



MITSUBISHI
FORKLIFT TRUCKS

SERVICE MANUAL

Chassis

FBC15

AFB1-50401

FBC20

AFB2-00203

AFB2A-00011 (FW)

FBC25

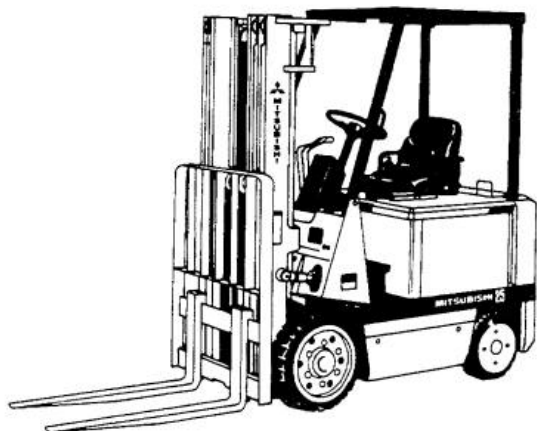
AFB2-50353

AFB2A-50005 (FW)

FBC30

AFB3-00067

AFB3A-00011 (FW)

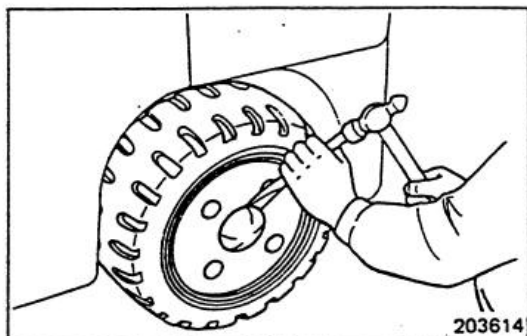


Quality Makes the Difference

Tips for removal

1 Cap removal

The cap is press fitted to the rim. Pry it off using a chisel and a hammer as shown. Discard the cap once removed and use a new cap when installing a replacement tire.



4 Rim and tire removal

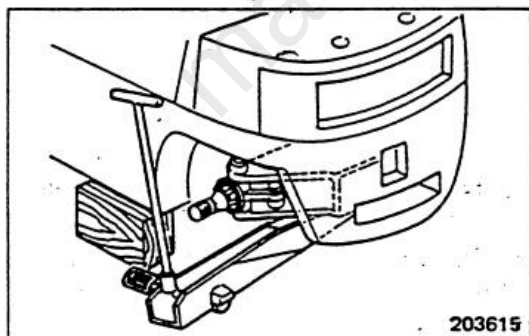
Remove the rim and tire assembly from the rear axle by wobbling it. Take care not to damage the oil seal fitted to the inner side of the rim. After removing the assembly, raise the counterweight to a position 400 to 500 mm (16 to 20 in.) from the floor.

7 Rear axle assembly removal

Support the rear axle at its center with a garage jack and remove the bolts securing the bearing support.

Weight of rear axle (without tires and rims)

FBC 15	60 kgs (132 lbs)
FBC 20-30	85 kgs (614.8 lbs)



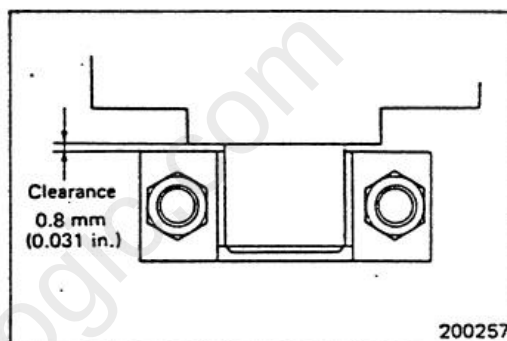
Installation

To install, follow the reverse of removal procedure and carefully proceed as follows:

(1) Bearing support clearance adjustment

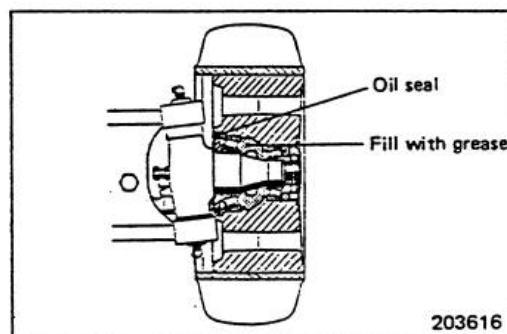
Make an adjustment by means of the thrust washer so that the total fore-aft clearance is 0.8 mm (0.031 in.). Tighten the bearing support bolts to the specified torque.

Tightening torque for bearing support bolts	14.8 kgf·m (107 lbf·ft)
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(2) Filling rim with grease

Fill the rim void with grease. Also fill the roller holder. Do not overfill the oil seal lip portion to prevent leakage.



(3) Preload adjustment and lock nut

Adjust the preload with the inside nut and, after tightening the outside (lock) nut to the sure that the preload is correct.

If the hub bearings have long been in service, it is advisable to aim at a value of preload in lower half of the specified range.

Preload for hub bearing	5 – 50 kgf·cm (0.4 – 3.6 lbf·ft)
Tightening torque for lock nut	16 kgf·m (115.7 lbf·ft)

HYDRAULIC SYSTEM

5. Overload relief valve (Optional)

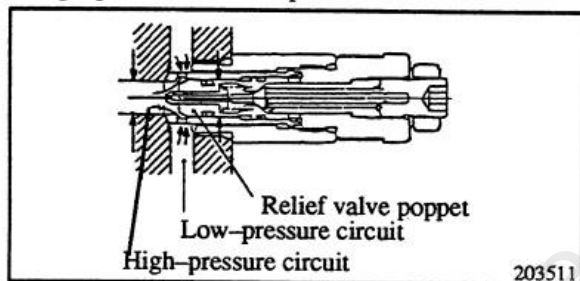
The overload relief valve, built in the attachment valve, provides a means of protecting the hydraulic components of an attachment. It is similar to the main relief valve in construction.

NOTE

This valve is properly set at the factory and should not be readjusted in field unless absolutely necessary. If the valve has to be readjusted, be sure to use a pressure gauge to obtain the correct setting.

Operation:

When the pressure in the high-pressure circuit is lower than that in the low-pressure circuit, the pressure created by the difference between the diameter B of relief valve poppet and the diameter A of high-pressure port unseats the poppet to admit the oil from the low-pressure circuit into the high-pressure circuit. By this feature, occurrence of cavitation in the high-pressure circuit is prevented.

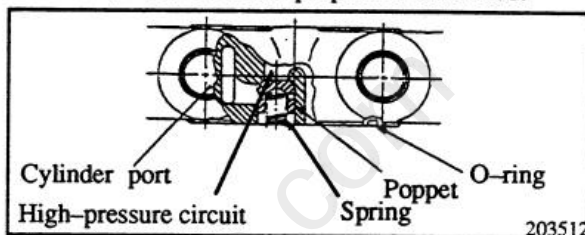


6. Load check valve

The load check valve is a poppet type flow control valve provided in the circuit between the high-pressure port and cylinder port of the tilt and attachment valves. It allows the oil to flow only in one direction, that is, to prevent the reverse flow of oil to the pump port.

NOTE

The valve differs from the load check valve of the lift valve as far as the purpose is concerned.

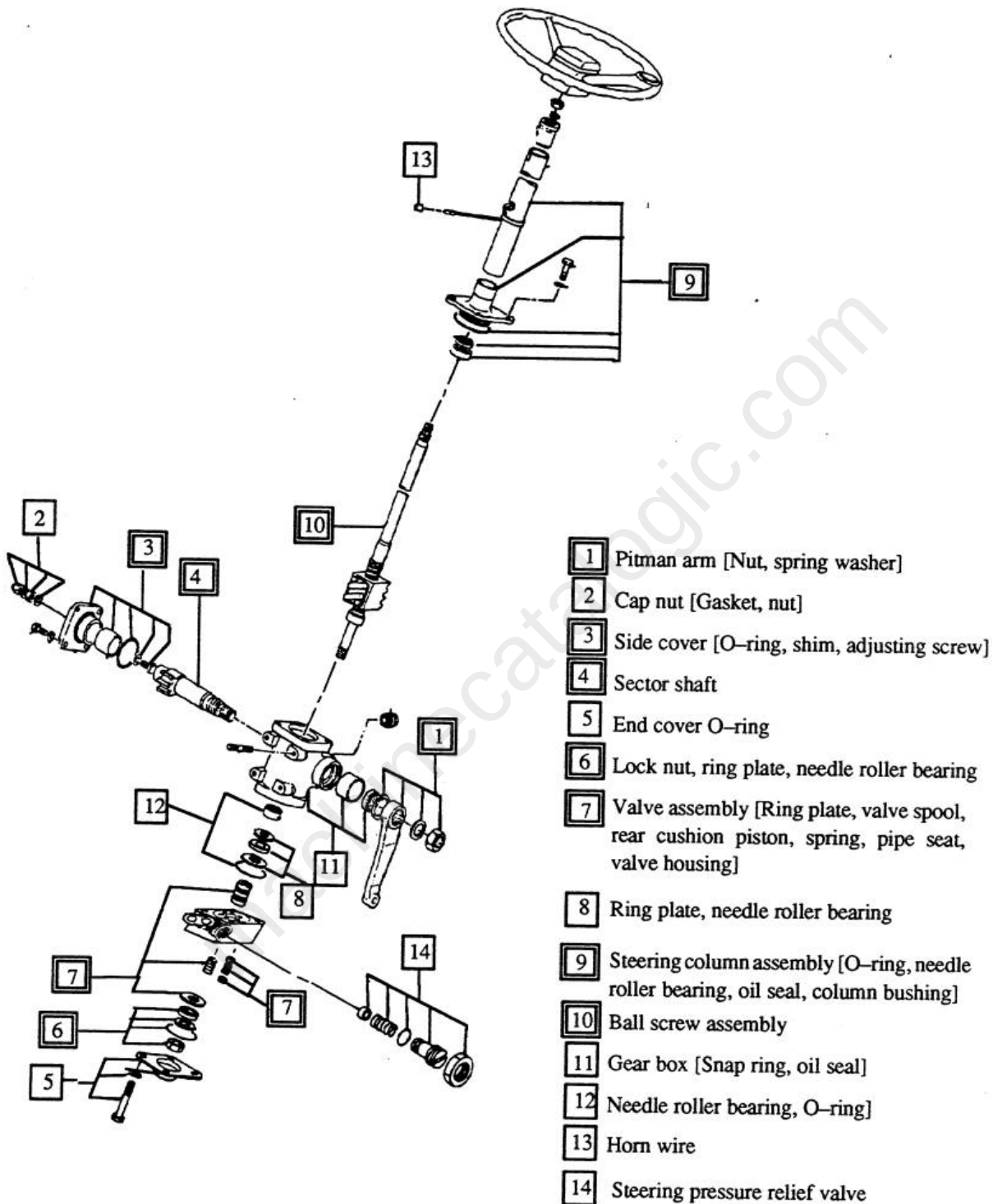


Masts and forks – continued

Item		Mast model	Dual-stage full free-lift panoramic		
			2B15A	2B25A	2B30A
1st lift cylinder	Tube ID	A	80 (3.15)	90 (3.54)	100 (3.94)
	Piston rod OD	A	70 (2.76)	75 (2.95)	85 (3.35)
		B	69.85 (2.7500)	74.85 (2.9468)	84.83 (3.3398)
	Cylinder head (bushing) ID	A	70 (2.76)	75 (2.95)	85 (3.35)
		B	70.25 (2.7657)	75.25 (2.9626)	85.30 (3.3583)
	Clearance between cylinder head (bushing) ID and piston rod OD	B	0.4 (0.016)	0.4 (0.016)	0.47 (0.0185)
	Stamping on down safety valve liter (U.S. gal)/min	A	90 (23.8)	120 (31.7)	90 (23.8)
	Piston	Wear ring thickness	A $3 \begin{smallmatrix} 0 \\ -0.08 \end{smallmatrix} (0.12 \begin{smallmatrix} 0 \\ -0.0031 \end{smallmatrix})$		
			B 2.6 (0.102)		
		Tightening torque for set screw, kgf·m (lbf·ft)	A $3.2 \pm 0.6 (23 \pm 4.3)$		
2nd lift cylinder	Tightening torque for cylinder head kgf·m (lbf·ft)		A $57.6 \pm 13.2 (417 \pm 95)$	$65.6 \pm 15.1 (474 \pm 109)$	$84.8 \pm 19.5 (613 \pm 141)$
	Tube ID	A	45 (1.77)	45 (1.77)	50 (1.97)
	Piston rod OD	A	32 (1.26)	35 (1.38)	40 (1.57)
		B	31.85 (1.2539)	34.85 (1.3720)	39.85 (1.5689)
	Cylinder head (bushing) ID	A	32 (1.26)	35 (1.38)	40 (1.57)
		B	32.15 (1.2657)	35.15 (1.3839)	40.15 (1.5807)
	Clearance between cylinder head (bushing) ID and piston rod OD	B	0.3 (0.012)	0.3 (0.012)	0.3 (0.012)
	Stamping on down safety valve liter (U.S. gal)/min	A	70 (18.5)	70 (18.5)	120 (31.7)
	Piston	Wear ring or piston ring thickness	A $2.5 \begin{smallmatrix} 0 \\ -0.08 \end{smallmatrix} (0.098 \begin{smallmatrix} 0 \\ -0.0031 \end{smallmatrix})$		
			B 2.1 (0.083)		
		Tightening torque kgf·m (lbf·ft)	A $20 \pm 5 (145 \pm 36)$		
		Tightening torque for set screw, kgf·m (lbf·ft)	A $0.4 \pm 0.1 (2.9 \pm 0.7)$		
	Tightening torque for cylinder head kgf·m (lbf·ft)		A $24 \pm 2.4 (174 \pm 17)$	$24 \pm 2.4 (174 \pm 17)$	$28 \pm 2.8 (203 \pm 20)$
	Inspection of pipes and cylinders for leakage		—	—	—
	Lubrication of specified points		—	—	—
	Inspection of hoses for tension or damage		—	—	—
	Tightening torque for mast support cap bolt kgf·m (lbf·ft)		A $7.5 \pm 0.8 (54 \pm 6)$	$18.2 \pm 1.8 (132 \pm 13)$	$18.2 \pm 1.8 (132 \pm 13)$

DISASSEMBLY AND REASSEMBLY

Steering gear Disassembly



Preparatory step

Before assembling the steering gear, measure the starting torque of the worm with a torque wrench or spring balance.

Full Version Available

Mitsubishi FBC30 Forklift Service Manual (99719-74100)

Mitsubishi FBC30 forklift service manual, shop repair, wiring, hydraulics, and drive diagnostics in PDF format. Instant PDF download.

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