



# INSTALLATION INSTRUCTIONS

Accessory	Application	Publications No.
AIR CONDITIONER	CIVIC 2- AND 4-DOOR	AI1 25436
		Issue Date OCT 2003

## What's New

The installation instructions for the 2004 Civic A/C *will not fit* the 2003 model. New changes include a new Receiver Pipe with a different bend, a new Condenser Assembly with the front surface painted, and a new Receiver Clip to enhance installation:

- 80000-S5D-A24 for U.S.
- 80000-S5D-C24 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 installation 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 vehicle. 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.

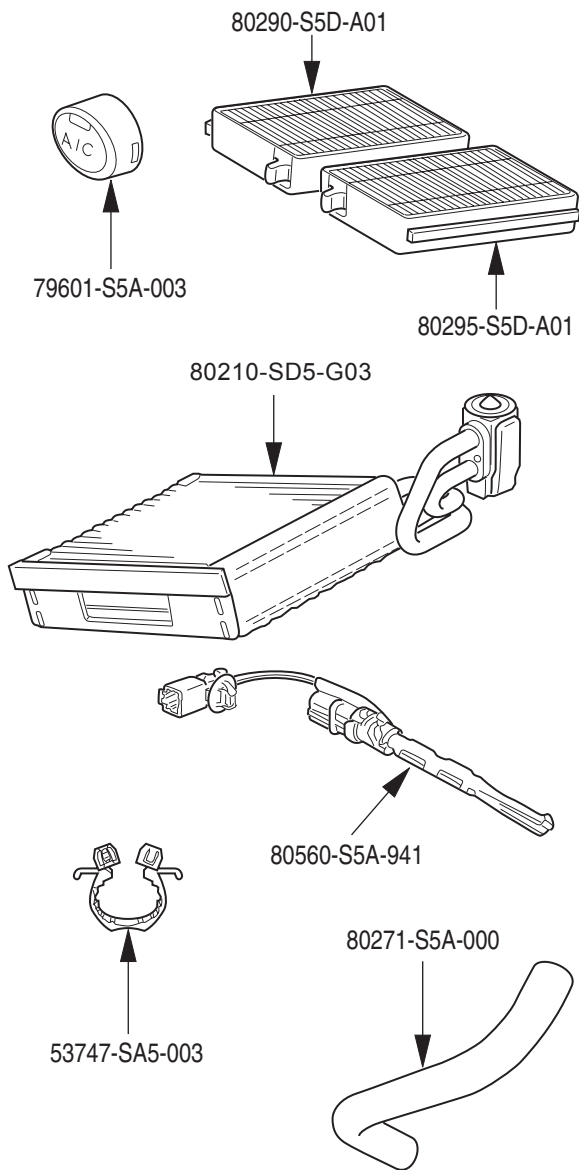
### During Installation:

- **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.

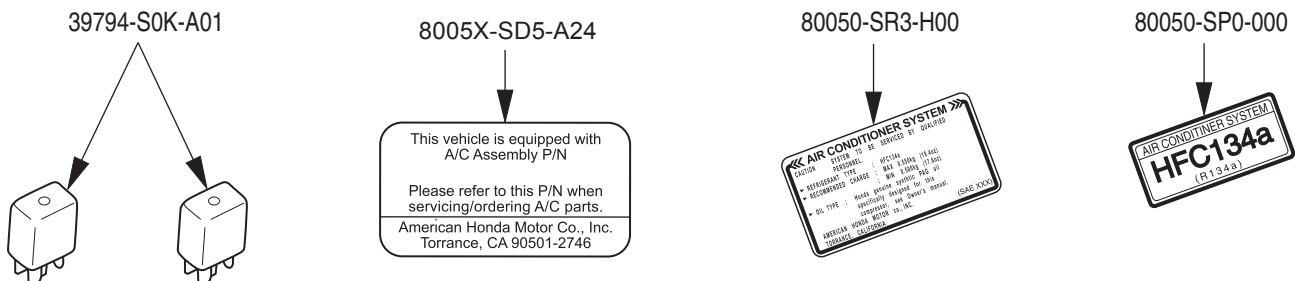
- **Before you connect each electrical connector, check its terminals.** Make sure the terminals aren't bent or out of place.

**Group A**

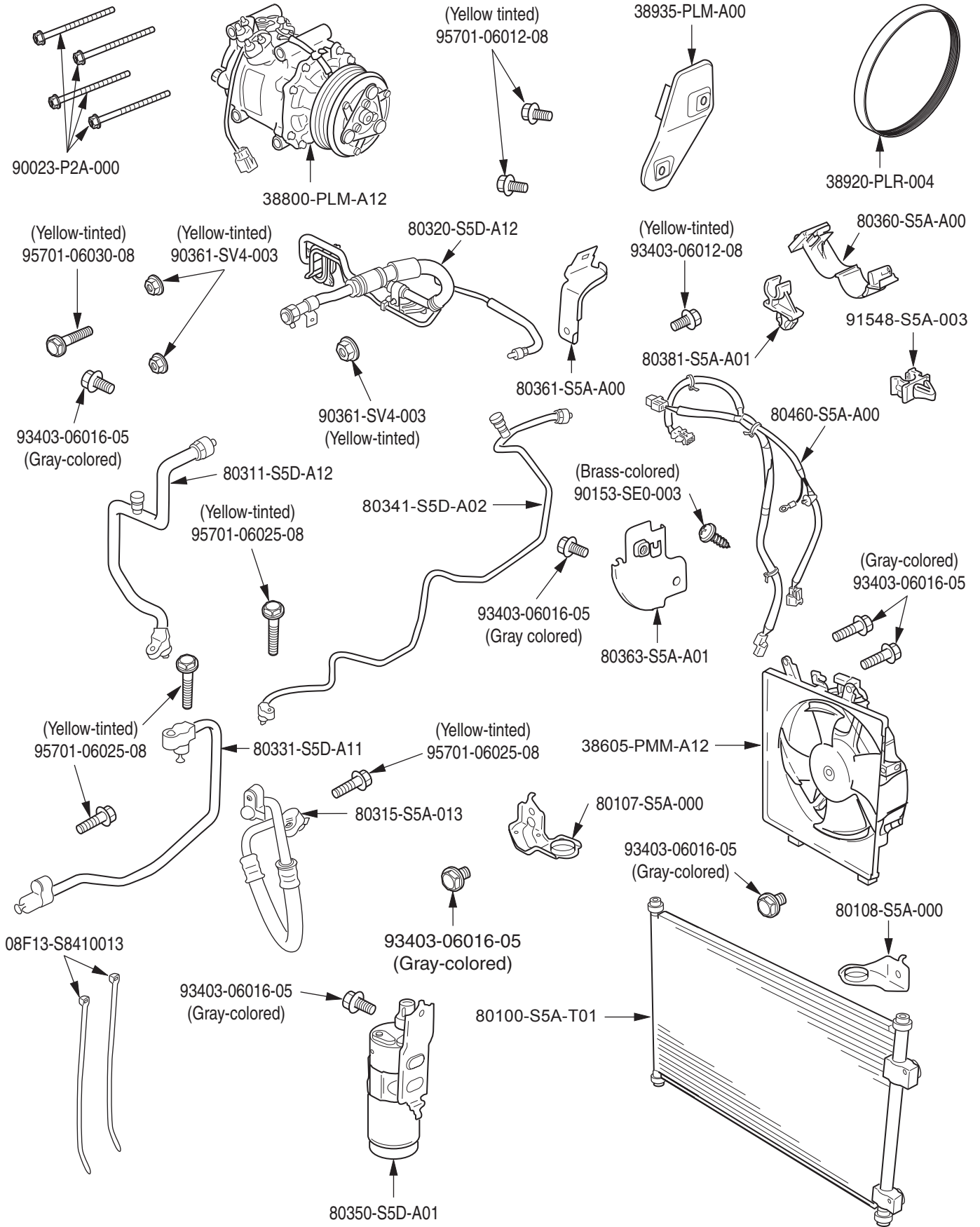


Group	Part	P/N	Qty
<b>A</b>	Drain hose clip	53747-SA5-003	1
	A/C button	79601-S5A-003	1
	Evaporator	80210-S5D-G03	1
	Drain hose	80271-S5A-000	1
	Dust and pollen filter A	80290-S5D-A01	1
	Dust and pollen filter B	80295-S5D-A01	1
<b>B</b>	Evaporator sensor	80560-S5A-941	1
	Wire ties	08F13-S84100013	2
	Condenser fan assembly	38605-PM-M-A12	1
	Compressor	38800-PLM-A12	1
	Compressor belt	38920-PLR-004	1
	Heat insulator	38935-PLM-A00	1
	Condenser assembly	80100-S5A-T01	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-A02	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	91548-S5A-003	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)	95701-06039-08	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-A24	1

**Group C**

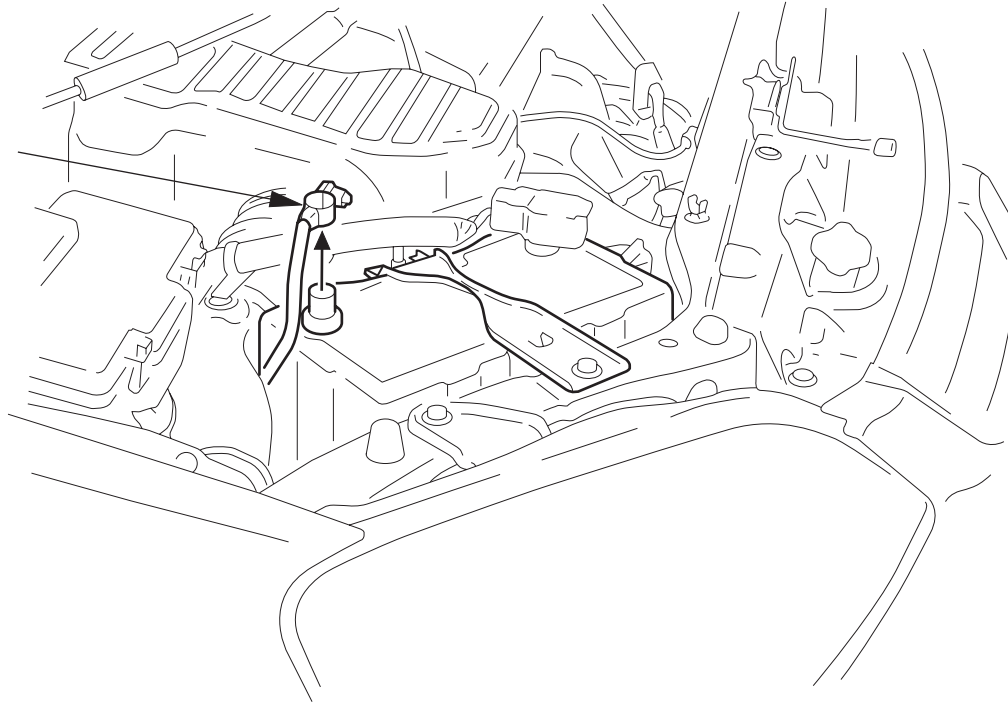


**Group B**

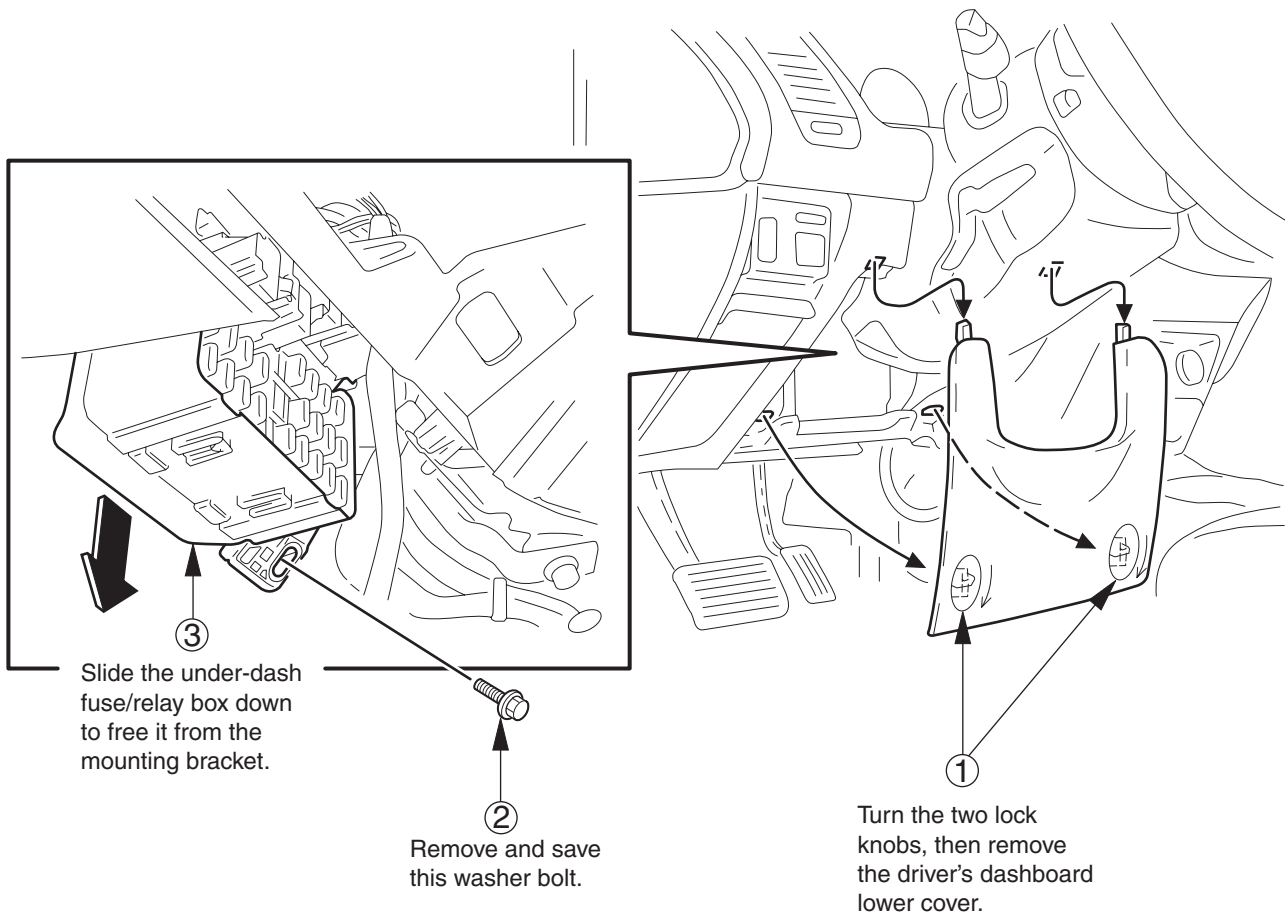


**1. Disconnect the battery.**

Remove the negative cable from the battery.



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

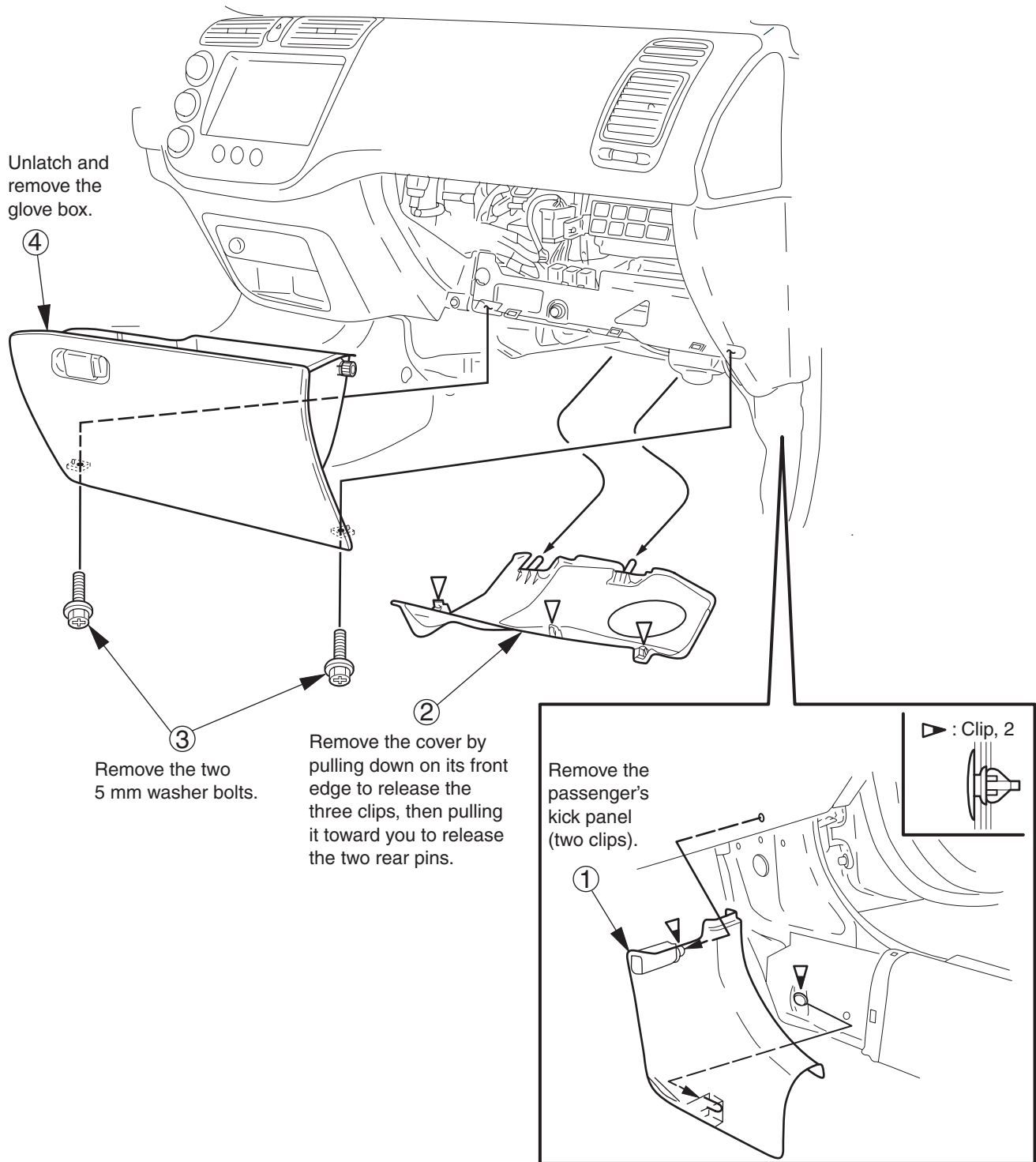


Slide the under-dash fuse/relay box down to free it from the mounting bracket.

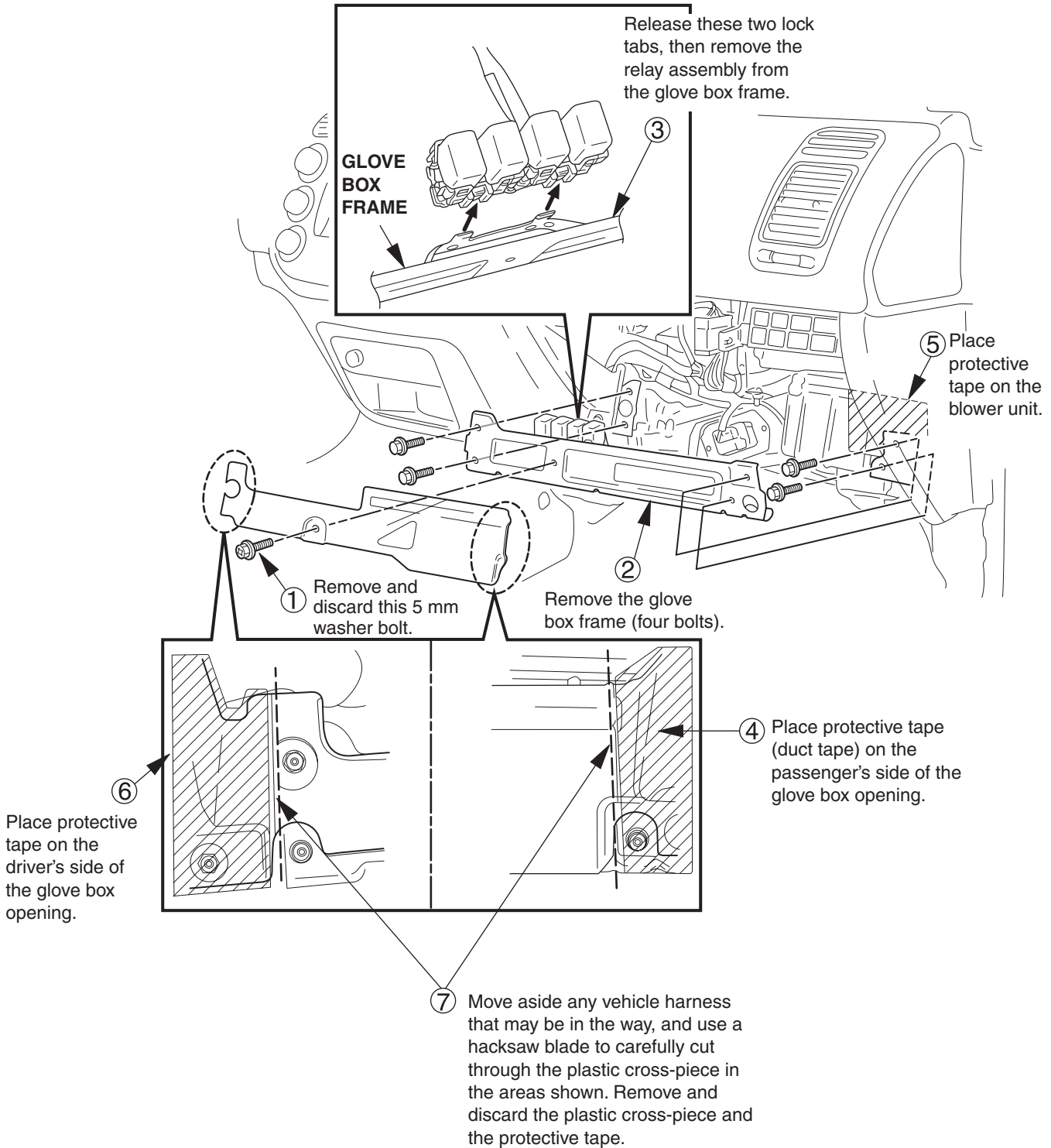
Remove and save this washer bolt.

Turn the two lock knobs, then remove the driver's dashboard lower cover.

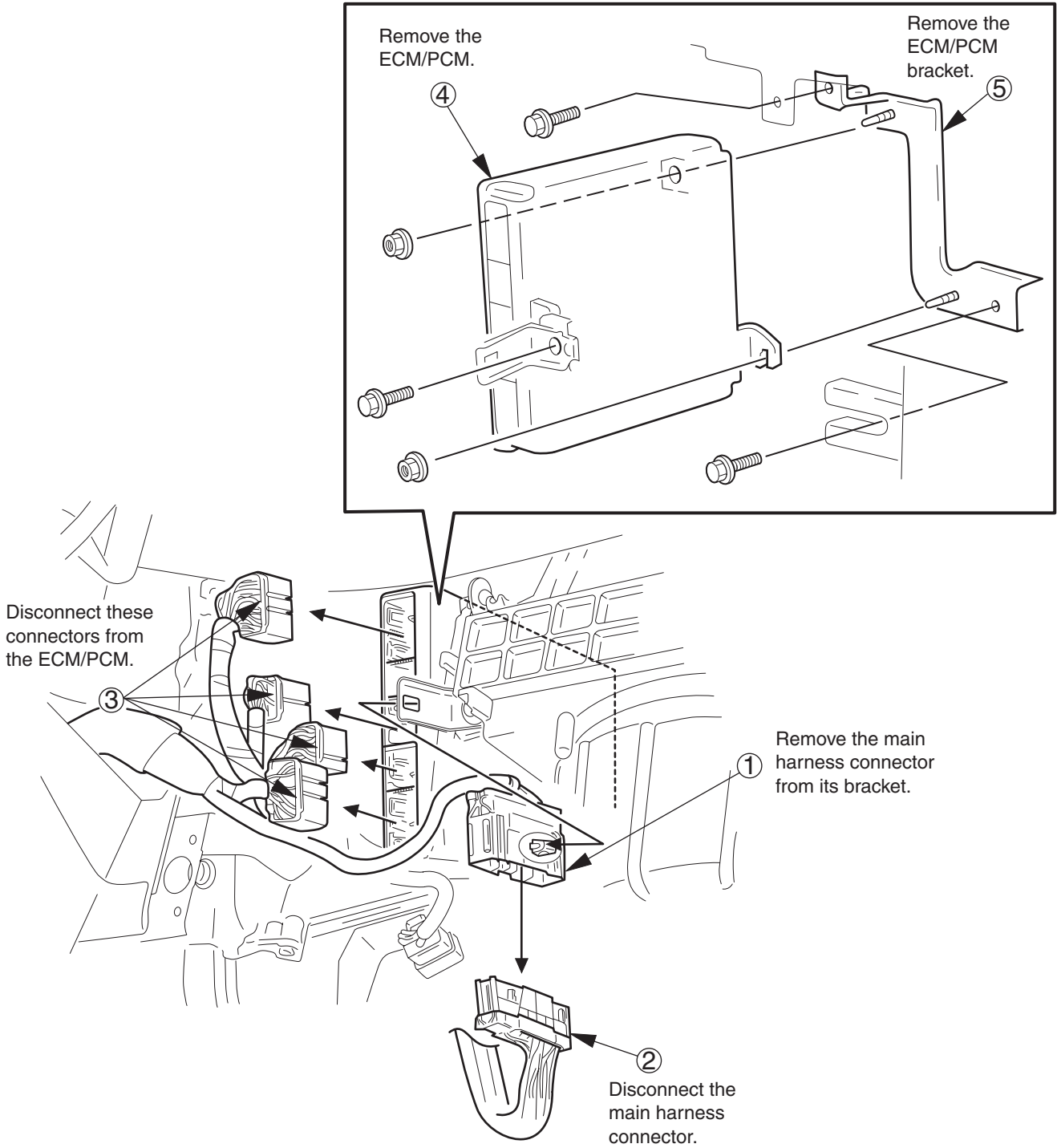
**3. Remove the passenger's dashboard lower cover and the glove box.**



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

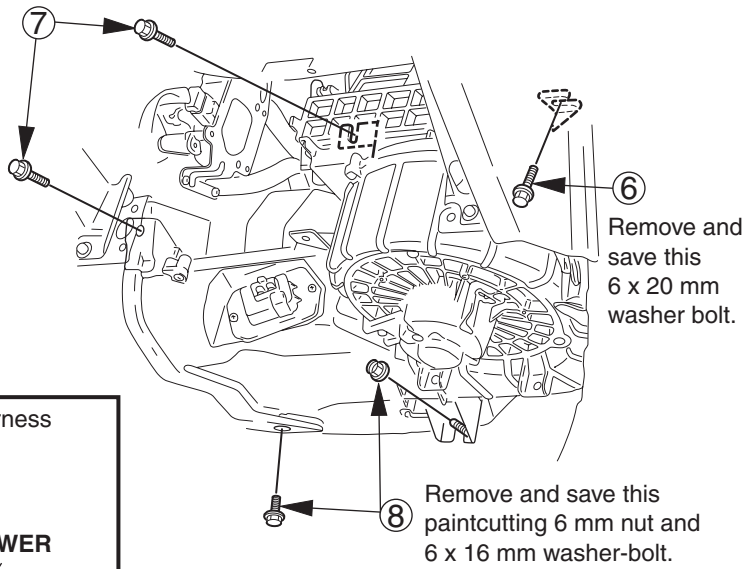


**5. Remove the ECM/PCM unit and the bracket.**

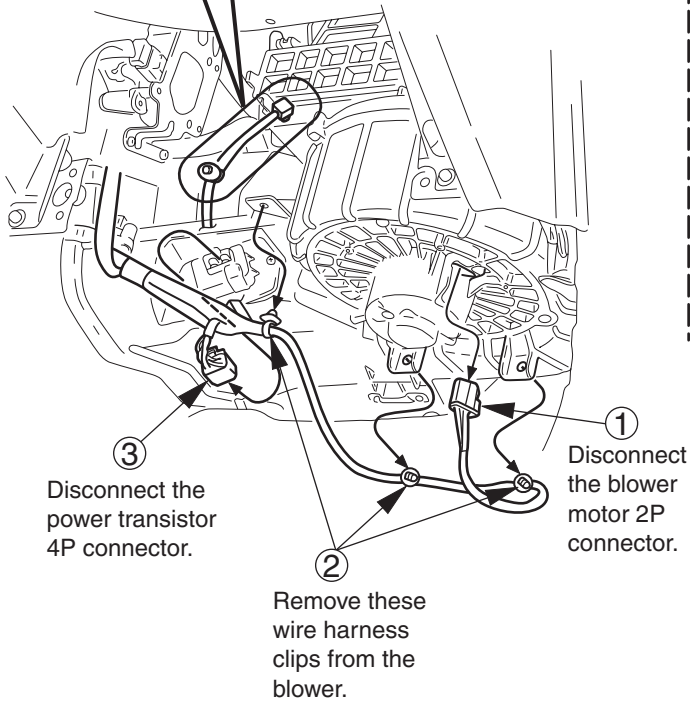
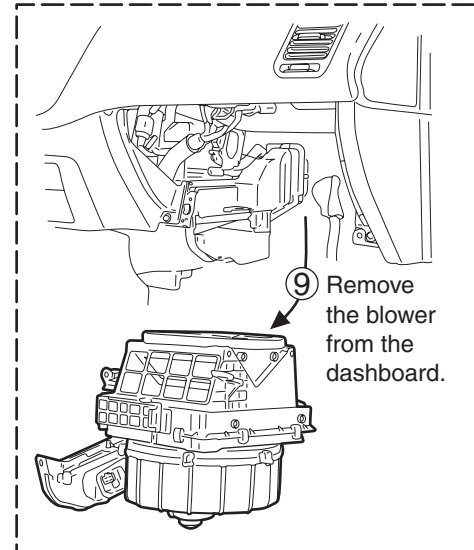
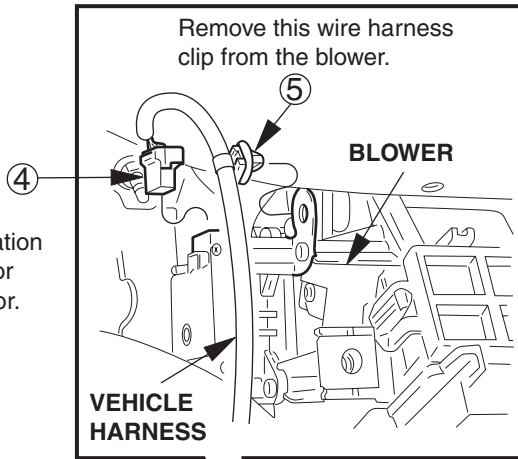


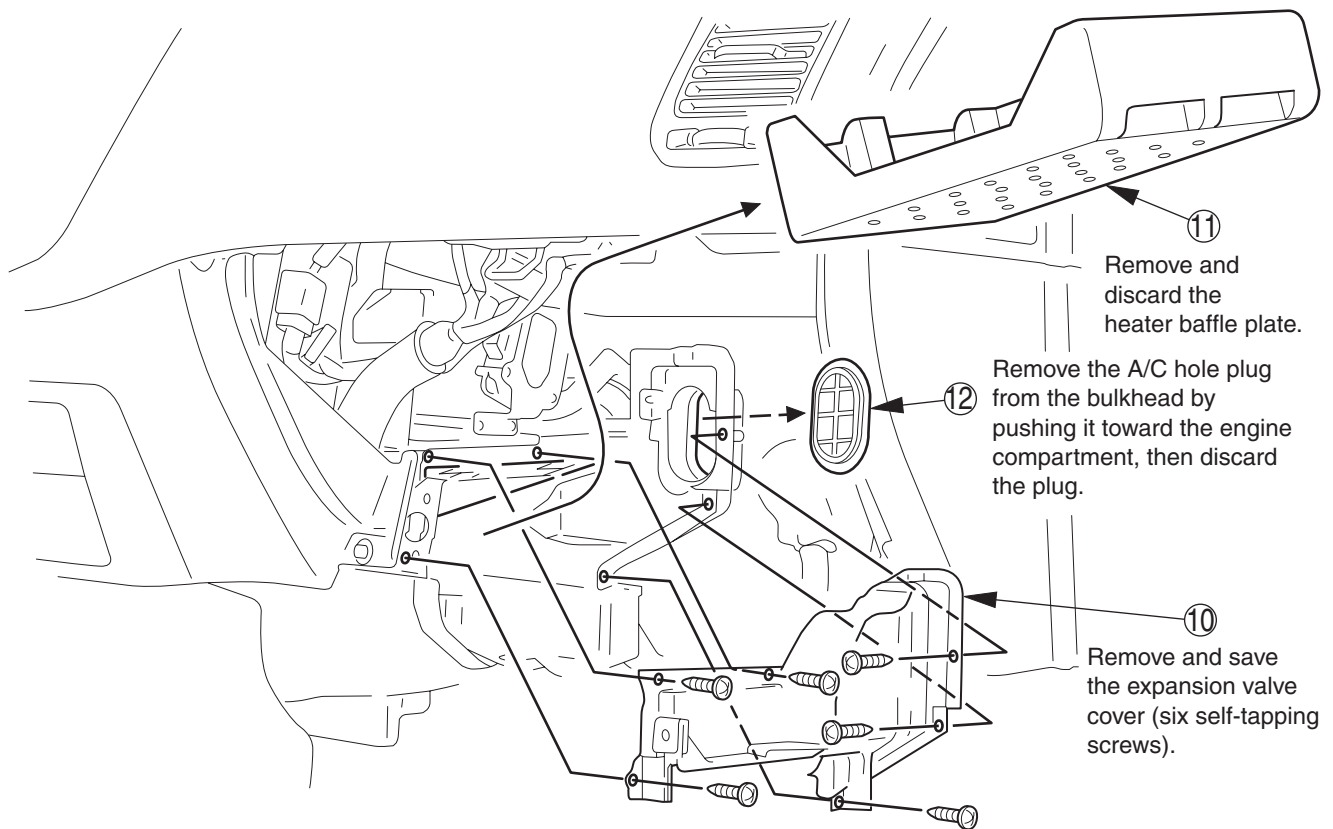
**6. Prepare to install the evaporator.**

Remove and save these washer bolts.



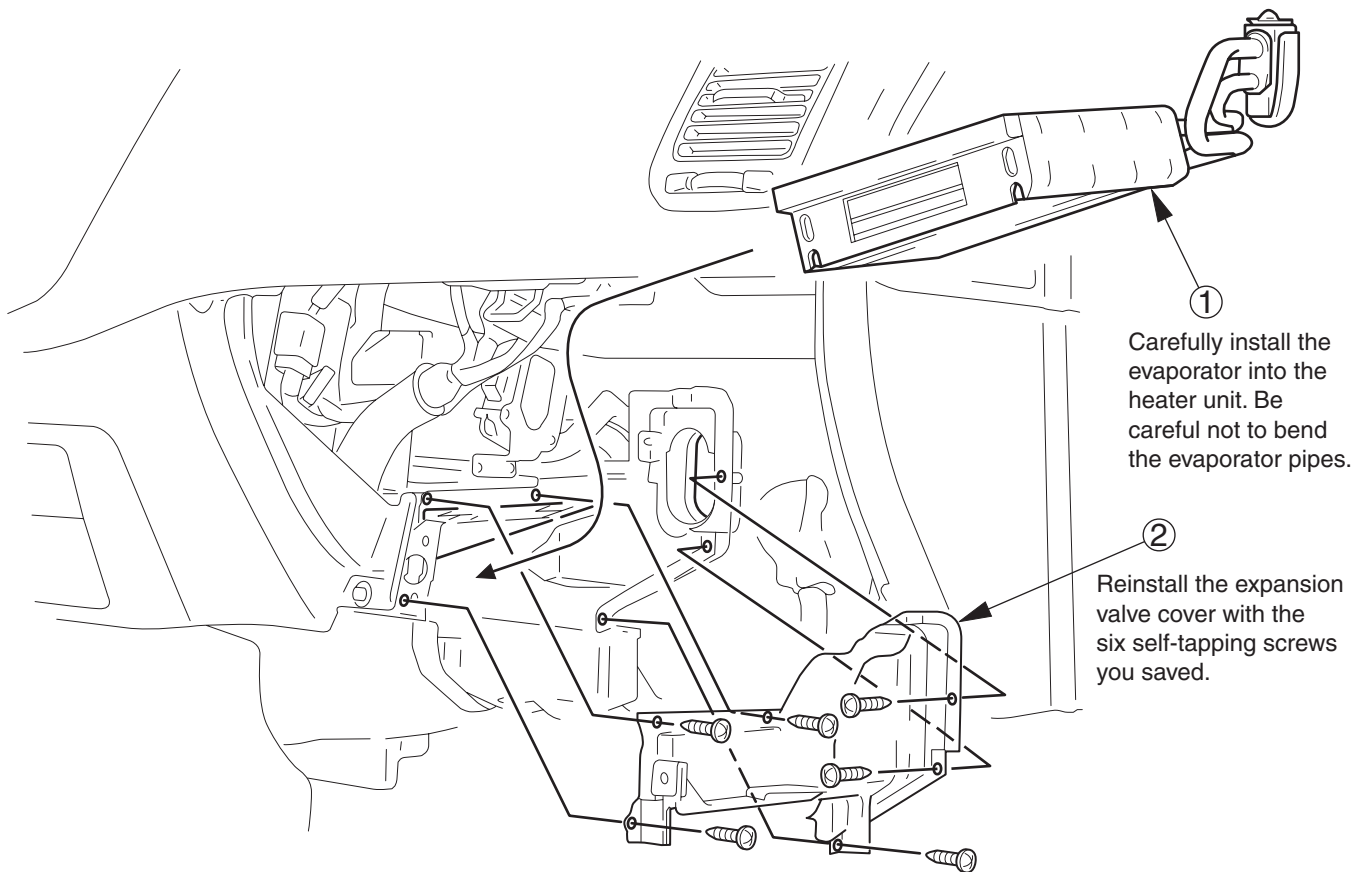
Remove this wire harness clip from the blower.



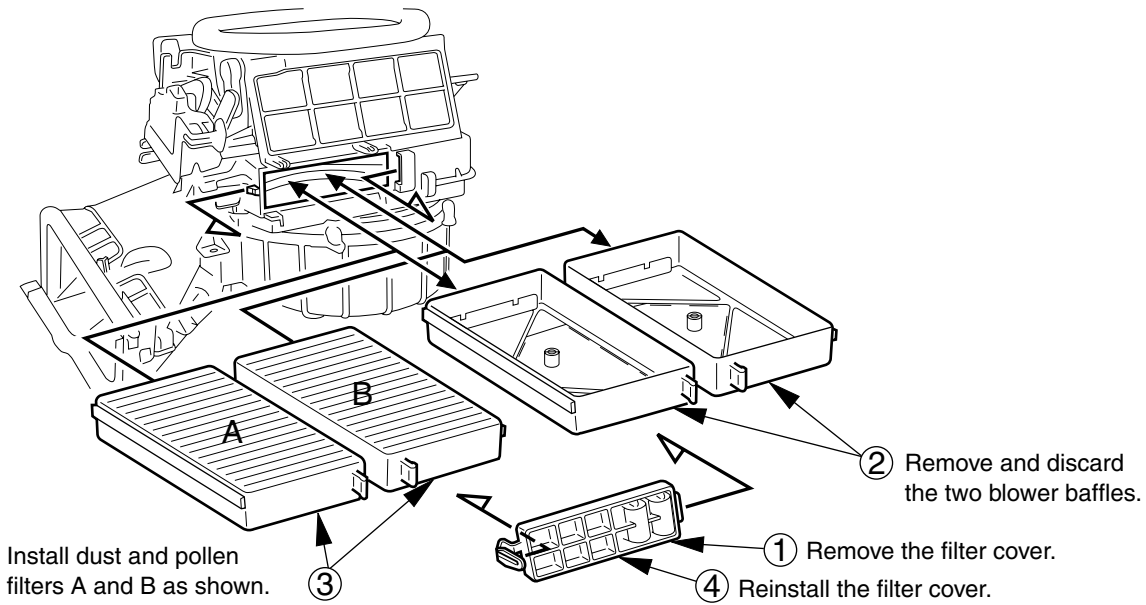


**Get Parts Group A.**

**7. Install the evaporator.**

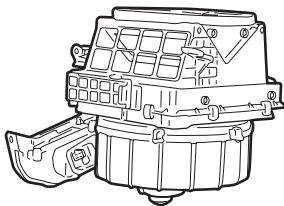
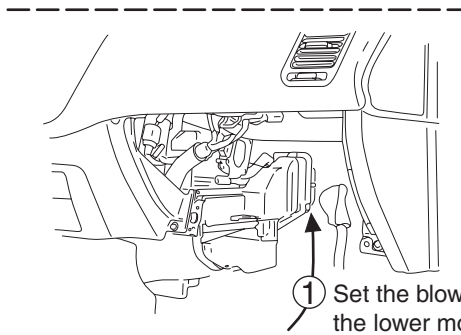
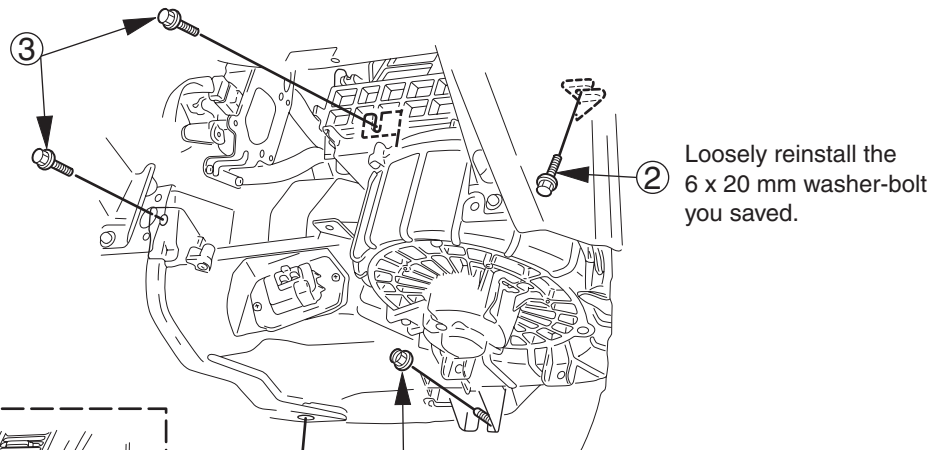


## 8. Install the dust and pollen filters.

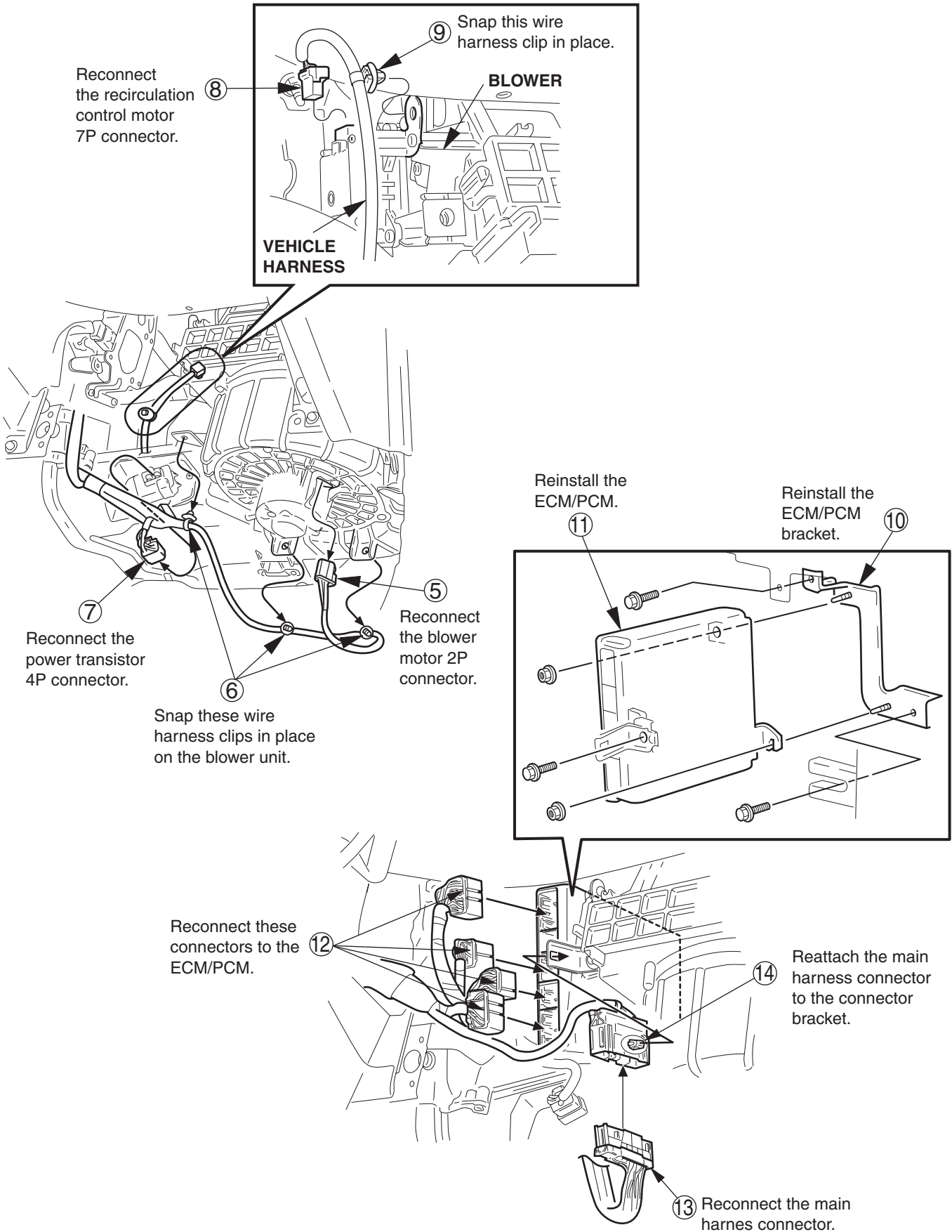


## 9. Reinstall the blower unit and the ECM/PCM.

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



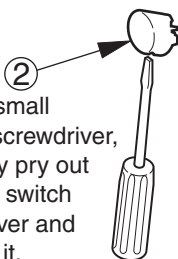
Reinstall the 6 mm paintcutting nut and 6 x 16 mm washer-bolt you saved, then torque them and the washer bolts in steps 2 and 3 to 10 N.m (7 lb-ft).



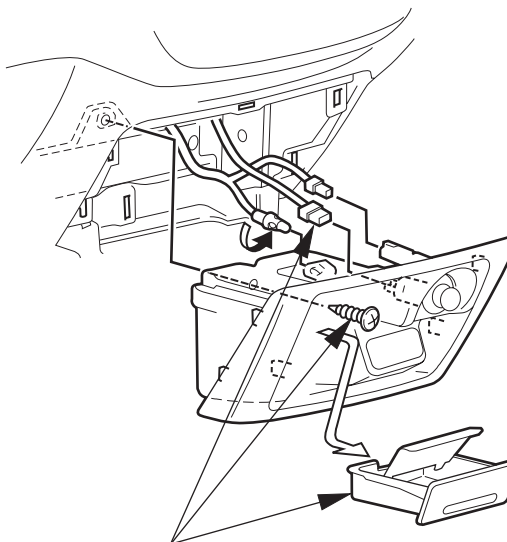
## 10. Install the A/C switch knob and the evaporator sensor.

Insert the A/C switch button in the A/C switch hole, then push on the button until it clicks into place. ③

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. ①



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*

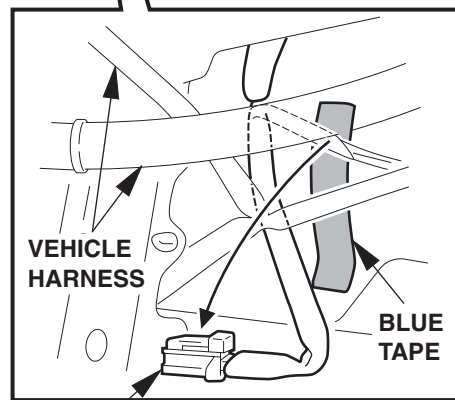
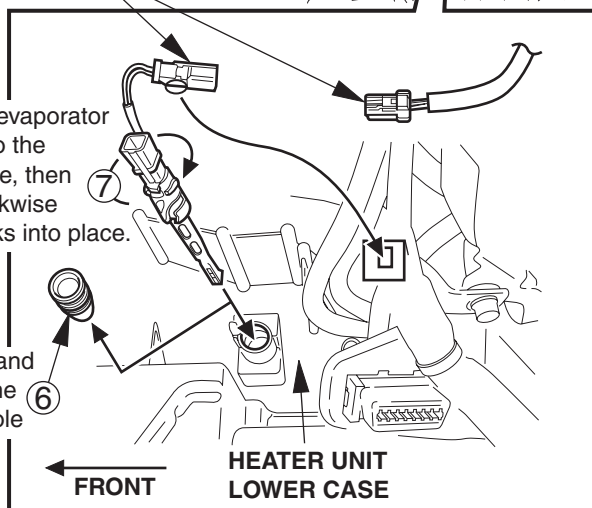
Remove the center console cover by pulling out on the cover to release the clips, then disconnect the accessory power socket connector.

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. ⑧



Insert the evaporator sensor into the sensor hole, then turn it clockwise until it clicks into place. ⑦

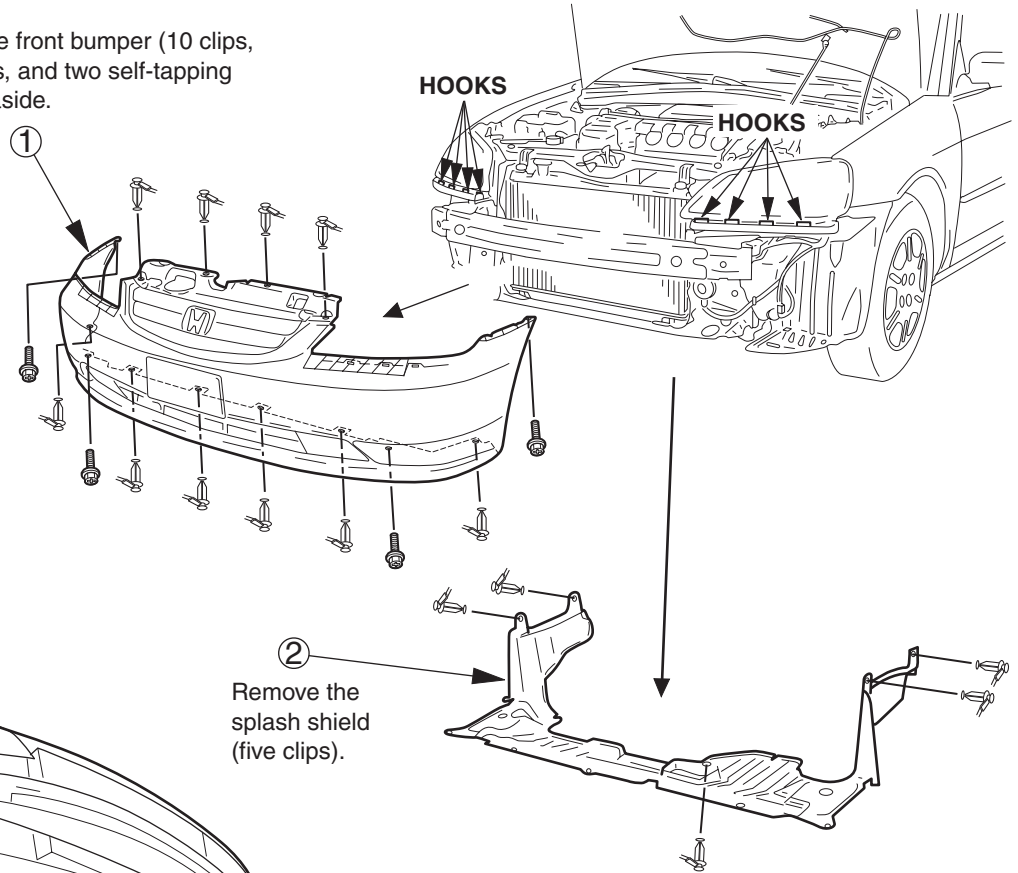
Remove and discard the sensor hole cover. ⑥



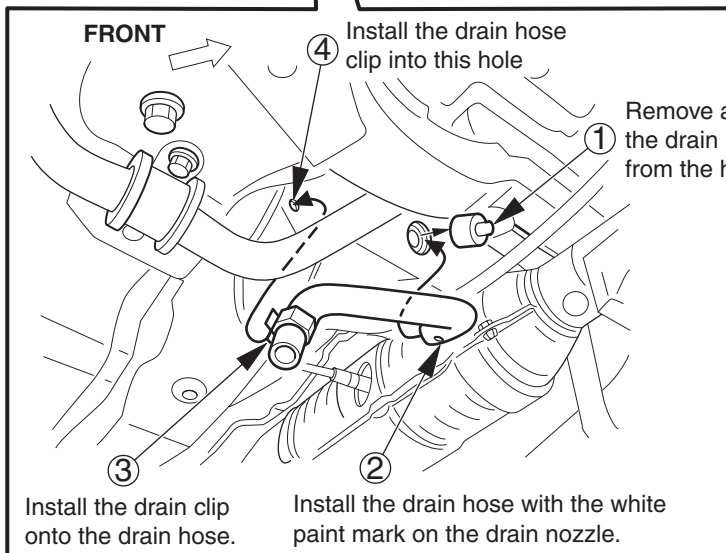
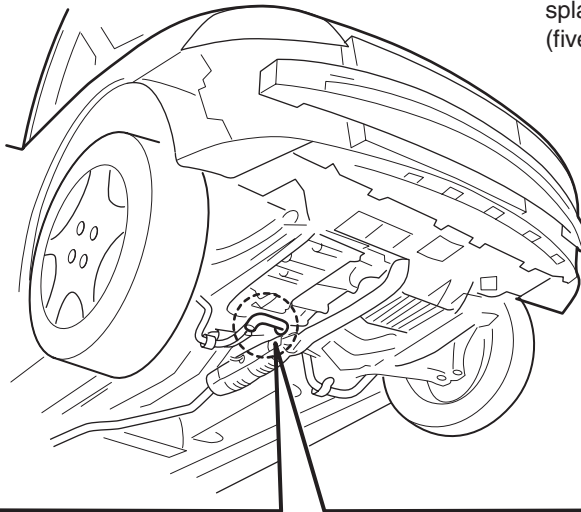
⑤ Remove the blue tape securing the evaporator sensor 2P connector to the vehicle harness.

**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.



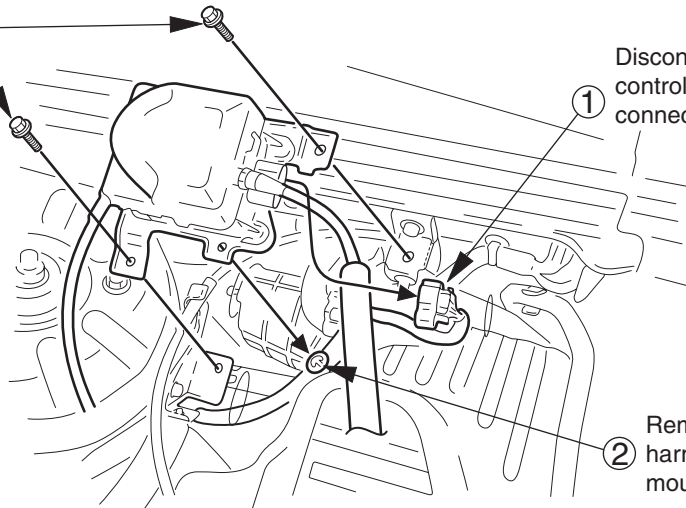
**12. Install the drain hose.**



**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.

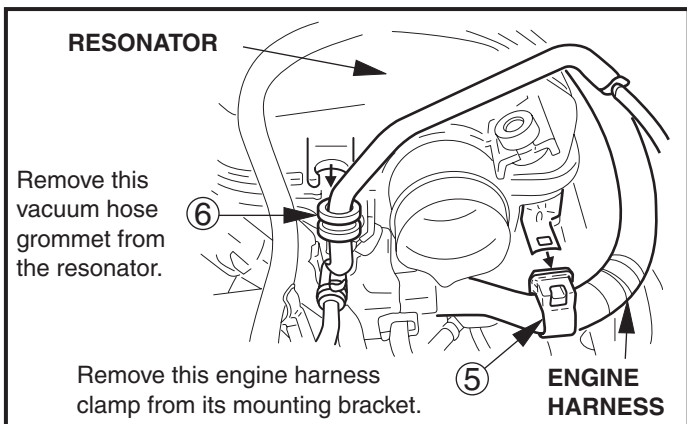
**NOTE:** Do not loosen or remove the throttle cables from the actuator.



Disconnect the cruise control actuator 4P connector.

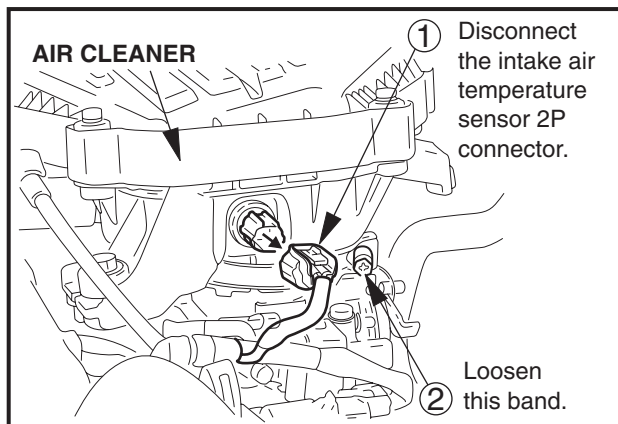
Remove this wire harness clip from the mounting bracket.

**14. Prepare the engine compartment.**



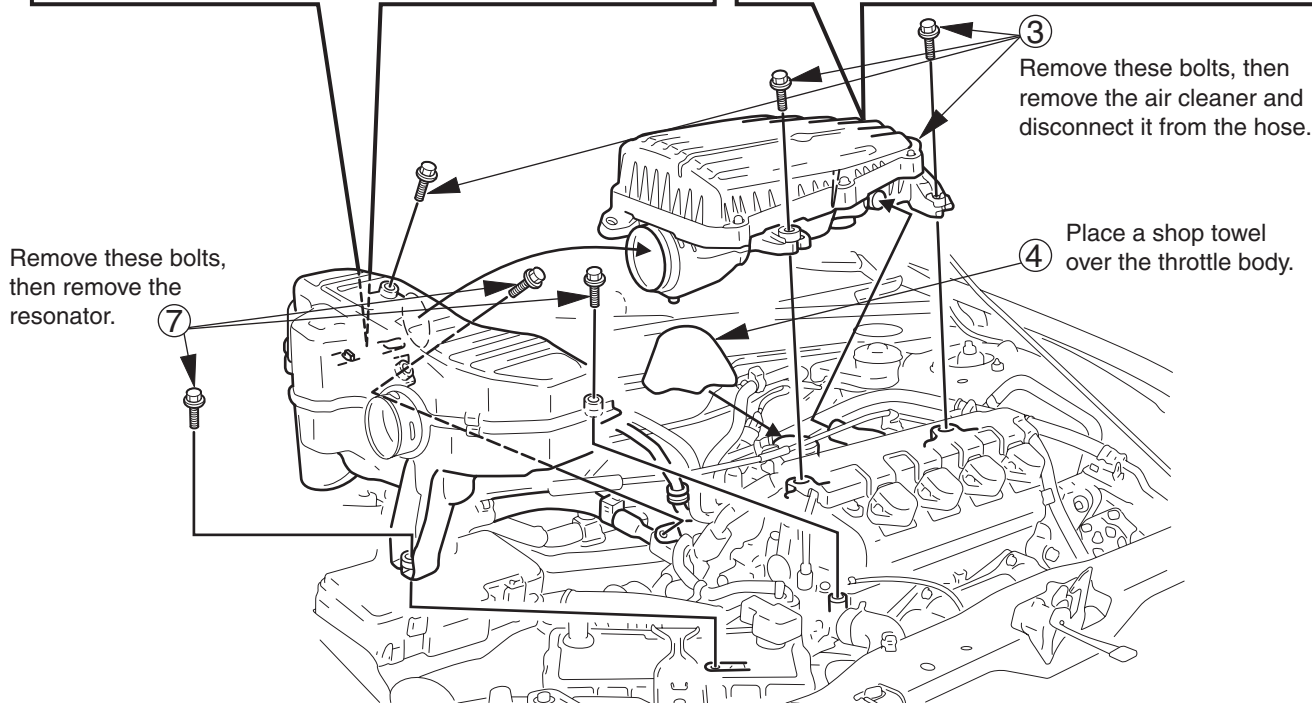
Remove this vacuum hose grommet from the resonator.

Remove this engine harness clamp from its mounting bracket.



Disconnect the intake air temperature sensor 2P connector.

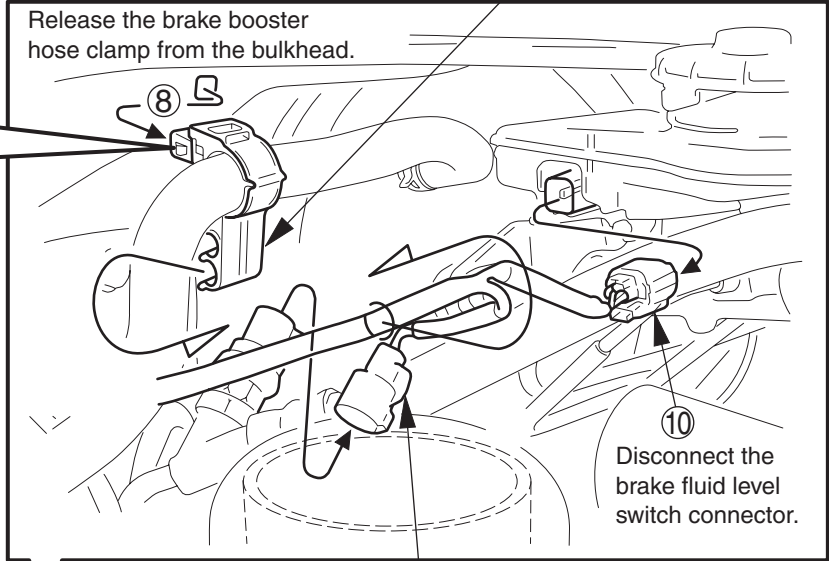
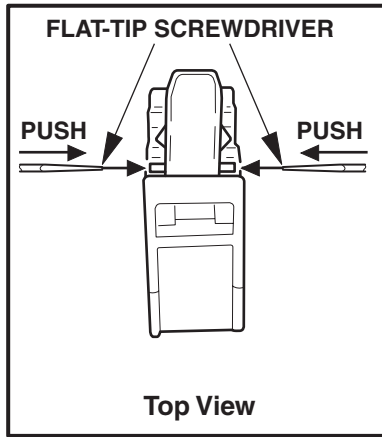
Loosen this band.



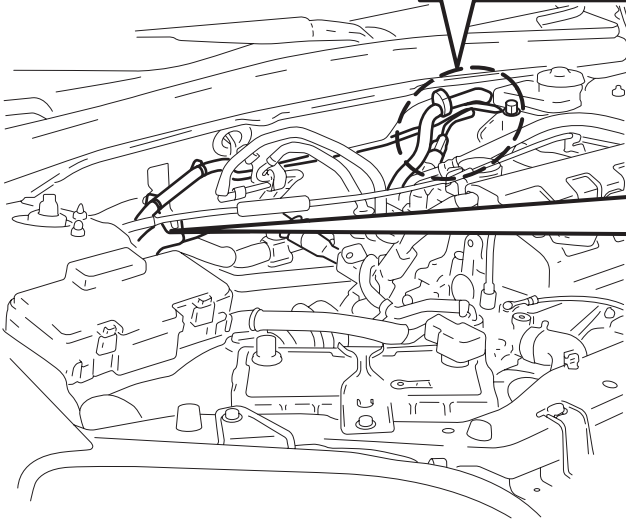
Remove these bolts, then remove the air cleaner and disconnect it from the hose.

Place a shop towel over the throttle body.

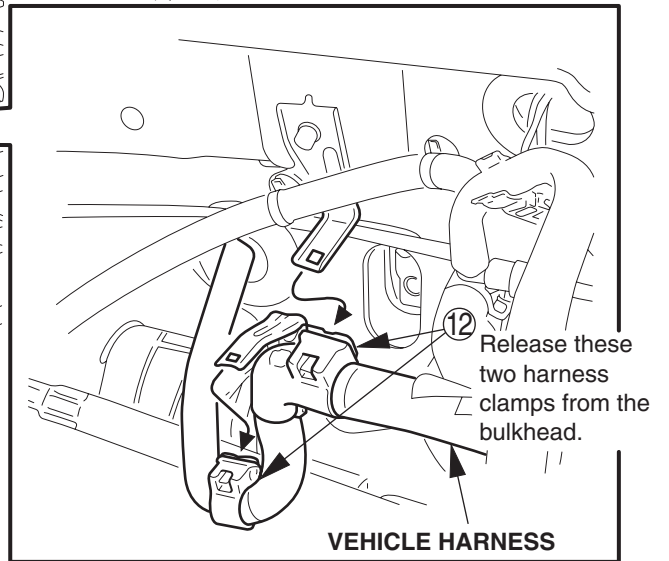
Remove these bolts, then remove the resonator.



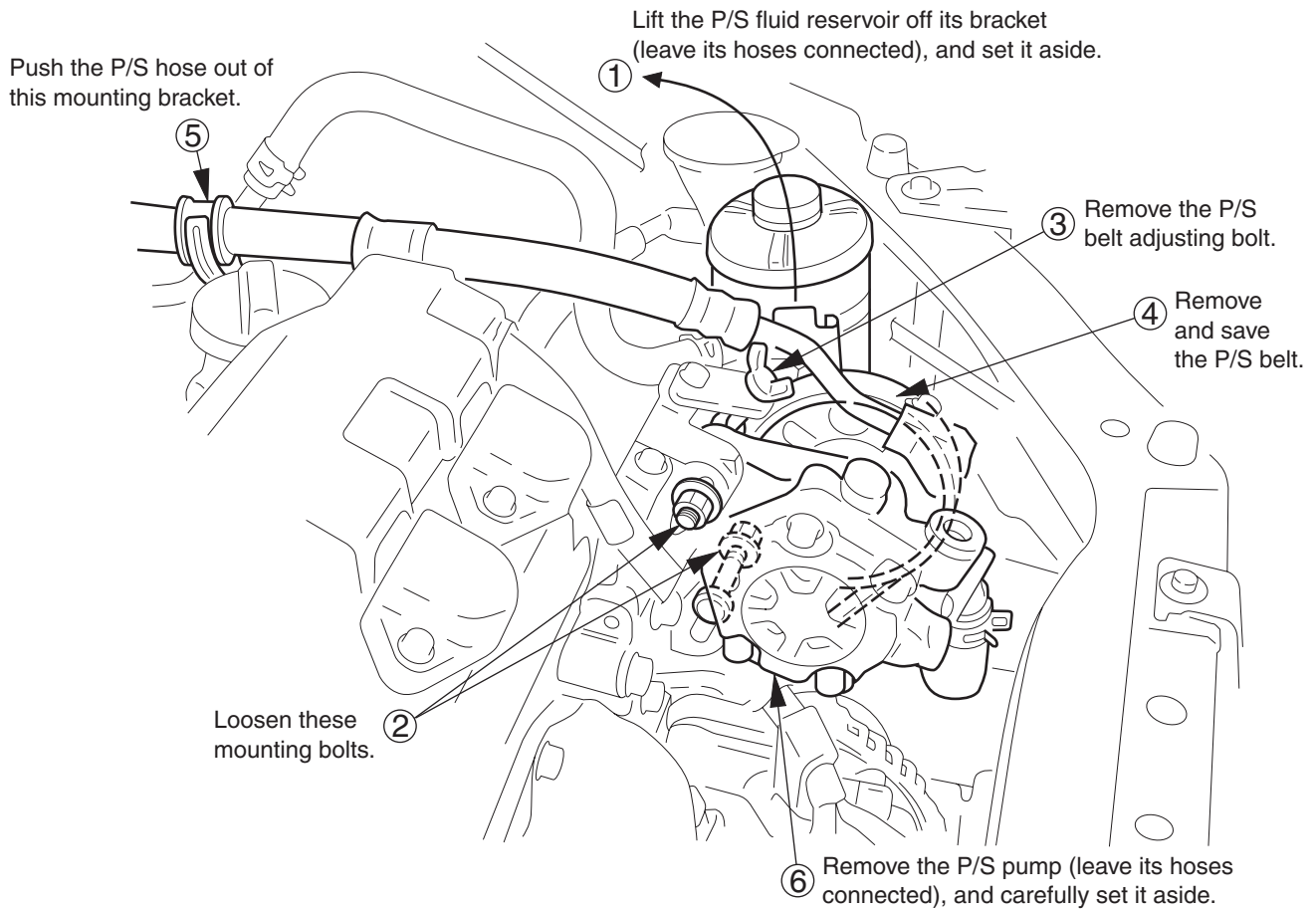
Push the vehicle harness out of this clamp. ⑪



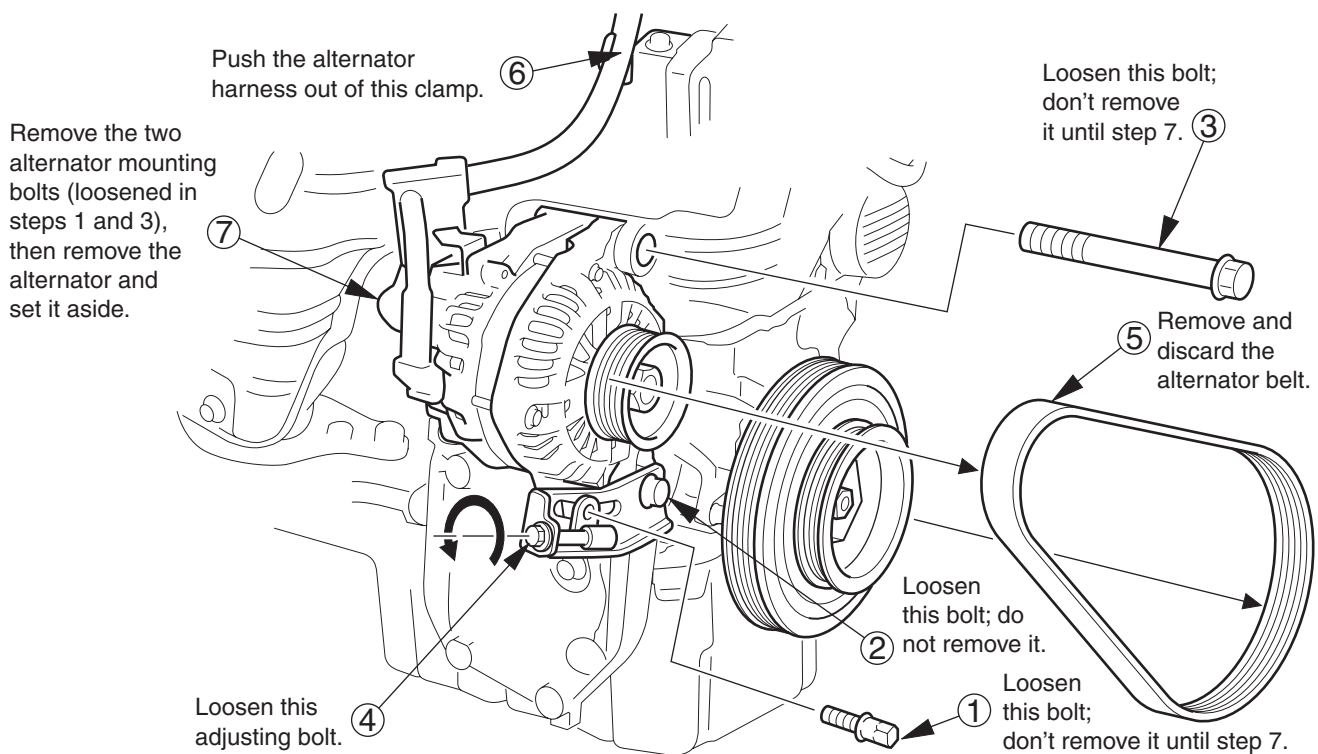
⑨ Disconnect the power steering pressure switch connector.



## 15. Remove the power steering pump.



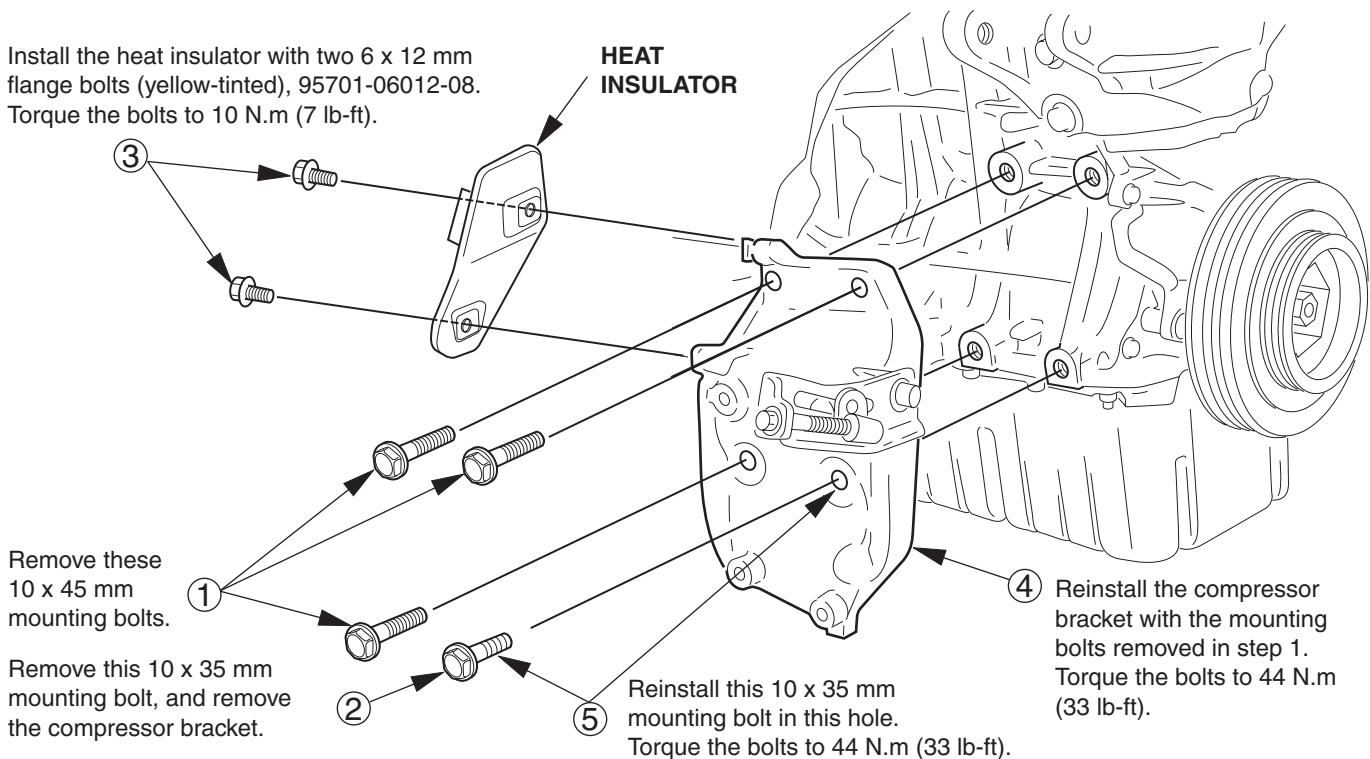
## 16. Remove the alternator.



**Get Parts Group B.**

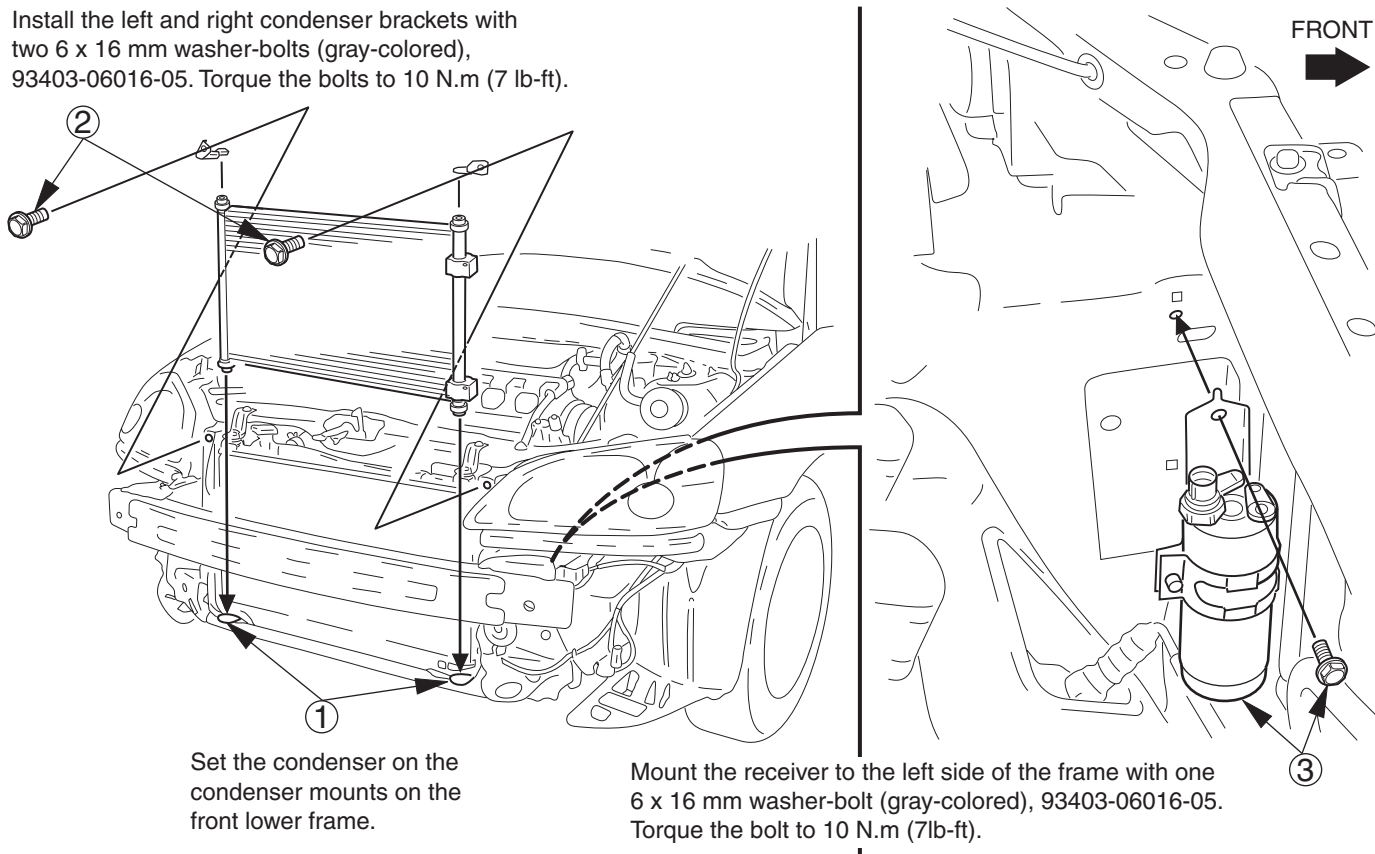
**17. Install the heat insulator.**

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).



**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).

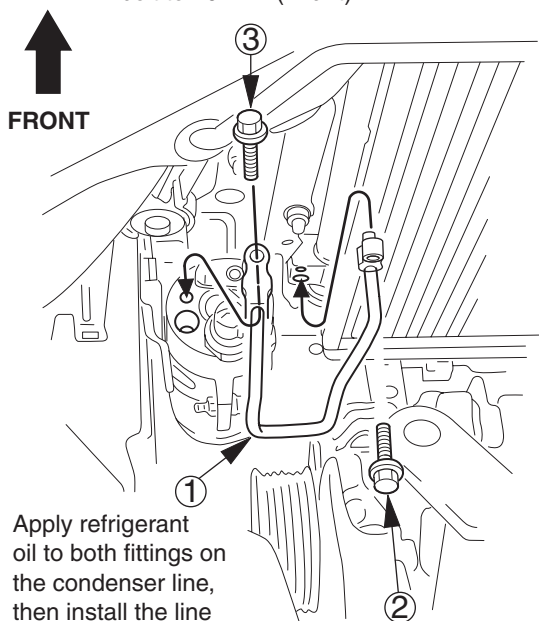


Set the condenser on the condenser mounts on the front lower frame.

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).

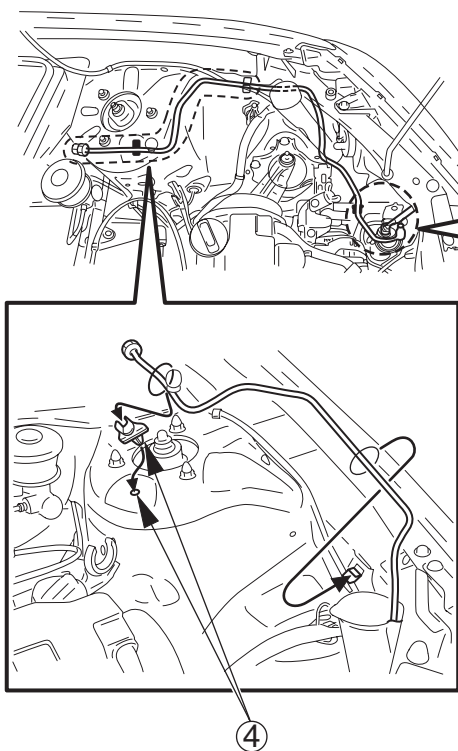
## 19. Install the condenser and receiver lines.

Secure the condenser line to the receiver with one 6 x 25 mm flange bolt (yellow-tinted), 95701-06025-08. Torque the bolt to 10 N.m (7 lb-ft).

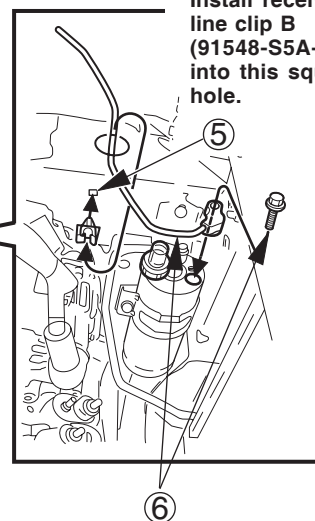


Apply refrigerant oil to both fittings on the condenser line, then install the line between the receiver and condenser.

Secure the condenser line to the condenser with one 6 x 25 mm flange bolt (yellow-tinted), 95701-06025-08. Torque the bolt to 10 N.m (7 lb-ft).



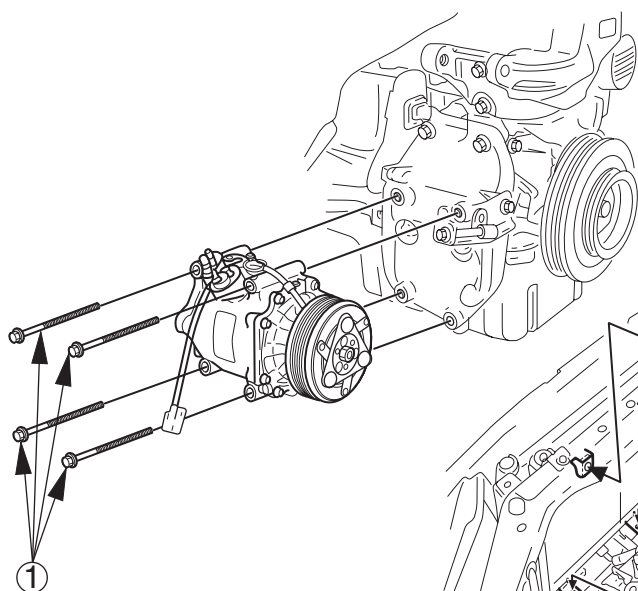
Install receiver line clip A (80381-S5A-A01) into this square hole.



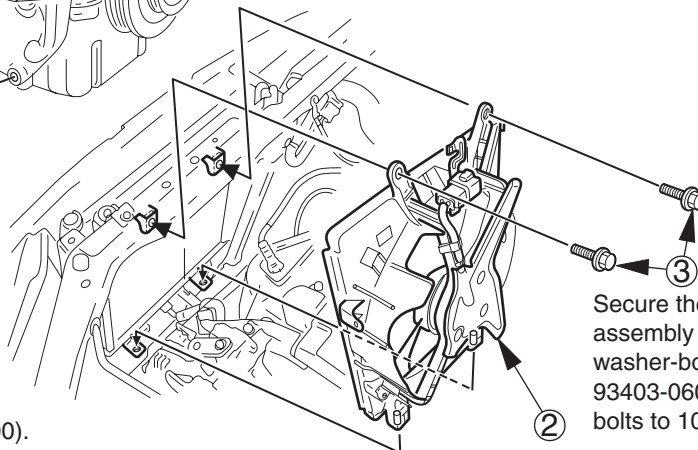
Install receiver line clip B (91548-S5A-003) into this square hole.

Apply refrigerant oil to its fitting, then connect the receiver line to the receiver with one 6 x 25 mm flange bolt (yellow-tinted), 95701-06025-08. Torque the bolt to 10 N.m (7 lb-ft).

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



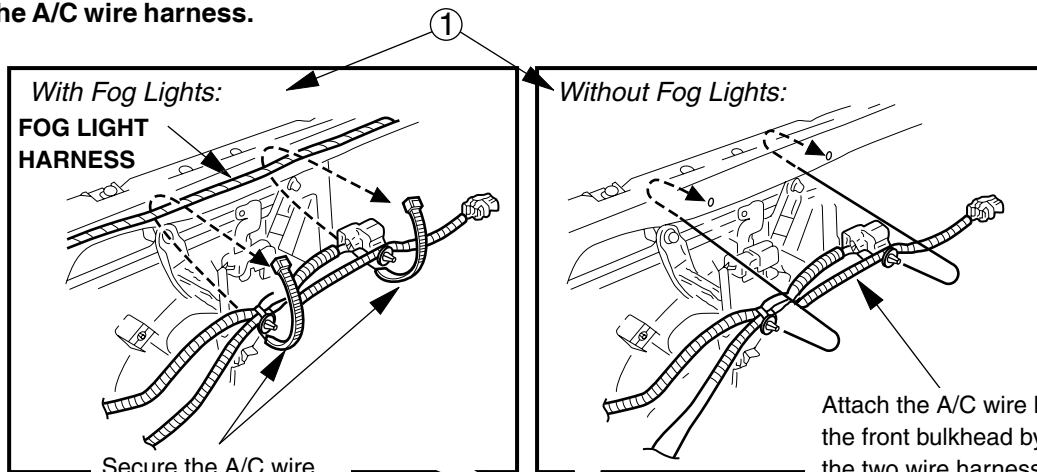
Install the compressor on the compressor bracket with the four 8 x 100 mm flange bolts (90023-P2A-000). Torque the bolts to 24 N.m (17lb-ft).



Secure the condenser fan assembly with two 6 x 16 mm washer-bolts (gray-colored), 93403-06016-05. Torque the bolts to 10 N.m (7 lb-ft).

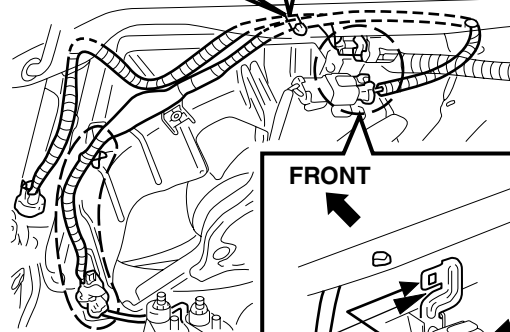
Carefully set the condenser fan assembly in place on the condenser fan mounts.

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

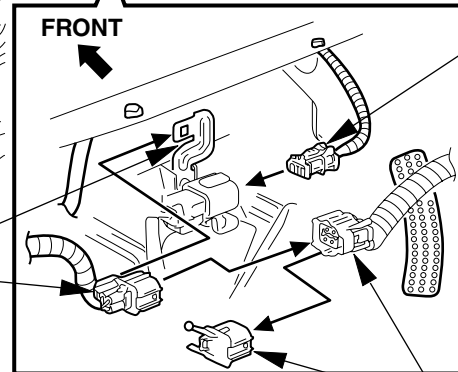


Secure the A/C wire harness to the fog light wire harness with two wire ties (38221-SW5-300). Cut off the excess wire tie.

Attach the A/C wire harness to the front bulkhead by snapping the two wire harness clips into the two holes shown.

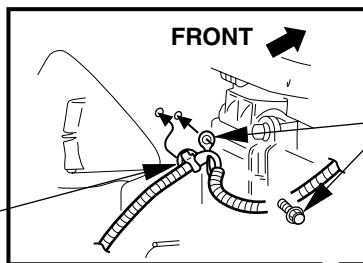


Connect the vehicle harness 4P connector to the A/C harness 4P connector, then snap the connector into the bracket.



4 Connect this 2P connector of the A/C wire harness to the condenser fan connector.

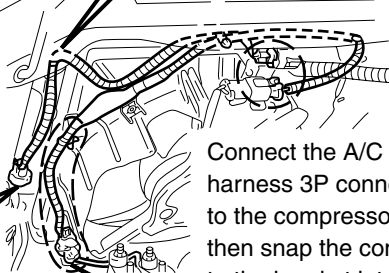
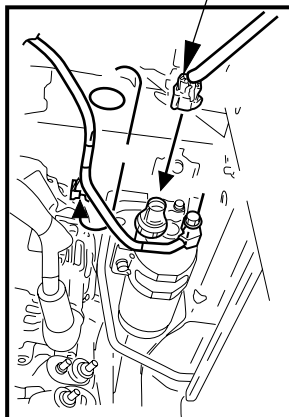
6 Snap this wire harness clip into the hole next to the ground bolt.



5 Attach the A/C harness ground terminal here with the ground bolt (gold-colored), 90153-SE0-003. Torque the bolt to 10 N.m (7 lb-ft).

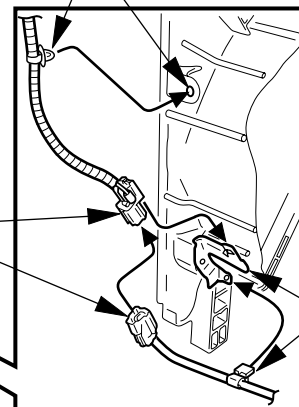
2 Remove the blue tape from the vehicle harness 4P connector, then remove and discard the blank connector.

7 Connect the A/C harness pressure switch connector to the receiver.



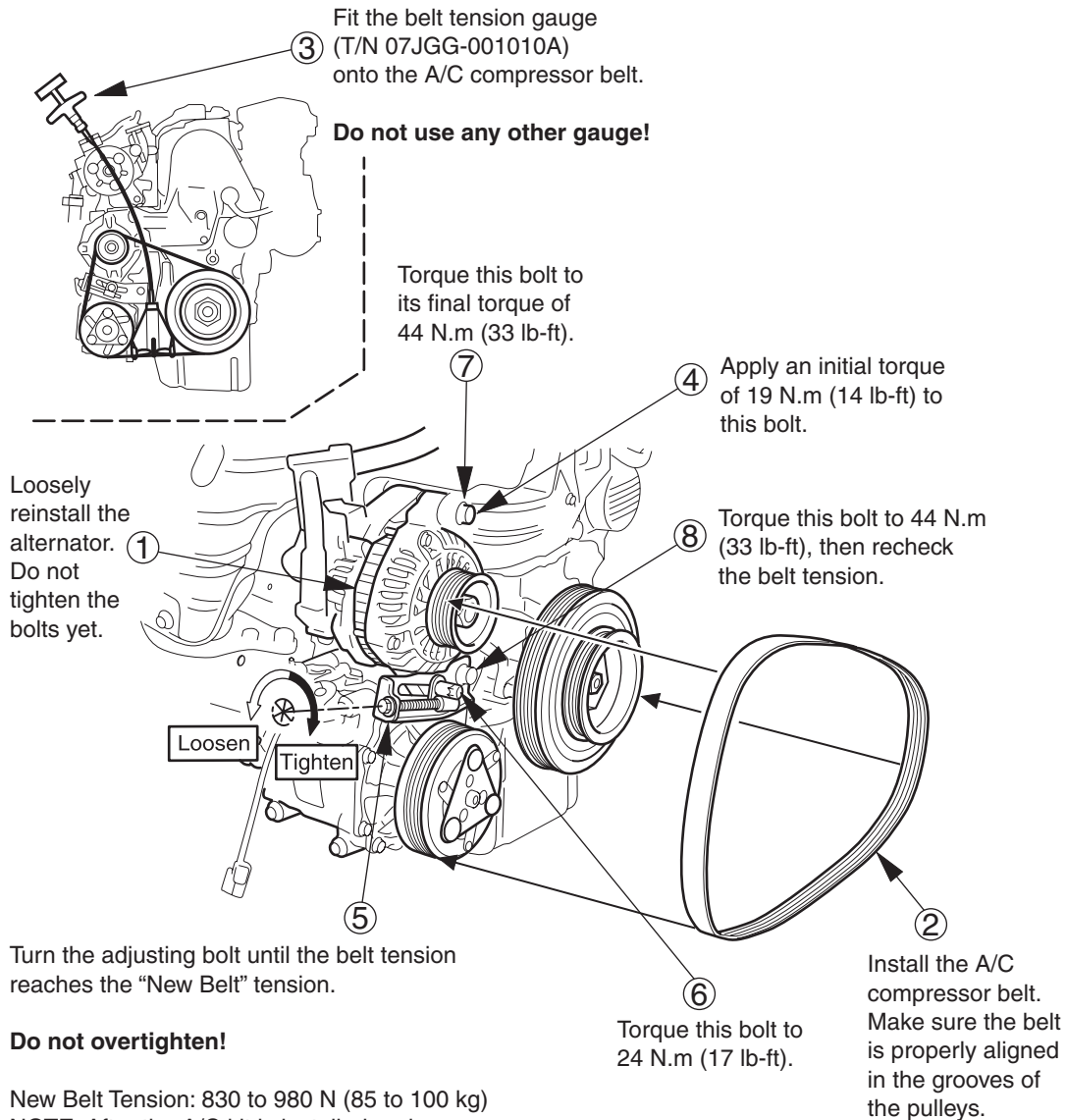
8 Connect the A/C harness 3P connector to the compressor, then snap the connector to the bracket into the condenser fan shroud.

9 Snap this wire harness clip into the tab on the condenser fan shroud.



10 Attach the compressor harness clip to this tab on the condenser fan shroud.

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



### Do not overtighten!

New Belt Tension: 830 to 980 N (85 to 100 kg)

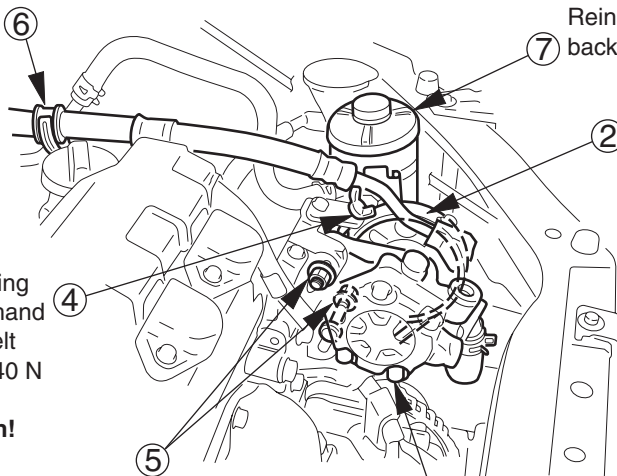
NOTE: After the A/C kit is installed and the engine has run for 5 or more minutes (A/C performance test), readjust the belt to the "Used Belt" tension.

Used Belt Tension: 390 to 540 N (40 to 55 kg).

### 23. Reinstall the power steering pump.

Reinstall the P/S hose in the bracket. ⑥

Reinstall the adjusting bolt, and turn it by hand to get the proper belt tension of 390 to 540 N (40 to 50 kg).  
**Do not overtighten!**

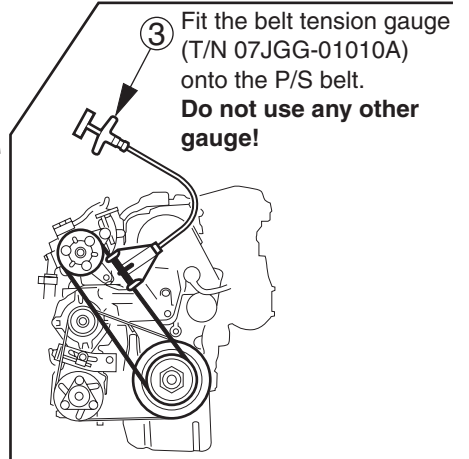


Torque the two mounting nuts to 24 N·m (17 lb-ft), then recheck the belt tension.

Reinstall the P/S pump and its mounting bolts and nuts. Do not tighten the bolts and nuts yet.

Reinstall the P/S fluid reservoir back in its mounting bracket.

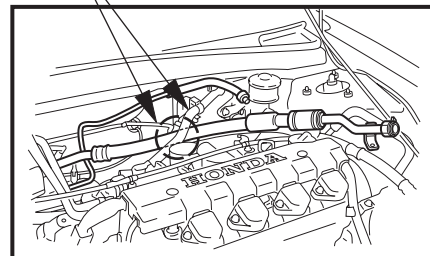
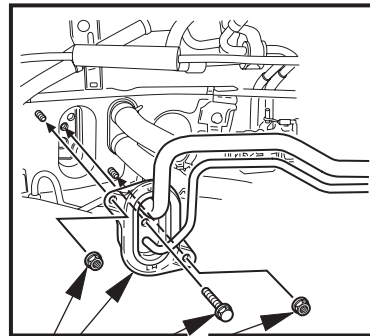
Reinstall the P/S belt. Make sure the belt is properly aligned in the grooves of the pulleys.



Fit the belt tension gauge (T/N 07JGG-01010A) onto the P/S belt.  
**Do not use any other gauge!**

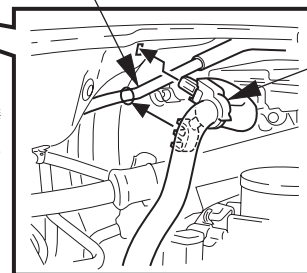
### 24. Install the A/C suction line and receiver line B.

① Push the brake booster vacuum hose toward the engine, then feed the suction hose on the A/C suction line and receiver line B under it.



② Connect the A/C suction line and receiver line B to the evaporator with one 6 x 30 mm flange bolt (yellow-tinted), 95701-06030-08, and two 6 mm paint-cutting nuts (yellow-tinted), 90361-SV4-003. Torque the bolt and nuts to 10 N·m (7 lb-ft).

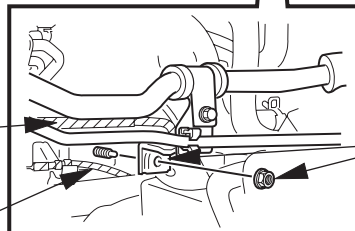
A/C LINE B



④ Reinstall the brake booster hose clamp into the square hole on the bulkhead, then snap A/C line B into it.

THROTTLE CABLE

HEATER VALVE CABLE

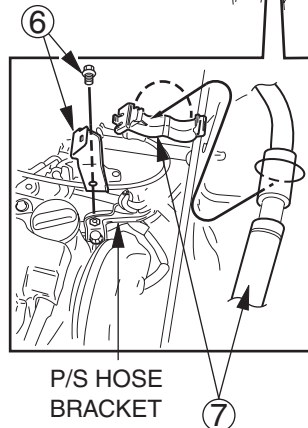


③ Slide the A/C suction line and receiver line B clamp onto the mounting stud. Make sure that the throttle and heater cables are not caught or pinched by the bracket, then install a 6 mm paint-cutting nut (yellow-tinted), 90361-SV4-003. Torque the nut to 10 N·m (7 lb-ft).

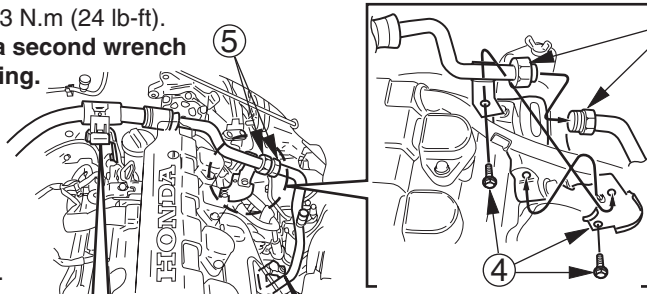
## 25. Connect the suction line.

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

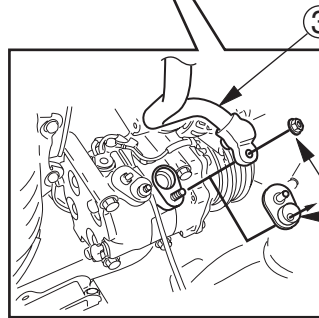
Install the suction hose bracket to the P/S hose bracket with a 6 x 12 mm washer-bolt (yellow-tinted), 93403-06012-08. Torque the bolt to 10 N.m (7 lb-ft).



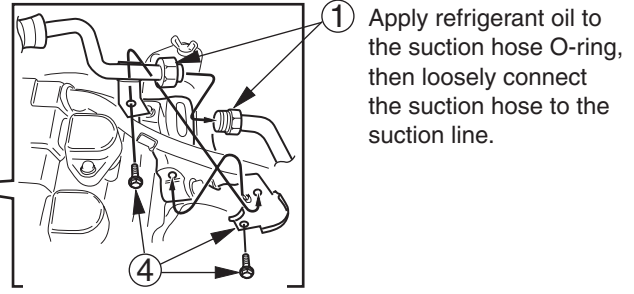
P/S HOSE BRACKET



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).



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



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

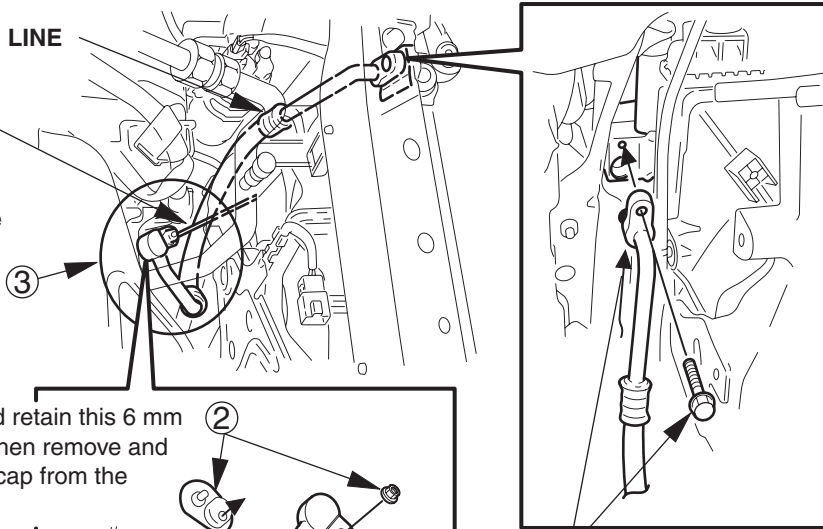
Apply refrigerant oil to its O-ring, then connect the suction line to the compressor with the retained 6 mm flange nut. Torque the nut to 10 N.m (7 lb-ft).

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

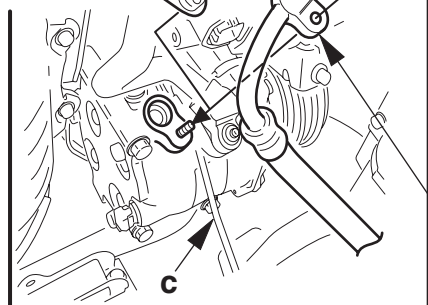
## 26. Install the discharge hose.

SUCTION LINE  
 COMPRESSOR CLUTCH WIRE

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.

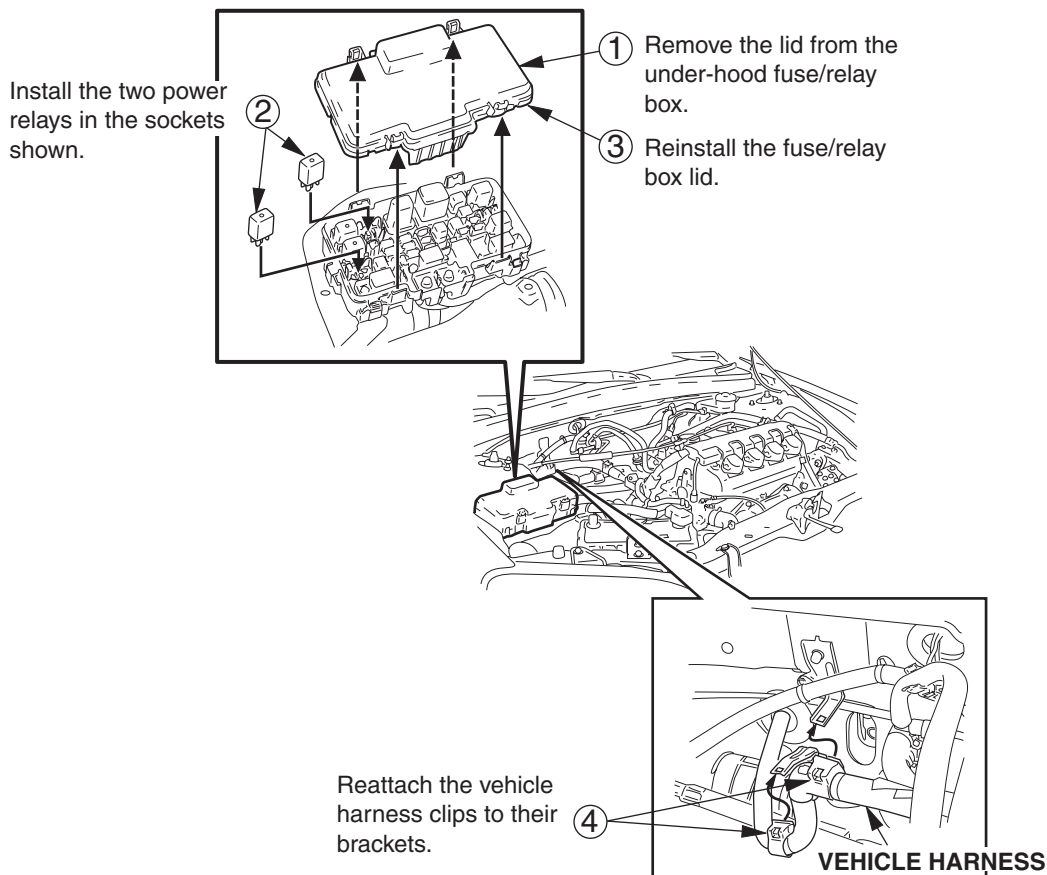


Apply refrigerant oil to its O-ring, then connect the discharge hose to the compressor with the retained 6 mm flange nut. Torque the nut to 10 N.m (7 lb-ft).

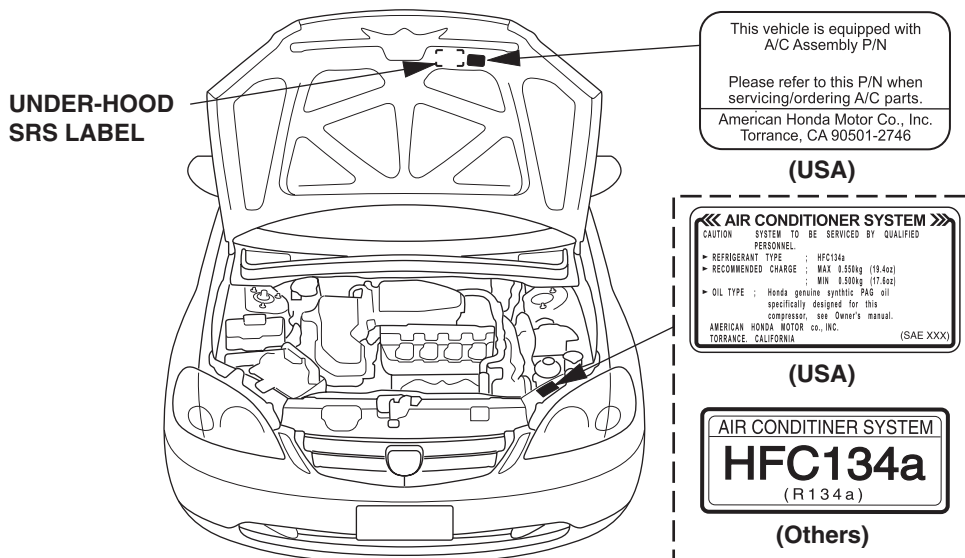
Apply refrigerant oil to its O-ring, then connect the discharge hose to the condenser with a 6 x 25 mm flange bolt (yellow-tinted), 95701-06025-08. Torque the nut to 10 N.m (7 lb-ft).

**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.

- Start the engine, and turn off all accessories (A/C, radio, defogger, etc.).
- 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 540 N (40 to 55 kg).

Refer to step 22 on page 20.