Maintenance Manual for XCMG Motor Grader

Maintenance

1. Check XCMG accessories - fuel tank storage capacity.
   Fill the tank on time. When filling, it should not be added to the top of the tank to prevent the fuel overflowing when the temperature rises.

2. Check fuel tank and tubing.
   Drain water and sediment in the tank before daily operation. Exclude the tanks and tubing that show leaks.

3. Check the oil surface of the oil sump.

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Check after the XCMG Motor Grader engine stops. The oil should be cool, the oil surface should reach the "safe start range" on the "engine stops" side of the oil gauge, and the oil surface should reach the "sufficient" mark on the "engine running" side of the oil gauge when the engine idles and the oil is warm. When oil is insufficient, it should be added.

4. Check coolant level.
When the coolant is insufficient, it should be added enough to keep the cooling liquid level above the low water level.

5. Check XCMG Motor Grader radiator, filter hose, radiator cap and gasket.
   (1) If leakage occurs, it should be excluded; if the hose is damaged, it should be replaced. If the filter element is blocked, it should be cleaned or replaced. If the radiator cap and gasket are damaged, they should be replaced. Straighten the deformed radiator in the core, remove blockage and dust.

   (2) In cold season, the relative density of antifreeze should be checked frequently to ensure reliable antifreeze protection.

6. Check the air filter.
When the yellow plunger of the air filter indicator enters the red zone or the engine exhaust smoke, the coarse filter core should be cleaned and replaced with fine filter core if necessary.

7. Check the fastening condition of engine parts.
All external parts should be firmly connected and should be fastened if loose.

Clean up the oil contamination and dirt on the surface of the engine fuselage and accessories.

9. Check the engine running sound.
The engine is easy to start and operate normally. Otherwise, the cause should be identified and the trouble eliminated.

II. Electrical equipment and instruments:

1. Check the indicating instruments, indicating lights, lighting equipment, etc.
   All instruments should work properly and the instructions should be correct. When working, the display of the indicator light and the barometer of the brake system must be in the green area, and all the lights, lighting equipment and alarm devices should be complete and effective.

2. Check the electronic monitoring system.
The electronic monitoring system should work normally. When the temperature of hydraulic oil is
above 88 ℃, the brake pressure is below 411.6 kPa, the oil pressure is above 588 kPa, and the coolant temperature reaches 107℃, the corresponding electronic monitor indicator should flash. At this time, find out the cause and eliminate the trouble.

3. Check **XCMG Motor Grader** generator and starter.
The generator and starter should work normally.

4. Check the battery.
Clear the dirt adhered to the surface of the battery and clear the vent.

**III. Transmission system:**

1. Check the gearbox, rear axle, planetary reducer and the balance box.
When working, the function should be normal without noise and oil leakage.

**IV. Steering system:**

1. Check the steering performance.
When working, the steering should be flexible, smooth, reliable without clamping stagnation. The steering cylinder should not leak out. Remove dirt, oil contamination and debris attached to the steering gear.

2. Lubricating steering gear.
Lubricate front axle swing sleeve, left and right steering knuckle arm bearing sleeve, front rod sleeve, front wheel inclined cylinder sleeve, front wheel upper and lower pin sleeve, frame cylinder hinge every 50 working hours.

**V. Walking mechanism:**

1. Check the tires.
There should be no damage, no foreign matters penetration or insertion on the outside surface of the tire. The air pressure should be normal. Blow up the tire if necessary. If bolts loose, tighten them. When tread wear is serious, find the cause and fix the problem.

2. Check the left and right wheels of the front axle.
If there is oil leakage, it should be dealt with.

**VI. Brake system:**

1. Exclude the accumulated water and sediment in the cylinder.
Open the waterproof valve and exclude the accumulated water and sediment in the cylinder.

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2. Check the oil-water separator.
Discharge oil and water once every 25 hours.

3. Check pipes and fittings.
Eliminate air leakage. Piping and pipe joints should be tightened if loose.

4. Check the brake pressure.
The brake pressure should be 656.6 ~ 682.48kPa. Adjust by air pressure regulator if necessary.

5. Check the safety valve (on the cylinder).
Check it every 50 working hours. When the pressure rises to 980 ~ 1078kPa, the safety valve should be automatically opened.

The brake should be stable, sensitive and reliable.

VII. Hydraulic system:

1. Check the oil surface of the hydraulic tank.
The oil surface height should be at the "FULL" sign of the oil gauge. Add oil when the oil is insufficient.

2. Check hydraulic oil pump, hydraulic motor, oil cylinder pipe and pipe joint.
When working, there should be no abnormal sound in the hydraulic pump and hydraulic motor, and there should be no oil leakage in the cylinder. Tighten pipe and pipe joint if loose and eliminate oil leakage.