



Mercedes W123 Diesel Thermostat Replacement

Feeling the heat? Or, on the other hand, engine not getting hot enough? It may be your thermostat. Learn to replace it here.

Written By: Nicolas Siemsen



INTRODUCTION

The thermostat on your car regulates how much coolant flows through the radiator. At first, none is allowed through; this helps the engine warm up faster to the proper operating temperature. As your engine warms the thermostat begins to open. When it reaches its proper operating temp the thermostat is fully open, allowing full coolant flow. Assuming the rest of your cooling system is in good order this full flow of coolant will keep your engine at or near the proper operating temp at all times, except under the most extreme loads. However, a failing thermostat will cause some serious heating issues on your car. In the best case scenario it will stay open, which means your car may never come up to full temp. This won't kill your engine right away, however it's bad for it in the long term. In the worst case, it will not open all the way, which could lead to your engine overheating. This could destroy your engine. So if you notice heating issues and believe it's your thermostat, it's fairly easy to replace. As always when dealing with automotive fluids you should wear the proper protective gear, such as gloves and glasses. Also be sure to catch the fluid properly and dispose of it safely and in an environmentally sound way!



TOOLS:

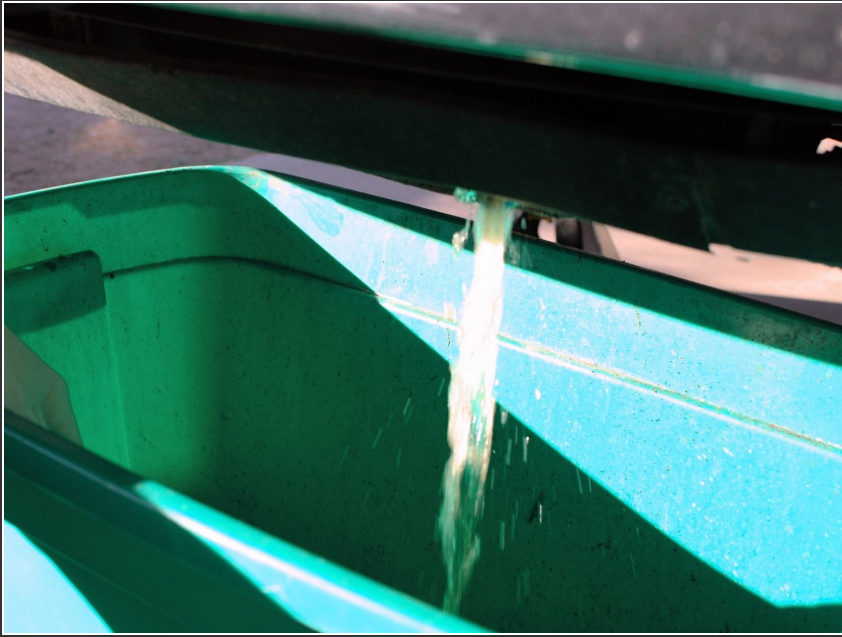
- [10mm Socket](#) (1)
- [Socket Wrench](#) (1)
- [Penetrating Lubricant](#) (1)



PARTS:

- [W123 Diesel Thermostat](#) (1)
part # 6172001815

Step 1 — Thermostat



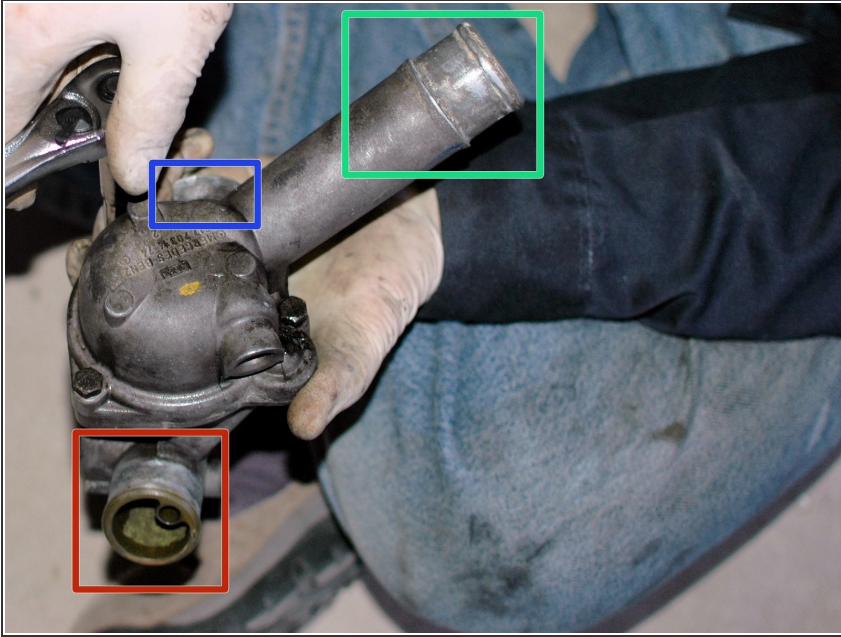
- Begin by draining the coolant from your radiator and engine block as [\[invalid guide link\]](#)

Step 2



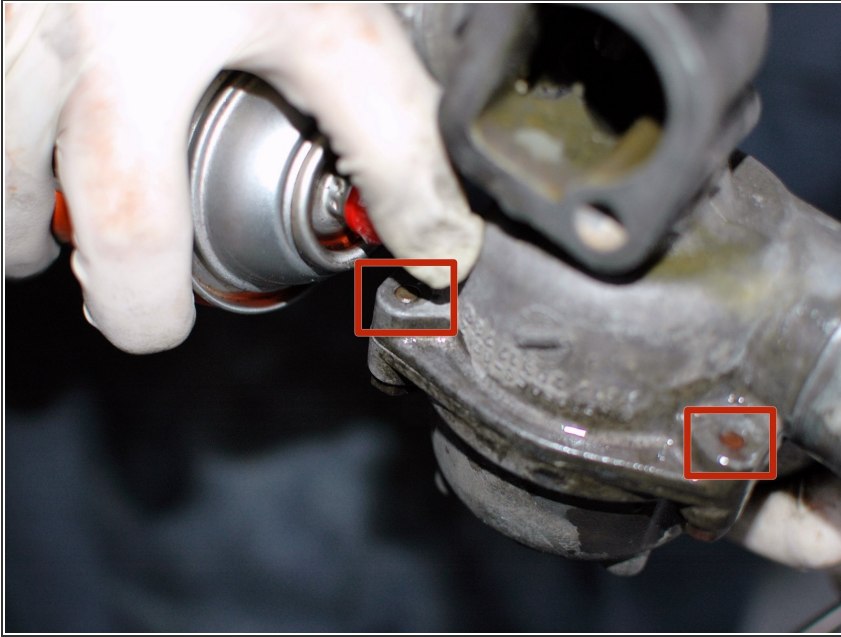
- Before installing any thermostat be sure to test it in a pot of water. This will ensure you do not install a bad thermostat.
- To test it, start by hanging it by two pieces of wire hanger from the pot handles. The thermostat should be fully submerged in the water but should not be touching the bottom of the pot.
- Then place a thermometer in the water. Use one that is designed for cooking, such as this candy thermometer.
- Heat up the water and watch as it approaches the opening temp of the thermostat. This thermostat is rated at 80°C/176°F. It should open at that temperature.
- Let the water cool again before removing it.

Step 3



- This job is being documented with the thermostat housing removed from the engine. However, it can normally be done with it still installed.
- To help orient you to the housing, here are the various components:
 - Neck for line to top of radiator, upper radiator hose connection. This is the TOP of the housing.
 - Neck for line to bottom of radiator, lower radiator hose.
 - Neck to short coolant hose under the housing, for water pump bypass.
- If you'd like to remove the housing to complete this job you can review the process in the [\[invalid guide link\]](#)

Step 4



- Before removing the bolts that hold the thermostat cover to the housing, spray all three with some penetrating lubricant. These bolts are exposed at the back and often are somewhat rusted in. Try to spray lubricant on both the back and front of the housing where the bolts are.
- The rear of two of the bolts shown here. This may be tricky to access with the housing installed in the engine but do your best.

Step 5

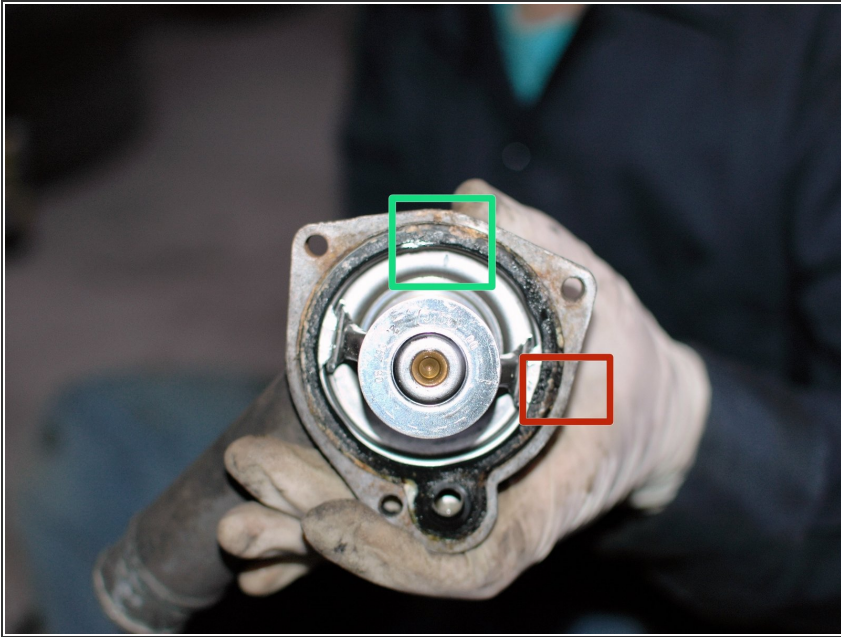


- Once the penetrating lubricant has soaked in for a few minutes use your 10mm socket and ratchet to loosen the three bolts that hold the cover on to the thermostat housing. When re-installing the nuts note that they should be torqued to 10nm / 7lb-ft

- Once the three bolts are out you can separate the cover from the housing. It will still be held in place by the

lower radiator hose but there will be plenty of room to access the thermostat.

Step 6



- With the thermostat cover separated you can see the thermostat.
- Note its orientation. The old thermostat, pictured, was installed incorrectly. The arrow on the thermostat should be facing up/towards the rear of the car. This one was facing the driver's side.
 - Top
 - Driver's side
- However, it was installed in the correct orientation at least. The side with the large spring should be facing in towards the engine.
- Remove the old thermostat and the rubber gasket from the cover.

Step 7



- Use an appropriate tool to clean up any corrosion from the face of the thermostat cover and the housing (still attached to the engine) to help it seal better.
- Install your new thermostat and the included gasket. The gasket should slip over the edge of the thermostat before it is installed.
- Now refill and bleed your cooling system as [\[invalid guide link\]](#).

To reassemble your device, follow these instructions in reverse order.