### **Powertrain Control Module**

	Pin	<b>Description and Characteristic</b>
C C O	C98-A3 C98-A4 C98-H1	CAN - CAN + GENERATOR COMMAND LINE: PWM
I	C99-F2	GENERATOR MONITOR LINE
0   	FH13-B1 FH13-D4 FH13-F3	STARTER RELAY DRIVE: TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND AUTOMATIC – PARK / NEUTRAL SIGNAL: B+ WHEN ACTIVATED ENGINE CRANK: B+

## Instrument Cluster

	Pin	Description and Characteristic
PG	FC8-2	POWER GROUND: GROUND
1	FC8-5	KEY-IN AUDIBLE WARNING: B+ WHEN KEY IN
B+	FC8-14	IGNITION SWITCHED POWER SUPPLY (II): B+
B+	FC8-15	BATTERY POWER SUPPLY (LOGIC): B+
SG	FC8-32	SIGNAL GROUND: GROUND
D	FC9-16	PATS TRANSCEIVER: ENCODED COMMUNICATION
С	FC9-28	CAN +
С	FC9-29	CAN -
1	FC9-31	PATS GROUND: GROUND
D	FC9-32	PATS TRANSCEIVER: ENCODED COMMUNICATION

## **Transmission Control Module**

	Pin	Description and Characteristic
B+	GB2-9	IGNITION SWITCHED POWER SUPPLY: B+
0	GB2-10	PARK / NEUTRAL SIGNAL: GROUND WHEN ACTIVATE
PG	GB2-13	POWER GROUND: GROUND
PG	GB2-16	POWER GROUND: GROUND

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

ı	Input	PG	Power Ground	С	CAN Network	D	Serial and Encoded Data
0	Output	SS	Sensor / Signal Supply V	S	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 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.

# Fig. 02.3

### COMPONENTS

Component	Connector(s)	<b>Connector Description</b>	Location
BATTERY	_	_	LUGGAGE COMPARTMENT
FPDB MEGAFUSE	_	_	LUGGAGE COMPARTMENT, RH SIDE
FRONT POWER DISTRIBUTION FUSE BOX	_	_	ENGINE COMPARTMENT, RH SIDE
GENERATOR	C73	3-WAY / BLACK	ENGINE, RH SIDE, FRONT
	ST7	EYELET	
GLOW PLUG MIDIFUSE	_	_	
IGNITION SWITCH	FC18	7-WAY / BLACK	STEERING COLUMN COWLING
INSTRUMENT CLUSTER	FC8	32-WAY / BLACK	INSTRUMENT PANEL
	FC9	32-WAY / BLACK	
PASSIVE ANTI-THEFT SYSTEM TRANSCEIVER	FC52	4-WAY / GREEN	STEERING COLUMN, IGNITION SWITCH
POWERTRAIN CONTROL MODULE	C98	48-WAY / BROWN	FRONT BULKHEAD, PASSENGER SIDE
	C99	48-WAY / GREY	
	FH13	48-WAY / BLACK	
PRIMARY JUNCTION FUSE BOX	CA2	26-WAY / BLACK	RH 'A' POST
	CA56	8-WAY / BLACK	
	FC37	26-WAY / BLACK	
	FH7	6-WAY / BLACK	
	FH53	10-WAY / BLACK	
STARTER MEGAFUSE	_	_	LUGGAGE COMPARTMENT, RH SIDE
STARTER MOTOR	_	_	ENGINE BLOCK, RH SIDE
STARTER RELAY	_	_	FRONT POWER DISTRIBUTION FUSE BOX - R20
TRANSMISSION CONTROL MODULE	GB2	16-WAY / BLACK	TRANSMISSION CONTROL VALVE ASSEMBLY

## HARNESS IN-LINE CONNECTORS

Connector	Connector Description / Location	Location
GB1	16-WAY / GREY / ENGINE HARNESS TO TRANSMISSION HARNESS	ADJACENT TO TRANSMISSION BELL HOUSING
PI41	42-WAY / BLACK / ENGINE HARNESS TO VEHICLE HARNESSES	ENGINE COMPARTMENT, BULKHEAD, PASSENGER SIDE
ST4	2-WAY / GREY / FRONT HARNESS TO STARTER LINK	ENGINE COMPARTMENT, REARWARD OF RH WHEEL ARCH

#### GROUNDS

GROUNDS	
Ground	Location
FC38	UNDER CENTER OF INSTRUMENT PANEL, ON TRANSMISSION TUNNEL
JB1	LUGGAGE COMPARTMENT, BATTERY GROUND
PI40 (LHD)	ENGINE COMPARTMENT, BEHIND RH WHEEL ARCH LINER
PI40 (RHD)	ENGINE COMPARTMENT, BEHIND LH WHEEL ARCH LINER
ST2	ENGINE COMPARTMENT, BEHIND LH WHEEL ARCH LINER

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.

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1 → 3 Fig. 01.1

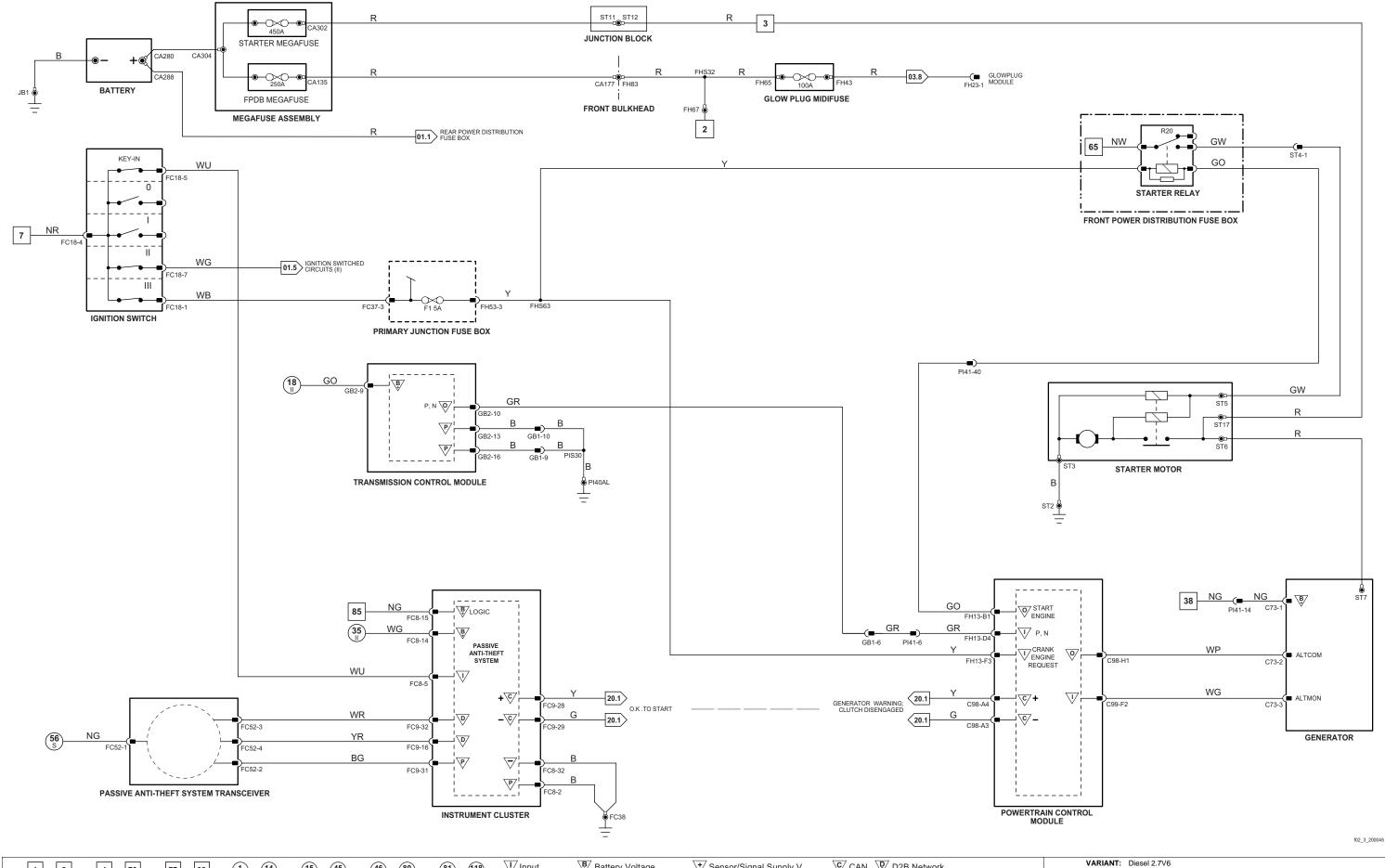
4 → 76 Fig. 01.2

77 → 92 Fig. 01.3

1 - 14 Fig. 01.4

(15) → (45) Fig. 01.5

46 S → 80 Fig. 01.6



 $\sqrt{I}$  Input

Output

Battery Voltage

P Power Ground

\* Sensor/Signal Supply V

Sensor/Signal Ground

C CAN D D2B Network

S SCP D Serial and Encoded Data

VIN RANGE: All

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(81) → (118) Fig. 01.7

**Battery; Starter; Generator: Diesel 2.7V6**