PART NO. W4HA-E-00

HITACHI

Workshop Manual

ZW

310

Wheel Loader

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TO4HA-E
Technical Manual (Troubleshooting)	: Vol. No.TT4HA-E
Workshop Manual	: Vol. No.W4HA-E

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GENERAL

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- Bleeding Air from Hydraulic Circuit

  - After refilling hydraulic oil, start the engine. While operating each cylinder, operate the machine under light loads for 10 to 15 minutes. Slowly start each operation (never fully stroke the cylinders during initial operation stage). As the pilot oil circuit has an air bleed device, air trapped in the pilot oil circuit will be bled while performing the above operation for approx. 5 minutes.
  - Reposition the front attachment to check hydraulic oil level.
  - Stop the engine. Recheck hydraulic oil level. Replenish oil as necessary.



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Disassembly of Axle

CAUTION: The axle assembly weight:
TPD Front: 1312 kg (2895 lb)
TPD Rear: 1242 kg (2740 lb)
LSD Front: 1318 kg (2505 lb)
LSD Rear: 1248 kg (2755 lb)

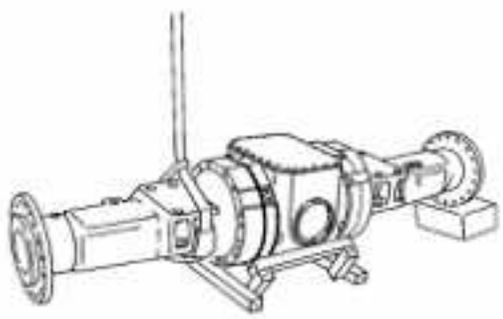
Removal of Axle Tubes (2, 7)

1. Remove drain plug (10) from differential gear body (5). Drain gear oil from differential gear body (5).
   : 14 mm
   Gear oil amount: 40 L (10.6 US gal.)

2. Remove bolts (11) (24 used) (on one side) and washer (12) (24 used) from axle tube (2).
   : 24 mm

3. Temporarily hoist axle tube (2) to be removed. Place a stand axle tube (7) in order to prevent axle tube (7) at the opposite side from lowering.

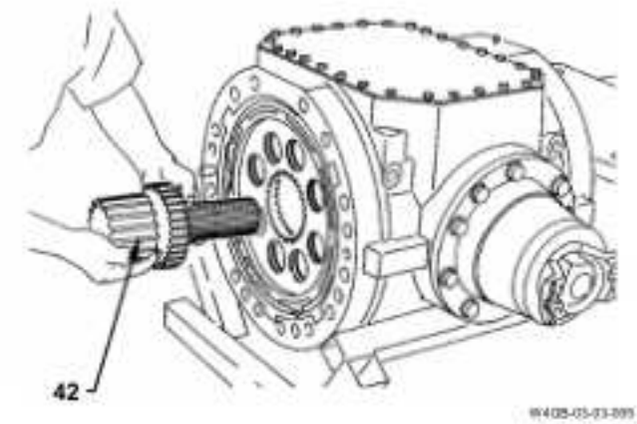
CAUTION: Axle tube (2) weight:
Front: 412 kg (910 lb)
Rear: 368 kg (815 lb)



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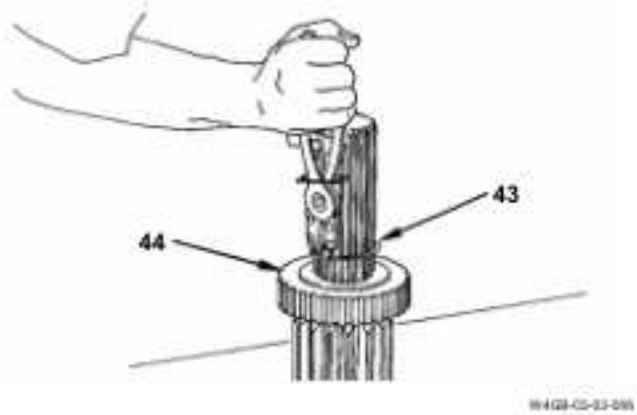
4. Remove axle tube (2) from differential gear body (5). If the mating surface is sticking, remove it by using a plastic hammer.

5. Remove the shaft (42) assembly from side gear (38).



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6. Remove retaining ring (43) from the shaft (42) assembly. Remove disc hub (44) from the spline part of shaft (42).



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7. Remove axle tube (7) at the opposite side and the shaft (42) assembly in the same way.

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Disassembly of Brake Valve

1. Remove pedal cover (39) from pedal (38) at the right side. Remove nut (46) and washer (45) from bolt (42). Remove bolt (42) from pedal (38).
   : 14 mm
2. Remove pedal (38), pedal collar (52), bushing (51) (2 used) and mounting plate (48) from shaft (53).
3. Remove pin (41) from pin (35). Remove roller (37), collars (36) (2 used), pedal pin (35), L pin (34) and washer (40) from pedal (38).
4. Loosen nut (49) on mounting plate (48). Remove bolt (50) from mounting plate (48).
   : 19 mm
5. Remove pedal cover (39) from pedal (38) at the left side. Remove nut (46) and washer (45) from bolt (42). Remove bolt (42) from pedal (38).
   : 14 mm
6. Loosen nut (43). Remove screw (44) from pedal (38).
   : 12 mm
7. Remove shaft (57), pedal (38) and pedal collar (52) from mounting plate (31).
8. Remove pin (41) from pin (35). Remove roller (37), collars (36) (2 used), pedal pin (35), L pin (34) and washer (40) from pedal (38).
9. Remove retaining rings (45) (2 used) from boot (55). Remove boot (55) from joint (56).
10. Remove pins (47) (2 used) from joint (56) by usng a press. Remove shafts (53, 57) from joint (56).

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