

TO-15000 UAZ-SGR

Repair instructions number
00502

Repair instructions name
TO-15000 UAZ-SGR

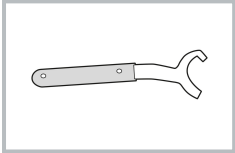
Applies to
UAZ 220695000046204
...

Model
BUS

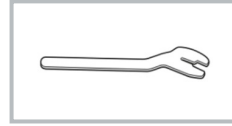
Production period
all

Modification
Not selected

Special tools

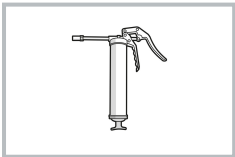


Wrench for holding the water pump shaft
005500000404900

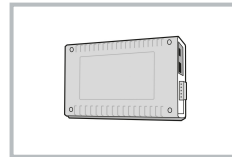


Fan viscous clutch removal key
005500000355600

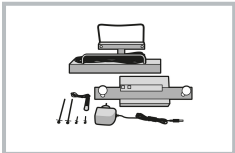
General equipment



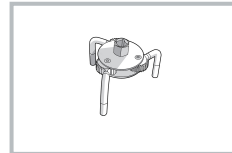
Grease gun



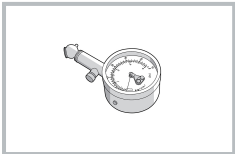
Diagnostic system UAZ



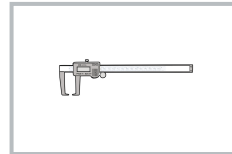
A device for measuring the total backlash of the steering



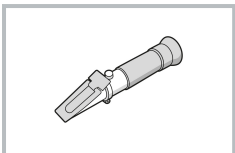
Oil filter remover



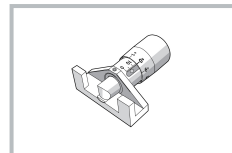
Tire pressure gauge



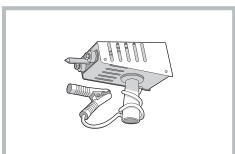
Caliper



A device for measuring the density of a coolant (refractometer)



Universal belt tension tester



Load fork

Refer to the instructions - COMBI - Car installation on lift (C) (00410)

Refer to the instructions - UAZ SANITARY CAR FOR MEDICAL SERVICES, BUS, GLAZED VAN, HATCH, RIGID VEHICLE - Right engine mudguard - Removal / Installation (C) (28011)

Refer to the instructions - UAZ SANITARY CAR FOR MEDICAL SERVICES, BUS, GLAZED VAN, HATCH, RIGID VEHICLE - Left engine mudguard - Removal / Installation (C) (28012)

1. Work outside the car:

IMAGE

OPERATION DESCRIPTION



1. Check by inspection for chips, cracks and foci of corrosion of the body paintwork.

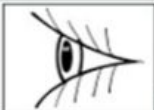
The presence of chips, cracks and centers of corrosion of the body paintwork is not allowed.

Img 1



2. Check by inspection for chips, cracks on glass and rear-view mirrors, lighting and light signaling devices.

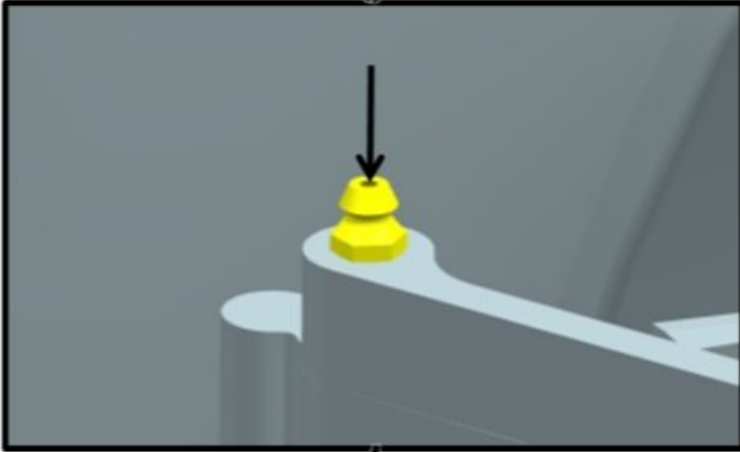
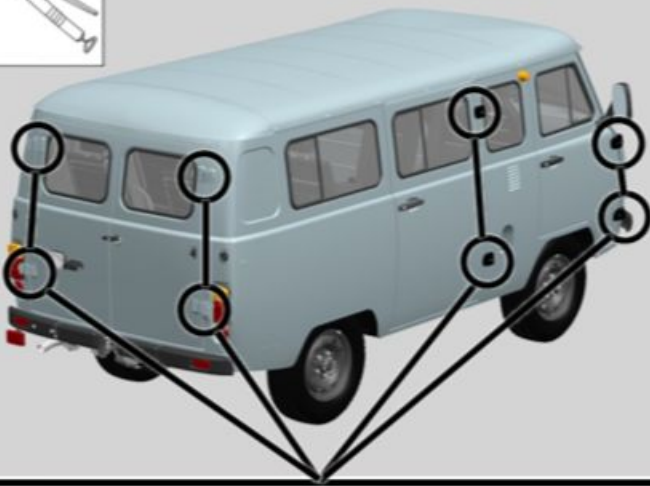
The presence of chips, cracks on glass and rear-view mirrors, lighting and light signaling devices is not allowed.



Img 2



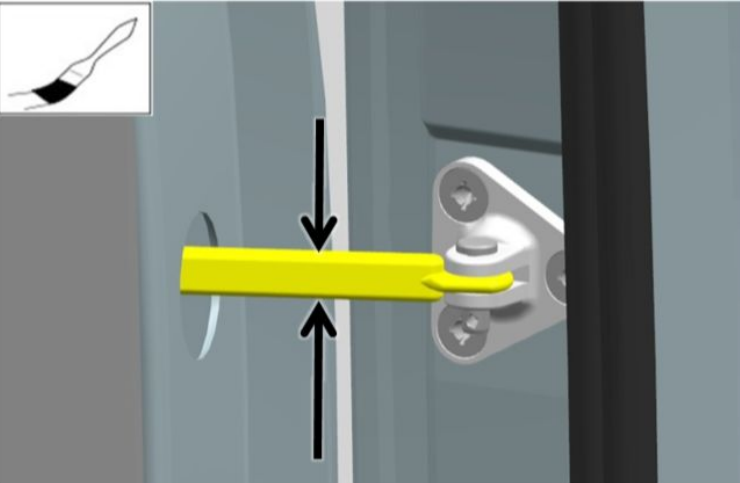
3. Apply grease to the door hinges.



Img 3

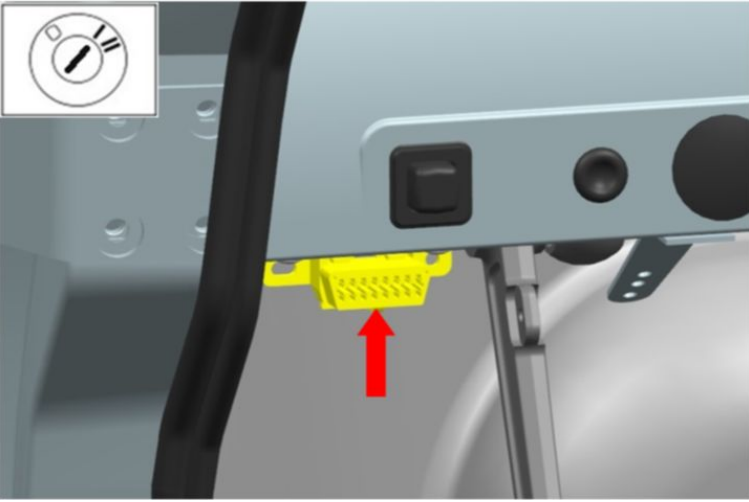


4. Apply grease to the front door stops.



Img 4

2. Work inside the car:



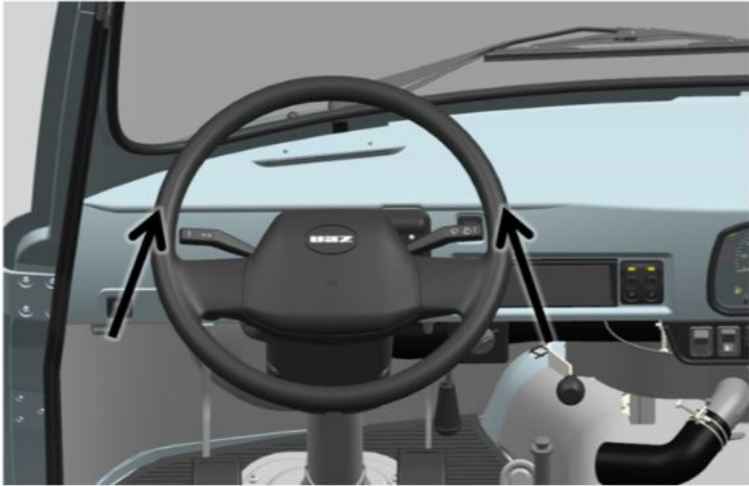
Img 1

1. Connect the UAZ diagnostic system to the OBD-2 connector.

2. Switch on the ignition.

3. Check for DTCs in the ECM.

4. Check for fault codes in the ABS control unit.



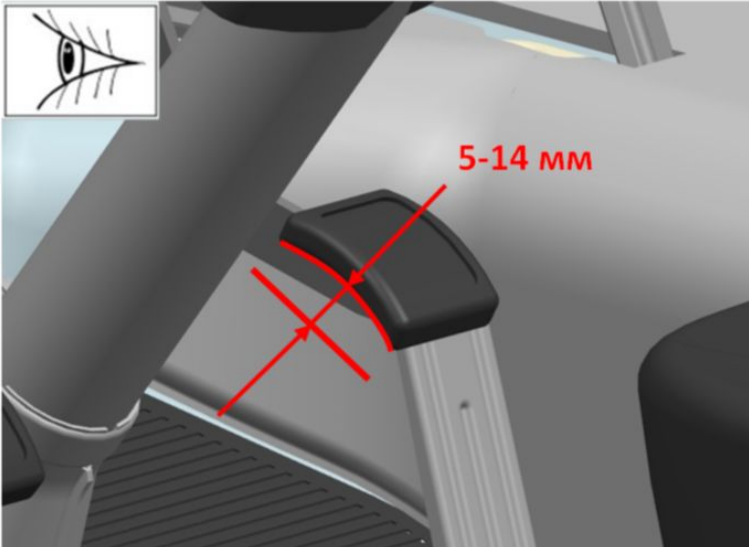
5. Install the parts of the device for measuring the total backlash of the steering on the steering wheel and on the left front wheel of the car.

6. Check the total backlash of the steering according to the operating instructions of the device.

The total backlash should not exceed 20 degrees.



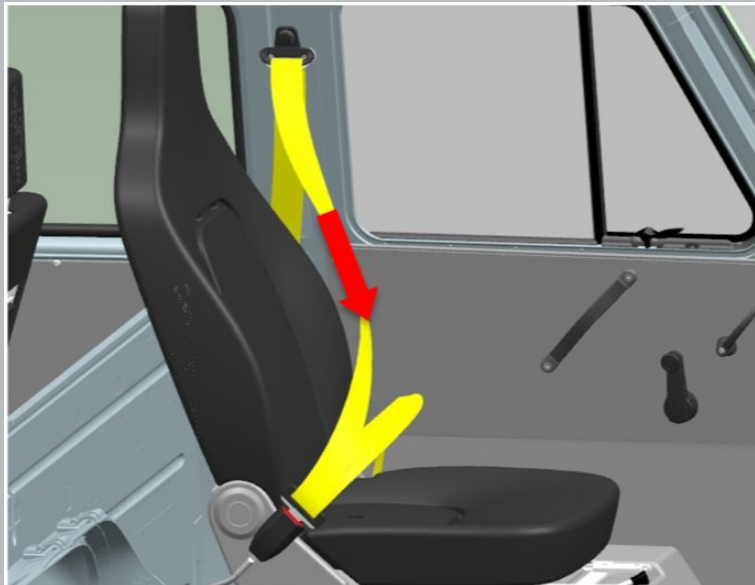
Img 2



7. Check the free play of the brake pedal.

The amount of free travel of the brake pedal should be 5-14 mm.

Img 3



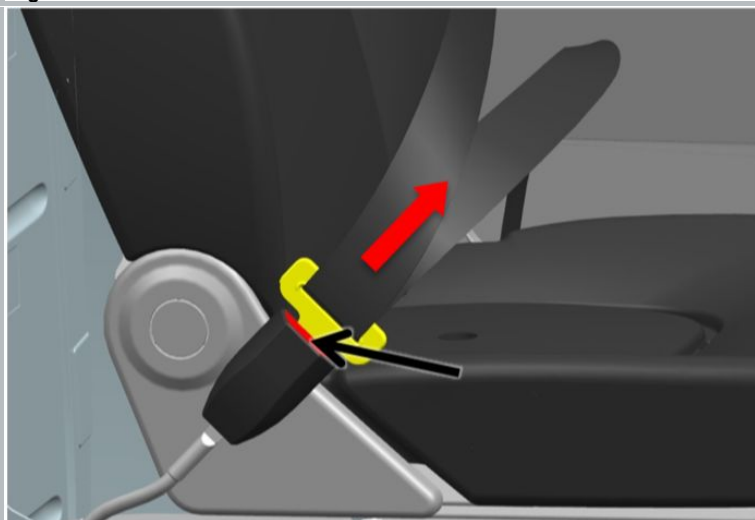
8. Check the operation of the seat belt retractor.

The device should wind the belt around the reel easily and without jamming.

9. Check the functionality of the inertia reel of seat belts.

When pulling sharply at different lengths, the inertial coil should block the change in the length of the belt.

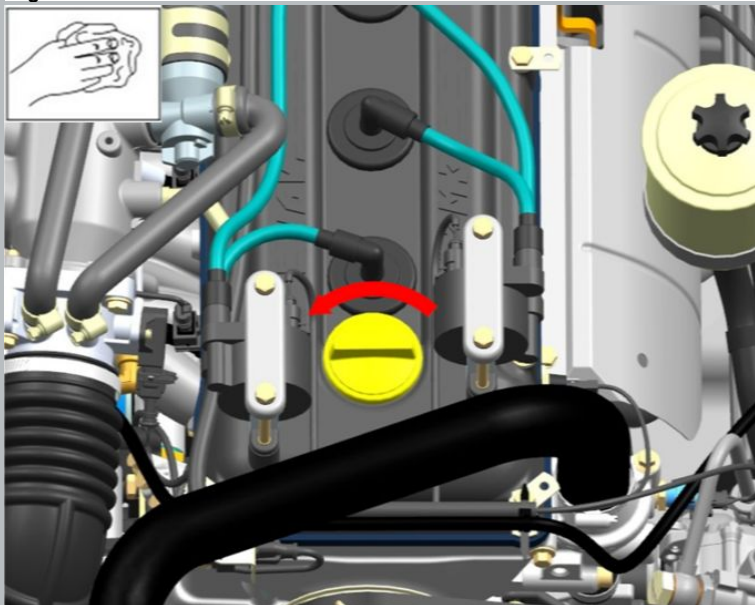
Img 4



10. Check the operation of the seat belt locking device.

The belt buckle must fit securely in the device. When unlocking, the buckle must be thrown out of the locking device.

Img 5



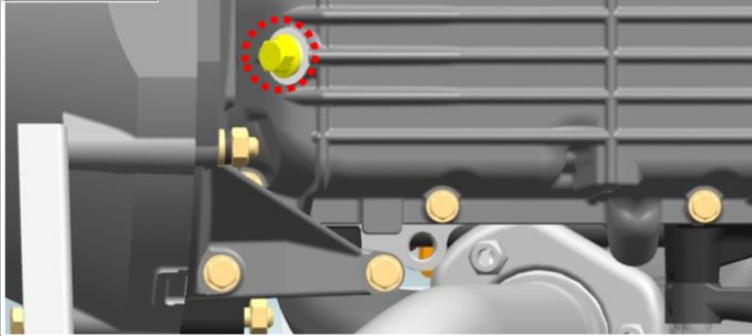
11. Warm up the engine to operating temperature.

12. Remove the engine oil filler cap.

Img 6

3. Work under the car bottom:

IMAGE	OPERATION DESCRIPTION



Img 1

1. Place a container under the oil sump to drain the oil.

2. Unscrew the drain plug on the engine crankcase.

tightening torque- 28 N·m

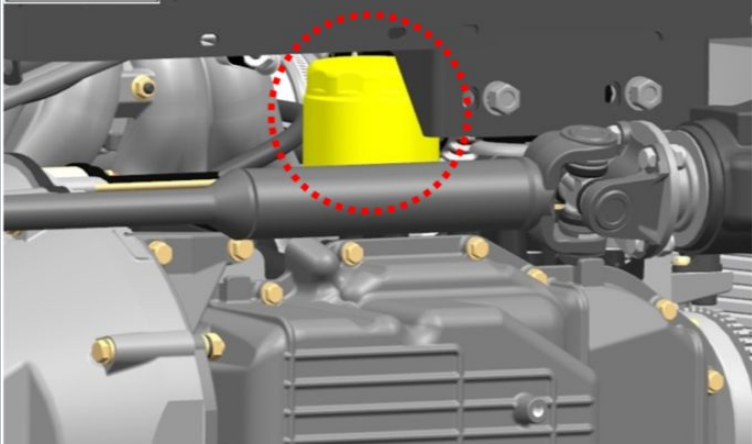
⚠ NOTIFICATION: Reuse of the O-ring is not permitted.

3. Let the oil drain.

Waiting time is 3-5 minutes.

4. Close the drain plug.

tightening torque- 28 N·m



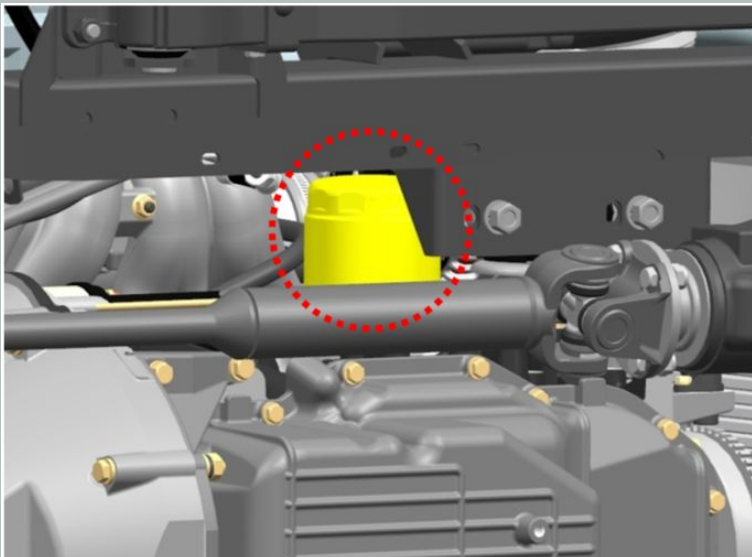
Img 2

5. Unscrew the oil filter.

tightening torque- 20 N·m

Make sure the filter O-ring is not left on the heat exchanger.

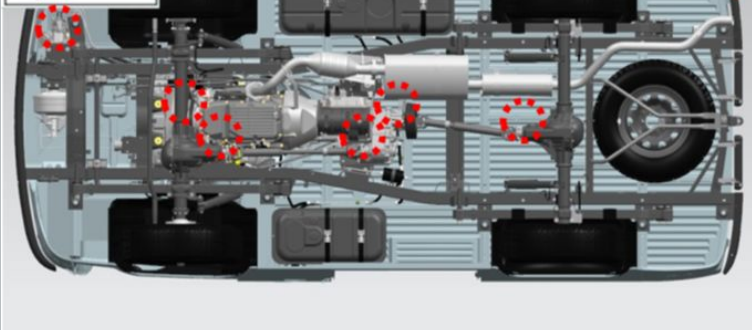
⚠ NOTIFICATION: Filter reuse is not allowed.



Img 3

6. Screw on the filter.

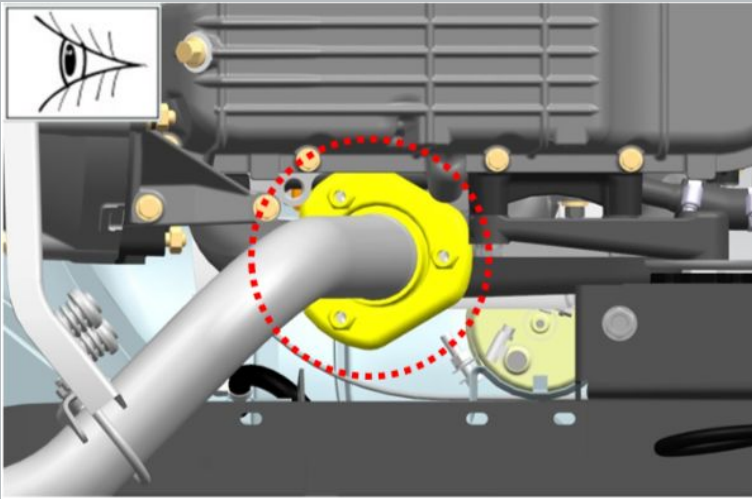
Screw in the filter until the O-ring touches the plane on the heat exchanger, and then turn the filter 3/4 turn.



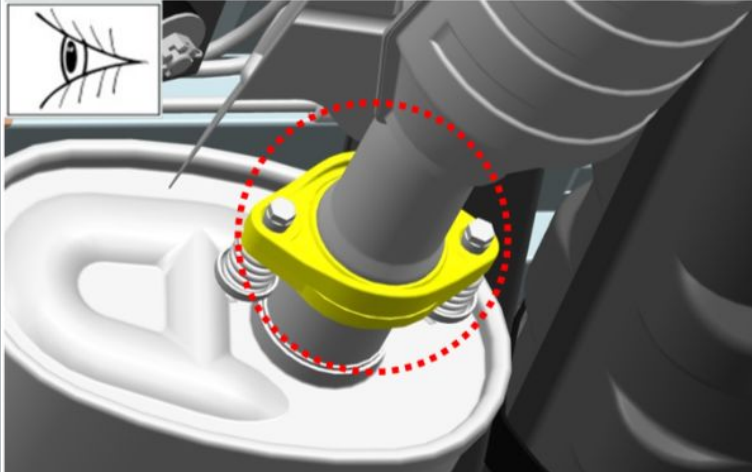
7. Visually inspect the gaskets and seals of the engine, transfer case, steering gear, front and rear axles.

Oil leakage and ejection are not allowed.

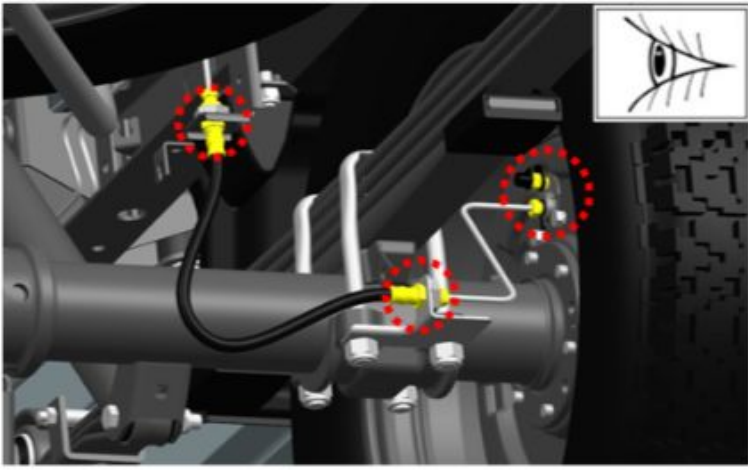
Img 4



8. Visually check the connections of the exhaust system for leaks.

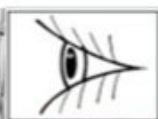
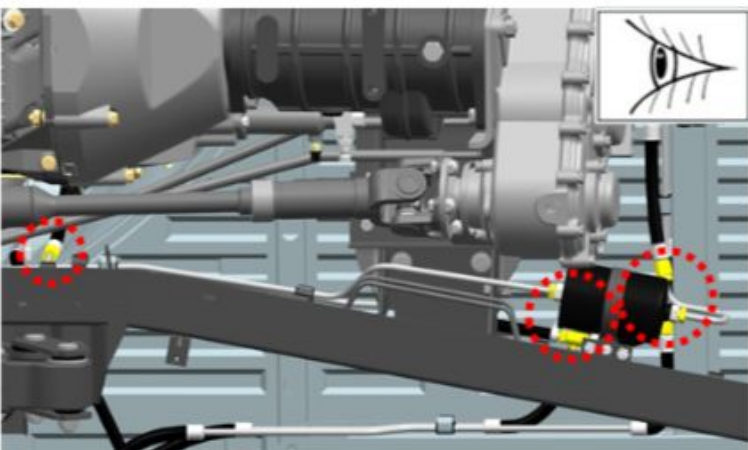
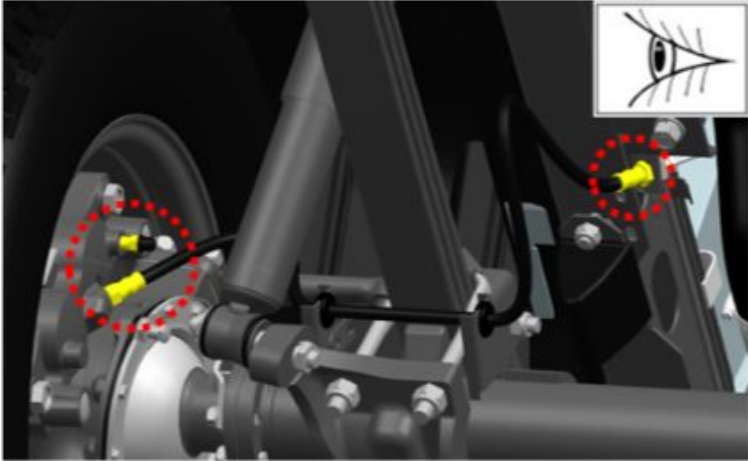


Img 5

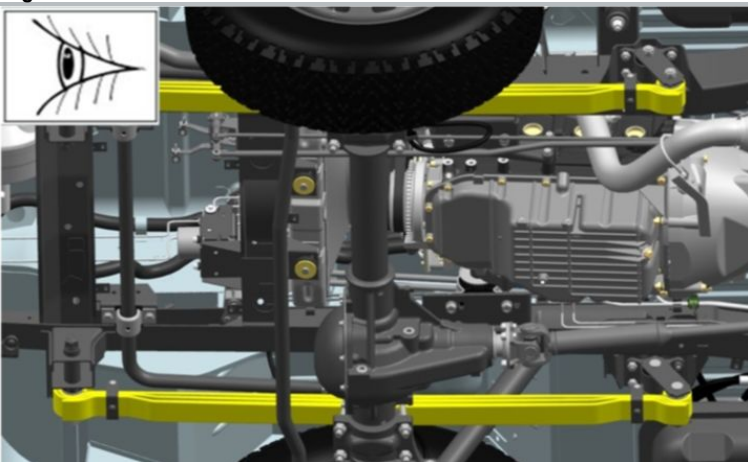


9. Visually check the connections of the pipelines of the cooling systems, heating, power supply, hydraulic brake drive, vacuum take-off system from the vacuum brake booster, the condition of pipes and hoses.

Leakage of coolant, fuel, brake fluid, leaks in the vacuum hose (vacuum booster) are not allowed. Cracks and ruptures of the hydraulic brake hoses are not allowed. Operation of deformed pipes of the hydraulic drive of brakes, parts of the vacuum take-off system is not allowed.



Img 6



Img 7

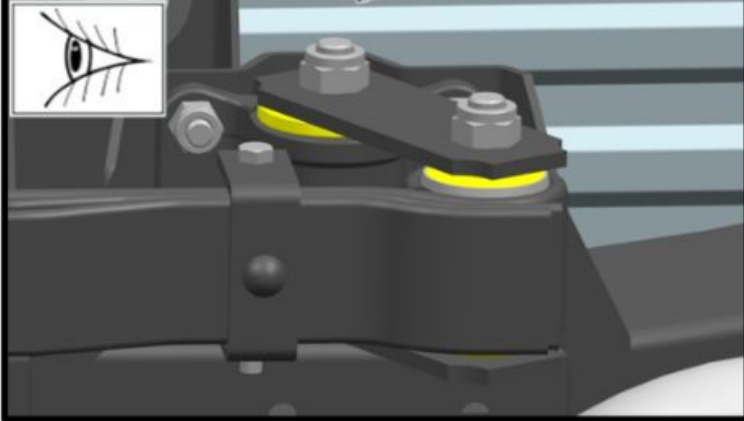
10. Inspect the front suspension springs.

The springs should not have sheet cracks, their longitudinal or transverse displacement.

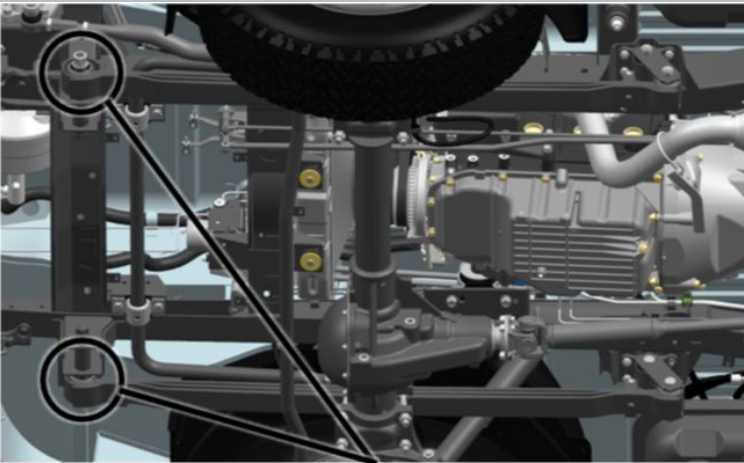


11. Inspect the front suspension spring hinges.

The hinges should not have cracks, breaks, undercutting and wear of rubber along the outer end of the hinge.



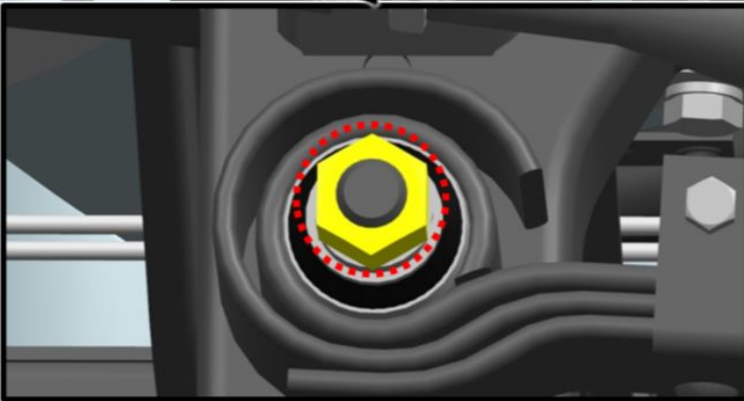
Img 8



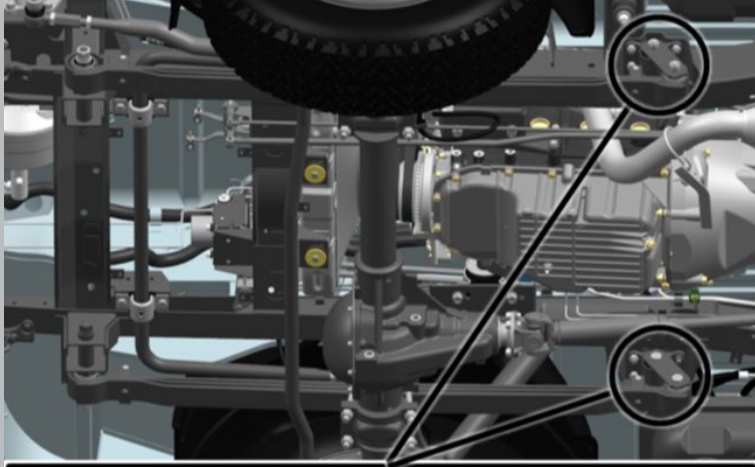
12. Tighten the spring front end axle nuts.

S=27

tightening torque- 170 N·m



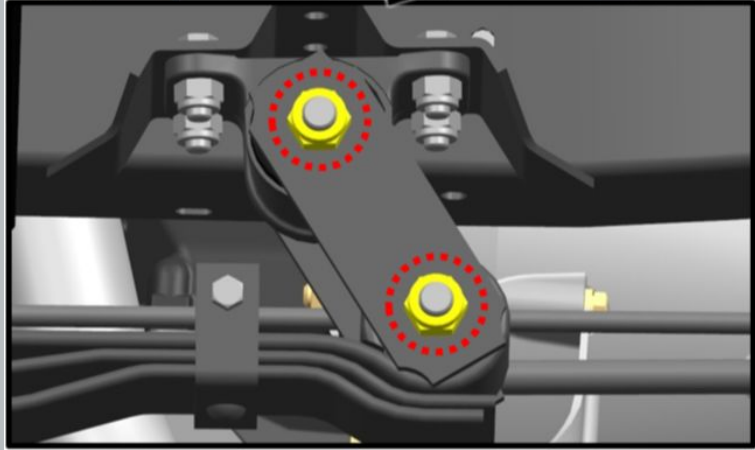
Img 9



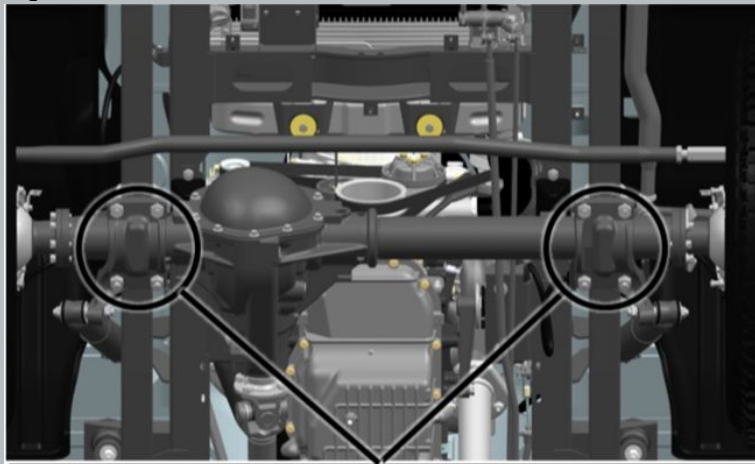
13. Tighten the nuts securing the spring shackles.

S=22

tightening torque- 90 N·m



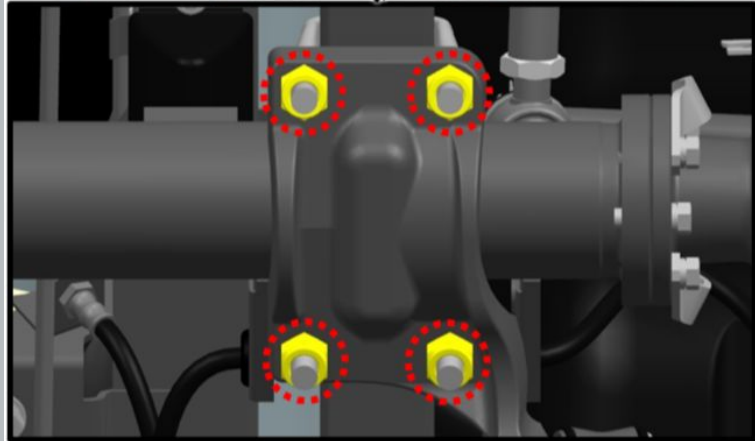
Img 10



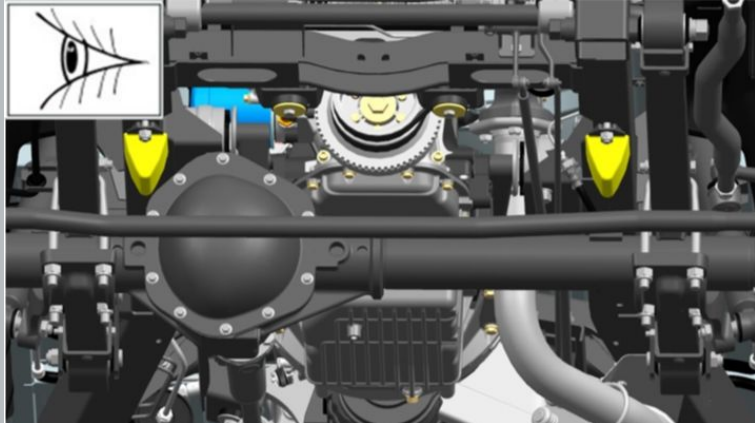
14. Tighten the nuts securing the spring ladders.

S=22

tightening torque- 90 N·m

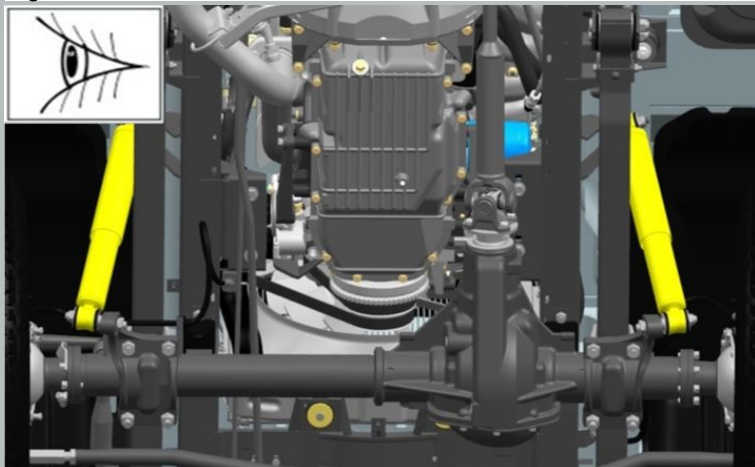


Img 11



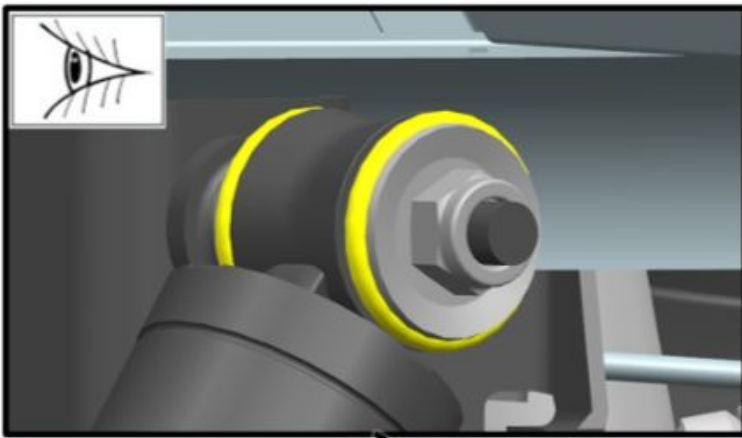
Img 12

15. Inspect the front suspension compression bumpers.
Buffers should not have cracks, breaks and deformations.



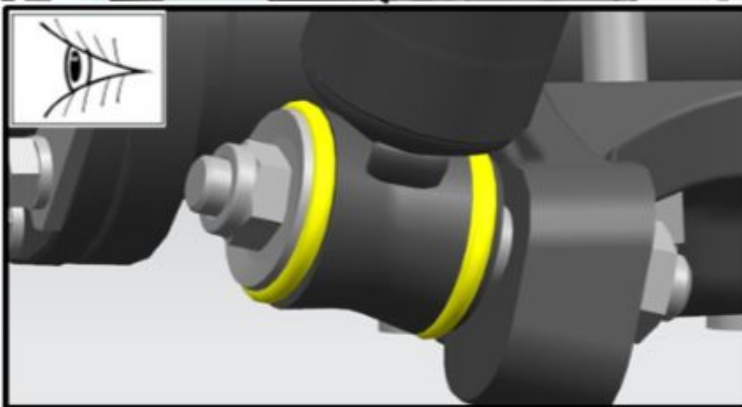
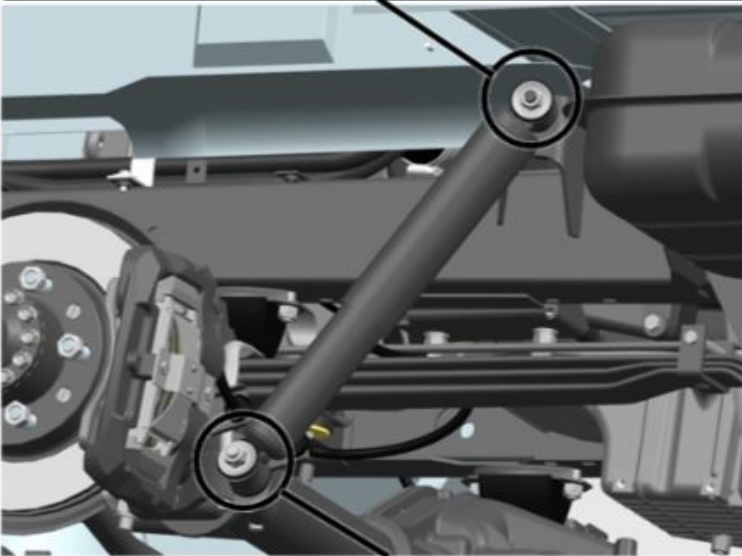
Img 13

16. Inspect the front suspension shock absorbers.
Oil fogging of the shock absorber does not indicate a malfunction and is acceptable. The appearance of drips on the shock absorber body, indicating a loss of tightness, is not allowed.

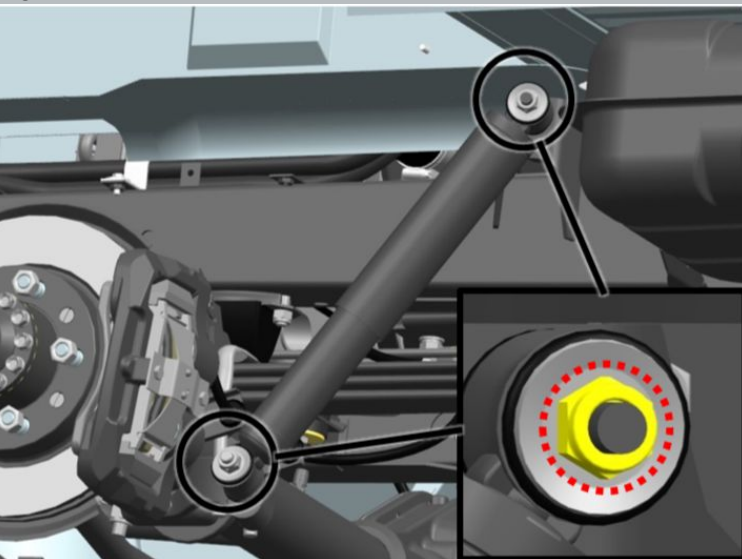


17. Inspect the front suspension shock absorber joints.

The hinges should not have cracks, breaks, undercutting and wear of rubber along the outer end of the hinge.



Img 14

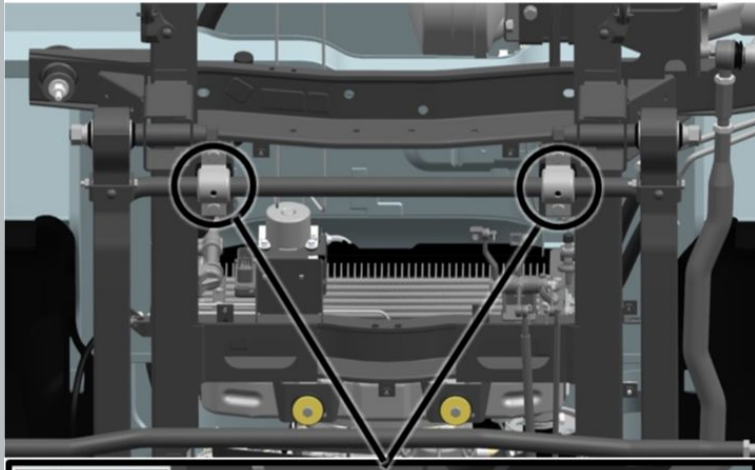


Img 15

18. Tighten the front suspension shock absorber retaining nuts.

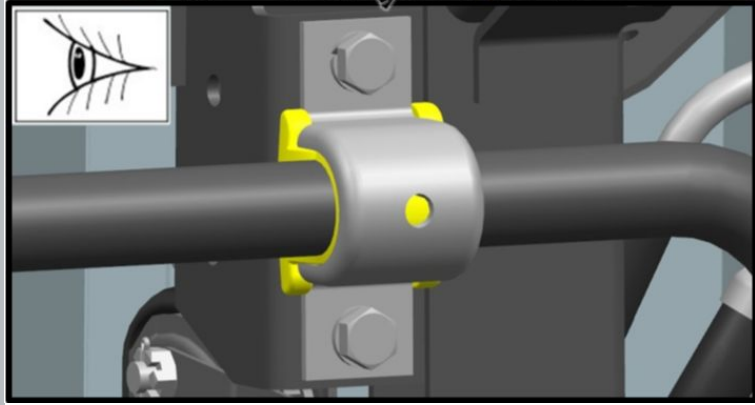
S=19

tightening torque- 58 N·m

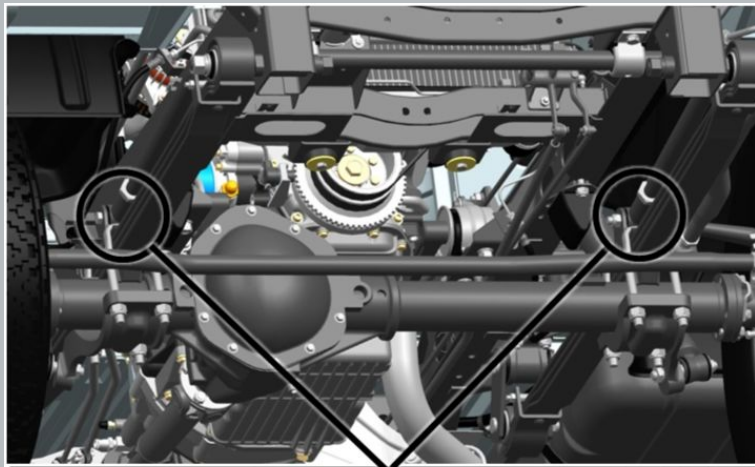


19. Inspect the anti-roll bar joints.

The hinges should not have cracks, breaks, undercutting and wear of rubber along the outer end of the hinge.

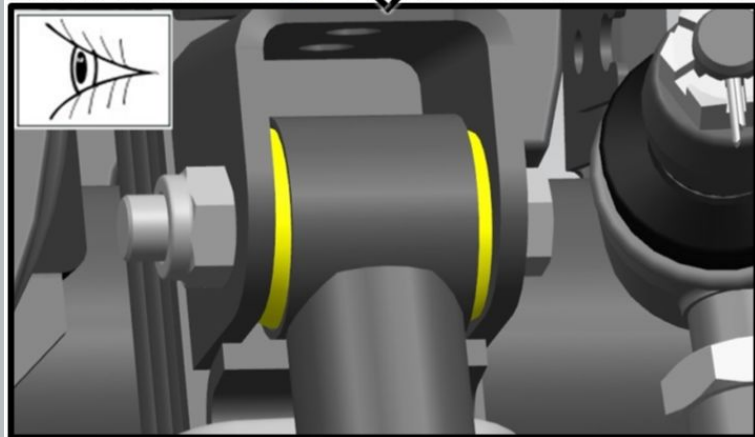


Img 16

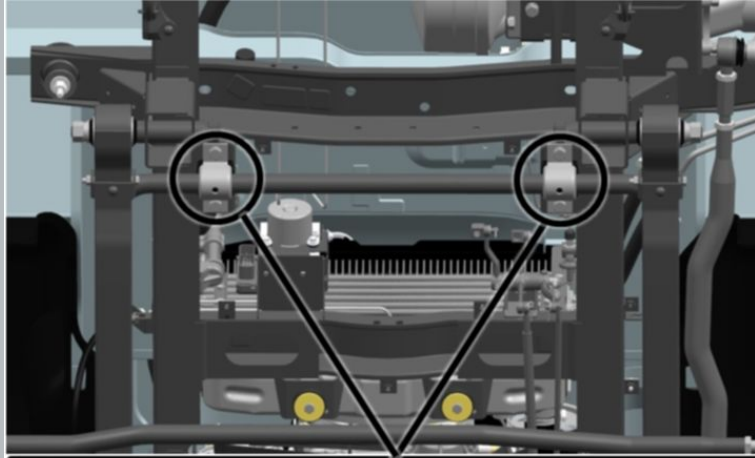


20. Inspect the anti-roll bar joints.

The hinges should not have cracks, breaks, undercutting and wear of rubber along the outer end of the hinge.



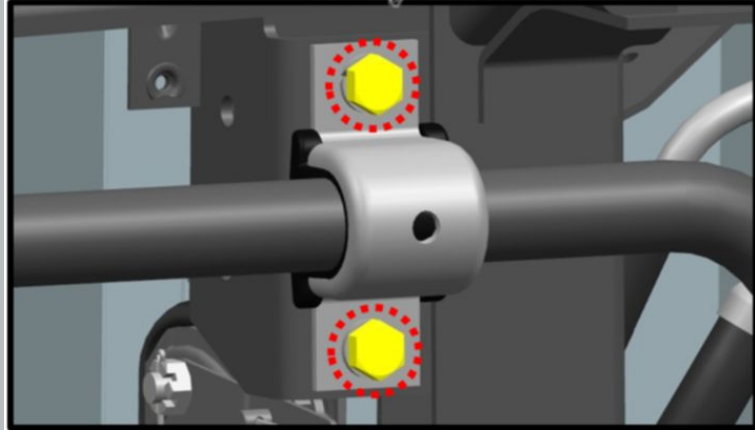
Img 17



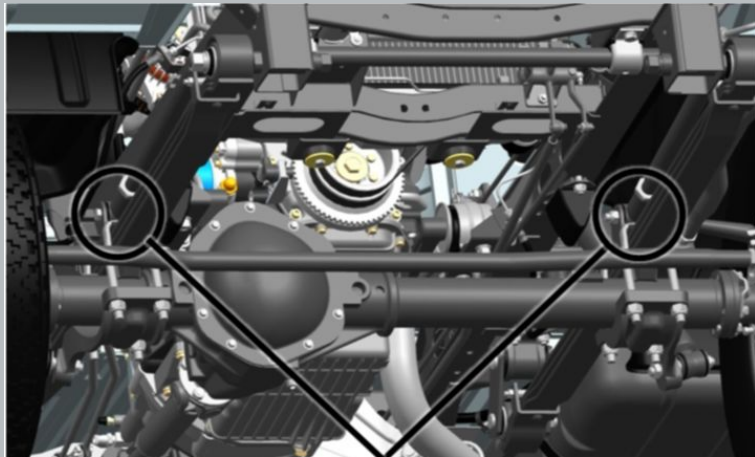
21. Tighten the anti-roll bar mounting bolts.

S=17

tightening torque- 50 N·m



Img 18

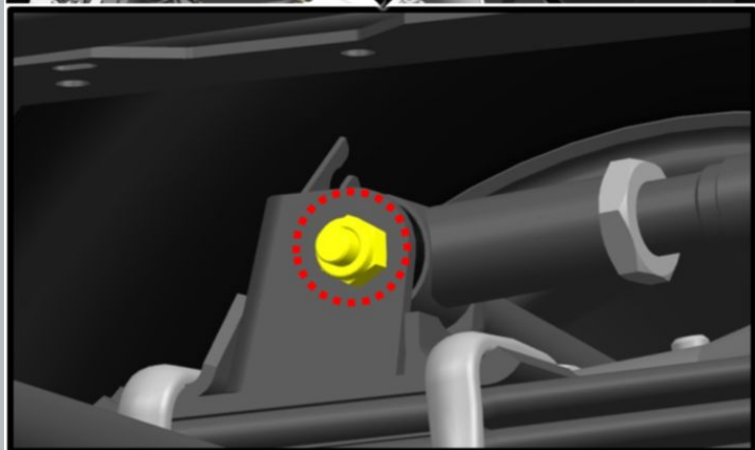


22. Tighten the anti-roll bar mounting nuts.

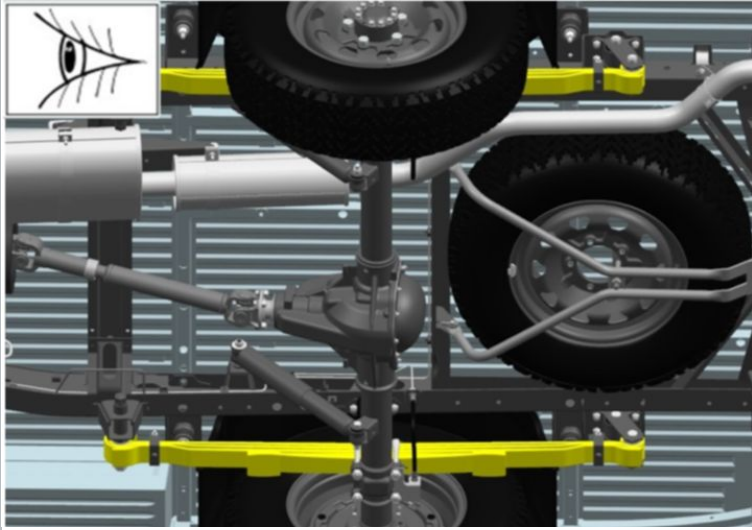
S=17

S=19

tightening torque- 58 N·m



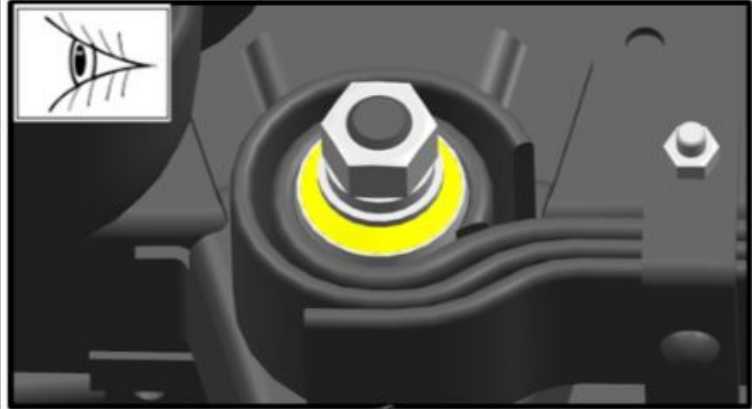
Img 19



Img 20

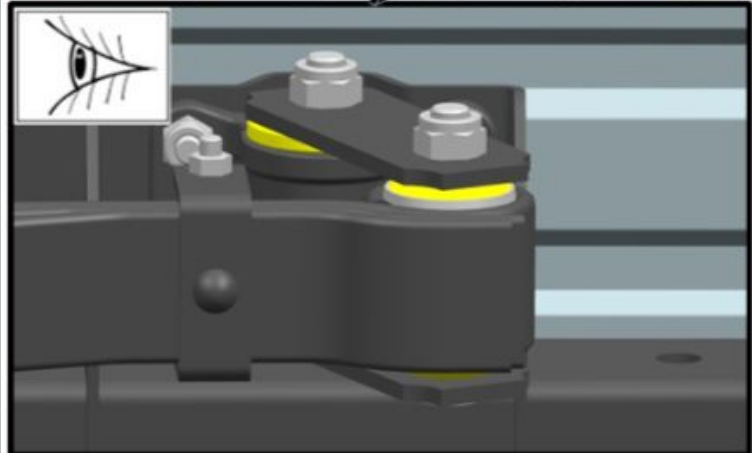
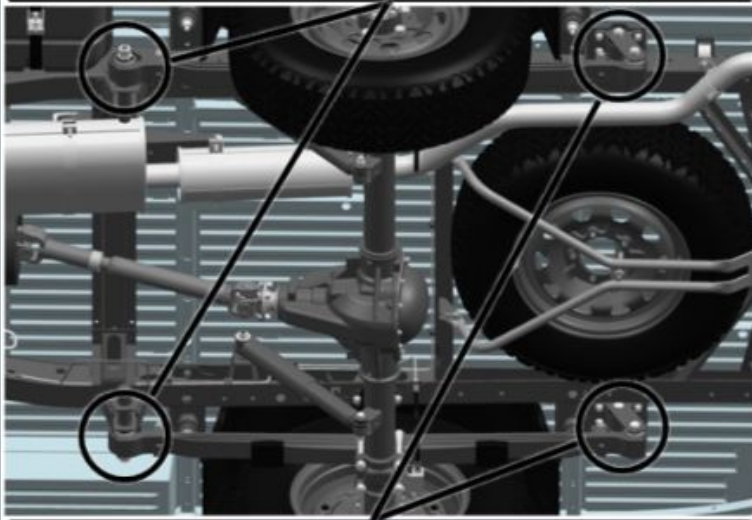
23. Inspect the rear suspension springs.

The springs should not have sheet cracks, their longitudinal or transverse displacement.

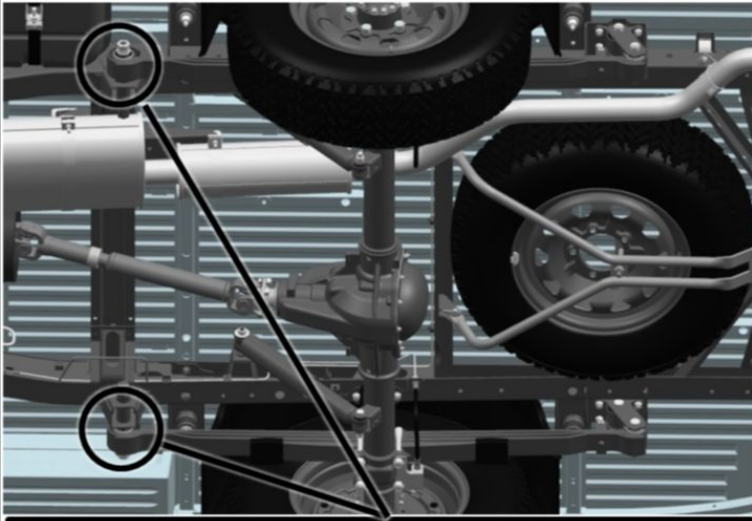


24. Inspect the rear suspension spring hinges.

The hinges should not have cracks, breaks, undercutting and wear of rubber along the outer end of the hinge.



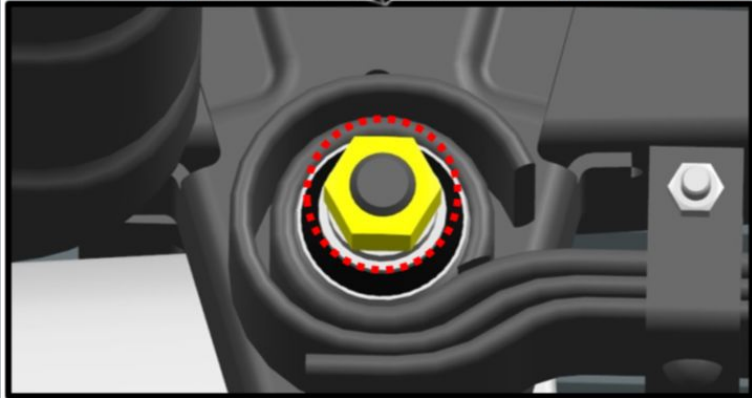
Img 21



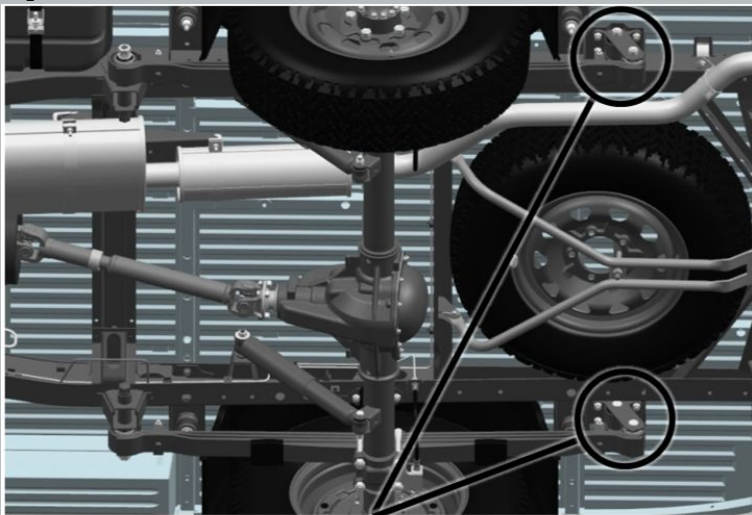
25. Tighten the nuts securing the axle of the front end of the spring.

S=27

tightening torque- 170 N·m



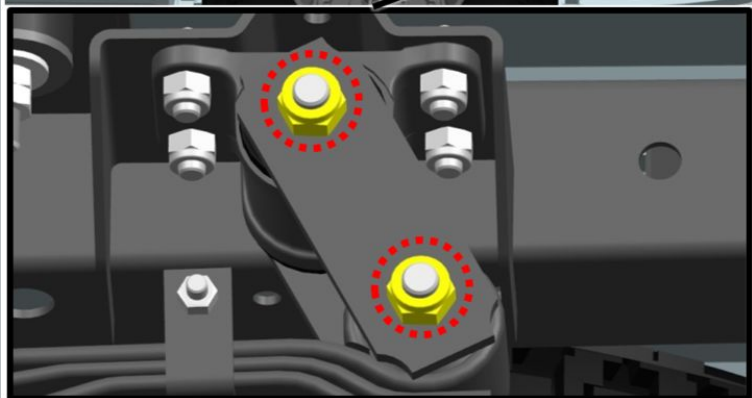
Img 22



26. Tighten the nuts securing the spring shackles.

S=22

tightening torque- 90 N·m

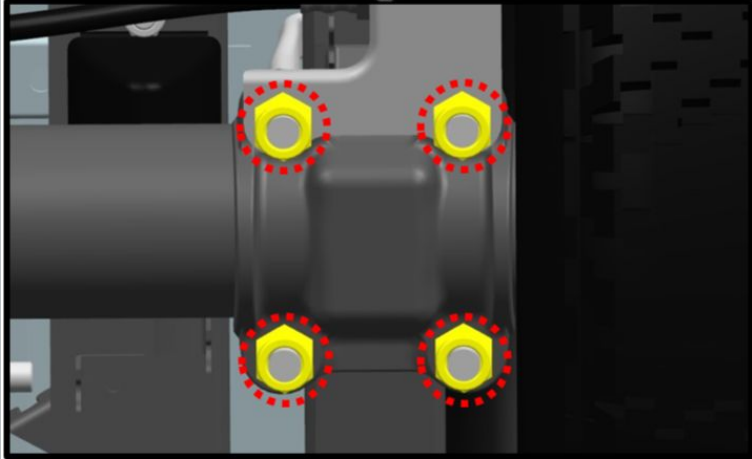


Img 23

27. Tighten the nuts securing the ladders of the springs.

S=22

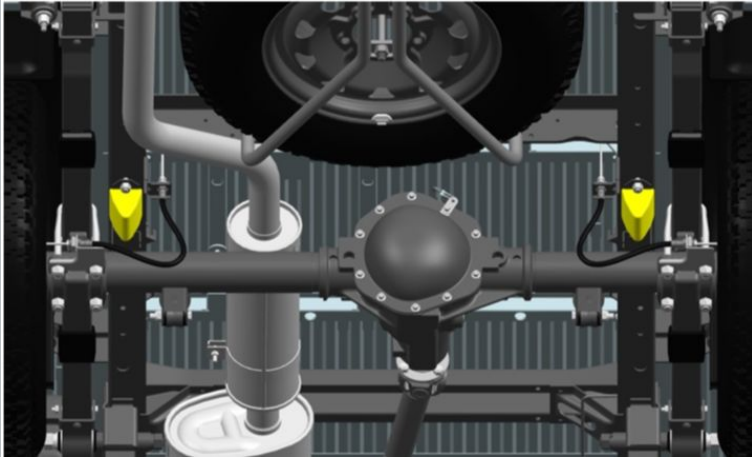
tightening torque- 93 N·m



Img 24

28. Inspect the rear suspension compression bumpers.

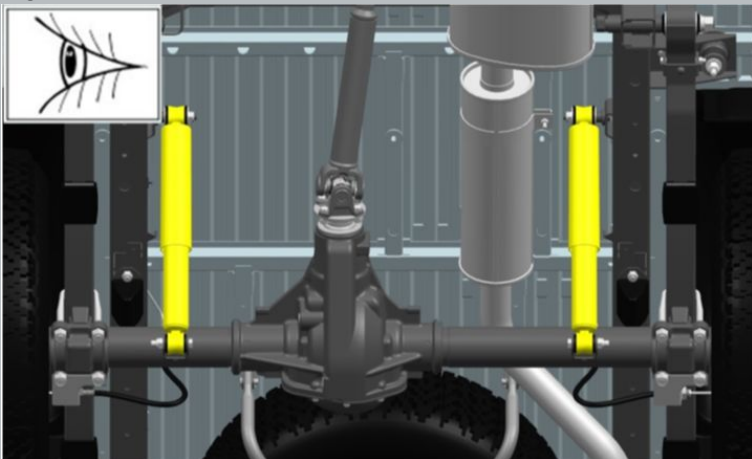
Buffers should not have cracks, breaks and deformations.



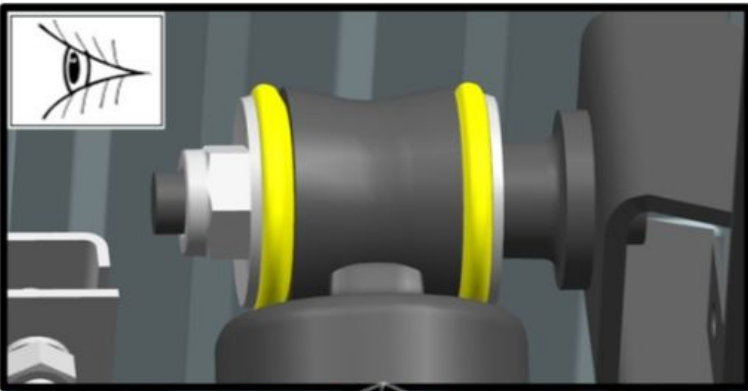
Img 25

29. Inspect the rear suspension shock absorbers.

Oil fogging of the shock absorber does not indicate a malfunction and is acceptable. The appearance of drips on the shock absorber body, indicating a loss of tightness, is not allowed.

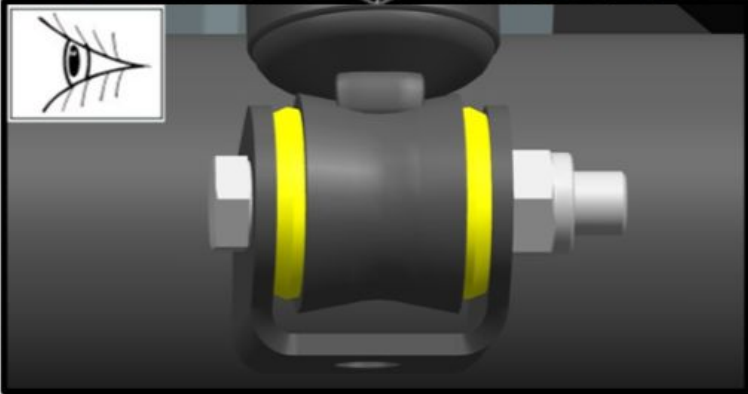
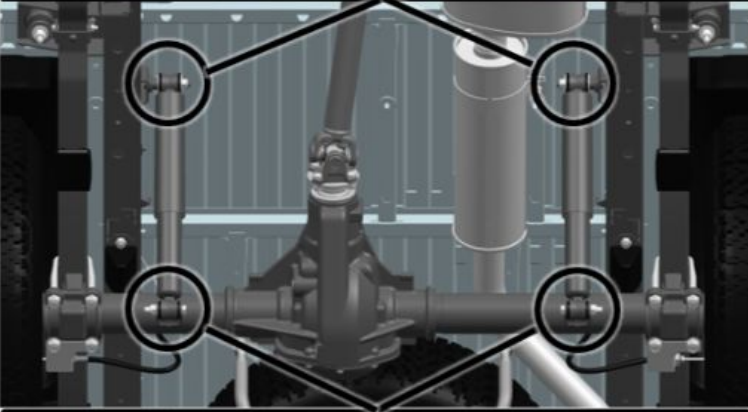


Img 26

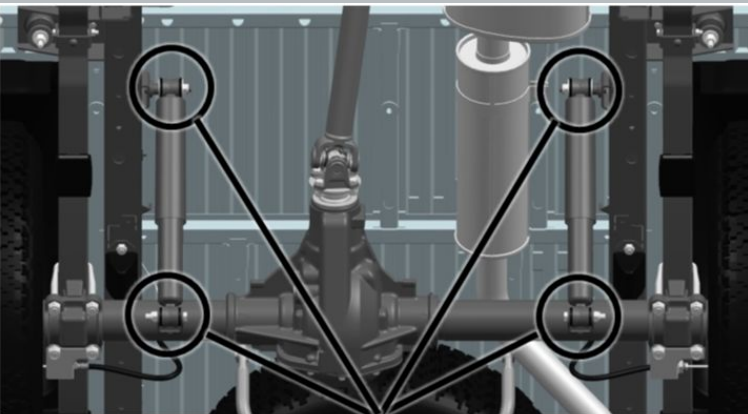


30. Inspect the rear suspension shock absorber joints.

The hinges should not have cracks, breaks, undercutting and wear of rubber along the outer end of the hinge.



Img 27

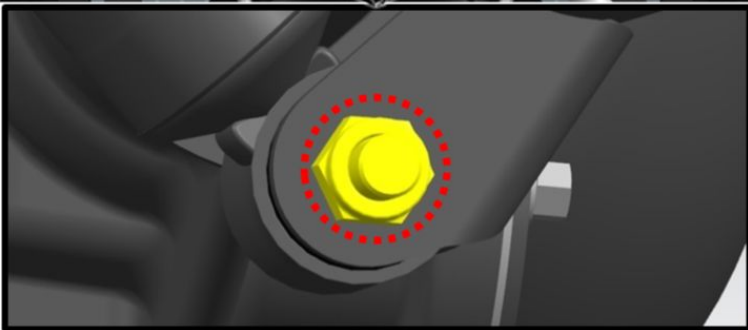


31. Tighten the rear suspension shock absorber retaining nuts.

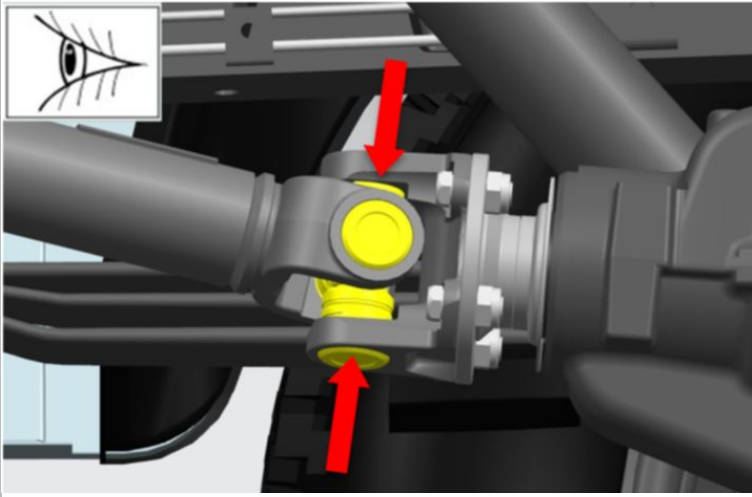
S=17

S=19

tightening torque- 58 N·m



Img 28



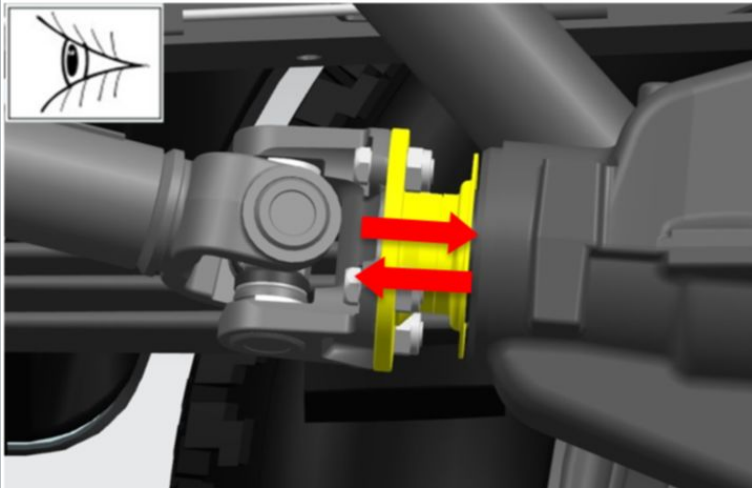
Img 29

32. Check the backlash in the crosspieces of the cardan shafts by applying an alternating hand force along the axes of the crosspieces.

Backlash in the crosspieces is not allowed.

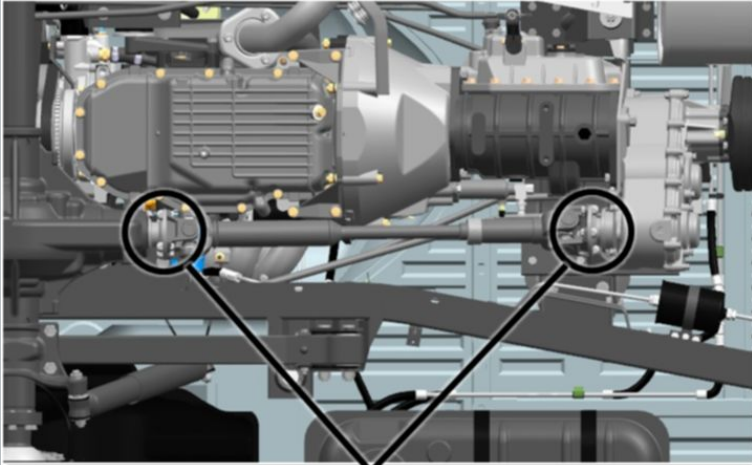
33. Rotate the crosspiece 90 degrees and recheck.

Backlash in the crosspieces is not allowed.



Img 30

34. Check the presence of axial play in the bearings of the main gears by moving the drive gear behind the propeller shaft flange.

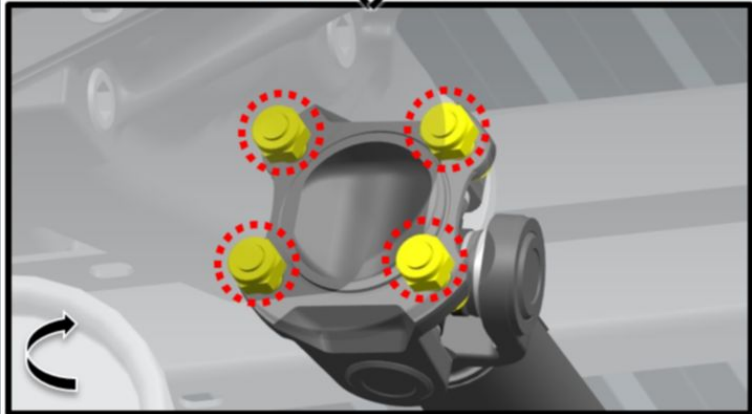


35. Tighten the nuts of the bolts securing the front propeller shaft flanges to the front axle and transfer case flanges.

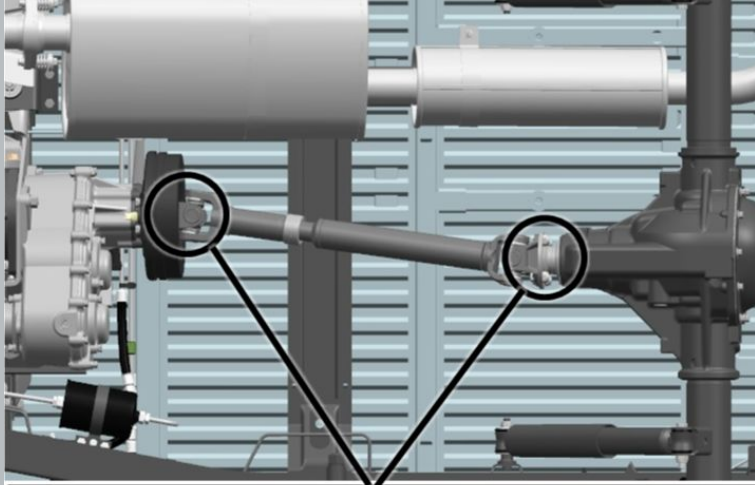
S=17

S=14

tightening torque- 50 N·m



Img 31

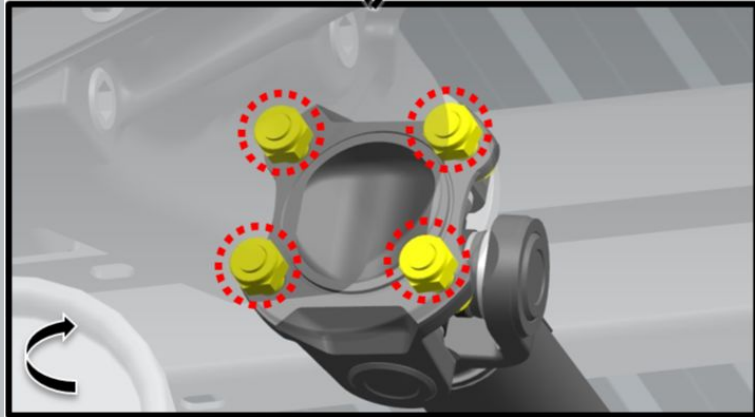


36. Tighten the nuts and bolts of the rear propeller shaft flanges to the parking brake and rear axle flanges.

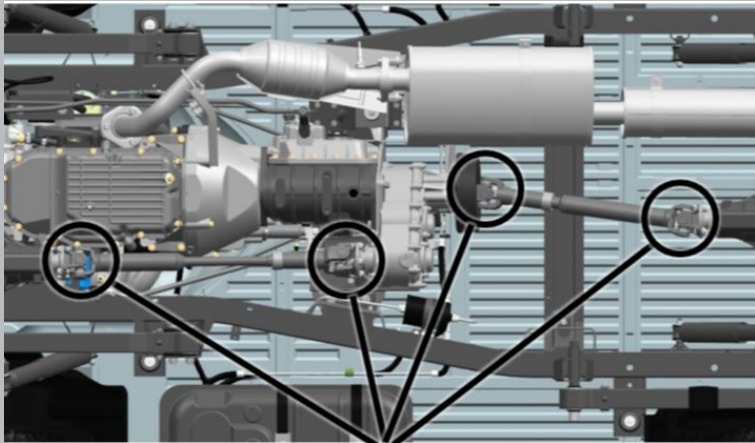
S=17

S=14

tightening torque- 50 N·m

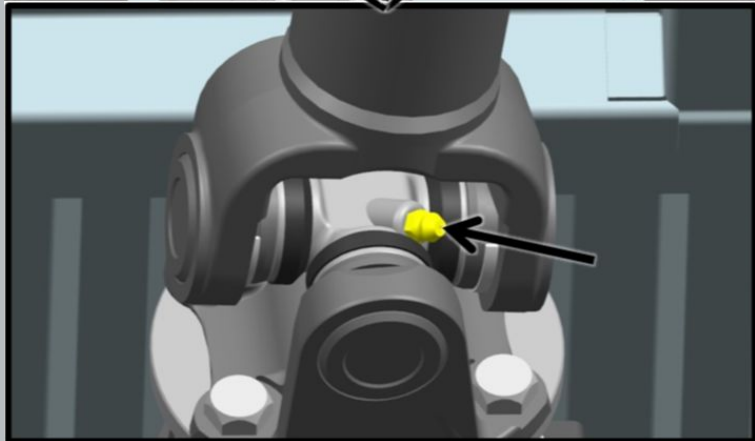


Img 32

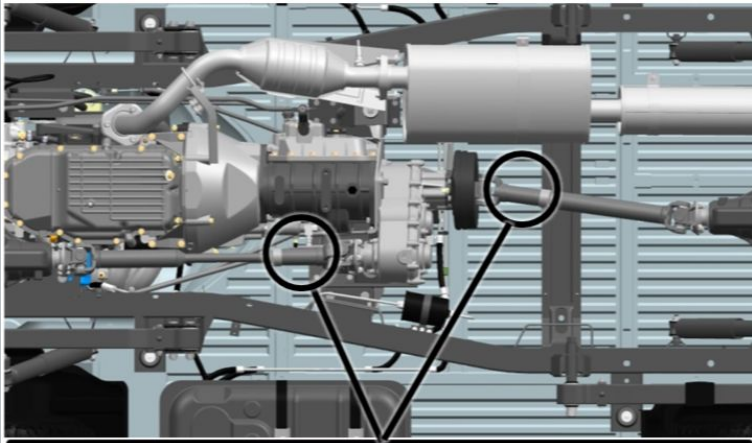


37. Lubricate the joints of the front and rear propeller shafts.

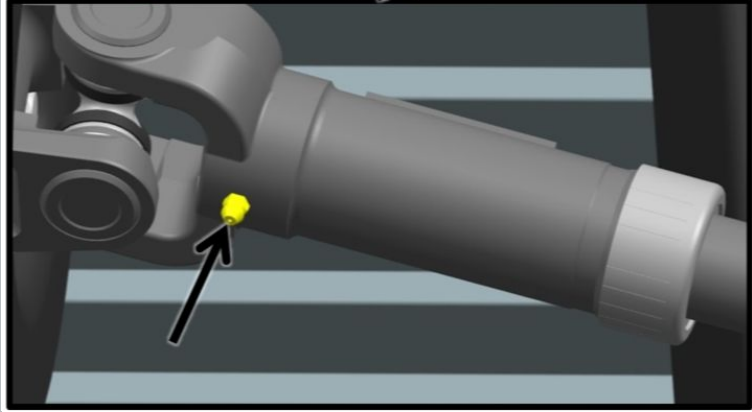
Lubricate until it comes out from under the working edges of the crosspiece cuffs.



Img 33



38. Lubricate the splines of the front and rear propeller shafts.
Make 3-5 strokes without waiting for the lubricant to come out.



Img 34



39. Check the play in the wheel hub bearings by swinging the wheels in a vertical plane.

No play in the hub bearings is allowed.

Img 35



40. Check the smoothness of rotation of the wheels.

Rolling of the hub bearings and wedging of the wheels during rotation is not allowed.

Img 36



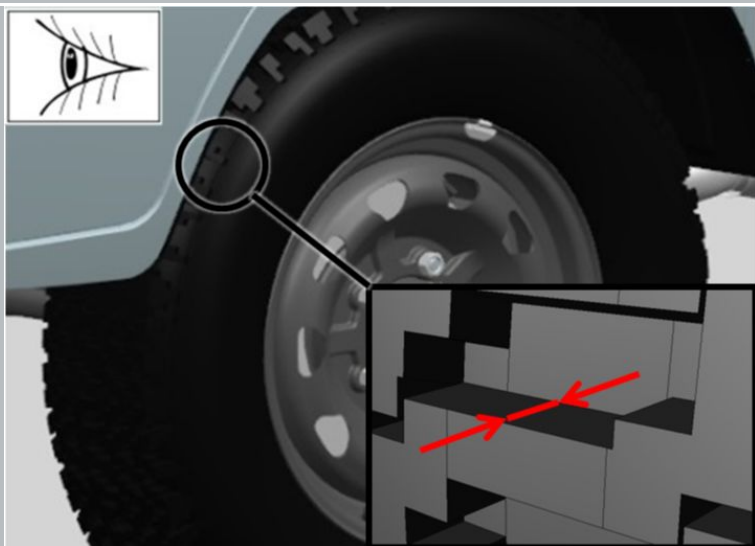
Img 37

41. Inspect the tires of the wheels.

42. Inspect the wheel rims.

43. Check the value of the pressure in the tires of the wheels.

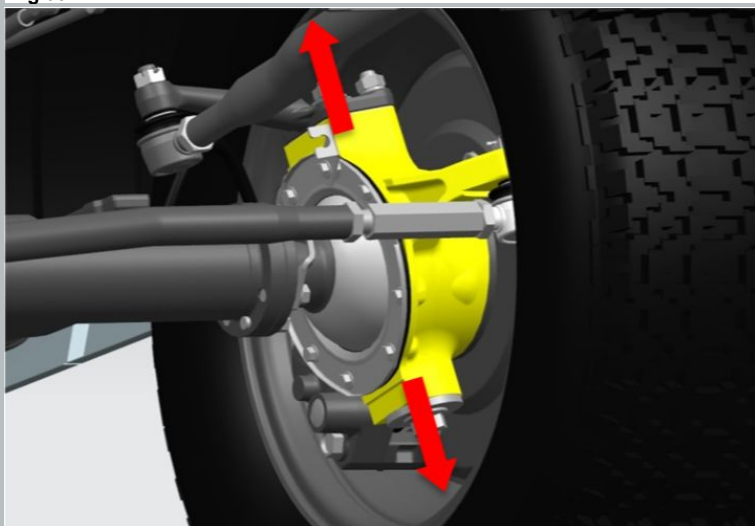
Tire pressures must comply with the values in Table 1.



Img 38

44. Measure the residual depth of the tread pattern.

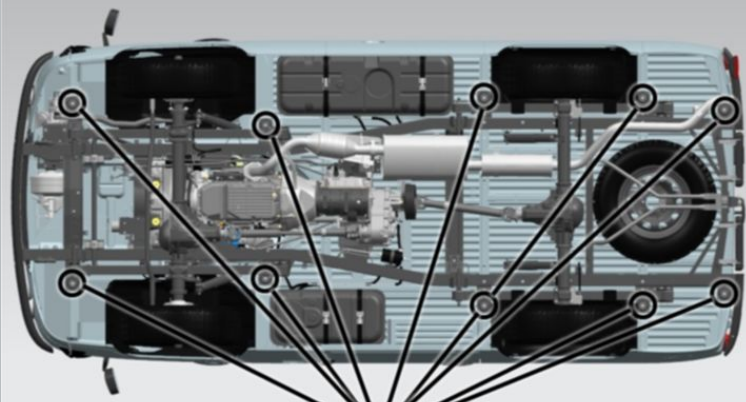
The residual tread depth must be more than 1.6 mm.



Img 39

45. Check the backlash of the pivots of the steering knuckles.

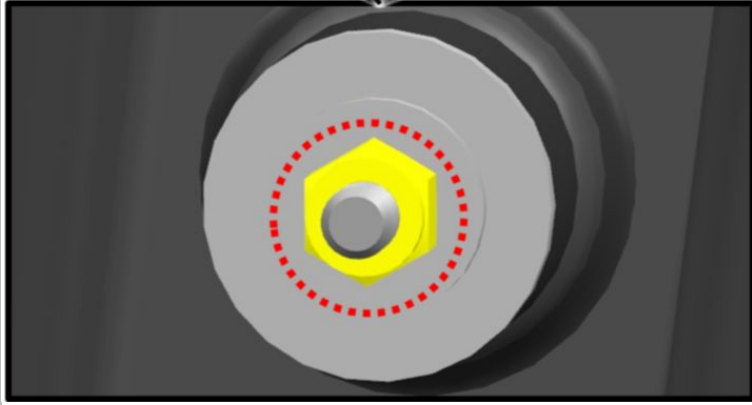
If there is an axial clearance of the pivots, remove the clearance by tightening the clamping sleeve.



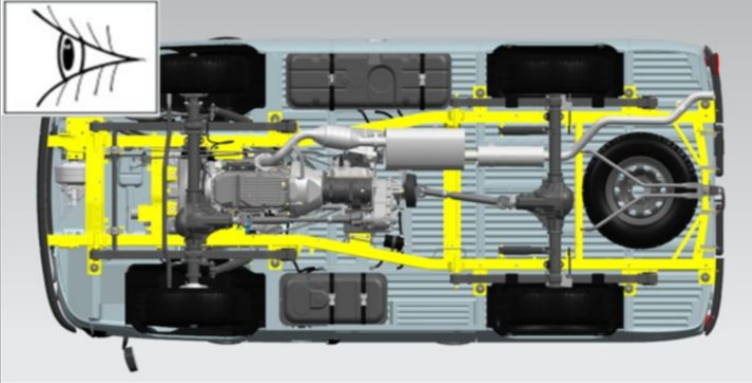
46. Tighten the nuts of the body-to-frame bolts.

S=17

tightening torque- 32 N·m



Img 40



47. Inspect the frame for paint chips, cracks and corrosion centers.

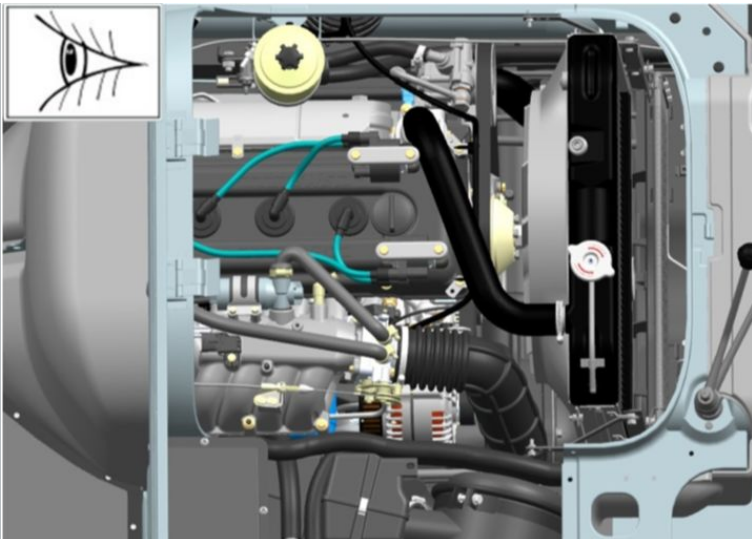
The presence of chips of paintwork, cracks and foci of corrosion of the frame is not allowed.

Img 41

Lower the car down on a lift.

4. Work in the engine compartment:

IMAGE

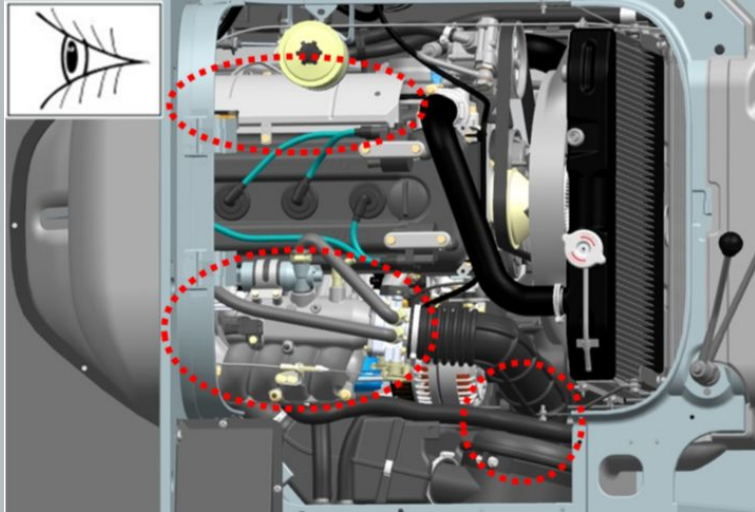


OPERATION DESCRIPTION

1. Carry out an external inspection of hoses, branch pipes, pipes, engine wires.

If there are traces of contact on the parts of the car, change their position relative to the engine. Scuffs and wear on hoses, branch pipes, pipes, wires are not allowed.

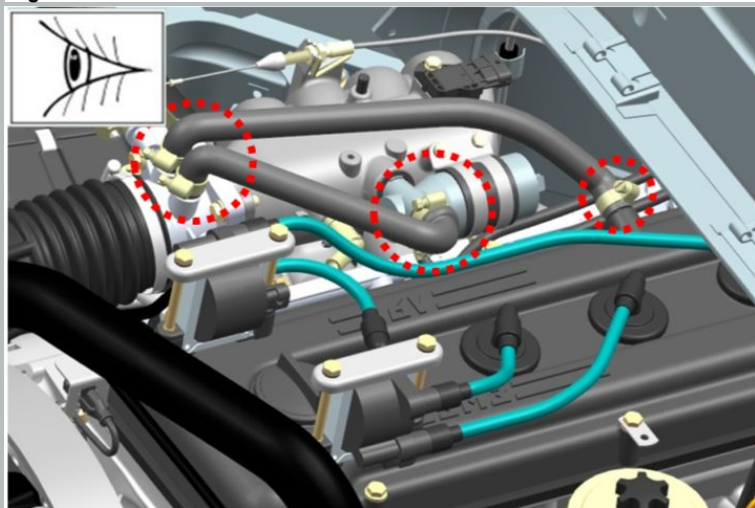
Img 1



Img 2

2. Visually check the connections of the intake and exhaust systems for leaks.

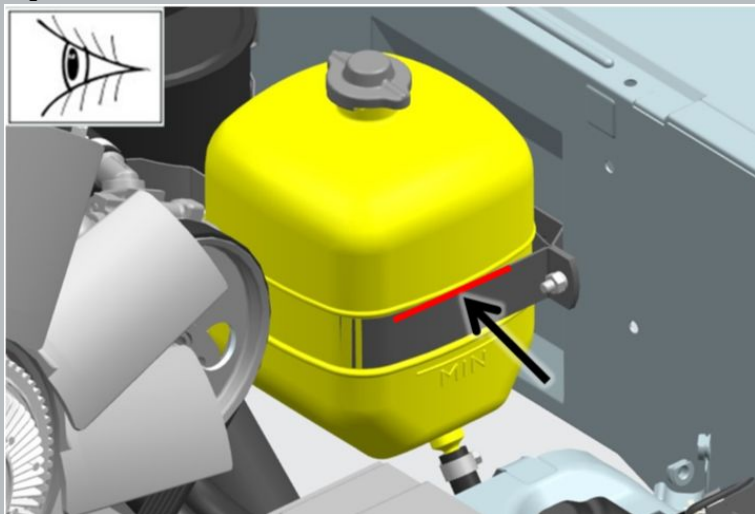
Leakage of connections is not allowed.



Img 3

3. Check visually the connections of hoses, branch pipes, pipes of the crankcase ventilation system for leaks.

Leakage of connections and damage to hoses are not allowed.



Img 4

4. Check the coolant level in the expansion tank.

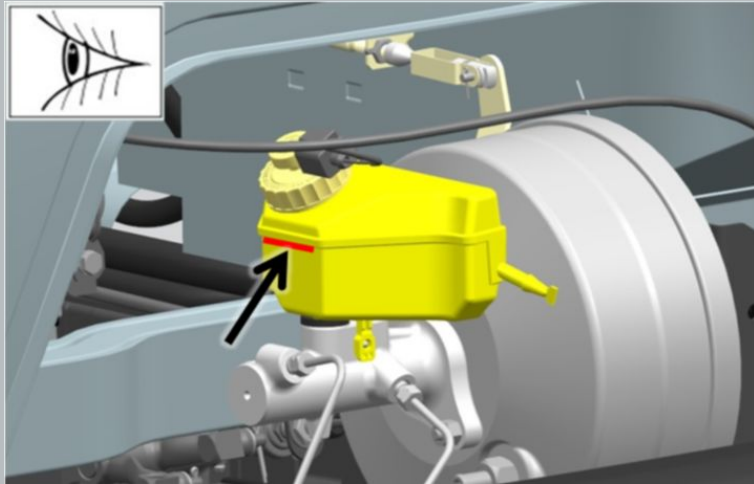
Check the coolant level only on a cold engine. The liquid level in the expansion tank should be 3-4 cm above the "min" mark.



5. Check the freezing point of the coolant using a refractometer.

The freezing temperature of the coolant should be as follows: - for regions with a temperate climate: -40-45 ° C; - for the regions of the Far North: -60-65 ° C.

Img 5



6. Check the fluid level in the reservoir of the brake master cylinder.

The brake fluid level should be at the "max" mark.

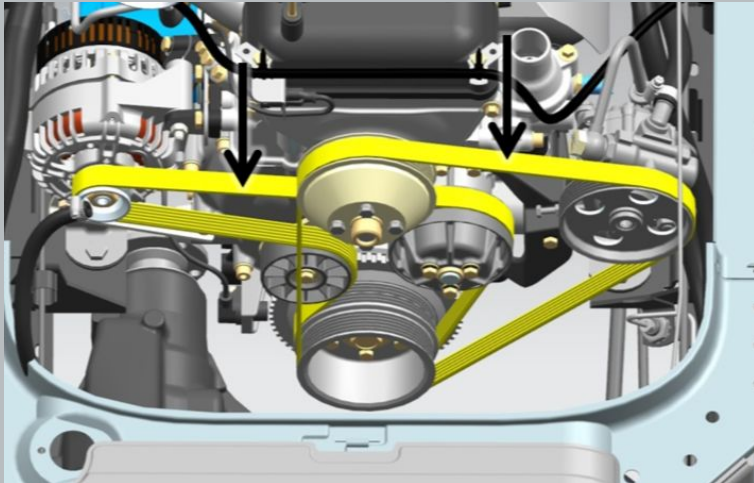
Img 6



7. Check the fluid level in the reservoir of the clutch master cylinder.

The brake fluid level should be 15-20 mm below the top edge of the reservoir.

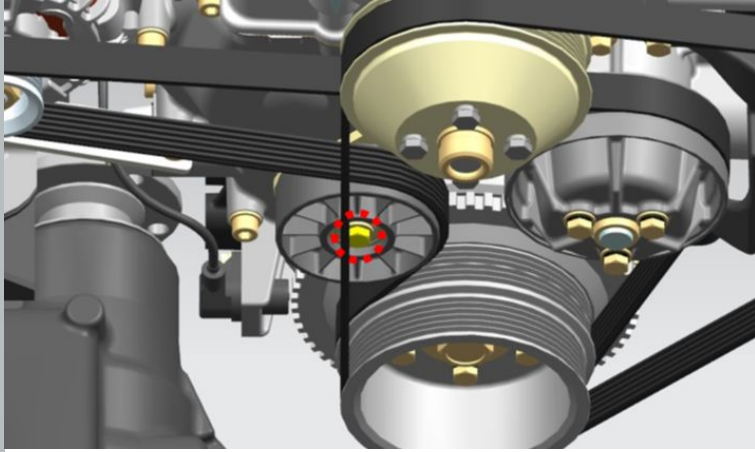
Img 7



8. Check the tension of the accessory and fan drive belts.

The deflection of the accessory drive belt should be 13-15 mm with a load of 80 N. The deflection of the fan drive belt should be 5-8 mm with a load of 40 N. Damage or excessive stretching of the belts is not allowed.

Img 8



Img 9

9. Tighten the accessory drive belt tensioner pulley bolt.

S=12

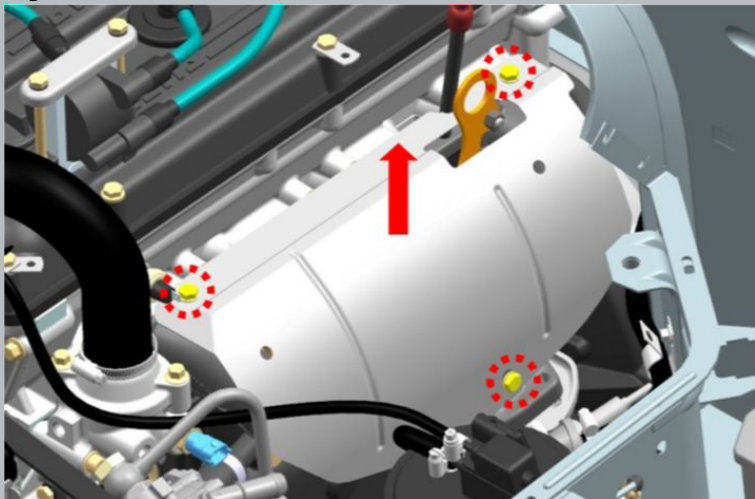
tightening torque- 16 N·m



Img 10

10. Tighten the fan clutch mount.

tightening torque- 55 N·m



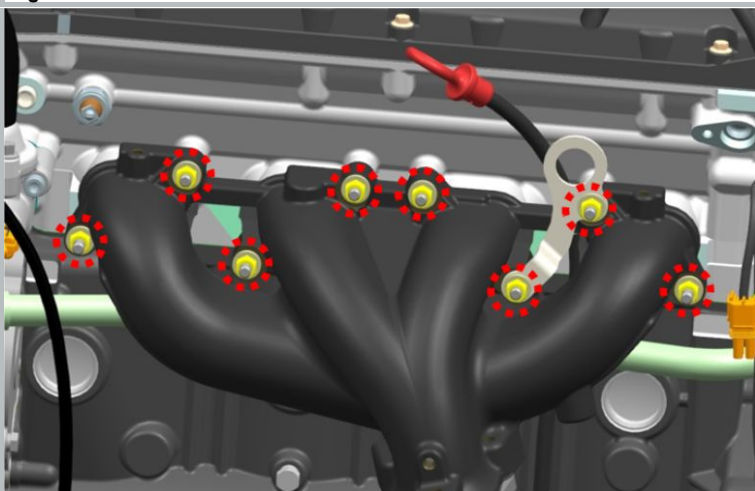
Img 11

11. Remove the bolts with washers securing the exhaust manifold shield.

S=12

tightening torque- 16 N·m

12. Remove the exhaust manifold shield.

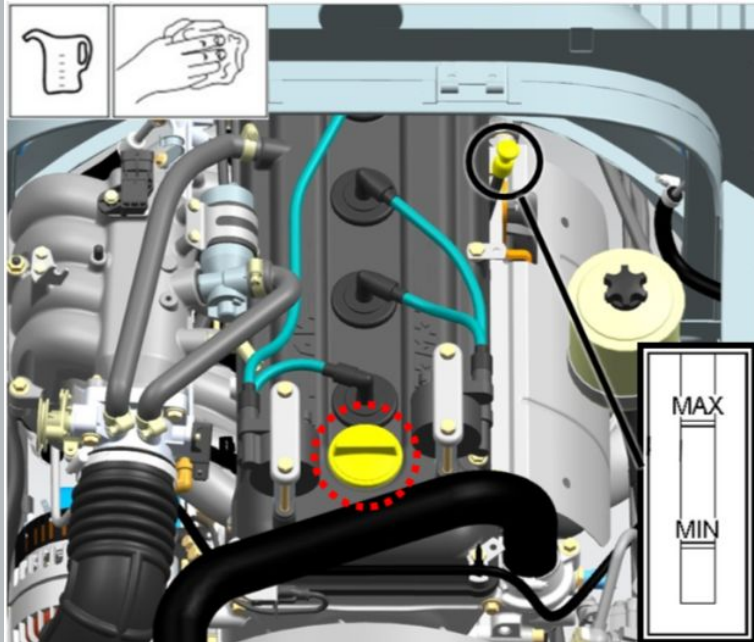


Img 12

13. Tighten the exhaust manifold retaining nuts.

S=12

tightening torque- 23 N·m



Img 13

14. Fill the engine with oil up to the upper mark on the oil level indicator.

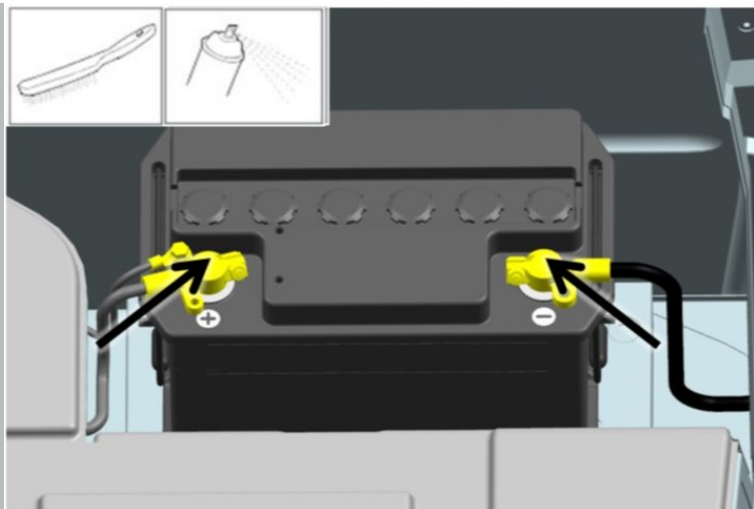
15. Start the engine.

Warm up the engine to operating temperature.

16. Stop the engine.

17. Check the oil level.

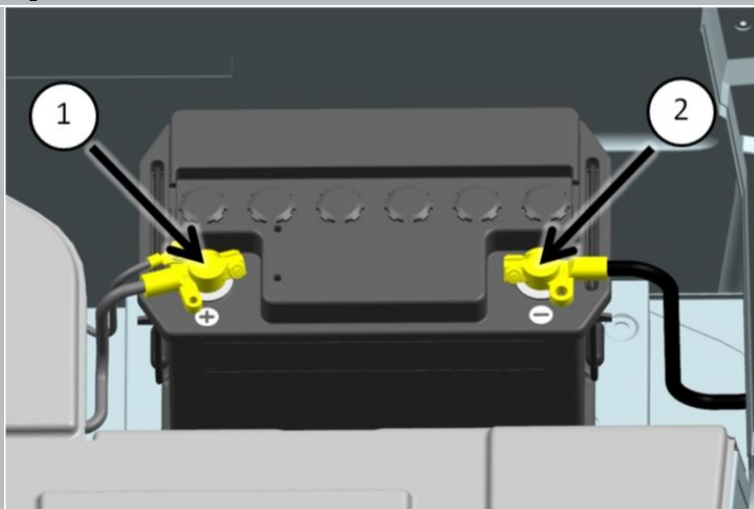
Check the oil level after 2 - 3 minutes. after stopping the engine. If necessary, add oil to the upper mark.



Img 14

18. Clean the leads and cable lugs from oxides.

19. Treat leads and wire ends with a means to protect electrical contacts.



Img 15

20. Connect the terminal of the load plug with "plus" to the same terminal of the battery.

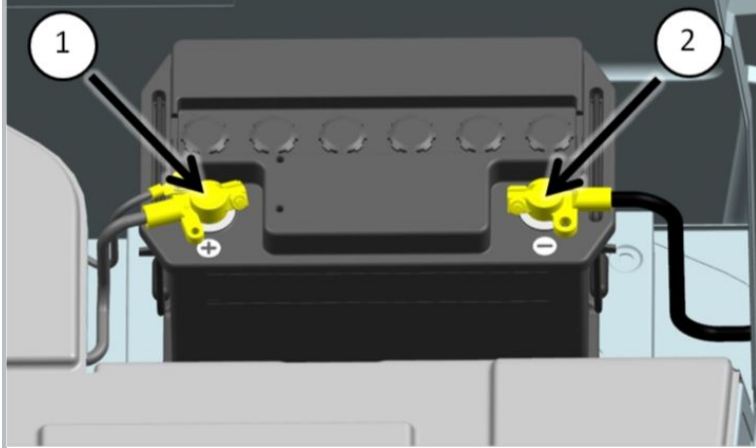
Make the connection without turning on the load coil.

21. Touch the negative pin on the case of the load plug to the negative terminal of the battery.

Record voltmeter readings.

22. Compare the obtained data with the value in Table 2.

If the battery is more than 75% charged, measure under load. If the battery is less than 75% charged, it must be charged.



Img 16

23. Switch on the load coil in the load plug, connect its terminal with "plus" to the same terminal of the battery.

24. Touch the negative pin on the body of the load plug to the negative terminal of the battery, and fix the voltmeter readings at the 5th second.

⚠ NOTIFICATION: DO NOT measure for more than 5 seconds.

25. Compare the obtained data with the value in Table 3 and take the recommended actions.



Img 17

26. Fill in the TO-15000 Card for UAZ-SGR vehicles, Table 4.