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Your Vehicle: 2005 Volvo V70 L5-2.4L VIN 61 B5244S



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Service and Repair

Magnet clutch AC compressor, replacing

Special tools:

999 5596 Counterhold [See: Tools and Equipment\999 5596 Counterhold](#)999 5597 Puller [See: Tools and Equipment\999 5597 Puller](#)999 5598 Puller [See: Tools and Equipment\999 5598 Puller](#)999 5599 Socket with ring [See: Tools and Equipment\999 5599 Socket With Ring](#)999 5600 Socket with ring [See: Tools and Equipment\999 5600 Socket With Ring](#)999 5602 Tool kit - repl. shaft seal Sanden comp. [See: Tools and Equipment\999 5602 Tool Kit - Repl. Shaft Seal Sanden Comp.](#)999 7193 Counterhold [See: Tools and Equipment\999 7193 Counterhold](#)

Note! The illustrations in this service information are used for different model years and/or models. Some variation may occur. However, the essential information in the illustrations is always correct.

Preparatory work

Warning! Follow the safety instructions for work on air conditioning systems. See: [Refrigerant](#), safety regulations [See: Service Precautions\Technician Safety Information](#).

Note! First read the instructions covering slow and fast leaks.

Note! When replacing a compressor, always replace the O-rings in pipes and quick-release connectors.

Note! Always plug the pipes and connections when working on the climate control system.

Disconnect the battery negative lead. See: Battery, disconnecting [See: Starting and Charging\Battery\Service and Repair\Procedures\Battery Disconnecting](#).

Drain the [refrigerant](#) from the system. See Refrigerant, draining [See: Service and Repair\Refrigerant, Draining](#).

Removal

Removing the auxiliaries belt

MY 1999-2000:

Remove the auxiliaries belt from the AC compressor according to: Auxiliaries belt / belt tensioner, replacing [See: Engine, Cooling and Exhaust\Engine\Drive Belt Tensioner\Service and Repair](#).

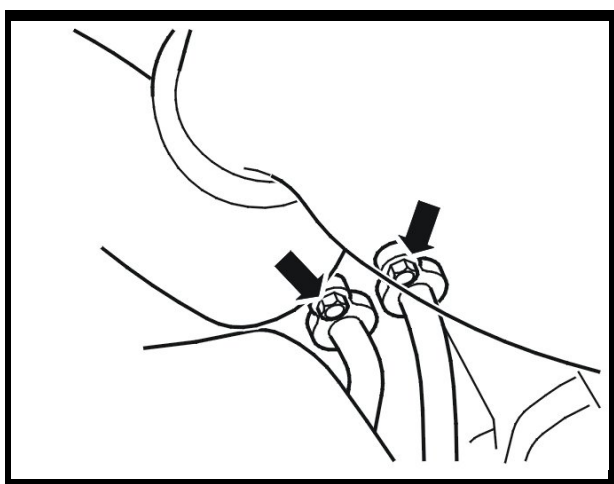
MY 2001-2004:

Remove the auxiliaries belt from the AC compressor according to: Auxiliaries belt / belt tensioner, replacing [See: Engine, Cooling and Exhaust\Engine\Drive Belt Tensioner\Service and Repair](#).

Model year 2005-

Remove the auxiliaries belt from the AC compressor according to: Auxiliaries belt / belt tensioner, replacing, B5244T5, B5254T2 [See: Engine, Cooling and Exhaust\Engine\Drive Belt Tensioner\Service and Repair](#) Auxiliaries belt / belt tensioner, replacing [See: Engine, Cooling and Exhaust\Engine\Drive Belt Tensioner\Service and Repair](#).

Removing AC compressor



[Zoom](#) [Sized for Print](#)

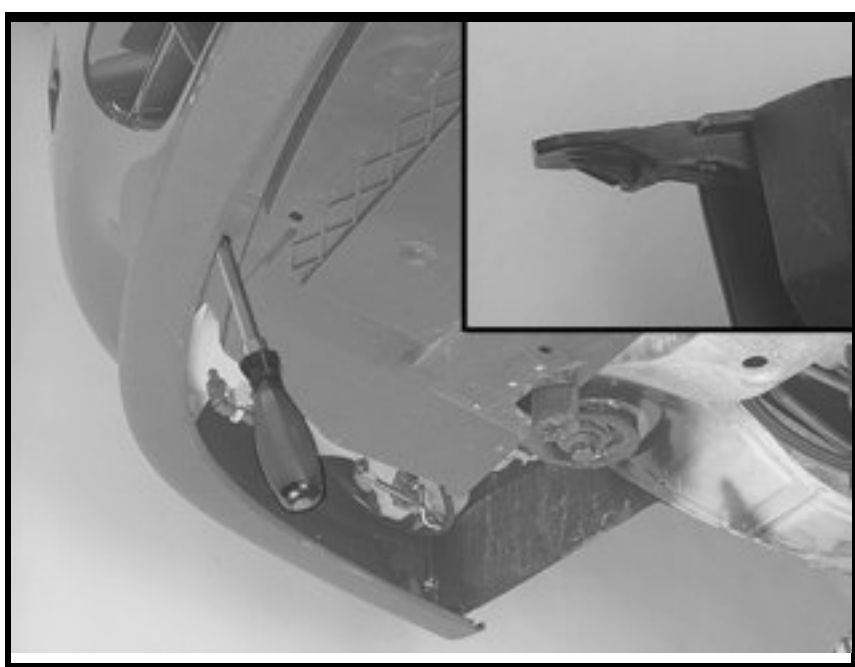
Note! The AC compressor is removed from below.

Loosen the screws, 2 pcs., for the AC compressor's low and high pressure hoses.

Removing the splash guard

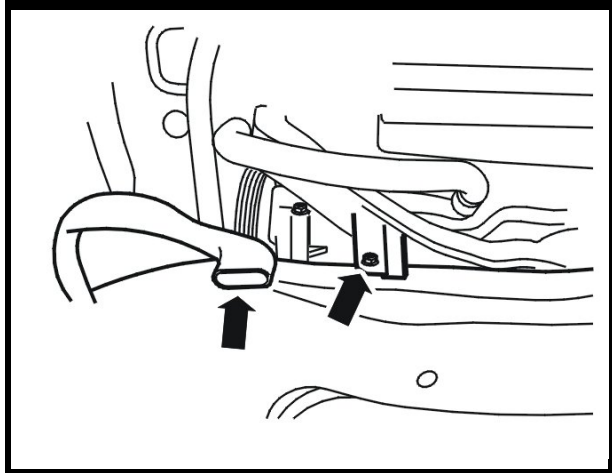
Note! Install the front lift arms so that they do not block the sub-frame's support plates.

Raise the vehicle.
Loosen the protective cover under the engine by removing the screws, 7 pcs.



[Zoom](#) [Sized for Print](#)

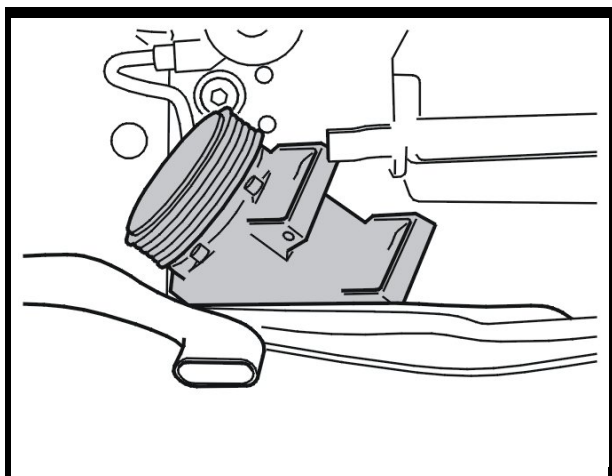
Remove the screws, 2 pcs., for the front protective cover.
Press in the catches in the cover's front edge and then pull backwards.



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Remove the screw, 1 pc., for the cable channel and loosen the cable channel from the sub-frame.
On certain variants: remove or loosen the control module box's air channel from the sub-frame.



Zoom

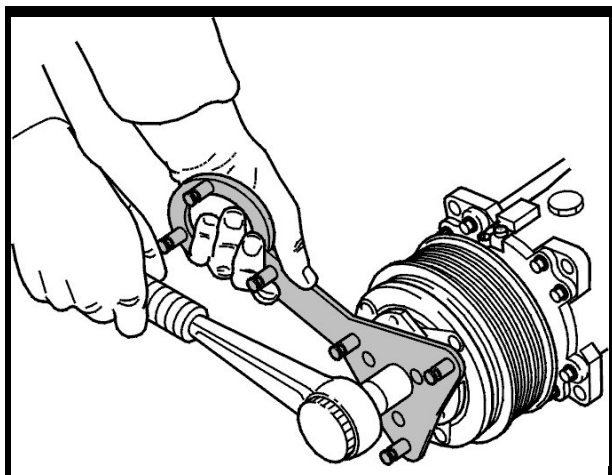
Sized for Print

Remove:

- low and high pressure hoses from the AC compressor and move them aside
- the connector for the AC compressor's magnet (solenoid) clutch
- the screws, 4 pcs., from the AC compressor.

Hold the cable channel to the side and remove the AC compressor by removing it between the sub-frame and the car body.

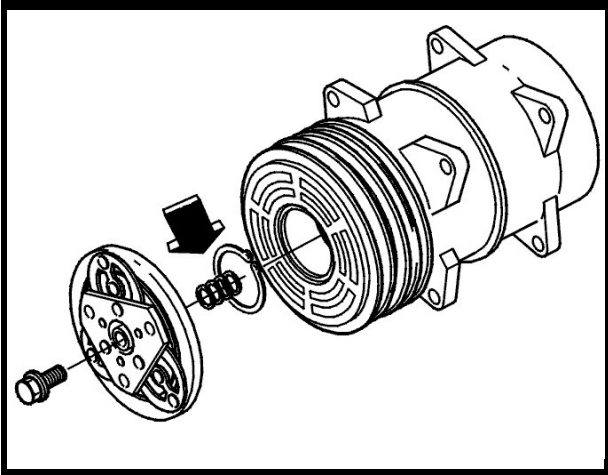
Removing the drive plate



Zoom

Sized for Print

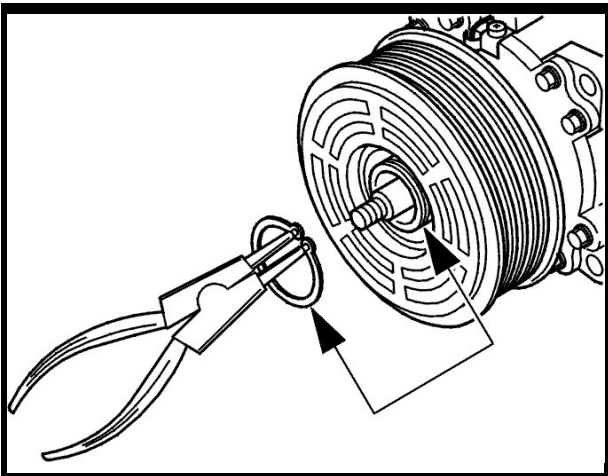
Loosen the screw, 1 pc., for the drive plate using a counterhold: 999 5596 Counterhold [See: Tools and Equipment\999 5596 Counterhold](#).

[Zoom](#)[Sized for Print](#)

Loosen the drive plate with a puller: 999 5597 Puller [See: Tools and Equipment\999 5597 Puller](#).

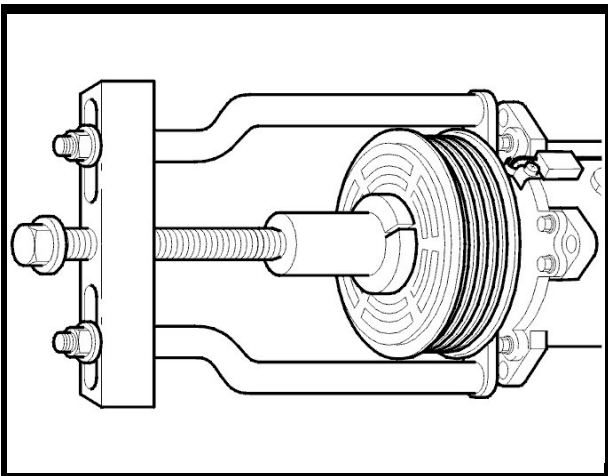
Note! Keep the shims.

Removing belt pulley's lock ring

[Zoom](#)[Sized for Print](#)

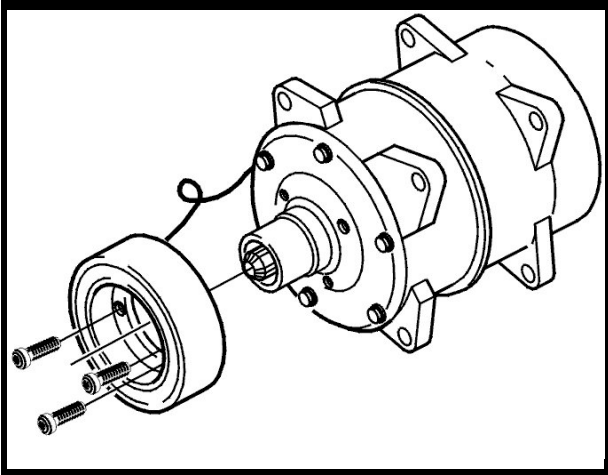
Remove the lock ring.

Removing the pulley

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Pull loose the belt pulley with a puller: 999 5598 Puller [See: Tools and Equipment\999 5598 Puller](#) and sleeve: 999 5599 Socket with ring [See: Tools and Equipment\999 5599 Socket With Ring](#).

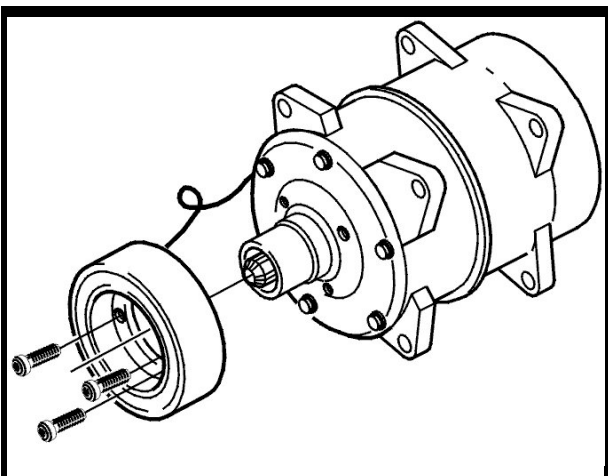
Removing the solenoid coil

[Zoom](#)[Sized for Print](#)

Remove the magnet coil.

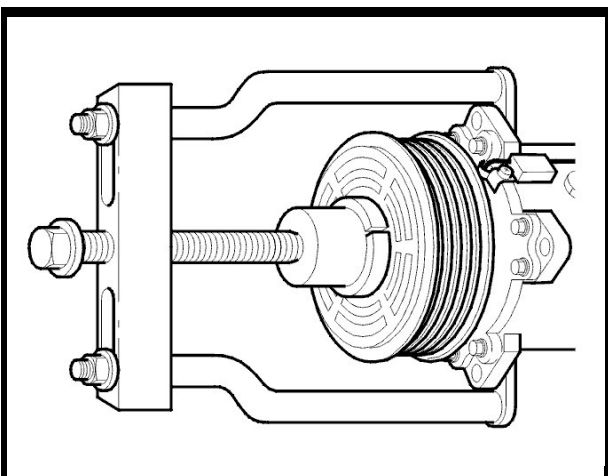
Installation

Installing the solenoid coil

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Install the screws, 3 pcs., for the new magnet coil (solenoid). Tighten with 5 Nm.

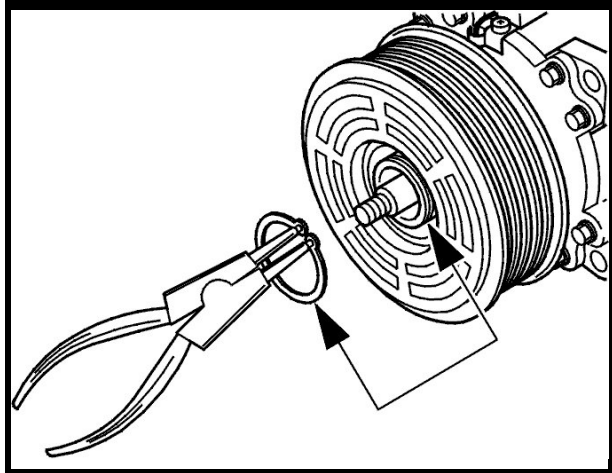
Installing the pulley

[Zoom](#)[Sized for Print](#)

Install the new belt pulley with a puller: 999 5598 Puller [See: Tools and Equipment\999 5598 Puller](#) and sleeve: 999 5600 Socket with ring [See: Tools and Equipment\999 5600 Socket With Ring](#).

Note! Install the tools behind the AC compressor mounts.

Installing the lock ring

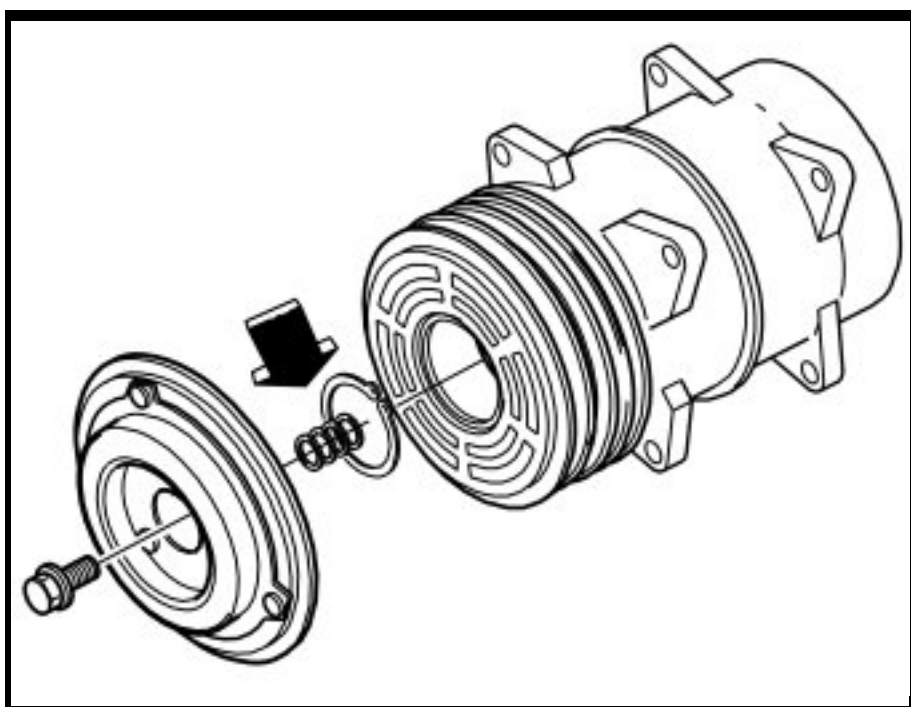


Zoom

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Install the lock ring.

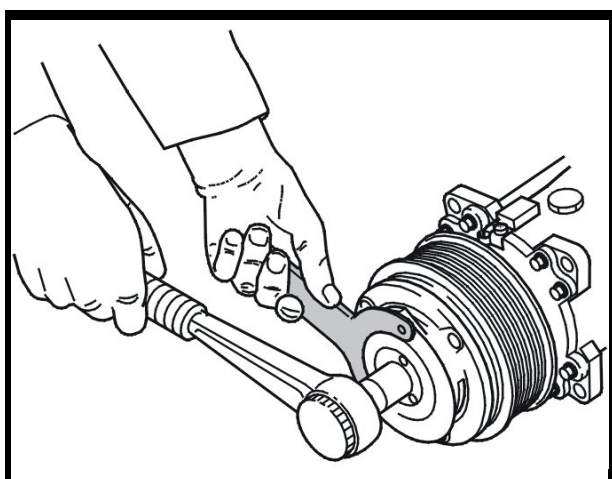
Installing the drive plate



Zoom

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Install the shims.



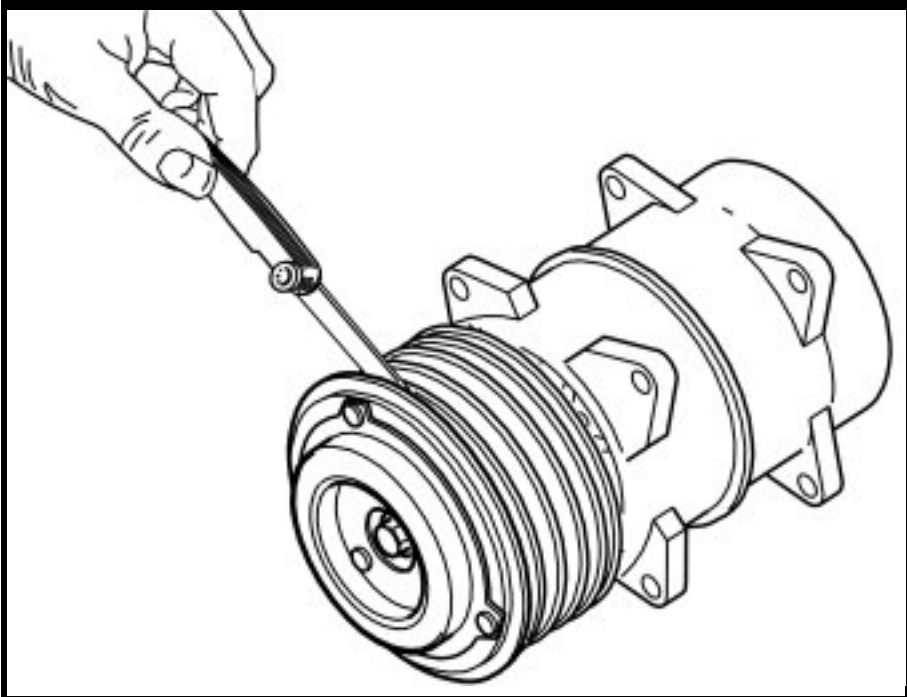
Zoom

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Install:

- the drive plate
- the screw, 1 pc., using a counterhold: 999 7193 Counterhold [See: Tools and Equipment\999 7193 Counterhold](#) and tighten with 13 Nm.

Checking the clearance

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Check the clearance between the turning plate and the belt pulley with a feeler gauge.

The clearance should be 0.3-0.5 mm.

0.3 mm clearance all the way round

It must not be possible to insert 0.6 mm at any point.

If clearance is not within given values, replace the shims.

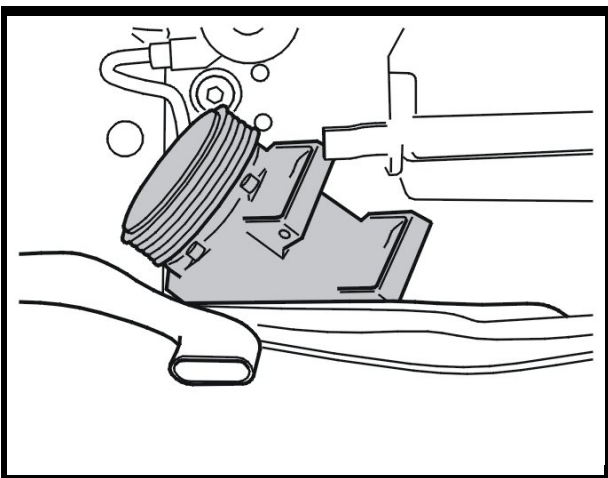
The following dimensions are available:

0.2 mm

0.3 mm

1.0 mm.

Installing the air conditioning (A/C) compressor

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If necessary, fill oil in the AC compressor according to applicable specifications.

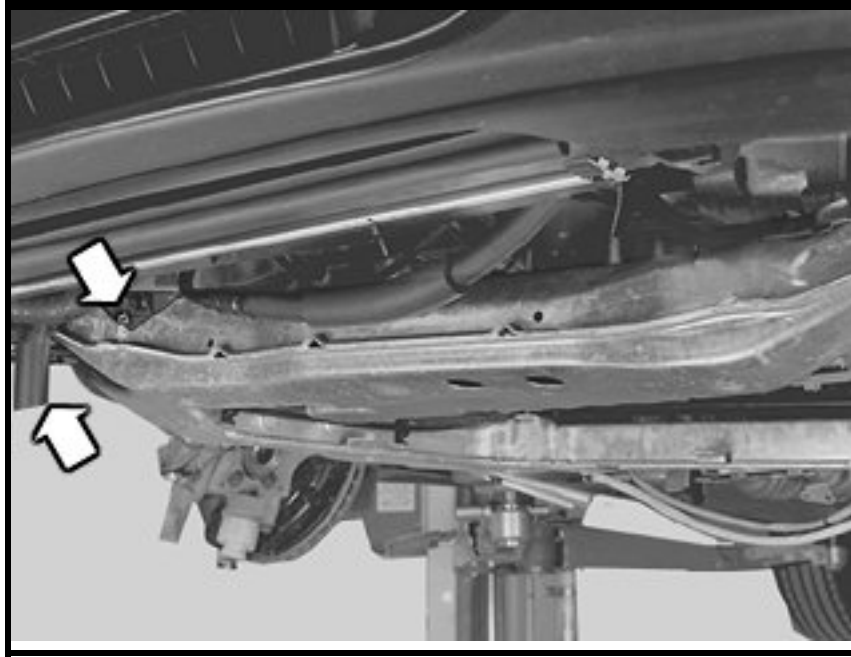
Hold the cable channel to the side and install the AC compressor by inserting it between the sub-frame and the car body.

Install the screws, 4 pcs. M8, for the AC compressor and tighten.

Note! Always use new O-rings lubricated with compressor oil.

Install:

- AC compressor's low and high pressure hoses. On certain vehicle models, it may be easier to install and tighten the screws from above
- the magnetic clutch connector.



Zoom

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Install the cable channel on the sub-frame and bolt it down.

On certain variants, the cable channel is mounted on the control module box and then on the sub-frame.

Installing the auxiliaries belt

MY 1999-2000:

Install the auxiliaries belt on the AC compressor according to: Auxiliaries belt / belt tensioner, replacing [See: Engine, Cooling and Exhaust\Engine\Drive Belt Tensioner\Service and Repair](#).

MY 2001-2004

Install the auxiliaries belt on the AC compressor according to: Auxiliaries belt / belt tensioner, replacing [See: Engine, Cooling and Exhaust\Engine\Drive Belt Tensioner\Service and Repair](#).

MY 2005

Install the auxiliaries belt on the AC compressor according to: Auxiliaries belt / belt tensioner, replacing, B5244T5, B5254T2 [See: Engine, Cooling and Exhaust\Engine\Drive Belt Tensioner\Service and Repair](#) Auxiliaries belt / belt tensioner, replacing [See: Engine, Cooling and Exhaust\Engine\Drive Belt Tensioner\Service and Repair](#).

Installing the battery negative cable

Fit the battery's negative cable in accordance with: Battery, disconnecting [See: Starting and Charging\Battery\Service and Repair\Procedures\Battery Disconnecting](#).

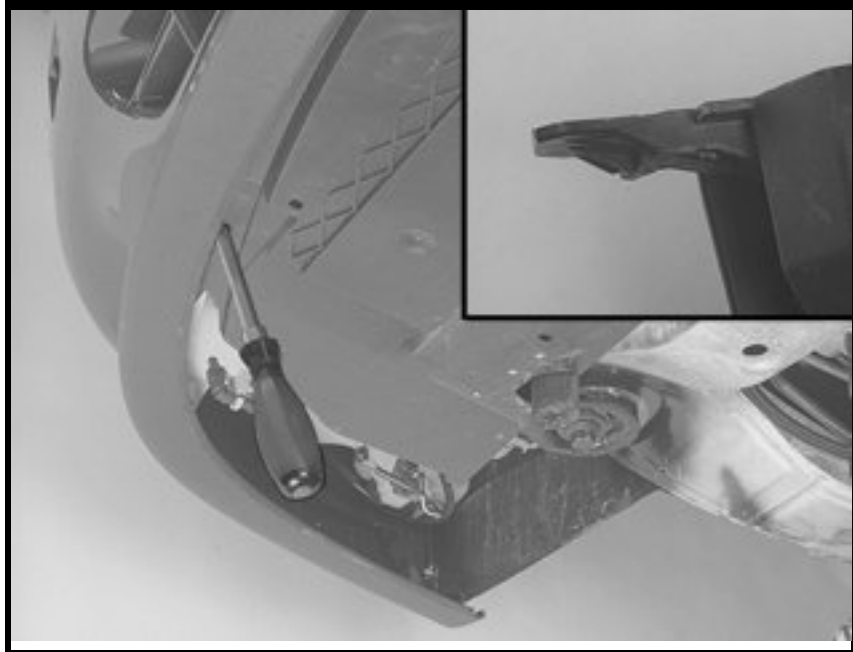
Refrigerant and leak detection

Vacuum pump side. See: Vacuum pumping [See: Service and Repair\Vacuum Pumping](#).

Fill the system with [refrigerant](#). See: Refrigerant, filling [See: Service and Repair\Refrigerant, Filling](#).

Check for system leaks according to: Leak tracing, fluorescent tracing agent / UV lamp [See: Testing and Inspection\Component Tests and General Diagnostics\Leak Tracing, Fluorescent Tracing Agent / UV Lamp](#) or according to: Leak tracing, electronic leak tracer [See: Testing and Inspection\Component Tests and General Diagnostics\Leak Tracing, Electronic Leak Tracer](#).

Installing the splash guard



Zoom

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Install:

- the catches in the protective casing's front edge and press forward
- the screws, 2 pcs., for the front protective cover.

Finishing

Installing the splash guard

Install:

- the protective cover under the engine
- the screws, 7 pcs., and tighten.

Lower the vehicle.

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