



Service Manual

Chassis & Mast

MC

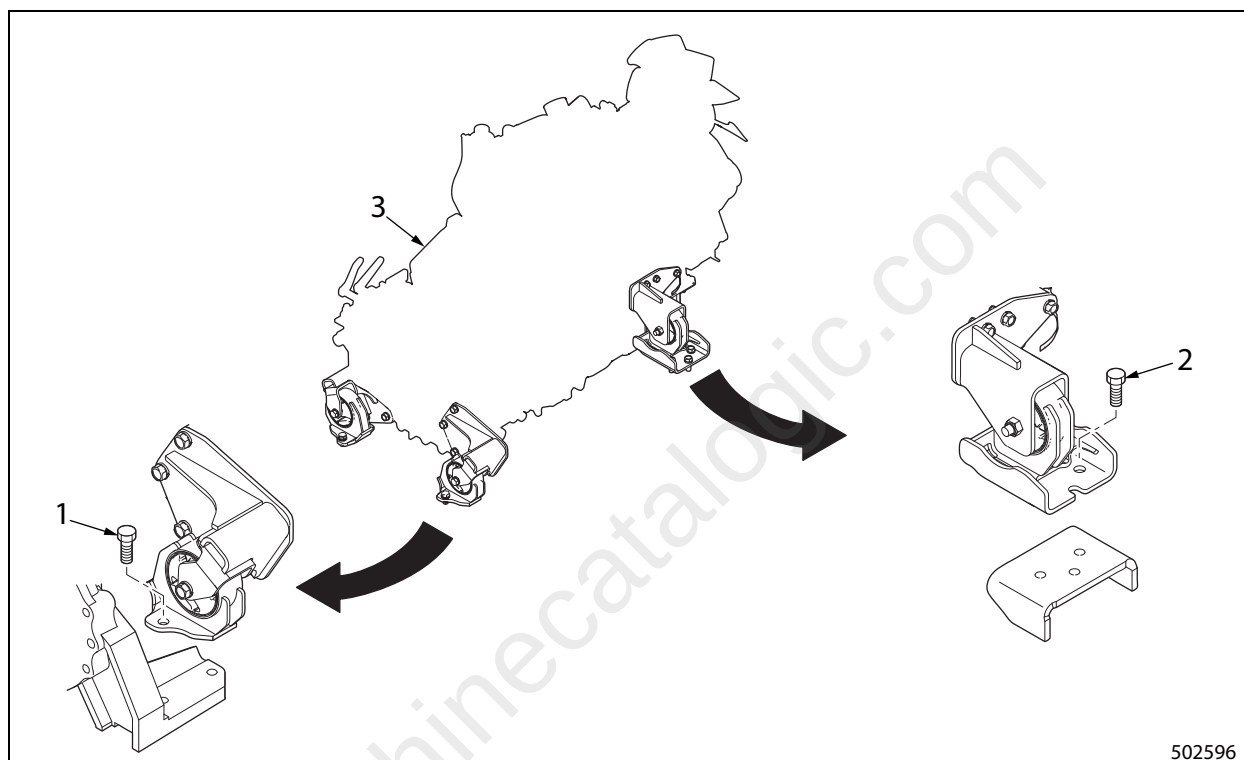
GP15N	CT25C-55001-up	GPE15N	CT34-00001-up	DP15N	CT16D-54001-up
GP15ZN	CT34-52001-up	GPE18N	CT34-40001-up	DP18N	CT16D-74001-up
GP18N	CT25C-75001-up	GPE20CN	CT34-30001-up	DP20CN	CT16D-24001-up
GP18ZN	CT34-72001-up	GPE20N	CT17D-20001-up	DP20N	CT18C-20001-up
GP20CN	CT34-22001-up	GPE20ZN	CT35-20001-up	DP25N	CT18C-70001-up
GP20N	CT17D-10001-up	GPE25N	CT17D-70001-up	DP30N	CT14E-10001-up
GP20ZN	CT35-10001-up	GPE25ZN	CT35-70001-up	DP35N	CT14E-80001-up
GP25N	CT17D-60001-up	GPE30N	CT13F-10001-up		
GP25ZN	CT35-60001-up	GPE35N	CT13F-80001-up		
GP30N	CT13F-40001-up				
GP35N	CT13F-60001-up				

1.15 Preparation for Removing Engine and Transmission Assembly

Lift the engine and transmission assembly with a hoist and slings.

Item	Weight
Engine and transmission assembly	Approx. 250 kg (551.2 lb.)

1.16 Removal Sequence of Engine and Transmission Assembly



1. Transmission mounting bolt
2. Engine mounting bolt
3. Engine and transmission assembly

1.17 Suggestions for Removing Engine and Transmission Assembly

- (1) To remove mounting bolts, lift the engine and transmission assembly high enough to lighten the weight from the mount cushions. Remove the engine mounting bolts of engine mounting.
- (2) Hitch slings to the three hooks, slowly lift the engine and transmission assembly by moving it backwards while maintaining its balance.

Note:

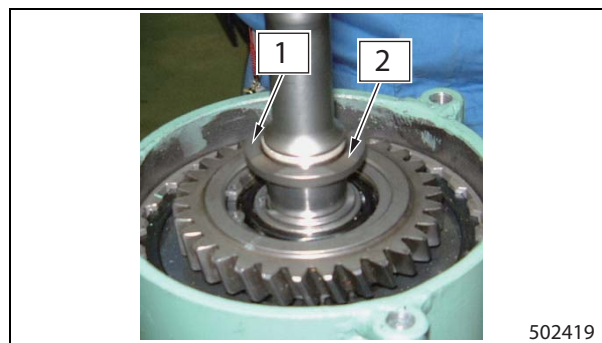
- With the engine and transmission assembly suspended, drain the transmission oil and clutch oil.
- Only one drain plug is provided on the powershift transmission.

Forward side input spacer and bearing, Installing

(1) Install input spacer using installer (special tool).

Note:

- Install input spacer with its oil groove side facing ball bearing side.
- When input spacer has been installed, snapping is hidden behind input spacer.

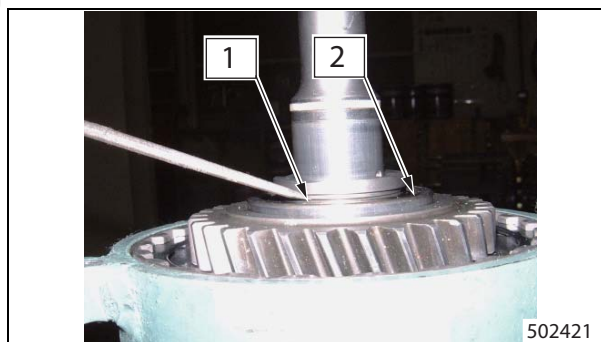


1. Input spacer

2. Oil groove



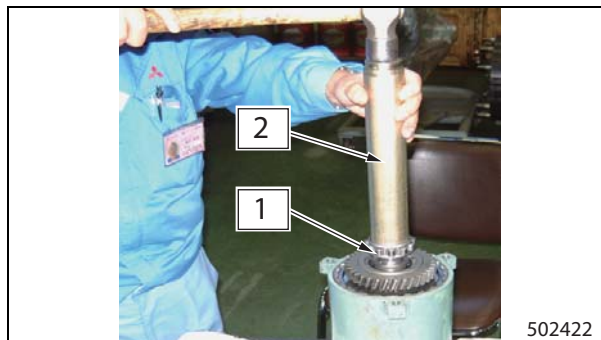
1. Special tool (Installer)



1. Input spacer

2. Angular bearing

(2) Install bearing using installer (special tool).



1. Bearing

2. Special tool (Installer)

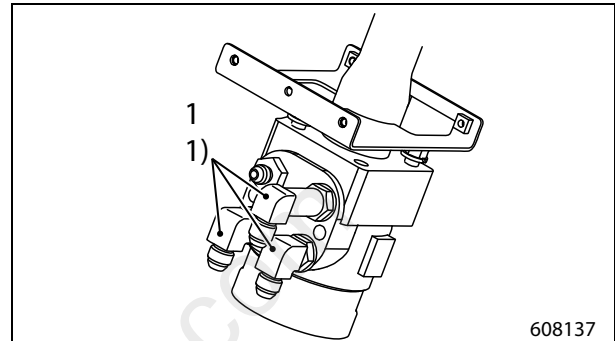
6. Steering Valve, Removing

- (1) Remove the cover from the steering column.
- (2) Disconnect four hoses from the steering valve.
- (3) Remove bolts and remove the steering valve.

7. Steering Valve, Installing

For installation, follow the removal sequence in reverse and observe the instructions below:

- (1) Apply grease to serrated portion at the lower part of the steering shaft.
- (2) Tighten mounting bolts to the specified torque.
- (3) Pay attention to the orientation when installing the elbow on the steering valve. Also be sure to tighten to the specified torque.



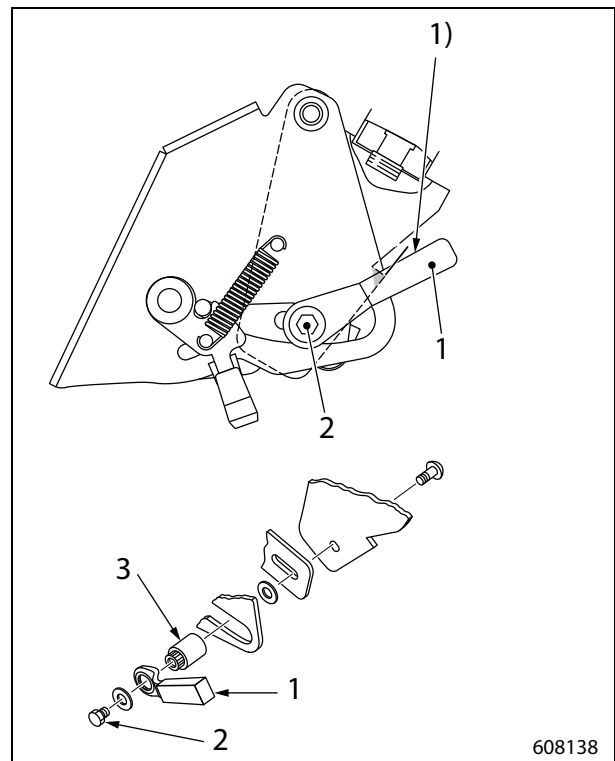
1. Elbow

1) Install the elbow facing downward

Ref.	Item	Tightening torque
1	Elbow	34 to 39 N·m (3.5 to 4.0 kgf·m) [25.08 to 28.76 lbf·ft]

8. Tilt Lock Lever, Disassembling

- (1) Make a matchmark across tilt lock lever and nut 3 for proper installation at assembly.
- (2) Remove lever mounting bolt 2 and remove tilt lock lever.



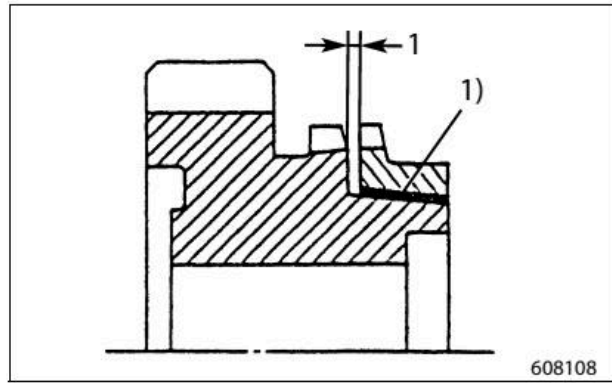
1. Tilt lock lever

2. Lever mounting bolt

3. Nut

1) Lever face

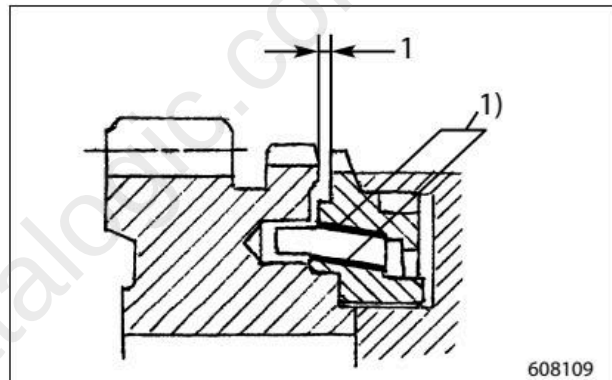
- (2) Check cones for wear or damage.
- (3) Measure the axial clearance between the gear and synchronizer ring.



H-L

1. Clearance (H-L)

1) Cone



F-R

1. Clearance (F-R)

1) Cone

Item		Ref.	Standard	Limit
Axial clearance between gear and ring	H-L	1	1.75 mm (0.0689 in.)	0 mm (0.00 in.)
	F-R	2	1.85 mm (0.0728 in.)	0.25 mm (0.0098 in.)

Full Version Available

Caterpillar GPE25N Forklift Service Manual (99719-3F110)

Caterpillar GPE25N forklift service manual, covers hydraulics, mast, wiring, drive unit, and diagnostics. Searchable PDF download.

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