

COMPACTTILT™

SERVICE AND MAINTENANCE TASKS

Service and maintenance of CTR10

Add	Task	Reason
1	Replacement of lock paddles and leaks in the quick change and top of the rotator ↗	Damage to rotor gasket. Damage to lock cylinder.
1.2	For replacement applicable to CTR10 (6-10T diggers) ↗	Collision - and overload / hard use
2	Leaks around end caps and valve blocks ↗	Collision. Damage to fittings.
3	Opsims of tilt lash / End lash ↗	Collision hydraulic engine. Lack of lubrication.
4	Lash hydraulic engine and / or lash in gearbox ↗	Collision oil engine. Lack of lubrication.
5	Loose valve block ↗	Collision

1. Replacement of lock paddles and leaks in the quick change and top of the rotator

- ⊕ Check damage to quick couplings and whether they are clamped.
- ⊕ Check for damage to the lock cylinder and whether it is clamped.

Note: Leaks from the quick change can be seen as leaks from the top of the rotator

1.2 For replacement applicable to CTR10 (6-10T diggers)

Replacement of locking cylinder, locking paddles and swivel shafts as well as main shafts:

- ⊕ Depressurize the system.
- ⊕ Remove bottom cap.
- ⊕ Unscrew the cartridge valve on the lock cylinder.
- ⊕ Remove the nuts at the end of the locking cylinder.
- ⊕ Remove hoses on cylinder.
- ⊕ Push the lock cylinder forward and tilt it down.
- ⊕ Lock paddles are pushed back.

Lock cylinder, lock paddles and crossbar can now be removed.

NOTE that there are no burrs and damage to the lock paddles. If it is found, they must be sanded off so that they are smooth and round in order to be dismantled

- ⊗ Check lock cylinder hoses for breakage and damage
- ⊗ Quick couplings are removed and checked for defects and damage and impact marks
- ⊗ Remove the swivel block
 - ✓ Check for damage to O rings in the joint between the lock cylinder and the swivel block.
 - ✓ Check for impact marks, notches or sharp edges on the swivel shaft.
 - ✓ Claw hoses are removed.
 - ✓ Remove the swivel block and swivel shaft. Swivel block and swivel shaft separate - O rings in between are checked for damage and defect. (if found - swivel shaft, rotor seals in main shaft must be replaced).
 - ✓ Remove the quick change and main shaft (housing for swivel) and check the o-rings between the body of the tiltrotator and the main shaft for damage and defects.
 - ✓ Check for damage to rotor gaskets located in the main shaft (if so, they must be replaced).
 - ✓ After the defect is found, the tiltrotator can be reassembled.
- ✓ REMEMBER all bolts must be tightened TORQUE, cf. table.
- ✓ All O-rings must always be replaced after they have been opened.
- ✓ NOTE When mounting the bottom screen with springs, the front end of the bottom screen must be tilted down and the rear end of the bottom screen tilted up. Otherwise, it cannot be assembled!

2. Leaks around end caps and valve blocks

- ⊗ Check damage to fittings.
- ⊗ Thoroughly check blind plugs in the valve block.
- ⊗ Check that the valve block and valve system are not loose (common cause is shortened hydraulic hoses or poor relief of hydraulic hoses from machine to rotator).
- ⊗ Important: valve block / reversing block is thoroughly tightened with its mounting bolts.

If the leak comes from the tilt engine: The engine must be dismantled and sent for renovation at compacttilt.dk

3. Opsims of tilt lash

- ⊗ Tilt the tilt fully to one side. Then, 2-3 degrees return. At the pressure end of the tilt, a dial gauge is placed on the stand and reset. The tilt is now fully tilted and held in pressure.
- ⊗ The same procedures are carried out for the other end.
- ⊗ Record data for sales on dial gauge for both ends.
- ⊗ Result must be between 0.05 and 0.15 (new production).
- ⊗ Remove the motor (point 2) and at one end 4 sims are placed on top. The 4 sims are taken out and measured.
- ⊗ New sims are installed so that the lash / clearance is in the range of 0.05 and 0.15.
- ⊗ Possibly. let the motor sit partially on the bracket so that it is only just pulled down so that it is possible to get to and replace the sims.

Final assembly

4. Lash in hydraulic engine or replacement of hydraulic engine

- ⊗ Remove the protective cap
The two bolts for oil motors can be removed or tightened. NOTE The bolts must always be tightened with torque.

Or Lash in the gearbox

Separation of quick change see pkt. 1: Replacement of locking cylinder, locking paddles and swivel shafts as well as main shafts:

Hereafter:

- ⊗ Remove bottom plate on tiltrotator.
- ⊗ Then peel off the hoses for the oil motor.
- ⊗ Bearing blocks for worm are removed and blind plate.
- ⊗ All parts are cleaned.
- ⊗ Worm wheels are checked for damage and wear (partial wear on worm wheels is accepted before replacement, but no tears in teeth).
- ⊗ Check the worm. The worm is more critical for wear than the worm wheel, and it is therefore advisable to replace it with less wear and tear.

- ⊗ End bearings for worm are always replaced by disassembly.
- ⊗ The bearing housing and worm are then sample assembled. A length lash of approx. 0.01mm clearance.
- ⊗ To achieve the desired clearance, mount the end bearing in the correct thickness.
- ⊗ After this, mount bearing blocks, blind plate again - with liquid gasket.
- ⊗ It is advisable to replace the packing cord at bearing blocks and blind plate.
- ⊗ NOTE worm wheels must be loosely loaded when mounting bearing blocks. Then mount the main shaft and test the gearbox. The back pressure on the oil engine must be between 5-20 bar.
- ⊗ Mount base plate in liquid gasket.

Final assembly according to pkt. 2 is followed

Remember to thoroughly check all functions and leaks

5. Loose valve block

Check if bolts are loose. If found loose, unscrew them and apply North Lock washers.