**GROUP** 

# ELECTRICAL DISTRIBUTION

18

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# **SECTION 18-01 Wiring and Circuit Protection**

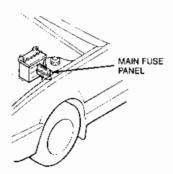
SUBJECT	PAGE	SUBJECT	PAGE
DESCRIPTIONREMOVAL AND INSTALLATION Circuit Breaker — Blower Motor		REMOVAL AND INSTALLATION (Cont'd.)  Main Fuse Box  Wire Ends	
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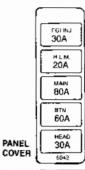
# **VEHICLE APPLICATION**

Capri.

# DESCRIPTION

The main fuse panel (high current) is located on the driver's side of the engine compartment. The fuses protect the circuits, as shown in the chart.





POSITION	DESCRIPTION	COLOR	CIRCUIT PROTECTED
EG! INJ	30 AMP MAIN	PINK	FUEL PUMP, FUEL INJECTORS, POWERTRAIN CONTROL MODULE (PCM)
HLM	20 AMP	BLUE	HEADLAMP LIFT MOTORS
MAIN	BO AMP MAIN	BLACK	CHARGING SYSTEM, AUDIO SYSTEM, CIGARETTE LIGHTER, AIR CONDITIONER, COOLING FAN SYSTEM WIPER, WASHER, BACKUP LAMPS, METER AND WARNING LAMPS, KICK DOWN (AT), REAR WINDOW DEFROSTER, IGNITION SYSTEM
BTN	60 AMP MAIN	YELLOW	CLOCK, STOPLAMPS, HORN, KEY BUZZER AND LAMI INTERIOR LAMPS, LUGGAGE COMPARTMENT LAMPS COURTESY LAMPS, DOOR LOCK CYLINDER LAMPS, SAFETY BELT WARNING, HEATER BLOWER MOTOR, OUTSIDE REMOTE CONTROL MIRRORS
HEAD	30 AMP MAIN	PINK	HEADLAMPS

K15020-B

The interior fuse panel, located under the LH instrument panel, protects the lower current circuits, including all vehicle accessories. Fuses are the plug-in type and are color coded by amp rating.

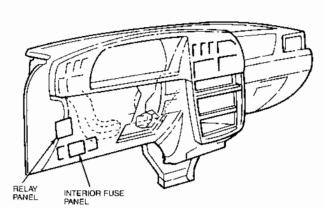
A plug-in type bimetal circuit breaker in the fuse panel protects the blower motor circuit.

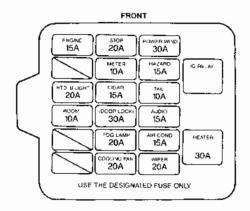
CAUTION: Never install a replacement fuse or circuit breaker with a higher amperage rating than is required. This will allow higher amounts of current to flow and may damage electrical wiring and components.

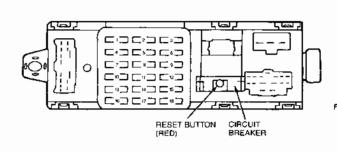
The relay panel is located above the fuse panel and contains the following relays:

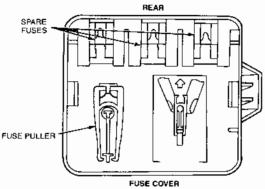
# **DESCRIPTION (Continued)**

Turn signal / hazard warning flasher, door buzzer, entry timer, and safety belt warning.









LOCATION	AMP BATING	COLOR	CIRCUIT PROTECTED
1	15 Amp	Blue	Emission Control, Alternator, Power Steering Solenoid
2	20 Amp	Yellow	Stoplamp Switch, Horn Relay
3	30 Amp	Green	Damper Control Switch (Headlamp motor)
4	_	_	Blank
5	10 Amp	Red	Cooling Fan Rolay, Meter, Speed Control, Safety Belt Warning Lamp. Combination Switch Kick Down Reverse Switch, Stoplight, Clutch Switch, Safety Bell Timer and Buzzer
6	15 Amp	Blue	Hazard Flasher
7	20 Amp	8łuė	Heated Back Light
8	15 Amp	Blue	Cigarette Lighter, Remote Control Mirror
9	10 Amp	Red	Front Combination Lamp (LH, RH) Meter Illumination, Rear Combination Lamp (LH, RH) Idle up Control Unit, Panel Illumination Control
10	10 Amp	Red	Luggage Compartment Lamp, Clock, Interior Lamp, Ignition Key Reminder Buzzer, Entry Illumination, Courtesy Lamp, Door Key Illumination
11	30 Amp	Green	Door Lock Relay
12	15 Amp	Blue	Radio
13	_		Blank
14	20 Amp	Yellow	Fog Lamps
15	15 Amp	Blue	Air Conditioning
16	. –	_	Blank
17	20 Amp	Yellow	Cooling Fan Motor
18	20 Amp	Yellow	Combination Switch—Front Wiper, Front Wiper, Washer Motor

K15021-A

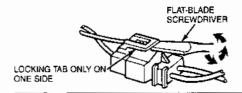
# REMOVAL AND INSTALLATION

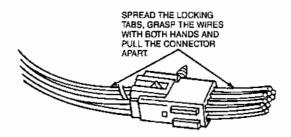
# Connectors

The following illustration shows typical electrical connectors and their disengagements.

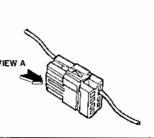
# Inline Connectors

INSERT A FLAT-BLADE SCREWORIVER IN THE LOCKING TAB AND TWIST, GRASP THE WIRES AND PULL TO SEPA-RATE.

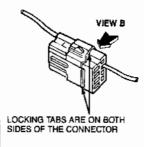




PLACE A THUMB UNDER THE LOCKING TAB AND PUSH UP GRASP THE WIRES AND PULL TO SEPARATE.







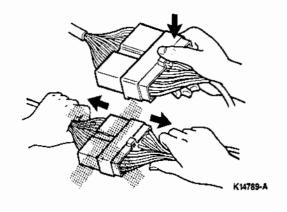


INSERT A FLAT-BLADE SCREWDRIVER IN THE LOCKING TAB AND TWIST. GRASP THE WIRES AND PULL UNTIL THE LOCKING TAB IS ON THE RAMP. TURN THE CONNECTOR OVER AND REPEAT THE PROCEDURE ON THE OPPOSITE SIDE OF THE CONNECTOR, THEN GRASP THE WIRES AND PULL APART.

VIEW B

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# **Bulkhead Connectors**



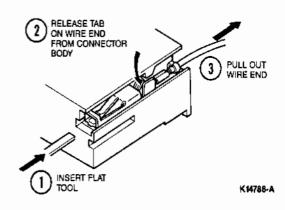
# Wire Ends

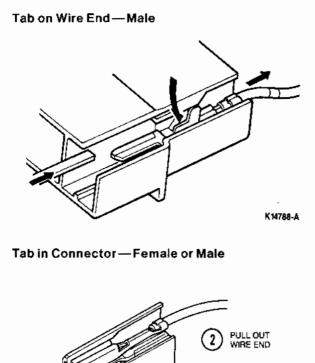
Wire ends can be removed from connectors when required. The wire ends are held in place by either a tab moulded into the connector or a tab stamped into the wire end.

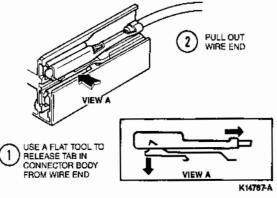
Insert a flat tool and depress tab to release wire end in either type of connector.

Instail wire end and make sure tab is fully engaged.

# Tab on Wire End — Female







# Main Fuse Box

# 30 and 60 Amp Fuses

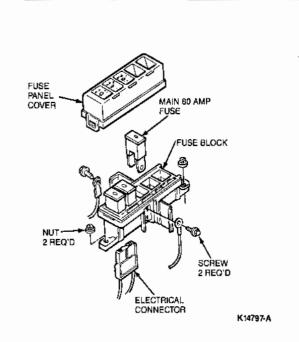
# Removal and Installation

- Disconnect negative battery cable.
- Unhook lock tabs from main fuse box cover.
- 3. Pull 30 or 60 amp fuse from main fuse holder.
- 4. To install, reverse Removal procedure.

# 80 Amp Fuse

# Removal

- 1. Disconnect negative battery cable.
- Unhook lock tab from main fuse panel cover.
- Remove nuts retaining main fuse panel to vehicle body. Remove main fuse panel assembly.
- Open access cover on both sides of main fuse panel.
- Remove bolts and terminal wire fastened to 80 amp fuse.
- Pull 80 amp fuse from main fuse panel.



# Installation

- Install 80 amp fuse into main fuse panel.
- Install terminal wires and bolts into 80 amp fuse and close side access covers.
- Position main fuse panel assembly to vehicle body and install nuts.
- 4. Install main fuse panel cover.
- 5. Connect negative battery cable.

# Circuit Breaker -- Blower Motor

The blower motor circuit breaker unplugs from the fuse panel.

# Fuse Panel, Interior

# Removal

- Disconnect negative battery cable.
- Disconnect electrical connectors from front of fuse panel.
- Remove retaining bolts from fuse panel.
- Disconnect electrical connectors from back of fuse panel.

# Installation

- Connect electrical connectors to back of fuse panel.
- 2. Position fuse panel and install bolts.
- Connect electrical connectors to front of fuse panel.
- 4. Connect negative battery cable.

# Fuse Link—Charging System

If it becomes necessary to replace a fuse link in a wiring assembly, make sure the replacement fuse link is a duplicate of one removed with respect to gauge, length and insulation. Original and Ford replacement fuse links have insulation that is flameproof. Do not fabricate a fuse link from ordinary wire because the insulation may not be flameproof.

# WARNING: ALWAYS DISCONNECT BATTERY GROUND CABLE PRIOR TO SERVICING ANY FUSE LINK.

If a circuit protected by a fuse link becomes inoperative, inspect for a blown fuse link. If the fuse link wire insulation is burned or opened, disconnect the feed as close as possible behind the splice in the harness. If the damaged fuse link is between two splices (weld points in the harness), cut out the damaged portion as close as possible to the weld points.

NOTE: Some fuse links shown have an eyelet terminal for an 8mm (5 / 16 inch) stud on one end.

WIRING ASSEMBLY — FUSE LINK (WITH EYELET TERMINAL AND ONE END STRIPPED)



EA9AZ-14526-A -- NO. 12 GAUGE WIRE -- (GRAY INSULATION)

D3AZ-14A526-D — NO. 14 GAUGE WIRE — APPROX. 230mm (9 INCHES) LENGTH (GREEN INSULATION) AS REQ'D

D3AZ-14A526-E — NO. 16 GAUGE WIRE — APPROX. 230mm (9 INCHES) LENGTH (ORANGE INSULATION) AS REQ'D

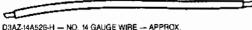
D3AZ-14A526-F — NO. 18 GAUGE WIRE — APPROX. 230mm (9 INCHES) LENGTH (RED INSULATION) AS REQ'D

D3AZ-HA526-G — NO. 20 GAUGE WIRE — APPROX. 230mm (9 INCHES) LENGTH (BLUE INSULATION) AS REQ'D

K15982-A

When an eyelet terminal is not required, use a fuse link, with insulation stripped from both ends.

WIRING ASSEMBLY — FUSE LINK (WITH INSULATION STRIPPED BOTH ENDS)



D3AZ-14A526-H — NO. 14 GAUGE WIRE — APPROX. 230mm (9 INCHES) LENGTH (GREEN INSULATION)

D3AZ-14A526-J — NO. 16 GAUGE WIRE — APPROX. 230mm (9 INCHES) LENGTH (ORANGE INSULATION) AS REO'D

D3AZ-44526-K — NO. 17 GAUGE WIRE — APPROX. 230mm (9 INCHES) LENGTH (YELLOW INSULATION) AS REQ'D (SPECIAL USED WITH AIR CONDITIONING SYSTEM)

D3AZ-14A526-L — NO. 18 GAUGE WIRE — APPROX. 230mm (9 INCHES) LENGTH (RED INSULATION) AS REQ'D

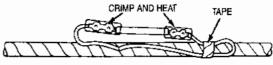
D3AZ-14A526-M — NO. 20 GAUGE WIRE — APPROX. 230mm (9 INCHES) LENGTH (BLUE INSULATION) AS REO'D

K 15983-A

# **Fuse Link**

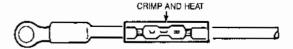
To service any fuse link in a multi-feed, or single circuit, use the following procedure:

- Determine which circuit is damaged, its location and cause of blown fuse link. If damaged fuse link is one of three fed by common No. 10 or 12 gauge feed wire, determine specific affected circuit.
- 2. Disconnect battery ground cable.
- Cut damaged fuse link from wiring harness and discard it. If fuse link is one of three circuits fed by single feed wire, cut it out of harness at each splice end and discard.
- Identify and obtain proper fuse link and butt connectors for attaching fuse link to harness.
- Strip wires 7.6mm (5 / 16-inch) and insert into proper size wire connector. Crimp and heat splice insulation until tubing shrinks and adhesive flows from each end of connector.



K15022-A

6. To service any fuse link which has an eyelet terminal on one end, such as the charging circuit, cut off open fuse link behind weld, strip approximately 12.7mm (1/2 inch) of insulation from cut end and attach appropriate eyelet fuse link to cut stripped wire with an appropriate size butt connector. Crimp and heat splice insulation until tubing shrinks and adhesive flows from each end of connector.



K15023-A

 Connect battery ground cable and test system for proper operation.

CAUTION: Do not mistake a resistor wire for a fuse link. The resistor wire is generally longer and has print stating "Resistor-do not cut or splice." When attaching a single No. 16, 17, 18, or 20 gauge fuse link to a heavy gauge wire, always double the stripped wire end of the fuse link before inserting and crimping it into the butt connector for positive wire retention.

# Wire Harness

### Removal

NOTE: Tag all wires before removal to ensure proper installation.

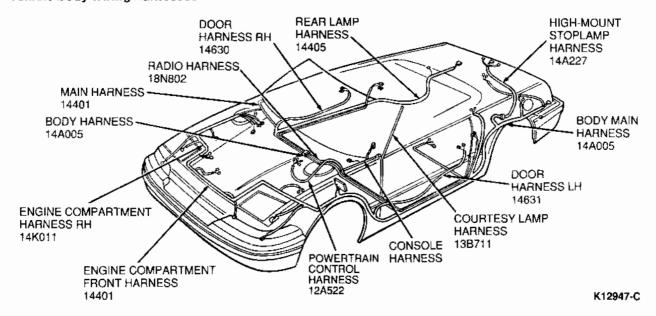
- Disconnect negative battery cable.
  - NOTE: Refer to Section 01-05 if it is necessary to remove any interior trim panels to gain access to the harness.
- Disconnect all wiring harness connectors.
- Disengage harness from all locators, straps and/or clips as necessary, including ground wire eyelets.

Remove harness from vehicle.

# Installation

- Position harness in vehicle. Make sure harness is engaged in all locators, straps and/or clips.
- Connect all harness connectors to components or other harnesses as necessary.
- Secure ground eyelets to body as necessary.
- Connect negative battery cable. Check all applicable circuits for proper operation.

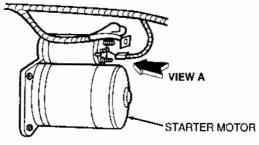
# Vehicle Body Wiring Harnesses

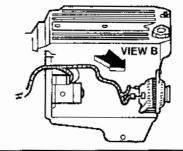


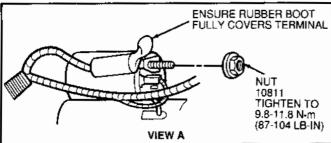
# AUTOMATIC TRANSMISSION AUTOMATIC TRANSMISSION TAB SCREW TIGHTEN TO 5.4-6.8 N·m (48-60 LB-IN) SCREW TIGHTEN TO 5.4-6.8 N·m (48-60 LB-IN)

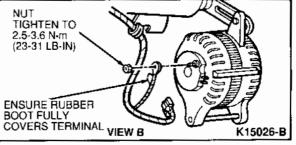
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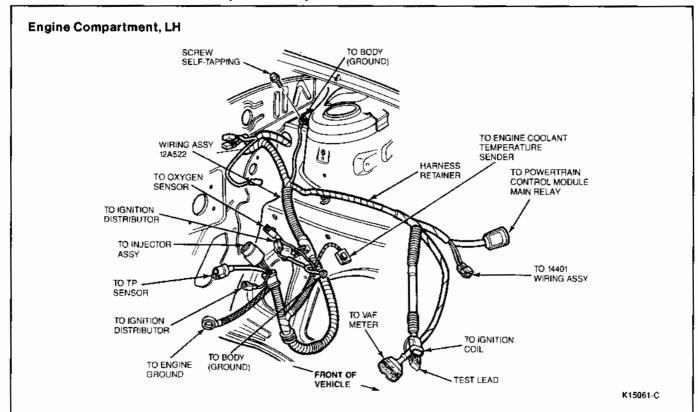
# **Starter and Generator Cables**



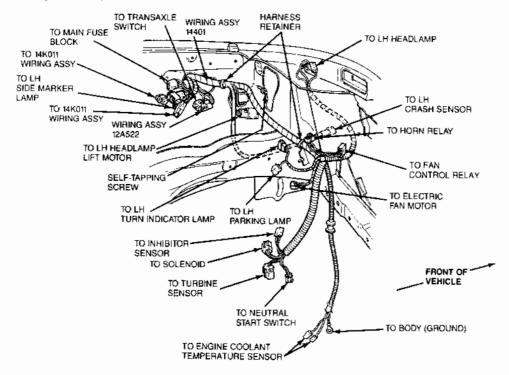




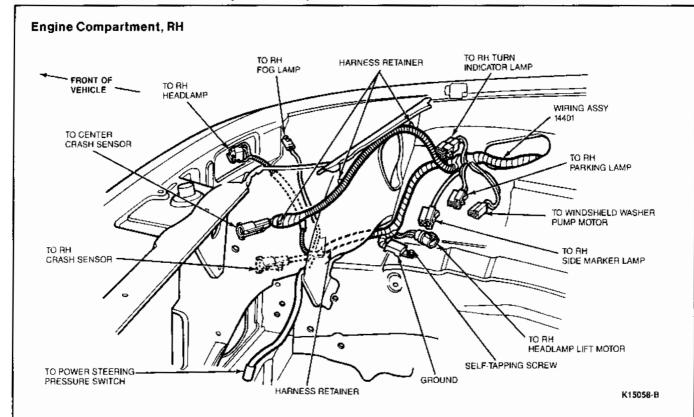




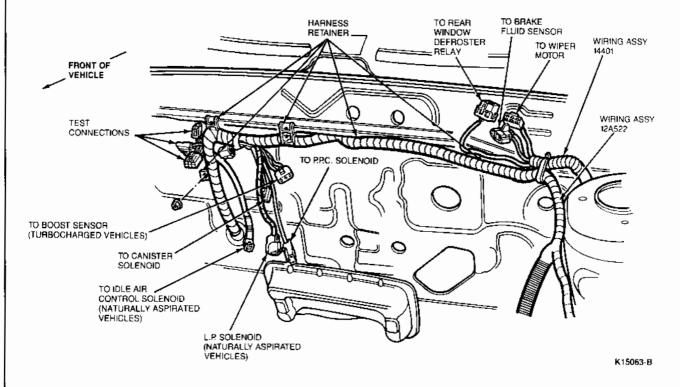
# **Engine Compartment, Front**

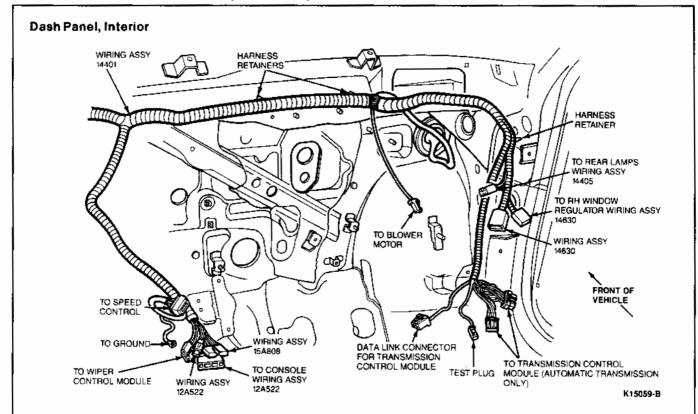


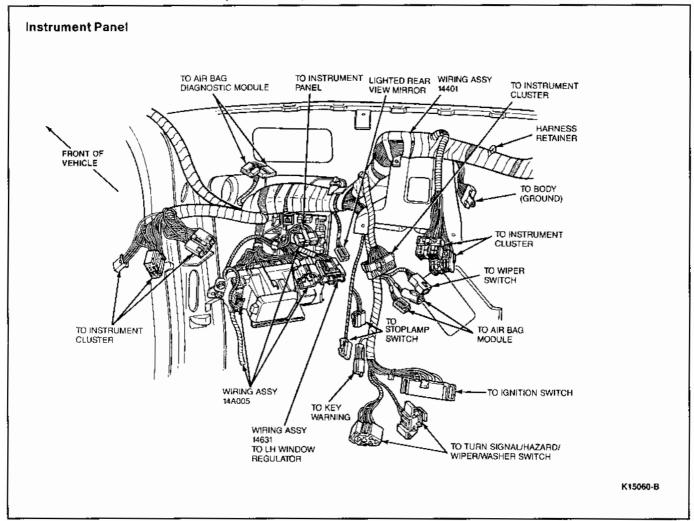
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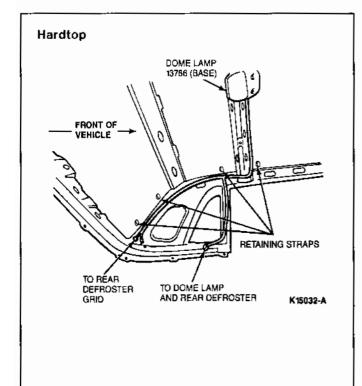


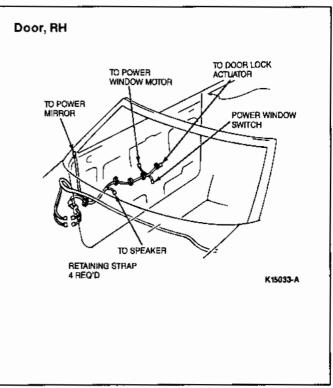
# Dash Panel

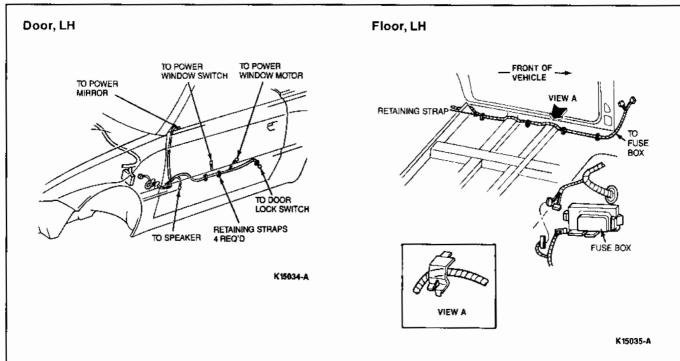




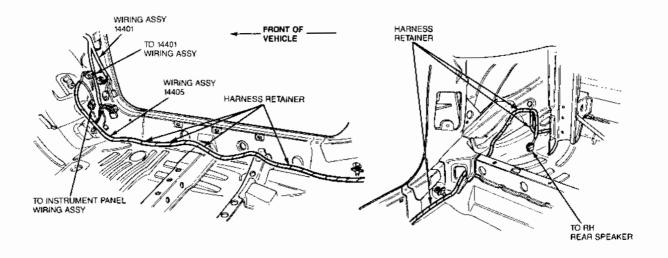




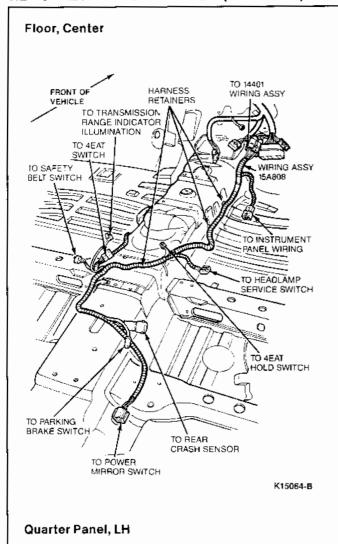


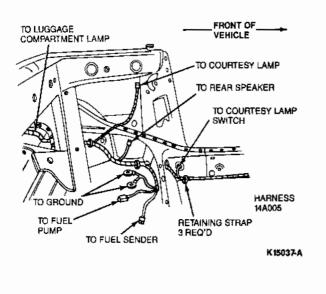


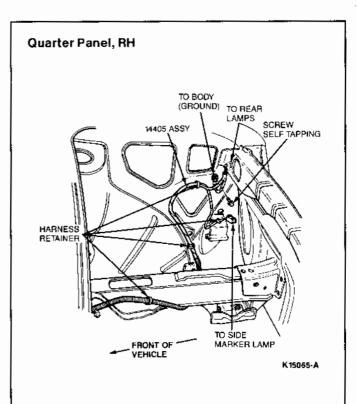
Floor, RH

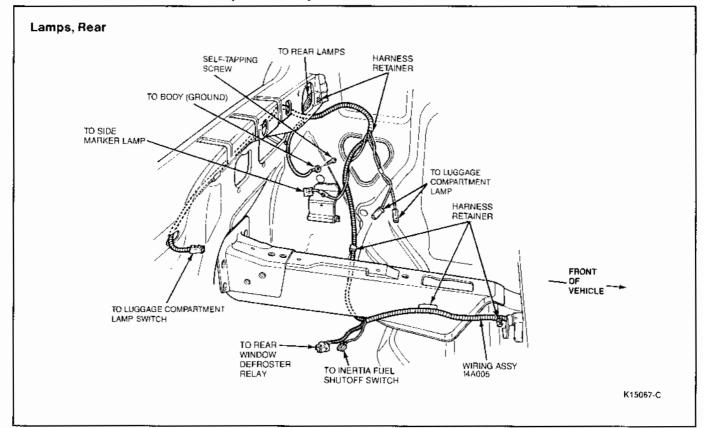


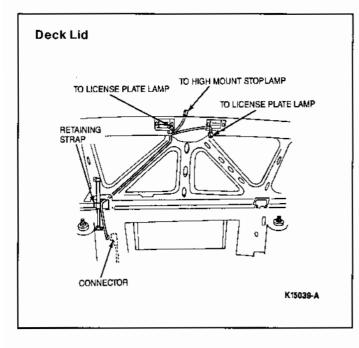
K 15066-A











# **SPECIFICATIONS**

Description	N-m	Lb-In
Ground Strap-Screw	5.4-6.8	48-60
Starter Solenoid-Nut	9.8-11.8	87-104
Generator Output Stud-Nut	2.5-3.6	23-31

# **SPECIAL SERVICE TOOLS**

Tool Number	Description
67S-17018-A	Wire Crimping Tool