



How to change spark
plugs on **LEXUS LS II**
(XF20) – 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:
LEXUS LS II (XF20) 4.0

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: LEXUS RX II (XU30) 3.3 400h AWD

REPLACEMENT: SPARK PLUGS – LEXUS LS II (XF20).
 TOOLS YOU MIGHT NEED:



- All-purpose cleaning spray
- High-temperature anti-seize lubricant
- Drive socket # 10
- Drive socket # 12
- Drive socket # 14
- Spark plug socket # 16
- HEX bit no.H8.
- Ratchet wrench
- Torque wrench
- Clic-R collar pliers
- Clip removal tool
- Flat Screwdriver
- Microfibre towel
- Fender cover

Buy tools

Replacement: spark plugs – LEXUS LS II (XF20). AUTODOC experts recommend:

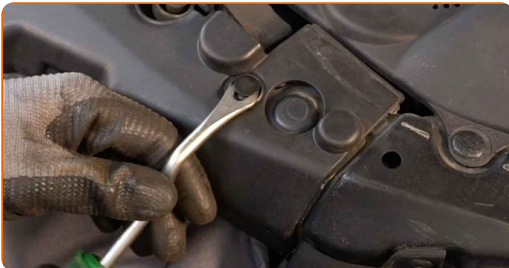
- The replacement procedure is the same for all spark plugs.
- Please note: all work on the car – LEXUS LS II (XF20) – should be done with the engine switched off.

CARRY OUT REPLACEMENT IN THE FOLLOWING ORDER:

1 Open the bonnet.

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

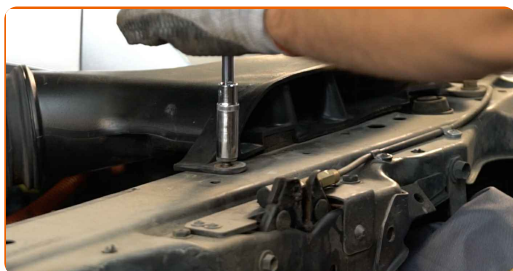
3 Remove the radiator support cover clips. Use a clip removal tool.



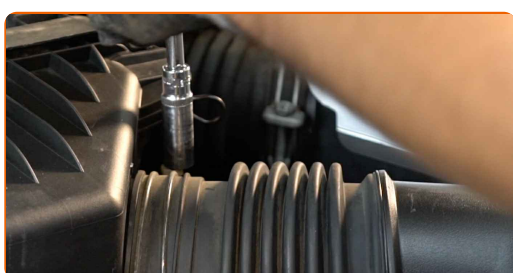
4 Remove the radiator support cover.



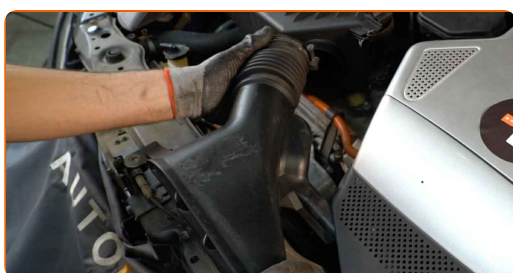
5 Loosen the air intake fastening. Use a drive socket #10. Use a ratchet wrench.



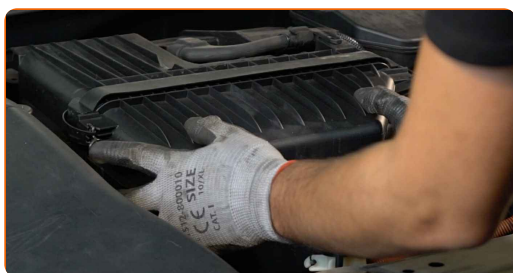
6 Loosen the fastening clamp connecting the air duct to the air filter housing. Use a drive socket #10. Use a ratchet wrench.



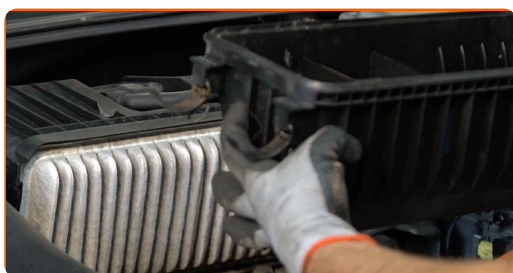
7 Detach the air duct housing from the air filter housing.



8 Release the air filter cover clips.



9 Take off the filter lid.



10 Remove the filter element from the filter housing.



11 Press down the pop clips of the protective cover. Remove the protective cover. Use a flat screwdriver.



12 Remove the engine cover clips.



13 Remove the engine cover.



14 Unscrew the air filter box fasteners. Use a drive socket #10. Use a ratchet wrench.



15 Remove the air filter box.



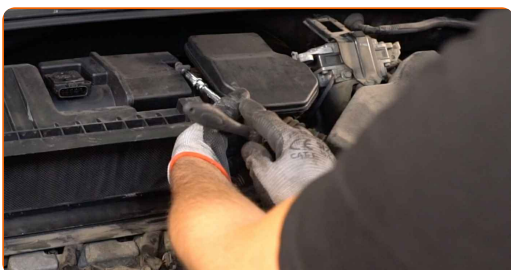
16 Unplug the mass air flow sensor connector. Use a flat screwdriver.



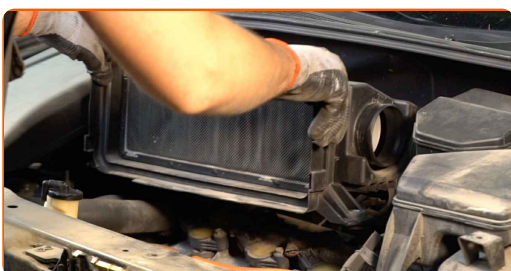
17 Unscrew the air intake resonator clamp from the air filter housing. Use a drive socket #10. Use a ratchet wrench.



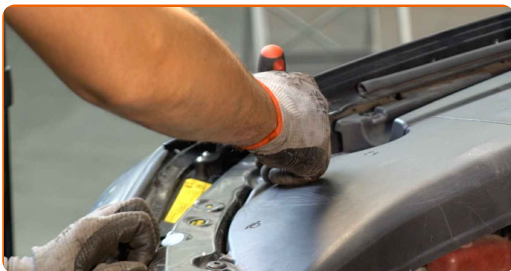
18 Unscrew the filter housing fastening bolts. Use a drive socket #10. Use a ratchet wrench.



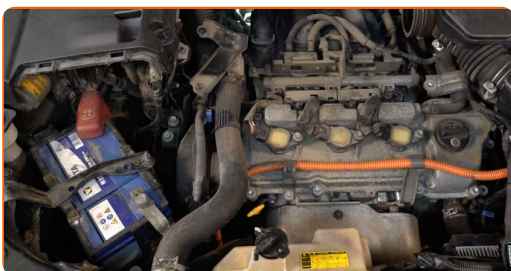
19 Remove the air filter housing.



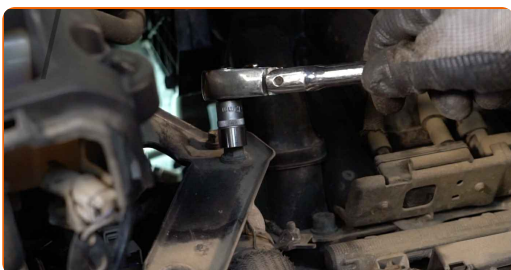
20 Remove the battery cover clips. Use a flat screwdriver.



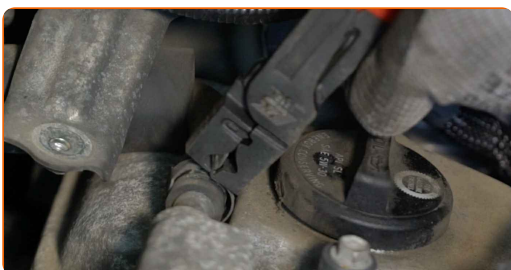
21 Remove the battery cover.



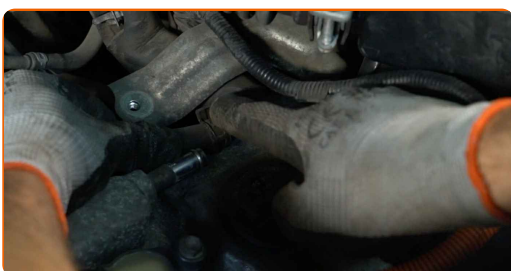
22 Unscrew the air filter housing bracket. Use a drive socket #12. Use a ratchet wrench.



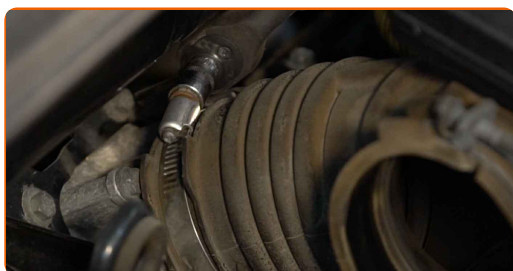
23 Detach the crankcase ventilation hose clamp. Use clic-R collar pliers.



24 On the right side, detach the PCV valve hose from the engine cover.



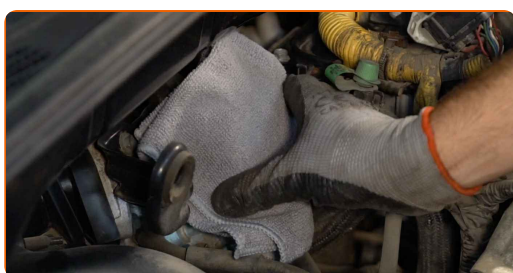
- 25 Unscrew the clamp that fastens the air filter hose to the throttle body. Use a drive socket #10. Use a ratchet wrench.



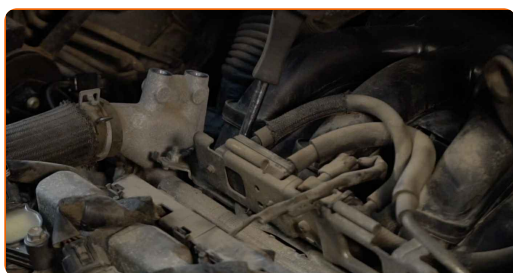
- 26 Dismantle the air filter pipe.



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



- 28 Unscrew the vacuum system bracket. Use a drive socket #12. Use a ratchet wrench.



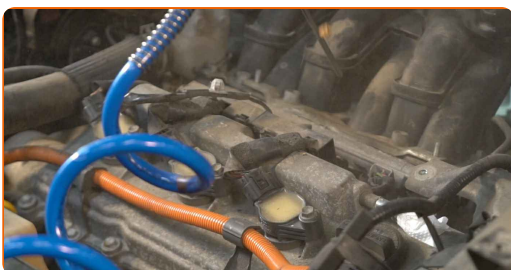
29 Detach the vacuum sensor connector. Use a flat screwdriver.



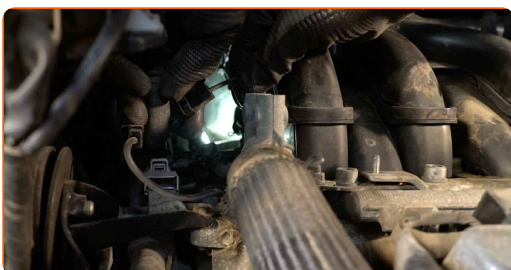
30 Detach the vacuum sensor hose.



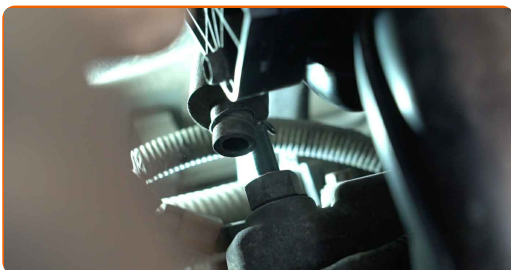
31 Clean the intake manifold fasteners. Use all-purpose cleaning spray.



32 Detach the ground wire connector.



33 Detach the crankcase ventilation hose clamp.



34 Detach the crankcase ventilation hose from the engine cover at the left.

35 Unscrew the intake manifold fasteners. Use a drive socket #14. Use a ratchet wrench.



36 Detach the throttle valve connectors.



37 Unscrew the intake manifold fasteners. Use HEX No.H8. Use a ratchet wrench.



38 Clean the intake manifold fasteners.



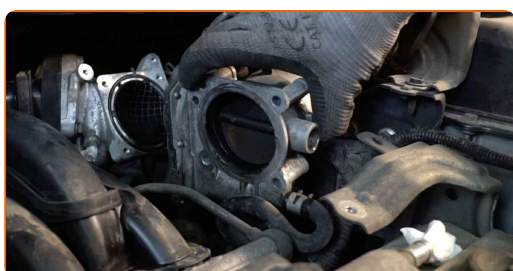
- 39 Unscrew the fasteners connecting the throttle valve to the intake manifold. Use a drive socket #12. Use a ratchet wrench.



- 40 Detach the throttle body from the intake manifold.



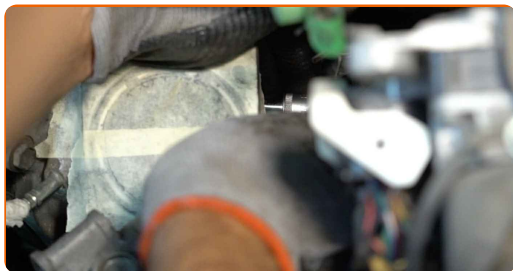
- 41 Clean the throttle body fasteners. Use all-purpose cleaning spray.



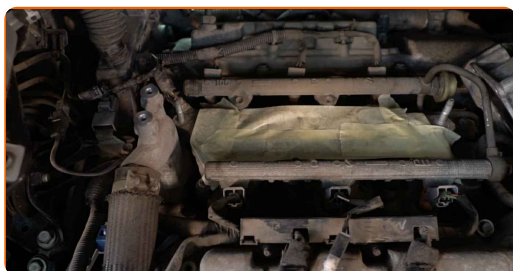
- 42 Cover the intake manifold passages with a microfibre towel to prevent dust and dirt from getting inside.



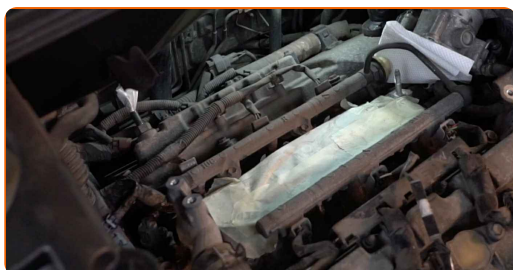
43 Unscrew the intake manifold fasteners. Use a drive socket #12. Use a ratchet wrench.



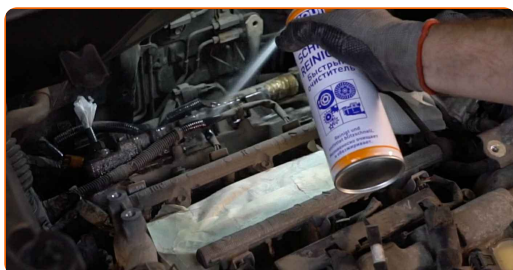
44 Remove the intake manifold.



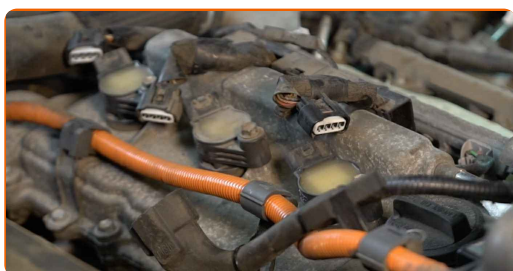
45 Cover the intake channels of the engine with a microfibre cloth to prevent dust and dirt from getting inside.



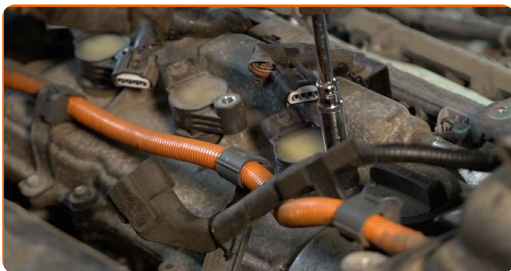
46 Clean the ignition coils. Use all-purpose cleaning spray.



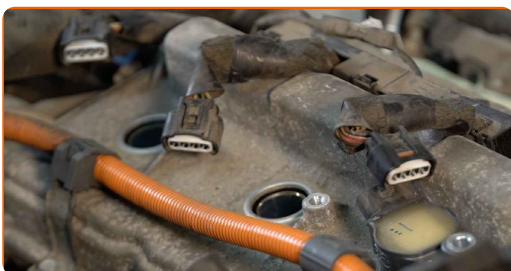
47 Unplug the connectors from the ignition coils. Use a flat screwdriver.



48 Unscrew the fasteners of the ignition coils. Use a drive socket #10. Use a ratchet wrench.



49 Take out the ignition coils from the spark plug wells.



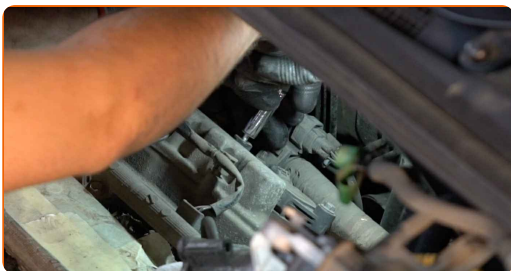
Replacement: spark plugs – LEXUS LS II (XF20). Tip:

- Remember the sequence of steps for ignition coil demounting.

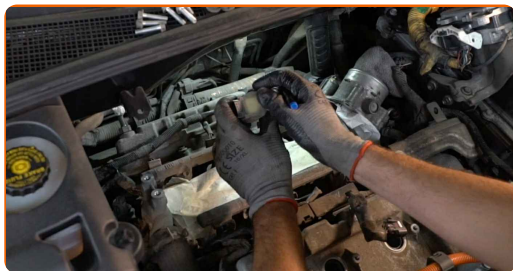
50 Unplug the connectors from the ignition coils. Use a flat screwdriver.



51 Unscrew the fasteners of the ignition coils. Use a drive socket #10. Use a ratchet wrench.



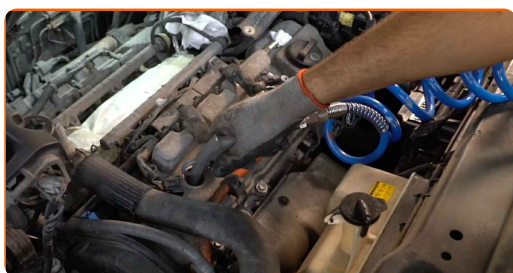
52 Take out the ignition coils from the spark plug wells.



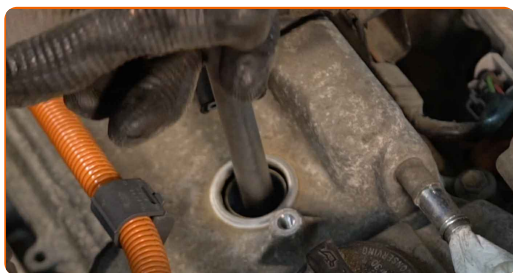
Replacement: spark plugs – LEXUS LS II (XF20). AUTODOC recommends:

- Remember the sequence of steps for ignition coil demounting.

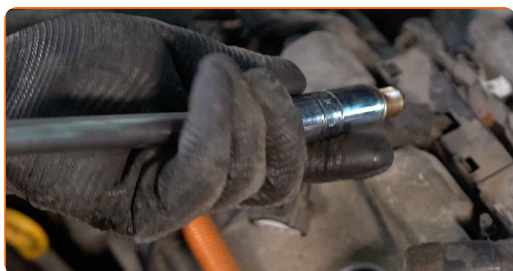
53 Clean dirt, dust and debris from inside the spark plug wells.



54 Unscrew the spark plugs. Use the spark plug socket #16. Use a ratchet wrench.

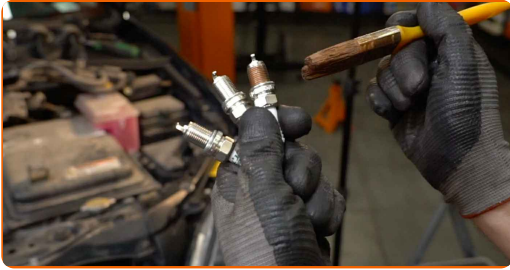


55 Take out the spark plugs.



56

Apply a thin layer of a special high temperature anti-seize lubricant to the threads of the new spark plugs.



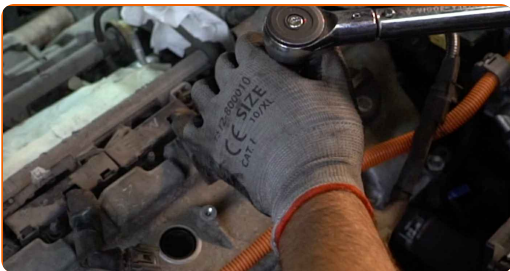
57

Install the new spark plugs into their mounting seats. Use the spark plug socket #16. Use a ratchet wrench.



58

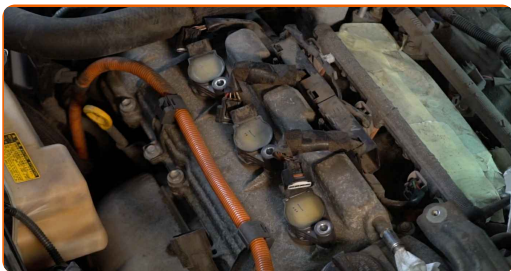
Screw new spark plugs and tighten them. Use the spark plug socket #16. Use a torque wrench. Tighten it to 26 nm torque.



Replacement: spark plugs – LEXUS LS II (XF20). Professionals recommend:

- Don't tighten the plugs with excessive force. Exceeding tightening torque can damage the thread connection.
- Be careful when working with a spark plug wrench. Its skewing can cause damage to the threaded connection.

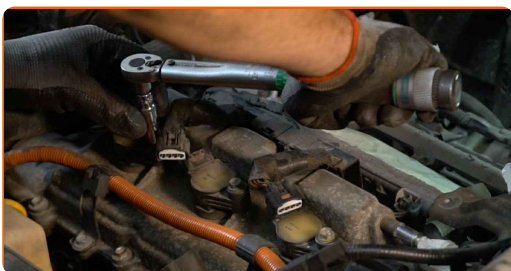
59 Install the ignition coils to the spark plug wells. Make sure you hear a click indicating that it is locked in place.



Replacement: spark plugs – LEXUS LS II (XF20). Tip from AUTODOC experts:

- Follow the installation sequence.

60 Tighten the ignition coil fastening. Use a drive socket #10. Use a torque wrench. Tighten it to 8 nm torque.

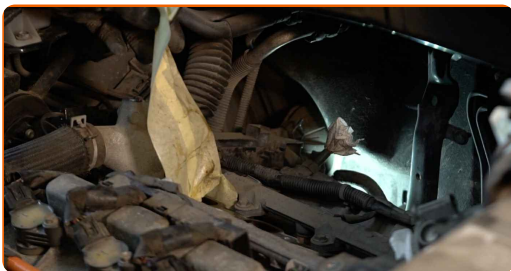


61 Plug in the connectors of the ignition coils.

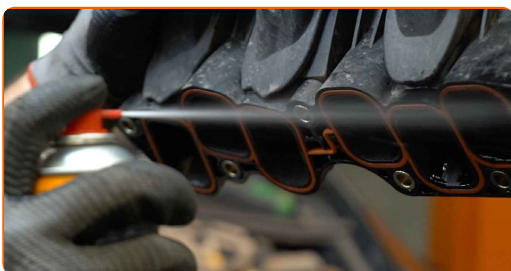


62 Clean the intake manifold mounting seats. Use all-purpose cleaning spray.

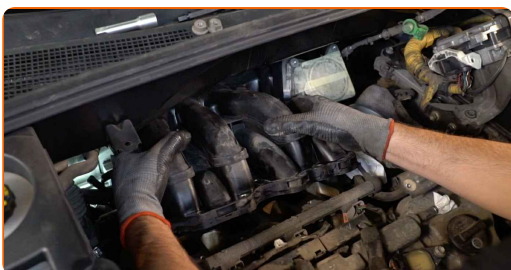
63 Remove the microfibre cloth from the engine intake channels.



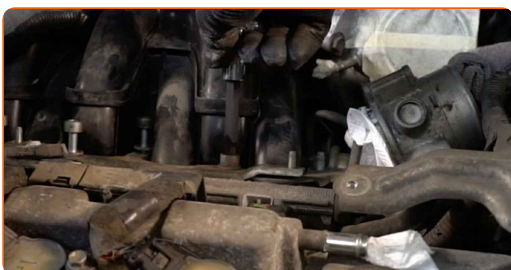
64 Clean the intake manifold. Use all-purpose cleaning spray.



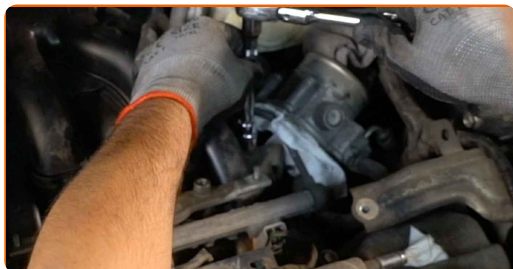
65 Install the intake manifold.



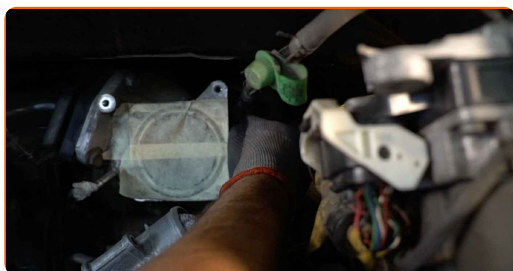
66 Tighten the intake manifold fasteners. Use HEX No.H8. Use a ratchet wrench.



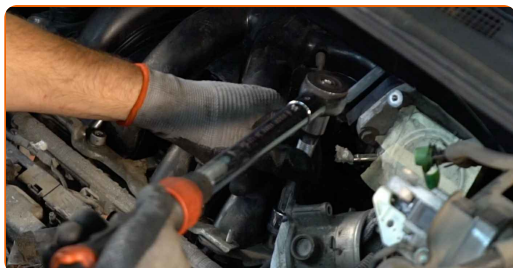
67 Tighten the intake manifold fasteners. Use a drive socket #14. Use a ratchet wrench.



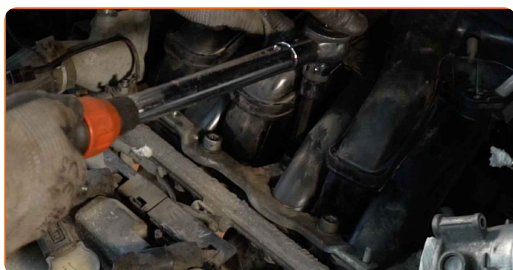
68 Tighten the intake manifold fasteners. Use a drive socket #12. Use a ratchet wrench.



69 Tighten the intake manifold fasteners. Use a drive socket #14. Use a torque wrench. Tighten it to 15 nm torque.



70 Tighten the intake manifold fasteners. Use HEX No.H8. Use a torque wrench. Tighten it to 15 nm torque.



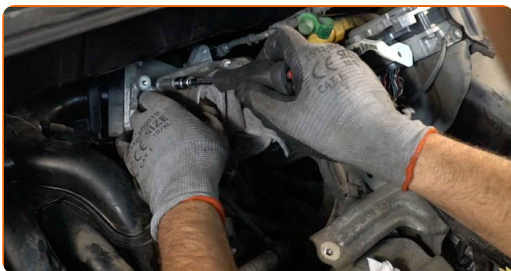
71 Remove the microfibre towel from the intake manifold.



72 Attach the throttle body to the intake manifold.



73 Tighten the throttle valve fasteners. Use a drive socket #12. Use a ratchet wrench.



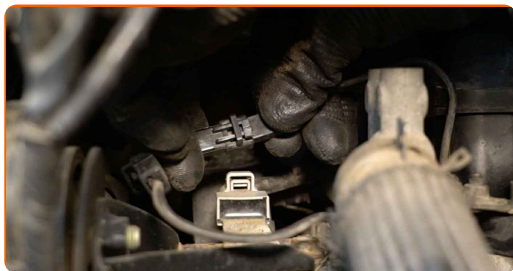
74 Attach the crankcase ventilation hose to the engine cover at the left.



75 Install the clamp of the crankcase ventilation hose.

76

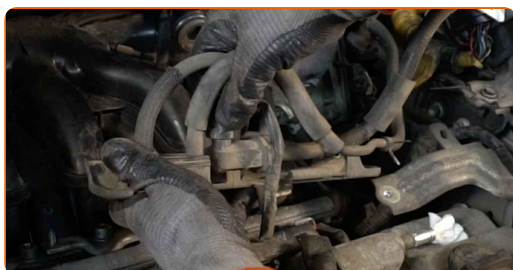
Attach the ground wire connector.

**77**

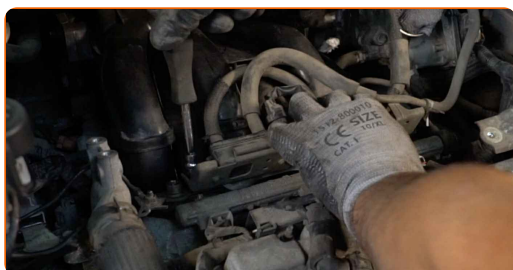
Attach the throttle valve connectors.

**78**

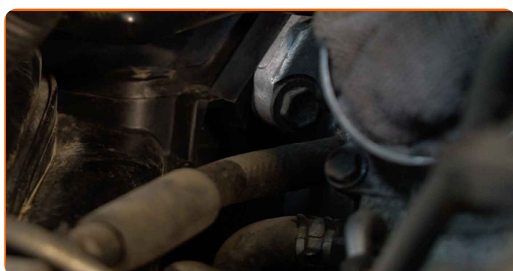
Attach the vacuum sensor connector.

**79**

Screw in the vacuum system bracket. Use a drive socket #12. Use a ratchet wrench.

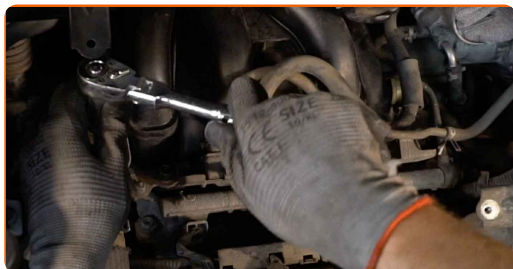
**80**

Attach the vacuum sensor hose.



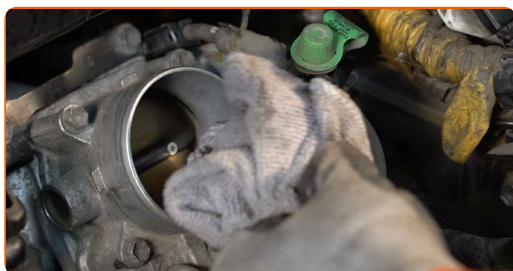
81

Screw in the air filter housing bracket. Use a drive socket #12. Use a ratchet wrench.



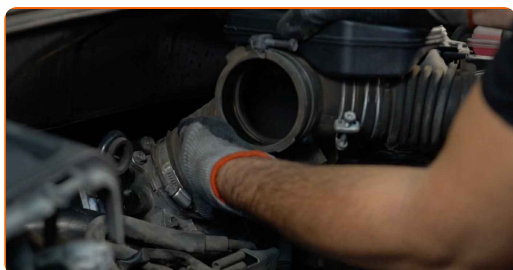
82

Remove the microfibre towel from the throttle body.



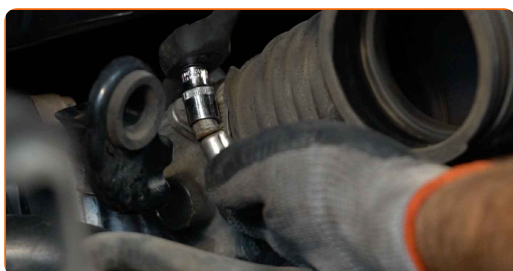
83

Install the air filter pipe.



84

Screw in the clamp that connects the air filter hose to the throttle body. Use a drive socket #10. Use a ratchet wrench.

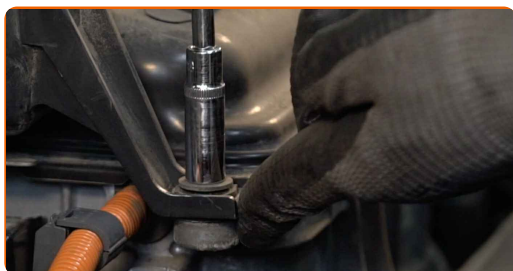


85

Install the air filter box.

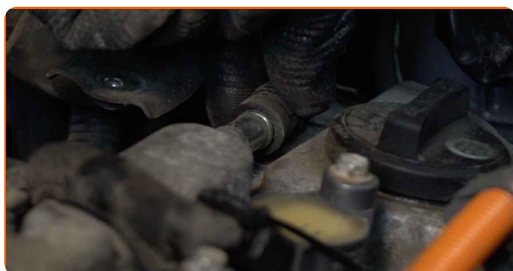
86

Screw in the air filter box fasteners. Use a drive socket #10. Use a ratchet wrench.



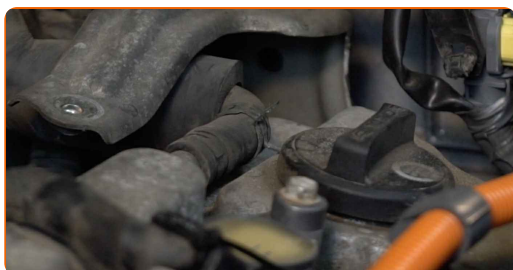
87

On the right side, attach the PCV valve hose to the engine cover.



88

Install the clamp of the crankcase ventilation hose. Use clic-R collar pliers.

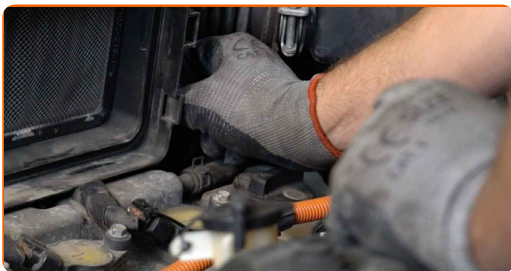


89

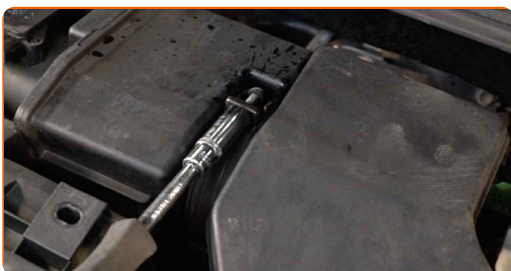
Reinstall the air filter housing.



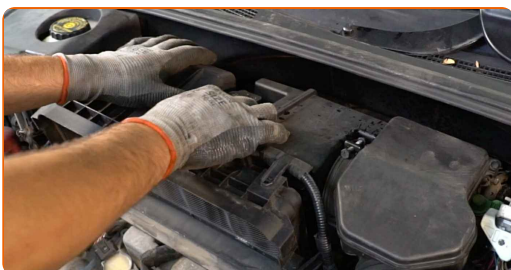
90 Screw the filter housing fastening bolts. Use a drive socket #10. Use a ratchet wrench.



91 Screw in the air intake resonator clamp to the air filter housing. Use a drive socket #10. Use a ratchet wrench.



92 Plug in the mass air flow sensor connector.



93 Install the battery cover. Reinstall the battery cover clips.



94 Install the engine cover. Reinstall the engine cover clips.



95

Install the protective cover. Reinstall the pop clips of the protective cover.



96

Insert the filter cartridge into the filter housing. Make sure that the filter edge fits tight to the housing.



Replacement: spark plugs – LEXUS LS II (XF20). AUTODOC recommends:

- Check out the correct location of the filter element. Do not skew.
- During installation, make sure to prevent dust and dirt from getting into the air filter housing.

97

Clean the air filter cover and housing.



98 Reinstall the air filter cover. Fasten it.



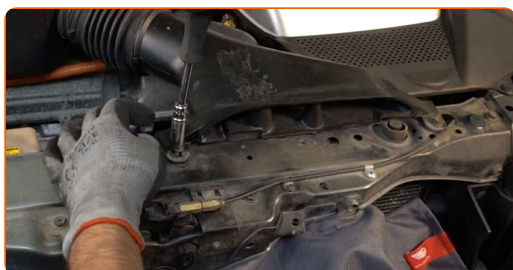
99 Press the air filter cover clips into place.



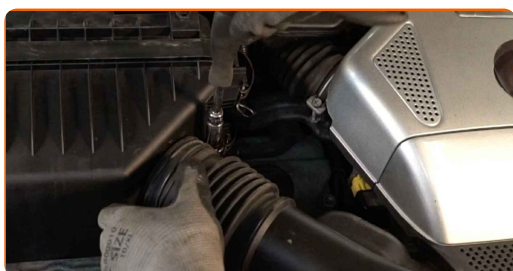
100 Install the air duct housing.



101 Secure the fastener of the air intake duct. Use a drive socket #10. Use a ratchet wrench.



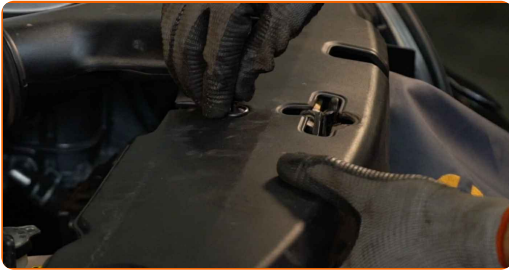
102 Screw the fastening clamp connecting the air duct to the air filter housing. Use a drive socket #10. Use a ratchet wrench.



103 Install the radiator support cover.



104 Install the radiator support cover clips.



105 Run the engine for a few minutes. This is necessary in order to make sure that the component operates properly.

106 Shut off the engine.

107 Remove the fender protection cover.

108 Close the hood.

WELL DONE! 

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