

Service Manual

**GP15, GP18, GP20, GP25, GP30, GP35;
DP15, DP18, DP20, DP25, DP30, DP35
Chassis & Mast**

AC

For use with 4G63, 4G64 Gasoline,
S4Q2,S4S Diesel Engine Service Manual

POWER TRAIN

2. After removing release cylinder 14 complete with bracket from the clutch housing, tie it to the pedal assembly. Also, tie fluid reservoir 15 to the pedal assembly, taking care not to allow the fluid to leak off (manual transmission models).
3. To remove pedal assembly 17, unscrew four bolts securing its bracket, and remove it together with release cylinder 14 and reservoir 15 (manual transmission models).
4. Disconnect choke cable and throttle cable 18 at the engine side, and put them inside the frame on the left and right sides of the truck (gasoline models).
5. To remove transmission control lever 19, pull clevis pin at the bottom of the lever, remove the lever shaft, and remove the lever from the bracket. Disconnect the throttle cable at the engine side, and put it inside the frame on the right side of the truck (manual transmission models).

paying particular attention to the welds to see if any weld is cracked to require repair.

3. Others

- (1) Check the outer surface of the oil seal retainer for wear or damage.
- (2) Check the outer and inner oil seals for wear and damage.

Reassembly

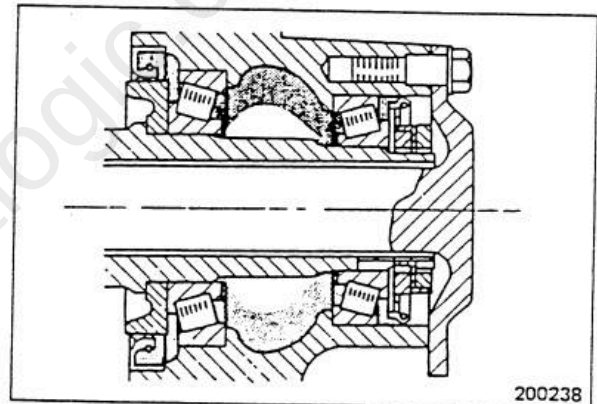
To reassemble, follow the reverse of disassembly sequence, and do the following steps:

1. Front wheel hub

- (1) Fill the front wheel hub, especially the roller holder and oil seal lip groove, with grease.

NOTE

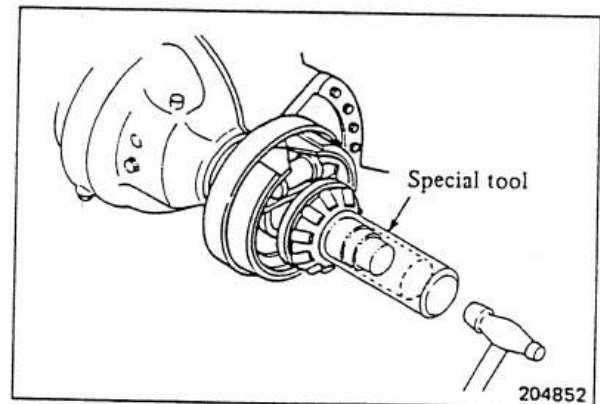
Take care not to apply grease to the brake drum.



- (2) Install the inner race and oil seal retainer of the wheel hub bearing with an installer (special tool).

Special tool needed

	GP(DP)15/18	GP(DP)20 thru 35
Installer	64309-12300	91468-00300

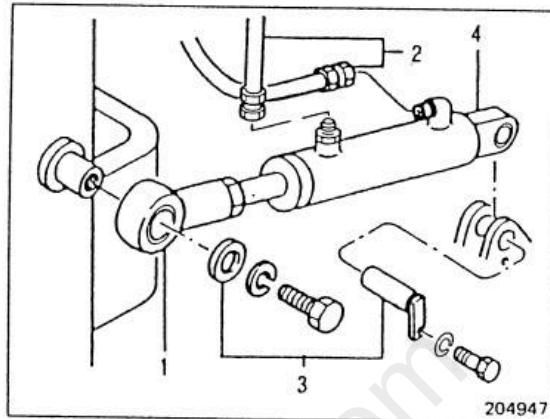


- (3) Apply sealant to the flange surfaces of the axle shafts.

HYDRAULIC SYSTEM

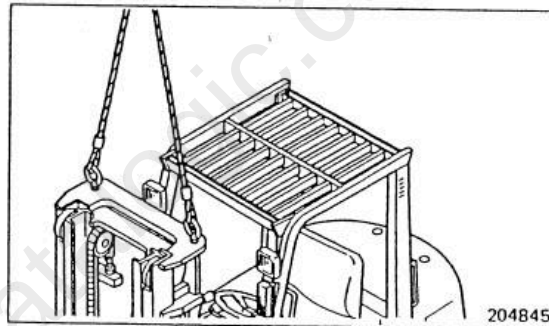
Tilt Cylinders

- 1 Tilt socket
- 2 Rubber hose [O-ring]
- 3 Cylinder pin [spacer]
- 4 Tilt cylinder



Start by:

1. lower the forks all the way, and tilt the mast fully forward.
2. hitch lifting slings to the top crossmember of outer mast by passing them through the round holes, and take up the weight of the mast with a hoist.



Suggestions

Removing tilt sockets

- (1) Mark the tilt cylinder sockets and nuts.

NOTE

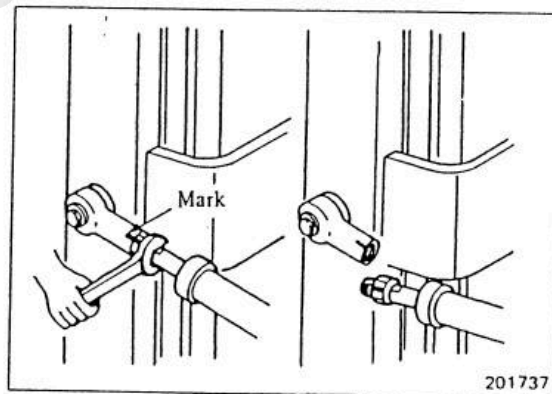
When the tilt cylinders are to be replaced, it is necessary to adjust the cylinder stroke and tilt angle.

- (2) Using a wrench, turn the piston rods to disconnect the tilt cylinders from the tilt sockets.

NOTE

Loosen the nut just enough to permit turning of the piston rod. Do not change the position of the nut.

- (3) Retract the tilt cylinders and disconnect them from the tilt sockets.



MANUAL TRANSMISSION

Inspection after disassembly

Shift forks

Check for distortion, cracks or badly worn tips.

Shifts rails

Check for distortion, cracks or worn detent ball grooves.

Input shaft

Check for distortion, cracks or badly worn splines.

Main shaft

Check for distortion, cracks or badly worn splines and bearing journals.

Output flange

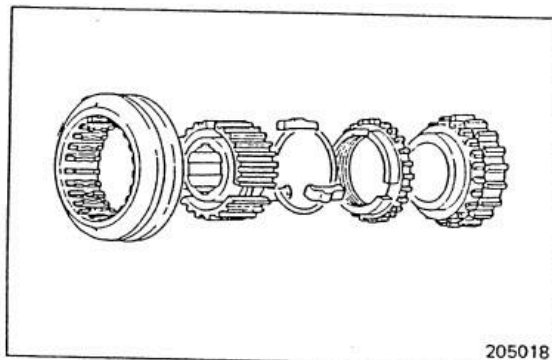
Check for distortion, cracks or badly worn splines. Also check the pinion teeth for defects outlined in the INSPECTION GUIDE volume.

Gears

Check for defects outlined in the INSPECTION GUIDE volume.

Synchronizer and related parts

- (1) Check the gears and keys for defects as outlined in the INSPECTION GUIDE volume.



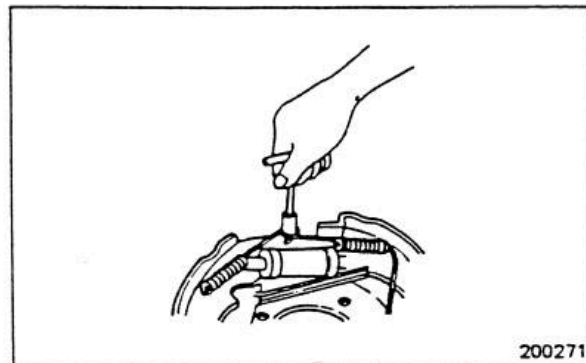
Suggestions

1. Return spring removal

Use a special tool to remove the return springs.

Special tool needed

Spring remover	64309-15411
----------------	-------------



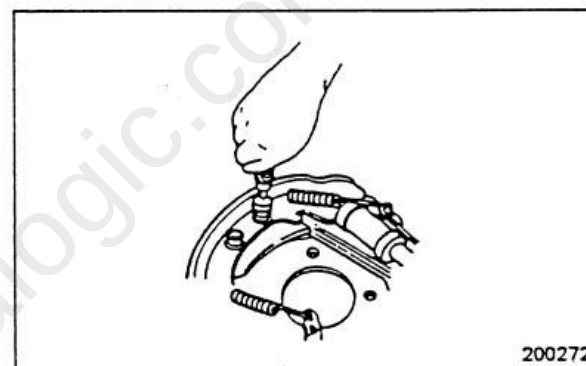
200271

2. Hold-down spring removal

Use a special tool to remove the hold-down springs.

Special tool needed

Spring retainer	64309-15412
-----------------	-------------



200272

Inspection after disassembly

1. Backing plate

- (1) Check the backing plate for cracks.
- (2) Tighten the backing plate mounting bolts to the specified torque.

Tightening torque for backing
plate mounting bolts

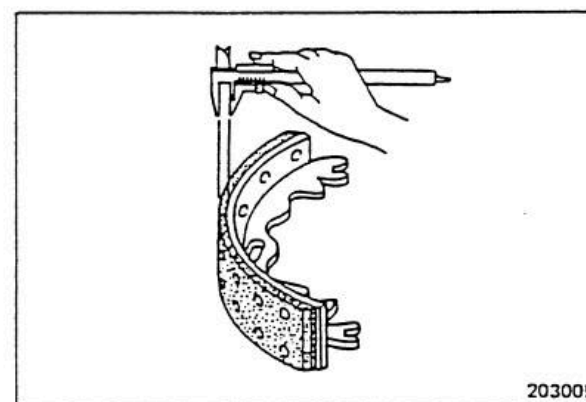
157 N·m
(16 kgf·m)
[116 lbf·ft]

2. Shoes and linings

- (1) Check each shoe and lining for cracks.
- (2) Replace the lining if it is found dirty with grease matter, burnt or glazed.
- (3) Check the thickness of the lining, and replace the lining if it is in excess of the service limit.

Unit: mm [in.]

		GP(DP)15 thru 18	GP(DP)20 thru 35
Thickness of linings	A	4.87 [0.19]	6 [0.24]
	B	2.5 [0.10], maximum	3 [0.12], maximum



203005

Full Version Available

Caterpillar GP35 FC Forklift Service Manual (99719-60100)

Caterpillar GP35 FC Forklift service manual, covers hydraulics, drive unit, wiring, mast, and engine work. Downloadable PDF format.

VIEW THE FULL MANUAL

<https://machinecatalogic.com/caterpillar-gp35-fc-forklift-service-manual-99719-60100/>