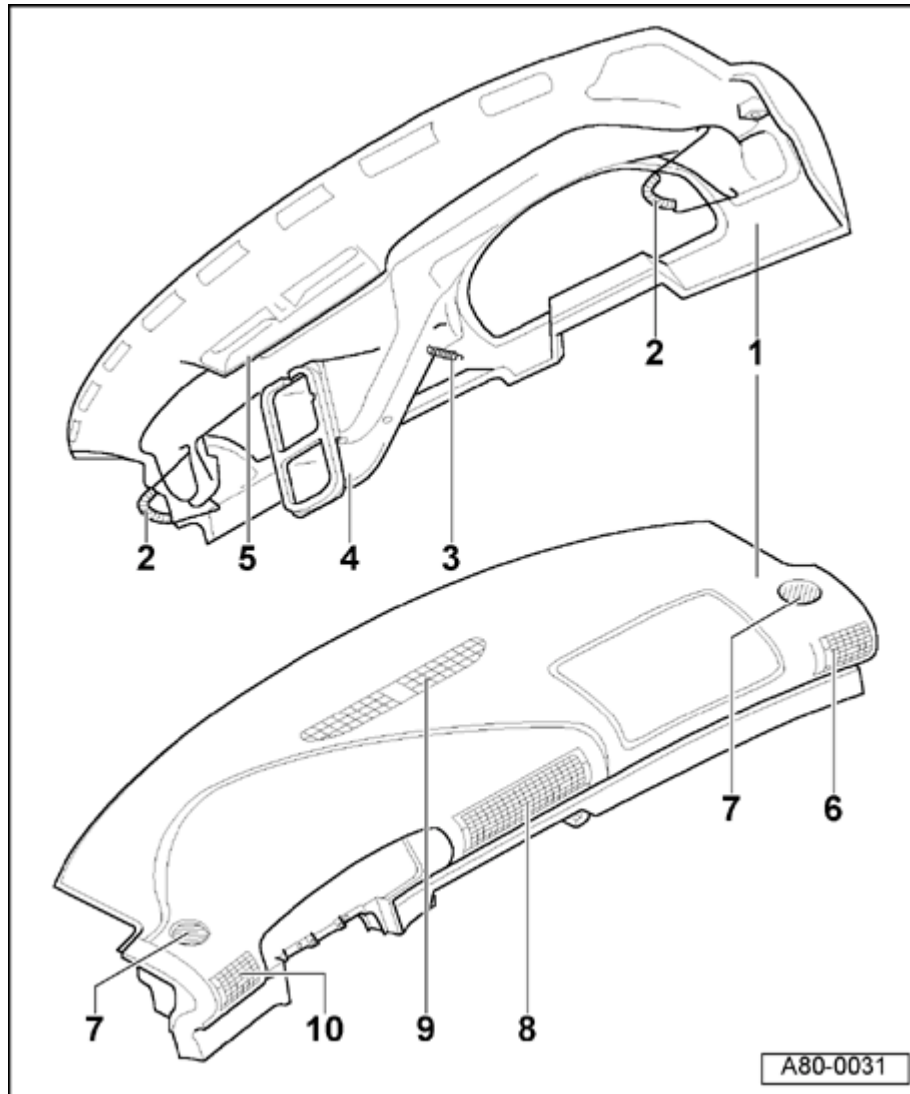


87-151



Heating and ventilation system, servicing

Instrument panel air outlets and air guide ducts

CAUTION!

Before working on the electrical system:

- ◆ **Obtain security code for anti-theft radio.**
- ◆ **Note customer's pre-set radio stations.**
- ◆ **Disconnect battery Ground (GND) strap.**

Note:

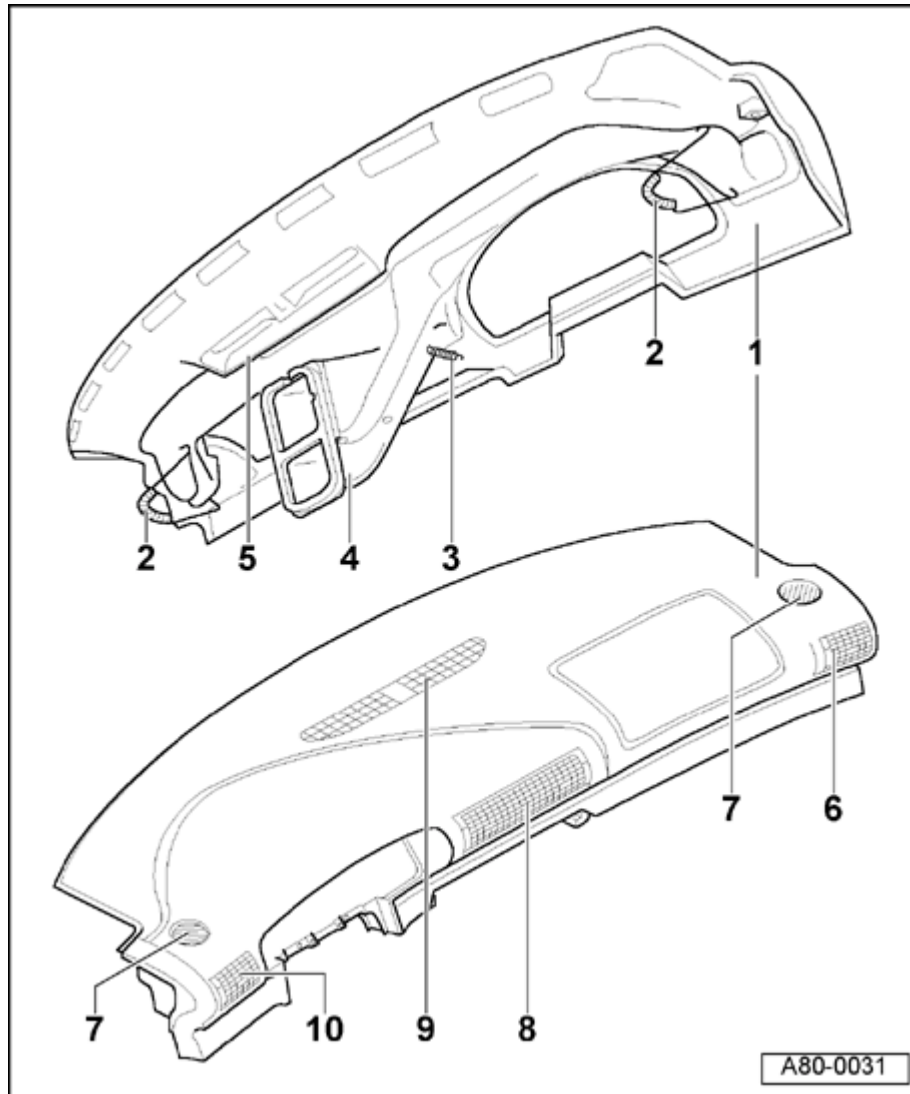
Air is extracted from the passenger compartment through 2 outlets located on both sides of the rear luggage compartment area near the bumper ⇒ [page 87-157](#) .

1 - Instrument panel top cover

Removing and installing ⇒ [Repair Manual, Body Interior, Repair Group 70](#)

2 - Retaining spring for air guide duct

87-152



3 - Retaining spring for air guide duct

4 - Air guide duct

5 - Defroster duct

6 - Right instrument panel air outlet

◆ Removing and installing ⇒ [page 87-155](#)

7 - Side window defroster vent

◆ Removing and installing ⇒ [Repair Manual, Body Interior, Repair Group 70](#)

8 - Center instrument panel air outlet

◆ Removing and installing ⇒ [page 87-154](#)

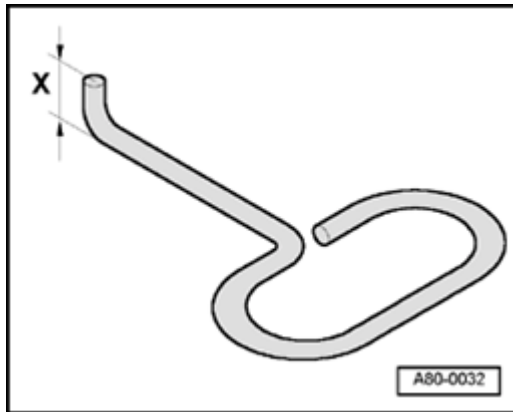
9 - Windshield defroster vent

◆ Removing and installing ⇒ [page 87-156](#)

10 - Left instrument panel air outlet

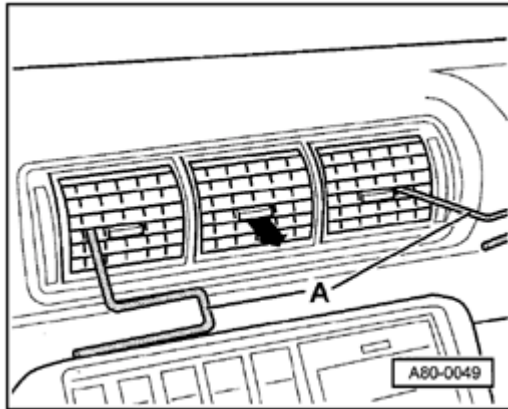
◆ Removing and installing ⇒ [page 87-155](#)

87-153

Tool for removing instrument panel air outlets, locally made

- Bend 3 mm (1/8 in.) diameter wire as shown.
Dimension X = 6 mm (1/4 in.)

Instrument panel air outlet (center), removing and installing

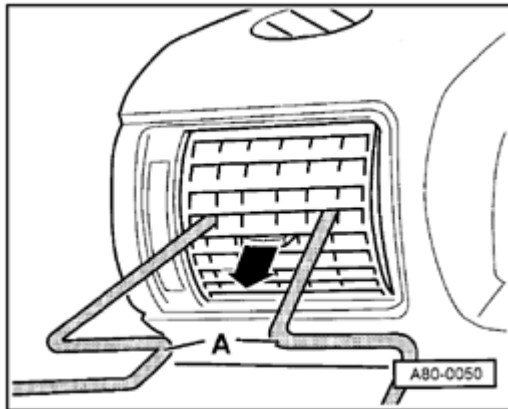


- A**
- Insert tools -A- into the instrument panel air outlet and pull outlet evenly out of the instrument panel.

Note:

Should a swivel insert become detached from the air outlet when removing, re-install swivel insert so that it locks in place on both sides.

Instrument panel air outlets (left and right), removing and installing

**A**

- Insert tools -A- into the instrument panel air outlet and pull air outlet evenly out of the instrument panel.

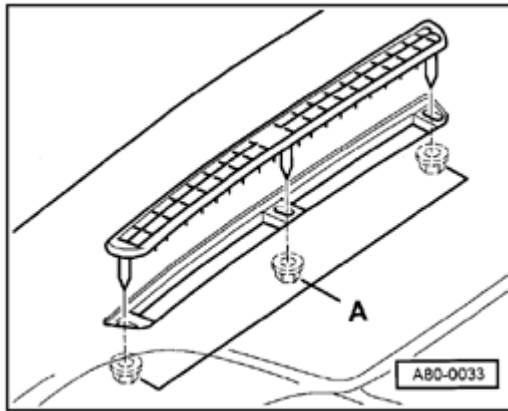
Note:

Should a swivel insert become detached from the air outlet when removing, re-install swivel insert so that it locks in place on both sides.

Instrument panel windshield defroster vent, removing and installing

Remove instrument panel top cover

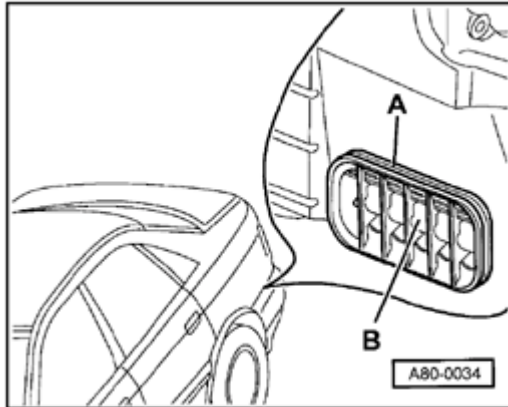
⇒ [Repair Manual, Body Interior, Repair Group 70](#)



A

- Remove nuts -A- and remove vent from instrument panel top cover.

Air extraction vents, checking

**A**

- Sealing lips -B- in air extraction vents -A- must move freely and close by themselves.

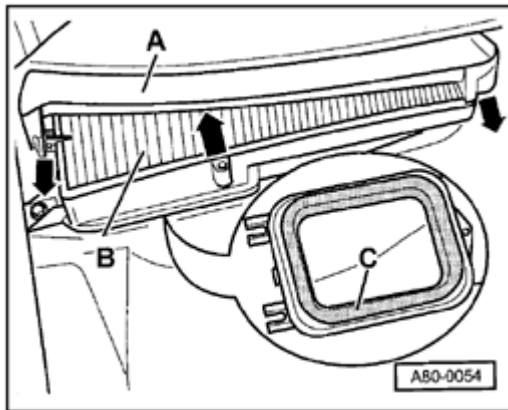
Notes:

- ◆ *Illustration shows air extraction vent with rear bumper removed.*
- ◆ *2 air extraction vents (left and right) are installed for forced ventilation.*
- ◆ *Extraction of air from the passenger compartment can only function properly if rear shelf air guides are not blocked.*

Dust and pollen filter, removing and installing

Remove right air plenum cover

⇒ [Repair Manual, Body Exterior, Repair Group 66](#)



A

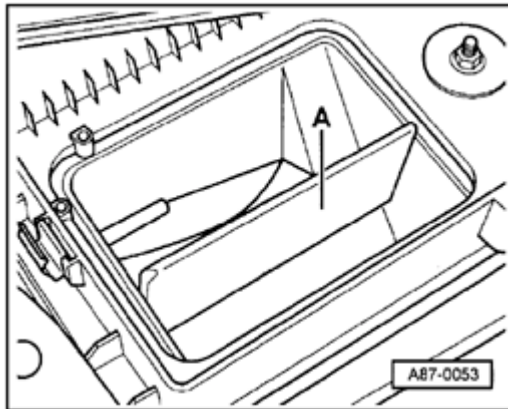
- Remove water guide -A-.
- Remove dust and pollen filter -B- from housing.

Notes:

- ◆ *The water guide and the plenum cover must be properly installed to ensure no water flows onto the dust and pollen filter and into the heater housing.*
- ◆ *Gasket -C- must be attached to the housing of the dust and pollen filter; before installing the housing, check that it is correctly located and not damaged.*
- ◆ *The dust and pollen filter should be replaced at regular intervals ⇒ [Repair Manual, Maintenance](#).*

Heater/air conditioner assembly complete with instrument panel, removing and installing (1996)

- Using VAG1551 function 03, initiate output Diagnostic Test Mode (DTM) ⇒ [page 01-42](#) .

**A**

- Proceed through output DTM and wait until air flow flap -A- closes via air flow flap motor V71.
- Cancel output DTM (press VAG1551 button -C-) with closed air flow flap -A-.
- Discharge refrigerant system ⇒ [page 87-201](#) .
- Remove dust and pollen filter ⇒ [page 87-158](#) .

CAUTION!

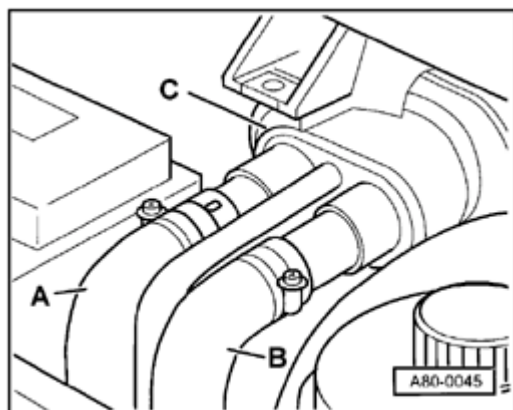
Before proceeding with removal of instrument panel and heater/air conditioner complete:

- ◆ **Obtain security code for anti-theft radio.**
- ◆ **Note customer's pre-set radio stations.**
- ◆ **Move power seats to most rearward position.**
- ◆ **Disconnect and remove battery.**

- Release pressure in coolant system by opening cap at coolant expansion tank.

WARNING!

- ◆ **With hot engine, cooling system is under pressure.**
- ◆ **Coolant expansion tank cap must be removed slowly.**



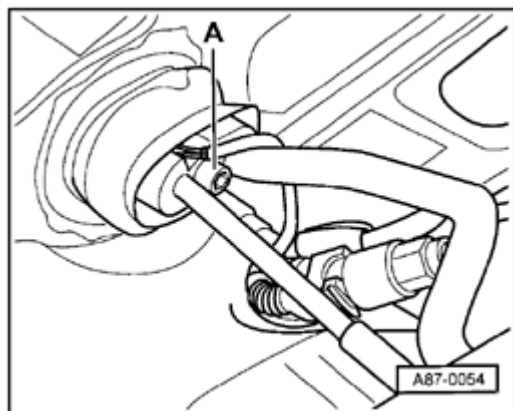
A

- Clamp coolant hoses -A- and -B- with VAG3094 (or equivalent) and remove from heater core inlet/outlet.
- Place catch basin below heater core connection -A- and carefully blow coolant out of heater core with compressed air through connection -B-.
- Remove A/C system vacuum supply hose from engine and attach at heater core inlet/outlet.
- Remove boot -C-.

CAUTION!

- ◆ **Dispose of used coolant properly. Check local regulations.**
- ◆ **Do not re-use used coolant.**

87-161

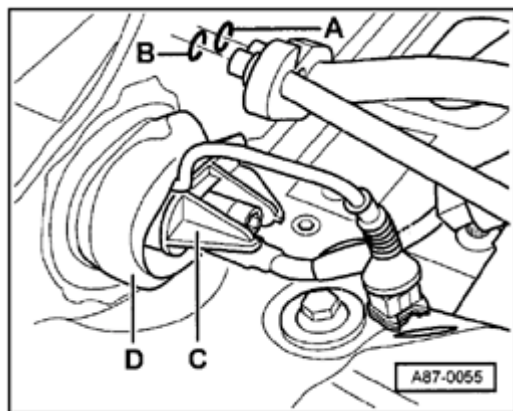


- A**
- Remove bolt -A-: tightening torque 15 Nm (11 ft lb).
 - Loosen refrigerant line clamp and remove lines from evaporator.
 - Secure refrigerant lines in engine compartment to allow unobstructed evaporator re-installation.

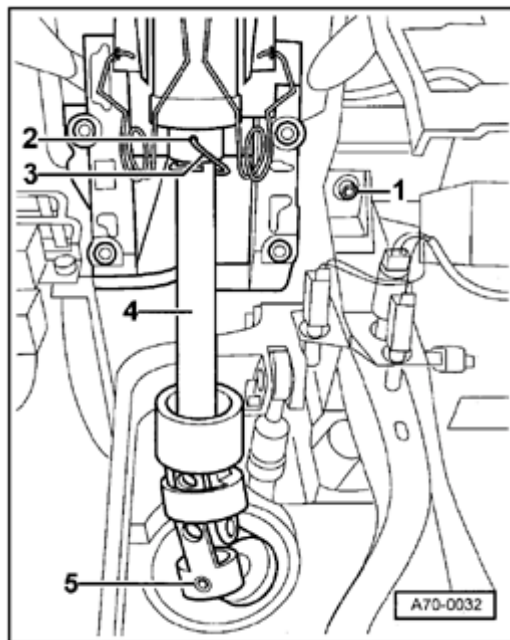
CAUTION!

Immediately plug open connections on A/C components and lines to prevent dirt and moisture contamination.

- Use blank plug from a replacement evaporator -C- to seal the connections at the evaporator; this also aids with evaporator re-installation.



- A**
- Remove boot -D-.
 - Disconnect low pressure switch -F73- electrical connection and secure connector end to evaporator fixture.



Remove glovebox, lower shelf on driver side and center section of instrument panel complete (trim and supports)

⇒ [Repair Manual, Body Interior, Repair Group 70](#)

Detach pedal assembly from instrument panel mounting (bolt -1-) ⇒ [Repair Manual, Brake System, Repair Group 46](#)

Remove drivers Airbag unit ⇒ [Repair Manual, Body Interior, Repair Group 69](#)

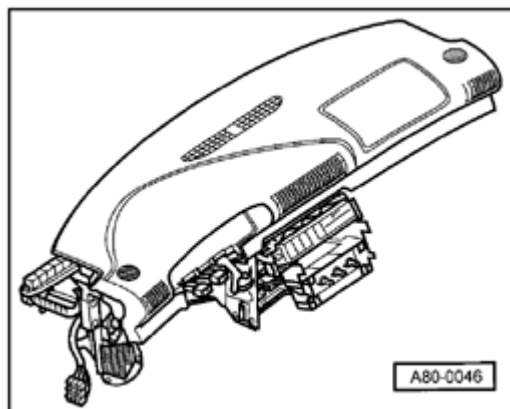
Remove steering wheel ⇒ [Repair Manual, Electrical Equipment, Repair Group 96](#)

Remove steering column -4- from steering gear (bolt -5-) and secure with wire -3- at hole -2- to prevent unit from sliding apart ⇒ [Repair Manual, Suspension, Wheels, Steering, Repair Group 48](#)

Disconnect affected electrical connections to Electronic box (integrated auxiliary fuse/relay panel) in left air plenum chamber) ⇒ [Repair Manual, Electrical Equipment, Repair Group 97](#)

Disconnect all affected electrical connections between instrument panel assembly and vehicle ⇒ [Repair Manual, Electrical Equipment, Repair Group 97](#)

87-163

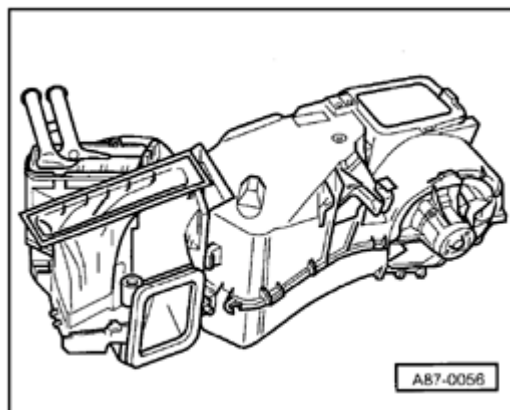


Remove heater/air conditioner assembly complete with instrument panel ⇒ [Repair Manual, Body Interior, Repair Group 70](#)

Note:

The instrument panel must only be placed on a clean, covered workbench to avoid damaging the top cover.

- Remove footwell air outlet ⇒ [page 87-134](#) .
- Disconnect all electrical connections between instrument panel and heater/air conditioner assembly.
- Remove all screws/bolts between instrument panel mounting and heater/air conditioner assembly.
- Separate Instrument cluster from heater/air conditioner assembly.
- Install in reverse order of removal noting the following.



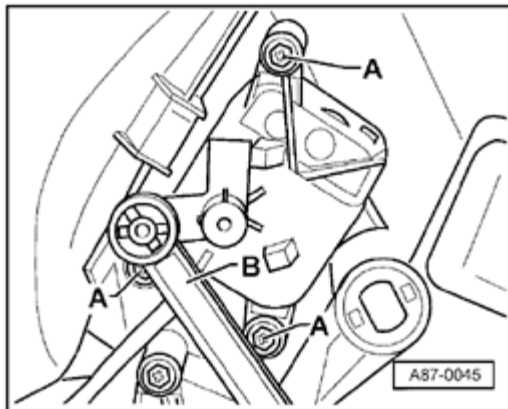
Notes:

- ◆ *Before removing screws/bolts, mark installation position.*
- ◆ *All cable ties removed in order to separate the instrument panel from the heater/air conditioner assembly must be re-attached at*

the same point after assembly.

Notes:

- ◆ When re-installing instrument panel and heater/air conditioner assembly, ensure the A/C system vacuum supply hose with heater core fixture, and low pressure switch electrical connector and evaporator fixture are inserted together through the plenum chamber openings.
- ◆ Ensure evaporator drain is correctly positioned ⇒ [page 87-169](#) .

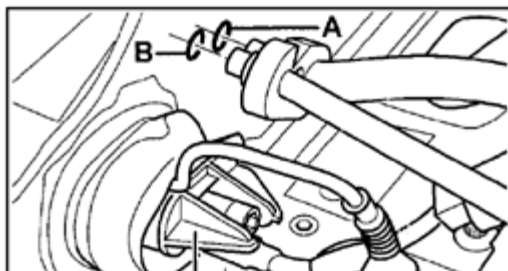


A

- ◆ Ensure boot -C- is correctly installed.

Connect coolant hoses correctly:

- ◆ Hose -A-: return flow to water pump (with vent hole).
- ◆ Hose -B-: supply from cylinder head.



A

- ◆ Replace refrigerant line O-rings -A- and -B-.
- ◆ Evaporator refrigerant line fixture bolt tightening torque: 15 Nm (11 ft lb).
- ◆ Ensure boot -D- and wiring to low pressure switch are correctly located and secured when installing.

- ◆ *Install refrigerant lines free of stress.*
- ◆ *Evacuate refrigerant circuit and charge system with refrigerant R134a
⇒ [page 87-204](#) .*
- ◆ *Fill with fresh coolant/anti-freeze and bleed cooling system ⇒ Repair
Manual, "General, Engine," Repair Group 19.*

Heater/air conditioner assembly, removing and installing (1997 ➤)

CAUTION!

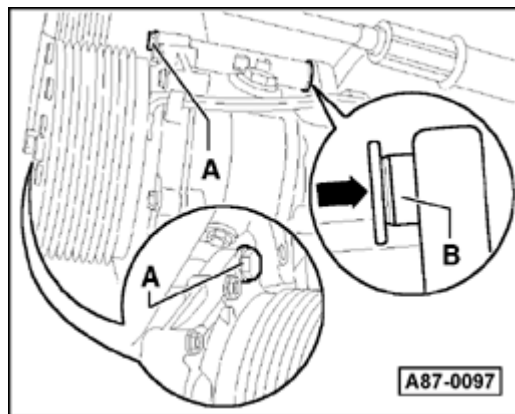
- ◆ *Obtain security code for anti-theft radio.*
- ◆ *Note customer's pre-set radio stations.*
- ◆ *Move power seats to most rearward position.*
- ◆ *Switch off ignition and disconnect battery ground (GND) strap.*
- Release pressure in coolant system by opening cap at coolant expansion tank.

WARNING!

- ◆ *With hot engine, cooling system is under pressure.*
- ◆ *Coolant expansion tank cap must be removed slowly.*
- ◆ *Dispose of used coolant properly. Check local regulations.*

♦ *Do not re-use used coolant.*

87-166

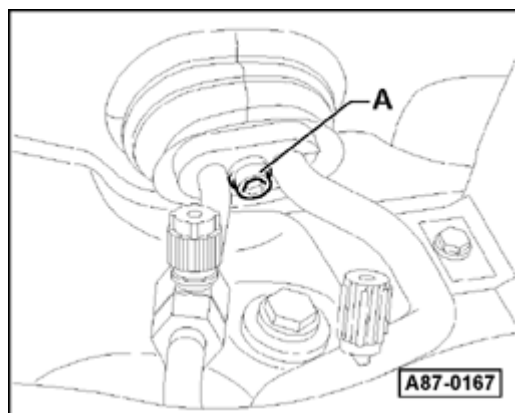


- A**
- Clamp coolant hoses -A- and -B- with VAG3094 (or equivalent) and remove from heater core inlet/outlet.
 - Place catch basin below heater core connection -A- and carefully blow coolant out of heater core with compressed air through connection -B-.
 - Remove boot -C-.

CAUTION!

A/C refrigerant system must be discharged before removing heater/air conditioner assembly.

- Discharge refrigerant system ⇒ [page 87-201](#) .

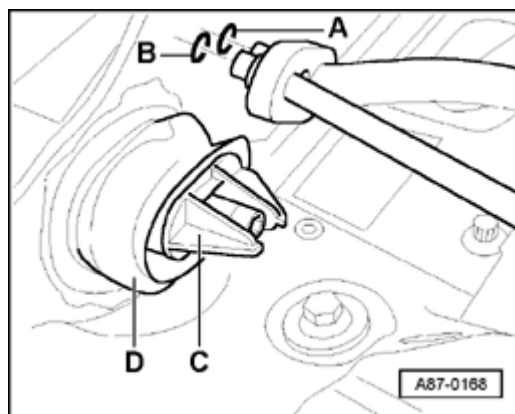


- A**
- Remove bolt -A-.
 - Remove refrigerant lines from evaporator and secure with tie wraps to prevent interference during installation.

CAUTION!

Immediately plug open connections on A/C components and lines to prevent dirt and moisture contamination.

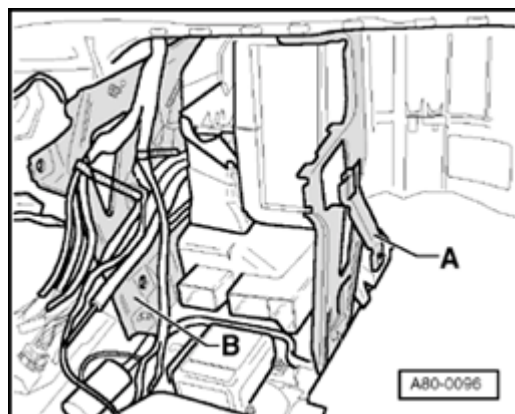
87-167



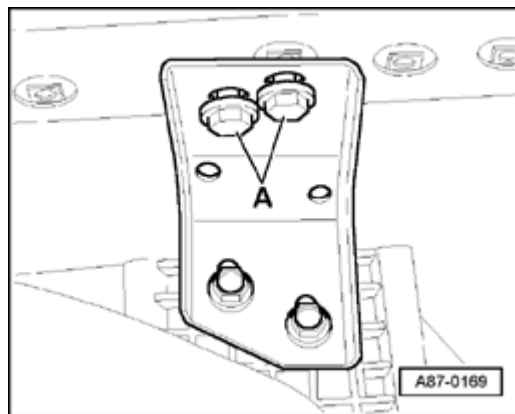
- A**
- Plug evaporator openings using cap supplied with replacement evaporator -C-.
 - Remove bulkhead grommet -D-.

Remove glovebox ⇒ [Repair Manual, Body Interior, Repair Group 70](#)

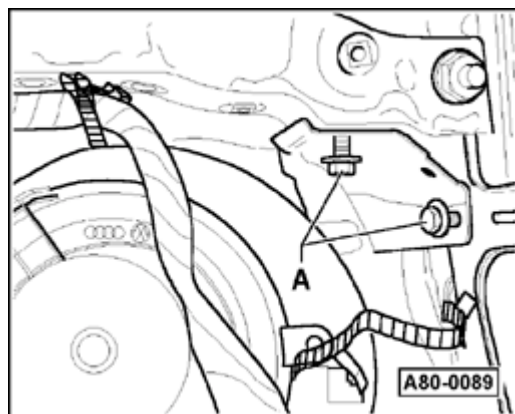
Remove driver side under-dash panel, center console and instrument panel outer skin ⇒ [Repair Manual, Body Interior, Repair Group 70](#)



- A**
- Remove instrument panel support -A-.
 - Loosen instrument panel support -B- (the upper mounting bolt to the heater/air conditioning assembly can not be removed).
 - Remove floor outlet ⇒ [page 87-134](#) .



- A**
- Remove bolts -A-.
 - Disconnect all electrical connections from instrument panel harness to heater/air conditioner assembly.

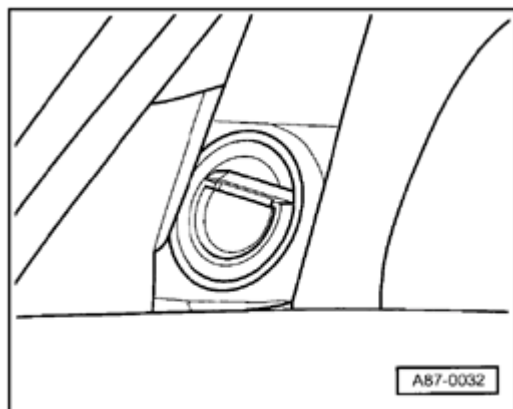


- A**
- Remove bolts -A-.
 - Remove heater/air conditioner assembly towards passenger side.
 - Install in reverse order of removal.

Notes on installation:

- ◆ Replace all damaged heater/air conditioner assembly seals.
- ◆ Replace all removed cable tie wraps in the same location.
- ◆ Always replace evaporator inlet/outlet O-rings.
- ◆ Ensure refrigerant lines fit into evaporator without binding.
- ◆ Check evaporator line and heater core bulkhead grommets for correct fit.
- ◆ Check evaporator drain and evaporator drain valve for correct fit (1996 ⇒ [page 87-169](#) ; 1997 ➤ ⇒ [page 87-171](#)).

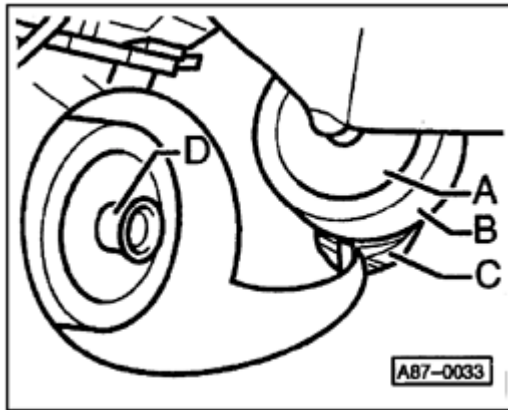
Evaporator housing drain, checking (1996)

**A**

- Evaporator drain valve flap -A- must not stick, must close completely and drain opening must be pointing downwards.

Notes:

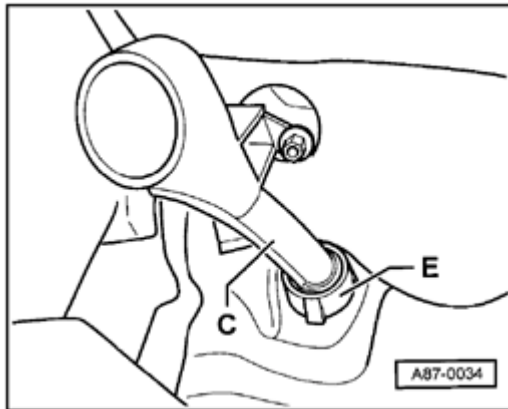
- ◆ *Remove drain valve downwards out of the floor panel.*
- ◆ *When installed, the drain valve must not be touching the heat shield.*
- ◆ *The drain valve must not stick as a result of wax or underbody sealant.*
- ◆ *If complaints of moisture in passenger compartment exist, check evaporator drain and drain valve and clean if necessary.*



- A**
- Foam seal -B- must fit tightly against drain funnel -C-.
 - Plate -A- must be fitted at drain in order to support foam seal.

Notes:

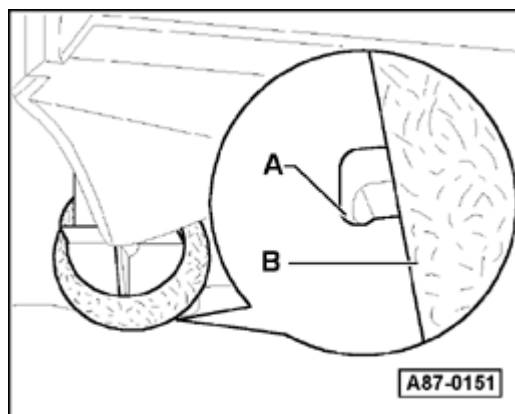
- ◆ The drain funnel and foam seal can only be replaced with A/C housing with evaporator assembly removed (removing and installing heater/air conditioner assembly ⇒ [page 87-172](#)).
- ◆ The stopper -D- on drain prevents liquid flowing back into the foam seal.



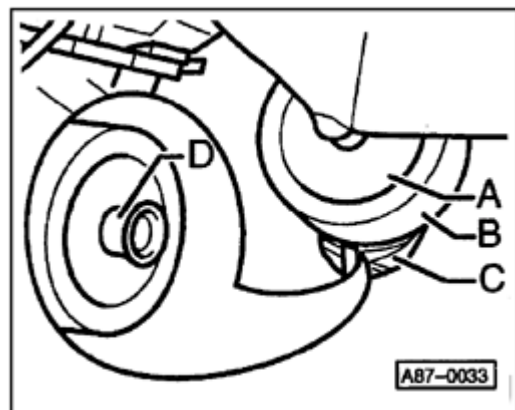
- A**
- ◆ Drain funnel -C- must be secured to floor panel and must not impede operation of drain valve -E-.

Evaporator housing drain, checking (1997 ➤)

Notes:

**A**

- ◆ Drip guide -A- on the evaporator housing drain prevents liquid from flowing back into the foam seal -B-.

**A**

- ◆ Should drip guide break off, install stopper -D- and seal with silicone adhesive to the drain tube.