



Service Manual

Chassis, Mast & Options

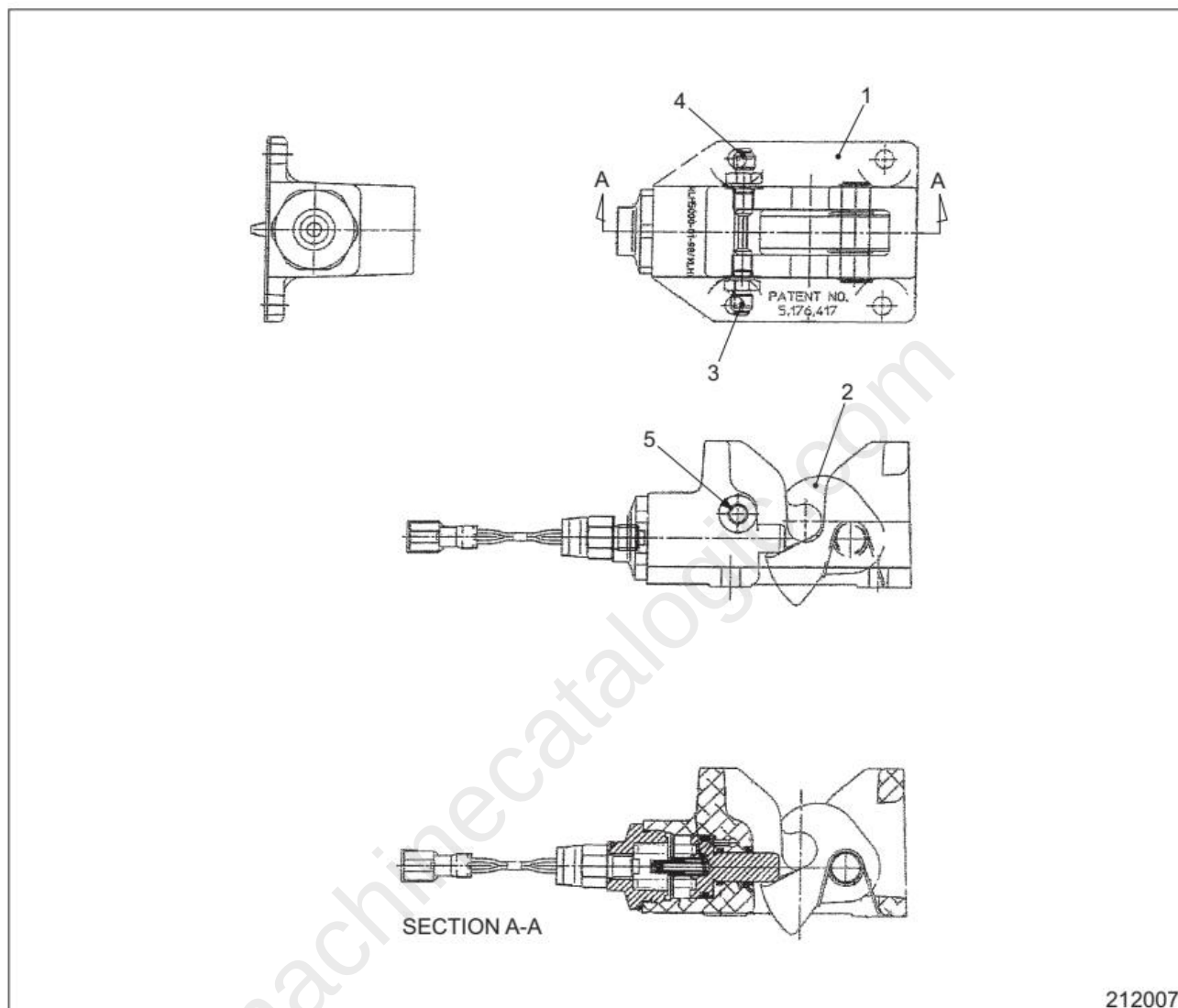
FD80N

F32C-10011-up

FD90N

F32C-60011-up

2.4 Hydraulic latch A, B



212007

1 Hydraulic latch assembly

2 Latch

3 Connector

4 Connector (hydraulic latch A),
Breather (hydraulic latch B)

5 Hydraulic port

- | | |
|---|---|
| 1 Hub cap, Gasket | 19 Clamp |
| 2 Outer lock nut, Lock washer | 20 Power cylinder, Pipe |
| 3 Inner lock nut | 21 Cover |
| 4 Rear axle hub | 22 Shim [21] |
| 5 Tapered roller bearing (inner race) [4] | 23 O-ring [21] |
| 6 Oil seal [4] | 24 Oil seal [21] |
| 7 Tapered roller bearing (outer race) [4] | 25 Tapered roller bearing (outer race) [21] |
| 8 Tapered roller bearing (outer race) [4] | 26 Stopper plate, Cap |
| 9 Tapered roller bearing (inner race) | 27 Steering knuckle |
| 10 Oil seal retainer | 28 Lower dust cover [27] |
| 11 Tie rod pin | 29 Tapered roller bearing (inner race) [27] |
| 12 Tie rod | 30 Oil seal retainer [27] |
| 13 Spacer [12] | 31 O-ring [30] |
| 14 Dust seal [12] | 32 Tapered roller bearing (inner race) [27] |
| 15 Spacer [12] | 33 Oil seal retainer [27] |
| 16 Dust seal [12] | 34 Oil seal [36] |
| 17 Stopper ring | 35 Tapered roller bearing (outer race) [36] |
| 18 Spherical bearing | 36 Rear axle housing |

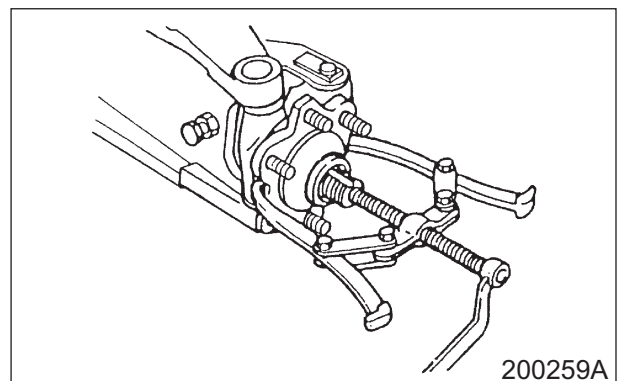
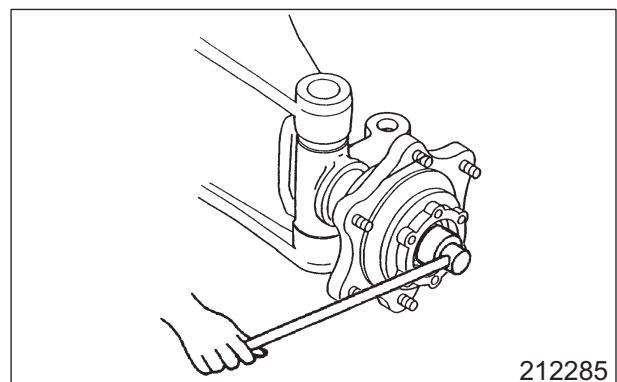
NOTE

[] shows the number of each place to remove from.

- (1) Lock nut
- (a) Restore the folded part of the lock washer to its original form.
- (b) Remove the outer and inner lock nuts using a socket wrench.

Width across flats of lock nut	70 mm (2.76 in.)
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- (2) Rear axle hub
- Use a puller to remove the rear axle housing from the steering knuckle.



4.4 Reassembly

To reassemble, follow the disassembly sequence in reverse and observe the following.

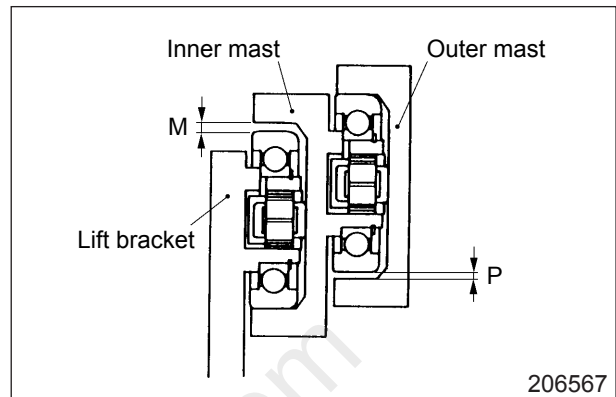
1. Front and rear clearance between mast and lift bracket

- (1) Select and assemble the main roller in an appropriate manner in order that the clearances P and M are within the dimensions as shown below throughout the height range.

Truck model	FD80N	FD90N
Clearances between main roller and rolling surface P, M	0.5 to 2.1mm (0.02 to 0.08 in.)	0.5 to 2.8 mm (0.02 to 0.11 in.)

Unit: mm

Truck model		FD80N	FD90N
Main roller size	S	169 mm (6.65 in.)	203 mm (7.99 in.)
	M	170 mm (6.69 in.)	205 mm (8.07 in.)
	L	171 mm (6.73 in.)	207 mm (8.15 in.)



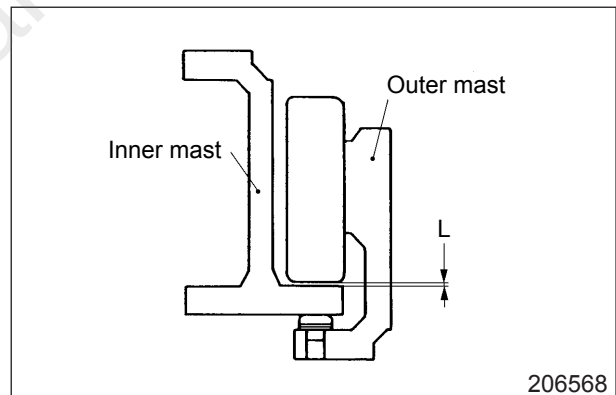
2. Installing mast trip

Install to make the front and rear clearance between outer and inner masts within the specified dimension.

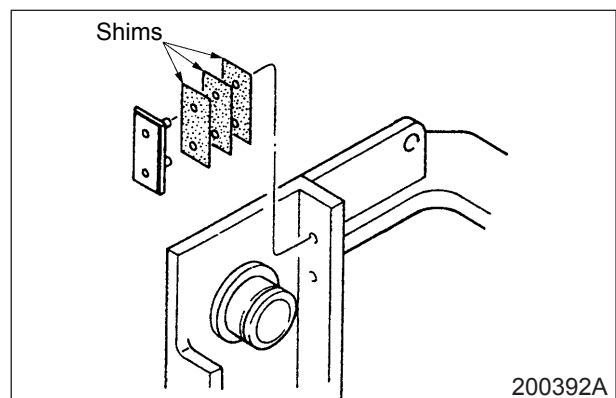
- (1) Withdraw the inner mast until the span of mast main roller comes to the dimension as shown below, and measure the clearance between inner mast flange and main roller L with thickness gauge.

Clearance L	0.2 to 1.0 mm (0.008 to 0.0039 in.)
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Mast Models	Roller span
4V80A, 4M80A	905 mm (35.6 in.)
4V90A	950 mm (37.4 in.)



- (2) If the clearance of mast strip L is not within the specified value, adjust with the shims.

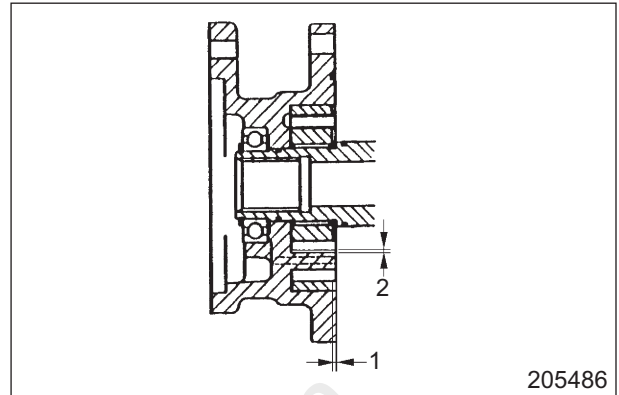


3-SPEED POWERSHIFT TRANSMISSION

4.2.2 Inspection

- (1) Oil pump
 - (a) Put the internal gear and pump gear in the pump case, and measure top clearance 2.
 - (b) Using a dial indicator, measure side clearance 1 between the gears and pump case.

Side clearance 1 mm (in.)	Standard value	0.040 to 0.078 (0.00157 to 0.00307)
	Service limit	0.09 (0.0035)
Top clearance 2 mm (in.)	Standard value	0.3 to 0.345 (0.0118 to 0.0136)
	Service limit	0.35 (0.0138)



- (2) Stator shaft
 - (a) Check the splines for wear or damage.
 - (b) Check the oil passages for clogging.
- (3) Friction plates and mating plates
 - (a) Check for sign of seizure, uneven contact, warpage or excessive wear.
 - (b) Check the splines for wear or damage.
- (4) Clutch drums
 - (a) Check the mating plate sliding surfaces for wear or damage.
 - (b) Check the clutch piston sliding surfaces for wear or damage.

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Mitsubishi FD90N Forklift Service Manual (99709-52100)

Mitsubishi FD90N forklift service manual PDF, covers engine, hydraulics, drive train, steering, and wiring for shop repairs. Instant PDF download.

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