



FIGURES

Fig.	Description	Variant
01	Power Distribution	
Fig. 01.1	Main Power Distribution	All Vehicles
Fig. 01.2	Battery Power Distribution	All Vehicles
Fig. 01.3	Ignition Switched Power Distribution: I (Accessory)	All Vehicles
Fig. 01.4	Ignition Switched Power Distribution: II (Run)	All Vehicles
Fig. 01.5	Ignition Switched Power Distribution: Battery Saver	All Vehicles
Fig. 01.6	Engine Management System Switched Power Distribution	All Vehicles
02	Battery; Starter; Generator	
Fig. 02.1	Battery; Starter; Generator: 2.5L & 3.0L	2.5L & 3.0L Vehicles
Fig. 02.2	Battery; Starter; Generator: 2.0L	2.0L Vehicles
03	Engine Management	
Fig. 03.1	Engine Management: 2.5L & 3.0L – Part 1	2.5L & 3.0L Vehicles
Fig. 03.2	Engine Management: 2.5L & 3.0L – Part 2	2.5L & 3.0L Vehicles
Fig. 03.3	Engine Management: 2.0L – Part 1	2.0L Vehicles
Fig. 03.4	Engine Management: 2.0L – Part 2	2.0L Vehicles
04	Transmission	
Fig. 04.1	Automatic and Manual Transmissions: Early Production	2.5L & 3.0L Vehicles
Fig. 04.2	Automatic and Manual Transmissions: Later Production	All Vehicles (Later Production)
05	Chassis	
Fig. 05.1	Anti-Lock Braking	2.5L & 3.0L ABS Vehicles
Fig. 05.2	Dynamic Stability Control	DSC Vehicles
Fig. 05.3	Anti-Lock Braking / Traction Control	2.0L ABS/TC Vehicles
06	Climate Control	
Fig. 06.1	Manual Climate Control System; Glass Heaters	Manual Climate Control Vehicles
Fig. 06.2	Automatic Climate Control System; Glass Heaters	Automatic Climate Control Vehicles
07	Instrumentation	
Fig. 07.1	Instrument Cluster	All Vehicles
Fig. 07.2	Audible Warnings	All Vehicles
08	Exterior Lighting	
Fig. 08.1	Exterior Lighting: Front – Autolamps	Autolamp Vehicles
Fig. 08.2	Exterior Lighting: Front – Non Autolamps;	Non Autolamp Vehicles;
	Exterior Lighting: Front – Daytime Running Lamps	Daytime Running Lamp Vehicles
Fig. 08.3	Exterior Lighting: Rear	All Vehicles
Fig. 08.4	Exterior Lighting: Rear – European Trailer Towing	EUR Trailer Towing Vehicles
Fig. 08.5	Exterior Lighting: Rear – U.K. Trailer Towing	U.K. Trailer Towing Vehicles
Fig. 08.6	Exterior Lighting: Rear – NAS Trailer Towing	NAS Trailer Towing Vehicles
Fig. 08.7	Headlamp Leveling	Headlamp Leveling Vehicles
09	Interior Lighting	
Fig. 09.1	Interior Lighting	All Vehicles
Fig. 09.2	Dimmer-Controlled Lighting	All Vehicles
10	Steering; Mirrors; Heaters	
Fig. 10.1	Variable Assist Steering; Electrochromic Rear View Mirror	All Vehicles
Fig. 10.2	Door Mirrors: Movement, Fold-Back	All Vehicles



FIGURES

Fig.	Description	Variant
11	Seat Systems	
Fig. 11.1	Powered Seats: 8-Way Movement	8-Way Powered Seat Vehicles
Fig. 11.2	Powered Seats: 2-Way Movement	2-Way Powered Seat Vehicles
Fig. 11.3	Seat Heaters	Heated Seat Vehicles
12	Door Locking; Security	
Fig. 12.1	Central Door Locking: Double Locking	Double Locking Vehicles
Fig. 12.2	Central Door Locking: Non Double Locking	Non Double Locking Vehicles
Fig. 12.3	Security System	All Vehicles
13	Wash / Wipe	
Fig. 13.1	Wash / Wipe System	Non Rain Sensing Vehicles
Fig. 13.2	Wash / Wipe System with Rain Sensing	Rain Sensing Vehicles
14	Powered Windows; Sliding Roof	
Fig. 14.1	Powered Windows: LHD	LHD Vehicles
Fig. 14.2	Powered Windows: RHD	RHD Vehicles
Fig. 14.3	Sliding Roof	Sliding Roof Vehicles
15	In-Car Entertainment	
Fig. 15.1	In-Car Entertainment: Standard	Standard ICE Vehicles
Fig. 15.2	In-Car Entertainment: Premium	Premium ICE Vehicles
16	Telematics	
Fig. 16.1	Telephone System: ROW	ROW Vehicles
Fig. 16.2	Telephone System: NAS	NAS Vehicles
Fig. 16.3	Telephone System with Voice: ROW	ROW Vehicles
Fig. 16.4	Telephone System with Voice: NAS	NAS Vehicles
Fig. 16.5	Voice Control System	Voice Only Vehicles
Fig. 16.6	Navigation System (except Japan)	NAV Vehicles except Japan
Fig. 16.7	Navigation System: Japan	Japan NAV Vehicles
17	Occupant Protection	
Fig. 17.1	Advanced Restraint System	All Vehicles
18	Driver Assist	
Fig. 18.1	Parking Aid System	Parking Aid Vehicles
19	Ancillaries	
Fig. 19.1	Ancillaries: Horn, Cigar Lighter, Accessory Connectors, Garage Door Opener	All Vehicles
20	Vehicle Multiplex Systems	
Fig. 20.1	Controller Area Network	All Vehicles
Fig. 20.2	Standard Corporate Protocol Network; Serial Data Link	All Vehicles
Fig. 20.3	D2B Network: Part 1	All Vehicles
Fig. 20.4	D2B Network: Part 2	All Vehicles



CONTROL MODULE PIN OUT INFORMATION

FIGURE NUMBER

COMPONENT, CONNECTOR AND GROUND INFORMATION

CONTROL MODULE PIN-OUT INFORMATION

General Electronic Control Module

Pin	Description and Characteristic
PS-18	SCP-
PS-19	SCP+
PS-4	KEY-IN IGNITION SWITCH- B+ WHEN KEY IN

Instrument Cluster

Pin	Description and Characteristic
PS-3	PAGE 1: ENCODED COMMUNICATION
PS-4	PAGE 2: ENCODED COMMUNICATION
PS-5	PAGE 3: ENCODED COMMUNICATION
PS-6	PAGE 4: ENCODED COMMUNICATION
PS-7	CAN+
PS-8	CAN-
PS-9	SCP+
PS-10	SCP-
PS-17	BATTERY POWER SUPPLY- B+
PS-18	POWER GROUND- GROUND
PS-19	IGNITION SWITCHES POWER SUPPLY (B+)

Engine Control Module (2.5L & 3.0L)

Pin	Description and Characteristic
EN-100	ENGINE DRIVE- B+
EN-101	PAUSE / RESUME SWITCH (AUTOMATIC TRANSMISSION- NORMALLY CLOSED / GROUND WHEN ACTIVATED)
EN-102	CLUTCH PEDAL SAFETY SWITCH (SERIAL TRANSMISSION- NORMALLY OPEN / B+ WHEN ACTIVATED)
EN-103	STARTER RELAY INHIBIT- TO ACTIVATE, LOW IMPEDANCE CIRCUIT TO GROUND
EN-104	GENERATOR FIELD RETURN SIGNAL- VARIABLE VOLTAGE BY GENERATOR OPERATING CONDITION
EN-105	GENERATOR FIELD RETURN SIGNAL- VARIABLE VOLTAGE BY GENERATOR OPERATING CONDITION
EN-106	GENERATOR FIELD RETURN SIGNAL- VARIABLE VOLTAGE BY GENERATOR OPERATING CONDITION
EN-107	GENERATOR FIELD RETURN SIGNAL- VARIABLE VOLTAGE BY GENERATOR OPERATING CONDITION
EN-108	GENERATOR FIELD RETURN SIGNAL- VARIABLE VOLTAGE BY GENERATOR OPERATING CONDITION
EN-109	CAN+
EN-110	CAN-

NOTE: Refer to the Appendix at the rear of this book for Network Messages.

Fig. 02.1

COMPONENTS	Connector(s)	Connector Description	Location
BATTERY	---	---	ENGINE COMPARTMENT
CLUTCH PEDAL SAFETY SWITCH	PS-18	2-WAY / BLACK	TOP OF CLUTCH PEDAL
ENGINE CONTROL MODULE (2.5L & 3.0L)	EN-100	22-WAY / BLACK	ENGINE COMPARTMENT / FRONT BULKHEAD IN BOX
GENERAL ELECTRONIC CONTROL MODULE	EN-101	22-WAY / GREEN	BEHIND INSTRUMENT PANEL, IN BOX
GENERATOR	EN-102	22-WAY / WHITE	22-WAY / WHITE
IGNITION SWITCH	EN-103	22-WAY / BLACK	ENGINE BAY / FRONT
INSTRUMENT CLUSTER	EN-104	22-WAY / YELLOW	STRIPPING COLUMN
PAUSE / RESUME SWITCH (AUTOMATIC TRANSMISSION)	EN-105	22-WAY / YELLOW	INSTRUMENT PANEL
POWER DISTRIBUTION FUSE BOX	EN-106	22-WAY / BLACK	STRIPPING COLUMN, IGNITION SWITCH
STARTER MOTOR (SERIAL PRODUCTION)	EN-107	22-WAY / GREEN	ENGINE COMPARTMENT / IN BOX
STARTER MOTOR (LATER PRODUCTION)	EN-108	22-WAY / GREEN	ENGINE BAY / IN BOX
TRANSMISSION RANGE SENSOR	EN-109	22-WAY / BLACK	POWER DISTRIBUTION FUSE BOX / IN TOP OF TRANSMISSION
STARTER RELAY	EN-110	22-WAY / BLACK	22-WAY / BLACK
TRANSMISSION RANGE SENSOR	EN-111	22-WAY / BLACK	22-WAY / BLACK

HARNESS IN-LINE CONNECTORS	Connector	Connector Description	Location
EN-100	EN-100	22-WAY / BLACK / JUNCTION BOX HARNESS TO ENGINE HARNESS	STARTER RELAY
EN-101	EN-101	22-WAY / GREEN / JUNCTION BOX HARNESS TO ENGINE HARNESS	ADJACENT TO SUSPENSION TUBES
EN-102	EN-102	22-WAY / WHITE / JUNCTION BOX HARNESS TO ENGINE HARNESS	ADJACENT TO CENTRAL JUNCTION FUSE BOX
EN-103	EN-103	22-WAY / BLACK / JUNCTION BOX HARNESS TO ENGINE HARNESS	ADJACENT TO CENTRAL JUNCTION FUSE BOX
EN-104	EN-104	22-WAY / YELLOW / JUNCTION BOX HARNESS TO ENGINE HARNESS	ADJACENT TO CENTRAL JUNCTION FUSE BOX
EN-105	EN-105	22-WAY / YELLOW / JUNCTION BOX HARNESS TO ENGINE HARNESS	ADJACENT TO CENTRAL JUNCTION FUSE BOX
EN-106	EN-106	22-WAY / BLACK / JUNCTION BOX HARNESS TO ENGINE HARNESS	ADJACENT TO CENTRAL JUNCTION FUSE BOX
EN-107	EN-107	22-WAY / GREEN / JUNCTION BOX HARNESS TO ENGINE HARNESS	ADJACENT TO CENTRAL JUNCTION FUSE BOX
EN-108	EN-108	22-WAY / GREEN / JUNCTION BOX HARNESS TO ENGINE HARNESS	ADJACENT TO CENTRAL JUNCTION FUSE BOX
EN-109	EN-109	22-WAY / BLACK / JUNCTION BOX HARNESS TO ENGINE HARNESS	ADJACENT TO CENTRAL JUNCTION FUSE BOX
EN-110	EN-110	22-WAY / BLACK / JUNCTION BOX HARNESS TO ENGINE HARNESS	ADJACENT TO CENTRAL JUNCTION FUSE BOX
EN-111	EN-111	22-WAY / BLACK / JUNCTION BOX HARNESS TO ENGINE HARNESS	ADJACENT TO CENTRAL JUNCTION FUSE BOX

GROUND	Location
EN-100	ENGINE COMPARTMENT / UNDER BATTERY TRAY
EN-101	ENGINE COMPARTMENT / UNDER BATTERY TRAY
EN-102	ENGINE COMPARTMENT / UNDER BATTERY TRAY
EN-103	ENGINE COMPARTMENT / UNDER BATTERY TRAY
EN-104	ENGINE COMPARTMENT / UNDER BATTERY TRAY
EN-105	ENGINE COMPARTMENT / UNDER BATTERY TRAY
EN-106	ENGINE COMPARTMENT / UNDER BATTERY TRAY
EN-107	ENGINE COMPARTMENT / UNDER BATTERY TRAY
EN-108	ENGINE COMPARTMENT / UNDER BATTERY TRAY
EN-109	ENGINE COMPARTMENT / UNDER BATTERY TRAY
EN-110	ENGINE COMPARTMENT / UNDER BATTERY TRAY
EN-111	ENGINE COMPARTMENT / UNDER BATTERY TRAY

FOR CONTROL MODULE PIN-OUT INFORMATION, UNFOLD PAGE TO LEFT.

DATA PAGE

The following abbreviations are used to represent values for Control Module Pin-out data:

I	Input	PG	Power Ground	CAN	CAN Network	D	Serial and Encoded Data
O	Output	SS	Sensor / Signal Supply V	SCP	SCP Network	V	Voltage (V)
B+	Battery Voltage	SG	Sensor / Signal Ground	D2	D2B Network	PWM	Pulse Width Modulated

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 characteristics 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.

Refer to the front of this book for detailed information and illustrations regarding the location and identification of harnesses, relays, fuses, grounds, control modules and control module pins.

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DATE OF ISSUE

FIGURE

MODEL RANGE AND YEAR

TITLE

FIGURE NUMBER

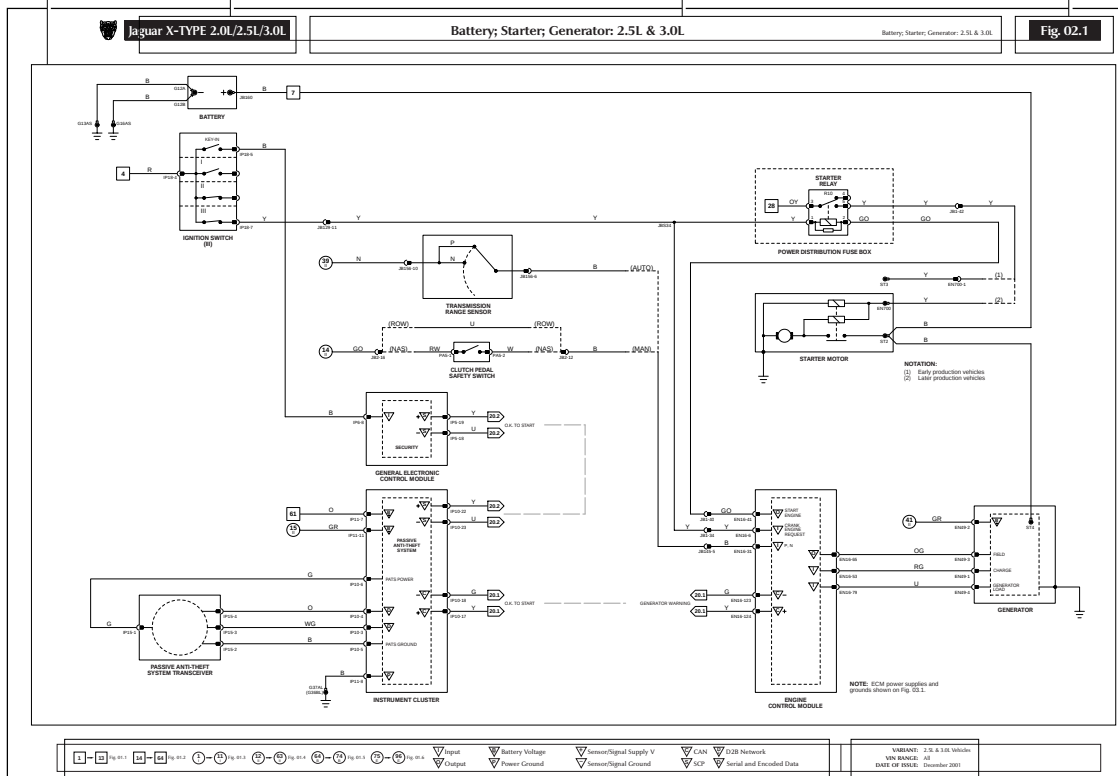
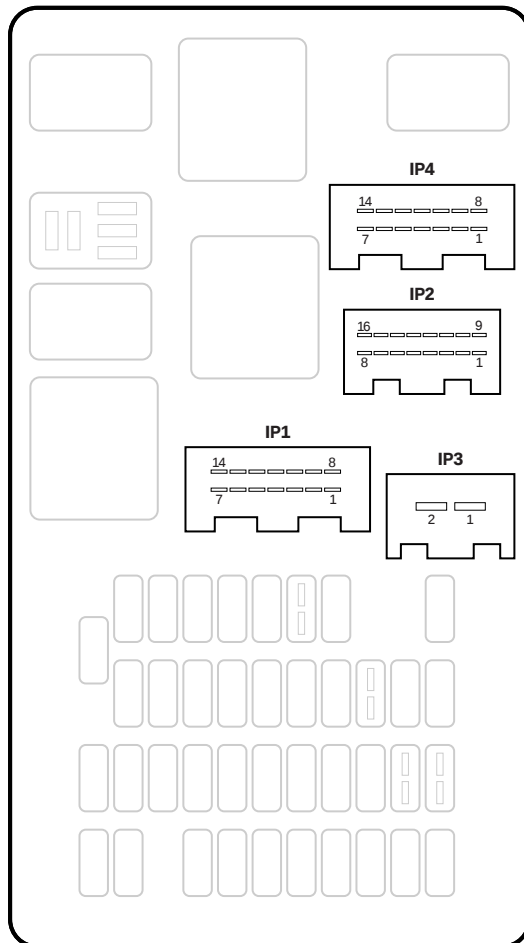


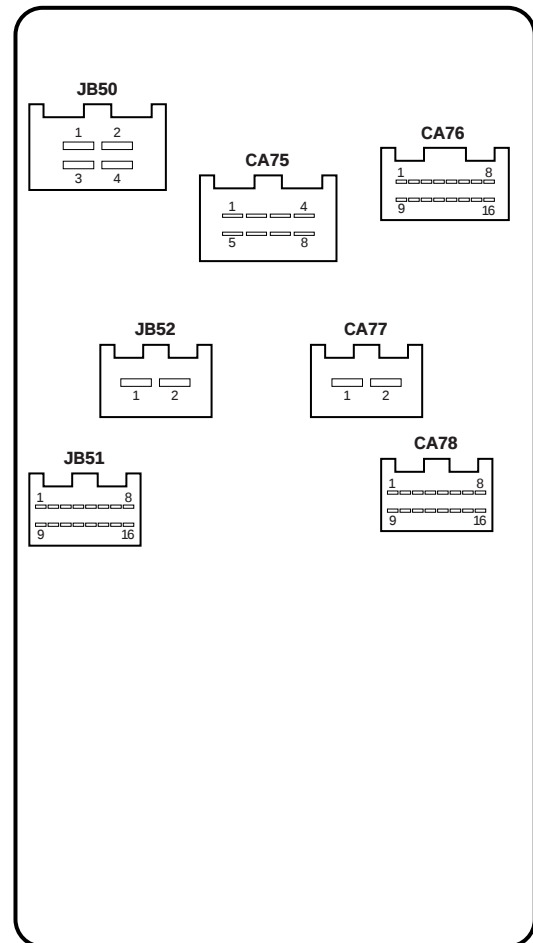
FIGURE PAGE



CENTRAL JUNCTION FUSE BOX - FRONT



CENTRAL JUNCTION FUSE BOX - REAR



COMPONENTS

Component	Connector(s)	Connector Description	Location
BATTERY	—	—	ENGINE COMPARTMENT
CENTRAL JUNCTION FUSE BOX	CA75	8-WAY / GREY	PASSENGER COMPARTMENT, FRONT BULKHEAD LH SIDE
	CA76	16-WAY / GREEN	
	CA77	2-WAY / GREY	
	CA78	16-WAY / GREY	
	IP1	14-WAY / GREEN	
	IP2	16-WAY GREY	
	IP3	2-WAY / GREY	
	IP4	14-WAY / GREY	
	JB50	4-WAY / GREY	
	JB51	16-WAY / BLUE	
	JB52	2-WAY / BLACK	
IGNITION SWITCH	IP18	7-WAY / BLACK	STEERING COLUMN
INERTIA SWITCH	IP132	3-WAY / BLACK	LOWER RH A POST
POWER DISTRIBUTION FUSE BOX	—	—	ENGINE COMPARTMENT LH SIDE
TRANSIT ISOLATION DEVICE	JB186	2-WAY / BLACK	BATTERY

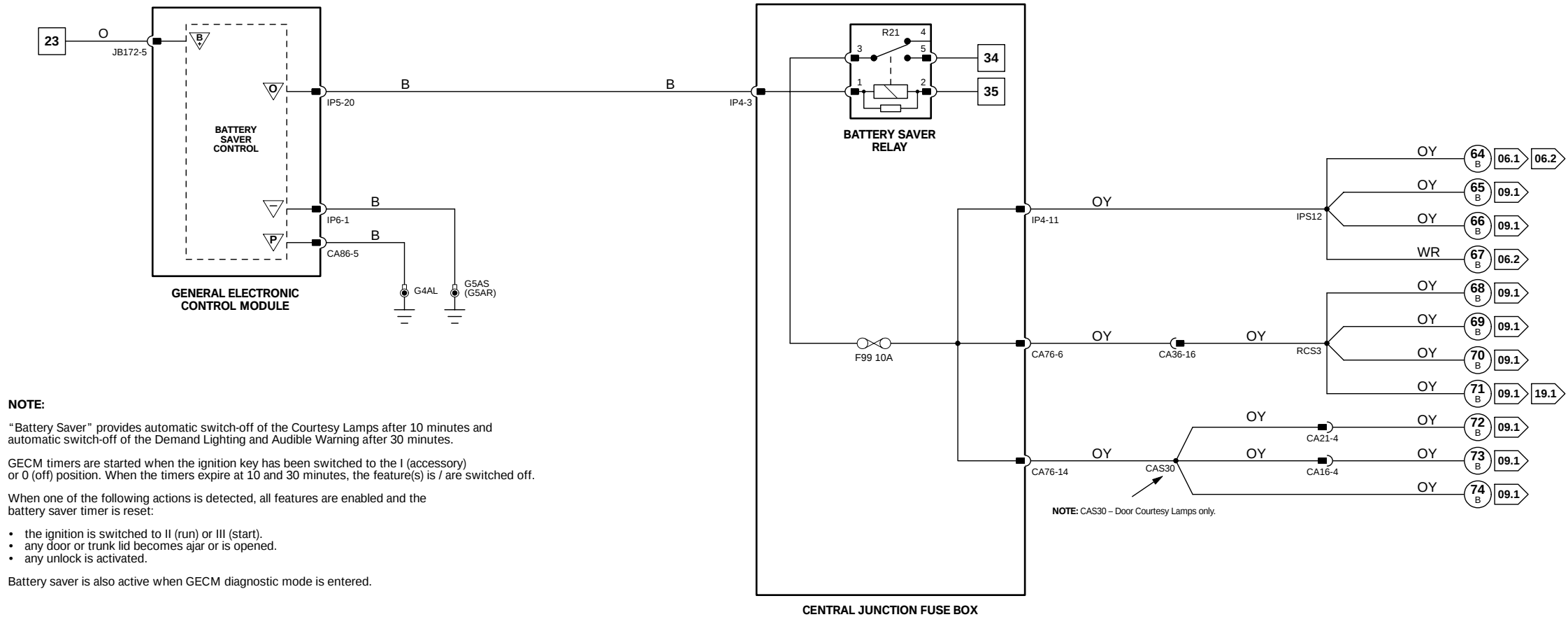
HARNESS IN-LINE CONNECTORS

Connector	Connector Description	Location
JB3	14-WAY / BLUE / JUNCTION BOX HARNESS TO INSTRUMENT PANEL HARNESS	BELOW INSTRUMENT PANEL LH SIDE
JB130	22-WAY / GREEN / JUNCTION BOX HARNESS TO INSTRUMENT PANEL HARNESS	ADJACENT TO CENTRAL JUNCTION FUSE BOX

GROUNDS

Ground	Location
G13	ENGINE COMPARTMENT / UNDER BATTERY TRAY
G16	ENGINE COMPARTMENT / ENGINE BLOCK

Refer to the front of this book for detailed information and illustrations regarding the location and identification of harnesses, relays, fuses, grounds, control modules and control module pins.



CONTROL MODULE PIN-OUT INFORMATION

Engine Control Module (2.5L & 3.0L)

Pin	Description and Characteristic	
O	EN16-001	HO2 SENSOR HEATER CONTROL – 1/1: PWM, 1 CYCLE PER 128 ms, VARIABLE DUTY CYCLE
O	EN16-002	HO2 SENSOR HEATER CONTROL – 1/1: PWM, 1 CYCLE PER 128 ms, VARIABLE DUTY CYCLE
PG	EN16-004	POWER GROUND 1: GROUND
PG	EN16-005	POWER GROUND 2: GROUND
I	EN16-006	ENGINE CRANK: B+
I	EN16-007	IGNITION ON: B+
I	EN16-008	BRAKE ON / OFF SWITCH: NORMALLY OPEN / B+ WHEN ACTIVATED
I	EN16-010	INERTIA SWITCH: NORMALLY CLOSED / OPEN CIRCUIT WHEN ACTIVATED
SS	EN16-012	SENSOR POWER SUPPLY 1: NOMINAL 5 V
SS	EN16-013	SENSOR POWER SUPPLY 2: NOMINAL 5 V
SG	EN16-017	SMALL SIGNAL GROUND 1: GROUND
SG	EN16-018	SMALL SIGNAL GROUND 2: GROUND
SG	EN16-019	SENSOR GROUND 1: GROUND
SG	EN16-020	SENSOR GROUND 2: GROUND
B+	EN16-022	BATTERY POWER SUPPLY: B+
B+	EN16-023	EMS SWITCHED POWER SUPPLY 1: B+
B+	EN16-024	EMS SWITCHED POWER SUPPLY 2: B+
SG	EN16-029	HO2 SENSOR HEATER GROUND – 1/1: GROUND
SG	EN16-030	HO2 SENSOR HEATER GROUND – 1/1: GROUND
I	EN16-031	PARK / NEUTRAL SWITCH (AUTOMATIC TRANSMISSION): NORMALLY CLOSED / GROUND WHEN ACTIVATED
I	EN16-031	CLUTCH PEDAL SAFETY SWITCH (MANUAL TRANSMISSION): NORMALLY OPEN / B+ WHEN ACTIVATED
I	EN16-036	CRANKSHAFT SENSOR SIGNAL: PULSED SIGNAL, 70 PULSES PER ENGINE CYCLE
SG	EN16-037	CRANKSHAFT SENSOR SIGNAL GROUND: GROUND
O	EN16-038	INTAKE MANIFOLD TUNING VALVE SOLENOID DRIVE – 1 / TOP: GROUND WHEN ACTIVATED
O	EN16-039	INTAKE MANIFOLD TUNING VALVE SOLENOID DRIVE – 2 / BOTTOM: GROUND WHEN ACTIVATED
O	EN16-040	EMS CONTROL RELAY DRIVE: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
O	EN16-041	STARTER RELAY DRIVE: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
SG	EN16-043	TP AND APP SIGNALS SHIELD: GROUND
I	EN16-044	MASS AIR FLOW SENSOR SIGNAL: NOMINAL 0 – 5 V BY ENGINE OPERATING CONDITION
SG	EN16-045	MASS AIR FLOW SENSOR GROUND: GROUND
SG	EN16-046	MASS AIR FLOW SENSOR GROUND: GROUND
I	EN16-050	ENGINE FUEL TEMPERATURE SENSOR SIGNAL, NOMINAL 0 – 5 V: NTC SENSOR – VOLTAGE DECREASES AS TEMPERATURE INCREASES
O	EN16-052	THROTTLE MOTOR RELAY DRIVE: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
O	EN16-053	GENERATOR CHARGE: VARIABLE VOLTAGE
SG	EN16-054	THROTTLE MOTOR GROUND: GROUND
O	EN16-055	HO2 SENSOR HEATER CONTROL – 2/1: PWM, 1 CYCLE PER 128 ms, VARIABLE DUTY CYCLE
O	EN16-056	HO2 SENSOR HEATER CONTROL – 2/1: PWM, 1 CYCLE PER 128 ms, VARIABLE DUTY CYCLE
I	EN16-065	GENERATOR FIELD RETURN SIGNAL: VARIABLE VOLTAGE BY GENERATOR OPERATING CONDITION
O	EN16-066	EVAP CANISTER PURGE VALVE DRIVE: PWM, 10 Hz, POSITIVE DUTY CYCLE RANGE 0.04% – 100%
O	EN16-067	EVAP CANISTER CLOSE VALVE DRIVE: TO CLOSE, ECM SWITCHES CIRCUIT TO GROUND
I	EN16-068	BANK 2 CAMSHAFT SENSOR SIGNAL: PULSED SIGNAL, 4 PULSES PER ENGINE CYCLE
SG	EN16-069	BANK 2 CAMSHAFT SENSOR GROUND: GROUND
I	EN16-070	ENGINE COOLANT TEMPERATURE SENSOR SIGNAL, NOMINAL 0 – 5 V: NTC SENSOR – VOLTAGE DECREASES AS TEMPERATURE INCREASES
I	EN16-071	INTAKE AIR TEMPERATURE SENSOR SIGNAL, NOMINAL 0 – 5 V: NTC SENSOR – VOLTAGE DECREASES AS TEMPERATURE INCREASES
I	EN16-073	INJECTION PRESSURE SENSOR SIGNAL, NOMINAL 0 – 5 V: POTENTIOMETER – VOLTAGE DECREASES AS PRESSURE INCREASES
I	EN16-075	THROTTLE POSITION SENSOR 1 SIGNAL: IDLE = 0.74 V, FULL THROTTLE = 3.97 V
I	EN16-076	THROTTLE POSITION SENSOR 2 SIGNAL: IDLE = 1.65 V, FULL THROTTLE = 4.20 V
I	EN16-078	ENGINE OIL TEMPERATURE SENSOR SIGNAL, NOMINAL 0 – 5 V: NTC SENSOR – VOLTAGE DECREASES AS TEMPERATURE INCREASES
I	EN16-079	GENERATOR LOAD: B+ = NORMAL, AFTER-START SWITCH-ON; GROUND = GENERATOR FAILURE, AFTER-START SWITCH-ON
O	EN16-080	THROTTLE MOTOR DRIVE: B+ TO ACTIVATE MOTOR
SG	EN16-081	HO2 SENSOR HEATER GROUND – 2/1: GROUND
SG	EN16-082	HO2 SENSOR HEATER GROUND – 2/1: GROUND
I	EN16-083	HO2 SENSOR 1/1 SIGNAL: VARIABLE CURRENT
I	EN16-084	HO2 SENSOR 1/1 SIGNAL: CONSTANT CURRENT
SG	EN16-091	HO2 SENSOR HEATERS 1/2, 2/2 GROUND: GROUND
O	EN16-092	HO2 SENSOR HEATER CONTROL – 1/2: PWM, 1 CYCLE PER 256 ms, POSITIVE DUTY CYCLE RANGE 0 ms = 0%, 77 ms = 30%, 256 ms = 100%
O	EN16-093	HO2 SENSOR HEATER CONTROL – 2/2: PWM, 1 CYCLE PER 256 ms, POSITIVE DUTY CYCLE RANGE 0 ms = 0%, 77 ms = 30%, 256 ms = 100%
I	EN16-094	BANK 1 CAMSHAFT SENSOR SIGNAL: PULSED SIGNAL, 4 PULSES PER ENGINE CYCLE
SG	EN16-095	BANK 1 CAMSHAFT SENSOR GROUND: GROUND
I	EN16-098	KNOCK SENSOR SIGNAL: PULSED SIGNAL
SG	EN16-100	SENSOR SHIELD: GROUND
I	EN16-102	ACCELERATOR PEDAL POSITION SENSOR 1 SIGNAL: FOOT OFF = 0.97 V; FULLY DEPRESSED = 3.33 V
I	EN16-103	ACCELERATOR PEDAL POSITION SENSOR 2 SIGNAL: FOOT OFF = 3.97 V; FULLY DEPRESSED = 0.84 V
I	EN16-104	FUEL TANK PRESSURE SENSOR SIGNAL, NOMINAL 0 – 5 V: VOLTAGE DECREASES AS PRESSURE INCREASES
D	EN16-105	SERIAL DATA LINK: SERIAL COMMUNICATION
O	EN16-106	THROTTLE MOTOR DRIVE: B+ TO ACTIVATE MOTOR
I	EN16-107	HO2 SENSOR 2/1 SIGNAL: VARIABLE CURRENT
I	EN16-108	HO2 SENSOR 2/1 SIGNAL: CONSTANT CURRENT
O	EN16-109	BANK 1 VVT SOLENOID VALVE: PWM, 300 Hz, POSITIVE DUTY CYCLE RANGE 0% – 100%
O	EN16-110	BANK 2 VVT SOLENOID VALVE: PWM, 300 Hz, POSITIVE DUTY CYCLE RANGE 0% – 100%
SG	EN16-111	BANK 1 FUEL INJECTORS (1, 3, 5) GROUND: GROUND
SG	EN16-116	BANK 2 FUEL INJECTORS (2, 4, 6) GROUND: GROUND
C	EN16-123	CAN –
C	EN16-124	CAN +
I	EN16-127	MAP SENSOR SIGNAL, NOMINAL 0 – 5 V: VOLTAGE INCREASES AS MANIFOLD ABSOLUTE PRESSURE INCREASES
I	EN16-128	HO2 SENSOR 1/2 SIGNAL, NOMINAL 1 V SWING: 0.1 – 0.9 V SWING
I	EN16-129	HO2 SENSOR 2/2 SIGNAL, NOMINAL 1 V SWING: 0.1 – 0.9 V SWING
SG	EN16-130	HO2 SENSORS SHIELD: GROUND
B+	EN16-134	THROTTLE MOTOR POWER SUPPLY: B+ WHEN RELAY ACTIVATED

NOTE: Refer to the Appendix at the rear of this book for Network Messages.

The following abbreviations are used to represent values for Control Module Pin-Out data

I	Input	PG	Power Ground	CAN	CAN Network	D	Serial and Encoded Data
O	Output	SS	Sensor / Signal Supply V	SCP	SCP Network	V	Voltage (DC)
B+	Battery Voltage	SG	Sensor / Signal Ground	D2	D2B Network	PWM	Pulse Width Modulated

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 characteristics 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.

Fig. 03.1

COMPONENTS

Component	Connector(s)	Connector Description	Location
APP SENSOR	PA1	6-WAY / BLACK	ABOVE ACCELERATOR PEDAL
BRAKE ON / OFF SWITCH	PA3	3-WAY / BLACK	TOP OF BRAKE PEDAL
CENTRAL JUNCTION FUSE BOX	CA75 CA76 CA77 CA78 IP1 IP2 IP3 IP4 JB50 JB51 JB52	8-WAY / GREY 16-WAY / GREEN 2-WAY / GREY 16-WAY / GREY 14-WAY / GREEN 16-WAY / GREY 2-WAY / GREY 14-WAY / GREY 4-WAY / GREY 16-WAY / BLUE 2-WAY / BLACK	PASSENGER COMPARTMENT, FRONT BULKHEAD LH SIDE
CKP SENSOR	EN12	2-WAY / BLACK	ADJACENT TO ENGINE CRANKSHAFT PULLEY
CMP SENSOR 1	EN43	2-WAY / BLACK	BANK 1 CYLINDER HEAD, FRONT
CMP SENSOR 2	EN33	2-WAY / BLACK	BANK 2 CYLINDER HEAD, FRONT
ECT SENSOR	EN18	2-WAY / BLACK	ENGINE VEE, FRONT
EFT SENSOR	IL8	2-WAY / BLACK	FUEL RAIL, FRONT
ENGINE CONTROL MODULE (2.5L & 3.0L)	EN16	134-WAY / BLACK	ENGINE COMPARTMENT, FRONT BULKHEAD RH SIDE
EOT SENSOR	EN25	2-WAY / BLACK	ADJACENT TO ENGINE OIL FILTER
EVAP CANISTER CLOSE VALVE	FT5	2-WAY / BLACK	REARWARD OF FUEL TANK
EVAP CANISTER PURGE VALVE	JB170	2-WAY / BLACK	REARWARD OF FUEL TANK
FTP SENSOR	FT1	3-WAY / BLACK	TOP OF FUEL TANK
HO2 SENSOR DOWNSTREAM 1/2	EN14	4-WAY / BLACK	BANK 1 EXHAUST
HO2 SENSOR DOWNSTREAM 2/2	EN9	4-WAY / BLACK	BANK 2 EXHAUST
HO2 SENSOR UPSTREAM 1/1	EN37	4-WAY / GREY	BANK 1 EXHAUST
HO2 SENSOR UPSTREAM 2/1	EN32	4-WAY / GREY	BANK 2 EXHAUST
IMT SOLENOID VALVE 1	EN999	2-WAY / BLACK	INTAKE MANIFOLD TOP
IMT SOLENOID VALVE 2	EN998	2-WAY / BLACK	INTAKE MANIFOLD BOTTOM
IP SENSOR	IL7	3-WAY / BLACK	FUEL RAIL REAR
KNOCK SENSOR	EN23	2-WAY / BLACK	ENGINE VEE
MAF SENSOR	EN6	5-WAY / BLACK	ENGINE AIR INTAKE DUCT
MAP SENSOR	EN8	4-WAY / BLACK	INTAKE MANIFOLD, REAR
POWER DISTRIBUTION FUSE BOX	—	—	ENGINE COMPARTMENT LH SIDE
THROTTLE BODY	EN10 EN13	2-WAY / BLACK 4-WAY / BLACK	ENGINE INTAKE MANIFOLD
THROTTLE MOTOR	EN10	2-WAY / BLACK	ENGINE INTAKE MANIFOLD
THROTTLE MOTOR RELAY	—	—	POWER DISTRIBUTION FUSE BOX R11
TP SENSOR (2.5L & 3.0L)	EN13	4-WAY / BLACK	ENGINE INTAKE MANIFOLD
VVT SOLENOID VALVE 1	EN61	2-WAY / BLACK	BANK 1 CYLINDER HEAD
VVT SOLENOID VALVE 2	EN42	2-WAY / BLACK	BANK 2 CYLINDER HEAD

HARNESS IN-LINE CONNECTORS

Connector	Connector Description	Location
CA5	12-WAY / BLACK / CABIN HARNESS TO FUEL TANK LINK LEAD	TOP OF FUEL TANK
CA10	22-WAY / GREY / ENGINE HARNESS TO CABIN HARNESS	BELOW THE GLOVEBOX
CA170	16-WAY / GREEN / IN-LINE CONNECTOR	LH LOWER A POST
EN4	12-WAY / BLACK / ENGINE HARNESS TO INJECTOR RAIL HARNESS	ADJACENT TO THE TRANSMISSION BELL HOUSING
JB1	42-WAY / BLACK / JUNCTION BOX HARNESS TO ENGINE HARNESS	ADJACENT TO LH SUSPENSION TURRET
JB2	16-WAY / GREEN / JUNCTION BOX HARNESS TO CABIN HARNESS	ADJACENT TO CENTRAL JUNCTION FUSE BOX

GROUND

Ground	Location
G8	ENGINE COMPARTMENT / RH INNER WHEEL ARCH

FOR CONTROL MODULE PIN-OUT INFORMATION, UNFOLD PAGE TO LEFT.

Refer to the front of this book for detailed information and illustrations regarding the location and identification of harnesses, relays, fuses, grounds, control modules and control module pins.

CONTROL MODULE PIN-OUT INFORMATION

Engine Control Module (2.0L)

▽	Pin	Description and Characteristic
I	EN65-002	AIR CONDITIONING PRESSURE SENSOR SIGNAL, NOMINAL 0 – 5 V: TRANSducer – VOLTAGE INCREASES AS PRESSURE INCREASES
SG	EN65-003	SENSOR GROUND: GROUND
I	EN65-007	BRAKE CANCEL SWITCH: NORMALLY CLOSED / GROUND WHEN ACTIVATED
SS	EN65-011	SENSOR POWER SUPPLY: NOMINAL 5 V
I	EN65-012	IGNITION MONITOR BANK 1 (1, 3, 5): PULSED SIGNAL, 3 PULSES PER ENGINE CYCLE
I	EN65-013	IGNITION MONITOR BANK 2 (2, 4, 6): PULSED SIGNAL, 3 PULSES PER ENGINE CYCLE
O	EN65-014	IGNITION COIL ACTIVATE – CYLINDER 1: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
O	EN65-015	IGNITION COIL ACTIVATE – CYLINDER 3: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
O	EN65-016	IGNITION COIL ACTIVATE – CYLINDER 5: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
I	EN65-017	INTELLIGENT SPEED SIGNAL (VEHICLE SPEED): PWM, DUTY CYCLE RANGE 30% to 70 %
O	EN65-020	AIR CONDITIONING COMPRESSOR CLUTCH RELAY DRIVE: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
I	EN65-034	BRAKE ON / OFF SWITCH: NORMALLY OPEN / B+ WHEN ACTIVATED
O	EN65-040	IGNITION COIL ACTIVATE – CYLINDER 2: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
O	EN65-041	IGNITION COIL ACTIVATE – CYLINDER 4: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
O	EN65-042	IGNITION COIL ACTIVATE – CYLINDER 6: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
O	EN65-044	COOLING FAN MODULE CONTROL: PWM, 140Hz, POSITIVE DUTY CYCLE RANGE 7% – 95%
I	EN65-056	SPEED CONTROL STATUS 1 ON / OFF: GROUND = ON; 5 V = OFF
I	EN65-057	SPEED CONTROL STATUS 2 ACTIVE / INACTIVE: GROUND = ACTIVE; 5 V = INACTIVE
O	EN65-065	FUEL INJECTOR DRIVE – CYLINDER 1: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
O	EN65-066	FUEL INJECTOR DRIVE – CYLINDER 3: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
O	EN65-067	FUEL INJECTOR DRIVE – CYLINDER 5: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
I	EN65-084	CLUTCH CANCEL SWITCH: NORMALLY CLOSED / GROUND WHEN ACTIVATED
O	EN65-092	FUEL INJECTOR DRIVE – CYLINDER 2: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
O	EN65-093	FUEL INJECTOR DRIVE – CYLINDER 4: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
O	EN65-094	FUEL INJECTOR DRIVE – CYLINDER 6: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
O	EN65-099	FUEL PUMP RELAY DRIVE: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND

Fig. 03.4

COMPONENTS

Component	Connector(s)	Connector Description	Location
AIR CONDITIONING COMPRESSOR CLUTCH RELAY	—	—	POWER DISTRIBUTION FUSE BOX R6
AIR CONDITIONING COMPRESSOR CLUTCH	EN30	2-WAY / BLACK	ADJACENT TO ENGINE OIL FILTER
AIR CONDITIONING PRESSURE SENSOR	JB106	4-WAY / BLACK	BEHIND FRONT LH WHEEL ARCH LINER
BRAKE CANCEL SWITCH	PA2	2-WAY / BLACK	TOP OF BRAKE PEDAL
BRAKE ON / OFF SWITCH	PA3	3-WAY / BLACK	TOP OF BRAKE PEDAL
CENTRAL JUNCTION FUSE BOX	CA75 CA76 CA77 CA78 IP1 IP2 IP3 IP4 JB50 JB51 JB52	8-WAY / GREY 16-WAY / GREEN 2-WAY / GREY 16-WAY / GREY 14-WAY / GREEN 16-WAY / GREY 2-WAY / GREY 14-WAY / GREY 4-WAY / GREY 16-WAY / BLUE 2-WAY / BLACK	PASSENGER COMPARTMENT, FRONT BULKHEAD LH SIDE
CLUTCH CANCEL SWITCH	PA4	5-WAY / BLACK	TOP OF CLUTCH PEDAL
COOLING FAN – LH	GC2	2-WAY / BLACK	COOLING PACK LH SIDE
COOLING FAN – RH	GC1	2-WAY / BLACK	COOLING PACK RH SIDE
COOLING FAN MODULE	JB188 PWM1	2-WAY / BLACK 4-WAY	ADJACENT TO RADIATOR LH SIDE
ENGINE CONTROL MODULE (2.0L)	EN65	104-WAY / BLACK	ENGINE COMPARTMENT, FRONT BULKHEAD RH SIDE
FUEL INJECTOR 1	IL1	2-WAY / BLACK	FUEL RAIL
FUEL INJECTOR 2	IL4	2-WAY / BLACK	FUEL RAIL
FUEL INJECTOR 3	IL2	2-WAY / BLACK	FUEL RAIL
FUEL INJECTOR 4	IL5	2-WAY / BLACK	FUEL RAIL
FUEL INJECTOR 5	IL3	2-WAY / BLACK	FUEL RAIL
FUEL INJECTOR 6	IL6	2-WAY / BLACK	FUEL RAIL
FUEL PUMP (2.0L)	CA415	6-WAY / BLACK	FUEL TANK
FUEL PUMP RELAY	—	—	POWER DISTRIBUTION FUSE BOX R11
IGNITION CAPACITOR	EN94	2-WAY / BLACK	BELOW AIR INTAKE
IGNITION MODULE AND COIL 1	EN51	4-WAY	BANK 1 CYLINDER HEAD
IGNITION MODULE AND COIL 2	EN54	4-WAY	BANK 2 CYLINDER HEAD
IGNITION MODULE AND COIL 3	EN52	4-WAY	BANK 1 CYLINDER HEAD
IGNITION MODULE AND COIL 4	EN55	4-WAY	BANK 2 CYLINDER HEAD
IGNITION MODULE AND COIL 5	EN53	4-WAY	BANK 1 CYLINDER HEAD
IGNITION MODULE AND COIL 6	EN56	4-WAY	BANK 2 CYLINDER HEAD
POWER DISTRIBUTION FUSE BOX	—	—	ENGINE COMPARTMENT LH SIDE
SPEED CONTROL SWITCHES	SW5	4-WAY / BLACK	STEERING WHEEL
SPEED CONTROL CONTROL MODULE	JB161	10-WAY / BLACK	ENGINE COMPARTMENT, BULKHEAD LH SIDE

HARNESS IN-LINE CONNECTORS

Connector	Connector Description	Location
CA5	12-WAY / BLACK / CABIN HARNESS TO FUEL TANK LINK LEAD	TOP OF FUEL TANK
CA10	22-WAY / GREY / ENGINE HARNESS TO CABIN HARNESS	BELOW THE GLOVEBOX
CA170	16-WAY / GREEN / IN-LINE CONNECTOR	LH LOWER A POST
EN4	12-WAY / BLACK / ENGINE HARNESS TO INJECTOR RAIL HARNESS	ADJACENT TO THE TRANSMISSION BELL HOUSING
JB1	42-WAY / BLACK / JUNCTION BOX HARNESS TO ENGINE HARNESS	ADJACENT TO LH SUSPENSION TURRET
JB129	22-WAY / GREY / INSTRUMENT PANEL HARNESS TO JUNCTION BOX HARNESS	LH LOWER A POST
JB145	8-WAY / BLACK / ENGINE HARNESS TO JUNCTION BOX HARNESS	ADJACENT TO CENTRAL JUNCTION FUSE BOX
JB187	2-WAY / BLACK / JUNCTION BOX HARNESS TO COOLING FAN MODULE LINK LEAD	ADJACENT TO RADIATOR LH SIDE
JB196	10-WAY / GREY / JUNCTION BOX HARNESS TO CABIN HARNESS	ADJACENT TO FOOT PEDALS

GROUND

Ground	Location
G8	ENGINE COMPARTMENT / RH INNER WHEEL ARCH
G11	ENGINE COMPARTMENT / UNDER LH HEADLAMP ASSEMBLY
G17	ENGINE COMPARTMENT / ON GENERATOR BRACKET
G35	PASSENGER COMPARTMENT / LH LOWER E POST

FOR CONTROL MODULE PIN-OUT INFORMATION, UNFOLD PAGE TO LEFT.

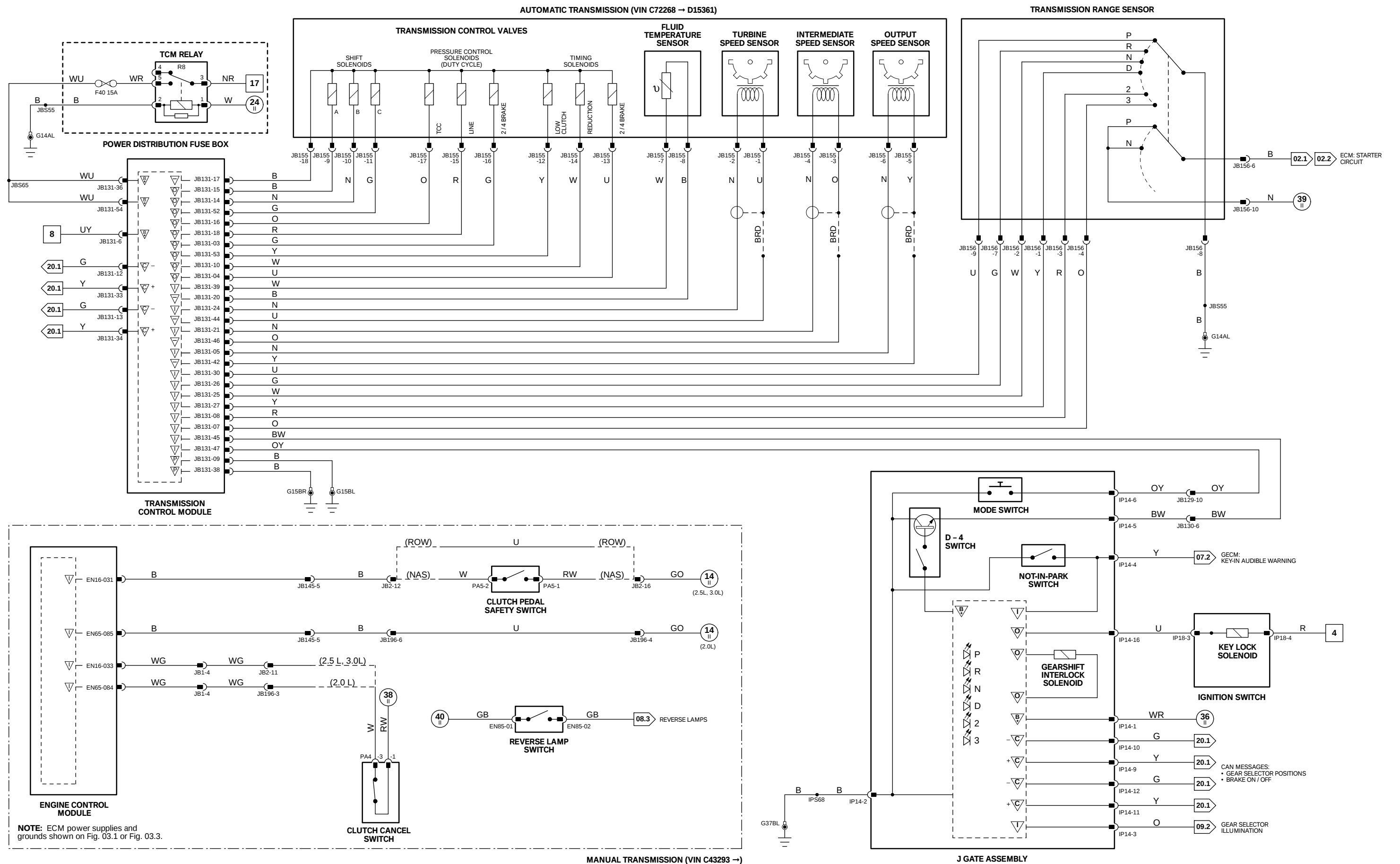
The following abbreviations are used to represent values for Control Module Pin-Out data

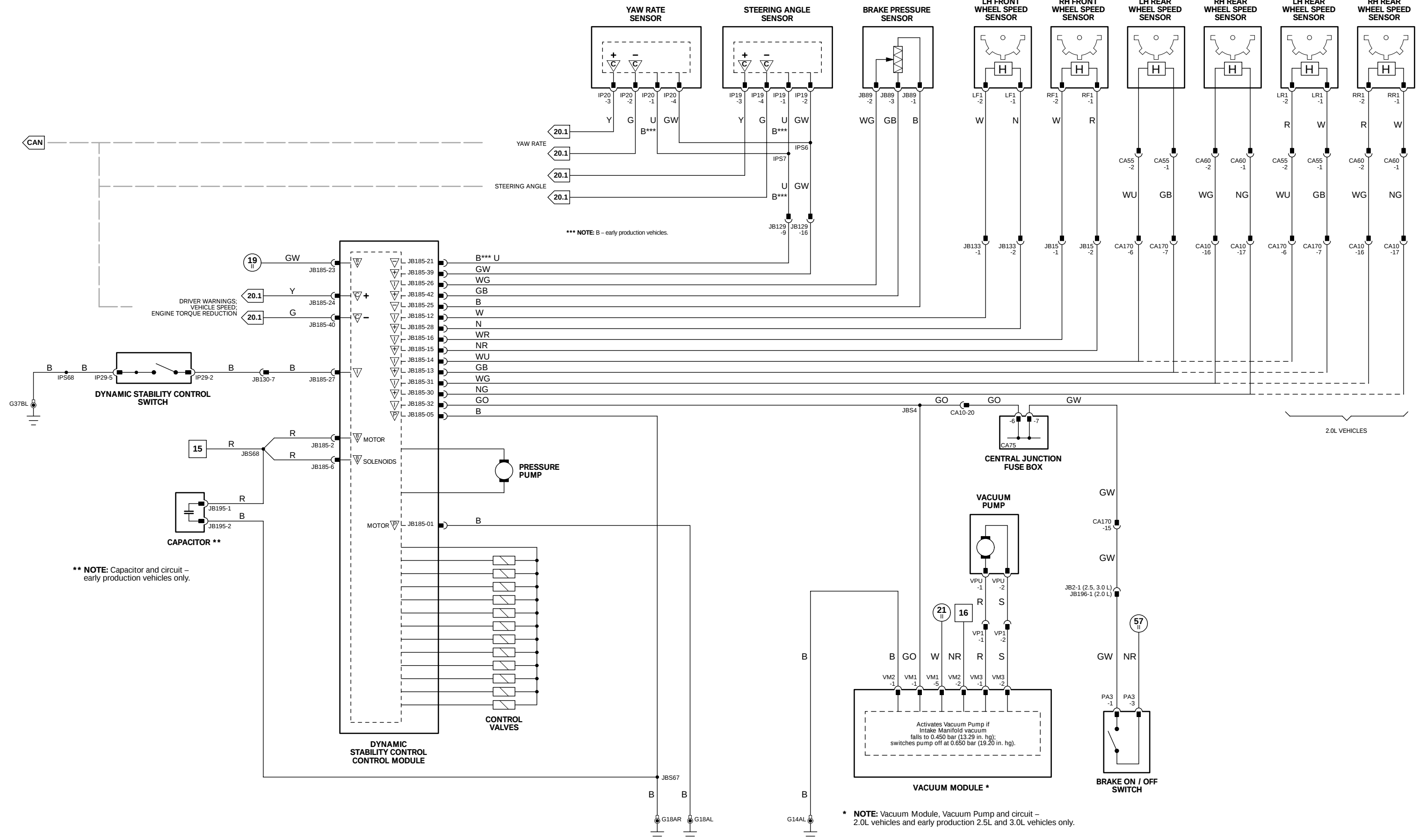
I	Input	PG	Power Ground	CAN	CAN Network	D	Serial and Encoded Data
O	Output	SS	Sensor / Signal Supply V	SCP	SCP Network	V	Voltage (DC)
B+	Battery Voltage	SG	Sensor / Signal Ground	D2	D2B Network	PWM	Pulse Width Modulated

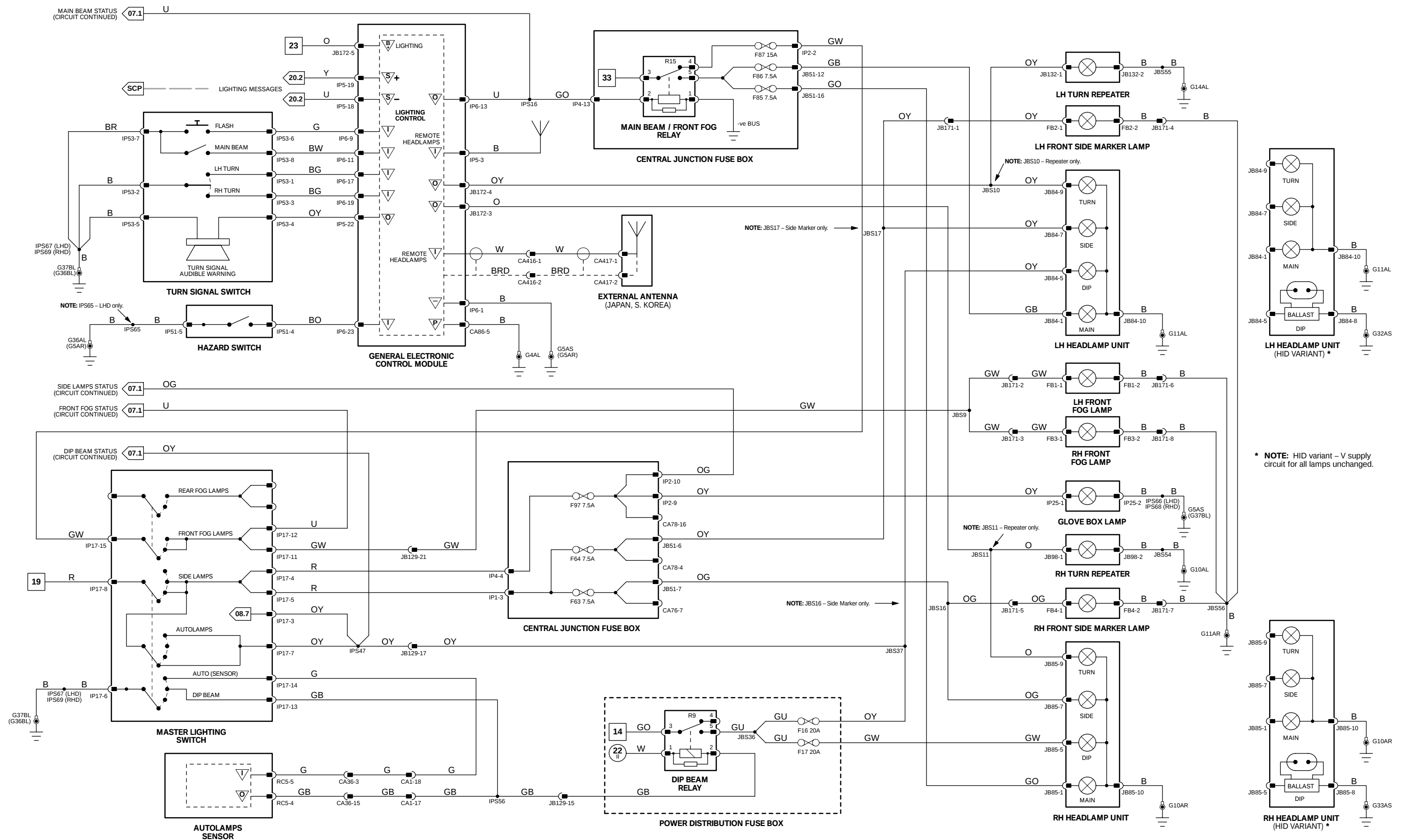
CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The characteristics 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.

Refer to the front of this book for detailed information and illustrations regarding the location and identification of harnesses, relays, fuses, grounds, control modules and control module pins.







CONTROL MODULE PIN-OUT INFORMATION

General Electronic Control Module

▽	Pin	Description and Characteristic
O	CA86-2	LH REAR TURN SIGNAL: TO ACTIVATE, GECM SWITCHES CIRCUIT TO B+
PG	CA86-5	POWER GROUND: GROUND
O	CA87-4	RH REAR TURN SIGNAL: TO ACTIVATE, GECM SWITCHES CIRCUIT TO B+
S	IP5-18	SCP –
S	IP5-19	SCP +
O	IP5-22	TURN SIGNAL AUDIBLE WARNING: TO ACTIVATE, GECM SWITCHES CIRCUIT TO B+
SG	IP6-1	LOGIC GROUND: GROUND
I	IP6-17	LH TURN SIGNAL SWITCH: GROUND WHEN SELECTED
I	IP6-19	RH TURN SIGNAL SWITCH: GROUND WHEN SELECTED
I	IP6-23	HAZARD SWITCH: GROUND WHEN SELECTED
B+	JB172-5	BATTERY POWER SUPPLY (TURN SIGNALS): B+

Instrument Cluster

▽	Pin	Description and Characteristic
I	IP10-1	REVERSE LAMP SWITCH: B+ WHEN ACTIVATED
C	IP10-17	CAN +
C	IP10-18	CAN –
O	IP11-3	REVERSE LAMPS RELAY DRIVE: TO ACTIVATE, IC SWITCHES CIRCUIT TO GROUND

NOTE: Refer to the Appendix at the rear of this book for Network Messages.

Fig. 08.3

COMPONENTS

Component	Connector(s)	Connector Description	Location
BRAKE ON / OFF SWITCH	PA3	3-WAY / BLACK	TOP OF BRAKE PEDAL
CENTRAL JUNCTION FUSE BOX	CA75	8-WAY / GREY	PASSENGER COMPARTMENT, FRONT BULKHEAD LH SIDE
	CA76	16-WAY / GREEN	
	CA77	2-WAY / GREY	
	CA78	16-WAY / GREY	
	IP1	14-WAY / GREEN	
	IP2	16-WAY / GREY	
	IP3	2-WAY / GREY	
	IP4	14-WAY / GREY	
	JB50	4-WAY / GREY	
	JB51	16-WAY / BLUE	
	JB52	2-WAY / BLACK	BEHIND INSTRUMENT PANEL RH SIDE
GENERAL ELECTRONIC CONTROL MODULE	CA86	23-WAY / GREY	
	CA87	23-WAY / GREEN	
	IP5	23-WAY / BROWN	
	IP6	23-WAY / WHITE	
	JB172	23-WAY / BLUE	
	IP51	6-WAY / BLACK	
	CA304	2-WAY / BLACK	
	IP10	26-WAY / YELLOW	
	IP11	26-WAY / YELLOW	
	TM4	2-WAY / BLACK	
HAZARD SWITCH	TM5	2-WAY / BLACK	CENTER CONSOLE
	IP17	16-WAY / BLACK	
	—	—	
	EN85	2-WAY / BLACK	
	RB5	2-WAY / BLACK	
	RB6	2-WAY / BLACK	
	CA137	7-WAY / BLACK	
	CA138	7-WAY / BLACK	
	IP53	10-WAY / GREY	
	—	—	
HIGH MOUNT STOP LAMP	CA304	2-WAY / BLACK	REAR WINDOW
INSTRUMENT CLUSTER	IP10	26-WAY / YELLOW	INSTRUMENT PANEL
	IP11	26-WAY / YELLOW	
			TRUNK LID
LICENSE PLATE LAMP – LH	TM4	2-WAY / BLACK	
LICENSE PLATE LAMP – RH	TM5	2-WAY / BLACK	TRUNK LID
MASTER LIGHTING SWITCH	IP17	16-WAY / BLACK	INSTRUMENT PANEL
REVERSE LAMPS RELAY	—	—	CENTRAL JUNCTION FUSE BOX R17
REVERSE LAMPS SWITCH	EN85	2-WAY / BLACK	TOP OF TRANSMISSION
SIDE MARKER LAMP – LH REAR	RB5	2-WAY / BLACK	REAR BUMPER LH SIDE
SIDE MARKER LAMP – RH REAR	RB6	2-WAY / BLACK	REAR BUMPER RH SIDE
TAIL LAMP UNIT – LH	CA137	7-WAY / BLACK	TRUNK LH REAR
TAIL LAMP UNIT – RH	CA138	7-WAY / BLACK	TRUNK RH REAR
TURN SIGNAL SWITCH	IP53	10-WAY / GREY	STEERING COLUMN

HARNESS IN-LINE CONNECTORS

Connector	Connector Description	Location
CA1	22-WAY / NATURAL / CABIN HARNESS TO INSTRUMENT PANEL HARNESS	LH LOWER A POST
CA10	22-WAY / GREY / ENGINE HARNESS TO CABIN HARNESS	BELOW THE GLOVEBOX
CA45	6-WAY / GREY / CABIN HARNESS TO TRUNK LID HARNESS	TRUNK LH REAR
CA129	12-WAY / GREY / CABIN HARNESS TO REAR BUMPER HARNESS	SPARE WHEEL WELL
CA170	16-WAY / GREEN / IN-LINE CONNECTOR	LH LOWER A POST
JB2	16-WAY / GREEN / JUNCTION BOX HARNESS TO CABIN HARNESS	ADJACENT TO CENTRAL JUNCTION FUSE BOX
JB145	8-WAY / BLACK / ENGINE HARNESS TO JUNCTION BOX HARNESS	ADJACENT TO CENTRAL JUNCTION FUSE BOX
JB196	10-WAY / GREY / JUNCTION BOX HARNESS TO CABIN HARNESS	ADJACENT TO FOOT PEDALS
TL10	6-WAY / GREY / TRUNK LID HARNESS	BELOW PARCEL SHELF LH SIDE

GROUND

Ground	Location
G1	TRUNK / LH REAR
G2	TRUNK / LH REAR
G4	PASSENGER COMPARTMENT / RH LOWER A POST
G5	PASSENGER COMPARTMENT / RH LOWER A POST
G36	PASSENGER COMPARTMENT / RH CROSS CAR BEAM
G37	PASSENGER COMPARTMENT / LH CROSS CAR BEAM
G38	PASSENGER COMPARTMENT / TOP OF LH E POST

FOR CONTROL MODULE PIN-OUT INFORMATION, UNFOLD PAGE TO LEFT.

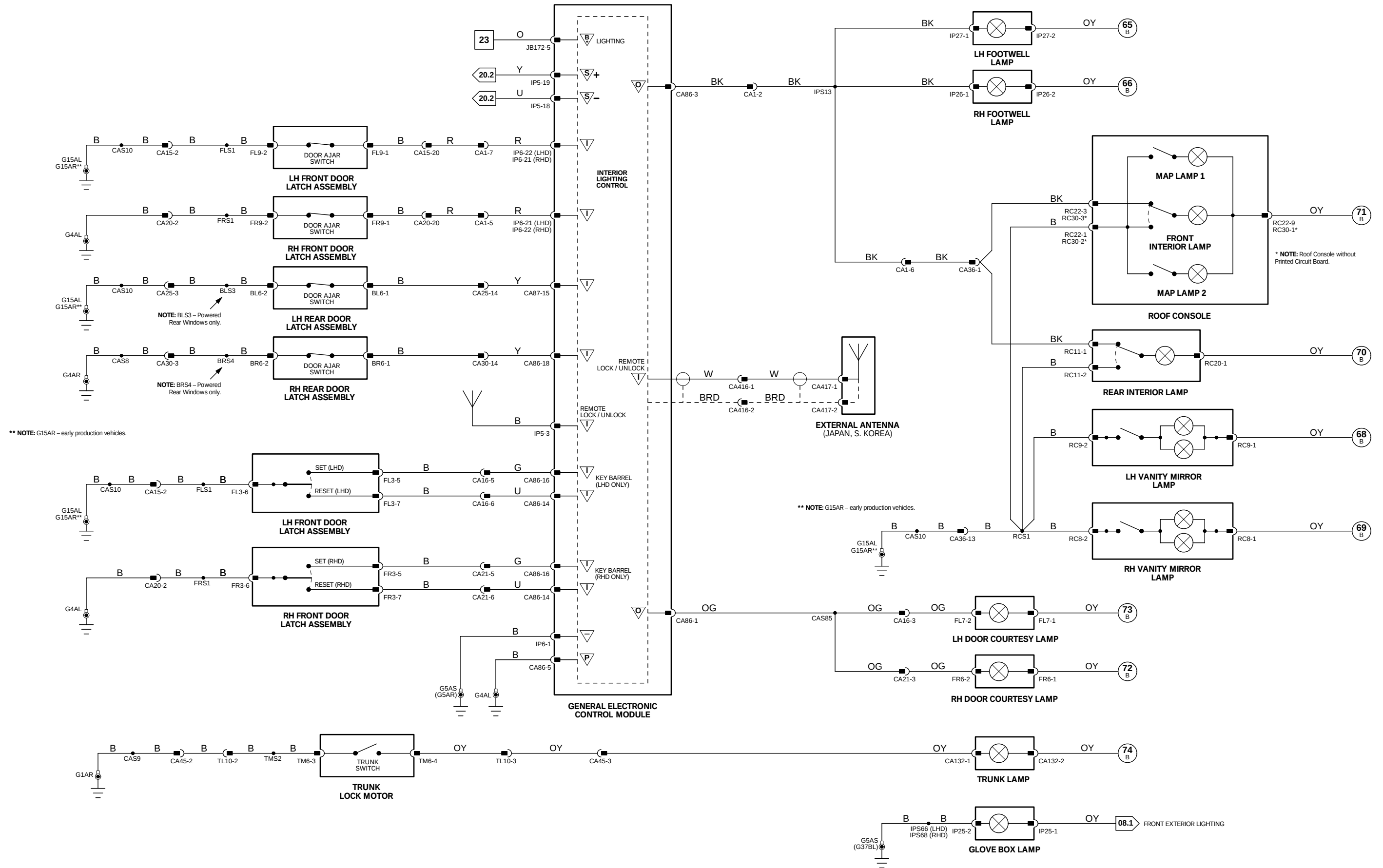
The following abbreviations are used to represent values for Control Module Pin-Out data

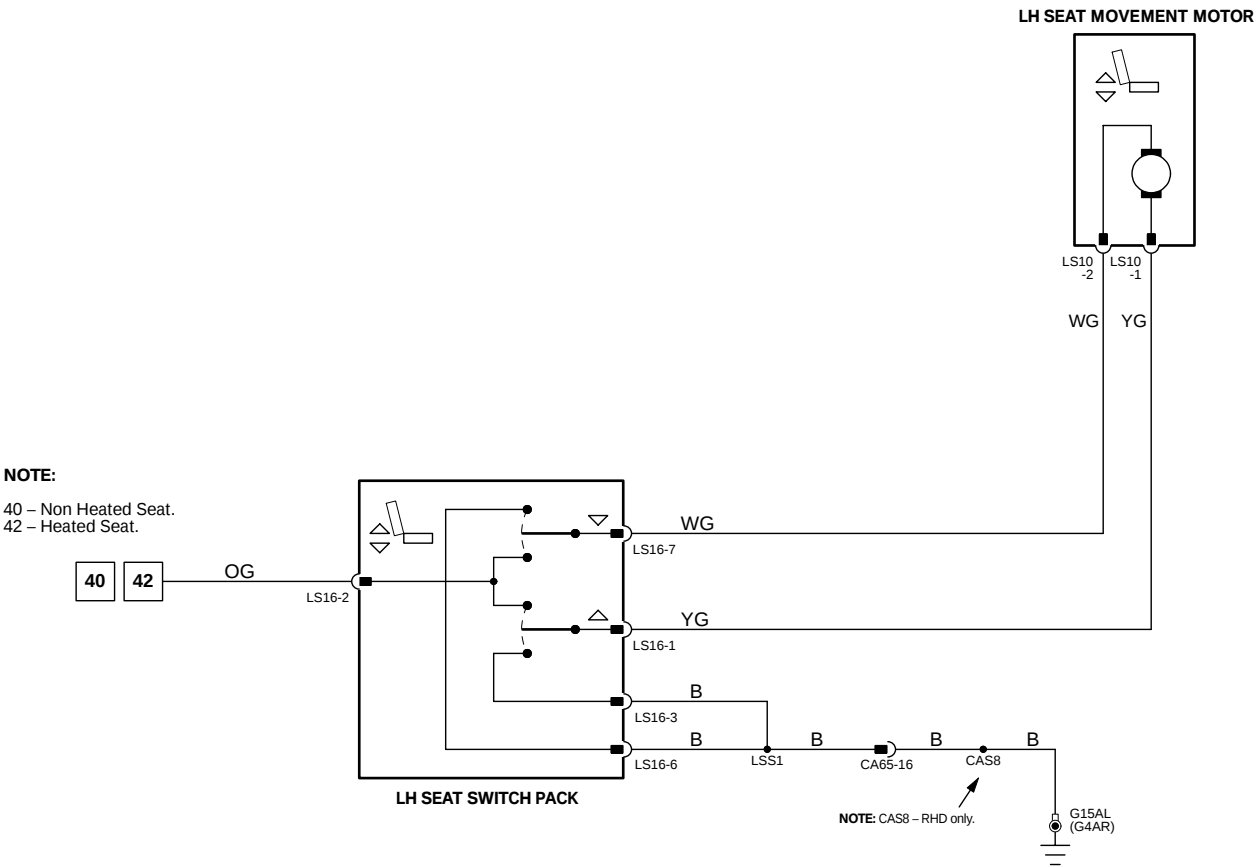
I	Input	PG	Power Ground	CAN	CAN Network	D	Serial and Encoded Data
O	Output	SS	Sensor / Signal Supply V	SCP	SCP Network	V	Voltage (DC)
B+	Battery Voltage	SG	Sensor / Signal Ground	D2	D2B Network	PWM	Pulse Width Modulated

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.

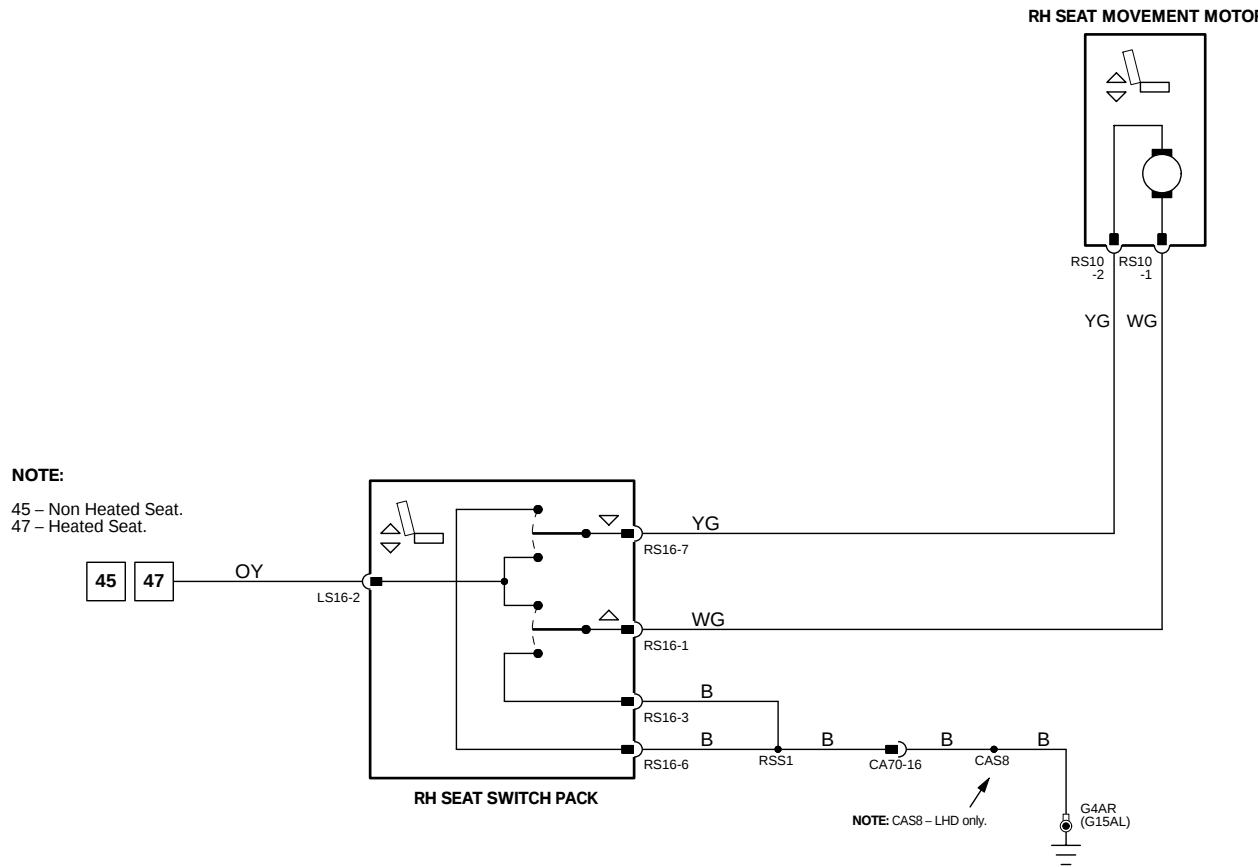
NOTE: The characteristics listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted.

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LH SEAT



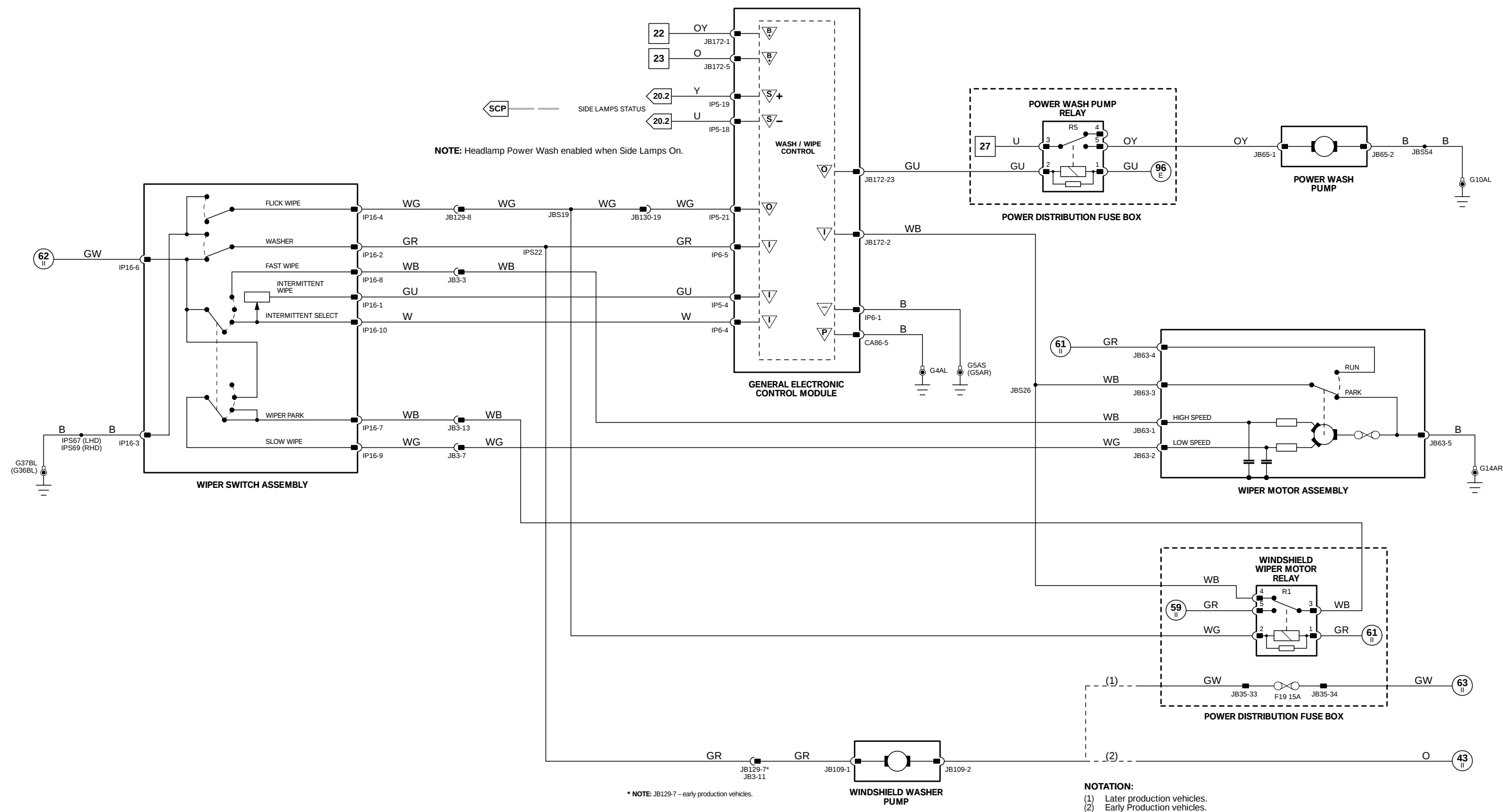
RH SEAT



Wash / Wipe System

Wash / Wipe System

Fig. 13.1



Cellular Phone Control Module

▽	Pin	Description and Characteristic
O	PH1-1	PHONE BATTERY CHARGING SUPPLY
O	PH1-2	HANDS FREE AUDIO TO PHONE
O	PH1-3	PHONE ON / OFF (RESPONSE TO INCOMING AUDIO)
O	PH1-4	MUTE COMMAND
I	PH1-5	MANUAL TEST DATA
I	PH1-6	PHONE BATTERY VOLTAGE
PG	PH1-9	POWER GROUND: GROUND
SG	PH1-10	ANALOG GROUND: GROUND
SG	PH1-11	MICROPHONE SHIELD: GROUND
B+	PH1-12	BATTERY POWER SUPPLY: B+
B+	PH1-13	BATTERY POWER SUPPLY: B+
B+	PH1-14	IGNITION SWITCHED POWER SUPPLY (I): B+
I	PH1-15	JaguarNet ASSISTANCE REQUEST
O	PH1-16	JaguarNet ASSISTANCE CALL INDICATOR
I	PH1-17	MICROPHONE +
I	PH1-18	MICROPHONE -
D	PH1-20	TELEPHONE SERIAL COMMUNICATIONS DATA
D	PH1-21	TELEPHONE SERIAL COMMUNICATIONS DATA
D	PH1-22	TELEPHONE SERIAL COMMUNICATIONS DATA
I	PH1-23	D2B NETWORK WAKE-UP
I	PH1-25	POWER GROUND: GROUND
I	PH1-26	TELEPHONE LOGIC GROUND: GROUND
I	PH1-29	IGNITION SWITCHED POWER SUPPLY (II): B+
I	PH1-30	AIRBAG DEPLOYED SIGNAL
I	PH1-31	JaguarNet INFORMATION REQUEST
O	PH1-32	JaguarNet INFORMATION CALL INDICATOR
D2	CD3-1	D2B NETWORK RECEIVE
D2	CD3-2	D2B NETWORK TRANSMIT

Voice Activation Control Module

▽	Pin	Description and Characteristic
I	PH2-1	MICROPHONE +
SG	PH2-2	MICROPHONE SHIELD
B+	PH2-6	IGNITION SWITCHED POWER SUPPLY (II) (START / RUN STATUS)
B+	PH2-8	IGNITION SWITCHED POWER SUPPLY (I)
PG	PH2-11	POWER GROUND
I	PH2-12	MICROPHONE -
O	PH2-14	D2B NETWORK WAKE UP
B+	PH2-22	BATTERY POWER SUPPLY
D2	CD4-1	D2B NETWORK RECEIVE
D2	CD2-2	D2B NETWORK TRANSMIT

The following abbreviations are used to represent values for Control Module Pin-Out data

I	Input	PG	Power Ground	CAN	CAN Network	D	Serial and Encoded Data
O	Output	SS	Sensor / Signal Supply V	SCP	SCP Network	V	Voltage (DC)
B+	Battery Voltage	SG	Sensor / Signal Ground	D2	D2B Network	PWM	Pulse Width Modulated

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 characteristics 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.

Fig. 16.4

COMPONENTS

Component	Connector(s)	Connector Description	Location
AUDIO CONTROL SWITCHES	SW4	6-WAY / BLACK	STEERING WHEEL
AUDIO UNIT	ID1	2-WAY / BLACK	INSTRUMENT PANEL CENTER
	IP65	20-WAY / BLACK	
	IP106	2-WAY / COAXIAL	
CELLULAR PHONE CONTROL MODULE	CD3	2-WAY / BLACK	TRUNK LH REAR
	PH1	32-WAY / BLACK	
	PH3	2-WAY / COAXIAL	
	PH5	2-WAY / COAXIAL	
HANDSET RECEIVER (NAS)	PH9	—	LH A POST
	PH10	10-WAY / GREY	LH A POST
JaguarNet GPS ANTENNA	PH5	2-WAY / COAXIAL	BEHIND LH REAR QUARTER TRIM PANEL
NAVIGATION CONTROL MODULE	CD5	2-WAY / BLACK	TRUNK LH REAR
	NA1	26-WAY NATURAL	
	NA2	12-WAY / BLACK	
	NA6	2-WAY / COAXIAL	
	NA7	20-WAY / BLACK	
ROOF CONSOLE	RC22	22-WAY / BLACK	ROOF, CENTER FRONT
	RC30	4-WAY / BLACK	
	RC31	2-WAY / BLACK	
	RC33	4-WAY / BLACK	
	RC34	6-WAY / BLACK	
TELEMATICS DISPLAY	IP70	22-WAY / BLACK	CENTER CONSOLE
	IP136	2-WAY	
	IP137	2-WAY	
	IP138	2-WAY	
	IP139	2-WAY	
TELEPHONE ANTENNA, BUMPER (NAS)	PH4	2-WAY	REAR BUMPER
TELEPHONE ANTENNA, JaguarNet (NAS)	PH12	2-WAY / COAXIAL	PARCEL SHELF
VOICE ACTIVATION CONTROL MODULE	PH2	22-WAY / GREY	TRUNK LH REAR

HARNESS IN-LINE CONNECTORS

Connector	Connector Description	Location
CA1	22-WAY / NATURAL / CABIN HARNESS TO INSTRUMENT PANEL HARNESS	LH LOWER A POST
CA35	10-WAY / GREY / CABIN HARNESS TO ROOF HARNESS	RH LOWER A POST
CA36	16-WAY / GREEN / CABIN HARNESS TO ROOF HARNESS	LH LOWER A POST
CA241	22-WAY / GREEN / INSTRUMENT PANEL HARNESS TO CABIN HARNESS	ADJACENT TO CENTRAL JUNCTION FUSE BOX
CA406	3-WAY / GREY / TELEPHONE HARNESS TO CABIN HARNESS	BELOW LH REAR SEAT CUSHION
CA407	16-WAY / GREEN / TELEPHONE HARNESS TO CABIN HARNESS	BELOW LH REAR SEAT CUSHION
CA414	16-WAY / BLUE / TELEPHONE HARNESS TO CABIN HARNESS	BELOW LH REAR SEAT CUSHION

GROUND

Ground	Location
G15	PASSENGER COMPARTMENT / LH LOWER A POST
G39	TRUNK / LH REAR

FOR CONTROL MODULE PIN-OUT INFORMATION, UNFOLD PAGE TO LEFT.

Refer to the front of this book for detailed information and illustrations regarding the location and identification of harnesses, relays, fuses, grounds, control modules and control module pins.