



# INSTALLATION INSTRUCTIONS

Accessory

AIR CONDITIONER

Application

CIVIC  
2- AND 4-DOOR

Publications No.

All 24158

Issue Date

SEP 2002

## What's New

The installation instructions for the 2003 Civic A/C are the same as the 2002 model. However, the A/C kit numbers are different because of improvements to the wire length on the compressor:

- 80000-S5D-A22 for U.S.
- 80000-S5D-C22 for Canada

## TOOLS AND SUPPLIES REQUIRED

Duct tape

Hacksaw blade

Trim clip remover

Open-end wrench set

Screwdrivers

Socket wrench set

Torque wrench

Tension gauge

Refrigerant oil (R-12 mineral oil or R-134a PAG oil)

Fender, floor, and seat covers

HFC-134a refrigerant recovery/recycling/charging station

Gloves

Eye protection (face shield or safety goggles)

Electronic leak detector

### NOTICE

- **Use only HFC-134a in this system;** do not use CFC 12 (Freon); do not install parts designed for use in a CFC system.
- **Use a charging station.** A/C charging stations and refrigerant recovery/recycling stations minimize the release of CFCs and HFCs to the atmosphere. Use them for all A/C charging and service work according to the manufacturers' instructions.
- **Do not overcharge.** This system requires only the amount of HFC-134a refrigerant shown below. If you overcharge the system, the engine and the A/C will malfunction.

500 to 550 grams

0.50 to 0.55 kilograms

1.1 to 1.2 pounds

17.6 to 19.4 ounces

## INSTALLATION

**Customer Information:** The information in these instructions is intended for use only by skilled technicians who have the proper tools, equipment, and training to correctly and safely add equipment to your car. These procedures should not be attempted by "do-it-yourselfers."

### NOTE:

- **Make sure you have the anti-theft code for the audio system.**
- **Write down the customer's radio station presets;** the radio memory will be erased when you disconnect the battery.
- **Make sure you install the right part.** Use the illustrations on pages 2 and 3 as a guide to check the parts before you install them.
- **Don't remove plugs and caps from fittings until the parts are ready to connect.** This will keep out moisture and dirt which could cause wear and damage.

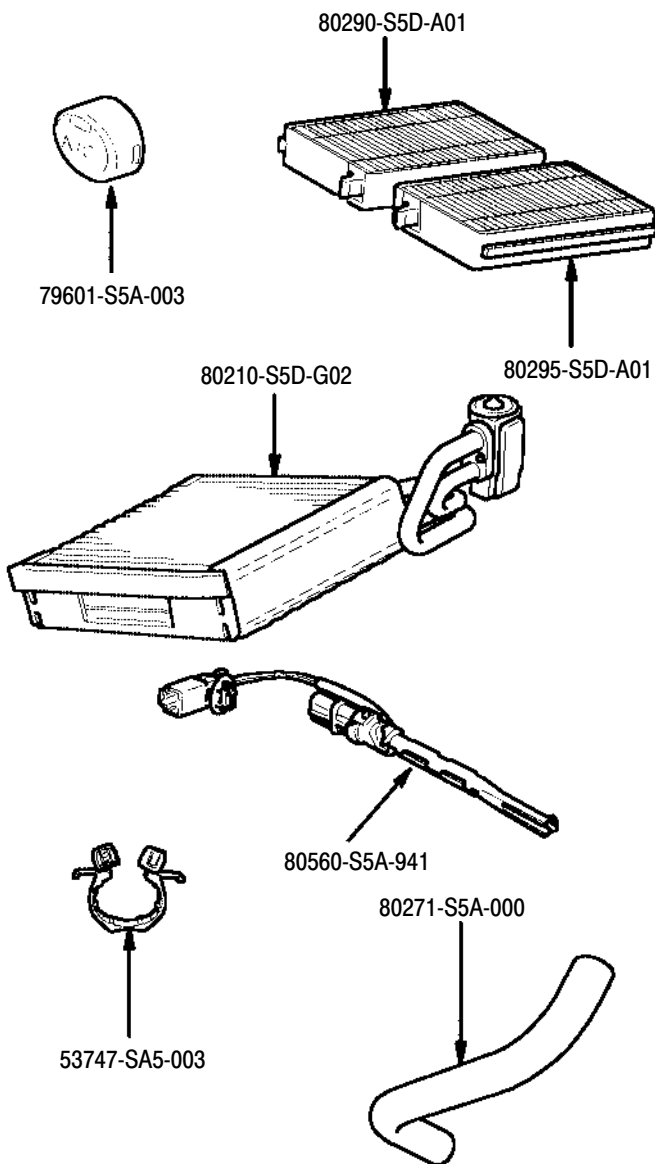
### During Installation:

- **Before you connect any line or hose, check and lube its O-ring.** Make sure the O-ring is on the fitting, put a few drops of refrigerant oil on the O-ring, then connect the fitting.
- You may use either type of refrigerant oil to lubricate O-rings and fittings.
- If you add or replace refrigerant oil in the system, use *only* this PAG oil: Sanden SP-10, P/N 38897-P13-A01.
- **Route and secure the lines and hoses properly;** maintain clearance between them and surrounding parts.
- **Use two wrenches to tighten or loosen fittings;** hold one fitting in place while you tighten the other one against it.

**NOTICE** **Don't overtighten; you could damage the fittings.** Before you tighten a fitting, check the torque listed for it. If leaks are caused by faulty O-rings, overtightening the fitting won't help.

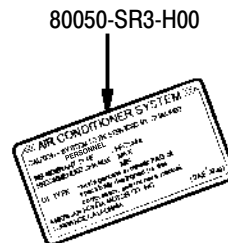
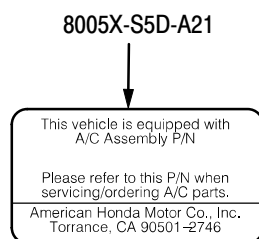
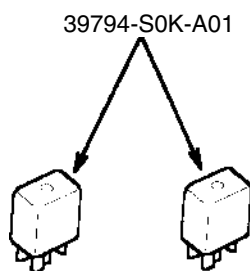
- **Before you connect each electrical connector, check its terminals.** Make sure the terminals aren't bent or out of place.

## Group A

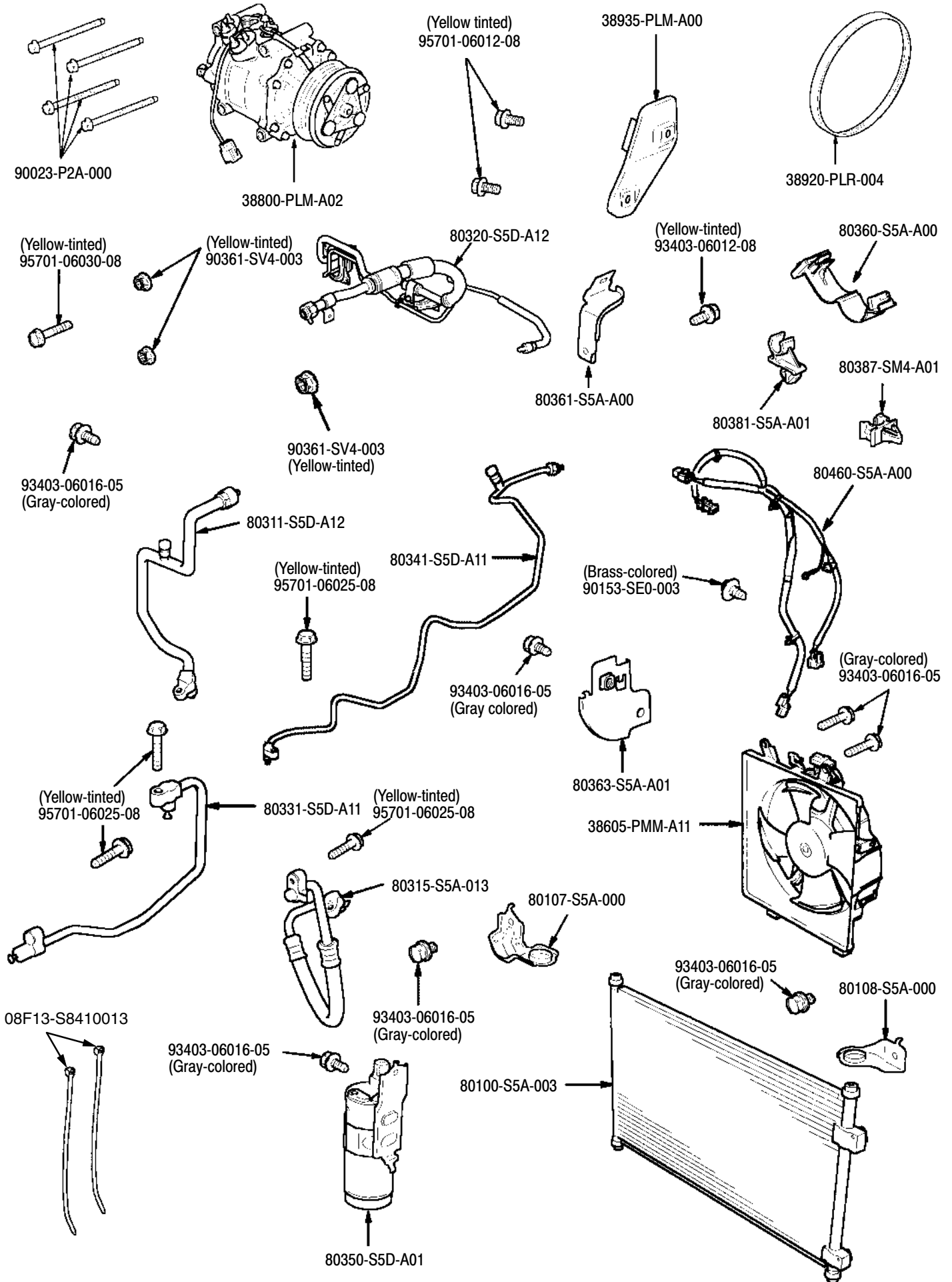


GROUP	PART	P/N	QUANTITY
<b>A</b>	Drain hose clip	53747-SA5-003	1
	A/C button	79601-S5A-003	1
	Evaporator	80210-S5D-G03	1
	Drain hose	80271-S5A-000	1
	Dust and pollen filter A	80290-S5D-A01	1
	Dust and pollen filter B	80295-S5D-A01	1
	Evaporator sensor	80560-S5A-941	1
<b>B</b>	Wire ties	08F13-S84100013	2
	Condenser fan assembly	38605-PMM-A12	1
	Compressor	38800-PLM-A12	1
	Compressor belt	38920-PLR-004	1
	Heat insulator	38935-PLM-A00	1
	Condenser assembly	80100-S5A-003	1
	Right condenser bracket	80107-S5A-000	1
	Left condenser bracket	80108-S5A-000	1
	Suction line	80311-S5D-A12	1
	Discharge hose	80315-S5A-013	1
	A/C suction line and receiver line B	80320-S5D-A12	1
	Condenser line	80331-S5D-A11	1
	Receiver line	80341-S5D-A11	1
	Receiver	80350-S5D-A01	1
	Suction hose clamp A	80360-S5A-A00	1
	Suction hose bracket	80361-S5A-A00	1
	Suction line bracket	80363-S5A-A01	1
	Receiver line clip A	80381-S5A-A01	1
	Receiver line clip B	80387-SM4-A01	1
	A/C wire harness	80460-S5A-A00	1
Flange bolts, 8 x 100 mm	90023-P2A-000	4	
Ground bolt, 6 x 12 mm (brass-colored)	90153-SE0-003	1	
Paint cutting nut, 6 mm (yellow-tinted)	90361-SV4-003	3	
Washer-bolt, 6 x 12 mm (yellow-tinted)	93403-06012-08	1	
Washer-bolts, 6 x 16 mm (gray-colored)	93403-06016-05	7	
Flange bolts, 6 x 12 mm (yellow-tinted)	95701-06012-08	2	
Flange bolts, 6 x 25 mm (yellow-tinted)	95701-06025-08	4	
Flange bolt, 6 x 30 mm (yellow-tinted)	95701-06030-08	1	
<b>C</b>	Power relay (4P)	39794-S0K-A01	2
	Information label (Canada)	80050-SP0-000	1
	Information label (USA)	80050-SR3-H00	1
	A/C kit identification label (USA)	8005X-S5D-A21	1

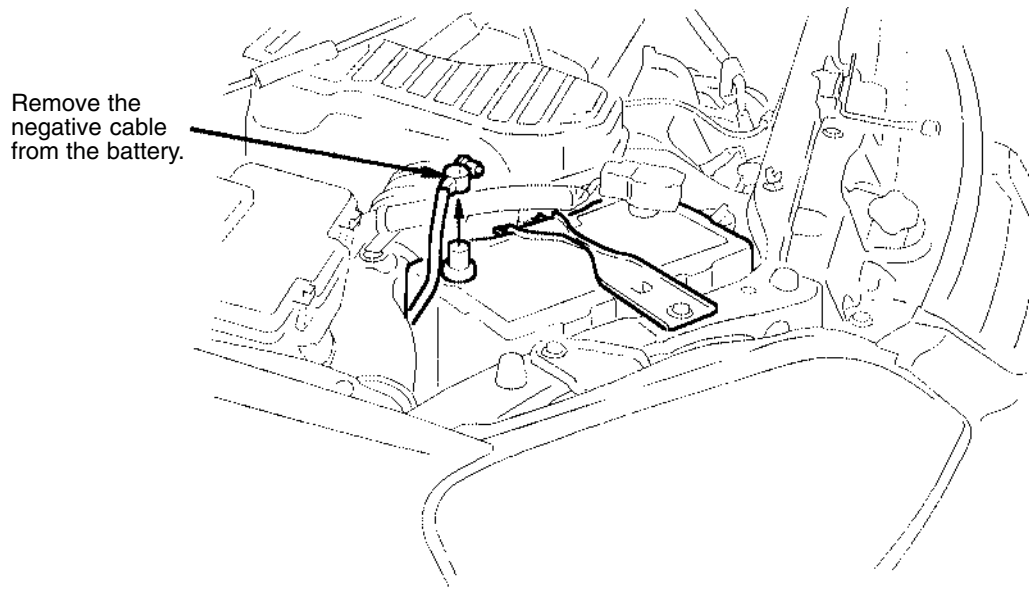
## Group C



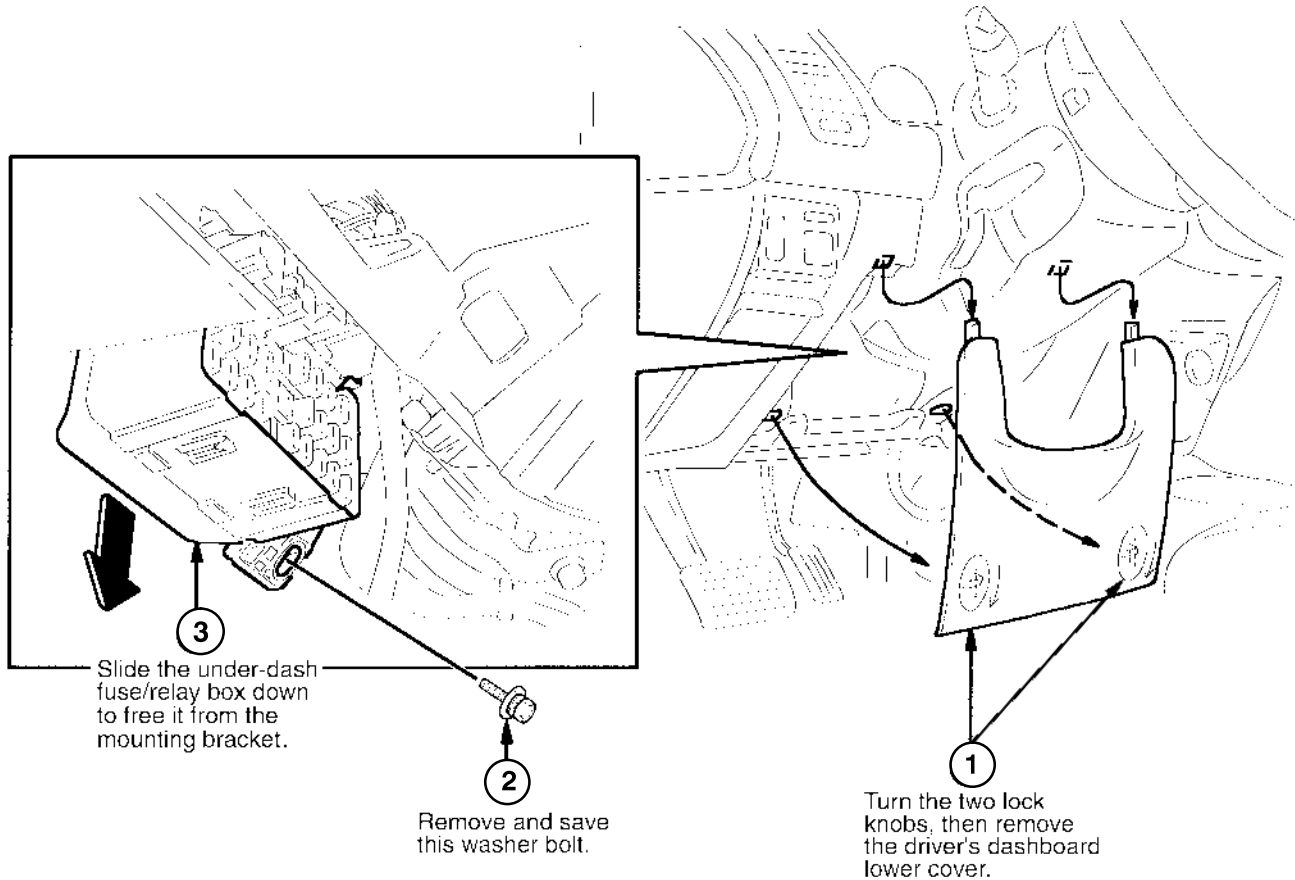
# Group B



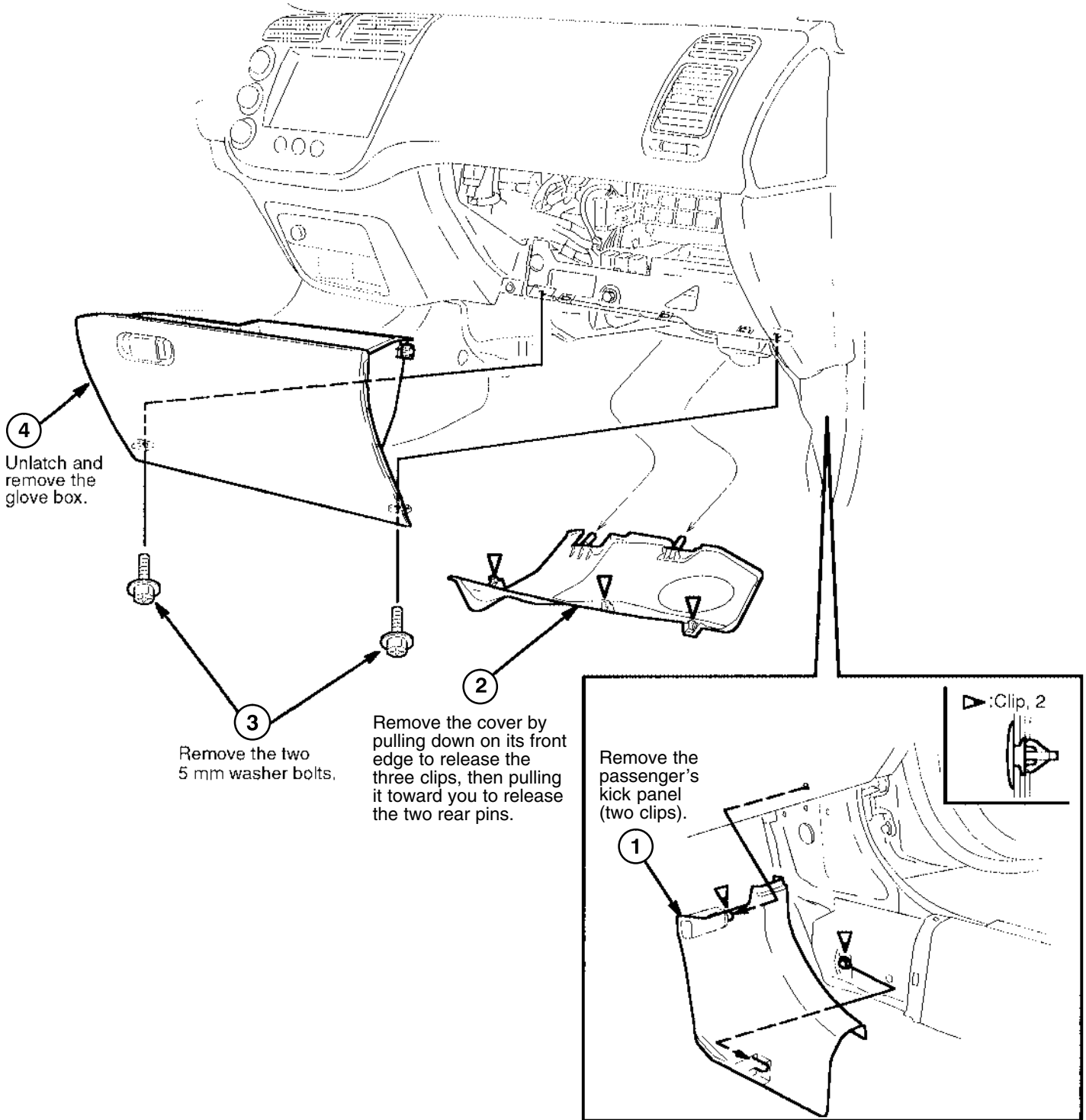
**1. Disconnect the battery.**



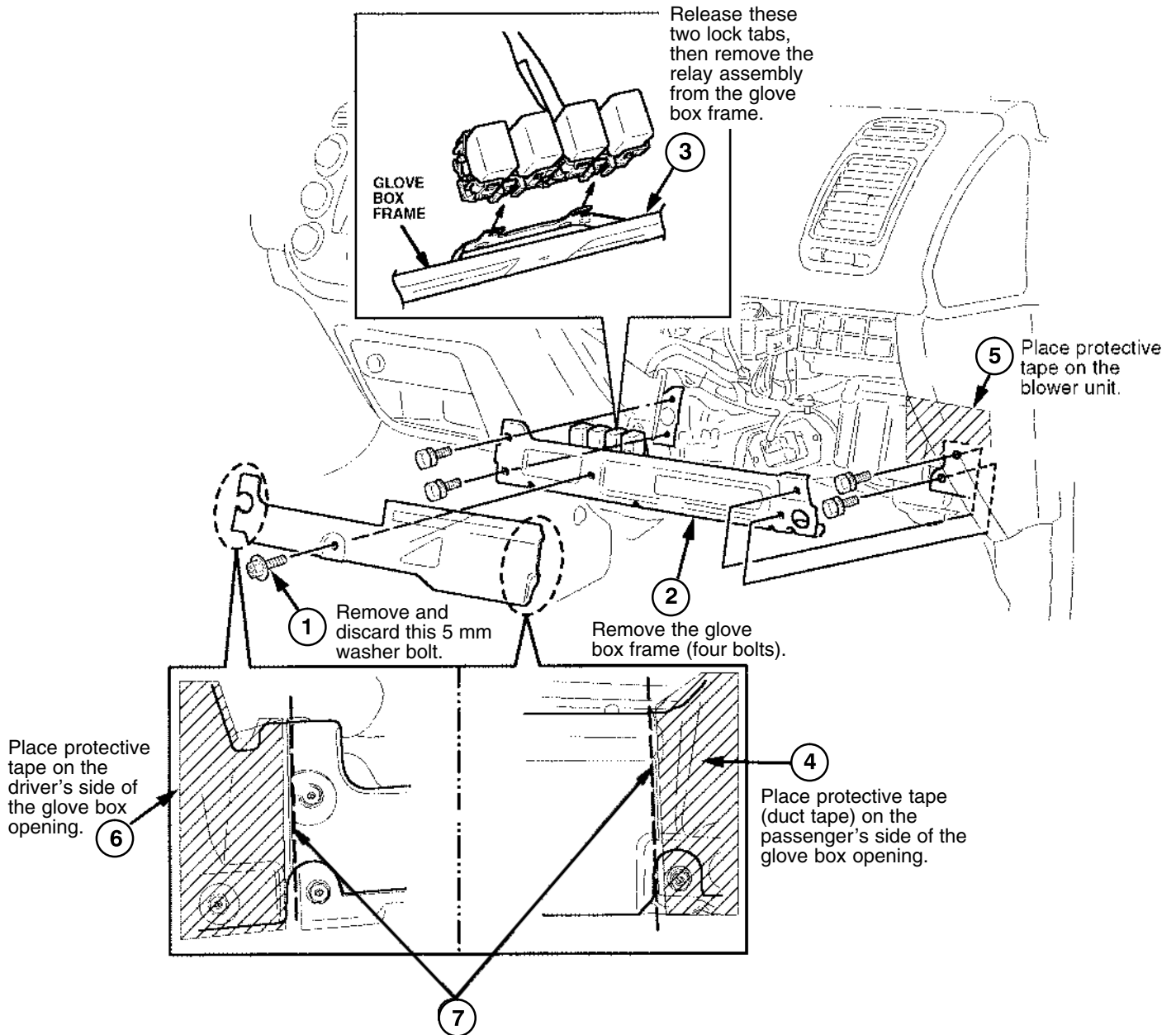
**2. Remove the driver's dashboard lower cover and the under-dash fuse/relay box.**



**3. Remove the passenger's dashboard lower cover and the glove box.**

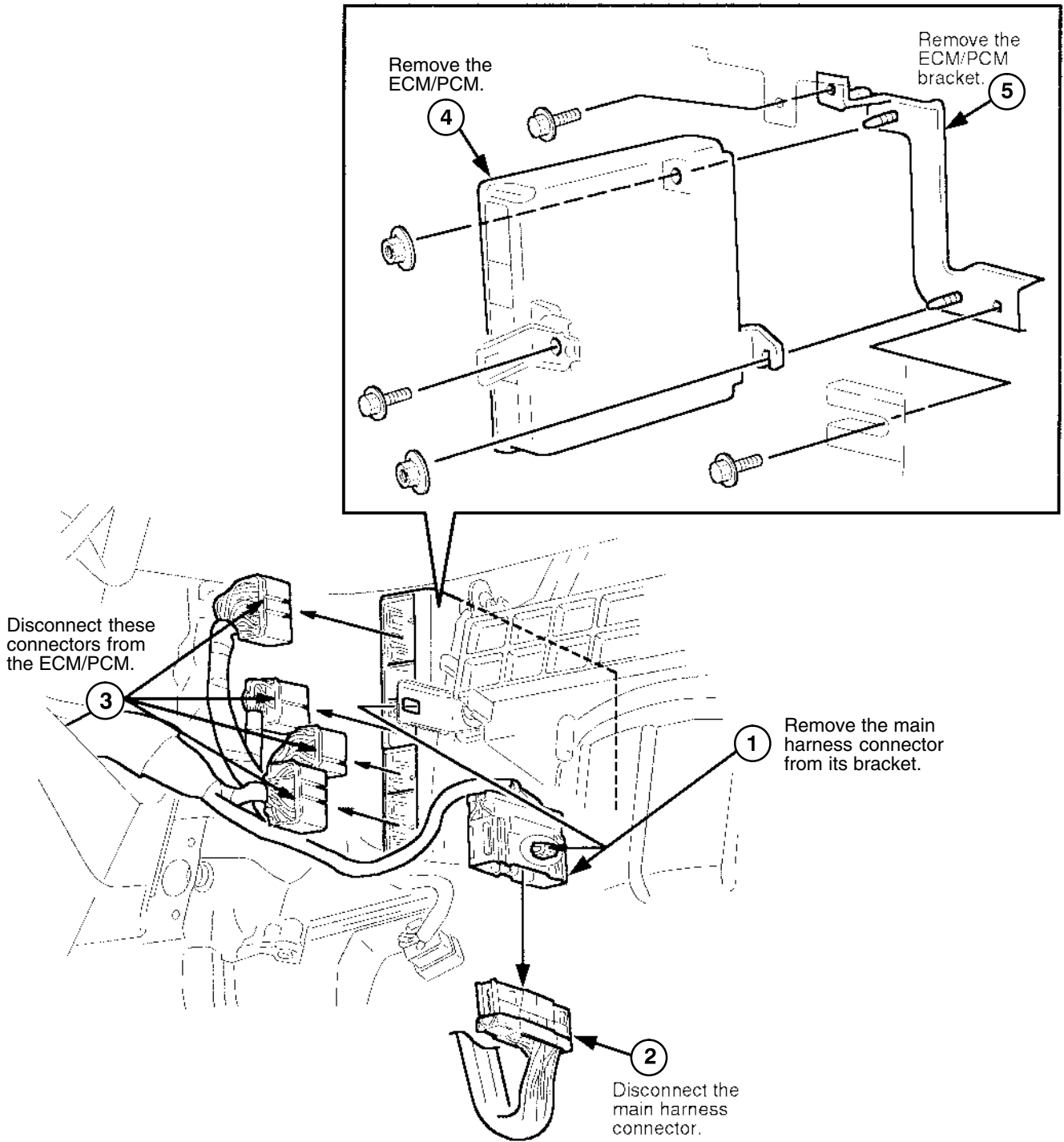


#### 4. Remove the glove box frame and plastic cross-piece.



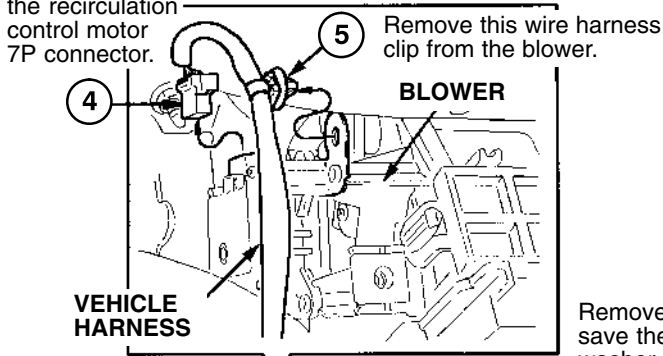
Move aside any vehicle harness that may be in the way, and use a hacksaw blade to carefully cut through the plastic cross-piece in the areas shown. Remove and discard the plastic cross-piece and the protective tape.

**5. Remove the ECM/PCM unit and the bracket.**

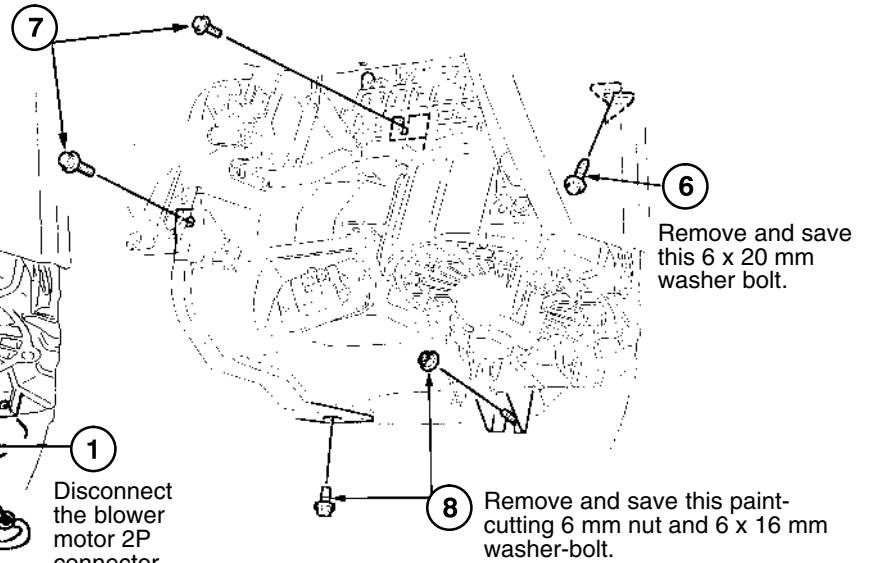


## 6. Prepare to install the evaporator.

Disconnect the recirculation control motor 7P connector.



Remove and save these washer bolts.



3

Disconnect the power transistor 4P connector.

1

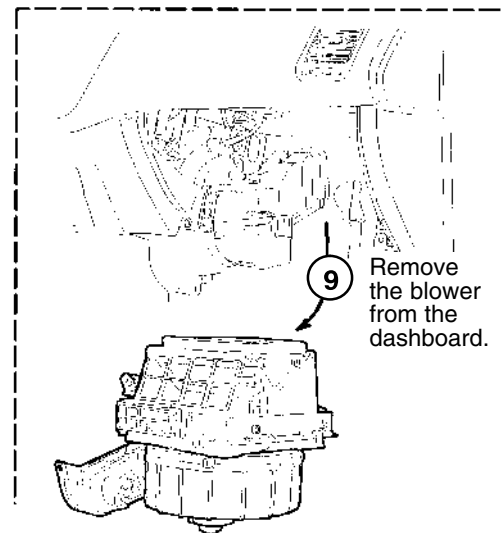
Disconnect the blower motor 2P connector.

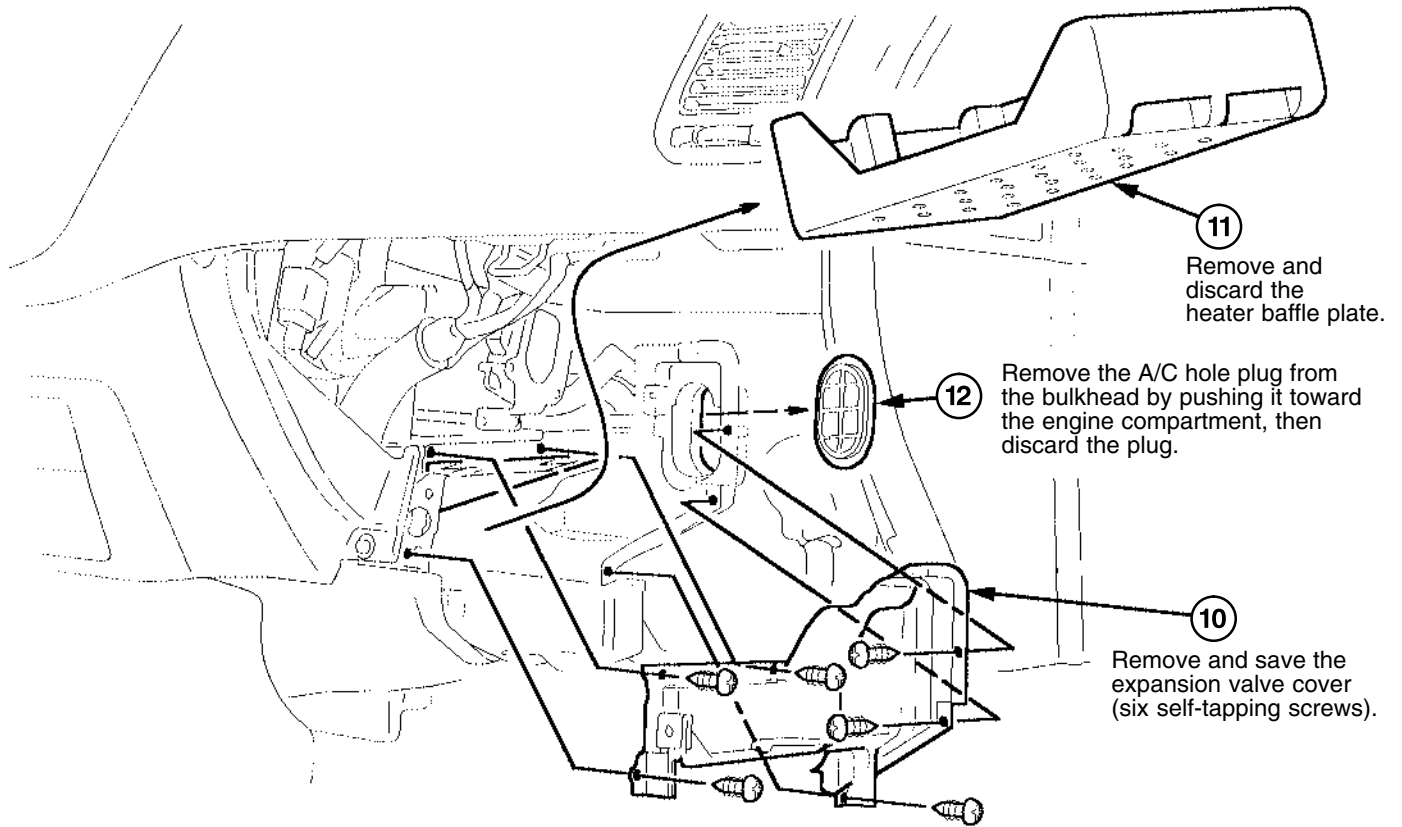
2

Remove these wire harness clips from the blower.

8

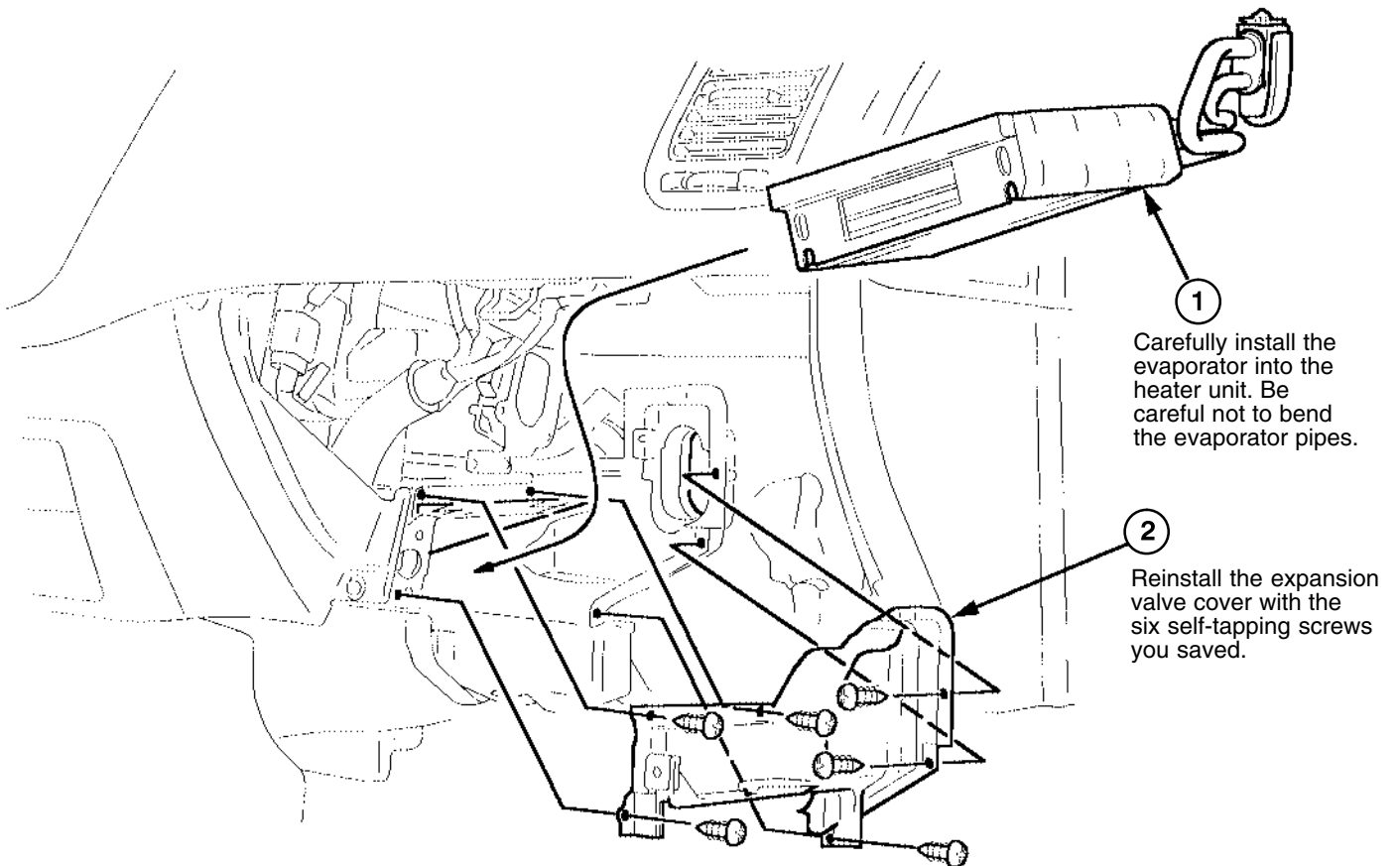
Remove and save this paint-cutting 6 mm nut and 6 x 16 mm washer-bolt.



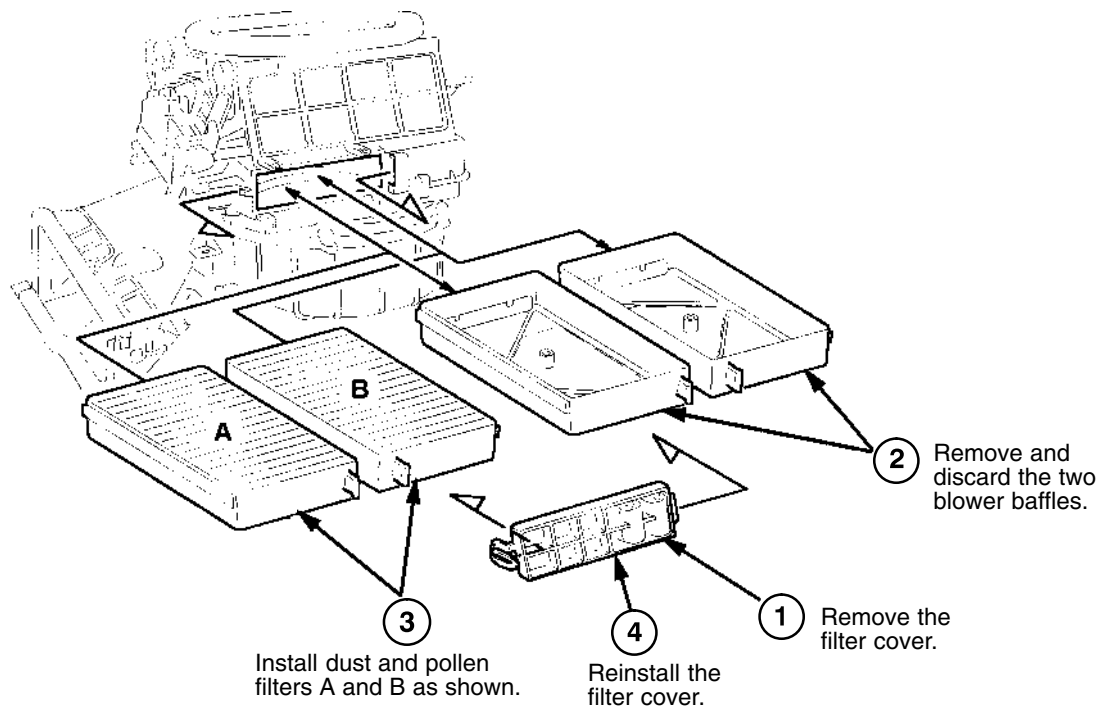


Get parts group A.

7. Install the evaporator.

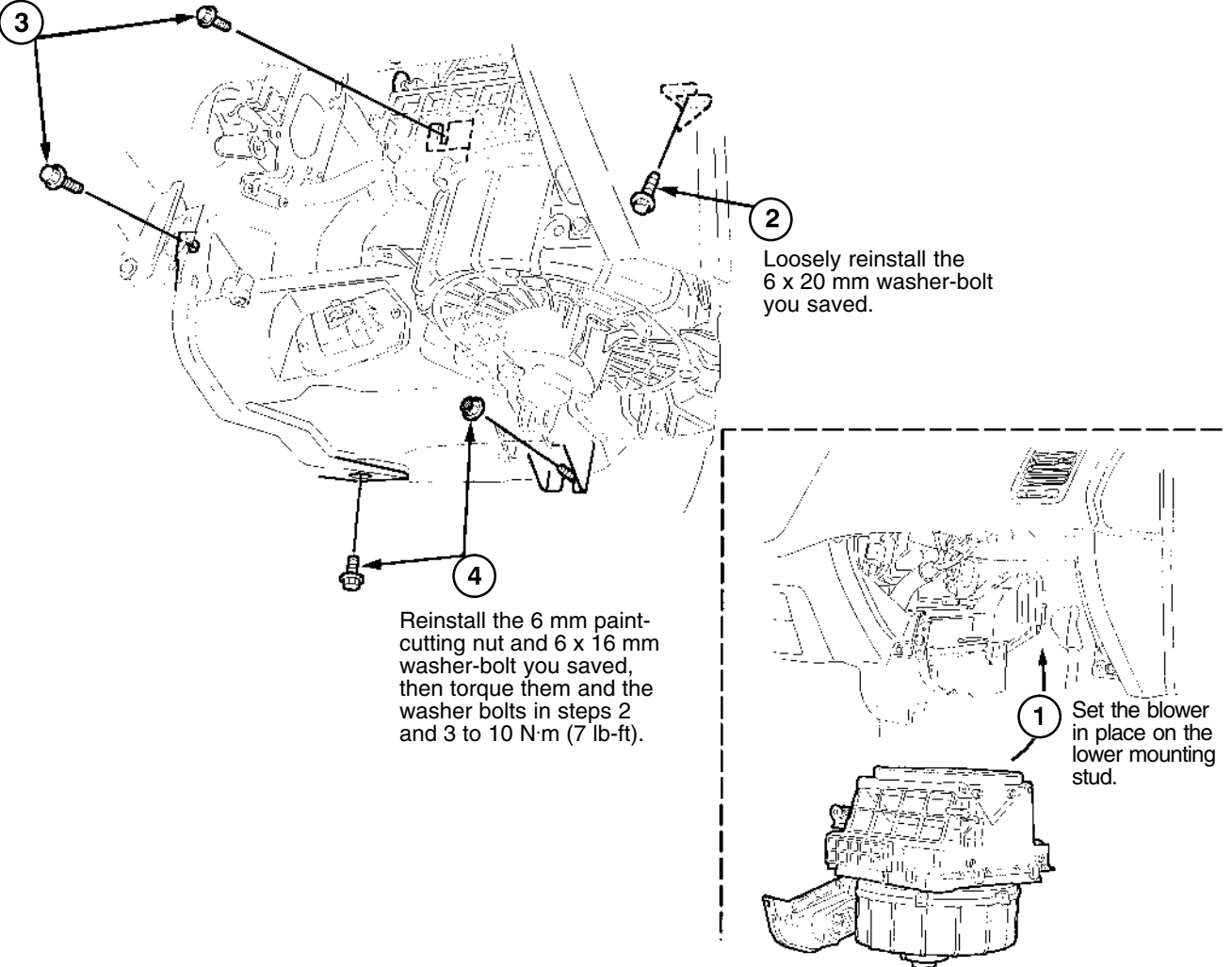


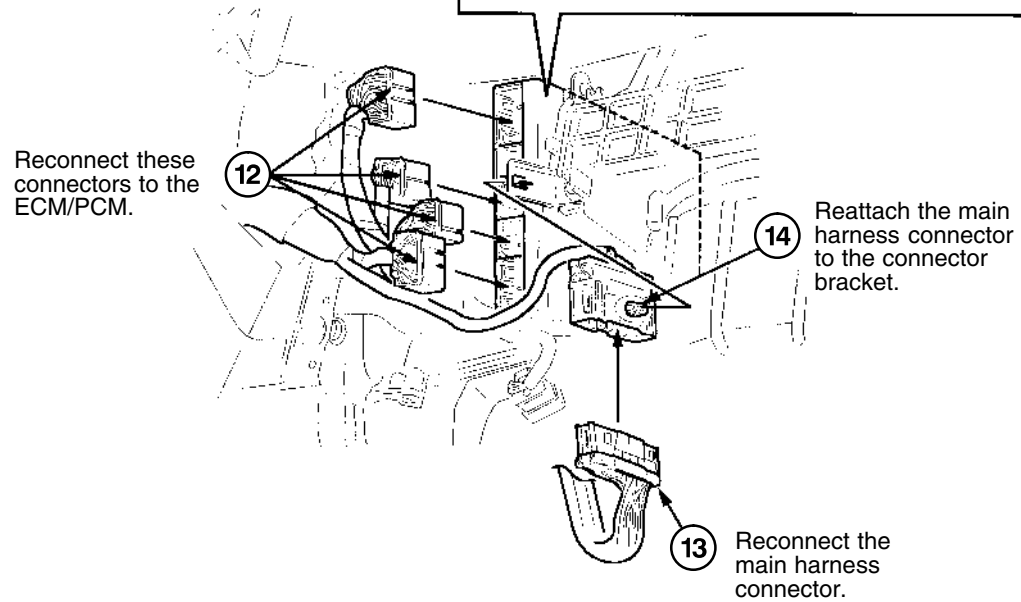
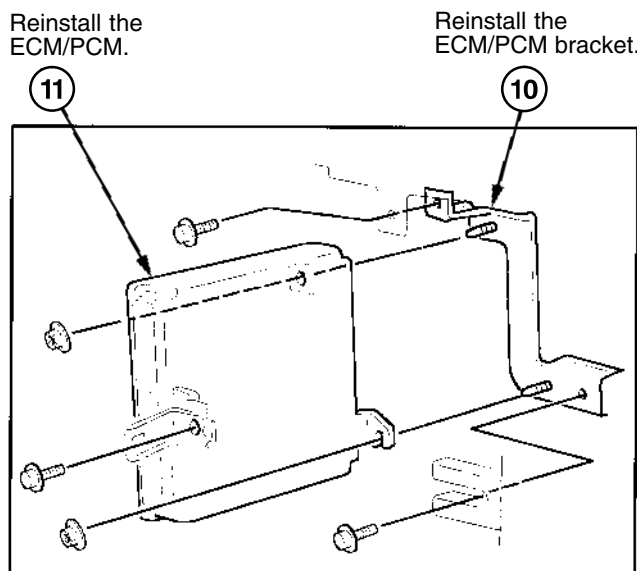
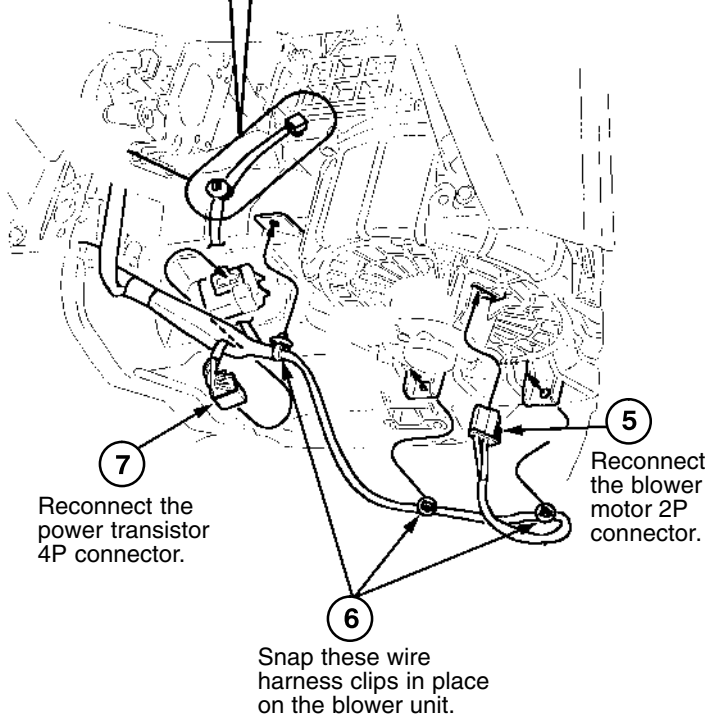
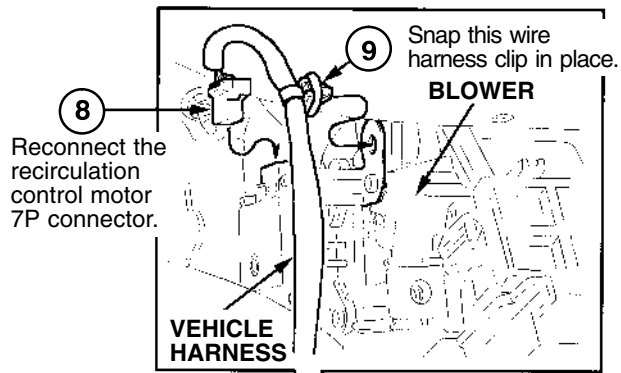
## 8. Install the dust and pollen filters.



## 9. Reinstall the blower unit and the ECM/PCM.

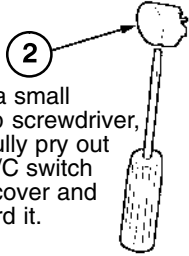
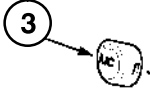
Loosely reinstall the two 6 x 16 mm washer-bolts you saved.





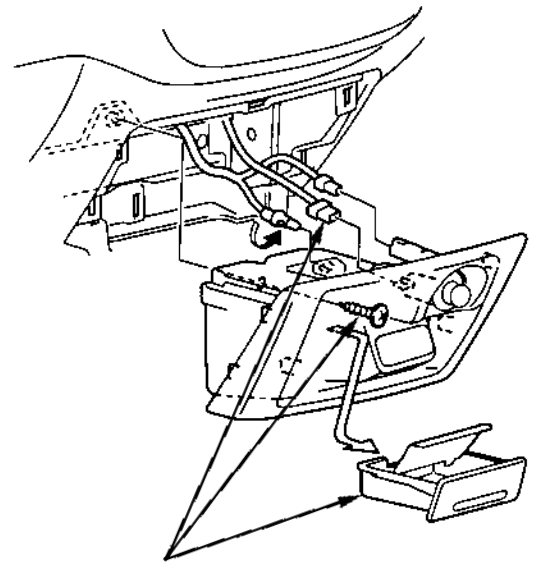
## 10. Install the A/C switch knob and the evaporator sensor.

Insert the A/C switch button in the A/C switch hole, then push on the button until it clicks into place.



With a small flat-tip screwdriver, carefully pry out the A/C switch hole cover and discard it.

Apply protective tape to the heater control panel just below the A/C switch hole cover.



Remove the ashtray, then remove the self-tapping screw. Remove the center console by pulling out on the cover to release the clips, then disconnect the connectors and the illumination bulb.

4 → *With Cigarette Lighter/Ashtray*  
 → *Without Cigarette Lighter/Ashtray*

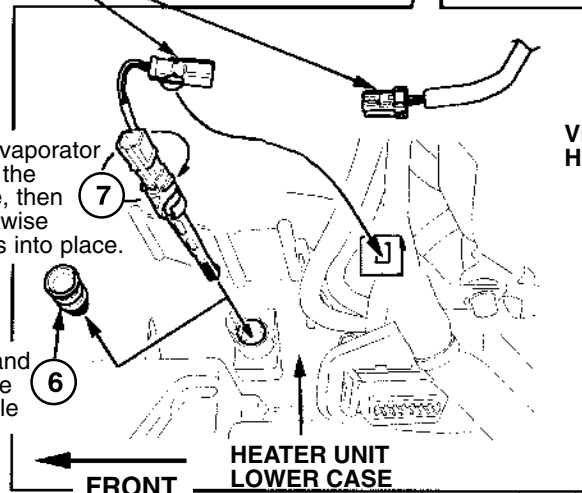
Connect the evaporator sensor to the sensor harness 2P connector you freed in step 5, then snap the connector clip in the bracket on the blower unit.



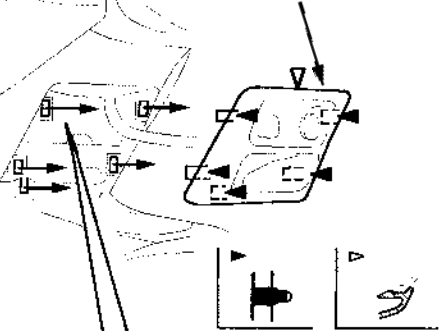
Insert the evaporator sensor into the sensor hole, then turn it clockwise until it clicks into place.



Remove and discard the sensor hole cover.

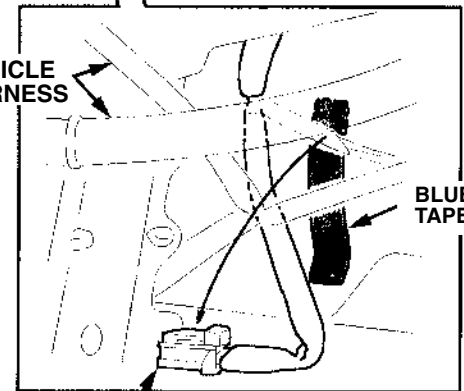


Remove the center console cover by pulling out on the cover to release the clips, then disconnect the accessory power socket connector.



VEHICLE HARNESS

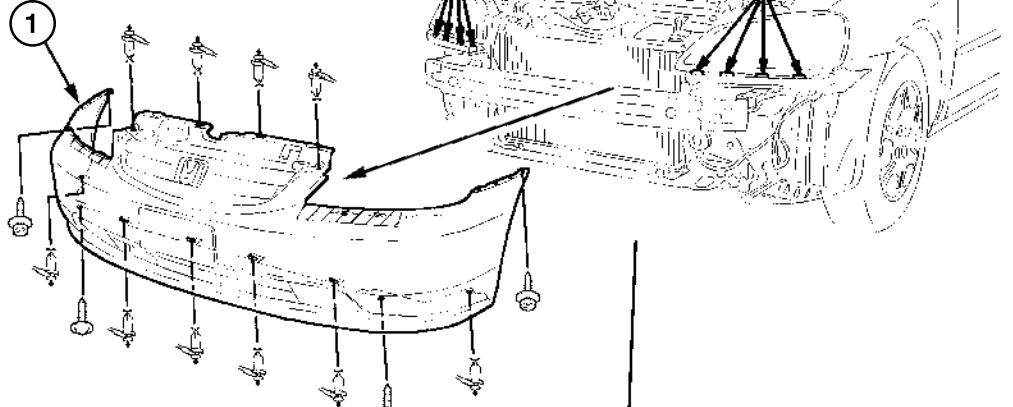
BLUE TAPE



Remove the blue tape securing the evaporator sensor 2P connector to the vehicle harness.

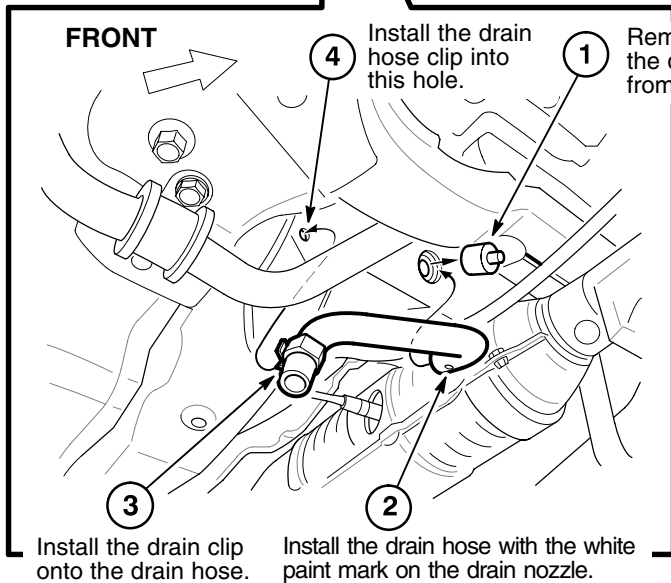
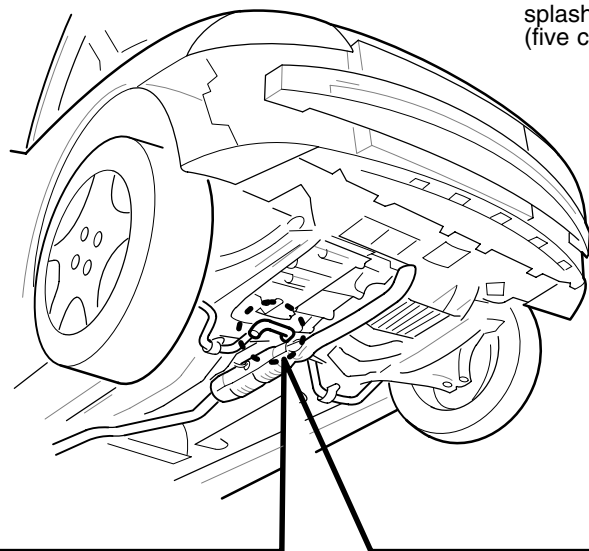
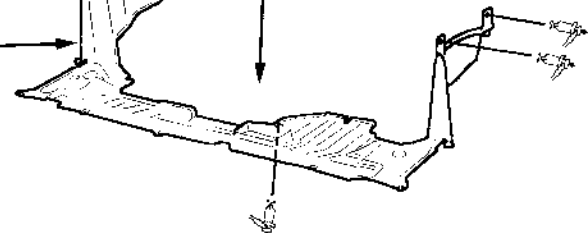
**11. Raise the vehicle, and remove the front bumper and the splash shield.**

Carefully remove the front bumper (10 clips, two hexhead screws, and two self-tapping screws), and set it aside.



**12. Install the drain hose.**

**2** Remove the splash shield (five clips).



**1** Remove and discard the drain nozzle cap from the heater unit.

**3** Install the drain clip onto the drain hose.

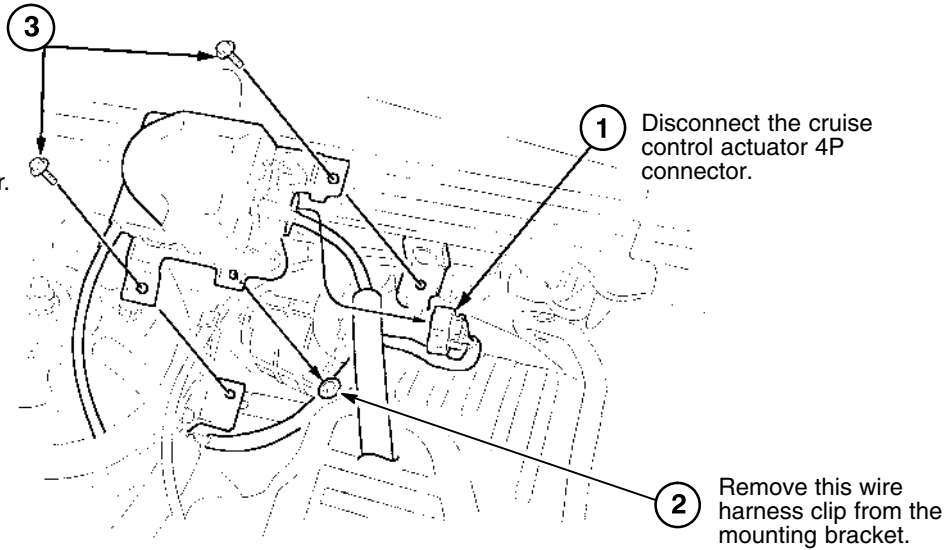
**2** Install the drain hose with the white paint mark on the drain nozzle.

**4** Install the drain hose clip into this hole.

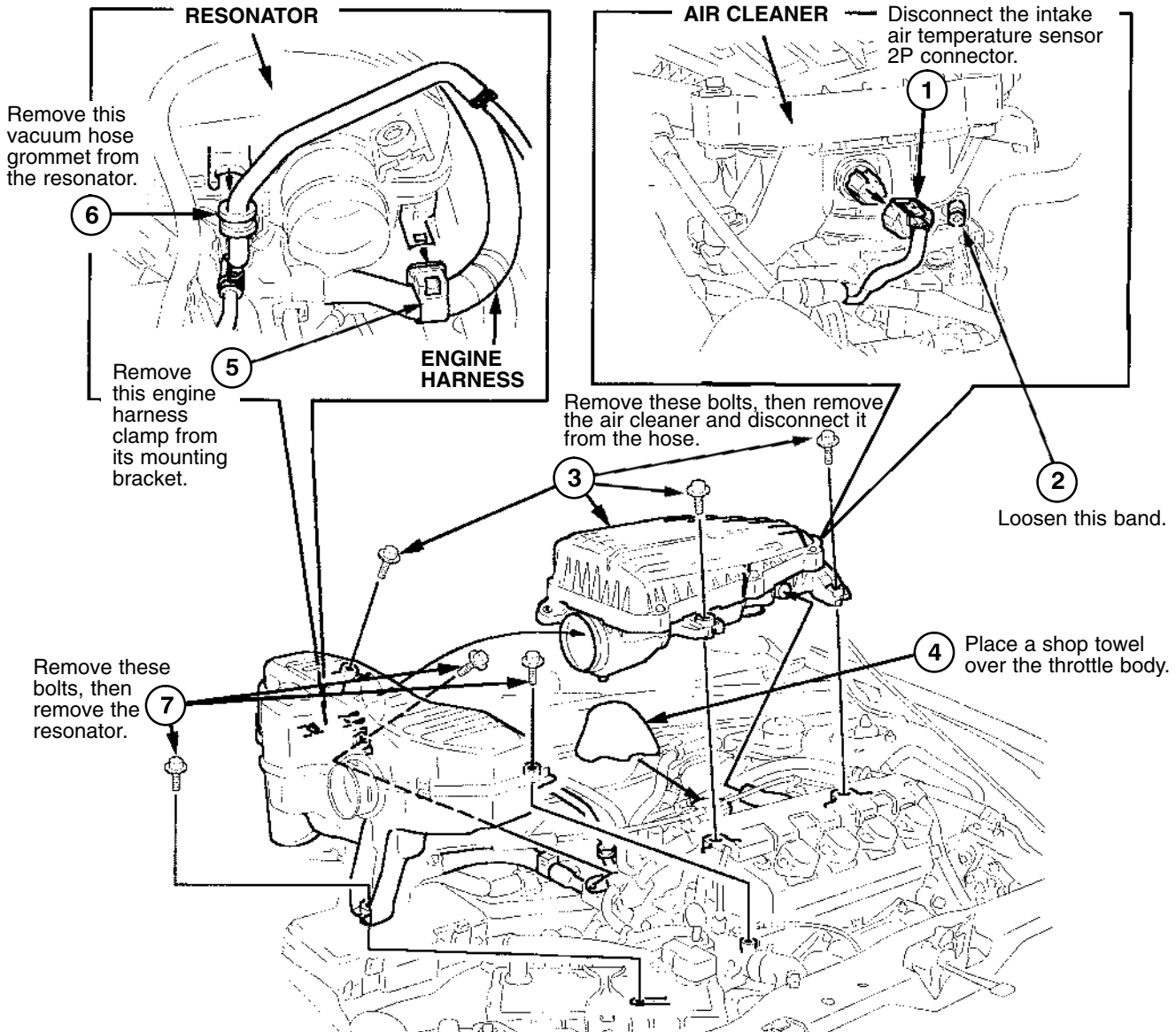
### 13. For vehicles with cruise control, remove the cruise control actuator.

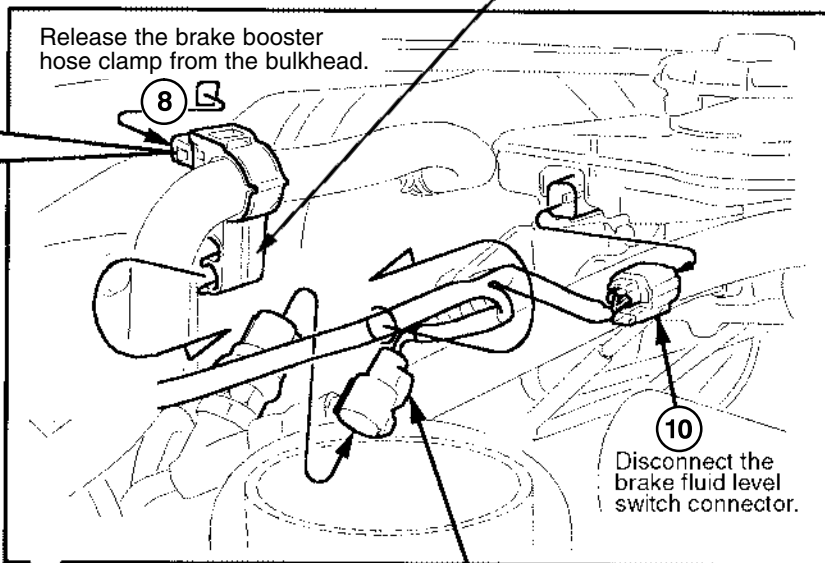
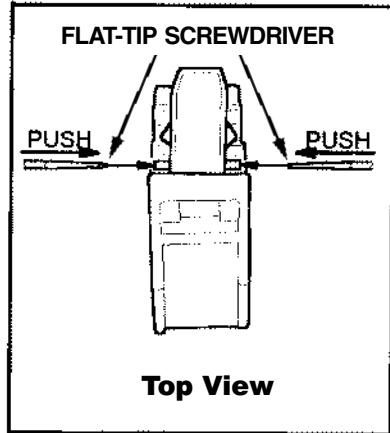
Remove these washer bolts, then remove the cruise control actuator and set it aside.

**NOTE:** Do not loosen or remove the throttle cables from the actuator.



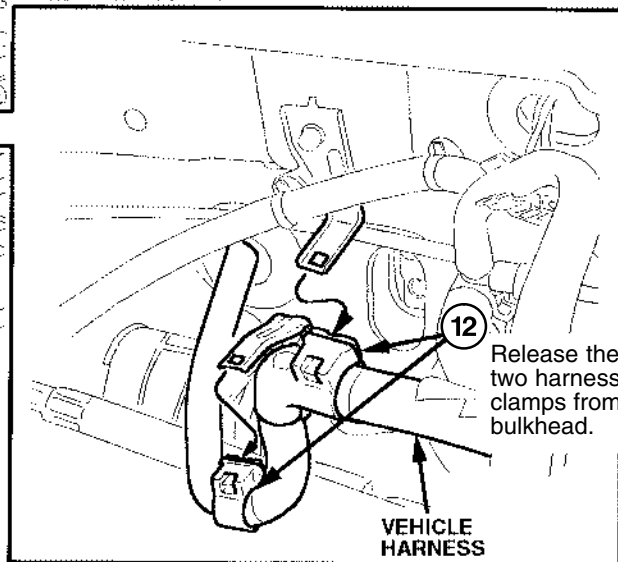
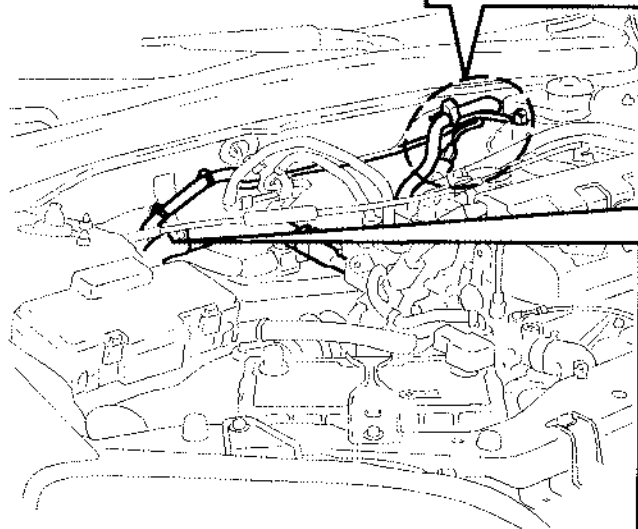
### 14. Prepare the engine compartment.





Push the vehicle harness out of this clamp.

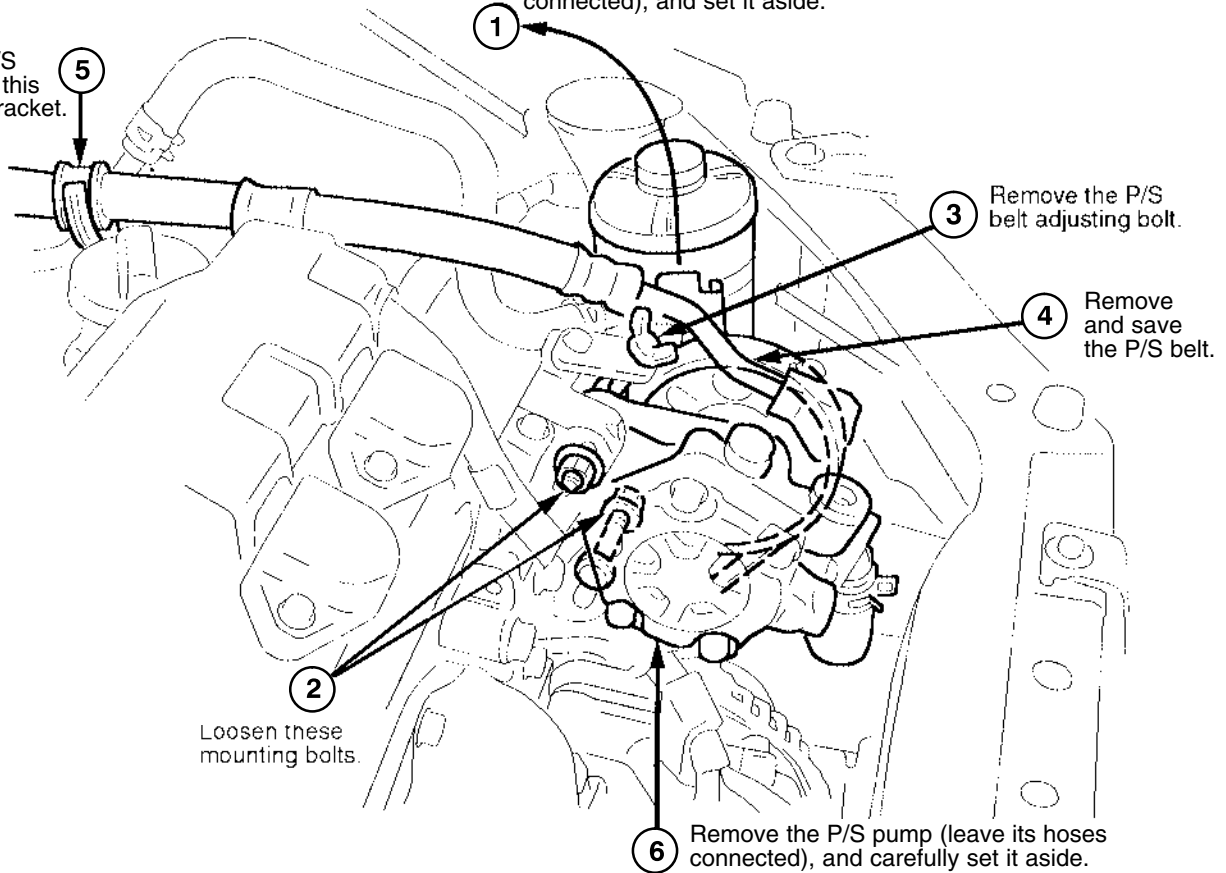
11



## 15. Remove the power steering pump.

Lift the P/S fluid reservoir off its bracket (leave its hoses connected), and set it aside.

Push the P/S hose out of this mounting bracket.

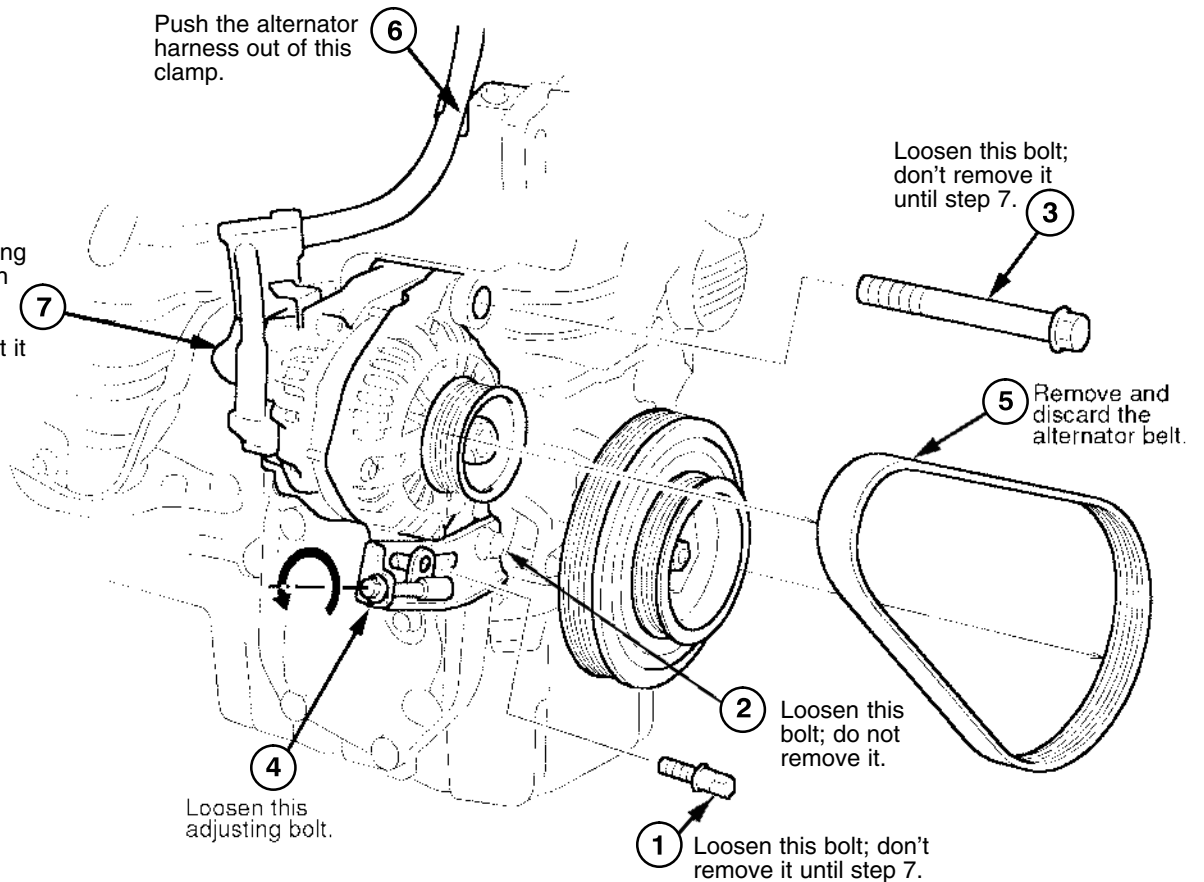


## 16. Remove the alternator.

Push the alternator harness out of this clamp.

Remove the two alternator mounting bolts (loosened in steps 1 and 3), then remove the alternator and set it aside.

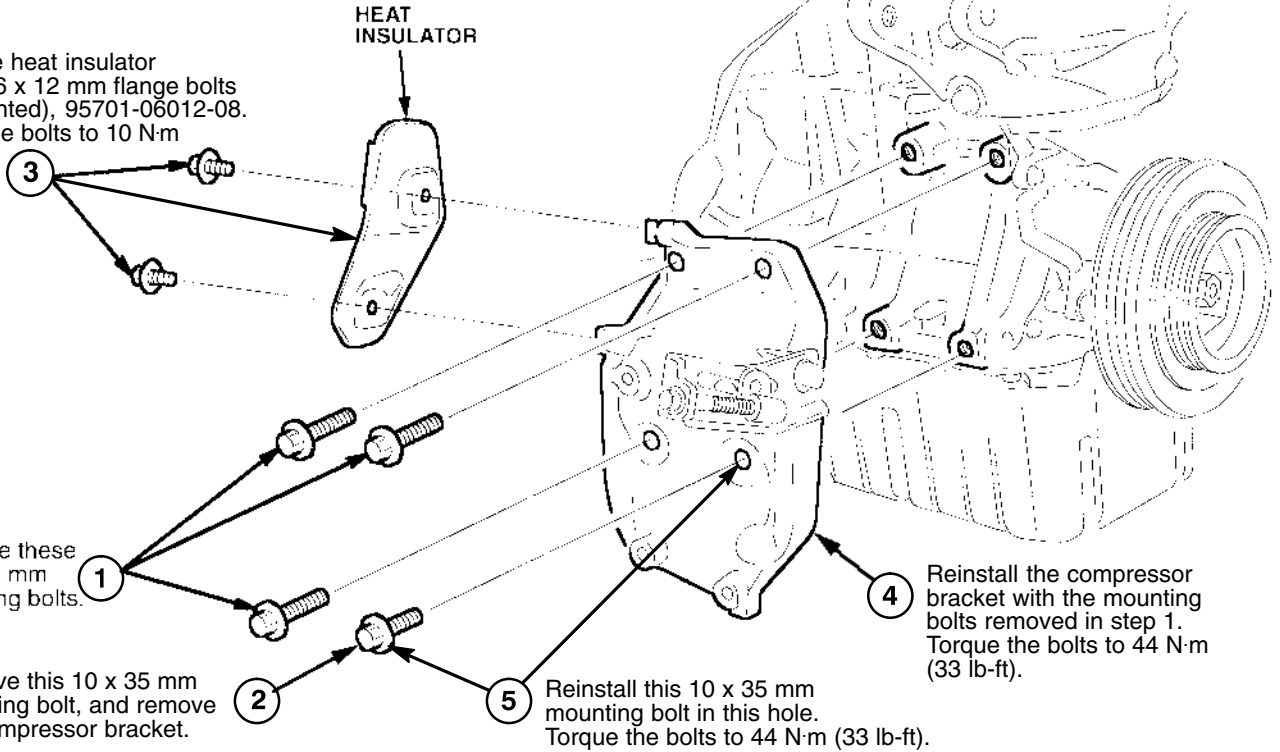
Loosen this bolt; don't remove it until step 7.



**Get parts group B.**

**17. Install the heat insulator.**

Install the heat insulator with two 6 x 12 mm flange bolts (yellow-tinted), 95701-06012-08. Torque the bolts to 10 N·m (7 lb-ft).



Remove these 10 x 45 mm mounting bolts.

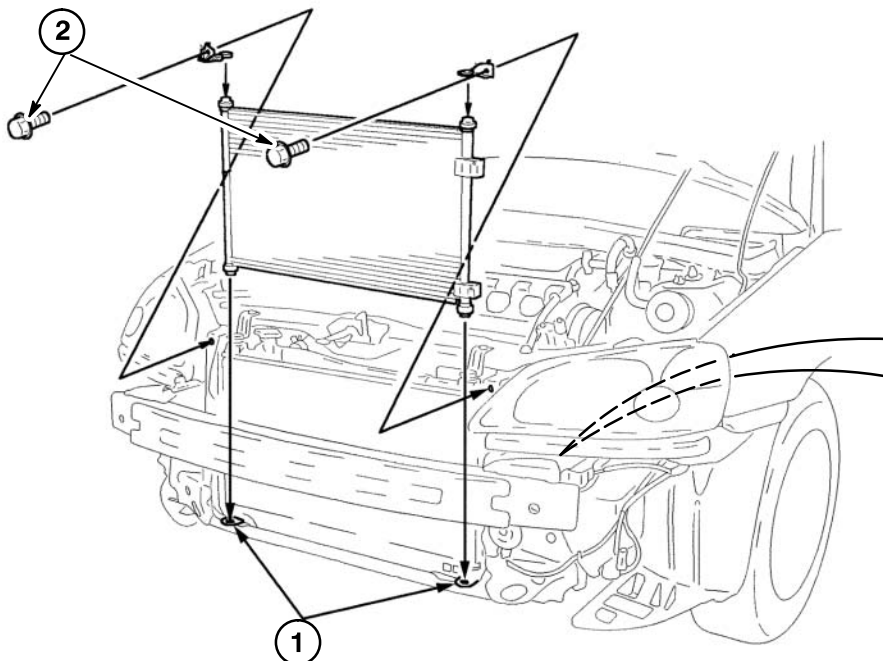
Remove this 10 x 35 mm mounting bolt, and remove the compressor bracket.

Reinstall this 10 x 35 mm mounting bolt in this hole. Torque the bolts to 44 N·m (33 lb-ft).

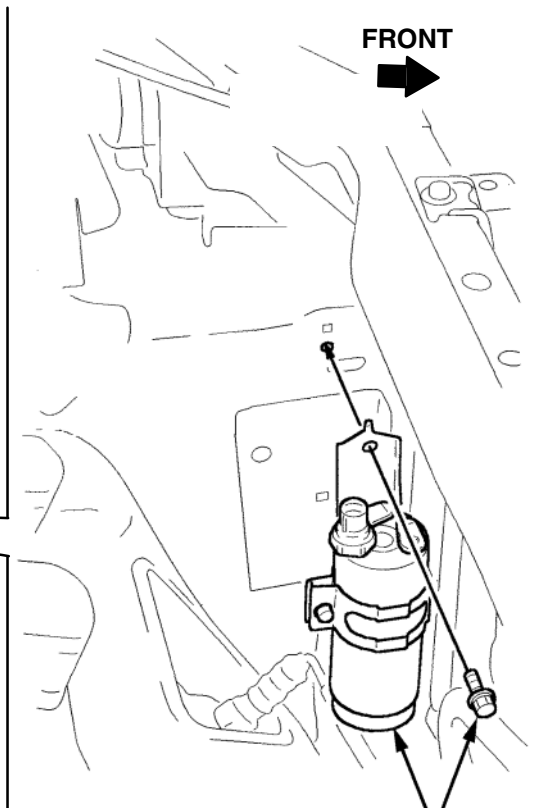
Reinstall the compressor bracket with the mounting bolts removed in step 1. Torque the bolts to 44 N·m (33 lb-ft).

**18. Install the condenser and the receiver.**

Install the left and right condenser brackets with two 6 x 16 mm washer-bolts (gray-colored), 93403-06016-05. Torque the bolts to 10 N·m (7 lb-ft).

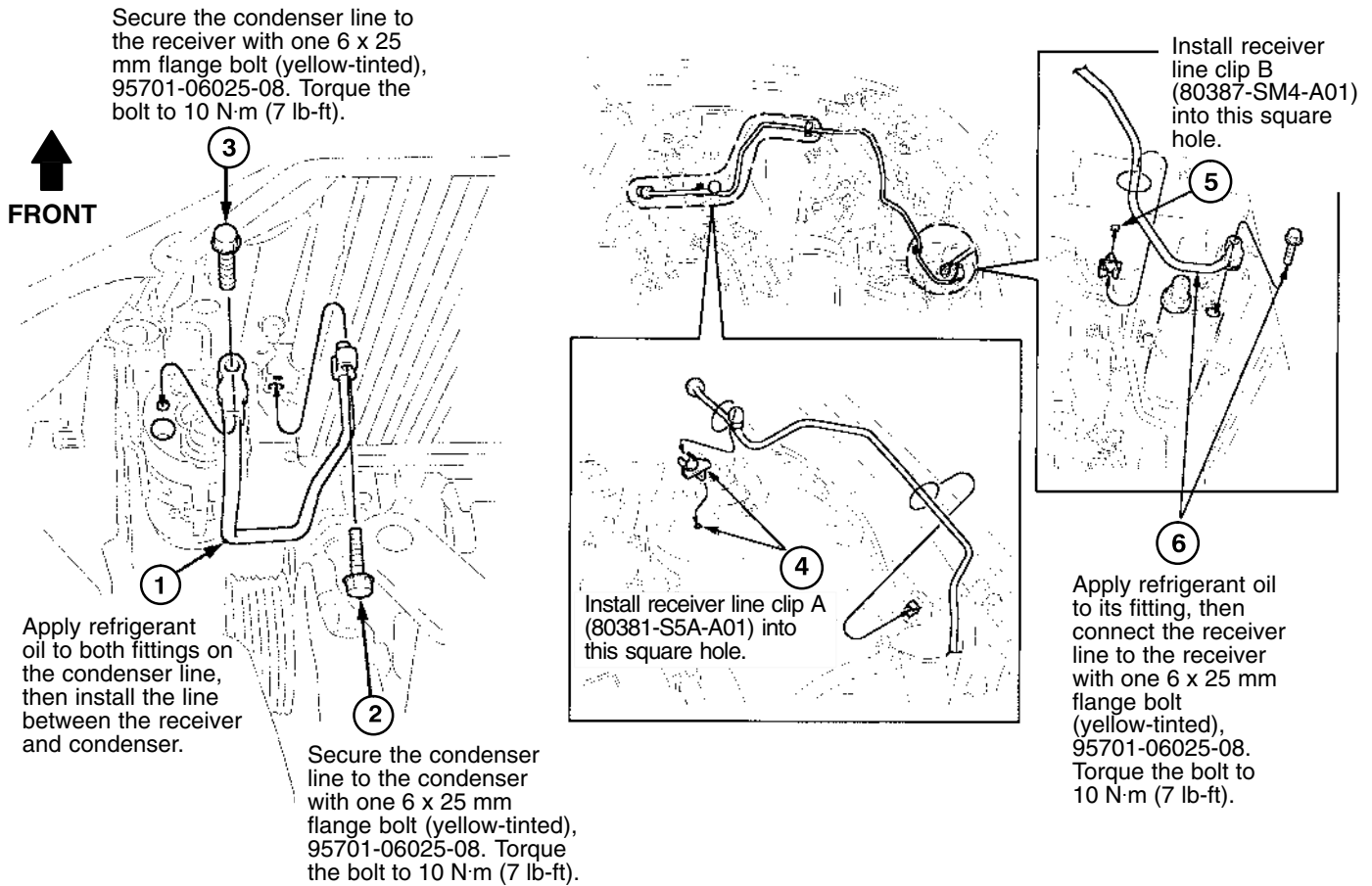


Set the condenser on the condenser mounts on the front lower frame.

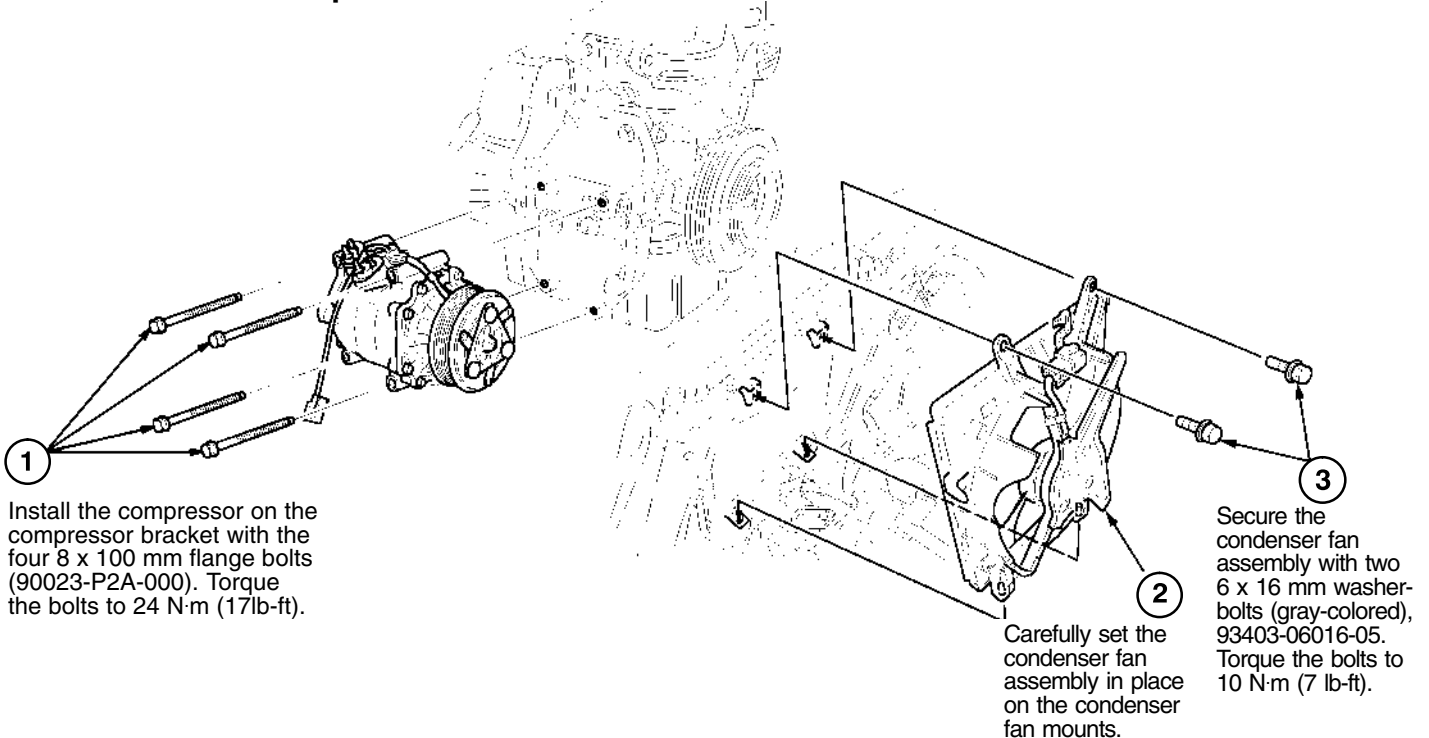


Mount the receiver to the left side of the frame with one 6 x 16 mm washer-bolt (gray-colored) 93403-06016-05. Torque the bolt to 10 N·m (7lb-ft).

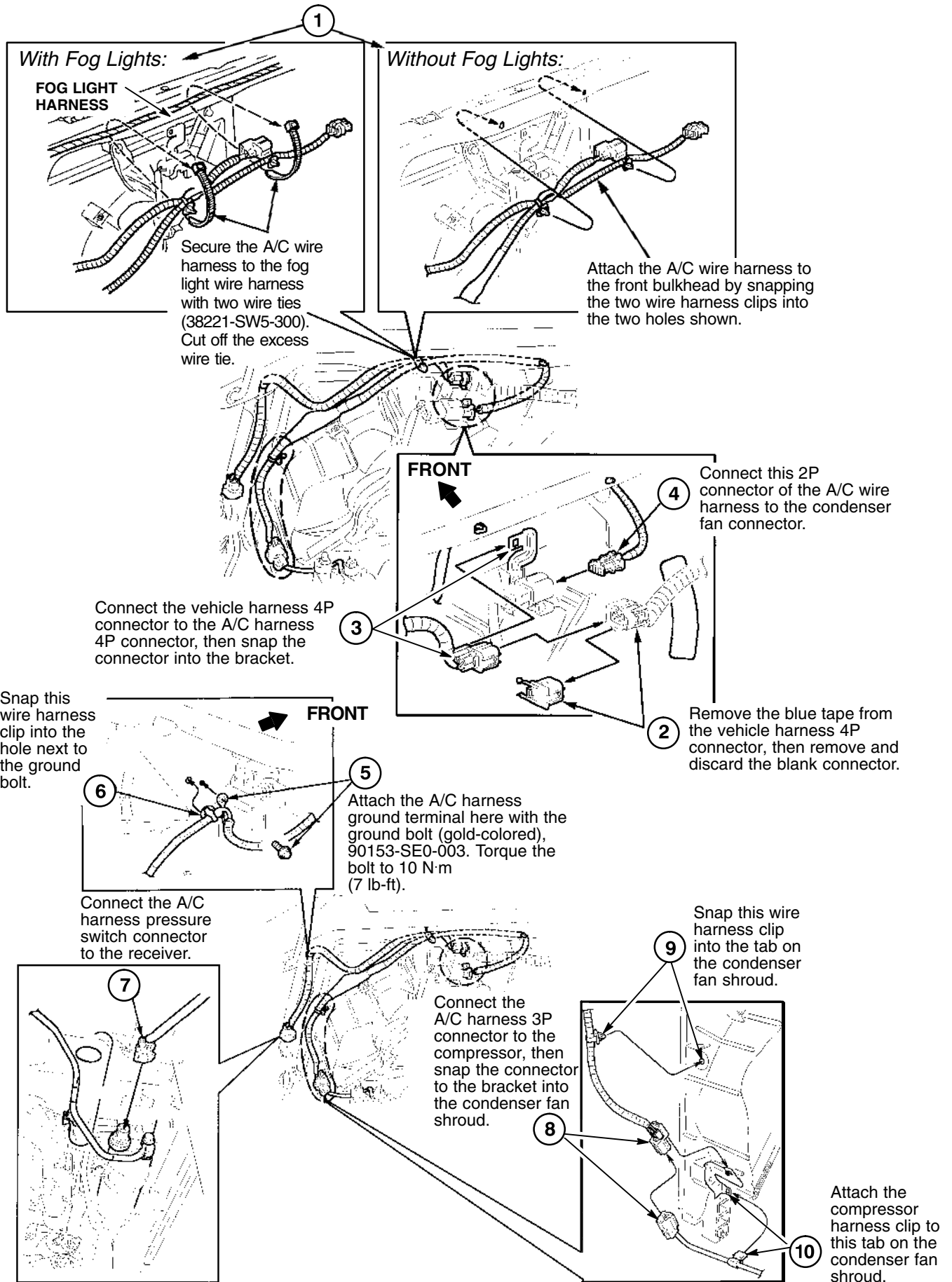
## 19. Install the condenser and receiver lines.



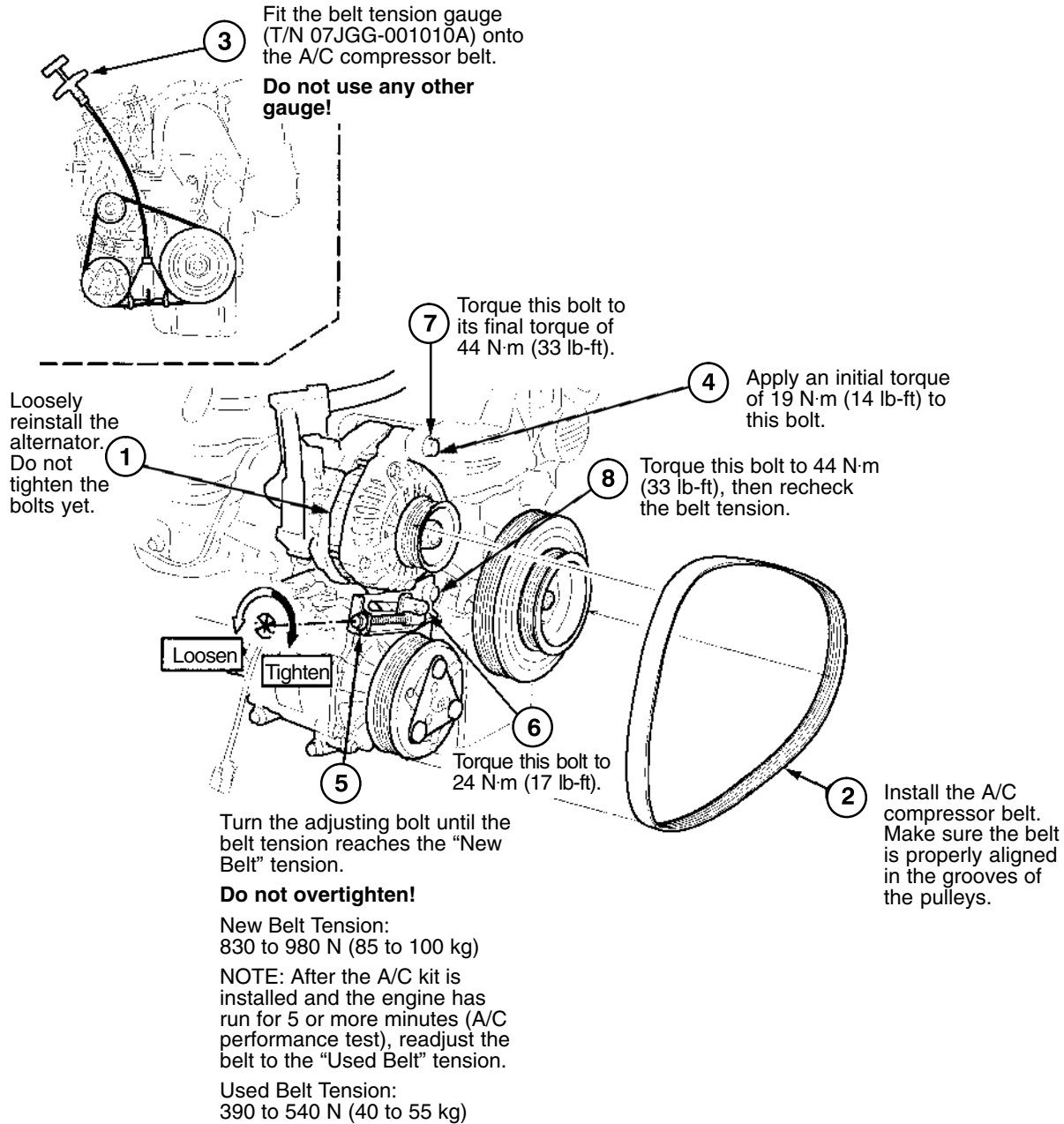
## 20. Install the compressor and the condenser fan.



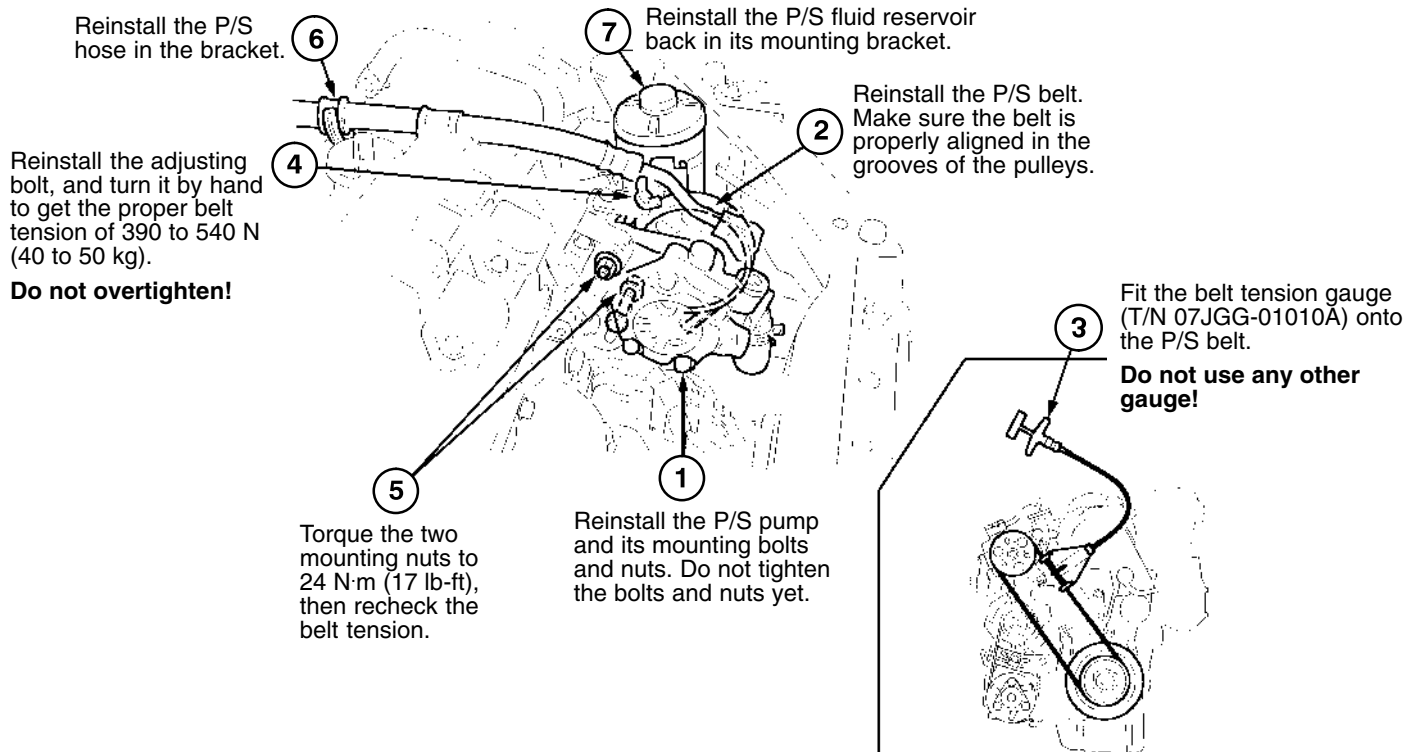
## 21. Install the A/C wire harness.



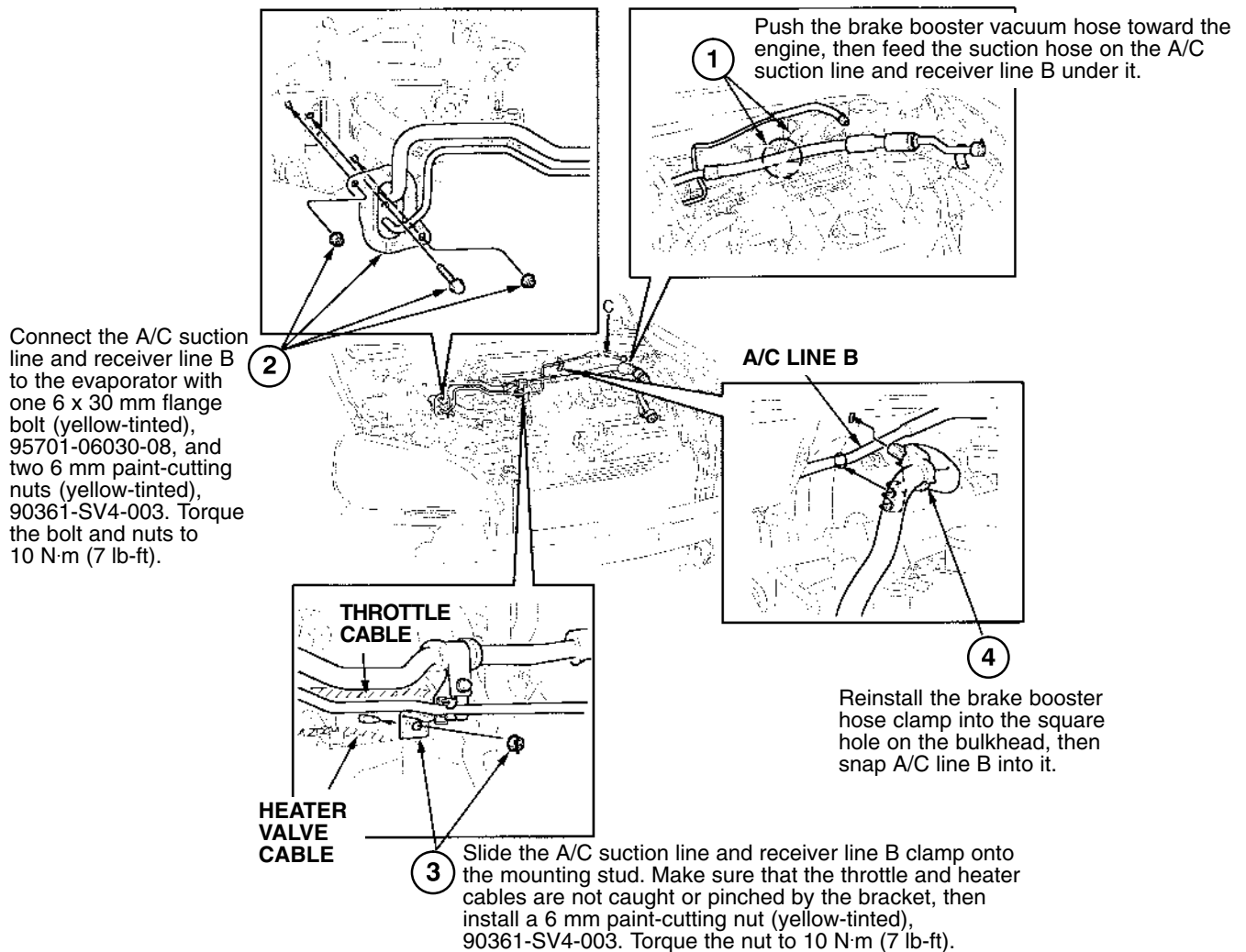
## 22. Install the A/C compressor belt.



## 23. Reinstall the power steering pump.

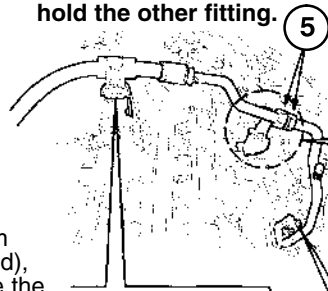


## 24. Install the A/C suction line and receiver line B.

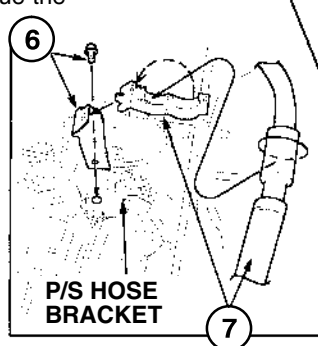


## 25. Connect the suction line.

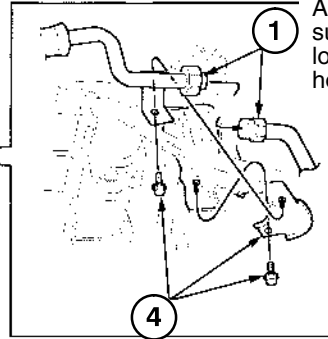
Torque this fitting to 33 N·m (24 lb-ft). **Make sure you use a second wrench to hold the other fitting.**



Install the suction hose bracket to the P/S hose bracket with a 6 x 12 mm washer-bolt (yellow-tinted), 93403-06012-08. Torque the bolt to 10 N·m (7 lb-ft).

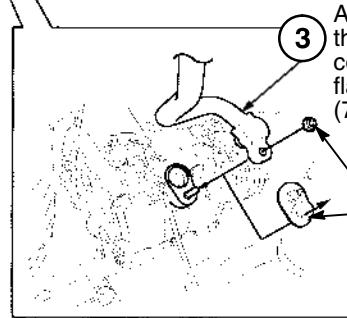


Install the suction hose clamp onto the suction hose bracket, then secure the suction hose in the clamp.



Apply refrigerant oil to the suction hose O-ring, then loosely connect the suction hose to the suction line.

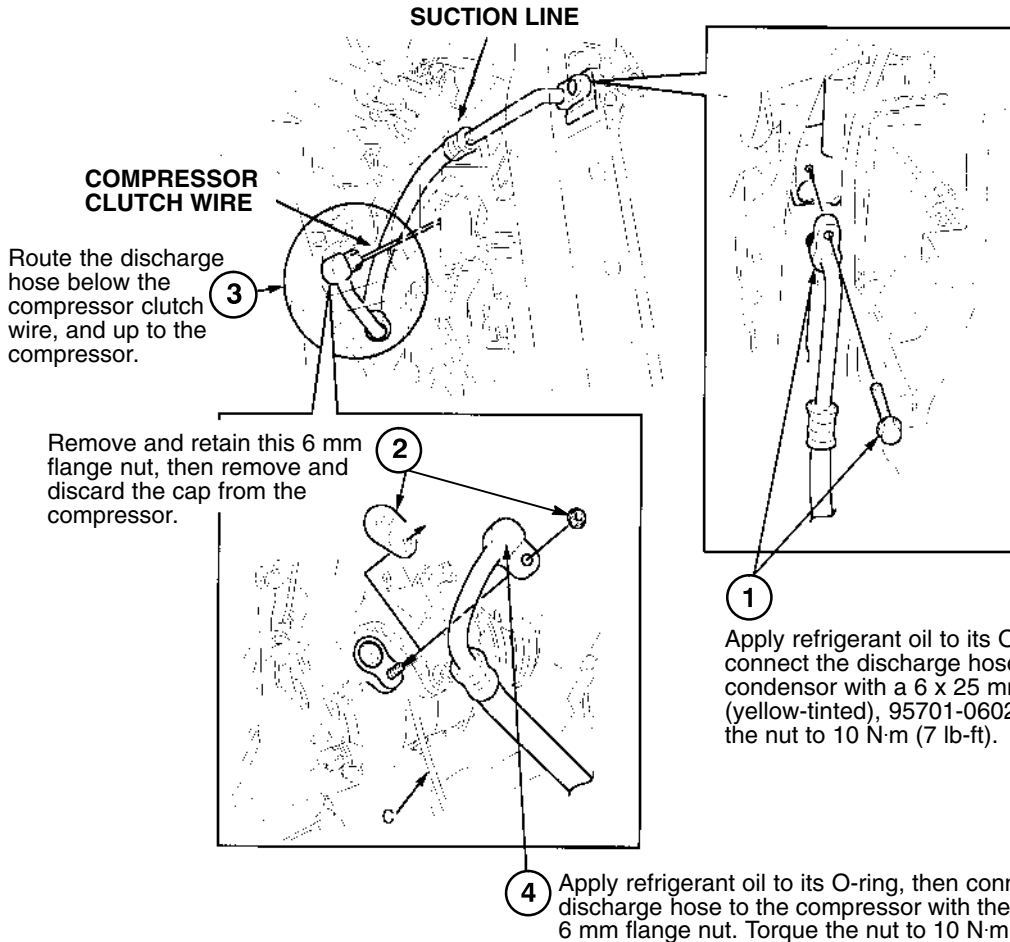
Install the suction line bracket with two 6 x 16 mm washer-bolts (gray-colored), 93403-06016-05. Torque the bolts to 10 N·m (7 lb-ft).



Apply refrigerant oil to its O-ring, then connect the suction line to the compressor with the retained 6 mm flange nut. Torque the nut to 10 N·m (7 lb-ft).

Remove and retain this 6 mm flange nut, then remove and discard the cap from the suction side of the compressor.

## 26. Install the discharge hose.



Route the discharge hose below the compressor clutch wire, and up to the compressor.

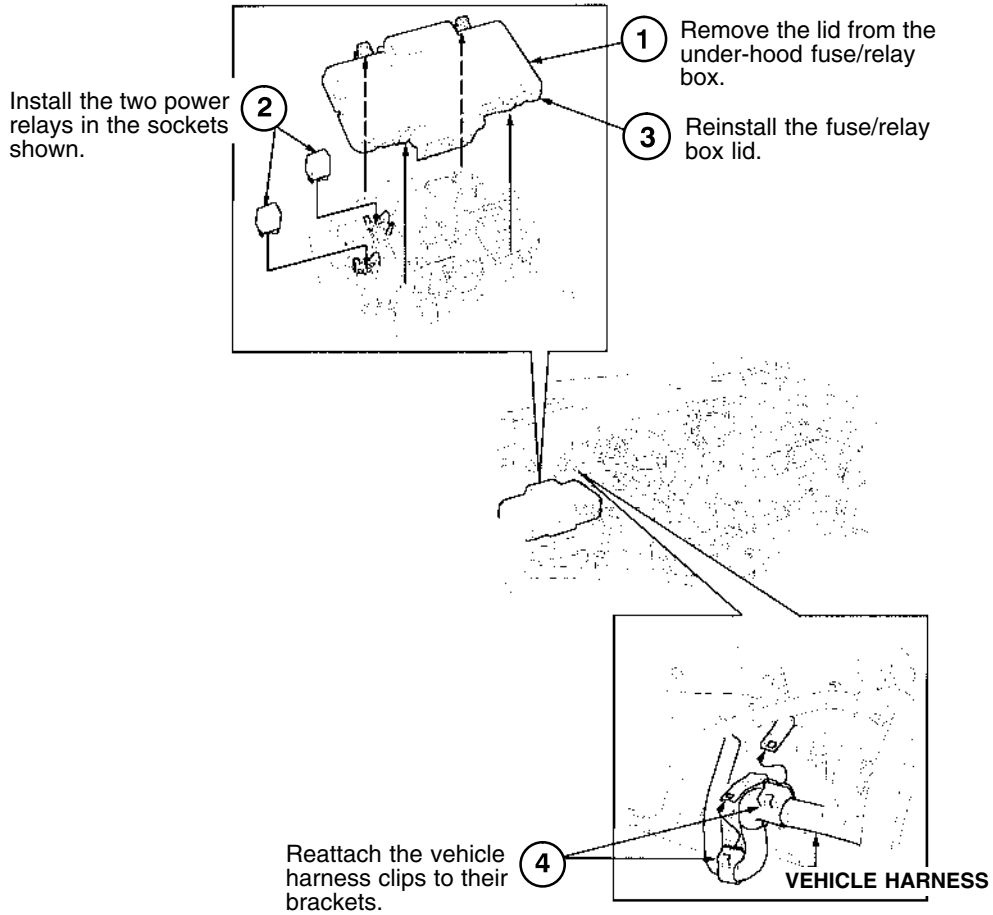
Remove and retain this 6 mm flange nut, then remove and discard the cap from the compressor.

Apply refrigerant oil to its O-ring, then connect the discharge hose to the condenser with a 6 x 25 mm flange bolt (yellow-tinted), 95701-06025-08. Torque the nut to 10 N·m (7 lb-ft).

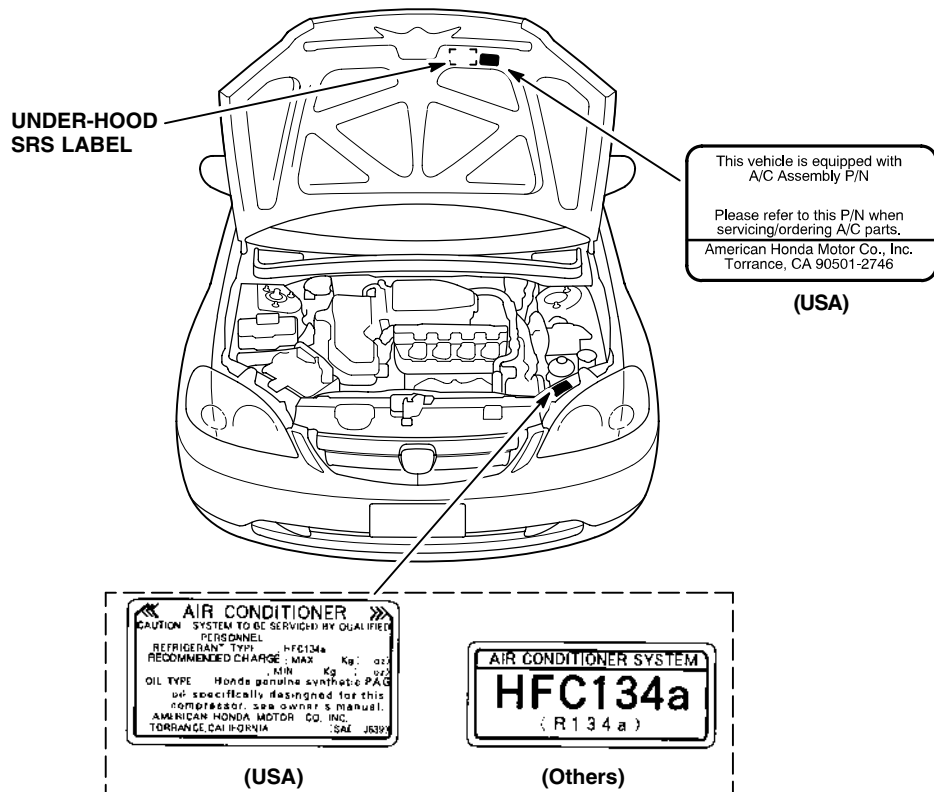
Apply refrigerant oil to its O-ring, then connect the discharge hose to the compressor with the retained 6 mm flange nut. Torque the nut to 10 N·m (7 lb-ft).

Get parts group C.

27. Install the power relays and the vehicle harness clip.



28. Attach the labels in the locations shown.



## 29. Reinstall the remaining parts.

- Relay assembly and glove box frame
- Glove box
- Passenger's dashboard lower cover
- Passenger's kick panel
- Center console cover, and reconnect the accessory power socket or cigarette lighter.
- Under-dash fuse/relay box
- Driver's dashboard lower cover
- Front bumper and splash shield
- Cruise control actuator; tighten the mounting bolts to 10 N·m (7 lb-ft).
- Power steering pressure switch connector
- Brake fluid level switch connector
- Resonator and air cleaner case
- Reconnect the negative cable to the battery.
- Check for battery voltage at the accessory power socket (or cigarette lighter).

## 30. Do the idle learning procedure.

Whenever the battery or the ECM/PCM is disconnected, the ECM/PCM must relearn the proper idle air control (IAC) values. To do this, follow this procedure exactly.

- 1 Start the engine, and turn off all accessories (A/C, radio, defogger, etc.).
- 2 Warm the engine up to normal operating temperatures (cooling fans come on twice), then let the engine idle for 10 minutes.

If the above procedure is not done correctly, the engine will have an erratic idle.

## 31. Evacuate the system.

The HFC-134a and compressor oil used in this A/C system are highly moisture absorbent. After installing the system, make sure you evacuate it for at least 15 minutes.

NOTE:

- If low pressure does not reach more than 700 mm Hg (27 in-Hg) in 15 minutes, there is probably a leak in the system. Partially charge the system, and check for leaks (see step 32).
- If the system is left open, the desiccant in the receiver tank will become saturated with moisture, requiring longer evacuation time.

## 32. Charge the system.

- This system requires only the amount of HFC-134a refrigerant shown below. If you overcharge the system, the engine and the A/C will malfunction. **Do not overcharge!** Select the appropriate units of measure for your refrigerant charging station.

500 to 550 grams
0.50 to 0.55 kilograms
1.1 to 1.2 pounds
17.6 to 19.4 ounces

- Do not add oil to the compressor; a new compressor already contains enough oil for the entire A/C system. If you are replacing compressor oil that has leaked out of the system, use only **Sanden SP-10 oil**.
- Using the wrong oil, or mixing different types of oil, will result in abnormal compressor noise or seizure, or shortened compressor service life. These conditions are **not covered by the warranty policy**.

## 33. Check for leaks.

When testing for leaks, follow these guidelines:

- Make sure you use a leak detector designed for A/C systems that use HFC-134a.
- To avoid false readings, do not use a tester designed to detect Freon (CFC-12).
- Because HFC-134a is heavier than air, always check 360° around all fittings.
- If you lose or damage an O-ring during A/C installation, make sure you order the correct replacement as listed here:

PART NAME	PART NUMBER	APPLICATION
O-ring, 8 mm	80873-ST7-000	Condenser line receiver lines
O-ring, 5/8"	80871-ST7-000	Suction hose and line
O-ring, 1/2"	80872-ST7-000	Discharge hose and line

## 34. Performance test the A/C system.

Refer to Service Bulletin 96-012, *Air Conditioning System Performance Test*, filed under Accessories in the old Service Bulletin binder.

## 35. Readjust the A/C compressor belt to the "Used Belt" tension: 390 to 540N (40 to 55 kg).

Refer to step 22 on page 20.