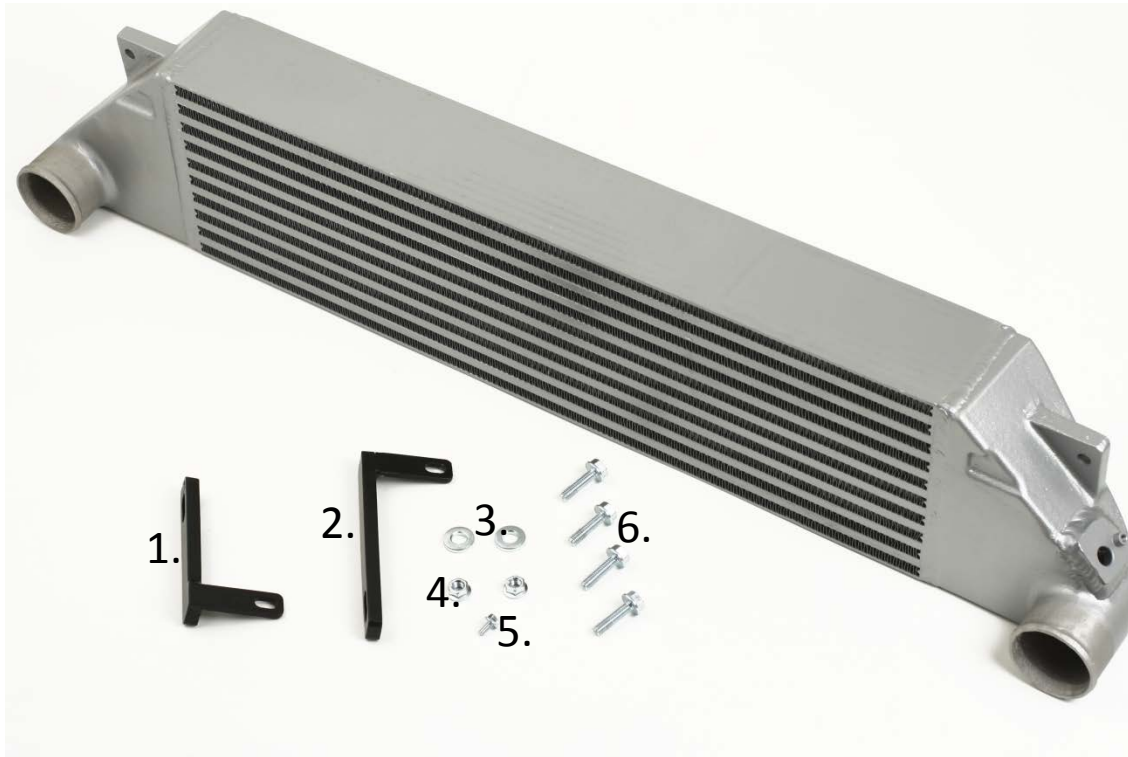


Installation instruction do88

Intercooler for Volvo S40 / V50 / C30



This instruction shows how to replace the OEM intercooler with our performance intercooler.

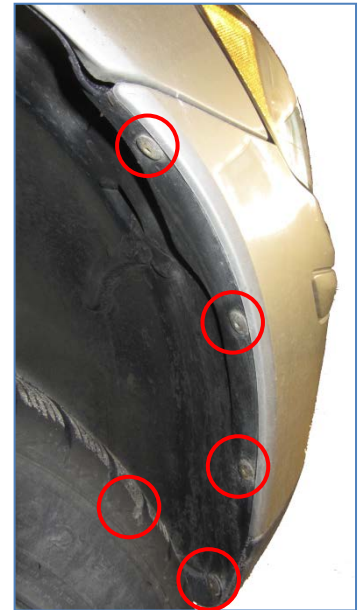
At this type of installation we always recommend that you have mechanical experience and knowledge about safety during work on vehicles.

Parts included:

1. Left bracket 1st
2. Right bracket 1st
3. Thick washer 2st
4. M8 Flanged nut 2st
5. M5 Torx screw 1st
6. M8x30 Flanged screw 4st

Part number: ICM-170

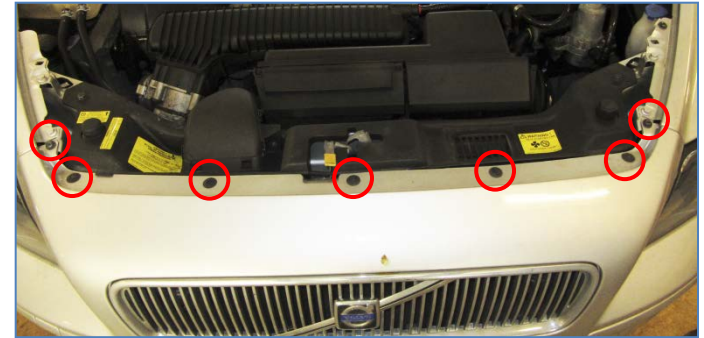
1. Remove 5pcs Torx T25 screws in each wheel from each inner fender.



2. Remove cover from headlight washer (if car are equipped with this) by carefully lifting them up from bumper and press the small plastic tab that become visible when lifting cover with a screwdriver. When the tab are pressed in lift cover further and it will come off.



- 3.** Remove 2pcs Torx R25 screws and 5 plastic rivets from top of bumper. Remove the plastic rivets by pushing the middle section of them down a few mm (about 1/8") and then pull it up in the collar.



- 4.** Pull the rear end of bumper out from the car until it comes loose on both sides of vehicle.



- 5.** Pry the plastic fastener that attach the front protecting plate to the radiator frame and pull the bumper a bit forward so it will not attach again.



6. Its time to remove the bumper and it will be easier if you get help from an assistant.
Start with pulling the lower part of the bumper forward then take grip a grip in the middle and pull forward to release the brackets under the headlights (1.) then tilt the bumper a bit upwards and pull it loose from the fenders (2.).
Now the bumper are loose from the car, but the cables to the front fog lights have to bee removed before removing bumper from car. Remove cables to both fog lights and remove bumper from car.

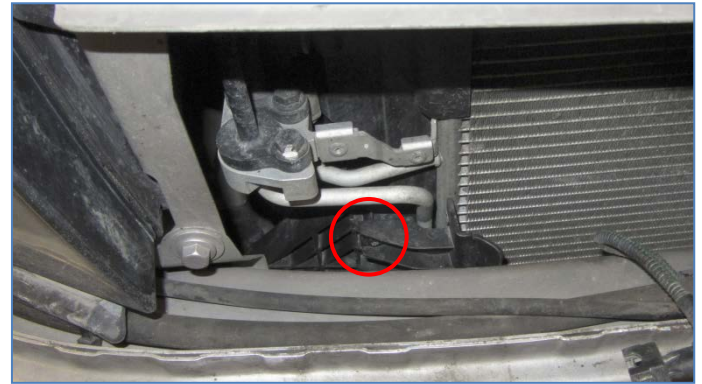


7. Remove both horns by disconnecting cable connectors and remove one 10mm hex head screw on each horn.



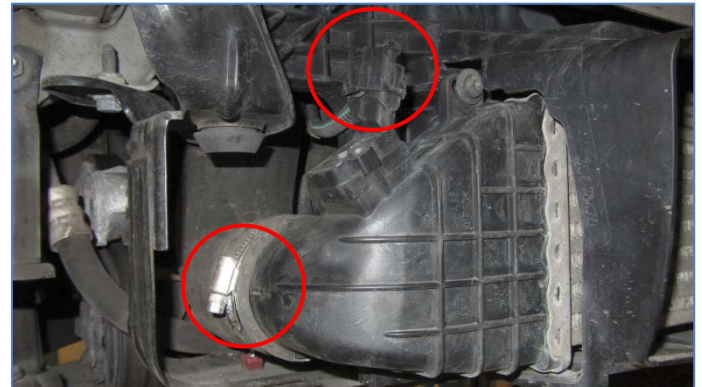
8. Remove the upper air ducting by pulling it forward to remove it from fasteners and air inlet guide in the upper part of the guide. Then tilt the upper part out of the car and remove.

9. Remove 2 pcs Torx T25 (90 degree torx key or flat bit wrench needed) that attach the lower air duct towards radiator frame. The air ducting will not be removed from vehicle now as it will be removed together with the intercooler later.



10. Remove both hose ends from the intercooler by loosen the hose clamps with an 7mm hose clamp screwdriver or 7mm hex socket and then pull the hose ends of the intercooler connections. The hoses can remain installed on car during this job if you should not replace them at the same time.

Remove cable connector from the sensor on the intercooler.



11. Remove the two Torx T30 screws that attaches the intercooler to the radiator frame. Remove and discard the intercooler and air ducting by lifting the intercooler a bit upwards and then moving it forward downward out from the vehicle.



12. Remove the sensor from the OEM intercooler by removing its Torx T25 screw and pull it up from the intercooler.

Then install the sensor in the do88 intercooler by pushing the sensor down in the hole and secure it with the included M5X16 Torx T25 screw.



13. Remove the front 12mm hex head screws that attach radiator bracket to the bumper beam. One screw at each side.

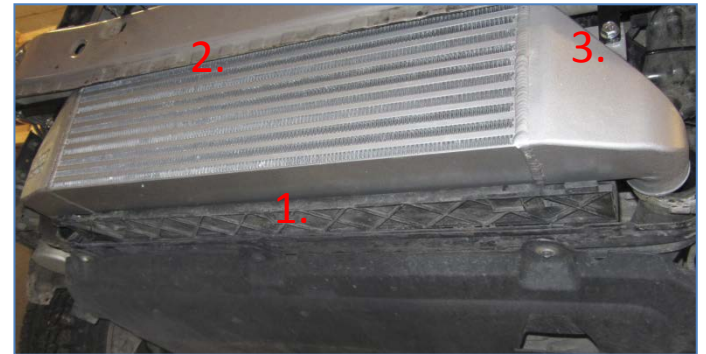


14. Install left and right intercooler bracket with 1pc M8x30 flange head screw and a thick washer each. The thick washer installs between the bracket and the radiator bracket. Do not tighten screws now as brackets should be adjustable.



- 15.** Lift new intercooler in place so its positioned up on the radiator frame lower edge (1.) and the upper part of intercooler just behind the double metal lip of the bumper beam (2.).

Adjust the brackets so the holes in the bracket aligns with the holes on the intercooler and install bracket on the outside of the intercooler attachment points (3.) with 1pc M8X30 flange head screw and 1pc M8 flange nut on each side.



- 16.** Adjust the position of the intercooler while brackets are loose until the grooves aligns with the screw boss for OEM intercooler and have contact with them. The lower edge of the intercooler should be about 3mm (1/8") from the radiator plastic frame according to picture.

Hold the intercooler in this position and tighten the two screws to the vehicles bumper beam and the screws and nuts between intercooler and bracket.



- 17.** Install both hoses on the intercooler and tighten the hose clamps.

Connect the cable contact to the sensor on the intercooler.

18. The lower grille brackets needs to be trimmed to not interfere with the intercooler.

The outer lower brackets (1.) on both sides needs to be trimmed flush with the grille frame.

The lower inner brackets (2.) needs to be trimmed about 3mm from the grille so they still will keep it in place but takes less place.

This step will differ from different bumper designs, model years and models as S40/V50/C30. This shows how to do on V50 T5 -04.



19. One of the brackets on the left hand plastic fog light frame needs to be trimmed at the red line to avoid interference with the intercooler tank.

This step will differ from different bumper designs, model years and models as S40/V50/C30. This shows how to do on V50 T5 -04.



20. Reinstall all other parts in reverse order.