

INSTALLATION MANUAL


REF NO.	BT00042B
DATE	Jun. 7, 2002

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This INSTALLATION MANUAL supersedes the previous issue No. BT00042A dated Jan. 16, 2001 which should be discarded.

SUBJECT: INSTALLATION PROCEDURE OF WET TYPE CLUTCH ROTATION MACHINE ON GD825A-2

PURPOSE: To introduce local installation procedures for the new wet clutch type circle rotation unit on GD825A-2 motor graders

APPLICATION: GD825A-2 Motor graders, Serial Nos.  11001 thru 12050



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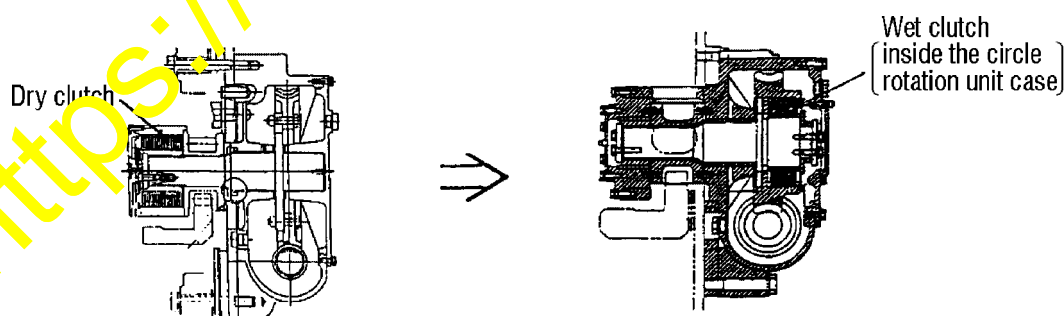
DESCRIPTION:

1. Introduction

When replacing the current dry clutch type circle rotation unit being carried by the GD825A-2 motor graders of the serial numbers upto # 12051 with the new wet clutch type circle rotation unit according to Fig. 1 below, replace the circle rotation unit following the local installation procedures outlined in this Installation Manual.

1-2. Revised places:

1 place 	Jan. 16, 2001	Errors in the serial numbers of the applicable machines were corrected.
14 places 	Jun. 7, 2002	Set up the Part No. for the circle ass'y and added the motor.







Dry clutch type circle rotation unit


Wet clutch type circle rotation unit (Fig. 1)

2. List of parts

No.	Part No.	Part Name	Q'ty	Remarks
1	235-70-45110 (235-70-15112)	Case (Case)	1 (1)	Refer to Fig. 4 (Item No. 1)
2	07041-13012 (07040-13016)	Plug (Plug)	2 (2)	Refer to Fig. 4 (Item No. 2)
3	07002-13034 (07002-13034)	O-ring (O-ring)	2 (2)	Refer to Fig. 4 (Item No. 3)
4	235-99-32660	Plate	1	Refer to Fig. 4 (Item No. 4)
5	01010-82050	Bolt	11	Refer to Fig. 4 (Item No. 5)
6	01643-32060	Washer	11	Refer to Fig. 4 (Item No. 6)
7	01011-82460 (01010-52465)	Bolt (Bolt)	8 (8)	Refer to Fig. 4 (Item No. 7)
8	01643-32460 (01643-32460)	Washer (Washer)	8 (8)	Refer to Fig. 4 (Item No. 8)
9	235-70-45170 (235-70-15760)	Shaft (Shaft)	1 (1)	Refer to Fig. 4 (Item No. 9)
10	234-70-45240 (235-70-15240)	Bushing (Bushing)	2 (2)	Refer to Fig. 4 (Item No. 10)
11	235-70-45250 (235-70-15150)	Washer (Washer)	1 (1)	Refer to Fig. 4 (Item No. 11)
12	235-70-45370	Washer	1	Refer to Fig. 4 (Item No. 12)
13	198-30-00072 (235-70-00190)	Seal ass'y (Seal ass'y)	4 (4)	Refer to Fig. 4 (Item No. 13)
14	235-99-32650 (235-70-15732)	Gear (Gear)	1 (1)	Refer to Fig. 4 (Item No. 14)
15	235-70-45180	Housing	1	Refer to Fig. 4 (Item No. 15)
16	01010-81023	Bolt	4	Refer to Fig. 4 (Item No. 16)
17	01643-31032	Washer	4	Refer to Fig. 4 (Item No. 17)
18	235-70-45220 (235-70-15250)	Bushing (Bushing)	1 (1)	Refer to Fig. 4 (Item No. 18)
19	235-70-45230 (235-70-15740)	Collar (Collar)	1 (1)	Refer to Fig. 4 (Item No. 19)
20	235-70-00260 (235-70-00180)	Shim ass'y (Shim ass'y)	1 (1)	Refer to Fig. 4 (Item No. 20)

No.	Part No.	Part Name	Q'ty	Remarks
21	235-70-15850 (235-70-15850)	Holder (Holder)	1 (1)	Refer to Fig. 4 (Item No. 21)
22	01010-81235 (01010-51255)	Bolt (Bolt)	2 (2)	Refer to Fig. 4 (Item No. 22)
23	04081-05512 (04081-05512)	Lock (Lock)	1 (1)	Refer to Fig. 4 (Item No. 23)
24	235-70-45210 (235-70-15810)	Cover (Cover)	1 (1)	Refer to Fig. 4 (Item No. 24)
25	01010-81025 (01010-50823)	Bolt (Bolt)	6 (6)	Refer to Fig. 4 (Item No. 25)
26	01643-31032 (01643-30823)	Washer (Washer)	6 (6)	Refer to Fig. 4 (Item No. 26)
27	235-70-45130 (235-70-15140)	Wheel, worm (Wheel, worm)	1 (1)	Refer to Fig. 4 (Item No. 27)
28	235-70-45260 (235-70-15780)	Spacer (Spacer)	1 (1)	Refer to Fig. 4 (Item No. 28)
29	714-07-12680 (419-15-12310)	Plate, separate (Plate, separate)	10 (10)	Refer to Fig. 4 (Item No. 29)
30	235-70-45430 (235-70-15920)	Disc (Disc)	11 (11)	Refer to Fig. 4 (Item No. 30)
31	235-70-45270	Spacer	1	Refer to Fig. 4 (Item No. 31)
32	235-70-45360	Spring	1	Refer to Fig. 4 (Item No. 32)
33	235-70-45290	Spacer	1	Refer to Fig. 4 (Item No. 33)
34	235-70-00270	Shim ass'y	1	Refer to Fig. 4 (Item No. 34)
35	07000-15310	O-ring	1	Refer to Fig. 4 (Item No. 35)
36	235-70-45320	Holder	1	Refer to Fig. 4 (Item No. 36)
37	01010-81235	Bolt	3	Refer to Fig. 4 (Item No. 37)
38	01643-31232	Washer	3	Refer to Fig. 4 (Item No. 38)
39	07000-12135	O-ring	1	Refer to Fig. 4 (Item No. 39)
40	235-70-45120 (235-70-15121)	Cover (Cover)	1 (1)	Refer to Fig. 4 (Item No. 40)

No.	Part No.	Part Name	Q'ty	Remarks
41	01010-81235 (01010-51230)	Bolt (Bolt)	2 (2)	Refer to Fig. 4 (Item No. 41)
42	01643-31232 (01643-31232)	Washer (Washer)	2 (2)	Refer to Fig. 4 (Item No. 42)
43	235-70-45350	Cover	1	Refer to Fig. 4 (Item No. 43)
44	01010-80820	Bolt	8	Refer to Fig. 4 (Item No. 44)
45	01643-30823	Washer	8	Refer to Fig. 4 (Item No. 45)
46	07042-30108 (07040-11409)	Plug (Plug)	1 (1)	Refer to Fig. 4 (Item No. 46)
47	07030-01030	Breather	1	Refer to Fig. 4 (Item No. 47)
48	235-70-45140 (235-70-15160)	Worm (Worm)	1 (1)	Refer to Fig. 4 (Item No. 48)
49	06302-30313 (06002-33215)	Bearing (Bearing)	2 (2)	Refer to Fig. 4 (Item No. 49)
50	235-70-45150 (235-70-15190)	Housing (Housing)	1 (1)	Refer to Fig. 4 (Item No. 50)
51	07000-15160 (07000-15150)	O-ring (O-ring)	1 (1)	Refer to Fig. 4 (Item No. 51)
52	235-70-00280 (235-70-00140)	Shim ass'y (Shim ass'y)	1 (1)	Refer to Fig. 4 (Item No. 52)
53	01144-51645 (01140-51665)	Stud (Stud)	4 (4)	Refer to Fig. 4 (Item No. 53)
54	01580-11613 (01582-11613)	Nut (Nut)	4 (4)	Refer to Fig. 4 (Item No. 54)
55	01643-31645 (01643-31645)	Washer (Washer)	4 (4)	Refer to Fig. 4 (Item No. 55)
56	07000-12385 (07011-07075)	O-ring (O-ring)	1 (1)	Refer to Fig. 4 (Item No. 56)
 57	01643-32460	Washer	2	 Refer to Fig. 4 (Item No. 57)
 58	01580-12419	Nut	2	 Refer to Fig. 4 (Item No. 58)

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No.	Part No.	Part Name	Q'ty	Remarks
59	235-62-11700	Motor ass'y	1	Refer to Fig. 4 (Item No. 59)
60	07372-21260	Bolt	4	Refer to Fig. 4 (Item No. 60)
61	01643-51232	Washer	4	Refer to Fig. 4 (Item No. 61)
62	01643-31645	Washer	1	Refer to Fig. 4 (Item No. 62)
63	07121-40423	Hose	1	Refer to Fig. 4 (Item No. 63)
64	07121-40424	Hose	1	Refer to Fig. 4 (Item No. 64)
65	235-60-34320	Elbow	1	Refer to Fig. 4 (Item No. 65)
66	263-60-13250	Elbow	1	Refer to Fig. 4 (Item No. 66)
67	237-60-24190	O-ring	2	Refer to Fig. 4 (Item No. 67)
68	07042-20108	Plug	2	Refer to Fig. 4 (Item No. 68)
Assembly consisting of the parts with the Item No. 1 thru Item No. 68.				
	235-99-35600	Circle ass'y	1	

- ② In case of the GD825A-2 (#12001 thru #12050), rework the draw bar according to the instructions given in Fig. 3 indicated below.

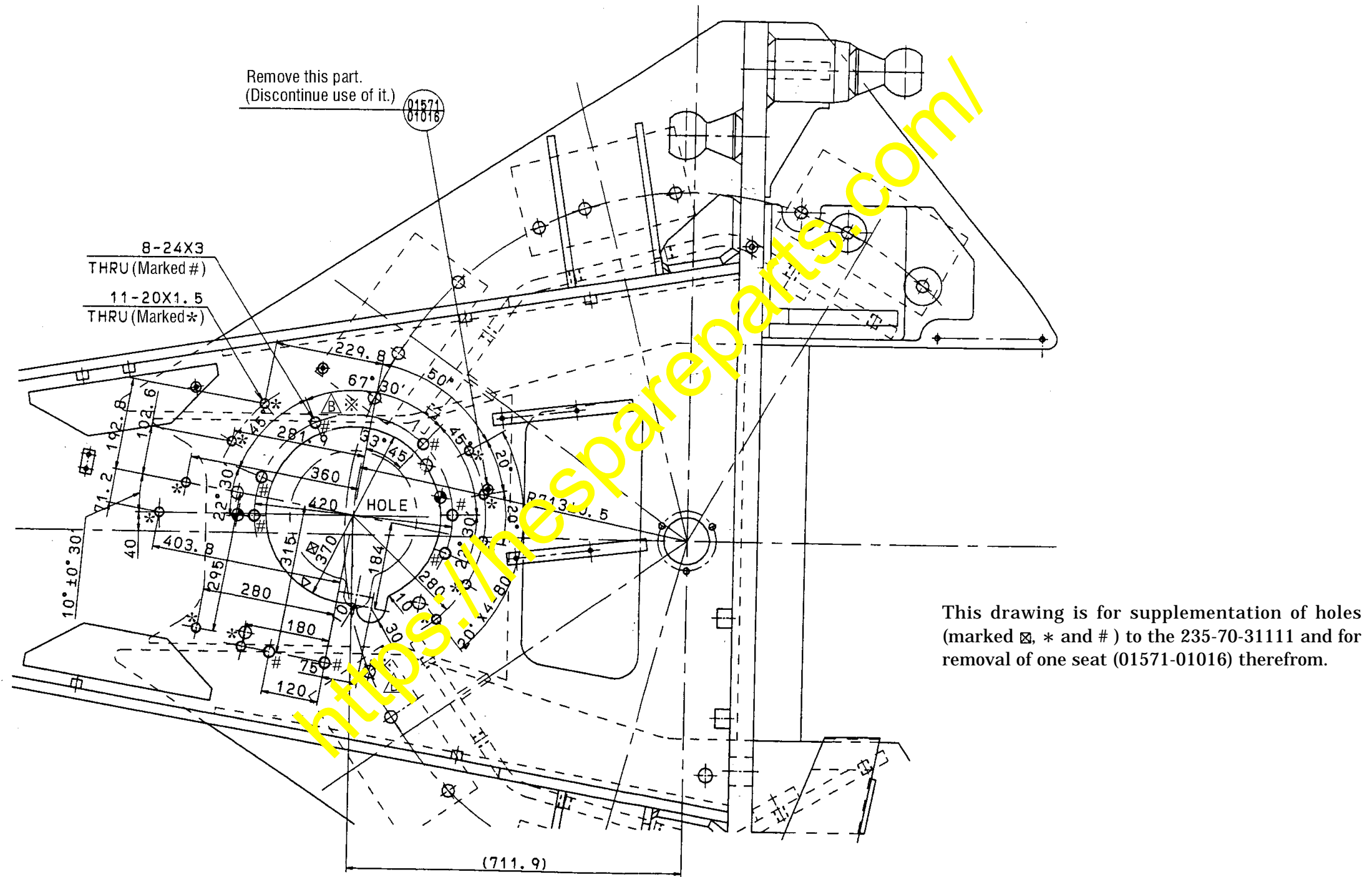



Fig. 3 Reworking with the draw bar

(3) Installation of the circle rotation unit assembly and the hydraulic motor assembly

Refer to the Section "Installation of circle rotation, gear and hydraulic motor ass'y" in the Chapter "Disassembly and assembly" of the Shop Manual for the GD825A-2.

(4) Inner parts of circle rotation unit assembly

 (Part No. of the circle rotation machine ass'y: 235-99-35600)
 (Refer to Fig. 4 for the contents of the assembly.)

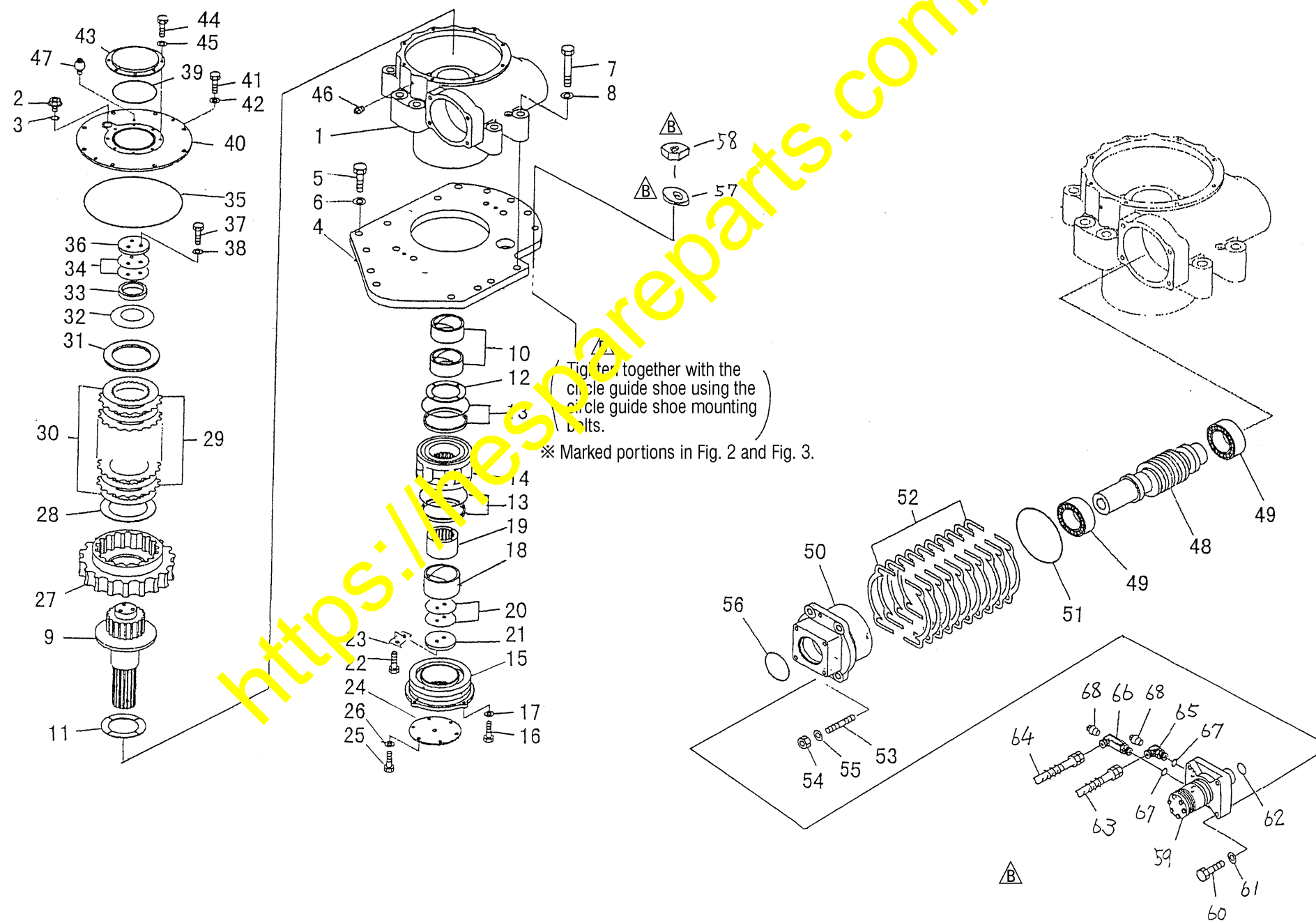


Fig. 4 Circle rotation unit assembly

4. Adjustment procedures

- (1) Install the clutch inserting 3.6 mm equivalent thickness of shims above the clutch, using shim units of 0.5 mm (235-70-45330) and 0.2 mm (235-70-45340).
- (2) Lowering the blade to touch the ground and extending the blade lift cylinder to lift up the front wheels, operate the circle rotation lever to check and make sure the slip clutch slips.
To check the slip clutch, remove the upper cover 235-70-45350 and observe if the shaft located inside has turned after the circle rotation lever was operated from its previous position before the circle rotation lever was operated.
- (3) Then, remove the 0.5 mm (235-70-45330) and 0.2 mm (235-70-45340) shim units one by one until the clutch quits slipping.
(This is to find out the limit point where the clutch quit slipping.)
This concludes the "slip zero" setting.
- (4) Finally, as the initial setting, remove a sheet of 0.2 mm (235-70-45340) shim unit before making final installation.

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