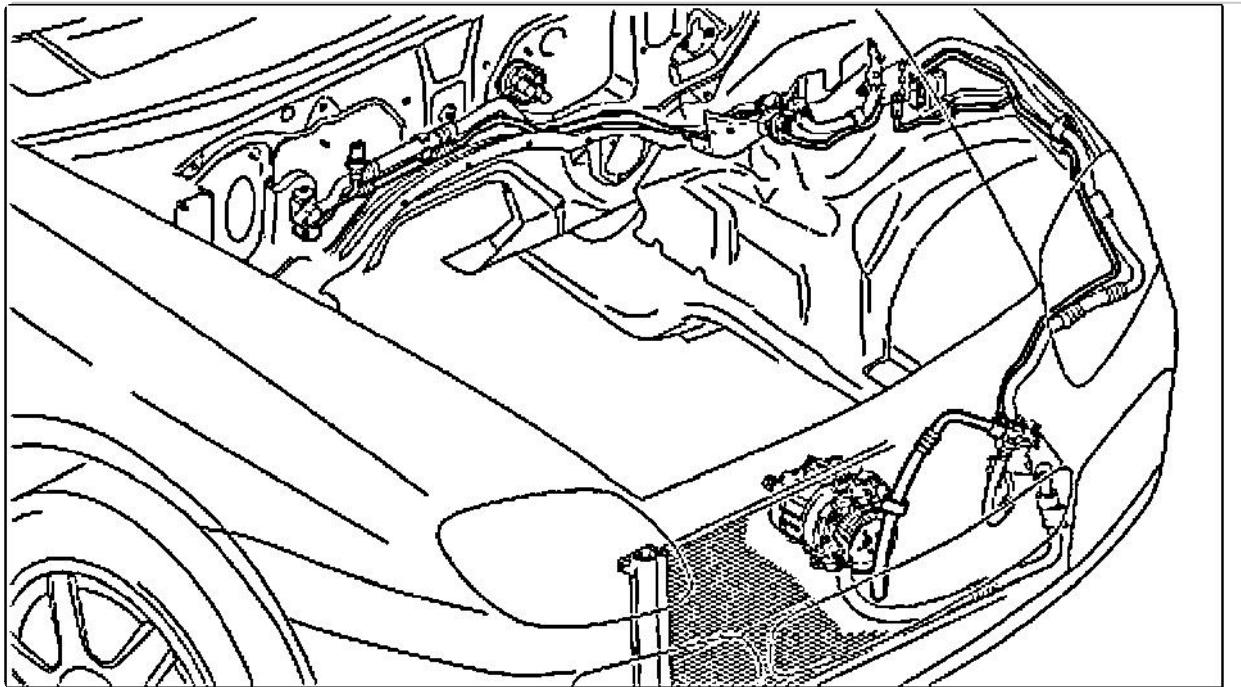


2004 Porsche Cayenne Turbo (9PA) V8-4.5L Turbo

Vehicle &gt; Heating and Air Conditioning &gt; Hose/Line HVAC &gt; Service and Repair &gt; Procedures

## AIR CONDITIONER/REMOVING AND INSTALLING COMPRESSOR/CONDENSER LINE

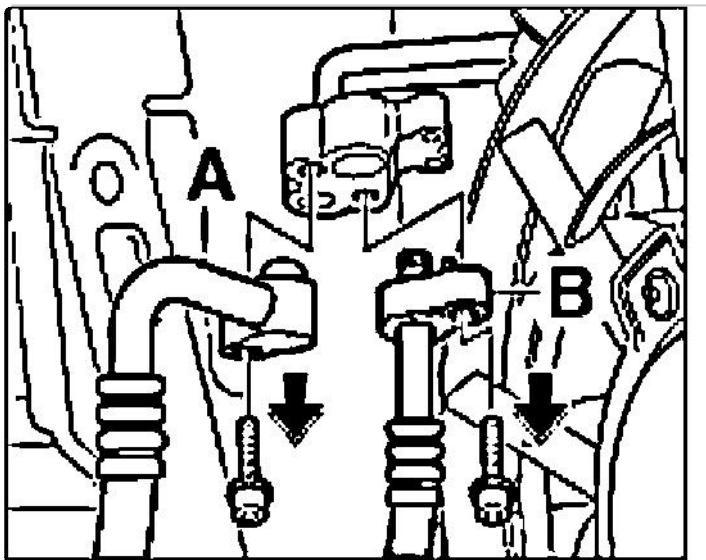
### Removing and Installing Compressor/Condenser Line



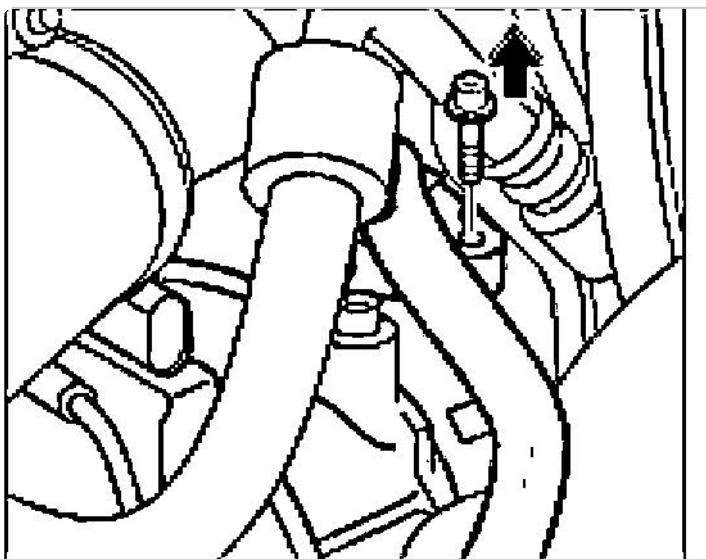
**NOTE:** The description of the removal and installation is based on a Turbo. Additional pipes, which are not installed on the naturally aspirated engine, are included in the procedures.

#### Removing Compressor/Condenser Line (A - B)

- Observe the safety regulations when working with refrigerants. Refer to, Safety regulations for working on air-conditioned vehicles and dealing with refrigerant R134a.
- Remove refrigerant by suction.
- Remove engine guard.



1. Unscrew refrigerant line fastening screw -A- for the compressor on the condenser.
2. Disconnect the refrigerant line connection.

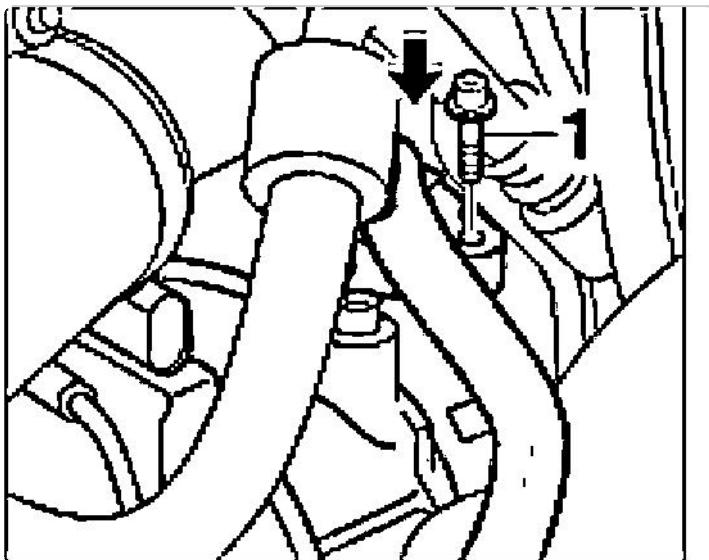


3. Unscrew fastening screw on the air-conditioning compressor.
4. Pull refrigerant line out of the compressor and remove it out of the engine area in a downward direction.

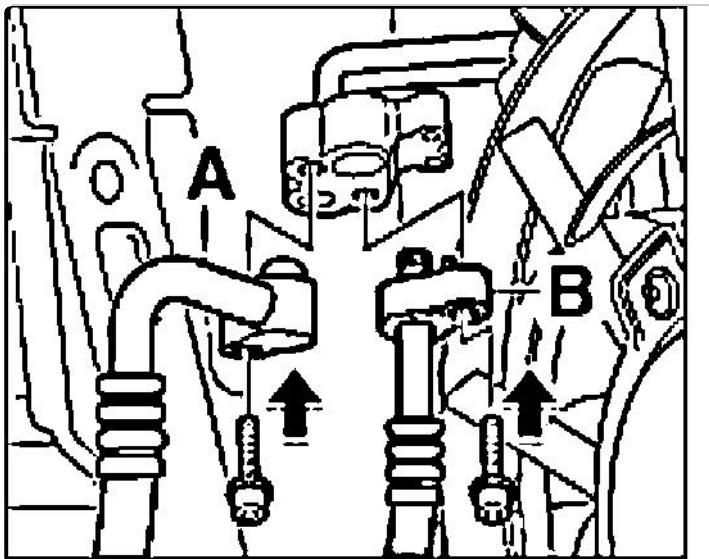
#### Installing Compressor/Condenser Line (A - B)

##### NOTE:

- Check the sealing rings of the refrigerant lines and replace them if necessary.
- Coat sealing rings with refrigerant oil before fitting.



1. Push in refrigerant line from below into the engine area and onto the air-conditioning compressor.
2. Screw in fastening screw -1- on the compressor and tighten it.



3. Insert the refrigerant line from the compressor on the condenser - do not tilt it - and fasten with fastening screw -A-.

- Observe the safety regulations when working with refrigerants. Refer to, Safety regulations for working on air-conditioned vehicles and dealing with refrigerant R134a.
- Remove refrigerant by suction.
- Remove engine guard.

#### Tightening Torques

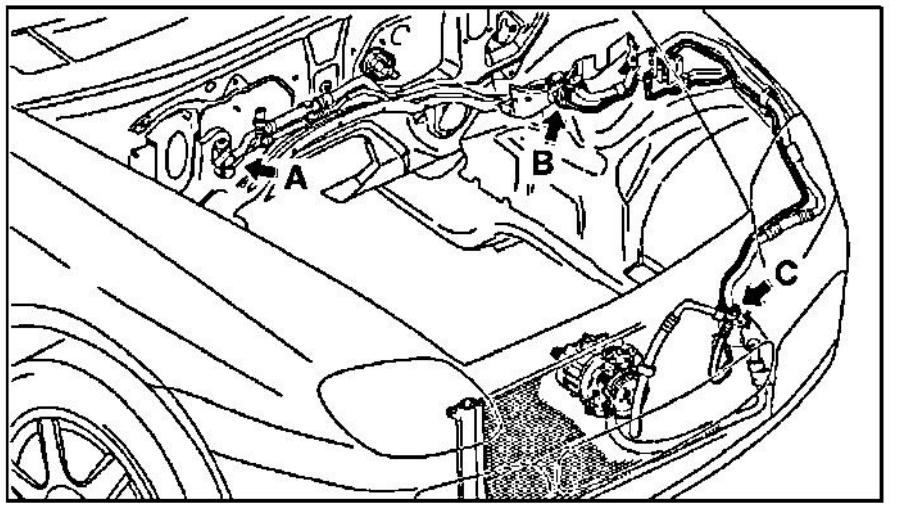
Location	Illustration	Thread	Tightening torque [Nm] (ftlb.)
Fastening screw for refrigerant lines	-1, A-	M8	12 (9)

2004 Porsche Cayenne Turbo (9PA) V8-4.5L Turbo

Vehicle &gt; Heating and Air Conditioning &gt; Hose/Line HVAC &gt; Service and Repair &gt; Procedures

## AIR CONDITIONER/REMOVING AND INSTALLING CONDENSER/EVAPORATOR LINE

### Removing and Installing Condenser/Evaporator Line

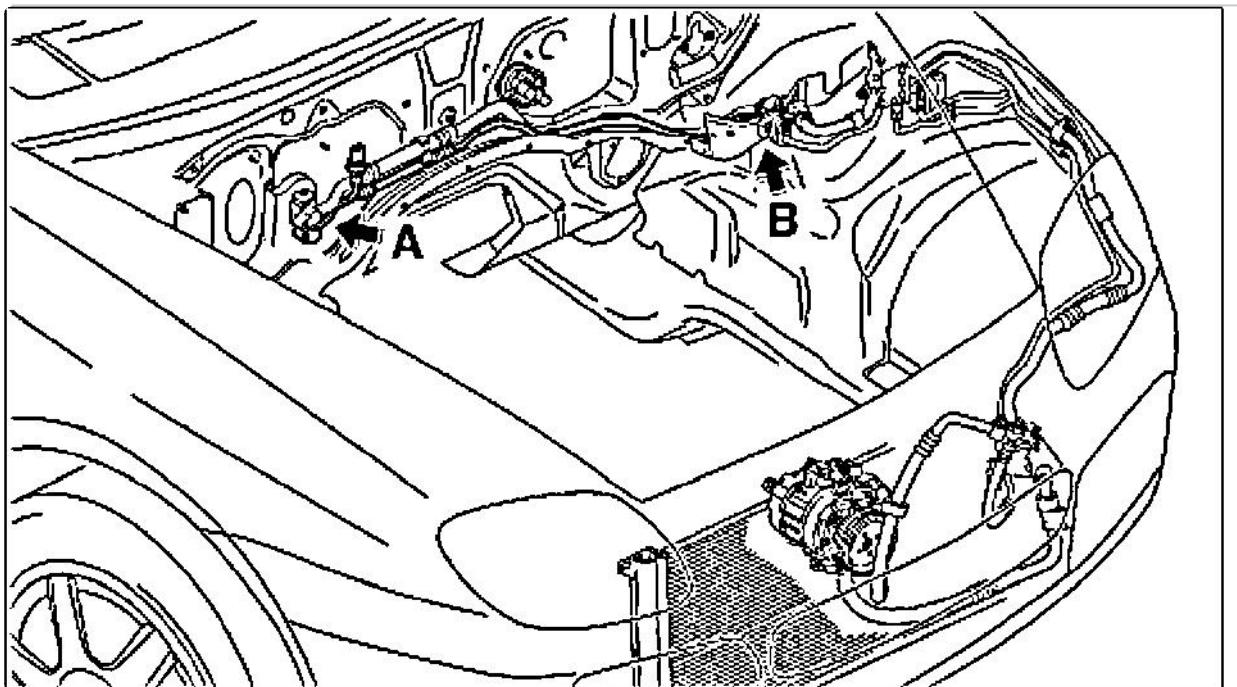


A - B Line from expansion valve to engine compartment separation point

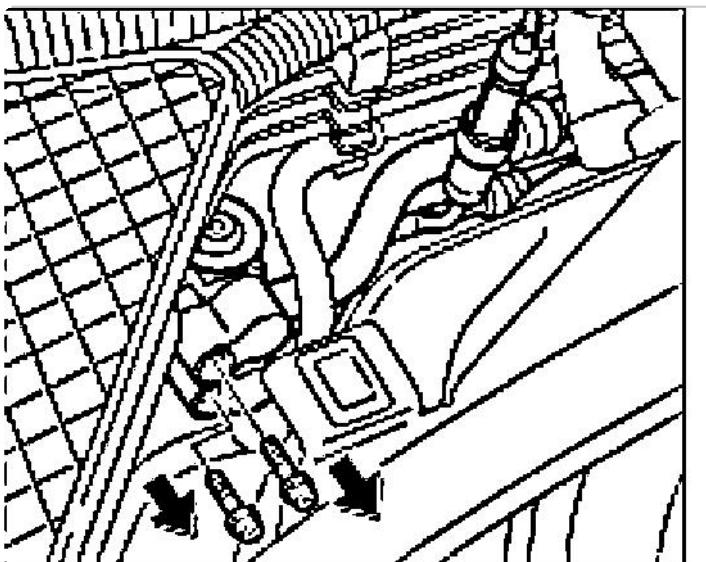
B - C Line from engine compartment separation point to condenser

**NOTE:** The description of the removal and installation is based on a Turbo. Additional pipes, which are not installed on the naturally aspirated engine, are included in the procedures.

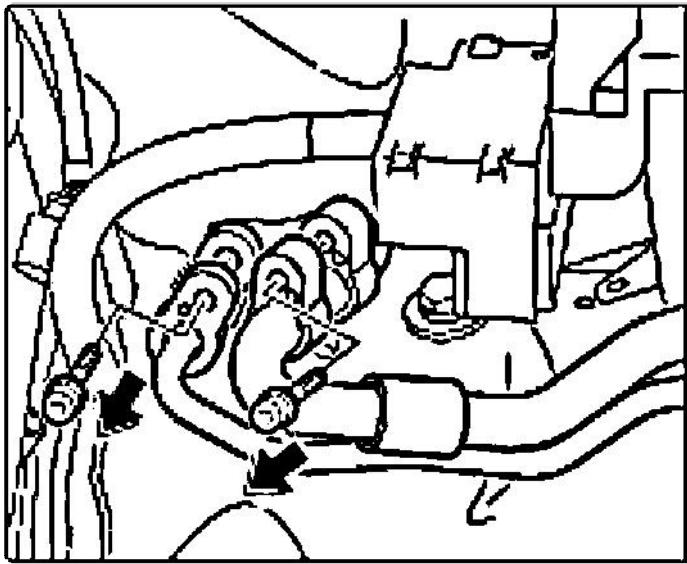
### Removing Condenser/Evaporator Line (A - B)

**NOTE:**

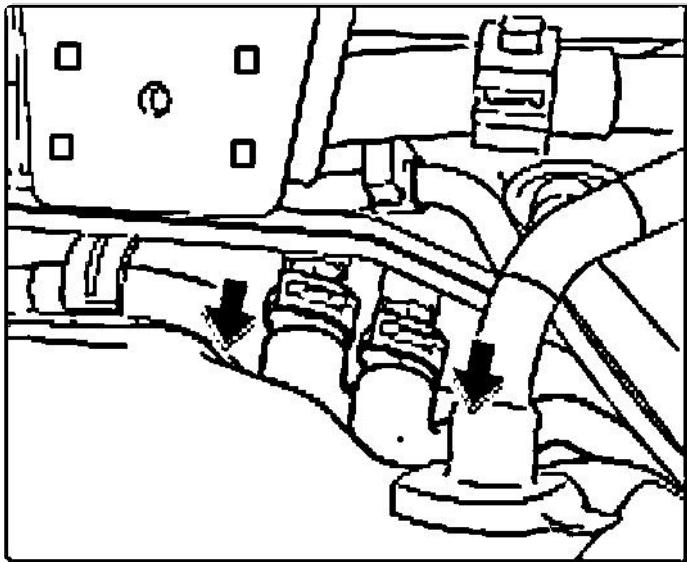
- The condenser/evaporator line can only be removed in conjunction with the compressor/evaporator line.
- Remove front left covers (engine compartment cover).
- Observe the safety regulations when working with refrigerants. Refer to, Safety regulations for working on air-conditioned vehicles and dealing with refrigerant R134a.
- Remove refrigerant by suction.
- Remove brake booster and the scope required for it.
- Remove wiper motor.
- Remove cowl panel cover.



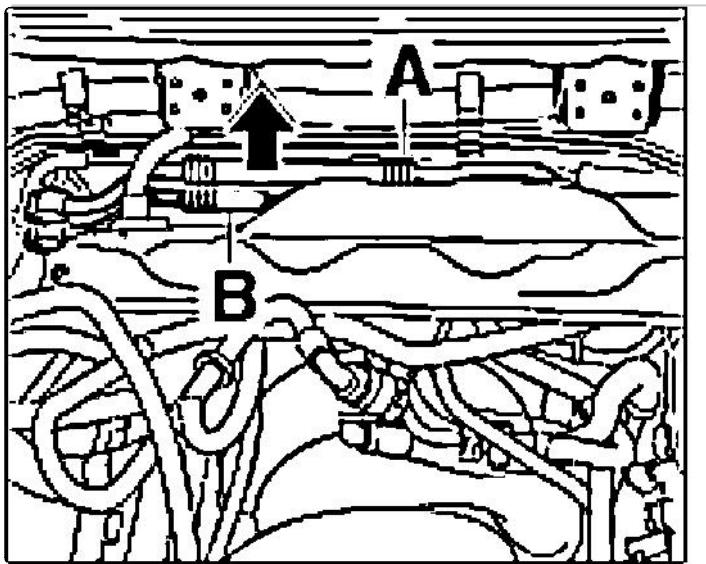
1. Unscrew both refrigerant line fastening screws on the expansion valve.
2. Pull the refrigerant lines out of the expansion valve.



3. Unscrew the fastening screws for both refrigerant lines and pull out the refrigerant line.

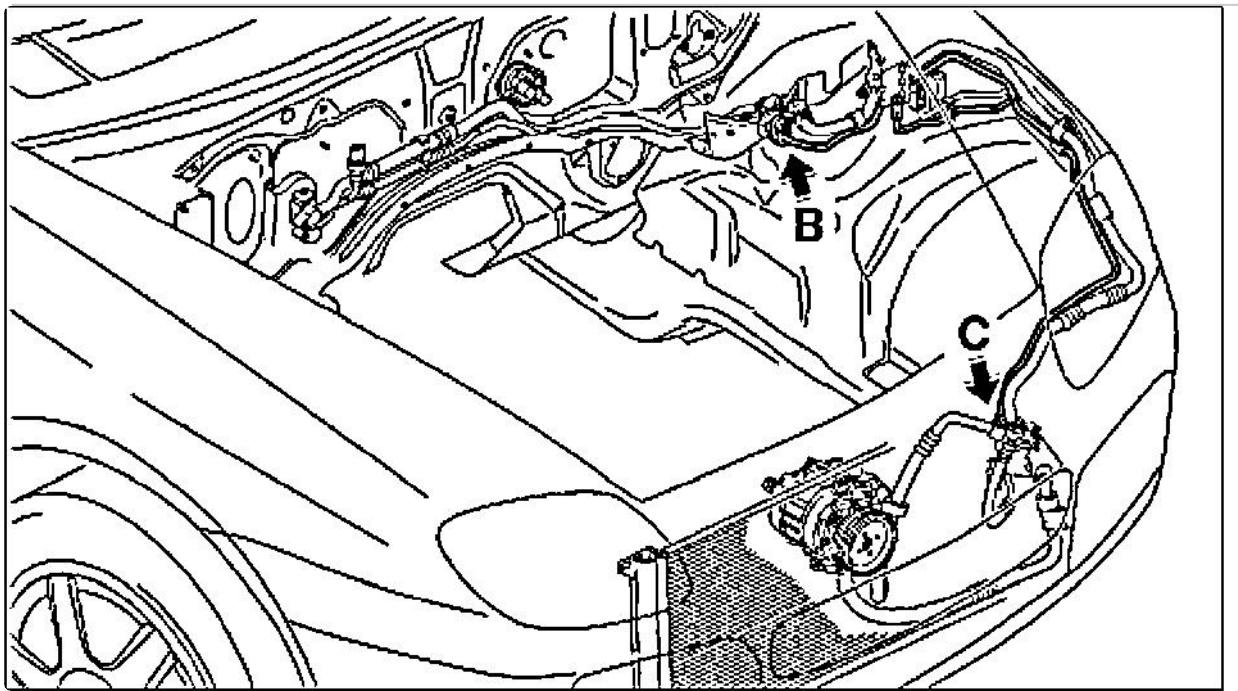


4. Press together the clips on the heater pipe and push them down. Refer to, Tools.
5. Pull hoses off the lines.



6. Remove refrigerant lines -A, B- in an upward direction.

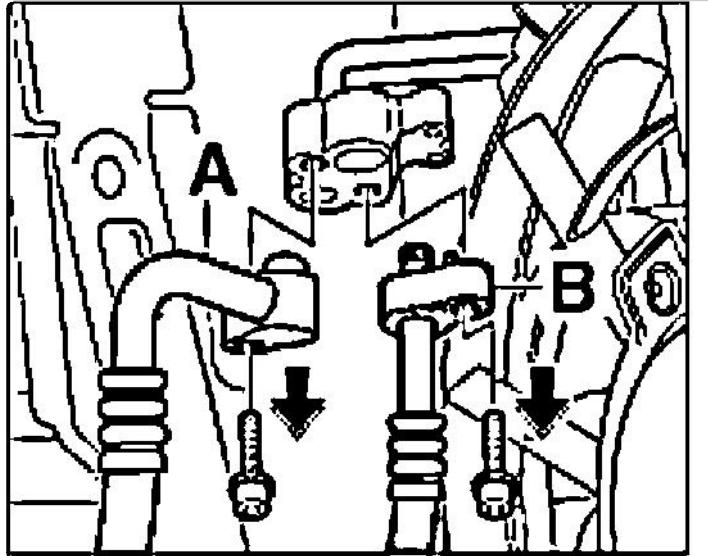
#### Removing Condenser/Evaporator Line (B - C)



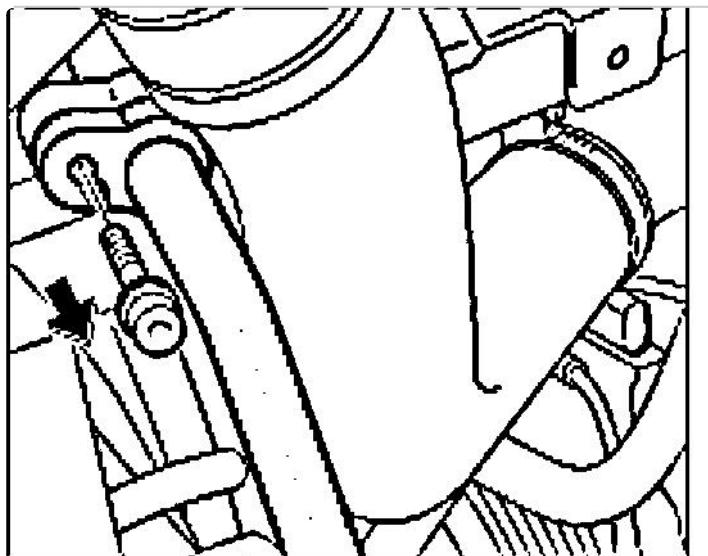
- Remove front left covers (engine compartment cover).
- Observe the safety regulations when working with refrigerants. Refer to, Safety regulations for working on air-conditioned vehicles and dealing with refrigerant R134a.
- Remove refrigerant by suction.
- Remove engine guard.
- Remove front left wheel.

- Remove right wheel housing liner.
- Remove external power supply.
- Remove left air cleaner housing.

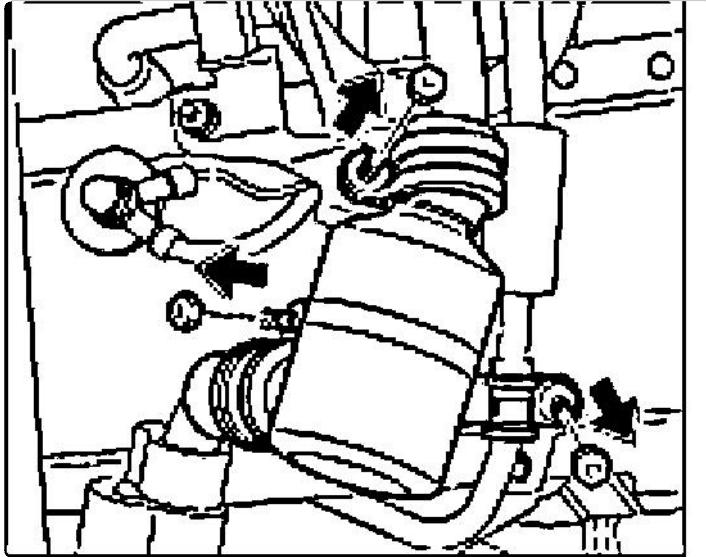
**NOTE:** The condenser/evaporator line can only be removed in conjunction with the compressor/evaporator line.



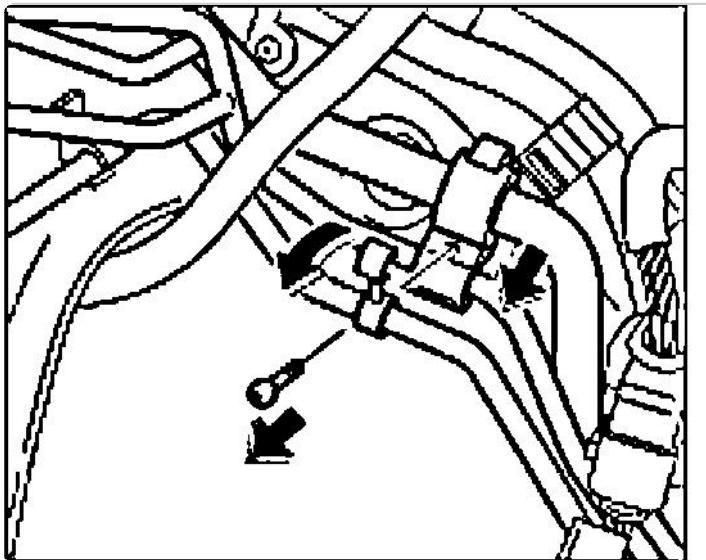
1. Unscrew the fastening screw for refrigerant line -B- on the condenser and pull out the refrigerant line.



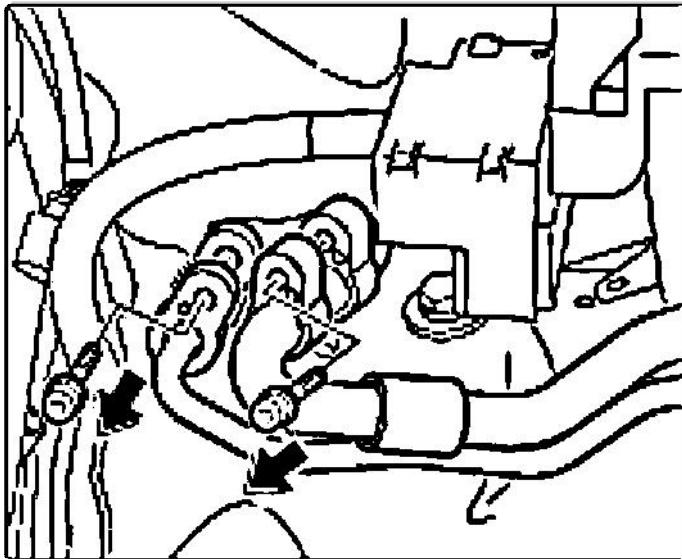
2. Unscrew refrigerant line fastening screw for the compressor on the pressure damper.
3. Pull refrigerant line out of the connection.



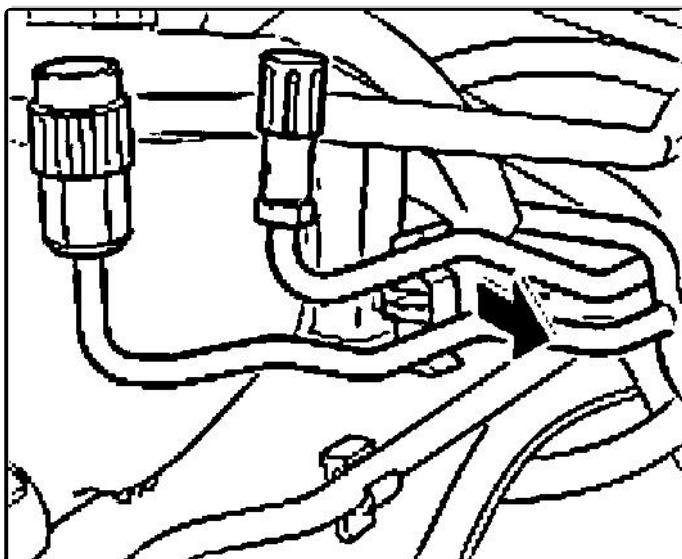
4. Unscrew both fastening nuts on the pressure damper of the compressor/evaporator line and the fastening nuts for the condenser/evaporator line.



5. Unscrew fastening screw for the holder of the refrigerant lines and open the holder.
6. Disengage the holder on the refrigerant line.



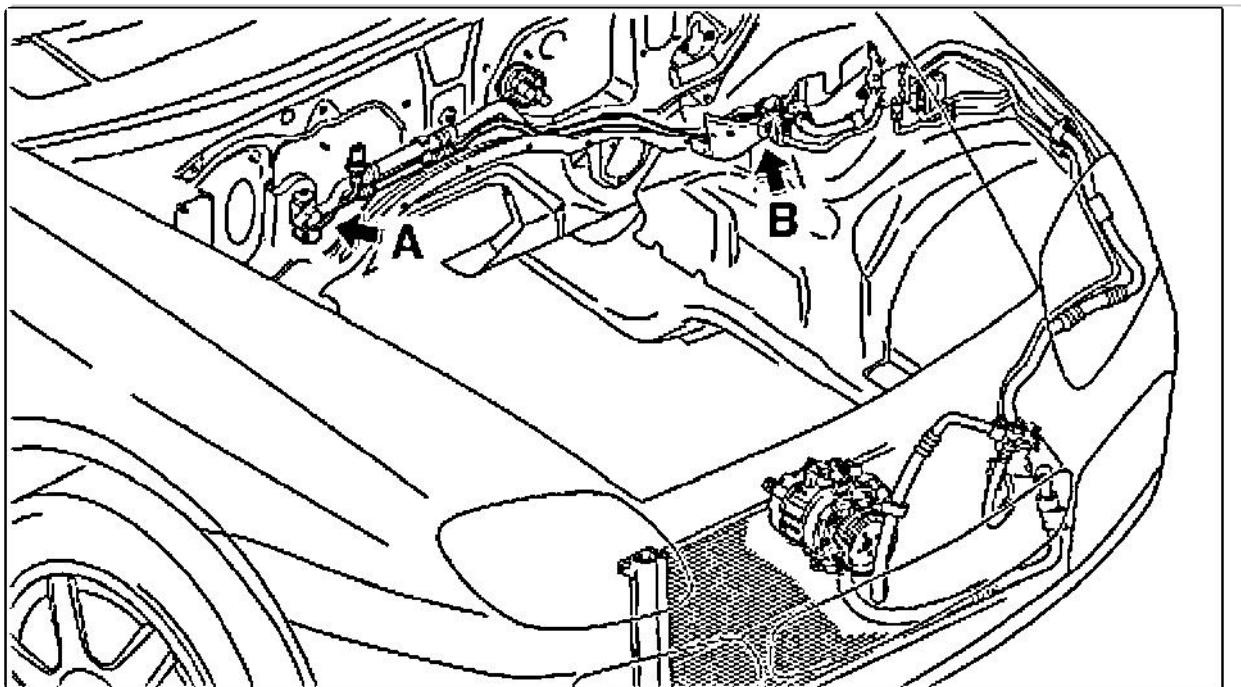
7. Unscrew the fastening screws for both refrigerant lines and pull out the refrigerant line.



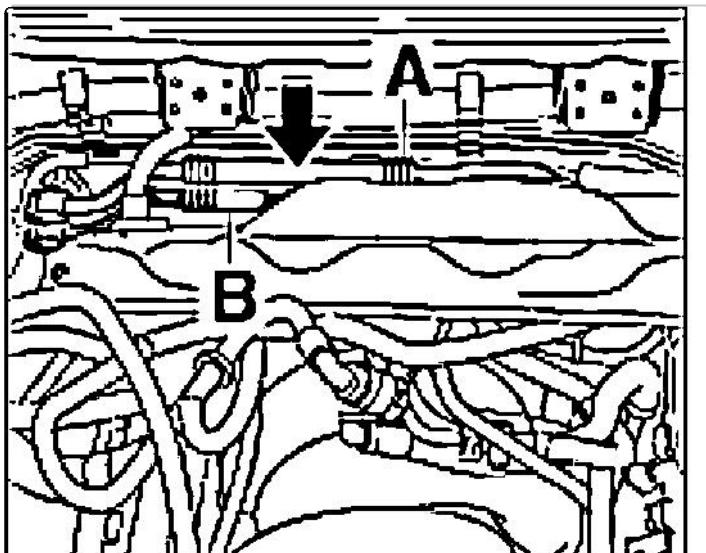
8. Carefully unclip the connecting leads for the refrigerant lines from the holder.

9. Raise the vehicle. Lift both refrigerant lines together, turn them and pull them out in a downward direction through the wheel housing opening on the left.

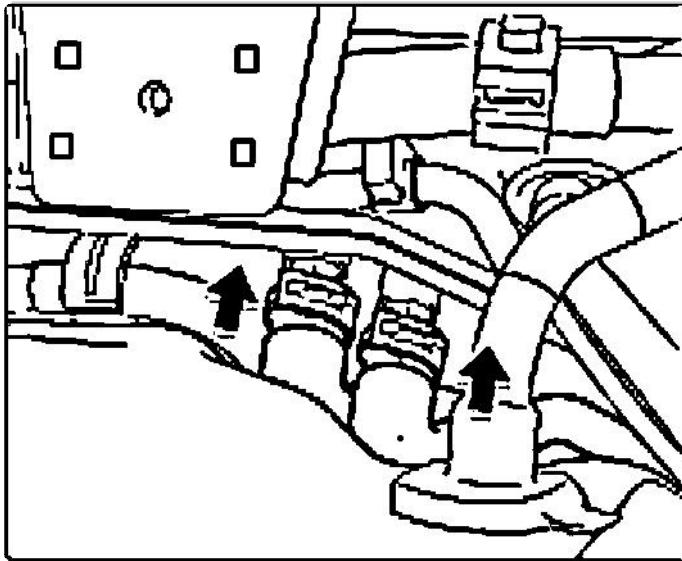
#### Installing Condenser/Evaporator Line (A - B)

**NOTE:**

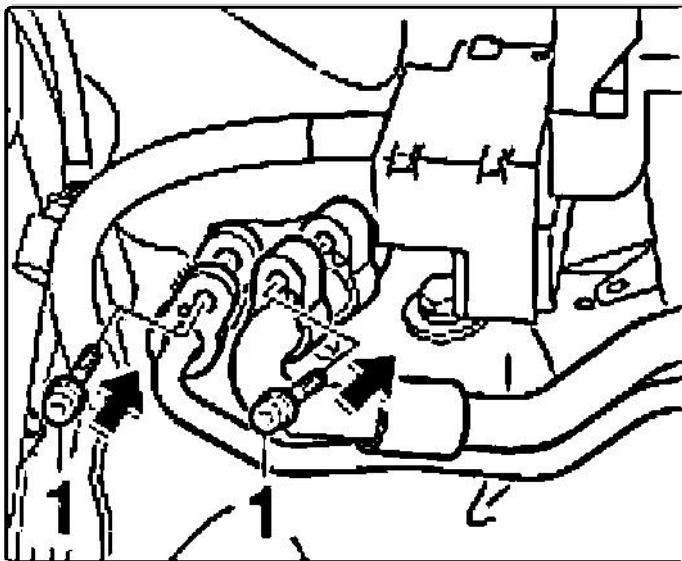
- Check the sealing rings of the refrigerant lines and replace them if necessary.
- Coat sealing rings with refrigerant oil before fitting.
- The condenser/evaporator line can only be installed in conjunction with the compressor/evaporator line.



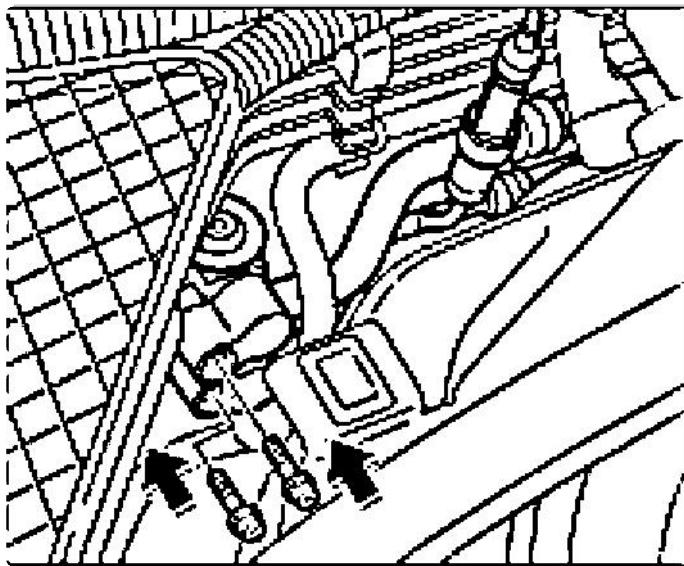
1. Insert and position refrigerant lines -A, B- in the radiator tank.



2. Connect the hoses for the heater to the lines and secure them with the clips. Refer to, Tools.



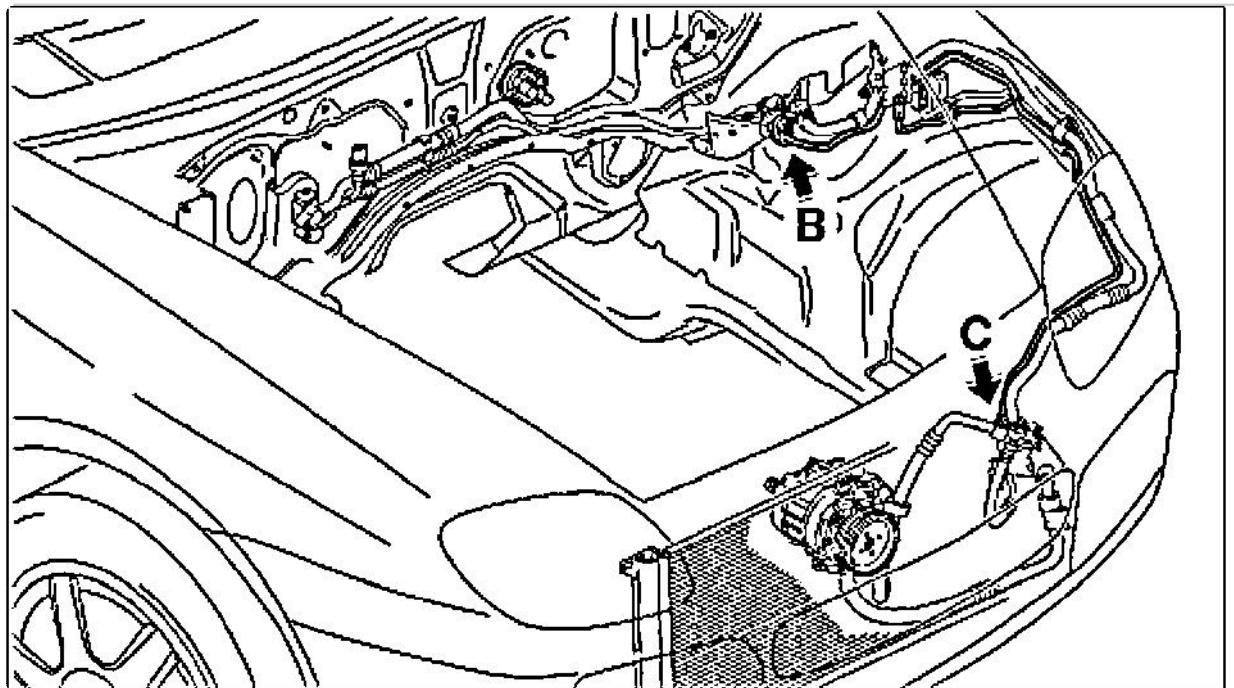
3. Connect the refrigerant lines in the engine compartment to the connections -do not tilt them- and fasten with the fastening screws -1-. Refer to tightening torques.



4. Position the refrigerant lines on the expansion valve and press into place -do not tilt them- and fasten with both fastening screws. Refer to tightening torques.

- Observe the safety regulations when working with refrigerants. Refer to, Safety regulations for working on air-conditioned vehicles and dealing with refrigerant R134a.
- Remove refrigerant by suction.
- Install brake booster and the scope required for it.
- Install wiper motor.
- Install cowl panel cover.
- Install front left covers (engine compartment cover).

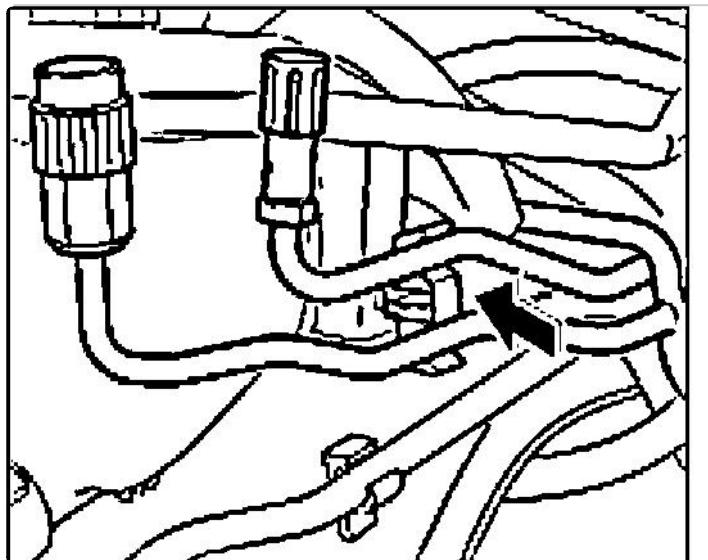
#### Installing Condenser/Evaporator Line (B - C)



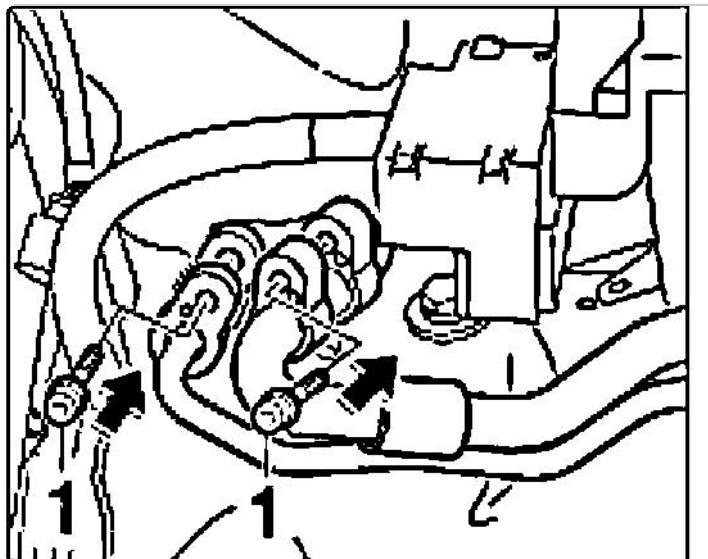
**NOTE:**

- Check the sealing rings of the refrigerant lines and replace them if necessary.
- Coat sealing rings with refrigerant oil before fitting.
- The condenser/evaporator line can only be installed in conjunction with the compressor/evaporator line.

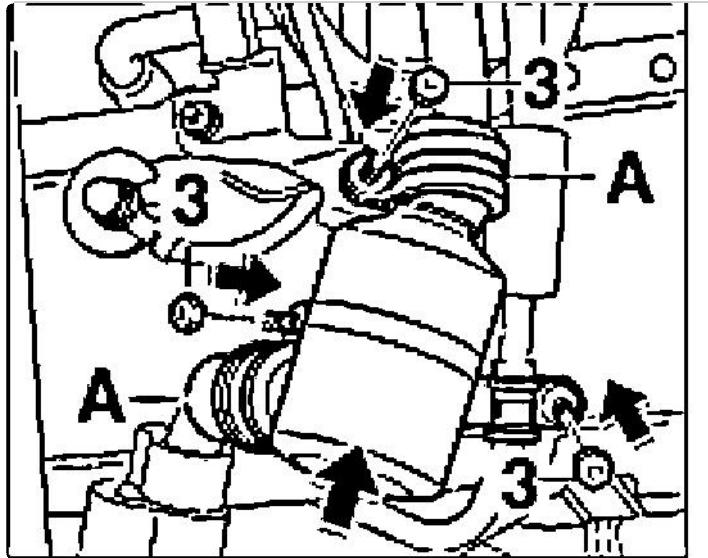
1. Raise the vehicle. Lift both refrigerant lines together, turn them and push them in from below through the wheel housing opening on the left.



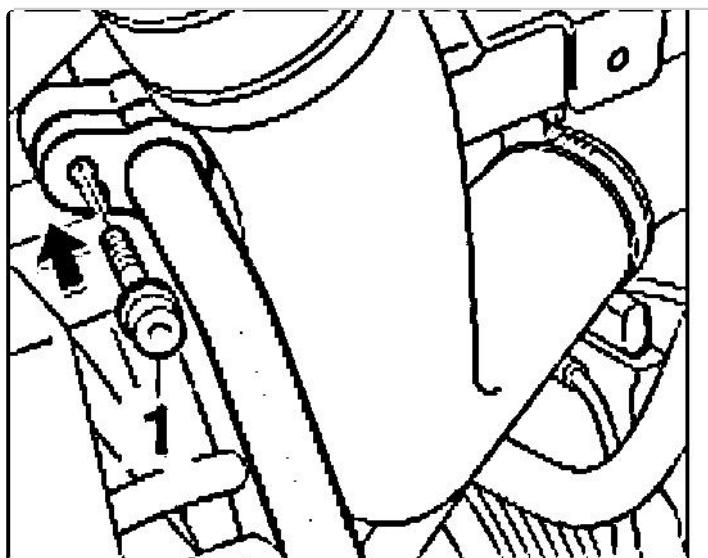
2. Carefully clip in the connecting leads for the refrigerant lines into the holder.



3. Connect the refrigerant lines in the engine compartment to the connections -do not tilt them- and fasten with the fastening screws -1-. Refer to tightening torques.
4. Position refrigerant lines on the wheel arch without tension.

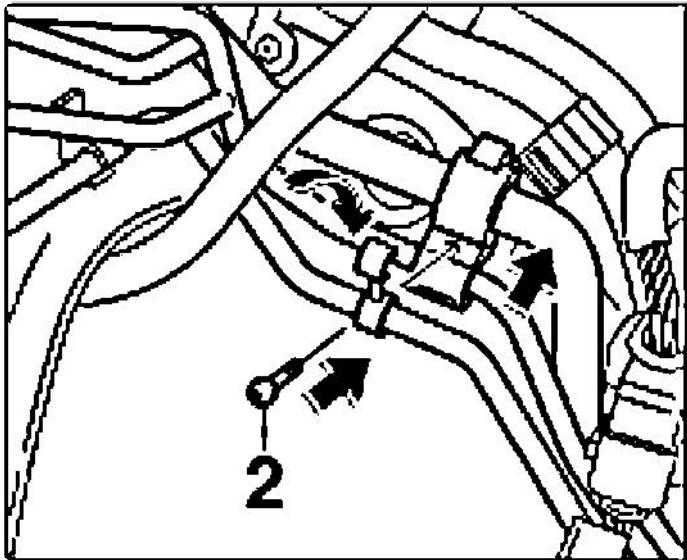


5. Position pressure damper for the compressor/evaporator line and the condenser/evaporator line.
6. Position the three fastening clamps on the threaded bolts and fasten with the three fastening nuts -3-. Refer to tightening torques.



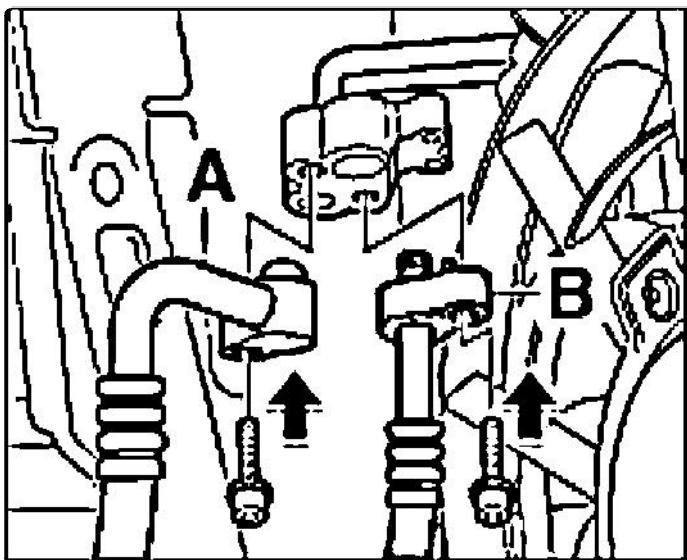
7. Insert the refrigerant line from the compressor on the pressure damper -do not tilt it- and fasten with fastening screw

-1-. Refer to tightening torques.



8. Engage refrigerant lines in the holder on the wheel arch, close them and fasten with fastening screw -2-. Refer to tightening torques.

9. Engage the holder on the refrigerant line.



10. Push refrigerant line -B- into the condenser and screw it in on the condenser with the fastening screw. Refer to tightening torques.

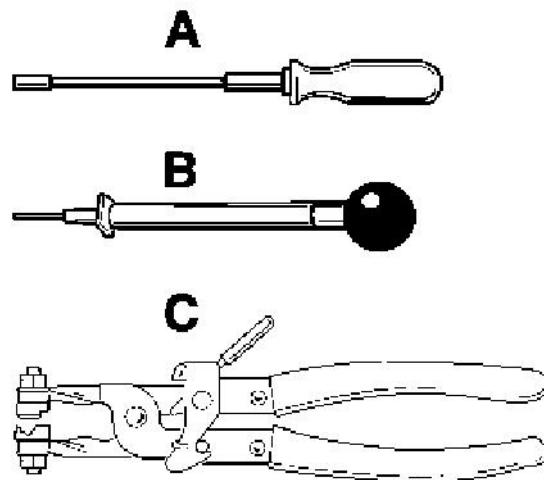
- Install external power supply.
- Install left air cleaner housing.

- Install right wheel housing liner.
- Fit engine guard.
- Fit front left wheel.
- Observe the safety regulations when working with refrigerants. Refer to, Safety regulations for working on air-conditioned vehicles and dealing with refrigerant R134a.
- Top up with refrigerant.
- Install front left covers (engine compartment cover).

## Tightening Torques

Location	Illustration	Thread	Tightening torque [Nm] (ftlb.)
Fastening screw for refrigerant lines	-1-	M8	12 (9)
Fastening screw for holder for air-conditioning lines	-2-		1.5 (1)
Pressure damper fastening nut to body	-3-	M6	8 (6)

## Tools



Item	Designation	Special tool	Remarks
A	Flexible screwdriver, a/f 7	Commercially available	For undoing or tightening screw-type hose clamps
B	Antifreeze testing device	Commercially available	For checking the antifreeze content in the coolant circuit; the design can deviate from that shown in the illustration
C	Spring band clamp pliers	Commercially available	For opening and closing spring band clamps