



Service Bulletin

Model: UXV 500/500i/700

SB# 17002

Subject: Bevel gear replacement

Date: Jun 2017

Effective: ON CONDITION

Time: 8.0 hrs

Description

A common issue amongst the UXV500i/700i has been the bevel gears failing for various reasons causing major engine damage. KYMCO has provided an upgraded gear and shaft set and has highlighted the setup of backlash between these gears is critical.

Cause

The bevel gears backlash is incorrect either through initial setup, shim wear or bearing movement that the gears are shimmed against, creating a stressed gear mesh.

Effect

The effects of this include clunking, rattling or whining noise from engine, wheels locking up or no drive available. Damage to the engine bevel gears including excessive wear, stripped/broken bevel gear teeth and crank case damage.

Remedy

Caution

Continuing to drive the machine could result in the bevel gears locking up and driving apart, cracking the RH crankcase. Do not operate the machine if this is a suspected fault.

Please follow Chapter 5 of the service manual for detailed instructions of the below procedures.

Inspection

- 1) Drain the engine oil.
- 2) Remove the strainer and check for large metal fragments.



- 3) Remove the bevel gear cover
- 4) Inspect the condition of the gears and wear patterns on the teeth.
- 5) Inspect the bearings for condition and they are seated firmly against the shoulders of the case.
- 6) Inspect the surrounding case for any cracks radiating from bolt and oil transfer holes, or wear marks on the case internally.
- 7) If there is visible damage to the gears or case, continue to step 9. If everything looks good, there may be other causes for the fault. Please contact Steelfort technical team to discuss.

Repair

- 8) Disconnect the front diff and remove the front driveshaft.
- 9) Remove the Engine. (It is possible to keep the engine wiring connected and slide it forwards from the mounts until the rear driveshaft is free, but this will be up to dealer preference).
- 10) Unstake and remove the driveshaft adapter, the centre drive shaft and the drive and driven bevel gears and shims. Remove seals at front and rear of engine.
- 11) Inspect surrounding case, splines and bearings. Check the rear engine bearing is secure and lock ring is tight. If it has moved reapply retaining compound to threads and torque to 147Nm.
- 12) Remove the RH flywheel cover and water pump. Remove the water pump drive gear and mounting.
- 13) Remove and replace oil pump.
- 14) Refit water pump drive gear and flywheel cover.
- 15) Replace front and rear engine seals.

Caution

The upgraded bevel gears are not compatible with the original versions. Please ensure both new gears have a double ring engraved around the front face.

- 16) Fit new shims, bevel gears, centre driveshaft and driveshaft adapter. The nominal shim is 0.85mm both sides.
- 17) Fit and torque both bevel gears into place, **DO NOT STAKE THE NUTS** yet. Check the backlash from the centre of the tooth on the driven gear as shown below. Replace shims as needed to achieve a backlash of 0.03-0.15mm and a contact pattern central on the teeth.



- 18) Stake the locknuts in place and refit the bevel gear cover.
- 19) Replace oil filter.
- 20) Refit engine, drive shafts and diffs as needed.
- 21) Refill with oil and water.
- 22) Test drive.

UXV700 Parts required

Part	Description	Qty
11394-LKM5-E00	GASKET R COVER	1
11496-LKM5-E00	GASKET R CASE CAP	1
15100-LDB5-E00	PUMP ASSY OIL	1
15119-LKM5-E00	GASKET OIL PUMP BODY	1
1541A-LBA2-E00	ELEMENT COMP OIL FILTER	1
23431-LDB5-E00	SHAFT FINAL	1
23518-LKM8-F30	BEVEL GEAR, DRIVE 17T	1
23519-LKM8-F30	BEVEL GEAR DRIVEN 23T	1
90203-LDB5-E00	NUT FLANGE 20MM	2
90314-LDB5-E00	SHIM FLNAL BEVEL GEAR D (0.75)	2
90316-LDB5-E00	SHIM FLNAL BEVEL GEAR F (0.85)	2
90318-LDB5-E00	SHIM FLNAL BEVEL GEAR H (0.95)	2
91255-LDB5-E00	OIL SEAL 35*67*7	1
91256-LDB5-E00	OIL SEAL 35*90*7	1

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Please contact STEELFORT Technical department for more information