

JEEP AIR

SPECIALIZING IN JEEP A/C COMPONENTS AND A/C KITS

WWW.JEEPAIR.COM

2011 Jeep Wrangler JK

Complete Air Conditioning System

Installation instructions

**Not affiliated with Fiat Chrysler Automobiles. Jeep and Wrangler are registered trademarks of FCA and are used for identification purposes only. **

Important information about your system, and warranty

- **DO NOT ADD ANY OIL TO ANY PART OF THE SYSTEM.**
- **DO NOT OVERCHARGE THE SYSTEM**

This is a brand new a/c kit that is capable of a vent temperature of 39-47 degrees. The kit is not designed for sealer, dye, or Freon substitutes. If these substances are used we are not responsible for the performance of the a/c system.

This kit was created with the customer in mind. It is the simplest kit on the market to install, and it can be done without any special tools. The kit will fit into the Jeep just as the factory designed it too. Follow the directions and you will have cold air conditioning in less than a day. Before beginning the installation please read the directions provided, to get familiar with the kit and installation process. Upon arrival please go through the checklist on page 4. If any parts are not included contact us immediately. We are not responsible for any missing parts after 4 business days.

The Jeep Air team would like to thank you for your recent purchase of a complete a/c kit. There are a few steps that must be followed in order for your a/c system to operate properly.

- The **HIGH SIDE** gauge reading should not exceed 250 PSI. We **MUST** have the **HIGH SIDE** gauge reading if you need any assistance in correcting a potential problem.
- If you purchased the a/c compressor from **Jeep Air**, **DO NOT ADD ANY OIL, DYE, LEAK SEALANTS, OR OTHER ADDITIVES TO ANY PART OF THE SYSTEM.** If oil is required, Jeep Air will provide an additional sheet with **directions on filling the system with oil.**
- There should be adequate airflow from the radiator fan, and a sufficient amount of room between the condenser and radiator. Make sure the **CONDENSER HAS A TUNNEL EFFECT OF AIRFLOW THAT FLOWS THROUGH THE CONDENSER AND RADIATOR.** Foam can be put in between condenser and the radiator edges to achieve a proper airflow effect. There should be ¼” to 1” gap in between the radiator and condenser. **EFFECTS OF INADEQUATE AIRFLOW:** the compressor may act like it is “locking up”; warm air only from the vents, overheating of the engine, high head pressure, air blows cold at idle and blows warm while driving, and more.

→ **If a problem exists after checking all these conditions you may call or email for technical assistance. IF YOU DO NOT HAVE THE HIGH SIDE GAUGE READING WE WILL NOT BE ABLE TO ASSIST YOU IN FIXING THE PROBLEM.**

Jeep Air highly recommends the system be evacuated and charged by a professional A/C shop in your local area if you've never done this type of work before. Though evacuating and charging is not difficult, specialty tools are required to perform the job. For the person with do-it-yourself capabilities, we've provided supplemental instructions so you can charge the system yourself with access to the right tools.

If you have a problem with the system we ask you to call before diagnosing or changing any parts. We can fix problems easier if the system is not tampered with. If you have a warranty claim you need to call or email prior to shipping any parts back. **OUR POLICY IS TO GET THE OLD PART BACK PRIOR TO SHIPPING ANY NEW PARTS OUT UNLESS A REPLACEMENT IS PURCHASED FROM US.**

Warranty Returns can be handled in two ways:

1. Ship the warrantied part back to us for inspection. Once the part is approved for warranty you will be shipped a replacement part. (For further clarification on why a part would not be approved for warranty please see below)
2. If you need a replacement part immediately, you can provide us with a credit card and you will be charged for a replacement part and one will be shipped out. Once the warrantied part is shipped back to us, inspected and approved for warranty you will be issued a refund on your credit card.

Reasons why a part would not be approved for a warranty claim:

- Cracked compressors from improper installation
- Compressor with broken valves from overcharging of oil or refrigerant
- Burned up clutches from too high of head pressure

If the technical department is unable to determine any defect with the part. If no defect is found, the part will be returned to the customer and a proper diagnosis will need to be done to find the real issue. If a part is not approved for a warranty claim we will do our best to offer you a replacement product at a fair discounted price.

Jeep Air will not refund your account if you purchase another part in replacement of the defective part.

We are available for support Monday through Friday. Please note when planning the installation we do observe all major holidays and are closed the last two weeks of December.

1-800-223-7167

sales@jeepair.com

CHECKLIST

- | | |
|---|----------------|
| <input type="checkbox"/> COMPRESSOR | PN: 91-4034 |
| <input type="checkbox"/> EVAPORATOR | PN: 96-7360 |
| <input type="checkbox"/> EXPANSION VALVE (INSTALLED ON EVAPORATOR) | PN: 94-9882 |
| <input type="checkbox"/> CONDENSER AUTOMATIC TRANSMISSION | PN: 93-7895 |
| MANUAL TRANSMISSION | PN: 93-7891 |
| <input type="checkbox"/> RECEIVER DRIER (INSTALLED ON CONDENSER) | PN: 92-8278 |
| <input type="checkbox"/> DISCHARGE LINE | PN: 79-5588 |
| <input type="checkbox"/> SUCTION AND LIQUID LINE ASSEMBLY | PN: 79-5589 |
| <input type="checkbox"/> HIGH PRESSURE SWITCH (INSTALLED ON D/L) | PN: 119-9886 |
| <input type="checkbox"/> WIRE HARNESS ASSEMBLY | PN: 20-6153-3 |
| <input type="checkbox"/> THERMOSTAT | PN: MT0761 |
| <input type="checkbox"/> PUSH BUTTON SWITCH | PN: 29-11801 |
| <input type="checkbox"/> A/C AND HEATER CONTROL HEAD | |
| WITH REAR DEFROSTER | PN: 55111840AE |
| WITHOUT REAR DEFROSTER | PN:55111841AE |
| <input type="checkbox"/> DRIVE BELT | PN: 900K6 |
| <input type="checkbox"/> HARDWARE BAG | PN: 920-1010 |

STEP 1 Installation

1. Disconnect and isolate the negative battery cable.
2. Drain the engine cooling system. Remove the radiator pressure cap from the radiator. Raise and support the vehicle. Attach one end of a hose to the drain cock ((Figure 1.1) 1: Radiator Pressure Cap, 2: Draincock) and put the other end into a cleaner. Now you can open the draincock and the coolant will drain from the radiator into your container.
3. Disconnect the hose from the radiator filler neck located below the radiator cap (1) and remove the coolant recovery bottle (3). FIG 1.2

FIG. 1.1

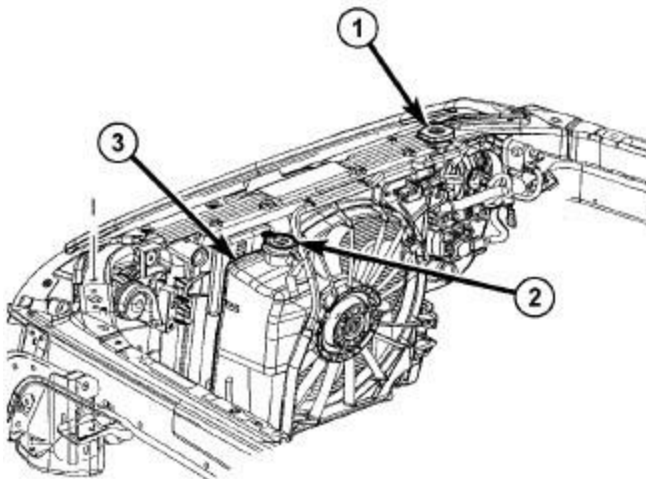
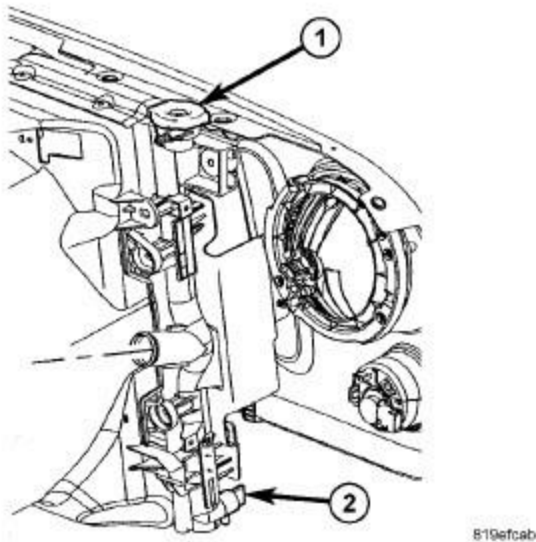
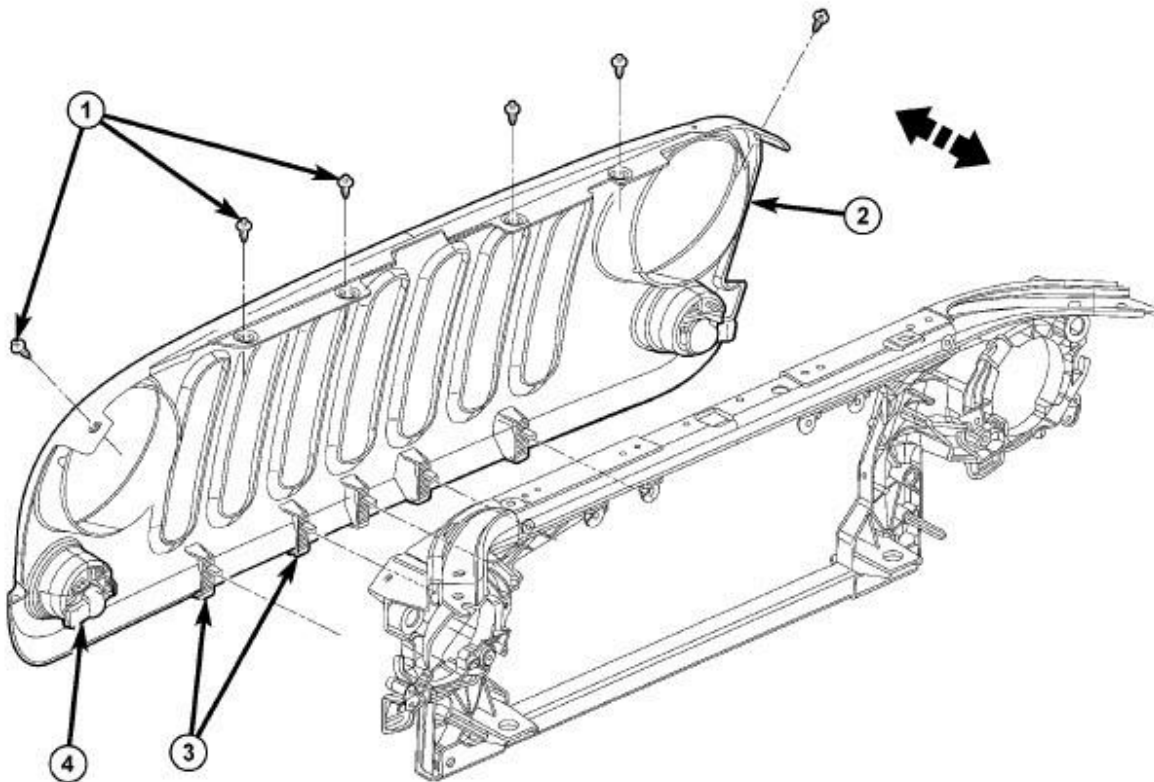


FIG 1.2

STEP 2
Grille Removal

- 2.1. Twist the center of the push pin insert to release and remove the six push pin fasteners (1). FIG 2.1
 - 2.2. Using a trim stick or equivalent, release the low clips (3) and separate the grille from the front end module. FIG 2.1
 - 2.3. Disconnect the electrical connectors (4). FIG 2.1
- FIG 2.1

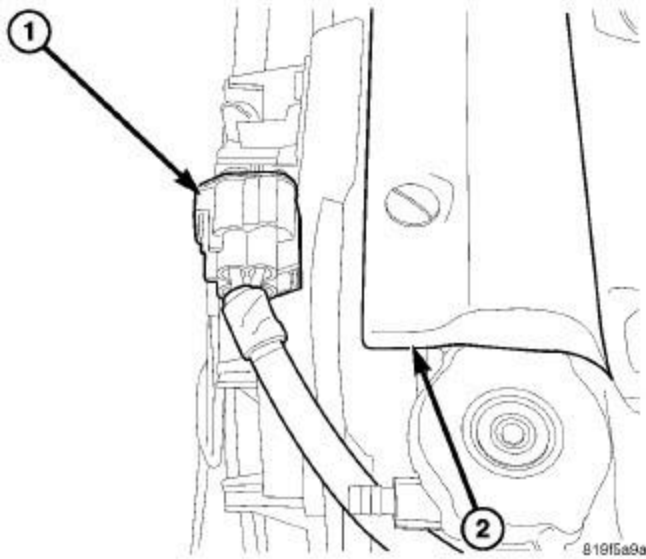


81974d4

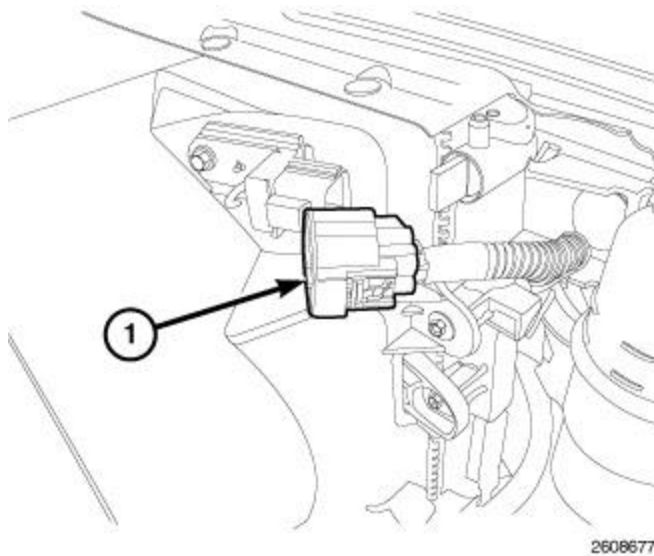
STEP 3
Cooling Fan Removal

- 3.1. Remove the windshield washer fluid reservoir.
- 3.2. Remove the upper radiator seal. FIG 3.1

FIG 3.1

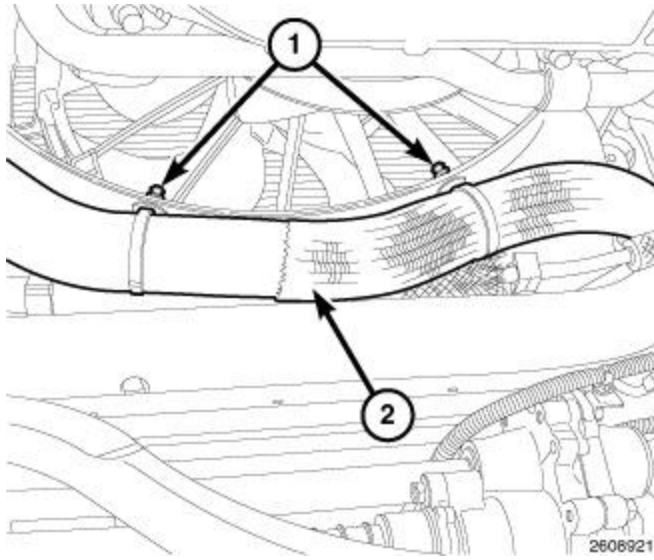


- 3.3. Disconnect the electric fan jumper harness (1) at the fan shroud and fan. FIG 3.2



- 3.4. Remove the viscous fan from the fan pulley
- 3.5. Raise and support the vehicle
- 3.6. Remove the lower radiator seal push pins
- 3.7. Remove the lower radiator hose to fan shroud retainers (1). FIG 3.3

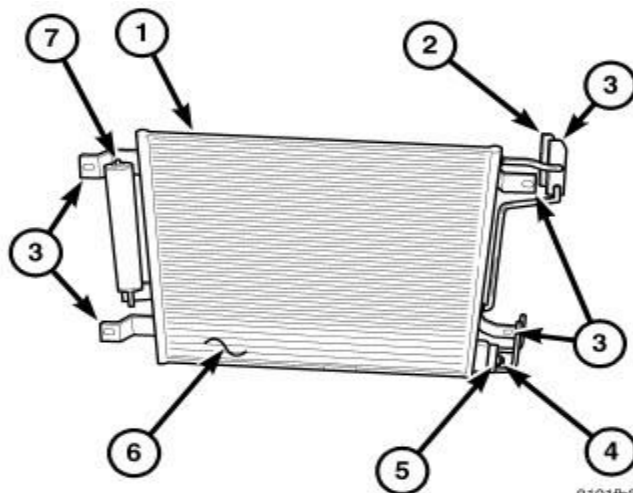
FIG 3.3



- 3.8. Remove the lower electric cooling fan mounting bolts
- 3.9. Lower the vehicle
- 3.10. Remove the upper fan shroud mounting bolts
- 3.11. Remove the upper electric cooling fan mounting bolts
- 3.12. Remove the viscous fan, fan shroud and electric cooling fan as an assembly

STEP 4
Installing the Condenser
Manual Transmission

- 4.1. Carefully push the top of the radiator rearward to provide clearance
- 4.2. Position the condenser to the front of the radiator
- 4.3. Install the five retaining bolts (3). Tighten the bolts to 5 Nm, (45 in lbs). FIG 4.1
- 4.4. Position the radiator to the radiator support and install the two retaining bolts. Tighten the bolts securely. *Note: You may need to adjust the condenser mounting tabs.



8191fb61 FIG 4.1

Automatic Transmission

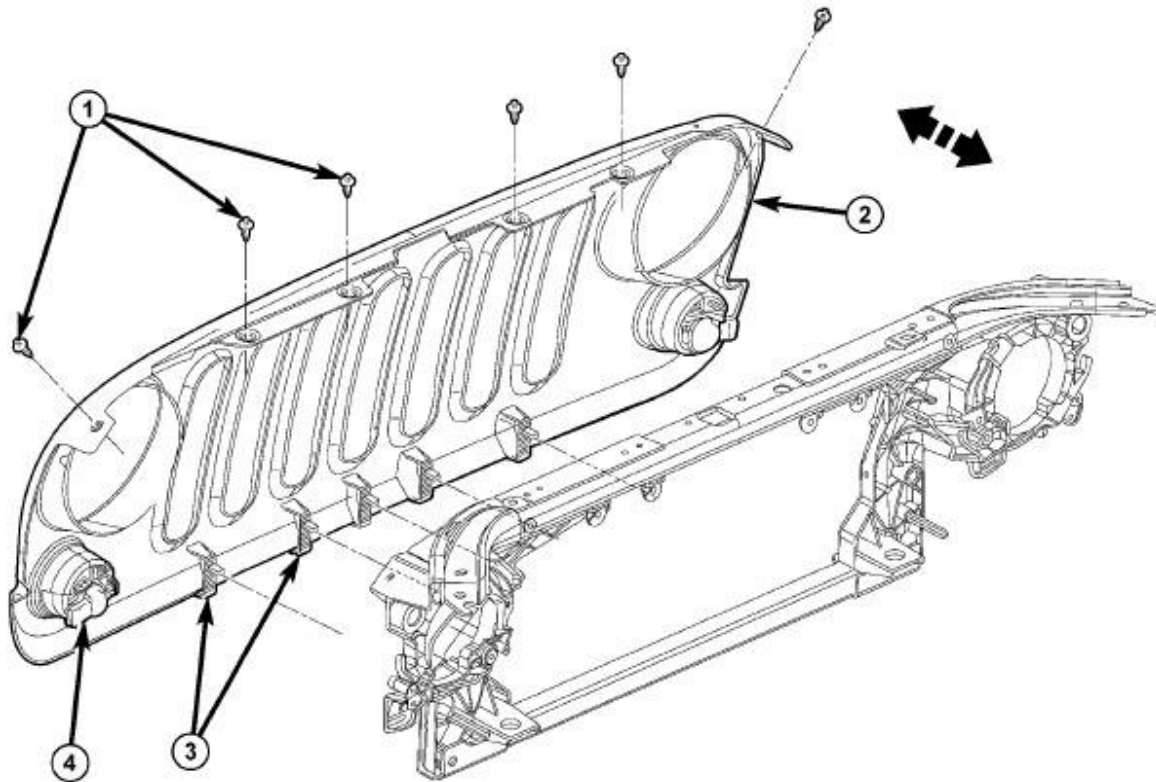
1. Remove lower radiator seal
2. Remove lower radiator hose
3. Loosen Horn mounting bolt. Rotate horn out of the way
4. Remove a/c tubing mounting bracket bolt?
5. Remove radiator mounting bolts
6. The lower part of the radiator is equipped with two alignment dowel pins. They are located on the bottom of the radiator tank and fit into rubber grommets. These rubber grommets are pressed into the radiator lower crossmember.
7. Lift radiator straight up and out of vehicle taking care not to damage radiator fins
8. When removing the radiator, note the position of the rubber seals located on the top and bottom of the radiator (on certain models only). To prevent possible overheating, these seals must be installed to their original position.
9. Position the condenser to the front of the radiator on the workbench
10. Install the five retaining bolts (3). Tighten the bolts to 5 Nm (45 in. lbs).
11. Guide the two radiator alignment dowels into the rubber grommets located in lower radiator crossmember. Install and tighten mounting bolts to 8 Nm (70 in. lbs.) torque.
12. Position combination condenser/transmission oil cooler in J-clips and install mounting bolts. Tighten bolts to 8 Nm (70 in lbs) *You may need to adjust the condenser mounting tabs.

STEP 5

Wrapping up Front End

- 5.1. Position horn and tighten mounting bolt to 8 Nm (70 in lbs)
- 5.2. Install the electric cooling fan
 - A. Position the electric cooling fan, fan shroud and viscous fan in to the vehicle as an assembly
 - B. Install the upper electric fan mounting bolts. Tighten the bolts to 6 Nm (53 in. lbs)
 - C. Install the upper fan shroud mounting bolts. Tighten the bolts to 8 Nm (71 in. lbs)
 - D. Raise and support the vehicle
 - E. Install the lower electric fan mounting bolts. Tighten the bolts to 6 Nm (53 in. lbs)
 - F. Install the lower radiator hose to a fan shroud retainers.
 - G. Install the lower radiator seal push pins
 - H. Lower the vehicle
 - I. Install the viscous fan to the fan pulley
 - J. Connect the electric fan jumper harness at the fan shroud and fan
 - K. Install the upper radiator seal
 - L. Install the windshield washer fluid reservoir
 - M. Position and install the lower radiator seal
- 5.3. Install the front grill
 - A. Connect the electric connectors (4)
 - B. Position the grille (2) onto the front end module and seat the clips (3) fully
 - C. Install the push pin fasteners (1) FIG 2.7

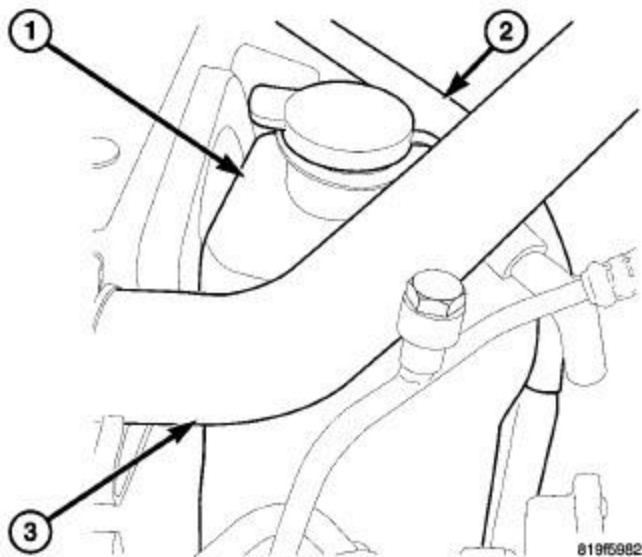
FIG 5.1



81974td4

- 5.4. Connect radiator hoses (2, 3) and install hose clamps
- 5.5. Install coolant recovery container (1) FIG 5.2
- 5.6. Fill cooling system with correct coolant

FIG 5.2



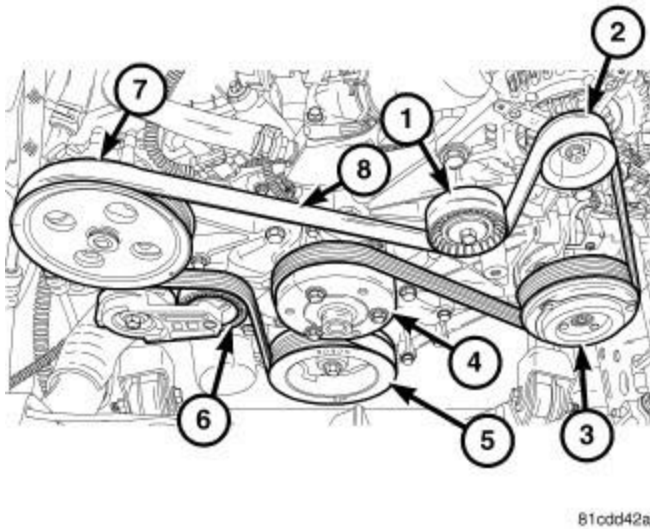
81975882

STEP 6

Compressor Installation

- 6.1. Drive belt removal
 - A. Rotate accessory belt tensioner (6) clockwise until it contacts its stop. Remove the accessory drive belt (8), then slowly rotate the accessory drive belt tensioner (6) into the freearm position. (Do not let the tensioner arm snap back to the freearm position, severe damage may occur to the tensioner). FIG 6.1
- 6.2. Remove a/c bypass pulley and bracket
- 6.3. Compressor Installation
 - A. Line compressor up with mounting holes. Install three bolts and lock washers

FIG 6.1



STEP 7

Evaporator Installation

- 7.1. In order to remove the heater hoses you will need to remove the upper intake manifold. Once it is removed you will have access to the hose clamps that secure the heater hoses to the heater core.
- 7.2. Disconnect the electrical connector from the Inlet Air Temperature (IAT)(2) sensor. FIG 7.1
- 7.3. Remove air inlet resonator to throttle body hose assembly (1) FIG 7.1
- 7.4. Disconnect the throttle body (1) electrical connector (3) FIG 7.2
- 7.5. Disconnect the EVAP hose at the throttle body.
- 7.6. Remove the EGR tube.
- 7.7. Disconnect the electrical connector from the Manifold Absolute Pressure (MAP) sensor.
- 7.8. Disconnect the PCV hose from the upper intake manifold.
- 7.9. Remove the upper intake manifold bolts and remove the manifold
- 7.10. Cover the lower intake manifold ports with a suitable cover while the upper manifold is removed.
- 7.11. Using clamp style pliers you can release the hose clamps that secure the heater hoses to the heater core tubes and disconnect the hoses. Make sure to cap off or tape over the open heater core tubes to prevent coolant from spilling out.

FIG 7.1

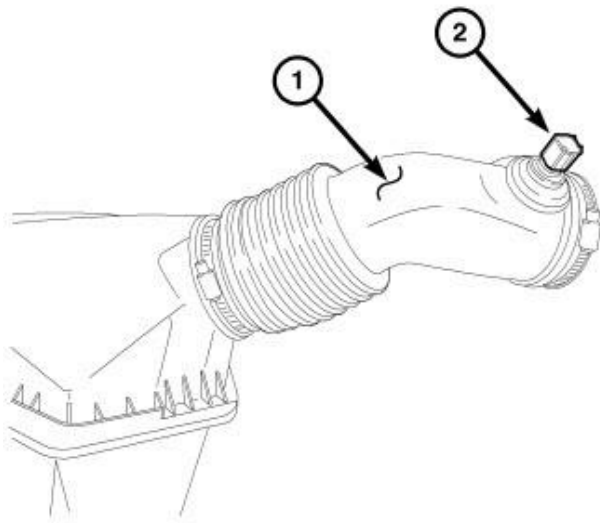
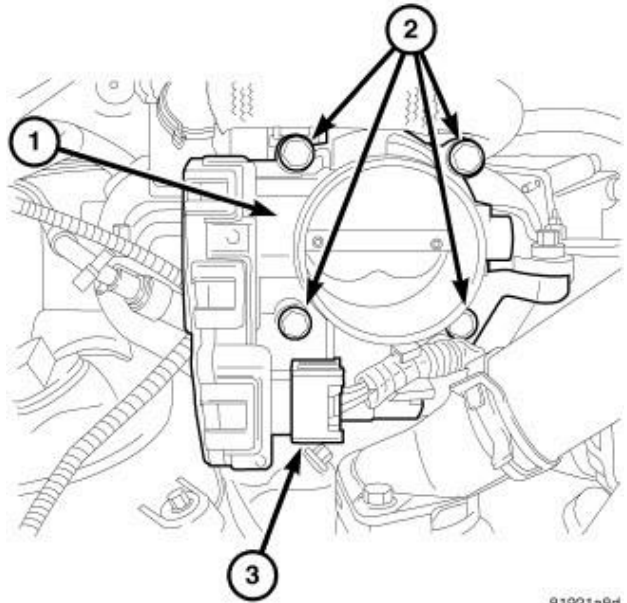


FIG 7.2

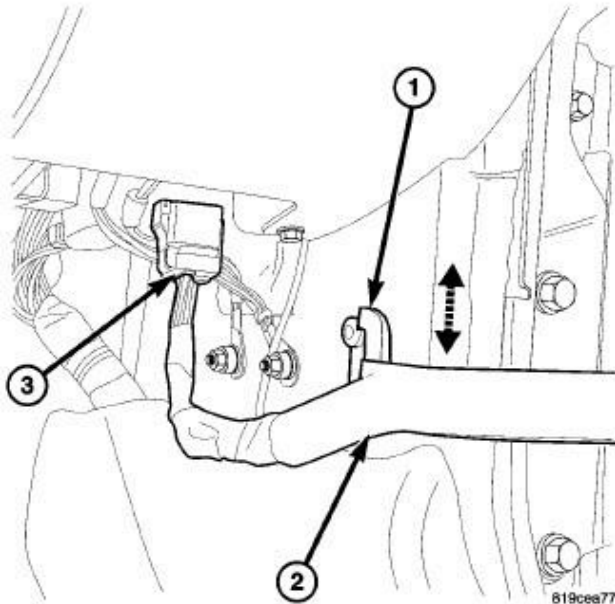


81920ee6

81921a8d

Instrument Panel Removal

- 7.12. Disconnect the electrical connector (3) at the A-pillar cowl area and separate the check strap (2) from the footmans loop (1) (FIG 7.3)



819cea77

FIG 7.3

- 7.13. Open the doors past 90 degrees to help in removing the instrument panel.
7.14. Remove the center console
7.14.1. 4X4 Models Only: Slide the shift lever back towards the seat and pull in an upward motion with a "quick" snap to remove the knob. If you are unable to remove the knob by

hand wrap a shop towel around the base (4) of the knob (3) and use a puller (2) and slide hammer (1) to remove it. (FIG 7.4 and FIG 7.5)

FIG 7.4

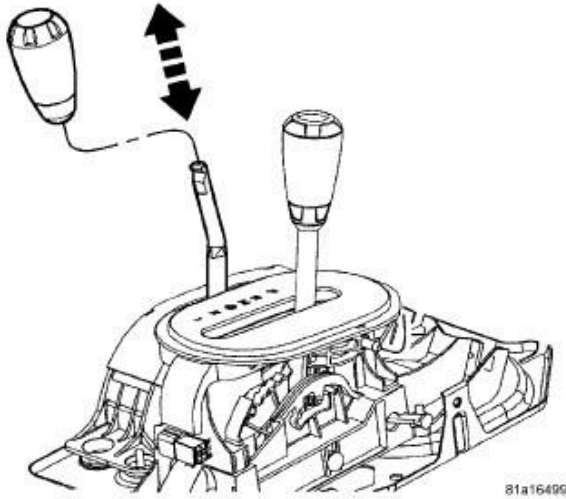
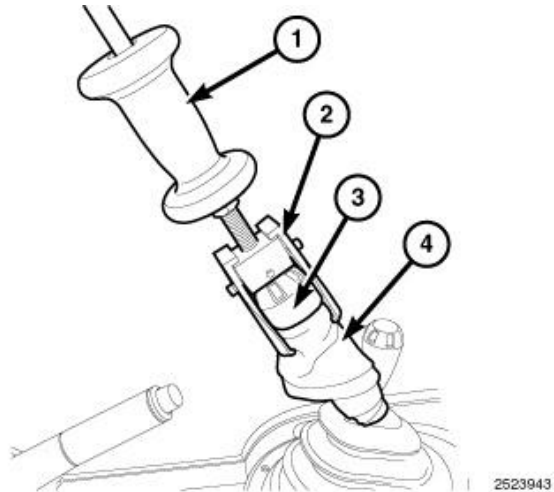


FIG 7.5



7.14.2. On manual transmissions it will be necessary to separate the shifter boot (2) from the console bezel (1). Remove the bolt (3) and remove the manual transmission shifter (2) from the shaft (1). (FIG 7.6 and 7.7)

FIG 7.6

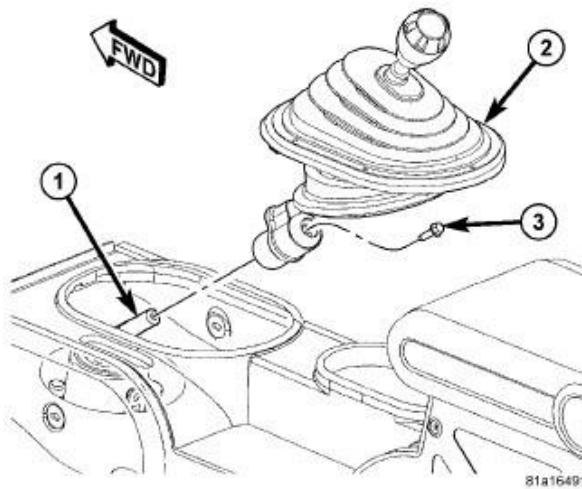
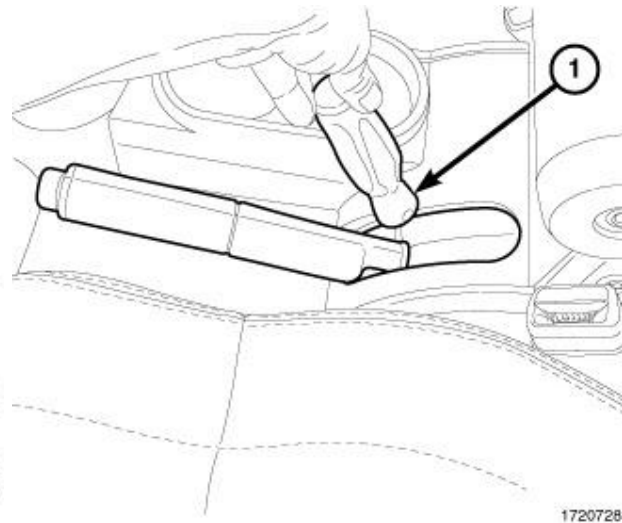


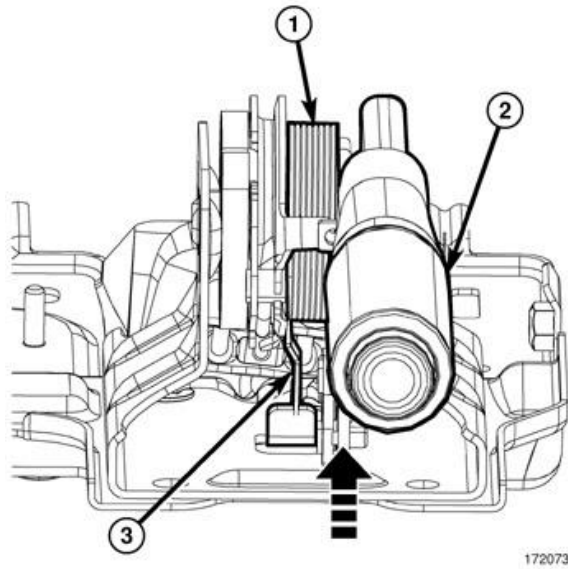
FIG 7.7



7.14.3. Position the emergency park brake into the up position.

7.14.4. Using a long wire hook tool (equivalent) (1) , locate the spring at the end of the park brake clutch. Pull up on the spring end (3) and deactivate the clutch (1) while pulling up on the brake lever (2) (FIG 7.8).

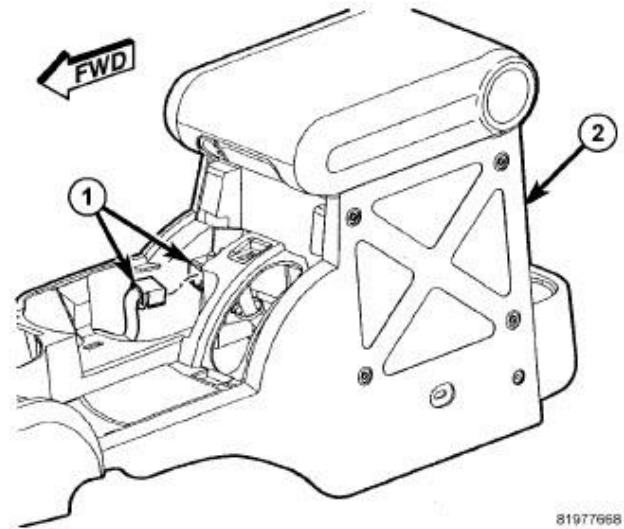
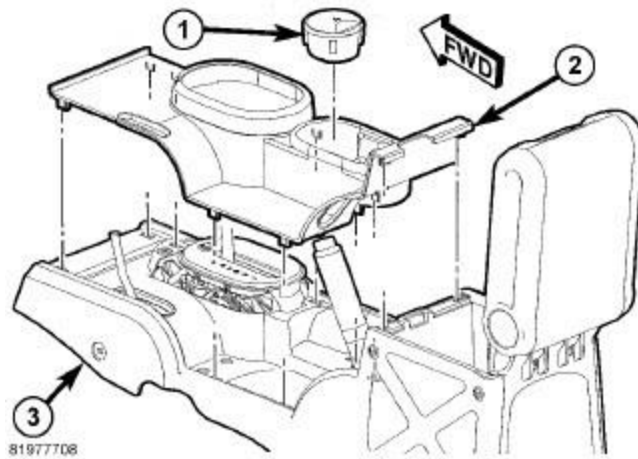
FIG 7.8



7.14.5. Remove the cup holder or ashtray (if applicable). (FIG 7.9)

FIG 7.9

FIG 7.10

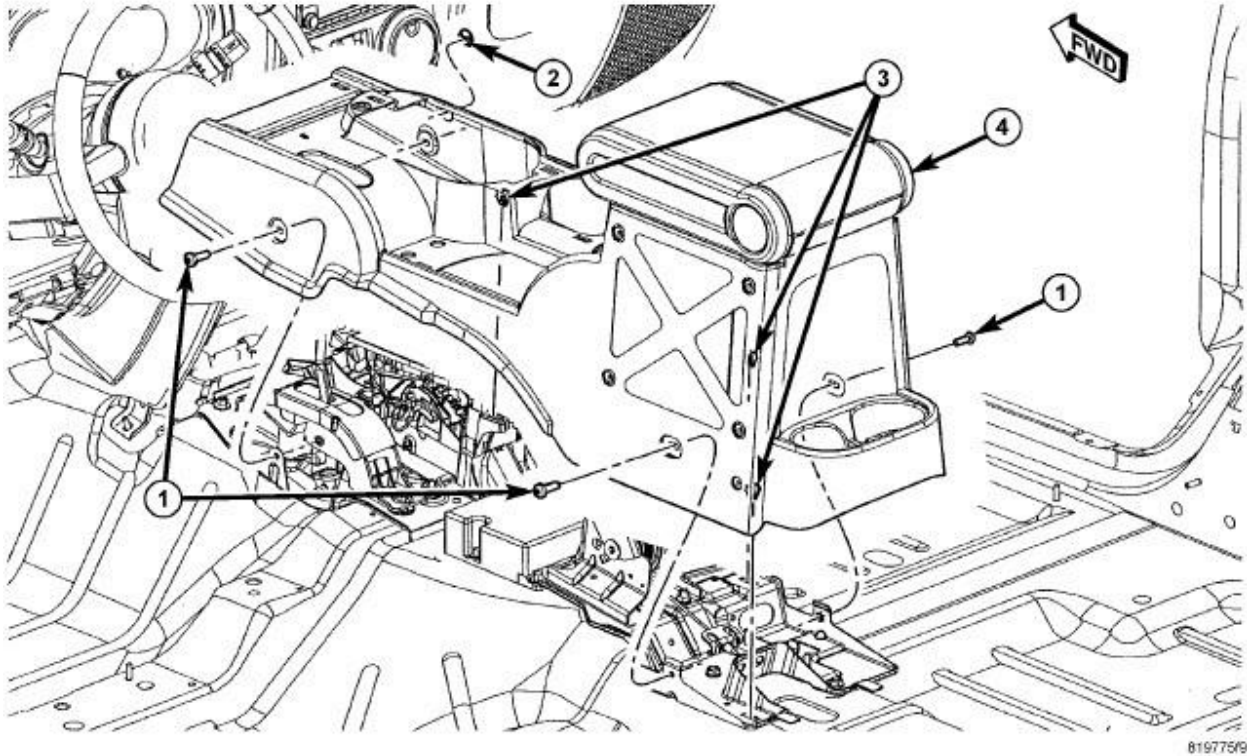


7.14.6. Using the trim stick remove the console beze (2). FIG 7.9

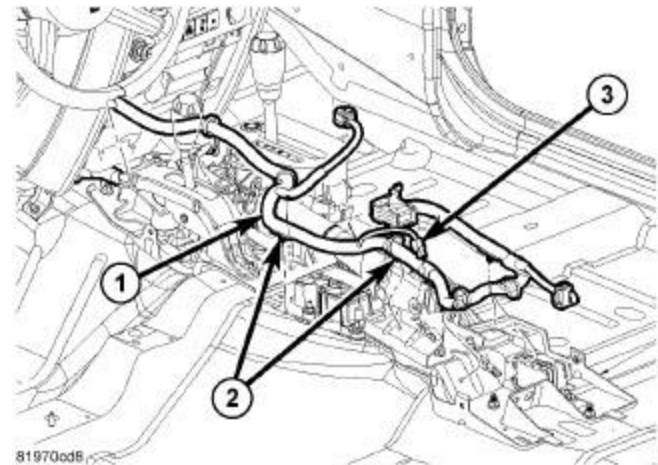
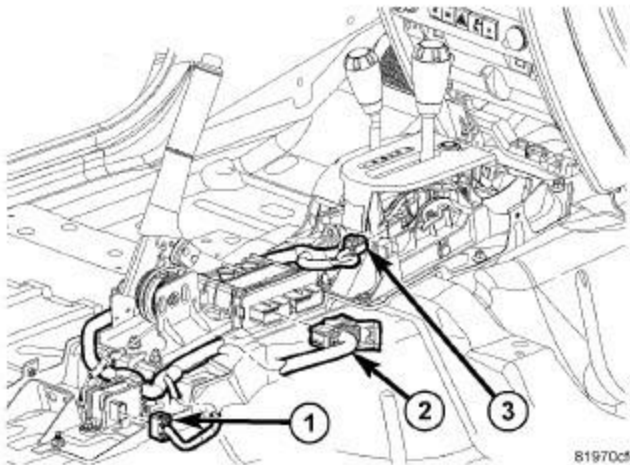
7.14.7. Disconnect the electrical connector (1). FIG 7.10

7.14.8. Remove the four console screws (1). Lift the console (4) up off the clip retainers (3) and remove. FIG 7.11

FIG. 7.11



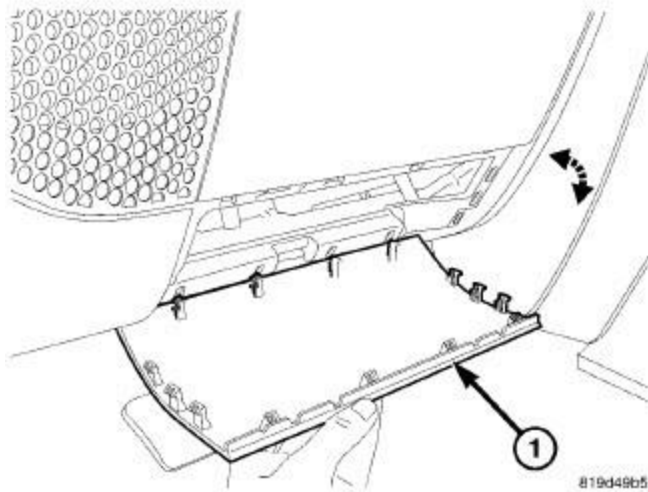
7.15. Disconnect the Instrument Panel wire harness electrical connectors (1, 2 and 3) FIG 7.12
 FIG 7.13



7.16. Release the push pin hangers (2) and position aside the harness (1). FIG 7.13

7.17. Using a trim stick, release the tabs and separate the lower steering column opening cover (1). FIG 7.14

FIG 7.14



7.18. Using a trim stick, release the upper clips (1) and rotate the steering column opening cover (3) down and remove from lower tabs (2). FIG 7.15

FIG 7.15

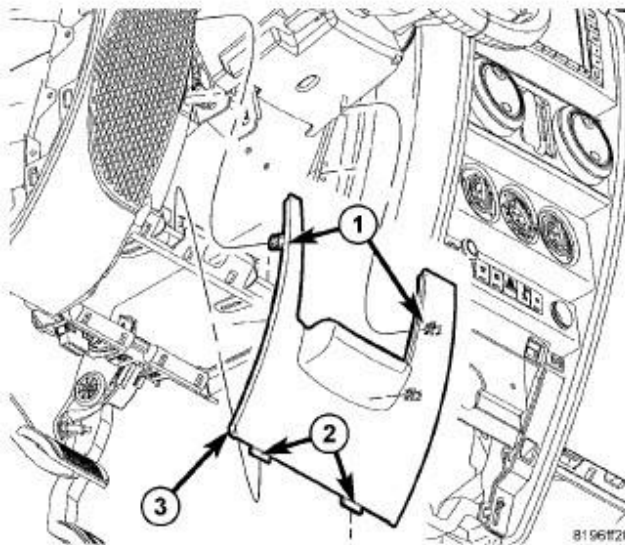
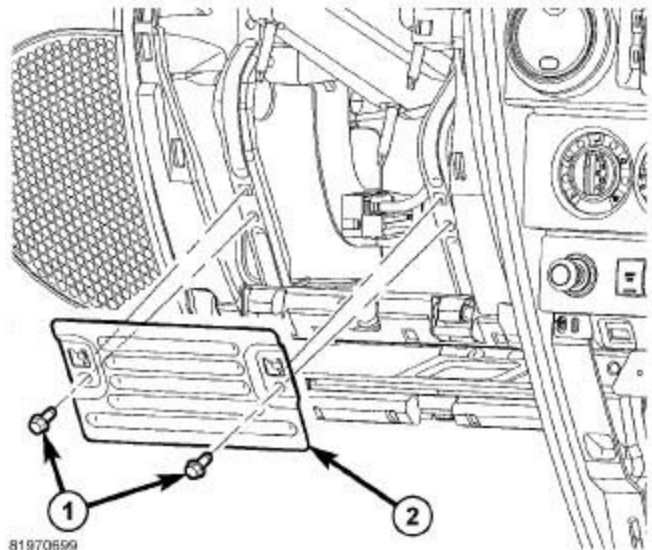


FIG 7.16

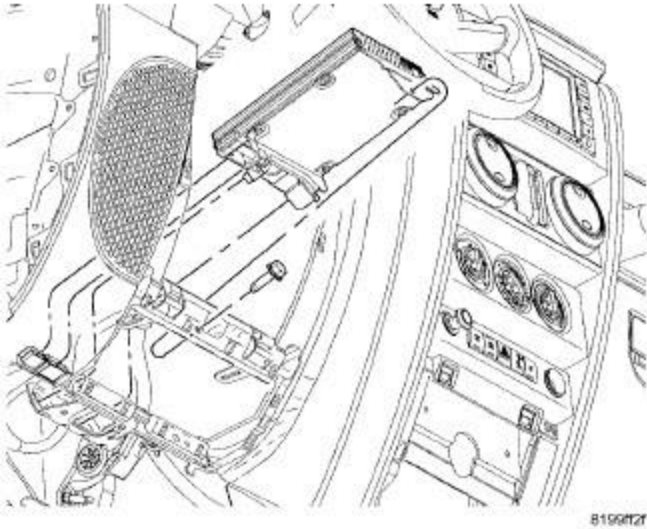


7.19. Remove the bolts (1) and remove the reinforcement plate (2). FIG 7.16

7.20. Remove the amplifier FIG 7.17

- 7.20.1. Remove the steering column opening cover.
- 7.20.2. Remove the steering column opening cover bracket.
- 7.20.3. Remove the mounting fastener.
- 7.20.4. Disconnect the electrical connector and remove the amplifier.

FIG 7.17



7.21. Remove the steering column

- 7.21.1. Position front wheels straight ahead.
- 7.21.2. Remove the airbag
 - 7.21.2.1. Release the steering column tilt lever and lower the column to its most downward position
 - 7.21.2.2. There are three airbag retainer access holes (1) on the instrument panel side of the steering wheel hub trim cover located at 2:00, 6:00 and 10:00 positions of the steering wheel. The steering wheel must be rotated to bring each of these access holes up to the 12:00 position of the steering column on at a time for removal. FIG 7.18

FIG 7.18

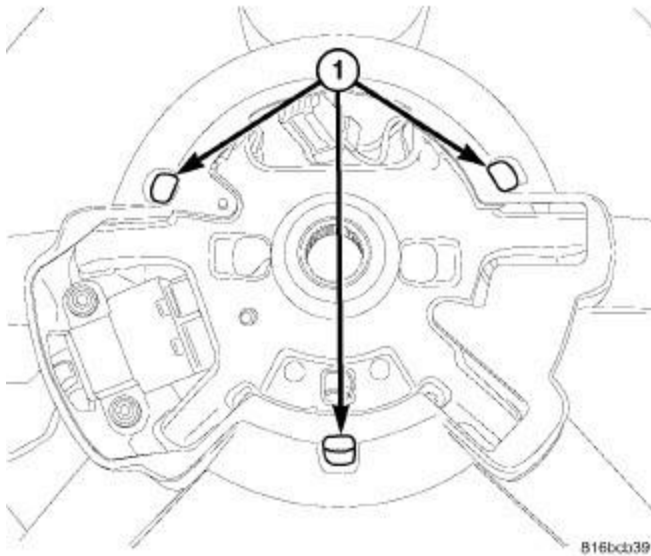
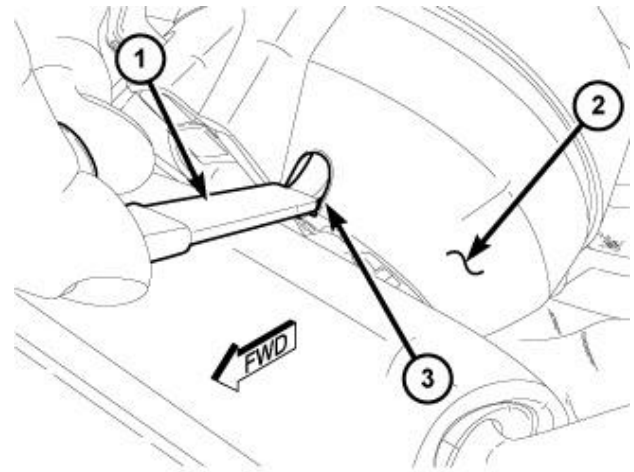


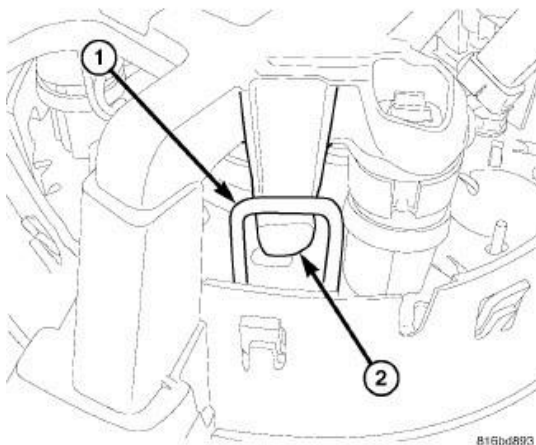
FIG 7.19



7.21.2.3. Insert the long blade (Tip B) of the Driver Airbag Removal Tool (#10187) (1) or the blade of an equivalent prying tool into either of the upper (2:00 or 10:00) access holes (3) of the steering wheel hub rear trim cover (2), being certain to place the blade of the tool on the inboard (steering wheel hub) side of the airbag snap retainer wire loop. FIG 7.19

7.21.2.4. Push the handle of the tool downward for the blade to pry the snap retainer wire loop (1) upward far enough to disengage the loop from the hook (2) of the steering wheel armature. At the same time, gently pull the driver airbag away from the steering wheel to prevent the retainer from snapping back into place over the hook once it is disengaged. FIG 7.20

FIG 7.20



- 7.21.2.5. Repeat step 4 and 5 at the other upper (2:00 or 10:00) access hole to disengage the other upper snap retainer wire loop.
- 7.21.2.6. Repeat step 4 and 5 at the lower (6:00) access hole to disengage the lower snap retainer wire loop (1). The lower snap retainer wire loop has a distinctive V-shape and must always be installed onto the 6:00 hook of the steering wheel armature. FIG 7.21

FIG 7.21

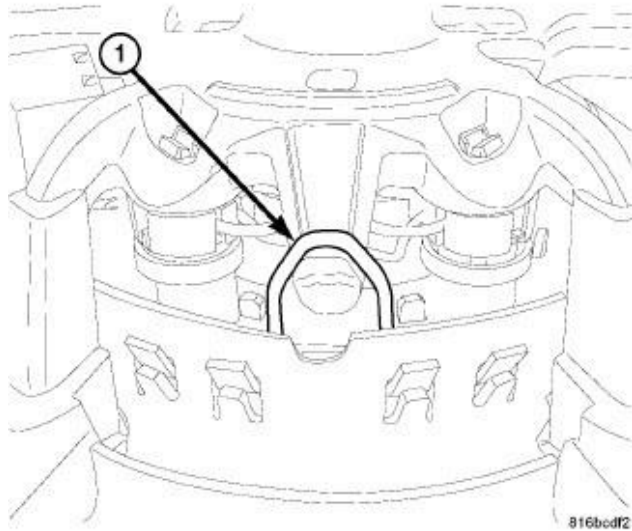
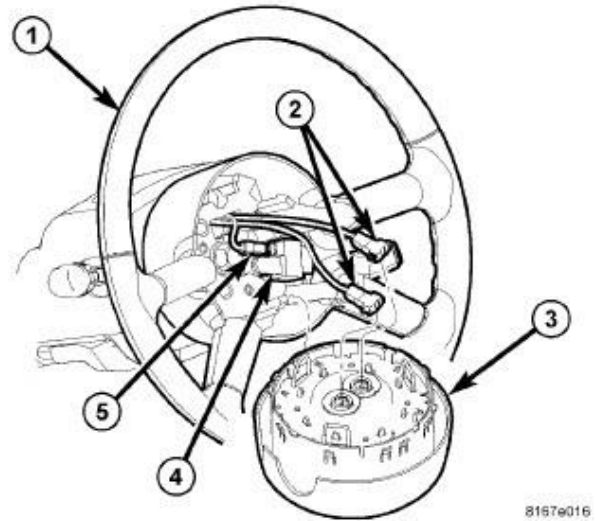


FIG 7.22



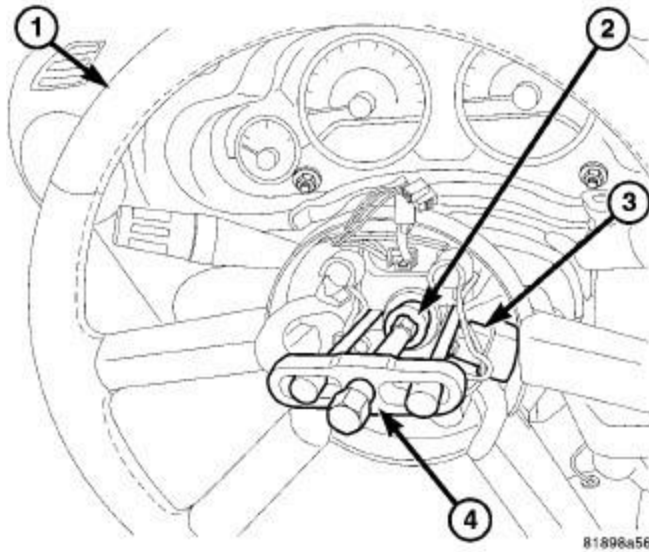
- 7.21.2.7. Pull the driver airbag (3) away from the steering wheel (1) far enough to access the electrical connections (2) at the back of the airbag housing. FIG 7.22

7.21.2.8. ****CAUTION: DO NOT PULL ON THE CLOCKSRING PIGTAIL WIRES OR PRY ON THE CONNECTOR INSULATOR TO DISENGAGE THE CONNECTOR FROM THE DRIVER AIRBAG INFLATOR CONNECTOR RECEPTACLE. IMPROPER REMOVAL OF THESE PIGTAILS WIRES AND THEIR CONNECTOR INSULATORS CAN RESULT IN DAMAGE TO THE AIRBAG CIRCUITS OR THE CONNECTOR INSULATORS.**

- 7.21.2.9. The clockspring driver airbag pigtail wire connectors are secured by an integral lock to the airbag inflator connector receptacles, which are located on the back of the driver airbag housing. Firmly grab and pull the lock straight out from the connector insulator, then pull the insulators straight out from the airbag inflator to disconnect them from the connector receptacles.

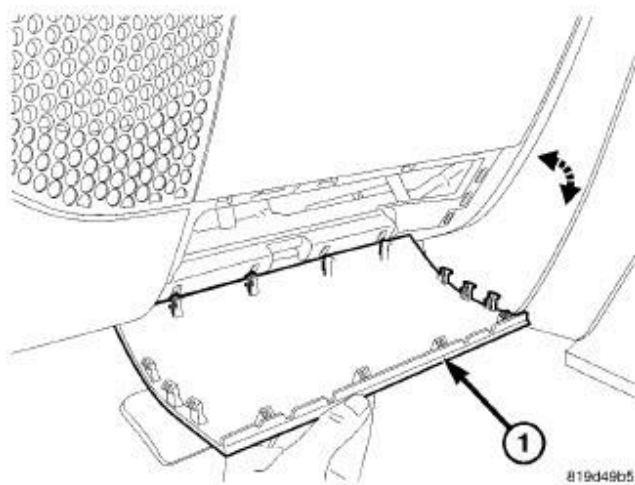
- 7.21.2.10. Remove the driver airbag from the steering wheel.
- 7.21.2.10.1. Disconnect the speed control wiring (3) to allow access for the puller (4). FIG 7.23

FIG 7.23



- 7.21.2.10.2. Partially remove the steering wheel bolt (2) and leave the bolt in the column F
- 7.21.2.10.3. Install steering wheel puller special tool L-4407A puller with OTC ® 7929A jaws or equivalent (4) using the top of the bolt to push on. (Ensure the puller jaws are seated in the pockets of the steering wheel armature)
- 7.21.2.10.4. Remove the steering wheel.
- 7.21.2.11. Remove steering column opening cover
 - 7.21.2.11.1. Using a trim stick C-4755 or equivalent, release the tabs and separate the lower steering column opening cover (1). FIG 7.24

FIG 7.24



- 7.21.2.11.2. Using a trim stick C-4755 or equivalent, release the upper clips (1) and rotate the steering column opening cover (3) down and remove the lower tabs (2). FIG 7.25

FIG 7.25

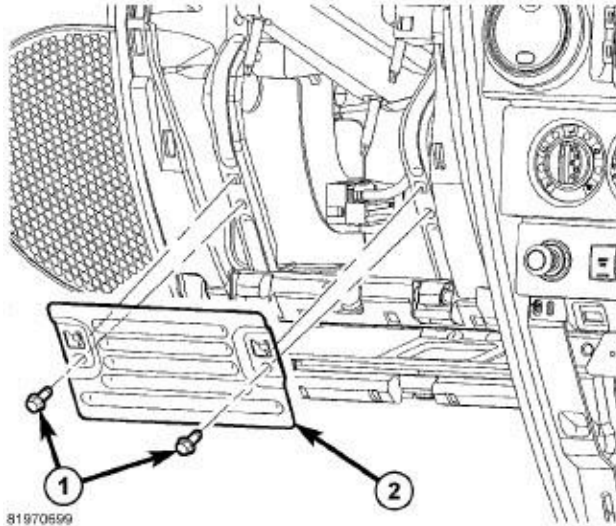
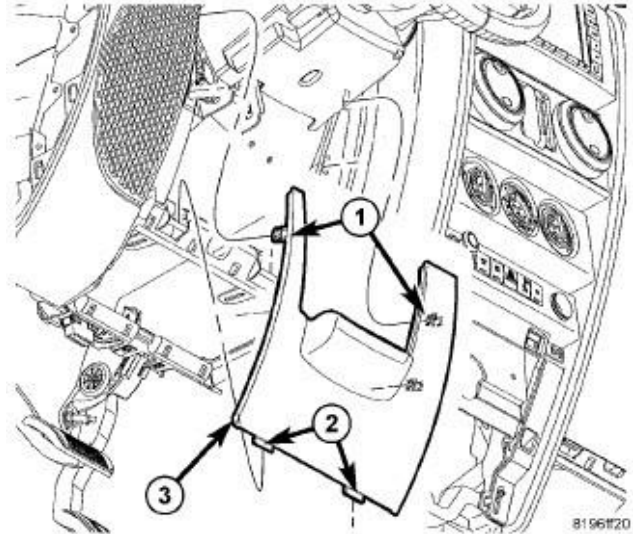


FIG 7.26



- 7.21.2.11.3. Remove the bolts (1) and remove the reinforcement plate (2) FIG 7.26

- 7.21.2.11.4. Remove the screws from the lower column shroud (2) and remove both the upper and lower shrouds. FIG 7.27 and FIG 7.28

FIG 7.27

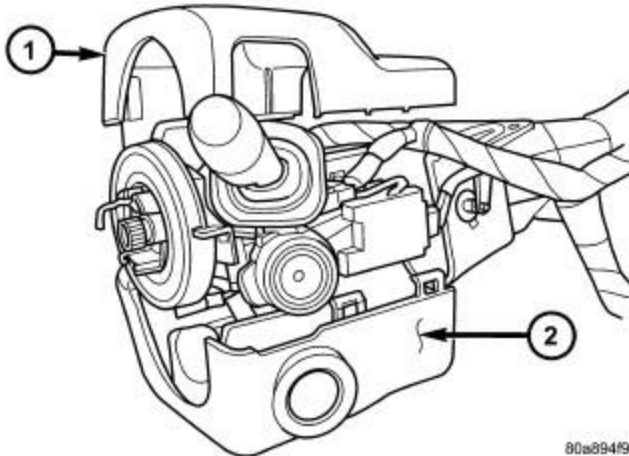


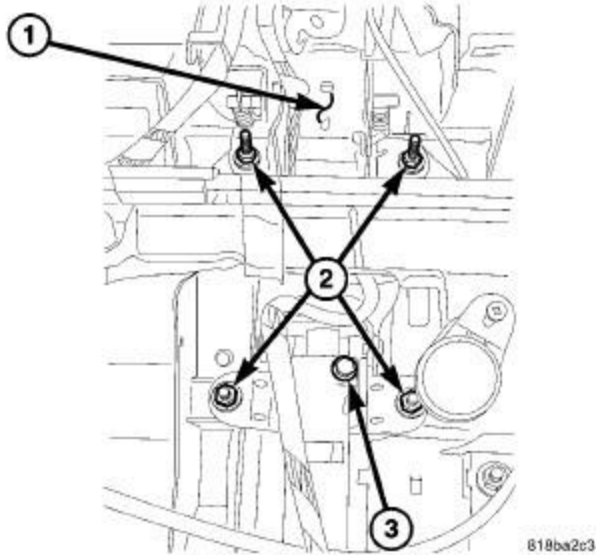
FIG 7.28

1 - Upper Shroud
2 - Lower Shroud

- 7.21.2.11.5. Turn ignition key to the on position
 7.21.2.11.6. If vehicle is equipped with the automatic transmission, disconnect shifter interlock cable from the column.

7.21.2.11.7. Remove the steering coupler bolt and column mounting nuts (2) then the lower column (1) off the mounting studs. FIG 7.29

FIG 7.29



7.21.2.11.8. Disconnect and remove the wiring harness from the column. Slide the shifter cable from the tie straps. Remove column (4). Remove clock spring (3), switches, (SKREEM if equipped). FIG 7.30 and FIG 7.31

FIG 7.30

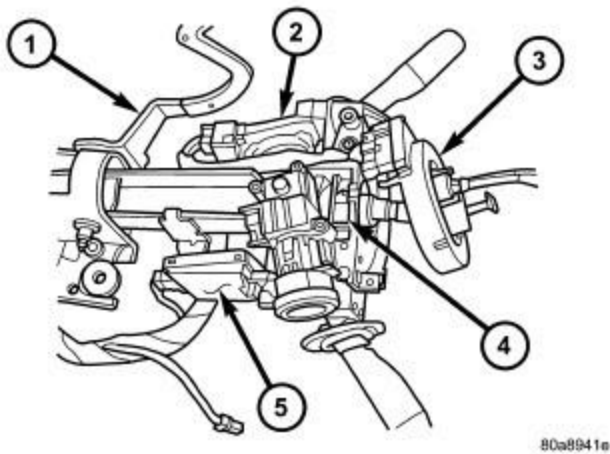
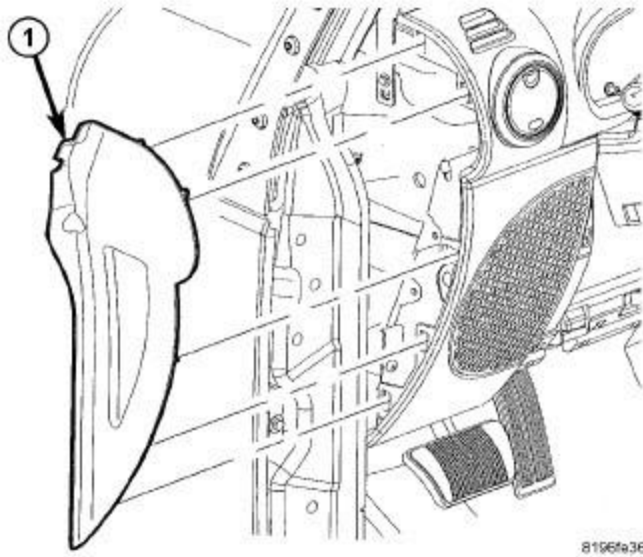


FIG 7.31

1 - Tilt Lever
2 - Ignition Switch
3 - Clockspring
4 - Steering Column
5 - skim/skreem

7.22. Using a trim stick C-4755 of equivalent, remove the end caps (1). FIG 7.32
FIG 7.32.



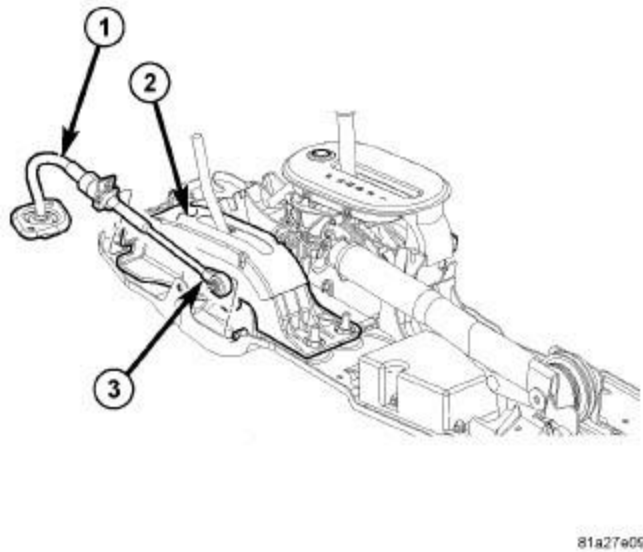
7.23. On automatic transmission vehicles, remove the shifter.

7.24. Remove the transfer case shifter

7.24.1. Shift transfer case into 4L.

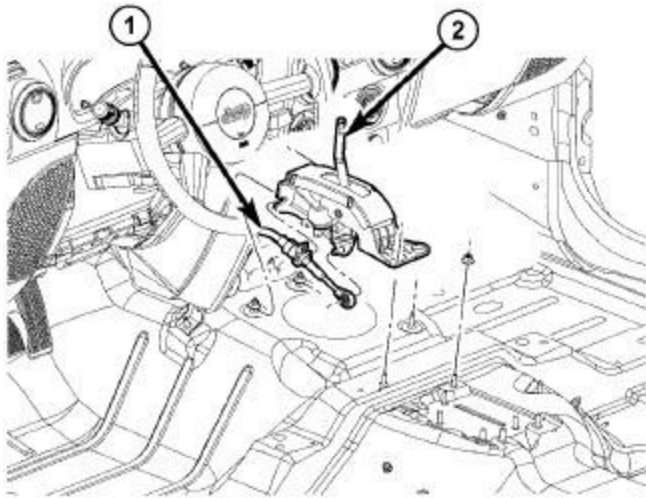
7.24.2. Disengage the transfer case shift cable from the shift lever pin and body. FIG 7.33

FIG 7.33



7.24.3. Remove the nuts attaching the lever assembly (1) to floor pan and remove assembly (2).
FIG 7.34

FIG 7.34

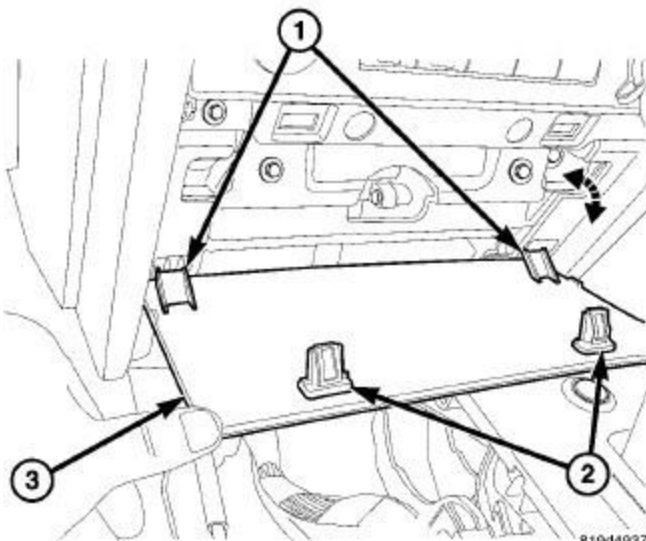


81a27d85

7.24.4. Remove the shifter mechanism from the vehicle

7.25. Using a trim stick C-4755 or equivalent, release the clips (2) and rotate the lower control center trim down (3) down and release the tabs (1). FIG 7.35

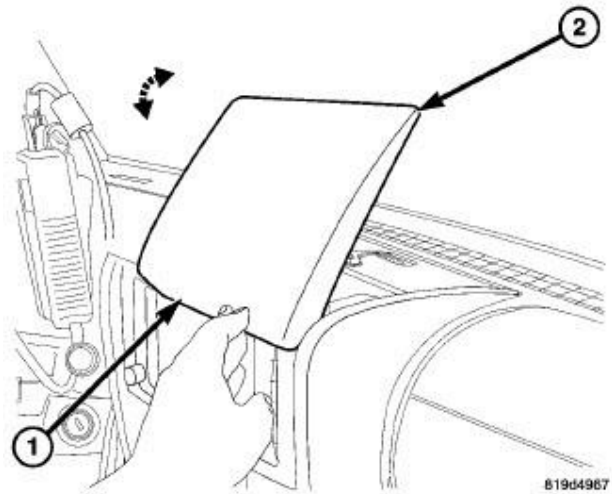
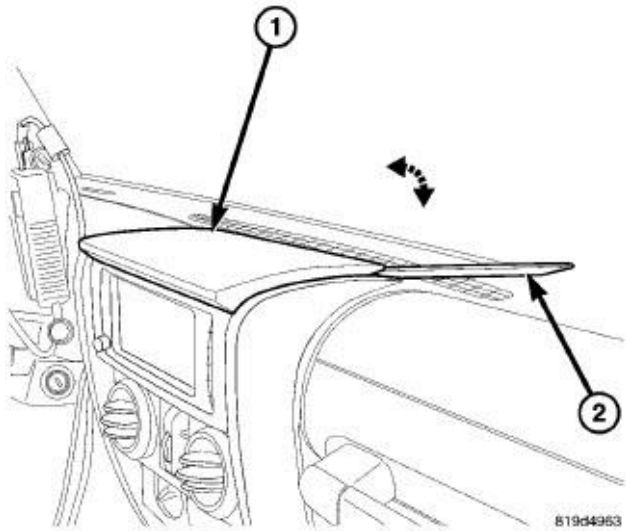
FIG 7.35



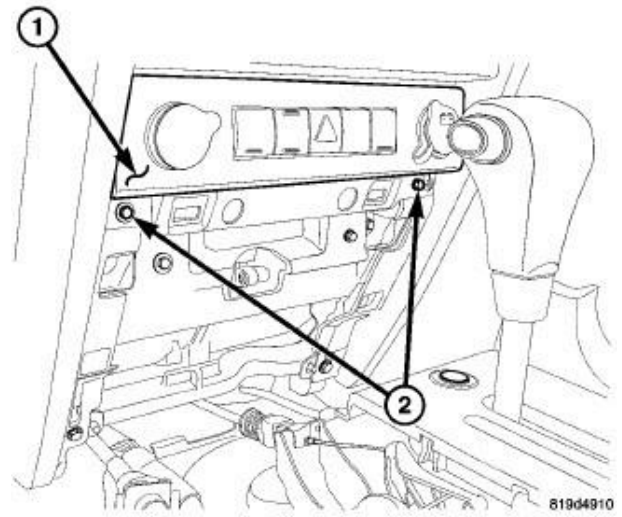
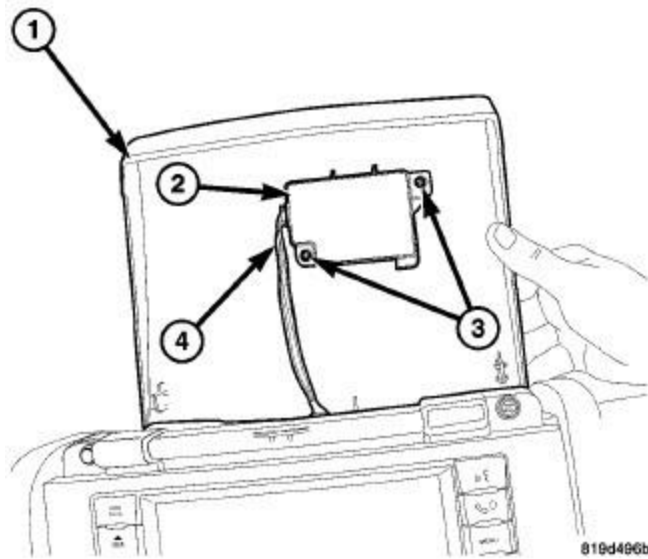
819d4937

7.26. Using a trim stick C-4755 or equivalent (2), release the clips in the rear of the upper trim (1). FIG 7.36

7.27. Rotate the upper trim (2) back and release the front (1). FIG 7.37
FIG 7.36



7.28. Disconnect the electrical connector and remove the upper center cover. FIG 7.38
FIG 7.39

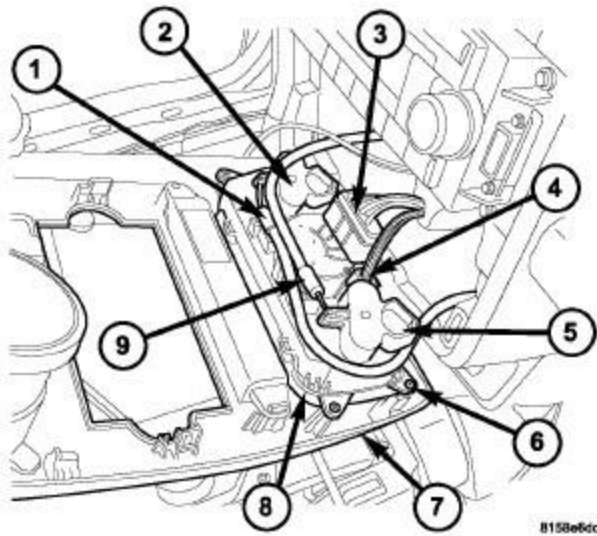


7.29. Remove the screws (2). Using the trim stick C-4755 or equivalent, separate the center bezel (1). FIG 7.39

7.30. Disconnect the electrical connectors (3). FIG 7.40. Place the center bezel on a workbench. Remove the four screws (6) that secure

the A/C heater control to the back of the center bezel and remove the control. To aid in reinstallation, note the installed positions of the control cables prior to removal.

FIG 7.40



- 7.31. Remove the radio (For REQ radios, turn the ignition to run and press the SET + SCAN buttons simultaneously to place into transportation mode. The radio will display "Transportation" on display within 5 seconds. If the radio is inoperative or not REQ, skip this step.
 - 7.31.1. Remove the screws (2) and remove the center I/P trim panels (1 and 3). FIG 7.41
 - 7.31.2. Remove the radio mounting fasteners
 - 7.31.3. Pull out the radio and disconnect the electrical and antenna connectors
 - 7.31.4. Remove the radio

FIG 7.41

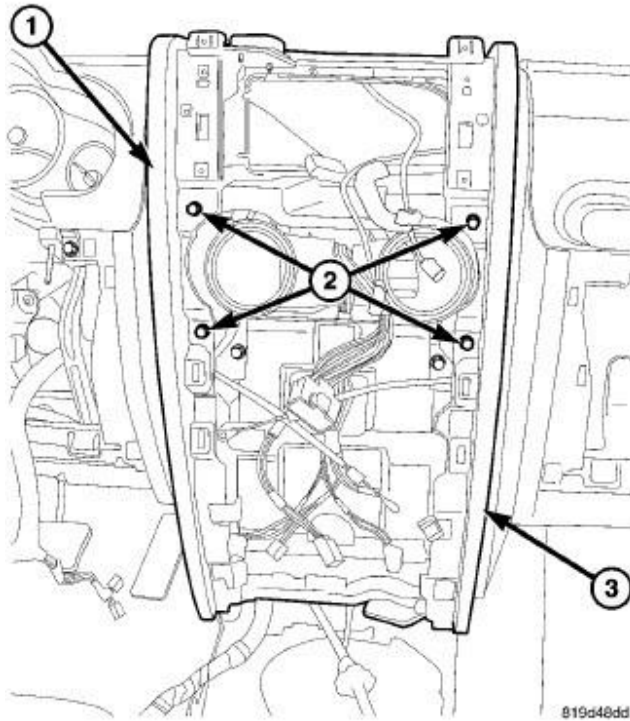
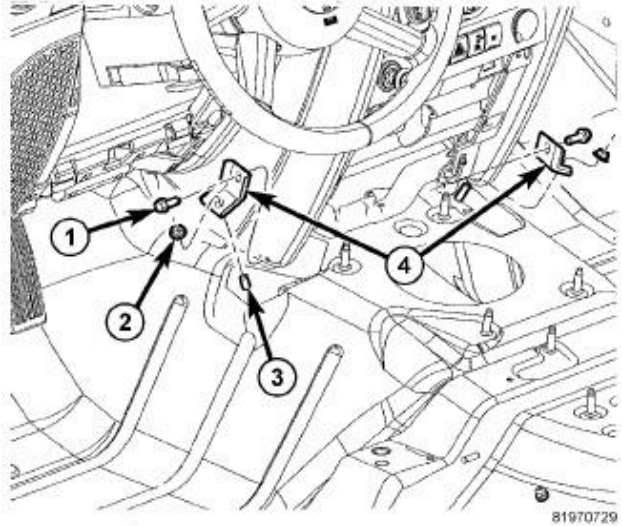


FIG 7.42



7.32. Remove the nuts (2) and bolts (1) and the center support brackets (4). FIG 7.42

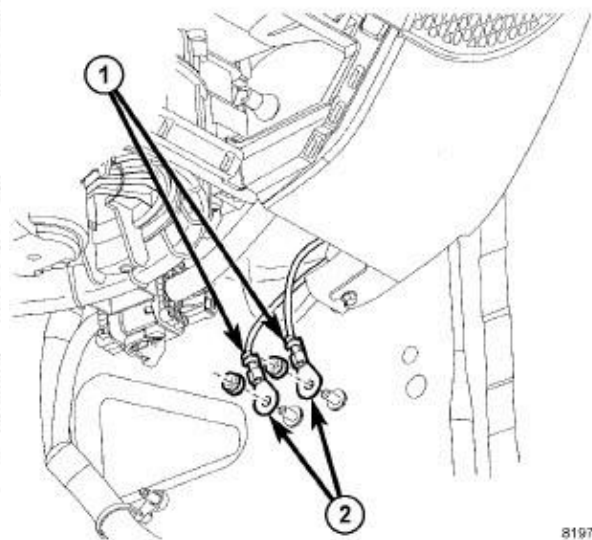
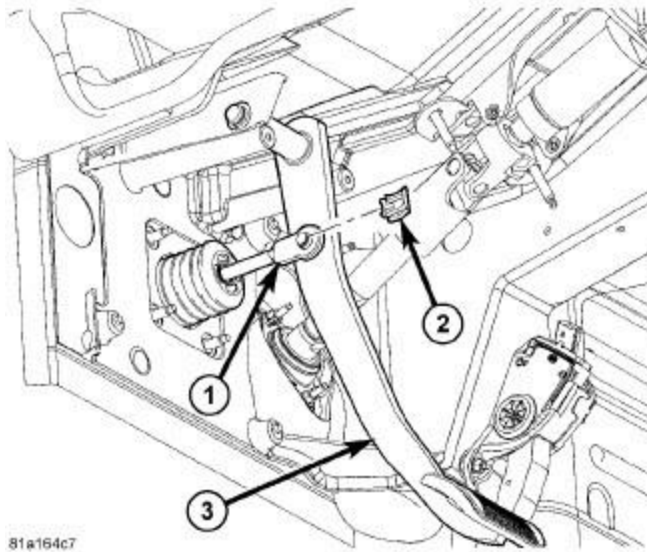
7.33. Remove the clutch pedal clip and separate the clutch pedal rod, if equipped

7.34. Remove the brake pedal clip (2) and separate the brake pedal rod (1). FIG 7.43

7.35. Remove the nut and separate the grounds (2) FIG 7.44

FIG. 7.43.

FIG7.44



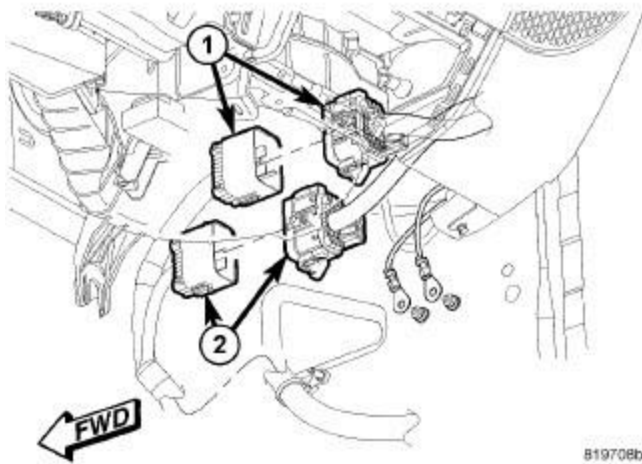
7.36. Disconnect the driver side electric connectors

7.37. Disconnect the passenger side electrical connectors (1 and 2) FIG 7.45

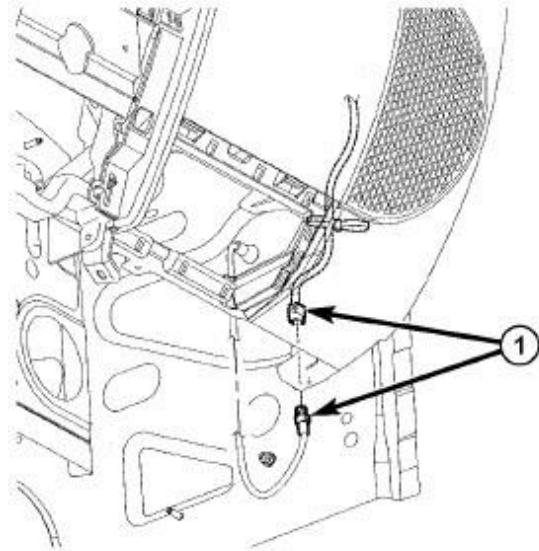
7.38. Disconnect the antenna connector (1) FIG. 7.46

FIG 7.45

FIG 7.46



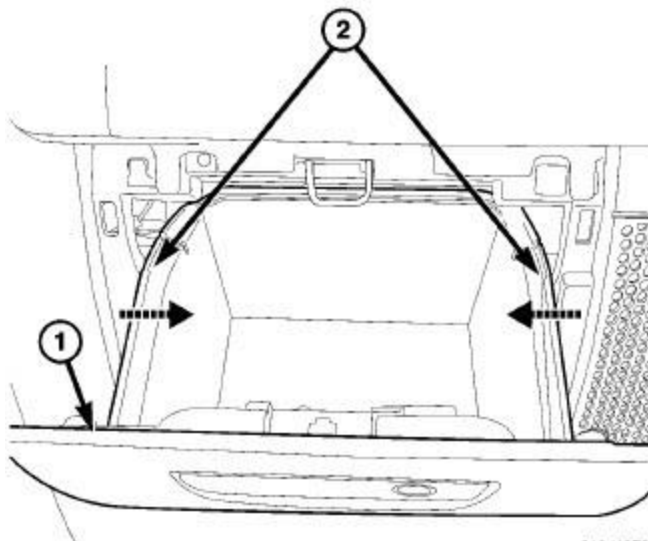
819708bc



819708f7

7.39. Remove the glove box. FIG 7.47

FIG 7.47



81964972

7.40. Disconnect the positive battery cable

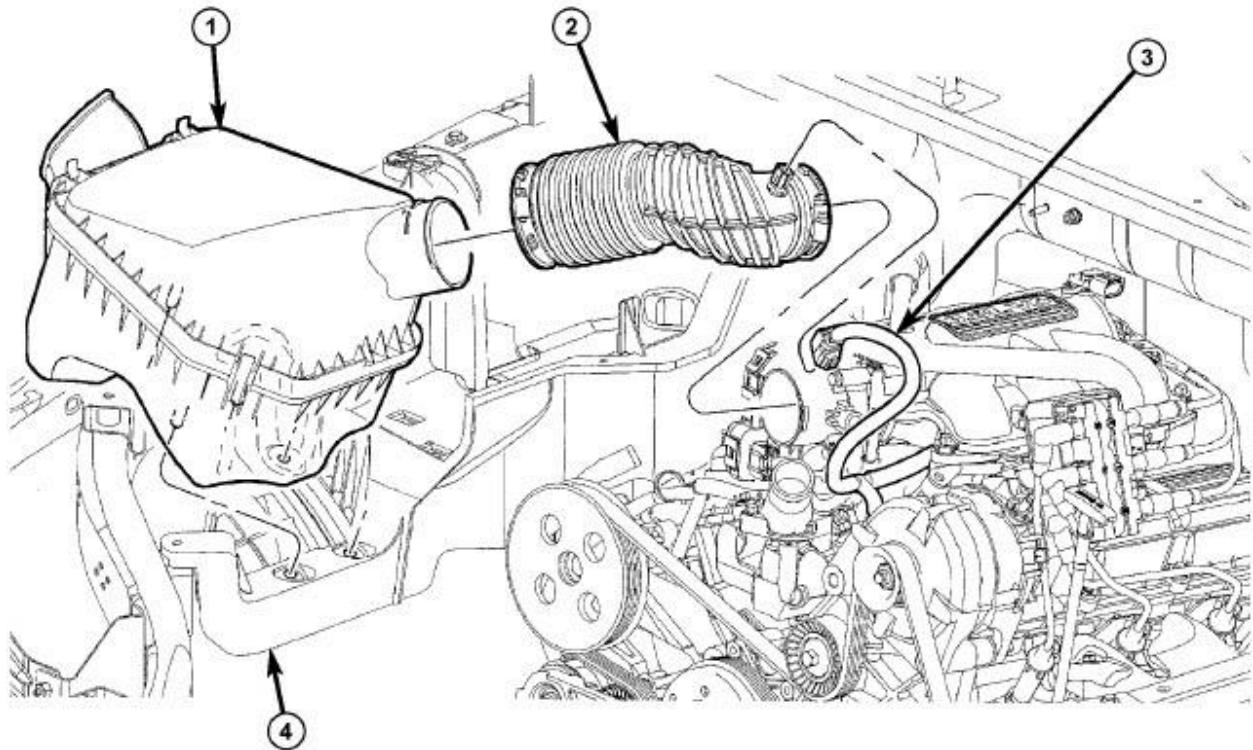
7.41. Remove the right side ground

7.42. Position aside the power steering reservoir

7.43. Remove the battery tray

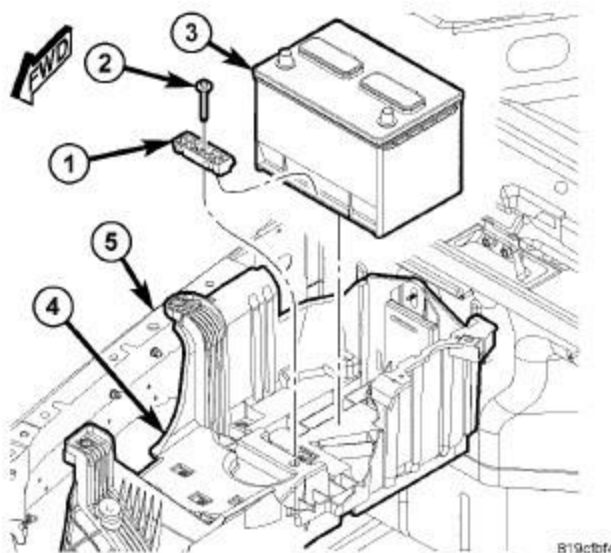
7.43.1. Remove the fresh air tube (2) from the air cleaner assembly (1) FIG 7.48

FIG 7.48



819d0109

- 7.43.2. Remove the air cleaner assembly (1) from the battery tray (4) by pulling up on the air cleaner to disengage the mounting pins. FIG. 7.48
- 7.43.3. Loosen bolt (2) and remove the retainer (1) that holds the battery (3) down to the tray (4). FIG. 7.49



819c1bf4

FIG 7.49

- 7.43.4. Remove the battery from the vehicle and the thermal guard that's equipped.

7.44. Remove the Totally Integrated Power Module (TIPM)

- 7.44.1. Release the TIPM cover retaining clips (1) and open the TIPM cover. FIG 7.50
FIG 7.50

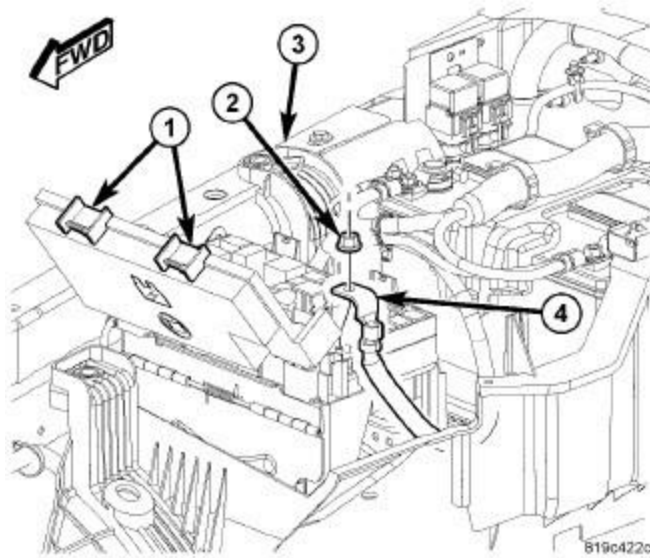
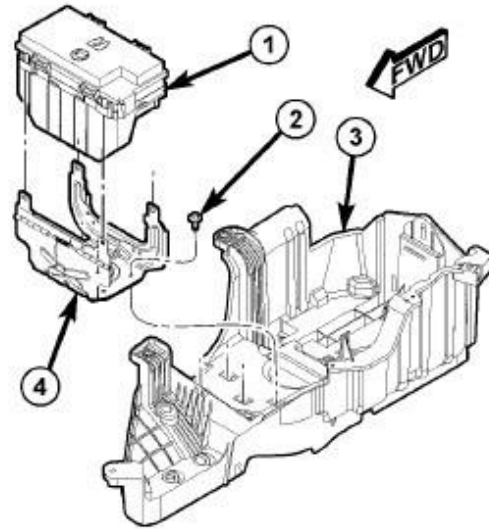


FIG 7.51



- 7.44.2. Remove the TIPM positive cable retaining nut (2) and remove the cable (4) from the stud. FIG 7.50
- 7.44.3. Depress the four mounting clips to disengage and remove the TIPM housing (1) From its mounting bracket (4). FIG 7.51
- 7.44.4. Disconnect each of the seven TIPM wire harness connectors
- 7.44.5. Remove the TIPM from the vehicle
- 7.45. Remove the four bolts (2 and 5) and one nut (3) securing the battery tray (4) to the vehicle. FIG 7.52
- 7.46. Lift the battery tray out of the engine compartment and remove it from the vehicle

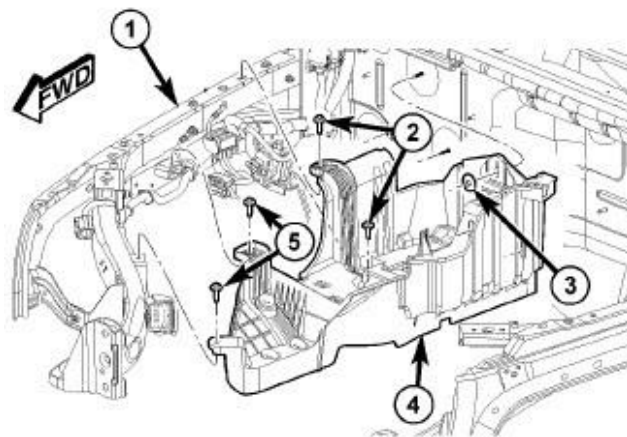


FIG 7.52

819d0117

7.47. Position aside the harness at the brake booster. Remove the brake booster bracket nuts (2) FIG 7.53

FIG 7.53

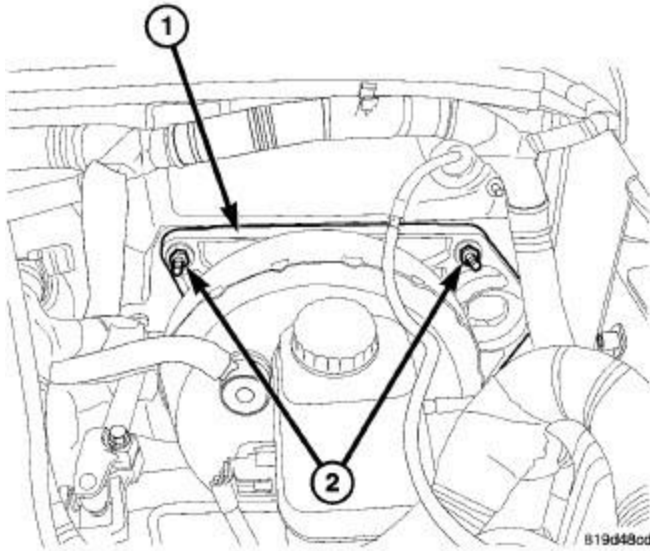
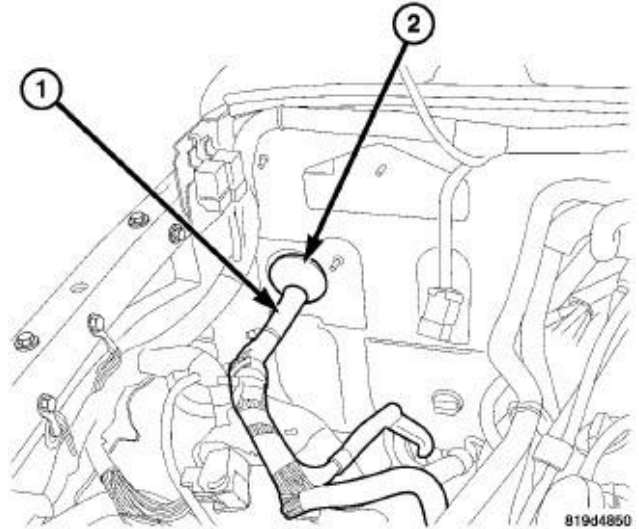


FIG 7.54



7.48. Release the wire harness grommet (2) and separate any remaining support clips for the wire harness (1) FIG 7.54

7.49. Remove the trim caps (2) and the fenceline nuts (3). FIG 7.55

FIG 7.55

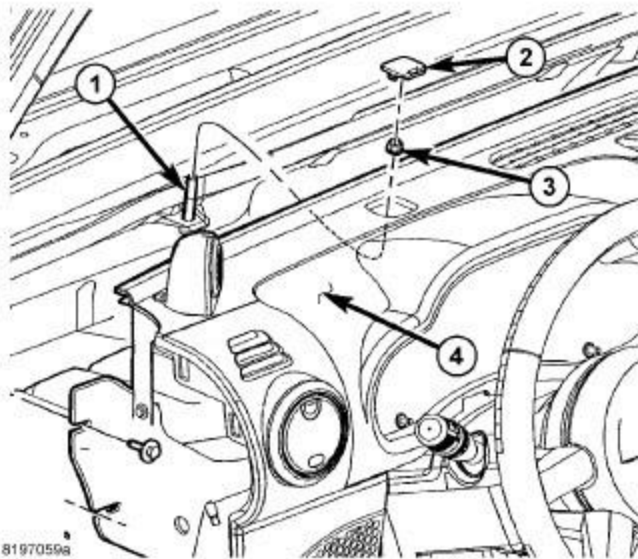
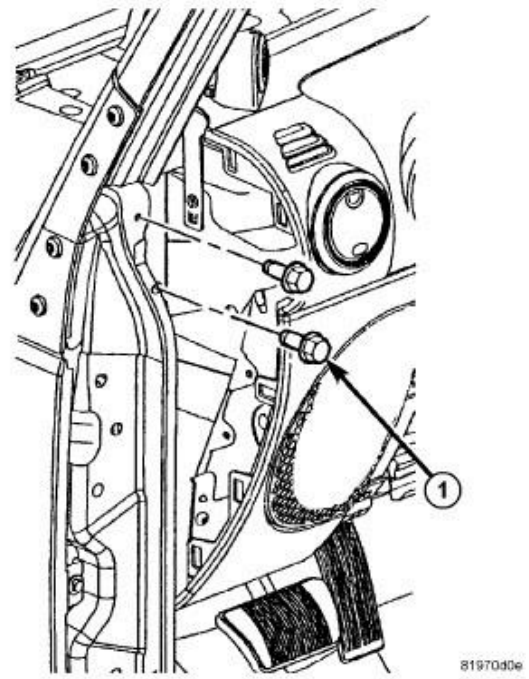


FIG 7.56



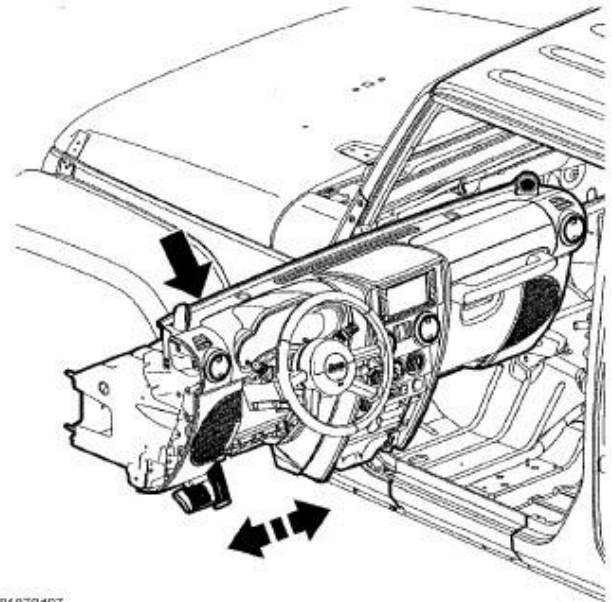
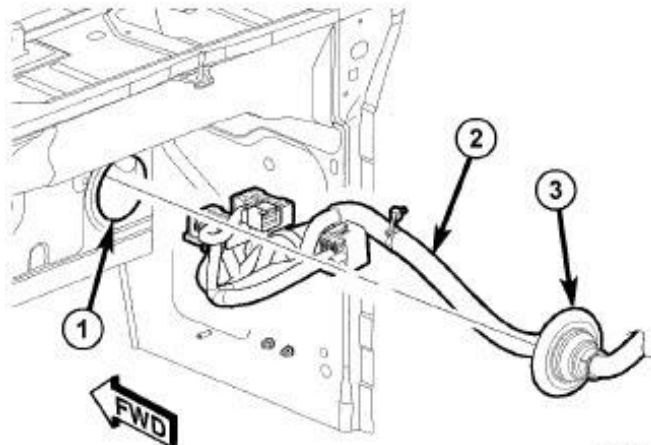
7.50. Remove the side support bolts (1) and position the I/P assembly back. FIG. 7.56

7.51. Pull the main wire harness (2) from the hole in the cowl (1). FIG 7.57

7.52. Remove the I/P from the vehicle. FIG 7.58

FIG 7.57

FIG 7.58



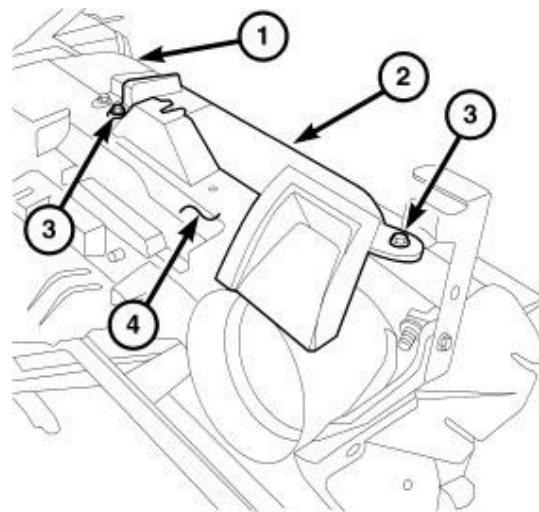
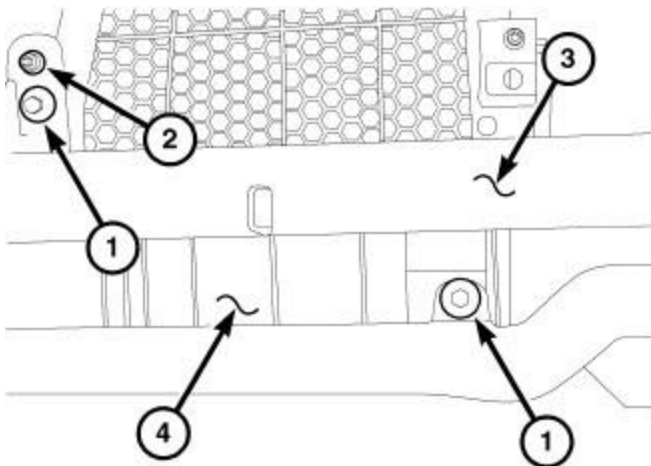
81970839 81870407

7.53. Disconnect the instrument panel wire harness connectors from the blower motor resistor, blower motor and recirculation door actuator.

7.54. Remove the two bolts (1) that secure the air inlet housing (4) to the passenger side of Instrument panel support (3). Use caution not to damage the housing alignment pin (2) during removal of the HVAC housing assembly from the support. FIG 7.59

FIG 7.59

FIG 7.60



8185e97

818f54a6

7.55. Remove the two screws (3) that secure each demister duct (2) to the instrument panel support (4) as required. (FIG 7.60)

- 7.56. Disconnect each demister duct from the defroster duct (1) and remove the demister ducts. FIG 7.60
- 7.57. Remove the four screws (2) that secure the defroster duct (6) to the instrument instrument support (4) and the HVAC housing assembly (5) and remove the duct. FIG 7.61
- 7.58. Remove the screw (3) that secures the outlet end of each instrument panel duct (1) to the instrument panel support (2). FIG 4.62

FIG 7.61

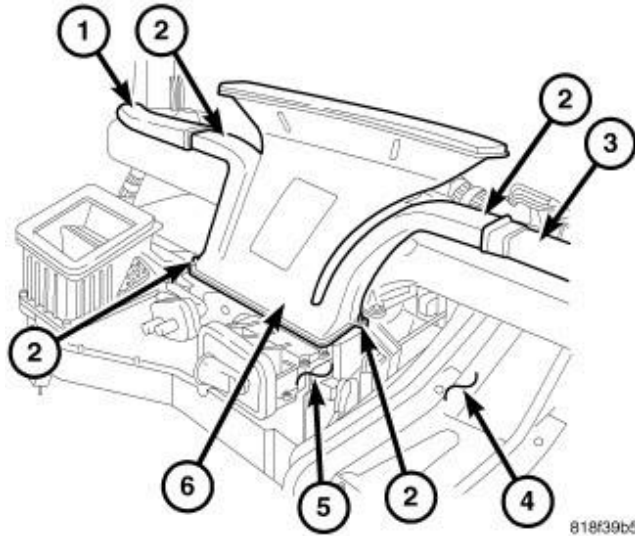
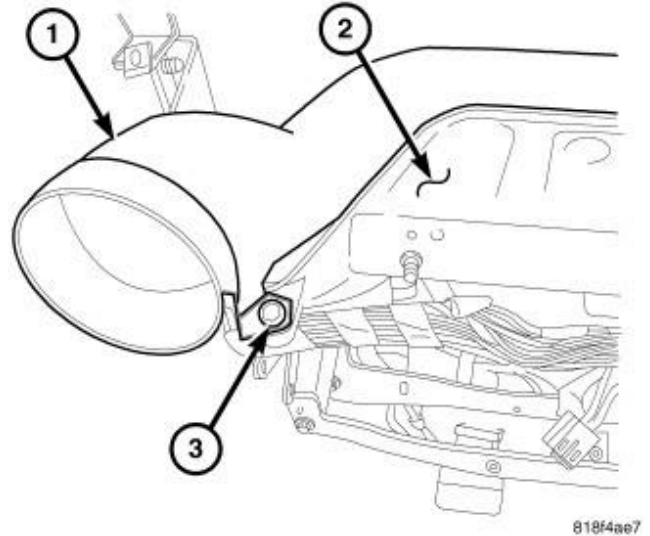
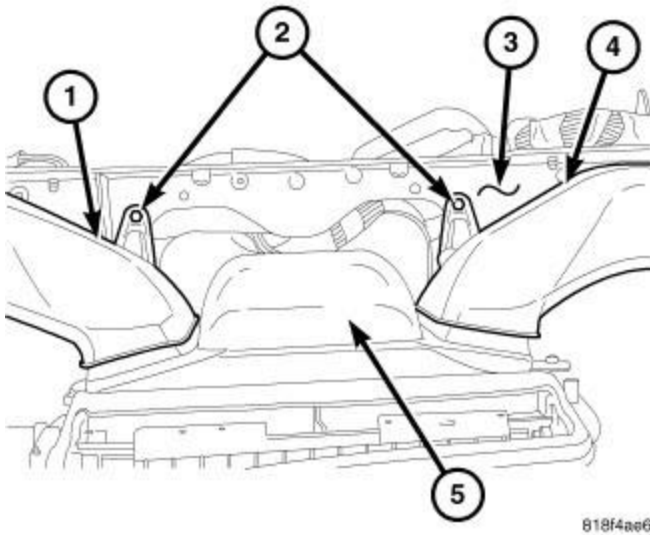


FIG 7.62



- 7.59. Remove the screw(2) that secures each instrument panel duct (1 and 4) to the center of the instrument panel support (3). FIG 7.63
- 7.60. Disconnect each instrument panel duct from the center duct (5) and remove the panel ducts. FIG 7.63

FIG 7.63



- 7.61. Remove the two screws (3) that secure the center duct (2) to the top of the HVAC housing assembly (4) and remove the duct from the instrument panel support (1) FIG 4.62

FIG 7.64

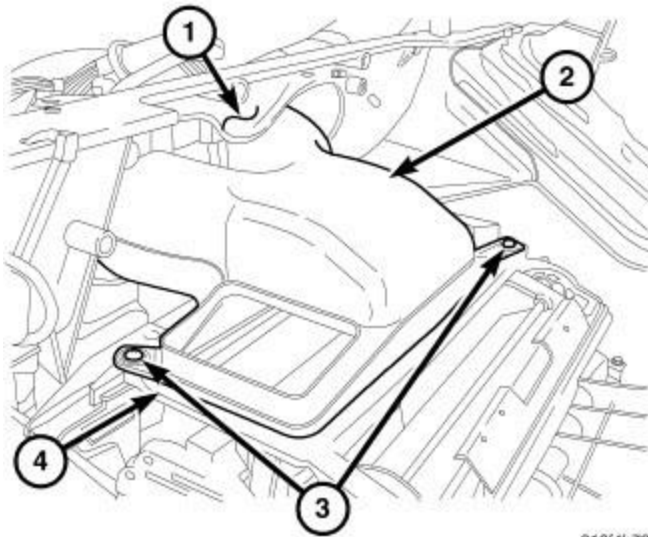
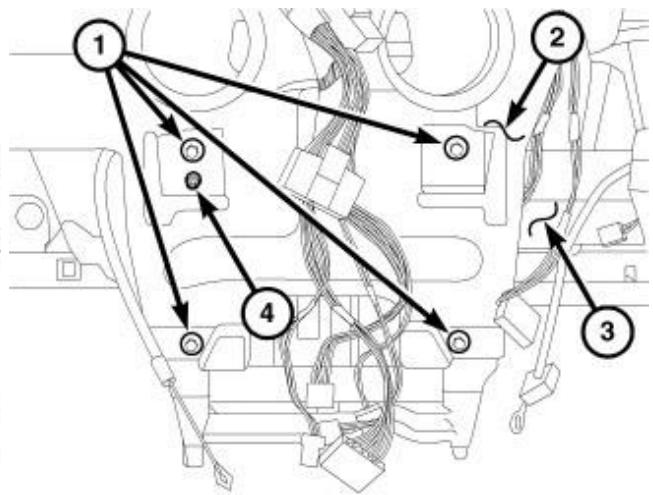


FIG 7.65

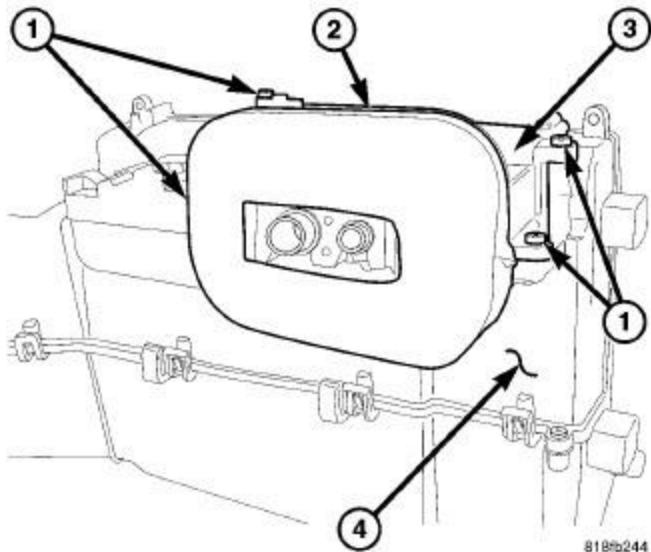


7.62. Remove the four bolts (1) that secure the HVAC housing assembly (3) to the center of the instrument panel support (2) and remove the housing from the support. Use caution not to damage the housing alignment pin (4) during removal of the housing from the Support. FIG 7.65

7.63. Remove the foam seal (2) from the flange (3) located on the top of the HVAC housing (4). FIG 7.66

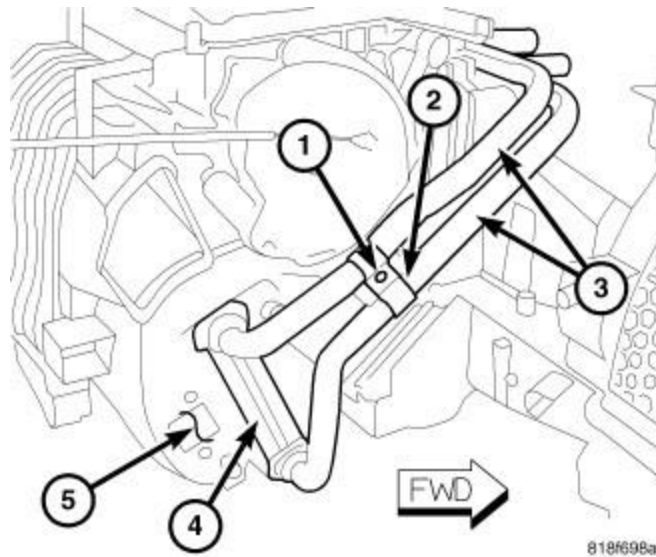
7.64. Remove the four screws (1) that secure the flange to the HVAC housing and remove flange. FIG 7.66

FIG 7.66



7.65. Remove the screw (1) that secures the bracket (2) retaining the heater core tubes (3) to the passenger side of the air distribution housing (5) and remove the bracket. Carefully pull the heater core (4) out of the side of the air distribution housing about 5". FIG 7.67

FIG 7.67



- 7.66. Remove the OEM evaporator headed tube foam gasket at the evaporator header tube exit hole. Retain the foam gasket for installation of the evaporator.
- 7.67. Now remove (3) OEM S.M.S (two screws on top, (1) screw and (1) clamp on (DS), two clips on (PS), two clips on bottom. Lastly, one molded clip midway up on PS to release. Separate recirc plenum back half from the heat case assembly front half.
- 7.68. Unclip and discard the plastic air baffle from the evaporator cavity
- 7.69. At this time with the OEM evaporator case block valve cover still attached, cut out the OEM evaporator coil header tube blank plastics for the block valve exit hole.
- 7.70. Now remove the (4) screws to remove top OEM evaporator case block valve cover

STEP 8

Evaporator Case Modification For Thermostat Capillary Tube

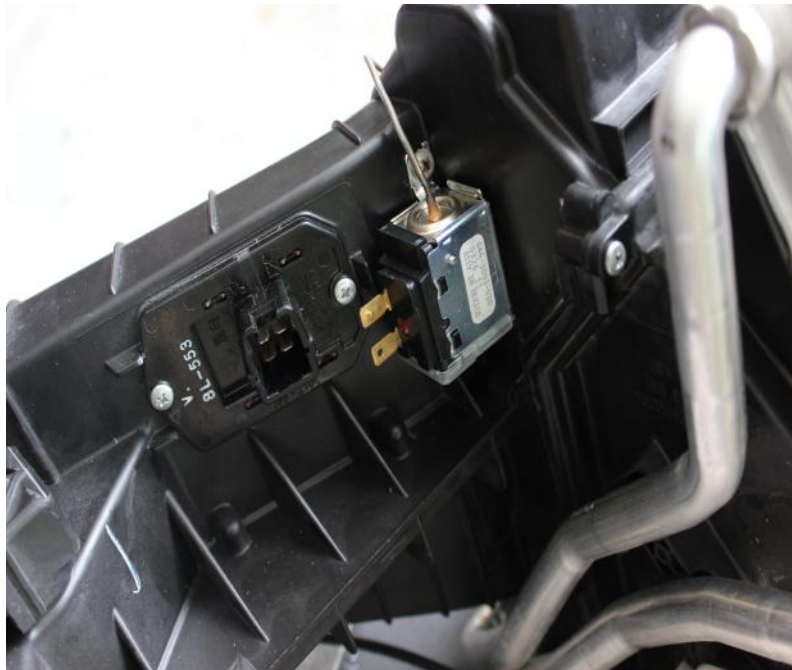
- 8.1. Drill a hole in the evaporator case approximately $\frac{1}{8}$ "
- 8.2. Install the evaporator into the OEM cavity in its fixed position.
- 8.3. Install the thermostat between the OEM resistor block and evaporator using a #8 x5/8" Screw.
- 8.4. Once the thermostat is installed you can route the capillary tube over the case and insert it through the hole previously drilled. Once pushed through the hole insert the probe into the evaporator core.
- 8.5. Hook up the black wire that is labeled T-Stat in wire harness assembly onto the switch prong. You will need to feed the new wire harness assembly through with the main wire harness.

STEP 9

A/C Heater Case Reassembly

- 9.1. Reassemble the heater case halves together in the reverse manner in which they were disassembled.
- 9.2. Now reinstall the a/c heater case assembly to the Instrument Panel. Take care of the control head cables.

Thermostat Installation



STEP 10

Modification to Instrument Panel for Push Button Switch:

- 10.1. We recommend cutting a hole in the center of the panel between the two large vents.
- 10.2. Once the hole is cut, install the push button switch.
- 10.3. Wiring for push button switch:
 - 10.3.1. Blue/Red Wire gets connected to the thermostat
 - 10.3.2. Red Wire gets connected to the ground on the factory cigarette lighter wires
 - 10.3.3. Blue Wire gets connected to the positive on the factory cigarette lighter wires

STEP 11

Control Head Installation

- 11.1. Install the A/C heater control to the instrument panel center bezel
- 11.2. Install the four screws that secure the A/C heater control to the center bezel. Tighten the screws to 2 Nm (17 in lbs)
- 11.3. Position the center bezel to the instrument panel and connect the wire harness connectors (3 and 4) to the back of the A/C heater control
- 11.4. Connect the wire harness connectors to the switches and power outlets, as equipped and install the center bezel to the instrument panel

STEP 12

Wire Harness Installation

- 12.1. Install the two relays and the inline fuse on the case of the Totally Integrated Power Module (TIPM)
- 12.2. The eyelet coming off of the inline fuse holder goes to the positive post on the battery
- 12.3. The ground coming off of the cooling fan relay needs to be grounded to the chassis
 - 12.a. The other wire coming off of the cooling fan relay is labeled "Fan Relay" and needs to be splice into the TIPM High Fan Control. It is C3 Pin 2 (BR/BL wire). Crimp the Female Push-On Terminal to the wire coming out of the connector (C3 Pin 2). Crimp the Male Push-On Terminal to wire coming from the factory harness.
- 12.4. The Blue wire label "Clutch" needs to be spliced into C1 Pin 50 (DB/YL wire) using the butt connector.

STEP 13

A/C Line Installation

- 13.1. Discharge Line
 - 13.1.1. Position the line in the engine compartment. The end with the switch port goes to the smaller compressor port and the other end goes to the condenser.

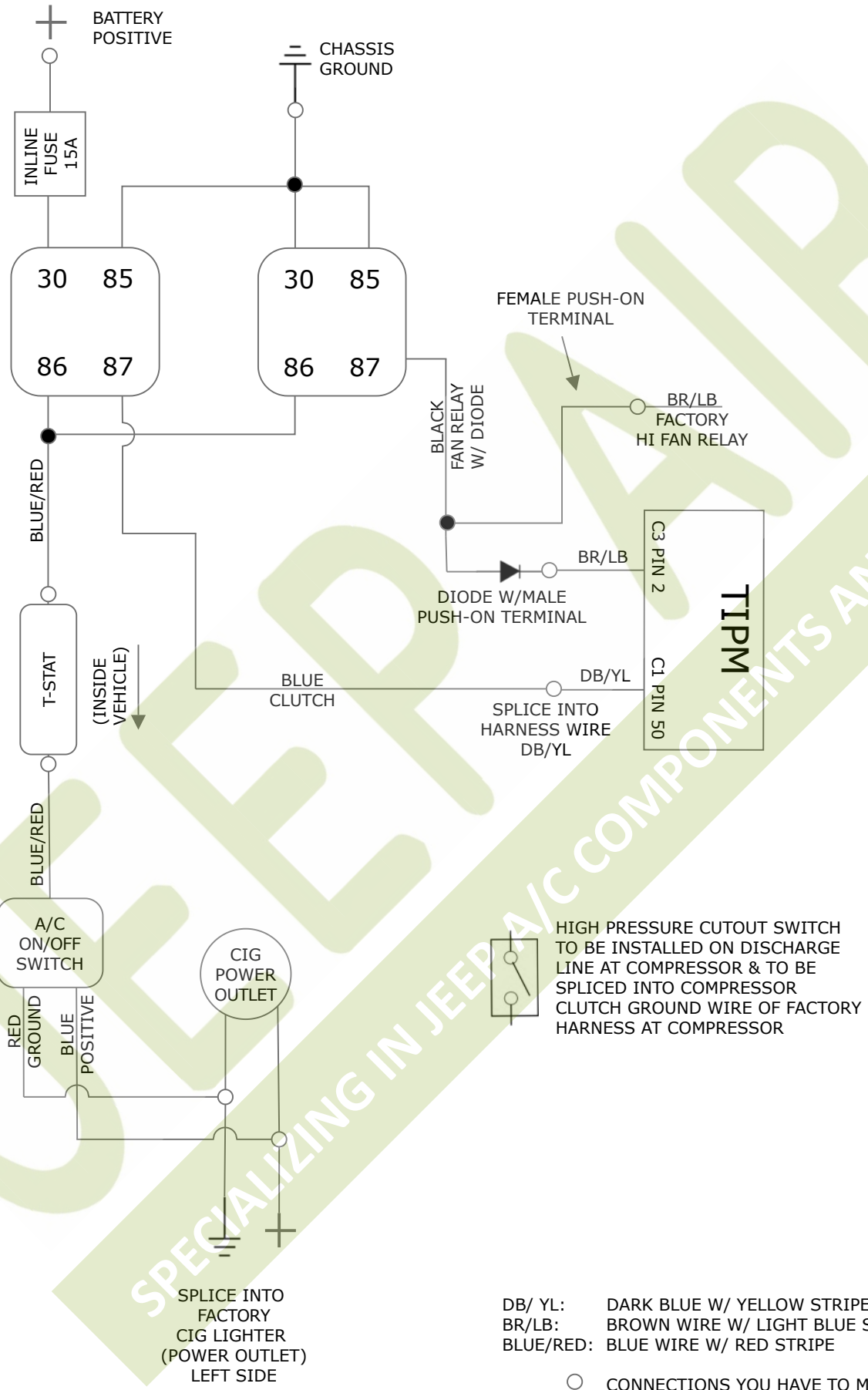
Push button switch installation

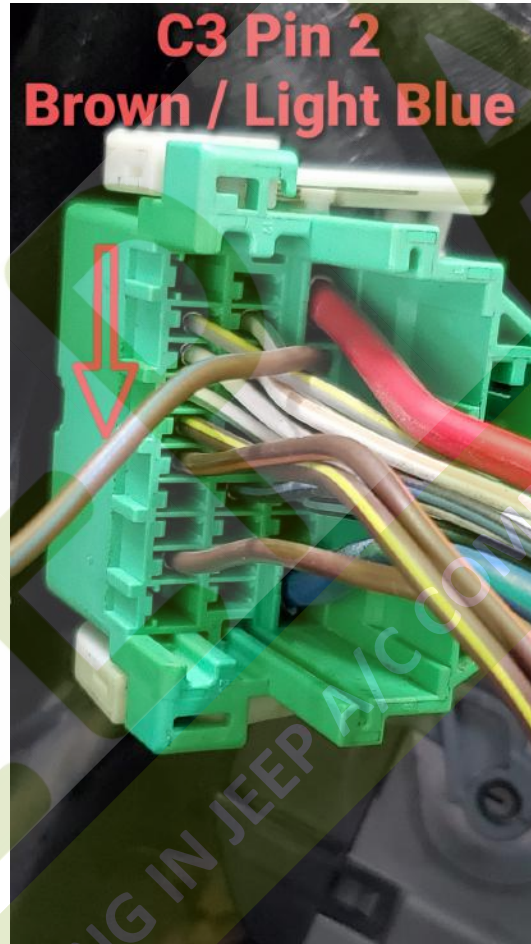
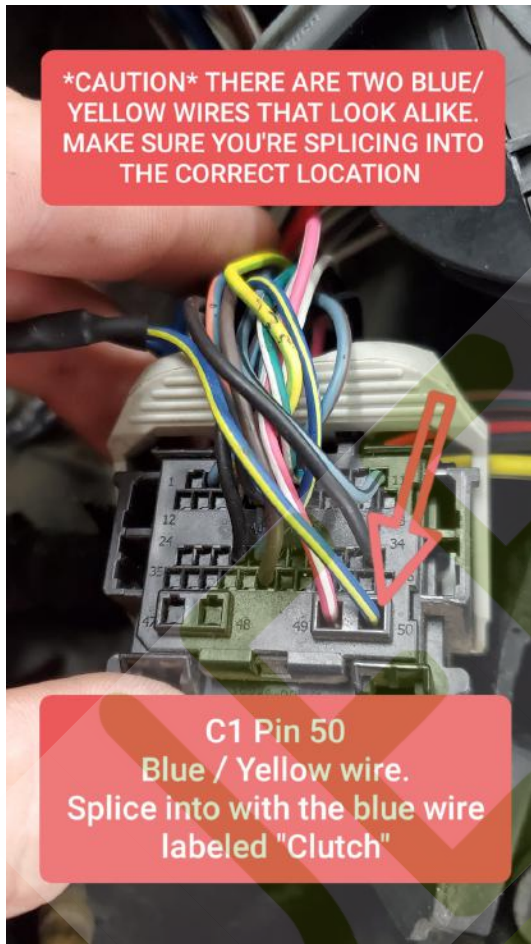
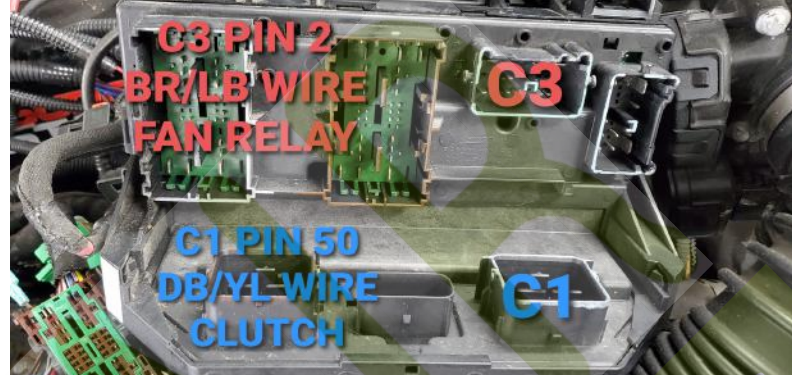


- 13.1.2. Install the nuts that secure the discharge line to the compressor and condenser. Tighten the nuts to 23Nm (17 ft. lbs.)
 - 13.1.3. Plug the compressor wire into the factory harness connector. Take the two wires on the switch pigtail and they will get spliced into the clutch ground wire of the factory harness
- 13.2. Suction and Liquid Line Assembly
- 13.2.1. Connect the liquid line to the condenser and install the retaining nut. Tighten the nut to 23 Nm (17 ft. lbs)
 - 13.2.2. Connect the liquid line and suction line to the expansion valve and install the retaining nut. Tighten the nut to 8 Nm (70 in lbs).
 - 13.2.3. Connect the suction line to the compressor and install the retaining nut. Tighten the nut to 23 Nm (17 ft. lbs)

Charge the System

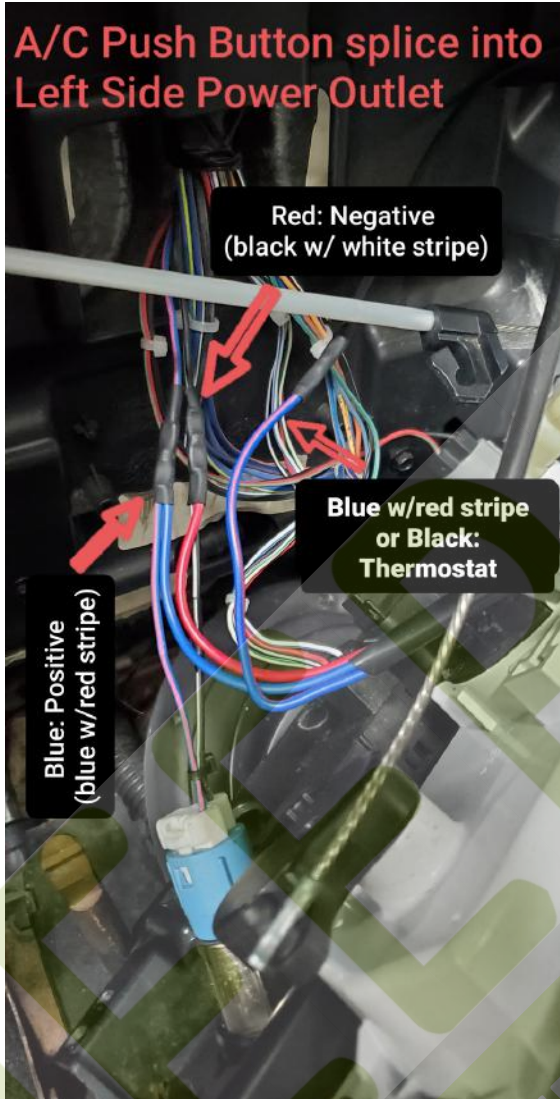
Evacuate for 45 minutes and charge using 134A to 1.125lbs.





SPECIALIZING IN JEEP

***NOTE:** If Power Outlet / Cigarette Lighter does not work or has questionable power to it, then tie the push button into a ignition source and ground the red wire.



***Note:** Supplied Pigtail wires may be black or green

SPECIALIZING IN JEEP A/C COPIES

A/C KITS