1996 BRONCO

FIX IT RIGHT THE FIRST TIME ON TIME

ELECTRICAL AND VACUUM TROUBLESHOOTING MANUAL

1996 Bronco Electrical & Vacuum Trouble-Shooting Manual (EVTM)

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FORD CUSTOMER SERVICE DIVISION

Quality is Job 1

Ford Customer Service Division has continued with the existing format for the 1996 BRONCO EVTM. Our goal is to provide accurate and timely electrical and vacuum service information.

1996 EVTM FEATURES

- Schematic pages now contain **Component Location** references to full-view illustrations and **Component Descriptions** that describe the system function of a component.
- **"COMPONENT TESTING"** procedures (CELL 149) that tell the user how to perform diagnostic tests on various circuits.
- **Connector End Views** are located at the end of individual cells and are shown for connectors with five or more cavities, for connectors with ten or more cavities, a circuit function chart is provided.
- **NOTES, CAUTIONS and WARNINGS** that contain important safety information.
- Full view **"COMPONENT LOCATION VIEWS"** (CELL 151) to help locate on-vehicle components.
- Circuit voltages are included on schematic pages to help simplify troubleshooting.
- **Cellular Pagination:** A specific section (or cell) in all EVTMs is numbered by cell and starts with page 1. For example: **"HOW TO USE THIS MANUAL"** is CELL 2 and begins with page 2-1.
- **"IN-LINE CONNECTOR FACES"** (CELL150) are included for in-line connectors with six or more terminals, to aid in servicing electrical wiring.
- **"C"** numbers are assigned for all electrical connectors. **"C"** numbers are listed in the **"LOCATION INDEX"** (CELL 152).
- **"HARNESS CAUSAL PART NUMBERS"** (CELL153) are included to aid in identigying warranty concerns.
- **"HARNESS CAUSAL PART NUMBERS"** contain a suffix to denote connector "gender" type (F-socket, M-prior blade).

ORDERING INFORMATION

Information about how to order additional copies of this publication or other Ford publications may be obtained by writing to Helm Incorporated at the address shown below or by calling 1-800-782-4356. Other publications available include:

- Service Manuals
- Service Specification Books
- Car/Truck Wiring Diagrams
- Powertrain Control/Emissions Diagnosis Manuals

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1-1 TABLE OF CONTENTS/INDEX

Table Of Contents

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IMPORTANT SAFETY NOTICE

Appropriate service methods and proper repair procedures are essential for the safe, reliable operation of all motor vehicles, as well as the personal safety of the individual doing the work. This Manual provides general directions for accomplishing service and repair work with tested, effective techniques. Following them will help assure reliability.

There are numerous variations in procedures, techniques, tools, and parts for servicing vehicles, as well as in the skill of the individual doing the work. This Manual cannot possibly anticipate all such variations and provide advice or cautions as to each. Accordingly, anyone who departs from the instructions provided in this Manual must first establish that neither personal safety nor the vehicle integrity be compromised by the choice of methods, tools or parts.

2-1 HOW TO USE THIS MANUAL

The purpose of this manual is to show electrical and vacuum circuits in a clear and simple fashion to make troubleshooting easier. **NOTES, CAUTIONS** and **WARNINGS** contain important information.

- **NOTES** describe how switches and other components operate to help complete a particular procedure.
- **CAUTIONS** provide information that could prevent making an error that may damage the vehicle.
- **WARNINGS** provide information to prevent personal injury.

The **WARNINGS** list on page 2-2 contains general warnings to follow when servicing a vehicle.

Components that work together are shown together. All electrical components used in a specific system are shown on one diagram. The circuit breaker or fuse is shown at the top of the page. All wires, connectors, components and splices are shown in the flow of current to ground at the bottom of the page. If a component is used in several different systems, it is shown in several places. For example, the Main Light Switch is electrically a part of many systems and is repeated on many pages.

In some cases, a component may seem (by its name) to belong to a system where it has no electrical connection. For example, Radio Illumination is electrically part of Instrument Illumination, but because it has no electrical connection to the Radio system, it is not shown on the Radio diagram.

Schematic pages contain references to full-view illustrations and description notes for various components. The references are reverse-text blocks located next to each component and connector and refer the user to the appropriate illustration page and zone. The description notes describe the operation of the component.

Schematic pages contain circuit voltages to help simplify troubleshooting hints. 12V is used to imply battery voltage on a component connector terminal, and 0V is used to show that there should be continuity to ground on that particular terminal. Conditional voltages such as "12V with the ignition switch in RUN" will also be provided. Troubleshooting hints that can't be simplified with circuit voltages will be shown at the end of each cell.

Component connector face information specific to a certain cell is found at the end of that cell. A Connector Face Reference List is provided to locate connector faces that are shown in different cells. Component connectors with five or more terminals are illustrated and are accompanied by a pinout chart that lists the function of all circuitry associated with that component.

"GROUNDS" (Cell 10) contains ground circuitry shown in complete detail. This information is useful for checking interconnections of the ground circuits of different systems.

"POWER DISTRIBUTION" (Cell 13) contains power distribution circuitry shown in complete detail. This section displays how the various fuses are powered and, in turn, how each system is powered.

"COMPONENT TESTING" (Cell 149) contains testing procedures for various switches. This information includes schematics, component terminal locations and step-by-step procedures.

"IN-LINE CONNECTOR FACES" (Cell 150) contains illustrations of all the in-line connectors that have 6 or more terminals. The terminals have pin numbers assigned to them.

"COMPONENT LOCATION VIEWS" (Cell 151) contains full-view illustrations which show the location of all components and connectors in the vehicle.

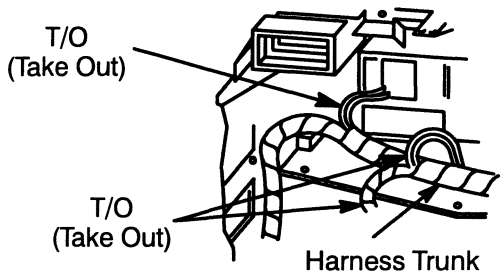
The **"LOCATION INDEX"** (Cell 152) provides the base part numbers, locations, connector face references and illustration references for all components, connectors, splices and grounds.

HELPFUL REMINDERS

Before using the EVTM for troubleshooting, refer to these HELPFUL REMINDERS:

1. The abbreviation T/O, for take out, used in the Location Index (Cell 152), refers to the point at which a group of wires branch off the harness trunk. Refer to the wiring harness illustration.

Wiring harness at back of Instrument Panel, showing typical T/O (Take Out) locations



2. If a connector serves the same purpose in two separate versions (e.g., Automatic/Manual), but is physically different, *two* connector numbers are used. However, if a connector serves the same purpose in two separate versions (e.g., Automatic/Manual) and is physically the same, but the wire colors are different, only *one* connector number is used. If the same physical connector is used more than once, then more than *one* connector number is used.
3. Wiring schematics provide a picture of how and under what conditions the circuit is powered, of the current path to circuit components, and of how a circuit is grounded. Each circuit component is named (underlined titles). Wire and connector colors are listed as follows (standard Ford color abbreviations are used):

COLOR ABBREVIATIONS

BL	**Blue**	**N**	**Natural**
BK	**Black**	**O**	**Orange**
BR	**Brown**	**PK**	**Pink**
DB	**Dark Blue**	**P**	**Purple**
DG	**Dark Green**	**R**	**Red**
GN	**Green**	**T**	**Tan**
GY	**Gray**	**W**	**White**
LB	**Light Blue**	**Y**	**Yellow**
LG	**Light Green**		

Note: Whenever a wire is labeled with two colors, the first color listed is the basic color of the wire, and the second color listed is the stripe marking of the wire.

4. When reporting Vehicle Repair Location Codes to Ford Customer Service Division, refer to Cell 160 (beginning on page 160-1). Note: Do *not* use the illustrations in Cell 151 (beginning on page 151-1) for reporting Vehicle Repair Location Codes.
5. **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.*

HOW TO FIND ELECTRICAL CONCERNS

TROUBLESHOOTING STEPS

These six steps present an orderly method of troubleshooting.

Step 1. Verify the concern.

- Operate the complete system to check the accuracy and completeness of the customer's complaint.

Step 2. Narrow the concern.

- Using the EVTM, narrow down the possible causes and locations of the concern to pinpoint the exact cause.
- Read the description notes at the components and study the wiring schematic. You should then know enough about the circuit operation to determine where to check for the trouble. Further information can be found by referring to the Service Manual pages listed in the box at the top of the page.

Step 3. Test the suspected cause.

- Use electrical test procedures to find the specific cause of the symptoms.
- The component location reference bars and the pictures will help you find components. The Location Index (at the end of the manual) gives component location information for connectors, diodes, resistors, splices and grounds.

Step 4. Verify the cause.

- Confirm that you have found the correct cause by connecting jumper wires and/or temporarily installing a known good component and operating the circuit.

Step 5. Make the repair.

- Repair or replace the inoperative component.

Step 6. Verify the repair.

- Operate the system as in Step 1 and check that your repair has removed all symptoms without creating any new symptoms.

Some engine circuits may need special test equipment and special procedures. See the *Service Manual* and other service books for details. You will find the circuits in this manual to be helpful with those special test procedures.

TROUBLESHOOTING TOOLS

JUMPER WIRE

This is a test lead used to connect two points of a circuit. A Jumper Wire can bypass an open to complete a circuit.

WARNING

Never use a jumper wire across loads (motors, etc.) connected between hot and ground. This direct battery short may cause injury or fire.

VOLTMETER

A DC Voltmeter measures circuit voltage. Connect negative (- or black) lead to ground, and positive (+ or red) lead to voltage measuring point.

OHMMETER

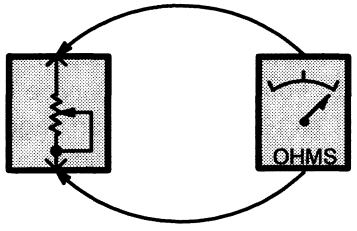


Figure 1–Resistance Check

An Ohmmeter shows the resistance between two connected points (Figure 1).

TEST LAMP

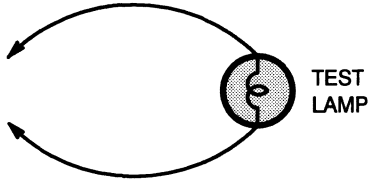


Figure 2–Test Lamp

A Test Light is a 12-volt bulb with two test leads (Figure 2).

Uses: Voltage Check, Short Check.

SELF-POWERED TEST LAMP

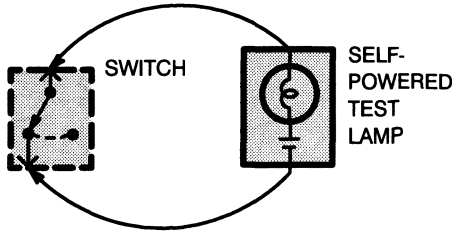


Figure 3–Continuity Check

The Self-Powered Test Lamp is a bulb, battery and set of test leads wired in series (Figure 3). When connected to two points of a continuous circuit, the bulb glows.

Uses: Continuity Check, Ground Check.

CAUTION

When using a self-powered test lamp or ohmmeter, be sure power is off in circuit during testing. Hot circuits can cause equipment damage and false readings.

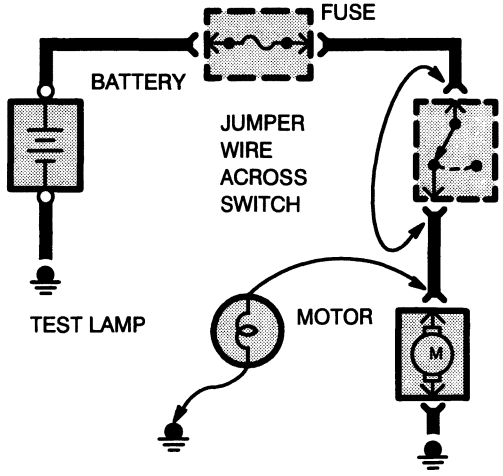


Figure 4—Switch Circuit Check and Voltage Check

In an inoperative circuit with a switch in series with the load, jumper the terminals of the switch to power the load. If jumpering the terminals powers the circuit, the switch is inoperative (Figure 4).

CONTINUITY CHECK
(Locating open circuits)

Connect one lead of Self-Powered Test Lamp or Ohmmeter to each end of circuit (Figure 3). Lamp will glow if circuit is closed. Switches and fuses can be checked in the same way.

VOLTAGE CHECK

Connect one lead of test lamp to a known good ground or the negative (-) battery terminal. Test for voltage by touching the other lead to the test point. Bulb goes on when the test point has voltage (Figure 4).

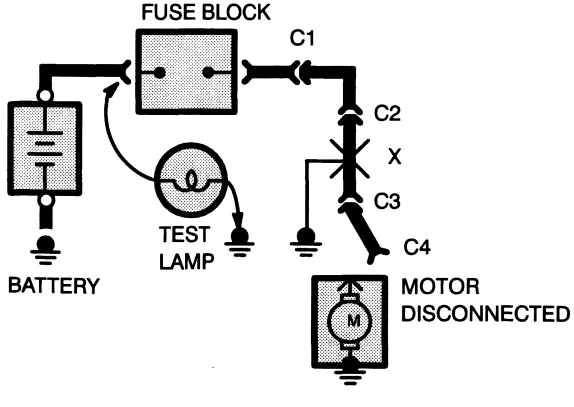


Figure 5—Short Check

A fuse that repeatedly blows is usually caused by a short to ground. It's important to be able to locate such a short quickly (Figure 5).

1. Turn off everything powered through the fuse.
2. Disconnect other loads powered through the fuse:
   - Motors: disconnect motor connector (Connector C4 in Figure 5).
   - Lights: remove bulbs.
3. Turn Ignition Switch to RUN (if necessary) to power fuse.
4. Connect one Test Lamp lead to hot end of blown fuse. Connect other lead to ground. Bulb should glow, showing power to fuse. *(This step is just a check to be sure you have power to the circuit.)*
5. Disconnect the test lamp lead that is connected to ground, and reconnect it to the load side of the fuse at the connector of the disconnected component. (In Figure 5, connect the test lamp lead to connector C4.)
   - If the Test Lamp is off, the short is in the disconnected component.
   - If the Test Lamp goes on, the short is in the wiring. You must find the short by disconnecting the circuit connectors, one at a time, until the Test Lamp goes out. For example, in Figure 5 with a ground at X, the bulb goes out when C1 or C2 is disconnected, but not after disconnecting C3. This means the short is between C2 and C3.

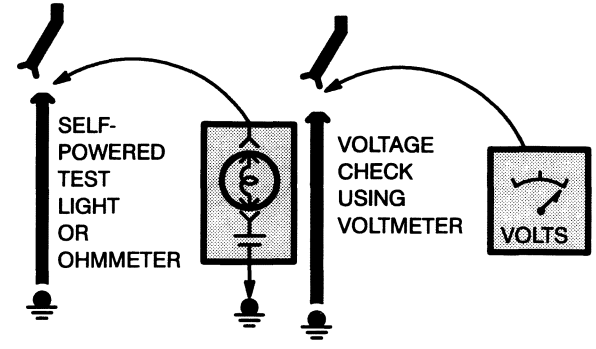


Figure 6—Ground Check

Turn on power to the circuit. Perform a Voltage Check between the suspected inoperative ground and the frame. Any indicated voltage means that the ground is inoperative (Figure 6).

Turn off power to the circuit. Connect one lead of a Self-Powered Test Lamp or Ohmmeter to the wire in question and the other lead to a known ground. If the bulb glows, the circuit ground is OK (Figure 6).

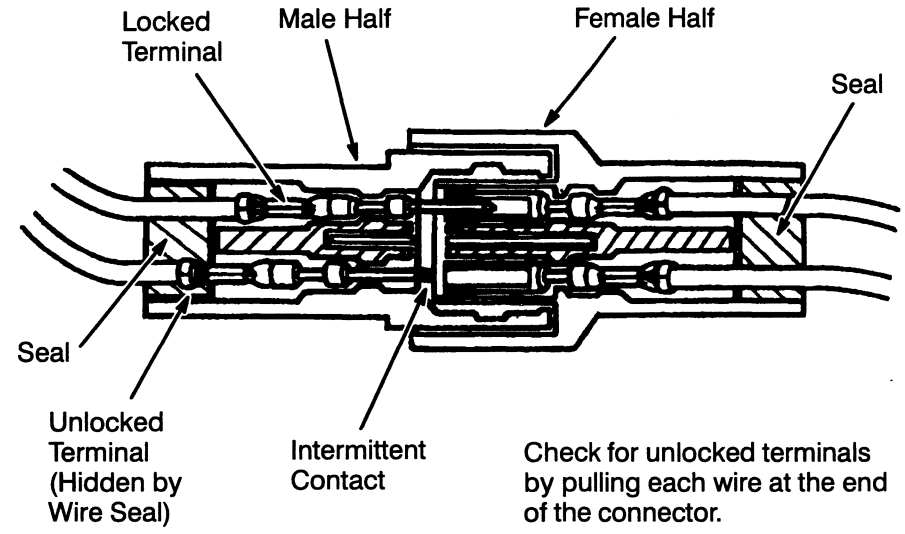
The circuit schematics in this manual make it easy to identify common points in circuits. This knowledge can help narrow the concern to a specific area. For example, if several circuits fail at the same time, check for a common power or ground connection (see *Power Distribution* or *Grounds*). If part of a circuit fails, check the connections between the part that works and the part that doesn't work.

For example, if the lo beam headlamps work, but the high beams and the indicator lamp don't work, then power and ground paths must be good. Since the dimmer switch is the component that switches this power to the high beam lights and indicator, it is most likely the cause of failure.

TROUBLESHOOTING WIRING HARNESS AND CONNECTOR HIDDEN CONCERNS

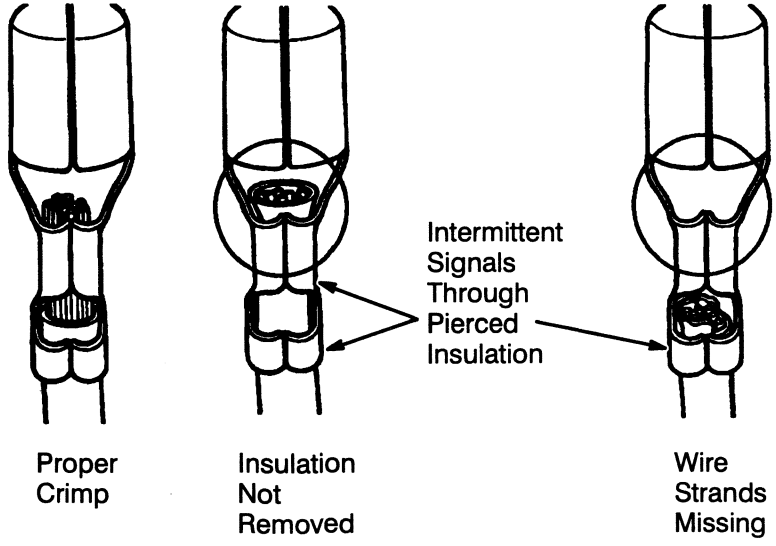
The following illustrations are known examples of wiring harness, splices and connectors that will create intermittent electrical concerns. The concerns are hidden and can only be discovered by a physical evaluation as shown in each illustration.

NOTE: When servicing gold plated terminals in a connector, only replace with the gold plated terminals designed for that connector.

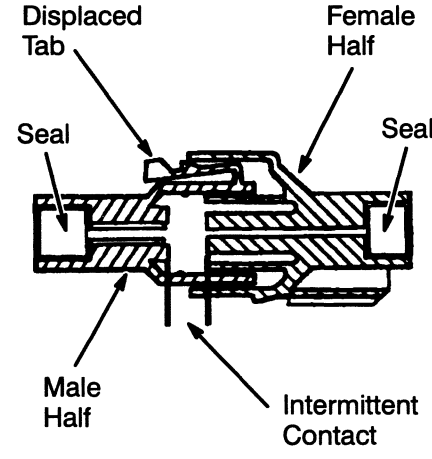


Check for unlocked terminals by pulling each wire at the end of the connector.

TERMINAL NOT PROPERLY SEATED

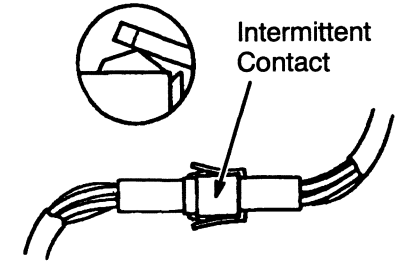


DEFECTIVE INSULATION STRIPPING



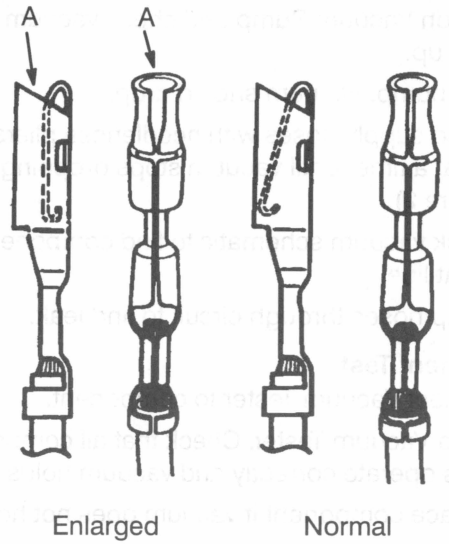
Type A

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



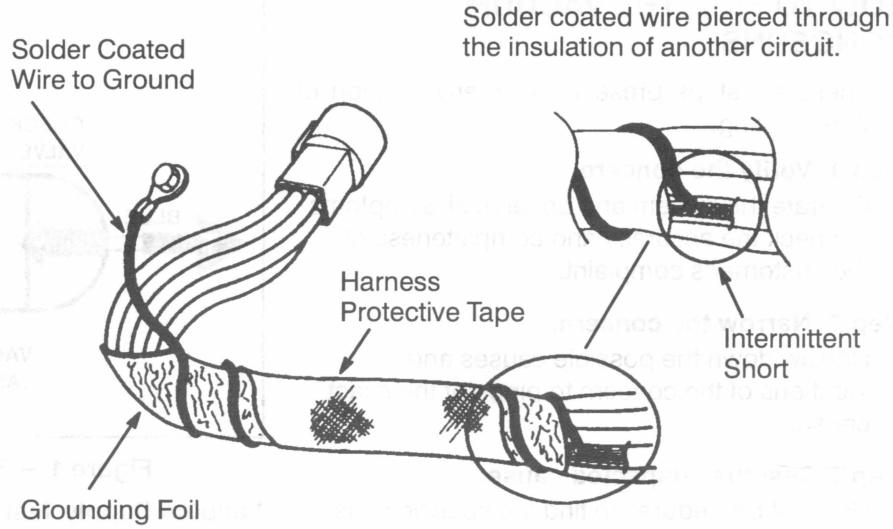
Type B

PARTIALLY MATED CONNECTORS

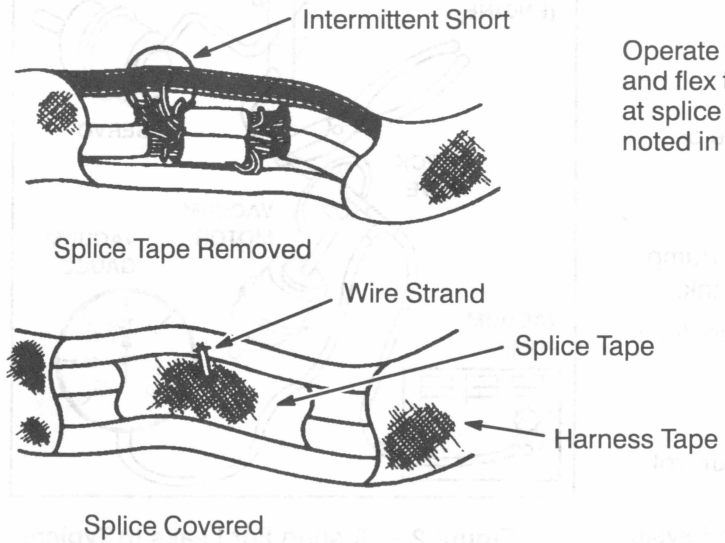


Any probe entering the terminal may enlarge the contact spring opening creating an intermittent signal. Insert the correct mating terminal (Location A) from the service kit and feel for a loose fit.

DEFORMED (ENLARGED) FEMALE TERMINALS

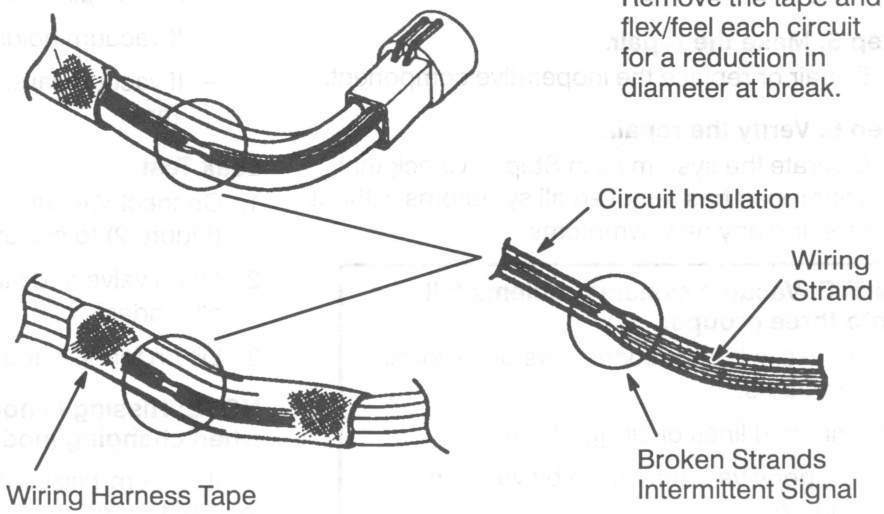


ELECTRICAL SHORT INSIDE THE HARNESS



Operate the system and flex the harness at splice location noted in Section 152.

ELECTRICAL SHORT WITHIN THE HARNESS



BROKEN WIRE STRANDS IN HARNESS

HOW TO FIND THE VACUUM CONCERNS

These six steps present an orderly method of troubleshooting.

Step 1. Verify the concern.

- Operate the system and observe all symptoms to check the accuracy and completeness of the customer's complaint.

Step 2. Narrow the concern.

- Narrow down the possible causes and locations of the concern to pinpoint the exact cause.

Step 3. Test the suspected cause.

- Use test procedures to find the specific cause of the symptoms.

Step 4. Verify the cause.

- Confirm that you have found the right cause by operating the parts of the circuit you think are good.

Step 5. Make the repair.

- Repair or replace the inoperative component.

Step 6. Verify the repair.

- Operate the system as in Step 1. Check that your repair has removed all symptoms without creating any new symptoms.

NOTE: Vacuum system problems fall into three groups.

1. Leaks in hoses, connectors or motor diaphragms.
2. Pinched lines or clogged valves.
3. Inoperative parts driven by vacuum motors.

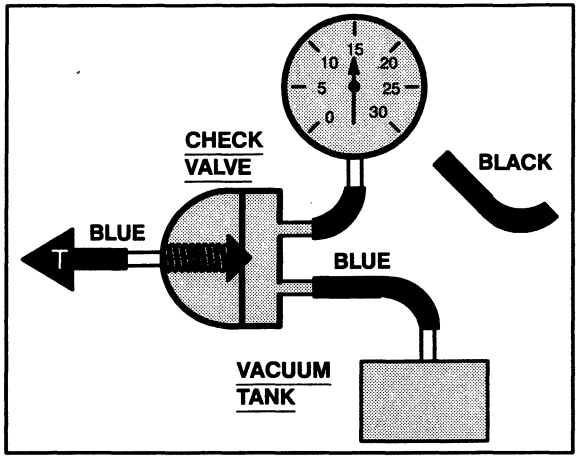


Figure 1 – System Supply Test

Vacuum Supply Test

1. Connect Vacuum Tester to system side of Check Valve (Figure 1).
2. Start engine. Gauge should show approximately 15 inches of vacuum.
3. Turn off engine, and observe gauge:
   - If vacuum holds, supply OK.
   - If vacuum fails, replace Check Valve or Tank.

Leak Test

1. Connect Vacuum Gauge and Vacuum Pump (Figure 2) to system hose in place of tank.
2. Open valve and start pump. Operate control in all modes.
3. Listen for hiss and observe gauge.

NOTE: Hissing is normal at Function Control when changing modes.

If system hisses or loses vacuum, find system leak as follows:

1. Turn on Vacuum Pump and check vacuum build-up.
2. Stop pump; vacuum should drop.
3. Clamp supply hoses with needlenose pliers, one at a time, until vacuum stops dropping (Figure 2).
4. Check vacuum schematic to find components in that line.
5. Clamp hoses through circuit to find leak.

Component Test

1. Connect Vacuum Tester to component.
2. Pump Vacuum Tester. Check that all components operate correctly and vacuum holds.
3. Replace component if vacuum does not hold.

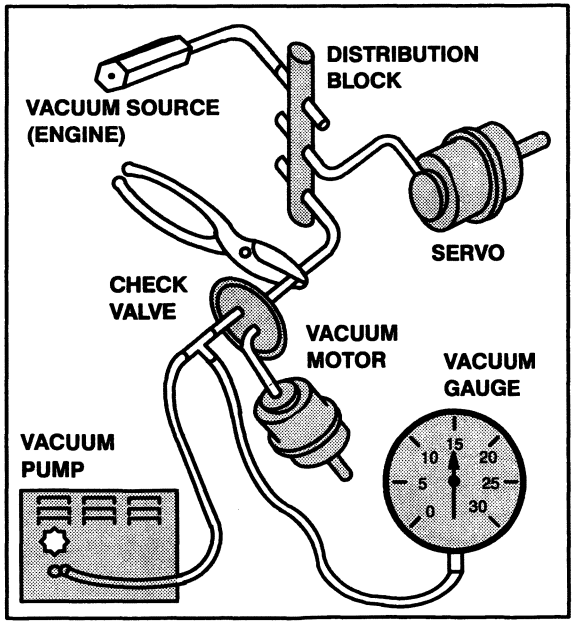
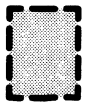
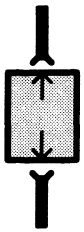


Figure 2 – Testing For Leaks In Typical Vacuum System

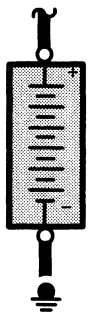
ELECTRICAL SYMBOLS



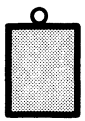
DASHED COMPONENT BOX
ONLY PART OF THE COMPONENT IS SHOWN ON THE PAGE; THE COMPONENT IS SHOWN COMPLETE IN ANOTHER LOCATION



COMPONENT WITH CONNECTORS



BATTERY



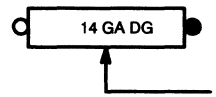
SCREW TERMINAL ON COMPONENT

SEALED ELECTRONIC COMPONENT
ANY CIRCUITRY SHOWN INSIDE THE BOX IS A FUNCTIONAL EQUIVALENT ONLY AND IS NOT EXACT

GROUND CONNECTION

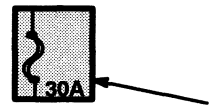
FUSE

CURRENT RATING



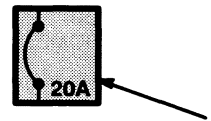
FUSIBLE LINK

WIRE SIZE AND COLOR



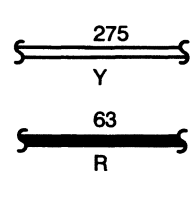
MAXI-FUSE
or
FUSIBLE LINK CARTRIDGE

CURRENT RATING

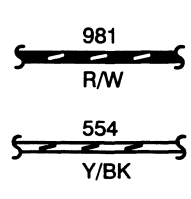


CIRCUIT BREAKER

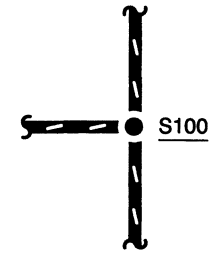
CURRENT RATING



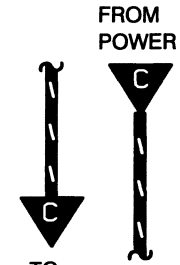
SOLID WIRES



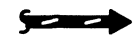
STRIPED WIRES



SPLICE OR CRIMP TERMINAL

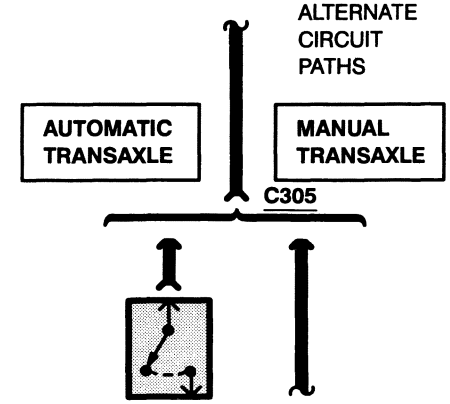


"CUT" WIRES REFERENCED BETWEEN PAGES
ARROWS SHOW CURRENT FLOW FROM POWER TO GROUND



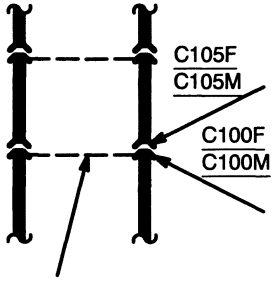
BACKUP LIGHTS

"REFERENCE" WIRES
COMPLETE WIRING SHOWN ON ANOTHER PAGE



ALTERNATE CIRCUIT PATHS

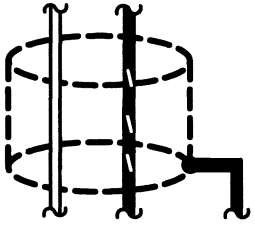
ELECTRICAL SYMBOLS



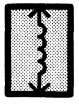
SINGLE DASHED LINE INDICATES THAT WIRE ON LEFT ALSO PASSES THROUGH THE SAME CONNECTOR

SEE GROUNDS *PAGES 10-1, 10-2*

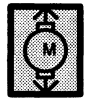
DASHED WIRE
CIRCUITRY IS NOT SHOWN IN COMPLETE DETAIL, BUT IS COMPLETE ON ANOTHER PAGE



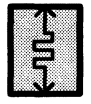
SHIELD
WIRES ARE COVERED BY A SHIELD



FIELD COIL

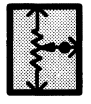


MOTOR



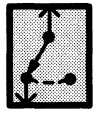
HEATING ELEMENT

THERMISTOR

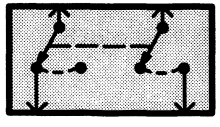


RHEOSTAT OR POTENTIOMETER

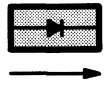
SOLENOID



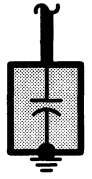
SWITCH



GANGED SWITCHES
CONTACTS MOVE AT THE SAME TIME

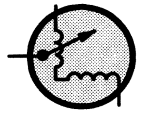


DIODES
CURRENT FLOWS IN DIRECTION OF ARROW ONLY



CAPACITOR

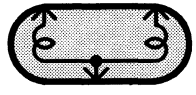
TRANSISTOR



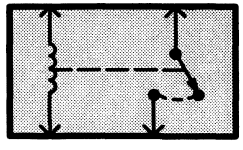
GAUGE

LIGHT EMITTING DIODE (LED)

LIGHT BULB

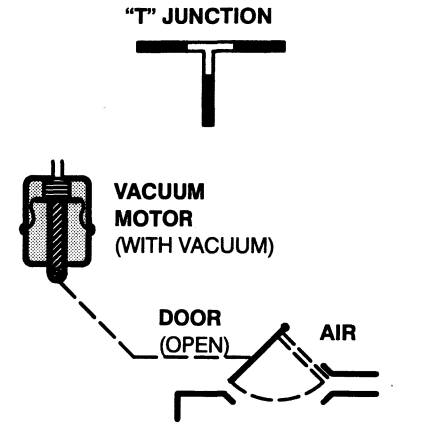


DUAL FILAMENT LIGHT BULB

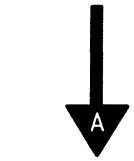


RELAY
CONTACTS CHANGE POSITION WITH CURRENT THROUGH COIL

VACUUM SYMBOLS



VACUUM ON VACUUM MOTOR PULLS DOOR OPEN TO LET AIR PASS THROUGH

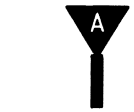


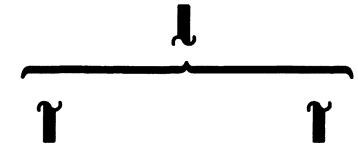
TO SYSTEM

"CUT" HOSES REFERENCED BETWEEN PAGES

ARROW SHOWS FROM MANIFOLD FITTING TO COMPONENT

FROM VACUUM DISTRIBUTION





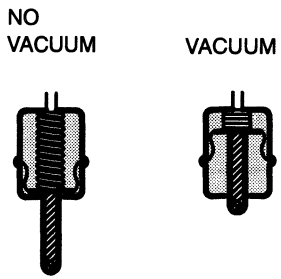
ALTERNATE VACUUM PATHS

NOTE

OTHER VACUUM SYMBOLS USED ON VACUUM SYSTEM DIAGRAMS ARE FULLY EXPLAINED ON THE PAGES WHERE THEY APPEAR.

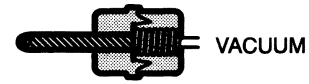
VACUUM MOTOR OPERATION

SINGLE DIAPHRAGM MOTOR



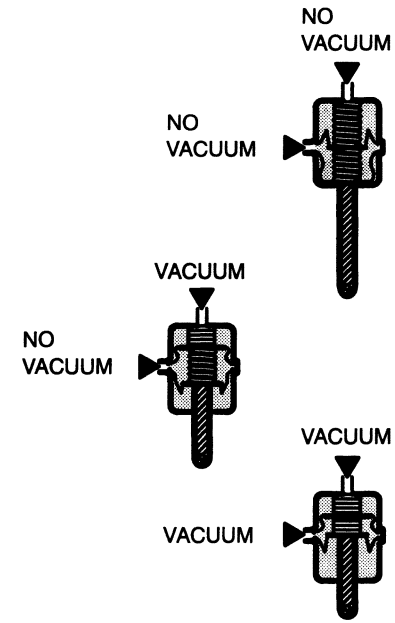
Vacuum motors operate like electrical solenoids, mechanically pushing or pulling a shaft between two fixed positions. When vacuum is not applied, the shaft is pushed all the way out by a spring.

SERVO MOTOR



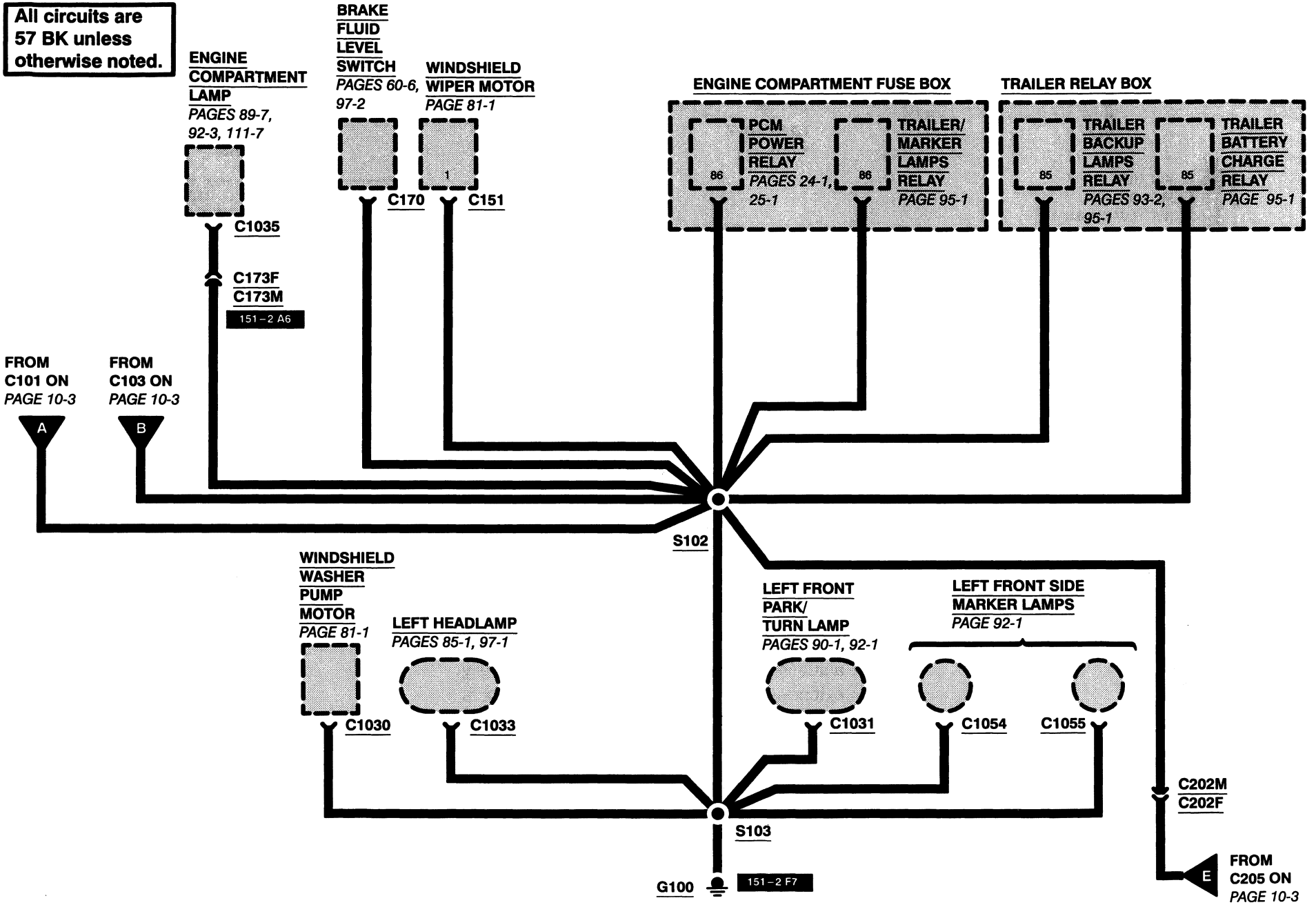
Some vacuum motors can position the actuating arm at any position between fully extended and fully retracted. The Servo is operated by a control valve that applies varying amounts of vacuum to the motor. The higher the vacuum level, the greater the retraction of the motor arm. Servo Motors work nearly the same way as two-position motors, except for the way the vacuum is applied. Servo Motors are generally larger and provide a calibrated control.

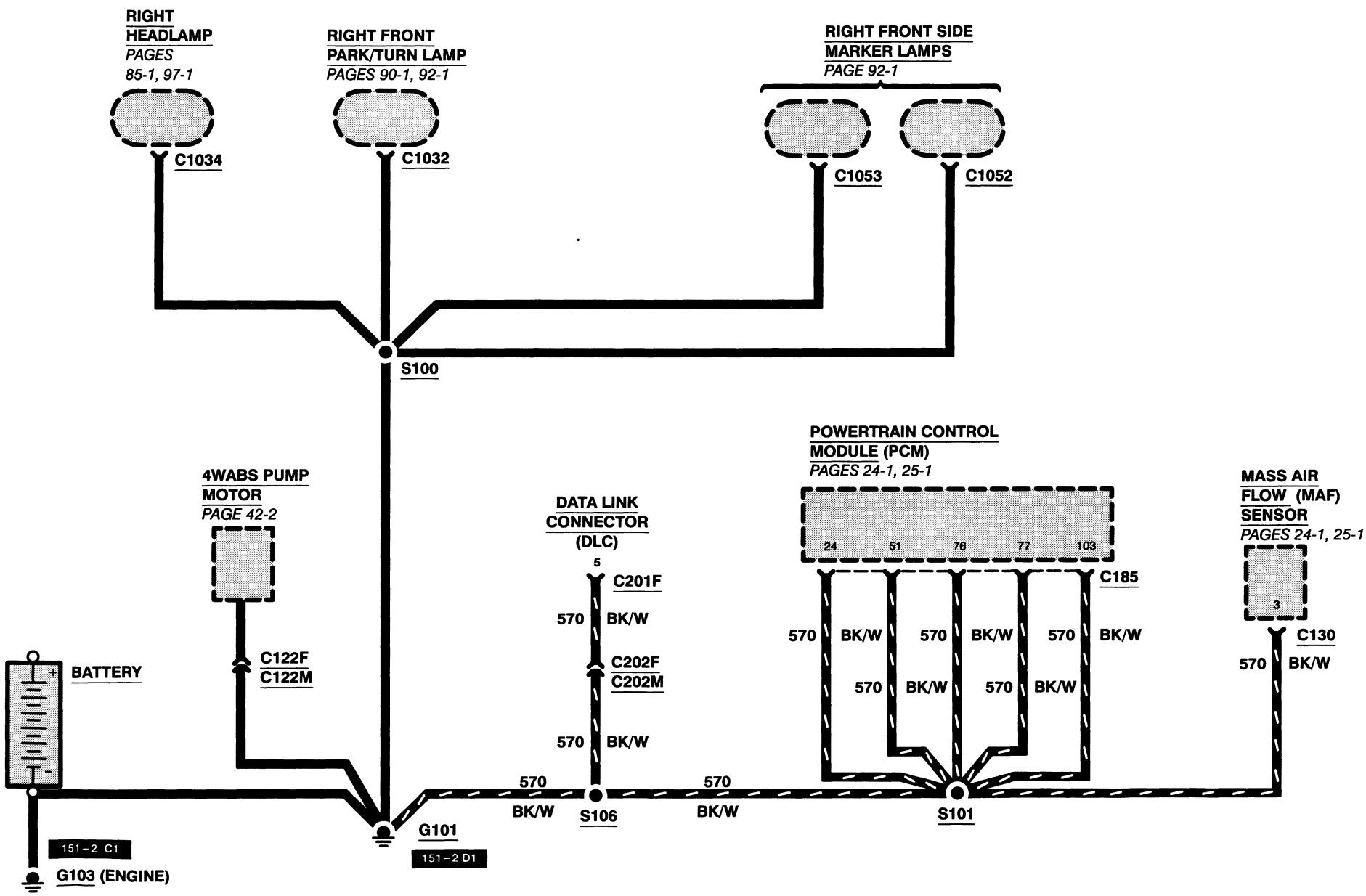
DOUBLE DIAPHRAGM MOTOR

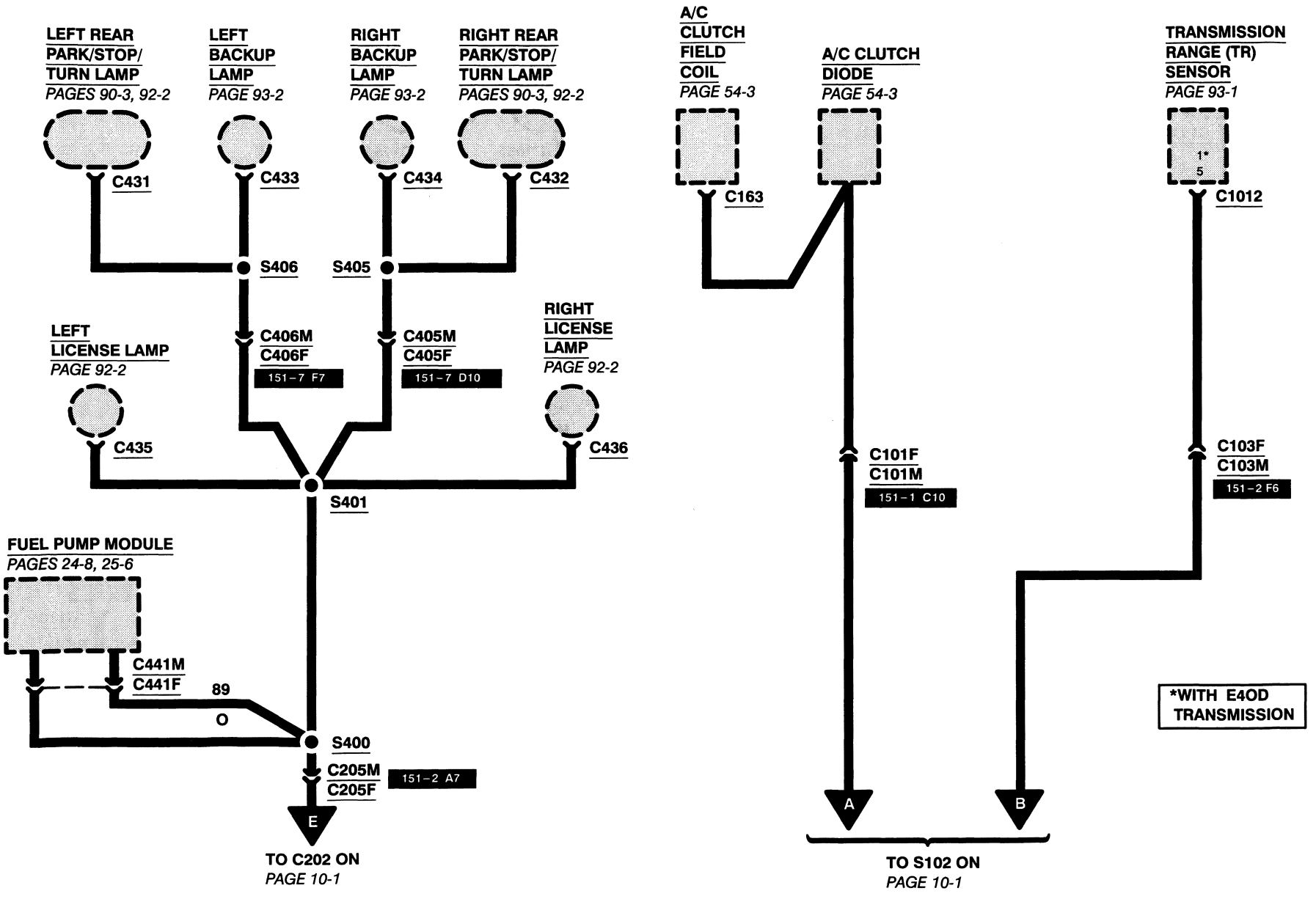


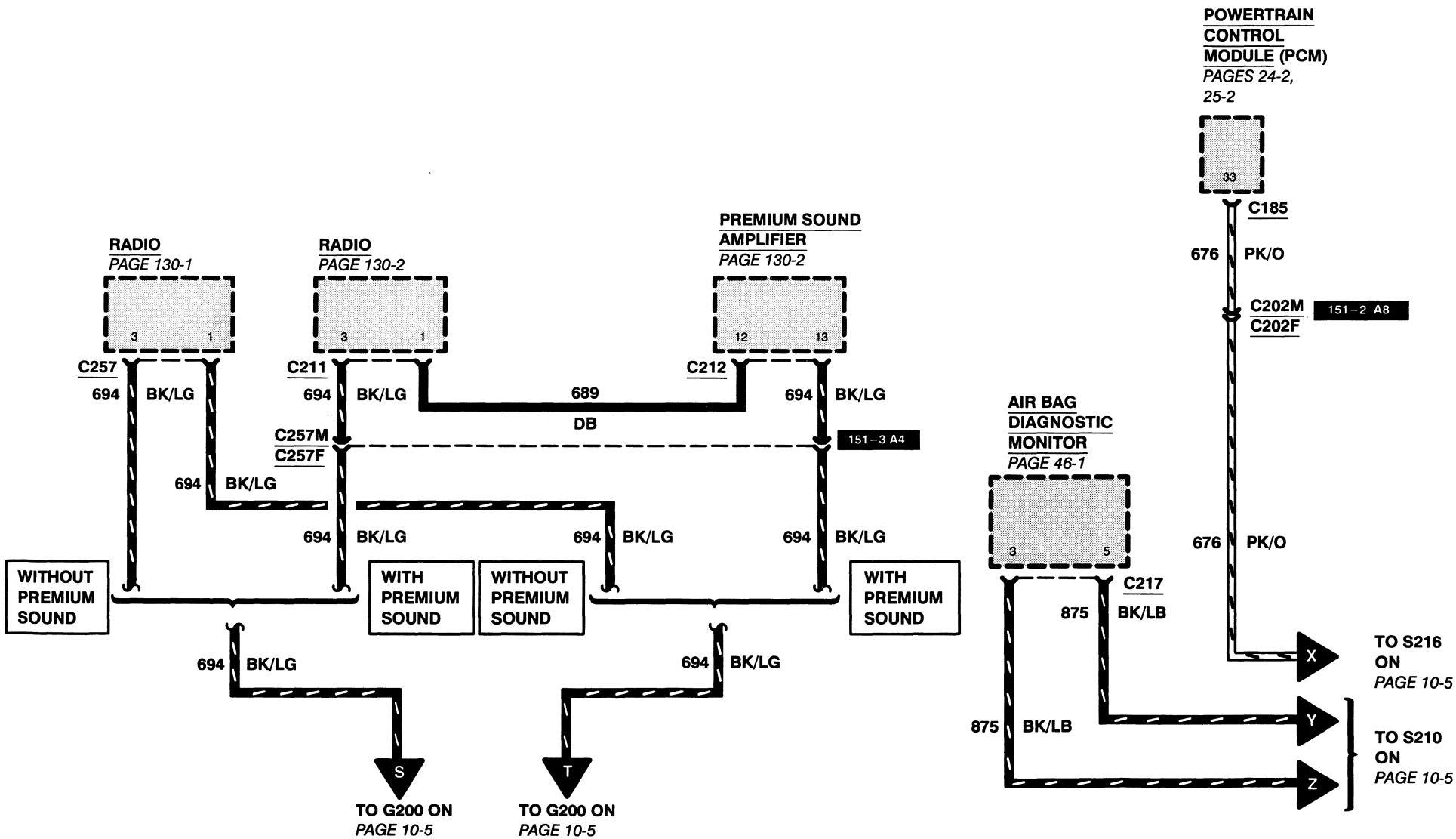
A double diaphragm motor has three positions (it is actually two motors in one housing). When the top port gets vacuum, the shaft pulls halfway in. When both ports get vacuum, the shaft pulls all the way in.

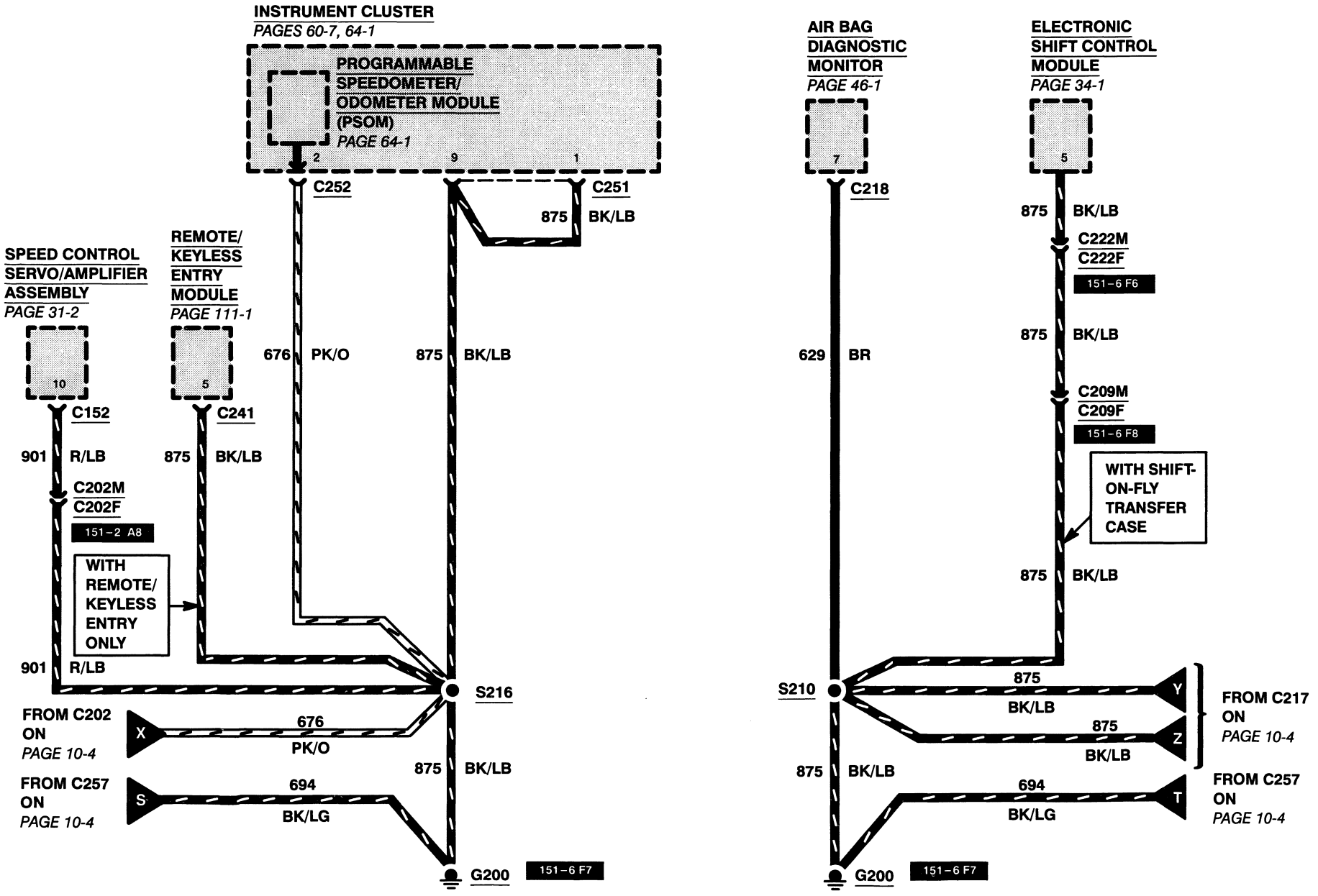
10-1 GROUNDS

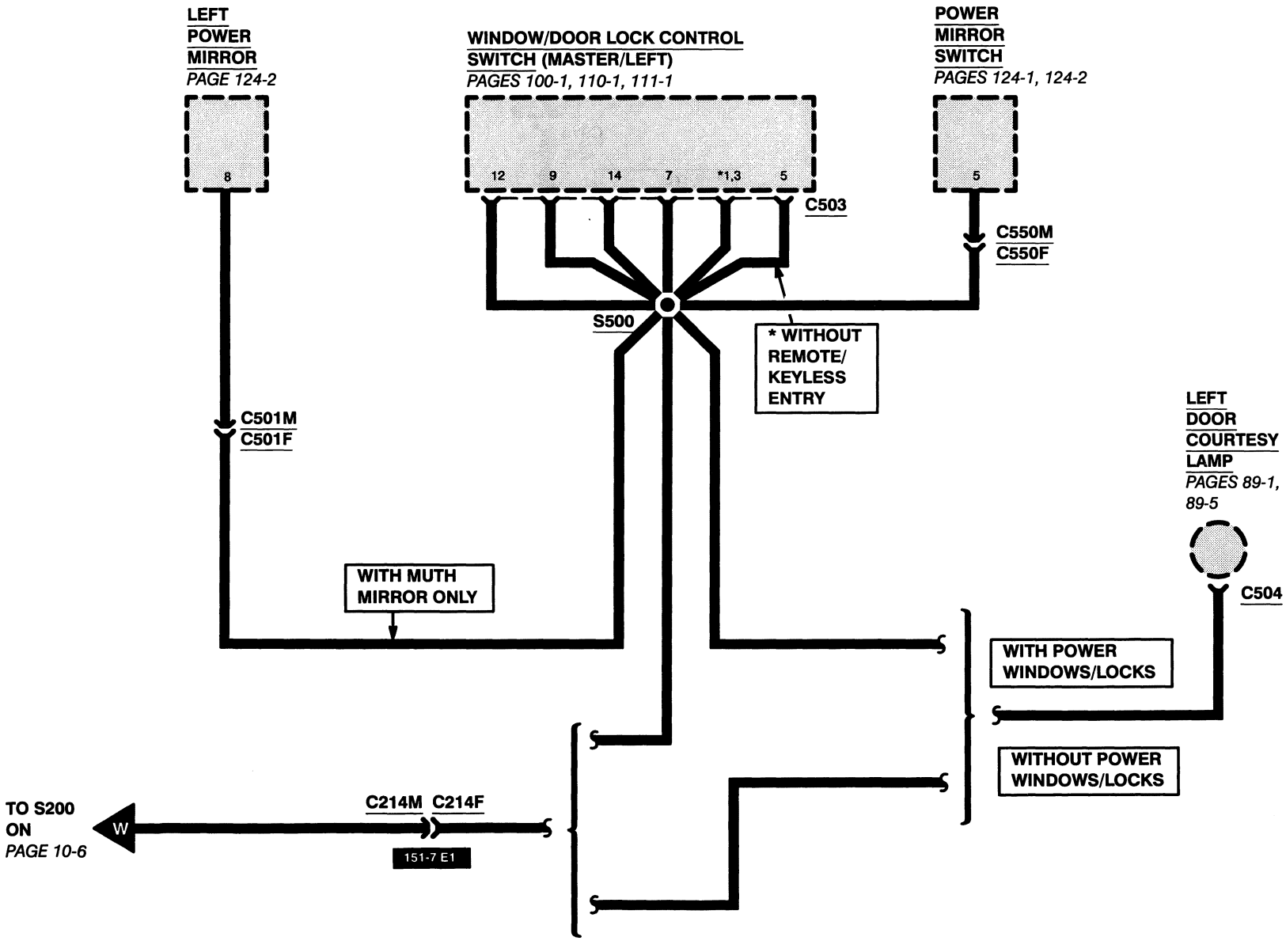

All circuits are 57 BK unless otherwise noted.
ENGINE COMPARTMENT LAMP
PAGES 89-7, 92-3, 111-7
C1035
C173F
C173M
151 – 2 A6
BRAKE FLUID LEVEL SWITCH
PAGES 60-6, 97-2
C170
WINDSHIELD WIPER MOTOR
PAGE 81-1
1
C151
ENGINE COMPARTMENT FUSE BOX
86
PCM POWER RELAY
PAGES 24-1, 25-1
86
TRAILER/ MARKER LAMPS RELAY
PAGE 95-1
TRAILER RELAY BOX
85
TRAILER BACKUP LAMPS RELAY
PAGES 93-2, 95-1
85
TRAILER BATTERY CHARGE RELAY
PAGE 95-1
FROM C101 ON
PAGE 10-3
A
FROM C103 ON
PAGE 10-3
B
S102
WINDSHIELD WASHER PUMP MOTOR
PAGE 81-1
C1030
LEFT HEADLAMP
PAGES 85-1, 97-1
C1033
LEFT FRONT PARK/ TURN LAMP
PAGES 90-1, 92-1
C1031
LEFT FRONT SIDE MARKER LAMPS
PAGE 92-1
C1054
C1055
S103
C202M
C202F
G100
151 – 2 F7
E
FROM C205 ON
PAGE 10-3


RIGHT HEADLAMP
PAGES 85-1, 97-1
C1034
RIGHT FRONT PARK/TURN LAMP
PAGES 90-1, 92-1
C1032
RIGHT FRONT SIDE MARKER LAMPS
PAGE 92-1
C1053
C1052
S100
4WABS PUMP MOTOR
PAGE 42-2
C122F
C122M
DATA LINK CONNECTOR (DLC)
5
C201F
570 BK/W
C202F
C202M
570 BK/W
POWERTRAIN CONTROL MODULE (PCM)
PAGES 24-1, 25-1
24 51 76 77 103
C185
570 BK/W
570 BK/W
570 BK/W
570 BK/W
570 BK/W
MASS AIR FLOW (MAF) SENSOR
PAGES 24-1, 25-1
3
C130
570 BK/W
BATTERY
+
-
151-2 C1
G103 (ENGINE)
G101
151-2 D1
570 BK/W
S106
570 BK/W
S101


LEFT REAR PARK/STOP/ TURN LAMP
PAGES 90-3, 92-2
LEFT BACKUP LAMP
PAGE 93-2
RIGHT BACKUP LAMP
PAGE 93-2
RIGHT REAR PARK/STOP/ TURN LAMP
PAGES 90-3, 92-2
C431
C433
C434
C432
S406
S405
LEFT LICENSE LAMP
PAGE 92-2
C406M
C406F
151-7 F7
C405M
C405F
151-7 D10
RIGHT LICENSE LAMP
PAGE 92-2
C435
C436
S401
FUEL PUMP MODULE
PAGES 24-8, 25-6
C441M
C441F
89
O
S400
C205M
C205F
151-2 A7
E
TO C202 ON
PAGE 10-1
A/C CLUTCH FIELD COIL
PAGE 54-3
A/C CLUTCH DIODE
PAGE 54-3
C163
C101F
C101M
151-1 C10
A
B
TO S102 ON
PAGE 10-1
TRANSMISSION RANGE (TR) SENSOR
PAGE 93-1
1*
5
C1012
C103F
C103M
151-2 F6
*WITH E4OD TRANSMISSION


RADIO
PAGE 130-1
3
1
C257
694 BK/LG
694 BK/LG
RADIO
PAGE 130-2
3
1
C211
694 BK/LG
694 BK/LG
C257M
C257F
694 BK/LG
694 BK/LG
PREMIUM SOUND AMPLIFIER
PAGE 130-2
12
13
C212
689
DB
694 BK/LG
694 BK/LG
694 BK/LG
151-3 A4
WITHOUT PREMIUM SOUND
WITH PREMIUM SOUND
WITHOUT PREMIUM SOUND
WITH PREMIUM SOUND
694 BK/LG
694 BK/LG
S
T
TO G200 ON
PAGE 10-5
TO G200 ON
PAGE 10-5
POWERTRAIN CONTROL MODULE (PCM)
PAGES 24-2, 25-2
33
C185
676 PK/O
C202M
C202F
151-2 A8
676 PK/O
AIR BAG DIAGNOSTIC MONITOR
PAGE 46-1
3
5
C217
875 BK/LB
875 BK/LB
X
Y
Z
TO S216 ON
PAGE 10-5
TO S210 ON
PAGE 10-5


INSTRUMENT CLUSTER
PAGES 60-7, 64-1
PROGRAMMABLE SPEEDOMETER/ ODOMETER MODULE (PSOM)
PAGE 64-1
2
9
1
C252
C251
875 BK/LB
SPEED CONTROL SERVO/AMPLIFIER ASSEMBLY
PAGE 31-2
10
REMOTE/ KEYLESS ENTRY MODULE
PAGE 111-1
5
676 PK/O
875 BK/LB
C152
C241
901 R/LB
875 BK/LB
C202M
C202F
151-2 A8
WITH REMOTE/ KEYLESS ENTRY ONLY
901 R/LB
S216
FROM C202 ON PAGE 10-4
X
676 PK/O
875 BK/LB
FROM C257 ON PAGE 10-4
S
694 BK/LG
G200
151-6 F7
AIR BAG DIAGNOSTIC MONITOR
PAGE 46-1
7
ELECTRONIC SHIFT CONTROL MODULE
PAGE 34-1
5
C218
875 BK/LB
C222M
C222F
151-6 F6
875 BK/LB
629 BR
C209M
C209F
151-6 F8
WITH SHIFT-ON-FLY TRANSFER CASE
875 BK/LB
S210
875 BK/LB
Y
875 BK/LB
Z
FROM C217 ON PAGE 10-4
875 BK/LB
694 BK/LG
T
FROM C257 ON PAGE 10-4
G200
151-6 F7


LEFT POWER MIRROR
PAGE 124-2
8
WINDOW/DOOR LOCK CONTROL SWITCH (MASTER/LEFT)
PAGES 100-1, 110-1, 111-1
12
9
14
7
*1,3
5
C503
POWER MIRROR SWITCH
PAGES 124-1, 124-2
5
C550M
C550F
S500
* WITHOUT REMOTE/ KEYLESS ENTRY
C501M
C501F
WITH MUTH MIRROR ONLY
LEFT DOOR COURTESY LAMP
PAGES 89-1, 89-5
C504
WITH POWER WINDOWS/LOCKS
WITHOUT POWER WINDOWS/LOCKS
TO S200
ON
PAGE 10-6
W
C214M C214F
151-7 E1

Connector	Location	Page Zone	Connector Page	Color	Terminal
C230	Top of steering column, on multi-function switch	151-4 B10	90–4		7
C231	Top of steering column, on multi-function switch	151-4 B10	90–4	GY	10
C232	Behind lower RH side of I/P, below glove compartment	151-4 E1		BR	1
C234	Behind lower center of I/P, on auxiliary power socket	151-4 F6		BR	1
C236	In steering column, on shift lock actuator	151-4 A6			3
C240	Behind LH side of I/P, on remote keyless entry module	151-3 B10	111–8		13
C241	Behind LH side of I/P, on remote keyless entry module	151-3 B10	111–9		16
C242	Behind LH side of I/P, on remote keyless entry module	151-3 B10	111–8		13
C243	Behind LH side of I/P, on RKE program connector	*			2
C250	Behind top LH side of I/P, on instrument cluster	151-3 A6	60–9	BR	14
C251	Behind top LH side of I/P, on instrument cluster	151-3 A9	60–9	GY	14
C252	Behind top LH side of I/P, on PSOM	151-3 A7	60–8	BK	12
C257	Behind top center of I/P, on radio	151-3 A4	130–3	BK	8
C257 (Premium Sound)	Behind I/P, near radio	151-3 A4	130–3	BK	8
C258	Behind top center of I/P, on radio	151-3 A4	130–4	BK	8
C260	Behind center of I/P, on blower motor switch	151-4 A4		GY	4
C261 (Automatic)	Behind LH side of I/P, on clutch pedal position switch jumper	151-3 F4		GY	6
C261 (Manual)	Behind LH side of I/P, on clutch pedal position switch	151-3 F4	20–3	GY	6
C262	In front of RH front door jamb, on right courtesy lamp switch	151-7 F4		N	3
C263	In lower rear of LH front door jamb, on left front courtesy lamp switch	151-7 F2		GY	3
C267	Behind top LH side of I/P, on electronic shift control switch	151-4 A6	34–3	GY	8
C268	Behind RH cowl panel	151-6 A5			4
C269	Top RH side of steering column, on ignition switch	*	20–3		15
C270	Top front of RH front door	151-7 A7			3
C271	Behind RH cowl panel, on inertia fuel shutoff	151-6 A4		GY	3
C273	Behind top LH side of I/P, on main light switch	151-3 C9	71–2	GY	9
C274	Behind top LH side of I/P, on master tailgate window switch	151-4 C10	100–5	GY	5
C275	Top of steering column, near transmission control switch	151-4 C10			3
C276	Behind LH side of I/P, on park brake switch	151-3 F8		BK	1

* No View Available

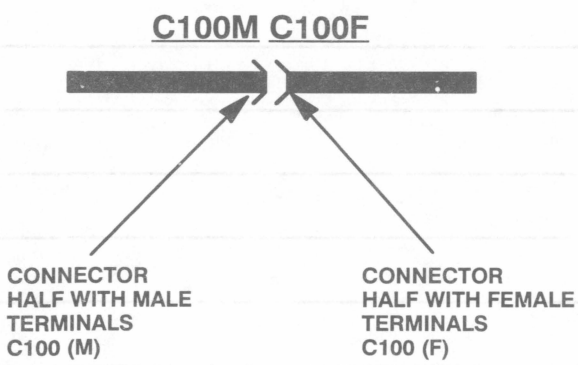
153-1 HARNESS CAUSAL PART NUMBER

1996 BRONCO

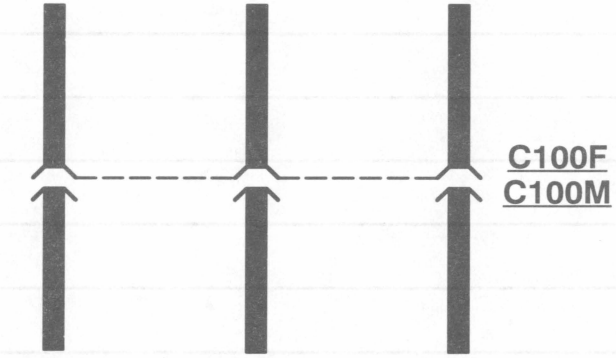
HOW TO IDENTIFY A BASIC HARNESS NUMBER BY USING A "C" NUMBER

Understand these symbols before using the following listing:

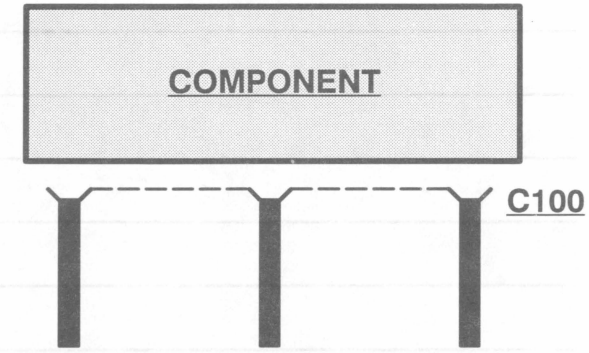
HARNESS TO HARNESS CONNECTION



DASHED LINES INDICATE TERMINALS OF SAME CONNECTOR



COMPONENT CONNECTION



Identify the basic harness part number by:

1) If the problem is in a connector, find the connector "C" number in the EVTM schematics. Then locate the "C" number in the following listing and read the harness base part number.

2) If the problem is not in a connector (such as a short or a broken wire), then choose a connector located on the same harness that has the problem. Identify the "C" number in the following listing and read the base part number of the harness that has the problem.

Connector Number	Wire Assembly
C101 (F)	9D930
C101 (M)	12A581
C102	12A581
C103 (F)	15525
C103 (M)	12A581
C106 (F)	12A581
C106 (M)	18A586
C107 (M)	12A581
C107 (F)	12A690
C109 (F)	15525
C109 (M)	12A581
C112 (F)	14405
C112 (M)	12A581
C115	9D930
C116	*
C117 (F)	14K067
C117 (M)	15525
C119	12A581
C120	12A581
C121	12A581
C122	12A581
C123	12A581
C124	12A690
C126	9D930
C129	12A581
C130	12A581
C131	12A581
C135	9D930
C139 (F)	14305
C139 (M)	12A581
C150	9D930
C151	12A581
C152	12A581
C153	14305
C154	14305
C161	14K067
C162	18A586
C163	9D930
C164	12A581
C166	15525
C168	18A586
C169	18A586
C170	12A581
C173 (F)	15A702
C173 (M)	12A581
C177	12A581
C178	9D930
C180	9D930
C182	9D930
C183	9D930
C185	12A581
C190	9D930
C191	9D930
C192	9D930
C193	9D930
C194	9D930
C195	9D930
C196	9D930
C197	9D930
C200 (F)	14A504
C200 (M)	14401
C201	14401
C202 (F)	14401
C202 (M)	12A581
C203 (F)	18A586
C203 (M)	14401
C204 (F)	14401
C204 (M)	13A726
C205 (F)	14401
C205 (M)	14405
C206 (F)	17K745
C206 (M)	14A504
C207	14401
C209 (F)	14401
C209 (M)	14B095
C210 (F)	14A348
C210 (M)	14401
C211	19B113
C212	19B113
C213 (F)	14A265
C213 (M)	14A509
C214 (M)	14A504
C214 (F)	14A509
C217	14401
C218	14401
C219	14401
C220	14B095
C221	14B095
C222	14B095
C223	14B095
C224	14401
C226	14401
C227	PIA
C228 (F)	14A265
C228 (M)	14401
C229 (F)	14401
C229 (M)	14A504
C230	14401
C231	14401
C232	14401
C234	13A726
C236	14401
C240	14401
C241	14401
C242	14401
C243	14401
C250	14401
C251	14401
C252	14401
C257	14401
C258	14401
C260	14401
C261	14401
C262	14401
C263	14A504
C267	14401
C268 (F)	14A265
C268 (M)	14A509
C269	14401
C270 (F)	14A265
C270 (M)	14401
C271	14401
C273	14401
C274	14401
C275	14401
C276	14401
C278	14401
C279	14401
C280	14401
C282	PIA
C283	PIA
C292	14401
C293	13A726
C294	13A726
C295	13A726
C296	14401
C298	14401
C299 (F)	17K745
C299 (M)	14A504
C300 (F)	14334
C300 (M)	14A504
C302	14A504
C305	14B084
C306	14B084
C310	14086
C311	14086
C312	14B084
C313 (F)	14A504
C313 (M)	14B084
C314 (F)	14A504
C314 (M)	14B084
C315 (F)	14335
C315 (M)	14A504
C317	14B084
C318 (F)	13A625
C318 (M)	14335

* NOT AVAILABLE

153-3 HARNESS CAUSAL PART NUMBER

Connector Number	Wire Assembly
C326	14A504
C327	14A504
C328	14B095
C329	12A581
C330	12A581
C402	14405
C404	14405
C405 (F)	14405
C405 (M)	13A409
C406 (F)	14405
C406 (M)	13A409
C407 (F)	13A576
C407 (M)	14405
C417 (F)	PIA
C417 (M)	13A576
C418 (F)	14405
C418 (M)	14086
C424 (F)	13A576
C424 (M)	14405
C428	14086
C429	14086
C431	13A409
C432	13A409
C433	13A409
C434	13A409
C435	14405
C436	14405
C441	14405
C500	14A509
C501	14A509
C502	14A509
C503	14A509
C504	14A509
C507	14A509
C508	14A509
C509 (F)	14A265
C509 (M)	14A509
C550	14A509
C600	14A265
C601	14A265
C602	14A265
C603	14A265
C606	14A265
C607	14A265
C608	14A265
C905	14334
C906	14334
C907	13A625
C908	13A625
C911	17K745
C912	17K745
C913	17K745
C914	17K745
C1005	12A581
C1006	12A581
C1007	9D930
C1008	9D930
C1012	15525
C1017	9D930
C1019	12A581
C1020	15525
C1021	12A581
C1022	9D930
C1023	9D930
C1024	9D930
C1025 (5.0L)	9D930
C1025 (5.8L)	12A690
C1028 (5.0L)	9D930
C1028 (5.8L)	15525
C1030	12A581
C1031	12A581
C1032	12A581
C1033	12A581
C1034	12A581
C1035	15A702
C1040	PIA
C1048	15525
C1049	15525
C1052	12A581
C1053	12A581
C1054	12A581
C1055	12A581
C1069	15525

160-1 VEHICLE REPAIR LOCATION CODES

1996 BRONCO

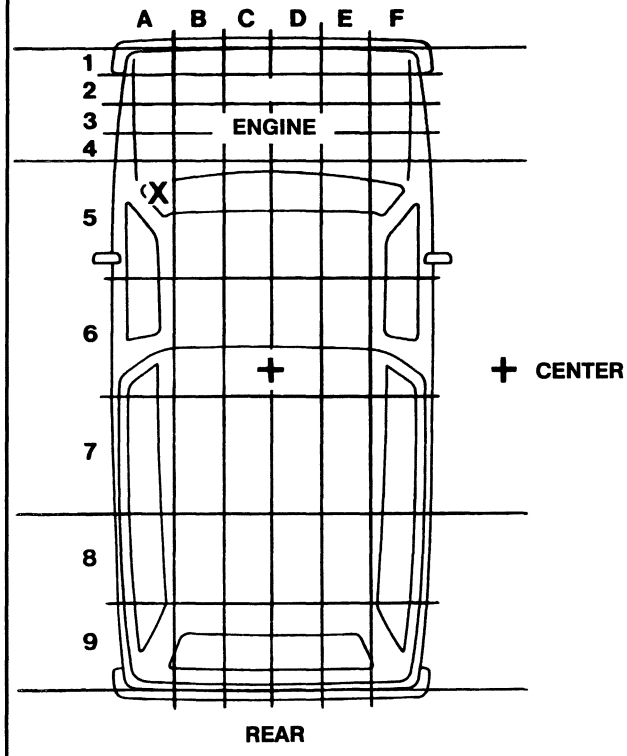
VEHICLE REPAIR LOCATION CODES

TO PINPOINT THE ACTUAL VEHICLE LOCATION OF A REPAIR. THE VEHICLE REPAIR LOCATION CODE IS REQUIRED.

FOR EXAMPLE, AN "X" HAS BEEN PLACED IN THE QUADRANT OF THE VEHICLE DIAGRAMS INDICATING THE LOCATION OF THE REPAIR. SEE DIAGRAMS.

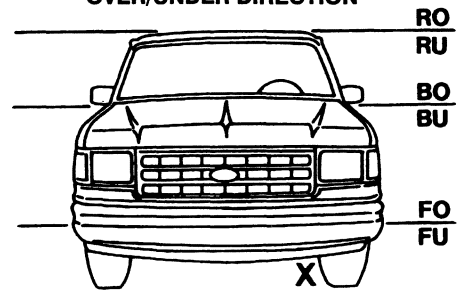
LOCATION CODE, FOR THE EXAMPLE: A5/FU – (UNDER THE FLOOR OF DRIVER'S LEFT FOOT.)

FRONT/REAR DIRECTION

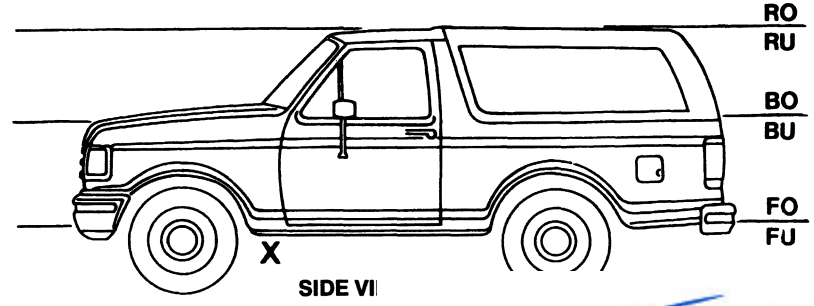


+ CENTER

OVER/UNDER DIRECTION



R = ROOF LINE
RO = ROOF OVER
RU = ROOF UNDER
B = BELT LINE
BO = BELT OVER
BU = BELT UNDER
F = FLOOR PAN
FO = FLOOR OVER
FU = FLOOR UNDER



SIDE VI