



How to change  
temperature sensor and  
engine thermostat on  
**MERCEDES-BENZ**  
**SPRINTER 3-t Bus (903)** –  
replacement guide

## SIMILAR VIDEO TUTORIAL



This video shows the replacement procedure of a similar car part on another vehicle

### Important!

This replacement procedure can be used for:

MERCEDES-BENZ SPRINTER 3-t Bus (903) 312 D 2.9, MERCEDES-BENZ SPRINTER 3-t Bus (903) 308 D 2.3, MERCEDES-BENZ SPRINTER 3-t Bus (903) 310 D 2.9 4x4

The steps may slightly vary depending on the car design.

This tutorial was created based on the replacement procedure for a similar car part on: MERCEDES-BENZ E-Class Saloon (W124) E 250 D (124.126, 124.129)

REPLACEMENT: TEMPERATURE SENSOR AND ENGINE THERMOSTAT – MERCEDES-BENZ SPRINTER 3-T BUS (903). TOOLS YOU'LL NEED:



- Wire brush
- All-purpose cleaning spray
- Dielectric grease
- Torque wrench
- Combination spanner #10
- Combination spanner #19
- Drive socket # 7
- Drive socket # 10
- Drive socket # 22
- Ratchet wrench
- Flat screwdriver
- Funnel
- Fluid container
- Fender cover

**Buy tools**

Replacement: temperature sensor and engine thermostat – MERCEDES-BENZ SPRINTER 3-t Bus (903). AUTODOC experts recommend:

- Check the condition of the coolant every time you replace the thermostat. Change the coolant if necessary.
- All work should be done with the engine stopped.
- All work should be done with the engine stopped.

## REPLACEMENT: TEMPERATURE SENSOR AND ENGINE THERMOSTAT – MERCEDES-BENZ SPRINTER 3-T BUS (903). TAKE THE FOLLOWING STEPS:

**1** Open the bonnet.

**2** Use a fender protection cover to prevent damaging paintwork and plastic parts of the car.

**3** Loosen the air filter hose clamps. Use a drive socket #7. Use a ratchet wrench.



**4** Remove the air intake hose.



**5** Cover the throttle body with a microfibre towel to prevent dust and dirt from getting into the system.



**6** Unscrew the coolant reservoir cap.



**7** Lift the car using a jack or place it over an inspection pit.

**8** Prepare a container for fluids.

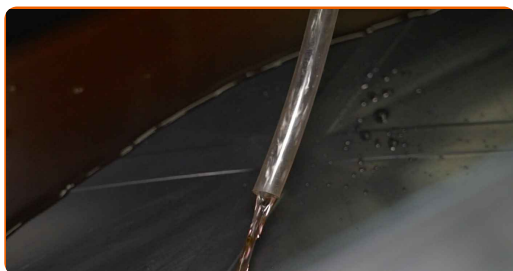


**9** Open the coolant drain tap. Use a flat screwdriver.



10

Drain the coolant from the engine.



Replacement: temperature sensor and engine thermostat – MERCEDES-BENZ SPRINTER 3-t Bus (903). Tip:

- All work should be done with the engine stopped.
- Wait until the coolant has completely flowed out of the drain hole.

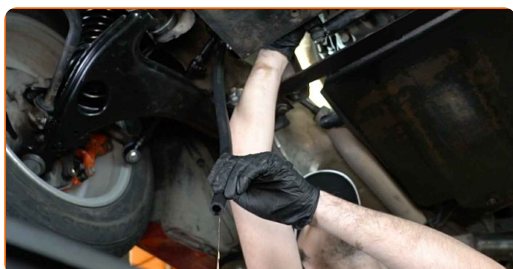
11

Unscrew the coolant drain plug on the engine block. Use a combination spanner #19.



12

Drain the coolant from the engine.



**AUTODOC recommends:**

- All work should be done with the engine stopped.
- Wait until the coolant has completely flowed out of the drain hole.

**13**

Screw in the coolant drain plug on the engine block. Use a combination spanner #19.



**14**

Close the coolant drain tap. Use a flat screwdriver.



**15**

Clean the thermostat housing fasteners. Use a wire brush. Use all-purpose cleaning spray.





- 16 Unscrew the thermostat housing fasteners. Use a combination spanner #10. Use a drive socket #10. Use a ratchet wrench.



- 17 Remove the fastening bolts.



- 18 Loosen the coolant hose clamp. Use a drive socket #7. Use a ratchet wrench.



- 19 Detach the coolant hose.



Replacement: temperature sensor and engine thermostat – MERCEDES-BENZ SPRINTER 3-t Bus (903). AUTODOC recommends:

- Be careful! The coolant may leak.



**20** Remove the thermostat together with the housing.



**21** Clean the thermostat housing mounting seat. Use a wire brush. Use all-purpose cleaning spray.



**22** Remove the thermostat.



**23** Clean the thermostat mounting seat. Use a wire brush. Use all-purpose cleaning spray.

**24** Install a new thermostat.



**25** Install the thermostat together with the housing.



**26** Install the fastening bolts.



**27** Tighten the thermostat housing fasteners. Use a drive socket #10. Use a torque wrench. Tighten it to 12 Nm torque.



**28** Attach the coolant hose.



**29** Secure the coolant hose clamp. Use a drive socket #7. Use a ratchet wrench.



**30** Unplug the connector of the coolant temperature sensor. Use a flat screwdriver.



**31** Clean the coolant temperature sensor. Use a wire brush. Use all-purpose cleaning spray.



**32** Unscrew the coolant temperature sensor. Use a drive socket #22. Use a ratchet wrench.



**33** Install a new coolant temperature sensor.



Replacement: temperature sensor and engine thermostat – MERCEDES-BENZ SPRINTER 3-t Bus (903). Tip from AUTODOC experts:

- Be sure to use a new O-ring when installing the sensor.

**34** Screw in and tighten the coolant temperature sensor. Use a drive socket #22. Use a torque wrench. Tighten it to 25 Nm torque.



**35** Treat the coolant temperature sensor connector. Use dielectric grease.



**36** Plug in the connector of the coolant temperature sensor.



**37** Remove the microfibre towel from the throttle body.



**38** Install the air intake hose and secure it.



**39** Tighten the air filter hose clamps. Use a drive socket #7. Use a ratchet wrench.



**40** Remove the coolant reservoir cap.



**41** Insert the funnel.





**42**

Pour coolant in the coolant reservoir.



**AUTODOC recommends:**

- Only use the coolant recommended by the manufacturer.
- The coolant level should be at the MAX mark.
- Wait until the air goes out of the system.

**43**

Run the engine for a few minutes.

**Replacement: temperature sensor and engine thermostat – MERCEDES-BENZ SPRINTER 3-t Bus (903). Professionals recommend:**

- This should be done in order to remove residual air from the cooling system and to check if the components are operating correctly.

**44**

Shut off the engine.

**45**

Install the coolant reservoir cap.



46

Screw on the coolant reservoir cap.



47

Remove the fender protection cover.

48

Close the hood.

**WELL DONE!** 

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