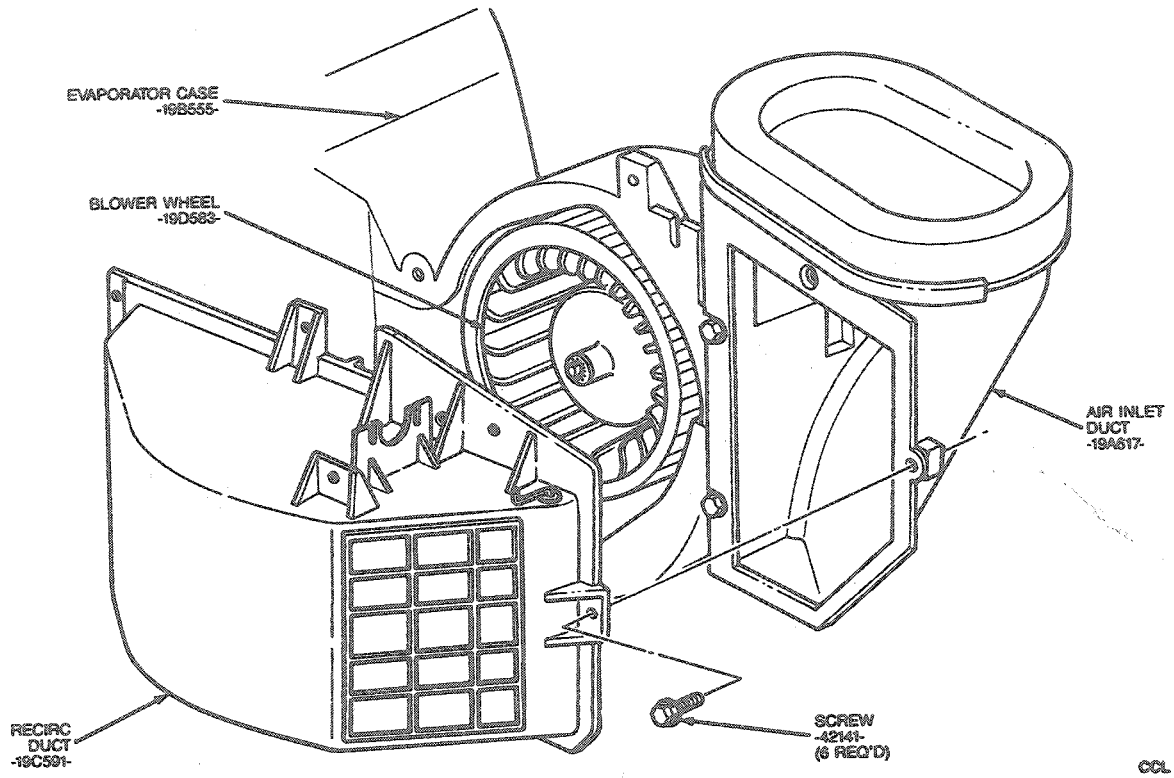
REMOVAL AND INSTALLATION (Continued)

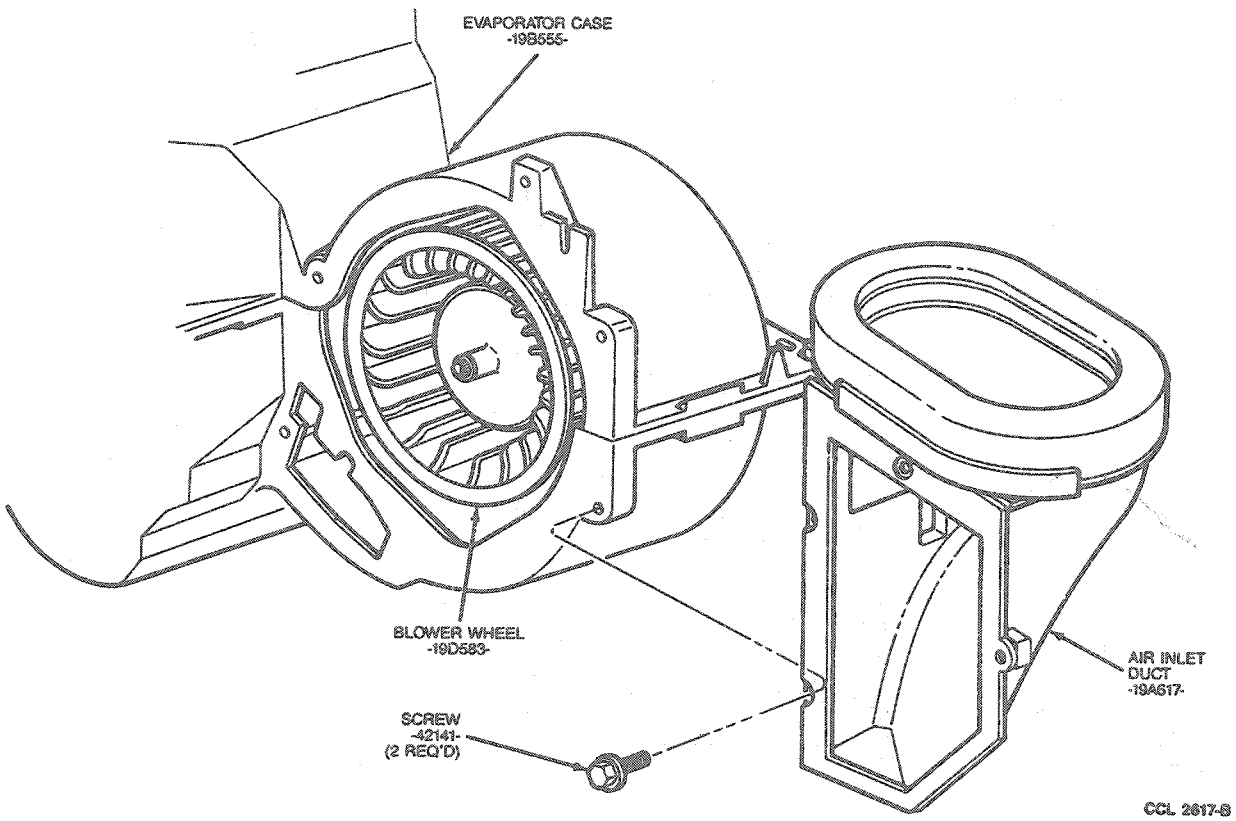
Recirc Duct Removal from Evaporator Case, Manual



4. Remove two screws from air inlet duct and remove duct from evaporator case.

REMOVAL AND INSTALLATION (Continued)

Air Inlet Duct Removal from Evaporator Case

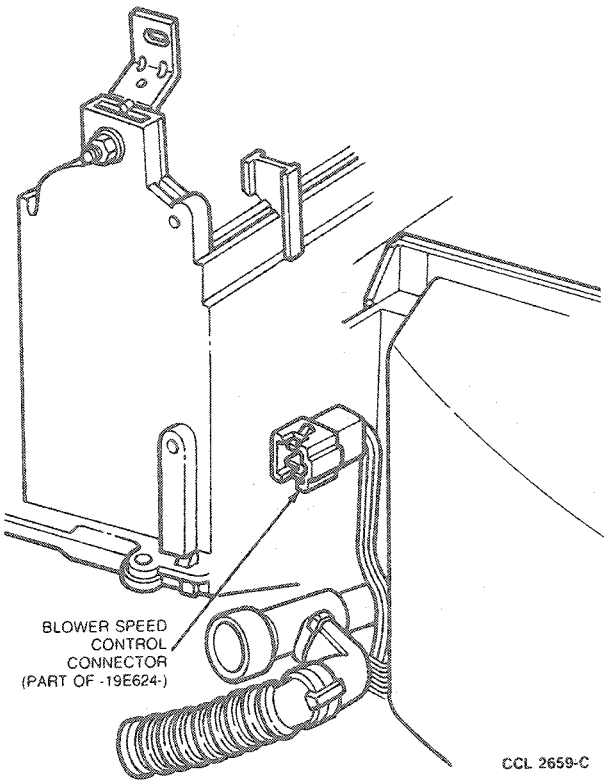


5. Remove support bracket from evaporator case (refer to Heater and A/C Evaporator Installation illustration, View A).

6. Remove screws holding electronic connector bracket to recirc duct. Disconnect engine harness 14401 from blower speed control connector. Release three connectors from bracket and remove bracket. Disconnect aspirator hose. (EATC only).

REMOVAL AND INSTALLATION (Continued)

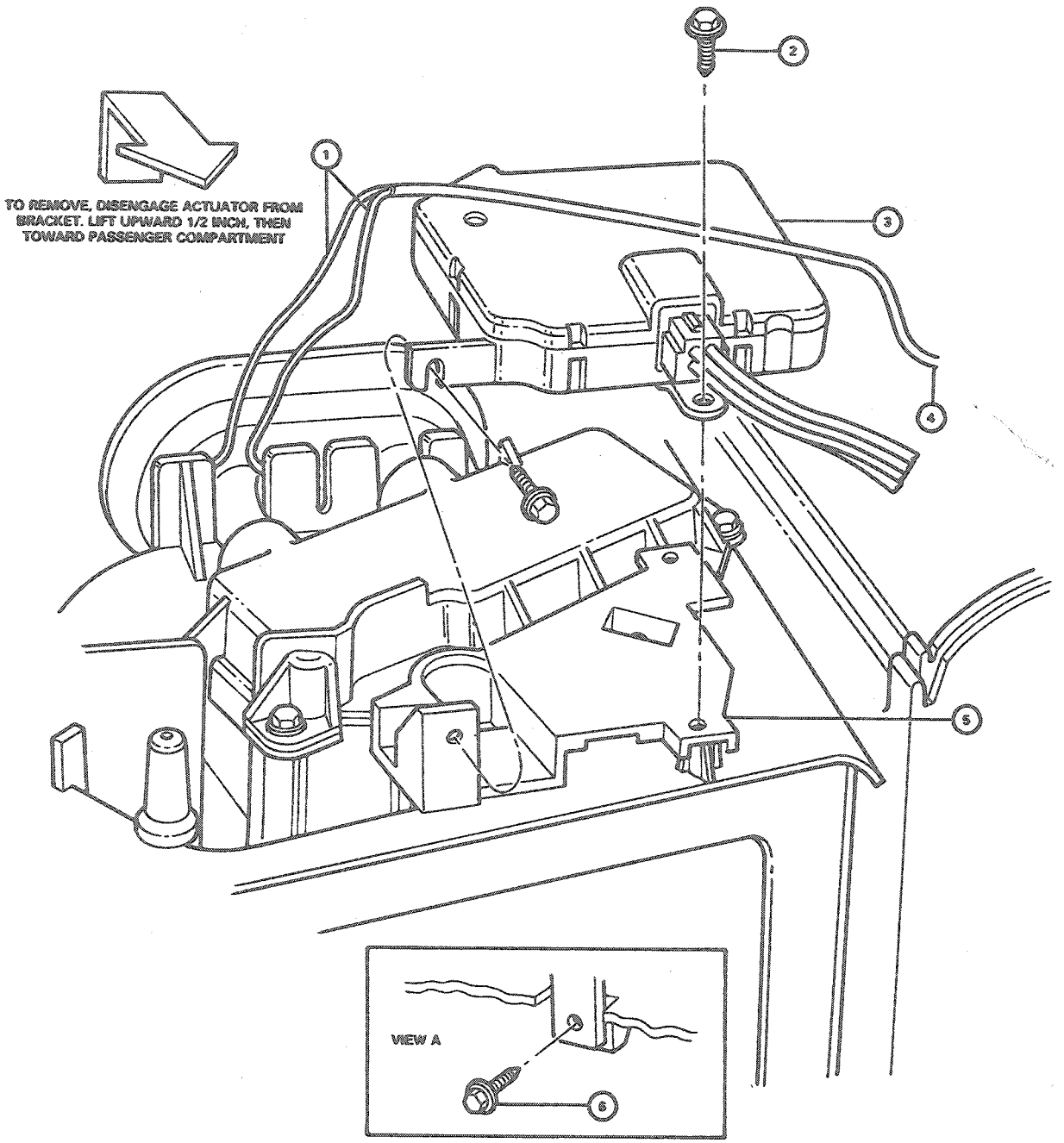
Blower Speed Control Connector



7. Remove blend door actuator (three screws) (EATC only).

REMOVAL AND INSTALLATION (Continued)

Blend Door Actuator



ITEM	DESCRIPTION
1.	TO COLD ENGINE LOCKOUT SWITCH
2.	SCREW (2 REQ'D.) - 42141
3.	BLEND DOOR ACTUATOR MOTOR ASSEMBLY - 19E616
4.	TO ELECTRICAL CONNECTOR
5.	BLEND DOOR ACTUATOR MOTOR MOUNTING PLATE - 19E693
6.	SCREW (1 OF 3 REQ'D) - 42141

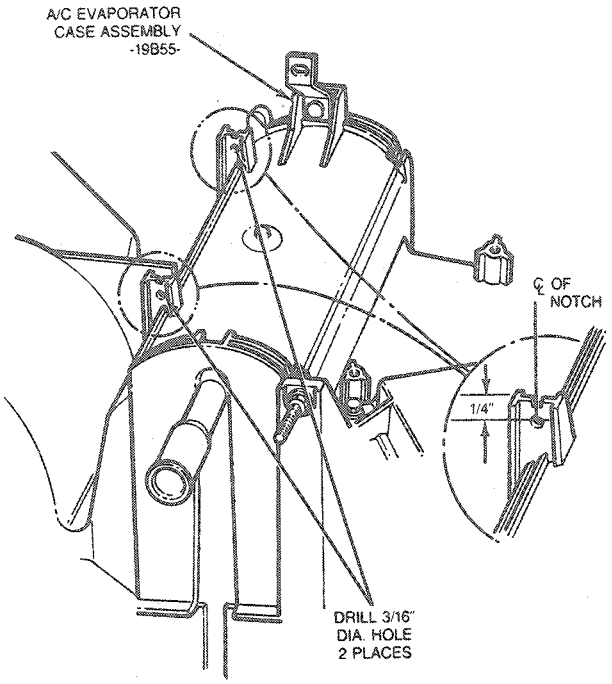
CCL 2668-C

8. Remove moulded seals from evaporator core tubes (refer to Heater and Evaporator installation Manual, illustration).

9. Drill a 4.75mm (3/ 16 inch) hole in both upright tabs on top of evaporator case.

REMOVAL AND INSTALLATION (Continued)

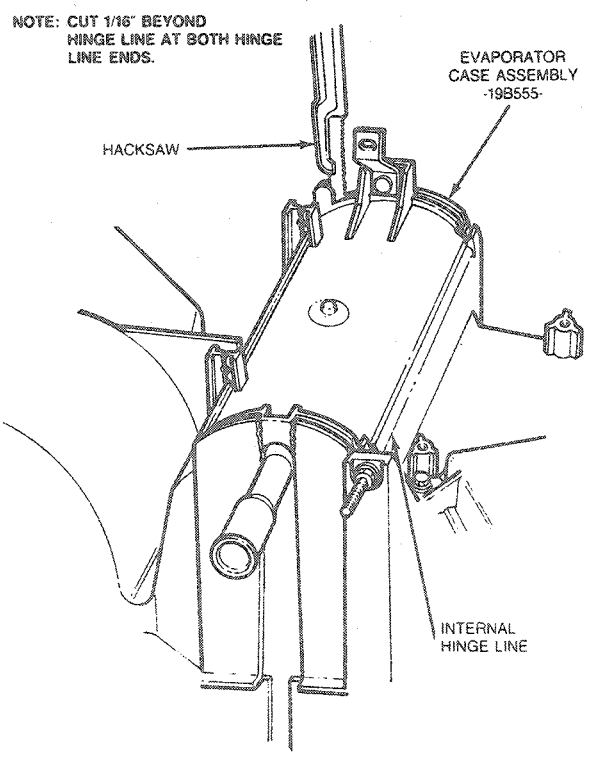
Drilling Holes in Evaporator Case Tabs



CCL2618-B

10. Using a hot knife or small saw blade, cut top of evaporator case between raised outline.

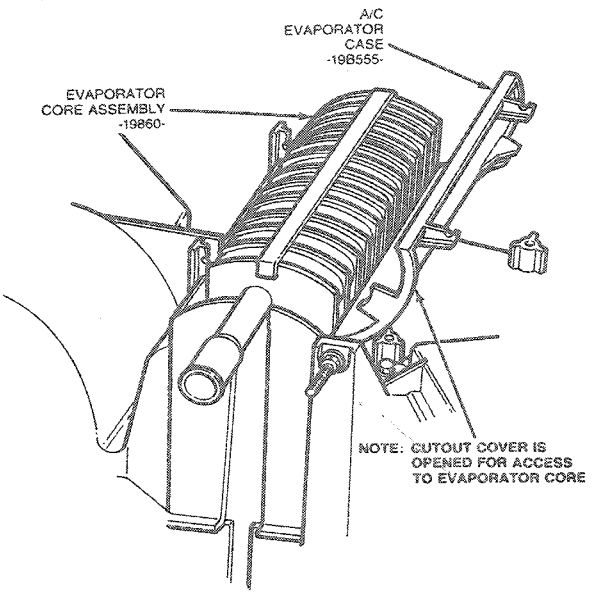
Evaporator Case Cutting



CCL2619-B

11. Fold cutout cover back from opening and lift evaporator core from case.

Evaporator Core Removal from Case



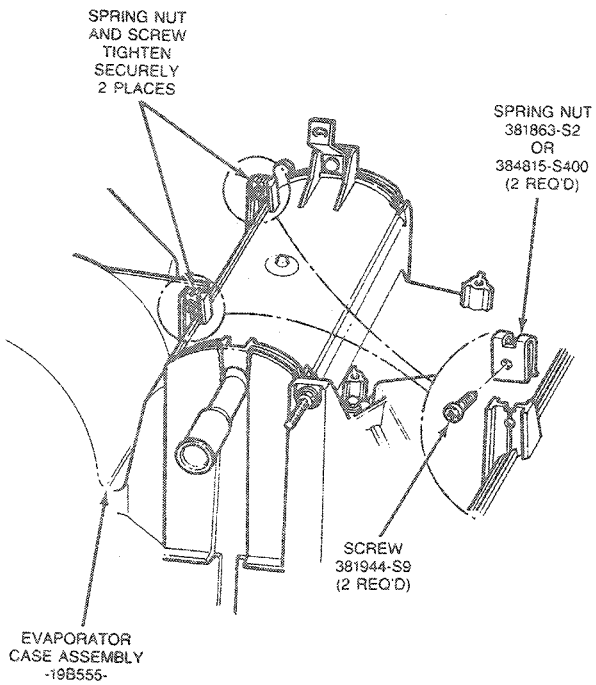
CCL2620-B

Installation

1. Transfer two foam core seals to new evaporator core.
2. Position evaporator core in case and close cutout cover.
3. Install a spring nut on each of two upright tabs with two holes drilled in front flange. Ensure hole in spring nut is aligned with 4.75mm (3 / 16 inch) holes drilled in tab and flange. Install and tighten screw in each spring nut (through hole in tab or flange) to secure cutout cover in closed position.

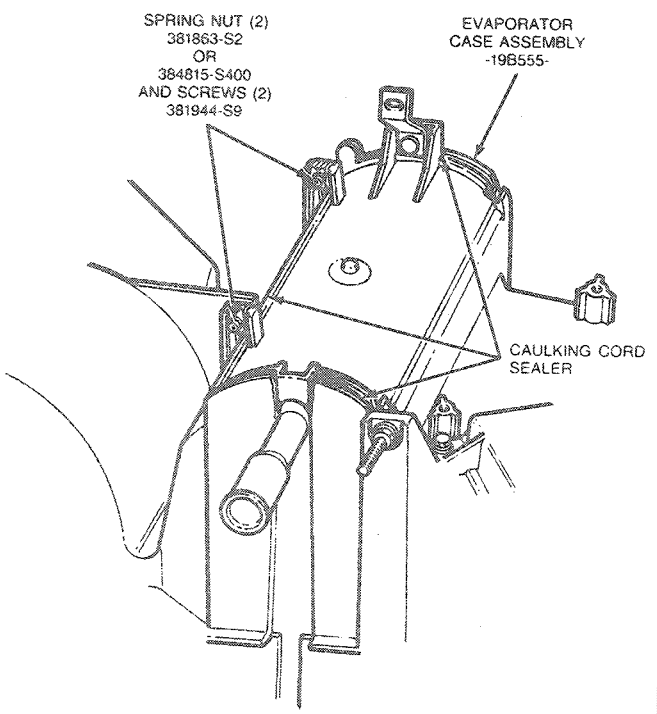
REMOVAL AND INSTALLATION (Continued)

Cutout Cover Secured in Closed Position



4. Install Caulking Cord D6AZ-19560-A (ESB-M4G32-A) or equivalent to seal evaporator case against leakage along cut line.

Caulking Cord Installation



5. Install air inlet duct to evaporator case and tighten two screws.
6. Install recirc duct to evaporator case and tighten six screws.
7. Install electrical connector bracket to recirc duct with one screw. (EATC only)
8. Install speed controller connector to bracket. (EATC only)
9. Attach blend door actuator to evaporator case and tighten three screws. Install electrical connector to bracket. Attach cold engine lock out switch by snapping spring clip in place on outermost heater core tube. (EATC only)
10. Install vacuum harness to evaporator case.
11. Install foam seals over evaporator tubes.
12. Assemble support bracket to evaporator case.
13. Install evaporator case assembly as outlined.

Heater Core

Vehicles may be equipped with an aluminum or a copper brass heater core. Use replacement cores made of copper brass. Always identify the type of core being replaced because there is a difference in the heater core to heater case seals (refer to Heater and Evaporator, Manual illustration). Having the correct seal is essential to provide satisfactory heater system performance.

Identification can be made by looking at one of the core tubes after a hose has been removed. An aluminum core will have a gray colored tube. A copper brass core will have a brass colored tube.

If the core is copper brass, the seal removed with the old core can be used with the new copper brass replacement bore, providing it is not damaged during removal.

If the core is aluminum, a new seal for the copper brass replacement core will be required. Refer to the Master Parts Catalog for heater core and heater hose seal part numbers.

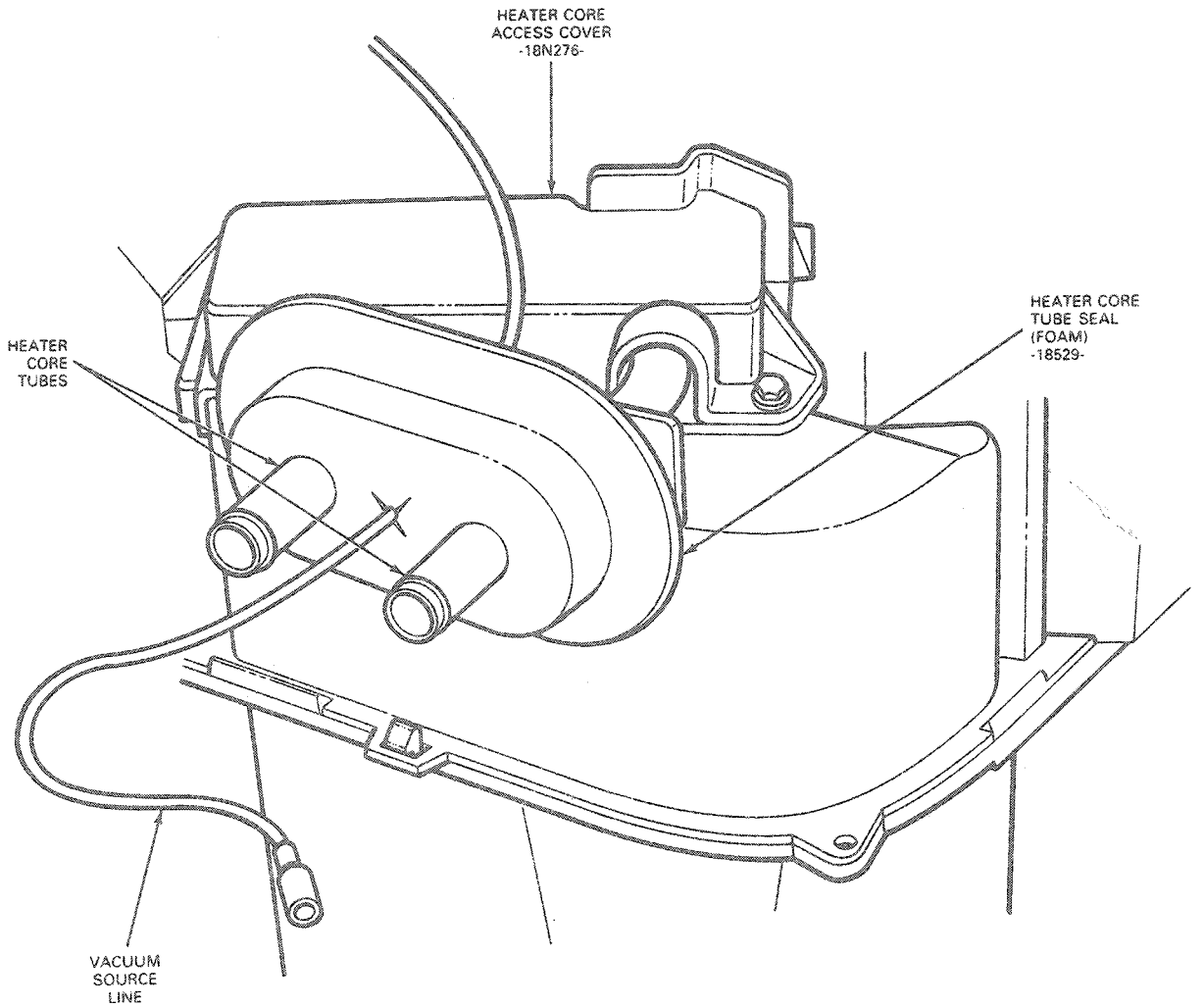
Removal

1. Remove instrument panel. Refer to Section 01-12.
2. Remove evaporator case assembly as outlined.

   NOTE: Whenever the evaporator case is removed, it will be necessary to replace the suction accumulator / drier.
3. Remove vacuum source line from heater core tube seal.

REMOVAL AND INSTALLATION (Continued)

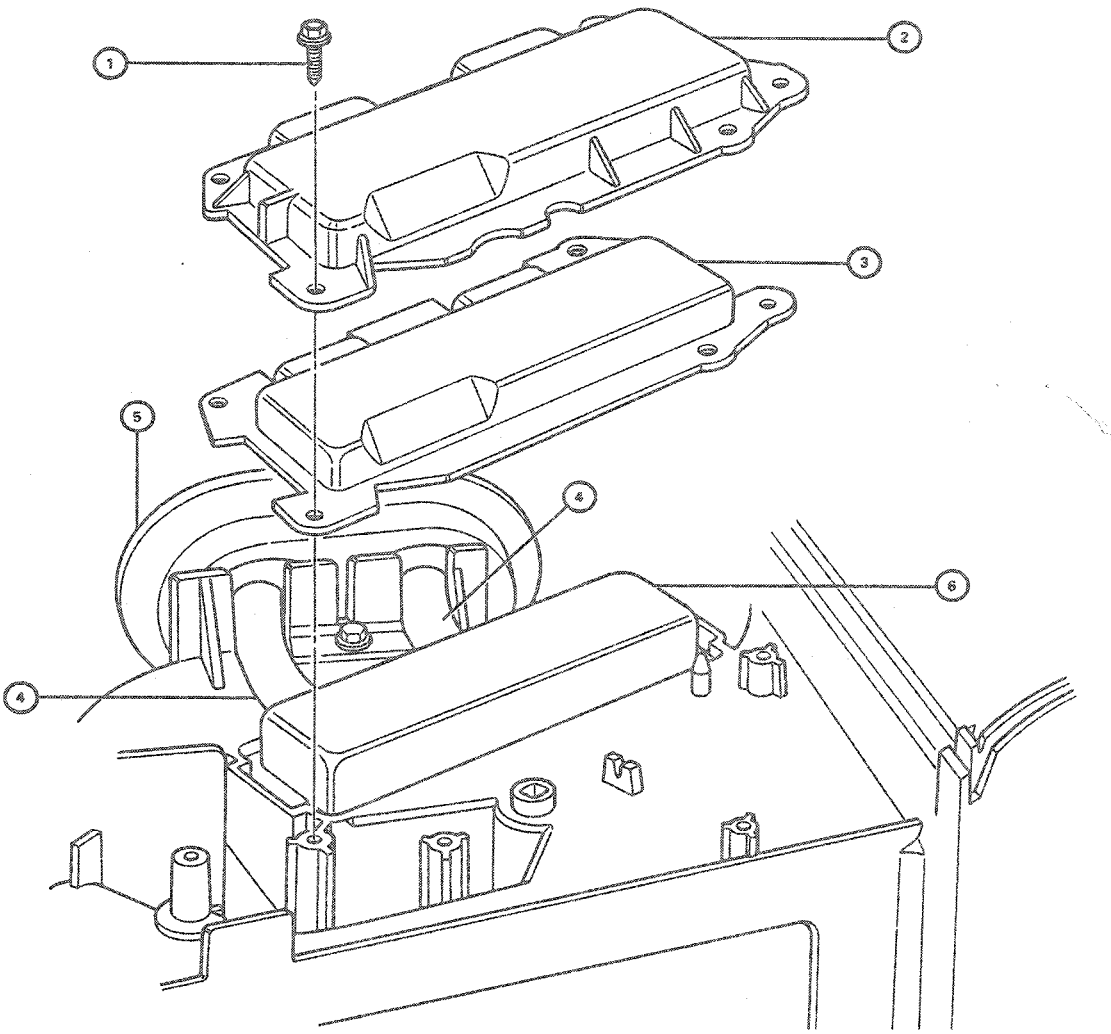
Vacuum Line Removal From Heater Core Tube Seal



4. Remove seal from heater core tubes (refer to HEater and Evaporator, Manual illustration).
5. Remove three screws retaining blend door actuator (Refer to Electric Blend Door Actuator Attachment illustration) to evaporator case. Remove actuator (EATC only).
6. Remove four heater core access cover retaining screws, and remove access cover and seal from evaporator case.

REMOVAL AND INSTALLATION (Continued)

Heater Core Access Cover Removal



ITEM	DESCRIPTION
1.	SCREW - 42141 (4 REQ'D)
2.	HEATER CORE ACCESS COVER - 18N276
3.	HEATER CORE SEAL - 18N267
4.	HEATER CORE TUBES
5.	HEATER CORE TUBE SEAL - 18529
6.	HEATER CORE - 18476

CCL 2624-B

7. Lift heater core and seals from evaporator case.

Installation

1. Transfer the seal to new heater core.
2. Install heater core and secure into evaporator case.
3. Position heater core access cover on evaporator case and install four retaining screws.
4. Position blend door actuator to blend door shaft. Install three screws retaining blend door actuator to evaporator case. (EATC only)
5. Install seal on heater core tubes.
6. Install vacuum source line through heater core tube seal.
7. Install evaporator case assembly into vehicle as outlined.
8. Install instrument panel as outlined.

REMOVAL AND INSTALLATION (Continued)

Recirc Duct Assembly

Removal

1. Open glove compartment and release retainers and lower door.
2. Remove screw retaining recirc duct support bracket to cowl (Refer to Heater and A/C Evaporator installation illustration.
3. Remove screw holding electrical connector bracket to recirc duct. Release three connectors from bracket and remove bracket (EATC only).
4. Remove vacuum connection to recirc door vacuum motor.
5. Remove six screws retaining recirc duct to evaporator assembly.
6. Remove recirc duct from evaporator assembly by lowering it between instrument panel and evaporator case.

Installation

1. Install recirc duct to evaporator, lifting recirc duct between instrument panel and evaporator case.
2. Install six screws retaining recirc duct to evaporator case.
3. Install vacuum connector to recirc door vacuum motor.
4. Install electrical bracket to recirc duct with one screw. Snap three connectors onto bracket (EATC only).
5. Install screw retaining support bracket to cowl.
6. Close glove compartment door.

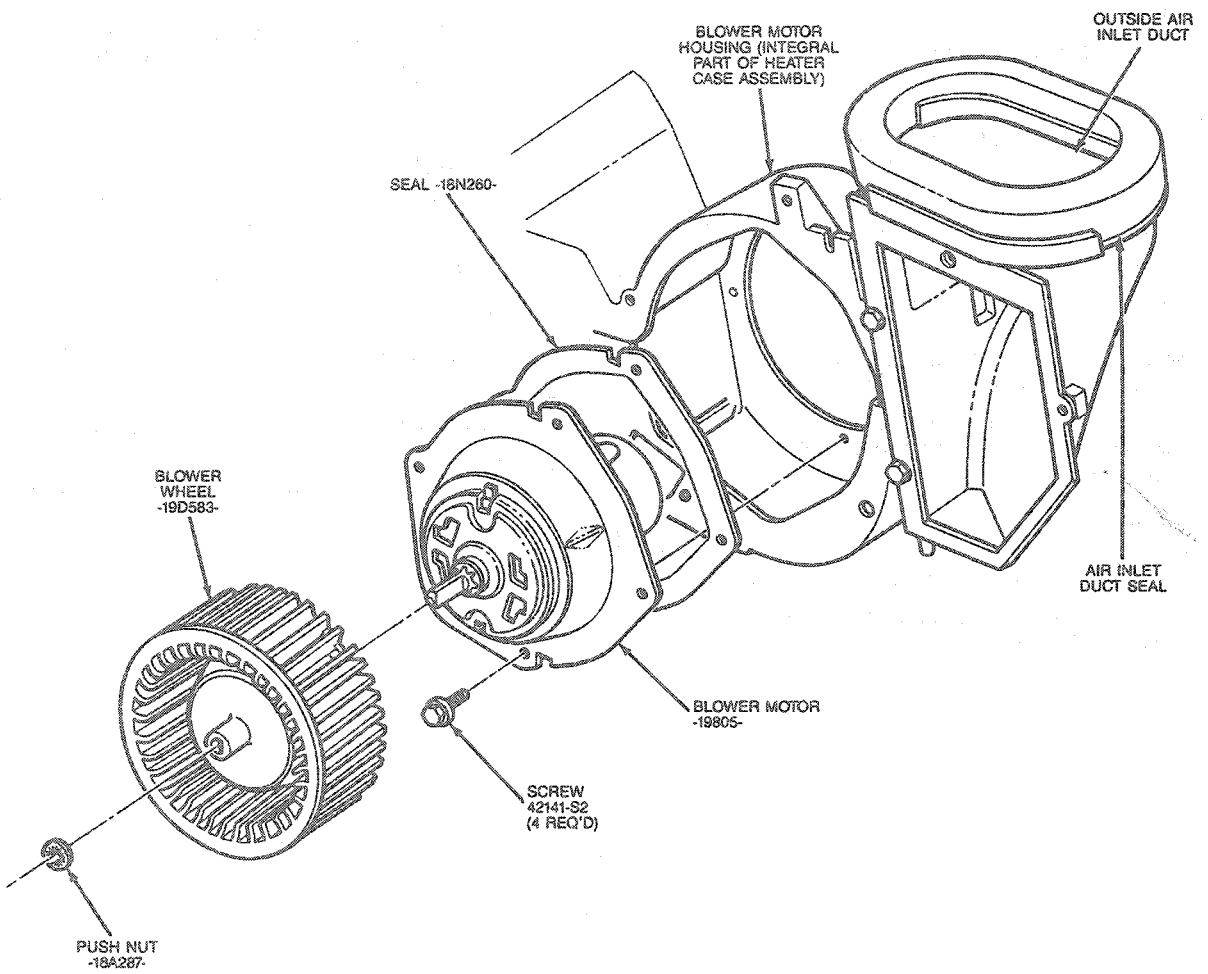
Blower Motor and Wheel Assembly

Removal

1. Remove recirc duct assembly as outlined.
2. Disconnect blower electrical lead.
3. Remove blower wheel pushnut and blower wheel.
4. Remove four blower motor mounting plate screws. Remove blower motor from evaporator case.

REMOVAL AND INSTALLATION (Continued)

Blower Wheel and Blower Motor Removal



Installation

1. Assemble blower motor electrical lead through evaporator case.
2. Position blower motor into evaporator. Install four retaining screws. Ensure new mounting seal is in place.
3. Assemble blower wheel to blower motor shaft aligning the flat on the shaft with the flat on the inside diameter of blower wheel hub. Slide blower wheel onto blower motor shaft until wheel is fully seated.
4. Install a new pushnut on blower shaft to retain wheel.
5. Connect blower motor electrical lead to wiring harness.
6. Install recirc duct assembly in vehicle.

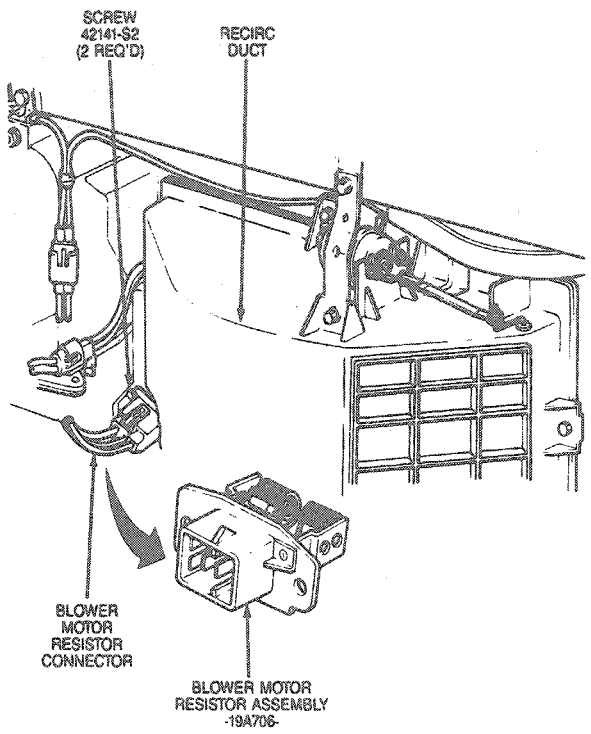
Blower Motor Resistor, Manual

Removal and Installation

The blower motor resistor and thermal limiter assembly are installed on the passenger side of the evaporator case behind the glove compartment. Use only the specified resistor assembly for service replacement. Do not apply sealer to the resistor board mounting surface.

REMOVAL AND INSTALLATION (Continued)

Blower Motor Resistor—Manual A/C



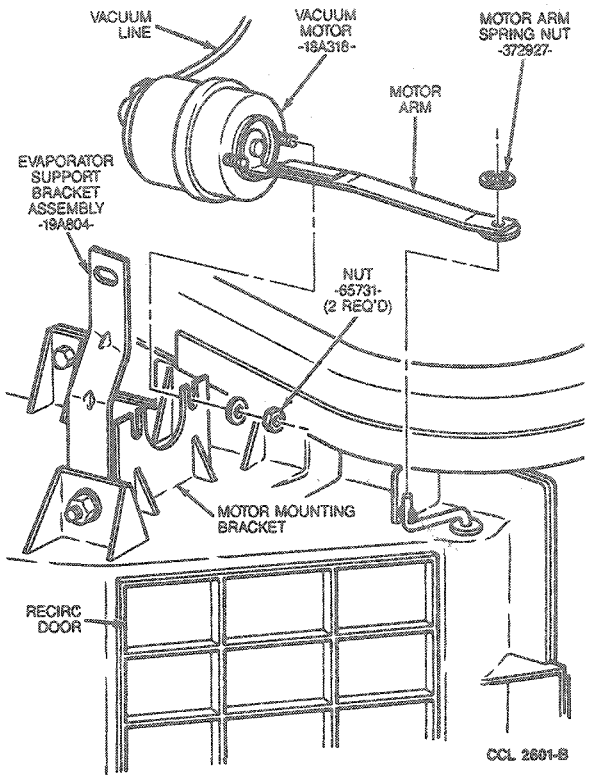
1. Open glove compartment door and release glove compartment retainers so that glove compartment hangs down.
2. Disconnect wire harness connector from resistor assembly.
3. Remove two resistor retaining screws and remove resistor from evaporator case.
4. To install, position resistor assembly in evaporator case opening and install two attaching screws. Do not apply sealer to resistor assembly mounting surface.
5. Connect wire harness connector to resistor.
6. Check operation of blower motor.
7. Install glove compartment to retainers and close glove compartment door.

Outside-Recirc Door Vacuum Motor

Removal

1. Lower glove compartment door to provide access to recirc duct assembly.
2. Disconnect vacuum hose from end of vacuum motor.
3. Remove motor arm retainer from the door crank arm.

Motor Arm Removal from Door Crank Arm



4. Remove two nuts retaining vacuum motor to recirc duct and remove motor.

Installation

1. Position vacuum motor to outside-recirc door crank arm, position motor to recirc duct and install two retaining nuts.
2. Install retainer on door crank arm.
3. Connect white vacuum hose to vacuum motor and check operation of vacuum motor.
4. Close glove compartment door.

Register Assemblies LH, Center Taurus

Removal and Installation

1. Remove cluster finish panel.
2. From the backside of the cluster finish panel, remove two screws retaining the LH register assembly. Remove two screws and, using a soldering iron, disconnect two heat stakes that retain the center register assembly.
3. To install the registers, reverse Removal procedure.

REMOVAL AND INSTALLATION (Continued)

Register Assemblies—RH
Taurus/Sable

Removal and Installation

Removal is necessary only to replace a register.

1. Remove all front horizontal vanes by flexing until retaining pins disengage from side retainers.
2. With an ice-pick type tool, disengage from the inside of the housing two locking tabs located along the edge and pull top housing back. Using same tool, disengage the lower two locking tabs and pull entire assembly out of instrument panel.

Installation

1. Install new assembly into opening in instrument panel by pressing firmly on housing until four locking tabs engage.

Register Assemblies—LH, Center
Sable

Removal and Installation

The LH register assembly is moulded as part of the cluster finish panel and the center register assemblies are moulded as part of the center finish panel. Register replacement requires the replacement of the appropriate finish panel, as outlined in Section 01-12.

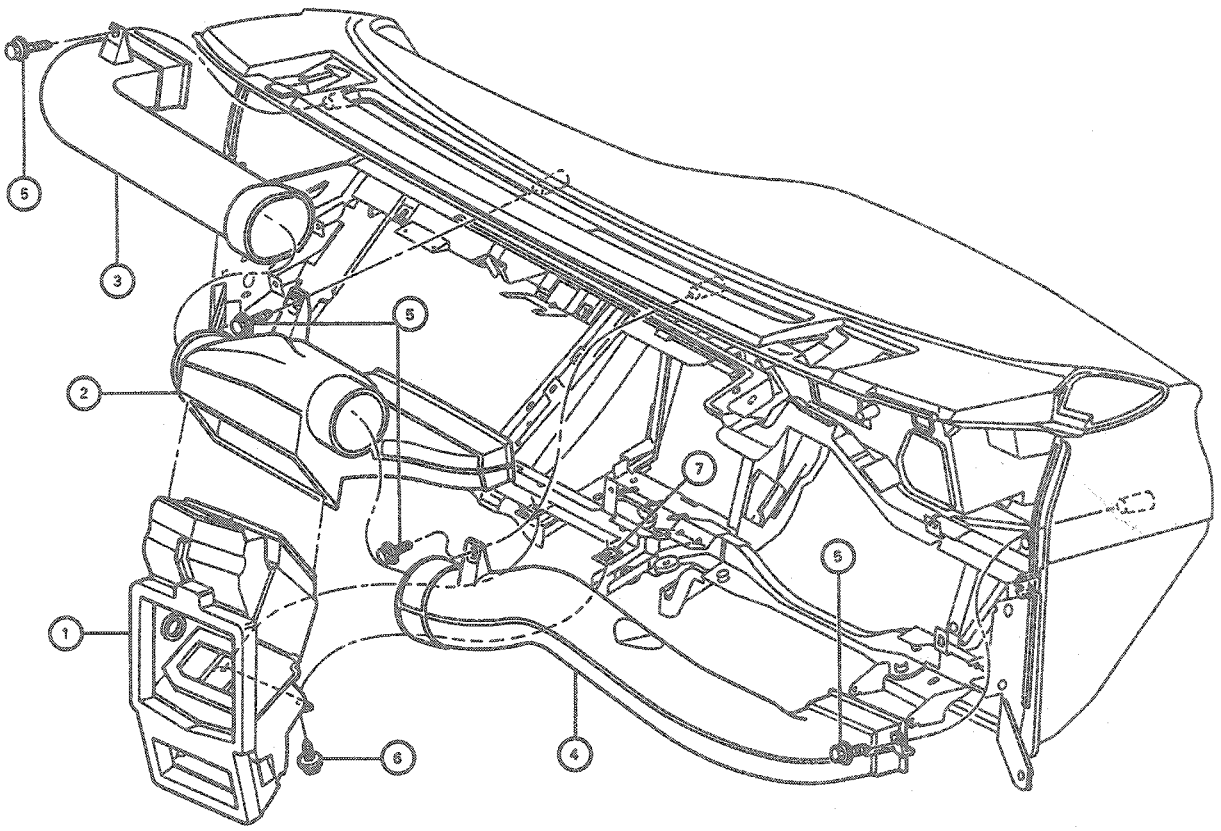
A/C Plenum Chamber

Removal and Installation

1. Remove instrument panel as outlined, and lay it back against front seat. Refer to Section 01-12.
2. Remove two screws retaining center plenum to instrument panel and one screw retaining defroster nozzle to plenum.
3. Disconnect vacuum hose connector from vacuum harness where it is strapped to defroster nozzle.
4. Disconnect demister hoses.
5. Remove plenum chamber.
6. To install, reverse Removal procedure.

REMOVAL AND INSTALLATION (Continued)

A/C Plenum Chamber Attachments—Taurus



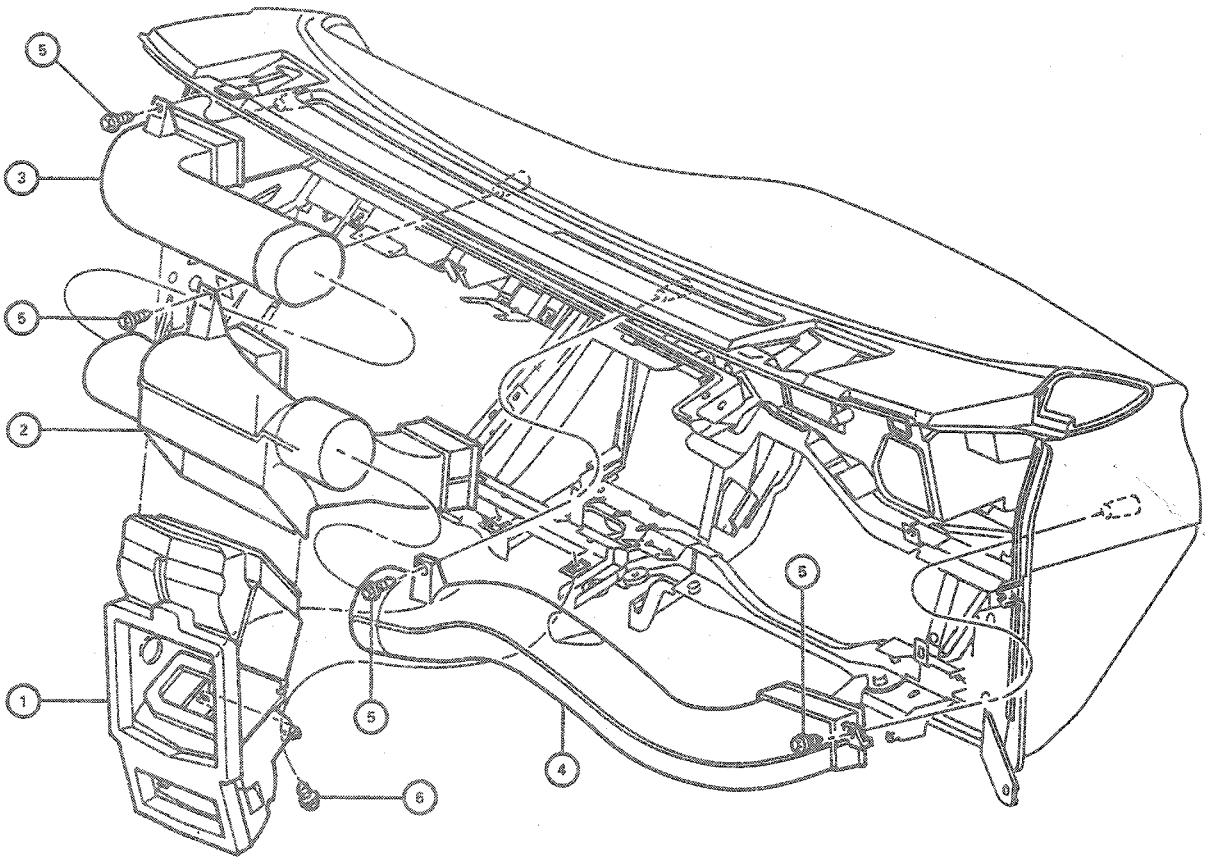
ITEM	DESCRIPTION
1.	A/C PLENUM ASSY - 19740
2.	A/C I/P CENTER LH REGISTER DUCT ASSY - 19C805
3.	A/C I/P RH REGISTER DUCT ASSY - 19B680
4.	A/C I/P LH REGISTER DUCT ASSY - 19A843

ITEM	DESCRIPTION
5.	SCREW - N803875-S36 (4 REQ'D)
6.	SCREW - N803876-S36B (2 REQ'D)
7.	SPRING NUT P.I.A. INSTRUMENT PANEL

CCL 3708-A

REMOVAL AND INSTALLATION (Continued)

A/C Plenum Chamber Attachments—Sable

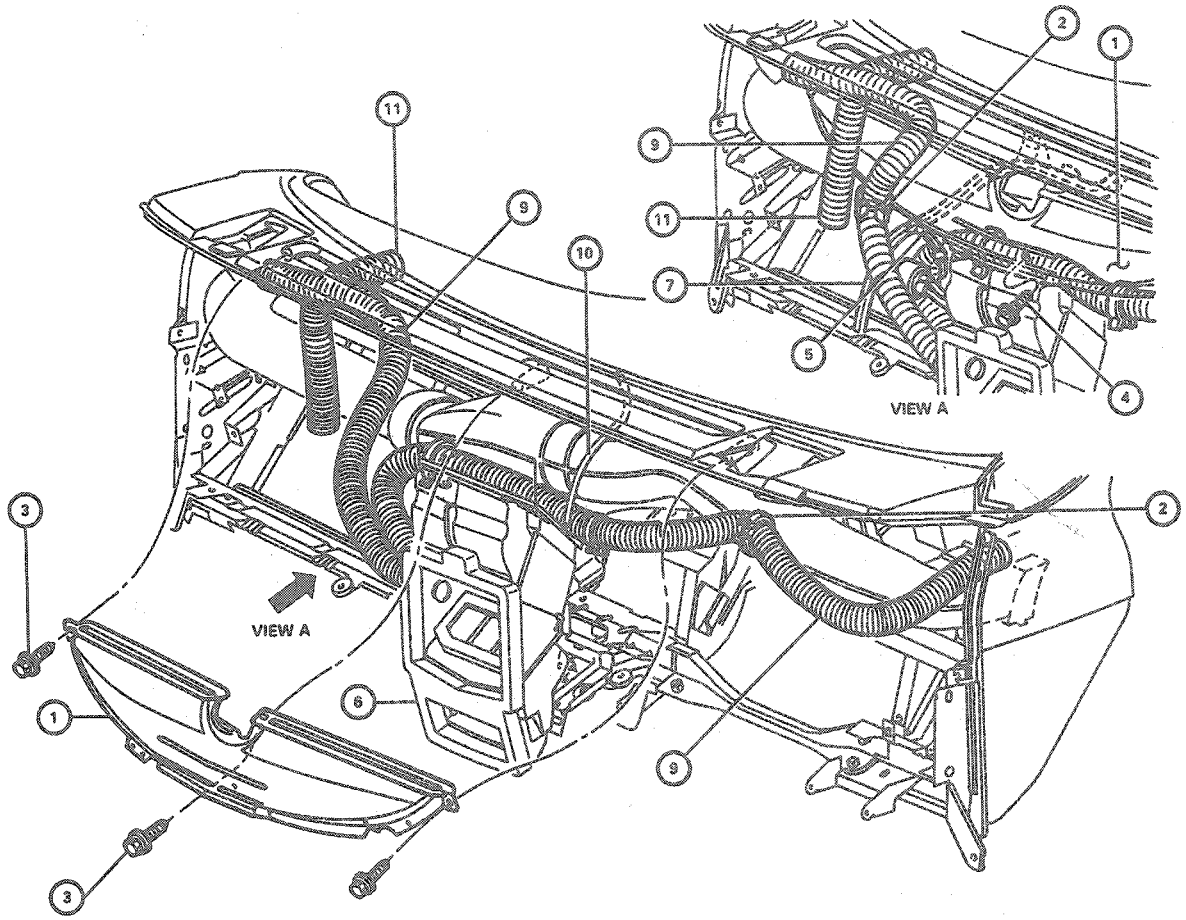


ITEM	DESCRIPTION
1.	PLENUM ASSY - 19740
2.	LH CENTER I/P REGISTER DUCT ASSY - 19C805
3.	RH I/P REGISTER DUCT ASSY - 19B680
4.	LH I/P REGISTER DUCT ASSY - 19A843
5.	SCREW - N803675-S36 (4 REQ'D)
6.	SCREW - N803676-S36B (2 REQ'D)

CCL 3709-A

REMOVAL AND INSTALLATION (Continued)

Defroster Nozzle and Demister Hose Assemblies



ITEM	DESCRIPTION
1.	NOZZLE ASSY - 19D733
2.	CLIP - 19B632 (4 REQ'D)
3.	SCREW - N803875-S36 (3 REQ'D)
4.	SCREW - 381801-S2 OR N803818-S55
5.	STRAP - 95874-S
6.	PLENUM CHAMBER
7.	VACUUM HARNESS P.I.A. CONTROL ASSY
8.	TAB PART OF CENTER DUCT
9.	DEMISTER & HOSE ASSY P.I.A. INSTRUMENT PANEL
10.	CABLE ASSY - 19D674
11.	TEMP CONTROL HOSE - 19D888

CCL 3710-A

Defroster Nozzle and Demister Duct/Hoses

Removal and Installation

1. Remove instrument panel as outlined, and place it back against front seat. Refer to Section 01-12 for instrument panel removal and installation procedures.
2. Disconnect vacuum hose connector from vacuum harness where it is clipped to defroster nozzle.
3. Lower A/C plenum chamber by loosening two screws retaining it to instrument panel.
4. Remove one screw retaining defroster nozzle to plenum.
5. Remove three screws retaining defroster nozzle to instrument panel.
6. Disconnect LH demister hose from LH duct clip, two clips on center duct and from RH side of plenum. Disconnect the RH hose from clip on defroster nozzle and RH side of plenum chamber. Remove each hose from the demister by rotating clockwise to disengage from the barb on the demister.
7. Remove two screws holding demister and hose assembly to instrument panel and remove from front side of instrument panel.
8. To install, reverse Removal procedure.

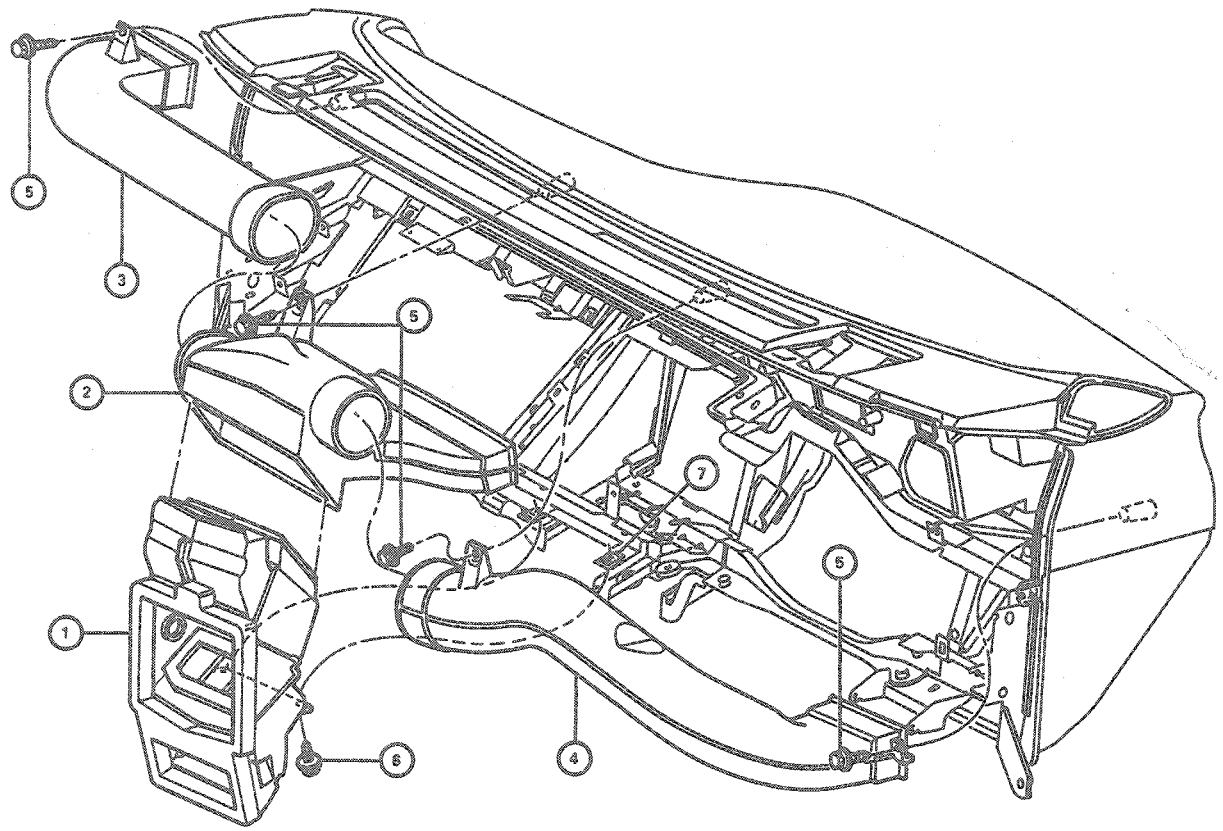
REMOVAL AND INSTALLATION (Continued)

Register Ducts

Removal

1. Remove instrument panel as outlined and lay it back against front seat. Refer to Section 01-12.
2. Lower A/C plenum chamber.
3. Remove defroster nozzle.
4. Remove four screws, center and/or LH and RH ducts as required.

Instrument Panel Register Duct—Taurus

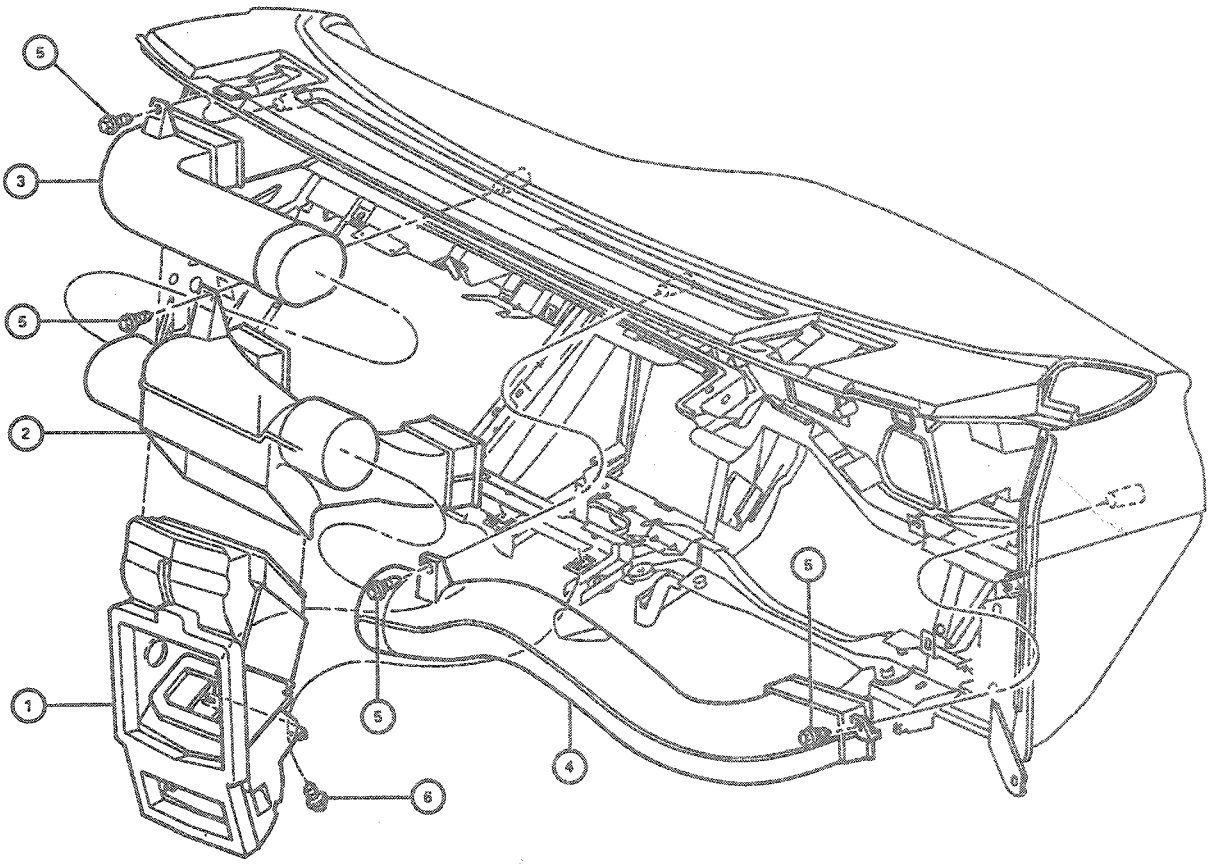


ITEM	DESCRIPTION
1.	A/C PLENUM ASSY - 19740
2.	A/C I/P CENTER LH REGISTER DUCT ASSY - 19C805
3.	A/C I/P RH REGISTER DUCT ASSY - 19B680
4.	A/C I/P LH REGISTER DUCT ASSY - 19A843
5.	SCREW - N803875-S36 (4 REQ'D)
6.	SCREW - N803876-S36B (2 REQ'D)
7.	SPRING NUT P.I.A. INSTRUMENT PANEL

CCL 3708-A

REMOVAL AND INSTALLATION (Continued)

Instrument Panel Register Duct—Sable



ITEM	DESCRIPTION
1.	PLENUM ASSY - 19740
2.	LH CENTER I/P REGISTER DUCT ASSY - 19C805
3.	RH I/P REGISTER DUCT ASSY - 19B680
4.	LH I/P REGISTER DUCT ASSY - 19A843
5.	SCREW - N803875-S36 (4 REQ'D)
6.	SCREW - N803876-S368 (2 REQ'D)

CCL 3709-A

Installation

1. Assemble LH, RH and center ducts together.
2. Position ducts to instrument panel and install four retaining screws.
3. Install defroster nozzle.
4. Position center plenum chamber as outlined.

Floor Air Distribution Duct

Front Heater System

Removal and Installation

1. Remove two screws retaining duct to evaporator case assembly just below A / C heat distribution duct.
2. Pull floor air distribution duct away from evaporator case.
3. To install duct, position it on evaporator case. Ensure retainer at forward edge of duct is inserted over edge of opening in evaporator case, and install two retaining screws.

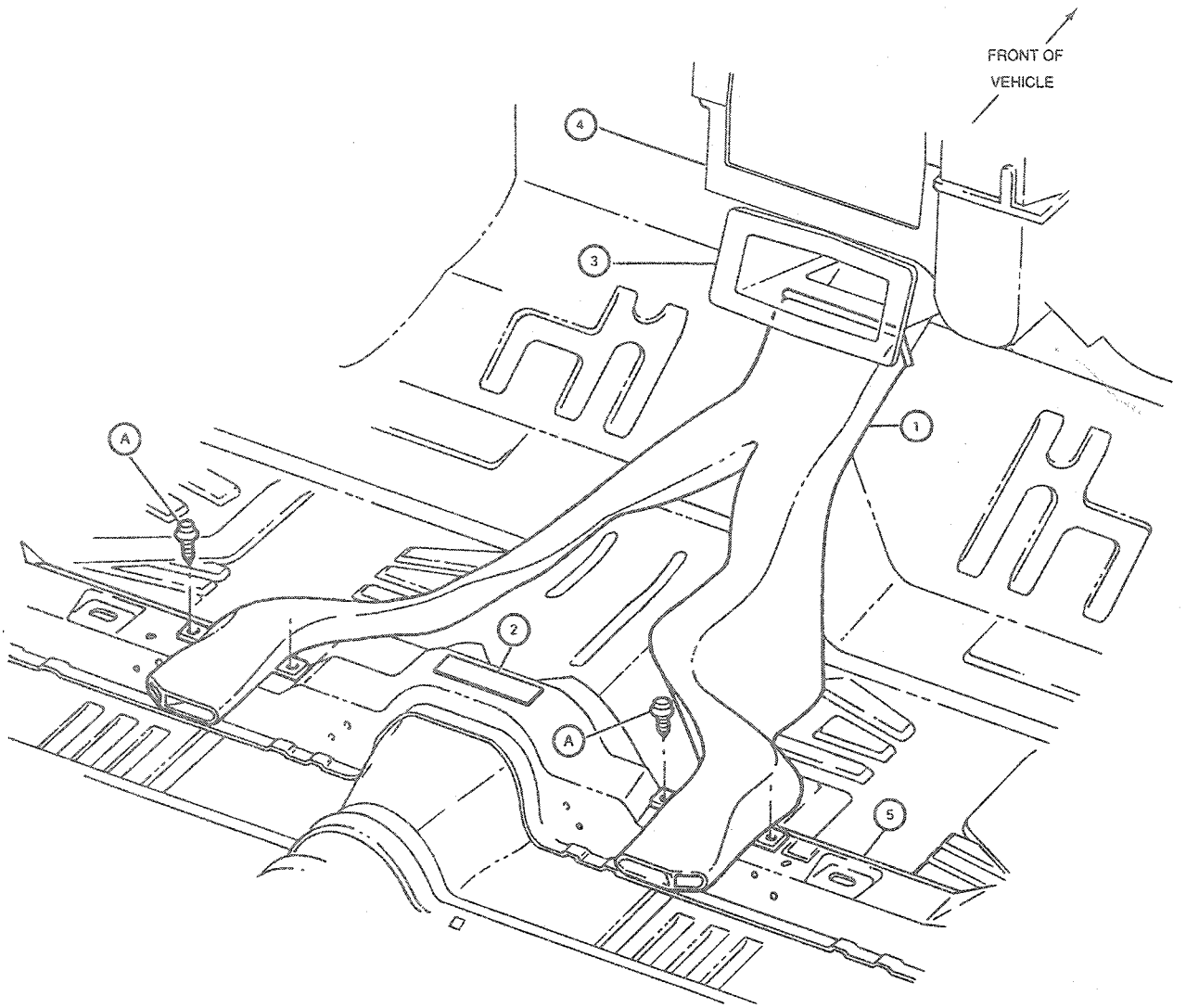
Rear Heater System

Removal and Installation

1. Remove carpet.

REMOVAL AND INSTALLATION (Continued)

2. Remove nut holding rear duct on tunnel.



E3D64201/PMD/910622

1 -18C4640- DUCT ASY-HEATER REAR SEAT OUTLET

2 ESB-M3G58-A TAPE 7.00 LONG X 2.00 WIDE

3 18C422 ADAPTER ASY FOR INSTALLATION, SEE PAGE 650-01

4 19B555 EVAPORATOR AND BLOWER ASY FOR INSTALLATION SEE PAGE 650-1

5 REF CROSS MEMBER

A N800500-S2 SCREW, 4 REQD

CCL 3765-A

REMOVAL AND INSTALLATION (Continued)

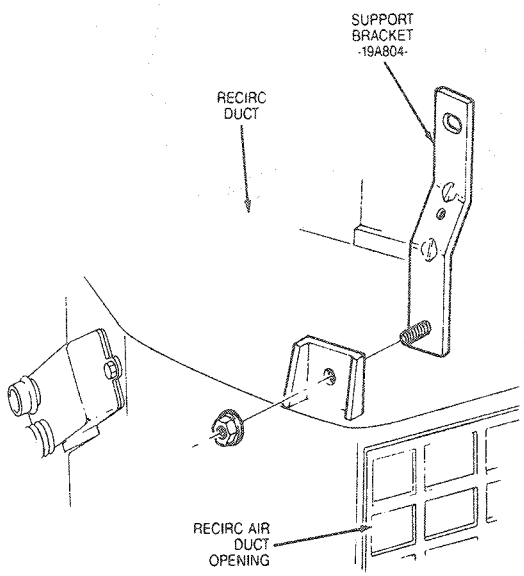
3. Remove two screws attaching rear seat heat duct to evaporator case and pull duct away from evaporator assembly.
4. To install duct, reverse Removal procedure.

Air Inlet Duct and Blower Housing Assembly

Removal

1. Remove glove compartment and disconnect hose from outside-recirc door vacuum motor.

Bracket to Recirc Duct Attachment

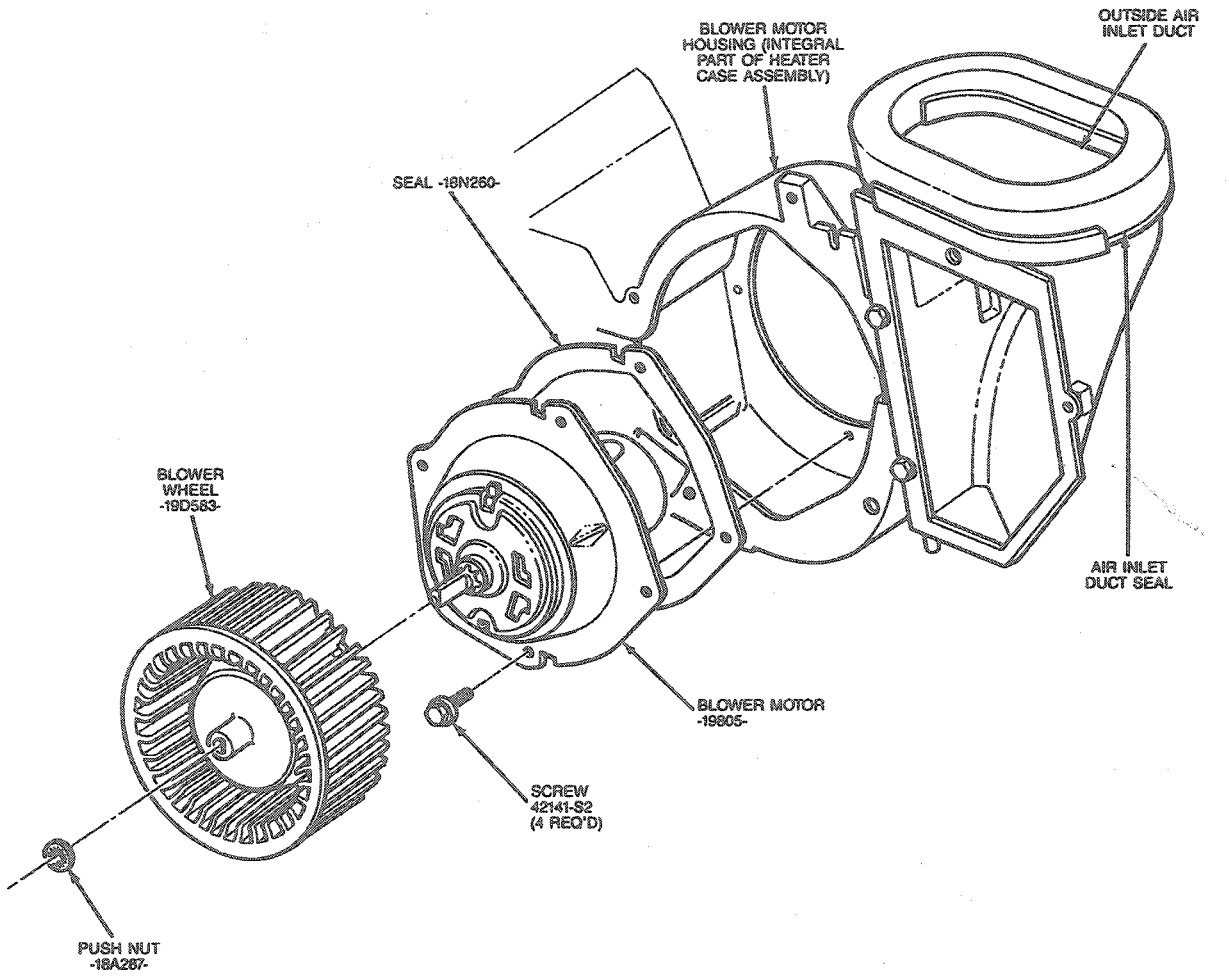


CCL 2662-C

2. Remove RH instrument panel to side cowl retaining bolt.
3. Remove screw retaining support brace to top of air inlet duct.
4. Disconnect blower motor power lead at wire connector.
5. Remove nut retaining blower housing lower support bracket to evaporator case.
6. Remove side cowl trim panel.
7. Remove one screw retaining top of air inlet duct to evaporator case.
8. Move air inlet duct and blower housing assembly down and away from evaporator case.

REMOVAL AND INSTALLATION (Continued)

Air Inlet Duct and Blower Housing Assembly



Installation

1. Tape blower motor power lead to air inlet duct to keep wire away from blower outlet during installation.
2. Position air inlet duct and blower housing assembly to evaporator case, inserting flange at top of blower outlet into opening in evaporator case. Slide blower housing lower bracket over stud and install retaining nut. Ensure blower wire is routed to RH side of evaporator case.
3. Install screw retaining air inlet duct to evaporator case.
4. Hold outside-recirc door open and rotate blower wheel to ensure it rotates freely. If an interference exists, remove blower motor and wheel and correct condition.
5. Connect blower motor power lead to harness at connector.
6. Install air inlet duct-to-cowl support brace retaining screw.
7. Connect vacuum hose to outside-recirc door vacuum motor and install glove compartment.
8. Install instrument panel lower RH side retaining bolt. Then, install RH cowl side trim panel.

Panel/Floor Door Vacuum Motor

Removal

1. Disconnect battery ground cable.
2. Remove instrument panel.
3. Depress tabs and disconnect vacuum motor arm from door shaft.
4. Remove two screws retaining vacuum motor to mounting bracket.
5. Remove vacuum motor from mounting bracket and disconnect vacuum hose.

REMOVAL AND INSTALLATION (Continued)

Installation

1. Position vacuum motor on mounting bracket and door shaft.
2. Install two screws retaining panel-defrost vacuum motor to mounting bracket.
3. Connect vacuum hose to defrost vacuum motor.
4. Install instrument panel.
5. Connect battery ground cable.

Panel-Defrost Door Vacuum Motor

Removal

1. Disconnect battery ground cable.
2. Remove instrument panel as outlined.
3. Remove panel-defrost door vacuum motor arm to door shaft.
4. Remove two nuts retaining vacuum motor to mounting bracket.
5. Remove vacuum motor from mounting bracket and disconnect vacuum hose.

Installation

1. Position vacuum motor to mounting bracket and door shaft.
2. Install two nuts retaining panel-defrost vacuum motor to mounting bracket.
3. Connect vacuum hose to panel-defrost vacuum motor.
4. Install instrument panel as outlined.
5. Connect battery ground cable.

Suction Accumulator / Drier

Tools Required:

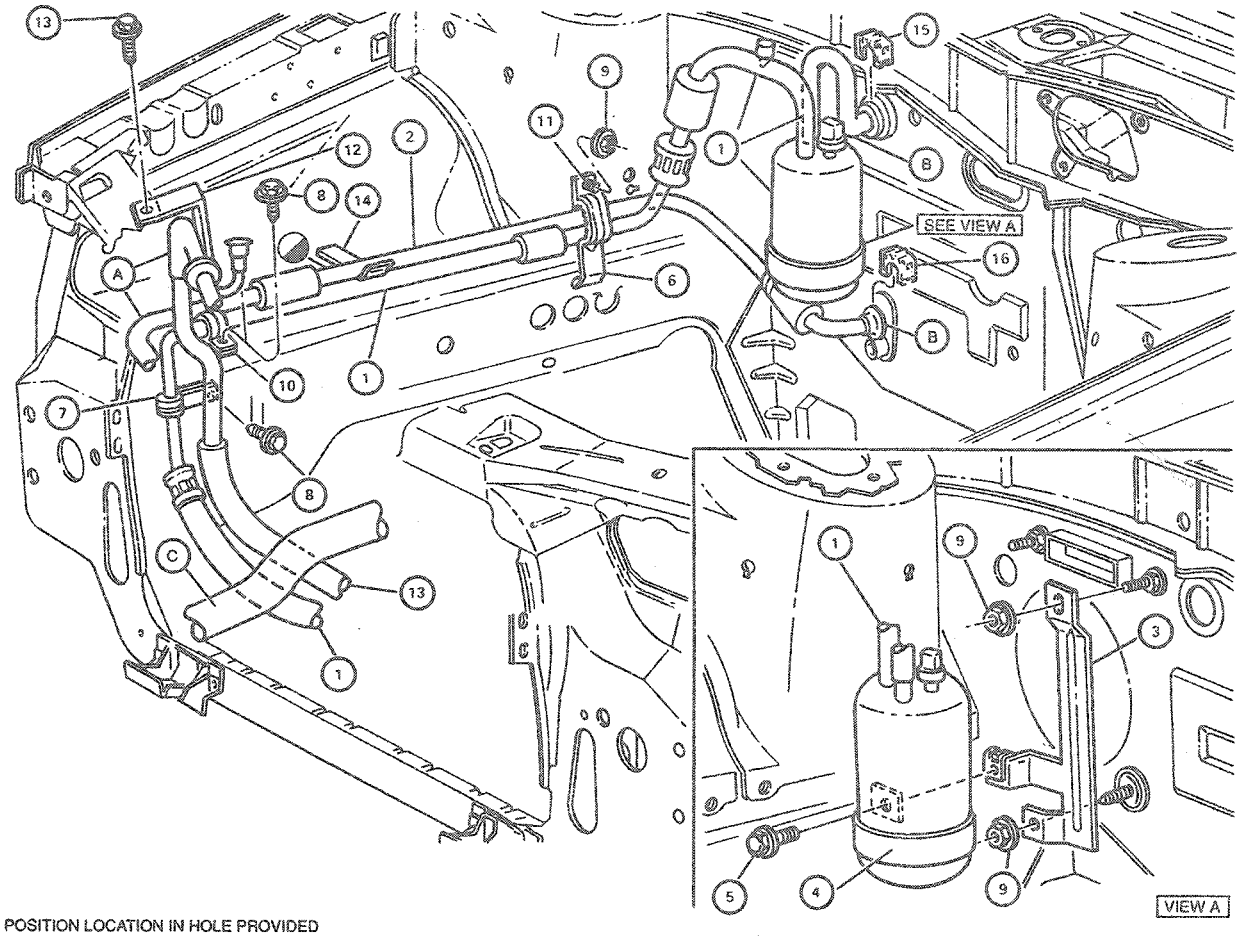
- Spring Lock Coupling Tool T85L-19623-A

Removal

1. Discharge refrigerant from A / C system following recommended service procedures. Observe all safety precautions. Refer to Section 12-00.
2. Disconnect suction hose at compressor. Cap suction hose and compressor to prevent entrance of dirt and moisture.
3. Disconnect accumulator / drier inlet tube from evaporator core outlet. Use Spring Lock Coupling Tool T85L-19623-A to reverse inlet tube.
4. Disconnect wire harness connector from pressure switch on top of accumulator / drier.
5. Remove screw holding suction accumulator / drier in accumulator bracket and remove suction accumulator / drier.

REMOVAL AND INSTALLATION (Continued)

Suction Accumulator Drier



POSITION LOCATION IN HOLE PROVIDED AT LOCATION INDICATED BY

1 -19C913- ACCUMULATOR & HOSE ASY.
2 -19N651- TUBE ASY. COND. TO EVAP.
3 -19D606- BRACKET ASY.-A/C ACCUMULATOR
4 BRACKET-P.I.A. OF 19D606 ASY.
5 SCREW-P.I.A. OF 19D606 ASY.
6 -19C789- BRACKET ASY.-A/C HOSE
7 N804069-S100 CLIP
8 N610957-S2 SCREW (2-REQD.)
9 N621906-S2 NUT & WASHER ASY. (3-REQD.)
10 N804200-S100 CLIP
11 N800358-S2 SCREW & RETAINER ASY.
12 -19D720- BRACKET A/C INLET TUBE
13 N610956-S2 SCREW
14 N805732-S CLIP
15 -19E746- SLC CLIP
16 -19E746- SLC CLIP
A TO A/C CONDENSER
B TO A/C EVAPORATOR
C LOWER RADIATOR HOSE (REF.)

CCL 3787-A

Installation

1. Position suction accumulator / drier to vehicle and route suction hose to compressor.
2. Using new O-rings lubricated with clean refrigerant oil, connect accumulator / drier inlet tube to evaporator core outlet.

   CAUTION: Make sure correct type O-rings are installed on A / C fittings.

REMOVAL AND INSTALLATION (Continued)

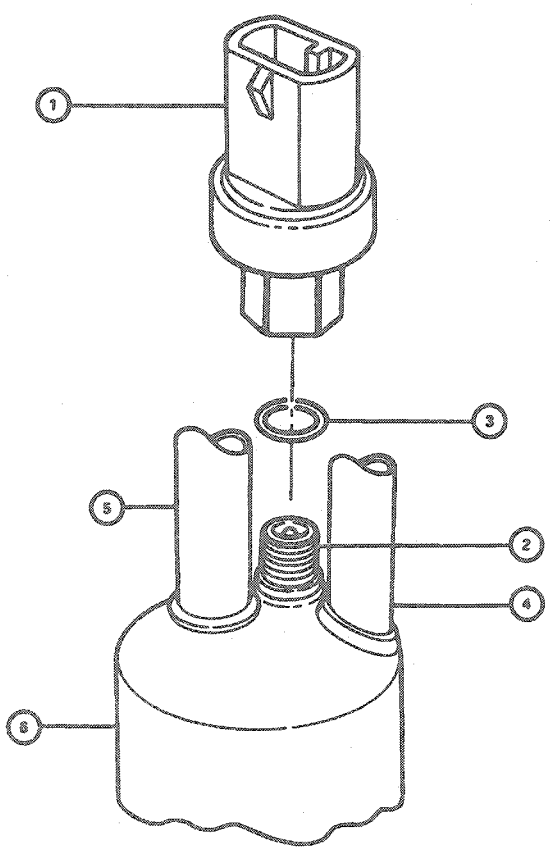
3. Install screw in suction accumulator / drier bracket.
4. Using new O-rings lubricated with clean refrigerant oil, connect suction hose to compressor. Install suction line spring lock coupling.
5. Leak test, evacuate, and charge the system following recommended service procedures. Observe all safety precautions. Refer to Section 12-00.
6. Check system for proper operation.

Clutch Cycling Pressure Switch

Removal

1. Disconnect wire harness connector from pressure switch.

Clutch Cycling Pressure Switch Harness Connector



ITEM	DESCRIPTION
1.	A/C CLUTCH CYCLING SWITCH - 19E561
2.	CYCLING SWITCH FITTING
3.	O-RING - 379737-S
4.	OUTLET TO COMPRESSOR
5.	INLET FROM EVAPORATOR
6.	ACCUMULATOR/DRIER - 19C913

CCL 2831-C

2. Unscrew pressure switch from top of suction accumulator / drier.

Installation

1. Install new O-ring, lubricated with clean refrigerant oil, on the accumulator pressure switch fitting.
2. Lubricate O-ring accumulator nipple with clean refrigerant oil.
3. Screw pressure switch on accumulator nipple and tighten switch hand-tight.
4. Connect wire connector to pressure switch.
5. Check pressure switch installation for refrigerant leaks.
6. Check system for proper operation.

Fixed Orifice Tube

Replacement Guidelines

The fixed orifice tube should be replaced whenever the compressor is replaced for lack of performance (internal damage).

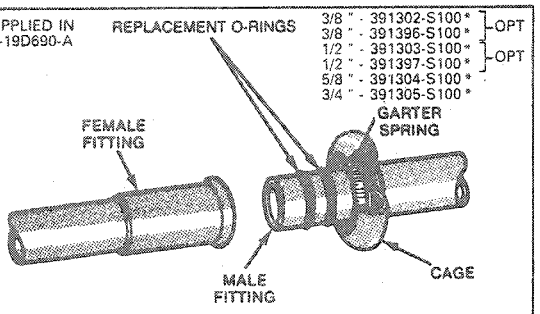
NOTE: **Do not** attempt to remove the fixed orifice tube. The fixed orifice tube is an integral part of the liquid line. When a new fixed orifice tube is required, a new liquid line (with integral fixed orifice tube) must be installed. Refer to Section 12-00.

Removal and Installation

1. Discharge refrigerant from A / C system following recommended service procedures. Observe all safety precautions. Refer to Section 12-00.
2. Disconnect refrigerant line at condenser outlet and evaporator inlet connections using procedure and Spring Lock Coupling Tool shown.

REMOVAL AND INSTALLATION (Continued)

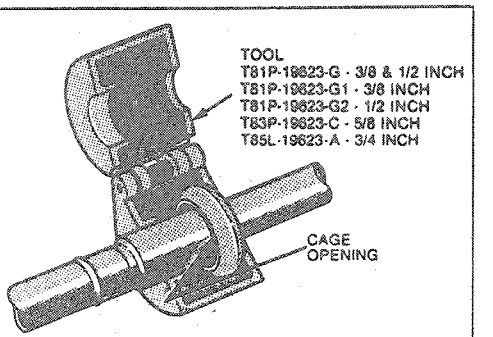
Spring Lock Coupling



SPRING LOCK COUPLING DISCONNECTED

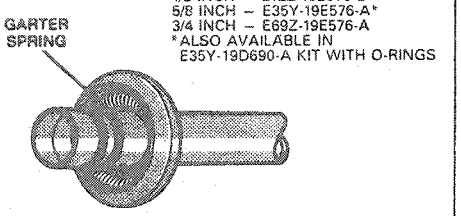
TO DISCONNECT COUPLING

CAUTION — DISCHARGE SYSTEM BEFORE DISCONNECTING COUPLING

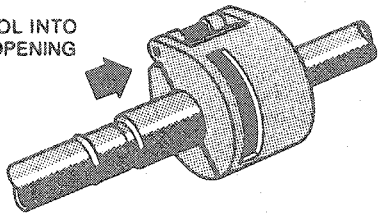


1. FIT TOOL TO COUPLING SO THAT TOOL CAN ENTER CAGE OPENING TO RELEASE THE GARTER SPRING.

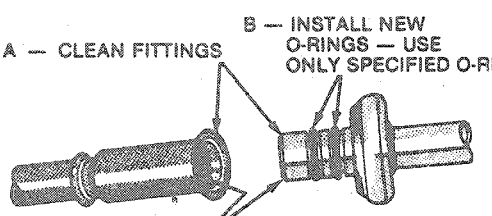
TO CONNECT COUPLING

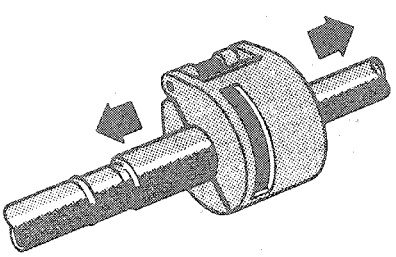


1. CHECK FOR MISSING OR DAMAGED GARTER SPRING — REMOVE DAMAGED SPRING WITH SMALL HOOKED WIRE — INSTALL NEW SPRING IF DAMAGED OR MISSING.

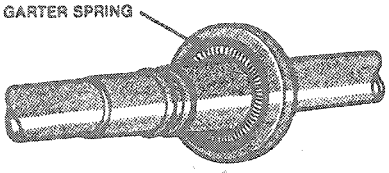


2. PUSH THE TOOL INTO THE CAGE OPENING TO RELEASE THE FEMALE FITTING FROM THE GARTER SPRING.

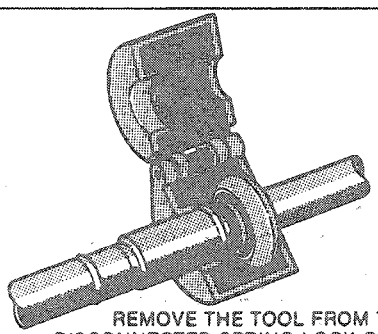




3. PULL THE COUPLING MALE AND FEMALE FITTINGS APART.



3. TO ENSURE COUPLING ENGAGEMENT, VISUALLY CHECK TO BE SURE GARTER SPRING IS OVER FLARED END OF FEMALE FITTING.



4. REMOVE THE TOOL FROM THE DISCONNECTED SPRING LOCK COUPLING.

CCL 4011-C

REMOVAL AND INSTALLATION (Continued)

3. Remove line from vehicle.
4. Route new refrigerant line (and integral fixed orifice tube) with protective caps installed.
5. Remove protective caps and connect new refrigerant line into system using new O-rings lubricated with clean refrigerant oil. Connect spring lock couplings.

   CAUTION: Make sure correct type O-rings (green) are installed on spring lock coupling A/C fittings.
6. Leak test, evacuate and charge the refrigerant system following recommended service procedures. Observe all safety precautions. Refer to Section 12-00.

Spring Lock Coupling

The spring lock coupling is a two-piece refrigerant line coupling that is held together by a garter spring. When connected together, two O-rings seal between the two fittings of the connector. A garter spring within the cage of the male fitting expands over the flared lip of the female fitting and prevents connector separation.

Refer to Spring Lock Coupling illustration and relate the numbered illustrations to the following Steps:

Tools Required:

- Spring Lock Coupling Tool T81P-19623-G1 and G2
- Spring Lock Coupling Disconnect Tool T83P-19623-C
- Spring Lock Coupling Disconnect Tool T85L-19623-A

To Disconnect Coupling

1. Discharge refrigerant from system following approved procedures. Refer to Section 12-00. Then, fit Spring Lock Coupling Tool T81P-19623-G1 for 3/8 inch and T81P-19623-G2 for 1/2 inch couplings or Spring Lock Coupling Disconnect Tool T83P-19623-C for 5/8 inch couplings to coupling as shown. The 3/4 inch Spring Lock Coupling Disconnect Tool T85L-19623-A, is required for servicing the accumulator suction connection to the evaporator outlet.
2. Close tool and push tool into open side of cage to expand garter spring and release female fitting.

   NOTE: The garter spring may not release if the tool is cocked while pushing it into the cage opening.
3. After garter spring is expanded, pull fittings apart.
4. Remove tool from disconnected coupling.

To Connect Coupling

1. Ensure that garter spring is in cage of male fitting. If garter spring is missing, install a new spring by pushing it into cage opening. If garter spring is damaged, remove it from cage with a small wire hook **(do not use a screwdriver)** and install a new spring.
2. Clean all dirt or foreign material from both pieces of coupling.
3. Install new special green O-rings on male fitting.

   CAUTION: Make sure correct type O-rings are installed on spring lock coupling A/C fittings.
4. Lubricate male fitting and O-rings and inside of female fitting with clean refrigerant oil.
5. Fit female fitting to male fitting and push until garter spring snaps over flared end of female fitting.
6. To ensure coupling engagement, pull on female fitting and visually check to verify garter spring is over flared end of female fitting.

Condenser

NOTE: Whenever a condenser is replaced, it is also necessary to replace the suction accumulator/drier.

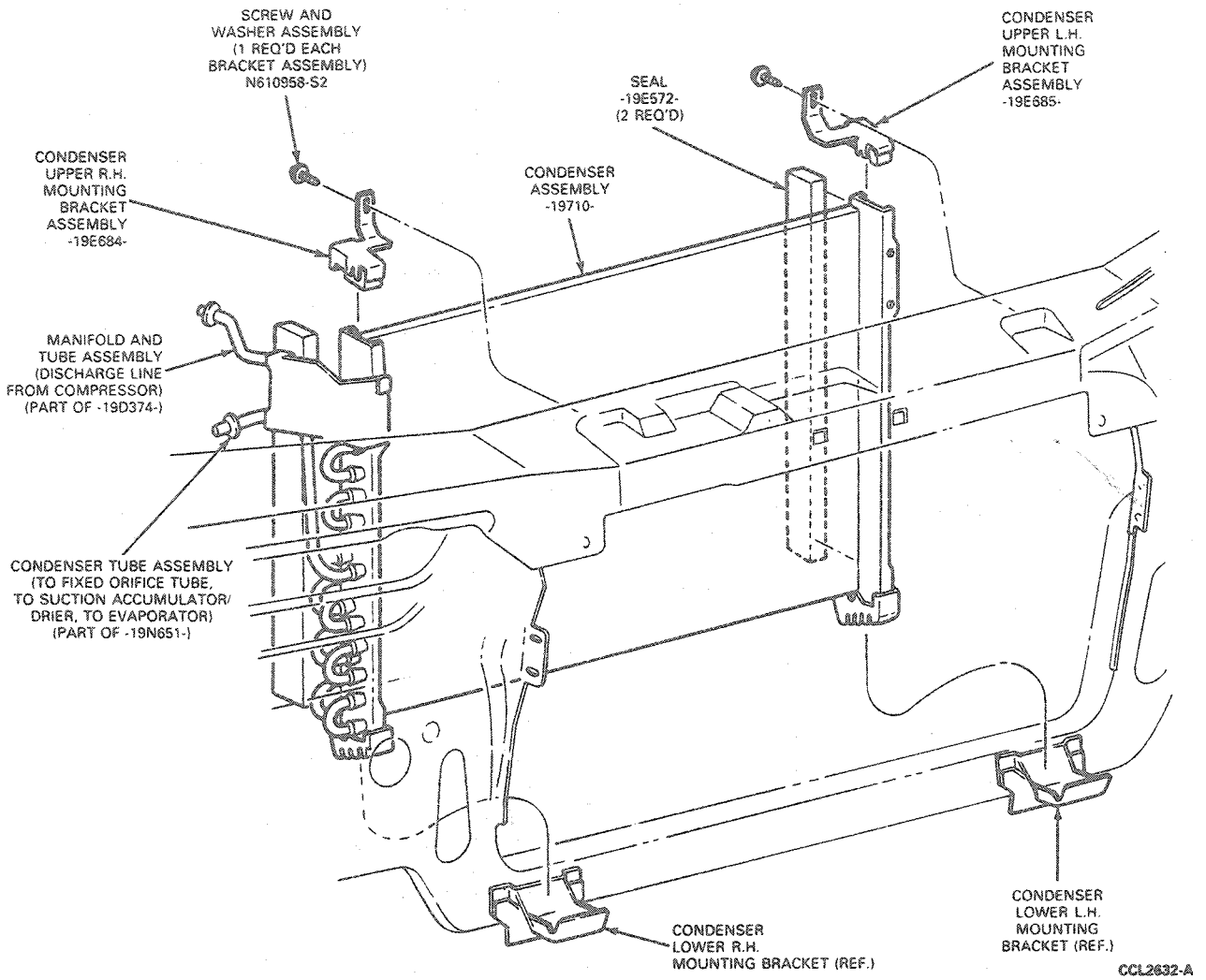
CAUTION: If a condenser leak is suspected, the condenser must be leak tested before it is removed from the vehicle. Refer to Section 12-00 for the leak test procedure.

Removal

1. Discharge refrigerant from A/C system at service access gauge port valve located on suction line. Observe all safety precautions. Refer to Section 12-00.
2. Disconnect two refrigerant lines at fittings on RH side of radiator following procedure for disconnecting spring lock couplings.
3. Remove four bolts retaining condenser to radiator support and remove condenser from vehicle.

REMOVAL AND INSTALLATION (Continued)

Condenser Assembly



Installation

1. Position condenser assembly to radiator support brackets. Install retaining bolts.
2. Connect refrigerant lines to condenser assembly using procedures for connecting spring lock couplings as outlined.

   CAUTION: Make sure correct type O-rings are installed on A/C fittings.
3. Leak test, evacuate and charge refrigerant system following recommended service procedures. Observe all safety precautions. Refer to Section 12-00.

Refrigerant Lines

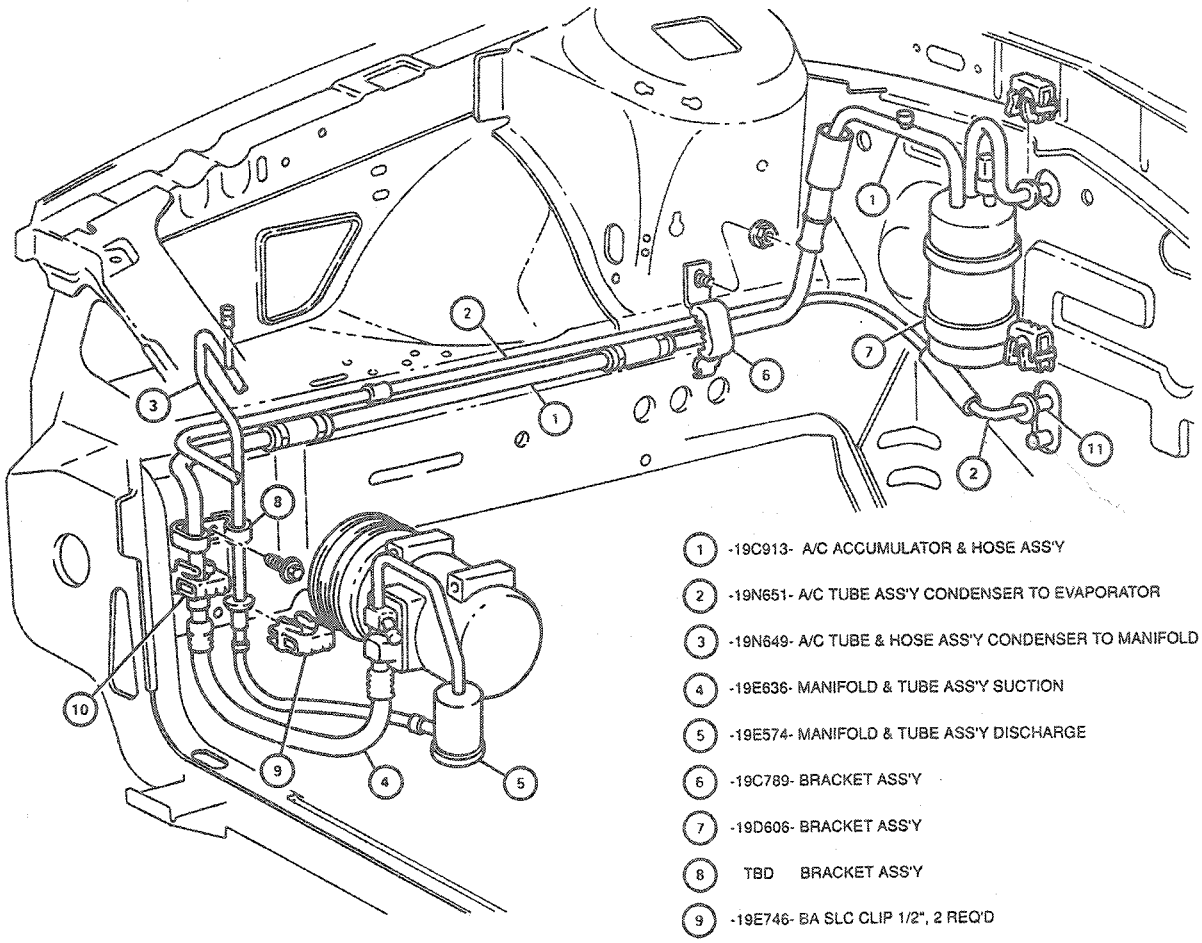
NOTE: Whenever a refrigerant line is replaced, it is also necessary to replace the suction accumulator/drier.

Removal and Installation

1. Discharge refrigerant from A/C system at low-pressure access gauge port valve located on suction line near suction accumulator/drier following recommended service procedure. Observe all safety precautions. Refer to Section 12-00.
2. Disconnect and remove refrigerant lines. At condenser, use disconnect procedure for spring lock couplings.
3. Route new refrigerant line with protective caps installed. Refer to the following illustration for 3.2L SHO engines and the next illustration for 3.0L and 3.8L engines.

REMOVAL AND INSTALLATION (Continued)

Refrigerant Lines—3.2L SHO

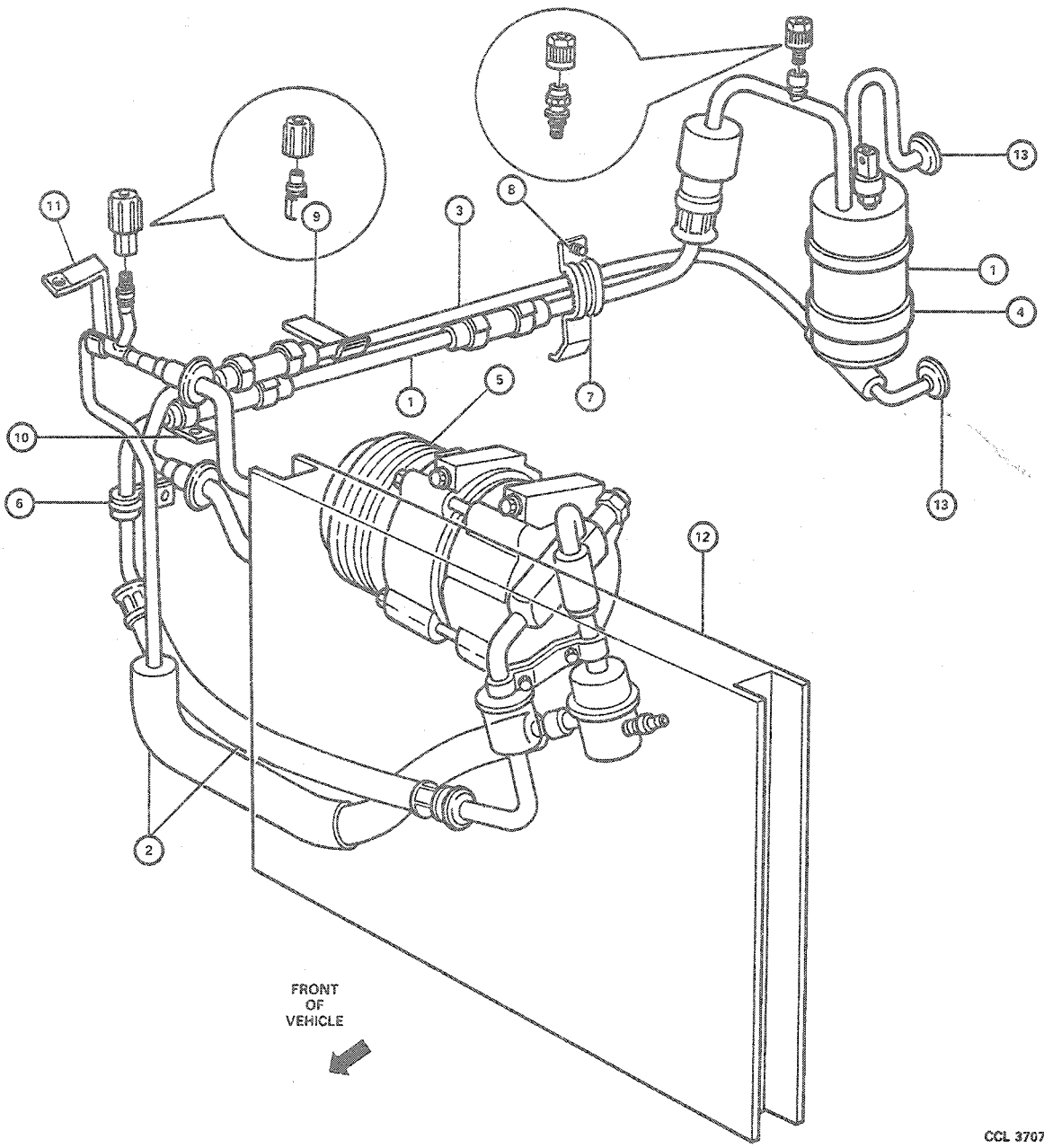


1. -19C913- A/C ACCUMULATOR & HOSE ASS'Y
2. -19N651- A/C TUBE ASS'Y CONDENSER TO EVAPORATOR
3. -19N649- A/C TUBE & HOSE ASS'Y CONDENSER TO MANIFOLD
4. -19E636- MANIFOLD & TUBE ASS'Y SUCTION
5. -19E574- MANIFOLD & TUBE ASS'Y DISCHARGE
6. -19C789- BRACKET ASS'Y
7. -19D606- BRACKET ASS'Y
8. TBD BRACKET ASS'Y
9. -19E746- BA SLC CLIP 1/2", 2 REQ'D
10. -19E746- SLC CLIP 3/4", 2 REQ'D
11. -19B555- EVAPORATOR & BLOWER ASS'Y
12. REF A/C COMPRESSOR & CLUTCH ASS'Y

CCL 3781-A

REMOVAL AND INSTALLATION (Continued)

Refrigerant Lines—3.0L, 3.8L



ITEM	DESCRIPTION
1.	ACCUMULATOR & HOSE ASSY - 19C913
2.	MANIFOLD & TUBE ASSY - 19D734
3.	CONDENSER TO EVAPORATOR TUBE ASSY - 19N651
4.	BRACKET ASSY - 19D606
5.	COMPRESSOR & CLUTCH ASSY - 19D629
6.	CLIP - N805191-S100
7.	CLIP - N806439-S100
8.	SCREW & RETAINER ASSY - N800358-S2
9.	CLIP - N805732-S
10.	CLIP - N804200-S100
11.	INLET TUBE BRACKET - 19D720
12.	CONDENSER
13.	TO EVAPORATOR

4. Connect refrigerant line into system using new O-rings lubricated with clean specified refrigerant oil. At condenser, use connecting procedure for spring lock couplings.

   CAUTION: Make sure correct type O-rings are installed on A/C fittings.

5. Leak test, evacuate and charge refrigerant system following recommended service procedures. Observe safety precautions. Refer to Section 12-00.

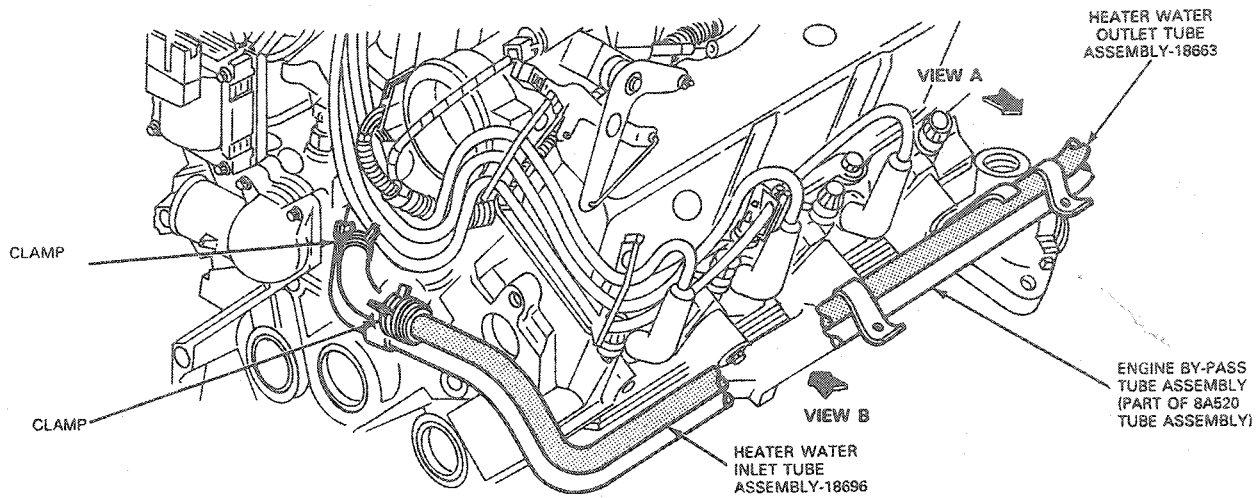
REMOVAL AND INSTALLATION (Continued)

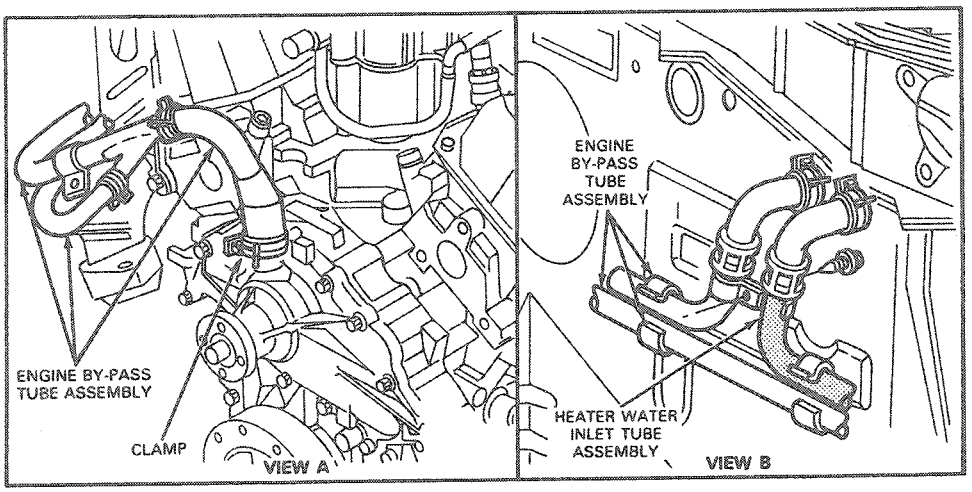
Heater Hoses

Removal and Installation

Refer to the following illustrations for proper heater hose applications.

Heater Hose Installation—3.0L Engine

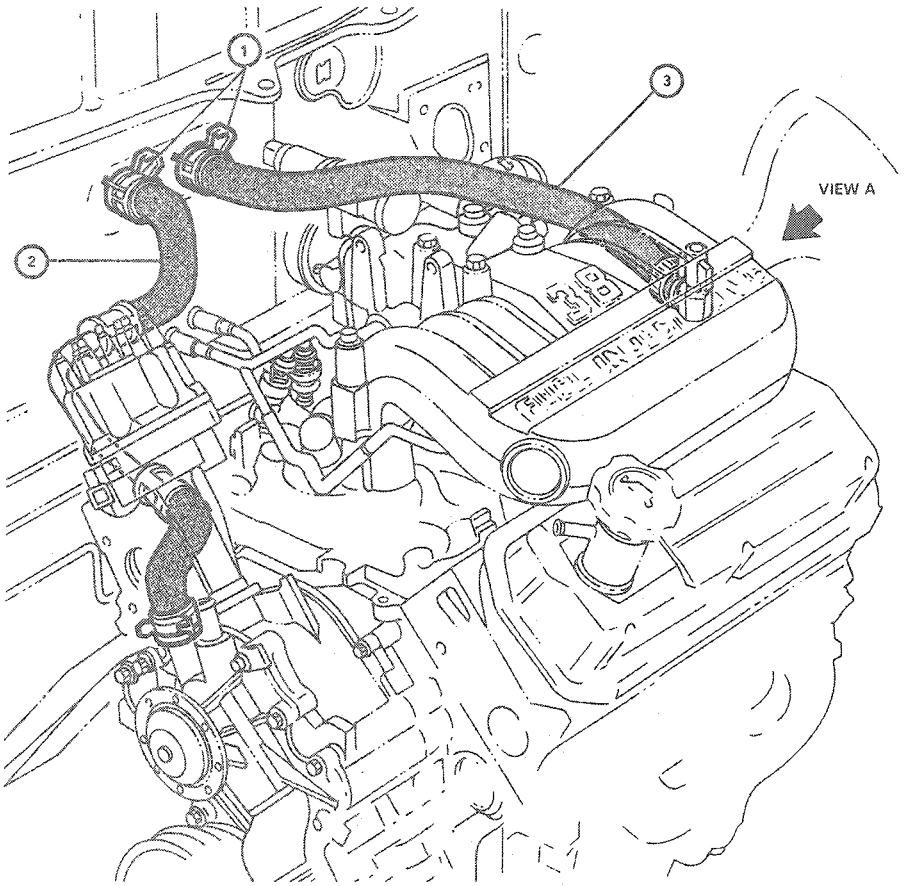


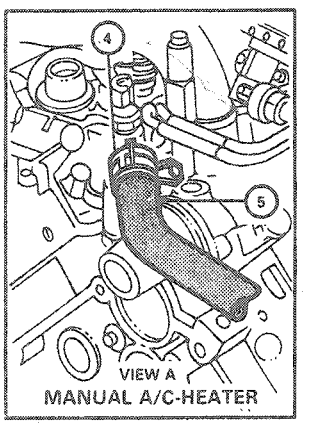


CCL 2772-D

REMOVAL AND INSTALLATION (Continued)

Heater Hose Installation—3.8L Engine



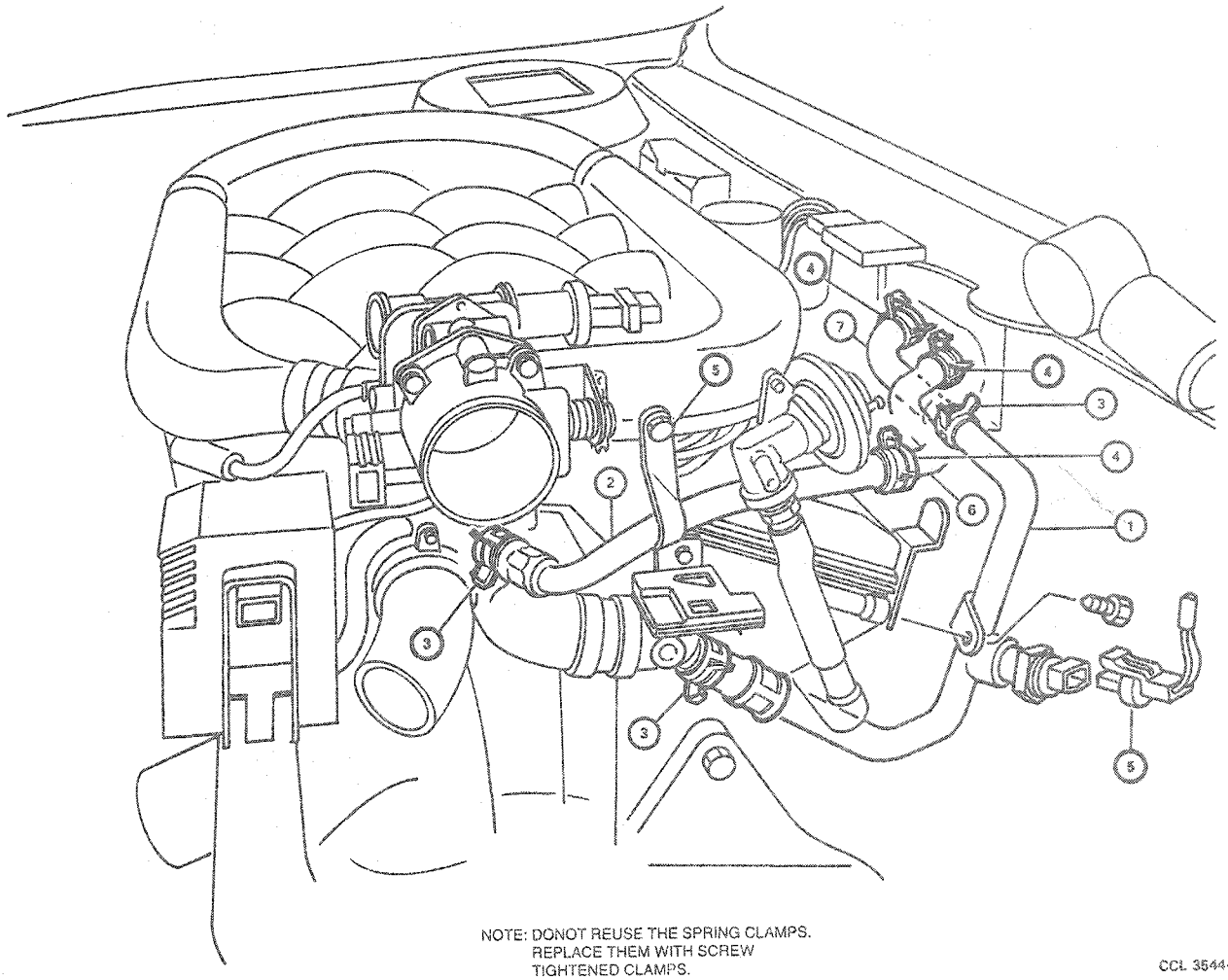


CCL3029-F

ITEM	DESCRIPTION
1.	CLAMP - 390761 (2 REQ'D)
2.	HEATER OUTLET HOSE - 18D663
3.	HEATER INLET HOSE - 18D376 (EATC ONLY)
4.	CLAMP - 390762 (1 REQ'D)
5.	HOSE - 18D334

REMOVAL AND INSTALLATION (Continued)

Heater Hose Installation — SHO Engine



NOTE: DONOT REUSE THE SPRING CLAMPS. REPLACE THEM WITH SCREW TIGHTENED CLAMPS.

CCL 3544-B

ITEM	DESCRIPTION
1.	HEATER INLET HOSE - 18D376
2.	HEATER OUTLET HOSE - 18D663
3.	SPRING CLAMP
4.	SPRING CLAMP
5.	WIRING HARNESS - 14401 ASS'Y
6.	HEATER OUTLET HOSE - 18D359
7.	HEATER INLET HOSE - 18D335

Compressor

NOTE: Whenever a compressor is replaced, it will be necessary to replace the suction accumulator / drier. For compressor service procedures and specifications refer to Section 12-03C for the FX-15, and 12-03B for the 10P15F compressor.

Vehicles that have an inoperative A / C compressor, due to internal causes, should have the refrigerant system cleaned to remove any debris or contaminants that may be present, to prevent damage to the replacement compressor.

When a compressor fails and internal damage occurs, A / C system contaminants can be produced in several ways. Refrigerant loss, poor lubrication and internal component failure can cause a number of physical and chemical reactions inside the compressor, resulting in the addition of contaminants to the A / C system.

Regular flushing procedures will not remove this type of contamination from the system. Therefore, the following A / C system flushing procedure MUST be performed before a new compressor can be installed. A new compressor should never be installed without performing this mandatory filtering procedure.

REMOVAL AND INSTALLATION (Continued)

A/C System Filtering

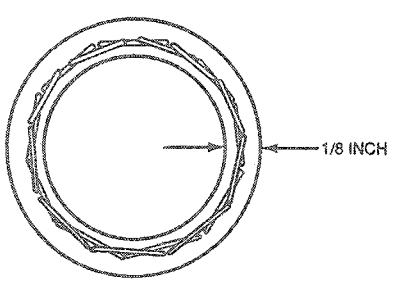
Two A/C service kits have been released to provide the necessary equipment and information to perform the new, mandatory A/C system filtering procedure. Filter kits with the service part number suffix "A" are to be used on vehicles that have a nylon lined suction hose between the suction accumulator/drier and the compressor. Filter kits with the service part number suffix "B" are for vehicles with rubber lined suction hose.

CAUTION: Follow all refrigerant system safety and service precautions as outlined.

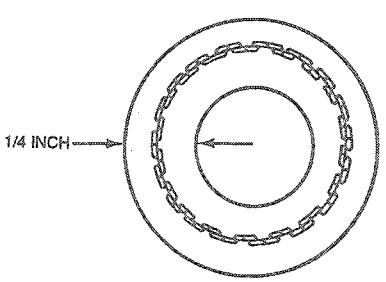
1. To Determine that the compressor has failed and must be replaced, remove the orifice tube and liquid line, if necessary. Look for a dirty orifice tube and/or a liquid line containing black refrigerant oil and particles.
2. Remove the damaged compressor and drain the oil into a calibrated container.

   NOTE: The proper amount of refrigerant oil must be added to the new compressor before it can be installed. The procedure for the FX-15 is given. However, the procedure is the same for all compressors. Refer to Section 12-00 for the quantity of oil required.
3. A new FX-15 service replacement compressor contains 207 ml (7 oz) of refrigerant oil. If the amount of oil drained from the removed compressor is between 90 and 148 ml (3 oz to 5 oz), pour the same amount of clean oil into the new compressor. If the amount of oil drained from the old compressor is greater that 148 ml (5 oz), pour only 148 ml (5 oz) of clean refrigerant oil into the new compressor. If the amount of refrigerant oil drained from the old compressor is less than 90 ml (3 oz), pour 90 ml (3 oz) of clean refrigerant oil into the new compressor.

   NOTE: It will be necessary to transfer the magnetic clutch from the old compressor to the new compressor.
4. Install the new compressor. Be sure the compressor mounting bolts are tightened to the proper specification. Check the tension of the compressor drive belt. Adjust, if necessary.
5. Remove the suction accumulator/drier assembly and drain the oil into a calibrated container.
6. Add clean refrigerant oil to the new accumulator/drier in the same amount that was removed from the old unit, plus an additional 60 ml of new refrigerant oil.
7. Install the suction accumulator/drier in the vehicle.
8. Determine the type of suction hose with which you are working. To do this, cut the suction hose into two pieces (make the cut closer to the compressor than the accumulator) and measure the hose wall thickness. Rubber lined hose has a wall thickness of 1/4 inch and nylon lined hose has a wall thickness of 1/8 inch.



NYLON HOSE

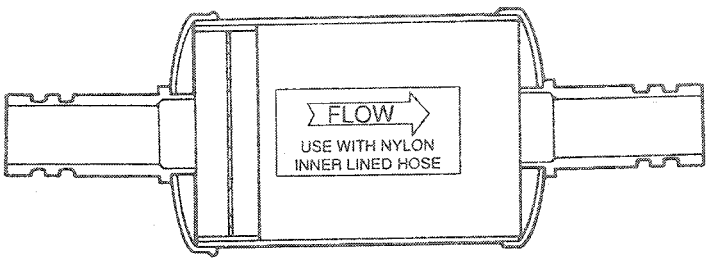


RUBBER HOSE

CCL 3765-A

REMOVAL AND INSTALLATION (Continued)

9. Get the proper service kit for the vehicle you're working on. Filter kits with the service part number suffix "A" are to be used on vehicles with a nylon lined suction hose. Filter kits with the service part number suffix "B" are for vehicles with rubber lined suction hose. The label on the filter shows which hose it is to be used with.



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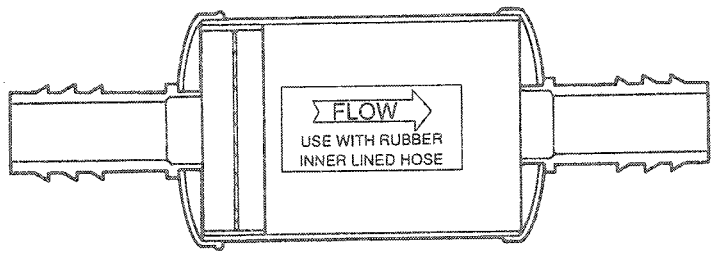


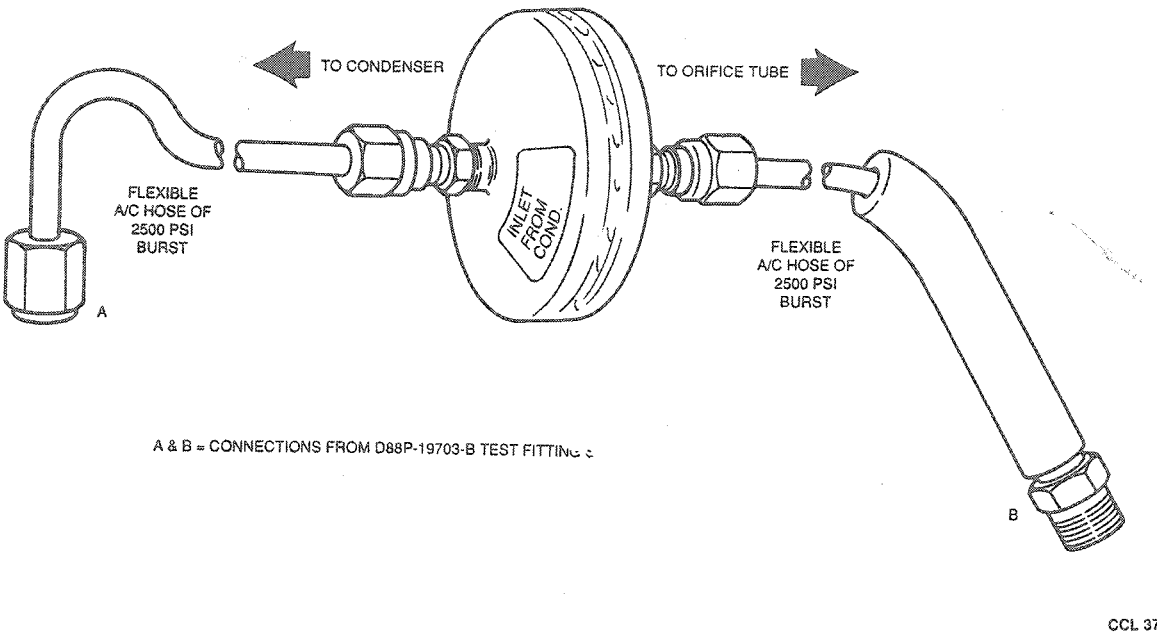
CCL 3731-A

10. Remove a length of suction hose to accommodate the suction filter and install the filter using the hose clamps provided with the kit. Be sure filter is correctly oriented for refrigerant system flow. Check the label on the filter. On the filter for nylon lined hose, install O rings (two on each filter tube being sure they are properly seated in the grooves on the tube). Tighten the hose clamps securely.

11. Install a new orifice tube. If the orifice tube is located in the liquid line between the condenser and the evaporator, replace the liquid line assembly. See Section 12-00.

REMOVAL AND INSTALLATION (Continued)

12. Install a pancake filter in the liquid line between the condenser and the orifice tube. Be sure the filter inlet is toward the condenser. Connections can be made using A/C Test Fitting Set D88P-19703-B or equivalent and flexible refrigerant hose of 2500 psi burst rating. Individual fittings are also available.



13. Evacuate, charge and leak test the system
14. check all refrigerant system hoses, lines and the positioning of the newly installed filters to be sure they do not interfere with other engine compartment components. If necessary, use tie straps to make adjustments.
15. Provide adequate air flow to the front of the vehicle (with a fan, if necessary), set the A/C control at MAX A/C . Set the blower on HI and temperature control at full cool. Start the engine and let it idle briefly. Make sure the A/C system is operating properly.
16. Gradually bring the engine up to 1200 rpm by running it at lower rpms for short periods (first at 800 rpm, then at 1000 rpm). Set the engine at 1200 rpm and run it for an hour with the A/C system operating.
17. Stop the engine.
18. Allow the engine to cool sufficiently to remove the fittings, flexible hoses and pancake filter from the liquid line. (It will be necessary to discharge the system first.)
19. Discard the pancake filter. It can be used ONE TIME ONLY.
20. Reconnect the liquid line back into the system.
21. Evacuate, charge and leak test the system. Make any necessary adjustments.
22. Check the operation of the system in all modes.

3.0L, 3.2L SHO Engines

NOTE: Whenever a compressor is replaced, it will be necessary to replace the suction accumulator/drier.

Removal

1. Discharge system following recommended service procedures. Observe all safety precautions.
2. Disconnect compressor clutch wires at field coil connector on compressor.
3. Remove accessory drive belt.
4. Disconnect hose assemblies from condenser and suction line.
5. Remove four bolts.
6. Remove compressor and manifold and tube assembly from vehicle as a unit. Assembly will not clear sub frame and radio support if attempt is made to remove unit from bottom. It must be removed from top.

REMOVAL AND INSTALLATION (Continued)

7. Remove manifold and tube assembly as an on-bench operation.
8. If compressor is to be replaced, remove clutch and field coil assembly.

Installation

1. New service replacement FX-15 and 10P15F compressors contain 207ml (7 oz) of specified refrigerant oil. Before replacement compressor installation drain 120ml (4 fluid oz) of refrigerant oil from compressor. This will maintain total system oil charge within specified limits.
2. Install manifold and tube assembly on A/C compressor (two bolts).
3. Install compressor and manifold and tube assembly on A/C mounting bracket (four bolts).
4. Using new O-rings lubricated with clean refrigerant oil, connect suction line to compressor manifold and tube assembly. Attach discharge line to A/C condenser.
5. Connect clutch wires to field coil connector.
6. Install accessory drive belt. Adjust belt tension to 190-217 N-m (141-160 lb-ft).
7. Leak test, evacuate and charge system following recommended service procedures. Observe all safety precautions.
8. Check system for proper operation.

3.8L Engine

NOTE: Whenever a compressor is replaced, it will be necessary to replace the suction accumulator/drier.

Removal

1. Discharge the system following the recommended procedure.
2. Drain and save radiator coolant following the recommended procedure.
3. Disconnect negative battery cable.
4. Disconnect and remove the integrated relay module.
5. Disconnect and remove the fan and shroud assembly.
6. Disconnect upper and lower radiator hoses.
7. Remove the radiator.
8. Disconnect A/C compressor magnetic clutch wire at field coil connector on the compressor.
9. Remove top two compressor mounting bolts.
10. Raise vehicle on a hoist. The following operation should be performed from underneath the vehicle.
11. Loosen and remove accessory drive belt.
12. Disconnect Heated Oxygen Sensor (HO2S) 9F472 wire connector.
13. Remove A/C muffler supporting strap bolt from subframe.
14. Disconnect A/C system hose from condenser and suction accumulator/drier using the spring lock coupling tool or equivalent. Immediately install protective caps on open lines.
15. Remove bottom two compressor mounting bolts. Ensure compressor is properly supported as the bolts are removed.
16. Remove compressor, manifold and tube assemblies from vehicle as a unit. The assembly can be removed from the bottom using care not to scrape against the condenser.
17. Remove manifold and tube assemblies from compressor.
18. If the compressor is to be replaced, remove clutch and field coil assembly.

Installation

1. A new service replacement FX15 compressor contains 207ml (7 oz) of specified refrigerant oil. Before installing a new compressor, drain 120ml (4 oz) of refrigerant oil from the compressor. This will maintain total system oil charge within specified limits.
2. Using new O-rings, lubricated with clean refrigerant oil, install manifold and tube assemblies onto the new compressor.
3. Install compressor, manifold and tube assemblies onto compressor mounting bracket
4. Using new O-rings lubricated with clean refrigerant oil, connect suction line to compressor and manifold assembly.
5. Using new O-rings lubricated with clean refrigerant oil, connect discharge line to compressor and manifold assembly.
6. Install muffler support onto subframe.
7. Connect Heated Oxygen Sensor (HO2S) 9F472 wire connector.
8. Install accessory drive belt.
9. Lower vehicle to floor and perform the following operations from the top.
10. Install radiator using the recommended procedure.
11. Connect radiator hoses and tighten hose clamps to specification.
12. Install fan and shroud assembly.
13. Install and connect integrated relay connector.
14. Connect negative battery cable.
15. Fill radiator with the reserved coolant.
16. Leak test, evacuate and charge system following recommended procedures.
17. Check system for proper operation.

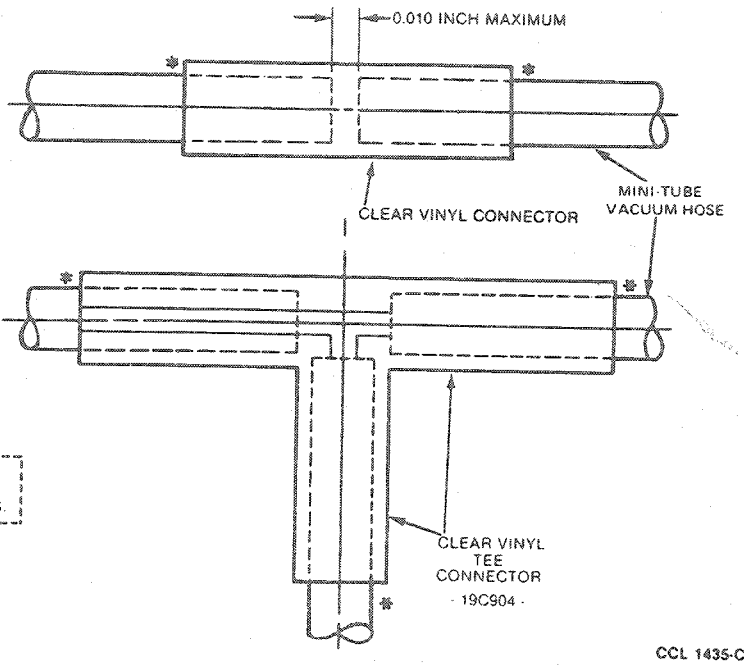
ADJUSTMENTS

Mini-Tube Vacuum Hose Service

1. Measure length of damaged area of mini-tube vacuum hose.

ADJUSTMENTS (Continued)

2. Cut a piece of standard 3mm (1/8 inch) ID vacuum hose approximately 25mm (1 inch) longer than the damaged area of mini-tube vacuum hose.
3. Cut off mini-tube vacuum hose on each side of damaged area.
4. Dip mini-tube hose ends in Tetra Hydro Furan (THF) or Methyl Ethyl Ketone (MEK). This solvent will seal mini-tube to vacuum hose.
5. Insert ends of mini-tube vacuum hose approximately 9mm (3/8 inch) into ends of standard 3mm (1/8 inch) service vacuum hose section.



6. Shake repair joint after assembly to ensure solvent is dispersed and vacuum line is not plugged.
7. Test system for a vacuum leak in service area.

Adding Refrigerant Oil

It is imperative that the specified type and quantity of refrigerant oil be maintained in the refrigerant system for proper operation. A surplus of oil, the wrong oil, the wrong viscosity or insufficient oil will all cause refrigerant system concerns. Insufficient oil or the wrong oil results in poor lubrication and possible compressor damage. A surplus of oil allows too much oil to circulate with the refrigerant causing the cooling capacity of the system to be reduced.

When it is necessary to replace a refrigeration system component, certain procedures must be followed to ensure that the total oil charge on the system is correct after the new component is installed. During normal A/C operation, some refrigerant oil is circulated through the system with the refrigerant and some is retained in the compressor. If certain components of the system are removed for replacement, some of the refrigerant oil will go with the component. To maintain the original total oil charge, it is necessary to compensate for the oil loss by adding oil to the system with the replacement part. Refer to Section 12-00 for oil adding procedures.

Compressor

NOTE: Whenever a compressor is replaced, it will be necessary to replace the suction accumulator/drier.

Refer to Section 12-03B or 12-03C for compressor refrigerant oil information and replacement.

ADJUSTMENTS (Continued)

Accumulator / Drier

Drain the oil from the removed accumulator / drier through the Schrader valve fitting of the pressure switch with the valve stem removed into a calibrated measuring container. Add the same amount of clean YN-9 refrigerant oil to the new accumulator / drier after installation.

NOTE: If more than 147.85ml (5 oz) of refrigerant oil is removed from an accumulator / drier, it is an indication that the oil drain hole in the accumulator / drier is plugged. Always check the accumulator / drier for excessive oil if the compressor has been replaced for lack of performance.

Evaporator Core

NOTE: Whenever an evaporator core is replaced, it will be necessary to replace the suction accumulator / drier.

Add 88.71ml (3 oz) of clean YN-9 refrigerant oil to the accumulator / drier inlet tube whenever the evaporator core is replaced. This will compensate for the refrigerant oil lost in the replaced evaporator core.

Condenser

NOTE: Whenever a condenser is replaced, it will be necessary to replace the suction accumulator / drier.

Add 29.57ml (1 oz) of clean YN-9 refrigerant oil to the condenser or the accumulator / drier if the condenser is replaced.

Other Refrigerant System Components

Replacement of other refrigerant system components such as hoses, compressor valves, pressure switch, etc. do not require the addition of refrigerant oil unless the hose burst during system operation. Then the amount of oil to be added must be determined by the technician. Refer to Section 12-00.

SPECIFICATIONS

REFRIGERANT SYSTEM COMPONENTS AND CAPACITIES

Vehicle (1)	Compressor	Clutch Cycling Pressure Switch (2)	Fixed Orifice Tube	Refrigerant Capacity (3)	
				(oz.)	(kg.)
3.0L EFI	FX-15	X	X	32 ± 1	.91 ± 0.028
3.8L	FX-15	X	X	32 ± 1	.91 ± 0.028
3.0L SHO	10P15F	X	X	32 ± 1	.91 ± 0.028

(1) All models equipped with Suction Accumulator / Drier

(2) Pressure switch open at 169 kPa (24.5 psi)

(3) Plus (2 oz.) (.57 kg.) minus (2 oz.) (.057 kg.)

REFRIGERANT SYSTEM

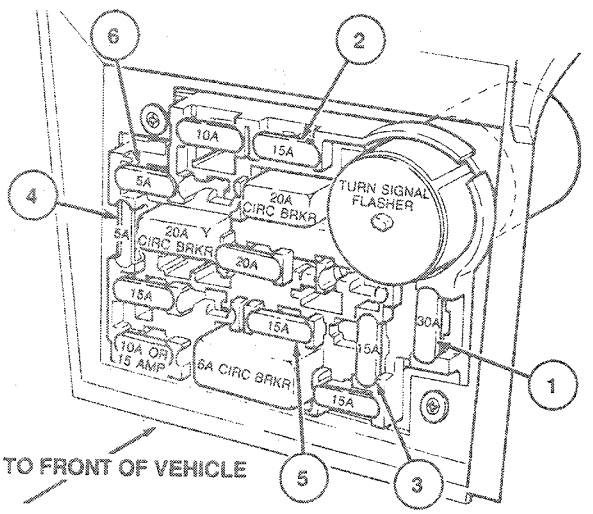
Description	Specification
System Protection Clutch Cycling Pressure Switch	Close Maximum 40-47 psi Open Minimum 22-28 psi
High Pressure Relief Valve[1]	3103 kPa (450 psi) minimum
Capacity 3.0L	32 Oz. ± 1 Oz.
3.8L	32 Oz. ± 1 Oz.
Type Refrigerant 12 (R-12)	Dichlorodifluoromethane CCL_2F_2
ESA-M17B2A	D4AZ-19B519-A, Ford YN1-A, 14 Oz. Can, Motorcraft YN-7, 30 Lb. Container
Refrigerant Oil	YN-9

1 Located in high pressure hose near compressor.

ELECTRICAL SYSTEM

System Protection	Fuse No.	Fuse Amps Rating
Blower Motor	1	30 Amp
A / C Clutch, Accessory Run, Blend Door	2	15 Amp
EATC Power On	3	15 Amp
EATC Panel Lamps	4	5 Amp
EATC LCD (Display)	5	15 Amp Headlamps Off
	6	5 Amp Headlamps On
EATC Memory	7	5 Amp

SPECIFICATIONS (Continued)



THE FUSE PANEL IS LOCATED IN THE LOWER LH SIDE OF THE INSTRUMENT PANEL, BEHIND A COVER WHICH MUST BE REMOVED FOR ACCESS. L6394-B

TORQUE SPECIFICATIONS

Description	N·m	Lb-Ft
Ambient Sensor Retaining Nut	6.2-7.3	55-64 (Lb-In)
Cold Engine Lockout (CELO) Switch	19	14

SPECIAL SERVICE TOOLS

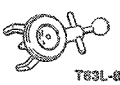
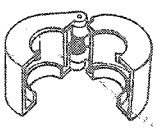
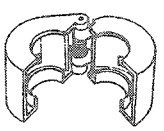
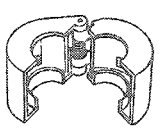
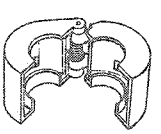
SPRING LOCK COUPLING COMPONENTS

Description	Part No.
O-Ring	3/8 inch — 391396
	1/2 inch — 391397
	5/8 inch — 391304
	3/4 inch — 391305
Garter Springs	3/8 inch — E1ZZ-19E576-A (YF-990)

(Continued)

SPRING LOCK COUPLING COMPONENTS (Cont'd)

Description	Part No.
	1/2 inch — E1ZZ-19E576-A (YF-991)
	5/8 inch — E35Y-19E576-A (YF-1134)
	3/4 inch — E69Z-19E576-A

Tool Number/ Description	Illustration
T63L-8620-A Belt Tension Gauge	 T63L-8620-A
T81P-19623-G1 Spring Lock Coupling Disconnect Tool— 3/8 inch	 T81P-19623-G1
T81P-19623-G2 Spring Lock Coupling Disconnect Tool — 1/2 inch	 T81P-19623-G2
T83P-19623-C Spring Lock Coupling Disconnect Tool — 5/8 inch	 T83P-19623-C
T85L-19623-A Spring-Lock Coupling Disconnect Tool — 3/4 inch	 T85L-19623-A