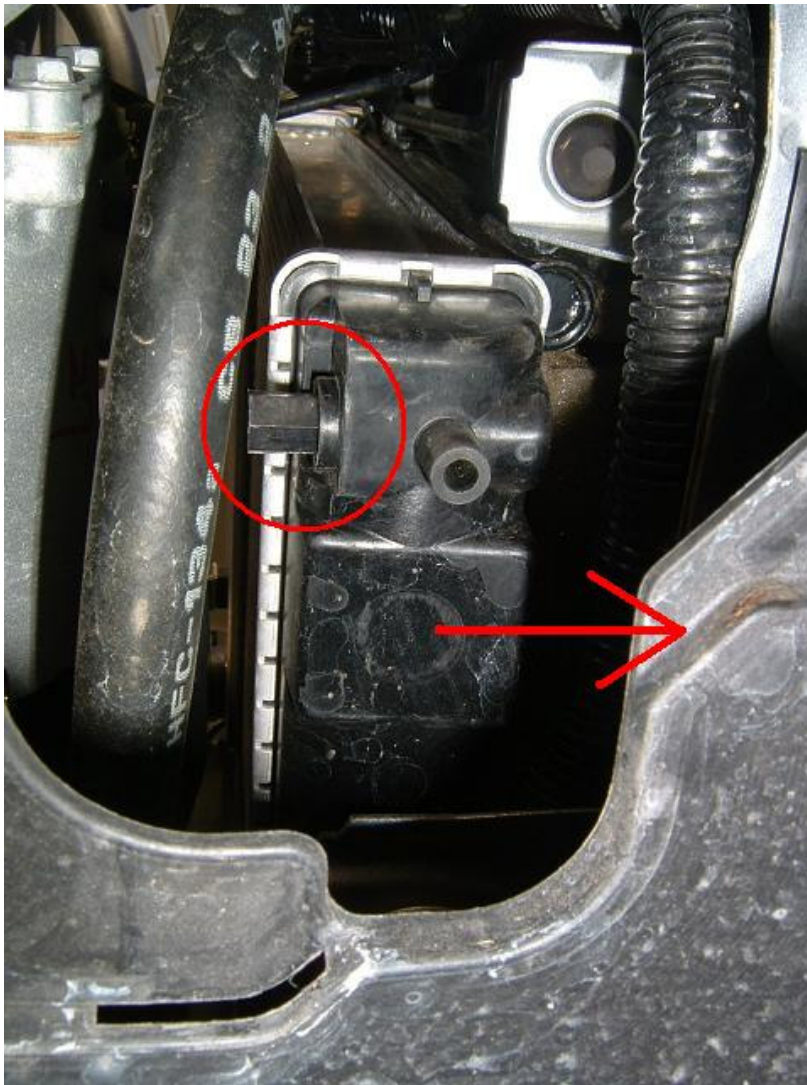


Coolant Change

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Post URL: <http://forums.evolutionm.net/showthread.php?t=89044>

This is an easy one 😊 I pulled up onto some ramps to allow more room underneath. From under the car, remove the passenger side corner of the undertray (I think it's only five clips). This will expose the radiator drain and plug. Remove the radiator cap (as long as the engine temperature is cool) and grab a drain bucket. Loosen the 10mm plug (circled in red, arrow points to front of car) until there's a steady flow of fluid coming out of the radiator:



Don't take the plug completely out until the flow is almost stopped:



Remove the cap from the overflow reservoir and undo the two 10mm bolts holding it down:



Dump the contents out and rinse out the junk that's settled at the bottom:

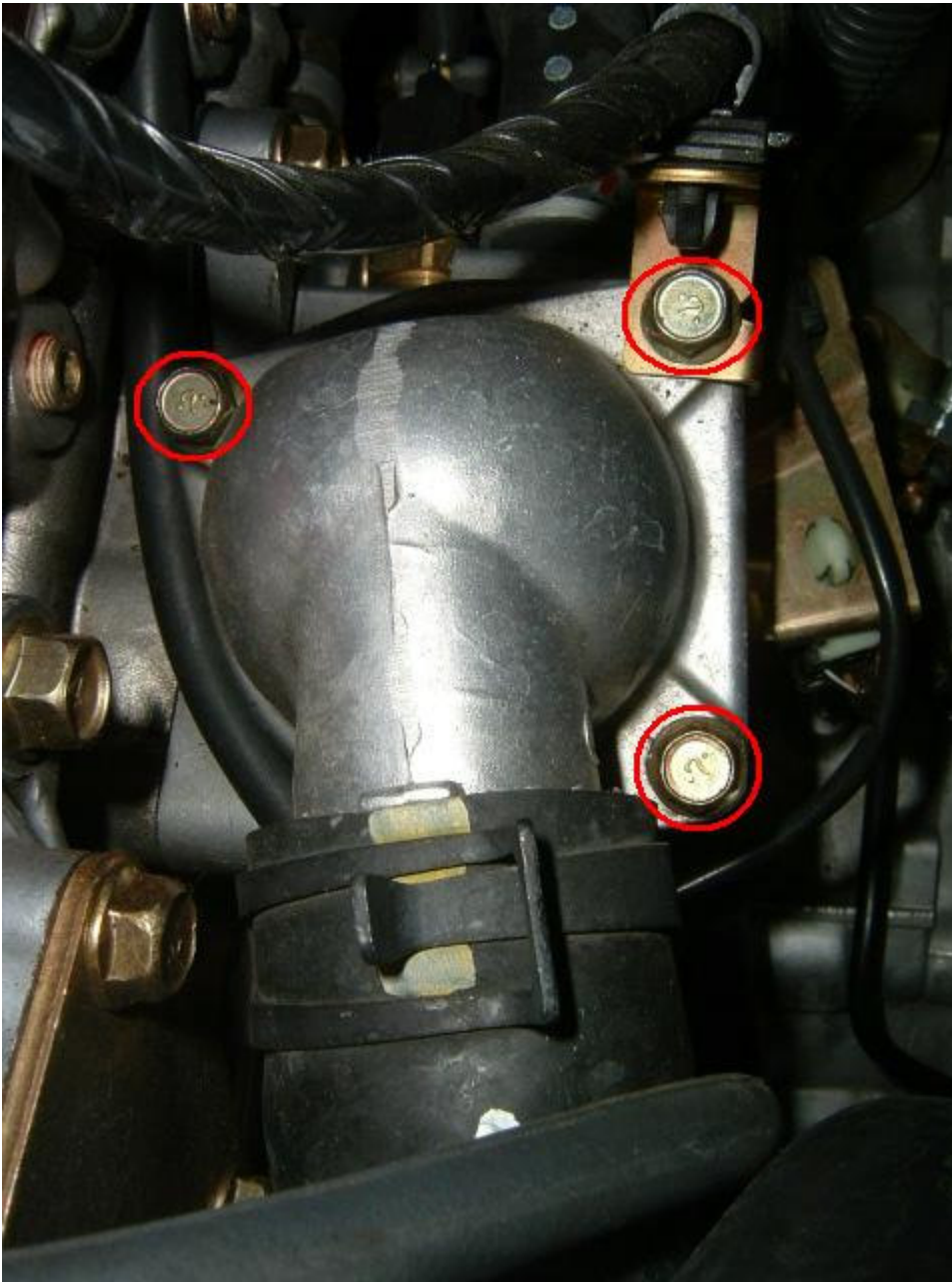


Reinstall the reservoir and torque to 44 +/- 9 in-lbs. You can also refill it to somewhere between the Min and Max lines with your desired ratio of coolant/water (see end) and replace the cap.

If you're doing your thermostat (now's really a good time), you'll want to remove a portion of your upper intercooler pipe to expose the housing:

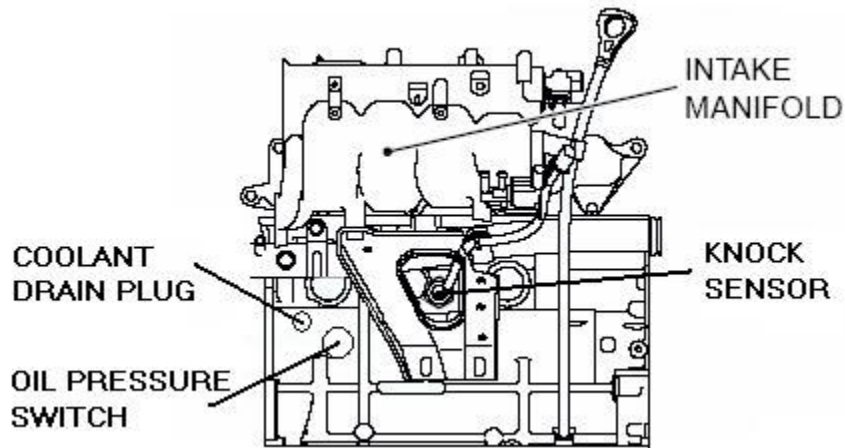


Undo the three 10mm bolts and pull up on the upper radiator hose/thermostat housing:



Pull the old thermostat out and replace it with the new one (pay attention to its orientation). Clean both sides of the housing and keep them free of coolant. Put a bead of Ultra Gray RTV around the upper housing and reinstall bolts (84 +/- 13 in-lbs). Reinstall the intercooler piping and clamps (53 +/- 9 in-lbs).

The service manual also states to remove the drain plug from the block. I found the plug (you'll need an 8mm allen head to remove it), but getting to it with just your hand is very difficult and I highly doubt getting tools back there is feasible without removing several other items (battery, etc...). This would be an approximate view from the firewall, but without various wires, vacuum lines, etc... in the way:



I did not remove this plug as I was able to extract about 5 of the 6 quarts of old coolant out of the system. If you do remove this plug, you'll want to use Loctite Blue 242 and torque it to 33 +/- 3 ft-lbs. You could also take off the lines going to the turbo, throttle body and heater core, but I chose not to.

Once all the coolant has been drained, replace the radiator plug and tighten it until snug. If you've replaced the thermostat, let the RTV cure for about an hour. Otherwise, it's time to add the coolant mix to the radiator. The manual calls for anywhere from a 30%-60% concentration of coolant/antifreeze. Remember to use distilled/deionized water (avoid mineral, spring, drinking and (especially) tap water). I went with a 25% mixture and a bottle of Water Wetter.

Once the system is "full" replace the cap, start the car and let it warm up. Rev the engine or go for a short drive and let it cool. Remove the cap when safe and top off the coolant level. It's also a good idea to make sure you've got heat and that your engine temp isn't climbing above normal (aka the halfway point on the stock gauge). If you aren't holding a normal temp and/or have no heat, there may be a pocket of air in the system which *should* work itself out.

Repeat every 30K miles according to the manual. If you're using Water Wetter like me, you'll want to change it more often as it tends to break down sooner than that.