

2003

Buy Now



Discover more ebooks! Visit our website: fordshopmanual.com

Wiring Diagrams



DEMO

This DEMO contains only a few pages of the entire manual/product.

Not all Bookmarks work on the Demo, but they do on the full version.

Features:

- Searchable text
- Printable pages
- Bookmarked for easy navigation
- High Resolution images
- Zoom to see exact details
- Money back Guarantee
- Transfer to USB flash drive support

F-150



License #84356800

Ford Motor Company

Copyright © 2024, Forel Publishing Company, LLC, Woodbridge, Virginia

All Rights Reserved. No part of this book may be used or reproduced in any manner whatsoever without written permission of Forel Publishing Company, LLC. For information write to Forel Publishing Company, LLC, Woodbridge, VA 22192

2003 Ford F-150 Truck Wiring Diagrams

EAN: 978-1-60371-490-7

ISBN: 1-60371-490-1

Forel Publishing Company, LLC
Woodbridge, VA 22192



License #84356800

This publication contains material that is reproduced and distributed under a license from Ford Motor Company. No further reproduction or distribution of the Ford Motor Company material is allowed without the express written permission of Ford Motor Company.

Note from the Publisher

This product was created from the original Ford Motor Company's publication. Every effort has been made to use the original scanned images, however, due to the condition of the material; some pages have been modified to remove imperfections.

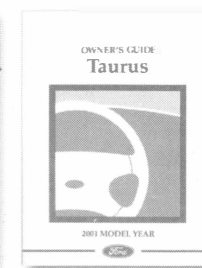
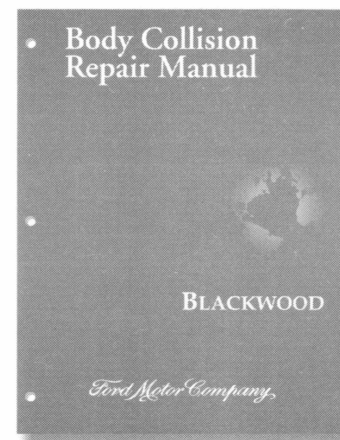
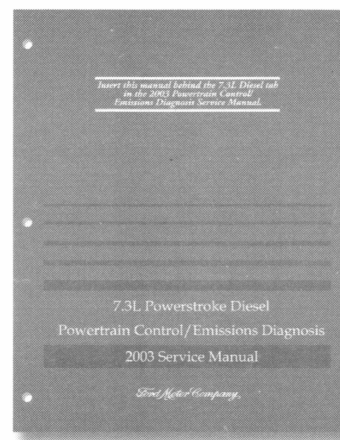
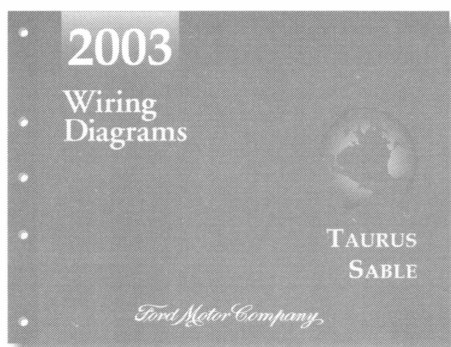
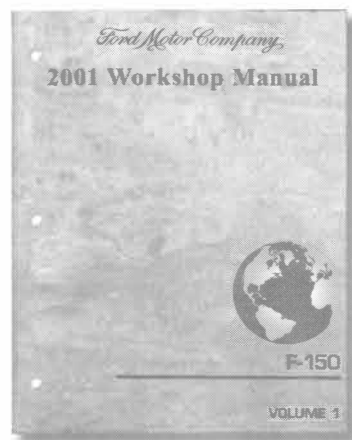
Disclaimer

Although every effort was made to ensure the accuracy of this book, no representations or warranties of any kind are made concerning the accuracy, completeness or suitability of the information, either expressed or implied. As a result, the information contained within this book should be used as general information only. The author and Forel Publishing Company, LLC shall have neither liability nor responsibility to any person or entity with respect to any loss or damage caused, or alleged to be caused, directly or indirectly by the information contained in this book. Further, the publisher and author are not engaged in rendering legal or other professional services. If legal, mechanical, electrical, or other expert assistance is required, the services of a competent professional should be sought.

Ford Motor Company

Ford Customer Service Division

Available publications include this and all other Ford and Lincoln/Mercury Workshop Manuals, Wiring Diagrams, PC/ED Manuals, Body Collision Repair Manuals, and Owner Guides.



Quality is Job 1

NOTE: The descriptions and specifications contained in this manual were in effect at the time this manual was approved for printing. Ford Motor Company reserves the right to discontinue models at any time, or change specifications or design without notice and without incurring any obligation.

Copyright © 2002 Ford Motor Company. All rights reserved. Reproduction by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system or translation in whole or part is not permitted without written authorization from Ford Motor Company.

To order:

Call:
1(800) 782-4356

Write:
**Ford Publications
c/o Helm Inc.
PO Box 07150
Detroit, Michigan 48207**

F-150 Wiring Diagrams

Table of Contents	1-1	Multifunction Electronic Control Modules	59-1
Index	2-1	Instrument Cluster	60-1
Introduction	3-1	Warning Devices	66-1
Symbols	4-1	Illumination	71-1
Connector Repair Procedures	5-1	Wipers and Washers	81-1
Systems Overview	8-1	Headlamps	85-1
Wiring Harness Overview	9-1	Fog Lamps	86-1
Grounds	10-1	Autolamps	87-1
Fuse and Relay Information	11-1	Courtesy Lamps	89-1
Charging System	12-1	Turn/Stop/Hazard Lamps	90-1
Power Distribution	13-1	Exterior Lamps	92-1
Module Communications Network	14-1	Reversing Lamps	93-1
Starting System	20-1	Trailer/Camper Adapter	95-1
Engine Ignition	21-1	Daytime Running Lamps	97-1
Engine Controls – 5.4L Bi-Fuel	22-1	Power Windows	100-1
Engine Controls – 4.2L	23-1	Roof Opening Panel	101-1
Engine Controls – 4.6L	24-1	Overhead Console	102-1
Engine Controls – 5.4L	25-1	Power Door Locks	110-1
Engine Controls – 5.4L NGV	26-1	Anti-Theft	112-1
Engine Controls – 5.4L supercharged	27-1	Remote Control Alarm and Locks	117-1
Engine Controls – 5.4L CNG	28-1	Climate Controlled Seats	119-1
Transmission Controls – 4R70W	29-1	Power Seats	120-1
Transmission Controls – 4R100	30-1	Power Mirrors	124-1
Vehicle Speed Control	31-1	Electronic Day/Night Mirror	125-1
Electronic Shift Control	34-1	Adjustable Pedal	127-1
Shift Lock	37-1	Radio	130-1
ABS	42-1	Rear Seat Entertainment (RSE)	132-1
Horn/Cigar Lighter	44-1	Component Testing	149-1
Air Bags	46-1	Connector Views	150-1
Heater	53-1	Component Location Views	151-1
Air Conditioner/Heater	54-1	Component Location Charts	152-1
EATC	55-1	Vehicle Repair Location Charts	160-1
Rear Window Defrost	56-1		

4R100 transmission	30-5	Alternative Fuel Control Module (AFCM)	28-6
4R70W transmission	29-5	Ambient air temperature sensor (19E702)	102-1
4x2 center axle disconnect solenoid – with Electronic Shift On the Fly (ESOF)	34-5	Ambient air temperature sensor (19E702)	55-3
4x2 center axle disconnect solenoid – with Mechanical Shift On the Fly (MSOF)	34-6	Antenna – Harley Davidson	130-5
4x4 center axle disconnect solenoid – with Electronic Shift On the Fly (ESOF)	34-5	Antenna – MP3 player	130-2
4x4 center axle disconnect solenoid – with Mechanical Shift On the Fly (MSOF)	34-6	Antenna – Regular cab, Super cab	130-3
4x4 High/Low indicator switch	34-6	Antenna – Supercrew	130-7
A/C clutch cycling pressure switch (19E561)	54-3	Ashtray illumination lamp	71-1
A/C clutch cycling pressure switch (19E561)	55-4	Autolamp sensor	87-2
A/C clutch field coil (19D798)	54-4	Auxiliary relay box 1	11-5
A/C clutch field coil (19D798)	55-3	Auxiliary relay box 2	11-6
A/C clutch relay	54-4	Auxiliary relay box 3	11-7
A/C clutch relay	55-3	Auxiliary relay box 4	11-8
A/C Compressor clutch diode	54-4	Auxiliary relay box 5	11-9
A/C Compressor clutch diode	55-3	Barometric Absolute Pressure (BAP) sensor	27-9
A/C high pressure switch (19D594)	54-3	Battery (10655)	13-1
A/C high pressure switch (19D594)	55-4	Battery Junction Box (BJB) (14A003)	13-1
ABS control module (2C219)	42-1	Battery saver relay	59-3
Accessory delay relay	59-3	Belt minder module	66-2
Adjustable pedal motor (2C429)	127-1	Bi-Fuel power relay – 5.4L Bi-Fuel	22-11
Adjustable pedal switch	127-1	Bi-Fuel power relay – 5.4L CNG	28-14
Air bag sliding contact (14A664)	31-2	Bi-Fuel relay module	11-10
Air bag sliding contact (14A664)	44-1	Bi-Fuel relay module	22-11
Air bag sliding contact (14A664)	46-2	Blower motor relay	53-1
Alternate fuel injector 1	28-9	Blower motor relay	54-2
Alternate fuel injector 2	28-9	Blower motor relay	55-2
Alternate fuel injector 3	28-9	Blower motor resistor (19A706)	53-1
Alternate fuel injector 4	28-9	Blower motor resistor (19A706)	54-2
Alternate fuel injector 5	28-9	Brake fluid level switch (2L414)	60-3
Alternate fuel injector 6	28-9	Brake pedal position switch (13480)	90-4
Alternate fuel injector 7	28-8	Brake pressure switch (2B264)	31-3
Alternate fuel injector 8	28-8	Brake shift interlock	37-1
		Camshaft position sensor (6B288) – 4.2L	23-7
		Camshaft position sensor (6B288) – 4.6L	24-7
		Camshaft position sensor (6B288) – 5.4L	25-7
		Camshaft position sensor (6B288) – 5.4L Bi-Fuel	22-7

Camshaft position sensor (6B288) – 5.4L CNG	28–12	Cylinder-head temperature sensor (6G004) – 5.4L supercharged	27–4
Camshaft position sensor (6B288) – 5.4L Natural Gas Vehicle (NGV)	26–7	Data Link Connector (DLC) (14489) – ISO Bus	14–2
Camshaft position sensor (6B288) – 5.4L supercharged	27–8	Data Link Connector (DLC) (14489) – SCP Bus, Manual A/C	14–3
Cargo lamp 1	89–4	Data Link Connector (DLC) (14489) – SCP Bus, with EATC	14–4
Cargo lamp 2	89–4	Daytime Running Lamps (DRL) relay 1	97–2
Central Junction Box (CJB) (14A068)	13–8	Daytime running lamps resistor	97–2
Central security module	117–2	Differential Pressure Feedback EGR (DPFE) sensor (9J460) – 4.2L	23–8
Central Timer Module (CTM)	59–2	Differential Pressure Feedback EGR (DPFE) sensor (9J460) – 4.6L	24–8
Charge air cooler pump motor	27–12	Differential Pressure Feedback EGR (DPFE) sensor (9J460) – 5.4L	25–8
Charge air cooler pump relay	27–12	Differential Pressure Feedback EGR (DPFE) sensor (9J460) – 5.4L Bi-Fuel	22–8
Cigar lighter, front (15055)	44–2	Differential Pressure Feedback EGR (DPFE) sensor (9J460) – 5.4L CNG	28–11
Clutch pedal position switch	20–1	Differential Pressure Feedback EGR (DPFE) sensor (9J460) – 5.4L supercharged	27–9
Clutch triple function switch jumper	20–2	Digital Transmission Range (DTR) sensor (7F293) – 4R100	30–4
Coil On Plug (COP) 1 (12029)	21–5	Digital Transmission Range (DTR) sensor (7F293) – 4R70W	29–4
Coil On Plug (COP) 2 (12029)	21–5	Door ajar switch, driver side rear (14018)	66–1
Coil On Plug (COP) 3 (12029)	21–5	Door ajar switch, left front	66–1
Coil On Plug (COP) 4 (12029)	21–5	Door ajar switch, passenger side rear (14018)	66–1
Coil On Plug (COP) 5 (12029)	21–5	Door ajar switch, right front	66–1
Coil On Plug (COP) 6 (12029)	21–5	Door entry lamp, left front (13776) – Early production	89–2
Coil On Plug (COP) 7 (12029)	21–5	Door entry lamp, right front (13776) – Early production	89–2
Coil On Plug (COP) 8 (12029)	21–5	Door lock actuator, left front	110–1
Cold start heater	22–15	Door lock actuator, left rear (218A43)	110–1
Cold start heater diode	22–15	Door lock actuator, right front	110–1
Cold start heater relay	22–15	Door lock actuator, right rear (218A42)	110–1
Compuvalve module – Bi-Fuel	22–11	Door lock switch, driver side (14028)	110–1
Crankshaft position sensor (6C315) – Bi-Fuel	21–6	Door lock switch, driver side (14028)	117–3
Crankshaft position sensor (6C315)	21–3	Door lock switch, passenger side (14028)	110–1
Crash fuel shutoff relay	27–10	Door lock switch, passenger side (14028)	117–3
Cylinder-head temperature sensor (6G004) – 4.2L	23–3	Driver air bag unit (78043B13)	46–2
Cylinder-head temperature sensor (6G004) – 4.6L	24–3	Driver safety belt retractor pretensioner	46–1
Cylinder-head temperature sensor (6G004) – 5.4L	25–3		
Cylinder-head temperature sensor (6G004) – 5.4L Bi-Fuel	22–3		
Cylinder-head temperature sensor (6G004) – 5.4L CNG	28–5		
Cylinder-head temperature sensor (6G004) – 5.4L Natural Gas Vehicle (NGV)	26–3		

Dropping resistor	27-10	F1.8	13-6
EGR vacuum regulator solenoid (9J459) - 4.2L	23-6	F1.9	13-3
EGR vacuum regulator solenoid (9J459) - 4.6L	24-6	F1.10	13-4
EGR vacuum regulator solenoid (9J459) - 5.4L	25-6	F1.11	13-1
EGR vacuum regulator solenoid (9J459) - 5.4L Bi-Fuel	22-6	F1.12	13-5
EGR vacuum regulator solenoid (9J459) - 5.4L CNG	28-10	F1.13	13-3
EGR vacuum regulator solenoid (9J459) - 5.4L supercharged	27-7	F1.15	89-6
Electrochromatic inside mirror unit (17700)	125-1	F1.16	28-5
Electronic Automatic Temperature Control (EATC) module (19980)	55-2	F1.17	13-10
Engine compartment lamp	89-2	F1.18 - 4.2L	23-3
EVAP canister purge valve - 4.2L	23-6	F1.18 - 4.6L	24-3
EVAP canister purge valve - 4.6L	24-6	F1.18 - 5.4L	25-3
EVAP canister purge valve - 5.4L	25-6	F1.18 - 5.4L Bi-Fuel	22-3
EVAP canister purge valve - 5.4L Bi-Fuel	22-6	F1.18 - 5.4L CNG	28-5
EVAP canister purge valve - 5.4L CNG	28-10	F1.18 - 5.4L Natural Gas Vehicle (NGV)	26-3
EVAP canister purge valve - 5.4L supercharged	27-7	F1.18 - 5.4L supercharged	27-4
Evaporative emission (EVAP) canister vent valve (9F945) - 4.2L	23-6	F1.19	95-3
Evaporative emission (EVAP) canister vent valve (9F945) - 4.6L	24-6	F1.20	95-3
Evaporative emission (EVAP) canister vent valve (9F945) - 5.4L	25-6	F1.23 - 4.2L	23-3
Evaporative emission (EVAP) canister vent valve (9F945) - 5.4L Bi-Fuel	22-6	F1.23 - 4.6L	24-3
Evaporative emission (EVAP) canister vent valve (9F945) - 5.4L CNG	28-10	F1.23 - 5.4L	25-3
Evaporative emission (EVAP) canister vent valve (9F945) - 5.4L supercharged	27-7	F1.23 - 5.4L Bi-Fuel	22-3
Exterior rear view mirror, driver side (17682)	124-1	F1.23 - 5.4L CNG	28-5
Exterior rear view mirror, passenger side (17683)	124-1	F1.23 - 5.4L Natural Gas Vehicle (NGV)	26-3
Exterior rear view mirror switch (17B676)	124-1	F1.23 - 5.4L supercharged	27-4
F1.1	13-3	F1.101	13-3
F1.2	13-6	F1.102	13-3
F1.3	13-2	F1.103	13-4
F1.4	13-2	F1.104	13-5
F1.5	13-1	F1.105	13-4
F1.6	13-2	F1.106	13-5
F1.7	13-2	F1.108	13-6
		F1.110	13-6
		F1.111	13-4
		F1.112	13-4
		F1.113	13-4

F1.115	13-6	Front blower motor (19805)	55-4
F1.116	13-6	Front blower motor speed controller (19E624)	55-2
F1.117	13-4	Fuel injector 1 (9F593) - 4.2L	23-5
F1.118	13-5	Fuel injector 1 (9F593) - 4.6L	24-5
F1.601	13-6	Fuel injector 1 (9F593) - 5.4L	25-5
F2.1	13-8	Fuel injector 1 (9F593) - 5.4L Bi-Fuel	22-5
F2.2	13-8	Fuel injector 1 (9F593) - 5.4L CNG	28-7
F2.3	13-8	Fuel injector 1 (9F593) - 5.4L Natural Gas Vehicle (NGV)	26-5
F2.4	13-9	Fuel injector 1 (9F593) - 5.4L supercharged	27-6
F2.5	13-10	Fuel injector 2 (9F593) - 4.2L	23-5
F2.6	13-10	Fuel injector 2 (9F593) - 4.6L	24-5
F2.8	13-11	Fuel injector 2 (9F593) - 5.4L	25-5
F2.11	13-11	Fuel injector 2 (9F593) - 5.4L Bi-Fuel	22-5
F2.13	13-9	Fuel injector 2 (9F593) - 5.4L CNG	28-7
F2.14	13-9	Fuel injector 2 (9F593) - 5.4L Natural Gas Vehicle (NGV)	26-5
F2.15	13-9	Fuel injector 2 (9F593) - 5.4L supercharged	27-6
F2.16	85-1	Fuel injector 3 (9F593) - 4.2L	23-5
F2.18	13-12	Fuel injector 3 (9F593) - 4.6L	24-5
F2.20	13-15	Fuel injector 3 (9F593) - 5.4L	25-5
F2.21	13-15	Fuel injector 3 (9F593) - 5.4L Bi-Fuel	22-5
F2.22	13-15	Fuel injector 3 (9F593) - 5.4L CNG	28-7
F2.23	13-16	Fuel injector 3 (9F593) - 5.4L Natural Gas Vehicle (NGV)	26-5
F2.24	13-16	Fuel injector 3 (9F593) - 5.4L supercharged	27-6
F2.26	85-1	Fuel injector 4 (9F593) - 4.2L	23-5
F2.27	86-2	Fuel injector 4 (9F593) - 4.6L	24-5
F2.28	85-1	Fuel injector 4 (9F593) - 5.4L	25-5
F2.29	13-13	Fuel injector 4 (9F593) - 5.4L Bi-Fuel	22-5
F2.30	13-13	Fuel injector 4 (9F593) - 5.4L CNG	28-7
F3.1	13-17	Fuel injector 4 (9F593) - 5.4L Natural Gas Vehicle (NGV)	26-5
F3.2	13-17	Fuel injector 4 (9F593) - 5.4L supercharged	27-6
Fog lamp, left front (15200)	86-2	Fuel injector 5 (9F593) - 4.2L	23-5
Fog lamp, right front (15200)	86-2	Fuel injector 5 (9F593) - 4.6L	24-5
Fog lamp relay	86-2	Fuel injector 5 (9F593) - 5.4L	25-5
Four-wheel drive switch	34-3	Fuel injector 5 (9F593) - 5.4L Bi-Fuel	22-5
Front blower motor (19805)	53-1	Fuel injector 5 (9F593) - 5.4L CNG	28-7
Front blower motor (19805)	54-2	Fuel injector 5 (9F593) - 5.4L Natural Gas Vehicle (NGV)	26-5

Fuel injector 5 (9F593) – 5.4L supercharged	27–6	Fuel pump relay – 4.6L	24–9
Fuel injector 6 (9F593) – 4.2L	23–5	Fuel pump relay – 5.4L	25–9
Fuel injector 6 (9F593) – 4.6L	24–5	Fuel pump relay – 5.4L Bi-Fuel	22–9
Fuel injector 6 (9F593) – 5.4L	25–5	Fuel pump relay – 5.4L CNG	28–13
Fuel injector 6 (9F593) – 5.4L Bi-Fuel	22–5	Fuel pump relay – 5.4L Natural Gas Vehicle (NGV)	26–9
Fuel injector 6 (9F593) – 5.4L CNG	28–7	Fuel pump relay – 5.4L supercharged	27–10
Fuel injector 6 (9F593) – 5.4L Natural Gas Vehicle (NGV)	26–5	Fuel rail cutoff valve – 5.4L CNG	28–14
Fuel injector 6 (9F593) – 5.4L supercharged	27–6	Fuel rail cutoff valve – 5.4L Natural Gas Vehicle (NGV)	26–9
Fuel injector 7 (9F593) – 4.6L	24–4	Fuel rail pressure transducer sensor	28–17
Fuel injector 7 (9F593) – 5.4L	25–4	Fuel rail temperature sensor – 5.4L CNG	28–17
Fuel injector 7 (9F593) – 5.4L Bi-Fuel	22–4	Fuel rail temperature sensor – 5.4L Natural Gas Vehicle (NGV)	26–9
Fuel injector 7 (9F593) – 5.4L CNG	28–6	Fuel tank pressure sensor	28–17
Fuel injector 7 (9F593) – 5.4L Natural Gas Vehicle (NGV)	26–4	Fuel tank pressure transducer sensor (9C968) – 4.2L	23–9
Fuel injector 7 (9F593) – 5.4L supercharged	27–5	Fuel tank pressure transducer sensor (9C968) – 4.6L	24–9
Fuel injector 8 (9F593) – 4.6L	24–4	Fuel tank pressure transducer sensor (9C968) – 5.4L	25–9
Fuel injector 8 (9F593) – 5.4L	25–4	Fuel tank pressure transducer sensor (9C968) – 5.4L Bi-Fuel	22–9
Fuel injector 8 (9F593) – 5.4L Bi-Fuel	22–4	Fuel tank pressure transducer sensor (9C968) – 5.4L CNG	28–15
Fuel injector 8 (9F593) – 5.4L CNG	28–6	Fuel tank pressure transducer sensor (9C968) – 5.4L supercharged	27–13
Fuel injector 8 (9F593) – 5.4L Natural Gas Vehicle (NGV)	26–4	Fuel tank temperature sensor	22–14
Fuel injector 8 (9F593) – 5.4L supercharged	27–5	Function selector switch assembly (19B888)	53–1
Fuel pump – 4.2L	23–9	Function selector switch assembly (19B888)	54–2
Fuel pump – 4.6L	24–9	Fusible link A	13–1
Fuel pump – 5.4L	25–9	Fusible link B	13–1
Fuel pump – 5.4L Bi-Fuel	22–13	Fusible link C	13–1
Fuel pump – 5.4L Bi-Fuel	22–9	G100	10–1
Fuel pump – 5.4L CNG	28–15	G101	10–1
Fuel pump – 5.4L supercharged	27–13	G102	10–2
Fuel pump cutoff relay – 5.4L Bi-Fuel	22–11	G103	10–3
Fuel pump cutoff relay – 5.4L CNG	28–14	G104	10–4
Fuel pump high/low relay	27–13	G105	10–1
Fuel pump module – 4.2L	23–9	G106	10–5
Fuel pump module – 4.6L	24–9	G107	10–6
Fuel pump module – 5.4L	25–9	G108	10–5
Fuel pump module – 5.4L Bi-Fuel	22–13	G200	10–7
Fuel pump module – 5.4L CNG	28–15	G201	10–9
Fuel pump relay – 4.2L	23–9		

G202	10-10	Heated Oxygen Sensor (HO2S) #22 (9G444) – 4.2L	23-10
G203	10-11	Heated Oxygen Sensor (HO2S) #22 (9G444) – 4.6L	24-10
G400	10-10	Heated Oxygen Sensor (HO2S) #22 (9G444) – 5.4L	25-10
G4001	22-11	Heated Oxygen Sensor (HO2S) #22 (9G444) – 5.4L Bi-Fuel ...	22-10
Generator – 5.4L supercharged	12-2	Heated Oxygen Sensor (HO2S) #22 (9G444) – 5.4L CNG	28-16
Generator	12-1	Heated Oxygen Sensor (HO2S) #22 (9G444) – 5.4L supercharged	27-11
Generic Electronic Module (GEM) (14B205)	59-1	Heated seat module, driver side front (14C724)	119-2
Glove box lamp (14413)	89-2	Heated seat module, passenger side front	119-3
Headlamp, left (13008)	85-2	High flow injector assembly	22-12
Headlamp, right (13008)	85-2	High mounted stoplamp (13A613)	90-4
Headlamp relay	87-2	High pitch horn	44-1
Heated Oxygen Sensor (HO2S) #11 (9F472) – 4.2L	23-6	Horn (13832)	44-1
Heated Oxygen Sensor (HO2S) #11 (9F472) – 4.6L	24-6	Horn relay	44-1
Heated Oxygen Sensor (HO2S) #11 (9F472) – 5.4L	25-6	Horn switch	44-1
Heated Oxygen Sensor (HO2S) #11 (9F472) – 5.4L Bi-Fuel	22-6	Idle Air Control (IAC) valve (9F715) – 4.2L	23-5
Heated Oxygen Sensor (HO2S) #11 (9F472) – 5.4L CNG	28-10	Idle Air Control (IAC) valve (9F715) – 4.6L	24-5
Heated Oxygen Sensor (HO2S) #11 (9F472) – 5.4L Natural Gas Vehicle (NGV)	26-6	Idle Air Control (IAC) valve (9F715) – 5.4L	25-5
Heated Oxygen Sensor (HO2S) #11 (9F472) – 5.4L supercharged	27-7	Idle Air Control (IAC) valve (9F715) – 5.4L Bi-Fuel	22-5
Heated Oxygen Sensor (HO2S) #12 (9G444) – 4.2L	23-10	Idle Air Control (IAC) valve (9F715) – 5.4L CNG	28-7
Heated Oxygen Sensor (HO2S) #12 (9G444) – 4.6L	24-10	Idle Air Control (IAC) valve (9F715) – 5.4L Natural Gas Vehicle (NGV)	26-5
Heated Oxygen Sensor (HO2S) #12 (9G444) – 5.4L	25-10	Idle Air Control (IAC) valve (9F715) – 5.4L supercharged	27-6
Heated Oxygen Sensor (HO2S) #12 (9G444) – 5.4L Bi-Fuel ...	22-10	Ignition coil (12029)	21-4
Heated Oxygen Sensor (HO2S) #12 (9G444) – 5.4L CNG	28-16	Ignition key switch	66-1
Heated Oxygen Sensor (HO2S) #12 (9G444) – 5.4L supercharged	27-11	Ignition switch (11572)	13-7
Heated Oxygen Sensor (HO2S) #21 (9F472) – 4.2L	23-6	Ignition transformer capacitor 1 (18801) – 4.2L	21-4
Heated Oxygen Sensor (HO2S) #21 (9F472) – 4.6L	24-6	Ignition transformer capacitor 1 (18801) – 4.6L, 5.4L	21-5
Heated Oxygen Sensor (HO2S) #21 (9F472) – 5.4L	25-6	Ignition transformer capacitor 2 (18801)	21-5
Heated Oxygen Sensor (HO2S) #21 (9F472) – 5.4L Bi-Fuel	22-6	In-bed fuel tank valve, front	26-9
Heated Oxygen Sensor (HO2S) #21 (9F472) – 5.4L CNG	28-10	In-bed fuel tank valve, rear	26-9
Heated Oxygen Sensor (HO2S) #21 (9F472) – 5.4L Natural Gas Vehicle (NGV)	26-6	In-vehicle temperature sensor (19C734)	55-3
Heated Oxygen Sensor (HO2S) #21 (9F472) – 5.4L supercharged	27-7	Indicator flasher relay (13350)	90-2
		Indicator light switch	22-16
		Inertia Fuel Shutoff (IFS) switch (9D362) – 4.2L	23-9
		Inertia Fuel Shutoff (IFS) switch (9D362) – 4.6L	24-9

- Inertia Fuel Shutoff (IFS) switch (9D362) – 5.4L 25–9
- Inertia Fuel Shutoff (IFS) switch (9D362) – 5.4L Bi-Fuel 22–9
- Inertia Fuel Shutoff (IFS) switch (9D362) – 5.4L CNG 28–13
- Inertia Fuel Shutoff (IFS) switch (9D362) – 5.4L Natural Gas
Vehicle (NGV) 26–9
- Inertia Fuel Shutoff (IFS) switch (9D362) – 5.4L supercharged 27–13
- Injection Control Pressure (ICP) sensor 26–8
- Instrument cluster 60–2
- Intake Air Temperature (IAT) sensor (12A697) – 4.2L 23–3
- Intake Air Temperature (IAT) sensor (12A697) – 4.6L 24–3
- Intake Air Temperature (IAT) sensor (12A697) – 5.4L 25–3
- Intake Air Temperature (IAT) sensor (12A697) – 5.4L Bi-Fuel 22–3
- Intake Air Temperature (IAT) sensor (12A697) – 5.4L CNG 28–5
- Intake Air Temperature (IAT) sensor (12A697) – 5.4L Natural
Gas Vehicle (NGV) 26–3
- Intake Air Temperature (IAT) sensor 1 27–4
- Intake Air Temperature (IAT) sensor 2 27–12
- Intake Manifold Runner Control (IMRC) module – 4.2L 23–7
- Intake Manifold Tuning Valve (IMTV) – 4.6L 24–7
- Intake Manifold Tuning Valve (IMTV) – 5.4L Bi-Fuel 22–7
- Interior/map lamps assembly, front 89–3
- Interior lamp – Supercrew, Harley Davidson 89–5
- Interior lamp 89–3
- Interior lamp relay 89–2
- Key pad switch assembly 117–4
- Knock sensor (12A699) – 4.2L 23–8
- Knock sensor (12A699) – 4.6L 24–8
- Knock sensor (12A699) – 5.4L 25–8
- Knock sensor (12A699) – 5.4L Bi-Fuel 22–8
- Knock sensor (12A699) – 5.4L CNG 28–11
- Knock sensor (12A699) – 5.4L supercharged 27–9
- License plate lamp, left 92–2
- License plate lamp, right 92–2
- Liquid Propane Gas (LPG) sender 22–15
- Lock off diode 22–15
- Lock off solenoid 22–15
- Low flow injector assembly 22–12
- Low pitch horn 44–1
- Main light switch (11654) 13–19
- Mass Air Flow (MAF) sensor (12B579) – 4.2L 23–4
- Mass Air Flow (MAF) sensor (12B579) – 4.6L 24–4
- Mass Air Flow (MAF) sensor (12B579) – 5.4L 25–4
- Mass Air Flow (MAF) sensor (12B579) – 5.4L Bi-Fuel 22–4
- Mass Air Flow (MAF) sensor (12B579) – 5.4L CNG 28–6
- Mass Air Flow (MAF) sensor (12B579) – 5.4L Natural Gas
Vehicle (NGV) 26–4
- Mass Air Flow (MAF) sensor (12B579) – 5.4L supercharged 27–5
- Master window adjust switch (14529) – Regular cab, Super cab 100–3
- Master window adjust switch (14529) – Supercrew, Harley
Davidson 100–4
- Mechanical Shift On the Fly (MSOF) relay 34–6
- Midship fuel tank valve 26–9
- Mirror turn signal relay, left 90–6
- Mirror turn signal relay, right 90–6
- Multifunction switch 81–1
- Multifunction switch 85–1
- Multifunction switch 87–4
- Multifunction switch 90–2
- Natural Gas Vehicle (NGV) fuel tank pressure sensor 26–11
- Natural Gas Vehicle (NGV) module 26–4
- Natural Gas Vehicle (NGV) timer jumper 21–2
- Oil pressure switch (9278) 60–3
- One-touch window relay 100–2
- Output Shaft Speed (OSS) sensor (7M101) – 4R100 30–4
- Output Shaft Speed (OSS) sensor (7M101) – 4R70W 29–4
- Overhead console 102–1
- Park/stop/turn lamp, left rear 90–3
- Park/stop/turn lamp, left rear 92–2
- Park/stop/turn lamp, right rear 90–3
- Park/stop/turn lamp, right rear 92–2
- Park/turn lamp, left front (13411) 90–4
- Park/turn lamp, left front (13411) 92–1

Park/turn lamp, right front (13411)	90-4	Power window motor, driver side front (23395)	100-2
Park/turn lamp, right front (13411)	92-1	Power window motor, left rear (23394)	100-5
Parking brake switch (15A851)	60-2	Power window motor, passenger side front (23394) –	
Park lamp relay	92-1	Regular cab, Super cab	100-3
Passenger Air bag Deactivation (PAD) switch	46-2	Power window motor, passenger side front (23394) –	
Passenger air bag module (15044A74)	46-2	Supercrew, Harley Davidson	100-4
Passenger safety belt retractor pretensioner	46-1	Power window motor, right rear (23394)	100-5
Passive anti-theft transceiver module (15607)	112-1	Radio (18806) – Harley Davidson	130-5
PCM power diode – 4.2L	23-3	Radio (18806) – MP3 player	130-2
PCM power diode – 4.6L	24-3	Radio (18806) – Regular cab, Super cab	130-3
PCM power diode – 5.4L	25-3	Radio (18806) – Supercrew	130-7
PCM power diode – 5.4L Bi-Fuel	22-3	Rail lamp, LH side (13776)	89-5
PCM power diode – 5.4L CNG	28-5	Rail lamp, RH side (13776)	89-5
PCM power diode – 5.4L Natural Gas Vehicle (NGV)	26-3	Rear axle speed sensor (4B409)	42-2
PCM power diode – 5.4L supercharged	27-4	Rear Integrated Control Panel (RICP) (19980)	130-5
PCM power relay – 4.2L	23-3	Rear Seat Entertainment (RSE) module	132-2
PCM power relay – 4.6L	24-3	Rear window adjust switch	100-6
PCM power relay – 5.4L	25-3	Rear window defrost grid (18C618)	56-1
PCM power relay – 5.4L Bi-Fuel	22-3	Rear window defrost relay	56-1
PCM power relay – 5.4L CNG	28-5	Rear window motor	100-6
PCM power relay – 5.4L Natural Gas Vehicle (NGV)	26-3	Resistor	22-11
PCM power relay – 5.4L supercharged	27-4	Resistor A	31-2
Power point (19N236)	44-2	Restraints control module (14B321)	46-1
Power point, console (19N236)	44-2	Reversing lamp, left (13411)	93-1
Power point, rear (19G247)	44-2	Reversing lamps switch	93-1
Power seat motor assembly, left	120-1	Roof opening panel module (502D70)	101-2
Power seat switch, left	120-1	Roof opening panel motor assembly (15790)	101-2
Powertrain Control Module (PCM) (12A650) – 4.2L	23-3	Running board lamp, left front	89-6
Powertrain Control Module (PCM) (12A650) – 4.6L	24-3	Running board lamp, left rear	89-6
Powertrain Control Module (PCM) (12A650) – 5.4L	25-3	Running board lamp, right front	89-6
Powertrain Control Module (PCM) (12A650) – 5.4L Bi-Fuel	22-3	Running board lamp, right rear	89-6
Powertrain Control Module (PCM) (12A650) – 5.4L CNG	28-5	S100	10-6
Powertrain Control Module (PCM) (12A650) – 5.4L Natural Gas Vehicle (NGV)	26-3	S101	10-1
Powertrain Control Module (PCM) (12A650) – 5.4L supercharged	27-4	S102	10-2
		S104	10-3
		S105	10-3

S106	10-4	S135 - 5.4L	25-8
S108	13-1	S135 - 5.4L Bi-Fuel	22-8
S109	13-3	S135 - 5.4L CNG	28-11
S112	13-10	S135 - 5.4L Natural Gas Vehicle (NGV)	26-8
S113	13-11	S135 - 5.4L supercharged	27-9
S114	85-2	S136 - 4.2L	23-8
S115	13-12	S136 - 4.6L	24-8
S116	13-13	S136 - 5.4L	25-8
S117	13-14	S136 - 5.4L Bi-Fuel	22-8
S120	13-16	S136 - 5.4L CNG	28-11
S125	53-1	S136 - 5.4L Natural Gas Vehicle (NGV)	26-8
S125	54-2	S136 - 5.4L supercharged	27-9
S127 - 4.2L	23-4	S137 - 4.2L	23-8
S127 - 4.6L	24-4	S137 - 4.6L	24-8
S127 - 5.4L	25-4	S137 - 5.4L	25-8
S127 - 5.4L Bi-Fuel	22-4	S137 - 5.4L Bi-Fuel	22-8
S127 - 5.4L CNG	28-6	S137 - 5.4L CNG	28-11
S127 - 5.4L Natural Gas Vehicle (NGV)	26-4	S137 - 5.4L supercharged	27-9
S127 - 5.4L supercharged	27-5	S138 - 4.2L	23-8
S129 - 4.2L	23-5	S138 - 4.6L	24-8
S129 - 4.6L	24-5	S138 - 5.4L	25-8
S129 - 5.4L	25-5	S138 - 5.4L Bi-Fuel	22-8
S129 - 5.4L Bi-Fuel	22-5	S138 - 5.4L CNG	28-11
S129 - 5.4L CNG	28-7	S138 - 5.4L Natural Gas Vehicle (NGV)	26-8
S129 - 5.4L Natural Gas Vehicle (NGV)	26-5	S138 - 5.4L supercharged	27-9
S129 - 5.4L supercharged	27-6	S139 - 4.2L	23-9
S130	93-1	S139 - 4.6L	24-9
S131 - 4.2L	23-5	S139 - 5.4L	25-9
S131 - 4.6L	24-5	S139 - 5.4L Bi-Fuel	22-9
S131 - 5.4L	25-5	S139 - 5.4L CNG	28-13
S131 - 5.4L Bi-Fuel	22-5	S139 - 5.4L Natural Gas Vehicle (NGV)	26-9
S131 - 5.4L CNG	28-7	S140 - 4.2L	23-10
S131 - 5.4L Natural Gas Vehicle (NGV)	26-5	S140 - 4.6L	24-10
S131 - 5.4L supercharged	27-6	S140 - 5.4L	25-10
S135 - 4.2L	23-8	S140 - 5.4L Bi-Fuel	22-10
S135 - 4.6L	24-8	S140 - 5.4L CNG	28-16

S140 – 5.4L Natural Gas Vehicle (NGV)	26–10	S155 – 5.4L CNG	28–10
S140 – 5.4L supercharged	27–11	S155 – 5.4L Natural Gas Vehicle (NGV)	26–6
S141 – 4.2L	23–10	S155 – 5.4L supercharged	27–7
S141 – 4.6L	24–10	S156	14–3
S141 – 5.4L	25–10	S157	14–3
S141 – 5.4L Bi-Fuel	22–10	S158	13–8
S141 – 5.4L CNG	28–16	S159	26–9
S141 – 5.4L Natural Gas Vehicle (NGV)	26–10	S160	90–5
S141 – 5.4L supercharged	27–11	S161	13–14
S142 – with Electronic Shift On the Fly (ESOF)	34–3	S162	13–14
S142 – with Mechanical Shift On the Fly (MSOF)	34–6	S170	60–3
S143 – 4.2L	23–10	S171	13–3
S143 – 4.6L	24–10	S172	10–5
S143 – 5.4L	25–10	S175	10–5
S143 – 5.4L Bi-Fuel	22–10	S177	28–18
S143 – 5.4L CNG	28–16	S179	14–3
S143 – 5.4L Natural Gas Vehicle (NGV)	26–10	S181	14–3
S143 – 5.4L supercharged	27–11	S183	28–17
S144 – 5.4L supercharged	27–10	S185	28–17
S146	81–2	S187	28–9
S147	86–2	S189	28–14
S148	90–3	S191	28–14
S149	90–3	S197	27–9
S151 – 5.4L supercharged	27–10	S198	20–2
S153 – G102	10–2	S199	10–1
S154 – 4.2L	23–6	S199	10–6
S154 – 4.6L	24–6	S200	10–7
S154 – 5.4L	25–6	S201	10–7
S154 – 5.4L Bi-Fuel	22–6	S202	10–7
S154 – 5.4L CNG	28–10	S203	10–8
S154 – 5.4L Natural Gas Vehicle (NGV)	26–6	S204	10–8
S154 – 5.4L supercharged	27–7	S205	10–11
S155 – 4.2L	23–6	S207	10–9
S155 – 4.6L	24–6	S208	10–9
S155 – 5.4L	25–6	S209	10–10
S155 – 5.4L Bi-Fuel	22–6	S210	130–6

S211	130-6	S246	90-2
S212	13-2	S247	90-2
S213	13-5	S248 – Regular cab, Super cab	100-3
S214	13-4	S248 – Supercrew, Harley Davidson	100-4
S215	13-4	S252	10-8
S217	132-4	S255 – Supercrew, Without Rear Seat Entertainment (RSE) system	130-10
S218	85-2	S255 – Supercrew, With Rear Seat Entertainment (RSE) system	130-8
S219	132-4	S257 – Supercrew, Without Rear Seat Entertainment (RSE) system	130-10
S220	13-9	S257 – Supercrew, With Rear Seat Entertainment (RSE) system	130-8
S221	13-9	S259	13-11
S222	13-10	S260	10-14
S224	13-12	S261	66-1
S225	13-13	S265	13-10
S226	93-1	S268	66-2
S227	13-15	S269	66-1
S228	13-16	S270	13-19
S229	14-2	S271	10-14
S230 – Regular cab, Super cab	100-3	S272	100-5
S230 – Supercrew, Harley Davidson	100-4	S273	110-1
S231	90-4	S274	13-9
S232	60-4	S280	71-1
S233	13-8	S286	55-3
S234	110-1	S289	13-8
S234	117-3	S290	13-16
S235	110-1	S291	14-4
S235	117-3	S292	14-4
S236	13-8	S297	90-5
S237	13-13	S298	13-4
S238	34-3	S301	10-14
S239	89-2	S302	26-9
S240	89-2	S303	26-11
S241	13-2	S304 – Super cab, with heated seats	10-17
S242	71-1	S304	10-13
S243	71-4	S305	89-3
S244	13-19		
S245	87-2		

S306 – Super cab, with heated seats	10-17	S500	10-11
S306	10-13	S501	10-12
S307	10-7	S503	124-1
S311	13-18	S600	10-12
S313	10-10	S601	110-1
S320	13-5	S602	110-1
S321 – Super cab, with heated seats	10-17	S900	89-3
S321	10-15	S901	89-5
S322	71-3	S902	10-15
S330	132-4	S902	10-16
S340	89-6	S903	89-5
S341	89-6	S904	89-3
S342	13-18	S911	10-15
S343	10-16	S920	132-5
S350	13-11	S921	132-5
S351	132-2	S1001	13-1
S353	10-17	S1002	13-1
S360	132-4	S1003 – 4.2L	23-3
S361	132-5	S1003 – 4.6L	24-3
S362	132-5	S1003 – 5.4L	25-3
S372	132-4	S1003 – 5.4L CNG	28-5
S373	132-5	S1003 – 5.4L Natural Gas Vehicle (NGV)	26-3
S374	132-5	S1003 – 5.4L supercharged	27-4
S375	132-5	S4001	22-5
S376	132-5	S4003	14-3
S377	132-5	S4004	14-3
S378	10-10	S4005 – 5.4L Bi-Fuel, CNG	22-14
S379	13-8	S4005 – 5.4L Bi-Fuel, LPG	22-15
S400	10-4	S4006	22-15
S401	10-5	S4007 – 5.4L Bi-Fuel, CNG	22-14
S403	13-12	S4007 – 5.4L Bi-Fuel, LPG	22-15
S405	93-1	S4008 – 5.4L Bi-Fuel, CNG	22-14
S406	95-3	S4008 – 5.4L Bi-Fuel, LPG	22-15
S407	95-3	S4009 – 5.4L Bi-Fuel, CNG	22-14
S408	95-4	S4009 – 5.4L Bi-Fuel, LPG	22-15
S409	10-10	S4010	22-15

S4011	22-14	Speaker, left rear (18808) – Supercrew, With Rear Seat Entertainment (RSE) system	130-8
S4012	22-14	Speaker, right front (18808) – Harley Davidson	130-6
S4013	22-15	Speaker, right front (18808) – MP3 player	130-2
S4014	22-15	Speaker, right front (18808) – Regular cab, Super cab	130-4
S4015	22-15	Speaker, right front (18808) – Supercrew, Without Rear Seat Entertainment (RSE) system	130-10
S4016	22-15	Speaker, right front (18808) – Supercrew, With Rear Seat Entertainment (RSE) system	130-8
S4017	22-16	Speaker, right rear (18808) – Harley Davidson	130-6
S4018	22-6	Speaker, right rear (18808) – MP3 player	130-2
S4019	22-6	Speaker, right rear (18808) – Regular cab, Super cab	130-4
S4020	22-8	Speaker, right rear (18808) – Supercrew, Without Rear Seat Entertainment (RSE) system	130-10
S4021	22-8	Speaker, right rear (18808) – Supercrew, With Rear Seat Entertainment (RSE) system	130-8
S4032	21-6	Speed control servo (9C735)	31-3
S4033	21-6	Starter motor (11002) – Automatic	20-2
S4034	10-1	Starter motor (11002) – Manual	20-1
S4035	10-1	Starter relay (11450) – Automatic	20-2
S4036	10-1	Starter relay (11450) – Manual	20-1
S4040	22-12	Steering wheel/speed control switch (9F924)	31-2
Safety belt buckle switch (10B924)	66-1	Sunload sensor (19E663)	55-3
Seat back heater, left front	119-2	Supercharger bypass solenoid	27-12
Seat back heater, right front	119-3	Tank valve 1	22-14
Seat cushion heater, left front	119-2	Tank valve	28-14
Seat cushion heater, right front	119-3	Tank valve diode	22-14
Seat heater switch, driver side	119-2	Temperature blend door actuator (19E616)	53-1
Seat heater switch, passenger side	119-3	Temperature blend door actuator (19E616)	54-3
Speaker, left front (18808) – Harley Davidson	130-6	Temperature blend door actuator (19E616)	55-4
Speaker, left front (18808) – MP3 player	130-2	Throttle Position Sensor (TPS) (9B989) – 4.2L	23-8
Speaker, left front (18808) – Regular cab, Super cab	130-4	Throttle Position Sensor (TPS) (9B989) – 4.6L	24-8
Speaker, left front (18808) – Supercrew, Without Rear Seat Entertainment (RSE) system	130-10	Throttle Position Sensor (TPS) (9B989) – 5.4L	25-8
Speaker, left front (18808) – Supercrew, With Rear Seat Entertainment (RSE) system	130-8	Throttle Position Sensor (TPS) (9B989) – 5.4L Bi-Fuel	22-8
Speaker, left rear (18808) – Harley Davidson	130-6	Throttle Position Sensor (TPS) (9B989) – 5.4L CNG	28-11
Speaker, left rear (18808) – MP3 player	130-2		
Speaker, left rear (18808) – Regular cab, Super cab	130-4		
Speaker, left rear (18808) – Supercrew, Without Rear Seat Entertainment (RSE) system	130-10		

Throttle Position Sensor (TPS) (9B989) – 5.4L Natural Gas Vehicle (NGV)	26–8
Throttle Position Sensor (TPS) (9B989) – 5.4L supercharged	27–9
Trailer tow connector (15A416)	95–3
Trailer tow relay, battery charge	95–3
Trailer tow relay, parking lamp	95–4
Trailer tow relay, reversing lamp	95–4
Transfer case assembly – with Electronic Shift On the Fly (ESOF)	34–4
Transfer case assembly – with Mechanical Shift On the Fly (MSOF)	34–6
Transfer case electric clutch relay	34–4
Transfer case relay module	34–4
Transfer case speed sensor – 4.2L	23–8
Transfer case speed sensor – 4.6L	24–8
Transfer case speed sensor – 5.4L	25–8
Transfer case speed sensor – 5.4L Bi–Fuel	22–8
Transfer case speed sensor – 5.4L CNG	28–11
Transmission control switch – 4R100	30–3
Transmission control switch – 4R70W	29–3
Turbine shaft speed (TSS) sensor (7M101)	30–4
Vanity mirror lamp, left (04100)	89–3
Vanity mirror lamp, right (04100)	89–3
Video cassette player	132–2
Video display	132–2
Wheel speed sensor, left front (2C205)	42–2
Wheel speed sensor, right front (2C204)	42–2
Window adjust switch, left rear (14A412)	100–5
Window adjust switch, right rear (14A412)	100–5
Windshield washer pump motor (17618)	81–2
Windshield washer relay	81–2
Windshield wiper motor (17508)	81–2
Wiper high/low relay	81–2
Wiper run/park relay	81–2

Note

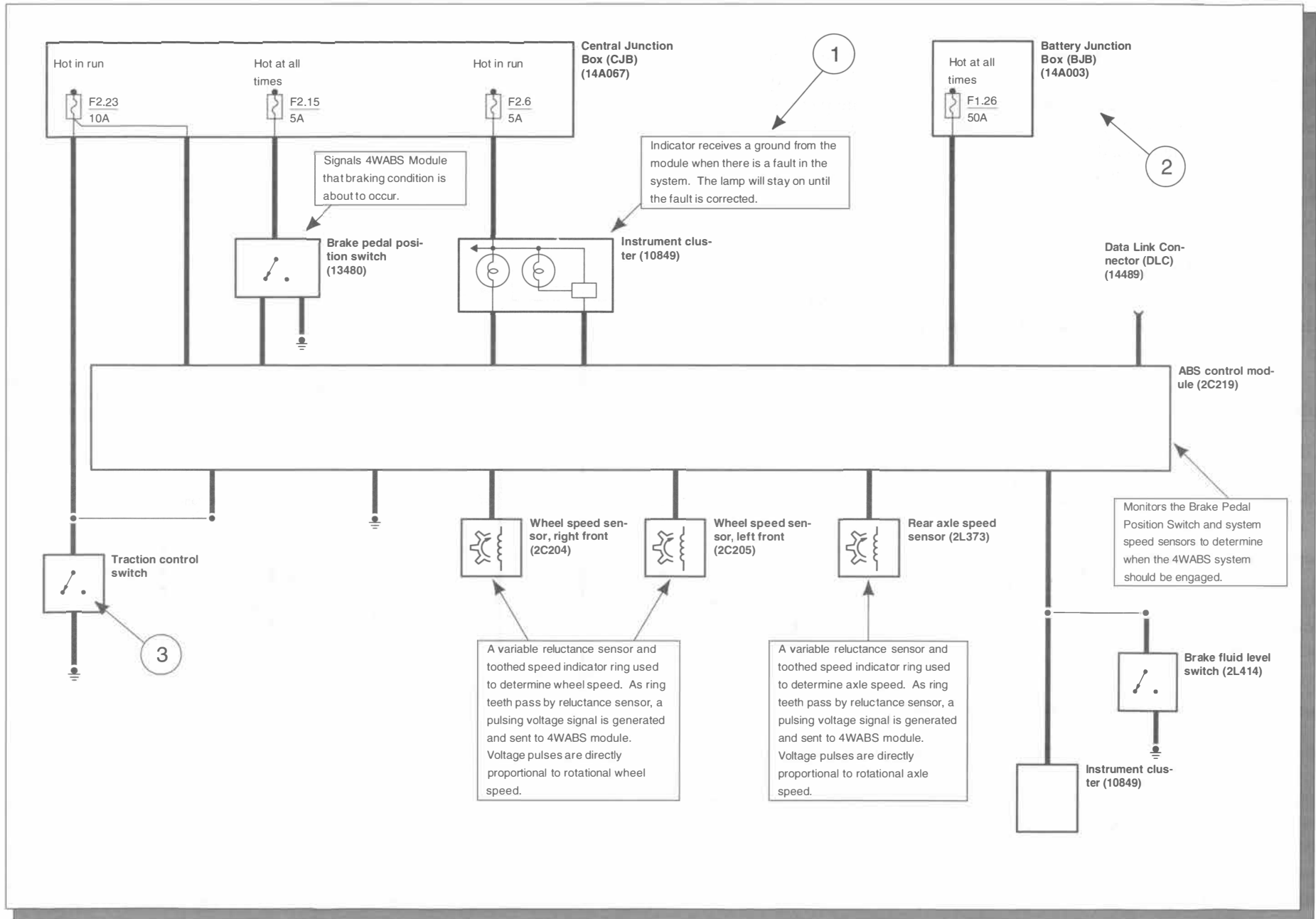
All wiring connections between components are shown exactly as they exist in the vehicles. It is important to realize, however, that no attempt has been made on the schematic to represent components and wiring as they physically appear on the vehicle. For example, a 4-foot length of wire is treated no differently in a schematic from one which is only a few inches long. Furthermore, to aid in understanding electrical (electronic) operation, wiring inside complicated components has been simplified.

Complete Circuit Operation

Each circuit is shown completely and independently in one cell. Other components which are connected to the circuit may not be shown unless they influence the circuit operation.

System Overview

Each major vehicle system includes a complete system overview prior to each set of schematic pages. It is important to realize that this is only a high level overview of the complete system connectivity. It includes component operational information (1), component name and base part number (2), and basic component internals (3). It does not include specific circuit information, connector or pin numbers, splices or grounds. That information is found on the schematic pages.



Current Flow (1)

Each cell normally starts with the component that powers the circuit, such as a fuse or the ignition switch. Current flow is shown from the power source at the top of the page to ground at the bottom of the page. In order to concentrate on the essential parts, power supply and ground connections are sometimes simplified by a dashed line in the schematics. A full representation of the power supply of a fuse or the power distribution from a fuse to various components is given in cell 13 "Power Distribution". Full representation of the ground connections are shown in cell 10 "Grounds".

Switch Positions (2)

Within the schematic, all switches, sensors and relays are shown "at rest" (as if the Ignition Switch were OFF).

Splices (3)

A dashed line indicates that the splice is not shown completely. A reference is given to the page where the splice appears in full. It is also listed in the Index.

Component Referencing (4)

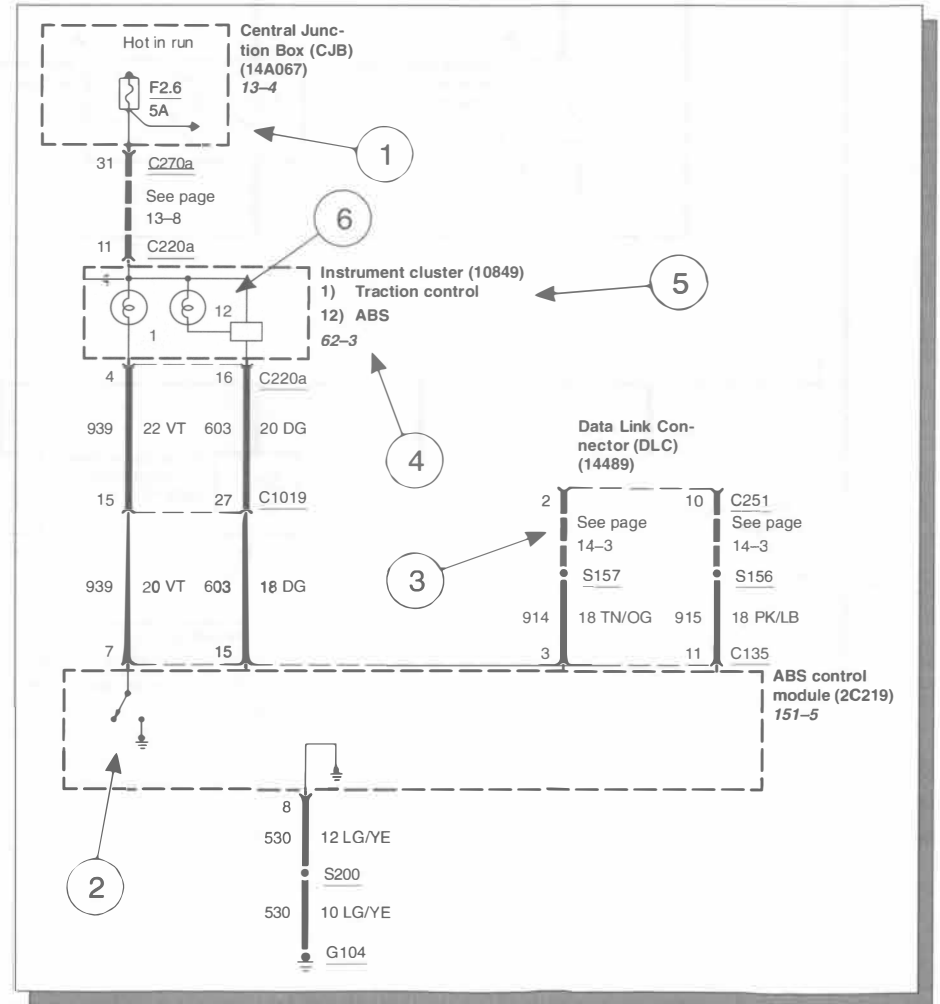
Each component on a schematic has a reference to the component location view or the page where it is shown completely. It is located to the right of each component.

Component Names, Notes and Base Part Numbers (5)

Component names are placed on the right hand side of each component. Any notes that describe switch positions or operating conditions follow the name. Descriptions of the internals of the component are also included here. The page where the component appears in full is listed in the Index. The base part number for a component is listed in parentheses next to or under a component. These part numbers will appear any place the component name appears in the publication.

Internal Name and Function Identification Numbers (6)

Some components on each page have internal symbols with an identification number located to the right. You can identify the internal symbol or function by finding the corresponding number under the component name.

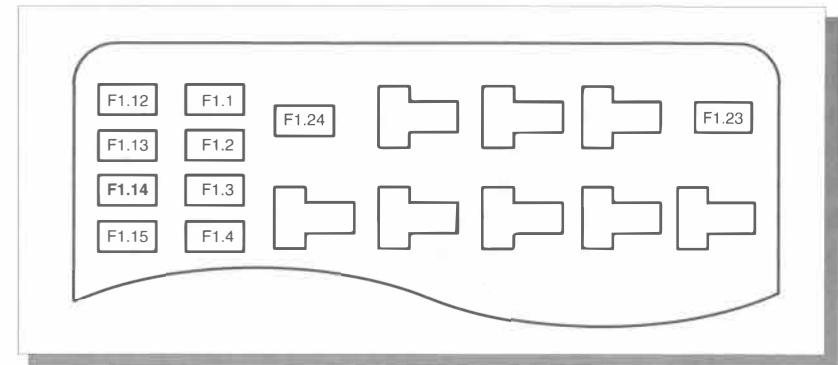


Fuse and Relay Information

Cell 11 “Fuse and Relay Information” contains a view of the fuse-/relay box in which all fuses and relays are identified.

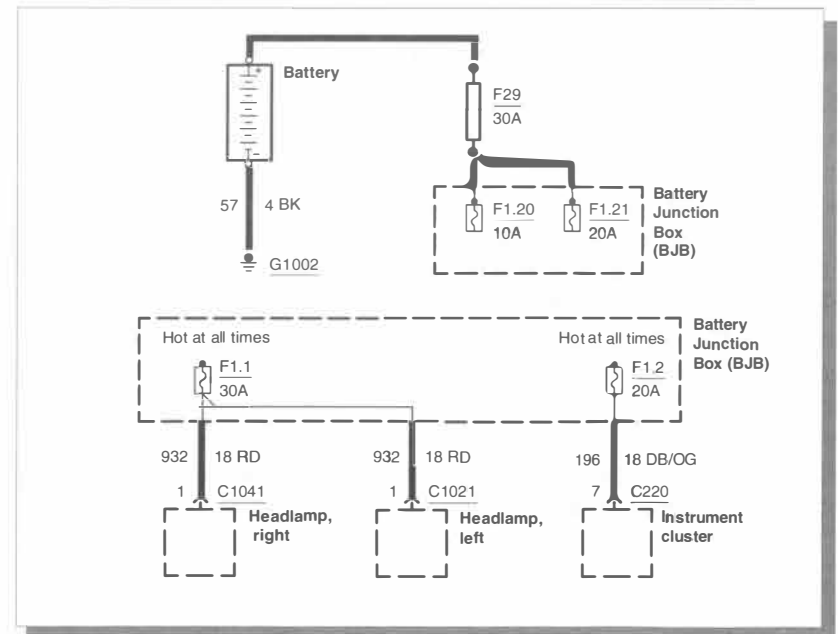
Fuse and Relay Numbering and Naming

Fuse and relay numbering and naming follow the indication of the fuse panel cover. In addition, a prefix precedes the fuse number to facilitate finding the fuse in the Component Location Charts, e.g. “F1.” precedes Battery Junction Box fuses, and “F2.” precedes Central Junction Box fuses.



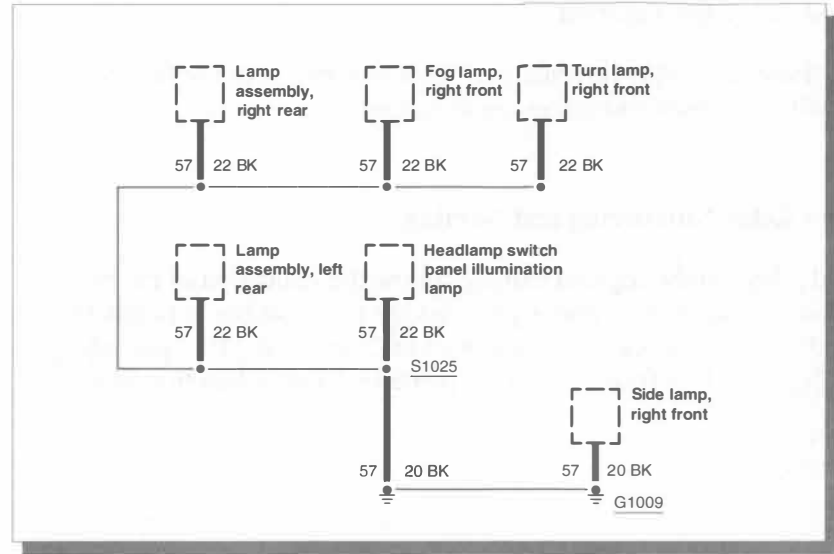
Power Distribution

Cell 13 “Power Distribution” shows the current feed circuit. The current path is shown from the battery to the ignition switch and to all fuses. It also shows the circuits protected by each fuse. The circuit is traced from the fuse to the component. All details (wires, splices, connectors) between the fuse and the first component are shown.



Ground Distribution

Cell 10 “Grounds” contains the schematics that show the complete details for each ground connection or main ground splice. This is useful in diagnosing a problem affecting several components at once (poor ground connection or ground splice). All details (wires, splices, connectors) between the ground point and the components are shown. These ground connection details are shown here in order to keep the individual cell schematics as uncluttered as possible.



Component and Connector Information

Cell 152 “Component Location Charts” helps the user find where the various items depicted on the schematic can physically be found on the vehicle. A brief written description of the location is given, along with a reference to the component location views.

Cell 151 “Component Location Views” show the components and their connecting wires as they can be found on the vehicle.

Cell 150 “Connector Views” show the views of the pins and/or cavities of all connectors. The pin and cavity sides are shown separately as if the connector were disconnected. The color of the connector housing is indicated next to the connector number when available. The harness causal number is located above the connector view and below the connector number. The circuit function charts are located below each connector. The wiring harness designations are listed in cell 152 “Component Location Charts”.

C150

12A581

Wheel speed sensor, left front (2C205)



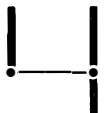


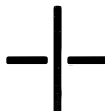







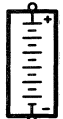

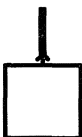


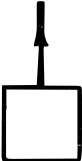





F02085

















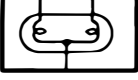




Pin	Circuit	Circuit Function
1	522 (TN/BK)	Wheel speed sensor, left front (2C205) -
2	521 (TN/OG)	Wheel speed sensor, left front (2C205) +

WARNINGS

- *Always wear safety glasses for eye protection.*
- *Use safety stands whenever a procedure requires being under a vehicle.*
- *Be sure that the **Ignition Switch** is always in the OFF position, unless otherwise required by the procedure.*
- *Set the parking brake when working on any vehicle. An automatic transmission should be in PARK. A manual transmission should be in NEUTRAL.*
- *Operate the engine only in a well-ventilated area to avoid danger of carbon monoxide.*
- *Keep away from moving parts, especially the fan and belts, when the engine is running.*
- *To prevent serious burns, avoid contact with hot metal parts such as the radiator, exhaust manifold, tail pipe, catalytic converter and muffler.*
- *Do not allow flame or sparks near the battery. Gases are always present in and around the battery cell. An explosion could occur.*
- *Do not smoke when working on a vehicle.*
- *To avoid injury, always remove rings, watches, loose hanging jewelry and avoid wearing loose clothing.*

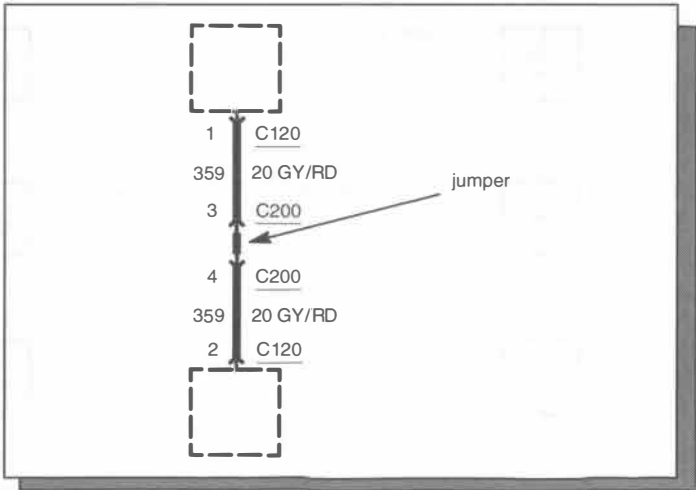
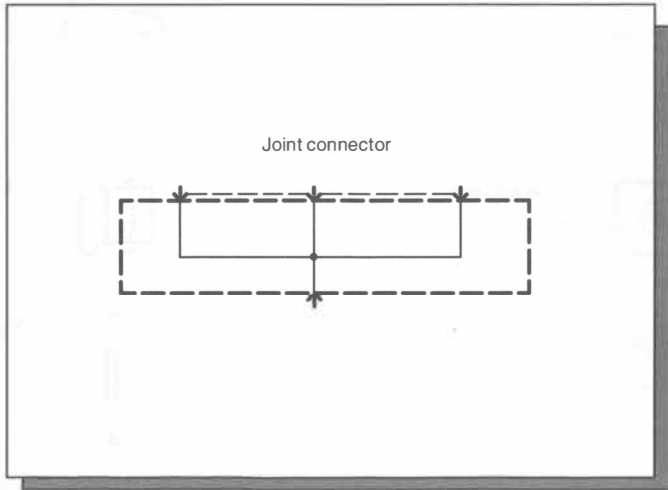
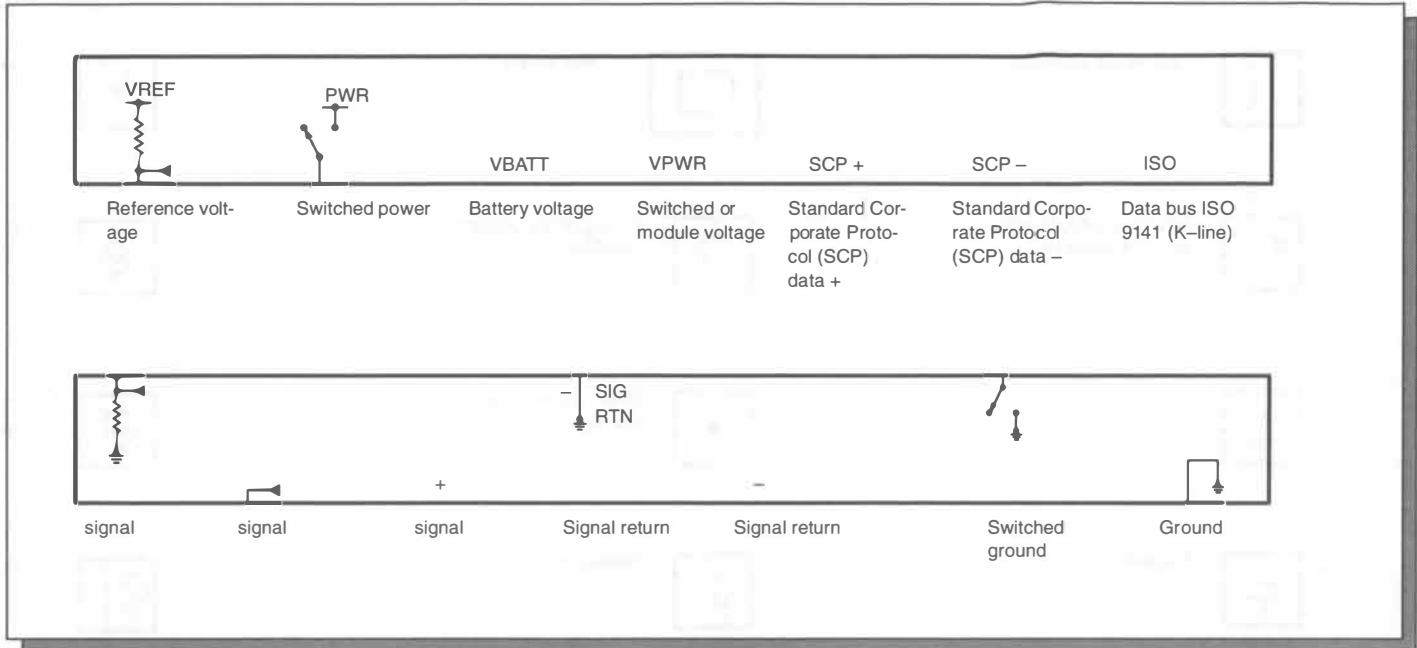
4-1 Symbols

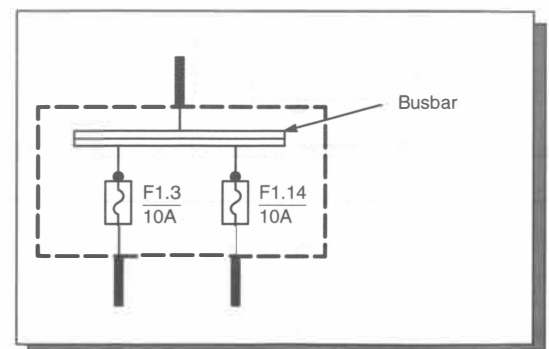
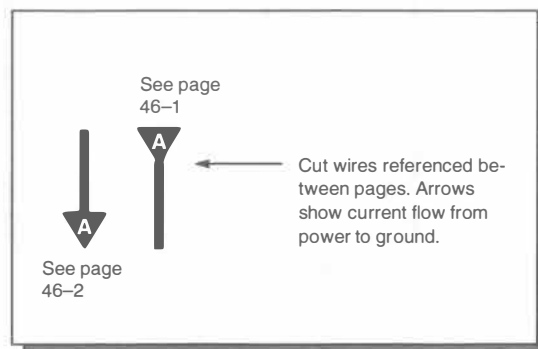
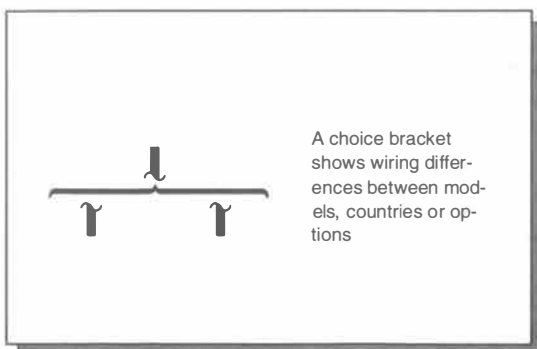
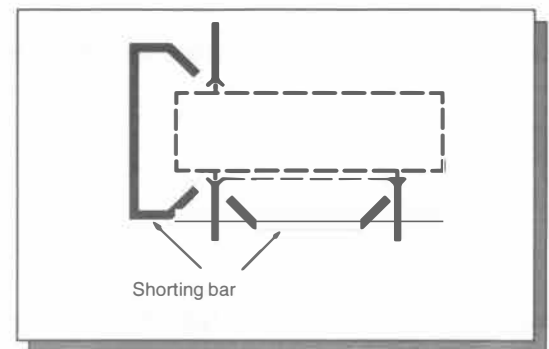
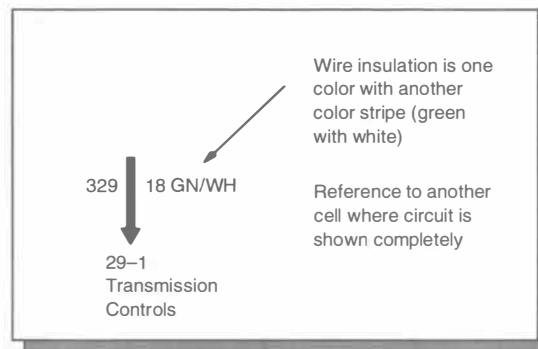
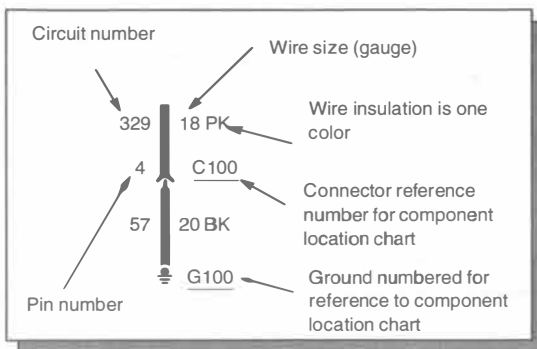
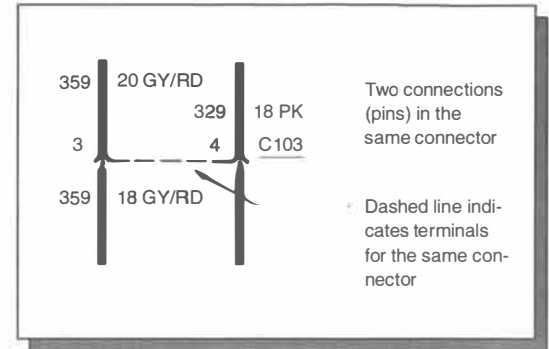
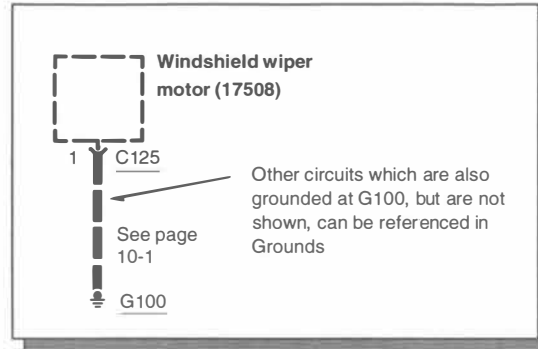
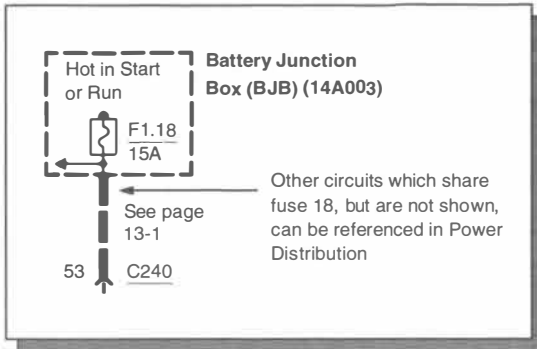
	Distributed splice		Entire component		Resistor
	Crossed wiring without connection		Part of a component		Potentiometer (pressure or temperature)
	Splice		Component case directly attached to metal part of vehicle (ground)		Potentiometer (outside influence)
	Removable connection		Component with screw terminals		Battery
	Ground		Connector attached to component		Fuse
	Connector		Connector attached to component lead (pigtail)		Circuit breaker
	Female connector		Positive Temperature Coefficient (PTC)		Heating element, Conductor loop
	Male connector				

	Ignition coil assembly		Hall sensor		Antenna
	Solenoid controlled valve or clutch solenoid		Air bag sliding contact (14A664)		Permanent magnet, one-speed-motor
	Light emitting diode (LED)		Diode, current flows in direction of arrow		Permanent magnet, two-speed-motor
	Capacitor		Transistor		Rotational sensor
	Variable capacitor		Lamp		Shield
	Piezoelectric sensor		Bifilament lamp		Horn or speaker
	Coil		Gauges		Fusible link

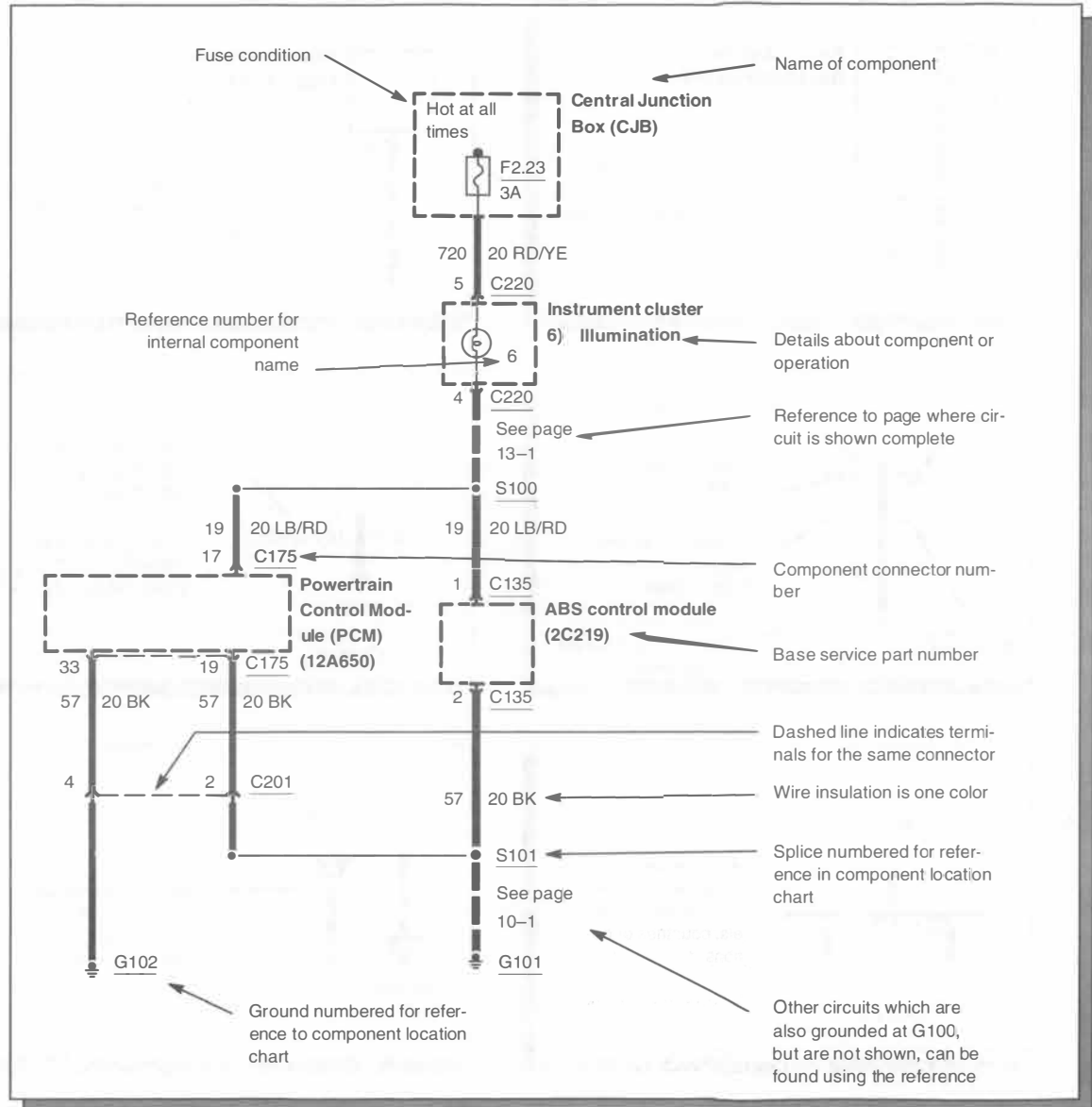
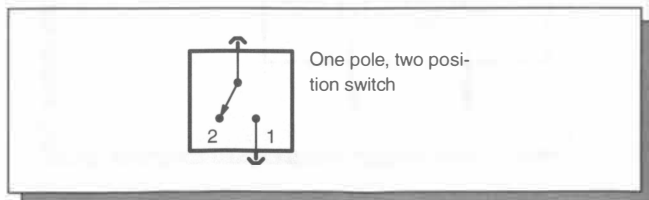
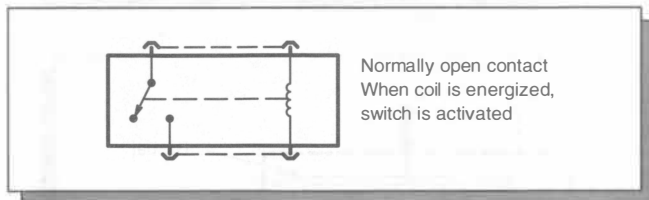
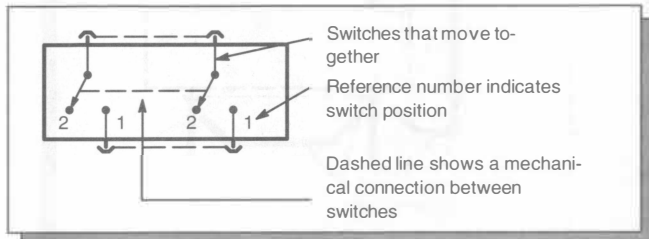
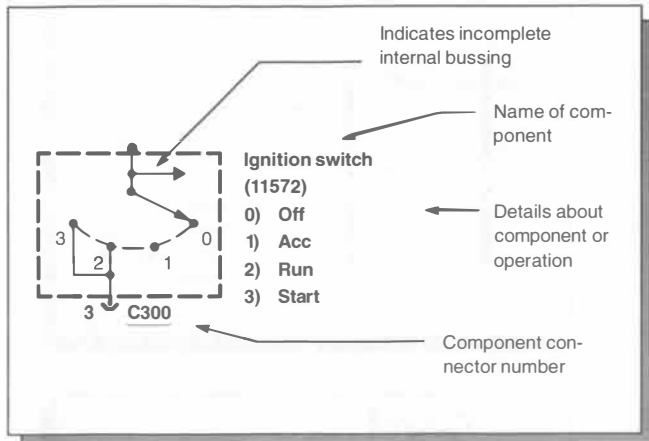
4-3 Symbols

Wire colors	
BK	Black
BN	Brown
BU	Blue
DB	Dark blue
DG	Dark green
GN	Green
GY	Gray
LB	Light blue
LG	Light green
NA	Natural
OG	Orange
PK	Pink
RD	Red
SR	Silver
TN	Tan
VT	Violet
WH	White
YE	Yellow



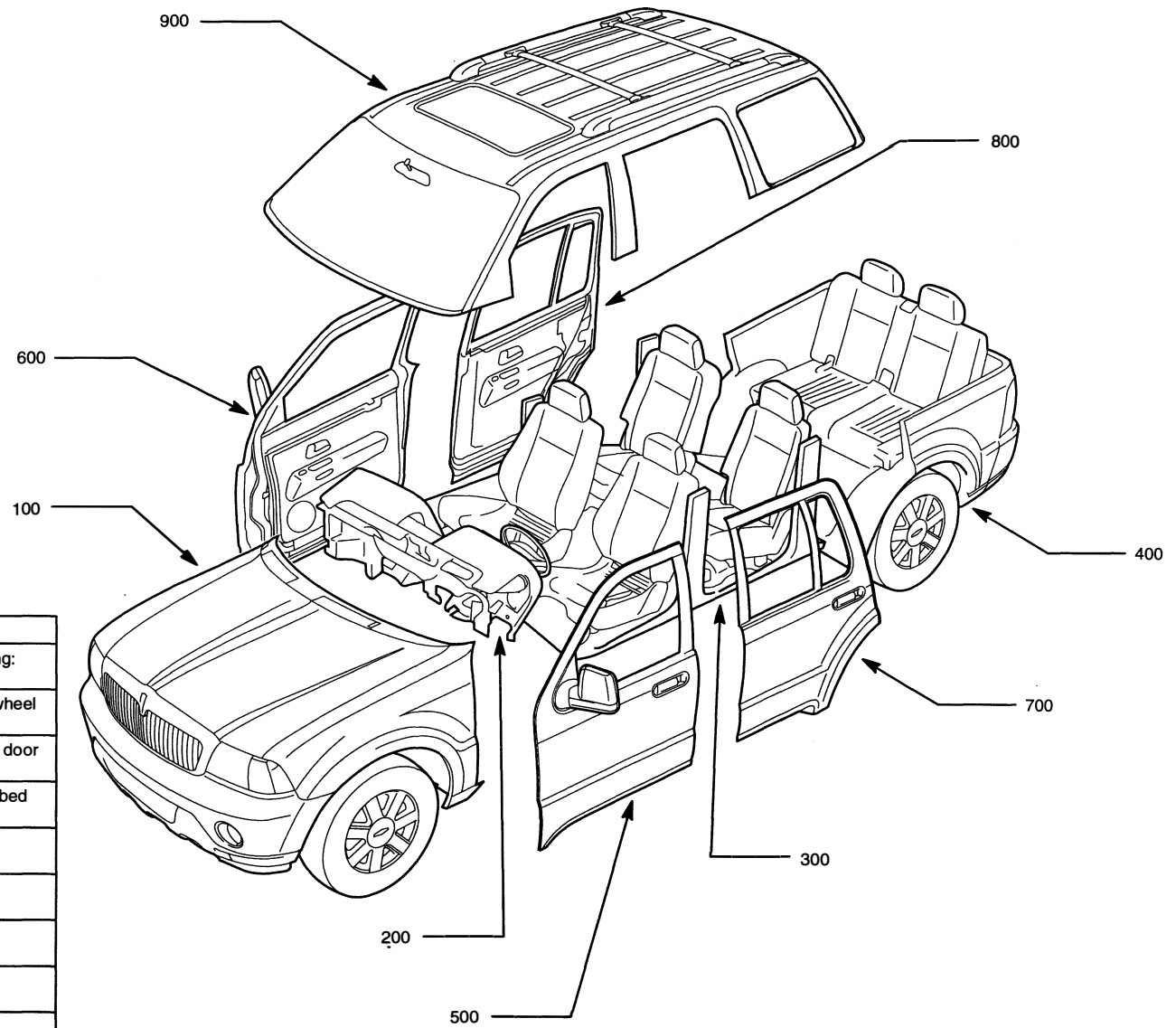


4-5 Symbols



The first digit of every connector, ground, and splice number used in this publication references its location within the vehicle.

The chart below describes the different sections of the vehicle, and lists the number associated with each.

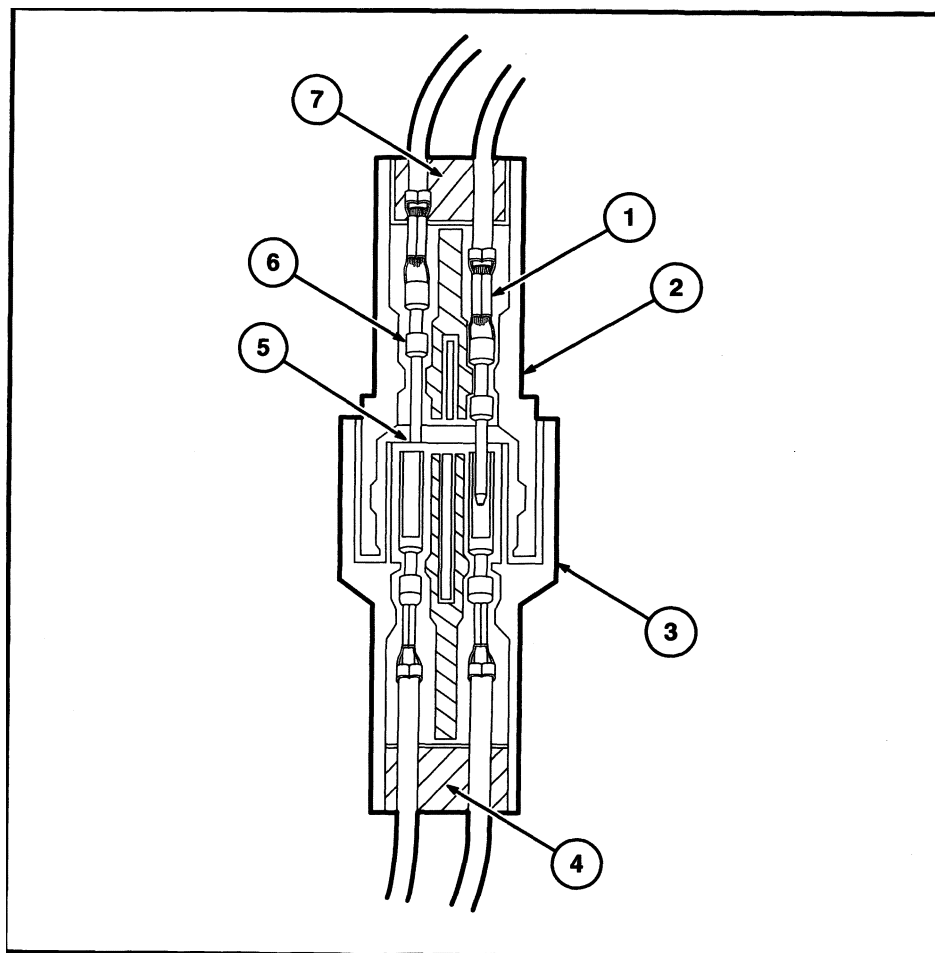


Number	Location
100	Engine compartment, Powertrain (including: axle/differential/transmission)
200	Instrument Panel and Console, Steering wheel assembly
300	From instrument panel to rear seat, below door trim panel
400	behind rear seats, to rear bumper; Truck bed
500	driver door
600	passenger door, front
700	passenger door, left rear
800	passenger door, right rear
900	Above door trim panel and headliner

Troubleshooting wiring harness and connector hidden concerns

The following illustrations are known examples of wiring harness, splices and connectors that will create intermittent electrical concerns. The concerns are hidden and can only be discovered by a physical evaluation as shown in each illustration.

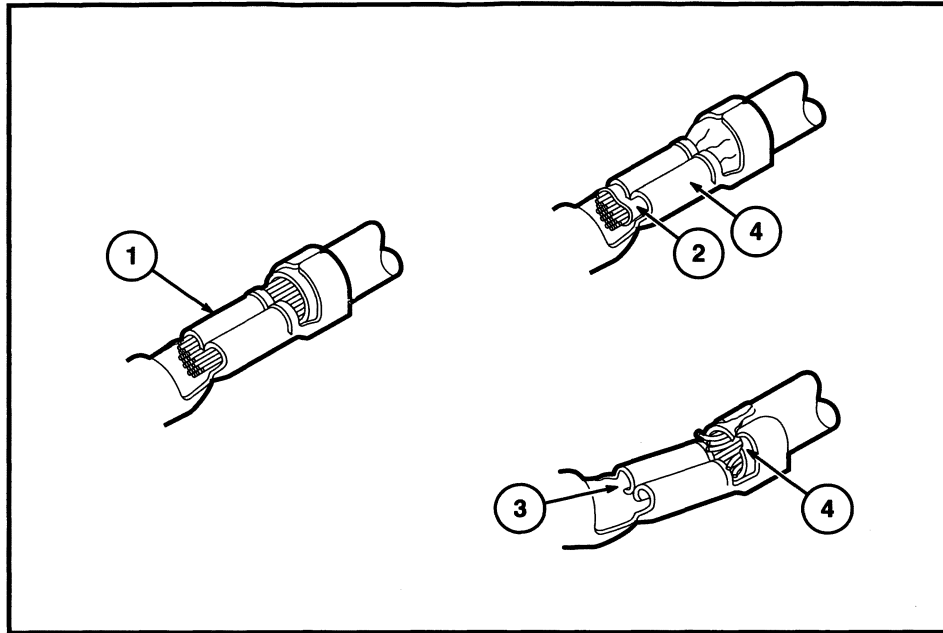
NOTE: Several components, such as the PCM, utilize gold plated terminals in their connections to the wiring harness. If those terminals need to be replaced, they must be replaced with a gold plated terminal.



Terminal not properly seated

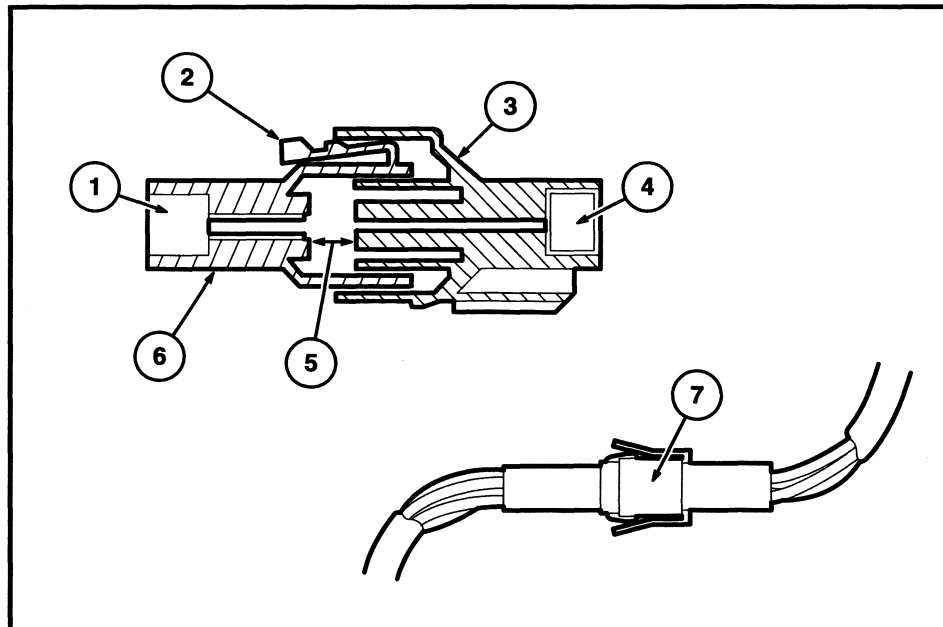
- 1 = Locked terminal
- 2 = Male half
- 3 = Female half
- 4 = Seal
- 5 = Intermittent contact
- 6 = Unlocked terminal (Hidden by wire seal)
- 7 = Seal

Check for unlocked terminals by pulling each wire at the end of the connector.



Defective insulation stripping

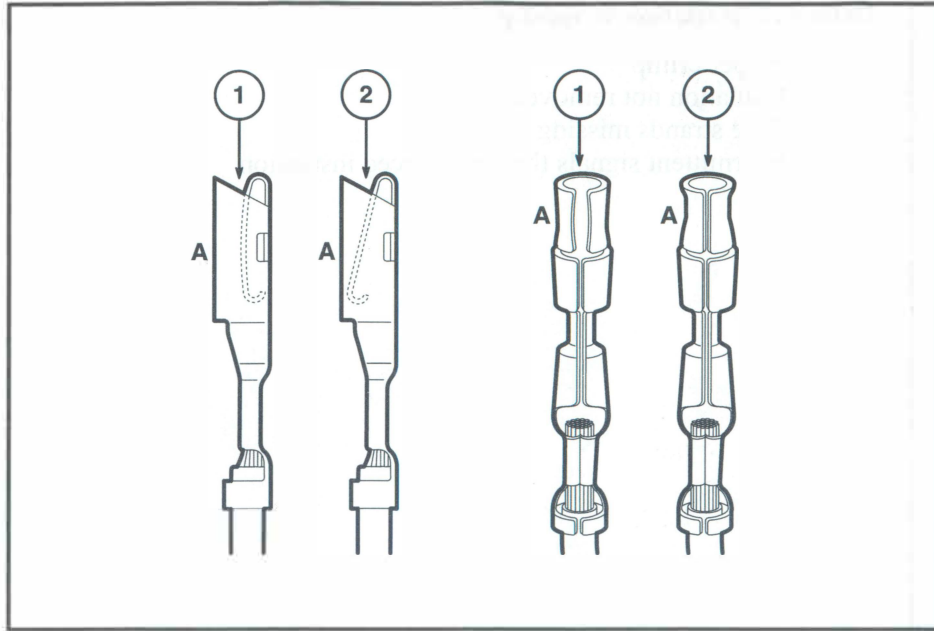
- 1 = Proper crimp
- 2 = Insulation not removed
- 3 = Wire strands missing
- 4 = Intermittent signals through pierced insulation



Partially mated connectors

- 1 = Seal
- 2 = Displaced tab
- 3 = Female half
- 4 = Seal
- 5 = Intermittent contact
- 6 = Male half
- 7 = Intermittent contact

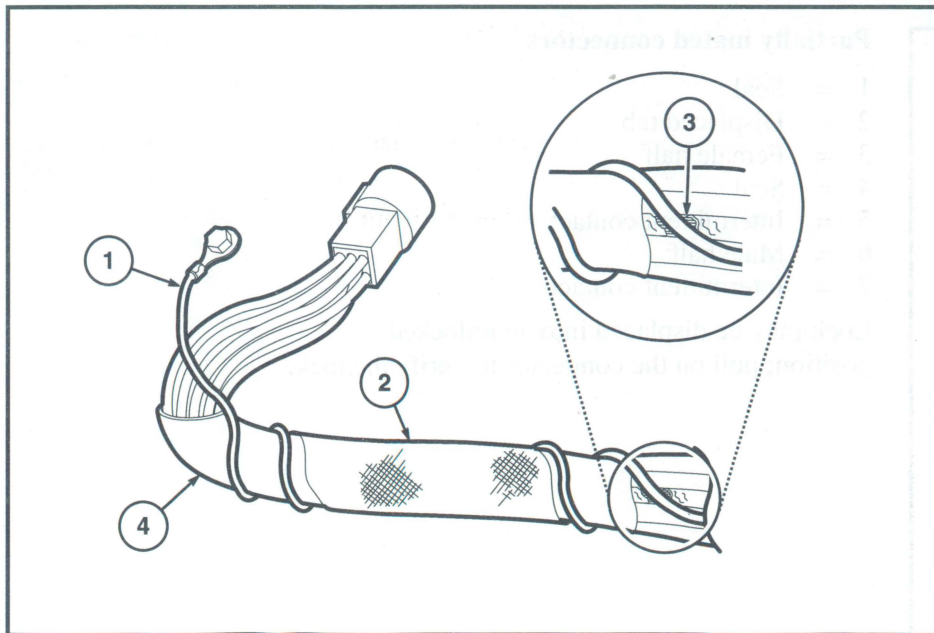
Lock may be displaced into an unlocked position; pull on the connector to verify the lock.



Deformed (enlarged) female terminals

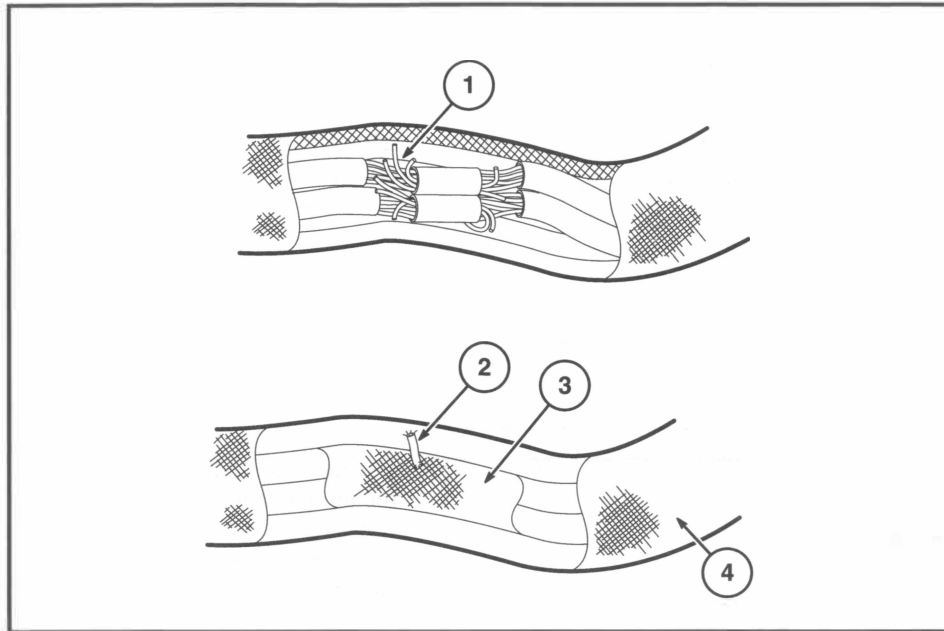
- 1 = Enlarged
- 2 = Normal

Any probe entering the terminal may enlarge the contact spring opening creating an intermittent signal. Insert the correct mating terminal (Location A) from the service kit and feel for a loose fit.



Electrical short inside the harness

- 1 = Solder coated wire to ground
- 2 = Harness protective tape
- 3 = Intermittent short
Solder coated wire pierced through the insulation of another circuit
- 4 = Grounding foil



Electrical short within the harness

Splice tape removed

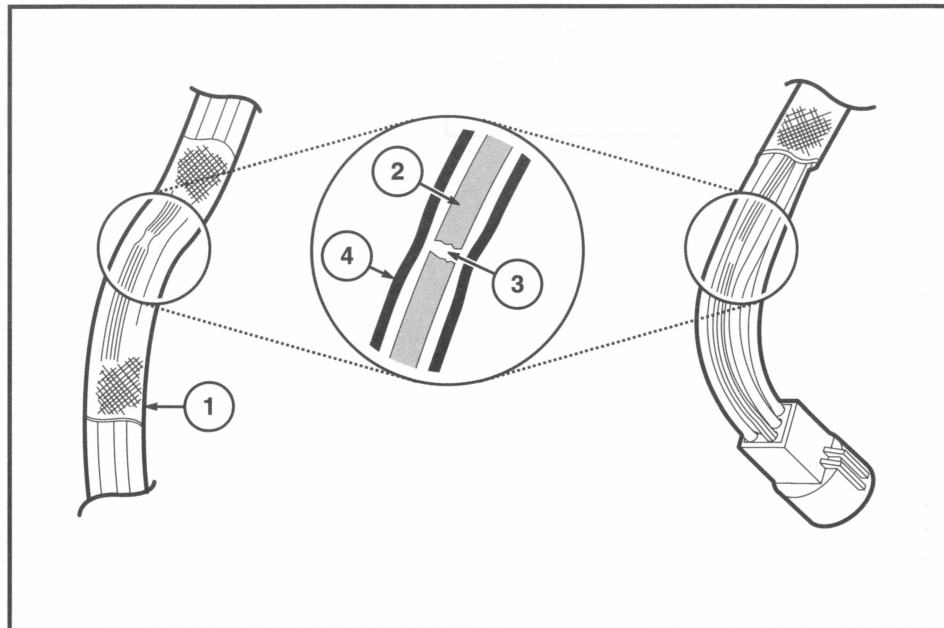
1 = Intermittent short

Splice covered

2 = Wire strand

3 = Splice tape

4 = Harness tape



Broken wire strands in harness

1 = Wiring harness tape

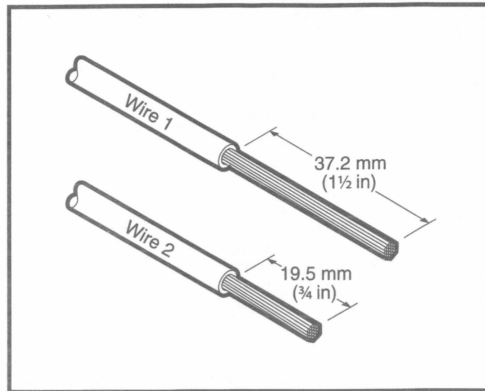
2 = Wiring strand

3 = Broken strands intermittent signal

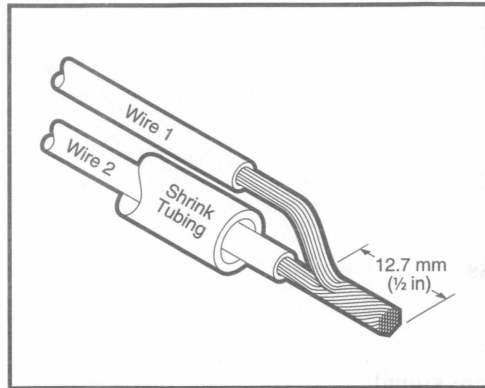
4 = Circuit insulation

Remove the tape and flex/feel each circuit for a reduction in diameter at break.

Recommended splicing method

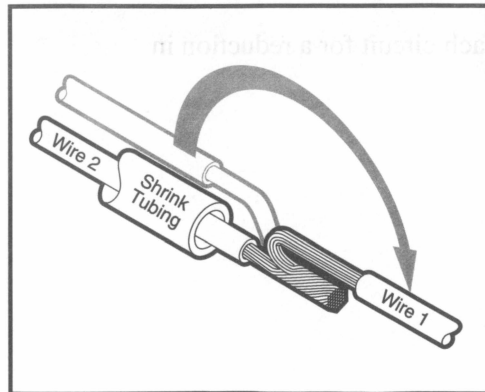


1. Disconnect battery ground cable.
2. Strip wires to appropriate length.



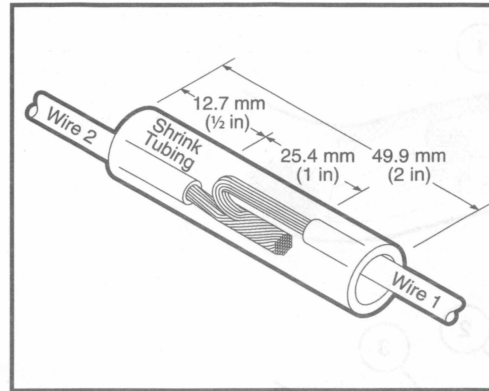
3. Install heat shrink tubing.
4. Twist wires together.
5. Solder wires together.

NOTE: Use rosin core mildly-activated (RMA) solder. Do not use acid core solder.



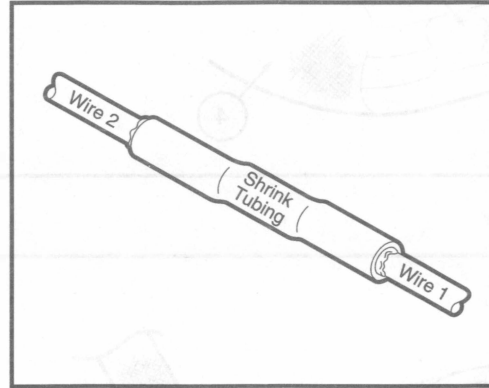
6. Bend Wire 1 back in a straight line.

NOTE: Wait for solder to cool before moving wires.



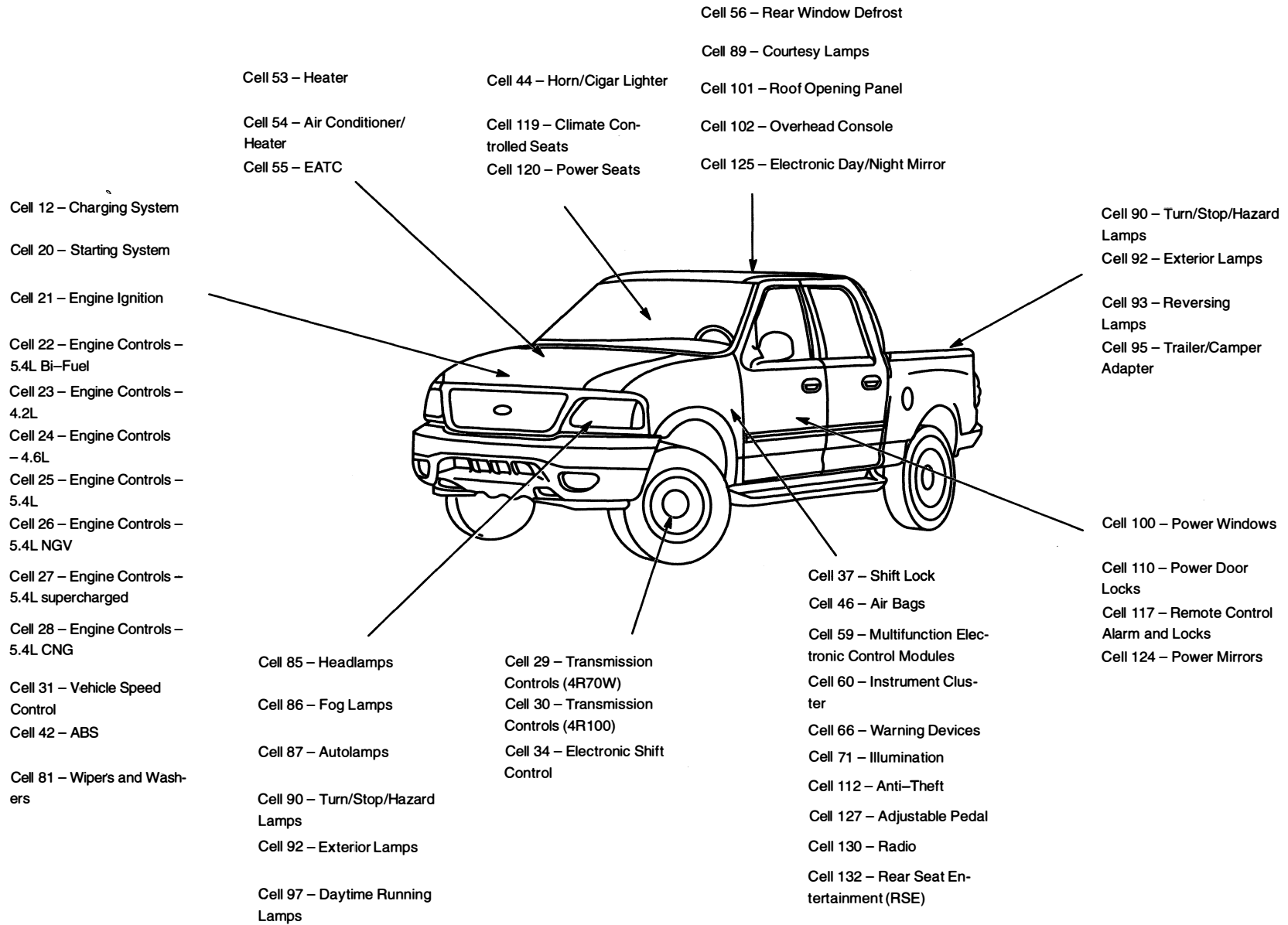
7. Evenly position heat shrink tubing over wire repair.

NOTE: Overlap tubing on both wires.

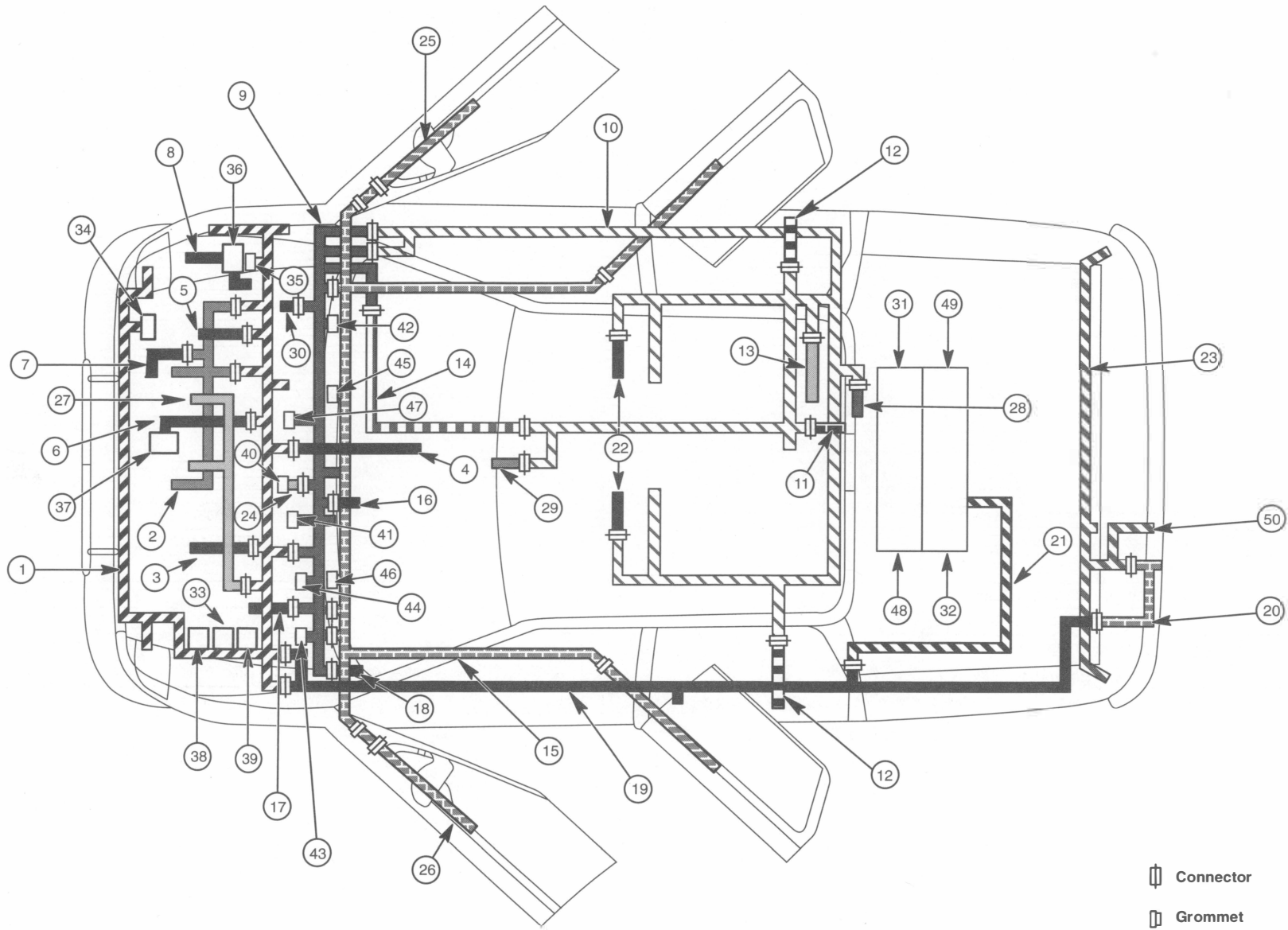


8. Use heat gun to heat the repaired area until adhesive flows out of both ends of heat shrink tubing.
9. Reconnect battery ground cable.

8-1 Systems Overview



9-1 Wiring Harness Overview

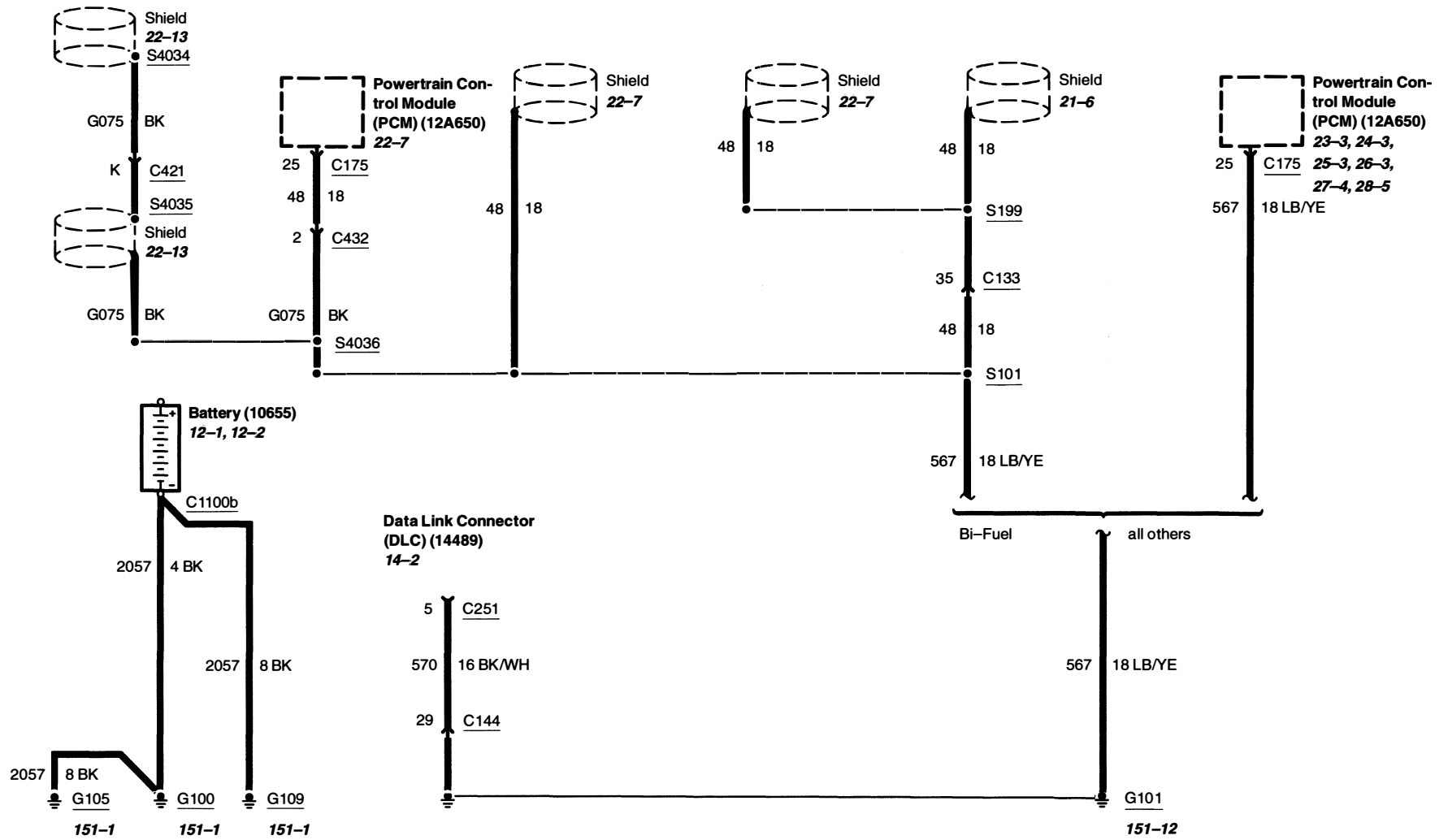


Item	Part Number	Description
1	12A581	Wiring harness – Engine control sensor
2	12B637	Wiring harness – Engine control sensor and fuel charge
	9D930	Wiring harness – Fuel charge (4.2L)
3	12A690	Wiring harness – Engine control sensor extension
4	15525	Wiring harness – Back up lamp switch to rear lamp feed
5	14B110	Wiring Harness – Four-wheel drive relay to solenoid
6	14305	Wiring harness – Alternator rectifier system
7	14B102	Wiring harness – Temperature sensor
8	14B060	Wiring harness – Starter motor relay and battery ground
9	14401	Wiring harness – Main
10	14A504	Wiring harness – Seat belt retractor switch right
11	13A625	Wiring harness – High mounted stoplamp
12	14632	Wiring harness – Window regulator, right rear door
13	14687	Wiring harness – Back window regulator
14	14335	Wiring harness – Interior illumination
15	14A005	Wiring harness – Body main
16	15080	Wiring and socket assembly – Cigar lighter lamp
17	7A786	Wiring assembly – Transfer case four-wheel drive control
18	14A320	Wiring harness – Multifunction switch
19	14405	Wiring harness – Tail lamps
20	13A576	Wiring harness – Trailer lamp feed
21	14406	Wiring harness – Fuel tank sender
22	14B084	Wiring harness – Passenger, driver seat jumper
23	13A409	Wiring harness – Rear lamp connector
24	13K027	Wiring harness – Headlamp relay
25	14630	Wiring harness – Window regulator, right front door (Regular cab, Super cab)

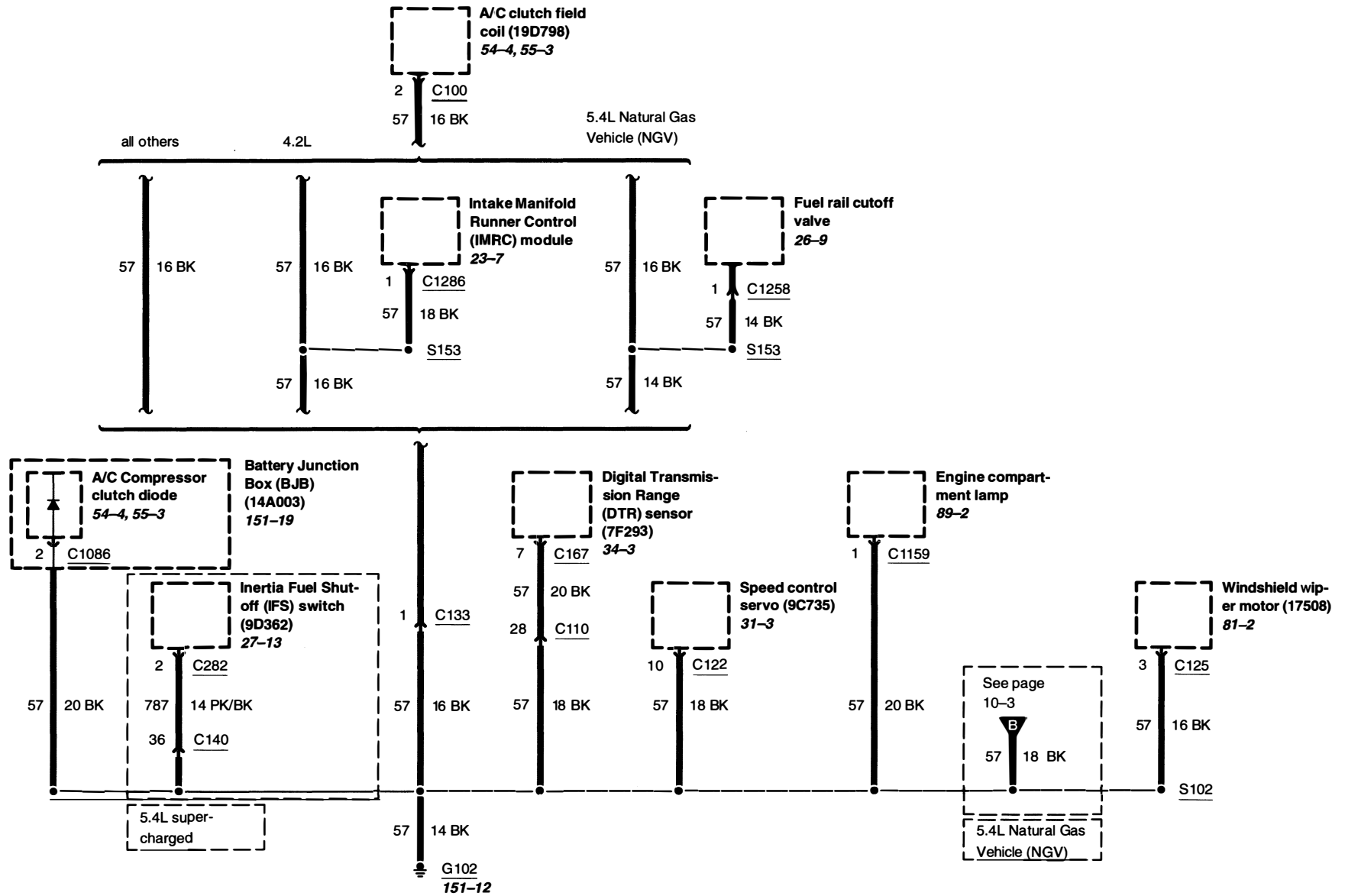
Item	Part Number	Description
26	14631	Wiring harness – Window regulator, left front door (Regular cab, Super cab)
27	14B527	Wiring harness – Fuel injector jumper (5.4L CNG)
28	18C619	Wiring harness – Rear window heater
29	17K745	Wiring harness – Rear view inside mirror
30	18B574	Wiring harness – Heater blower motor
31	A2-765	Wiring harness – Bi-fuel tank 1
32	A2-766	Wiring harness – Bi-fuel tank 2
33	–	Auxiliary relay box 1
34	–	Alternative Fuel Control Module (AFCM) (5.4L CNG)
35	–	Powertrain Control Module (PCM) (12A650)
36	–	Battery (10655)
37	–	Generator
38	–	ABS control module (2C219)
39	–	Battery Junction Box (BJB) (14A003)
40	–	Auxiliary relay box 2
41	–	Auxiliary relay box 3
42	–	Auxiliary relay box 4
43	–	Central Junction Box (CJB) (14A068)
44	–	Generic Electronic Module (GEM) (14B205)
45	–	Auxiliary relay box 5
46	–	Central security module
47	–	Belt minder module
48	–	Natural Gas Vehicle (NGV) tank
49	–	Natural Gas Vehicle (NGV) tank
50	14A348	Wiring harness – Trailer brake control switch

10-1 Grounds

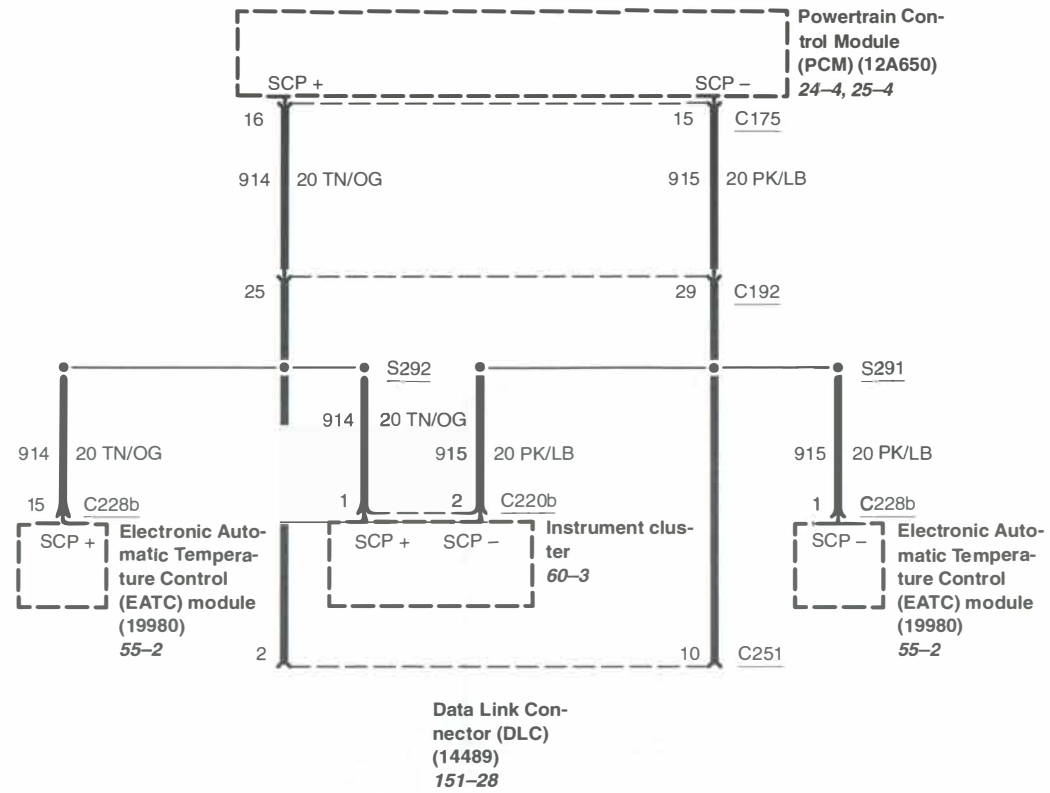
G100, G101, G105, G109



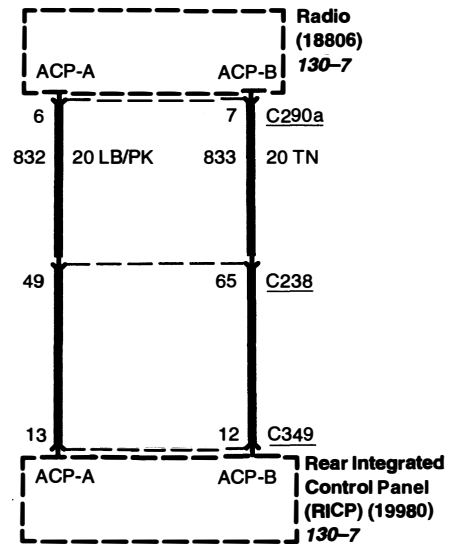
G102

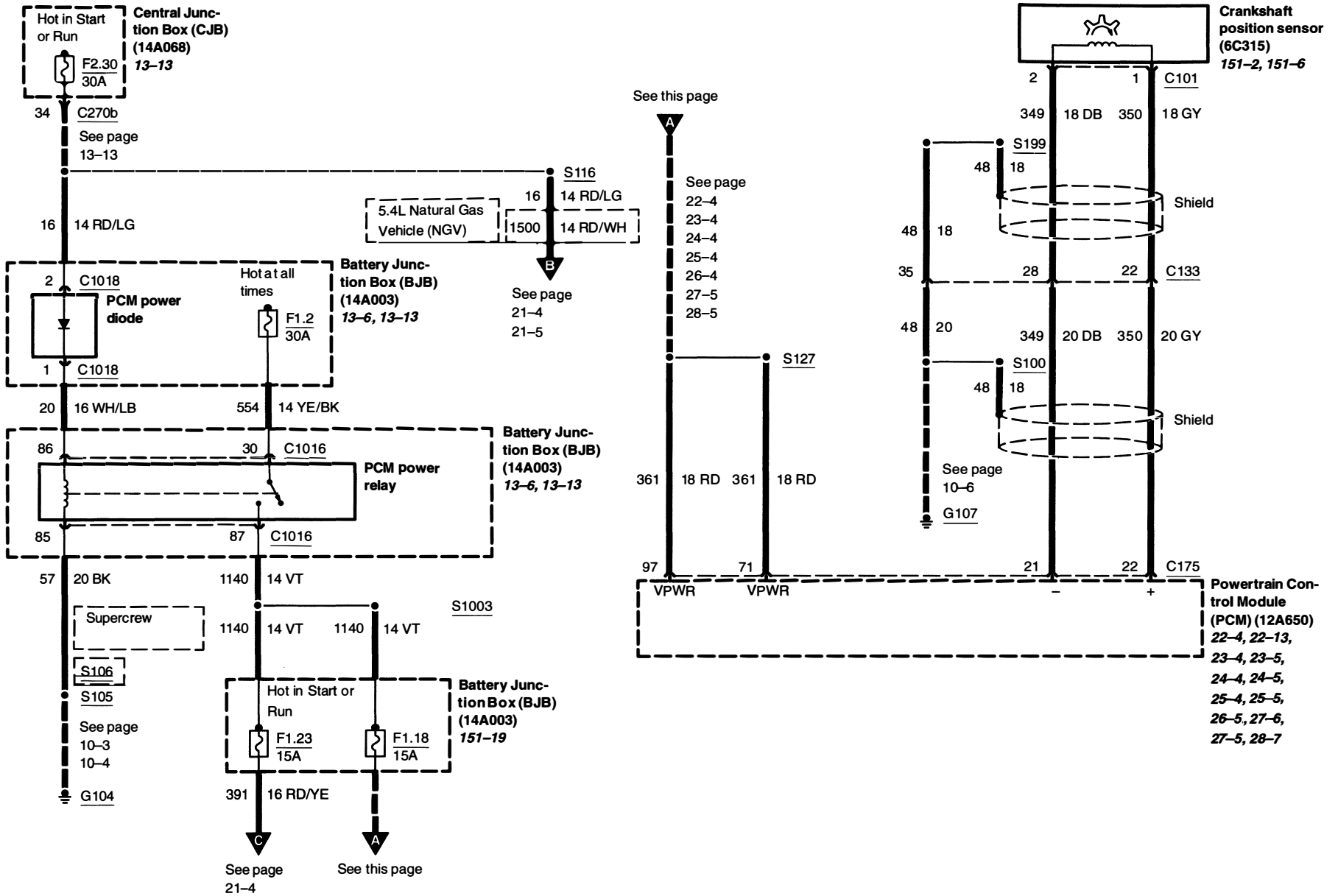


SCP Bus, with EATC

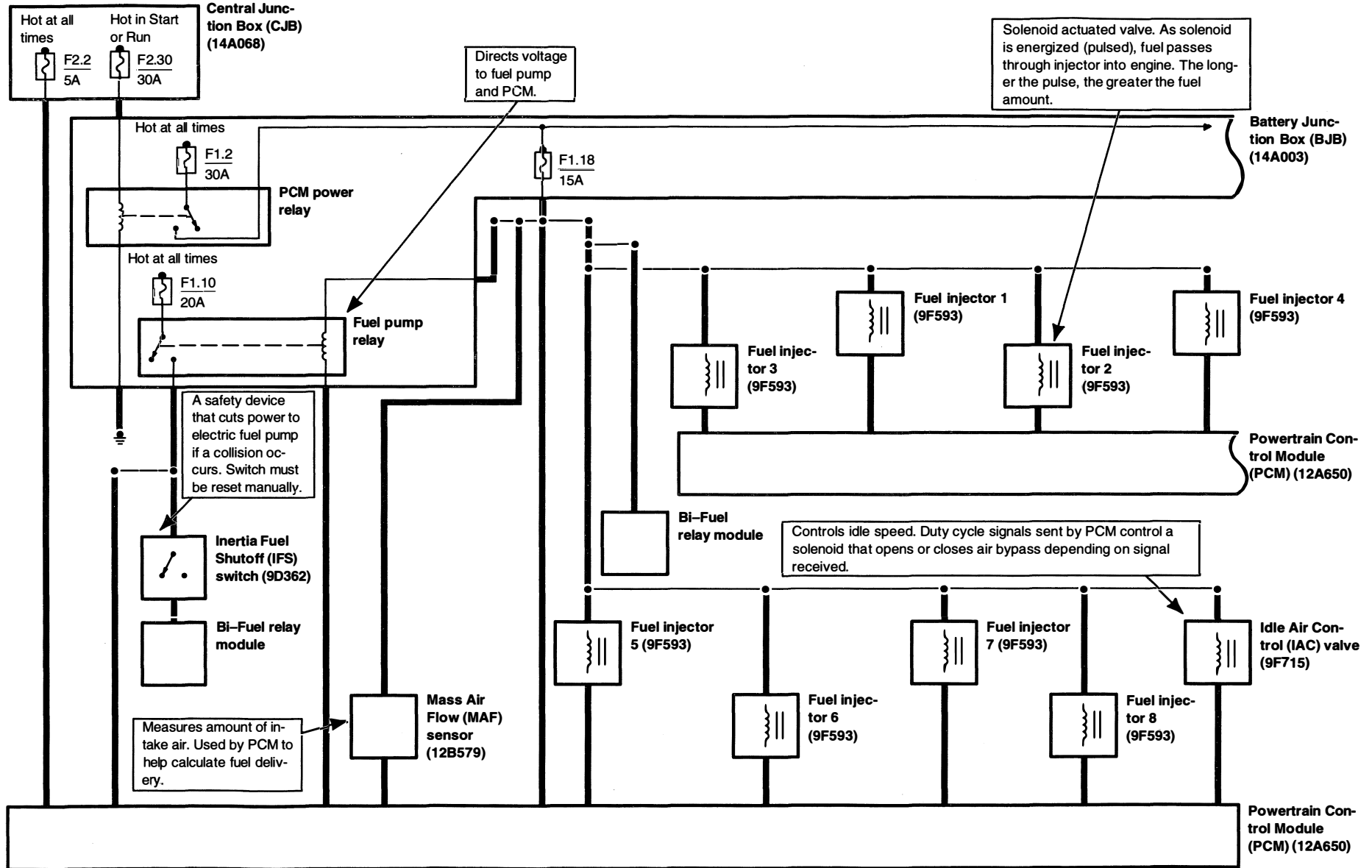


ACP Bus, Harley Davidson





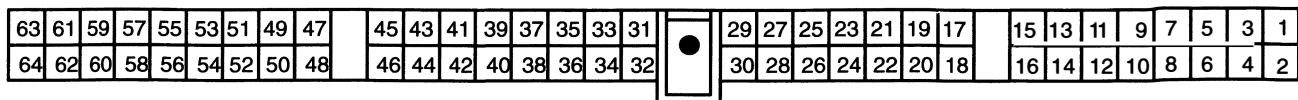
5.4L Bi-Fuel, System overview



C1294 (BK)

A3-288

Compuvalve module



F66001

* CNG
** LPG

Pin	Circuit	Circuit function
1	G001 (WH)	Coolant solenoid, signal
2	G002 (WH)	Voltage supplied at all times (overload protected)
3	*G003 (WH)	Tank valve 1, control
	**G003 (WH)	Lock off solenoid, control
4	G004 (WH)	Reference voltage
5	G005 (WH)	Fuel pump cutoff relay, control
6	*G006 (WH)	Fuel tank pressure transducer sensor (9C968), signal
	**G006 (WH)	Liquid Propane Gas (LPG) sender, signal
7	G007 (WH)	Cold start heater relay, control
8	*G008 (WH)	Fuel tank pressure transducer sensor (9C968), Signal return
	**G008 (WH)	Liquid Propane Gas (LPG) sender, Signal return
9	G009 (WH)	Voltage supplied in Start and Run (overload protected)
10	G010 (WH)	Heated Oxygen Sensor (HO2S) #21 (9F472), signal
11	G011 (WH)	Voltage supplied in Start and Run (overload protected)
12	G096 (WH)	not used
13	G013 (WH)	Voltage supplied in Start and Run (overload protected)
14	G086 (WH)	SCP Bus +
15	G015 (WH)	not used
16	G085 (WH)	SCP Bus -
17	G017 (WH)	Low flow injector 1, control

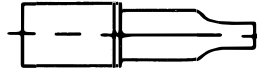
Pin	Circuit	Circuit function
18	G018 (WH)	not used
19	G019 (WH)	Low flow injector 2, control
20	-	not used
21	G021 (WH)	signal, return
22	G022 (WH)	Throttle Position Sensor (TPS) (9B989), signal
23	-	not used
24	G024 (WH)	not used
25	-	not used
26	G026 (WH)	Fuel tank temperature sensor, signal
27	G027 (WH)	not used
28	-	not used
29	-	not used
30	G030 (WH)	Heated Oxygen Sensor (HO2S) #11 (9F472), signal
31	-	not used
32	G032 (WH)	signal, return
33	-	not used
34	G830 (WH)	Crankshaft position sensor (6C315) -
35	-	not used
36	-	not used
37	-	not used
38	G831 (WH)	Crankshaft position sensor (6C315) +

Pin	Circuit	Circuit function
39	–	not used
40	–	not used
41	–	not used
42	G042 (WH)	not used
43	G043 (WH)	not used
44	–	not used
45	G045 (WH)	High flow injector 3, control
46	G046 (WH)	Indicator light switch, return
47	G047 (WH)	High flow injector 4, control
48	–	not used
49	G049 (WH)	High flow injector 5, control
50	G050 (WH)	Indicator light switch, switch, output
51	G051 (WH)	High flow injector 6, control
52	G052 (WH)	Indicator light switch, indicator, control
53	G053 (WH)	High flow injector 7, control
54	G054 (WH)	not used
55	G055 (WH)	High flow injector 8, control
56	G056 (WH)	not used
57	G057 (BK)	Ground
58	G058 (WH)	not used
59	G059 (BK)	Ground
60	G060 (WH)	not used
61	G061 (BK)	Ground
62	G062 (BK)	Ground
63	G063 (BK)	Ground
64	G064 (BK)	Ground

C1295

A2-525

Cold start heater



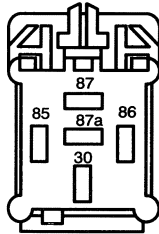
F01143

Pin	Circuit	Circuit function
1	G109 (WH)	Cold start heater relay, switched power, output

C1296

A2-525

Cold start heater relay



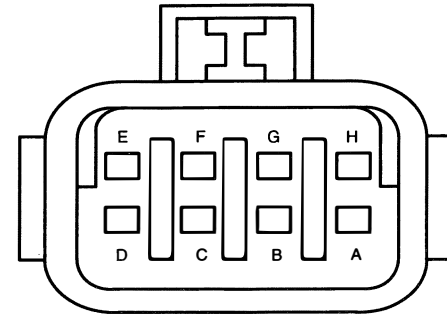
F05062

Pin	Circuit	Circuit function
30	G109 (WH)	Cold start heater relay, switched power, output
85	G007 (GY)	Cold start heater relay, control
86	G080 (WH)	Fuel pump, Power (Start or Run)
87	G002 (WH)	Voltage supplied at all times (overload protected)
87a	-	not used

C1297 (BK)

A3-288

High flow injector assembly



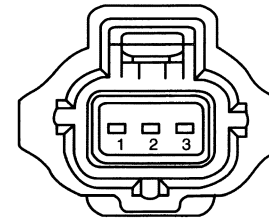
F08135

Pin	Circuit	Circuit function
A	G045 (WH)	High flow injector 3, control
B	G047 (WH)	High flow injector 4, control
C	G049 (WH)	High flow injector 5, control
D	G051 (WH)	High flow injector 6, control
E	G053 (WH)	High flow injector 7, control
F	G055 (WH)	High flow injector 8, control
G	G072 (WH)	Voltage supplied in Start and Run (overload protected)
H	G073 (WH)	Voltage supplied in Start and Run (overload protected)

C1299 (BK)

12B637

Barometric Absolute Pressure (BAP) sensor



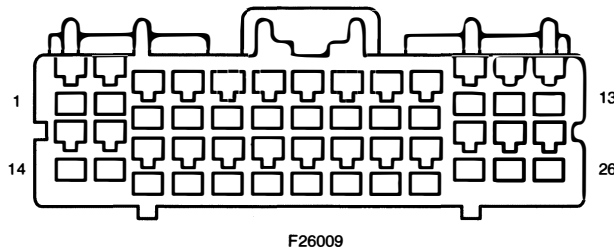
F03273

Pin	Circuit	Circuit function
1	351 (BN/WH)	Reference, voltage
2	359 (GY/RD)	signal, return
3	356 (DB/LG)	Barometric Absolute Pressure (BAP) sensor, signal

C3076 (GY)

14B079

Video cassette player



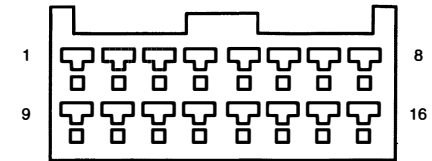
F26009

Pin	Circuit	Circuit function
1	(RD)	Audio signal positive, Left
2	(RD)	Audio signal positive, Right
3	-	not used
4	-	not used
5	-	not used
6	-	not used
7	-	not used
8	-	not used
9	-	not used
10	-	not used
11	(BK)	Shield
12	(RD)	video +
13	-	not used
14	(BK)	Shield
15	(BK)	Shield
16	-	not used
17	-	not used
18	-	not used
19	-	not used
20	-	not used
21	-	not used
22	-	not used
23	(WH)	Video cassette player, to, Rear Seat Entertainment (RSE) module, signal
24	(BK/LG)	audio ground
25	(LG/VT)	Voltage supplied at all times (overload protected)
26	(BK/PK)	Voltage in Run or Accessory (overload protected)

C3077a

14B079

Rear Seat Entertainment (RSE) module



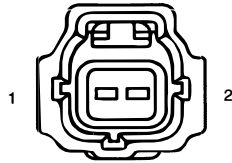
F16037

Pin	Circuit	Circuit function
1	(TN/LG)	Audio signal positive, left rear
2	(OG/RD)	Audio signal positive, right rear
3	(BN/PK)	Audio signal negative, right rear
4	-	not used
5	(TN/YE)	Audio signal negative, left rear
6	(GY/LB)	Audio signal positive, left rear
7	(TN/WH)	Audio signal positive, left rear
8	(BK/LG)	audio ground
9	(LG/BK)	Audio System ON (ASYSON)
10	(LG/VT)	Voltage supplied at all times (overload protected)
11	(BK)	audio/video ground
12	(LB/PK)	Audio corporate protocol A
13	(TN)	Audio corporate protocol B
14	(WH)	Video cassette player, to, Rear Seat Entertainment (RSE) module, signal
15	(BK)	Ground, Illumination
16	(LB/RD)	Illumination, feed

C4123

14406

In-bed fuel tank valve, rear



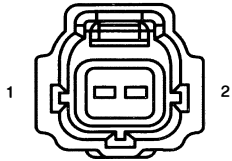
F02111

Pin	Circuit	Circuit function
1	57 (BK)	Ground
2	787 (PK/BK)	Fuel pump, Power

C4124

14406

In-bed fuel tank valve, front



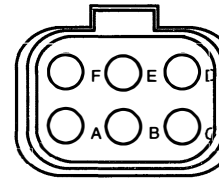
F02091

Pin	Circuit	Circuit function
1	57 (BK)	Ground
2	787 (PK/BK)	Fuel pump, Power

C4125

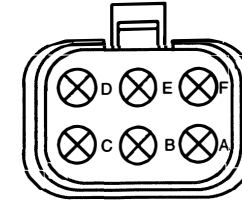
* CNG
** LPG

A3-198



F06028

A2-765



F06029

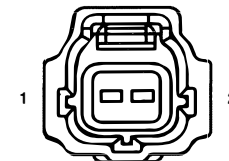
- (A) G008 (BK)
- (B) G006 (DG)
- (C) G004 (RD)
- (D) G080 (PK)
- (E) *G026 (OG)
- (F) G003 (YE)

- (A) G008 (BK)
- (B) **G006 (GN)
- (C) **G004 (RD)
- (D) *G080 (RD/LB)
- (E) *G026 (OG)
- (F) *G003 (YE)

C4126

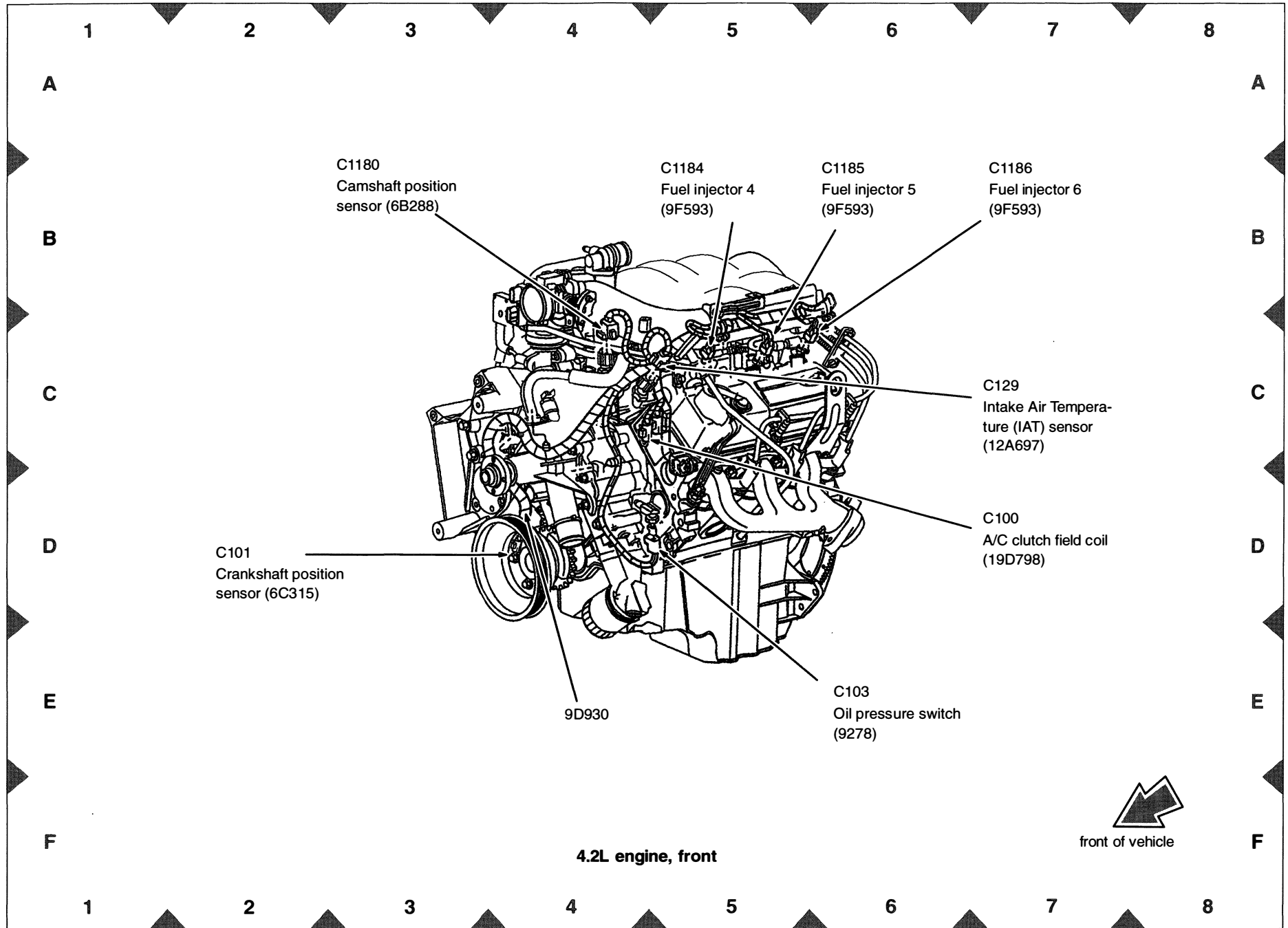
14406

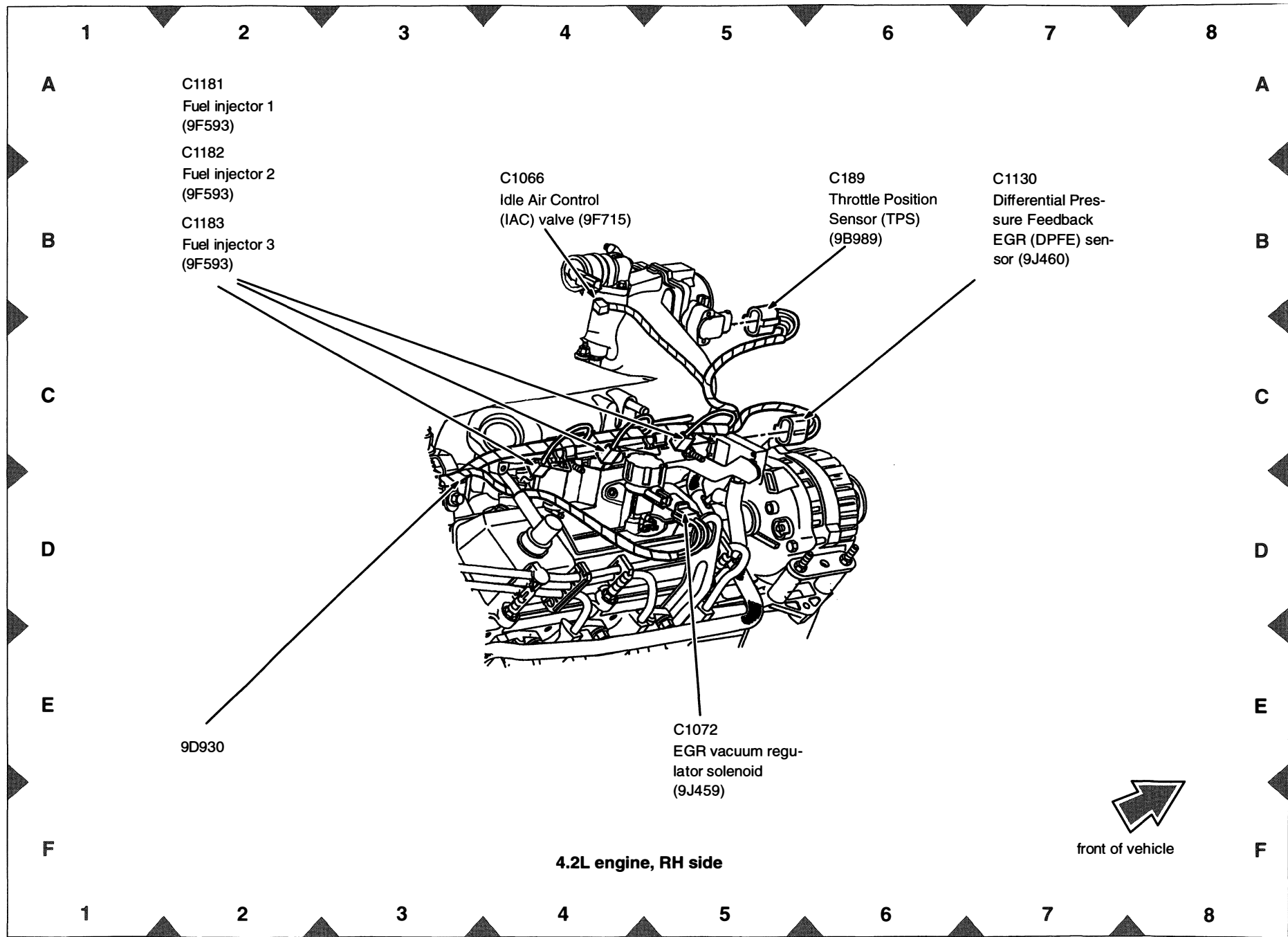
Midship fuel tank valve

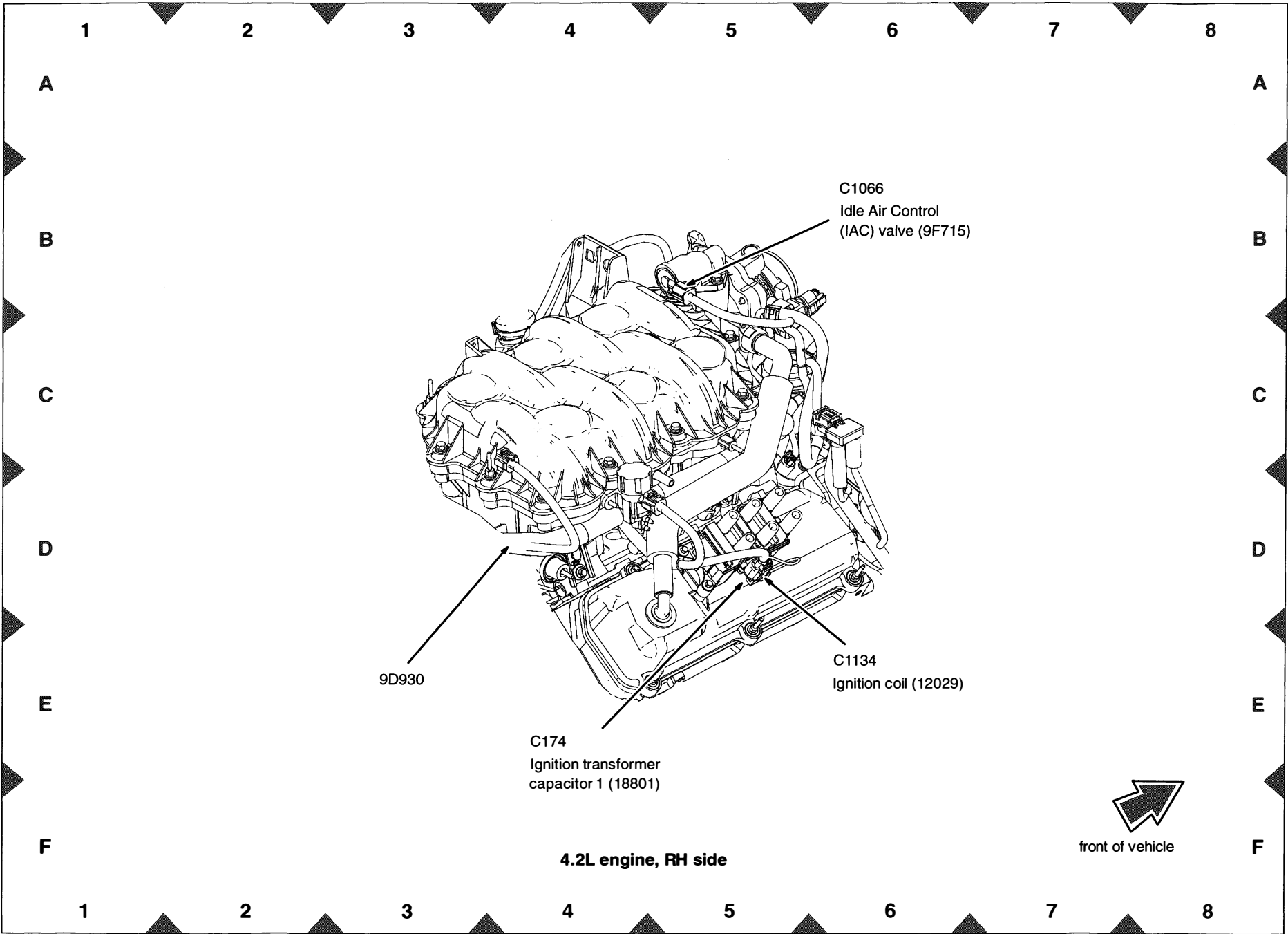


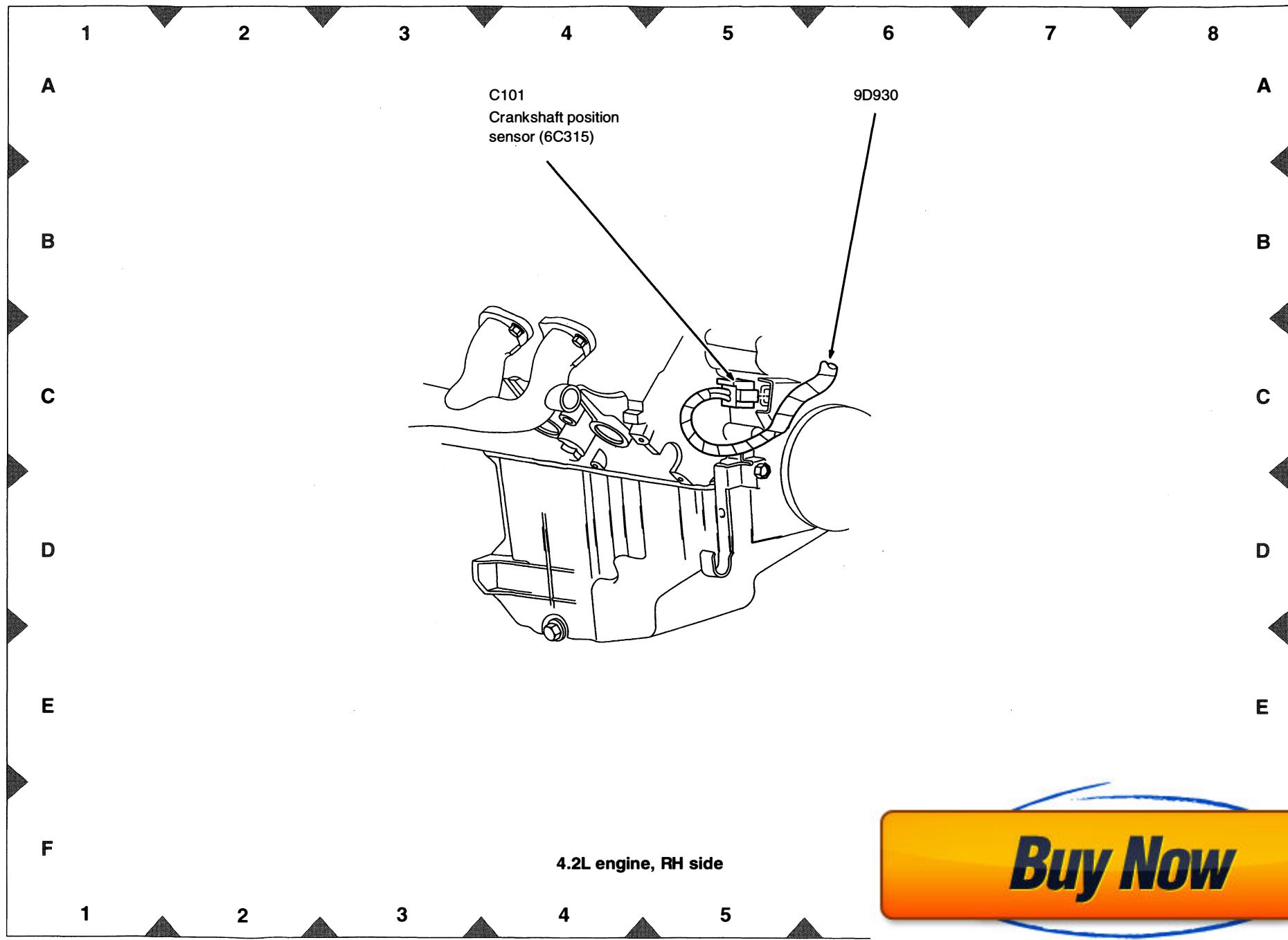
F02091

Pin	Circuit	Circuit function
1	57 (BK)	Ground
2	787 (PK/BK)	Fuel pump, Power









Buy Now

