

INDEX

**AUXILIARY ORGANS**

**CLIMATE CONTROL SYSTEM**

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FOR THE INFORMATION NOT GIVEN HEREIN,  
REFER TO THE CORRESPONDING GROUP OF  
"Spider - Gtv".  
THE REFERENCE ENGINE IS THE "6 CYLINDER "  
(3.0 V6 ENGINE)

## OPERATING PROCEDURES



### GENERAL PRECAUTIONS FOR OPERATIONS ON THE CLIMATE CONTROL SYSTEM

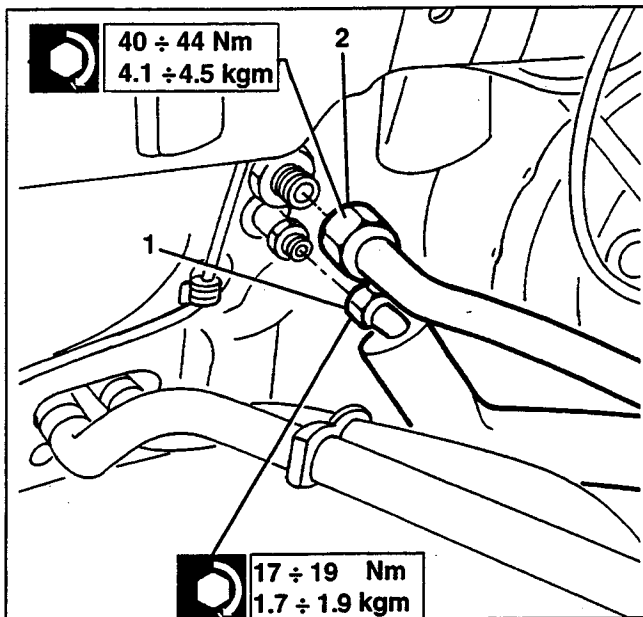
- Before doing any maintenance and repair work you are advised to disconnect the battery negative terminal.
- Before dis-assembling the system it is necessary to drain the system and recover the coolant fluid.
- During operations, when the system components are disconnected, suitably plug the disconnected fittings to prevent the entrance of moisture and impurities in the system.
- When refitting the pipe fittings replace the O-rings on the fittings themselves.
- Lubricate pipe fitting threads with the specified antifreeze oil and tighten the fittings to the specified torque.

## DUCTING/DISTRIBUTOR UNIT

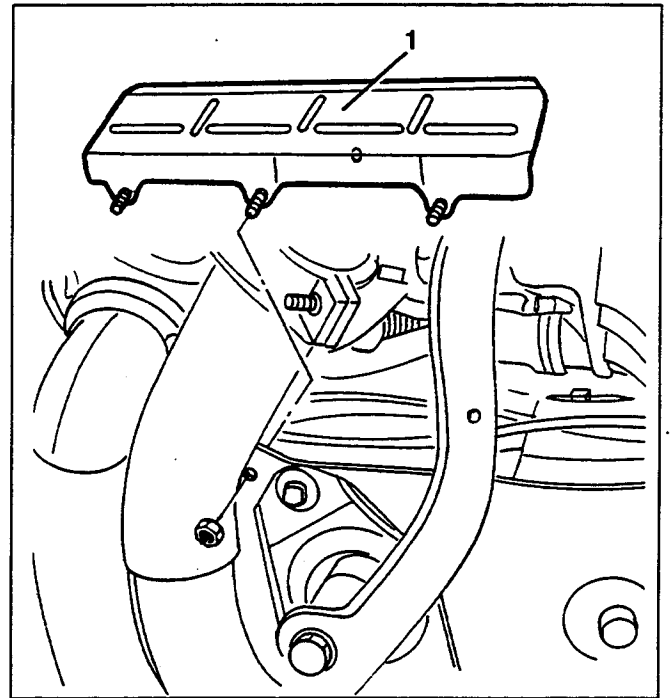
### REMOVAL

- Disconnect the battery negative terminal.
- Remove the dashboard (see GROUP 70).
- Drain the coolant fluid.

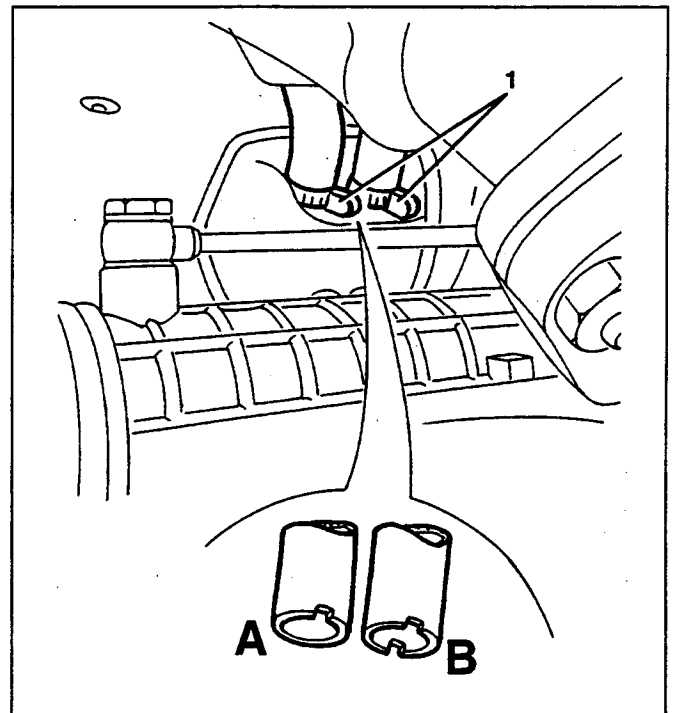
1. Using wrenches 1.822.111.000 and 1.822.113.000 disconnect the pipe from the evaporator to the condenser.
2. Using wrenches 1.822.112.000 and 1.822.115.000 disconnect the pipe from the evaporator to the drier filter.



1. Raise the car and remove the power steering heat shield.



1. Open the clamps and disconnect the two engine coolant delivery and return pipes in the heater: N.B. recover the fluid.



**NOTE:** The two pipes are distinguished by one notch (A) and two notches (B) so that it is impossible to invert them.



Use screw clamps when refitting.

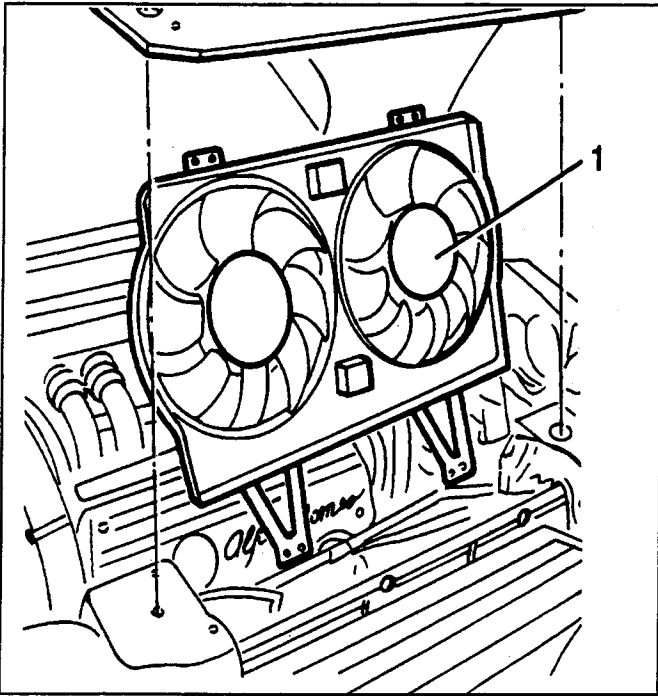
PROCEDE AS ILLUSTRATED IN "Spider-Gtv", Group 50.

## ON-VEHICLE OPERATIONS

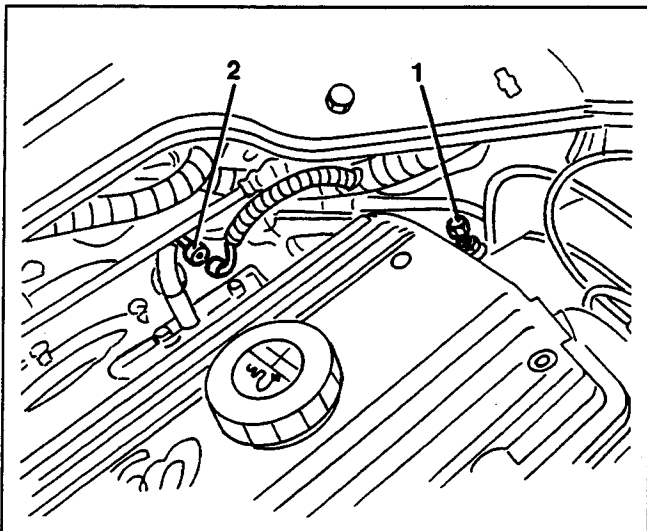
### COMPRESSOR

#### Removal

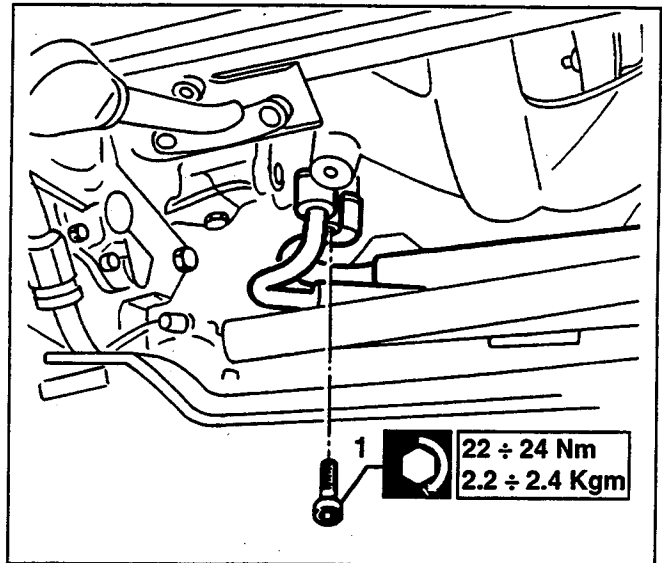
- Disconnect the battery negative terminal.
  - Drain the coolant fluid.
  - With the car on a lift, remove the right front wheel.
1. Working in the engine compartment, remove the front crossmember and duct complete with fans.



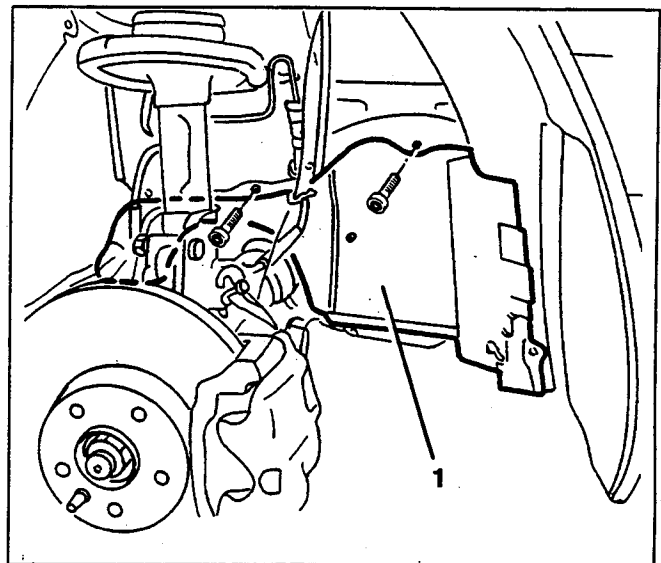
- Remove the heat shield between the engine and radiator.
1. Slacken the adjustment locknut of the power steering belt.  
2. Disconnect the compressor electrical connection.



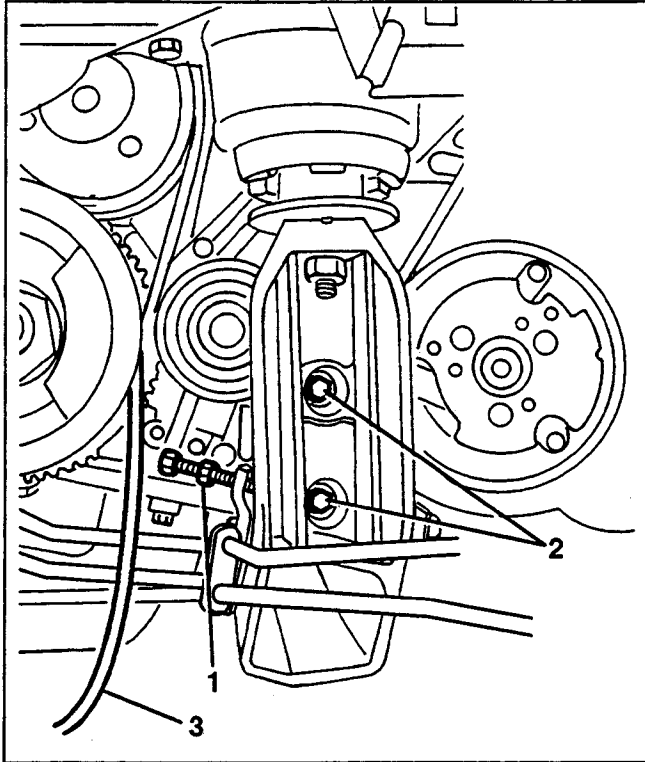
1. Disconnect the two compressor intake and delivery pipes after slackening the bracket fastening the pipes.



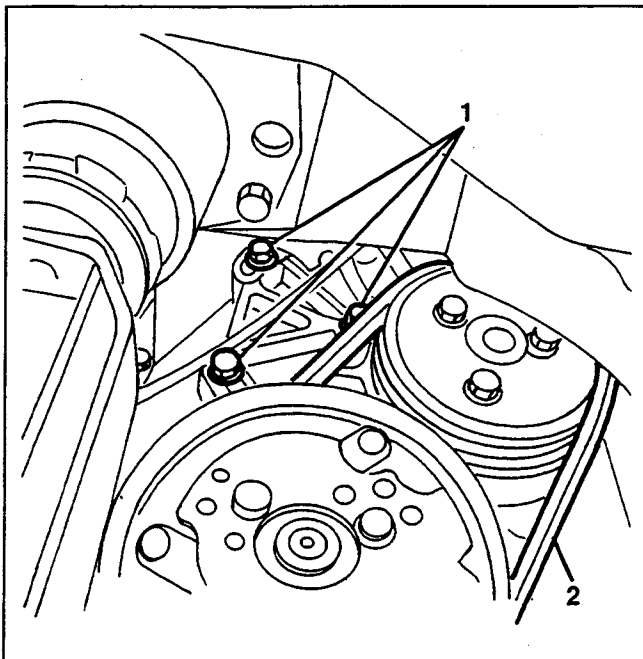
- With the car on a lift, remove the right front wheel.
1. Remove the engine bulkhead.



1. Slacken the adjustment locknut of the belt tensioner guide pulley.
2. Through the engine mount holes, slacken the two screws fastening the belt tensioner guide pulley.
3. Remove the compressor drive belt.

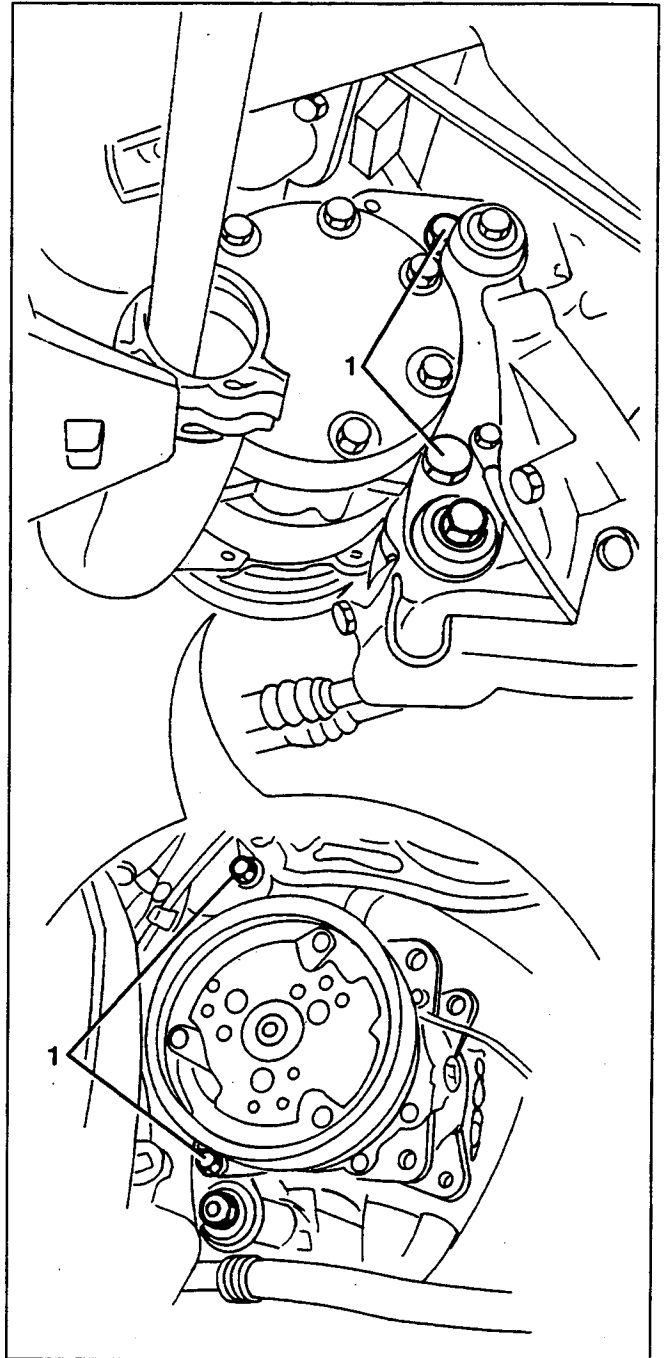


1. Slacken the screws fastening the power steering pump bracket
2. Remove the power steering pump belt.



– Raise the power steering pump up as far as possible and lock it in this position to facilitate removal of the compressor.

1. Slacken the four screws (two per side) and remove the compressor



### Refitting



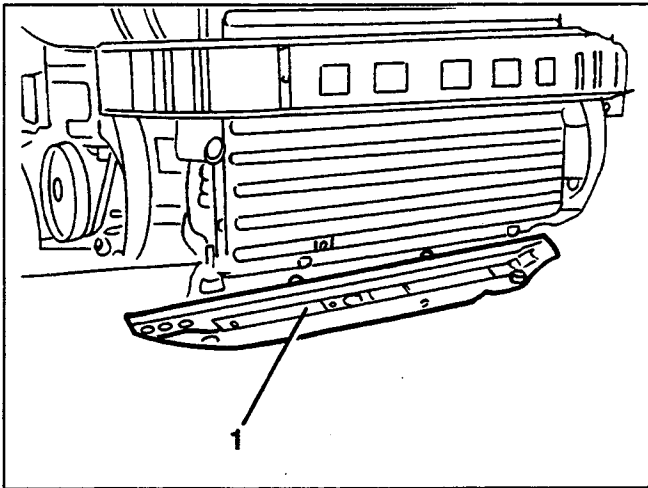
- Tension the power steering pump belt and compressor drive belt (see GROUP 00).
- Lubricate the fittings with the specified oil.
- Tighten to the specified torque where applicable

## CONDENSER

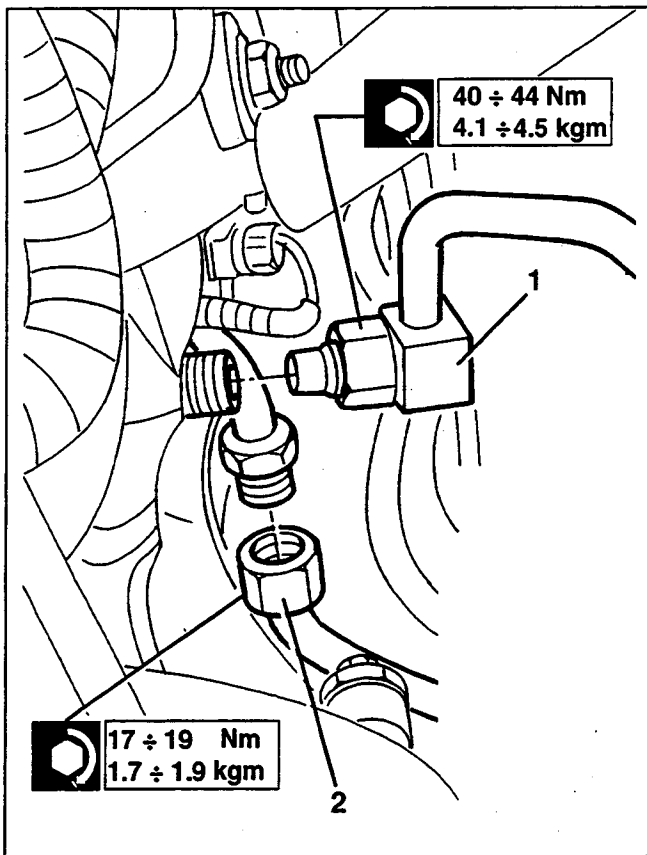
### Removal

- Drain the coolant fluid;
- Set the car on a lift.
- Remove the front bumper (see GROUP 70).

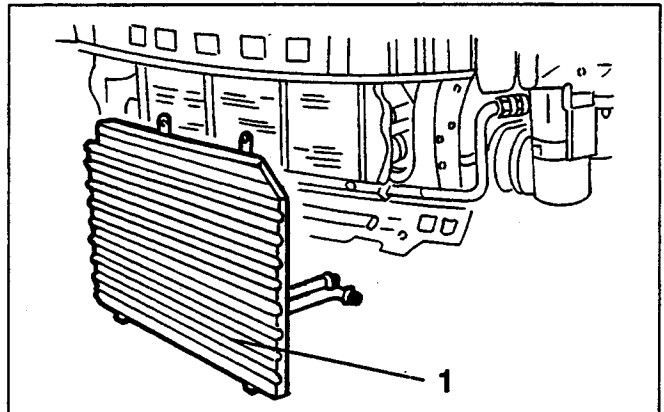
1. Remove the condenser support bracket.



1. Disconnect the coolant fluid pipe leading to the compressor
2. Disconnect the pipe leading to the evaporator.



1. Slacken the fastening screws and remove the condenser withdrawing it from below.



### Refitting

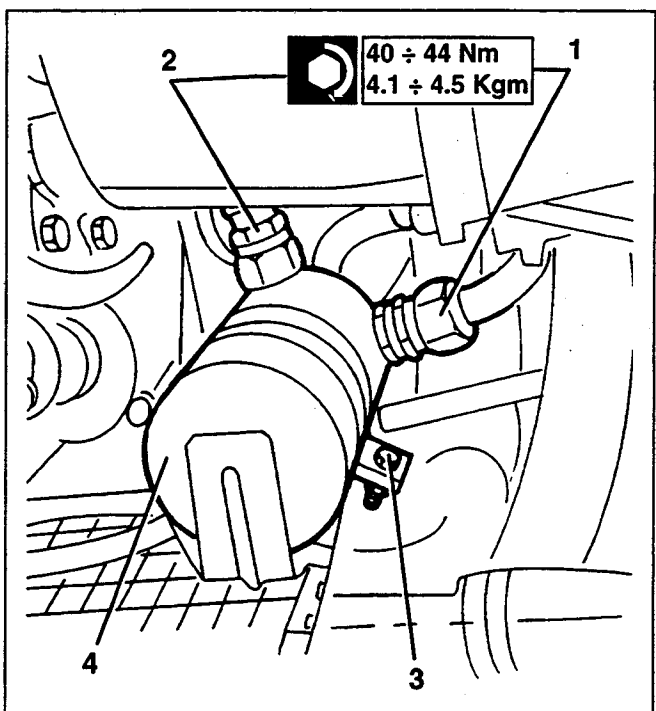


- Take care not to damage the condenser thermal exchange fins.
- Lubricate the fittings with the specified oil and tighten them to the specified torque.

## DRIER FILTER

### Removal

- Drain the coolant fluid.
  - Set the car on a lift.
1. Disconnect the pipe leading from the compressor.
  2. Disconnect the pipe leading from the evaporator.
  3. Slacken the fastening clamp.
  4. Remove the filter.



### Refitting

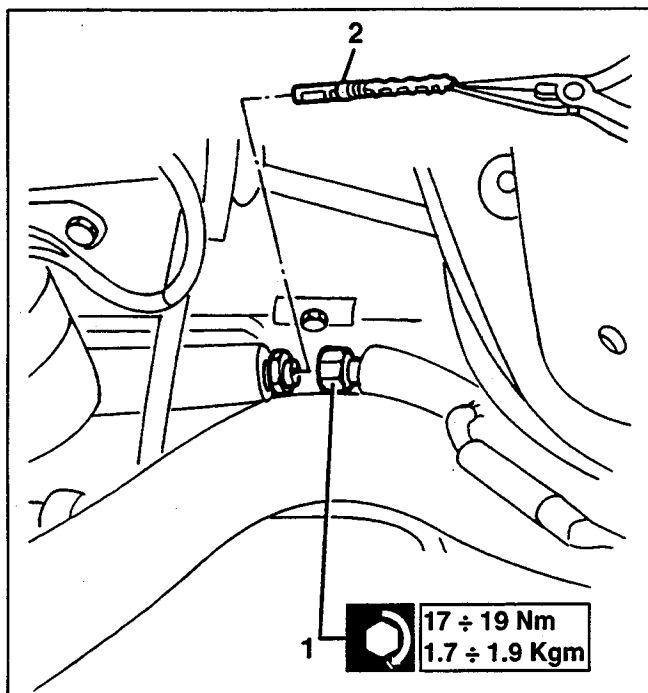


- Lubricate the fittings with the specified oil.
- Tighten the fittings to the specified torque.

### EXPANSION VALVE

#### Removal

- Drain the coolant fluid.
- Set the car on a lift.
- Remove the front bumper (see GROUP 70).
- Remove the air-flow meter and pipes (see GROUP 10)
- 1. Slacken the connection nut and gain access to the valve.
- 2. Withdraw the valve with a pincer taking care not to damage it.



#### Refitting

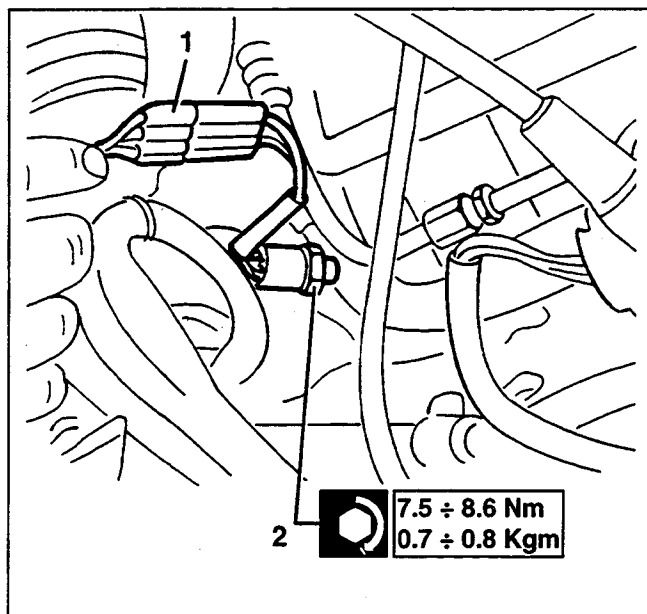


- Lubricate the fittings with the specified oil.
- Tighten to the specified torque.

### THREE-LEVEL PRESSURE SWITCH

#### Removal and Refitting

- Disconnect the battery negative terminal.
- Remove the air-flow meter with pipes (see GROUP 10)
- 1. Disconnect the pressure switch connector.
- 2. Using a suitable wrench remove the pressure switch.



**NOTE:** Due to the presence of a non-return valve, the pressure switch can be removed without having to drain the coolant fluid, like any other component of the conditioning system.

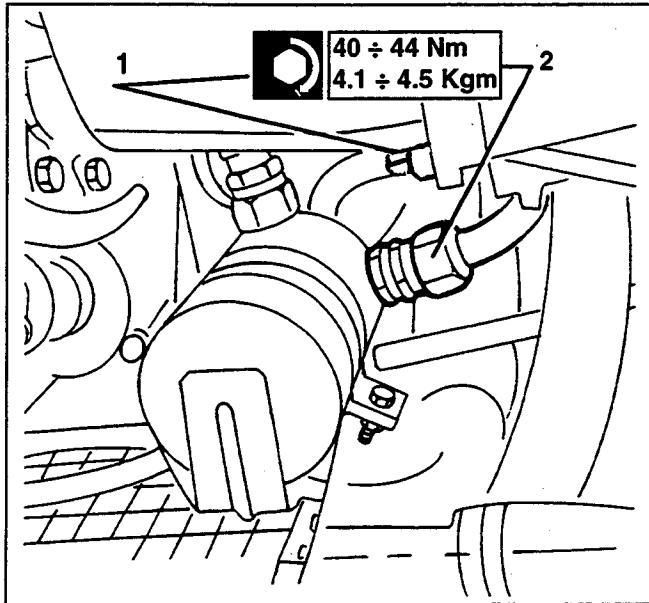
## COMPRESSOR PIPES

### Removal

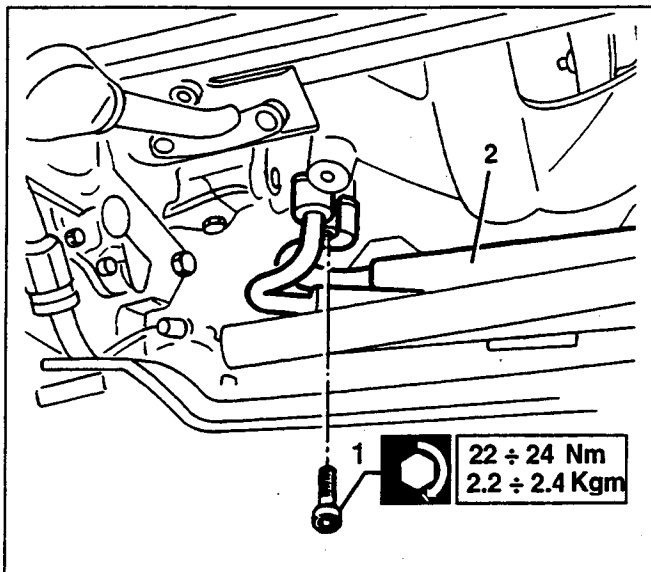
- Drain the coolant fluid.
- Set the car on a lift.
- Remove the front crossmember and cut complete with fans (see GROUP 10).

Remove the air-flow meter with pipes (see GROUP 10).

1. Disconnect the low pressure pipe from the drier filter.
2. Disconnect the high pressure pipe from the condenser.



1. Slacken the clamp fastening the pipes to the compressor loosening the centre fastening screw.
2. Remove the two pipes.

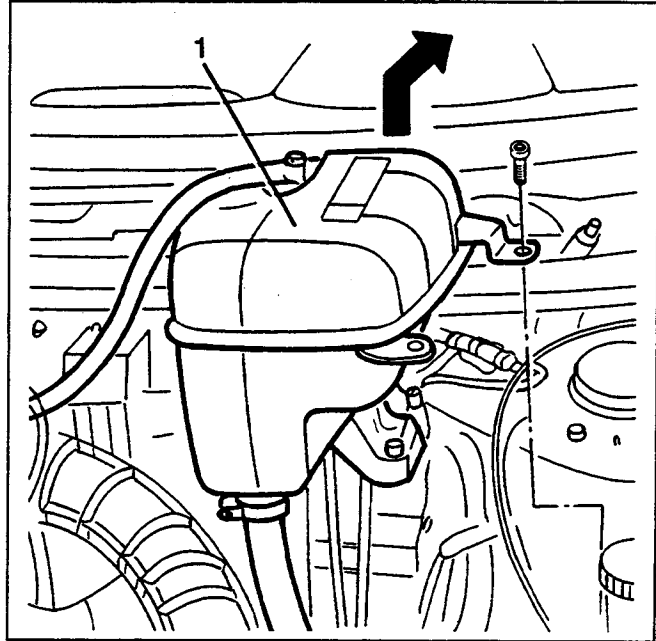


## EVAPORATOR PIPES

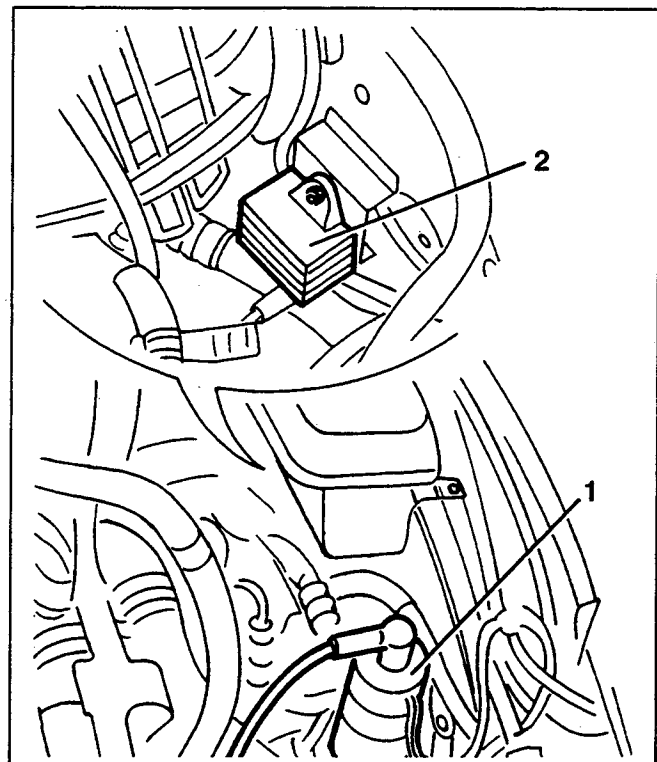
### Removal

- Disconnect the battery negative terminal.
- Remove the air-flow meter with pipes (see GROUP 10).

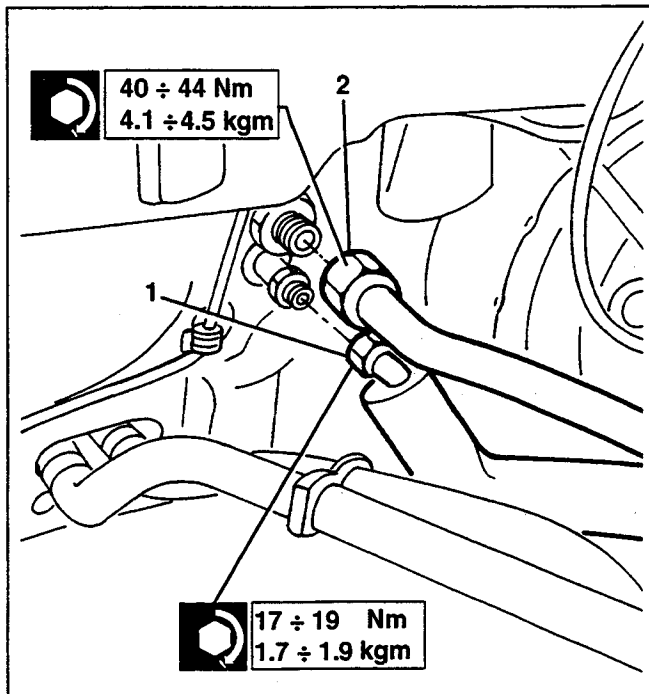
1. Disconnect the engine cooling circuit reservoir from the frame and move it. **N.B.** this operation does not required draining the engine coolant fluid (for further details see Group 10).



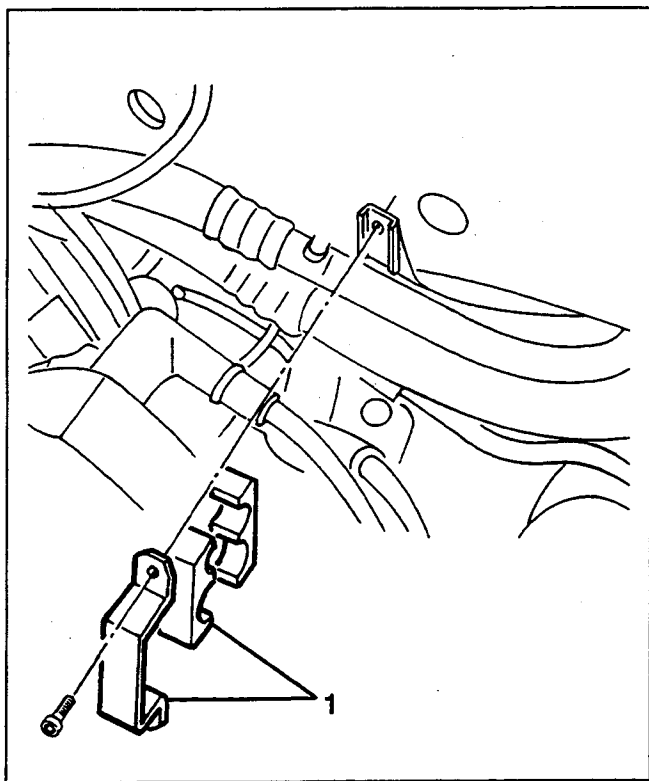
1. Remove the ignition coil.
2. Remove the branch terminal box.



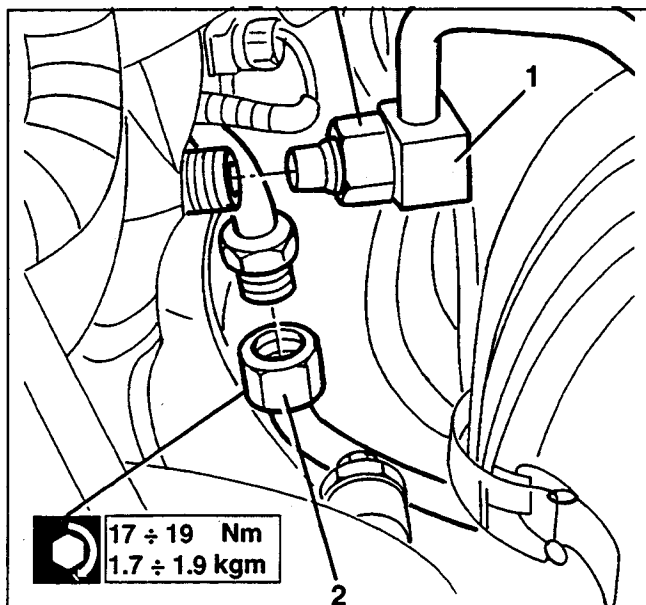
1. Using wrenches 1.822.111.000 and 1.822.113.000 disconnect the pipe from the evaporator to the condenser.
2. Using wrenches 1.822.112.000 and 1.822.115.000 disconnect the pipe from the evaporator to the drier filter.



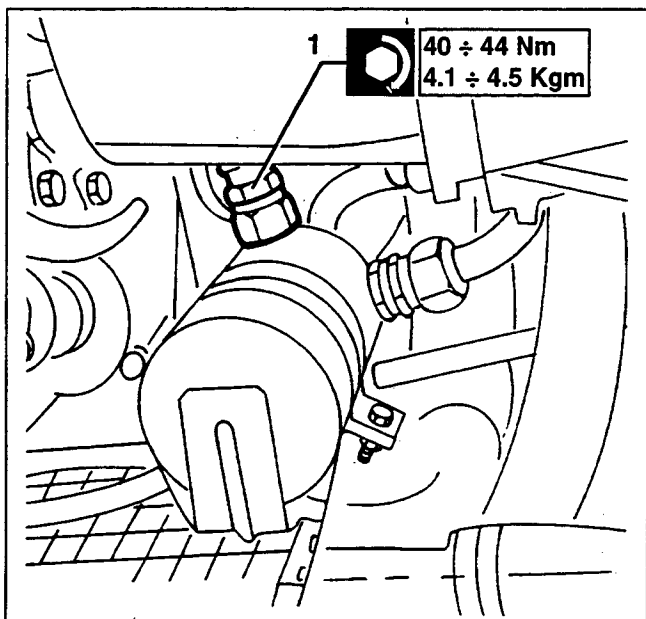
1. Remove the clamp fastening the pipes to the side panel.



1. Disconnect the three-level pressure switch connection. If necessary remove the pressure switch.
2. Disconnect the pipe from the condenser.



1. Disconnect the pipe from the drier filter.
  - Remove the two pipes withdrawing them from below.



### Refitting



- Lubricate the fittings with the specified oil and tighten them to the specified torque.





VARIANTS FOR



INDEX

**AUXILIARY ORGANS**

**50**

**OPERATING PROCEDURES**

- OPERATING PROCEDURES..... 1
- Compressor..... 1
- Condenser..... 3

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## OPERATING PROCEDURES

### GENERAL WARNINGS FOR OPERATIONS ON THE CLIMATE CONTROL UNIT

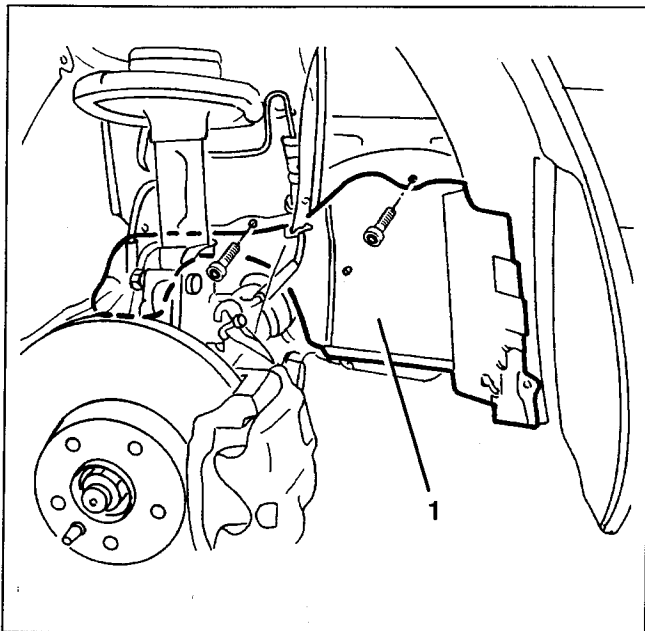


- Before any maintenance and repair work it is advisable to disconnect the battery negative terminal.
- Before disassembling the system it is necessary to drain the system and recover the coolant fluid.
- During operations, when the components are disconnected from the system, suitably plug the disconnected fittings to prevent damp and impurities from getting into the system.
- When reassembling pipe fittings change the O-rings on them.
- Lubricate the pipe fitting threads with the specified antifreeze oil and tighten the fittings to the specified torque.

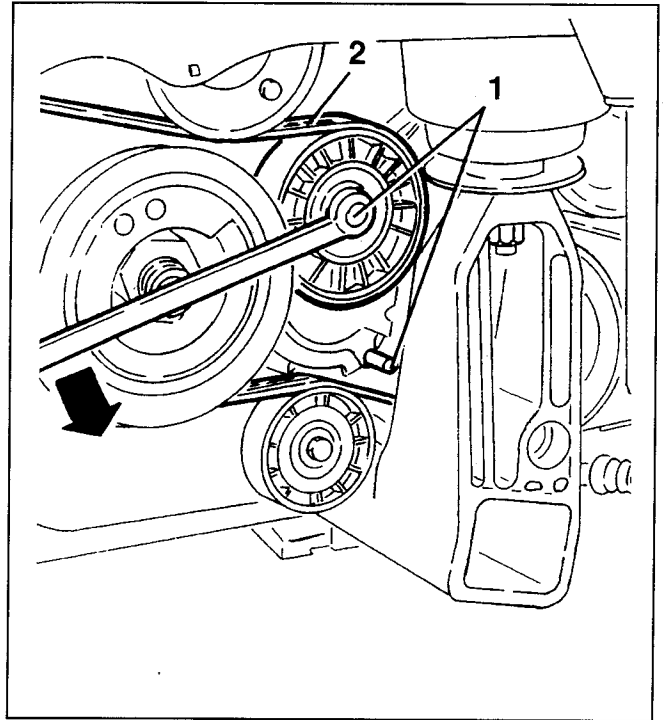
## COMPRESSOR

### Removing

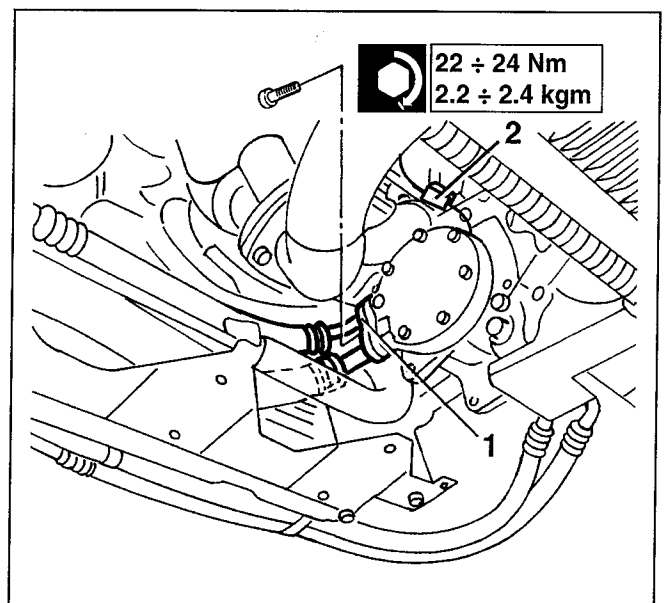
- Set the car on a lift.
  - Disconnect the battery negative terminal.
  - Drain the coolant fluid.
  - Remove the right front wheel.
1. Remove the engine bulkhead.



1. Using a wrench on the belt tensioner pulley fastening screw, overcome the force of the automatic tensioner and lock it in this position (belt slack) inserting the special peg as illustrated.
2. Prise and remove the auxiliary components drive belt.



- Raise the car.
1. Disconnect the two intake and delivery pipes from the compressor after slackening the pipe fastening brackets. Release the pipes from the fastenings to the radiator bracket. Release the pipes from the fastenings to the radiator bracket.
  2. Disconnect the electrical connection of the compressor





SERVICE

**DIREZIONE POST-VENDITA**  
**SERVIZI ASSISTENZIALI**  
Viale Alfa Romeo 20020 Arese (MI)  
Fiat Auto S.p.A.

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