



Haynes
shows you how

BMW 3-Series 320i & 320xi (12-14), 325i, 325xi, 330i & 330xi (06) & 328i & 328xi (07-14) Haynes Online Manual

11 Air conditioning system components - removal and installation

Warning:

Refer to the precautions in Section 10.

Evaporator

1 Have the air conditioning refrigerant discharged and recovered by a dealer or air conditioning shop. Remove the heater assembly (see [Section 9](#)).

2 Peel off the rubber grommet from the lines, and remove the screw securing the line clamp (see illustration 9.26a and 9.26b) .

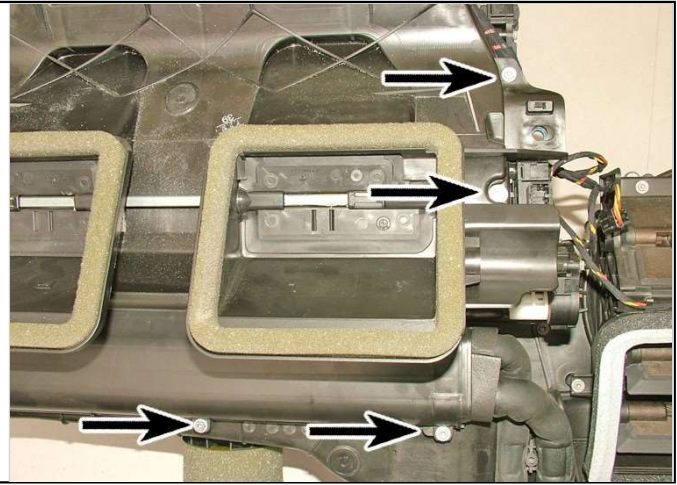
3 Carefully cut through the foam seal at the top of the heater assembly (see illustration) .

11.3 Cut through the foam at the points indicated

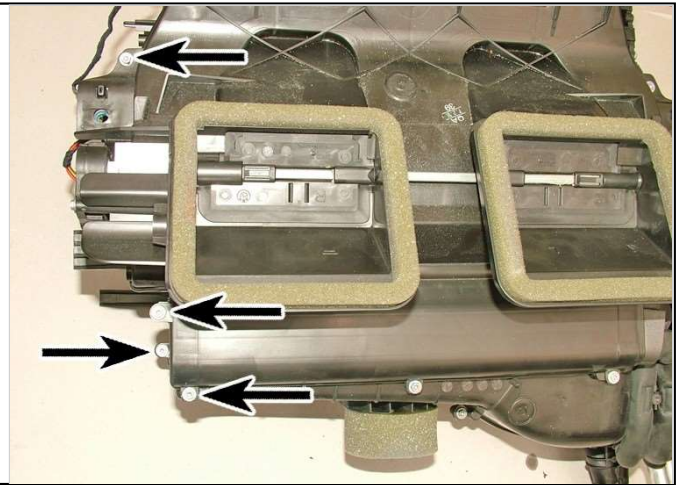


4 Remove the upper heater housing mounting screws and housing (see illustrations) . Disconnect the positioning motor electrical connectors and outlet temperature sensor plug as the housing is removed.

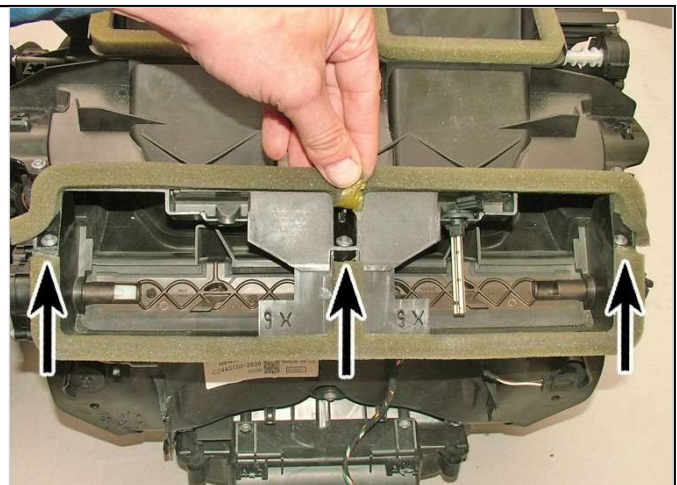
11.4a Remove the mounting screws on the left-hand side . . .



11.4b . . . in the center . . .



11.4c . . . and right-hand side of the heater housing . . .



11.4d . . . then lift off the upper heater housing



5 Lift out the plastic flap, then lift the evaporator from the housing. Recover the plastic cap from the lower edge of the evaporator (see illustrations) .

11.5a Lift out the plastic flap . . .



11.5b . . . and remove the evaporator



11.5c Recover the plastic cap from the lower edge



6 Installation is the reverse of removal, but note that the receiver/drier should also be replaced. Have the refrigerant recharged by the shop that recovered it, and top-up the coolant level (see [Chapter 1](#)).

Expansion valve

7 Have the air conditioning refrigerant discharged and recovered by a dealer or air conditioning shop.

Models with strut tower braces

8 Remove the plastic cap from the center of the cowl trim panel. Two different types of the cap are installed: one with a central slot, removed by rotating it 45 degrees counterclockwise, and one without a central slot, which can be pried out (see illustration 9.10) . *Note: If the cap or seal are damaged, they must be replaced. Failure to do so may result in water leaks.*

9 Remove the bolt in the center of the cowl (see illustration 9.11) . Discard the bolt; a new one must be installed.

10 Remove the bolt at each outer end of the supports, then hold the rubber grommet in place and slide the supports out (see illustration 9.12) . Do not allow the grommet to fall. Discard the bolts; new ones must be installed.

All models

11 Working at the rear of the engine compartment, remove the bolts and remove the cabin air filter cover. Slide the filter from the housing (see illustration 9.6) .

12 Release the catches and remove the left- and right-hand plastic covers from behind the strut towers on each side of the engine compartment. Unclip the hose from the left-hand cover (see illustration 9.7) .

13 Depress the clips and pull the cable guide forwards from the cabin air filter lower housing (see illustration 9.8) .

14 Release the catch and remove the mounting bolt on each side, then slide the cabin air filter lower housing forwards and maneuver it out (see illustrations 9.9a and 9.9b) .

15 Remove the mounting bolts and detach the refrigerant lines from the expansion valve at the firewall (see illustration 9.13) . Discard the line seals; new ones must be installed.

16 Remove the mounting bolts and remove the expansion valve (see illustration 9.14) . Discard the O-ring seals; new ones must be installed.

17 Installation is the reverse of removal. Have the refrigerant recharged by the shop that recovered it, and top-off the coolant level (see [Chapter 1](#)).

Receiver/drier

18 The receiver/drier should be replaced when:

- There is dirt in the air conditioning system.
- The compressor has been replaced.
- The condenser or evaporator has been replaced.
- A leak has emptied the air conditioning system.
- The air conditioning system has been opened for more than 24 hours.

19 Remove the condenser (see Steps 41 through 44).

20 Unscrew the cap from the condenser (see illustration) .

11.20 Unscrew the cap



21 Remove the snap-ring securing the receiver/drier insert .

22 Using an old bolt, pull the insert from the receiver/drier (see illustration) .

11.22 Remove the snap-ring and use an old bolt to extract the receiver/drier



23 Install the new desiccant sack into the new insert, and mount it to the condenser (see illustration) . The remainder of installation is the reverse of removal.

11.23 Install the desiccant sack into the insert



Compressor

24 Have the air conditioning refrigerant discharged and recovered by a dealer or air conditioning shop.

25 On 3.0L engines, remove the thermostat (see [Section 4](#)).

26 Remove the mounting bolts and disconnect the air conditioning lines from the compressor. Discard the O-ring seals; new ones must be installed during assembly. Seal/plug the openings to prevent contamination.

27 Remove the drivebelt (see [Chapter 1](#)), then disconnect the electrical connector from the compressor.

28 Firmly apply the parking brake, then raise the front of the vehicle and support it securely on jackstands. Remove the mounting fasteners and remove the engine splash shield.

29 On 2.0L engines, remove the charge air inlet duct (see [Chapter 4](#)).

30 Working underneath the vehicle, remove the compressor mounting bolts and the compressor.

31 Installation is the reverse of removal, noting the following points:

- A. Prior to installing the compressor, it is essential that the correct amount of refrigerant oil is added - refer to your dealer for the correct amount and specification.
- B. Always use new seals when reconnecting the refrigerant lines.
- C. Replace the receiver/drier.
- D. Have the refrigerant recharged by the shop that recovered it.

Sunlight sensor

32 Using a blunt, flat-bladed tool, carefully pry the sensor from the center of the instrument panel. Disconnect the electrical connector, and secure the harness from falling into the instrument panel with tape.

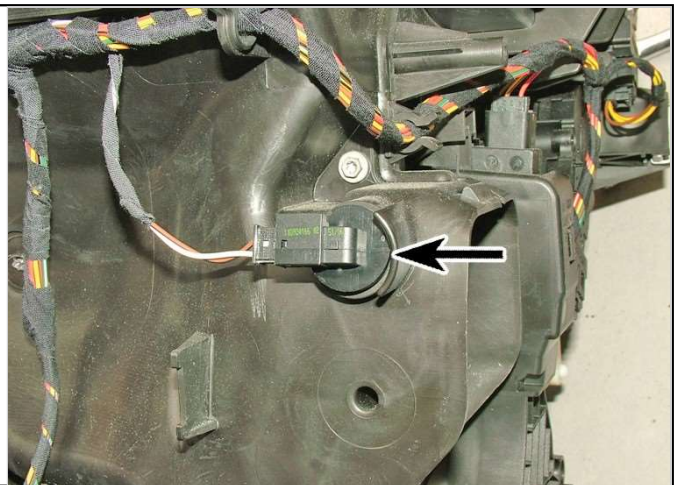
33 Installation is the reverse of removal.

Evaporator temperature sensor

34 Remove the mounting bolts, then pull the trim panel under the passenger's side of the instrument panel downward and rearward (see [illustration 9.33](#)) . Disconnect the footwell light electrical connector as the panel is withdrawn.

35 Disconnect the sensor electrical connector, then withdraw the sensor from the heater housing (see [illustration](#)) .

11.35 Evaporator temperature sensor



36 Installation is the reverse of removal.

Pressure sensor

Note:

The pressure sensor is located on the refrigerant line on the left-hand side of the engine compartment.

37 Have the air conditioning refrigerant discharged by a BMW dealer or air conditioning shop.

38 Remove the mounting bolts and move the heat shield to one side.

39 Disconnect the sensor electrical connector and unscrew the sensor. Plug/seal the openings to prevent contamination.

40 Installation is the reverse of removal. Tighten the sensor securely and have the refrigerant recharged by a BMW dealer or air conditioning shop.

Condenser

Note:

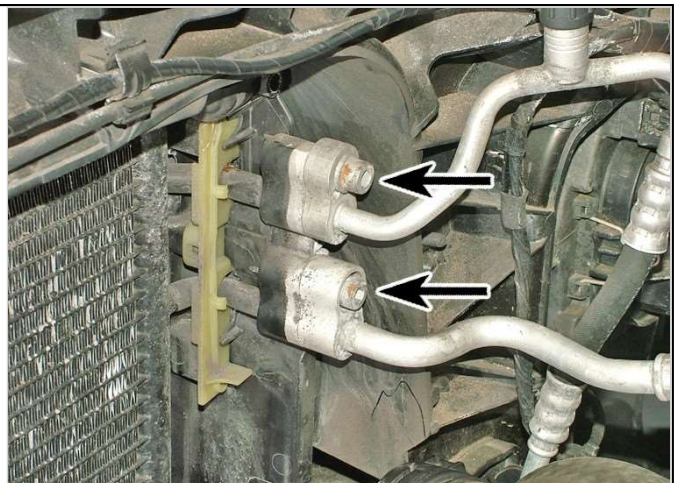
The condenser is located in front of the radiator.

41 Have the air conditioning refrigerant discharged and recovered by a dealer or air conditioning shop.

42 Remove the radiator (see [Section 3](#)).

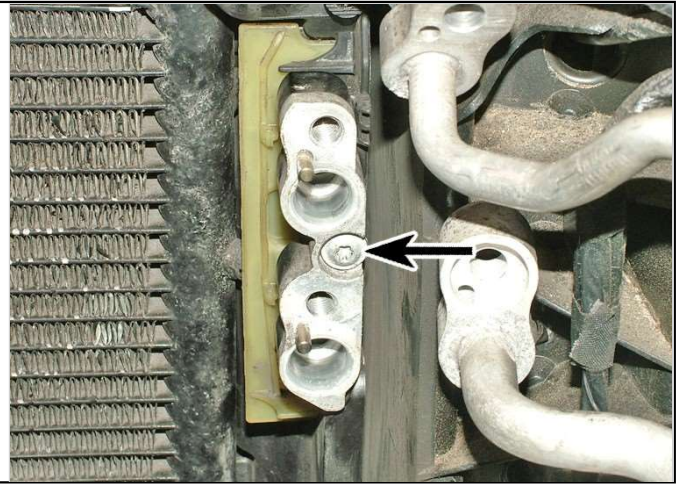
43 Remove the mounting bolts and disconnect the refrigerant lines from the condenser (see illustration) . Discard the O-ring seals; new ones must be installed.

11.43 Refrigerant line bolts



44 Remove the retaining bolt, pry out the retaining plate, and pull the right-hand side of the condenser rearward (see illustration) . Maneuver the condenser out.

11.44 Remove the condenser retaining bolt



45 Installation is the reverse of removal, noting the following points:

- A. Prior to installing the condenser it is essential that the correct amount of refrigerant oil is added - refer to your dealer for the correct amount and specification.
- B. Always use new seals when reconnecting the refrigerant lines.
- C. Replace the receiver/drier.
- D. Have the refrigerant recharged by the shop that recovered it.

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