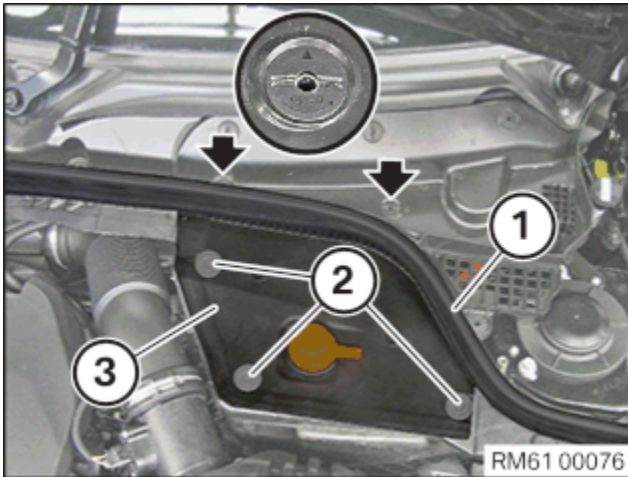


Delivery Stop: Replacing F56 B38 and B48 Oil Filter Housing



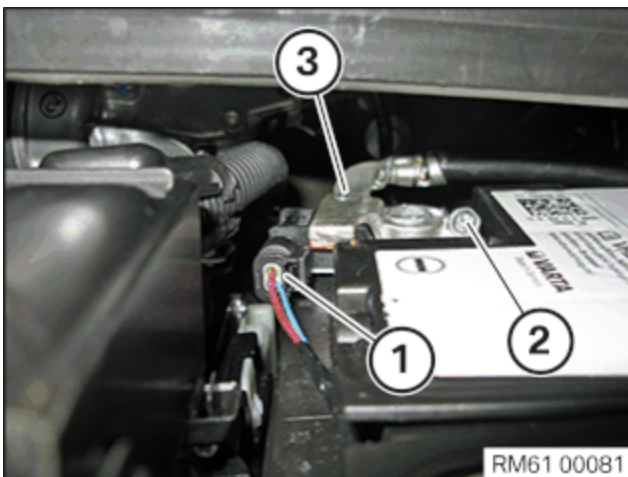
Disconnecting the battery ground lead:

Partially detach the seal (1).

Open the locks by turning anti-clockwise.

Release the screws (2) and remove the battery cover (3).

The cover is unlocked and can be removed.



Unlock and disconnect the connector (1).

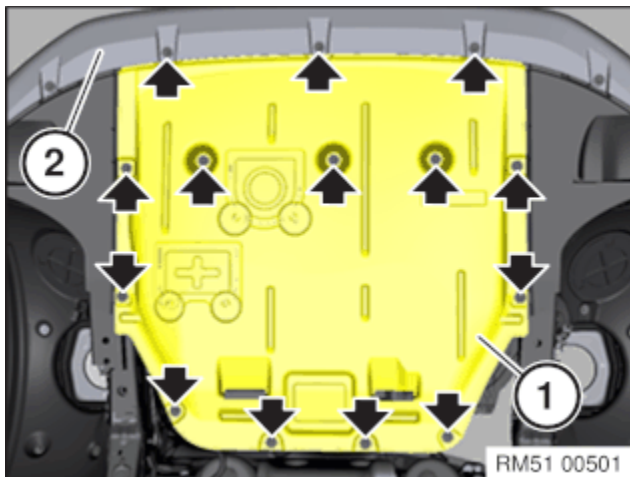
Loosen the nut (2).

Disconnect the battery earth lead (3) and secure at the side.



Burning danger!

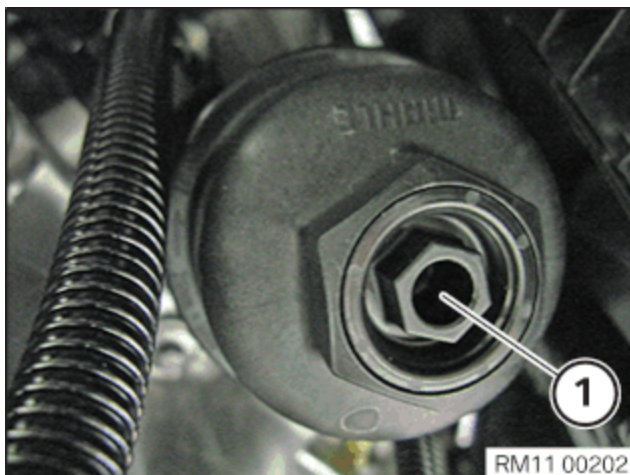
Repair work on the vehicle only with oil and temperature-resistant protection gloves, incl. arm protection, face protection and protective apron.



Remove the underbody protection:

Release the screws (see arrows).

Pull the forward underbody protection (1) below the bumper panel (2) and remove.

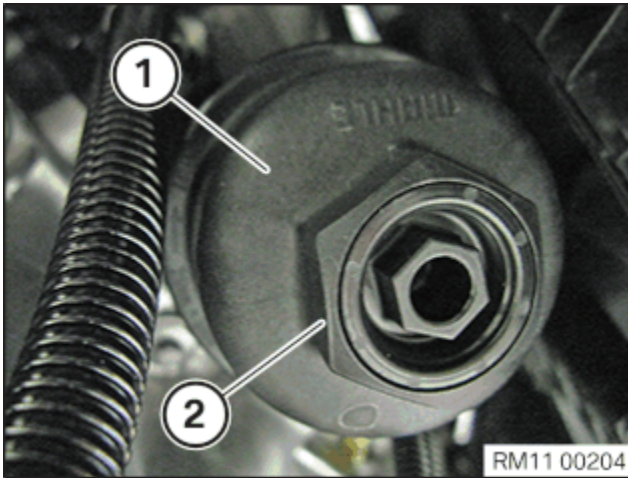


Loosen the oil filter cap drain plug (1) and drain the engine oil from the housing.

Do not drain engine oil from the engine oil pan.

Loosen the oil filter cap (1) at the hexagon (2) and allow the engine oil to drain.

Do not drain engine oil from the engine oil pan.



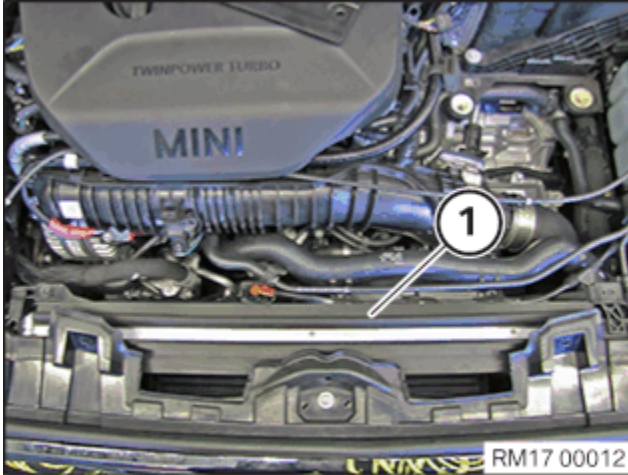
Remove the radiator electric radiator fan:

Warning!

Danger of severe burns!

Perform repair work on the cooling system only when the engine is cold.

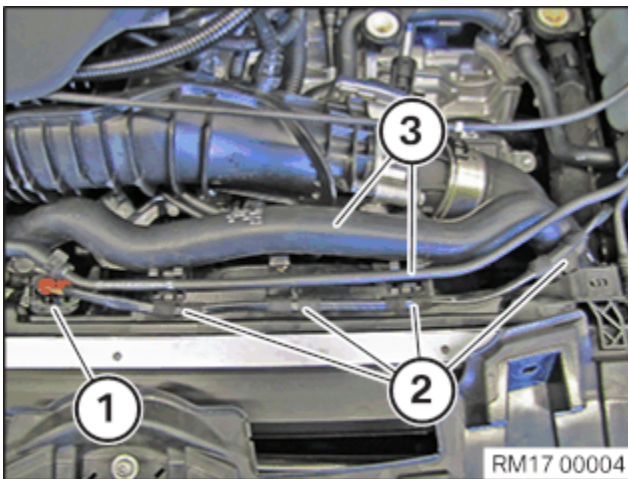
Remove the gasket/seal (1) on the radiator.



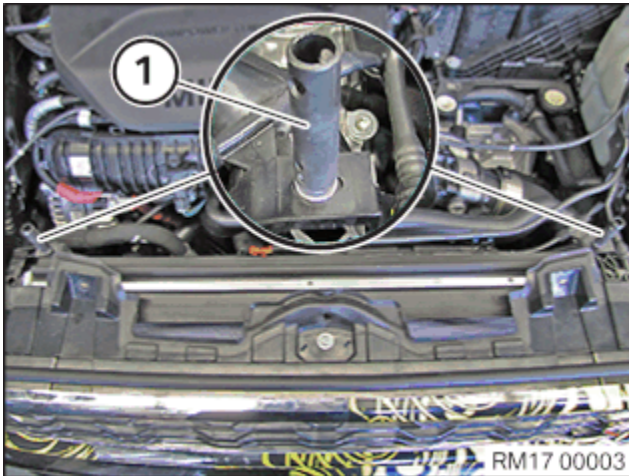
Unlock and unplug the connectors (1) on the radiator support.

Unclip the clips (2) on the fan shroud and place the wiring harness out of the way.

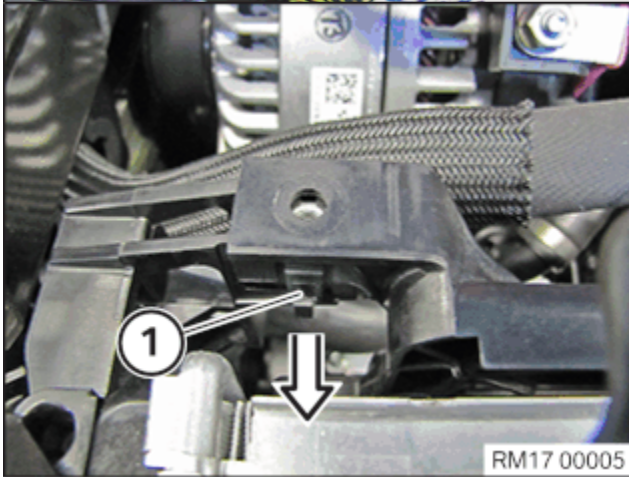
Unclip the coolant hose and the bleeder line (3) from the fan shroud.



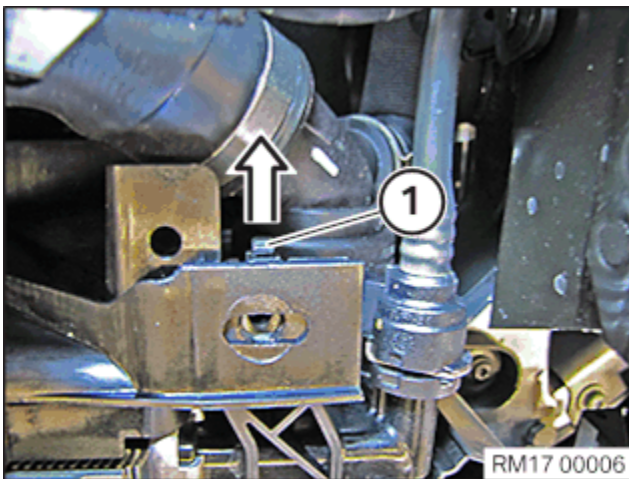
Loosen the screws (1).

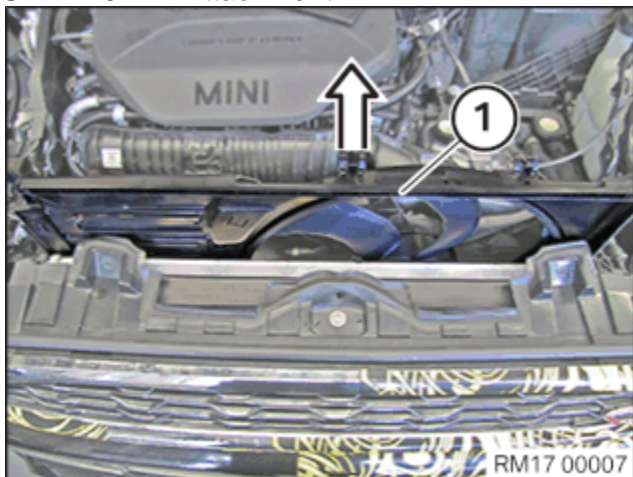


Unlock the fan shroud on the right side (1) in the direction of the arrow.



Unlock the left side of the fan shroud (1) in the direction of the arrow.





Remove the fan shroud (1) in the direction of the arrow (clearance is tight).



Drain the engine coolant

Warning!

Danger of severe burns!

Perform repair work on the cooling system only when the engine is cold.

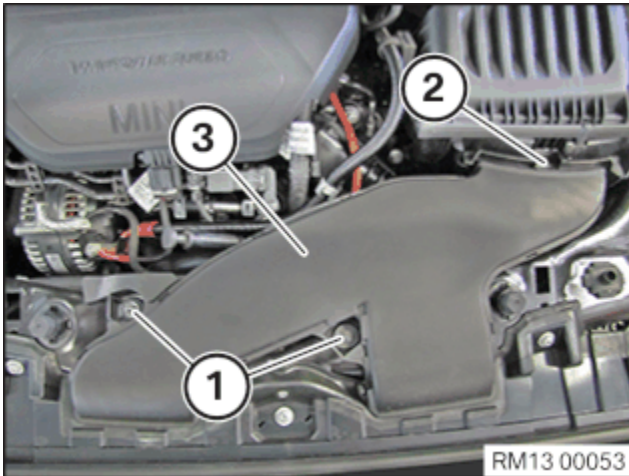


Attention!

Safety gloves and safety goggles required.

Attention!
Danger of damage!

Only use approved engine coolants when refilling!

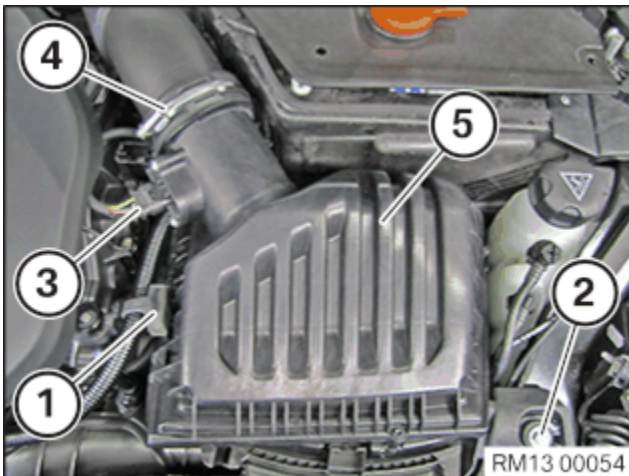


Remove the intake duct:

Unscrew the nuts (1).

Release the lock (2).

Slide out the intake port (3) to remove.



Remove the intake silencer:

Pull off the rubber retainer (1) from the intake silencer housing.

Release the screw (2).

Unlock the connector (3) on the hot film air mass meter and disconnect.

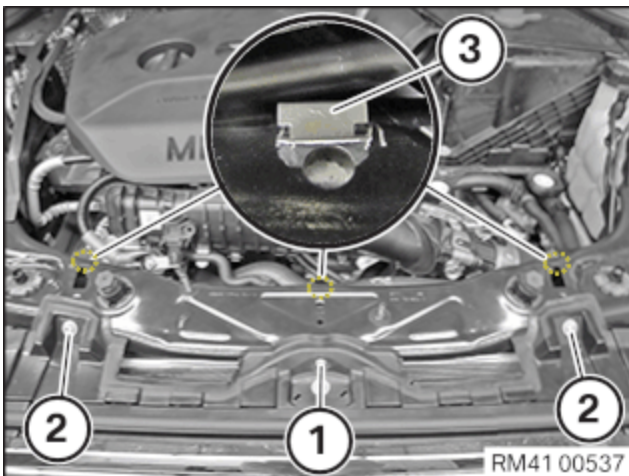
Release the clamp (4) and pull the clean air pipe out of the intake silencer housing.

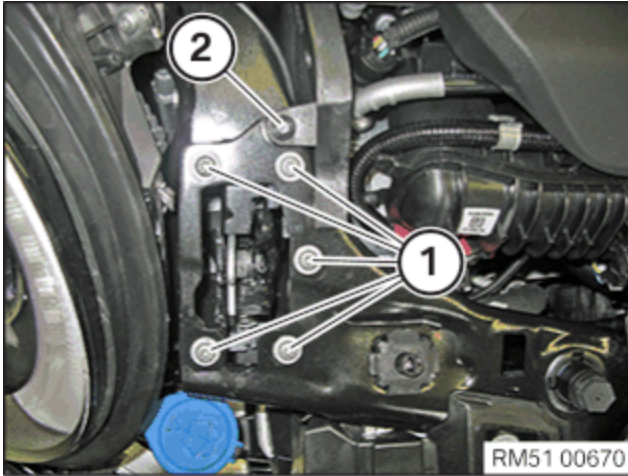
Pull the intake filter housing (5) up and out of the rubber mounts to remove.

Remove the cross member:

Loosen the screws (1) and (2).

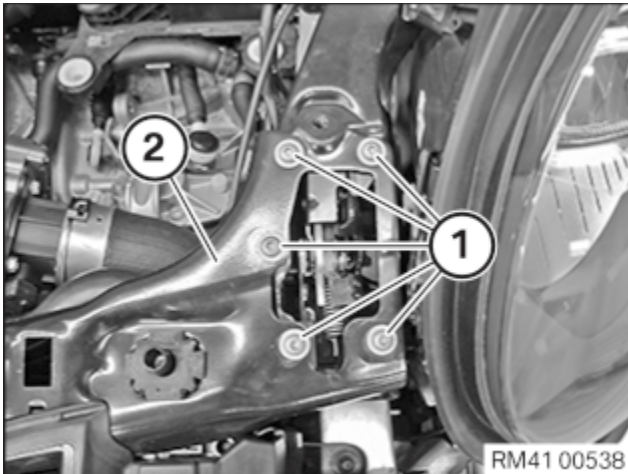
Loosen the clips (3) for the hood release Bowden cable.





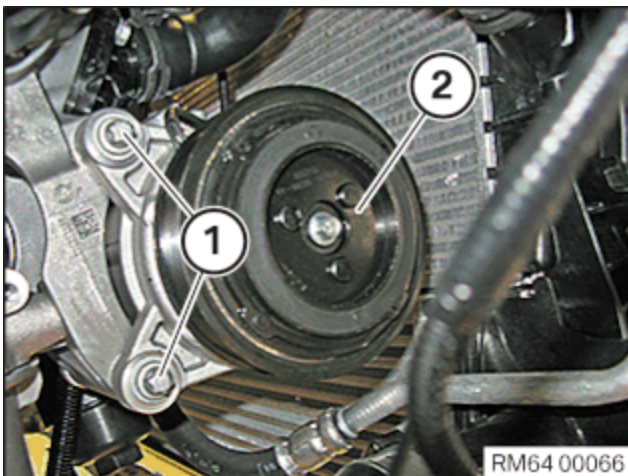
Loosen the screws (1).

Remove the rivet (2).



Loosen the screws (1).

Remove the cross member (2) by lifting up and out.



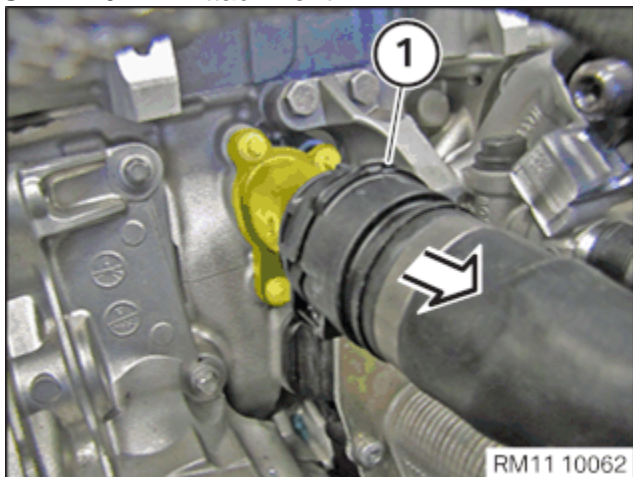
Cooper with B38 3-cylinder engine only!

Loosen the air conditioning compressor:

Remove the air conditioning compressor screws (1).

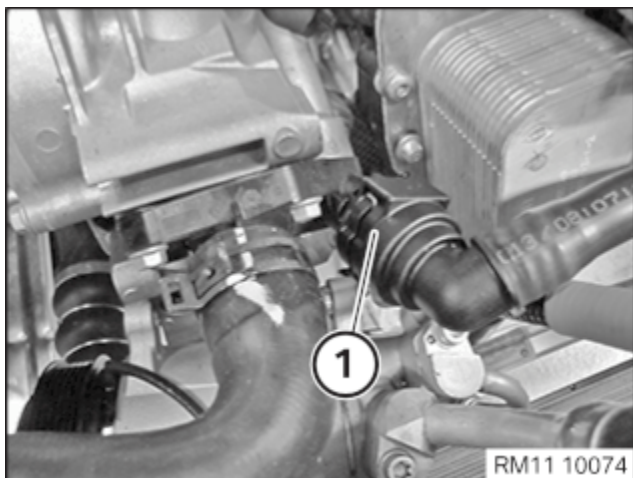
Gently move the compressor away from the oil filter housing to gain clearance and provide adequate support.

Note: Do not discharge the refrigerant!

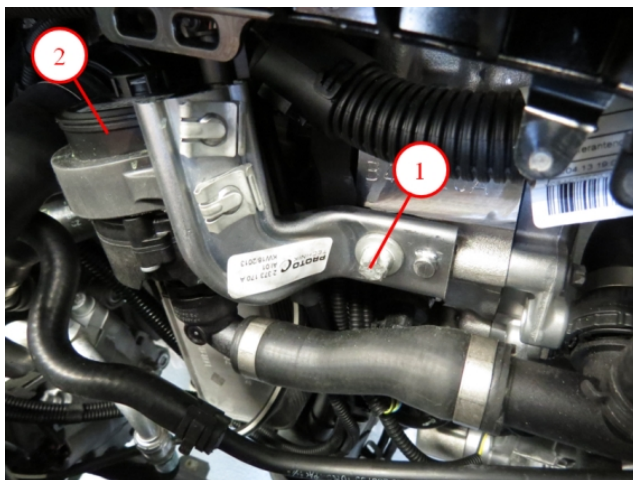


Remove the coolant hoses:

Release the coolant hose lock (1) and remove the hose in the direction of the arrow.



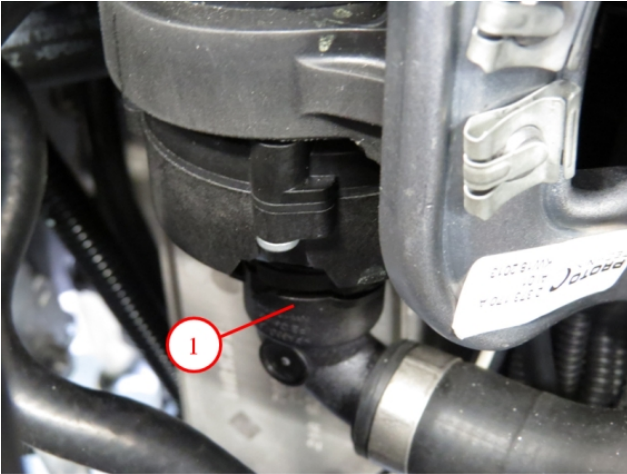
Disconnect the coolant hose (1).



Remove the auxiliary water pump:

Undo the screw (1) and pull the auxiliary water pump (2), complete with bracket, out towards the front of the vehicle.

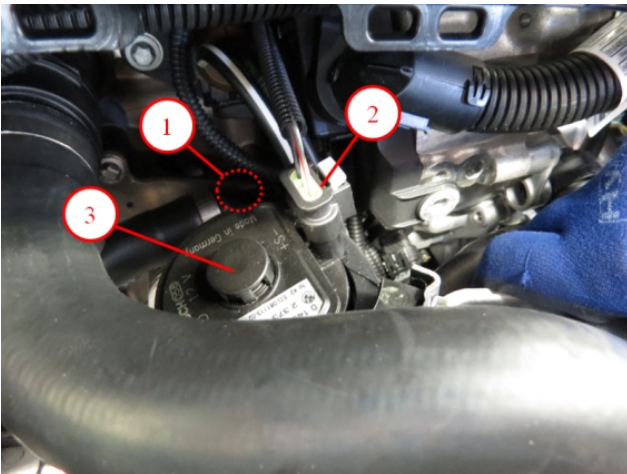
Release and remove the hose connection (1).



Release and remove the connection (1).

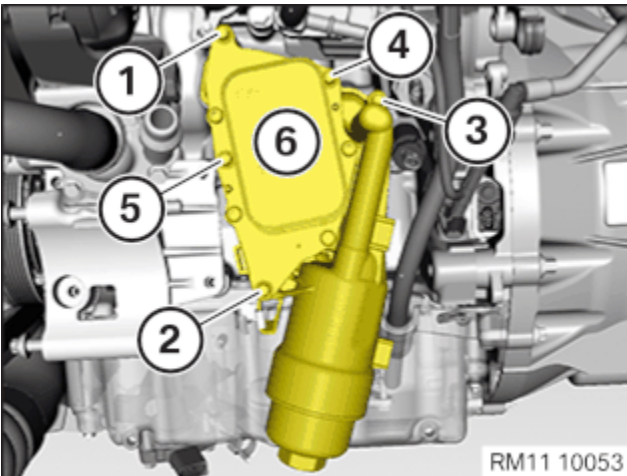
Release and remove the connector (2).

Remove the auxiliary water pump (3), complete with bracket.



Loosen the screws in this order: 5 – 4 – 3 – 2 – 1.

Remove the oil-filter housing (6).

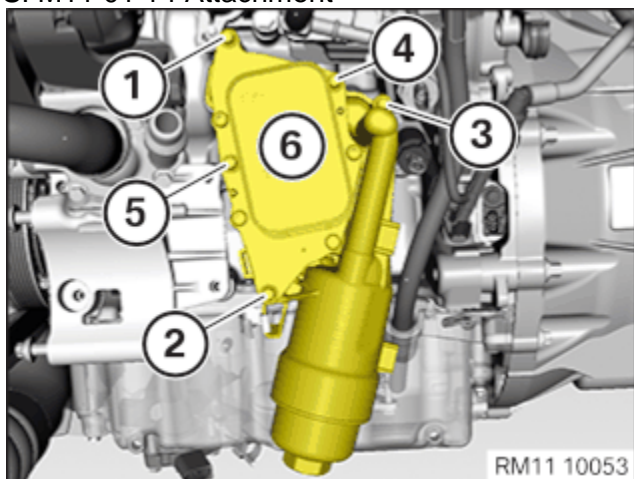


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Install new oil filter housing P/N 11 42 8 511 391 (6) and new seals/gaskets.

Tighten the screws in this order: 1 – 2 – 3 – 4 – 5.

Tightening torque: 10 Nm

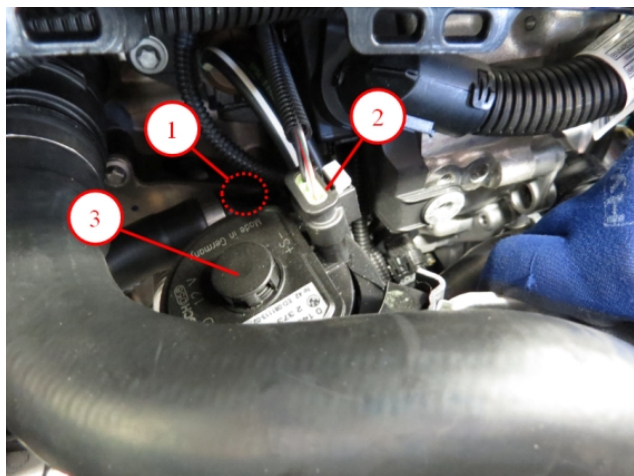


Install the auxiliary water pump:

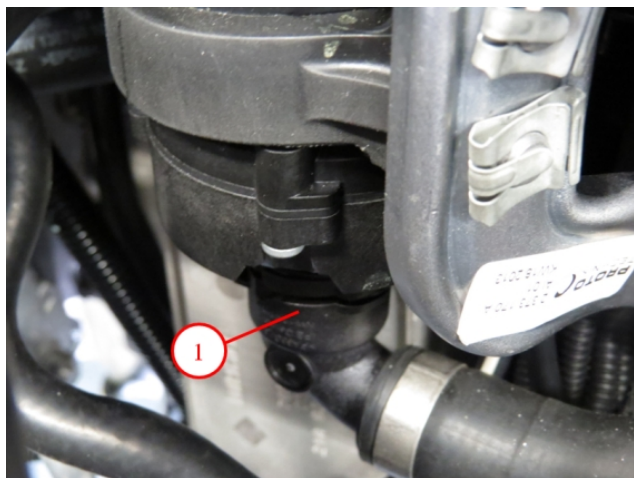
Install the auxiliary water pump (3), complete with bracket.

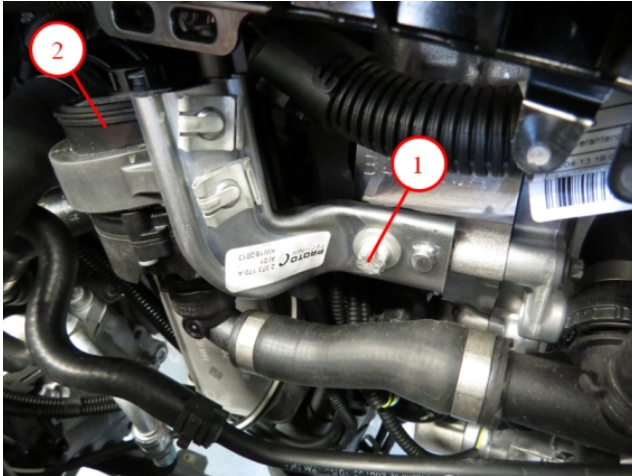
Connect the hose (1).

Install the plug connection (2).



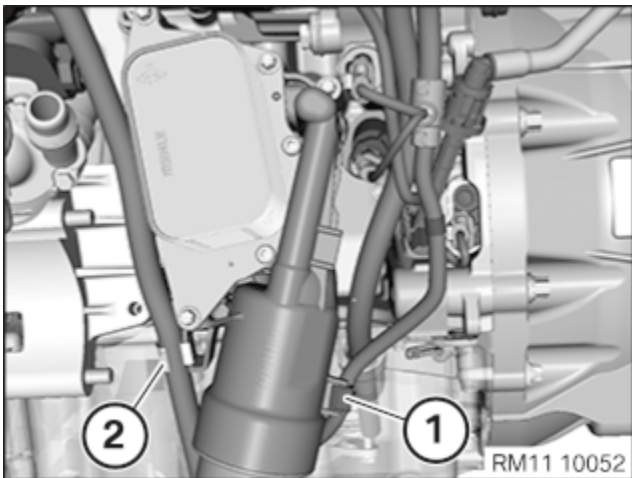
Coonect the hose (1).





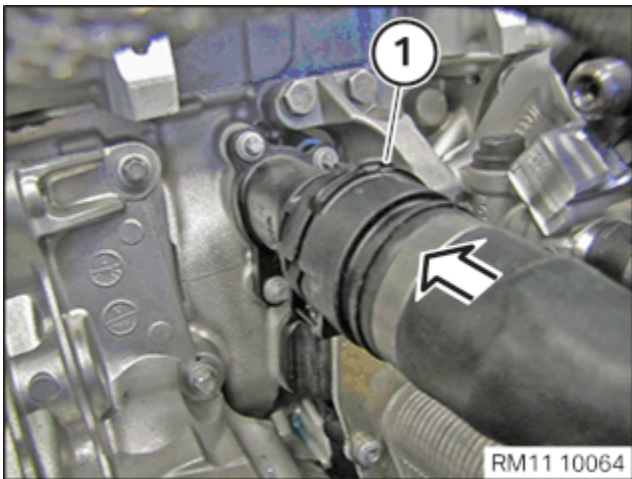
Tighten the screw (1)

Tightening torque: 20 Nm



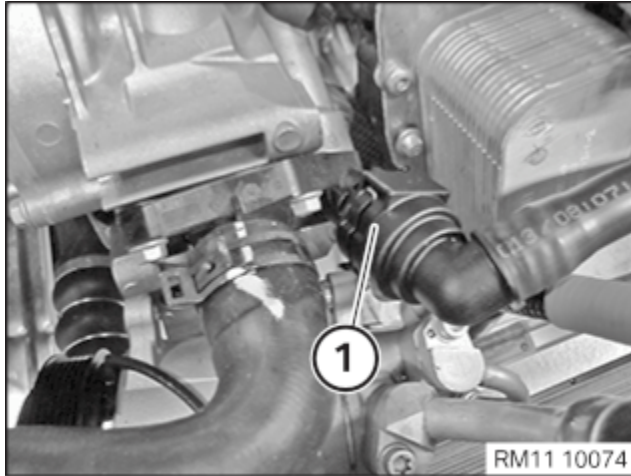
Clip the wiring harness (1) back together.

Clip the B+ cable (2) into the holder.



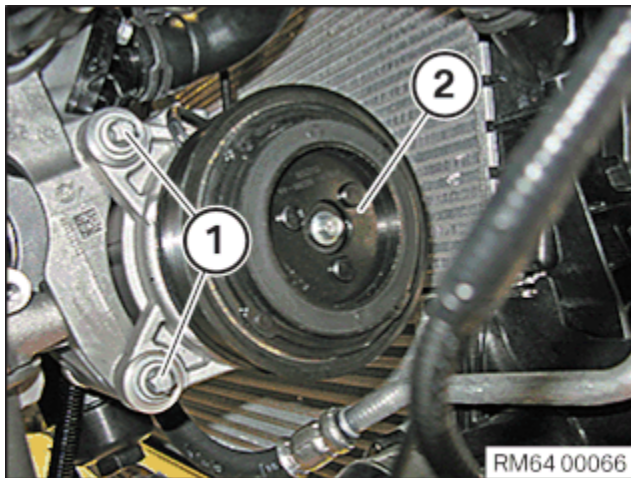
Reinstall the coolant hoses:

A click must be heard when securely locked (1).



Reinstall the coolant hose (1).

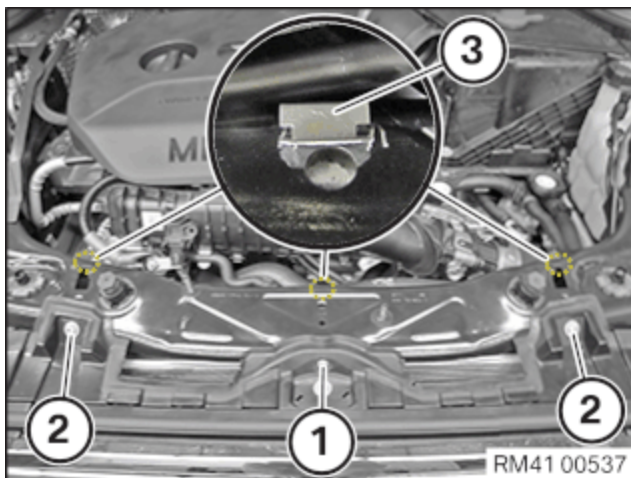
A click must be heard when securely locked.



Reinstall the compressor:

Reposition the air conditioning compressor (2) and tighten the screws (1).

Tightening torque: 38 Nm



Install the cross member:

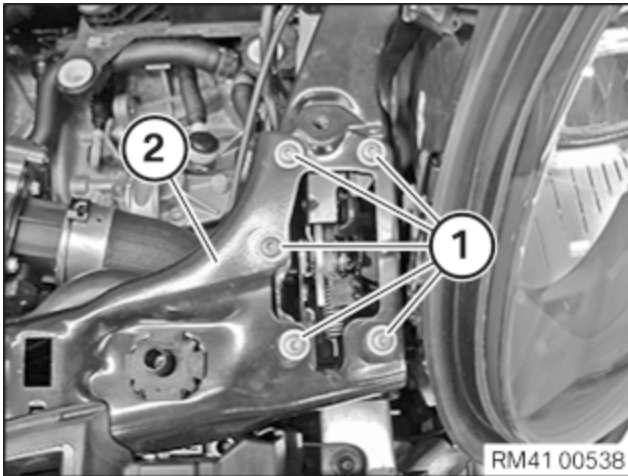
Only hand-tighten all of the screws at first before applying torque.

Torque sequence:

Tighten the screw (1); use tightening torque 12 Nm.

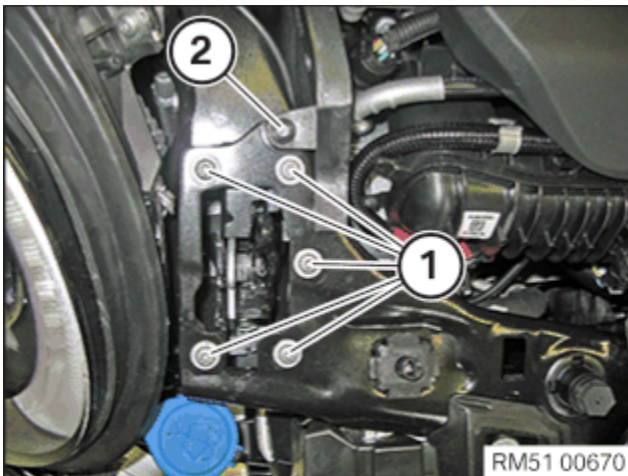
Tighten the screw (2); use tightening torque 6 Nm.

Secure the clips (3) for the hood release Bowden cable for the bonnet locks on the cross member.



Tighten the screw (1).

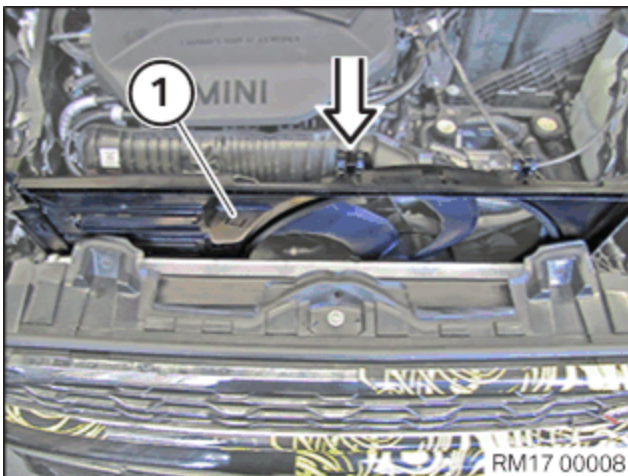
Tightening torque: 12 Nm



Tighten the screw (1).

Tightening torque: 12 Nm

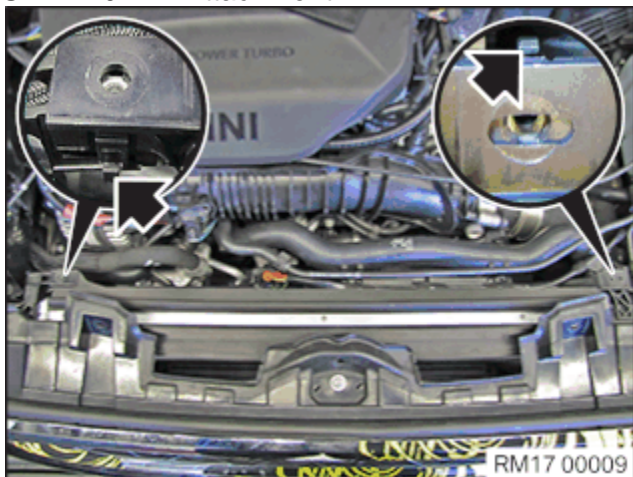
Secure the spread rivit (2).



Install the electric fan:

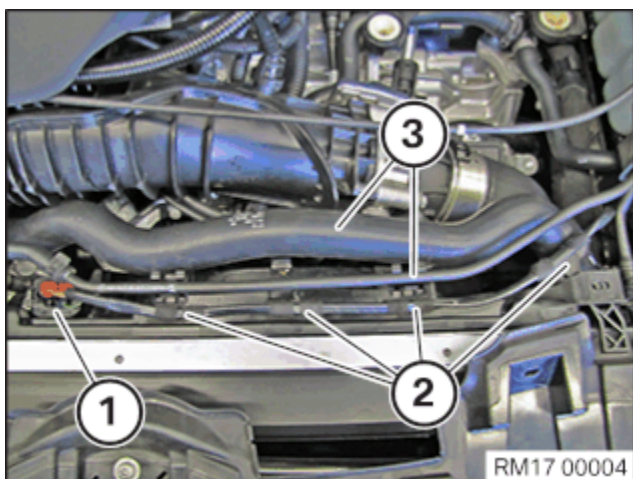
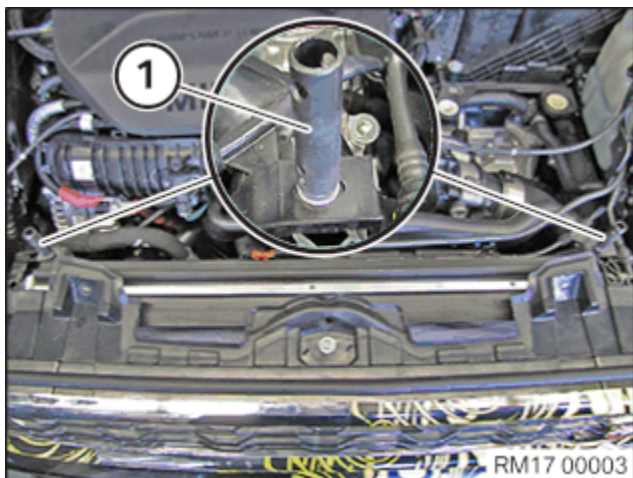
Reinstall the fan shroud (1) in the direction of the arrow (clearances are tight).

Lock the fan shroud on the left and right side.



Tighten the screws (1).

Tightening torque: 8 Nm



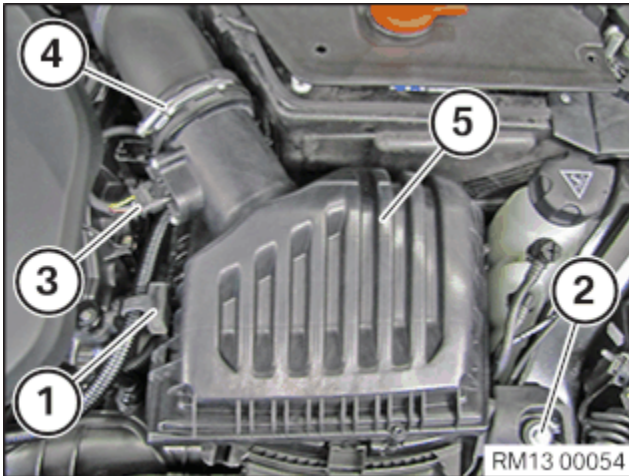
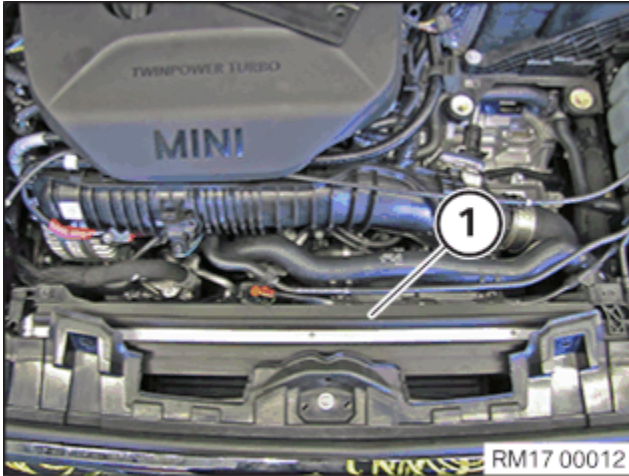
Connect the electrical plug (1) at the fan shroud plug socket.

Connector (1) will make an audible clicking sound when secured.

Install the clips (2) at the fan shroud.

Clip the coolant hose and bleeding line (3) to the fan shroud.

Reinstall the gasket/seal (1) on the radiator.



Install the intake silencer and intake duct:

Tighten the clamp (4).

Tightening torque: 3 Nm

Connect the connector (3) to the hot film air mass meter.

Connector (3) must snap audibly into place.

Tighten the screw (2).

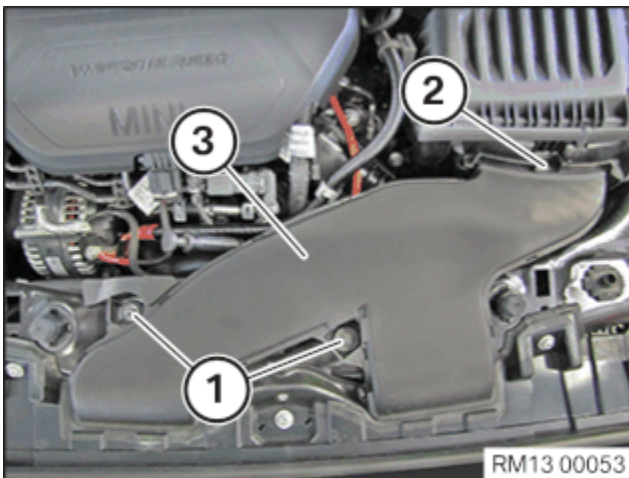
Tightening torque: 8 Nm

Install the intake duct (3).

Lock the tab into the air box (2).

Tighten the nuts (1).

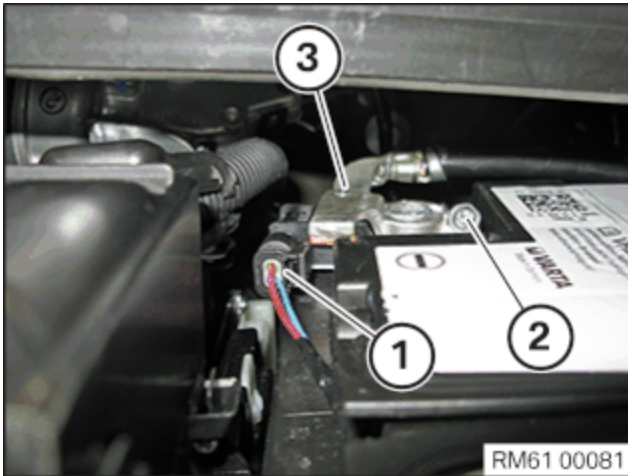
Tightening torque: 8 Nm



Refilling the cooling system:

Refill the cooling system only with **new coolant** before starting the engine.

Refer to Repair Instruction 17 00 039, "Venting and filling cooling system with vacuum filling unit."

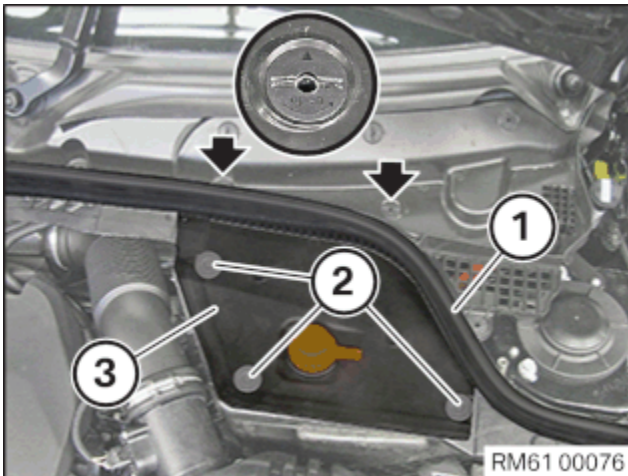


Reconnect the battery and install the cover:

Connect the battery earth lead (3) and tighten the nut (2).

Tightening torque: 5 Nm

Connect the plug (1).



Install the battery cover (3) and tighten the screws (2).

Tightening torque: 2.8 Nm

Turn the locks to limit the position in the direction of the arrow.

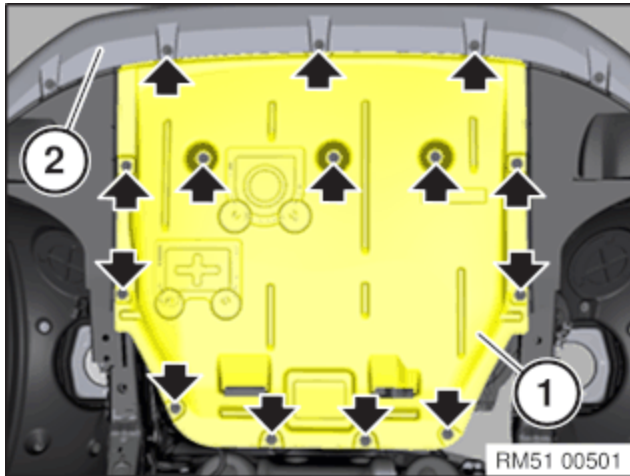
Install the gasket (1) and press down firmly to secure

Topping the engine oil:

Top the engine oil with 0.3 liters or 11 oz. of engine oil.

Verify that all repairs are leak-free.

- Vehicle is on an even surface.
- Start the engine and let idle until the oil pressure check light turns off.
- Turn the engine off.
- Check the oil-filter cap for leaks.



Install the underbody protection:

Feed the underbody protection (1) inside the bumper panel (2).

Secure the underbody protection (1) with bolts.