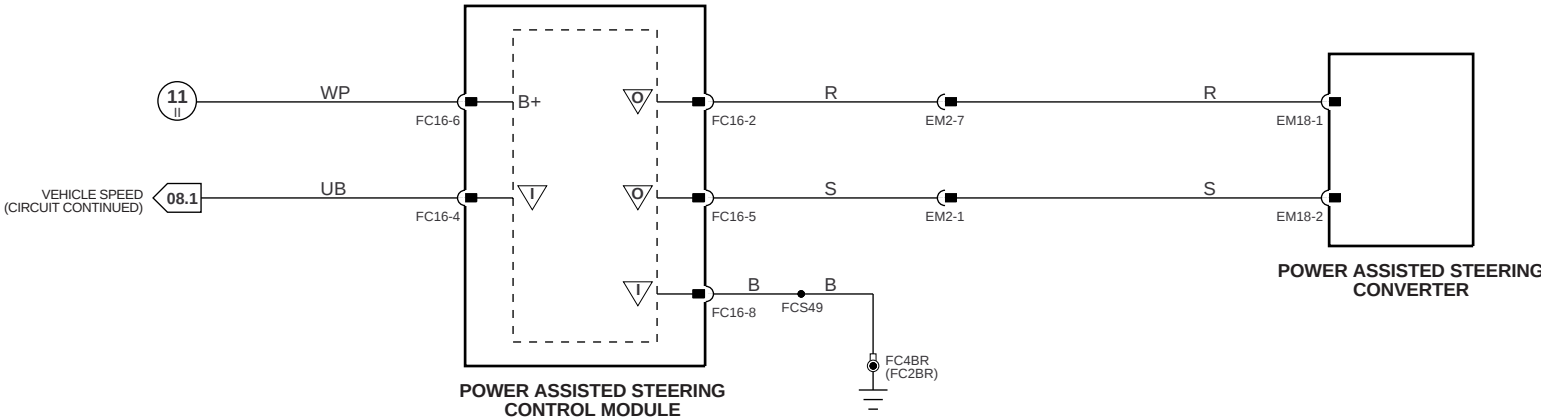
Output
CAN (Network)

Serial and Encoded Communications
SCP Network

VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



LHD



RHD

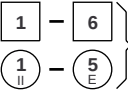


Fig. 01.1

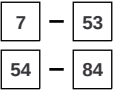


Fig. 01.2

Fig. 01.3



Fig. 01.4

Fig. 01.5

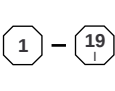


Fig. 02.1

Input

Signal Ground (SG)

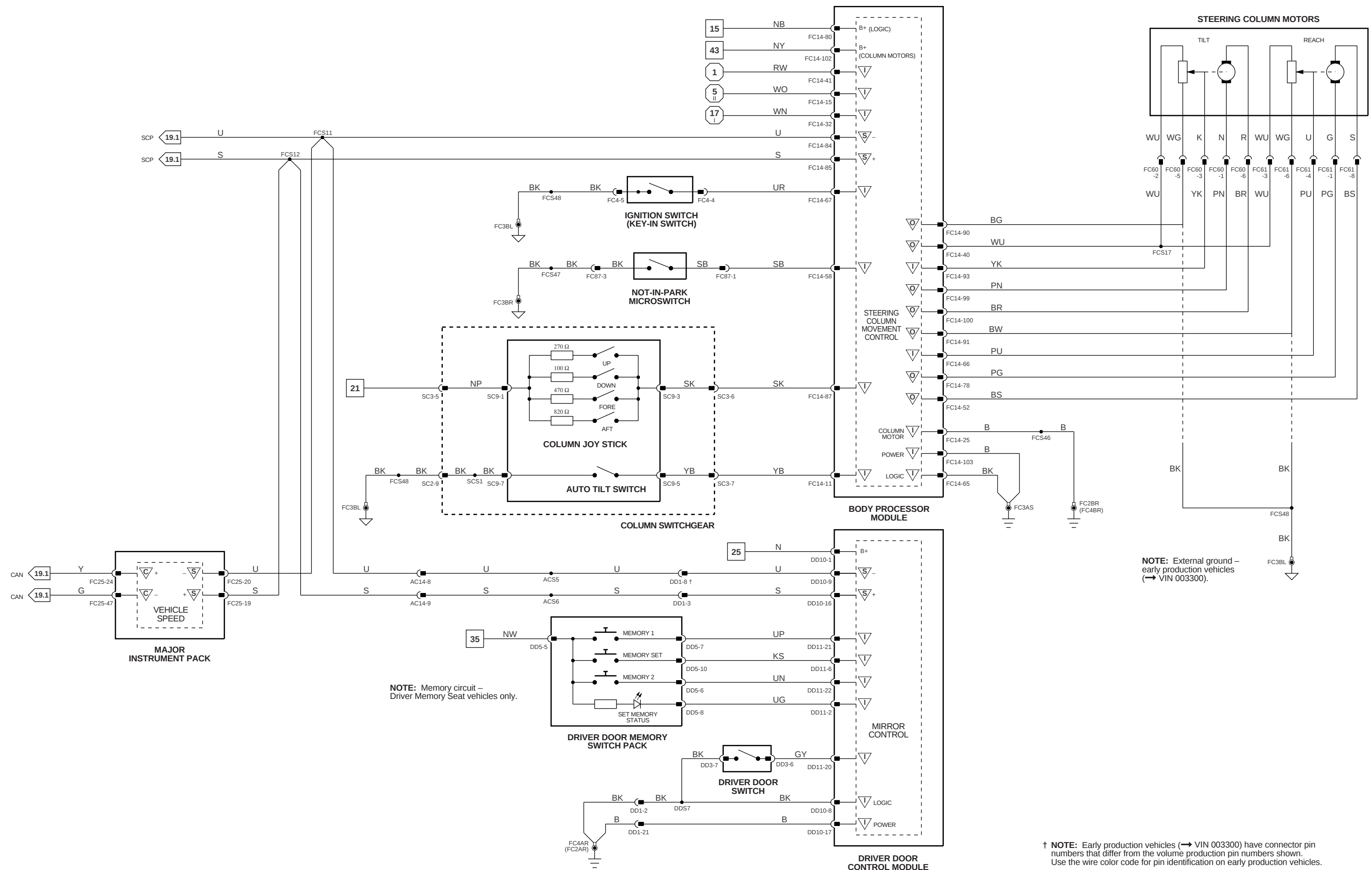
Output

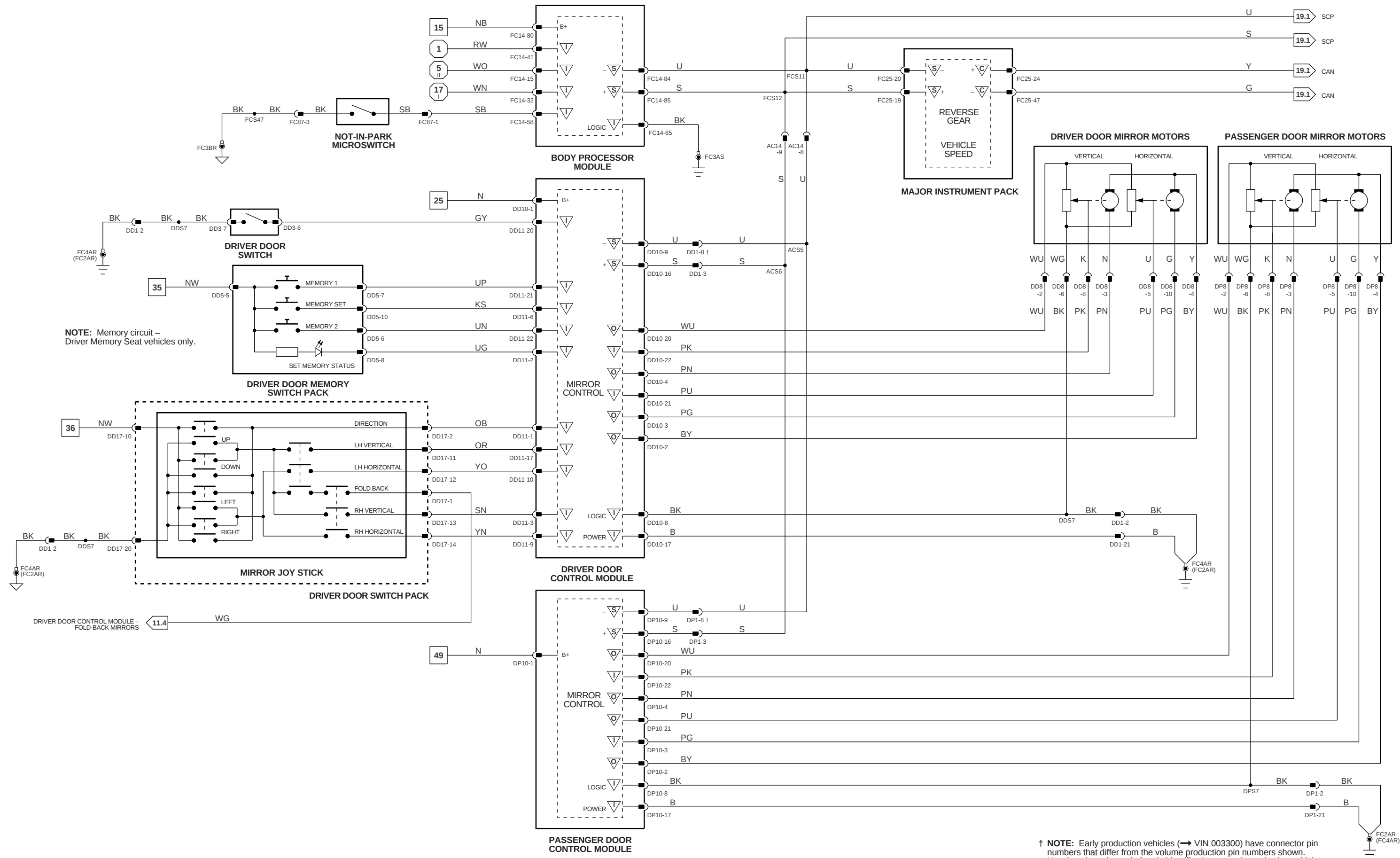
CAN (Network)

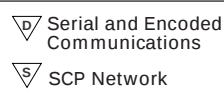
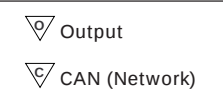
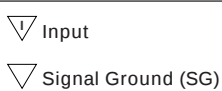
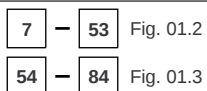
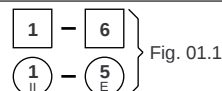
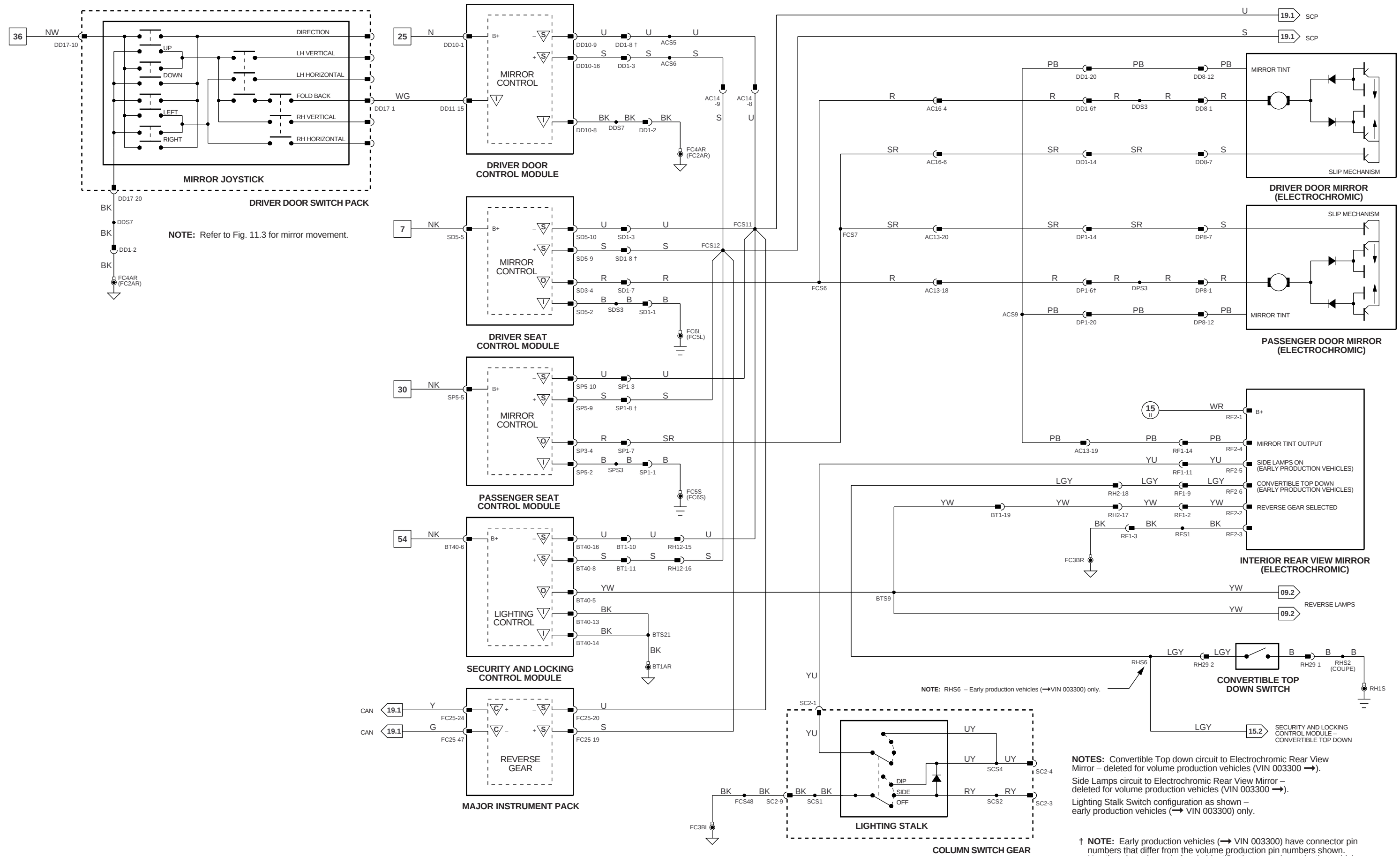
Serial and Encoded Communications

SCP Network

VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996







VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996

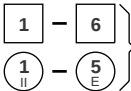
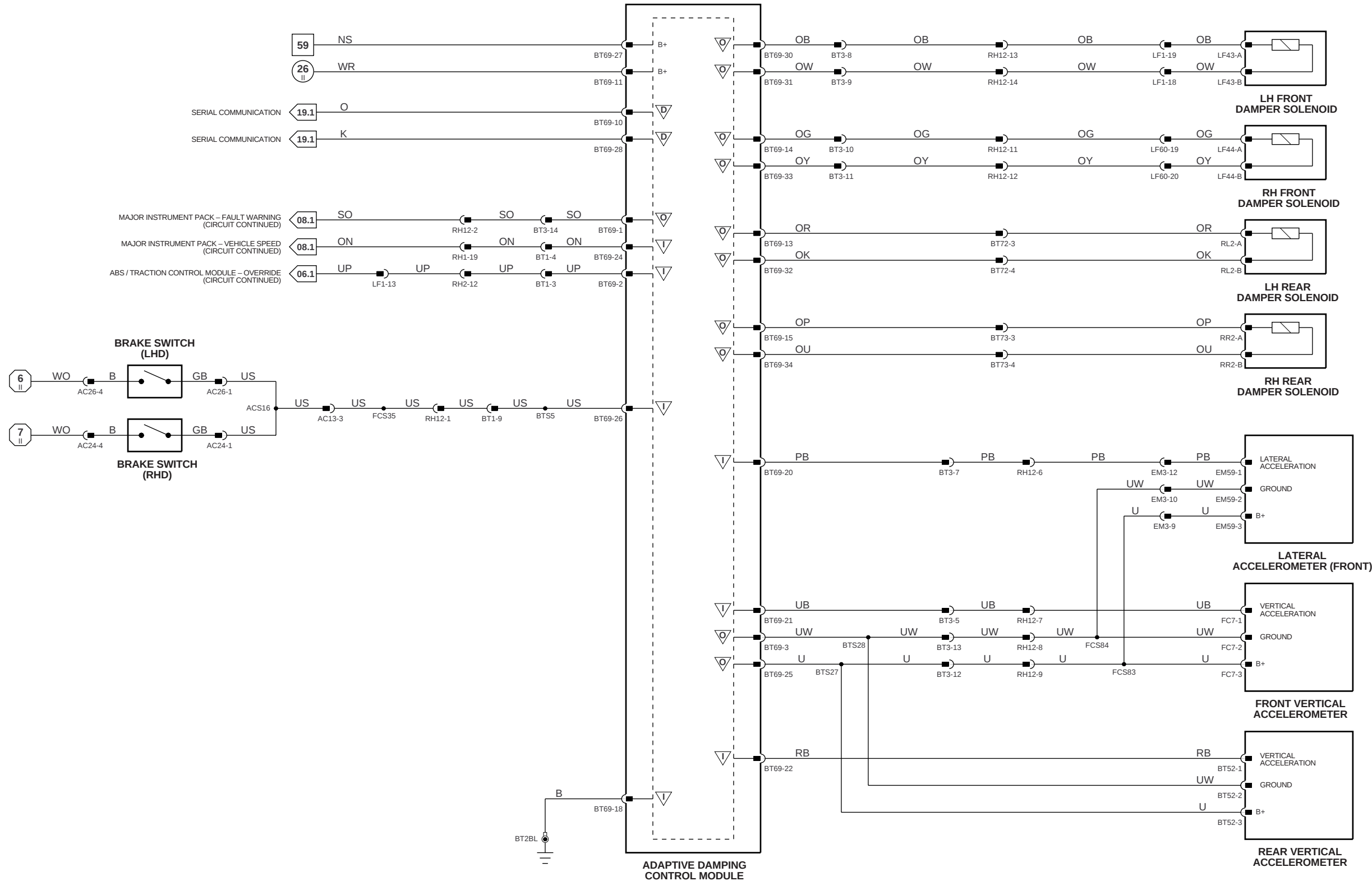


Fig. 01.1

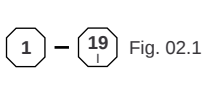


Fig. 01.2



Fig. 01.4

Fig. 01.5



Input

Signal Ground (SG)

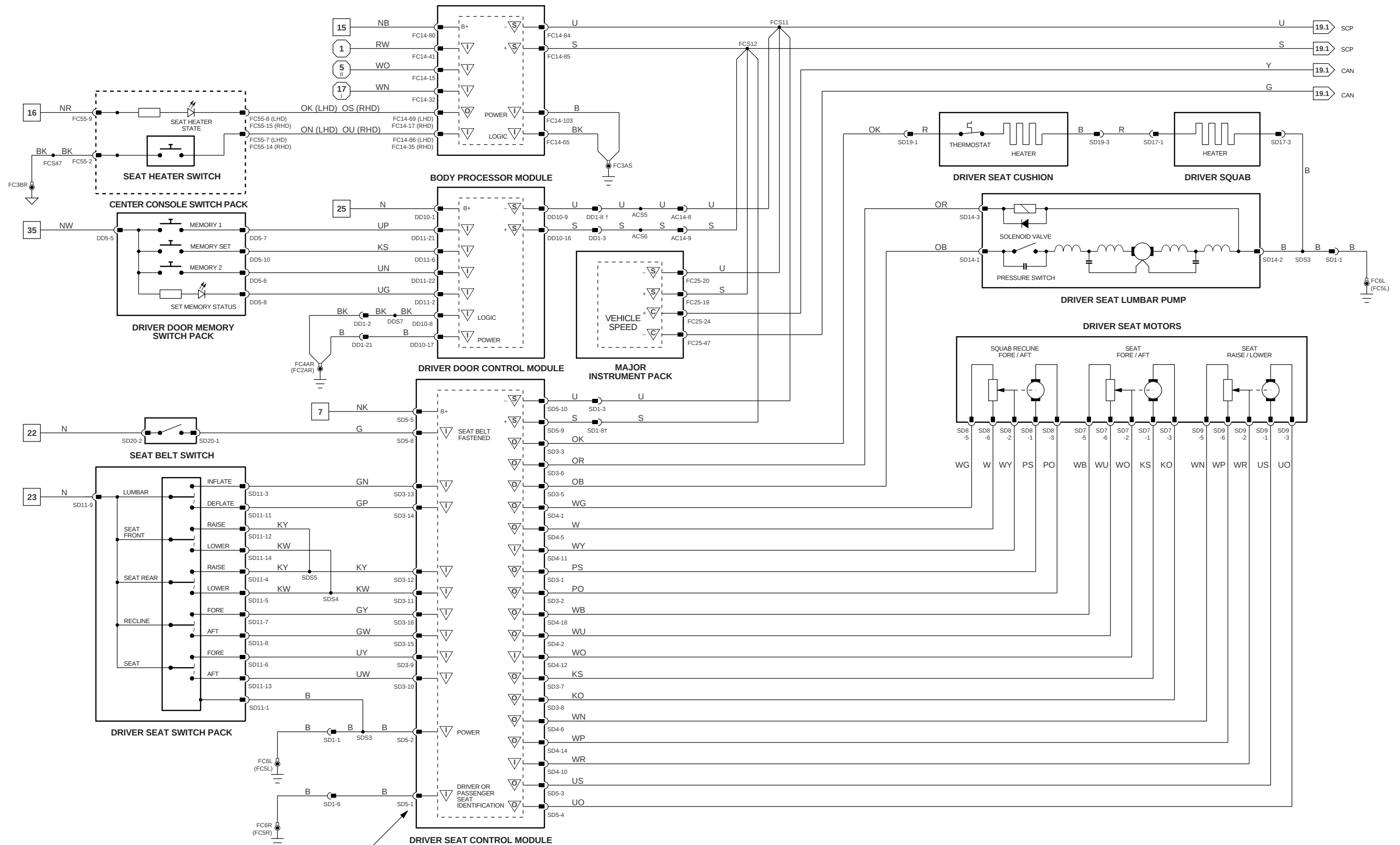
Output

CAN (Network)

Serial and Encoded Communications

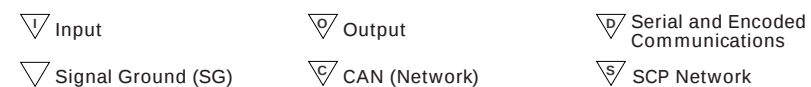
SCP Network

VARIANT: Adaptive Damping Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996

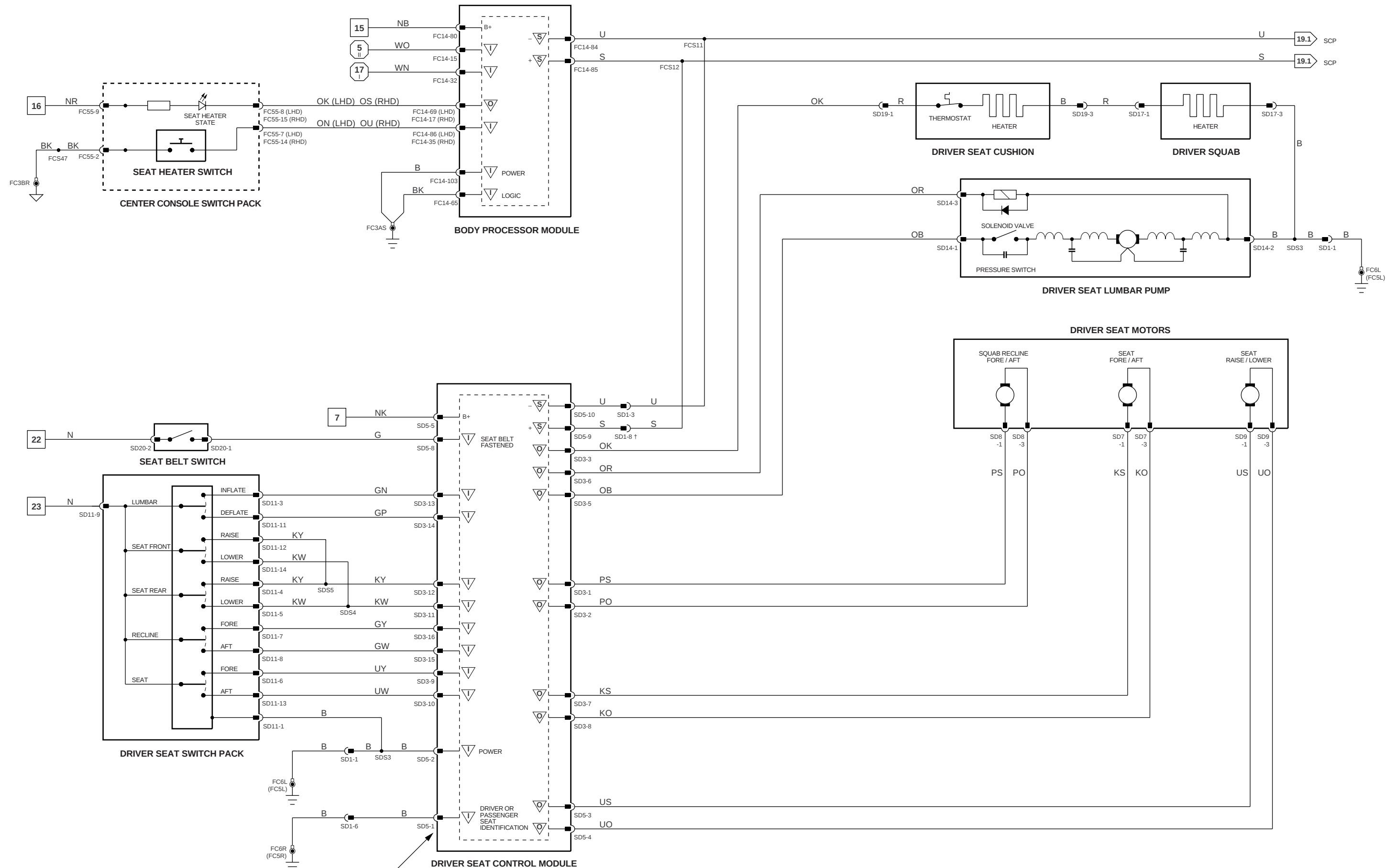


NOTE: Early production vehicles (→ VIN 003300) – SD4-3.

† NOTE: Early production vehicles (→ VIN 003300) have connector pin numbers that differ from the volume production pin numbers shown. Use the wire color code for pin identification on early production vehicles.

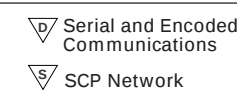
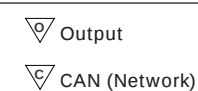
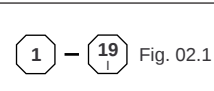
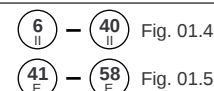
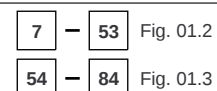
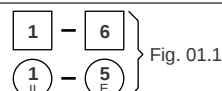


VARIANT: Memory Seat Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



NOTE: Early production vehicles (→ VIN 003300) – SD4-3.

† NOTE: Early production vehicles (→ VIN 003300) have connector pin numbers that differ from the volume production pin numbers shown. Use the wire color code for pin identification on early production vehicles.



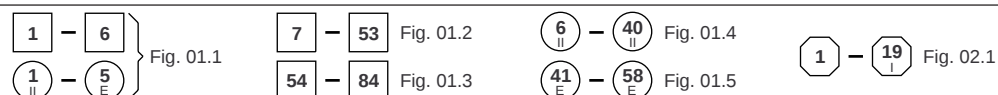
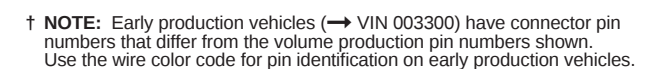
VARIANT: Non Memory Seat Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



Passenger's Seat – 3-Way Movement

Passenger's Seat – 3-Way Movement

Fig. 12.3



▽ Input

▽ Signal Ground (SG)

▽ Output

 CAN (Network)

Serial and Encoded
Communications

 SCP Network

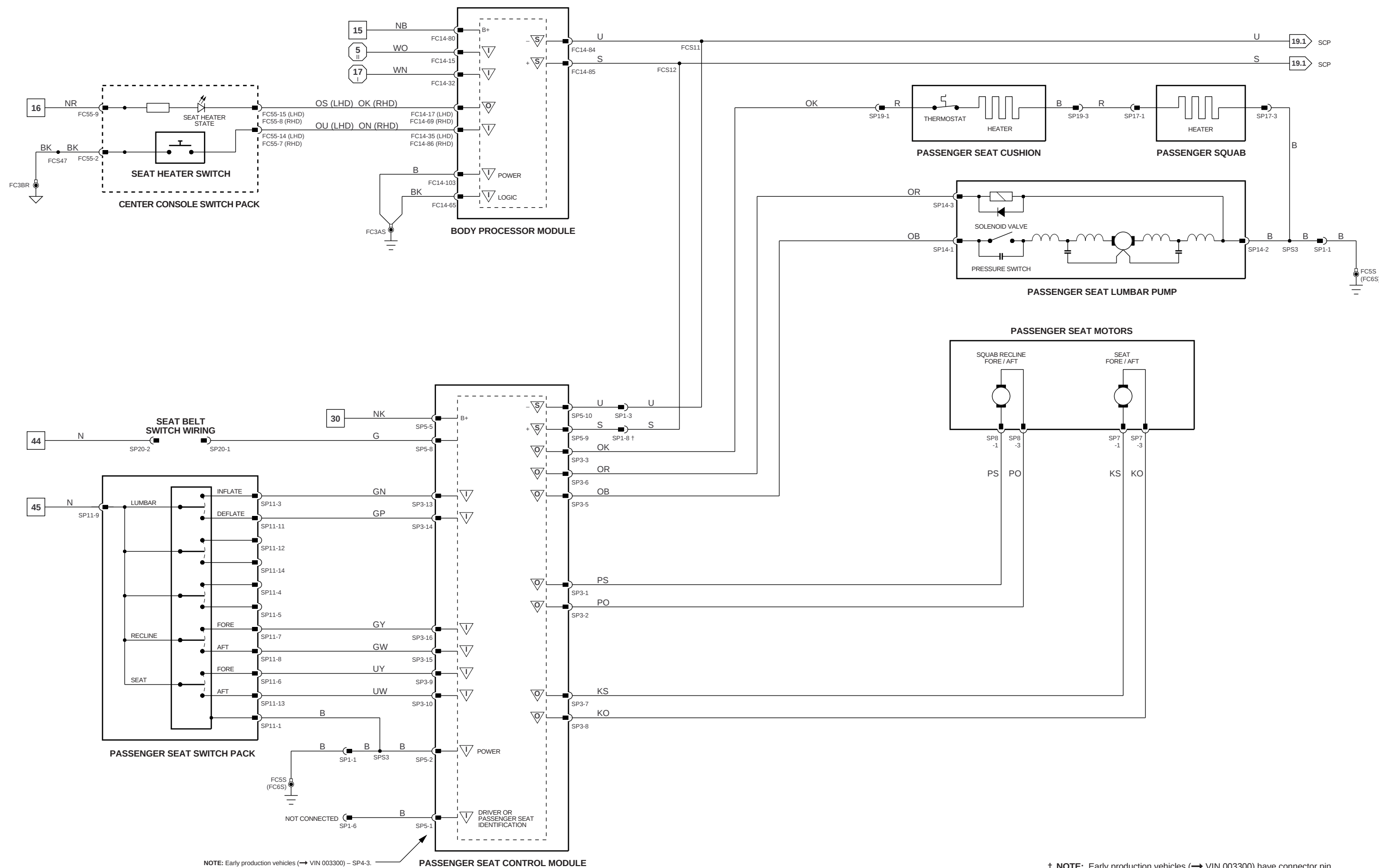
VARIANT: 3-Way Movement Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



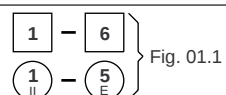
Passenger's Seat – 2-Way Movement

Passenger's Seat – 2-Way Movement

Fig. 12.4



† **NOTE:** Early production vehicles (→ VIN 003300) have connector pin numbers that differ from the volume production pin numbers shown. Use the wire color code for pin identification on early production vehicles.



$$\begin{array}{r} 7 \\ 54 \end{array} - \begin{array}{r} 53 \\ 84 \end{array}$$

 Fig. 01.4
 Fig. 01.5

1 — 19 Fig. 02.1

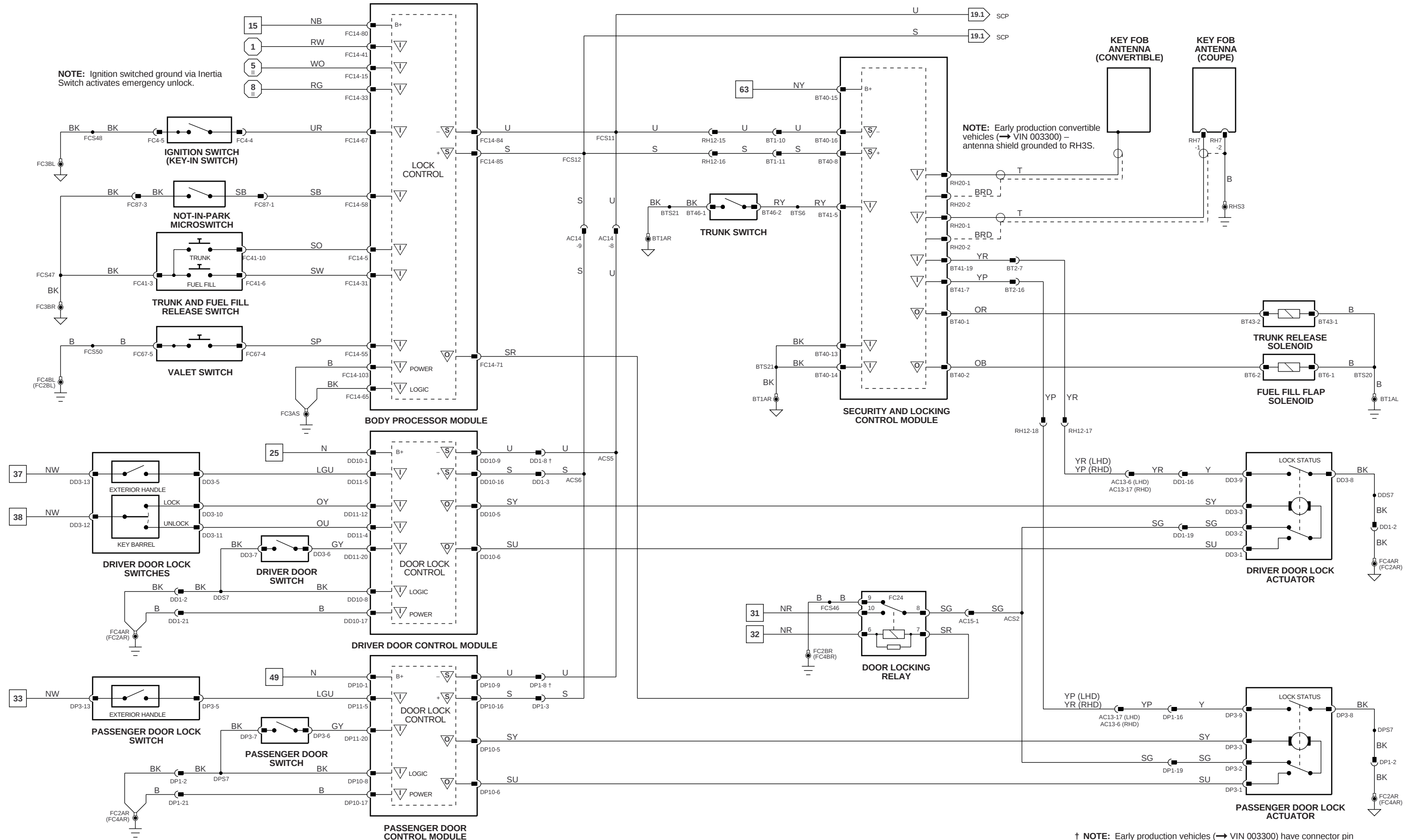
▽ Input

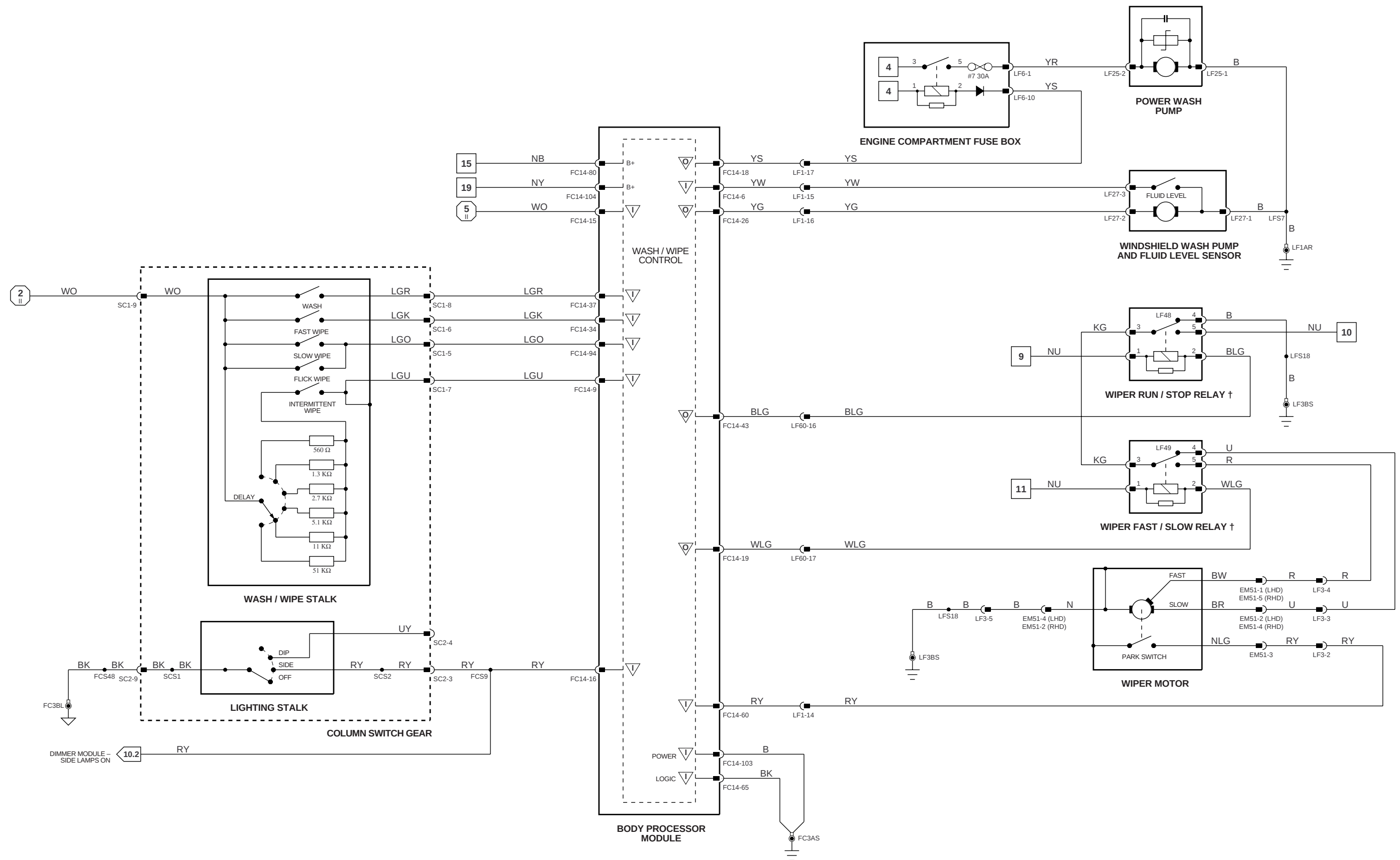
▽ Signal Ground (SG)

 Output
 CAN (Network)

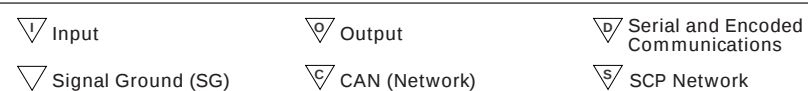
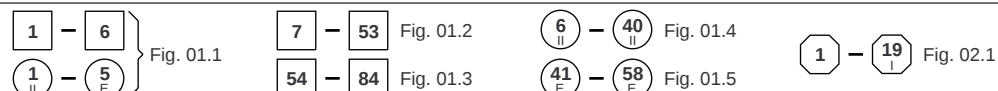
- ▷ Serial and Encoded Communications
- ▷ SCP Network

VARIANT: 2-Way Movement Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996





† NOTE: Early production vehicles (→ VIN 003300) have connector pin numbers that differ from the volume production pin numbers shown. Use the wire color code for pin identification on early production vehicles.

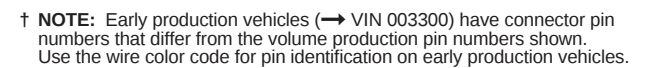


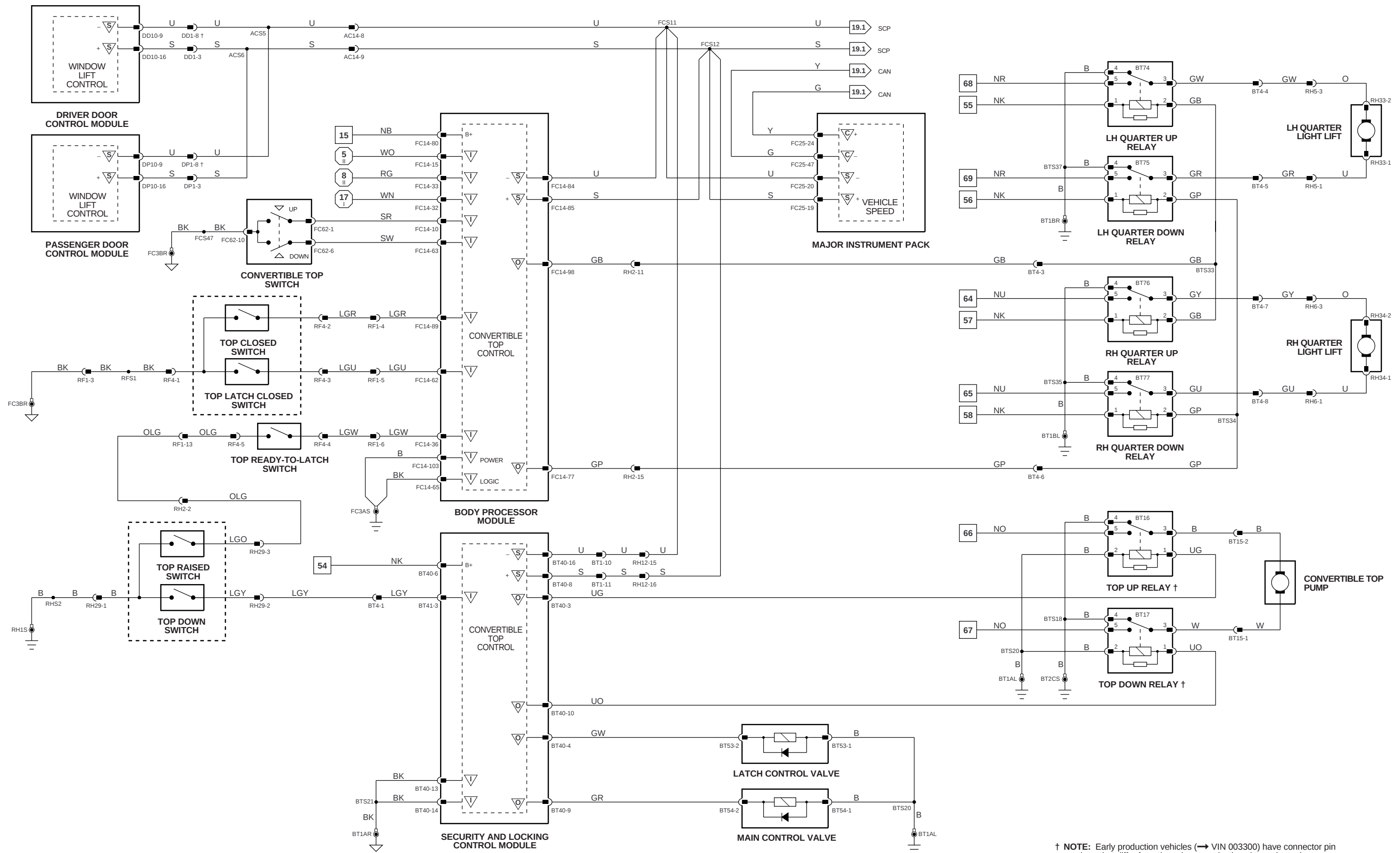
VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



Window Lifts

Fig. 15.1





† NOTE: Early production vehicles (→ VIN 003300) have connector pin numbers that differ from the volume production pin numbers shown. Use the wire color code for pin identification on early production vehicles.

1 - 6 Fig. 01.1
1 - 5

7 - 53 Fig. 01.2
54 - 84 Fig. 01.3

6 - 40 Fig. 01.4
41 - 58 Fig. 01.5

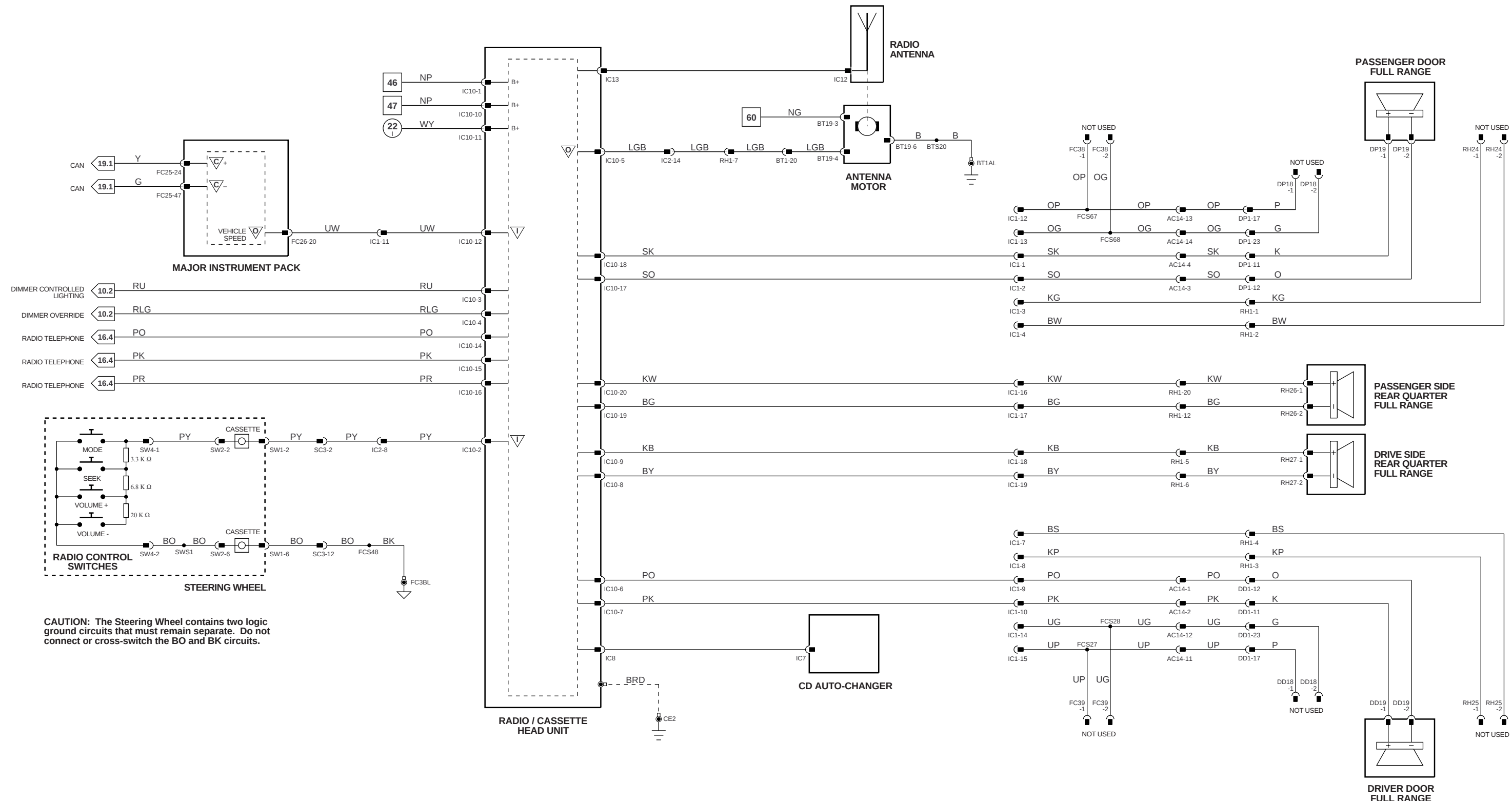
1 - 19 Fig. 02.1

Input
Signal Ground (SG)

Output
CAN (Network)

Serial and Encoded Communications
SCP Network

VARIANT: Convertible Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



1 - 6
1 - 5

7 - 53
54 - 84

6 - 40
41 - 58

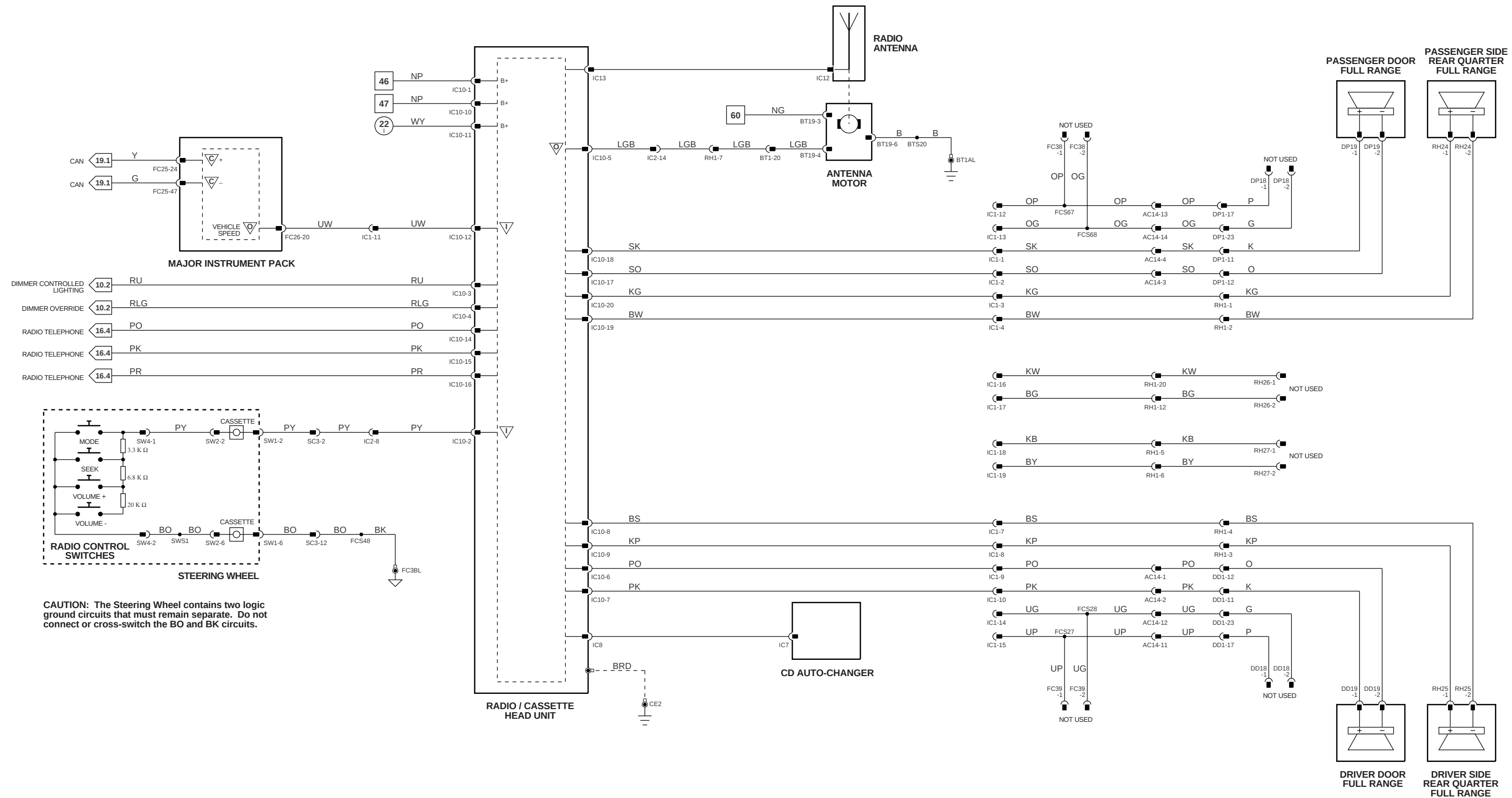
1 - 19

Input
Signal Ground (SG)

Output
CAN (Network)

Serial and Encoded Communications
SCP Network

VARIANT: Convertible Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



1 - 6
1 - 5

7 - 53
54 - 84

6 - 40
41 - 58

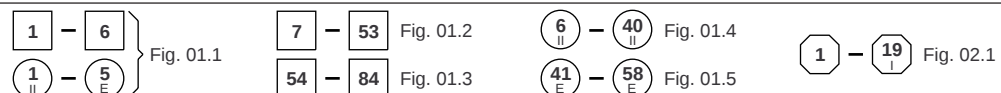
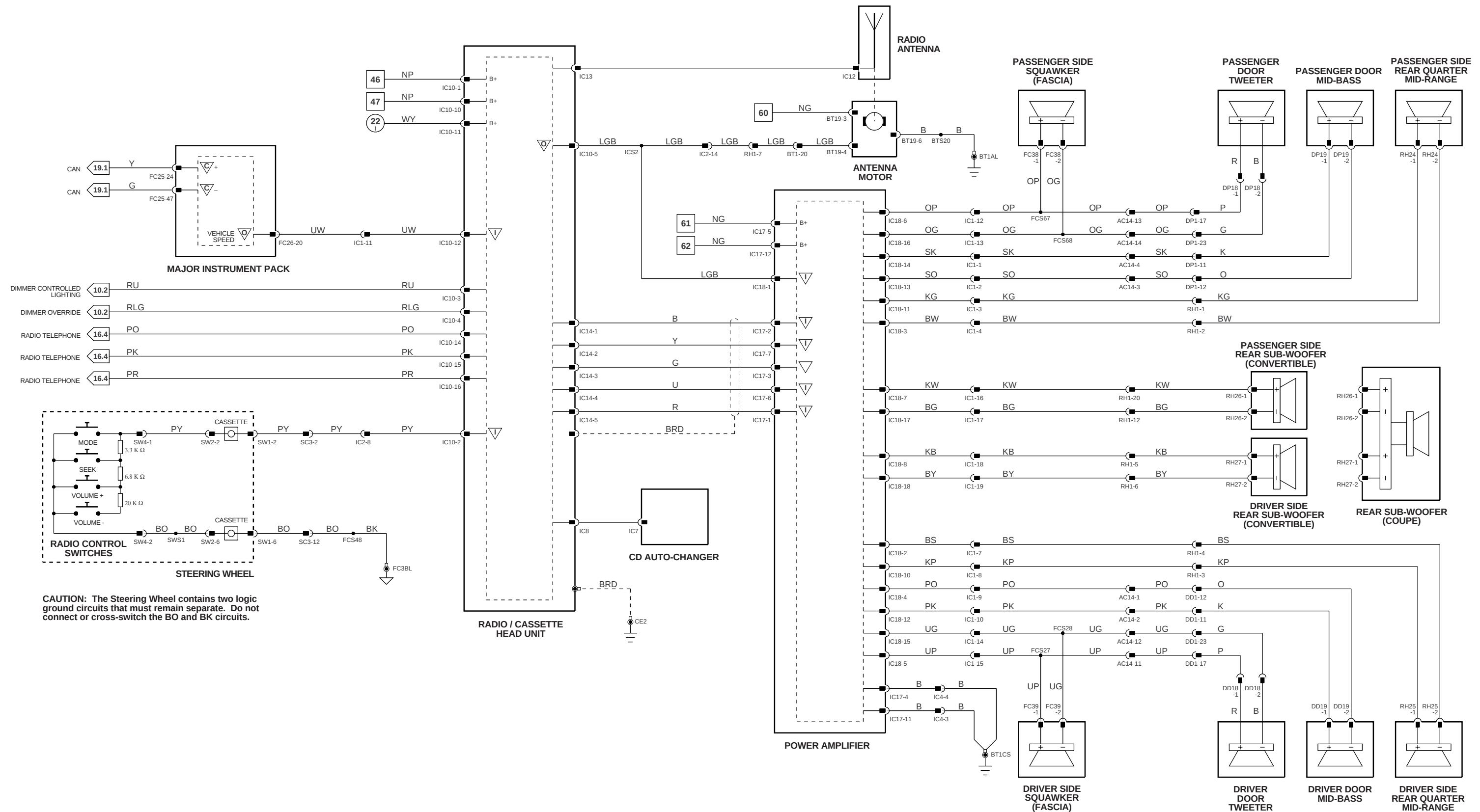
1 - 19

Input
Signal Ground (SG)

Output
CAN (Network)

Serial and Encoded Communications
SCP Network

VARIANT: Coupe Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



 Input

▽ Signal Ground (SG)

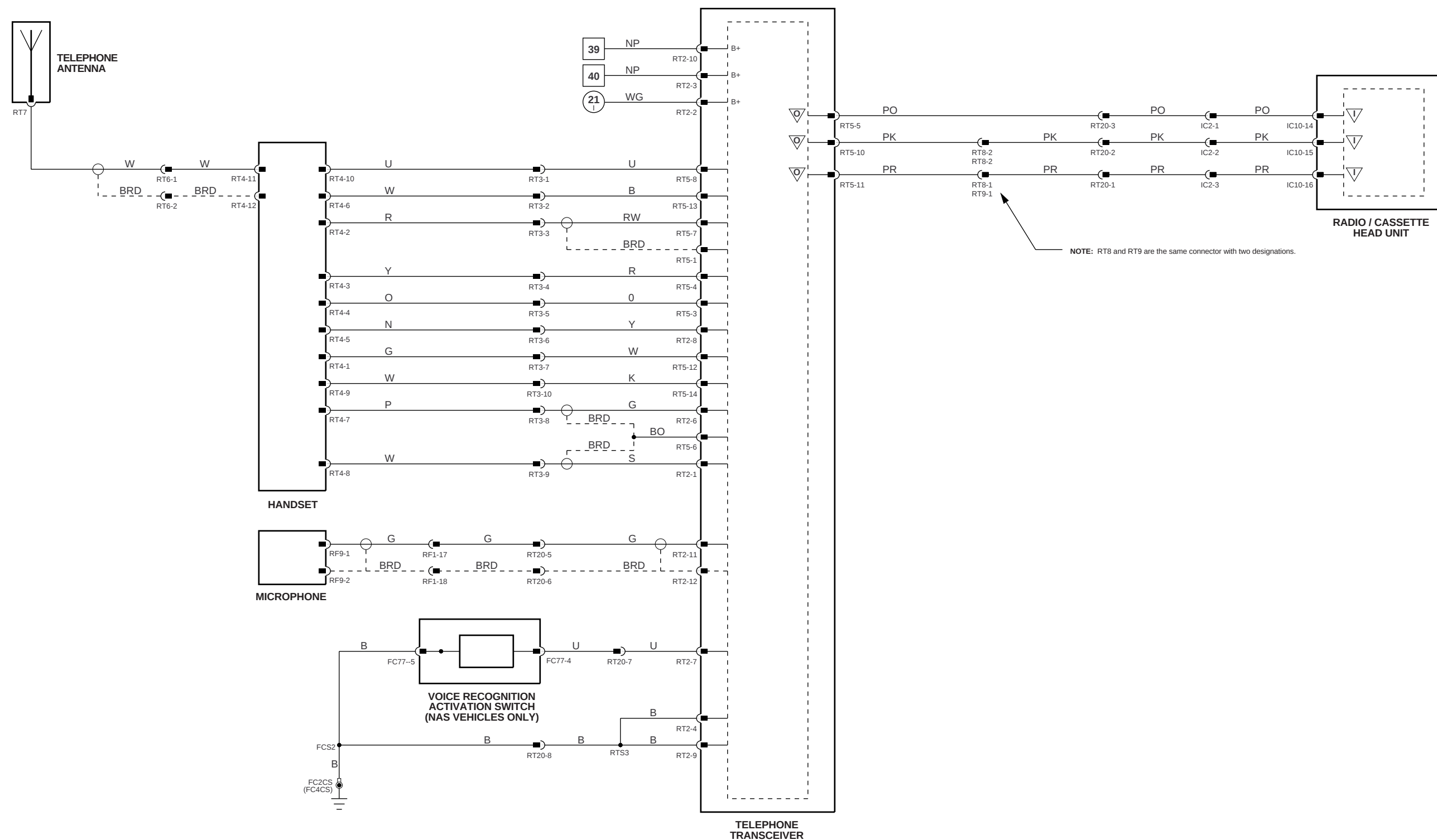
 Output

 CAN (Network)

Serial and Encoded Communications

 SCP Network

VARIANT: Premium ICE Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



1 - 6 Fig. 01.1
1 - 5 Fig. 01.1

7 - 53 Fig. 01.2
54 - 84 Fig. 01.3

6 - 40 Fig. 01.4
41 - 58 Fig. 01.5

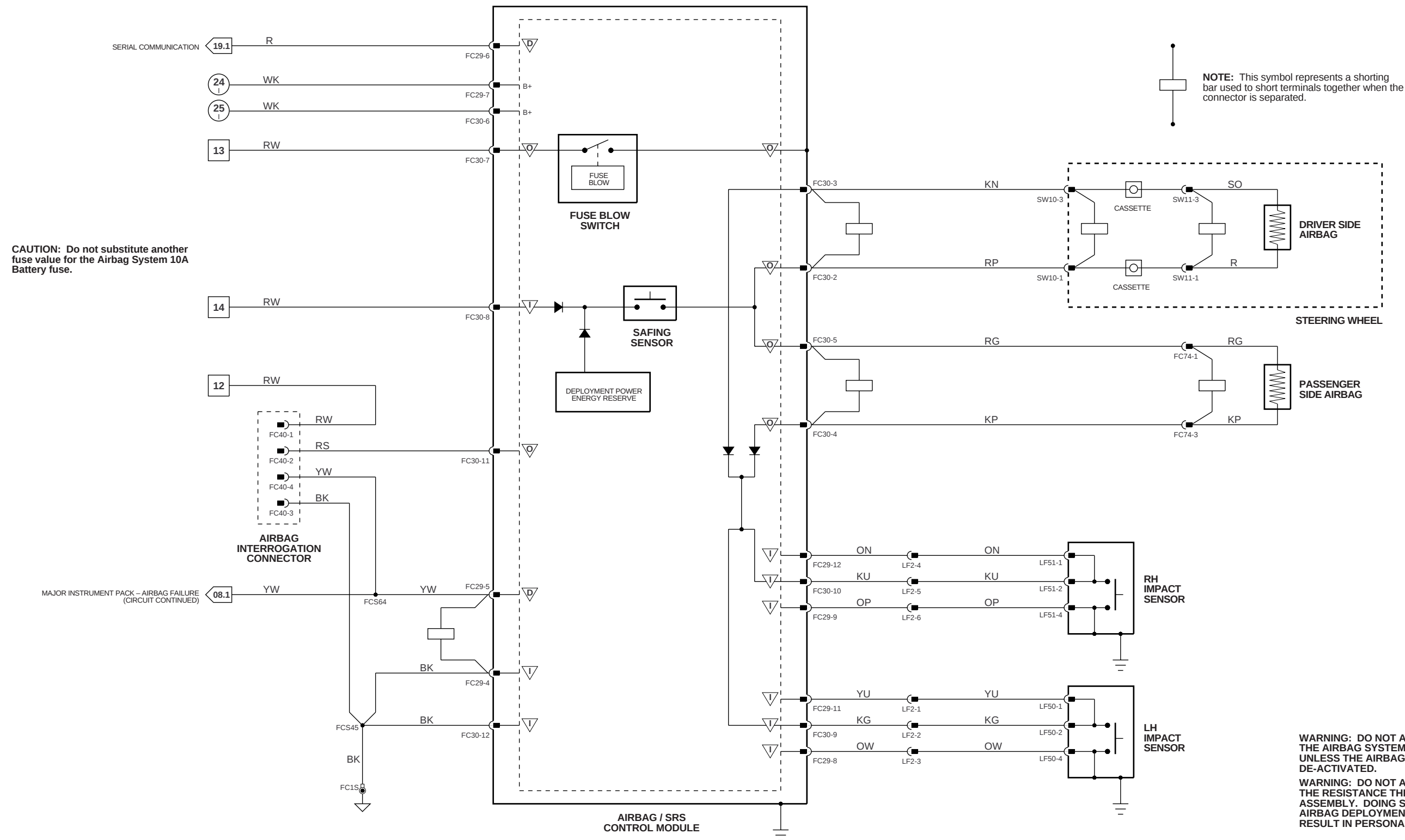
1 - 19 Fig. 02.1

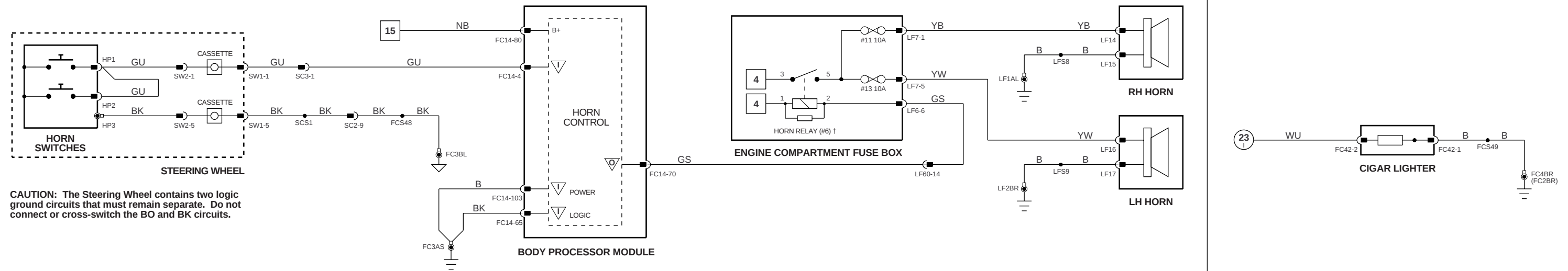
Input
Signal Ground (SG)

Output
CAN (Network)

Serial and Encoded Communications
SCP Network

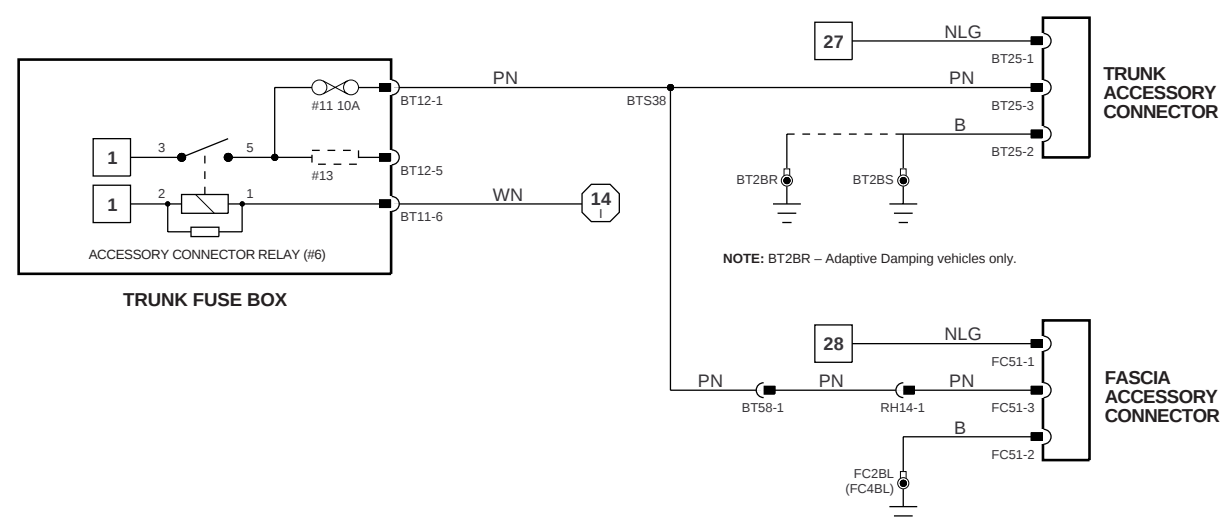
VARIANT: All Vehicles
VIN RANGE: All
DATE OF ISSUE: OCTOBER 1996



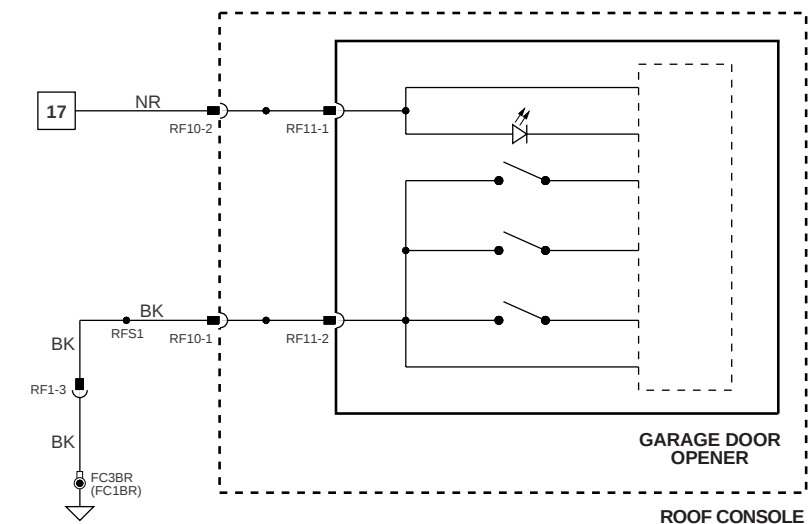


HORNS

CIGAR LIGHTER



ACCESSORY CONNECTORS



GARAGE DOOR OPENER

† **NOTE:** Early production vehicles (→ VIN 003300) have connector pin numbers that differ from the volume production pin numbers shown. Use the wire color code for pin identification on early production vehicles.

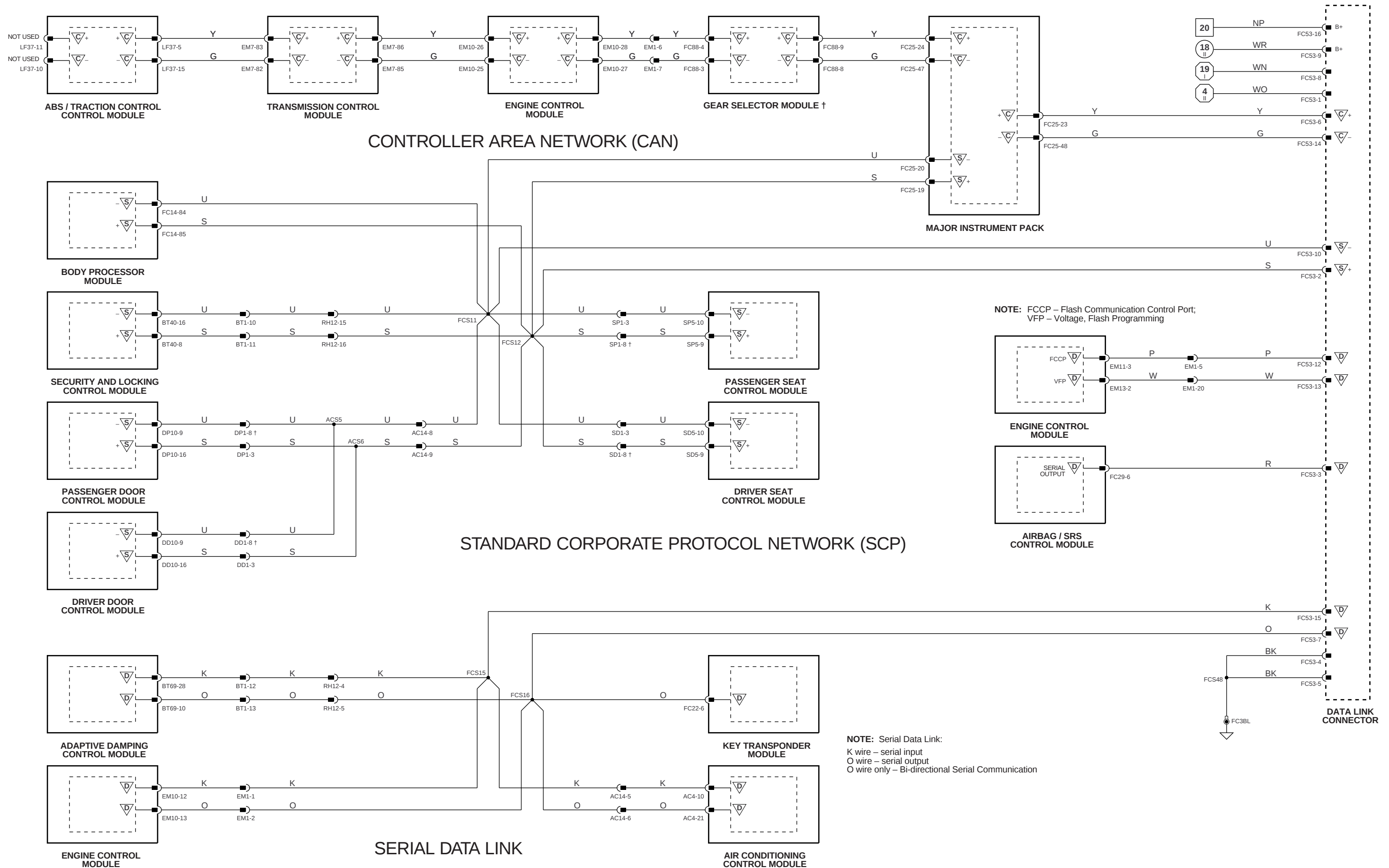


Fig. 01.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
BATTERY	BT66 / EYELET BT67 / EYELET	TRUNK, RIGHT HAND SIDE
DELAY TIMER (TRANSIT MINI HARNESS)	LT3 / 9-WAY RELAY / BROWN	TRUNK / ADJACENT TO BATTERY
DIODE (LT2) – TRANSIT ISOLATION	LT2 / DIODE	TRUNK / ADJACENT TO BATTERY
FUSE BOX – DRIVER SIDE	FC5 / 10-WAY U.T.A. FUSEBOX / NATURAL FC6 / 10-WAY U.T.A. FUSEBOX / BLACK FC90 / EYELET FC92 / EYELET	FASCIA / DRIVER SIDE
FUSE BOX – ENGINE COMPARTMENT	LF5 / 10-WAY U.T.A. FUSEBOX / WHITE LF6 / 10-WAY U.T.A. FUSEBOX / BLACK LF7 / 10-WAY U.T.A. FUSEBOX / GREEN LF8 / 10-WAY U.T.A. FUSEBOX / BLUE LF70 / EYELET	ENGINE COMPARTMENT / LEFT FRONT
FUSE BOX – ENGINE MANAGEMENT	EM19 / 10-WAY U.T.A. FUSEBOX / WHITE EM20 / 10-WAY U.T.A. FUSEBOX / BLACK EM70 / EYELET	ENGINE COMPARTMENT / CONTROL MODULE ENCLOSURE
FUSE BOX – PASSENGER SIDE	FC20 / 10-WAY U.T.A. FUSEBOX / NATURAL FC21 / 10-WAY U.T.A. FUSEBOX / BLACK FC90 / EYELET FC93 / EYELET	FASCIA / PASSENGER SIDE
FUSE BOX – TRUNK	BT10 / 10-WAY U.T.A. FUSEBOX / NATURAL BT11 / 10-WAY U.T.A. FUSEBOX / BLACK BT12 / 10-WAY U.T.A. FUSEBOX / GREEN BT13 / 10-WAY U.T.A. FUSEBOX / BLUE BT64 / EYELET	TRUNK / ELECTRICAL CARRIER
HIGH POWER PROTECTION MODULE	BT60 / EYELET BT61 / EYELET BT62 / EYELET BT63 / EYELET	TRUNK / ADJACENT TO BATTERY
TRANSIT ISOLATION DEVICE	BT44 / 2-WAY FCONOSEAL III HC / BLACK BT65 / EYELET BT66 / EYELET LT1 / LUCAR	TRUNK / ADJACENT TO BATTERY
TRUNK ACCESSORY CONNECTOR	BT25 / 3-WAY AMP SERIES 250 PIN / BLACK	TRUNK / ADJACENT TO BATTERY

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
AUXILIARY POSITIVE RELAY	BROWN	BUS	PASSENGER SIDE FUSE BOX
EMS CONTROL RELAY	BROWN	BUS	ENGINE MANAGEMENT FUSE BOX
IGNITION POSITIVE RELAY	BROWN	BUS	DRIVER SIDE FUSE BOX
IGNITION POSITIVE RELAY	BROWN	BUS	ENGINE COMPARTMENT FUSE BOX
IGNITION POSITIVE RELAY	BROWN	BUS	TRUNK FUSE BOX

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BT49	LUCAR	TRUNK / ADJACENT TO BATTERY
BT79	EYELET	TRANSMISSION TUNNEL
BT80	EYELET	ENGINE COMPARTMENT / FALSE BULKHEAD, RIGHT HAND SIDE
EM71	EYELET	TRANSMISSION TUNNEL
FC91	EYELET	TRANSMISSION TUNNEL
LF71	EYELET	TRANSMISSION TUNNEL
ST1	EYELET	ENGINE COMPARTMENT / FALSE BULKHEAD, RIGHT HAND SIDE

GROUND

Ground	Location / Type
BT68	BATTERY GROUND STUD
BT2BR	EYELET (PAIR) – RIGHT HAND LEG / TRUNK, RIGHT REAR
BT2BS	EYELET (SINGLE) / TRUNK, RIGHT REAR

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. 01.2

COMPONENTS

Component	Connector / Type / Color	Location / Access
FUSE BOX – DRIVER SIDE	FC5 / 10-WAY U.T.A. FUSEBOX / NATURAL FC6 / 10-WAY U.T.A. FUSEBOX / BLACK FC90 / EYELET FC92 / EYELET	FASCIA / DRIVER SIDE
FUSE BOX – PASSENGER SIDE	FC20 / 10-WAY U.T.A. FUSEBOX / NATURAL FC21 / 10-WAY U.T.A. FUSEBOX / BLACK FC90 / EYELET FC93 / EYELET	FASCIA / PASSENGER SIDE

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC12	20-WAY MULTILOCK 070 / WHITE	FASCIA TOP CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC13	20-WAY MULTILOCK 070 / YELLOW	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC14	14-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC15	20-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC16	6-WAY MULTILOCK 070 / YELLOW	LEFT HAND 'A' POST CONNECTOR MOUNTING BRACKET / 'A' POST TRIM
BT2	18-WAY MULTILOCK 070 / YELLOW	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
BT58	4-WAY ECONOSEAL III HC / BLACK	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
DD1	23-WAY AMP – FORD / BLACK	DRIVER SIDE 'A' POST MOUNTING BRACKET/ 'A' POST TRIM
DP1	23-WAY AMP – FORD / BLACK	PASSENGER SIDE 'A' POST / 'A' POST TRIM
IC2	14-WAY MULTILOCK 070 / WHITE	BELOW CENTER CONSOLE GLOVE BOX
LF1	20-WAY MULTILOCK 070 / SLATE	LEFT HAND 'A' POST CONNECTOR MOUNTING BRACKET / 'A' POST TRIM
RF1	18-WAY MULTILOCK 070 / YELLOW	RIGHT HAND 'A' POST CONNECTOR MOUNTING BRACKET / 'A' POST TRIM
RH14	2-WAY ECONOSEAL III HC / BLACK	REAR OF CENTER CONSOLE ASSEMBLY
RH2	20-WAY MULTILOCK 070 / WHITE	REAR OF CENTER CONSOLE ASSEMBLY
RT20	14-WAY MULTILOCK 070 / SLATE	REAR OF CENTER CONSOLE ASSEMBLY
SD1	8-WAY MULTILOCK 070 / YELLOW	BELOW DRIVER SEAT
SP1	8-WAY MULTILOCK 070 / YELLOW	BELOW PASSENGER SEAT

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. 01.3

COMPONENTS

Component	Connector / Type / Color	Location / Access
FUSE BOX – ENGINE COMPARTMENT	LF5 / 10-WAY U.T.A. FUSEBOX / WHITE LF6 / 10-WAY U.T.A. FUSEBOX / BLACK LF7 / 10-WAY U.T.A. FUSEBOX / GREEN LF8 / 10-WAY U.T.A. FUSEBOX / BLUE LF70/ EYELET	ENGINE COMPARTMENT / LEFT FRONT
FUSE BOX – ENGINE MANAGEMENT	EM19 / 10-WAY U.T.A. FUSEBOX / WHITE EM20 / 10-WAY U.T.A. FUSEBOX / BLACK EM70 / EYELET	ENGINE COMPARTMENT / CONTROL MODULE ENCLOSURE
FUSE BOX – TRUNK	BT10 / 10 WAY U.T.A. FUSEBOX / NATURAL BT11 / 10-WAY U.T.A. FUSEBOX / BLACK BT12 / 10-WAY U.T.A. FUSEBOX / GREEN BT13 / 10-WAY U.T.A. FUSEBOX / BLUE BT64 / EYELET	TRUNK / ELECTRICAL CARRIER

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
IC4	4-WAY MULTILOCK 070 / WHITE	TRUNK / LEFT OF ANTENNA ASSEMBLY

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. 01.4

COMPONENTS

Component	Connector / Type / Color	Location / Access
FUSE BOX – DRIVER SIDE	FC5 / 10-WAY U.T.A. FUSEBOX / NATURAL FC6 / 10-WAY U.T.A. FUSEBOX / BLACK FC90 / EYELET FC92 / EYELET	FASCIA / DRIVER SIDE
FUSE BOX – ENGINE COMPARTMENT	LF5 / 10-WAY U.T.A. FUSEBOX / WHITE LF6 / 10-WAY U.T.A. FUSEBOX / BLACK LF7 / 10-WAY U.T.A. FUSEBOX / GREEN LF8 / 10-WAY U.T.A. FUSEBOX / BLUE LF70/ EYELET	ENGINE COMPARTMENT / LEFT FRONT
FUSE BOX – PASSENGER SIDE	FC20 / 10-WAY U.T.A. FUSEBOX / NATURAL FC21 / 10-WAY U.T.A. FUSEBOX / BLACK FC90 / EYELET FC93 / EYELET	FASCIA / PASSENGER SIDE
FUSE BOX – TRUNK	BT10 / 10-WAY U.T.A. FUSEBOX / NATURAL BT11 / 10-WAY U.T.A. FUSEBOX / BLACK BT12 / 10-WAY U.T.A. FUSEBOX / GREEN BT13 / 10-WAY U.T.A. FUSEBOX / BLUE BT64 / EYELET	TRUNK / ELECTRICAL CARRIER

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC15	20-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
EM2	18-WAY MULTILOCK 070 / YELLOW	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
IC2	14-WAY MULTILOCK 070 / WHITE	BELOW CENTER CONSOLE GLOVE BOX
LF40	13-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / LEFT HAND ENCLOSURE
LF60	20-WAY MULTILOCK 070 / WHITE	LEFT HAND 'A' POST CONNECTOR MOUNTING BRACKET / 'A' POST TRIM
PI2	13-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / BRACKET ON TOP OF TRANSMISSION
RF1	18-WAY MULTILOCK 070 / YELLOW	RIGHT HAND 'A' POST CONNECTOR MOUNTING BRACKET / 'A' POST TRIM
RT20	14-WAY MULTILOCK 070 / SLATE	REAR OF CENTER CONSOLE ASSEMBLY

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. 01.5

COMPONENTS

Component	Connector / Type / Color	Location / Access
FUSE BOX – ENGINE MANAGEMENT	EM19 / 10-WAY U.T.A. FUSEBOX / WHITE EM20 / 10-WAY U.T.A. FUSEBOX / BLACK EM70 / EYELET	ENGINE COMPARTMENT / CONTROL MODULE ENCLOSURE

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
EL1	6-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / RIGHT HAND ENCLOSURE
LF40	13-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / LEFT HAND ENCLOSURE
PI1	57-WAY SUMITOMO / BLACK	ENGINE COMPARTMENT / BRACKET ON TOP OF TRANSMISSION

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. 02.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
IGNITION SWITCH (KEY-IN SWITCH)	FC4 (FLYLEAD) / 8-WAY MULTILOCK 070 / WHITE	STEERING COLUMN
INERTIA SWITCH	FC46 / 3-WAY ECONOSEAL III LC / BLACK	ADJACENT TO LEFT HAND FASCIA FUSE BOX

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC13	20-WAY MULTILOCK 070 / YELLOW	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
BT1	20-WAY MULTILOCK 070 / WHITE	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
LF60	20-WAY MULTILOCK 070 / WHITE	LEFT HAND 'A' POST CONNECTOR MOUNTING BRACKET / 'A' POST TRIM
RH2	20-WAY MULTILOCK 070 / WHITE	REAR OF CENTER CONSOLE ASSEMBLY

GROUND

Ground	Location / Type
FC3BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND 'A' POST

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.

CONTROL MODULE PIN OUT INFORMATION

ENGINE CONTROL MODULE

▽	Pin	Description	Active	Inactive
D	EM10-17	SECURITY ACKNOWLEDGE	ENCODED COMMUNICATIONS	
D	EM10-6	OK TO START – ENCODED COMMUNICATIONS		
I	EM11-6	ENGINE CRANK		
			GROUND (CRANKING)	B+

KEY TRANSPONDER MODULE (OPTIONAL)

▽	Pin	Description	Active	Inactive
D	FC22-9	GLASS BREAKAGE / OK TO START (ENCODED COMMUNICATION)		
D	FC22-16	OK TO START (ENCODED COMMUNICATION)		
D	FC22-17	SECURITY ACKNOWLEDGE (ENCODED COMMUNICATION)		

Fig. 03.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
BATTERY	BT66 / EYELET BT67 / EYELET	TRUNK, RIGHT HAND SIDE
BODY PROCESSOR MODULE	FC14 / 104-WAY AMP EEEEC / SLATE	PASSENGER SIDE FASCIA / AIRBAG BRACKET
ENGINE CONTROL MODULE	EM10 / 28-WAY MULTILOCK 040 / SLATE EM11 / 16-WAY MULTILOCK 040 / SLATE EM12 / 22-WAY MULTILOCK 040 / SLATE EM13 / 34-WAY MULTILOCK 040 / SLATE	ENGINE COMPARTMENT / CONTROL MODULE ENCLOSURE
GENERATOR	AN1 / EYELET AN2 / EYELET ST11 / EYELET	ENGINE COMPARTMENT / RIGHT FRONT
HIGH POWER PROTECTION MODULE	BT60 / EYELET BT61 / EYELET BT62 / EYELET BT63 / EYELET	TRUNK / ADJACENT TO BATTERY
IGNITION SWITCH (KEY-IN SWITCH)	FC4 (FLYLEAD) / 8-WAY MULTILOCK 070 / WHITE	STEERING COLUMN
KEY TRANSPONDER MODULE	FC22 / 20-WAY MULTILOCK 040 / GREEN	ADJACENT TO PASSENGER SIDE FUSE BOX
NEUTRAL SWITCH	FC89 (FLYLEAD) / 3-WAY MULTILOCK 070 / SLATE	GEAR SELECTOR ASSEMBLY
REGULATOR (GENERATOR)	PI50 / 3-WAY SUMITOMO 0902 / BLACK	ENGINE COMPARTMENT / GENERATOR
STARTER MOTOR	ST2 / EYELET ST3 / EYELET ST10 / EYELET	ENGINE BLOCK
SUPPRESSION MODULE	AN3 (FLYLEAD) / 2-WAY ECONOSEAL III LC/ RED	ENGINE COMPARTMENT / FORWARD OF GENERATOR

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
STARTER RELAY	BROWN	EM50 / BROWN	RH BRAKE BOOSTER ENCLOSURE RELAYS

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BT80	EYELET	ENGINE COMPARTMENT / FALSE BULKHEAD, RIGHT HAND SIDE
EM1	20-WAY MULTILOCK 070 / WHITE	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
EM2	18-WAY MULTILOCK 070 / YELLOW	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
EM3	14-WAY MULTILOCK 070 / SLATE	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
EM60	2-WAY ECONOSEAL III HC / BLACK	ENGINE COMPARTMENT / BEHIND LEFT INNER FENDER HEAT SHIELD
PI1	57-WAY SUMITOMO / BLACK	ENGINE COMPARTMENT / BRACKET ON TOP OF TRANSMISSION
ST1	EYELET	ENGINE COMPARTMENT / FALSE BULKHEAD, RIGHT HAND SIDE

GROUND

Ground	Location / Type
BT68	BATTERY GROUND STUD
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC3AS	EYELET (SINGLE) / LEFT HAND ‘A’ POST

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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.

CONTROL MODULE PIN OUT INFORMATION

ENGINE CONTROL MODULE

Pin	Description	Active	Inactive
I EM10-1	IGNITION SWITCHED POWER SUPPLY	B-	0 V
I EM10-5	IGNITION SWITCHED POWER SUPPLY	B+	B+
D EM10-6	OK TO START – ENCODED COMMUNICATIONS		
I EM10-9	BATTERY POWER SUPPLY	B+	B+
I EM10-10	BRAKE SWITCH	GROUND	B+
D EM10-12	SERIAL COMMUNICATIONS		
D EM10-13	SERIAL COMMUNICATIONS		
I EM10-14	PARKING BRAKE SWITCH	GROUND (APPLIED)	B+
I EM10-15	PARK / NEUTRAL	GROUND (R,D,4,3,2)	B+ (P, N)
O EM10-16	EMS CONTROLLED RELAY ACTIVATE	GROUND	B-
O EM10-17	SECURITY ACKNOWLEDGE	ENCODED COMMUNICATIONS	
O EM10-20	IATS / ECTS / TPS / MECHANICAL GUARD POSITION / PEDAL POSITION COMMON REFERENCE GROUND	GROUND	GROUND
O EM10-21	MECHANICAL GUARD POSITION / PEDAL POSITION / TPS COMMON REFERENCE VOLTAGE	5 V	5 V
I EM10-22	GROUND	GROUND	GROUND
I EM10-23	GROUND	GROUND	GROUND
C EM10-25	CAN NETWORK	15 – 1500 Hz	
C EM10-26	CAN NETWORK	15 – 1500 Hz	
C EM10-27	CAN NETWORK	15 – 1500 Hz	
C EM10-28	CAN NETWORK	15 – 1500 Hz	
D EM11-3	ECM PROGRAMMING	B+	B+
I EM11-6	ENGINE CRANK	GROUND (CRANKING)	B+
O EM11-8	MECHANICAL GUARD POSITION / PEDAL POSITION / TPS COMMON REFERENCE VOLTAGE	5 V	5 V
I EM11-9	ECT FEEDBACK	0.41 V @ 195°F (DECREASING WITH TEMPERATURE)	
I EM11-10	TPS FEEDBACK	0.5 V = IDLE; 4.75 V = WOT	
I EM11-11	TPS FEEDBACK	0.5 V = IDLE; 4.75 V = WOT	
O EM11-12	IATS / ECTS / TPS / MECHANICAL GUARD POSITION / PEDAL POSITION COMMON REFERENCE GROUND	GROUND	GROUND
I EM11-13	MECHANICAL GUARD POSITION FEEDBACK	0.5 V = IDLE; 4.75 V = WOT	
SG EM11-14	MECHANICAL GUARD POSITION / PEDAL POSITION / TPS SHIELD	GROUND	GROUND
I EM11-15	PEDAL POSITION FEEDBACK	0.5 V = IDLE; 4.75 V = WOT	
I EM11-16	PEDAL POSITION FEEDBACK	0.5 V = IDLE; 4.75 V = WOT	
O EM12-1	EGR STEPPER MOTOR ‘S1’ WINDING SUPPLY	GROUND	B+
O EM12-2	EGR STEPPER MOTOR ‘S2’ WINDING SUPPLY	GROUND	B+
O EM12-3	EGR STEPPER MOTOR ‘S3’ WINDING SUPPLY	GROUND	B+
O EM12-4	EGR STEPPER MOTOR ‘S4’ WINDING SUPPLY	GROUND	B+
I EM12-12	IATS FEEDBACK	0.98 V @ 10°C, DECREASING WITH TEMPERATURE	
I EM12-13	MAFS FEEDBACK	1.2 V @ IDLE, INCREASING WITH RPM INCREASE	
I EM12-14	UPSTREAM ‘B’ BANK HO2S	0.1 – 0.9 V @ IDLE (SWING)	
I EM12-15	UPSTREAM ‘A’ BANK HO2S	0.1 – 0.9 V @ IDLE (SWING)	
I EM12-16	DOWNSTREAM ‘B’ BANK O2S	0.1 – 0.9 V @ IDLE (SWING)	
I EM12-17	DOWNSTREAM ‘A’ BANK O2S	0.1 – 0.9 V @ IDLE (SWING)	
O EM12-18	MAFS REFERENCE GROUND	GROUND	GROUND
O EM12-19	MAFS REFERENCE GROUND	GROUND	GROUND
SG EM12-22	O2S / HO2S COMMON SHIELD	GROUND	GROUND
D EM13-2	ECM PROGRAMMING	GROUND	B+
O EM13-11	VACUUM SWITCHING VALVE #3 ACTIVATE	GROUND	B+
O EM13-12	VACUUM SWITCHING VALVE #1 ACTIVATE	GROUND	B+
O EM13-13	VACUUM SWITCHING VALVE #2 ACTIVATE	GROUND	B+
O EM13-14	THROTTLE MOTOR POWER RELAY ACTIVATE	GROUND	B+
I EM13-17	‘B’ BANK KNOCK SENSOR FEEDBACK	0 KHz = NO KNOCK, 2 – 20 KHz = KNOCK	
I EM13-18	‘A’ BANK KNOCK SENSOR FEEDBACK	0 KHz = NO KNOCK, 2 – 20 KHz = KNOCK	
I EM13-19	CKPS SIGNAL	5 V @ 1000 RPM = 45 Hz; 2000 RPM = 90 Hz	
I EM13-20	CMPS SIGNAL	5 Hz @ IDLE	
I EM13-27	CMPS / CKPS / KNOCK SENSORS COMMON SHIELD	GROUND	GROUND
I EM13-28	CKPS SIGNAL	5 V @ 1000 RPM = 45 Hz; 2000 RPM = 90 Hz	
SG EM13-29	CMPS SIGNAL GROUND	GROUND	GROUND
I EM14-1	THROTTLE MOTOR POWER SUPPLY	B+	GROUND
I EM14-2	THROTTLE MOTOR POWER SUPPLY	B+	GROUND
I EM14-3	IGNITION SWITCHED POWER SUPPLY	B+	GROUND
I EM14-4	GROUND	GROUND	GROUND
O EM14-5	THROTTLE MOTOR POWER SUPPLY	B+	GROUND
O EM14-6	THROTTLE MOTOR POWER SUPPLY	B+	GROUND
I EM14-7	GROUND	GROUND	GROUND
I EM14-8	GROUND	GROUND	GROUND
I EM14-9	GROUND	GROUND	GROUND
I EM14-10	GROUND	GROUND	GROUND
O EM14-11	THROTTLE MOTOR POWER SUPPLY	GROUND	GROUND
O EM14-12	THROTTLE MOTOR POWER SUPPLY	B+	GROUND
O EM15-1	UPSTREAM ‘B’ BANK HO2S HEATER GROUND	GROUND	GROUND
O EM15-2	UPSTREAM ‘A’ BANK HO2S HEATER GROUND	GROUND	GROUND
O EM15-3	EVAP VALVE ACTIVATE	GROUND (VALVE OPEN)	B+
O EM15-8	VARIABLE VALVE TIMING SOLENOID ‘B’ BANK	GROUND	B+
O EM15-9	VARIABLE VALVE TIMING SOLENOID ‘B’ BANK	GROUND	B+
I EM15-11	GROUND	GROUND	GROUND
I EM15-12	GROUND	GROUND	GROUND
I EM15-22	GROUND	GROUND	GROUND

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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. 04.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
BRAKE SWITCH – LHD	AC26 (FLYLEAD) / 4-WAY MULTILOCK 070 / WHITE	TOP OF BRAKE PEDAL
BRAKE SWITCH – RHD	AC24 (FLYLEAD) / 4-WAY MULTILOCK 070 / WHITE	TOP OF BRAKE PEDAL
CAMSHAFT POSITION SENSOR	PI15 (FLYLEAD) / 2-WAY ECONOSEAL III HC / BLACK	‘B’ BANK CYLINDER HEAD, REAR
CRANKSHAFT POSITION SENSOR	PI17 (FLYLEAD) / 3-WAY ECONOSEAL III LC / BLACK	ENGINE / REAR OF BED PLATE
ECM AND TCM COOLING FAN	EM64 / 2-WAY MULTILOCK 070 / WHITE	ENGINE COMPARTMENT / CONTROL MODULE ENCLOSURE
ENGINE COOLANT TEMPERATURE SENSOR	PI4 / 2-WAY ECONOSEAL E J2 / SLATE	ENGINE COMPARTMENT / REAR OF ENGINE TOP HOSE
EGR VALVES	PI34 / 6-WAY EGR VALVE CONNECTOR / SLATE	ENGINE COMPARTMENT / REAR OF THROTTLE ASSEMBLY
ENGINE CONTROL MODULE	EM10 / 28-WAY MULTILOCK 040 / SLATE EM11 / 16-WAY MULTILOCK 040 / SLATE EM12 / 22-WAY MULTILOCK 040 / SLATE EM13 / 34-WAY MULTILOCK 040 / SLATE	ENGINE COMPARTMENT / CONTROL MODULE ENCLOSURE
EVAPORATIVE EMISSION CONTROL VALVE	EM58 / 2-WAY ECONOSEAL J2 / BLACK	ENGINE COMPARTMENT / LEFT HAND BULKHEAD EXTENSION
HEATED OXYGEN SENSOR – A UPSTREAM	EM21 (FLYLEAD) / 4-WAY SUMITOMO 090 II / SLATE	‘A’ BANK CATALYTIC CONVERTER
HEATED OXYGEN SENSOR – B UPSTREAM	EM23 (FLYLEAD) / 4-WAY SUMITOMO 090 II / SLATE	‘B’ BANK CATALYTIC CONVERTER
KNOCK SENSOR – A	PI26 (FLYLEAD) / 2-WAY ECONOSEAL III LC / BLACK	ENGINE VEE / UNDER INTAKE MANIFOLD
KNOCK SENSOR – B	PI27 (FLYLEAD) / 2-WAY ECONOSEAL III LC / BLACK	ENGINE VEE / UNDER INTAKE MANIFOLD
MASS AIR FLOW SENSOR	PI36 / 6-WAY YAZAKI 0902 / BLACK	ENGINE COMPARTMENT / REARWARD OF AIR CLEANER
OXYGEN SENSOR – A DOWNSTREAM	EM22 (FLYLEAD) / 2-WAY SUMITOMO 090 A TYPE / SLATE	‘A’ BANK CATALYTIC CONVERTER
OXYGEN SENSOR – B DOWNSTREAM	EM24 (FLYLEAD) / 2-WAY SUMITOMO 090 A TYPE / SLATE	‘B’ BANK CATALYTIC CONVERTER
PARKING BRAKE SWITCH	FC19 / LUCAR RIGHT ANGLE	BELOW PARKING BRAKE LEVER
PEDAL POSITION AND MECHANICAL GUARD SENSORS	PI42 / 5-WAY YAZAKI 0902 / BLACK	ENGINE COMPARTMENT / THROTTLE ASSEMBLY
THROTTLE MOTOR	PI33 / 2-WAY TWIN CLIP / BLACK	ENGINE COMPARTMENT / THROTTLE ASSEMBLY
THROTTLE POSITION SENSOR	PI6 / 4-WAY SUMITOMO TS090 / BLACK	ENGINE COMPARTMENT / THROTTLE ASSEMBLY
VACUUM SWITCHING VALVE – 1	EL2 / 2-WAY SUMITOMO 090 DC INHIBIT 1 / BLUE	BEHIND RIGHT HAND WHEEL ARCH LINER
VACUUM SWITCHING VALVE – 2	EL3 / 2-WAY SUMITOMO 090 DC INHIBIT 1 / BROWN	BEHIND RIGHT HAND WHEEL ARCH LINER
VACUUM SWITCHING VALVE – 3	EL4 / 2-WAY YAZAKI 090 / SLATE	BEHIND RIGHT HAND WHEEL ARCH LINER
VARIABLE VALVE TIMING SOLENOID VALVE – A	PI31 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	ENGINE COMPARTMENT / ‘A’ BANK CYLINDER HEAD, FRONT
VARIABLE VALVE TIMING SOLENOID VALVE – B	PI32 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	ENGINE COMPARTMENT / ‘B’ BANK CYLINDER HEAD, FRONT

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
THROTTLE MOTOR POWER RELAY	BROWN	EM16 / BROWN	CONTROL MODULE ENCLOSURE RELAYS

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC13	20-WAY MULTILOCK 070 / YELLOW	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
EL1	6-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / RIGHT HAND ENCLOSURE
EM1	20-WAY MULTILOCK 070 / WHITE	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
EM2	18-WAY MULTILOCK 070 / YELLOW	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
PI1	57-WAY SUMITOMO / BLACK	ENGINE COMPARTMENT / BRACKET ON TOP OF TRANSMISSION
PI2	13-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / BRACKET ON TOP OF TRANSMISSION

GROUND

Ground	Location / Type
EM1AL	EYELET (PAIR) – LEFT HAND LEG / ENGINE COMPARTMENT, RIGHT HAND ENCLOSURE
EM1AR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, RIGHT HAND ENCLOSURE
EM1BR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, RIGHT HAND ENCLOSURE
EM2AL	EYELET (PAIR) – LEFT HAND LEG / ENGINE COMPARTMENT, LEFT HAND ENCLOSURE
EM2AR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, LEFT HAND ENCLOSURE
EM2BR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, LEFT HAND ENCLOSURE

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.

CONTROL MODULE PIN OUT INFORMATION

ENGINE CONTROL MODULE

Pin	Description	Active	Inactive
EM10-2	A/CCM ENGINE SPEED	5 V @ 1000 RPM = 45 Hz; 2000 RPM = 90 Hz	
EM10-3	A/CCM COMPRESSOR CLUTCH BATTERY POWER SUPPLY	B+	B+
EM10-4	A/CCM COMPRESSOR CLUTCH REQUEST	B+	GROUND
EM10-11	CRUISE CONTROL BRAKE CANCEL REQUEST	GROUND (APPLIED)	B+
EM11-1	CRUISE CONTROL SET +/-	7.3 V =(+), 8.8 V =(-)B+	
EM11-4	CRUISE CONTROL ON REQUEST	B+	GROUND
EM11-5	CRUISE CONTROL CANCEL / RESUME	7.3 V = RESUME, 8.8 V = CANCEL B+	
EM12-5	4 WAY REFRIGERANT SWITCH HIGH PRESSURE	GROUND @ 20 BAR (290 PSI)	
EM12-6	4 WAY REFRIGERANT SWITCH HIGH PRESSURE	GROUND @ 12 BAR (174 PSI)	
EM12-8	IGNITION MODULE 2 SWITCHING FEEDBACK	23 Hz @ IDLE (5 V)	
EM12-9	IGNITION MODULE 2 SWITCHING FEEDBACK	23 Hz @ IDLE (5 V)	
EM12-10	AIR CONDITIONING COMPRESSOR RELAY ACTIVATE	GROUND	B+
EM13-1	FUEL PUMP RELAY ACTIVATE	GROUND	B+
EM13-3	CRUISE CONTROL ON STATUS LED	GROUND	B+
EM13-15	SERIES (LOW) SPEED FAN ACTIVATE	GROUND	B+
EM13-16	PARALLEL (HIGH) SPEED FAN ACTIVATE	GROUND	B+
EM13-22	IGNITION COIL RELAY ACTIVATE	GROUND	B+
EM13-23	IGNITION MODULE 1 SWITCHING	5 Hz @ IDLE	
EM13-24	IGNITION MODULE 2 SWITCHING	5 Hz @ IDLE	
EM13-25	IGNITION MODULE 2 SWITCHING	5 Hz @ IDLE	
EM13-26	IGNITION MODULE 1 SWITCHING	5 Hz @ IDLE	
EM13-31	IGNITION MODULE 2 SWITCHING	5 Hz @ IDLE	
EM13-32	IGNITION MODULE 1 SWITCHING	5 Hz @ IDLE	
EM13-33	IGNITION MODULE 1 SWITCHING	5 Hz @ IDLE	
EM13-34	IGNITION MODULE 1 SWITCHING	5 Hz @ IDLE	
EM15-4	INJECTOR '3B' ACTIVATE	GROUND	B+
EM15-5	INJECTOR '2B' ACTIVATE	GROUND	B+
EM15-6	INJECTOR '4A' ACTIVATE	GROUND	B+
EM15-7	INJECTOR '1A' ACTIVATE	GROUND	B+
EM15-15	INJECTOR '4B' ACTIVATE	GROUND	B+
EM15-16	INJECTOR '3A' ACTIVATE	GROUND	B+
EM15-17	INJECTOR '2A' ACTIVATE	GROUND	B+
EM15-18	INJECTOR '1B' ACTIVATE	GROUND	B+

AIR CONDITIONING CONTROL MODULE

Pin	Description	Active	Inactive
AC1-1	COMPRESSOR CLUTCH STATUS	B+ (ON)	0 V
AC3-1	AIR CONDITIONING ELECTRICAL LOAD SIGNAL	B+	0 V
AC4-7	LOAD INHIBIT	0 V	B+
AC4-9	COMPRESSOR CLUTCH ON REQUEST	B+	0 V
AC4-17	REFRIGERANT 4 WAY PRESSURE SWITCH	0 V (2 – 30 BAR)	B+ (OUT OF ACTIVE RANGE)

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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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	Connector / Type / Color	Location / Access
AIR CONDITIONING COMPRESSOR CLUTCH AIR CONDITIONING CONTROL MODULE	PI36 (FLYLEAD) / 1-WAY SUMITOMO 090 A-TYPE / BLACK AC1 / 26-WAY MULTILOCK 47 / SLATE AC2 / 16-WAY MULTILOCK 47 / SLATE AC3 / 12-WAY MULTILOCK 47 / SLATE AC4 / 22-WAY MULTILOCK 47 / SLATE AC26 / 4-WAY MULTILOCK 070 / WHITE AC24 / 4-WAY MULTILOCK 070 / WHITE FC63 / 10-WAY AMP ML KEY B / WHITE SW3 (FLYLEAD) / 3-WAY EPC / BLACK AND WHITE	ENGINE COMPARTMENT / A/C COMPRESSOR A/C UNIT / RIGHT HAND SIDE TOP OF BRAKE PEDAL TOP OF BRAKE PEDAL REARWARD OF GEAR SELECTOR CENTER OF STEERING WHEEL ENGINE COMPARTMENT / CONTROL MODULE ENCLOSURE
BRAKE CANCEL SWITCH – LHD BRAKE CANCEL SWITCH – RHD CRUISE CONTROL ON / OFF SWITCH CRUISE CONTROL SWITCHES (STEERING WHEEL) ENGINE CONTROL MODULE	EM10 / 28-WAY MULTILOCK 040 / SLATE EM11 / 18-WAY MULTILOCK 040 / SLATE EM12 / 22-WAY MULTILOCK 040 / SLATE EM13 / 34-WAY MULTILOCK 040 / SLATE PI7 / 2-WAY AMP JUNIOR POWER TIMER / BLACK PI11 / 2-WAY AMP JUNIOR POWER TIMER / BLACK PI8 / 2-WAY AMP JUNIOR POWER TIMER / BLACK PI12 / 2-WAY AMP JUNIOR POWER TIMER / BLACK PI9 / 2-WAY AMP JUNIOR POWER TIMER / BLACK PI13 / 2-WAY AMP JUNIOR POWER TIMER / BLACK PI10 / 2-WAY AMP JUNIOR POWER TIMER / BLACK PI14 / 2-WAY AMP JUNIOR POWER TIMER / BLACK BT55 / 4-WAY SUMITOMO DL090 / NATURAL BT10 / 10-WAY U.T.A. FUSEBOX / NATURAL BT11 / 10-WAY U.T.A. FUSEBOX / BLACK BT12 / 10-WAY U.T.A. FUSEBOX / GREEN BT13 / 10-WAY U.T.A. FUSEBOX / BLUE BT64 / EYELET	INTAKE MANIFOLD / FUEL RAIL INTAKE MANIFOLD / FUEL RAIL INTAKE MANIFOLD / FUEL RAIL INTAKE MANIFOLD / FUEL RAIL INTAKE MANIFOLD / FUEL RAIL INTAKE MANIFOLD / FUEL RAIL INTAKE MANIFOLD / FUEL RAIL INTAKE MANIFOLD / FUEL RAIL INTAKE MANIFOLD / FUEL RAIL TRUNK / TOP OF FUEL TANK TRUNK / ELECTRICAL CARRIER
FUEL INJECTOR – 1A FUEL INJECTOR – 1B FUEL INJECTOR – 2A FUEL INJECTOR – 2B FUEL INJECTOR – 3A FUEL INJECTOR – 3B FUEL INJECTOR – 4A FUEL INJECTOR – 4B FUEL PUMP FUSE BOX – TRUNK	PI18 / 2-WAY YAZAKI 090X / BLACK PI22 / 2-WAY YAZAKI 090X / BLACK PI19 / 2-WAY YAZAKI 090X / BLACK PI23 / 2-WAY YAZAKI 090X / BLACK PI20 / 2-WAY YAZAKI 090X / BLACK PI24 / 2-WAY YAZAKI 090X / BLACK PI21 / 2-WAY YAZAKI 090X / BLACK PI25 / 2-WAY YAZAKI 090X / BLACK EM27 / 12-WAY IGNITION POWER MODULE / BLACK EM29 / 12-WAY IGNITION POWER MODULE / BLACK LF9 / 8-WAY TRW / BLACK LF13 / 2-WAY REINSHAGEN METRI 630 / BLACK LF12 / 2-WAY REINSHAGEN METRI 630 / BLACK LF57 (FLYLEAD) / 6-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / BULKHEAD, RIGHT HAND SIDE ENGINE COMPARTMENT / BULKHEAD, LEFT HAND SIDE ADJACENT TO LEFT HAND HORN ENGINE COMPARTMENT / FRONT ENGINE COMPARTMENT / FRONT ENGINE COMPARTMENT / REARWARD OF RADIATOR
IGNITION COIL – 1A IGNITION COIL – 1B IGNITION COIL – 2A IGNITION COIL – 2B IGNITION COIL – 3A IGNITION COIL – 3B IGNITION COIL – 4A IGNITION COIL – 4B IGNITION MODULE – 1 IGNITION MODULE – 2 RADIATOR FAN CONTROL RELAY MODULE RADIATOR FAN – LH RADIATOR FAN – RH REFRIGERANT 4-WAY PRESSURE SWITCH		

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
AIR CONDITIONING COMPRESSOR CLUTCH RELAY	BROWN	BUS	LH BRAKE BOOSTER ENCLOSURE RELAYS
FUEL INJECTION RELAY	BROWN	EM5 / BROWN	CONTROL MODULE ENCLOSURE RELAYS
FUEL PUMP RELAY (#4)	BROWN	BUS	TRUNK FUSE BOX
IGNITION COIL RELAY	BROWN	EM26 / BROWN	CONTROL MODULE ENCLOSURE RELAYS

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC12	20-WAY MULTILOCK 070 / WHITE	FASCIA TOP CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC13	20-WAY MULTILOCK 070 / YELLOW	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC13	20-WAY MULTILOCK 070 / YELLOW	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
BT2	18-WAY MULTILOCK 070 / YELLOW	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
EM1	20-WAY MULTILOCK 070 / WHITE	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
EM2	18-WAY MULTILOCK 070 / YELLOW	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
EM3	14-WAY MULTILOCK 070 / SLATE	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
LF3	13-WAY ECONOSEAL III LC / WHITE	ENGINE COMPARTMENT / LEFT HAND ENCLOSURE
LF40	13-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / LEFT HAND ENCLOSURE
PI1	57-WAY SUMITOMO / BLACK	ENGINE COMPARTMENT / BRACKET ON TOP OF TRANSMISSION
PI2	13-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / BRACKET ON TOP OF TRANSMISSION
RH1	20-WAY MULTILOCK 070 / SLATE	BEHIND GLOVE BOX
SC3	12-WAY MULTILOCK 070 / SLATE	RIGHT HAND SIDE OF STEERING COLUMN
SW1	12-WAY MULTILOCK 040 / BLACK	INSIDE STEERING COLUMN COWL
SW2	6-WAY JST / WHITE	CENTER OF STEERING WHEEL

GROUND

Ground	Location / Type
BT2AL	EYELET (PAIR) – LEFT HAND LEG / TRUNK, RIGHT REAR
EM1AR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, RIGHT HAND ENCLOSURE
EM2AR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, LEFT HAND ENCLOSURE
FC3BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND 'A' POST
LF2AL	EYELET (PAIR) – LEFT HAND LEG / ENGINE COMPARTMENT, FORWARD OF LEFT HAND HOOD CATCH
LF2BL	EYELET (PAIR) – LEFT HAND LEG / ENGINE COMPARTMENT, FORWARD OF LEFT HAND HOOD CATCH

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.

CONTROL MODULE PIN OUT INFORMATION

ENGINE CONTROL MODULE

▼	Pin	Description	Active	Inactive
I	EM10-1	IGNITION SWITCHED POWER SUPPLY	B+	0 V
I	EM10-5	IGNITION SWITCHED POWER SUPPLY	B+	B+
D	EM10-6	OK TO START – ENCODED COMMUNICATIONS		
I	EM10-7	BRAKE SWITCH – NOT USED		
I	EM10-9	BATTERY POWER SUPPLY	B+	B+
I	EM10-10	BRAKE SWITCH	GROUND	B+
D	EM10-12	SERIAL COMMUNICATIONS		
D	EM10-13	SERIAL COMMUNICATIONS		
I	EM10-14	PARKING BRAKE SWITCH	GROUND (APPLIED)	B+
I	EM10-15	PARK / NEUTRAL	GROUND (R,D,4,3,2)	B+ (P, N)
O	EM10-16	FMS CONTROLLED RELAY ACTIVATE	GROUND	B+
D	EM10-17	SECURITY ACKNOWLEDGE	ENCODED COMMUNICATIONS	
O	EM10-20	IATS / ECTS / TPS / MECHANICAL GUARD POSITION / PEDAL POSITION COMMON REFERENCE GROUND	GROUND	GROUND
O	EM10-21	MECHANICAL GUARD POSITION / PEDAL POSITION / TPS COMMON REFERENCE VOLTAGE	5 V	5 V
I	EM10-22	GROUND	GROUND	GROUND
I	EM10-23	GROUND	GROUND	GROUND
C	EM10-25	CAN NETWORK	15 – 1500 Hz	
C	EM10-26	CAN NETWORK	15 – 1500 Hz	
C	EM10-27	CAN NETWORK	15 – 1500 Hz	
C	EM10-28	CAN NETWORK	15 – 1500 Hz	
D	EM11-3	ECM PROGRAMMING	B+	B+
I	FM11-6	ENGINE CRANK	GROUND (CRANKING)	B+
O	EM11-8	MECHANICAL GUARD POSITION / PEDAL POSITION / TPS COMMON REFERENCE VOLTAGE	5 V	5 V
I	EM11-9	ECT FEEDBACK	0.41 V @ 195°F (DECREASING WITH TEMPERATURE)	
I	EM11-10	TPS FEEDBACK	0.5 V = IDLE; 4.75 V = WOT	
I	EM11-11	TPS FEEDBACK	0.5 V = IDLE; 4.75 V = WOT	
O	EM11-12	IATS / ECTS / TPS / MECHANICAL GUARD POSITION / PEDAL POSITION COMMON REFERENCE GROUND	GROUND	GROUND
I	EM11-13	MECHANICAL GUARD POSITION FEEDBACK	0.5 V = IDLE; 4.75 V = WOT	
SG	EM11-14	MECHANICAL GUARD POSITION / PEDAL POSITION / TPS SHIELD	GROUND	GROUND
I	EM11-15	PEDAL POSITION FEEDBACK	0.5 V = IDLE; 4.75 V = WOT	
I	EM11-16	PEDAL POSITION FEEDBACK	0.5 V = IDLE; 4.75 V = WOT	
O	EM12-1	NOT USED		
O	EM12-2	NOT USED		
O	EM12-3	NOT USED		
O	EM12-4	NOT USED		
I	EM12-12	IATS FEEDBACK	0.98 V @ 10°C, DECREASING WITH TEMPERATURE	
I	EM12-13	MAFS FEEDBACK	1.2 V @ IDLE, INCREASING WITH RPM INCREASE	
I	EM12-14	‘B’ BANK HO2S	0.1 – 0.9 V @ IDLE (SWING)	
I	EM12-15	‘A’ BANK HO2S	0.1 – 0.9 V @ IDLE (SWING)	
I	EM12-16	NOT USED		
I	EM12-17	NOT USED		
O	EM12-18	MAFS REFERENCE GROUND	GROUND	GROUND
O	EM12-19	MAFS REFERENCE GROUND	GROUND	GROUND
SG	EM12-22	HO2S COMMON SHIELD	GROUND	GROUND
D	EM13-2	ECM PROGRAMMING		
O	EM13-3	CRUISE CONTROL ON STATUS LED	GROUND	
O	EM13-11	VACUUM SWITCHING VALVE #3 ACTIVATE	GROUND	B+
O	EM13-12	VACUUM SWITCHING VALVE #1 ACTIVATE	GROUND	B+
O	EM13-13	VACUUM SWITCHING VALVE #2 ACTIVATE	GROUND	B+
O	EM13-14	THROTTLE MOTOR POWER RELAY ACTIVATE	GROUND	B+
I	EM13-17	‘B’ BANK KNOCK SENSOR FEEDBACK	0 KHz = NO KNOCK, 2 – 20 KHz = KNOCK	
I	EM13-18	‘A’ BANK KNOCK SENSOR FEEDBACK	0 KHz = NO KNOCK, 2 – 20 KHz = KNOCK	
I	EM13-19	CKPS SIGNAL	5 V @ 1000 RPM = 45 Hz; 2000 RPM = 90 Hz	
I	EM13-20	CMPS SIGNAL	5 Hz @ IDLE	
I	EM13-27	CMPS / CKPS / KNOCK SENSORS COMMON SHIELD	GROUND	GROUND
I	EM13-28	CKPS SIGNAL	5 V @ 1000 RPM = 45 Hz; 2000 RPM = 90 Hz	
SG	EM13-29	CMPS SIGNAL GROUND	GROUND	GROUND
O	EM13-31	IGNITION MODULE 2 SWITCHING	5 Hz @ IDLE	
O	EM13-32	IGNITION MODULE 1 SWITCHING	5 Hz @ IDLE	
O	EM13-33	IGNITION MODULE 1 SWITCHING	5 Hz @ IDLE	
O	EM13-34	IGNITION MODULE 1 SWITCHING	5 Hz @ IDLE	
I	EM14-1	THROTTLE MOTOR POWER SUPPLY	B+	GROUND
I	EM14-2	THROTTLE MOTOR POWER SUPPLY	B+	GROUND
I	EM14-3	IGNITION SWITCHED POWER SUPPLY	B+	GROUND
I	EM14-4	GROUND	GROUND	GROUND
O	EM14-5	THROTTLE MOTOR POWER SUPPLY	B+	GROUND
O	EM14-6	THROTTLE MOTOR POWER SUPPLY	B+	GROUND
I	EM14-7	GROUND	GROUND	GROUND
I	EM14-8	GROUND	GROUND	GROUND
I	EM14-9	GROUND	GROUND	GROUND
I	EM14-10	GROUND	GROUND	GROUND
O	EM14-11	THROTTLE MOTOR POWER SUPPLY	GROUND	GROUND
O	EM14-12	THROTTLE MOTOR POWER SUPPLY	B+	GROUND
O	EM15-1	UPSTREAM ‘B’ BANK HO2S HEATER GROUND	GROUND	GROUND
O	EM15-2	UPSTREAM ‘A’ BANK HO2S HEATER GROUND	GROUND	GROUND
O	EM15-3	EVAP VALVE ACTIVATE	GROUND (VALVE OPEN)	B+
O	EM15-8	VARIABLE VALVE TIMING SOLENOID ‘B’ BANK	GROUND	B+
O	EM15-9	VARIABLE VALVE TIMING SOLENOID ‘A’ BANK	GROUND	B+
I	EM15-11	GROUND	GROUND	GROUND
I	EM15-12	GROUND	GROUND	GROUND
I	EM15-22	GROUND	GROUND	GROUND

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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. 04.3

COMPONENTS

Component	Connector / Type / Color	Location / Access
BRAKE SWITCH – LHD	AC26 (FLYLEAD) / 4-WAY MULTILOCK 070 / WHITE	TOP OF BRAKE PEDAL
BRAKE SWITCH – RHD	AC24 (FLYLEAD) / 4-WAY MULTILOCK 070 / WHITE	TOP OF BRAKE PEDAL
CATALYST SWITCHING MODULE	EM52 / 8-WAY MULTILOCK 040 / BLACK	ENGINE COMPARTMENT / ADJACENT TO FALSE BULKHEAD
CATALYST THERMOCOUPLES	EM56 / (FLYLEAD) 4-WAY ECONOSEAL III LC / BLACK	‘A’ AND ‘B’ BANK CATALYTIC CONVERTERS
CAMSHAFT POSITION SENSOR	PI15 (FLYLEAD) / 2-WAY ECONOSEAL III HC / BLACK	‘B’ BANK CYLINDER HEAD, REAR
CRANKSHAFT POSITION SENSOR	PI17 (FLYLEAD) / 3-WAY ECONOSEAL III LC / BLACK	ENGINE / REAR OF BED PLATE
ECM AND TCM COOLING FAN	EM64 / 2-WAY MULTILOCK 070 / WHITE	ENGINE COMPARTMENT / CONTROL MODULE ENCLOSURE
ENGINE COOLANT TEMPERATURE SENSOR	PI4 / 2-WAY ECONOSEAL E J2 / SLATE	ENGINE COMPARTMENT / REAR OF ENGINE TOP HOSE
ENGINE CONTROL MODULE	EM10 / 28-WAY MULTILOCK 040 / SLATE EM11 / 16-WAY MULTILOCK 040 / SLATE EM12 / 22-WAY MULTILOCK 040 / SLATE EM13 / 34-WAY MULTILOCK 040 / SLATE	ENGINE COMPARTMENT / CONTROL MODULE ENCLOSURE
EVAPORATIVE EMISSION CONTROL VALVE	EM58 / 2-WAY ECONOSEAL J2 / BLACK	ENGINE COMPARTMENT / LEFT HAND BULKHEAD EXTENSION
HEATED OXYGEN SENSOR – A UPSTREAM	EM21 (FLYLEAD) / 4-WAY SUMITOMO 090 II / SLATE	‘A’ BANK CATALYTIC CONVERTER
HEATED OXYGEN SENSOR – B UPSTREAM	EM23 (FLYLEAD) / 4-WAY SUMITOMO 090 II / SLATE	‘B’ BANK CATALYTIC CONVERTER
KNOCK SENSOR – A	PI26 (FLYLEAD) / 2-WAY ECONOSEAL III LC / BLACK	ENGINE VEE / UNDER INTAKE MANIFOLD
KNOCK SENSOR – B	PI27 (FLYLEAD) / 2-WAY ECONOSEAL III LC / BLACK	ENGINE VEE / UNDER INTAKE MANIFOLD
MASS AIR FLOW SENSOR	PI35 / 5-WAY YAZAKI 0902 / BLACK	ENGINE COMPARTMENT / REARWARD OF AIR CLEANER
PARKING BRAKE SWITCH	FC19 / LUCAR RIGHT ANGLE	BELOW PARKING BRAKE LEVER
PEDAL POSITION AND MECHANICAL GUARD SENSORS	PI42 / 5-WAY YAZAKI 0902 / BLACK	ENGINE COMPARTMENT / THROTTLE ASSEMBLY
THROTTLE MOTOR	PI33 / 2-WAY TWIN CLIP / BLACK	ENGINE COMPARTMENT / THROTTLE ASSEMBLY
THROTTLE POSITION SENSOR	PI6 / 4-WAY SUMITOMO TS090 / BLACK	ENGINE COMPARTMENT / THROTTLE ASSEMBLY
VACUUM SWITCHING VALVE – 1	EL2 / 2-WAY SUMITOMO 090 DC INHIBIT 1 / BLUE	BEHIND RIGHT HAND WHEEL ARCH LINER
VACUUM SWITCHING VALVE – 2	EL3 / 2-WAY SUMITOMO 090 DC INHIBIT 1 / BROWN	BEHIND RIGHT HAND WHEEL ARCH LINER
VACUUM SWITCHING VALVE – 3	EL4 / 2-WAY YAZAKI 090 / SLATE	BEHIND RIGHT HAND WHEEL ARCH LINER
VARIABLE VALVE TIMING SOLENOID VALVE – A	PI31 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	ENGINE COMPARTMENT / ‘A’ BANK CYLINDER HEAD, FRONT
VARIABLE VALVE TIMING SOLENOID VALVE – B	PI32 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	ENGINE COMPARTMENT / ‘B’ BANK CYLINDER HEAD, FRONT

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
THROTTLE MOTOR POWER RELAY	BROWN	EM16 / BROWN	CONTROL MODULE ENCLOSURE RELAYS

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC13	20-WAY MULTILOCK 070 / YELLOW	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
EL1	6-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / RIGHT HAND ENCLOSURE
EM1	20-WAY MULTILOCK 070 / WHITE	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
EM2	18-WAY MULTILOCK 070 / YELLOW	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
PI1	57-WAY SUMITOMO / BLACK	ENGINE COMPARTMENT / BRACKET ON TOP OF TRANSMISSION
PI2	13-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / BRACKET ON TOP OF TRANSMISSION

GROUND S

Ground	Location / Type
EM1AL	EYELET (PAIR) – LEFT HAND LEG / ENGINE COMPARTMENT, RIGHT HAND ENCLOSURE
EM1AR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, RIGHT HAND ENCLOSURE
EM1BR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, RIGHT HAND ENCLOSURE
EM2AL	EYELET (PAIR) – LEFT HAND LEG / ENGINE COMPARTMENT, LEFT HAND ENCLOSURE
EM2AR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, LEFT HAND ENCLOSURE
EM2BR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, LEFT HAND ENCLOSURE

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.

CONTROL MODULE PIN OUT INFORMATION

ENGINE CONTROL MODULE

Pin	Description	Active	Inactive
EM10-2	A/CCM ENGINE SPEED	5 V @ 1000 RPM = 45 Hz; 2000 RPM = 90 Hz	
EM10-3	A/CCM COMPRESSOR CLUTCH BATTERY POWER SUPPLY	B+	B+
EM10-4	A/CCM COMPRESSOR CLUTCH REQUEST	B+	GROUND
EM10-10	BRAKE SWITCH	GROUND	B+
EM11-1	CRUISE CONTROL SET +/-	7.3 V = (+), 8.8 V = (-)B+	
EM11-4	CRUISE CONTROL ON REQUEST	B+	GROUND
EM11-5	CRUISE CONTROL CANCEL / RESUME	7.3 V = RESUME, 8.8 V = CANCEL B+	
EM12-5	4 WAY REFRIGERANT SWITCH HIGH PRESSURE	GROUND @ 20 BAR (290 PSI)	
EM12-6	4 WAY REFRIGERANT SWITCH HIGH PRESSURE	GROUND @ 12 BAR (174 PSI)	
EM12-8	IGNITION MODULE 2 SWITCHING FEEDBACK	23 Hz @ IDLE (5 V)	
EM12-9	IGNITION MODULE 2 SWITCHING FEEDBACK	23 Hz @ IDLE (5 V)	
EM12-10	AIR CONDITIONING COMPRESSOR RELAY ACTIVATE	GROUND	B+
EM13-1	FUEL PUMP RELAY ACTIVATE	GROUND	B+
EM13-3	CRUISE CONTROL ON STATUS LED	GROUND	B+
EM13-15	SERIES (LOW) SPEED FAN ACTIVATE	GROUND	B+
EM13-16	PARALLEL (HIGH) SPEED FAN ACTIVATE	GROUND	B+
EM13-22	IGNITION COIL RELAY ACTIVATE	GROUND	B+
EM13-23	IGNITION MODULE 1 SWITCHING	5 Hz @ IDLE	
EM13-24	IGNITION MODULE 2 SWITCHING	5 Hz @ IDLE	
EM13-25	IGNITION MODULE 2 SWITCHING	5 Hz @ IDLE	
EM13-26	IGNITION MODULE 1 SWITCHING	5 Hz @ IDLE	
EM13-31	IGNITION MODULE 2 SWITCHING	5 Hz @ IDLE	
EM13-32	IGNITION MODULE 1 SWITCHING	5 Hz @ IDLE	
EM13-33	IGNITION MODULE 1 SWITCHING	5 Hz @ IDLE	
EM13-34	IGNITION MODULE 1 SWITCHING	5 Hz @ IDLE	
EM15-4	INJECTOR '3B' ACTIVATE	GROUND	B+
EM15-5	INJECTOR '2B' ACTIVATE	GROUND	B+
EM15-6	INJECTOR '4A' ACTIVATE	GROUND	B+
EM15-7	INJECTOR '1A' ACTIVATE	GROUND	B+
EM15-15	INJECTOR '4B' ACTIVATE	GROUND	B+
EM15-16	INJECTOR '3A' ACTIVATE	GROUND	B+
EM15-17	INJECTOR '2A' ACTIVATE	GROUND	B+
EM15-18	INJECTOR '1B' ACTIVATE	GROUND	B+

AIR CONDITIONING CONTROL MODULE

Pin	Description	Active	Inactive
AC1-1	COMPRESSOR CLUTCH STATUS	B+ (ON)	0 V
AC3-1	AIR CONDITIONING ELECTRICAL LOAD SIGNAL	B+	0 V
AC4-7	LOAD INHIBIT	0 V	B+
AC4-9	COMPRESSOR CLUTCH ON REQUEST	B+	0 V
AC4-17	REFRIGERANT 4 WAY PRESSURE SWITCH	0 V (2 – 30 BAR)	B+ (OUT OF ACTIVE RANGE)

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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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. 04.4

COMPONENTS

Component	Connector / Type / Color	Location / Access
AIR CONDITIONING COMPRESSOR CLUTCH AIR CONDITIONING CONTROL MODULE	PI36 (FLYLEAD) / 1-WAY SUMITOMO 090 A-TYPE / BLACK AC1 / 26-WAY MULTILOCK 47 / SLATE AC2 / 18-WAY MULTILOCK 47 / SLATE AC3 / 12-WAY MULTILOCK 47 / SLATE AC4 / 22-WAY MULTILOCK 47 / SLATE AC26 / 4-WAY MULTILOCK 070 / WHITE AC24 / 4-WAY MULTILOCK 070 / WHITE FC63 / 10-WAY AMP ML KEY B / WHITE SW3 (FLYLEAD) / 3-WAY EPC / BLACK AND WHITE	ENGINE COMPARTMENT / A/C COMPRESSOR A/C UNIT / RIGHT HAND SIDE
BRAKE CANCEL SWITCH – LHD BRAKE CANCEL SWITCH – RHD CRUISE CONTROL ON / OFF SWITCH CRUISE CONTROL SWITCHES (STEERING WHEEL) ENGINE CONTROL MODULE	EM10 / 28-WAY MULTILOCK 040 / SLATE EM11 / 16-WAY MULTILOCK 040 / SLATE EM12 / 22-WAY MULTILOCK 040 / SLATE EM13 / 34-WAY MULTILOCK 040 / SLATE PI7 / 2-WAY AMP JUNIOR POWER TIMER / BLACK PI11 / 2-WAY AMP JUNIOR POWER TIMER / BLACK PI8 / 2-WAY AMP JUNIOR POWER TIMER / BLACK PI12 / 2-WAY AMP JUNIOR POWER TIMER / BLACK PI9 / 2-WAY AMP JUNIOR POWER TIMER / BLACK PI13 / 2-WAY AMP JUNIOR POWER TIMER / BLACK PI10 / 2-WAY AMP JUNIOR POWER TIMER / BLACK PI14 / 2-WAY AMP JUNIOR POWER TIMER / BLACK BT55 / 4-WAY SUMITOMO DL090 / NATURAL BT10 / 10-WAY U.T.A. FUSEBOX / NATURAL BT11 / 10-WAY U.T.A. FUSEBOX / BLACK BT12 / 10-WAY U.T.A. FUSEBOX / GREEN BT13 / 10-WAY U.T.A. FUSEBOX / BLUE BT64 / EYELET	TOP OF BRAKE PEDAL TOP OF BRAKE PEDAL REARWARD OF GEAR SELECTOR CENTER OF STEERING WHEEL ENGINE COMPARTMENT / CONTROL MODULE ENCLOSURE
FUEL INJECTOR – 1A FUEL INJECTOR – 1B FUEL INJECTOR – 2A FUEL INJECTOR – 2B FUEL INJECTOR – 3A FUEL INJECTOR – 3B FUEL INJECTOR – 4A FUEL INJECTOR – 4B FUEL PUMP FUZE BOX – TRUNK	PI18 / 2-WAY YAZAKI 090X / BLACK PI22 / 2-WAY YAZAKI 090X / BLACK PI19 / 2-WAY YAZAKI 090X / BLACK PI23 / 2-WAY YAZAKI 090X / BLACK PI20 / 2-WAY YAZAKI 090X / BLACK PI24 / 2-WAY YAZAKI 090X / BLACK PI21 / 2-WAY YAZAKI 090X / BLACK PI25 / 2-WAY YAZAKI 090X / BLACK EM27 / 12-WAY IGNITION POWER MODULE / BLACK EM29 / 12-WAY IGNITION POWER MODULE / BLACK LF9 / 8-WAY TRW / BLACK LF13 / 2-WAY REINSHAGEN METRI 630 / BLACK LF12 / 2-WAY REINSHAGEN METRI 630 / BLACK LF57 (FLYLEAD) / 6-WAY ECONOSEAL III LC / BLACK	INTAKE MANIFOLD / FUEL RAIL INTAKE MANIFOLD / FUEL RAIL INTAKE MANIFOLD / FUEL RAIL INTAKE MANIFOLD / FUEL RAIL INTAKE MANIFOLD / FUEL RAIL INTAKE MANIFOLD / FUEL RAIL INTAKE MANIFOLD / FUEL RAIL INTAKE MANIFOLD / FUEL RAIL TRUNK / TOP OF FUEL TANK TRUNK / ELECTRICAL CARRIER
IGNITION COIL – 1A IGNITION COIL – 1B IGNITION COIL – 2A IGNITION COIL – 2B IGNITION COIL – 3A IGNITION COIL – 3B IGNITION COIL – 4A IGNITION COIL – 4B IGNITION MODULE – 1 IGNITION MODULE – 2 RADIATOR FAN CONTROL RELAY MODULE RADIATOR FAN – LH RADIATOR FAN – RH REFRIGERANT 4-WAY PRESSURE SWITCH	PI18 / 2-WAY YAZAKI 090X / BLACK PI22 / 2-WAY YAZAKI 090X / BLACK PI19 / 2-WAY YAZAKI 090X / BLACK PI23 / 2-WAY YAZAKI 090X / BLACK PI20 / 2-WAY YAZAKI 090X / BLACK PI24 / 2-WAY YAZAKI 090X / BLACK PI21 / 2-WAY YAZAKI 090X / BLACK PI25 / 2-WAY YAZAKI 090X / BLACK EM27 / 12-WAY IGNITION POWER MODULE / BLACK EM29 / 12-WAY IGNITION POWER MODULE / BLACK LF9 / 8-WAY TRW / BLACK LF13 / 2-WAY REINSHAGEN METRI 630 / BLACK LF12 / 2-WAY REINSHAGEN METRI 630 / BLACK LF57 (FLYLEAD) / 6-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / CAMSHAFT COVER ENGINE COMPARTMENT / BULKHEAD, RIGHT HAND SIDE ENGINE COMPARTMENT / BULKHEAD, LEFT HAND SIDE ADJACENT TO LEFT HAND HORN ENGINE COMPARTMENT / FRONT ENGINE COMPARTMENT / FRONT ENGINE COMPARTMENT / REARWARD OF RADIATOR

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
AIR CONDITIONING COMPRESSOR CLUTCH RELAY	BROWN	BUS	LH BRAKE BOOSTER ENCLOSURE RELAYS
FUEL INJECTION RELAY	BROWN	EM5 / BROWN	CONTROL MODULE ENCLOSURE RELAYS
FUEL PUMP RELAY (#4)	BROWN	BUS	TRUNK FUSE BOX
IGNITION COIL RELAY	BROWN	EM26 / BROWN	CONTROL MODULE ENCLOSURE RELAYS

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC12	20-WAY MULTILOCK 070 / WHITE	FASCIA TOP CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC13	20-WAY MULTILOCK 070 / YELLOW	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
BT2	18-WAY MULTILOCK 070 / YELLOW	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
EM1	26-WAY MULTILOCK 070 / WHITE	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
EM2	18-WAY MULTILOCK 070 / YELLOW	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
EM3	14-WAY MULTILOCK 070 / SLATE	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
LF3	13-WAY ECONOSEAL III LC / WHITE	ENGINE COMPARTMENT / LEFT HAND ENCLOSURE
LF40	13-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / LEFT HAND ENCLOSURE
PI1	57-WAY SUMITOMO / BLACK	ENGINE COMPARTMENT / BRACKET ON TOP OF TRANSMISSION
PI2	13-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / BRACKET ON TOP OF TRANSMISSION
RH1	20-WAY MULTILOCK 070 / SLATE	BEHIND GLOVE BOX
SC3	12-WAY MULTILOCK 070 / SLATE	RIGHT HAND SIDE OF STEERING COLUMN
SW1	12-WAY MULTILOCK 040 / BLACK	INSIDE STEERING COLUMN COWL
SW2	6-WAY JST / WHITE	CENTER OF STEERING WHEEL

GROUND

Ground	Location / Type
BT2AL	EYELET (PAIR) – LEFT HAND LEG / TRUNK, RIGHT REAR
EM1AR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, RIGHT HAND ENCLOSURE
EM2AR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, LEFT HAND ENCLOSURE
FC3BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST
LF2AL	EYELET (PAIR) – LEFT HAND LEG / ENGINE COMPARTMENT, FORWARD OF LEFT HAND HOOD CATCH
LF2BL	EYELET (PAIR) – LEFT HAND LEG / ENGINE COMPARTMENT, FORWARD OF LEFT HAND HOOD CATCH

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.

CONTROL MODULE PIN OUT INFORMATION

TRANSMISSION CONTROL MODULE

▽	Pin	Description	Active	Inactive
O	EM7-1	PRESSURE REGULATOR #2	GROUND (MAXIMUM PRESSURE)	B+ (NO PRESSURE)
O	EM7-2	SPORT MODE SWITCH STATUS LED	GROUND = LED ON	B+
O	EM7-4	PRESSURE REGULATOR #4	GROUND (MAXIMUM PRESSURE)	B+ (NO PRESSURE)
O	EM7-5	PRESSURE REGULATOR #1	GROUND (MAXIMUM PRESSURE)	B+ (NO PRESSURE)
I	EM7-6	GROUND	GROUND	GROUND
I	EM7-8	ROTARY SWITCH 'L2' CONTACTS	B+	GROUND
I	EM7-9	ROTARY SWITCH 'L4' CONTACTS	B+	GROUND
I	EM7-12	SPORT MODE SWITCH STRATEGY SELECT	GROUND = SPORT	9 V = NORMAL
I	EM7-13	D - 4 SWITCH	GROUND	B+
I	EM7-14	TURBINE SPEED SENSOR	300 Hz @ IDLE (2.5 V)	
SG	EM7-15	OUTPUT SPEED SENSOR SHIELD	GROUND	GROUND
SG	EM7-16	OUTPUT SPEED SENSOR	GROUND	GROUND
I	EM7-18	KICKDOWN SWITCH	GROUND	B+
SG	EM7-21	FLUID TEMPERATURE SENSOR	1.31 V	
I	EM7-22	FLUID TEMPERATURE SENSOR FEEDBACK	1.15 V @ 90°C	
I	EM7-23	TURBINE SPEED SENSOR SHIELD	GROUND	GROUND
I	EM7-26	BATTERY POWER SUPPLY	B+	B+
O	EM7-28	ROTARY / D-4 / KICK DOWN SWITCHES COMMON GROUND	GROUND	GROUND
O	EM7-29	PRESSURE REGULATOR #3	GROUND (MAXIMUM PRESSURE)	B+ (NO PRESSURE)
O	EM7-30	SOLENOID VALVE #1	GROUND	B+
O	EM7-32	SOLENOID VALVE #3	GROUND	B+
O	EM7-33	SOLENOID VALVE #2	GROUND	B+
I	EM7-34	GROUND	GROUND	GROUND
I	EM7-36	ROTARY SWITCH 'L1' CONTACTS	B+	GROUND
I	EM7-37	ROTARY SWITCH 'L3' CONTACTS	B+	GROUND
I	EM7-42	TURBINE SPEED SENSOR	1.51 V @ 10 MPH (16 KM/H) = 250 Hz, 20 MPH (32 KM/H) = 500 Hz	
I	EM7-44	OUTPUT SPEED SENSOR	1.51 V @ 10 MPH (16 KM/H) = 223 Hz, 20 MPH (32 KM/H) = 446 Hz	
I	EM7-45	SPORT MODE SWITCH STRATEGY SELECT	10 v = SPORT	GROUND = NORMAL
O	EM7-51	PRESSURE REGULATOR #5	GROUND (MAXIMUM PRESSURE)	B+ (NO PRESSURE)
O	EM7-52	SOLENOID VALVES COMMON SUPPLY	B+	B+
O	EM7-53	PRESSURE REGULATORS COMMON SUPPLY	B+	B+
I	EM7-64	IGNITION SWITCHED POWER SUPPLY	B+	GROUND
I	EM7-55	IGNITION SWITCHED POWER SUPPLY	B+	GROUND
C	EM7-82	CAN NETWORK	15 – 1500 Hz	
C	EM7-83	CAN NETWORK	15 – 1500 Hz	
C	EM7-85	CAN NETWORK	15 – 1500 Hz	
C	EM7-86	CAN NETWORK	15 – 1500 Hz	

GEAR SELECTOR MODULE

▽	Pin	Description	Active	Inactive
I	FC88-1	IGNITION SWITCHED POWER SUPPLY	B+	GROUND
C	FC88-3	CAN NETWORK	15 – 1500 Hz @ 2.5 V	
C	FC88-4	CAN NETWORK	15 – 1500 Hz @ 2.5 V	
I	FC88-6	GROUND	GROUND	GROUND
C	FC88-8	CAN NETWORK	15 – 1500 Hz @ 2.5 V	
C	FC88-9	CAN NETWORK	15 – 1500 Hz @ 2.5 V	

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 05.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
D - 4 SWITCH	FC84 (FLYLEAD) /YELLOW	GEAR SELECTOR ASSEMBLY, REAR
GEAR SELECTOR MODULE	FC88 / HYBRID / BLACK	FRONT OF GEAR SELECTOR ASSEMBLY
KICKDOWN SWITCH – LHD	AC21 / 2-WAY ECONOSEAL III LC / BLACK	BELOW ACCELERATOR PEDAL
KICKDOWN SWITCH – RHD	AC25 / 2-WAY ECONOSEAL III LC / BLACK	BELOW ACCELERATOR PEDAL
MODE SWITCH (TRANSMISSION)	FC35 / 10-WAY AMP ML KEY A / BLACK	REARWARD OF GEAR SELECTOR
TRANSMISSION CONTROL MODULE	EM7 / 88-WAY BOSCH / BLACK	ENGINE COMPARTMENT / CONTROL MODULE ENCLOSURE
TRANSMISSION ELECTRICAL CONNECTOR	EM46 / 16-WAY TRANSMISSION / BLACK	TRANSMISSION / LEFT HAND SIDE
TRANSMISSION ROTARY SWITCH	EM47 (FLYLEAD) / 10-WAY REINSHAGEN MPL50 / BLACK	TRANSMISSION / RIGHT HAND SIDE

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC12	20-WAY MULTILOCK 070 / WHITE	FASCIA TOP CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
EM1	20-WAY MULTILOCK 070 / WHITE	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
EM3	14-WAY MULTILOCK 070 / SLATE	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE

GROUND

Ground	Location / Type
EM1AL	EYELET (PAIR) – LEFT HAND LEG / ENGINE COMPARTMENT, RIGHT HAND ENCLOSURE
EM2AL	EYELET (PAIR) – LEFT HAND LEG / ENGINE COMPARTMENT, LEFT HAND ENCLOSURE
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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.

CONTROL MODULE PIN OUT INFORMATION

BODY PROCESSOR MODULE

	Pin	Description	Active	Inactive
I	FC14-15	IGNITION SWITCHED GROUND SUPPLY	GROUND	
I	FC14-32	IGNITION SWITCHED GROUND SUPPLY	GROUND	GROUND
O	FC14-48	GEARSHIFT INTERLOCK SOLENOID SUPPLY	B+ (GEARSHIFT FREE)	GROUND (GEARSHIFT LOCKED)
O	FC14-51	KEY LOCK SOLENOID SUPPLY	B+ (KEY CAPTIVE)	GROUND (KEY RELEASED)
I	FC14-58	NOT-IN-PARK	GROUND (R,N,D,4,3,2)	B+ (PARK)
I	FC14-65	LOGIC GROUND SUPPLY	GROUND	GROUND
I	FC14-80	BATTERY POWER SUPPLY (LOGIC)	B+	B+
S	FC14-84	SCP NETWORK	2 – 1600 Hz	
S	FC14-85	SCP NETWORK	2 – 1600 Hz	
I	FC14-103	POWER GROUND SUPPLY	GROUND	GROUND
I	FC14-104	LIGHTING / MOTORS BATTERY POWER SUPPLY	B+	B+

ENGINE CONTROL MODULE

	Pin	Description	Active	Inactive
I	EM10-10	BRAKE SWITCH	GROUND	B+
C	EM10-28	CAN NETWORK	15 – 1500 Hz	
C	EM10-27	CAN NETWORK	15 – 1500 Hz	

GEAR SELECTOR MODULE

	Pin	Description	Active	Inactive
C	FC88-4	CAN NETWORK	15 – 1500 Hz @ 2.5 V	
C	FC88-3	CAN NETWORK	15 – 1500 Hz @ 2.5 V	
C	FC88-8	CAN NETWORK	15 – 1500 Hz @ 2.5 V	
C	FC88-9	CAN NETWORK	15 – 1500 Hz @ 2.5 V	

MAJOR INSTRUMENT PACK

	Pin	Description	Active	Inactive
S	FC25-19	SCP NETWORK	2 – 1600 Hz	
S	FC25-20	SCP NETWORK	2 – 1600 Hz	
C	FC25-24	CAN NETWORK	15 – 1500 Hz	
C	FC25-47	CAN NETWORK	15 – 1500 Hz	

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 05.2

COMPONENTS

Component	Connector / Type / Color	Location / Access
BODY PROCESSOR MODULE	FC14 / 104-WAY AMP EEEEC / SLATE	PASSENGER SIDE FASCIA / AIRBAG BRACKET
BRAKE SWITCH – LHD	AC26 (FLYLEAD) / 4-WAY MULTILOCK 070 / WHITE	TOP OF BRAKE PEDAL
BRAKE SWITCH – RHD	AC24 (FLYLEAD) / 4-WAY MULTILOCK 070 / WHITE	TOP OF BRAKE PEDAL
ENGINE CONTROL MODULE	EM10 / 28-WAY MULTILOCK 040 / SLATE EM11 / 16-WAY MULTILOCK 040 / SLATE EM12 / 22-WAY MULTILOCK 040 / SLATE EM13 / 34-WAY MULTILOCK 040 / SLATE	ENGINE COMPARTMENT / CONTROL MODULE ENCLOSURE
GFAR SELECTOR MODULE	FC88 / HYBRID / BLACK	FRONT OF GEAR SELECTOR ASSEMBLY
GEARSHIFT INTERLOCK SOLENOID	FC86 / 2-WAY MULTILOCK 070 / WHITE	GEAR SELECTOR ASSEMBLY
KEYLOCK SOLENOID (COLUMN SWITCHGEAR)	SC1 (FLYLEAD) / 12-WAY MULTILOCK 070 / WHITE	STEERING COLUMN
MAJOR INSTRUMENT PACK	FC25 / 48-WAY AMP PCB SIGNAL / BLACK FC26 / 24-WAY AMP PCB SIGNAL / BLACK	FASCIA
NOT-IN-PARK MICROSWITCH	FC87 (FLYLEAD) / 3-WAY MULTILOCK 070 / WHITE	GEAR SELECTOR ASSEMBLY

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC13	20-WAY MULTILOCK 070 / YELLOW	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
EM1	20-WAY MULTILOCK 070 / WHITE	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE

GROUND

Ground	Location / Type
FC2BR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC3AS	EYELET (SINGLE) / LEFT HAND ‘A’ POST
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC4BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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

CONTROL MODULE PIN OUT INFORMATION

ABS / TRACTION CONTROL CONTROL MODULE

	Pin	Description	Active	Inactive
O	LF37-1	BRAKE FLUID RESERVOIR LEVEL SWITCH REFERENCE	B+	B+
I	LF37-2	BRAKE SWITCH	GROUND	B+
I	LF37-3	RH FRONT WHEEL SPEED SENSOR	2.5 V @ 10 MPH (16 KM/H) = 100 Hz; 20 MPH (32 KM/H) = 200 Hz	
SG	LF37-4	RH FRONT WHEEL SPEED SENSOR	2.5 V @ REST	
C	LF37-5	CAN NETWORK	15 – 1500 Hz	
SG	LF37-6	RH REAR WHEEL SPEED SENSOR	2.5 V @ REST	
I	LF37-7	RH REAR WHEEL SPEED SENSOR	2.5 V @ 10 MPH (16 KM/H) = 100 Hz; 20 MPH (32 KM/H) = 200 Hz	
I	LF37-8	GROUND	GROUND	GROUND
I	LF37-9	BATTERY POWER SUPPLY	B+	B+
	LF37-10	NOT USED		
	LF37-11	NOT USED		
I	LF37-13	BRAKE FLUID RESERVOIR LEVEL SWITCH	GROUND	B+
I	LF37-14	STABILITY / TRACTION CONTROL SWITCH	GROUND (MOMENTARY)	B+
C	LF37-15	CAN NETWORK	15 – 1500 Hz	
O	LF37-16	STABILITY / TRACTION CONTROL SWITCH STATE LED	GROUND	B+
I	LF37-17	LH FRONT WHEEL SPEED SENSOR	2.5 V @ 10 MPH (16 KM/H) = 100 Hz; 20 MPH (32 KM/H) = 200 Hz	
SG	LF37-18	LH FRONT WHEEL SPEED SENSOR	2.5 V @ REST	
O	LF37-19	ADAPTIVE DAMPENING OVERRIDE		
I	LF37-20	IGNITION SWITCHED SUPPLY	B+	GROUND
I	LF37-21	LH REAR WHEEL SPEED SENSOR	2.5 V @ 10 MPH (16 KM/H) = 100 Hz; 20 MPH (32 KM/H) = 200 Hz	
SG	LF37-22	LH REAR WHEEL SPEED SENSOR	2.5 V @ REST	
I	LF37-24	GROUND	GROUND	GROUND
I	LF37-25	BATTERY POWER SUPPLY	B+	B+

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 06.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
ABS / TRACTION CONTROL CONTROL MODULE	LF37 / 25-WAY AMP HYBRID / BLACK	ENGINE COMPARTMENT / FRONT LEFT
BRAKE FLUID RESERVOIR	EM37 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	ENGINE COMPARTMENT / BRAKE BOOSTER ENCLOSURE
BRAKE SWITCH – LHD	AC26 (FLYLEAD) / 4-WAY MULTILOCK 070 / WHITE	TOP OF BRAKE PEDAL
BRAKE SWITCH – RHD	AC24 (FLYLEAD) / 4-WAY MULTILOCK 070 / WHITE	TOP OF BRAKE PEDAL
STABILITY / TRACTION CONTROL SWITCH (CENTER CONSOLE SWITCH PACK)	FC55 (FLYLEAD) / 20-WAY FORD IDC / BLACK	CENTER CONSOLE SWITCH PACK
WHEEL SPEED SENSOR – LH FRONT	FL1 / 2-WAY REINSHAGEN METRI 630 / BLACK	WHEEL HUB
WHEEL SPEED SENSOR – LH REAR	RL1 / 2-WAY REINSHAGEN METRI 630 / BLACK	WHEEL HUB
WHEEL SPEED SENSOR – RH FRONT	FR1 / 2-WAY REINSHAGEN METRI 630 / BLACK	WHEEL HUB
WHEEL SPEED SENSOR – RH REAR	RR1 / 2-WAY REINSHAGEN METRI 630 / BLACK	WHEEL HUB

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC13	20-WAY MULTILOCK 070 / YELLOW	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
BT2	18-WAY MULTILOCK 070 / YELLOW	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
BT72	4-WAY ECONOSEAL III LC / BLACK	REAR OF REAR HUB ASSEMBLY / LEFT HAND SIDE
BT73	4-WAY ECONOSEAL III LC / BLACK	REAR OF REAR HUB ASSEMBLY / RIGHT HAND SIDE
LF40	13-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / LEFT HAND ENCLOSURE
LF41	2-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / ADJACENT TO ENGINE COMPARTMENT FUSE BOX
LF42	2-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / ADJACENT TO AIR CLEANER
LF60	20-WAY MULTILOCK 070 / WHITE	LEFT HAND ‘A’ POST CONNECTOR MOUNTING BRACKET / ‘A’ POST TRIM
RH1	20-WAY MULTILOCK 070 / SLATE	BEHIND GLOVE BOX

GROUND

Ground	Location / Type
FC2BR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC4BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
LF3AS	EYELET (SINGLE) / ENGINE COMPARTMENT, FORWARD OF LEFT HAND HOOD CATCH

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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.

CONTROL MODULE PIN OUT INFORMATION

AIR CONDITIONING CONTROL MODULE

▽ Pin	Description	Active	Inactive
O AC1-6	DEFROST VENT SERVO MOTOR	B+	0 V
O AC1-7	CENTER VENT SERVO MOTOR	B+	0 V
O AC1-8	LH FRESH / RECIRCULATION VENT MOTOR	B+	0 V
O AC1-9	RH FRESH / RECIRCULATION VENT MOTOR	B+	0 V
O AC1-12	FOOTWELL VENT SERVO MOTOR	B+	0 V
O AC1-13	COOL AIR BY-PASS VENT SERVO MOTOR	B+	0 V
O AC1-19	DEFROST VENT SERVO MOTOR	B+	0 V
O AC1-20	CENTER VENT SERVO MOTOR	B+	0 V
O AC1-21	LH FRESH / RECIRCULATION VENT SERVO MOTOR	B+	0 V
O AC1-22	RH FRESH / RECIRCULATION VENT SERVO MOTOR	B+	0 V
O AC1-25	FOOTWELL SERVO MOTOR	B+	0 V
O AC1-26	COOL AIR BYPASS SERVO MOTOR	B+	0 V
I AC2-1	SOLAR SENSOR FEEDBACK	0.75 V – 4.75 V; INCREASING WITH SOLAR LOAD	< 1 V = CLOSED
I AC2-2	CENTER VENT POTENTIOMETER FEEDBACK	> 3.5 V = OPEN	< 1 V = CLOSED
I AC2-3	RH FRESH / RECIRCULATION VENT POTENTIOMETER FEEDBACK	> 3.5 V = OPEN	< 1 V = CLOSED
I AC2-5	COOL AIR BYPASS VENT POTENTIOMETER FEEDBACK	> 3.5 V = OPEN	< 1 V = CLOSED
I AC2-6	ENGINE COOLANT TEMPERATURE	2.5 V @ 90° C; DECREASING WITH TEMPERATURE	4.75 V = BLUE
I AC2-9	DIFFERENTIAL CONTROL POTENTIOMETER FEEDBACK	0.75 V = RED	< 1 V = CLOSED
I AC2-10	DEFROST VENT POTENTIOMETER FEEDBACK	> 3.5 V = OPEN	< 1 V = CLOSED
I AC2-11	LH FRESH / RECIRCULATION VENT POTENTIOMETER FEEDBACK	> 3.5 V = OPEN	< 1 V = CLOSED
I AC2-13	FOOTWELL VENT POTENTIOMETER FEEDBACK	> 3.5 V = OPEN	< 1 V = CLOSED
O AC3-2	CLOCK	B+ (1.45 Hz)	
D AC3-3	SERIAL DATA OUTPUT TO CONTROL PANEL		0 V
I AC3-4	COMPRESSOR LOCK SIGNAL	.43 V	
I AC3-5	AMBIENT TEMPERATURE SENSOR FEEDBACK	2.18 V @ 25° C; DECREASING WITH WITH TEMPERATURE	
I AC3-6	HEATER MATRIX TEMPERATURE SENSOR FEEDBACK	2.25 V @ 20° C; DECREASING WITH TEMPERATURE	
D AC3-7	SERIAL DATA INPUT FROM CONTROL PANEL		0 V
O AC3-8	START	B+ (MOMENTARY)	0 V
I AC3-10	IGNITION SWITCHED POWER SUPPLY	B+	
I AC3-11	IN CAR TEMPERATURE SENSOR FEEDBACK	3.25 V @ 0° C; DECREASING WITH TEMPERATURE	
I AC3-12	EVAPORATOR TEMPERATURE SENSOR FEEDBACK	3.25 V @ 0° C; DECREASING WITH TEMPERATURE	
I AC4-1	IGNITION SWITCHED POWER SUPPLY	B+	0 V
I AC4-2	ISOLATE RELAY CONTROLLED BATTERY POWER SUPPLY	B+	0 V
I AC4-3	IGNITION SWITCHED GROUND	0 V	B+
O AC4-4	CONTROL PANEL BATTERY POWER SUPPLY	B+	0 V
I AC4-5	BATTERY POWER SUPPLY	B+	
I AC4-6	ENGINE SPEED SIGNAL	5 V @ 1000 RPM = 45 Hz; 2000 RPM = 90 Hz	5 V
O AC4-8	POTENTIOMETER COMMON REFERENCE VOLTAGE	5 V	
D AC4-10	SERIAL COMMUNICATIONS INPUT		
O AC4-12	CONTROL PANEL BATTERY POWER SUPPLY	B+	B+
I AC4-13	GROUND	0 V	0 V
O AC4-14	CONTROL PANEL GROUND SUPPLY	0 V	0 V
O AC4-15	ISOLATE RELAY ACTIVE	B+	0 V
I AC4-16	VEHICLE SPEED SIGNAL	22 Hz @ 10 MPH (16 KM/H); 44 Hz @ 20 MPH (32 KM/H) @ B+	
O AC4-18	ASPIRATOR MOTOR POWER SUPPLY	B+	0 V
O AC4-19	POTENTIOMETER COMMON REFERENCE GROUND	0 V	0 V
I AC4-20	GROUND	0 V	0 V
D AC4-21	SERIAL COMMUNICATIONS OUTPUT		

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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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. 07.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
AIR CONDITIONING CONTROL MODULE	AC1 / 26-WAY MULTILOCK 47 / SLATE AC2 / 16-WAY MULTILOCK 47 / SLATE AC3 / 12-WAY MULTILOCK 47 / SLATE AC4 / 22-WAY MULTILOCK 47 / SLATE	A/C UNIT / RIGHT HAND SIDE
AIR CONDITIONING CONTROL PANEL	FC43 (FLYLEAD) / 12-WAY MULTILOCK 040 / BLUE	CENTER CONSOLE
AIR INTAKE – LH BLOWER	AC5 (FLYLEAD) / 15-WAY SUMITOMO 090 HYBRID / NATURAL	ADJACENT TO BLOWER MOTOR ASSEMBLY
AIR INTAKE – RH BLOWER	AC6 (FLYLEAD) / 15-WAY SUMITOMO 090 HYBRID / NATURAL	ADJACENT TO BLOWER MOTOR ASSEMBLY
AMBIENT TEMPERATURE SENSOR	LF29 (FLYLEAD) / 2-WAY YAZAKI 0902 / BLACK	ADJACENT TO RIGHT HAND HORN
ASPIRATOR ASSEMBLY	FC12 (FLYLEAD) / 4-WAY MULTILOCK 070 / WHITE	DRIVER KNEE BOLSTER
COMPRESSOR LOCK SENSOR	PI37 (FLYLEAD) / 2-WAY SUMITOMO HW090 / BLACK	ENGINE COMPARTMENT / A/C COMPRESSOR
DIFFERENTIAL CONTROL POTENTIOMETER	FC48 (FLYLEAD) / 3-WAY MULTILOCK 070 / WHITE	A/C UNIT, LEFT HAND SIDE
EVAPORATOR / HEATER MATRIX ASSEMBLY	AC7 (FLYLEAD) / 12-WAY MULTILOCK 040 / BLACK	A/C UNIT / LEFT HAND SIDE
SOLAR SENSOR	FC92 (FLY LEAD) / 2-WAY MULTILOCK 040 / BLACK	DRIVER SIDE FASCIA / ADJACENT TO DEFROST VENT
VENT ASSEMBLY	FC44 (FLYLEAD) / 12-WAY MULTILOCK 040 / BLACK	A/C UNIT / TOP

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
AIR CONDITIONING ISOLATE RELAY	VIOLET	FC24 / VIOLET	RH FASCIA RELAYS

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC12	20-WAY MULTILOCK 070 / WHITE	FASCIA TOP CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC13	20-WAY MULTILOCK 070 / YELLOW	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC15	20-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC15	20-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
EM1	20-WAY MULTILOCK 070 / WHITE	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
LF60	20-WAY MULTILOCK 070 / WHITE	LEFT HAND 'A' POST CONNECTOR MOUNTING BRACKET / 'A' POST TRIM
PI1	57-WAY SUMITOMO / BLACK	ENGINE COMPARTMENT / BRACKET ON TOP OF TRANSMISSION

GROUND S

Ground	Location / Type
FC2BR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND 'A' POST
FC3CS	EYELET (SINGLE) / LEFT HAND 'A' POST
FC4BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND 'A' POST

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.

CONTROL MODULE PIN OUT INFORMATION

ENGINE CONTROL MODULE

	Pin	Description	Active	Inactive
I	EM10-2	A/CCM ENGINE SPEED	5 V @ 1000 RPM = 45 Hz; 2000 RPM = 90 Hz	
I	EM10-3	A/CCM COMPRESSOR CLUTCH BATTERY POWER SUPPLY	B+	B+
I	EM10-4	A/CCM COMPRESSOR CLUTCH REQUEST	B+	GROUND
I	EM12-5	4 WAY REFRIGERANT SWITCH HIGH PRESSURE	GROUND @ 20 BAR (290 PSI)	
I	FM12-6	4 WAY REFRIGERANT SWITCH HIGH PRESSURE	GROUND @ 12 BAR (174 PSI)	
O	EM12-10	AIR CONDITIONING COMPRESSOR RELAY ACTIVATE	GROUND	B+
O	EM13-15	SERIES (LOW) SPEED FAN ACTIVATE	GROUND	B+
O	EM13-16	PARALLEL (HIGH) SPEED FAN ACTIVATE	GROUND	B+

AIR CONDITIONING CONTROL MODULE

	Pin	Description	Active	Inactive
I	AC1-1	COMPRESSOR CLUTCH STATUS	B+ (ON)	0 V
O	AC1-2	HEATER VALVE ACTIVE	B+	0 V
O	AC1-3	RH BLOWER MOTOR RELAY ACTIVE	0 V	B+
O	AC1-4	LH / RH WINDSHIELD HEATER RELAYS ACTIVATE	0 V	B+
O	AC1-5	DOOR MIRROR HEATER RELAY ACTIVATE	0 V	B+
O	AC1-16	LH BLOWER MOTOR RELAY ACTIVATE	B+	0 V
O	AC1-17	HEATER PUMP RELAY ACTIVATE	0 V	B+
O	AC1-18	HEATED BACKLIGHT RELAY ACTIVATE	0 V	B+
I	AC2-7	RH BLOWER SPEED FEEDBACK	7.6 V = LOW SPEED	0.83 V = HIGH SPEED
O	AC2-8	RH BLOWER SPEED CONTROL DRIVE SIGNAL	1.3 V = LOW SPEED	0 V = HIGH SPEED
I	AC2-15	LH BLOWER SPEED FEEDBACK	7.6 V = LOW SPEED	0.83 V = HIGH SPEED
O	AC2-16	LH BLOWER SPEED CONTROL DRIVE SIGNAL	1.3 V = LOW SPEED	0 V = HIGH SPEED
O	AC3-1	AIR CONDITIONING ELECTRICAL LOAD SIGNAL	B+	0 V
I	AC4-7	LOAD INHIBIT	0 V	B+
O	AC4-9	COMPRESSOR CLUTCH ON REQUEST	B+	0 V
I	AC4-17	REFRIGERANT 4 WAY PRESSURE SWITCH	0 V (2 ~ 30 BAR)	B+ (OUT OF ACTIVE RANGE)

Fig. 07.2

COMPONENTS

Component	Connector / Type / Color	Location / Access
AIR CONDITIONING COMPRESSOR CLUTCH AIR CONDITIONING CONTROL MODULE	PI36 (FLYLEAD) / 1-WAY SUMITOMO 090 A-TYPE / BLACK AC1 / 26-WAY MULTILOCK 47 / SLATE AC2 / 16-WAY MULTILOCK 47 / SLATE AC3 / 12-WAY MULTILOCK 47 / SLATE AC4 / 22-WAY MULTILOCK 47 / SLATE	ENGINE COMPARTMENT / A/C COMPRESSOR A/C UNIT / RIGHT HAND SIDE
BLOWER MOTOR – LH BLOWER MOTOR – RH ENGINE CONTROL MODULE	AC5 (FLYLEAD) / 15-WAY SUMITOMO 090 HYBRID / NATURAL AC6 (FLYLEAD) / 15-WAY SUMITOMO 090 HYBRID / NATURAL EM10 / 28-WAY MULTILOCK 040 / SLATE EM11 / 16-WAY MULTILOCK 040 / SLATE EM12 / 22-WAY MULTILOCK 040 / SLATE EM13 / 34-WAY MULTILOCK 040 / SLATE	LEFT HAND SIDE OF A/C UNIT RIGHT HAND SIDE OF A/C UNIT ENGINE COMPARTMENT / CONTROL MODULE ENCLOSURE
FUSE BOX – ENGINE COMPARTMENT	LF5 / 10-WAY U.T.A. FUSEBOX / WHITE LF6 / 10-WAY U.T.A. FUSEBOX / BLACK LF7 / 10-WAY U.T.A. FUSEBOX / GREEN LF8 / 10-WAY U.T.A. FUSEBOX / BLUE LF70/ EYELET	ENGINE COMPARTMENT / LEFT FRONT
FUSE BOX – TRUNK	BT10 / 10-WAY U.T.A. FUSEBOX / NATURAL BT11 / 10-WAY U.T.A. FUSEBOX / BLACK BT12 / 10-WAY U.T.A. FUSEBOX / GREEN BT13 / 10-WAY U.T.A. FUSEBOX / BLUE BT64 / EYELET	TRUNK / ELECTRICAL CARRIER
HEATED BACKLIGHT HEATER PUMP HEATER VALVE MIRROR – DRIVER MIRROR – PASSENGER RADIATOR FAN CONTROL RELAY MODULE RADIATOR FAN – LH RADIATOR FAN – RH REFRIGERANT 4-WAY PRESSURE SWITCH WINDSHIELD HEATER – LH WINDSHIELD HEATER – RH	RH17 / LUCAR RIGHT ANGLE EM41 (FLYLEAD) / 2-WAY ECONOSEAL III LC / BLACK EM42 (FLYLEAD) / 2-WAY ECONOSEAL III LC / WHITE DD8 / 12-WAY MULTILOCK 040 / BLUE DP8 / 12-WAY MULTILOCK 040 / BLUE LF9 / 8-WAY TRW / BLACK LF13 / 2-WAY REINSHAGEN METRI 630 / BLACK LF12 / 2-WAY REINSHAGEN METRI 630 / BLACK LF57 (FLYLEAD) / 8-WAY ECONOSEAL III LC / BLACK EM49 / 2-WAY AMP SERIES 187C / SLATE EM48 / 2-WAY AMP SERIES 187C / SLATE	BACKLIGHT / RIGHT HAND SIDE ENGINE COMPARTMENT / BULKHEAD, LEFT HAND SIDE ENGINE COMPARTMENT / BULKHEAD, LEFT HAND SIDE DRIVER DOOR PASSENGER DOOR ADJACENT TO LEFT HAND HORN ENGINE COMPARTMENT / FRONT ENGINE COMPARTMENT / FRONT ENGINE COMPARTMENT / REARWARD OF RADIATOR ENGINE COMPARTMENT / ENGINE COMPARTMENT /

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
AIR CONDITIONING COMPRESSOR CLUTCH RELAY	BROWN	BUS	LH BRAKE BOOSTER ENCLOSURE RELAYS
BLOWER MOTOR RELAY – LH	BLUE	AC20 / BLUE	DRIVESHAFT TUNNEL RELAYS
BLOWER MOTOR RELAY – RH	BLUE	AC20 / BLUE	DRIVESHAFT TUNNEL RELAYS
DOOR MIRROR HEATER RELAY	BLUE	FC28 / BLUE	LH FASCIA RELAYS
HEATED BACKLIGHT RELAY (#2)	BROWN	BUS	TRUNK RELAYS
HEATER PUMP RELAY (#1)	BROWN	BUS	ENGINE COMPARTMENT FUSE BOX RELAYS
WINDSHIELD HEATER RELAY – LH	BROWN	EM44 / BROWN	RH BRAKE BOOSTER ENCLOSURE RELAYS
WINDSHIELD HEATER RELAY – RH	BROWN	EM45 / BROWN	RH BRAKE BOOSTER ENCLOSURE RELAYS

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC12	20-WAY MULTILOCK 070 / WHITE	FASCIA TOP CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC13	20-WAY MULTILOCK 070 / YELLOW	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC15	20-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
BT2	18-WAY MULTILOCK 070 / YELLOW	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
BT58	4-WAY ECONOSEAL III HC / BLACK	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
DD1	23-WAY AMP – FORD / BLACK	DRIVER SIDE ‘A’ POST MOUNTING BRACKET/ ‘A’ POST TRIM
DP1	23-WAY AMP – FORD / BLACK	PASSENGER SIDE ‘A’ POST / ‘A’ POST TRIM
EM1	20-WAY MULTILOCK 070 / WHITE	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
EM2	18-WAY MULTILOCK 070 / YELLOW	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
LF3	13-WAY ECONOSEAL III LC / WHITE	ENGINE COMPARTMENT / LEFT HAND ENCLOSURE
LF40	13-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / LEFT HAND ENCLOSURE
LF60	20-WAY MULTILOCK 070 / WHITE	LEFT HAND ‘A’ POST CONNECTOR MOUNTING BRACKET / ‘A’ POST TRIM
PI1	57-WAY SUMITOMO / BLACK	ENGINE COMPARTMENT / BRACKET ON TOP OF TRANSMISSION
RH2	20-WAY MULTILOCK 070 / WHITE	REAR OF CENTER CONSOLE ASSEMBLY

GROUND

Ground	Location / Type
EM1AR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, RIGHT HAND ENCLOSURE
EM1BL	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, RIGHT HAND ENCLOSURE
EM1BS	EYELET (SINGLE) / ENGINE COMPARTMENT, RIGHT HAND ENCLOSURE
EM2AR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, LEFT HAND ENCLOSURE
EM2BL	EYELET (PAIR) – LEFT HAND LEG / ENGINE COMPARTMENT, LEFT HAND ENCLOSURE
EM2BS	EYELET (SINGLE) / ENGINE COMPARTMENT, LEFT HAND ENCLOSURE
FC2AL	EYELET (PAIR) – LEFT HAND LEG / RIGHT HAND ‘A’ POST
FC4AL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST
LF2AL	EYELET (PAIR) – LEFT HAND LEG / ENGINE COMPARTMENT, FORWARD OF LEFT HAND HOOD CATCH
LF2AR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, FORWARD OF LEFT HAND HOOD CATCH
LF2BL	EYELET (PAIR) – LEFT HAND LEG / ENGINE COMPARTMENT, FORWARD OF LEFT HAND HOOD CATCH
RH2S	EYELET (SINGLE) / LEFT HAND REAR QUARTER

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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CONTROL MODULE PIN OUT INFORMATION

MAJOR INSTRUMENT PACK

	Pin	Description	Active	Inactive
I	FC25-1	GROUND	GROUND	GROUND
I	FC25-2	IGNITION SWITCHED POWER SUPPLY	B+	GROUND
O	FC25-3	MINOR INSTRUMENT PACK BATTERY POWER SUPPLY	B+	B+
I	FC25-6	ADAPTIVE DAMPENING WARNING	GROUND	B+
I	FC25-10	TRIP CYCLE	GROUND (MOMENTARY)	
I	FC25-13	‘A/B’ TRIP SELECT	GROUND (MOMENTARY)	
I	FC25-14	‘ML/KM’ SELECT	GROUND (MOMENTARY)	
S	FC25-19	SCP NETWORK	2 – 1600 Hz	
S	FC25-20	SCP NETWORK	2 – 1600 Hz	
C	FC25-23	CAN NETWORK	15 – 1500 Hz	
C	FC25-24	CAN NETWORK	15 – 1500 Hz	
I	FC25-25	BATTERY POWER SUPPLY	B+	B+
I	FC25-26	GROUND	GROUND	GROUND
I	FC25-27	ILLUMINATION SUPPLY	B+	GROUND
O	FC25-28	MINOR INSTRUMENT PACK ILLUMINATION SUPPLY	B+	GROUND
O	FC25-33	GROUND REFERENCE	GROUND	GROUND
I	FC25-35	‘CLEAR’ SELECT	GROUND (MOMENTARY)	
I	FC25-36	‘000’ SELECT	GROUND (MOMENTARY)	
C	FC25-47	CAN NETWORK	15 – 1500 Hz	
C	FC25-48	CAN NETWORK	15 – 1500 Hz	
O	FC26-1	BATTERY CHARGE WARNING	< 3 V	B+
O	FC26-2	OIL PRESSURE WARNING	< 3 V = < 3 PSI	B+
O	FC26-3	ENGINE SPEED	6 V @ 1000 RPM = 46 Hz; 2000 RPM = 90 Hz	
O	FC26-4	ENGINE COOLANT TEMPERATURE	6 V = 90° C	
O	FC26-5	VEHICLE SPEED – A/CCM	22 Hz @ 10 MPH (16 KM/H); 44 Hz @ 20 MPH (32 KM/H) @ B+	
O	FC26-6	VEHICLE SPEED – PAS	22 Hz @ 10 MPH (16 KM/H); 44 Hz @ 20 MPH (32 KM/H) @ B+	
O	FC26-7	VEHICLE SPEED – ADAPTIVE DAMPING CONTROL MODULE	22 Hz @ 10 MPH (16 KM/H); 44 Hz @ 20 MPH (32 KM/H) @ B+	
O	FC26-8	BATTERY VOLTAGE GAUGE POSITION FEEDBACK	22 Hz @ 10 MPH (16 KM/H); 44 Hz @ 20 MPH (32 KM/H) @ B+	
O	FC26-9	BATTERY VOLTAGE GAUGE POSITION FEEDBACK	5 V (MIDPOINT)	
O	FC26-10	OIL PRESSURE GAUGE POSITION FEEDBACK	5 V (MIDPOINT)	
O	FC26-11	BATTERY VOLTAGE GAUGE MOVEMENT	5 V = 0 PSI; 3.3 V = NORMAL (MIDPOINT)	
O	FC26-12	BATTERY VOLTAGE GAUGE MOVEMENT	3.7 – 5 V (PULSE)	
I	FC26-13	FUEL LEVEL GAUGE FEEDBACK	3.7 – 5 V (PULSE)	
O	FC26-14	FUEL LEVEL GAUGE REFERENCE GROUND	B+ = EMPTY	0 V = FULL
O	FC26-15	OIL PRESSURE GAUGE POSITION FEEDBACK	GROUND	GROUND
I	FC26-16	AIR BAG MIL	5 V = 0 PSI; 3.3 V = NORMAL (MIDPOINT)	
O	FC26-17	OIL PRESSURE GAUGE MOVEMENT	GROUND (ON)	B+
O	FC26-18	OIL PRESSURE GAUGE MOVEMENT	3.7 – 5 V (PULSE)	
I	FC26-19	LOW OIL PRESSURE WARNING	3.7 – 5 V (PULSE)	
O	FC26-20	VEHICLE SPEED	> 3 V = > 3 PSI	B+
I	FC26-21	DIMMER OVERRIDE	22 Hz @ 10 MPH (16 KM/H); 44 Hz @ 20 MPH (32 KM/H) @ B+	
I	FC26-22	CHARGE WARNING	GROUND	B+
I	FC26-23	LOW COOLANT WARNING	B+	GROUND
I	FC26-24	EXHAUST OVER TEMPERATURE WARNING	GROUND	B+

MINOR INSTRUMENT PACK

	Pin	Description	Active	Inactive
I	FC79-8	MINOR INSTRUMENT PACK ILLUMINATION SUPPLY	B+	B+
I	FC79-9	OIL PRESSURE GAUGE MOVEMENT	3.7 – 5 V (PULSE)	
I	FC79-10	OIL PRESSURE GAUGE MOVEMENT	3.7 – 5 V (PULSE)	
I	FC79-11	CHARGE WARNING	< 3 V	B+
I	FC79-12	BATTERY VOLTAGE GAUGE POSITION FEEDBACK	5 V (MIDPOINT)	
I	FC79-13	BATTERY VOLTAGE GAUGE POSITION FEEDBACK	5 V (MIDPOINT)	
I	FC79-14	BATTERY VOLTAGE GAUGE MOVEMENT	3.7 – 5 V (PULSE)	
I	FC79-15	BATTERY VOLTAGE GAUGE MOVEMENT	3.7 – 5 V (PULSE)	
I	FC79-16	GROUND	GROUND	GROUND
I	FC79-17	BATTERY POWER SUPPLY	B+	B+
I	FC79-18	LOW OIL PRESSURE WARNING	GROUND (< 3 PSI)	B+
I	FC79-19	OIL PRESSURE GAUGE POSITION FEEDBACK	5 V = 0 PSI; 3.3 V = NORMAL (MIDPOINT)	
I	FC79-20	OIL PRESSURE GAUGE POSITION FEEDBACK	5 V = 0 PSI; 3.3 V = NORMAL (MIDPOINT)	

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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. 08.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
COOLANT LEVEL SWITCH	EM55 / 2-WAY AMP JUNIOR POWER TIMER / BROWN	ENGINE COMPARTMENT / COOLANT RESERVOIR
FUEL LEVEL SENSOR	BT7 / LUCAR RIGHT ANGLE BT8 / LUCAR RIGHT ANGLE	TRUNK / FUEL TANK
MAJOR INSTRUMENT PACK	FC25 / 48-WAY AMP PCB SIGNAL / BLACK FC26 / 24-WAY AMP PCB SIGNAL / BLACK	FASCIA
MINOR INSTRUMENT PACK	FC79 / 20-WAY MULTILOCK 040 / BLACK	FASCIA
OIL PRESSURE SWITCH	PI40 / 1-WAY ECONOSEAL ECJ2 / BLACK	ENGINE BLOCK / RIGHT HAND SIDE
TRIP COMPUTER SWITCH PACK	FC27 / 10-WAY AMP ML KEY A / BLACK	FASCIA / DRIVER SIDE
TRIP CYCLE SWITCH (COLUMN SWITCHGEAR)	SC2 (FLYLEAD) / 10-WAY MULTILOCK 070 / YELLOW	STEERING COLUMN

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BT2	18-WAY MULTILOCK 070 / YELLOW	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
EM1	20-WAY MULTILOCK 070 / WHITE	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
EM2	18-WAY MULTILOCK 070 / YELLOW	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
PI1	57-WAY SUMITOMO / BLACK	ENGINE COMPARTMENT / BRACKET ON TOP OF TRANSMISSION
RH1	20-WAY MULTILOCK 070 / SLATE	BEHIND GLOVE BOX

GROUND

Ground	Location / Type
EM1BR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, RIGHT HAND ENCLOSURE
EM2BR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, LEFT HAND ENCLOSURE
FC2BR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC3BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST
FC4BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST

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, HARNESES, GROUNDS, VEHICLE CONTROL MODULES AND CONTROL MODULE PINS.

CONTROL MODULE PIN OUT INFORMATION

BODY PROCESSOR MODULE

▽	Pin	Description	Active	Inactive
I	FC14-4	BATTERY POWER SUPPLY	B+	B+
I	FC14-15	IGNITION SWITCHED GROUND SUPPLY	GROUND	B+
I	FC14-32	IGNITION SWITCHED GROUND SUPPLY	GROUND	GROUND
I	FC14-41	IGNITION GROUND SUPPLY	GROUND	GROUND
I	FC14-65	LOGIC GROUND SUPPLY	GROUND	GROUND
I	FC14-80	BATTERY POWER SUPPLY (LOGIC)	B+	B+
O	FC14-82	AUDIBLE WARNING SPEAKER OUTPUT	AUDIO OUTPUT	
O	FC14-83	AUDIBLE WARNING SPEAKER OUTPUT	AUDIO OUTPUT	
S	FC14-84	SCP NETWORK	2 – 1600 Hz	
S	FC14-85	SCP NETWORK	2 – 1600 Hz	
I	FC14-103	POWER GROUND SUPPLY	GROUND	GROUND

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 08.2

COMPONENTS

Component	Connector / Type / Color	Location / Access
AUDIBLE WARNING SPEAKER (COLUMN SWITCHGEAR) BODY PROCESSOR MODULE	SC1 (FLYLEAD) / 12-WAY MULTILOCK 070 / WHITE FC14 / 104-WAY AMP EEEEC / SLATE	STEERING COLUMN / RIGHT HAND SIDE PASSENGER SIDE FASCIA / AIRBAG BRACKET

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
SC1	12-WAY MULTILOCK 070 / WHITE	RIGHT HAND SIDE OF STEERING COLUMN

GROUND

Ground	Location / Type
FC3AS	EYELET (SINGLE) / LEFT HAND 'A' POST

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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.

CONTROL MODULE PIN OUT INFORMATION

BODY PROCESSOR MODULE

▽	Pin	Description	Active	Inactive
O	FC14-1	RH FRONT SIDE LAMP BULB SUPPLY	B+	GROUND
O	FC14-2	LH FRONT DI BULB SUPPLY	B+ (PULSED)	GROUND
O	FC14-3	RH FRONT DI BULB SUPPLY	B+ (PULSED)	GROUND
I	FC14-14	HEADLAMP MAIN BEAM REQUEST	GROUND	B+
I	FC14-15	IGNITION SWITCHED GROUND SUPPLY	GROUND	
I	FC14-16	SIDE LAMP REQUEST	GROUND	B+
O	FC14-20	FRONT FOG LAMP RELAY ACTIVATE / STATUS LED	GROUND (LIGHTS ON / LED ON)	B+
O	FC14-27	LH SIDE DI REPEATER SUPPLY (ROW ONLY)	B+	GROUND
O	FC14-28	RH SIDE DI REPEATER SUPPLY (ROW ONLY)	B+	GROUND
I	FC14-30	HEADLAMP FLASH REQUEST	GROUND (MOMENTARY)	B+
I	FC14-38	FRONT FOG LAMP SWITCH	GROUND (MOMENTARY)	B+
I	FC14-41	IGNITION GROUND SUPPLY	GROUND	
I	FC14-42	DIPPED BEAM REQUEST	GROUND	B+
O	FC14-45	MAIN BEAM RELAY ACTIVATE	GROUND	B+
O	FC14-53	LH FRONT SIDE LAMP SUPPLY	B+ (LIGHT ON)	GROUND
O	FC14-54	LH SIDE MARKER SUPPLY (NAS ONLY)	B+ (LIGHT ON)	GROUND
I	FC14-59	HAZARD LAMP REQUEST	GROUND (MOMENTARY)	B+
I	FC14-61	RH DI REQUEST	GROUND	B+
I	FC14-65	LOGIC GROUND SUPPLY	GROUND	GROUND
O	FC14-68	DIP BEAM RELAY ACTIVATE	GROUND (LIGHTS ON)	B+
I	FC14-79	BATTERY POWER SUPPLY	B+	B+
I	FC14-80	BATTERY POWER SUPPLY (LOGIC)	B+	B+
O	FC14-81	RH SIDE DI REPEATER SUPPLY (ROW ONLY)	B+ (LIGHTS ON)	GROUND
S	FC14-84	SCP NETWORK	2 ~ 1600 Hz	
S	FC14-85	SCP NETWORK	2 ~ 1600 Hz	
I	FC14-88	LH DI REQUEST	GROUND	B+
O	FC14-96	HAZARD STATUS INDICATOR	B+ (PULSED)	GROUND
I	FC14-103	POWER GROUND SUPPLY	GROUND	GROUND

MAJOR INSTRUMENT PACK

▽	Pin	Description	Active	Inactive
S	FC25-19	SCP NETWORK	2 ~ 1600 Hz	
S	FC25-20	SCP NETWORK	2 ~ 1600 Hz	

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 09.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
BODY PROCESSOR MODULE	FC14 / 104-WAY AMP EEEEC / SLATE	PASSENGER SIDE FASCIA / AIRBAG BRACKET
CENTER CONSOLE SWITCH PACK	FC55 / 20-WAY FORD IDC / BLACK	CENTER CONSOLE
FRONT FOG LAMP – LH	LF32 / 2-WAY REINSHAGEN METRI 630 / BLACK	FRONT BUMPER / WHEEL ARCH LINER PANEL
FRONT FOG LAMP – RH	LF22 / 2-WAY REINSHAGEN METRI 630 / BLACK	FRONT BUMPER / WHEEL ARCH LINER PANEL
FRONT LAMP UNIT – LH	LF31 / 6-WAY ECONOSEAL III LC / BLACK	LEFT HAND HEADLAMP ASSEMBLY
FRONT LAMP UNIT – RH	LF21 / 6-WAY ECONOSEAL III LC / BLACK	RIGHT HAND HEADLAMP ASSEMBLY
FUSE BOX – ENGINE COMPARTMENT	LF5 / 10-WAY U.T.A. FUSEBOX / WHITE LF6 / 10-WAY U.T.A. FUSEBOX / BLACK LF7 / 10-WAY U.T.A. FUSEBOX / GREEN LF8 / 10-WAY U.T.A. FUSEBOX / BLUE LF70/ EYELET	ENGINE COMPARTMENT / 1 FT FRONT
LIGHTING STALK (COLUMN SWITCHGEAR)	SC2 (FLYLEAD) / 10-WAY MULTILOCK 070 / YELLOW	STEERING COLUMN
MAJOR INSTRUMENT PACK	FC25 / 48-WAY AMP PCB SIGNAL / BLACK FC26 / 24-WAY AMP PCB SIGNAL / BLACK	FASCIA
SIDE DI REPEATER – LH (ROW)	LF4 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	BEHIND WHEEL ARCH LINER
SIDE DI REPEATER – RH (ROW)	EL5 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	BEHIND WHEEL ARCH LINER
FRONT SIDE MARKER – LH (NAS ONLY)	LF11 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	BEHIND WHEEL ARCH LINER
FRONT SIDE MARKER – RH (NAS ONLY)	LF10 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	BEHIND WHEEL ARCH LINER

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
DIP BEAM RELAY (#5)	BROWN	BUS	ENGINE COMPARTMENT FUSE BOX
FRONT FOG RELAY (#2)	BROWN	BUS	ENGINE COMPARTMENT FUSE BOX
MAIN BEAM RELAY (#3)	BROWN	BUS	ENGINE COMPARTMENT FUSE BOX

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
EL1	6-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / RIGHT HAND ENCLOSURE
LF1	20-WAY MULTILOCK 070 / SLATE	LEFT HAND ‘A’ POST CONNECTOR MOUNTING BRACKET / ‘A’ POST TRIM
LF40	13-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / LEFT HAND ENCLOSURE

GROUNDS

Ground	Location / Type
EM1AR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, RIGHT HAND ENCLOSURE
EM2AR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, LEFT HAND ENCLOSURE
FC2BR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC3AS	EYELET (SINGLE) / LEFT HAND ‘A’ POST
FC3BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC4BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
LF1AL	EYELET (PAIR) LEFT HAND LEG / RIGHT HAND HEADLAMP
LF2BR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, FORWARD OF LEFT HAND HOOD CATCH

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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

CONTROL MODULE PIN OUT INFORMATION

BODY PROCESSOR MODULE

▽	Pin	Description	Active	Inactive
I	FC14-12	REAR FOG LAMP REQUEST	GROUND (MOMENTARY)	B+
I	FC14-15	IGNITION SWITCHED GROUND SUPPLY	GROUND	
I	FC14-16	SIDE LAMP REQUEST	GROUND	B+
I	FC14-41	IGNITION GROUND SUPPLY	GROUND	
I	FC14-42	DIPPED BEAM REQUEST	GROUND	B+
O	FC14-44	REAR FOG LAMP STATUS LED	GROUND (LED ON)	B+
O	FC14-50	LH REAR DI LAMP SUPPLY	B+ (LIGHT ON)	GROUND
I	FC14-65	LOGIC GROUND SUPPLY	GROUND	GROUND
O	FC14-76	RH REAR DI LAMP SUPPLY	B+ (LIGHTS ON)	GROUND
I	FC14-79	BATTERY POWER SUPPLY	B+	B+
I	FC14-80	BATTERY POWER SUPPLY (LOGIC)	B+	B+
S	FC14-84	SCP NETWORK	2 – 1600 Hz	
S	FC14-85	SCP NETWORK	2 – 1600 Hz	
O	FC14-95	TAIL LAMP RELAY ACTIVATE	GROUND (LIGHTS ON)	B+
I	FC14-103	POWER GROUND SUPPLY	GROUND	GROUND
I	FC14-104	LIGHTING / MOTORS BATTERY POWER SUPPLY	B+	B+

LAMP CONTROL MODULE

▽	Pin	Description	Active	Inactive
I	BT18-14	RH STOP LAMP SUPPLY	B+	GROUND
I	BT18-15	LH STOP LAMP SUPPLY	B+	GROUND
I	BT18-16	LH TAIL & SIDE MARKER LAMP SUPPLY	B+	GROUND
I	BT18-17	RH TAIL & SIDE MARKER LAMP SUPPLY	B+	GROUND
O	BT18-18	NUMBER PLATE LAMP SUPPLY	B+	GROUND
O	BT18-19	LH STOP LAMP SUPPLY	B+	GROUND
O	BT18-20	RH STOP LAMP SUPPLY	B+	GROUND
O	BT18-21	LH TAIL LAMP SUPPLY	B+	GROUND
O	BT18-22	RH TAIL LAMP SUPPLY	B+	GROUND
O	BT18-23	SIDE MARKER LAMP SUPPLY	B+	GROUND
I	BT18-24	IGNITION SWITCHED POWER SUPPLY	B+	GROUND
O	BT18-25	SECURITY LIGHTING ON FEEDBACK	B+	GROUND
I	BT18-26	GROUND	GROUND	GROUND

MAJOR INSTRUMENT PACK

▽	Pin	Description	Active	Inactive
S	FC25-19	SCP NETWORK	2 – 1600 Hz	
S	FC25-20	SCP NETWORK	2 – 1600 Hz	
C	FC25-24	CAN NETWORK	15 – 1500 Hz	
C	FC25-47	CAN NETWORK	15 – 1500 Hz	

SECURITY AND LOCKING CONTROL MODULE

▽	Pin	Description	Active	Inactive
O	BT40-5	REVERSE LAMP SUPPLY	B+	GROUND
I	BT40-6	BATTERY POWER SUPPLY	B+	B+
O	BT40-7	REAR FOG LAMP RELAY ACTIVATE	B+	GROUND
S	BT40-8	SCP NETWORK	2 – 1600 Hz	
I	BT40-13	GROUND	GROUND	GROUND
I	BT40-14	GROUND	GROUND	GROUND
S	BT40-16	SCP NETWORK	2 – 1600 Hz	
I	BT41-1	SECURITY LIGHTING ON FEEDBACK	B+	GROUND

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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. 09.2

COMPONENTS

Component	Connector / Type / Color	Location / Access
BODY PROCESSOR MODULE	FC14 / 104-WAY AMP EEEEC / SLATE	PASSENGER SIDE FASCIA / AIRBAG BRACKET
BRAKE SWITCH – LHD	AC26 (FLYLEAD) / 4-WAY MULTILOCK 070 / WHITE	TOP OF BRAKE PEDAL
BRAKE SWITCH – RHD	AC24 (FLYLEAD) / 4-WAY MULTILOCK 070 / WHITE	TOP OF BRAKE PEDAL
CENTER CONSOLE SWITCH PACK	FC55 / 20-WAY FORD IDC / BLACK	CENTER CONSOLE
FUSE BOX – TRUNK	BT10 / 10-WAY U.T.A. FUSEBOX / NATURAL BT11 / 10-WAY U.T.A. FUSEBOX / BLACK BT12 / 10-WAY U.T.A. FUSEBOX / GREEN BT13 / 10-WAY U.T.A. FUSEBOX / BLUE BT64 / EYELET	TRUNK / ELECTRICAL CARRIER
HIGH MOUNT STOP LAMP (CONV.)	BL8 / 2-WAY MULTILOCK 070 / WHITE	TRUNK / UNDERSIDE OF LID
HIGH MOUNT STOP LAMP (COUPE)	RH8 / 2-WAY MULTILOCK 070 / WHITE	TRUNK / REARWARD OF SUB WOOFER SPEAKER
LAMP CONTROL MODULE	BT18 / 26-WAY AMP MQS / YELLOW	TRUNK / ELECTRICAL CARRIER
LIGHTING STALK (COLUMN SWITCHGEAR)	SC2 (FLYLEAD) / 10-WAY MULTILOCK 070 / YELLOW	STEERING COLUMN
MAJOR INSTRUMENT PACK	FC25 / 48-WAY AMP PCB SIGNAL / BLACK FC26 / 24-WAY AMP PCB SIGNAL / BLACK	FASCIA
NUMBER PLATE LAMP – LH	BL4 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	TRUNK LID / LINER
NUMBER PLATE LAMP – RH	BL5 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	TRUNK LID / LINER
SECURITY AND LOCKING CONTROL MODULE	BT40 / 16-WAY FORD 2.8 TIMER / BLACK BT41 / 26-WAY FORD IDC / BLACK RH20 / COAXIAL CONNECTOR	TRUNK / ELECTRICAL CARRIER
REAR SIDE MARKER – LH (NAS ONLY)	BT27 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	TRUNK / LEFT HAND SIDE
REAR SIDE MARKER – RH (NAS ONLY)	BT26 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	TRUNK / RIGHT HAND SIDE
TAIL LAMP UNIT – LH	BT31 / 7-WAY AMP JUNIOR TIMER / BLACK	TRUNK / LEFT HAND SIDE
TAIL LAMP UNIT – RH	BT30 / 7-WAY AMP JUNIOR TIMER / BLACK	TRUNK / RIGHT HAND SIDE

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
REAR FOG RELAY (#1)	BROWN	BUS	TRUNK FUSE BOX
STOP LAMP RELAY (#5)	BROWN	BUS	TRUNK FUSE BOX
TAIL LAMP RELAY (#3)	BROWN	BUS	TRUNK FUSE BOX

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC13	20-WAY MULTILOCK 070 / YELLOW	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
BB1	3-WAY MULTILOCK 070 / YELLOW	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
BL1	4-WAY MULTILOCK 070 / WHITE	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
BT1	20-WAY MULTILOCK 070 / WHITE	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
BT2	18-WAY MULTILOCK 070 / YELLOW	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
RH2	20-WAY MULTILOCK 070 / WHITE	REAR OF CENTER CONSOLE ASSEMBLY
RH12	18-WAY MULTILOCK 070 / YELLOW	REAR OF CENTER CONSOLE ASSEMBLY

GROUND

Ground	Location / Type
BT1AR	EYELET (PAIR) – RIGHT HAND LEG / ADJACENT TO BATTERY
BT2AR	EYELET (PAIR) – RIGHT HAND LEG / TRUNK, RIGHT REAR
BT3S	EYELET (SINGLE) / TRUNK, LEFT REAR
FC1BL	EYELET (PAIR) – LEFT HAND LEG / RIGHT HAND ‘A’ POST
FC1BR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC3AS	EYELET (SINGLE) / LEFT HAND ‘A’ POST
FC3BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
RH1S	EYELET (SINGLE) / RIGHT HAND REAR QUARTER

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. 09.3

COMPONENTS

Component	Connector / Type / Color	Location / Access
HEADLAMP LEVELING ACTUATOR – LH	LF34 / 3-WAY REINSHAGEN / BLACK	HEADLAMP ASSEMBLY / REAR
HEADLAMP LEVELING ACTUATOR – RH	LF24 / 3-WAY REINSHAGEN / BLACK	HEADLAMP ASSEMBLY / REAR
LEVELING SWITCH (CENTER CONSOLE SWITCH PACK)	FC55 (FLYLEAD) / 20-WAY FORD IDC / BLACK	CENTER CONSOLE SWITCH PACK

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
LF60	20-WAY MULTILOCK 070 / WHITE	LEFT HAND 'A' POST CONNECTOR MOUNTING BRACKET / 'A' POST TRIM

GROUND

Ground	Location / Type
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND 'A' POST
LF1AL	EYELET (PAIR) – LEFT HAND LEG / RIGHT HAND HEADLAMP
LF2BR	EYELET (PAIR) – RIGHT HAND LEG / ENGINE COMPARTMENT, FORWARD OF LEFT HAND HOOD CATCH

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

CONTROL MODULE PIN OUT INFORMATION

DRIVER DOOR CONTROL MODULE

	Pin	Description	Active	Inactive
I	DD10-1	BATTERY POWER SUPPLY	B+	B+
I	DD10-8	LOGIC GROUND	GROUND	GROUND
S	DD10-9	SCP NETWORK	2 – 1600 Hz	
O	DD10-14	DRIVERS DOOR PUDDLE LAMP SUPPLY	B+	GROUND
S	DD10-16	SCP NETWORK	2 – 1600 Hz	
I	DD10-17	POWER GROUND	GROUND	GROUND
I	DD11-4	DRIVERS DOOR LOCK BARREL UNLOCK REQUEST	B+ (MOMENTARY)	GROUND
I	DD11-12	DRIVERS DOOR LOCK BARREL LOCK REQUEST	B+ (MOMENTARY)	GROUND
I	DD11-20	DRIVERS DOOR SWITCH	GROUND (DOOR OPEN)	B+

PASSENGER DOOR CONTROL MODULE

	Pin	Description	Active	Inactive
I	DP10-1	BATTERY POWER SUPPLY	B+	B+
I	DP10-8	LOGIC GROUND	GROUND	GROUND
S	DP10-9	SCP NETWORK	2 – 1600 Hz	
O	DP10-14	PASSENGER DOOR PUDDLE LAMP SUPPLY	B+ (LIGHT ON)	GROUND
S	DP10-16	SCP NETWORK	2 – 1600 Hz	
I	DP10-17	POWER GROUND	GROUND	GROUND
I	DP11-20	PASSENGER DOOR SWITCH	GROUND (DOOR OPEN)	B+

BODY PROCESSOR MODULE

	Pin	Description	Active	Inactive
I	FC14-15	IGNITION SWITCHED GROUND SUPPLY	GROUND	
O	FC14-24	FOOTWELL / INTERIOR LAMP SUPPLY	B+	GROUND
I	FC14-32	IGNITION SWITCHED GROUND SUPPLY	GROUND	GROUND
I	FC14-41	IGNITION GROUND SUPPLY	GROUND	
I	FC14-65	LOGIC GROUND SUPPLY	GROUND	GROUND
I	FC14-67	KEY IN IGNITION	GROUND (KEY IN)	B+
O	FC14-74	INTERIOR LAMP FADE 2 OUTPUT	B+ (FADES TO 0 V)	
I	FC14-80	BATTERY POWER SUPPLY (LOGIC)	B+	B+
S	FC14-84	SCP NETWORK	2 – 1600 Hz	
S	FC14-85	SCP NETWORK	2 – 1600 Hz	
O	FC14-101	TRUNK / GLOVE BOX / VANITY LAMP POWER SUPPLY	B+	GROUND
I	FC14-103	POWER GROUND SUPPLY	GROUND	GROUND
I	FC14-104	LIGHTING / MOTORS BATTERY POWER SUPPLY	B+	B+

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 10.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
BODY PROCESSOR MODULE	FC14 / 104-WAY AMP EEEC / SLATE	PASSENGER SIDE FASCIA / AIRBAG BRACKET
DIODE (BT29) – TRUNK SWITCH	BT29 / DIODE	TRUNK, / ADJACENT TO BATTERY
DOOR CONTROL MODULE – DRIVER	DD10 / 22-WAY FORD 2.8 TIMER / BLUE DD11 / 22-WAY FORD 2.8 TIMER / BLACK	DRIVER DOOR / DOOR CASING
DOOR CONTROL MODULE – PASSENGER	DP10 / 22-WAY FORD 2.8 TIMER / BLUE DP11 / 22-WAY FORD 2.8 TIMER / BLACK	PASSENGER DOOR / DOOR CASING
DOOR LOCK SWITCHES – DRIVER	DD3 / 13-WAY ECONOSEAL III LC / BLACK	DRIVER DOOR / DOOR CASING
DOOR SWITCH – DRIVER	DD3 / 13-WAY ECONOSEAL III LC / BLACK	DRIVER DOOR / DOOR CASING
DOOR SWITCH – PASSFNGR	DP3 / 13-WAY ECONOSEAL III LC / BLACK	PASSENGER DOOR / DOOR CASING
FOOTWELL LAMP – LH	FC31 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	LEFT HAND FOOTWELL
FOOTWELL LAMP – RH	FC32 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	RIGHT HAND FOOTWELL
GLOVE BOX LAMP	FC33 / 1-WAY LUCAR STRAIGHT FC34 / 1-WAY LUCAR STRAIGHT	GLOVE BOX
IGNITION SWITCH (KEY-IN SWITCH)	FC4 (FLYLEAD) / 8-WAY MULTILOCK 070 / WHITE	STEERING COLUMN
PUDDLE LAMP – DRIVER DOOR	DD14 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	DRIVER DOOR
PUDDLE LAMP – PASSENGER DOOR	DP14 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	PASSENGER DOOR
REAR INTERIOR LAMP (COUPE ONLY)	RH2 / 2-WAY AMP JUNIOR POWER TIMER / WHITE	REAR CENTER OF HEAD LINING
ROOF CONSOLE	RF10 / 6-WAY MULTILOCK 070 / SLATE	INTERIOR ROOF
TRUNK LAMP – LH	BT56 / 2-WAY AMP JUNIOR POWER TIMER / WHITE	TRUNK / LEFT HAND SIDE
TRUNK LAMP – RH	BT59 / 2-WAY AMP JUNIOR POWER TIMER / WHITE	TRUNK / RIGHT HAND SIDE
TRUNK SWITCH	BT46 / 2-WAY FORD / BLACK	TRUNK
VANITY LAMP – LH	RF8 / 3-WAY MULTILOCK 070 / YELLOW	SUN VISOR
VANITY LAMP – RH	RF7 / 3-WAY MULTILOCK 070 / YELLOW	SUN VISOR

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BT1	20-WAY MULTILOCK 070 / WHITE	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
DD1	23-WAY AMP – FORD / BLACK	DRIVER SIDE ‘A’ POST MOUNTING BRACKET/ ‘A’ POST TRIM
DP1	23-WAY AMP – FORD / BLACK	PASSENGER SIDE ‘A’ POST / ‘A’ POST TRIM
RF1	18-WAY MULTILOCK 070 / YELLOW	RIGHT HAND ‘A’ POST CONNECTOR MOUNTING BRACKET / ‘A’ POST TRIM
RH2	20-WAY MULTILOCK 070 / WHITE	REAR OF CENTER CONSOLE ASSEMBLY

GROUND

Ground	Location / Type
BT1AR	EYELET (PAIR) – RIGHT HAND LEG / ADJACENT TO BATTERY
FC2AL	EYELET (PAIR) – LEFT HAND LEG / RIGHT HAND ‘A’ POST
FC2AR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC2BL	EYELET (PAIR) – LEFT HAND LEG / RIGHT HAND ‘A’ POST
FC2BR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC3AS	EYELET (SINGLE) / LEFT HAND ‘A’ POST
FC3BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC4AL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST
FC4AR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC4BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST
FC4BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
RH1S	EYELET (SINGLE) / RIGHT HAND REAR QUARTER

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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.

CONTROL MODULE PIN OUT INFORMATION

DIMMER MODULE

▽	Pin	Description	Active	Inactive
O	FC23-1	MAJOR INSTRUMENT PACK ILLUMINATION BULB SUPPLY	B+ (LIGHTS ON)	GROUND
O	FC23-2	MAJOR INSTRUMENT PACK ILLUMINATION BULB SUPPLY	B+ (LIGHTS ON)	GROUND
I	FC23-3	IGNITION SWITCHED GROUND SUPPLY	GROUND	
I	FC23-4	SIDE LAMPS ON REQUEST	GROUND	
I	FC23-5	DIMMER POTENTIOMETER FEEDBACK VOLTAGE	1.3 V = DIM; 4 V = BRIGHT	
O	FC23-6	DIMMER POTENTIOMETER REFERENCE GROUND	GROUND	GROUND
O	FC23-7	GENERAL ILLUMINATION BULB SUPPLY	B+ (LIGHTS ON)	GROUND
O	FC23-8	GENERAL ILLUMINATION BULB SUPPLY	B+ (LIGHTS ON)	GROUND
I	FC23-9	GROUND SUPPLY	GROUND	GROUND
I	FC23-10	BATTERY POWER SUPPLY	B+	B+
I	FC23-11	BATTERY POWER SUPPLY	B+	B+
O	FC23-12	DIMMER POTENTIOMETER REFERENCE VOLTAGE	4 V	0 V

Fig. 10.2

COMPONENTS

Component	Connector / Type / Color	Location / Access
AIR CONDITIONING CONTROL PANEL	FC43 (FLYLEAD) / 12-WAY MULTILOCK 040 / BLUE	CENTER CONSOLE
CENTER CONSOLE SWITCH PACK	FC55 / 20-WAY FORD IDC / BLACK	CENTER CONSOLE
CIGAR LIGHTER	FC42 / CIGAR LIGHTER / BLACK FC59 / LUCAR RIGHT ANGLE	FORWARD OF GEAR SELECTOR
CONVERTIBLE TOP SWITCH	FC62 / 10-WAY AMP ML KEY A / BLACK	FORWARD OF GEAR SELECTOR
CRUISE CONTROL ON / OFF SWITCH	FC63 / 10-WAY AMP ML KEY B / WHITE	REARWARD OF GEAR SELECTOR
DIMMER CONTROL (COLUMN SWITCHGEAR)	SC11 (FLYLEAD) / 6-WAY MULTILOCK 070 / WHITE	STEERING COLUMN COWL
DIMMER MODULE	FC23 / 12-WAY MULTILOCK 040 / BLACK	ADJACENT TO RIGHT HAND FASCIA FUSE BOX
GEAR SELECTOR MODULE	FC86 / HYBRID / BLACK	FRONT OF GEAR SELECTOR ASSEMBLY
LIGHTING STALK (COLUMN SWITCHGEAR)	SC2 (FLYLEAD) / 10-WAY MULTILOCK 070 / YELLOW	STEERING COLUMN
MAJOR INSTRUMENT PACK	FC25 / 48-WAY AMP PCB SIGNAL / BLACK FC26 / 24-WAY AMP PCB SIGNAL / BLACK	FASCIA
MINOR INSTRUMENT PACK	FC79 / 20-WAY MULTILOCK 040 / BLACK	FASCIA
MODE SWITCH (TRANSMISSION)	FC35 / 10-WAY AMP ML KEY A / BLACK	REARWARD OF GEAR SELECTOR
RADIO	IC10 / 20-WAY MULTILOCK 070 / WHITE	CENTER CONSOLE
SWITCH PACK – DRIVER DOOR	DD17 / 20-WAY MULTILOCK 040 / BLACK	DRIVER DOOR
SWITCH PACK – DRIVER DOOR MEMORY	DD5 / 10-WAY AMP ML KEY A / BLACK	DRIVER DOOR
SWITCH PACK – PASSENGER DOOR	DP17 / 8-WAY MULTILOCK 040 / BLACK	PASSENGER DOOR
TRIP COMPUTER SWITCH PACK	FC27 / 10-WAY AMP ML KEY A / BLACK	FASCIA / DRIVER SIDE
TRUNK AND FUEL FILL RELEASE SWITCH	FC41 / 10-WAY AMP ML KEY B / WHITE	FASCIA / DRIVER SIDE
VALET SWITCH	FC67 / 10-WAY AMP ML KEY A / BLACK	DRIVER KNEE BOLSTER
VOICE RECOGNITION ACTIVATION SWITCH (NAS VEHICLES ONLY)	FC77 / 10-WAY AMP ML KEY B / WHITE	CENTER CONSOLE

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC15	20-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
DD1	23-WAY AMP – FORD / BLACK	DRIVER SIDE ‘A’ POST MOUNTING BRACKET/ ‘A’ POST TRIM
DP1	23 WAY AMP – FORD / BLACK	PASSENGER SIDE ‘A’ POST / ‘A’ POST TRIM
IC1	20-WAY MULTILOCK 070 / YELLOW	BELOW CENTER CONSOLE GLOVE BOX
SC3	12-WAY MULTILOCK 070 / SLATE	RIGHT HAND SIDE OF STEERING COLUMN
SC11		

GROUND

Ground	Location / Type
CE2	EYELET (SINGLE) / ABOVE RIGHT HAND SIDE OF TRANSMISSION TUNNEL
FC2AL	EYELET (PAIR) – LEFT HAND LEG / RIGHT HAND ‘A’ POST
FC2BL	EYELET (PAIR) – LEFT HAND LEG / RIGHT HAND ‘A’ POST
FC2BR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC2CS	EYELET (SINGLE) / RIGHT HAND ‘A’ POST
FC3BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC4AL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST
FC4BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST
FC4BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC4CS	EYELET (SINGLE) / LEFT HAND ‘A’ POST

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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.

CONTROL MODULE PIN OUT INFORMATION

POWER ASSISTED STEERING CONTROL MODULE

	Pin	Description	Active	Inactive
O	FC16-2	TRANSDUCER NEGATIVE	2 V @ IDLE DECREASING WITH VEHICLE SPEED	
I	FC16-4	VEHICLE SPEED	B+ @ 10 MPH (16 KM/H) = 20 Hz, 20 MPH (32 KM/H) = 40 Hz	
O	FC16-5	TRANSDUCER POSITIVE	9 V @ IDLE INCREASING WITH VEHICLE SPEED	
I	FC16-6	IGNITION SWITCHED POWER SUPPLY	B+	0 V
I	FC16-8	GROUND	0 V	0 V

Fig. 11.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
POWER ASSISTED STEERING CONTROL MODULE	FC16 / 9-WAY RISTS RELAY / BLACK AND RED	FASCIA / BETWEEN PASSENGER SIDE FUSE BOX AND GLOVE BOX
VARIABLE STEERING CONVERTER - LHD	LL2 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	STEERING RACK / CONTROL VALVE
VARIABLE STEERING CONVERTER - RHD	EM18 / 2-WAY AMP JUNIOR POWER TIMER / BLACK	STEERING RACK / CONTROL VALVE

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
EM2	18-WAY MULTILOCK 070 / YELLOW	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
LL1	2-WAY ECONOSEAL III LC / BLACK	ENGINE COMPARTMENT / ADJACENT TO STARTER MOTOR

GROUND

Ground	Location / Type
FC2BR	EYELET (PAIR) - RIGHT HAND LEG / RIGHT HAND 'A' POST
FC4BR	EYELET (PAIR) - RIGHT HAND LEG / LEFT HAND 'A' POST

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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CONTROL MODULE PIN OUT INFORMATION

BODY PROCESSOR MODULE

▽	Pin	Description	Active	Inactive
I	FC14-11	AUTO TILT REQUEST	GROUND	B+
I	FC14-15	IGNITION SWITCHED GROUND SUPPLY	GROUND	
I	FC14-25	COLUMN MOTOR GROUND SUPPLY	GROUND	GROUND
I	FC14-32	IGNITION SWITCHED GROUND SUPPLY	GROUND	GROUND
O	FC14-40	COLUMN MOTOR POTENTIOMETER REFERENCE VOLTAGE	5 V	
I	FC14-41	IGNITION GROUND SUPPLY	GROUND	
O	FC14-52	COLUMN REACH MOTOR SUPPLY	B+	GROUND
I	FC14-58	NOT-IN-PARK	GROUND (R,N,D,4,3,2)	B+ (PARK)
I	FC14-65	LOGIC GROUND SUPPLY	GROUND	GROUND
I	FC14-66	COLUMN REACH MOTOR POTENTIOMETER FEEDBACK	0.5 V (OUT); 4 V (IN)	
I	FC14-67	KEY IN IGNITION	GROUND (KEY IN)	B+
O	FC14-78	COLUMN REACH MOTOR SUPPLY	B+	GROUND
I	FC14-80	BATTERY POWER SUPPLY (LOGIC)	B+	B+
S	FC14-84	SCP NETWORK	2 – 1600 Hz	
S	FC14-85	SCP NETWORK	2 – 1600 Hz	
I	FC14-87	COLUMN MOVEMENT REQUEST	UP = 10.1 V, DOWN = 12.1 V, RETRACT = 8.5 V, EXTEND = 6.8 V	
O	FC14-90	COLUMN TILT MOTOR POTENTIOMETER REFERENCE GROUND	GROUND	GROUND
O	FC14-91	COLUMN REACH MOTOR POTENTIOMETER REFERENCE GROUND	GROUND	
I	FC14-93	COLUMN TILT MOTOR POTENTIOMETER FEEDBACK	UP = 4 V, DOWN = 0.5 V	
O	FC14-99	COLUMN TILT MOTOR SUPPLY	B+	GROUND
O	FC14-100	COLUMN TILT MOTOR SUPPLY	B+	GROUND
I	FC14-102	COLUMN MOVEMENT MOTORS BATTERY POWER SUPPLY	B+	
I	FC14-103	POWER GROUND SUPPLY	GROUND	GROUND

DRIVER DOOR CONTROL MODULE

▽	Pin	Description	Active	Inactive
I	DD10-1	BATTERY POWER SUPPLY	B+	B+
I	DD10-8	LOGIC GROUND	GROUND	GROUND
S	DD10-9	SCP NETWORK	2 – 1600 Hz	
S	DD10-16	SCP NETWORK	2 – 1600 Hz	
I	DD10-17	POWER GROUND	GROUND	GROUND
O	DD11-2	SEAT MEMORY STATUS LED	GROUND (LED ON)	B+
I	DD11-6	MEMORY SET REQUEST	B+	
I	DD11-20	DRIVERS DOOR SWITCH	GROUND (DOOR OPEN)	B+
I	DD11-21	MEMORY 1 RECALL REQUEST	B+ (MOMENTARY)	GROUND
I	DD11-22	MEMORY 2 RECALL REQUEST	B+ (MOMENTARY)	GROUND

MAJOR INSTRUMENT PACK

▽	Pin	Description	Active	Inactive
S	FC25-19	SCP NETWORK	2 – 1600 Hz	
S	FC25-20	SCP NETWORK	2 – 1600 Hz	

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 11.2

COMPONENTS

Component	Connector / Type / Color	Location / Access
AUTO TILT SWITCH (COLUMN SWITCHGEAR)	SC9 / 8-WAY GROTE AND HARTMAN MDK / BLACK	STEERING COLUMN / LEFT HAND SIDE
BODY PROCESSOR MODULE	FC14 / 104-WAY AMP EEEC / SLATE	PASSENGER SIDE FASCIA / AIRBAG BRACKET
COLUMN JOY STICK (COLUMN SWITCHGEAR)	SC9 / 8-WAY GROTE AND HARTMAN MDK / BLACK	STEERING COLUMN / LEFT HAND SIDE
DOOR CONTROL MODULE – DRIVER	DD10 / 22-WAY FORD 2.8 TIMER / BLUE DD11 / 22-WAY FORD 2.8 TIMER / BLACK DU3 / 13-WAY ECONOSEAL III LC / BLACK	DRIVER DOOR / DOOR CASING
DOOR SWITCH – DRIVER	FC4 (FLYLEAD) / 8-WAY MULTILOCK 070 / WHITE	STEERING COLUMN
IGNITION SWITCH (KEY-IN SWITCH)	FC25 / 48-WAY AMP PCB SIGNAL / BLACK	FASCIA
MAJOR INSTRUMENT PACK	FC26 / 24-WAY AMP PCB SIGNAL / BLACK FC87 (FLYLEAD) / 3-WAY MULTILOCK 070 / WHITE FC80 (FLYLEAD) / 6-WAY MULTILOCK 070 / WHITE FC61 (FLYLEAD) / 8-WAY MULTILOCK 070 / YELLOW	GEAR SELECTOR ASSEMBLY STEERING COLUMN
NOT-IN-PARK MICROSWITCH		
STEERING COLUMN MOTORS	DD5 / 10-WAY AMP ML KEY A / BLACK	DRIVER DOOR
SWITCH PACK – DRIVER DOOR MEMORY		

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC14	14-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
DD1	23-WAY AMP – FORD / BLACK	DRIVER SIDE ‘A’ POST MOUNTING BRACKET/ ‘A’ POST TRIM
SC2	10-WAY MULTILOCK 070 / YELLOW	ADJACENT TO STEERING COLUMN MOTOR
SC3	12-WAY MULTILOCK 070 / SLATE	RIGHT HAND SIDE OF STEERING COLUMN

GROUNDS

Ground	Location / Type
FC2AR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC2BR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC3AS	EYELET (SINGLE) / LEFT HAND ‘A’ POST
FC3BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC4AR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC4BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

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

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CONTROL MODULE PIN OUT INFORMATION

BODY PROCESSOR MODULE

Pin	Description	Active	Inactive
I FC14-15	IGNITION SWITCHED GROUND SUPPLY	GROUND	
I FC14-32	IGNITION SWITCHED GROUND SUPPLY	GROUND	GROUND
I FC14-41	IGNITION GROUND SUPPLY	GROUND	
I FC14-58	NOT-IN-PARK	GROUND (R,N,D,4,3,2)	B+ (PARK)
I FC14-65	LOGIC GROUND SUPPLY	GROUND	GROUND
I FC14-80	BATTERY POWER SUPPLY (LOGIC)	B+	B+
S FC14-84	SCP NETWORK	2 – 1600 Hz	
S FC14-85	SCP NETWORK	2 – 1600 Hz	

DRIVER DOOR CONTROL MODULE

Pin	Description	Active	Inactive
I DD10-1	BATTERY POWER SUPPLY	B+	
O DD10-2	DRIVERS DOOR MIRROR VERTICAL / HORIZONTAL MOTOR COMMON SUPPLY	B+ = LEFT / DOWN; GROUND = RIGHT / UP	
O DD10-3	DRIVERS DOOR MIRROR HORIZONTAL MOVEMENT MOTOR	B+ = RIGHT	GROUND = LEFT
O DD10-4	DRIVERS DOOR MIRROR VERTICAL MOVEMENT MOTOR	B+ = UP	GROUND = DOWN
I DD10-8	LOGIC GROUND	GROUND	GROUND
S DD10-9	SCP NETWORK	2 – 1600 Hz	
S DD10-16	SCP NETWORK	2 – 1600 Hz	
I DD10-17	POWER GROUND	GROUND	GROUND
O DD10-20	DRIVERS DOOR MIRROR POTENTIOMETER COMMON REFERENCE VOLTAGE	B+	B+
I DD10-21	DRIVERS DOOR MIRROR POTENTIOMETER HORIZONTAL POSITION FEEDBACK	1 V = LEFT; 8 V = RIGHT	
I DD10-22	DRIVERS DOOR MIRROR POTENTIOMETER VERTICAL POSITION FEEDBACK	1 V = DOWN; 8 V = UP	
I DD11-1	MIRROR SELECT	B+ = UP / RIGHT	GROUND = DOWN / LEFT
O DD11-2	SEAT MEMORY STATUS LED	GROUND (LED ON)	B+
I DD11-3	RH VERTICAL MOVEMENT REQUEST	B+ = DOWN	GROUND = UP
I DD11-6	MEMORY SET REQUEST	B+	
I DD11-9	RH HORIZONTAL MOVEMENT REQUEST	B+ = LEFT	GROUND = RIGHT
I DD11-10	LH HORIZONTAL MOVEMENT REQUEST	B+ = LEFT	GROUND = RIGHT
I DD11-17	LH VERTICAL MOVEMENT REQUEST	B+ = DOWN	GROUND = UP
I DD11-20	DRIVERS DOOR SWITCH	GROUND (DOOR OPEN)	B+
I DD11-21	MEMORY 1 RECALL REQUEST	B+ (MOMENTARY)	GROUND
I DD11-22	MEMORY 2 RECALL REQUEST	B+ (MOMENTARY)	GROUND

MAJOR INSTRUMENT PACK

Pin	Description	Active	Inactive
S FC25-19	SCP NETWORK	2 – 1600 Hz	
S FC25-20	SCP NETWORK	2 – 1600 Hz	
C FC25-24	CAN NETWORK	15 – 1500 Hz	
C FC25-47	CAN NETWORK	15 – 1500 Hz	

PASSENGER DOOR CONTROL MODULE

Pin	Description	Active	Inactive
I DP10-1	BATTERY POWER SUPPLY	B+	B+
O DP10-2	PASSENGER DOOR MIRROR VERTICAL / HORIZONTAL MOVEMENT MOTORS COMMON	B+ = LEFT / DOWN	GROUND = RIGHT / UP
O DP10-3	PASSENGER DOOR MIRROR HORIZONTAL MOVEMENT MOTOR	B+ = RIGHT	GROUND
O DP10-4	PASSENGER DOOR MIRROR VERTICAL MOVEMENT MOTOR	B+ = UP	GROUND
I DP10-8	LOGIC GROUND	GROUND	GROUND
S DP10-9	SCP NETWORK	2 – 1600 Hz	
S DP10-16	SCP NETWORK	2 – 1600 Hz	
I DP10-17	POWER GROUND	GROUND	GROUND
O DP10-20	PASSENGER DOOR MIRROR POTENTIOMETER COMMON REFERENCE VOLTAGE	B+	B+
I DP10-21	PASSENGER DOOR MIRROR POTENTIOMETER HORIZONTAL POSITION FEEDBACK VOLTAGE	1 V = LEFT; 8 V = RIGHT	
I DP10-22	PASSENGER DOOR MIRROR POTENTIOMETER VERTICAL POSITION FEEDBACK VOLTAGE	1 V = DOWN; 8 V = UP	

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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. 11.3

COMPONENTS

Component	Connector / Type / Color	Location / Access
BODY PROCESSOR MODULE	FC14 / 104-WAY AMP EEEC / SLATE	PASSENGER SIDE FASCIA / AIRBAG BRACKET
DOOR CONTROL MODULE – DRIVER	DD10 / 22-WAY FORD 2.8 TIMER / BLUE DD11 / 22-WAY FORD 2.8 TIMER / BLACK	DRIVER DOOR / DOOR CASING
DOOR CONTROL MODULE – PASSENGER	DP10 / 22-WAY FORD 2.8 TIMER / BLUE DP11 / 22-WAY FORD 2.8 TIMER / BLACK	PASSENGER DOOR / DOOR CASING
DOOR MIRROR MOTORS – DRIVER	DD8 (FLYLEAD) / 12-WAY MULTILOCK 040 / BLUE	DRIVER DOOR
DOOR MIRROR MOTORS – PASSENGER	DP8 (FLYLEAD) / 12-WAY MULTILOCK 040 / BLUE	PASSENGER DOOR
DOOR SWITCH – DRIVER	DD3 / 13-WAY ECONOSEAL III LC / BLACK	DRIVER DOOR / DOOR CASING
MAJOR INSTRUMENT PACK	FC25 / 48-WAY AMP PCB SIGNAL / BLACK FC26 / 24-WAY AMP PCB SIGNAL / BLACK	FASCIA
MIRROR JOYSTICK (DRIVER DOOR SWITCH PACK)	DD17 (FLYLEAD) / 20-WAY MULTILOCK 040 / BLACK	DRIVER DOOR SWITCH PACK
NOT-IN-PARK MICROSWITCH	FC87 (FLYLEAD) / 3-WAY MULTILOCK 070 / WHITE	GEAR SELECTOR ASSEMBLY
SWITCH PACK – DRIVER DOOR MEMORY	DD5 / 10-WAY AMP ML KEY A / BLACK	DRIVER DOOR

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC14	14-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
DD1	23-WAY AMP – FORD / BLACK	DRIVER SIDE ‘A’ POST MOUNTING BRACKET/ ‘A’ POST TRIM
DP1	23-WAY AMP – FORD / BLACK	PASSENGER SIDE ‘A’ POST / ‘A’ POST TRIM

GROUND

Ground	Location / Type
FC2AR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC2AR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC3AS	EYELET (SINGLE) / LEFT HAND ‘A’ POST
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC4AR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC4AR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



CONTROL MODULE PIN OUT INFORMATION

DRIVER DOOR CONTROL MODULE

Pin	Description	Active	Inactive
I DD10-1	BATTERY POWER SUPPLY	B+	B+
I DD10-8	LOGIC GROUND	GROUND	GROUND
S DD10-9	SCP NETWORK	2 – 1600 Hz	
S DD10-16	SCP NETWORK	2 – 1600 Hz	
I DD11-15	DOOR MIRROR POWER FOLD BACK REQUEST	B+	GROUND

DRIVER SEAT CONTROL MODULE

Pin	Description	Active	Inactive
O SD3-4	DOOR MIRROR FOLD BACK ACTIVATE	GROUND	B+
I SD5-2	POWER GROUND	GROUND	GROUND
I SD6-5	BATTERY POWER SUPPLY	B+	B+
S SD5-9	SCP NETWORK	2 – 1600 Hz	
S SD5-10	SCP NETWORK	2 – 1600 Hz	

MAJOR INSTRUMENT PACK

Pin	Description	Active	Inactive
S FC25-19	SCP NETWORK	2 – 1600 Hz	
S FC25-20	SCP NETWORK	2 – 1600 Hz	
C FC25-24	CAN NETWORK	15 – 1500 Hz	
C FC25-47	CAN NETWORK	15 – 1500 Hz	

PASSENGER SEAT CONTROL MODULE

Pin	Description	Active	Inactive
O SP3-4	DOOR MIRROR FOLD OUT ACTIVATE	GROUND	B+
I SP5-2	POWER GROUND	GROUND	GROUND
I SP5-5	BATTERY POWER SUPPLY	B+	B+
S SP5-9	SCP NETWORK	2 – 1600 Hz	
S SP5-10	SCP NETWORK	2 – 1600 Hz	

SECURITY AND LOCKING CONTROL MODULE

Pin	Description	Active	Inactive
O BT40-5	REVERSE LAMP SUPPLY	B+	GROUND
I BT40-6	BATTERY POWER SUPPLY	B+	B+
S BT40-8	SCP NETWORK	2 – 1600 Hz	
I BT40-13	GROUND	GROUND	GROUND
I BT40-14	GROUND	GROUND	GROUND
S BT40-16	SCP NETWORK	2 – 1600 Hz	

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 11.4

COMPONENTS

Component	Connector / Type / Color	Location / Access
CONVERTIBLE TOP DOWN SWITCH DOOR CONTROL MODULE – DRIVER	RH29 (FLYLEAD) / 3-WAY MULTILOCK 070 / WHITE DD10 / 22-WAY FORD 2.8 TIMER / BLUE DD11 / 22-WAY FORD 2.8 TIMER / BLACK	RIGHT HAND OPERATING CYLINDER DRIVER DOOR / DOOR CASING
DOOR MIRROR (ELECTROCHROMIC) – DRIVER DOOR MIRROR (ELECTROCHROMIC) – PASSENGER INTERIOR REAR VIEW MIRROR (ELECTROCHROMIC) LIGHTING STALK (COLUMN SWITCHGEAR) MAJOR INSTRUMENT PACK	DD8 (FLYLEAD) / 12-WAY MULTILOCK 040 / BLUE DP8 (FLYLEAD) / 12-WAY MULTILOCK 040 / BLUE RF2 / 6-WAY MULTILOCK 070 / YELLOW SC2 (FLYLEAD) / 10-WAY MULTILOCK 070 / YELLOW FC25 / 48-WAY AMP PCB SIGNAL / BLACK FC26 / 24-WAY AMP PCB SIGNAL / BLACK	DRIVER DOOR PASSENGER DOOR WINDSHIELD / FORWARD OF ROOF CONSOLE STEERING COLUMN FASCIA
MIRROR JOYSTICK (DRIVER DOOR SWITCH PACK) SEAT CONTROL MODULE – DRIVER	DD17 (FLYLEAD) / 20-WAY MULTILOCK 040 / BLACK SD3 / 16-WAY FORD 2.8 TIMER / BLACK SD4 / 26-WAY FORD IDC / BLACK SD6 / 10 WAY FORD 2.8 TIMER / BLACK	DRIVER DOOR SWITCH PACK BELOW SEAT CUSHION
SEAT CONTROL MODULE – PASSENGER	SP3 / 16-WAY FORD 2.8 TIMER / BLACK SP5 / 10-WAY FORD 2.8 TIMER / BLACK	BELOW SEAT CUSHION
SECURITY AND LOCKING CONTROL MODULE	BT40 / 16-WAY FORD 2.8 TIMER / BLACK BT41 / 26-WAY FORD IDC / BLACK RH20 / COAXIAL CONNECTOR	TRUNK / ELECTRICAL CARRIER

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC13	20-WAY MULTILOCK 070 / YELLOW	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC14	14-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC16	6-WAY MULTILOCK 070 / YELLOW	LEFT HAND ‘A’ POST CONNECTOR MOUNTING BRACKET / ‘A’ POST TRIM
BT1	20-WAY MULTILOCK 070 / WHITE	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
DD1	23-WAY AMP – FORD / BLACK	DRIVER SIDE ‘A’ POST MOUNTING BRACKET/ ‘A’ POST TRIM
DP1	23-WAY AMP – FORD / BLACK	PASSENGER SIDE ‘A’ POST / ‘A’ POST TRIM
RF1	18-WAY MULTILOCK 070 / YELLOW	RIGHT HAND ‘A’ POST CONNECTOR MOUNTING BRACKET / ‘A’ POST TRIM
RH12	18-WAY MULTILOCK 070 / YELLOW	REAR OF CENTER CONSOLE ASSEMBLY
RH2	20-WAY MULTILOCK 070 / WHITE	REAR OF CENTER CONSOLE ASSEMBLY
SD1	8-WAY MULTILOCK 070 / YELLOW	BELOW DRIVER SEAT
SP1	8-WAY MULTILOCK 070 / YELLOW	BELOW PASSENGER SEAT

GROUND S

Ground	Location / Type
BT1AR	EYELET (PAIR) – RIGHT HAND LEG / ADJACENT TO BATTERY
FC2AR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC3BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC4AR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC5L	EYELET (PAIR) – LEFT HAND LEG / RIGHT HAND SEAT
FC5S	EYELET (SINGLE) / RIGHT HAND SEAT
FC6L	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND SEAT
FC6S	EYELET (SINGLE) / LEFT HAND SEAT
RH1S	EYELET (SINGLE) / RIGHT HAND REAR QUARTER

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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.

CONTROL MODULE PIN OUT INFORMATION

ADAPTIVE DAMPING CONTROL MODULE

▽	Pin	Description	Active	Inactive
O	BT69-1	MAJOR INSTRUMENT PACK ADAPTIVE DAMPENING MIL	GROUND	B+
I	BT69-2	ADAPTIVE DAMPENING OVERRIDE (FROM ABS/TC/ASC)	GROUND (DURING EVENT)	
O	BT69-3	ACCELEROMETER COMMON GROUND SUPPLY	GROUND	GROUND
D	BT69-10	SERIAL COMMUNICATIONS		
I	BT69-11	IGNITION SWITCHED POWER SUPPLY	B+	GROUND
O	BT69-13	LH REAR DAMPER BATTERY POWER SUPPLY	B-	B-
O	BT69-14	RH FRONT DAMPER BATTERY POWER SUPPLY	B-	B+
O	BT69-15	RH REAR DAMPER BATTERY POWER SUPPLY	B+	B+
I	BT69-18	GROUND	GROUND	GROUND
I	BT69-20	FRONT LATERAL ACCELEROMETER FEEDBACK	< 0.2 V OR > 4.8 V	2.3 – 2.7 V = HARD
I	BT69-21	FRONT VERTICAL ACCELEROMETER FEEDBACK	< 0.2 V OR > 4.8 V	2.3 – 2.7 V = HARD
I	BT69-22	REAR VERTICAL ACCELEROMETER FEEDBACK	< 0.2 V OR > 4.8 V	2.3 – 2.7 V = HARD
I	BT69-24	VEHICLE SPEED SIGNAL	22 Hz @ 10 MPH (16 KM/H); 44 Hz @ 20 MPH (32 KM/H) @ B+	
O	BT69-25	ACCELEROMETER COMMON VOLTAGE SUPPLY	5 V	5 V
I	BT69-26	BRAKE SWITCH	GROUND	B+
I	BT69-27	BATTERY POWER SUPPLY	B+	B+
D	BT69-28	SERIAL COMMUNICATIONS		
O	BT69-30	LH FRONT DAMPER BATTERY POWER SUPPLY	B+	B+
O	BT69-31	LH FRONT DAMPER	GROUND	B+
O	BT69-32	LH REAR DAMPER	GROUND	B+
O	BT69-33	RH FRONT DAMPER	GROUND	B+
O	BT69-34	RH REAR DAMPER	GROUND	B+

Fig. 11.5

COMPONENTS

Component	Connector / Type / Color	Location / Access
ACCELEROMETER – FRONT LATERAL	EM59 / 3-WAY AMP ML / BLACK	ENGINE COMPARTMENT / ADJACENT TO ECM
ACCELEROMETER – REAR VERTICAL	BT52 / 3-WAY AMP ML / BLACK	TRUNK / BELOW FUEL TANK
ACCELEROMETER – FRONT VERTICAL	FC7 / 3-WAY AMP ML / BLACK	CENTER CONSOLE / BEHIND ICE HEAD UNIT
ADAPTIVE DAMPING CONTROL MODULE	BT69 / 35-WAY AMP / BLACK	TRUNK / ADJACENT TO ELECTRICAL CARRIER
BRAKE SWITCH – LHD	AC26 (FLYLEAD) / 4-WAY MULTILOCK 070 / WHITE	TOP OF BRAKE PEDAL
BRAKE SWITCH – RHD	AC24 (FLYLEAD) / 4-WAY MULTILOCK 070 / WHITE	TOP OF BRAKE PEDAL
DAMPER SOLENOID – LH FRONT	LF43 / 2-WAY DELPHI/REINSHAGEN / SLATE	TOP OF LEFT HAND FRONT DAMPER
DAMPER SOLENOID – LH REAR	RL2 / 2-WAY DELPHI/REINSHAGEN / SLATE	TOP OF LEFT HAND REAR DAMPER
DAMPER SOLENOID – RH FRONT	LF44 / 2-WAY DELPHI/REINSHAGEN / SLATE	TOP OF RIGHT HAND FRONT DAMPER
DAMPER SOLENOID – RH REAR	RR2 / 2-WAY DELPHI/REINSHAGEN / SLATE	TOP OF RIGHT HAND REAR DAMPER

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC13	20-WAY MULTILOCK 070 / YELLOW	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
BT1	20-WAY MULTILOCK 070 / WHITE	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
BT3	14-WAY MULTILOCK 070 / SLATE	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
BT72	4-WAY ECONOSEAL III LC / BLACK	REAR OF REAR HUB ASSEMBLY / LEFT HAND SIDE
BT73	4-WAY ECONOSEAL III LC / BLACK	REAR OF REAR HUB ASSEMBLY / RIGHT HAND SIDE
EM3	14-WAY MULTILOCK 070 / SLATE	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
LF1	20-WAY MULTILOCK 070 / SLATE	LEFT HAND 'A' POST CONNECTOR MOUNTING BRACKET / 'A' POST TRIM
LF60	20-WAY MULTILOCK 070 / WHITE	LEFT HAND 'A' POST CONNECTOR MOUNTING BRACKET / 'A' POST TRIM
RH1	20-WAY MULTILOCK 070 / SLATE	BEHIND GLOVE BOX
RH2	20-WAY MULTILOCK 070 / WHITE	REAR OF CENTER CONSOLE ASSEMBLY
RH12	18-WAY MULTILOCK 070 / YELLOW	REAR OF CENTER CONSOLE ASSEMBLY

GROUND

Ground	Location / Type
BT2BL	EYELET (PAIR) – LEFT HAND LEG / TRUNK, RIGHT REAR

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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.

CONTROL MODULE PIN OUT INFORMATION

BODY PROCESSOR MODULE

Pin	Description	Active	Inactive
I FC14-15	IGNITION SWITCHED GROUND SUPPLY	GROUND	
O FC14-17	LHD RH (RHD LH) SEAT HEATER STATE LED	GROUND (LED ON)	B+
I FC14-32	IGNITION SWITCHED GROUND SUPPLY	GROUND	GROUND
I FC14-35	LHD RH (RHD LH) SEAT HEATER REQUEST	GROUND	B+
I FC14-41	IGNITION GROUND SUPPLY	GROUND	
I FC14-65	LOGIC GROUND SUPPLY	GROUND	GROUND
O FC14-69	LHD LH SEAT HEATER STATUS LED (RHD = RH)	GROUND	B+
I FC14-90	BATTERY POWER SUPPLY (LOGIC)	B+	B+
S FC14-84	SCP NETWORK	2 ~ 1600 Hz	
S FC14-85	SCP NETWORK	2 ~ 1600 Hz	
I FC14-86	LHD LH (RHD RH) SEAT HEATER REQUEST	GROUND (MOMENTARY)	B+
I FC14-103	POWER GROUND SUPPLY	GROUND	GROUND

DRIVER DOOR CONTROL MODULE

Pin	Description	Active	Inactive
I DD10-1	BATTERY POWER SUPPLY	B+	B+
I DD10-8	LOGIC GROUND	GROUND	GROUND
S DD10-9	SCP NETWORK	2 ~ 1600 Hz	
S DD10-16	SCP NETWORK	2 ~ 1600 Hz	
I DD10-17	POWER GROUND	GROUND	GROUND
O DD11-2	SEAT MEMORY STATUS LED	GROUND (LED ON)	B+
I DD11-6	MEMORY SET REQUEST	B+	
I DD11-21	MEMORY 1 RECALL REQUEST	B+ (MOMENTARY)	GROUND
I DD11-22	MEMORY 2 RECALL REQUEST	B+ (MOMENTARY)	GROUND

DRIVER SEAT CONTROL MODULE

Pin	Description	Active	Inactive
O SD3-1	DRIVERS SEAT SQUAB MOTOR SUPPLY – FORWARD	B+	GROUND
O SD3-2	DRIVERS SEAT SQUAB MOTOR SUPPLY – REAR	B+	GROUND
O SD3-3	DRIVERS SEAT HEATER ELEMENTS SUPPLY	B+	GROUND
O SD3-5	DRIVER SEAT LUMBAR PUMP INFLATE MOTOR	B+	GROUND
O SD3-6	DRIVERS SEAT LUMBAR PUMP DEFLATE SOLENOID	B+	GROUND
O SD3-7	DRIVERS SEAT FORE / AFT MOTOR SUPPLY	B+	GROUND
O SD3-8	DRIVERS SEAT FORE / AFT MOTOR SUPPLY	B+	GROUND
I SD3-9	DRIVERS SEAT FORE MOVEMENT REQUEST	B+ (MOMENTARY)	GROUND
I SD3-10	DRIVERS SEAT AFT MOVEMENT REQUEST	B+ (MOMENTARY)	GROUND
I SD3-11	DRIVERS SEAT CUSHION REAR EDGE LOWER REQUEST	B+ (MOMENTARY)	GROUND
I SD3-12	DRIVERS SEAT CUSHION REAR EDGE RAISE REQUEST	B+ (MOMENTARY)	GROUND
I SD3-13	DRIVERS SEAT LUMBAR INFLATE REQUEST	B+ (MOMENTARY)	GROUND
I SD3-14	DRIVERS SEAT LUMBAR DEFLATE REQUEST	B+ (MOMENTARY)	GROUND
I SD3-16	DRIVERS SEAT SQUAB FORE RECLINE REQUEST	B+ (MOMENTARY)	GROUND
O SD4-1	DRIVERS SEAT SQUAB POTENTIOMETER REFERENCE GROUND	GROUND	GROUND
O SD4-2	DRIVERS SEAT FORE / AFT MOVEMENT POTENTIOMETER REFERENCE GROUND	GROUND	GROUND
O SD4-5	DRIVERS SEAT SQUAB POT. REFERENCE VOLTAGE	B+	B+
O SD4-6	DRIVERS SEAT RAISE / LOWER POTENTIOMETER REFERENCE VOLTAGE	B+	B+
I SD4-10	DRIVERS SEAT RAISE / LOWER POTENTIOMETER FEEDBACK	10 V = UP; 2 V = DOWN	
I SD4-11	DRIVERS SEAT SQUAB POT. FEEDBACK	9 V = UP; 4 V = DOWN	
I SD4-12	DRIVERS SEAT FORE / AFT POTENTIOMETER FEEDBACK	10 V = FORWARD; 2 V = REAR	
O SD4-14	DRIVERS SEAT RAISE / LOWER POTENTIOMETER REFERENCE GROUND	GROUND	GROUND
O SD4-18	DRIVERS SEAT FORE / AFT MOVEMENT POTENTIOMETER REFERENCE VOLTAGE	B+	B+
I SD5-1	DRIVER OR PASSENGER SEAT IDENTIFICATION	GROUND (DRIVER)	
I SD5-2	POWER GROUND	GROUND	GROUND
O SD5-3	DRIVERS SEAT RAISE / LOWER MOTOR SUPPLY	B+	GROUND
O SD5-4	DRIVERS SEAT RAISE / LOWER MOTOR SUPPLY	B+	GROUND
I SD5-5	BATTERY POWER SUPPLY	B+	B+
I SD5-8	DRIVERS SEAT BELT FASTENED	B+ (FASTENED)	GROUND
S SD5-9	SCP NETWORK	2 ~ 1600 Hz	
S SD5-10	SCP NETWORK	2 ~ 1600 Hz	

MAJOR INSTRUMENT PACK

Pin	Description	Active	Inactive
S FC25-19	SCP NETWORK	2 ~ 1600 Hz	
S FC25-20	SCP NETWORK	2 ~ 1600 Hz	

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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. 12.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
BODY PROCESSOR MODULE	FC14 / 104-WAY AMP EEEEC / SLATE	PASSENGER SIDE FASCIA / AIRBAG BRACKET
DOOR CONTROL MODULE – DRIVER	DD10 / 22-WAY FORD 2.8 TIMER / BLUE DD11 / 22-WAY FORD 2.8 TIMER / BLACK	DRIVER DOOR / DOOR CASING
MAJOR INSTRUMENT PACK	FC25 / 48-WAY AMP PCB SIGNAL / BLACK FC26 / 24-WAY AMP PCB SIGNAL / BLACK	FASCIA
SEAT BELT SWITCH	SD20 / 2-WAY MULTILOCK 040 / BLACK	BELOW SEAT CUSHION
SEAT CONTROL MODULE – DRIVER	SD3 / 16-WAY FORD 2.8 TIMER / BLACK SD4 / 26-WAY FORD IDC / BLACK SD5 / 10-WAY FORD 2.8 TIMER / BLACK	BELOW SEAT CUSHION
SEAT CUSHION (HEATER) – DRIVER	SD19 (FLYLEAD) / 3-WAY MULTILOCK 070 / YELLOW	SEAT CUSHION
SEAT HEATER SWITCH (CENTER CONSOLE SWITCH PACK)	FC65 (FLYLEAD) / 20-WAY FORD IDC / BLACK	CENTER CONSOLE SWITCH PACK
SEAT LUMBAR PUMP – DRIVER	SD14 / 3-WAY MULTILOCK 070 / YELLOW	SEAT BACK
SEAT MOTORS – DRIVER	SD7 / 6-WAY MULTILOCK 070 / WHITE SD8 / 6-WAY MULTILOCK 070 / WHITE SD9 / 6-WAY MULTILOCK 070 / YELLOW	BELOW SEAT CUSHION
SQUAB (HEATER) – DRIVER	SD17 (FLYLEAD) / 3-WAY MULTILOCK 070 / SLATE	SEAT SQUAB
SWITCH PACK – DRIVER DOOR MEMORY	DD5 / 10-WAY AMP ML KEY A / BLACK	DRIVER DOOR
SWITCH PACK – DRIVER SEAT	SD11 / 16-WAY MULTILOCK 040 / BLACK	DRIVER SEAT

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC14	14-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
DD1	23-WAY AMP – FORD / BLACK	DRIVER SIDE ‘A’ POST MOUNTING BRACKET/ ‘A’ POST TRIM
SD1	8-WAY MULTILOCK 070 / YELLOW	BELOW DRIVER SEAT

GROUND

Ground	Location / Type
FC2AR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC3AS	EYELET (SINGLE) / LEFT HAND ‘A’ POST
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC4AR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC6L	EYELET (PAIR) – LEFT HAND LEG / RIGHT HAND SEAT
FC6R	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND SEAT
FC6L	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND SEAT
FC6R	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND SEAT

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.

CONTROL MODULE PIN OUT INFORMATION

BODY PROCESSOR MODULE

▽	Pin	Description	Active	Inactive
I	FC14-15	IGNITION SWITCHED GROUND SUPPLY	GROUND	
O	FC14-17	LHD RH (RHD LH) SEAT HEATER STATE LED	GROUND (LED ON)	B+
I	FC14-32	IGNITION SWITCHED GROUND SUPPLY	GROUND	GROUND
I	FC14-35	LHD RH (RHD L H) SEAT HEATER REQUEST	GROUND	B+
I	FC14-65	LOGIC GROUND SUPPLY	GROUND	GROUND
O	FC14-69	LHD LH SEAT HEATER STATUS LED (RHD = RH)	GROUND	B+
I	FC14-80	BATTERY POWER SUPPLY (LOGIC)	B+	B+
S	FC14-84	SCP NETWORK	2 ~ 1600 Hz	
S	FC14-85	SCP NETWORK	2 ~ 1600 Hz	
I	FC14-86	LHD LH (RHD RH) SEAT HEATER REQUEST	GROUND (MOMENTARY)	B+
I	FC14-103	POWER GROUND SUPPLY	GROUND	GROUND

DRIVER SEAT CONTROL MODULE

▽	Pin	Description	Active	Inactive
O	SD3-1	DRIVERS SEAT SQUAB MOTOR SUPPLY – FORWARD	B+	GROUND
O	SD3-2	DRIVERS SEAT SQUAB MOTOR SUPPLY – REAR	B+	GROUND
O	SD3-3	DRIVERS SEAT HEATER ELEMENTS SUPPLY	B+	GROUND
O	SD3-5	DRIVER SEAT LUMBAR PUMP INFLATE MOTOR	B+	GROUND
O	SD3-6	DRIVERS SEAT LUMBAR PUMP DEFLATE SOLENOID	B+	GROUND
O	SD3-7	DRIVERS SEAT FORE / AFT MOTOR SUPPLY	B+	GROUND
O	SD3-8	DRIVERS SEAT FORE / AFT MOTOR SUPPLY	B+	GROUND
I	SD3-9	DRIVERS SEAT FORE MOVEMENT REQUEST	B+ (MOMENTARY)	GROUND
I	SD3-10	DRIVERS SEAT AFT MOVEMENT REQUEST	B+ (MOMENTARY)	GROUND
I	SD3-11	DRIVERS SEAT CUSHION REAR EDGE LOWER REQUEST	B+ (MOMENTARY)	GROUND
I	SD3-12	DRIVERS SEAT CUSHION REAR EDGE RAISE REQUEST	B+ (MOMENTARY)	GROUND
I	SD3-13	DRIVERS SEAT LUMBAR INFLATE REQUEST	B+ (MOMENTARY)	GROUND
I	SD3-14	DRIVERS SEAT LUMBAR DEFLATE REQUEST	B+ (MOMENTARY)	GROUND
I	SD3-15	DRIVERS SEAT SQUAB AFT RECLINE REQUEST	B+ (MOMENTARY)	GROUND
I	SD3-16	DRIVERS SEAT SQUAB FORE RECLINE REQUEST	B+ (MOMENTARY)	GROUND
I	SD5-1	DRIVER OR PASSENGER SEAT IDENTIFICATION	GROUND (DRIVER)	
I	SD5-2	POWER GROUND	GROUND	GROUND
O	SD5-3	DRIVERS SEAT RAISE / LOWER MOTOR SUPPLY	B+	GROUND
O	SD5-4	DRIVERS SEAT RAISE / LOWER MOTOR SUPPLY	B+	GROUND
I	SD5-6	BATTERY POWER SUPPLY	B+	B+
I	SD5-8	DRIVERS SEAT BELT FASTENED	B+ (FASTENED)	GROUND
S	SD5-9	SCP NETWORK	2 ~ 1600 Hz	
S	SD5-10	SCP NETWORK	2 ~ 1600 Hz	

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 12.2

COMPONENTS

Component	Connector / Type / Color	Location / Access
BODY PROCESSOR MODULE SEAT BELT SWITCH SEAT CONTROL MODULE – DRIVER	FC14 / 104-WAY AMP ECEC / SLATE SD20 / 2-WAY MULTILOCK 040 / BLACK SD3 / 16-WAY FORD 2.8 TIMER / BLACK SD4 / 26-WAY FORD IDC / BLACK SD5 / 10-WAY FORD 2.8 TIMER / BLACK	PASSENGER SIDE FASCIA / AIRBAG BRACKET BELOW SEAT CUSHION BELOW SEAT CUSHION
SEAT CUSHION (HEATER) – DRIVER SEAT HEATER SWITCH (CENTER CONSOLE SWITCH PACK) SEAT LUMBAR PUMP – DRIVER SEAT MOTORS – DRIVER	SD19 (FLYLEAD) / 3-WAY MULTILOCK 070 / YELLOW FC65 (FLYLEAD) / 20-WAY FORD IDC / BLACK SD14 / 3-WAY MULTILOCK 070 / YELLOW SD7 / 6-WAY MULTILOCK 070 / WHITE SD8 / 6-WAY MULTILOCK 070 / WHITE SD9 / 6-WAY MULTILOCK 070 / YELLOW	SEAT CUSHION CENTER CONSOLE SWITCH PACK SEAT BACK BELOW SEAT CUSHION
SQUAB (HEATER) – DRIVER SWITCH PACK – DRIVER SEAT	SD17 (FLYLEAD) / 3-WAY MULTILOCK 070 / SLATE SD11 / 16-WAY MULTILOCK 040 / BLACK	SEAT SQUAB DRIVER SEAT

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
SD1	8-WAY MULTILOCK 070 / YELLOW	BELOW DRIVER SEAT

GROUND

Ground	Location / Type
FC3AS	EYELET (SINGLE) / LEFT HAND ‘A’ POST
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC5L	EYELET (PAIR) – LEFT HAND LEG / RIGHT HAND SEAT
FC5R	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND SEAT
FC6L	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND SEAT
FC6R	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND SEAT

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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.

CONTROL MODULE PIN OUT INFORMATION

BODY PROCESSOR MODULE

	Pin	Description	Active	Inactive
I	FC14-15	IGNITION SWITCHED GROUND SUPPLY	GROUND	
O	FC14-17	LHD RH (RHD LH) SEAT HEATER STATE LED	GROUND (LED ON)	B+
I	FC14-32	IGNITION SWITCHED GROUND SUPPLY	GROUND	GROUND
I	FC14-35	LHD RH (RHD LH) SEAT HEATER REQUEST	GROUND	B+
I	FC14-85	LOGIC GROUND SUPPLY	GROUND	GROUND
O	FC14-69	LHD LH SEAT HEATER STATUS LED (RHD = RH)	GROUND	B+
I	FC14-80	BATTERY POWER SUPPLY (LOGIC)	B+	B+
S	FC14-84	SCP NETWORK	2 – 1600 Hz	
S	FC14-85	SCP NETWORK	2 – 1600 Hz	
I	FC14-86	LHD LH (RHD RH) SEAT HEATER REQUEST	GROUND (MOMENTARY)	B+
I	FC14-103	POWER GROUND SUPPLY	GROUND	GROUND

PASSENGER SEAT CONTROL MODULE

	Pin	Description	Active	Inactive
O	SP3-1	PASSENGER SEAT SQUAB MOTOR SUPPLY – FORWARD	B+	GROUND
O	SP3-2	PASSENGER SEAT SQUAB MOTOR SUPPLY – REAR	B+	GROUND
O	SP3-3	PASSENGER SEAT HEATER ELEMENTS SUPPLY	B+	GROUND
O	SP3-5	PASSENGER SEAT LUMBAR PUMP INFLATE MOTOR	B+	GROUND
O	SP3-6	PASSENGER SEAT LUMBAR PUMP DEFLATE SOLENOID	B+	GROUND
O	SP3-7	PASSENGER SEAT FORE / AFT MOTOR SUPPLY – FORWARD	B+	GROUND
O	SP3-8	PASSENGER SEAT FORE / AFT MOTOR SUPPLY – REAR	B+	GROUND
I	SP3-9	PASSENGER SEAT FORE MOVEMENT REQUEST	B+ (MOMENTARY)	GROUND
I	SP3-10	PASSENGER SEAT AFT MOVEMENT REQUEST	B+ (MOMENTARY)	GROUND
I	SP3-11	PASSENGER SEAT CUSHION REAR EDGE LOWER REQUEST	B+ (MOMENTARY)	GROUND
I	SP3-12	PASSENGER SEAT CUSHION REAR EDGE RAISE REQUEST	B+ (MOMENTARY)	GROUND
I	SP3-13	PASSENGER SEAT LUMBAR INFLATE REQUEST	B+ (MOMENTARY)	GROUND
I	SP3-14	PASSENGER SEAT LUMBAR DEFLATE REQUEST	B+ (MOMENTARY)	GROUND
I	SP3-15	PASSENGER SEAT SQUAB AFT RECLINE REQUEST	B+ (MOMENTARY)	GROUND
I	SP3-16	PASSENGER SEAT SQUAB FORE RECLINE REQUEST	B+ (MOMENTARY)	GROUND
I	SP5-1	DRIVER OR PASSENGER SEAT IDENTIFICATION	GROUND (DRIVERS)	GROUND (PASSENGERS)
I	SP5-2	POWER GROUND	GROUND	GROUND
O	SP5-3	PASSENGER SEAT RAISE / LOWER MOTOR SUPPLY	NOT USED	
O	SP5-4	PASSENGER SEAT RAISE / LOWER MOTOR SUPPLY	NOT USED	
I	SP5-5	BATTERY POWER SUPPLY	B+	B+
I	SP5-8	PASSENGER SEAT BELT FASTENED	B+ (FASTENED)	GROUND
S	SP5-9	SCP NETWORK	2 – 1600 Hz	
S	SP5-10	SCP NETWORK	2 – 1600 Hz	

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 12.3

COMPONENTS

Component	Connector / Type / Color	Location / Access
BODY PROCESSOR MODULE	FC14 / 104-WAY AMP EEEC / SLATE	PASSENGER SIDE FASCIA / AIRBAG BRACKET
SEAT BELT SWITCH WIRING (NOT USED)	SP20 / 2-WAY MULTILOCK 040 / BLACK	BELOW SEAT CUSHION
SEAT CONTROL MODULE – PASSENGER	SP3 / 16-WAY FORD 2.8 TIMER / BLACK SP5 / 10-WAY FORD 2.8 TIMER / BLACK	BELOW SEAT CUSHION
SEAT CUSHION (HEATER) – PASSENGER	SP19 (FLYLEAD) / 3-WAY MULTILOCK 070 / YELLOW	SEAT CUSHION
SEAT HEATER SWITCH (CENTER CONSOLE SWITCH PACK)	FC55 (FLYLEAD) / 20-WAY FORD IDC / BLACK	CENTER CONSOLE SWITCH PACK
SEAT LUMBAR PUMP – PASSENGER	SP14 / 3-WAY MULTILOCK 070 / YELLOW	SEAT BACK
SEAT MOTORS – PASSENGER	SP7 / 6-WAY MULTILOCK 070 / WHITE SP8 / 6-WAY MULTILOCK 070 / WHITE SP9 / 6-WAY MULTILOCK 070 / YELLOW	BELOW SEAT CUSHION
SQUAB (HEATER) – PASSENGER	SP17 (FLYLEAD) / 3-WAY MULTILOCK 070 / SLATE	SEAT SQUAB
SWITCH PACK – PASSENGER SEAT	SP11 / 16-WAY MULTILOCK 040 / BLACK	PASSENGER SEAT

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
SP1	8-WAY MULTILOCK 070 / YELLOW	BELOW PASSENGER SEAT

GROUNDS

Ground	Location / Type
FC3AS	EYELET (SINGLE) / LEFT HAND ‘A’ POST
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC6S	EYELET (SINGLE) / RIGHT HAND SEAT
FC6S	EYELET (SINGLE) / LEFT HAND SEAT

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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

CONTROL MODULE PIN OUT INFORMATION

BODY PROCESSOR MODULE

	Pin	Description	Active	Inactive
I	FC14-15	IGNITION SWITCHED GROUND SUPPLY	GROUND	
O	FC14-17	LHD RH (RHD LH) SEAT HEATER STATE LED	GROUND (LED ON)	B+
I	FC14-32	IGNITION SWITCHED GROUND SUPPLY	GROUND	GROUND
I	FC14-35	LHD RH (RHD LH) SEAT HEATER REQUEST	GROUND	B+
I	FC14-65	LOGIC GROUND SUPPLY	GROUND	GROUND
O	FC14-69	LHD LH SEAT HEATER STATUS LED (RHD = RH)	GROUND	B+
I	FC14-80	BATTERY POWER SUPPLY (LOGIC)	B+	B+
S	FC14-84	SCP NETWORK	2 ~ 1600 Hz	
S	FC14-86	SCP NETWORK	2 ~ 1600 Hz	
I	FC14-86	LHD LH (RHD RH) SEAT HEATER REQUEST	GROUND (MOMENTARY)	B+
I	FC14-103	POWER GROUND SUPPLY	GROUND	GROUND

PASSENGER SEAT CONTROL MODULE

	Pin	Description	Active	Inactive
O	SP3-1	PASSENGER SEAT SQUAB MOTOR SUPPLY – FORWARD	B+	GROUND
O	SP3-2	PASSENGER SEAT SQUAB MOTOR SUPPLY – REAR	B+	GROUND
O	SP3-3	PASSENGER SEAT HEATER ELEMENTS SUPPLY	B+	GROUND
O	SP3-5	PASSENGER SEAT LUMBAR PUMP INFLATE MOTOR	B+	GROUND
O	SP3-6	PASSENGER SEAT LUMBAR PUMP DEFLATE SOLENOID	B+	GROUND
O	SP3-7	PASSENGER SEAT FORE / AFT MOTOR SUPPLY – FORWARD	B+	GROUND
O	SP3-8	PASSENGER SEAT FORE / AFT MOTOR SUPPLY – REAR	B+	GROUND
I	SP3-9	PASSENGER SEAT FORE MOVEMENT REQUEST	B+ (MOMENTARY)	GROUND
I	SP3-10	PASSENGER SEAT AFT MOVEMENT REQUEST	B+ (MOMENTARY)	GROUND
I	SP3-13	PASSENGER SEAT LUMBAR INFLATE REQUEST	B+ (MOMENTARY)	GROUND
I	SP3-14	PASSENGER SEAT LUMBAR DEFLATE REQUEST	B+ (MOMENTARY)	GROUND
I	SP3-15	PASSENGER SEAT SQUAB AFT RECLINE REQUEST	B+ (MOMENTARY)	GROUND
I	SP3-16	PASSENGER SEAT SQUAB FORE RECLINE REQUEST	B+ (MOMENTARY)	GROUND
I	SP5-1	DRIVER OR PASSENGER SEAT IDENTIFICATION	GROUND (DRIVERS)	GROUND (PASSENGERS)
I	SP5-2	POWER GROUND	GROUND	GROUND
I	SP5-5	BATTERY POWER SUPPLY	B+	B+
I	SP5-8	PASSENGER SEAT BELT FASTENED	B+ (FASTENED)	GROUND
S	SP5-9	SCP NETWORK	2 ~ 1600 Hz	
S	SP5-10	SCP NETWORK	2 ~ 1600 Hz	

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 12.4

COMPONENTS

Component	Connector / Type / Color	Location / Access
BODY PROCESSOR MODULE	FC14 / 104-WAY AMP EEEC / SLATE	PASSENGER SIDE FASCIA / AIRBAG BRACKET
SEAT BELT SWITCH WIRING (NOT USED)	SP20 / 2-WAY MULTILOCK 040 / BLACK	BELOW SEAT CUSHION
SEAT CONTROL MODULE – PASSENGER	SP3 / 16-WAY FORD 2.8 TIMER / BLACK SP5 / 10-WAY FORD 2.8 TIMER / BLACK	BELOW SEAT CUSHION
SEAT CUSHION (HEATER) – PASSENGER	SP19 (FLYLEAD) / 3-WAY MULTILOCK 070 / YELLOW	SEAT CUSHION
SEAT HEATER SWITCH (CENTER CONSOLE SWITCH PACK)	FC65 (FLYLEAD) / 20-WAY FORD IDC / BLACK	CENTER CONSOLE SWITCH PACK
SEAT MOTORS – PASSENGER	SP7 / 6-WAY MULTILOCK 070 / WHITE SP8 / 6-WAY MULTILOCK 070 / WHITE SP9 / 6-WAY MULTILOCK 070 / YELLOW	BELOW SEAT CUSHION
SQUAB (HEATER) – PASSENGER	SP17 (FLYLEAD) / 3-WAY MULTILOCK 070 / SLATE	SEAT SQUAB
SWITCH PACK – PASSENGER SEAT	SP11 / 16-WAY MULTILOCK 040 / BLACK	PASSENGER SEAT

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
SP1	8-WAY MULTILOCK 070 / YELLOW	BELOW PASSENGER SEAT

GROUND

Ground	Location / Type
FC3AS	EYELET (SINGLE) / LEFT HAND ‘A’ POST
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC6S	EYELET (SINGLE) / RIGHT HAND SEAT
FC6S	EYELET (SINGLE) / LEFT HAND SEAT

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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.

CONTROL MODULE PIN OUT INFORMATION

BODY PROCESSOR MODULE

▽	Pin	Description	Active	Inactive
I	FC14-5	TRUNK LATCH RELEASE REQUEST	GROUND (MOMENTARY)	B+
I	FC14-15	IGNITION SWITCHED GROUND SUPPLY	GROUND	
I	FC14-31	FUEL FLAP RELEASE REQUEST	GROUND (MOMENTARY)	B+
I	FC14-33	IGNITION SWITCHED GROUND SUPPLY	GROUND	GROUND
I	FC14-41	IGNITION GROUND SUPPLY	GROUND	
I	FC14-55	VALET SWITCH	GROUND (MOMENTARY)	B+
I	FC14-58	NOT-IN-PARK	GROUND (R,N,D,4,3,2)	B+ (PARK)
I	FC14-65	LOGIC GROUND SUPPLY	GROUND	GROUND
I	FC14-67	KEY IN IGNITION	GROUND (KEY IN)	B+
O	FC14-71	DOOR LOCK RELAY ACTIVATE	GROUND (PULSE)	B+
I	FC14-80	BATTERY POWER SUPPLY (LOGIC)	B+	B+
S	FC14-84	SCP NETWORK	2 – 1600 Hz	
S	FC14-85	SCP NETWORK	2 – 1600 Hz	
I	FC14-103	POWER GROUND SUPPLY	GROUND	GROUND

DRIVER DOOR CONTROL MODULE

▽	Pin	Description	Active	Inactive
I	DD10-1	BATTERY POWER SUPPLY	B+	B+
O	DD10-5	DOOR LOCK ACTUATOR MOTOR UNLOCK	B+	GROUND
O	DD10-6	DOOR LOCK ACTUATOR MOTOR LOCK	B+	GROUND
I	DD10-8	LOGIC GROUND	GROUND	GROUND
S	DD10-9	SCP NETWORK	2 – 1600 Hz	
S	DD10-16	SCP NETWORK	2 – 1600 Hz	
I	DD11-4	DRIVERS DOOR LOCK BARREL UNLOCK REQUEST	B+ (MOMENTARY)	GROUND
I	DD11-5	EXTERIOR DOOR HANDLE WINDOW DROP REQUEST	B+	
I	DD11-12	DRIVERS DOOR LOCK BARREL LOCK REQUEST	B+ (MOMENTARY)	GROUND
I	DD11-17	LH VERTICAL MOVEMENT REQUEST	B+ = DOWN	GROUND = UP
I	DD11-20	DRIVERS DOOR SWITCH	GROUND (DOOR OPEN)	B+

PASSENGER DOOR CONTROL MODULE

▽	Pin	Description	Active	Inactive
I	DP10-1	BATTERY POWER SUPPLY	B+	B+
O	DP10-5	PASSENGER DOOR LOCK ACTUATOR MOTOR UNLOCK	B+	GROUND
O	DP10-6	PASSENGER DOOR LOCK ACTUATOR MOTOR LOCK	B+	GROUND
I	DP10-8	LOGIC GROUND	GROUND	GROUND
S	DP10-9	SCP NETWORK	2 – 1600 Hz	
S	DP10-16	SCP NETWORK	2 – 1600 Hz	
I	DP10-17	POWER GROUND	GROUND	GROUND
I	DP11-5	EXTERIOR DOOR HANDLE WINDOW DROP REQUEST	B+	GROUND
I	DP11-20	PASSENGER DOOR SWITCH	GROUND (DOOR OPEN)	B+

SECURITY AND LOCKING CONTROL MODULE

▽	Pin	Description	Active	Inactive
O	BT40-1	TRUNK RELEASE SOLENOID	B+	GROUND
O	BT40-2	FUEL FILLER FLAP SOLENOID	B+	GROUND
S	BT40-8	SCP NETWORK	2 – 1600 Hz	
I	BT40-13	GROUND	GROUND	GROUND
I	BT40-14	GROUND	GROUND	GROUND
I	BT40-15	BATTERY POWER SUPPLY	B+	B+
S	BT40-16	SCP NETWORK	2 – 1600 Hz	
I	BT41-5	TRUNK SWITCH	GROUND	B+
I	BT41-7	PASSENGER DOOR LOCK ACTUATOR LOCK STATUS	GROUND (LOCKED)	B+
I	BT41-19	DRIVERS DOOR LOCK ACTUATOR LOCK STATUS	GROUND (LOCKED)	B+
I	RH20-1	KEY FOB ANTENNA		
I	RH20-1	KEY FOB ANTENNA		
I	RH20-2	KEY FOB ANTENNA SHIELD	GROUND	GROUND
I	RH20-2	KEY FOB ANTENNA SHIELD	GROUND	GROUND

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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. 13.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
BODY PROCESSOR MODULE	FC14 / 104-WAY AMP EEEC / SLATE	PASSENGER SIDE FASCIA / AIRBAG BRACKET
DOOR CONTROL MODULE – DRIVER	DD10 / 22-WAY FORD 2.8 TIMER / BLUE DD11 / 22-WAY FORD 2.8 TIMER / BLACK	DRIVER DOOR / DOOR CASING
DOOR CONTROL MODULE – PASSENGER	DP10 / 22-WAY FORD 2.8 TIMER / BLUE DP11 / 22-WAY FORD 2.8 TIMER / BLACK	PASSENGER DOOR / DOOR CASING
DOOR LOCK ACTUATOR – DRIVER	DD3 / 13-WAY ECONOSEAL III LC / BLACK	DRIVER DOOR / DOOR CASING
DOOR LOCK ACTUATOR – PASSENGER	DP3 / 13-WAY ECONOSEAL III LC / BLACK	PASSENGER DOOR / DOOR CASING
DOOR LOCK SWITCH – PASSENGER	DP3 / 13-WAY ECONOSEAL III LC / BLACK	PASSENGER DOOR / DOOR CASING
DOOR LOCK SWITCHES – DRIVER	DD3 / 13-WAY ECONOSEAL III LC / BLACK	DRIVER DOOR / DOOR CASING
DOOR SWITCH – DRIVER	DD3 / 13-WAY ECONOSEAL III LC / BLACK	DRIVER DOOR / DOOR CASING
DOOR SWITCH – PASSENGER	DP3 / 13-WAY ECONOSEAL III LC / BLACK	PASSENGER DOOR / DOOR CASING
FUEL FILL FLAP SOLENOID	BT6 / 2-WAY LABINAL / NATURAL	TRUNK / FUEL FILL
IGNITION SWITCH (KEY-IN SWITCH)	FC4 (FLYLEAD) / 8-WAY MULTILOCK 070 / WHITE	STEERING COLUMN
KEY FOB ANTENNA (CONVERTIBLE)	HARD WIRED	TOP OF BACKLIGHT
KEY FOB ANTENNA (COUPE)	RH7 / COAXIAL CONNECTOR	TOP OF BACKLIGHT
NOT-IN-PARK MICROSWITCH	FC87 (FLYLEAD) / 3-WAY MULTILOCK 070 / WHITE	GEAR SELECTOR ASSEMBLY
SECURITY AND LOCKING CONTROL MODULE	BT40 / 16-WAY FORD 2.8 TIMER / BLACK BT41 / 26-WAY FORD IDC / BLACK RH20 / COAXIAL CONNECTOR	TRUNK / ELECTRICAL CARRIER
TRUNK AND FUEL FILL RELEASE SWITCH	FC41 / 10-WAY AMP ML KEY B / WHITE	FASCIA / DRIVER SIDE
TRUNK RELEASE SOLENOID	BT43 / 2-WAY LABINAL / BROWN	TRUNK / LEFT HAND SIDE
TRUNK SWITCH	BT46 / 2-WAY FORD / BLACK	TRUNK
VALET SWITCH	FC67 / 10-WAY AMP ML KEY A / BLACK	DRIVER KNEE BOLSTER

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
DOOR LOCKING RELAY	VIOLET	FC24 / VIOLET	RH FASCIA RELAYS

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC13	20-WAY MULTILOCK 070 / YELLOW	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC14	14-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC15	20-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
BT1	20-WAY MULTILOCK 070 / WHITE	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
BT2	18-WAY MULTILOCK 070 / YELLOW	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
DD1	23-WAY AMP – FORD / BLACK	DRIVER SIDE ‘A’ POST MOUNTING BRACKET/ ‘A’ POST TRIM
DP1	23-WAY AMP – FORD / BLACK	PASSENGER SIDE ‘A’ POST / ‘A’ POST TRIM
RH12	18-WAY MULTILOCK 070 / YELLOW	REAR OF CENTER CONSOLE ASSEMBLY

GROUND

Ground	Location / Type
BT1AL	EYELET (PAIR) – LEFT HAND LEG / ADJACENT TO BATTERY
BT1AR	EYELET (PAIR) – RIGHT HAND LEG / ADJACENT TO BATTERY
FC2AR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC2BL	EYELET (PAIR) – LEFT HAND LEG / RIGHT HAND ‘A’ POST
FC2BR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC3AS	EYELET (SINGLE) / LEFT HAND ‘A’ POST
FC3BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC4AR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
FC4BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST
FC4BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
RHS3	EYELET (SINGLE) / ROOF, ADJACENT TO BACKLIGHT

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.

CONTROL MODULE PIN OUT INFORMATION

BODY PROCESSOR MODULE

	Pin	Description	Active	Inactive
I	FC14-6	WASHER FLUID LEVEL LOW	0 V	B+
I	FC14-9	INTERMITTENT WIPER REQUEST	GROUND (MOMENTARY)	B+
I	FC14-16	IGNITION SWITCHED GROUND SUPPLY	GROUND	
I	FC14-16	SIDE LAMP REQUEST	GROUND	B+
O	FC14-18	POWER WASH RELAY ACTIVATE	GROUND	B+
O	FC14-19	WIPER FAST / SLOW RELAY ACTIVATE	GROUND	B+
O	FC14-26	WINDSHIELD WASH PUMP AND FLUID LEVEL SENSOR SUPPLY	B+	GROUND
I	FC14-34	FAST WIPE REQUEST	GROUND	B+
I	FC14-37	WASH REQUEST	0 V (MOMENTARY)	B+
O	FC14-43	WIPER RUN / STOP RELAY ACTIVATE	GROUND	B+
I	FC14-60	WIPER MOTOR PARK SWITCH	GROUND (PARKED)	B+ (NOT PARKED)
I	FC14-65	LOGIC GROUND SUPPLY	GROUND	GROUND
I	FC14-80	BATTERY POWER SUPPLY (LOGIC)	B+	B+
I	FC14-94	SLOW WIPE REQUEST	GROUND (WIPERS ON)	B+
I	FC14-103	POWER GROUND SUPPLY	GROUND	GROUND
I	FC14-104	LIGHTING / MOTORS BATTERY POWER SUPPLY	B-	B+

Fig. 14.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
BODY PROCESSOR MODULE FUSE BOX - ENGINE COMPARTMENT	FC14 / 104-WAY AMP EFFC / SLATE LF5 / 10-WAY U.T.A. FUSEBOX / WHITE LF6 / 10-WAY U.T.A. FUSEBOX / BLACK LF7 / 10-WAY U.T.A. FUSEBOX / GREEN LF8 / 10-WAY U.T.A. FUSEBOX / BLUE LF70/ EYELET	PASSENGER SIDE FASCIA / AIRBAG BRACKET ENGINE COMPARTMENT / LEFT FRONT
LIGHTING STALK (COLUMN SWITCHGEAR) POWER WASH PUMP WASH / WIPE STALK (COLUMN SWITCHGEAR) WINDSHIELD WASH PUMP AND FLUID LEVEL SENSOR WIPER MOTOR	SC2 (FLYLEAD) / 10-WAY MULTILOCK 070 / YELLOW LF25 / 2-WAY ECONOSEAL III HC / BLACK SC1 (FLYLEAD) / 12-WAY MULTILOCK 070 / WHITE LF27 / 3-WAY AUGAT / BLACK EM51 (FLYLEAD) / 5-WAY FORD FA0 / BLACK	STEERING COLUMN LEFT FRONT FENDER / WHEEL ARCH LINER STEERING COLUMN LEFT FRONT FENDER / WHEEL ARCH LINER BASE OF WINDSHIELD / AIR INTAKE PLENUM

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
WIPER RUN / STOP RELAY WIPER FAST / SLOW RELAY POWERWASH RELAY (#4)	BLACK BLACK BROWN	LF48 / BLACK LF49 / BLACK BUS	LH BRAKE BOOSTER ENCLOSURE RELAYS LH BRAKE BOOSTER ENCLOSURE RELAYS ENGINE COMPARTMENT FUSE BOX

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
LF3 LF1 LF60	13-WAY ECONOSEAL III LC / WHITE 20-WAY MULTILOCK 070 / SLATE 20-WAY MULTILOCK 070 / WHITE	ENGINE COMPARTMENT / LEFT HAND ENCLOSURE LEFT HAND 'A' POST CONNECTOR MOUNTING BRACKET / 'A' POST TRIM LEFT HAND 'A' POST CONNECTOR MOUNTING BRACKET / 'A' POST TRIM

GROUND

Ground	Location / Type
FC3AS FC3BL LF1AR LF3BS LF3BS	EYELET (SINGLE) / LEFT HAND 'A' POST EYELET (PAIR) - LEFT HAND LEG / LEFT HAND 'A' POST EYELET (PAIR) - RIGHT HAND LEG / RIGHT HAND HEADLAMP EYELET (SINGLE) / ENGINE COMPARTMENT, FORWARD OF LEFT HAND HOOD CATCH EYELET (SINGLE) / ENGINE COMPARTMENT, FORWARD OF LEFT HAND HOOD CATCH

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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.

CONTROL MODULE PIN OUT INFORMATION

BODY PROCESSOR MODULE

	Pin	Description	Active	Inactive
S	FC14-84	SCP NETWORK	2 ~ 1600 Hz	
S	FC14-85	SCP NETWORK	2 ~ 1600 Hz	

DRIVER DOOR CONTROL MODULE

	Pin	Description	Active	Inactive
I	DD10-1	BATTERY POWER SUPPLY	B-	B+
O	DD10-7	WINDOW LIFT MOTOR DOWN SUPPLY	B-	GROUND
I	DD10-8	LOGIC GROUND	GROUND	GROUND
S	DD10-9	SCP NETWORK	2 ~ 1600 Hz	
I	DD10-10	DRIVERS SWITCH PACK LH WINDOW DOWN REQUEST	GROUND (MOMENTARY)	B-
I	DD10-11	DRIVERS WINDOW LIFT SENSOR FEEDBACK	2 V = UP; 12 V = DOWN	
I	DD10-12	DRIVERS WINDOW LIFT SENSOR FEEDBACK	2 V = UP; 12 V = DOWN	
O	DD10-13	DRIVERS WINDOW LIFT SENSOR REFERENCE VOLTAGE	B-	B+
O	DD10-15	DRIVERS WINDOW LIFT MOTOR UP SUPPLY	B-	GROUND
S	DD10-16	SCP NETWORK	2 ~ 1600 Hz	
I	DD10-17	POWER GROUND	GROUND	GROUND
I	DD10-18	DRIVERS SWITCH PACK LH WINDOW UP REQUEST	GROUND (MOMENTARY)	GROUND
I	DD10-19	DRIVERS SWITCH PACK RH WINDOW UP REQUEST	GROUND (MOMENTARY)	GROUND
I	DD11-4	DRIVERS DOOR LOCK BARREL UNLOCK REQUEST	B+ (MOMENTARY)	GROUND
I	DD11-7	DRIVERS SWITCH PACK RH WINDOW DOWN REQUEST	B- (MOMENTARY)	GROUND
I	DD11-12	DRIVERS DOOR LOCK BARREL LOCK REQUEST	B- (MOMENTARY)	GROUND

MAJOR INSTRUMENT PACK

	Pin	Description	Active	Inactive
S	FC25-19	SCP NETWORK	2 ~ 1600 Hz	
S	FC25-20	SCP NETWORK	2 ~ 1600 Hz	

PASSENGER DOOR CONTROL MODULE

	Pin	Description	Active	Inactive
I	DP10-1	BATTERY POWER SUPPLY	B-	B+
O	DP10-7	PASSENGER WINDOW LIFT MOTOR DOWN SUPPLY	B+	GROUND
I	DP10-8	LOGIC GROUND	GROUND	GROUND
S	DP10-9	SCP NETWORK	2 ~ 1600 Hz	
I	DP10-10	PASSENGER SWITCH PACK RH WINDOW DOWN REQUEST	B+ (MOMENTARY)	GROUND
I	DP10-11	PASSENGER WINDOW LIFT MOVEMENT SENSOR FEEDBACK	2 V = UP; 12 V = DOWN	
I	DP10-12	PASSENGER WINDOW LIFT MOVEMENT SENSOR FEEDBACK	2 V = UP; 12 V = DOWN	
O	DP10-13	PASSENGER WINDOW LIFT MOVEMENT SENSOR REFERENCE VOLTAGE	B+	B+
O	DP10 15	PASSENGER WINDOW LIFT MOTOR UP SUPPLY	B-	GROUND
S	DP10-16	SCP NETWORK	2 ~ 1600 Hz	
I	DP10-17	POWER GROUND	GROUND	GROUND
I	DP10-18	PASSENGER SWITCH PACK RH WINDOW UP REQUEST	B+ (MOMENTARY)	GROUND

SECURITY AND LOCKING CONTROL MODULE

	Pin	Description	Active	Inactive
S	BT40-8	SCP NETWORK	2 ~ 1600 Hz	
S	BT40-16	SCP NETWORK	2 ~ 1600 Hz	

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 15.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
BODY PROCESSOR MODULE	FC14 / 104-WAY AMP EEEEC / SLATE	PASSENGER SIDE FASCIA / AIRBAG BRACKET
DOOR CONTROL MODULE – DRIVER	DD10 / 22-WAY FORD 2.8 TIMER / BLUE DD11 / 22 WAY FORD 2.8 TIMER / BLACK	DRIVER DOOR / DOOR CASING
DOOR CONTROL MODULE – PASSENGER	DP10 / 22-WAY FORD 2.8 TIMER / BLUE DP11 / 22-WAY FORD 2.8 TIMER / BLACK	PASSENGER DOOR / DOOR CASING
DOOR LOCK SWITCHES – DRIVER	DD3 / 13-WAY ECONOSEAL III LC / BLACK	DRIVER DOOR / DOOR CASING
MAJOR INSTRUMENT PACK	FC25 / 48-WAY AMP PCB SIGNAL / BLACK FC26 / 24-WAY AMP PCB SIGNAL / BLACK	FASCIA
SECURITY AND LOCKING CONTROL MODULE	BT40 / 16-WAY FORD 2.8 TIMER / BLACK BT41 / 26-WAY FORD IDC / BLACK RH20 / COAXIAL CONNECTOR	TRUNK / ELECTRICAL CARRIER
WINDOW LIFT SWITCHES – DRIVER DOOR	DD17 (FLYLEAD) / 20-WAY MULTILOCK 040 / BLACK	DRIVER DOOR SWITCH PACK
WINDOW LIFT SWITCHES – PASSENGER DOOR (PASSENGER DOOR SWITCH PACK)	DP17 (FLYLEAD) / 20-WAY MULTILOCK 040 / BLACK	PASSENGER DOOR SWITCH PACK
WINDOW LIFT – DRIVER	DD16 / 6-WAY ECONOSEAL III LC / BLACK	DRIVER DOOR
WINDOW LIFT – PASSENGER	DP16 / 6-WAY ECONOSEAL III LC / BLACK	DRIVER DOOR

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC14	14-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC15	20-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
AC16	6-WAY MULTILOCK 070 / YELLOW	LEFT HAND ‘A’ POST CONNECTOR MOUNTING BRACKET / ‘A’ POST TRIM
BT1	20-WAY MULTILOCK 070 / WHITE	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
BT2	18-WAY MULTILOCK 070 / YELLOW	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
DD1	23-WAY AMP – FORD / BLACK	DRIVER SIDE ‘A’ POST MOUNTING BRACKET/ ‘A’ POST TRIM
DP1	23-WAY AMP – FORD / BLACK	PASSENGER SIDE ‘A’ POST / ‘A’ POST TRIM
FC62	10-WAY AMP ML KEY A / BLACK	CONVERTIBLE TOP SWITCH
RF1	18-WAY MULTILOCK 070 / YELLOW	RIGHT HAND ‘A’ POST CONNECTOR MOUNTING BRACKET / ‘A’ POST TRIM
RH12	18-WAY MULTILOCK 070 / YELLOW	REAR OF CENTER CONSOLE ASSEMBLY
RH2	20-WAY MULTILOCK 070 / WHITE	REAR OF CENTER CONSOLE ASSEMBLY

GROUND

Ground	Location / Type
FC2AR	EYELET (PAIR) – RIGHT HAND LEG / RIGHT HAND ‘A’ POST
FC4AR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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.

CONTROL MODULE PIN OUT INFORMATION

BODY PROCESSOR MODULE

Pin	Description	Active	Inactive
I FC14-10	CONVERTIBLE TOP RAISE REQUEST	GROUND (MOMENTARY)	B+
I FC14-15	IGNITION SWITCHED GROUND SUPPLY	GROUND	
I FC14-32	IGNITION SWITCHED GROUND SUPPLY	GROUND	GROUND
I FC14-33	IGNITION SWITCHED GROUND SUPPLY	GROUND	GROUND
I FC14-36	CONVERTIBLE TOP READY TO LATCH	GROUND	B+
I FC14-62	CONVERTIBLE TOP LATCH CLOSED	GROUND (CLOSED)	B+
I FC14-63	CONVERTIBLE TOP LOWER REQUEST	GROUND (MOMENTARY)	B+
I FC14-65	LOGIC GROUND SUPPLY	GROUND	GROUND
O FC14-77	REAR QUARTER GLASS DOWN RELAYS ACTIVATE	GROUND	B+
I FC14-80	BATTERY POWER SUPPLY (LOGIC)	B+	B+
S FC14-84	SCP NETWORK	2 – 1600 Hz	
S FC14-85	SCP NETWORK	2 – 1600 Hz	
I FC14-89	CONVERTIBLE TOP CLOSED	GROUND	B+
O FC14-98	REAR QUARTER GLASS UP RELAYS ACTIVATE	GROUND	B+
I FC14-103	POWER GROUND SUPPLY	GROUND	GROUND

DRIVER DOOR CONTROL MODULE

Pin	Description	Active	Inactive
S DD10-9	SCP NETWORK	2 – 1600 Hz	
S DD10-16	SCP NETWORK	2 – 1600 Hz	

MAJOR INSTRUMENT PACK

Pin	Description	Active	Inactive
S FC25-19	SCP NETWORK	2 – 1600 Hz	
S FC25-20	SCP NETWORK	2 – 1600 Hz	

PASSENGER DOOR CONTROL MODULE

Pin	Description	Active	Inactive
S DP10-9	SCP NETWORK	2 – 1600 Hz	
S DP10-16	SCP NETWORK	2 – 1600 Hz	

SECURITY AND LOCKING CONTROL MODULE

Pin	Description	Active	Inactive
O BT40-3	TOP UP RELAY ACTIVATE	B+	GROUND
O BT40-4	LATCH CONTROL VALVE	B+	GROUND
I BT40-6	BATTERY POWER SUPPLY	B+	B+
S BT40-8	SCP NETWORK	2 – 1600 Hz	
O BT40-9	MAIN CONTROL VALVE	B+	GROUND
O BT40-10	TOP DOWN RELAY ACTIVATE	B+	GROUND
I BT40-13	GROUND	GROUND	GROUND
I BT40-14	GROUND	GROUND	GROUND
S BT40-16	SCP NETWORK	2 – 1600 Hz	
I BT41-3	CONVERTIBLE TOP DOWN SWITCH	GROUND	B+

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 15.2

COMPONENTS

Component	Connector / Type / Color	Location / Access
BODY PROCESSOR MODULE	FC14 / 104-WAY AMP EEEEC / SLATE	PASSENGER SIDE FASCIA / AIRBAG BRACKET
CONVERTIBLE TOP CLOSED SWITCH	RF4 (FLYLEAD) / 6-WAY MULTILOCK 070 / WHITE	TOP OF WINDSHIELD
CONVERTIBLE TOP DOWN SWITCH	RH29 (FLYLEAD) / 3-WAY MULTILOCK 070 / WHITE	RIGHT HAND OPERATING CYLINDER
CONVERTIBLE TOP LATCH CLOSED SWITCH	RF4 (FLYLEAD) / 6-WAY MULTILOCK 070 / WHITE	TOP OF WINDSHIELD
CONVERTIBLE TOP PUMP	BT15 (FLYLEAD) / 2-WAY AMP / NATURAL	TRUNK / RIGHT HAND SIDE
CONVERTIBLE TOP RAISED SWITCH	RH29 (FLYLEAD) / 3-WAY MULTILOCK 070 / WHITE	RIGHT HAND OPERATING CYLINDER
CONVERTIBLE TOP READY-TO-LATCH SWITCH	RF4 (FLYLEAD) / 6-WAY MULTILOCK 070 / WHITE	TOP OF WINDSHIELD
CONVERTIBLE TOP SWITCH	FC62 / 10-WAY AMP ML KEY A / BLACK	FORWARD OF GEAR SELECTOR
DOOR CONTROL MODULE – DRIVER	DD10 / 22-WAY FORD 2.8 TIMER / BLUE DD11 / 22-WAY FORD 2.8 TIMER / BLACK	DRIVER DOOR / DOOR CASING
DOOR CONTROL MODULE – PASSENGER	DP10 / 22-WAY FORD 2.8 TIMER / BLUE DP11 / 22-WAY FORD 2.8 TIMER / BLACK	PASSENGER DOOR / DOOR CASING
LATCH CONTROL VALVE	BT63 / 2-WAY D & R / BLUE	TRUNK / CONVERTIBLE TOP PUMP
MAIN CONTROL VALVE	BT64 / 2-WAY D & R / ORANGE	TRUNK / CONVERTIBLE TOP PUMP
MAJOR INSTRUMENT PACK	FC25 / 48-WAY AMP PCB SIGNAL / BLACK FC26 / 24-WAY AMP PCB SIGNAL / BLACK	FASCIA
QUARTER LIGHT LIFT – LH	RH33 / 2-WAY ECONOSEAL III HC / BLACK	REAR QUARTER PANEL
QUARTER LIGHT LIFT – RH	RH34 / 2-WAY ECONOSEAL III HC / BLACK	REAR QUARTER PANEL
SECURITY AND LOCKING CONTROL MODULE	BT40 / 16-WAY FORD 2.8 TIMER / BLACK BT41 / 26-WAY FORD IDC / BLACK RH20 / COAXIAL CONNECTOR	TRUNK / ELECTRICAL CARRIER

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
QUARTER DOWN RELAY – LH	BLACK	BT75 / BLACK	TRUNK RELAYS
QUARTER DOWN RELAY – RH	BLACK	BT77 / BLACK	TRUNK RELAYS
QUARTER UP RELAY – LH	BLACK	BT74 / BLACK	TRUNK RELAYS
QUARTER UP RELAY – RH	BLACK	BT76 / BLACK	TRUNK RELAYS
TOP UP RELAY	BLACK	BT16 / BLACK	TRUNK RELAYS
TOP DOWN RELAY	BLACK	BT17 / BLACK	TRUNK RELAYS

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC14	14-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
BT1	20-WAY MULTILOCK 070 / WHITE	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
BT4	10-WAY MULTILOCK 070 / YELLOW	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
DD1	23-WAY AMP – FORD / BLACK	DRIVER SIDE ‘A’ POST MOUNTING BRACKET/ ‘A’ POST TRIM
DP1	23-WAY AMP – FORD / BLACK	PASSENGER SIDE ‘A’ POST / ‘A’ POST TRIM
RF1	18-WAY MULTILOCK 070 / YELLOW	RIGHT HAND ‘A’ POST CONNECTOR MOUNTING BRACKET / ‘A’ POST TRIM
RH12	18-WAY MULTILOCK 070 / YELLOW	REAR OF CENTER CONSOLE ASSEMBLY
RH2	20-WAY MULTILOCK 070 / WHITE	REAR OF CENTER CONSOLE ASSEMBLY
RH5	3-WAY MULTILOCK 070 / WHITE	BEHIND LEFT HAND QUARTER TRIM PANEL
RH6	3-WAY MULTILOCK 070 / WHITE	BEHIND RIGHT HAND QUARTER TRIM PANEL

GROUND

Ground	Location / Type
BT1AL	EYELET (PAIR) – LEFT HAND LEG / ADJACENT TO BATTERY
BT1AR	EYELET (PAIR) – RIGHT HAND LEG / ADJACENT TO BATTERY
BT1BL	EYELET (PAIR) – LEFT HAND LEG / ADJACENT TO BATTERY
BT1BR	EYELET (PAIR) – RIGHT HAND LEG / ADJACENT TO BATTERY
BT2CS	EYELET (SINGLE) / TRUNK, RIGHT REAR
FC3AS	EYELET (SINGLE) / LEFT HAND ‘A’ POST
FC3BR	EYELET (PAIR) – RIGHT HAND LEG / LEFT HAND ‘A’ POST
RH1S	EYELET (SINGLE) / RIGHT HAND REAR QUARTER

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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CONTROL MODULE PIN OUT INFORMATION

MAJOR INSTRUMENT PACK

	Pin	Description	Active	Inactive
C	FC25-24	CAN NETWORK	15 – 1500 Hz	
C	FC25-47	CAN NETWORK	15 – 1500 Hz	
O	FC26-20	VEHICLE SPEED	22 Hz @ 10 MPH (16 KM/H); 44 Hz @ 20 MPH (32 KM/H) @ B+	

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 16.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
ANTENNA MOTOR	BT19 / 6-WAY YAZAKI C.S.U. / WHITE	TRUNK / RIGHT HAND SIDE
CD AUTO-CHANGER	IC7 / CD DATA CONNECTOR	TRUNK / RIGHT HAND SIDE
FULL RANGE SPEAKER – DRIVER DOOR	DD19 / 2-WAY GROTE AND HARTMAN MDK / BLACK	DRIVER DOOR CASING
FULL RANGE SPEAKER – PASSENGER DOOR	DP19 / 2-WAY GROTE AND HARTMAN MDK / BLACK	PASSENGER DOOR CASING
MAJOR INSTRUMENT PACK	FC25 / 48-WAY AMP PCB SIGNAL / BLACK FC26 / 24-WAY AMP PCB SIGNAL / BLACK	FASCIA
RADIO / CASSETTE HEAD UNIT	IC8 / COAXIAL CONNECTOR IC10 / 20-WAY MULTILOCK 070 / WHITE IC13 / COAXIAL CONNECTOR IC14 / POWER AMPLIFIER CONNECTOR	CENTER CONSOLE
RADIO ANTENNA	IC12 / COAXIAL CONNECTOR	TRUNK / RIGHT HAND SIDE
RADIO CONTROL SWITCHES (STEERING WHEEL)	SW4 (FYLEAD) / 3-WAY EPC / BLACK AND WHITE	STEERING WHEEL
REAR QUARTER FULL RANGE SPEAKER – DRIVER SIDE	RH27 / 2-WAY GROTE AND HARTMAN MDK / BLACK	INTERIOR REAR QUARTER PANEL
REAR QUARTER FULL RANGE SPEAKER – PASSENGER SIDE	RH26 / 2-WAY GROTE AND HARTMAN MDK / BLACK	INTERIOR REAR QUARTER PANEL

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC14	14-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
BT1	20-WAY MULTILOCK 070 / WHITE	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
DD1	23-WAY AMP – FORD / BLACK	DRIVER SIDE ‘A’ POST MOUNTING BRACKET/ ‘A’ POST TRIM
DP1	23-WAY AMP – FORD / BLACK	PASSENGER SIDE ‘A’ POST / ‘A’ POST TRIM
IC1	20-WAY MULTILOCK 070 / YELLOW	BELOW CENTER CONSOLE GLOVE BOX
IC2	14-WAY MULTILOCK 070 / WHITE	BELOW CENTER CONSOLE GLOVE BOX
RH1	20-WAY MULTILOCK 070 / SLATE	BEHIND GLOVE BOX
SC2	10-WAY MULTILOCK 070 / YELLOW	ADJACENT TO STEERING COLUMN MOTOR
SC3	12-WAY MULTILOCK 070 / SLATE	RIGHT HAND SIDE OF STEERING COLUMN
SW1	12-WAY MULTILOCK 040 / BLACK	INSIDE STEERING COLUMN COWL
SW2	6-WAY JST / WHITE	CENTER OF STEERING WHEEL

GROUND

Ground	Location / Type
BT1AL	EYELET (PAIR) – LEFT HAND LEG / ADJACENT TO BATTERY
CE2	EYELET (SINGLE) / ABOVE RIGHT HAND SIDE OF TRANSMISSION TUNNEL
FC3BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

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

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CONTROL MODULE PIN OUT INFORMATION

MAJOR INSTRUMENT PACK

▽	Pin	Description	Active	Inactive
C	FC25-24	CAN NETWORK	15 – 1500 Hz	
C	FC25-47	CAN NETWORK	15 – 1500 Hz	
O	FC25-20	VEHICLE SPEED	22 Hz @ 10 MPH (16 KM/H); 44 Hz @ 20 MPH (32 KM/H) @ B+	

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 16.2

COMPONENTS

Component	Connector / Type / Color	Location / Access
ANTENNA MOTOR	BT19 / 6-WAY YAZAKI C.S.U. / WHITE	TRUNK / RIGHT HAND SIDE
CD AUTO-CHANGER	IC7 / CD DATA CONNECTOR	TRUNK / RIGHT HAND SIDE
FULL RANGE SPEAKER – DRIVER DOOR	DD19 / 2-WAY GROTE AND HARTMAN MDK / BLACK	DRIVER DOOR CASING
FULL RANGE SPEAKER – PASSENGER DOOR	DP19 / 2-WAY GROTE AND HARTMAN MDK / BLACK	PASSENGER DOOR CASING
MAJOR INSTRUMENT PACK	FC25 / 48-WAY AMP PCB SIGNAL / BLACK FC26 / 24-WAY AMP PCB SIGNAL / BLACK	FASCIA
RADIO / CASSETTE HEAD UNIT	IC8 / COAXIAL CONNECTOR IC10 / 20-WAY MULTILOCK 070 / WHITE IC13 / COAXIAL CONNECTOR IC14 / POWER AMPLIFIER CONNECTOR	CENTER CONSOLE
RADIO ANTENNA	IC12 / COAXIAL CONNECTOR	TRUNK / RIGHT HAND SIDE
RADIO CONTROL SWITCHES (STEERING WHEEL)	SW4 (FLYLEAD) / 3-WAY EPC / BLACK AND WHITE	STEERING WHEEL
REAR QUARTER FULL RANGE SPEAKER – DRIVER SIDE	RH25 / 2-WAY GROTE AND HARTMAN MDK / BLACK	INTERIOR REAR QUARTER PANEL
REAR QUARTER FULL RANGE SPEAKER – PASSENGER SIDE	RH24 / 2-WAY GROTE AND HARTMAN MDK / BLACK	INTERIOR REAR QUARTER PANEL

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC14	14-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
BT1	20-WAY MULTILOCK 070 / WHITE	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
DD1	23-WAY AMP – FORD / BLACK	DRIVER SIDE 'A' POST MOUNTING BRACKET/ 'A' POST TRIM
DP1	23-WAY AMP – FORD / BLACK	PASSENGER SIDE 'A' POST / 'A' POST TRIM
IC1	20-WAY MULTILOCK 070 / YELLOW	BELOW CENTER CONSOLE GLOVE BOX
IC2	14-WAY MULTILOCK 070 / WHITE	BELOW CENTER CONSOLE GLOVE BOX
RH1	20-WAY MULTILOCK 070 / SLATE	BEHIND GLOVE BOX
SC3	12-WAY MULTILOCK 070 / SLATE	RIGHT HAND SIDE OF STEERING COLUMN
SW1	12-WAY MULTILOCK 040 / BLACK	INSIDE STEERING COLUMN COWL
SW2	6-WAY JST / WHITE	CENTER OF STEERING WHEEL

GROUND

Ground	Location / Type
FC38L	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND 'A' POST
CE2	EYELET (SINGLE) // ABOVE RIGHT HAND SIDE OF TRANSMISSION TUNNEL
BT1AL	EYELET (PAIR) – LEFT HAND LEG / ADJACENT TO BATTERY

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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

CONTROL MODULE PIN OUT INFORMATION

MAJOR INSTRUMENT PACK

	Pin	Description	Active	Inactive
C	FC25-24	CAN NETWORK	15 ~ 1500 Hz	
C	FC25-47	CAN NETWORK	15 ~ 1500 Hz	
O	FC26-20	VEHICLE SPEED	22 Hz @ 10 MPH (16 KM/H); 44 Hz @ 20 MPH (32 KM/H) @ B+	

NOTE: REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 16.3

COMPONENTS

Component	Connector / Type / Color	Location / Access
ANTENNA MOTOR	BT19 / 6-WAY YAZAKI C.S.U. / WHITE	TRUNK / RIGHT HAND SIDE
CD AUTO-CHANGER	IC7 / CD DATA CONNECTOR	TRUNK / RIGHT HAND SIDE
MAJOR INSTRUMENT PACK	FC25 / 48-WAY AMP PCB SIGNAL / BLACK FC26 / 24-WAY AMP PCB SIGNAL / BLACK	FASCIA
MID-BASS SPEAKER – DRIVER DOOR	DD19 / 2-WAY GROTE AND HARTMAN MDK / BLACK	DRIVER DOOR
MID-BASS SPEAKER – PASSENGER DOOR	DP19 / 2-WAY GROTE AND HARTMAN MDK / BLACK	PASSENGER DOOR
POWER AMPLIFIER	IC17 / 12-WAY MULTILOCK 070 / WHITE IC18 / 18-WAY MULTILOCK 070 / WHITE	TRUNK / RIGHT HAND SIDE
RADIO / CASSETTE HEAD UNIT	IC8 / COAXIAL CONNECTOR IC10 / 20-WAY MULTILOCK 070 / WHITE IC13 / COAXIAL CONNECTOR IC14 / POWER AMPLIFIER CONNECTOR	CENTER CONSOLE
RADIO ANTENNA	IC12 / COAXIAL CONNECTOR	TRUNK / RIGHT HAND SIDE
RADIO CONTROL SWITCHES (STEERING WHEEL)	SW4 (FLYLEAD) / 3-WAY EPC / BLACK AND WHITE	STEERING WHEEL
REAR QUARTER MID-RANGE SPEAKER – DRIVER SIDE	RH25 / 2-WAY GROTE AND HARTMAN MDK / BLACK	INTERIOR REAR QUARTER PANEL
REAR QUARTER MID-RANGE SPEAKER – PASSENGER SIDE	RH24 / 2-WAY GROTE AND HARTMAN MDK / BLACK	INTERIOR REAR QUARTER PANEL
REAR SUB-WOOFER (CONVERTIBLE) – DRIVER SIDE	RH27 / 2-WAY GROTE AND HARTMAN MDK / BLACK	INTERIOR REAR QUARTER PANEL
REAR SUB-WOOFER (CONVERTIBLE) – PASSENGER SIDE	RH26 / 2-WAY GROTE AND HARTMAN MDK / BLACK	INTERIOR REAR QUARTER PANEL
REAR SUB-WOOFER (COUPE)	RH26 / 2-WAY GROTE AND HARTMAN MDK / BLACK RH27 / 2-WAY GROTE AND HARTMAN MDK / BLACK	PARCEL SHELF
SQUAWKER (FASCIA) – DRIVER SIDE	FC39 / 2-WAY MULTILOCK 070 / SLATE	FASCIA / DRIVER SIDE
SQUAWKER (FASCIA) – PASSENGER SIDE	FC38 / 2-WAY MULTILOCK 070 / SLATE	FASCIA / PASSENGER SIDE
TWEETER – DRIVER DOOR	DD18 (FLYLEAD) / 2-WAY MULTILOCK 040 / BLACK	DRIVER DOOR
TWEETER – PASSENGER DOOR	DP18 (FLYLEAD) / 2-WAY MULTILOCK 040 / BLACK	PASSENGER DOOR

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
AC14	14-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
BT1	20-WAY MULTILOCK 070 / WHITE	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
DD1	23-WAY AMP – FORD / BLACK	DRIVER SIDE ‘A’ POST MOUNTING BRACKET/ ‘A’ POST TRIM
DP1	23-WAY AMP – FORD / BLACK	PASSENGER SIDE ‘A’ POST / ‘A’ POST TRIM
IC1	20-WAY MULTILOCK 070 / YELLOW	BELOW CENTER CONSOLE GLOVE BOX
IC2	14-WAY MULTILOCK 070 / WHITE	BELOW CENTER CONSOLE GLOVE BOX
IC4	4-WAY MULTILOCK 070 / WHITE	TRUNK / LEFT OF ANTENNA ASSEMBLY
RH1	20-WAY MULTILOCK 070 / SLATE	BEHIND GLOVE BOX
SC3	12-WAY MULTILOCK 070 / SLATE	RIGHT HAND SIDE OF STEERING COLUMN
SW1	12-WAY MULTILOCK 040 / BLACK	INSIDE STEERING COLUMN COWL
SW2	6-WAY JST / WHITE	CENTER OF STEERING WHEEL

GROUND

Ground	Location / Type
BT1AL	EYELET (PAIR) – LEFT HAND LEG / ADJACENT TO BATTERY
BT1CS	EYELET (SINGLE) / ADJACENT TO BATTERY
CE2	EYELET (SINGLE) / ABOVE RIGHT HAND SIDE OF TRANSMISSION TUNNEL
FC3BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND ‘A’ POST

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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

Fig. 16.4

COMPONENTS

Component	Connector / Type / Color	Location / Access
HANDSET	RT4 / TELEPHONE / PROPRIETARY	CENTER CONSOLE
MICROPHONE	RF9 / 2-WAY MULTILOCK 040 / BLACK	ROOF CONSOLE
RADIO / CASSETTE HEAD UNIT	IC8 / COAXIAL CONNECTOR	CENTER CONSOLE
	IC10 / 20-WAY MULTILOCK 070 / WHITE	
	IC13 / COAXIAL CONNECTOR	
	IC14 / POWER AMPLIFIER CONNECTOR	
TELEPHONE ANTENNA	RT7 / COAXIAL	TRUNK / RIGHT HAND SIDE
TELEPHONE TRANSCEIVER	RT2 / TELEPHONE / PROPRIETARY	CENTER CONSOLE
	RT5 / TELEPHONE / PROPRIETARY	
VOICE RECOGNITION ACTIVATION SWITCH (N/A5 VEHICLES ONLY)	FC77 / 10-WAY AMP ML KEY B / WHITE	CENTER CONSOLE

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
IC2	14-WAY MULTILOCK 070 / WHITE	BELOW CENTER CONSOLE GLOVE BOX
RF1	18-WAY MULTILOCK 070 / YELLOW	RIGHT HAND 'A' POST CONNECTOR MOUNTING BRACKET / 'A' POST TRIM
RT3	TELEPHONE / PROPRIETARY	CENTER CONSOLE
RT6	TELEPHONE / PROPRIETARY	CENTER CONSOLE
RT8	TELEPHONE / PROPRIETARY	CENTER CONSOLE
RT9	TELEPHONE / PROPRIETARY	CENTER CONSOLE
RT20	14-WAY MULTILOCK 070 / SLATE	REAR OF CENTER CONSOLE ASSEMBLY

GROUND5

Ground	Location / Type
FC2CS	EYELET (SINGLE) / RIGHT HAND 'A' POST
FC4CS	EYELET (SINGLE) / LEFT HAND 'A' POST

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CONTROL MODULE PIN OUT INFORMATION

AIRBAG / SRS CONTROL MODULE

	Pin	Description	Active	Inactive
I	FC29-4	GROUND	GROUND	GROUND
O	FC29-5	MAJOR INSTRUMENT PACK AIRBAG MIL	GROUND	B+
D	FC29-6	SERIAL COMMUNICATION		
I	FC29-7	IGNITION SWITCHED POWER SUPPLY	B+	
I	FC29-8	LH IMPACT SENSOR GROUND SUPPLY STATUS	0 V (NO FAULT)	GROUND
I	FC29-9	RH IMPACT SENSOR GROUND SUPPLY STATUS	GROUND (NO FAULT)	
O	FC30-2	DRIVERS SIDE AIRBAG POWER SUPPLY	B+ (SHORTED SAFING SENSOR)	OPEN CIRCUIT
O	FC30-3	DRIVERS SIDE AIRBAG GROUND SUPPLY	GROUND (SHORTED IMPACT SENSOR)	OPEN CIRCUIT
O	FC30-4	PASSENGER SIDE AIRBAG GROUND SUPPLY	GROUND (SHORTED IMPACT SENSOR)	OPEN CIRCUIT
O	FC30-5	PASSENGER SIDE AIRBAG POWER SUPPLY	B+ (SHORTED SAFING SENSOR)	OPEN CIRCUIT
I	FC30-6	IGNITION SWITCHED POWER SUPPLY	B+	GROUND
O	FC30-7	FUSED SUPPLY INTERRUPT	GROUND (FAULT PRESENT)	B+ (NO FAULT)
I	FC30-8	DEPLOYMENT BATTERY POWER SUPPLY	B+	B+
I	FC30-9	COMMON AIRBAG GROUND SUPPLY	GROUND (SHORTED IMPACT SENSOR)	OPEN CIRCUIT
I	FC29-11	LH IMPACT SENSOR STATUS	GROUND (SHORTED)	B+
I	FC29-12	RH IMPACT SENSOR STATUS	GROUND (SHORTED)	B+
I	FC30-10	COMMON AIRBAG GROUND SUPPLY	GROUND (SHORTED IMPACT SENSOR)	OPEN CIRCUIT
O	FC30-11	CODE RETRIEVAL PULSED OUTPUT	GROUND (PULSED)	B+
I	FC30-12	GROUND	GROUND	GROUND

Fig. 17.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
AIRBAG – DRIVER SIDE (STEERING WHEEL)	SW11 (FLYLEAD) / 3-WAY EPC / BLACK	CENTER OF STEERING WHEEL
AIRBAG – PASSENGER SIDE	FC74 (FLYLEAD) / 3-WAY EPC / BLACK	LEFT HAND SIDE OF AIRBAG ASSEMBLY
AIRBAG INTERROGATION CONNECTOR	FC40 / 4-WAY MULTILOCK 070 / WHITE	RIGHT HAND ‘A’ POST / ‘A’ POST TRIM
AIRBAG / SRS CONTROL MODULE	FC29 / 12-WAY FORD CARD / BLACK FC30 / 12-WAY FORD CARD / SLATE	RIGHT HAND ‘A’ POST / ‘A’ POST TRIM
IMPACT SENSOR – RH	LF51 / 4-WAY FORD CARD / WHITE	FRONT UPPER CROSS MEMBER / FORWARD OF RADIATOR
IMPACT SENSOR – LH	LF50 / 4-WAY FORD CARD / WHITE	FRONT UPPER CROSS MEMBER / FORWARD OF RADIATOR

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
LF2	8-WAY FORD CARD / BLACK	LEFT HAND ‘A’ POST CONNECTOR MOUNTING BRACKET / ‘A’ POST TRIM
SW10	3-WAY EPC / BLACK	INSIDE STEERING COLUMN COWL

GROUND

Ground	Location / Type
FC1S	EYELET (SINGLE) / RIGHT HAND A POST

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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CONTROL MODULE PIN OUT INFORMATION

BODY PROCESSOR MODULE

	Pin	Description	Active	Inactive
I	FC14-4	BATTERY POWER SUPPLY	B+	B+
I	FC14-65	LOGIC GROUND SUPPLY	GROUND	GROUND
O	FC14-70	HORN RELAY ACTIVATE	GROUND (HORN SOUNDING)	B-
I	FC14-80	BATTERY POWER SUPPLY (LOGIC)	B+	B+
I	FC14-103	POWER GROUND SUPPLY	GROUND	GROUND

Fig. 18.1

COMPONENTS

Component	Connector / Type / Color	Location / Access
BODY PROCESSOR MODULE	FC14 / 104-WAY AMP EEEC / SLATE	PASSENGER SIDE FASCIA / AIRBAG BRACKET
CIGAR LIGHTER	FC42 / CIGAR LIGHTER / BLACK FC69 / LUCAR RIGHT ANGLE	FORWARD OF GEAR SELECTOR
FASCIA ACCESSORY CONNECTOR	FC61 / 3-WAY AMP SERIES 250 / BLACK	FASCIA / ADJACENT TO RIGHT HAND SIDE OF GLOVE BOX
FUSE BOX - ENGINE COMPARTMENT	LF5 / 10-WAY U.T.A. FUSEBOX / WHITE LF6 / 10-WAY U.T.A. FUSEBOX / BLACK LF7 / 10-WAY U.T.A. FUSEBOX / GREEN LF8 / 10-WAY U.T.A. FUSEBOX / BLUE LF70/ EYELET	ENGINE COMPARTMENT / LEFT FRONT
FUSE BOX - TRUNK	RT10 / 10-WAY U.T.A. FUSEBOX / NATURAL BT11 / 10-WAY U.T.A. FUSEBOX / BLACK BT12 / 10-WAY U.T.A. FUSEBOX / GREEN BT13 / 10-WAY U.T.A. FUSEBOX / BLUE BT64 / EYELET	TRUNK / ELECTRICAL CARRIER
GARAGE DOOR OPENER (ROOF CONSOLE)	RF11 / HYBRID / WHITE RF10 (FLYLEAD) / 6-WAY MULTILOCK 070 / SLATE	ROOF CONSOLE
HORN SWITCHES (STEERING WHEEL)	HP1 / 1-WAY BLADE HP2 / 1-WAY BLADE HP3 / EYELET	CENTER OF STEERING WHEEL
HORN - LH	LF16 / LUCAR RIGHT ANGLE LF17 / LUCAR RIGHT ANGLE	FRONT BUMPER / REAR
HORN - RH	LF14 / LUCAR RIGHT ANGLE LF15 / LUCAR RIGHT ANGLE	FRONT BUMPER / REAR
TRUNK ACCESSORY CONNECTOR	BT25 / 3-WAY AMP SERIES 250 PIN / BLACK	TRUNK / ADJACENT TO BATTERY

RELAYS

Relay	Color / Stripe	Connector / Color	Location / Access
HORN RELAY (#6)	BROWN	BUS	ENGINE COMPARTMENT FUSE BOX
ACCESSORY CONNECTOR RELAY (#6)	BROWN	BUS	TRUNK FUSE BOX

HARNESS-TO-HARNESS CONNECTORS

Connector	Type / Color	Location / Access
BT58	4-WAY ECONOSEAL III HC / BLACK	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
LF60	20-WAY MULTILOCK 070 / WHITE	LEFT HAND 'A' POST CONNECTOR MOUNTING BRACKET / 'A' POST TRIM
RF1	18-WAY MULTILOCK 070 / YELLOW	RIGHT HAND 'A' POST CONNECTOR MOUNTING BRACKET / 'A' POST TRIM
RH14	2-WAY ECONOSEAL III HC / BLACK	REAR OF CENTER CONSOLE ASSEMBLY
SC2	10-WAY MULTILOCK 070 / YELLOW	ADJACENT TO STEERING COLUMN MOTOR
SC3	12-WAY MULTILOCK 070 / SLATE	RIGHT HAND SIDE OF STEERING COLUMN
SW1	12-WAY MULTILOCK 040 / BLACK	INSIDE STEERING COLUMN COWL
SW2	6-WAY JST / WHITE	CENTER OF STEERING WHEEL

GROUND

Ground	Location / Type
FC1BR	EYELET (PAIR) - RIGHT HAND LEG / RIGHT HAND 'A' POST
FC2BL	EYELET (PAIR) - LEFT HAND LEG / RIGHT HAND 'A' POST
FC2BR	EYELET (PAIR) - RIGHT HAND LEG / RIGHT HAND 'A' POST
FC3AS	EYELET (SINGLE) / LEFT HAND 'A' POST
FC3BL	EYELET (PAIR) - LEFT HAND LEG / LEFT HAND 'A' POST
FC3BR	EYELET (PAIR) - RIGHT HAND LEG / LEFT HAND 'A' POST
FC4BL	EYELET (PAIR) - LEFT HAND LEG / LEFT HAND 'A' POST
FC4BR	EYELET (PAIR) - RIGHT HAND LEG / LEFT HAND 'A' POST
LF1AL	EYELET (PAIR) - LEFT HAND LEG / RIGHT HAND HEADLAMP
LF2BR	EYELET (PAIR) - RIGHT HAND LEG / ENGINE COMPARTMENT, FORWARD OF LEFT HAND HOOD LATCH

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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

I	Input	D	Serial and encoded communications	B+	Battery voltage	KHz	Frequency x 1000
O	Output	C	CAN (Network)	V	Voltage (DC)	MS	Milliseconds
SG	Signal Ground	S	SCP Network	Hz	Frequency	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.

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CONTROL MODULE PIN OUT INFORMATION

REFER TO THE APPENDIX AT THE REAR OF THIS BOOK FOR CAN AND SCP NETWORK MESSAGES.

Fig. 19.1

COMPONENTS		
Component	Connector / Type / Color	Location / Access
ABS / TRACTION CONTROL CONTROL MODULE	LF37 / 25-WAY AMP HYBRID / BLACK	ENGINE COMPARTMENT / FRONT LEFT
ADAPTIVE DAMPING CONTROL MODULE	BT69 /35-WAY AMP / BLACK	TRUNK / ADJACENT TO ELECTRICAL CARRIER
AIR CONDITIONING CONTROL MODULE	AC1 / 26-WAY MULTILOCK 47 / SLATE AC2 / 16-WAY MULTILOCK 47 / SLATE AC3 / 12-WAY MULTILOCK 47 / SLATE AC4 / 22-WAY MULTILOCK 47 / SLATE	A/C UNIT / RIGHT HAND SIDE
AIRBAG / SRS CONTROL MODULE	FC29 / 12-WAY FORD CARD / BLACK FC30 / 12-WAY FORD CARD / SLATE	RIGHT HAND 'A' POST / 'A' POST TRIM
BODY PROCESSOR MODULE	FC14 / 104-WAY AMP EEEC / SLATE	PASSENGER SIDE FASCIA / AIRBAG BRACKET
DATA LINK CONNECTOR	FC53 / 16-WAY AMP OBD2 / BLACK	BELOW DRIVER SIDE FUSE BOX
DOOR CONTROL MODULE – DRIVER	DD10 / 22-WAY FORD 2.8 TIMER / BLUE DD11 / 22-WAY FORD 2.8 TIMER / BLACK	DRIVER DOOR / DOOR CASING
DOOR CONTROL MODULE – PASSENGER	DP10 / 22-WAY FORD 2.8 TIMER / BLUE DP11 / 22-WAY FORD 2.8 TIMER / BLACK	PASSENGER DOOR / DOOR CASING
ENGINE CONTROL MODULE	EM10 / 28-WAY MULTILOCK 040 / SLATE EM11 / 16-WAY MULTILOCK 040 / SLATE EM12 / 22-WAY MULTILOCK 040 / SLATE EM13 / 34-WAY MULTILOCK 040 / SLATE	ENGINE COMPARTMENT / CONTROL MODULE ENCLOSURE
GEAR SELECTOR MODULE	FC88 / HYBRID / BLACK	FRONT OF GEAR SELECTOR ASSEMBLY
KEY TRANSPONDER MODULE	FC22 / 20-WAY MULTILOCK 040 / GREEN	ADJACENT TO PASSENGER SIDE FUSE BOX
MAJOR INSTRUMENT PACK	FC25 / 48-WAY AMP PCB SIGNAL / BLACK FC26 / 24-WAY AMP PCB SIGNAL / BLACK	FASCIA
SEAT CONTROL MODULE – DRIVER	SD3 / 16-WAY FORD 2.8 TIMER / BLACK SD4 / 26-WAY FORD IDC / BLACK SD5 / 10-WAY FORD 2.8 TIMER / BLACK	BELOW SEAT CUSHION
SEAT CONTROL MODULE – PASSENGER	SP3 / 16-WAY FORD 2.8 TIMER / BLACK SP5 / 10-WAY FORD 2.8 TIMER / BLACK	BELOW SEAT CUSHION
SECURITY AND LOCKING CONTROL MODULE	BT40 / 16-WAY FORD 2.8 TIMER / BLACK BT41 / 26-WAY FORD IDC / BLACK RH20 / COAXIAL CONNECTOR	TRUNK / ELECTRICAL CARRIER
TRANSMISSION CONTROL MODULE	EM7 / 88-WAY BOSCH / BLACK	ENGINE COMPARTMENT / CONTROL MODULE ENCLOSURE
HARNESS-TO-HARNESS CONNECTORS		
Connector	Type / Color	Location / Access
AC14	14-WAY MULTILOCK 070 / SLATE	FASCIA BOTTOM CONNECTOR MOUNTING BRACKET / RIGHT HAND SIDE
BT1	20-WAY MULTILOCK 070 / WHITE	TRUNK / ABOVE RIGHT HAND REAR WHEEL ARCH
DD1	23-WAY AMP – FORD / BLACK	DRIVER SIDE 'A' POST MOUNTING BRACKET/ 'A' POST TRIM
DP1	23-WAY AMP – FORD / BLACK	PASSENGER SIDE 'A' POST / 'A' POST TRIM
EM1	20-WAY MULTILOCK 070 / WHITE	ENGINE COMPARTMENT / ADJACENT TO RIGHT HAND ENCLOSURE
RH12	16-WAY MULTILOCK 070 / YELLOW	REAR OF CENTER CONSOLE ASSEMBLY
SD1	8-WAY MULTILOCK 070 / YELLOW	BELOW DRIVER SEAT
SP1	8-WAY MULTILOCK 070 / YELLOW	BELOW PASSENGER SEAT
GROUNDS		
Ground	Location / Type	
FC3BL	EYELET (PAIR) – LEFT HAND LEG / LEFT HAND 'A' POST	

CONTROL MODULE PIN OUT INFORMATION (FOLD OUT PAGE)



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This Appendix contains a listing of CAN and SCP Network messages.

Abbreviations

The following abbreviations are used throughout this Appendix:

BPM	Body Processor Module
DIAG	Diagnostics
DDCM	Driver Door Control Module
DSCM	Driver Seat Control Module
IP	Instrument Pack
PDCM	Passenger Door Control Module
PSCM	Passenger Seat Control Module
R	Receive
T	Transmit
SLCM	Security and Locking Control Module



CAN Messages by Node

NODE: Engine Control Module

Transmitted by ECM

Message	Useage
CAN traction acknowledge	Confirms torque reduction for traction control
CAN traction control estimated engine torque	Derived from map of engine characteristics
CAN shift energy management estimated engine torque	Derived from map of engine characteristics
CAN throttle position	Throttle valve position
CAN pedal position	Accelerator pedal position, throttle demand
CAN torque reduction acknowledge	Confirms torque reduction for shift energy management
CAN engine speed	Engine speed
CAN brake pedal pressed	Brake switch status
CAN cruise status	Cruise control system status
CAN park brake status	Indicates whether the parking brake is on
CAN OBD II clear fault codes	Request for ABS and TCM to clear their OBD II DTCs
CAN engine coolant temperature	Engine coolant temperature in Celsius
CAN engine OBD II MIL	MIL control for OBD II DTCs
CAN throttle malfunction red	Red throttle malfunction warnings
CAN throttle malfunction amber	Amber throttle malfunction warnings
CAN ECM fault code MIL status	Indicates whether the ECM DTC should switch MIL on
CAN ECM PECUS flag	PECUS programmed status of ECM
CAN engine fault codes	EMS DTCs, including OBD II P and C codes
CAN fuel used	Derived from injector pulse duration
CAN NWM token ECM	Message for monitoring network status
CAN diagnostic data out – ECM	From external diagnostics device only



CAN Messages by Node

NODE: Engine Control Module**Received by ECM**

Message	Usage	Source
CAN torque reduction throttle	For traction control – throttle intervention	ABS
CAN fast torque reduction ignition	Fast stability control response – ignition retard	ABS
CAN fast torque reduction cylinder	Fast stability control response – cylinder fuel cut off	ABS
CAN torque reduction request	For shift energy management	TCM
CAN transmission overload	Protects transmission against excessive torque	TCM
CAN transmission input speed	Transmission input shaft speed	TCM
CAN transmission output speed	Transmission output shaft speed	TCM
CAN torque converter slip	Percentage of torque converter slip	TCM
CAN kickdown	Kickdown status	TCM
CAN traction status	Indicates if the traction control algorithm is functioning	ABS
CAN vehicle reference speed	Vehicle speed based on a standard wheel size	ABS
CAN ABS fault codes	ABS DTCs, including OBD II P and C codes	ABS
CAN OBD II ABS clear acknowledge	Acknowledgment that OBD II ABS DTCs have been cleared	ABS
CAN ABS fault code MIL status	Indicates whether the ABS DTC should switch MIL on	ABS
CAN ABS malfunction	Malfunction information for ABS and brake systems	ABS
CAN sidelamp status	Side lamp state for idle speed control	IP
CAN dipped beam status	Dipped beam state for idle speed control	IP
CAN main beam status	Main beam state for idle speed control	IP
CAN oil pressure low	Indicates low engine oil pressure	IP
CAN fuel level damped	Indicates 'damped' level of fuel in tank	IP
CAN fuel level raw	Indicates 'raw – undamped' level of fuel in tank	IP
CAN gear position actual	Actual transmission gear state	TCM
CAN torque converter status	Indicates torque converter lockup	TCM
CAN gear position selected	Position of transmission rotary switch	TCM
CAN gear selection fault	Indicates validity of CAN gear position selected	TCM
CAN transmission shift map	Dynamic shift program currently selected	TCM
CAN transmission oil temperature	Transmission fluid temperature	TCM
CAN transmission malfunction	Transmission malfunction warning	TCM
CAN TCM fault code MIL status	Indicates whether the TCM DTC should switch MIL on	TCM
CAN OBD II TCM clear acknowledge	Acknowledgment that OBD II DTCs have been cleared	TCM
CAN transmission fault codes	TCM DTCs, including OBD II P and C codes	TCM
CAN left front wheel speed	Front left wheel speed	ABS
CAN right front wheel speed	Front right wheel speed	ABS
CAN left rear wheel speed	Rear left wheel speed	ABS
CAN right rear wheel speed	Rear right wheel speed	ABS
CAN NWM token – TCM	Message for monitoring network status	TCM
CAN NWM token – IP	Message for monitoring network status	IP
CAN NWM token – ABS	Message for monitoring network status	ABS
CAN diagnostic data in – ECM	From external diagnostics device only	DIAG



CAN Messages by Node

NODE: Transmission Control Module

Transmitted by TCM

Message	Usage
CAN torque reduction request	For shift energy management
CAN transmission overload	Protects transmission against excessive torque
CAN transmission input speed	Transmission input shaft speed
CAN transmission output speed	Transmission output shaft speed
CAN torque converter slip	Percentage of torque converter slip
CAN kickdown	Kickdown status
CAN gear position actual	Actual transmission gear state
CAN torque converter status	Indicates torque converter lockup
CAN gear position selected	Position of transmission rotary switch
CAN gear selection fault	Indicates validity of CAN gear position selected
CAN transmission shift map	Dynamic shift program currently selected
CAN transmission oil temperature	Transmission fluid temperature
CAN transmission malfunction	Transmission malfunction warning
CAN TCM PECUS flag	PECUS programmed status of TCM
CAN TCM fault code MIL status	Indicates whether the TCM DTC should switch MIL on
CAN OBD II TCM clear acknowledge	Acknowledgment that OBD II DTCs have been cleared
CAN transmission fault codes	TCM DTCs, including OBD II P and C codes
CAN NWM token – TCM	Message for monitoring network status
CAN diagnostic data out – TCM	To external diagnostics device only

Received by TCM

Message	Usage	Source
CAN traction status	Indicates if the traction control algorithm is functioning	ABS
CAN ABS malfunction	Malfunction information for ABS and brake systems	ABS
CAN ABS status	Indicates whether ABS is operating	ABS
CAN shift energy management estimated engine torque	Derived from map of engine characteristics	ECM
CAN throttle position	Throttle valve position	ECM
CAN pedal position	Accelerator pedal position, throttle demand	ECM
CAN torque reduction acknowledge	Confirms torque reduction for shift energy management	ECM
CAN engine speed	Engine speed	ECM
CAN brake pedal pressed	Brake switch status	ECM
CAN cruise status	Cruise control system status	ECM
CAN OBD II clear fault codes	Request for ABS and TCM to clear their OBD II DTCs	ECM
CAN engine coolant temperature	Engine coolant temperature in Celsius	ECM
CAN engine OBD II MIL	MIL control for OBD II DTCs	ECM
CAN throttle malfunction red	Red throttle malfunction warnings	ECM
CAN throttle malfunction amber	Amber throttle malfunction warnings	ECM
CAN ECM fault code MIL status	Indicates whether the ECM DTC should switch MIL on	ECM
CAN engine fault codes	EMS DTCs, including OBD II P and C codes	ECM
CAN left front wheel speed	Front left wheel speed	ABS
CAN right front wheel speed	Front right wheel speed	ABS
CAN NWM token – ECM	Message for monitoring network status	ECM
CAN NWM token – IP	Message for monitoring network status	IP
CAN NWM token – ABS	Message for monitoring network status	ABS
CAN diagnostic data in – TCM	From external diagnostics device only	DIAG



CAN Messages by Node

NODE: Instrument Pack**Transmitted by IP**

Message	Usage
CAN sidelamp status	Side lamp state for idle speed control
CAN dipped beam status	Dipped beam state for idle speed control
CAN main beam status	Main beam state for idle speed control
CAN oil pressure low	Indicates low engine oil pressure
CAN fuel level damped	Indicates 'damped' level of fuel in tank
CAN fuel level raw	Indicates 'raw – undamped' level of fuel in tank
CAN NWM token – IP	Message for monitoring network status
CAN diagnostic data out – IP	To external diagnostics device only

Received by IP

Message	Usage	Source
CAN traction status	Indicates if the traction control algorithm is functioning	ABS
CAN vehicle reference speed	Vehicle speed based on a standard wheel size	ABS
CAN reference distance traveled	Rolling count – based on a standard wheel size	ABS
CAN ABS malfunction	Malfunction information for ABS and brake systems	ABS
CAN engine speed	Engine speed	ECM
CAN brake pedal pressed	Brake switch status	ECM
CAN park brake status	Indicates whether the parking brake is on	ECM
CAN gear position selected	Position of transmission rotary switch	TCM
CAN gear selection fault	Indicates validity of CAN gear position selected	TCM
CAN transmission oil temperature	Transmission fluid temperature	TCM
CAN transmission malfunction	Transmission malfunction warning	TCM
CAN TCM PECUS flag	PECUS programmed status of TCM	TCM
CAN engine coolant temperature	Engine coolant temperature in Celsius	ECM
CAN engine OBD II MIL	MIL control for OBD II DTCs	ECM
CAN throttle malfunction red	Red throttle malfunction warnings	ECM
CAN throttle malfunction amber	Amber throttle malfunction warnings	ECM
CAN ECM PECUS flag	PECUS programmed status of ECM	ECM
CAN fuel used	Derived from injector pulse duration	ECM
CAN right rear wheel speed	Rear right wheel speed	ABS
CAN NWM token ECM	Message for monitoring network status	ECM
CAN NWM token TCM	Message for monitoring network status	TCM
CAN NWM token ABS	Message for monitoring network status	ABS
CAN diagnostic data in inst	From external diagnostics device only	DIAG



CAN Messages by Node

NODE: ABS / Traction Control Control Module

Transmitted by ABS/TC CM

Message	Usage
CAN torque reduction throttle	For traction control – throttle intervention
CAN fast torque reduction ignition	Fast stability control response – ignition retard
CAN fast torque reduction cylinder	Fast stability control response – cylinder fuel cut off
CAN traction status	Indicates if the traction control algorithm is functioning
CAN vehicle reference speed	Vehicle speed based on a standard wheel size
CAN reference distance traveled	Rolling count – based on a standard wheel size
CAN ABS fault codes	ABS DTCs, including OBD II P and C codes
CAN OBD II ABS clear acknowledge	Acknowledgment that OBD II ABS DTCs have been cleared
CAN ABS fault code MIL status	Indicates whether the ABS DTC should switch MIL on
CAN ABS malfunction	Malfunction information for ABS and brake systems
CAN ABS status	Indicates whether ABS is operating
CAN left front wheel speed	Front left wheel speed
CAN right front wheel speed	Front right wheel speed
CAN left rear wheel speed	Rear left wheel speed
CAN right rear wheel speed	Rear right wheel speed
CAN NWM token – ABS	Message for monitoring network status
CAN diagnostic data out – ABS	From external diagnostics device only

Received by ABS/TC CM

Message	Usage	Source
CAN traction acknowledge	Confirms torque reduction for traction control	ECM
CAN traction control estimated engine torque	Derived from map of engine characteristics	ECM
CAN transmission input speed	Transmission input shaft speed	TCM
CAN transmission output speed	Transmission output shaft speed	TCM
CAN torque converter slip	Percentage of torque converter slip	TCM
CAN kickdown	Kickdown status	TCM
CAN throttle position	Throttle valve position	ECM
CAN pedal position	Accelerator pedal position, throttle demand	ECM
CAN engine speed	Engine speed	ECM
CAN brake pedal pressed	Brake switch status	ECM
CAN OBD II clear fault codes	Request for ABS and TCM to clear their OBD II DTCs	ECM
CAN gear position actual	Actual transmission gear state	TCM
CAN torque converter status	Indicates torque converter lockup	TCM
CAN transmission shift map	Dynamic shift program currently selected	TCM
CAN transmission malfunction	Transmission malfunction warning	TCM
CAN transmission fault codes	TCM DTCs, including OBD II P and C codes	TCM
CAN engine OBD II MIL	MIL control for OBD II DTCs	ECM
CAN throttle malfunction red	Red throttle malfunction warnings	ECM
CAN throttle malfunction amber	Amber throttle malfunction warnings	ECM
CAN ECM fault code MIL status	Indicates whether the ECM DTC should switch MIL on	ECM
CAN engine fault codes	EMS DTCs, including OBD II P and C codes	ECM
CAN NWM token – ECM	Message for monitoring network status	ECM
CAN NWM token – TCM	Message for monitoring network status	TCM
CAN NWM token – IP	Message for monitoring network status	IP
CAN diagnostic data in – ABS	From external diagnostics device only	DIAG



CAN Messages by Node

NODE: Gear Selector Module (listen only)

Received by Gear Selector Module

Message	Usage	Source
CAN gear position selected	Gear selector indicator illumination	TCM
CAN gear selection fault		TCM



CAN Message Matrix

Message	ABS	TCM	ECM	IP	Gear Selector	Diagnostics
CAN torque reduction throttle	T		R			
CAN fast torque reduction ignition	T		R			
CAN fast torque reduction cylinder	T		R			
CAN traction acknowledge	R		T			
CAN traction control estimated engine torque	R		T			
CAN torque reduction request		T	R			
CAN transmission overload		T	R			
CAN transmission input speed	R	T	R			
CAN transmission out speed	R	T	R			
CAN torque converter slip	R	T	R			
CAN kickdown	R	T	R			
CAN traction status	T	R	R	R		
CAN vehicle reference speed	T		R	R		
CAN reference distance traveled	T			R		
CAN ABS fault codes	T		R			
CAN OBD II ABS clear acknowledge	T		R			
CAN ABS fault code MIL status	T		R			
CAN ABS malfunction	T	R	R	R		
CAN ABS status	T	R				
CAN shift energy management estimated engine torque		R	T			
CAN throttle position	R	R	T			
CAN pedal position	R	R	T			
CAN torque reduction acknowledge		R	T			
CAN engine speed	R	R	T	R		
CAN brake pedal pressed	R	R	T	R		
CAN cruise status		R	T			
CAN park brake status			T	R		
CAN OBD II clear fault codes	R	R	T			
CAN sidelamp status			R	T		
CAN dipped beam status			R	T		
CAN main beam status			R	T		
CAN oil pressure low			R	T		
CAN fuel level raw			R	T		
CAN fuel level damped			R	T		
CAN gear position actual	R	T	R			
CAN torque converter status	R	T	R			
CAN gear position selected	R	T	R	R	R	
CAN gear selection fault	R	T	R	R	R	
CAN transmission shift map	R	T	R			
CAN transmission oil temperature		T	R	R		
CAN transmission malfunction	R	T	R	R		
CAN TCM PECUS flag		T		R		
CAN TCM fault code MIL status		T	R			
CAN OBD II TCM clear acknowledge		T	R			
CAN transmission fault codes	R	T	R			
CAN engine coolant temperature		R	T	R		
CAN engine OBD II MIL	R	R	T	R		
CAN throttle malfunction red	R	R	T	R		
CAN throttle malfunction amber	R	R	T	R		
CAN ECM fault code MIL status	R	R	T			
CAN ECM PECUS flag			T	R		
CAN engine fault codes	R	R	T			
CAN fuel used			T	R		
CAN left front wheel speed	T	R	R			
CAN right front wheel speed	T	R	R			
CAN left rear wheel speed	T		R			
CAN right rear wheel speed	T		R	R		



Message	ABS	TCM	ECM	IP	Gear Selector	Diagnostics
CAN NWM token – ECM	R	R	T	R		
CAN NWM token – TCM	R	T	R	R		
CAN NWM token – IP	R	R	R	T		
CAN NWM token – ABS	T	R	R	R		
CAN diagnostic data in – ECM			R			T
CAN diagnostic data in – TCM		R				T
CAN diagnostic data in – IP				R		T
CAN diagnostic data in – ABS	R					T
CAN diagnostic data out – ECM			T			R
CAN diagnostic data out – TCM		T				R
CAN diagnostic data out – IP				T		R
CAN diagnostic data out – ABS	T					R



SCP Message Matrix

#	Message Name	IP	BPM	DDCM	PDCM	DSCM	PSCM	SLCM
1	Vehicle speed	T	R	R				R
2	Brake pedal pressed	T	R					
3	SLCM not programmed	R						T
4	BPM not programmed	R	T					
5	DDCM not programmed	R		T				
6	DSCM not programmed	R				T		
7	PDCM not programmed	R			T			
8	PSCM not programmed	R					T	
9	Left hand drive vehicle		T	R	R			R
10	Valet mode OFF		T					R
11	Non-convertible vehicle		T					R
12	Right hand drive vehicle		T	R	R			R
13	Valet mode ON		T					R
14	Convertible vehicle		T					R
15	Request vehicle drive side		R	T				
16	Request valet mode status		R					T
17	Request convertible status		R					T
18	Reverse gear selected	T	R	R	R	R	R	R
19	Not-in-park switch - inactive		T	R	R	R	R	
20	Not-in-park switch - active		T	R	R	R	R	
21	Request not-in-park switch status		R			T		
22	Request not-in-park switch status		R				T	
23-58	Diagnostic messages							
59	Charging OK	T				R	R	
60	Inertia switch inactive		T	R	R			R
61	Inertia switch active		T	R	R			R
62	Request inertia switch status		R	T				
63	Request inertia switch status		R	T				
64	Ignition status	R	T	R	R	R	R	R
65	Key not-in-ignition		T	R	R			R
66	Key in-ignition		T	R	R			R
67	Request ignition status		R					T
68	Request ignition status	T	R					
69	Request ignition status		R	T				
70	Request ignition status		R		T			
71	Request ignition status		R	T				
72	Request ignition status		R		T			
73	Request key-in status		R					T
74	Request key-in status		R	T				
75	Request key-in status		R		T			
76	Request key-in status		R	T				
77	Seat belt tell tale OFF	R				T		
78	Low washer fluid warning OFF	R	T					
79	Convertible top latch warning OFF	R						T
80	Seat belt tell tale ON	R				T		
81	Low washer fluid warning ON	R	T					
82	Convertible top latch warning ON	R						T
83	Request washer fluid status	T	R					
84	Request convertible top latch status	T						R
85	Security audible indication		R					T
86	Remote panic		R	R	R			T
87	Security disarm		R	R	R			T
88	Glass break fault		T					R
89	Security armed		R	R	R			T
90	Key valid		T					R



#	Message Name	IP	BPM	DDCM	PDCM	DSCM	PSCM	SLCM
91	Glass break detected	.....	T					R
92	Request security arm status	.....	T					R
93	Request security arm status	.....		T				R
94	Request security arm status	.....			T			R
95	Seat belt chime OFF	.....	R			T		
96	Seat belt chime ON	.....	R			T		
97	Request seat belt chime status	.....	T			R		
98–165	Diagnostic messages	.....						
166	Recall memory 1	.....	R	T	R	R		
167	Recall memory 2	.....	R	T	R	R		
168	Save memory 1	.....	R	T	R	R		
169	Save memory 2	.....	R	T	R	R		
170	DDCM memory 1 recalled	.....	R	T				
171	DSCM memory 1 recalled	.....	R			T		
172	PDCM memory 1 recalled	.....	R		T			
173	DDCM memory 2 recalled	.....	R	T				
174	DSCM memory 2 recalled	.....	R			T		
175	PDCM memory 2 recalled	.....	R		T			
176	Park fold-back mirrors	.....		T		R	R	
177	Unfold fold-back mirrors	.....		T		R	R	
178	Stop driver mirror	.....		T	R			
179	Stop passenger mirror	.....		T	R			
180	Driver mirror up	.....		T	R			
181	Passenger mirror up	.....		T	R			
182	Driver mirror down	.....		T	R			
183	Passenger mirror down	.....		T	R			
184	Passenger mirror right	.....		T	R			
185	Passenger mirror left	.....		T	R			
186	Unlock driver door	.....		R	T			
187	Unlock passenger door	.....		T	R			
188	Remote unlock	.....	R	R	R			T
189	Remote trunk release	.....	R					T
190	Lock front doors	.....	R	T				
191	Lock front doors	.....	R		T			
192	Remote superlock	.....		R	R			T
193	Superlock driver door	.....				T		
194	Superlock passenger door	.....		T				
195	Remote lock	.....	R					T
196	Vehicle unlocked	.....	R	T				R
197	Driver door unlocked	.....	R	R	R			T
198	Passenger door unlocked	.....	R		R			T
199	Driver lock switch status	.....	R	T				R
200	Passenger lock switch status	.....	R		T			R
201	Driver door unsuperlocked	.....	R	T				
202	Passenger door unsuperlocked	.....	R		T			
203	Vehicle locked	.....	R	T				R
204	Driver door locked	.....	R	R	R			T
205	Passenger door locked	.....	R	R	R			T
206	Driver door superlocked	.....	R	T				
207	Passenger door superlocked	.....	R		T			
208	Request vehicle lock status	.....		R				T
209	Request driver door lock status	.....		T				R
210	Request passenger door status	.....			T			R
211	Request driver key barrel status	.....		R				T
212	Request driver key barrel status	.....		R	T			

(continued)



SCP Message Matrix

#	Message Name	IP	BPM	DDCM	PDCM	DSCM	PSCM	SLCM
213	Request passenger key barrel status (deleted)	.....	.....	.....	R .....	.....	.....	T
214	Request passenger key barrel status (deleted)	.....	.....	T	R .....	.....	.....	.....
215	Request superlock status	.....	T	R	R .....	.....	.....	.....
216	Open trunk	.....	T .....	.....	.....	.....	.....	R
217	Hood closed	R	T .....	.....	.....	.....	.....	R
218	Driver door closed	R	R	T .....	.....	R .....	.....	R
219	Passenger door closed	R	R .....	.....	.....	T	R	R
220	Trunk closed	R	R .....	.....	.....	.....	.....	T
221	Stop fuel filler flap open	.....	T .....	.....	.....	.....	.....	R
222	Convertible top latch status	.....	T .....	.....	.....	.....	.....	.....
223	Hood ajar	R	T .....	.....	.....	.....	.....	R
224	Driver door ajar	R	R	T .....	.....	R .....	.....	R
225	Passenger door ajar	R	R .....	.....	T .....	.....	R	R
226	Trunk ajar	R	R .....	.....	.....	.....	.....	T
227	Open fuel filler flap	.....	T .....	.....	.....	.....	.....	R
228	Request hood ajar status	.....	R .....	.....	.....	.....	.....	T
229	Request driver door ajar status	.....	.....	R .....	.....	.....	.....	T
230	Request driver door status	.....	T	R .....	.....	.....	.....	.....
231	Request driver door ajar status	.....	.....	R .....	.....	T .....	.....	.....
232	Request passenger door ajar status	.....	.....	.....	R .....	.....	.....	T
233	Request trunk ajar status	.....	T .....	.....	.....	.....	.....	R
234	Request convertible top latch switches status	.....	R .....	.....	.....	.....	.....	T
235	Driver seat heater tell tale OFF	.....	R .....	.....	.....	T .....	.....	.....
236	Passenger seat heater tell tale OFF	.....	R .....	.....	.....	.....	T .....	.....
237	Driver seat heater tell tale ON	.....	R .....	.....	.....	T .....	.....	.....
238	Passenger seat heater tell tale ON	.....	R .....	.....	.....	.....	T .....	.....
239	Request driver heater tell tale status	.....	T .....	.....	.....	R .....	.....	.....
240	Request passenger heater tell tale status	.....	T .....	.....	.....	.....	R .....	.....
241	Stop global window open	.....	R	R	R .....	.....	.....	T
242	Stop global window close	.....	R	R	R .....	.....	.....	T
243	Position driver window	.....	.....	R .....	.....	.....	.....	T
244	Position passenger window	.....	.....	.....	R .....	.....	.....	T
245	Position rear quarters	.....	R .....	.....	.....	.....	.....	T
246	Driver window position	.....	.....	T .....	.....	.....	.....	R
247	Passenger window position	.....	.....	.....	T .....	.....	.....	R
248	Stop passenger window open	.....	.....	T	R .....	.....	.....	.....
249	Stop convertible top open	.....	T .....	.....	.....	.....	.....	R
250	Stop passenger window close	.....	.....	T	R .....	.....	.....	.....
251	Stop convertible top close	.....	T .....	.....	.....	.....	.....	R
252	Open passenger window	.....	.....	T	R .....	.....	.....	.....
253	Open convertible top	.....	T .....	.....	.....	.....	.....	R
254	Close passenger window	.....	.....	T	R .....	.....	.....	.....
255	Close convertible top	.....	T .....	.....	.....	.....	.....	R
256	Request driver window position	.....	.....	R .....	.....	.....	.....	T
257	Request passenger window position	.....	.....	.....	R .....	.....	.....	T
258	Request driver and passenger window switch status	.....	.....	R	T .....	.....	.....	.....
259	Driver seat heater switch active	.....	T .....	.....	.....	R .....	.....	.....
260	Passenger seat heater switch active	.....	T .....	.....	.....	.....	R .....	.....
261	Front bulb failure	R	T .....	.....	.....	.....	.....	.....
262	Rear bulb failure	R .....	.....	.....	.....	.....	.....	T
263	Front bulbs OK	R	T .....	.....	.....	.....	.....	.....
264	Rear bulbs OK	R .....	.....	.....	.....	.....	.....	T
265	Request front bulb fail status	T	R .....	.....	.....	.....	.....	.....
266	Request rear bulb fail status	T .....	.....	.....	.....	.....	.....	R
267	Rear fog lamps OFF	.....	T .....	.....	.....	.....	.....	R
268	Remote head lamp convenience OFF	.....	R .....	.....	.....	.....	.....	T



#	Message Name	IP	BPM	DDCM	PDCM	DSCM	PSCM	SLCM
269	Rear fog lamps ON	.....	T .....	.....	.....	.....	.....	R
270	Remote head lamp convenience ON	.....	R .....	.....	.....	.....	.....	T
271	Dip beam OFF	R	T .....	.....	.....	.....	.....	.....
272	Sidelamps OFF	R	T .....	.....	.....	.....	.....	.....
273	Hazard warning OFF	R	T .....	.....	.....	.....	.....	.....
274	Left DI lamp OFF	R	T .....	.....	.....	.....	.....	.....
275	Right DI lamp OFF	R	T .....	.....	.....	.....	.....	.....
276	Main beam OFF	R	T .....	.....	.....	.....	.....	.....
277	Rear fog lamps OFF	.....	R .....	.....	.....	.....	.....	T
278	Main beam flash OFF	.....	T .....	.....	.....	.....	.....	R
279	Request rear fog switch status	.....	R .....	.....	.....	.....	.....	T
280	Request remote headlamp convenience status	.....	T .....	.....	.....	.....	.....	R
281	Dip beam ON	R	T .....	.....	.....	.....	.....	.....
282	Sidelamps ON	R	T .....	.....	.....	.....	.....	.....
283	Hazards ON	R	T .....	.....	.....	.....	.....	.....
284	Left DI lamp ON	R	T .....	.....	.....	.....	.....	.....
285	Right DI lamp ON	R	T .....	.....	.....	.....	.....	.....
286	Main beam ON	R	T .....	.....	.....	.....	.....	.....
287	Rear fog lamps ON	.....	R .....	.....	.....	.....	.....	T
288	Main beam flash ON	.....	T .....	.....	.....	.....	.....	R
289	Request dip beam status	T	R .....	.....	.....	.....	.....	.....
290	Request sidelamps status	T	R .....	.....	.....	.....	.....	.....
291	Request left DI status	T	R .....	.....	.....	.....	.....	.....
292	Request right DI status	T	R .....	.....	.....	.....	.....	.....
293	Request main beam status	T	R .....	.....	.....	.....	.....	.....
294	Request hazard warning status	T	R .....	.....	.....	.....	.....	.....
295	Request rear fog lamps status	.....	T .....	.....	.....	.....	.....	R
296	Interior lamps OFF	R	T .....	.....	.....	.....	.....	.....
297	Interior lamps ON	R	T .....	.....	.....	.....	.....	.....
298	Request interior lighting status	T	R .....	.....	.....	.....	.....	.....
299	Valet mode message OFF	R	T .....	.....	.....	.....	.....	.....
300	Recoding keying message OFF	R .....	.....	.....	.....	.....	.....	T
301	Valet mode message	R	T .....	.....	.....	.....	.....	.....
302	Recoding keying message	R .....	.....	.....	.....	.....	.....	T
303–356	Diagnostic messages	.....	.....	.....	.....	.....	.....	.....
357	Wake up (SLCM)	.....	.....	.....	.....	.....	.....	T
358	Wake up (BPM)	.....	T .....	.....	.....	.....	.....	.....
359	Wake up (IP)	T .....	.....	.....	.....	.....	.....	.....
360	Wake up (DDCM)	.....	.....	T .....	.....	.....	.....	.....
361	Wake up (DSCM)	.....	.....	.....	.....	T .....	.....	.....
362	Wake up (PDCM)	.....	.....	.....	T .....	.....	.....	.....
363	Wake up (PSCM)	.....	.....	.....	.....	.....	T .....	.....
364	Network awake (SLCM)	R	R	R	R	R	R	T
365	Network awake (BPM)	R	T	R	R	R	R	R
366	Network awake (IP)	T	R	R	R	R	R	R
367	Network awake (DDCM)	R	R	T	R	R	R	R
368	Network awake (DSCM)	R	R	R	R	T	R	R
369	Network awake (PDCM)	R	R	R	T	R	R	R
370	Network awake (PSCM)	R	R	R	R	R	T	R
371	SLCM entering sleep mode	R	R	R	R	R	R	T
372	BPM entering sleep mode	R	T	R	R	R	R	R
373	IP entering sleep mode	T	R	R	R	R	R	R
374	DDCM entering sleep mode	R	R	T	R	R	R	R
375	DSCM entering sleep mode	R	R	R	R	T	R	R
376	PDCM entering sleep mode	R	R	R	T	R	R	R
377	PSCM entering sleep mode	R	R	R	R	R	T	R