MITSUBISHI FORKLIFT TRUCKS

Service Manual

Chassis & Mast

FBC15K, FBC18K, FBC18KL

A3BC1-10200-up
A3BC1-20200-up
A3BC1-30200-up
A3BC2-40200-up

FBC20K, FBC25K

A3BC2-10200-up
A3BC2-20200-up
A3BC2-30200-up
A3BC2-40200-up
A3BC2-80200-up

FBC25KE, FBC25KL, FBC30K

A3BC3-10200-up
A3BC3-20200-up
A3BC3-30200-up
A3BC3-40200-up
A3BC3-80200-up

FBC30KL

A3BC4-40200-up

99759-73110

Suggestions for Disassembly

1. Remove the bevel pinion shaft 6 as follows:
   (1) Using a chisel, cut the staked portion of the nut 4, taking care not to damage the bevel pinion shaft.
   (2) Hold the input gear 15 with the special tool to prevent the bevel pinion 6 from rotating, then remove the nut 4 and shims 5.

   Special tool needed

Transfer bearing tool	97E67 - 00100

   (3) Using the bevel pinion puller (special tool), pull the bevel pinion 6 out of the bearing cone 9 (See the drawing on the right).

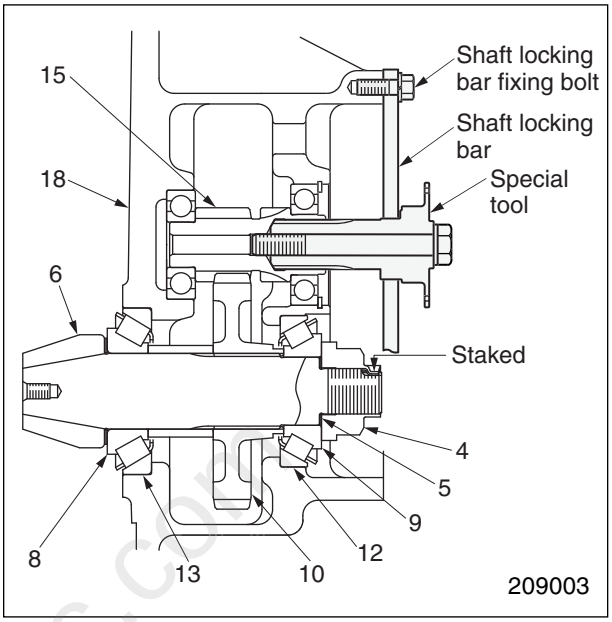
   Special tool needed

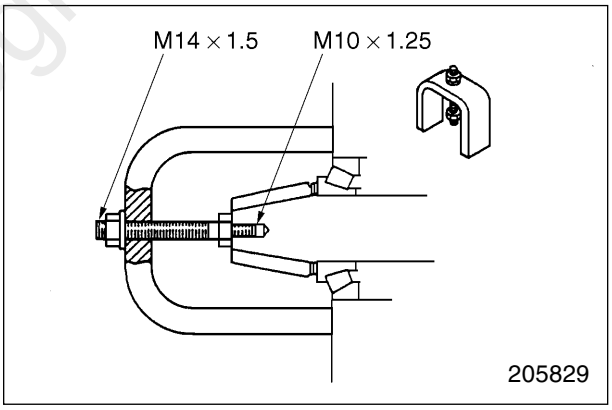
Bevel pinion puller	91268 - 00300

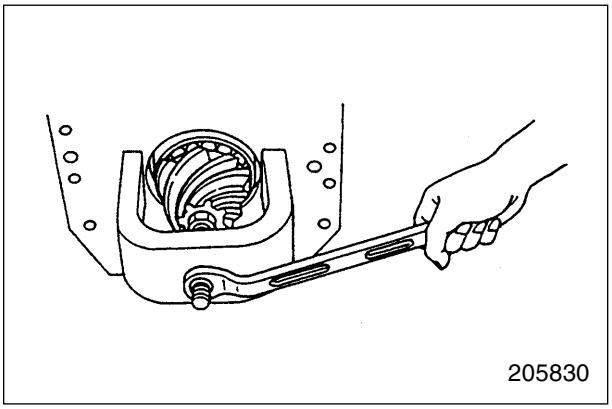
   (4) If the bearing cone 8 needs to be removed, use a bearing puller and a press to pull it from the bevel pinion 6.
   (5) If the bearing cups 12 and 13 need to be removed, use a bearing cup puller to pull them out of the transfer case 18.

NOTE

(1) The taper roller bearing cup and cone are an exclusive pair. If either the cup or cone of a pair is faulty, replace them as a set.
(2) The removed shims should be kept together until they are reinstalled. (This only applies when the bevel pinion and/or taper roller bearing are/is reused.)
(3) The bevel pinion and bevel gear are an exclusive pair. If either of them is defective, replace them as a set.

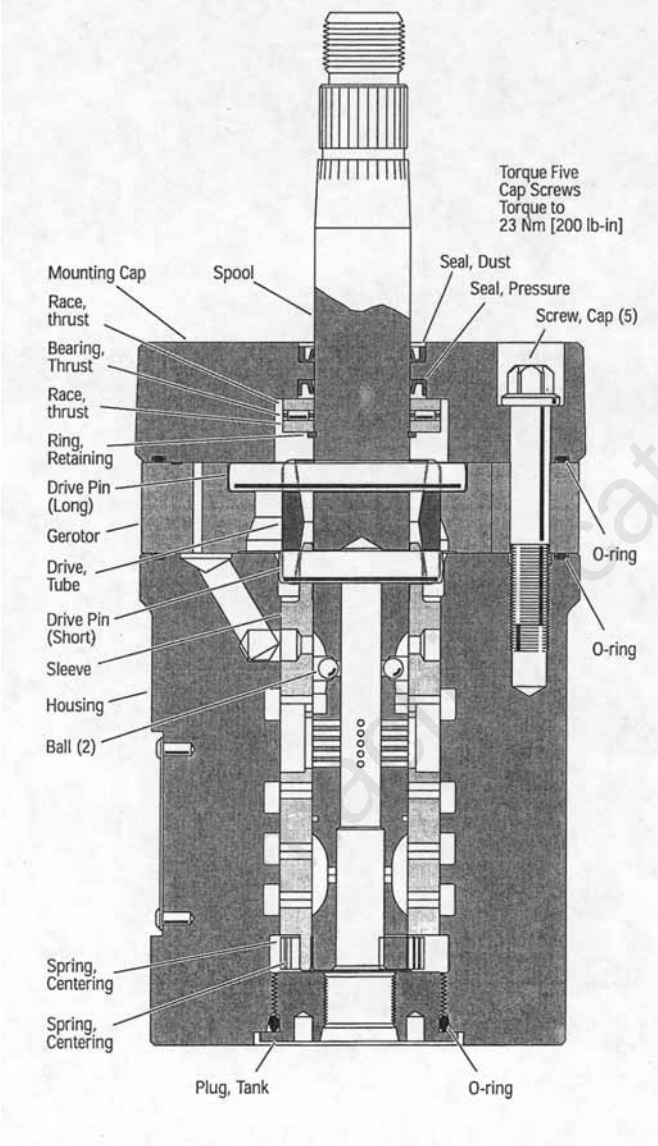






Suggestions:

NOTE: These instructions are more in depth than routine service should require. **DO NOT** disassemble the steer gear further than required to replace serviceable components. Doing so may result in replacing entire gear.



1 Install o-ring (82,6 [3.25 OD) on tank plug.
2 Assemble tank plug into housing. Torque tank plug to 47,5 Nm [35 lb-ft].
3 Install o-ring (82,6 [3.25 OD) into groove.
4 Lay gerotor on the housing,lining up bolt holes, check alignment per scribed (mark) line..
5 Install pressure seal into inside cavity of mounting cap (25,4 [1.00] OD x 3,2 [.12] W).
6 Install dust seal (25,4 [1.00] OD x 3,2 [.12] W) into mounting cap.
7 Install manual steering balls (9) into spool. Grease balls to retain in holes.
8 Insert spool into sleeve, lining up the spring slots.
9 Insert smaller centering spring onto spool/ sleeve assembly.
10 Install larger centering spring onto spool/ sleeve assembly.
11 Insert shorter drive pin.
12 Install drive tube assembly, wider groove downward.
13 Slide spool/sleeve/tube assembly into housing bore, through the gerotor star. Before spool/sleeve/tube reaches the tank plug,line up pin slot in gerotor with pin slot in drive tube, insert longer drive pin, then continue to slide spool/sleeve/tube into housing until the pin sets into the gerotor.
14 Install the retaining ring into groove on spool.
15 Install bearing race-bearing-bearing race onto the retaining ring.
16 Grease o-ring (82,6 [3.25] OD) and install into mounting cap.
17 Carefully install mounting cap over spool so as not to cut or damage seals. Lining up bolt holes, check alignment per scribed (mark) line.
18 Install 5 bolts. torque to 23Nm [200 in-lb].

	Complaint	Possible Cause	Remedy
Parking Brake	Lever stroke is too small	Lining-to-drum clearance too small	Readjust
	Squeals during traveling	Lining-to-drum clearance too small	Readjust
		Brake drum badly distorted	Repair or replace
	Will not apply	Parking brake cable longer than specified	Check drum-to-lining clearance and, if brake will not apply, turn adjusting knob clockwise
		Linings worn to service limit	Replace shoe & lining assembly
		Lining-to-drum clearance too small	Readjust
		Lack of brake lever operating effort	Readjust to 25 to 30 kgf (55 to 66 lbf) [245 to 294 N]

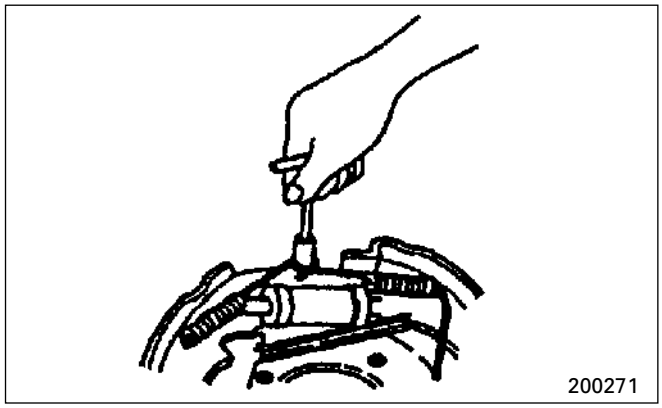
	Complaint	Possible Cause	Remedy
Steering System	Hard steering	a) Overloaded steer axle	Reduce load
		b) Damaged mechanical linkage	Replace
		c) Dry mechanical linkage joints	Lubricate
		d) Mechanical joints too tight	Readjust
		e) Kingpin bearings improperly preloaded	Readjust
	Truck wanders	a) Damaged or worn mechanical linkage	Replace
		b) Loose cylinder piston	Replace cylinder rod
	Truck drifts	a) Damaged or worn mechanical linkage	Replace
		b) Tire diameter differs between right and left	Replace tire
	Erratic steering	Loose cylinder piston	Replace cylinder rod
	Excessive free play at steered wheels	Damaged or worn linkage between cylinder and steered wheels	Replace
	Axle shimmy	a) Excessive clearance between the kingpin and its bearings	Repair or replace
		b) Worn or damaged hub bearing	Replace
	Rear tires wear prematurely or unevenly	Tire on one side differs in kind or brand from that on the other side.	Replace tires

Suggestions

Removing Return Springs

Use a special tool to remove the return springs.

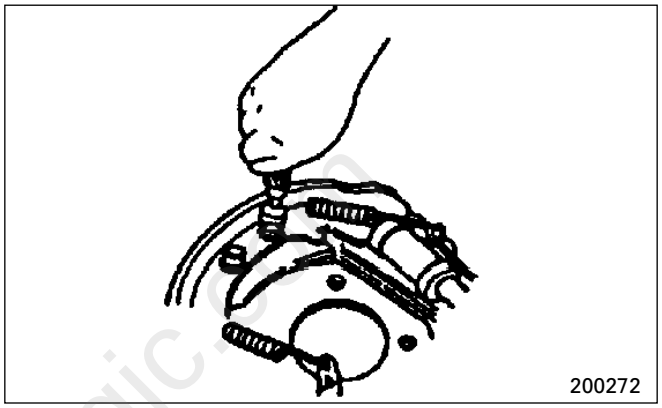
Special Tool	Part Number
Spring remover	64309-15411



Removing Hold-Down Springs

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

Special Tool	Part Number
Spring remover	64309-15412



Full Version Available

Mitsubishi FBC30K Forklift Service Manual (99759-73110)

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