PART NO. W4GC-E-00

HITACHI

Workshop Manual

ZW

220
250

Wheel Loader
(Standard Specification)

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TO4GC-E
Technical Manual (Troubleshooting)	: Vol. No.TT4GC-E
Workshop Manual	: Vol. No.W4GC-E

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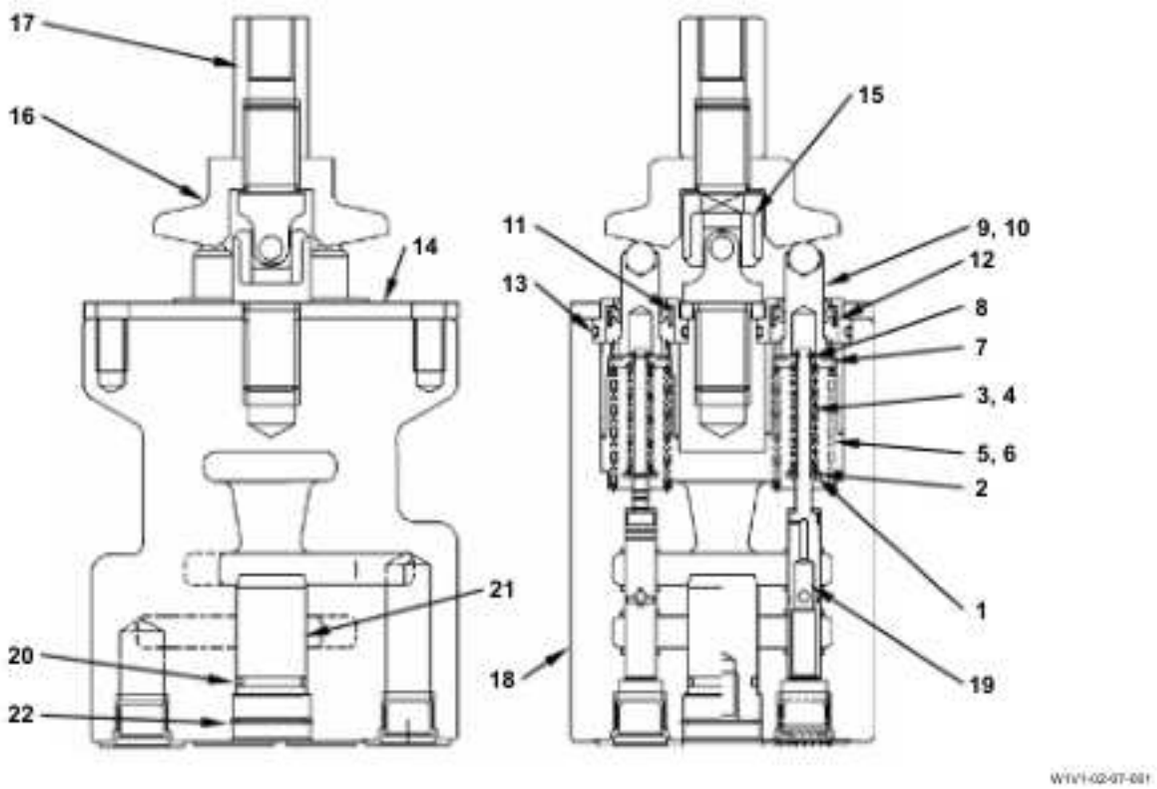
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ASSEMBLY OF JOY-STICK TYPE PILOT VALVE FOR ADDITIONAL CIRCUIT (OPTIONAL)



1 - Spacer (4 Used)
2 - Shim (Several)
3 - Balance Spring A (2 Used)
4 - Balance Spring B (2 Used)
5 - Return Spring A (2 Used)
6 - Return Spring B (2 Used)
7 - Spring Guide (4 Used)
8 - Retaining Ring (4 Used)
9 - Pusher A (2 Used)
10 - Pusher B (2 Used)
11 - Oil Seal (4 Used)
12 - Sleeve (4 Used)
13 - O-Ring (4 Used)
14 - Plate
15 - Universal Joint
16 - Cam
17 - Screw Joint
18 - Casing
19 - Spool (4 Used)
20 - O-Ring
21 - Plug
22 - Retaining Ring

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Installation

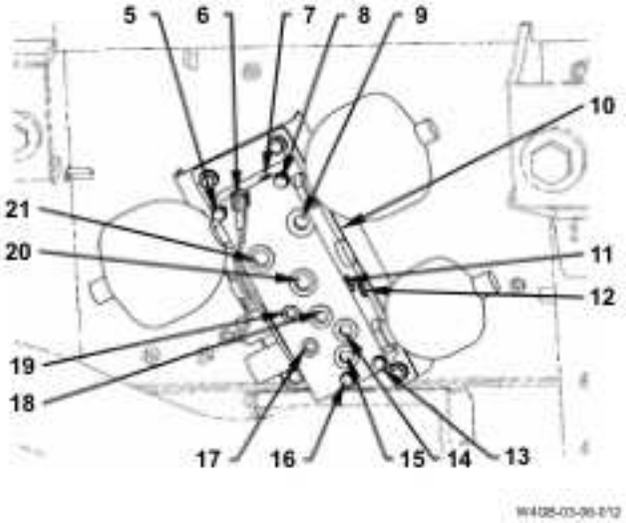
CAUTION: Charging block (10) weight: 30 kg (67 lb)

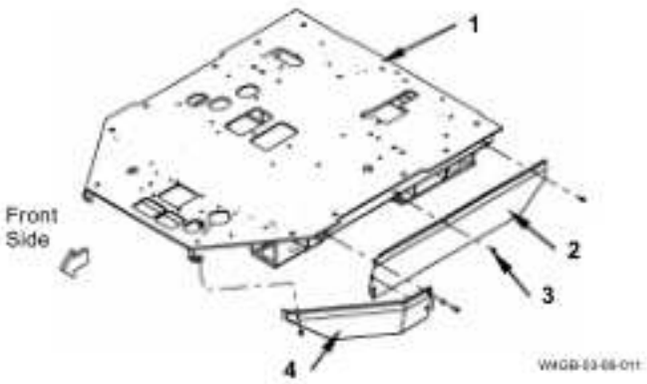
1. Align charging block (10) with the installation hole of cockpit (1) by using a forklift. Install charging block (10) to cockpit (1) with bolts (5, 8, 13, 16) (4 used). As the overall length of installation bolt (14) is long, operate carefully.
   - : 17 mm
   - : 50 N·m (5 kgf·m, 36 lbf·ft)

2. Connect hoses (6, 7, 11, 15, 18, 19, 20, 21) and install pressure sensors (9, 14) to charging block (10).
   - : 17 mm
   - : 24.5 N·m (2.5 kgf·m, 18 lbf·ft)
   - : 22 mm
   - : 39 N·m (4 kgf·m, 29 lbf·ft)
   - : 27 mm
   - : 78 N·m (8 kgf·m, 58 lbf·ft)

   Pressure Sensor
   - : 24 mm
   - : 39.2 N·m (4 kgf·m, 29 lbf·ft)
   - : 27 mm
   - : 78 N·m (8 kgf·m, 58 lbf·ft)

3. Install covers (2, 4) to cockpit (1) with sems bolts (3) (5 used).
   - : 17 mm
   - : 50 N·m (5 kgf·m, 36 lbf·ft)

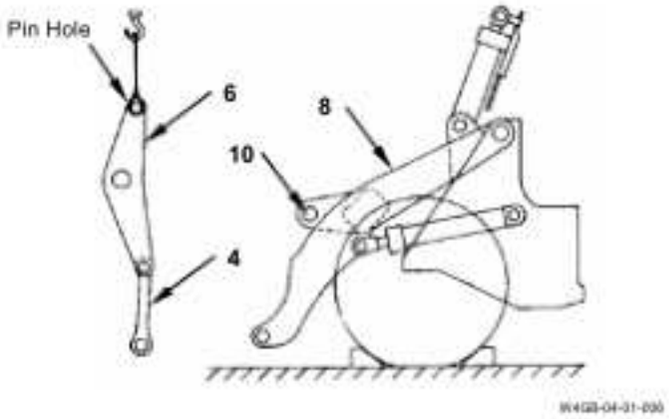




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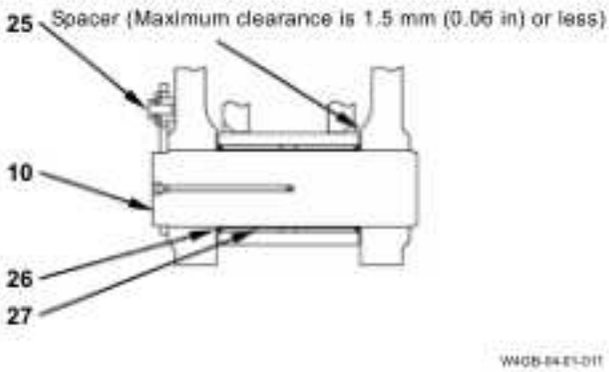
CAUTION: Bellcrank (6) weight:
ZW220: 300 kg (665 lb)
ZW250: 330 kg (730 lb)
Bucket link (4) weight:
ZW220: 60 kg (135 lb)
ZW250: 70 kg (150 lb)

5. Hoist and place bellcrank (6) and the bucket link (4) sub-assy onto the mounting position on lift arm (8).

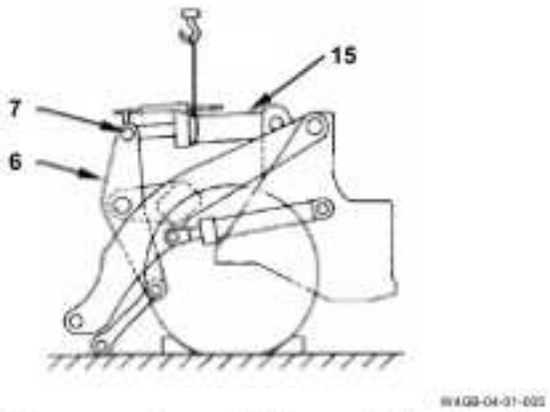


(The connection part between lift arm and bellcrank pin: C)

6. The connection part between lift arm and bellcrank pin: C
   Press fit bushing (27) into the center of the boss.
   Apply grease onto the lip part of dust seal (26).
   Press fit dust seal (26) into both side of the bushing.
   Apply grease and insert pin (10). Install the spring washer, washer and bolt (25).
   : 24 mm
   : 87 N·m (9 kgf·m, 64 lbf·ft)

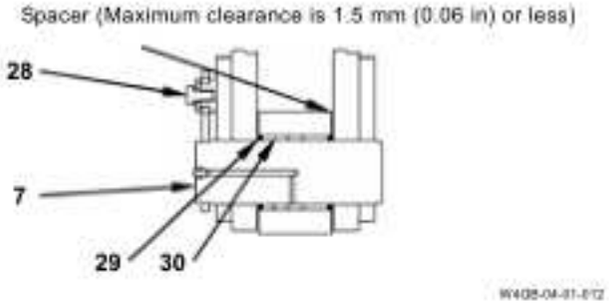


7. Attach a nylon sling to the cap part of bucket cylinder (15). Hoist and place the bucket cylinder onto the mounting position on bellcrank (6).



(The connection part between bellcrank and bucket cylinder: D)

8. The connection part between bellcrank and bucket cylinder: D
   Press fit bushing (30) into the center of the boss.
   Apply grease onto the lip part of dust seal (29).
   Press fit dust seal (29) into the both side of the bushing.
   Apply grease and insert pin (7). Install the spring washer, washer and bolt (28).
   : 24 mm
   : 87 N·m (9 kgf·m, 64 lbf·ft)



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