



MITSUBISHI
FORKLIFT TRUCKS

SERVICE MANUAL

FGC15

FGC18

FGC20

FGC25

FGC30

NOTE

For use with the 4G63/4G64
Gasoline Engine Service Manual.

CHASSIS
MAST

POWER TRAIN

Start by:

1. drain coolant from the engine cooling system
2. drain oil from the transmission, reduction gear and differential

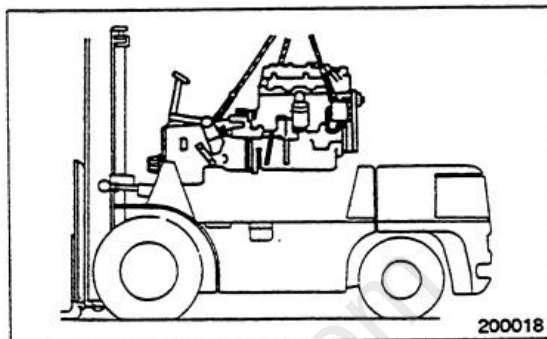
Suggestions

Fasten a hoist to the engine-power train combination. Carefully lift the combination from the frame and move it backward into position for removal.

Weight of components

Unit: kg [lb]

Component	FGC15/18	FGC20/25	FGC30
Mast [3.3-m [130 in.] Simplex]	520 [1147]	725 [1599]	830 [1830]
Overhead guard	60 [132]	65 [143]	65 [143]
Power train	320 [706]	360 [794]	360 [794]



Installation

To install, follow the reverse of removal sequence.

Hints for reduction gear and differential installation

• Output shaft shim adjustment

Before installing the bearing, determine the thickness of shims to be used by referring "a" and "b" to this formula:

$$\text{Shim thickness (c)} = 1.8 + \frac{a}{100} - b$$

where a = machining error indicated in a unit of 1/100 mm [0.0004 in.] on differential carrier by punching

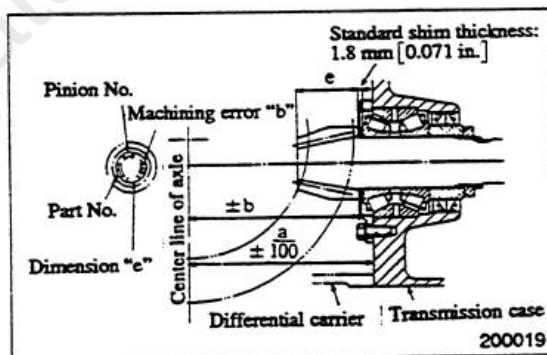
b = machining error of bevel pinion

- (1) Fill the cooling system with soft water and add antifreeze.

NOTE

For the concentration of antifreeze, see SERVICE DATA.

- (2) Fill the transmission, reduction gear and differential, front axle and torque converter after making adjustments.



BRAKE SYSTEM

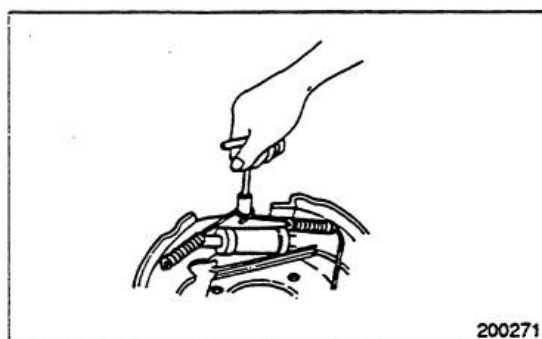
Suggestions

1. Removing return springs

Use a special tool to remove the return springs.

Special tool needed

Spring remover	64309-15411
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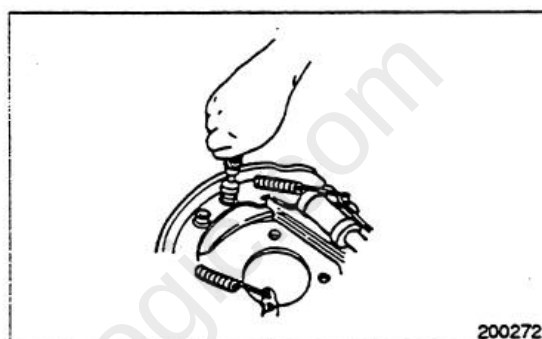


2. Removing hold-down springs

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

Special tool needed

Spring remover	64309-15412
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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]
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2. Shoes and linings

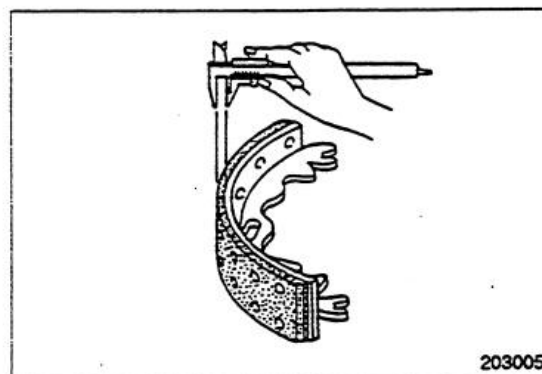
- (1) Check each shoe and lining for cracks.
- (2) Replace the lining if it is found dirty with grease matter, burnt or glazed.
- (3) Check the thickness of the lining, and replace the lining if it is in excess of the service limit.

A = Assembly standard

B = Repair or service limit

Unit: mm[in.]

		FGC15/18	FGC20/25/30
Thickness of linings	A	4.87 [0.19]	6 [0.24]
	B	2.5 [0.10], maximum	3 [0.12], maximum



3. Lift chains, chain wheels and chain wheel supports

- (1) Measure the length of each chain to be sure that two chains are equal in length. Also check the chains for wear, evidence of breakage, link binding and twist.
- (2) Check each chain anchor bolt for cracks or damaged thread.
- (3) Check each chain wheel support and chain wheel for crack or wear. Check to be sure that the wheels are capable of smooth rotation.

4. Mast strips

Check the mast strips for damage, wear or distortion.

Reassembly

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

1. Adjusting mast and lift bracket clearance

Rollers for mast and lift bracket are available in three sizes (diameters) for selective use. Select the size that will provide a longitudinal clearances of 1 mm [0.04 in.] and less.

Roller Sizes

Unit: mm[in.]

Diam. of main roller	FGC15/18	FGC20/25/30
S	99 [3.90]	114 [4.49]
M	100 [3.94]	115 [4.53]
L	101 [3.98]	116 [4.57]

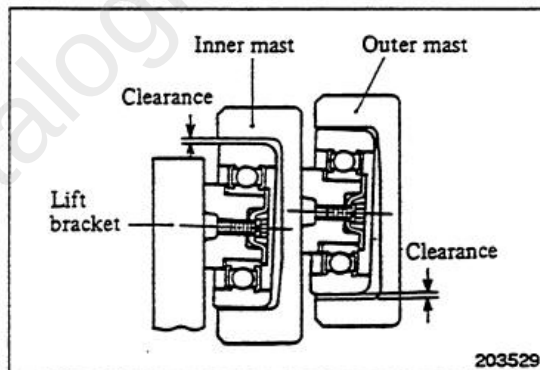
Length of Lift Chain (per 20 links)

A = Assembly standard

B = Repair or service limit

Unit: mm[in.]

	FGC15/18	FGC20/25	FGC30
A	318 [12.52]	381 [15.00]	508 [20.00]
B	327 [12.87]	392 [15.43]	523 [20.59]



FRONT AXLE AND REDUCTION DIFFERENTIAL

3. Others

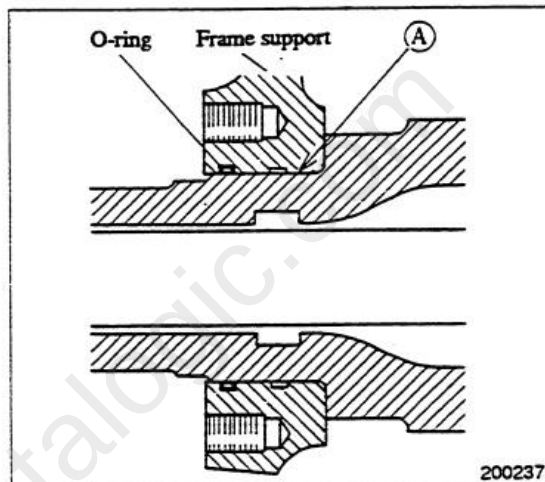
- (1) Check the outer surface of the oil seal retainer for wear or damage.
- (2) Check the outer and inner oil seals for wear and damage.

Reassembly

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

1. Axle housing

- (1) Install the O-ring in the outer groove (of the two grooves in the bore of each frame support).
- (2) Apply grease to the surfaces A of the support and axle housing.

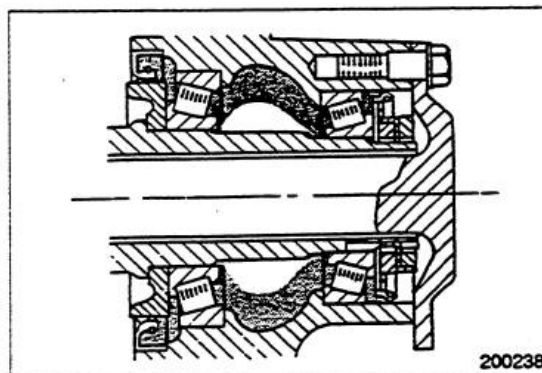


2. Front wheel hub

- (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.



Full Version Available

Mitsubishi FGC20HP Forklift Service Manual (99719-70110)

Mitsubishi FGC20HP forklift service manual PDF, covers LPG engine, hydraulics, drive unit, and wiring repair for shop use. Instant PDF download.

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