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				

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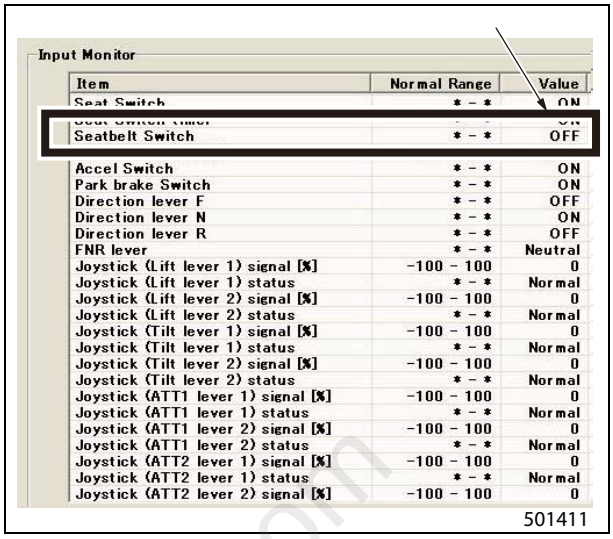
For use with K15, K21, K25, S4Q2 and S4S Engine Service Manuals.

99719-3F110

6.2 Seat Belt Warning Light, Checking the Operation

(1) Connect the service tool to the VCM-1M controller.
(2) Turn the key switch to the ON position and start the engine.
(3) Display the input monitor screen of the service tool.
(4) Make sure that the seat switch status is turned OFF when the seat belt is not fastened or not buckled properly.
Also check that the seat belt warning light in the meter panel glows.



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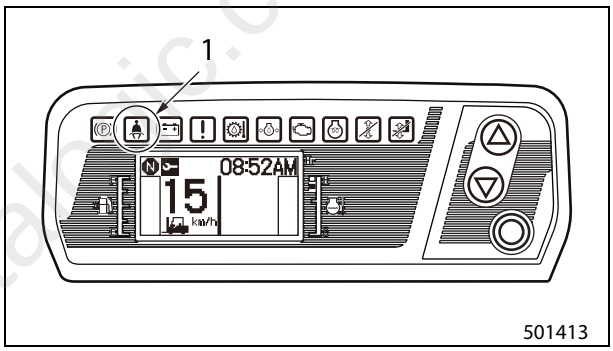
If Seat belt switch does not indicate ON

Check the seat belt switch operation and wiring connections by referring to 4-38 "Harness Codes", 4-40 "VCM-1M Controller", and 4-44 "Seat Switch".



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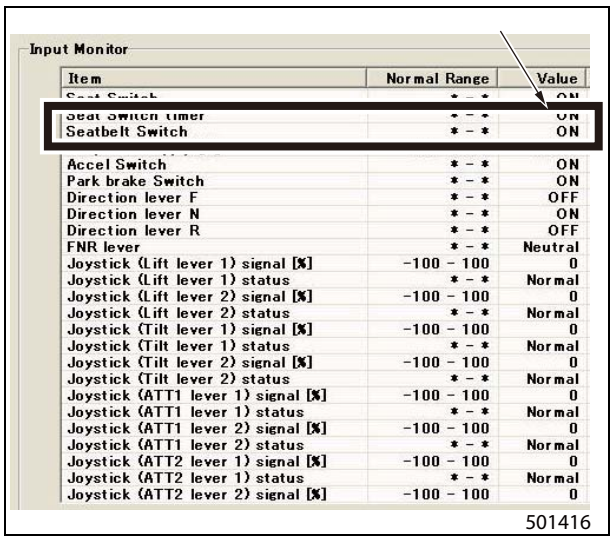
1. Lighting

(5) Make sure that the seat belt switch turns ON and the seat belt warning light in the meter panel goes out when the seat belt is properly fastened.



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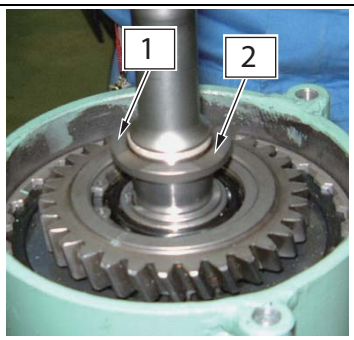
Forward side input spacer and bearing, Installing

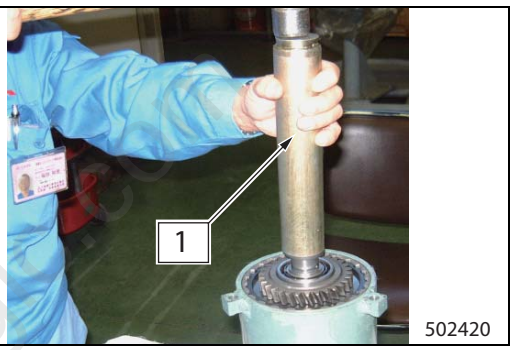
(1) Install input spacer using installer (special tool).

Note:

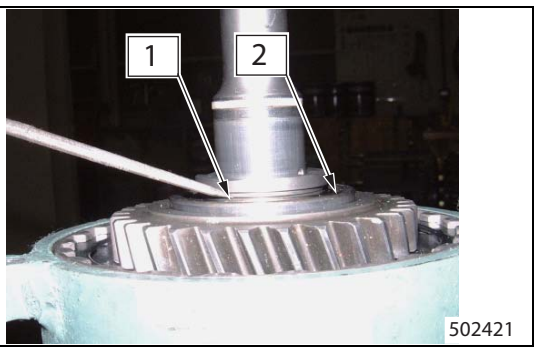
- Install input spacer with its oil groove side facing ball bearing side.
- When input spacer has been installed, snapring is hidden behind input spacer.



1. Input spacer 2. Oil groove

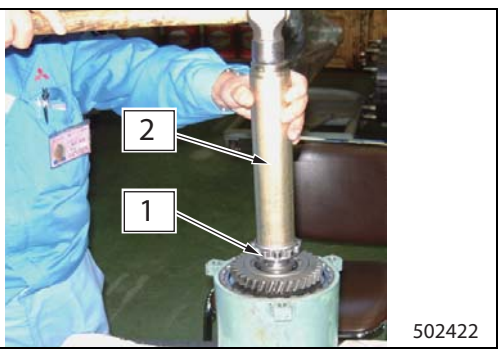


1. Special tool (Installer)



1. Input spacer 2. Angular bearing

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



1. Bearing 2. Special tool (Installer)

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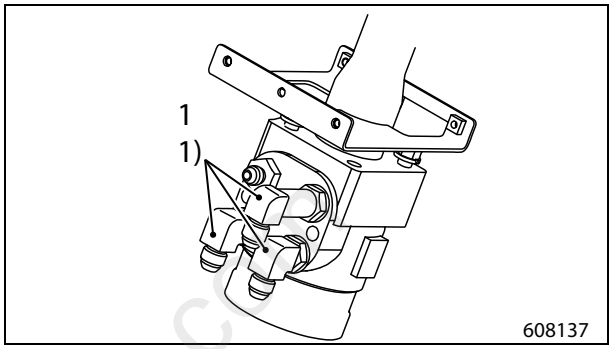
6. Steering Valve, Removing

(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.

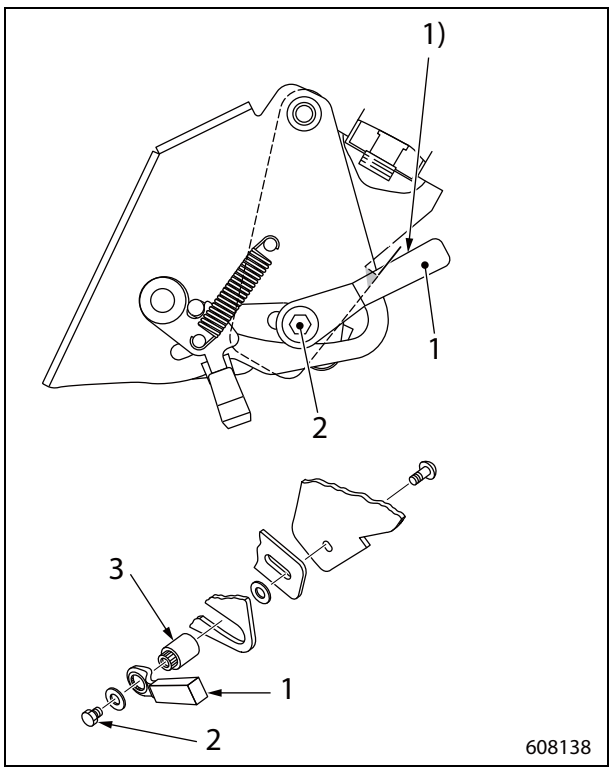


1. Elbow
1) Install the elbow facing downward

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

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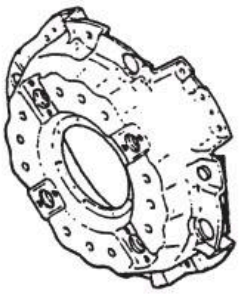
Clutch cover

Check the clutch cover for distortion, cracks, deformation and wear.



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Release levers

Check each release lever for wear or damage on the contact and sliding surfaces.

7. Pressure Assembly, Assembling

For assembly, follow the disassembly sequence in reverse.

7.1 Suggestions for Assembly

Bolt tightening torque

- Tighten the bolts with strap fixing washers 3 to the torque specified below.

Item	Tightening torque
Strap fixing washer mounting bolt	39 to 59N·m (4.0 to 6.0 kgf·m) [28.76 to 43.52 lbf·ft]

- Tighten the bolts that hold locking plates 1 to the torque specified below.

Item	Tightening torque
Lockplate mounting bolts	5.8 to 7.8 N·m (0.59 to 0.80 kgf·m) [4.278 to 5.753 lbf·ft]

Applying grease

Apply molybdenum disulfide grease (Never Seez or equivalent) to the pressure plate of the dry type clutch at the following places.

- Contact surfaces of release lever and pressure plate.
- Contact surfaces of release lever and lever support.

Also apply anti-seize and lubricating compound (Never Seez grease) to the following parts.

- Support nut threaded portion
- Support nut spherical portion

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6. Axle Assembly, Installing

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

(1) Using shims, adjust the total front and back clearance to be 0.8 mm (0.032 in.) or less.

⚠ CAUTION

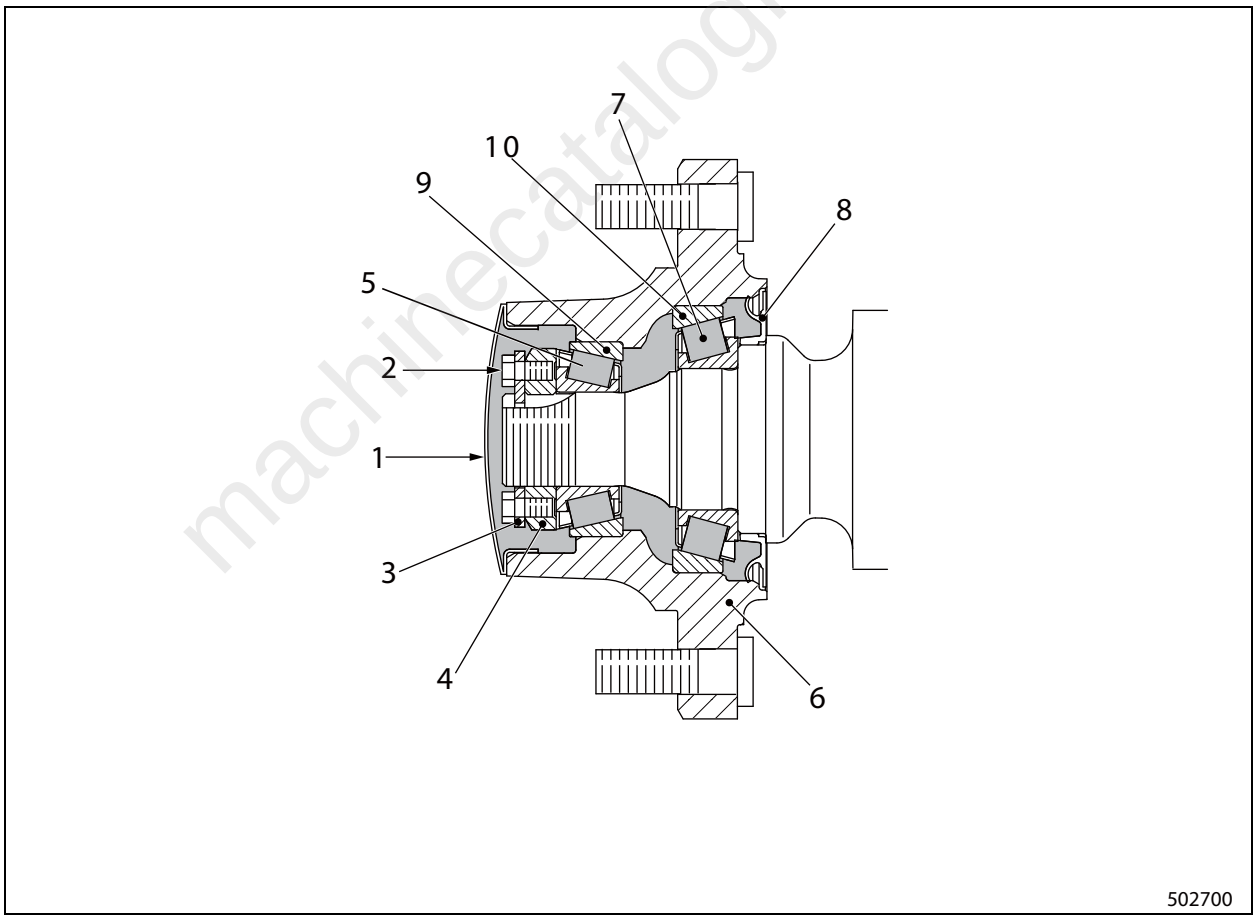
Place shims equally at the front and back.

(2) Apply "AUTOLEX A" grease or equivalent through grease nipple.
(3) Tighten the bolts to the specified torque.

Item	Specified value
Tightening torque	247.4 to 334.8 N·m (25.23 to 34.14 kgf·m) [182.473 to 246.936 lbf·ft]

7. Wheel Hub, Disassembling

7.1 Disassembly Sequence



1. Hub cap
2. Bolt
3. Lockplate
4. Locknut (hexagon nut)
5. Tapered roller bearing (inner race)
6. Hub (with tapered roller bearing outer race)
7. Tapered roller bearing (inner race)
8. Oil seal
9. Tapered roller bearing (outer race)
10. Tapered roller bearing (outer race)

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Full Version Available

Caterpillar GP18ZN Forklift Service and Operator Manual (99719-3F110)

Caterpillar GP18ZN forklift service manual, covers hydraulics, mast, drive unit, wiring, and engine service data. Searchable PDF download.

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