PART NO. WNHJ40-EN-01

HITACHI

Reliable solutions

Workshop Manual

ZW370-6

Wheel Loader

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TONHJ40-EN
Technical Manual (Troubleshooting)	: Vol. No.TTNHJ40-EN
Workshop Manual	: Vol. No.WNHJ40-EN

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Safety Alert Symbol and Headline Notations

In this manual, the following safety alert symbol and signal words are used to alert the reader to the potential for personal injury of machine damage.

⚠ This is the safety alert symbol. When you see this symbol, be alert to the potential for personal injury.
Never fail to follow the safety instructions prescribed along with the safety alert symbol.
The safety alert symbol is also used to draw attention to component/part weights.
To avoid injury and damage, be sure to use appropriate lifting techniques and equipment when lifting heavy parts.

⚠ **CAUTION:**
Indicates potentially hazardous situation which could, if not avoided, result in personal injury or death.

IMPORTANT:
Indicates a situation which, if not conformed to the instructions, could result in damage to the machine.

NOTE:
Indicates supplementary technical information or know-how.

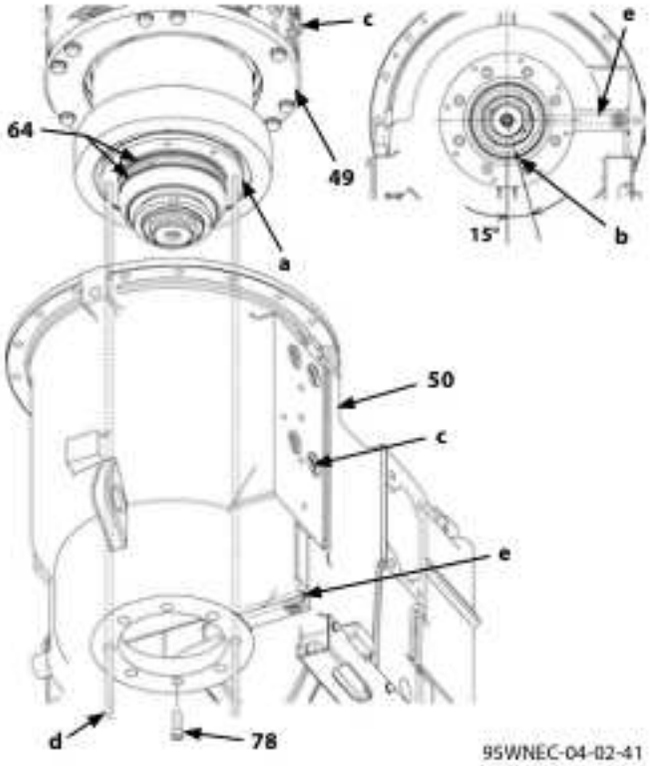
Units Used

SI Units (International System of Units) are used in this manual.

A table for conversion from SI units to other system units is shown below for reference purposes.

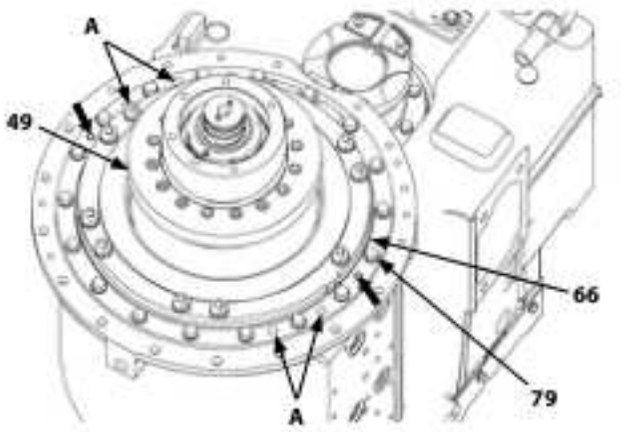
Quantity	To Convert From	Into	Multiply By
Length	mm	in	0.03937
	mm	ft	0.003281
Volume	L	US gal	0.2642
	L	US qt	1.057
	m^3	yd^3	1.308
Weight	kg	lb	2.205
Force	N	kgf	0.10197
	N	lbf	0.2248
Torque	N·m	kgf·m	0.10197
Pressure	MPa	kgf/cm^2	10.197
	MPa	psi	145.0
Power	kW	PS	1.360
	kW	HP	1.341
Temperature	°C	°F	°C×1.8+32
Velocity	km/h	mph	0.6214
	min^{-1}	rpm	1.0
Flow rate	L/min	US gpm	0.2642
	mL/rev	cc/rev	1.0

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95WNEC-04-02-41

a- Bearing Retainer
b- Oil Drain Mark
c- Oil Port
d- Guide Bar
e- Oil Port



95WNEC-04-02-34

A- Install Eyebolt

CAUTION: Clutch assembly (49) weight: 420 kg (926 lb)

20. Install O-rings (64) (2 used) to clutch assembly (49).
Install eyebolts (M16 x P2.0) at positions (A) on clutch assembly (49).
Attach nylon slings to the eyebolts and sling and hold clutch assembly (49).

NOTE: Be sure to replace O-rings (64) with new ones.

NOTE: Refer to W4-2-4 for assembly of clutch assembly (49).

21. Align oil ports (c) of bearing retainer (a) and housing (50), and adjust bearing retainer (a) so that oil drain mark (b) positions as shown in the figure above.

22. Insert guide bars (d) (2 used) into the bolt (78) mounting holes of bearing retainer (a) and housing (50).
Align oil ports (c) of clutch assembly (49) and housing (50), and carefully put them down on a stable workbench.

23. Apply lubrication oil to bolts (78) (8 used) and bolts (79) (18 used).
Tighten clutch assembly (49) to housing (50) with these bolts (78, 79).

(78) : 10 mm

: 86.3 N·m (8.8 kgf·m, 64 lbf·ft)

(79) : 17 mm

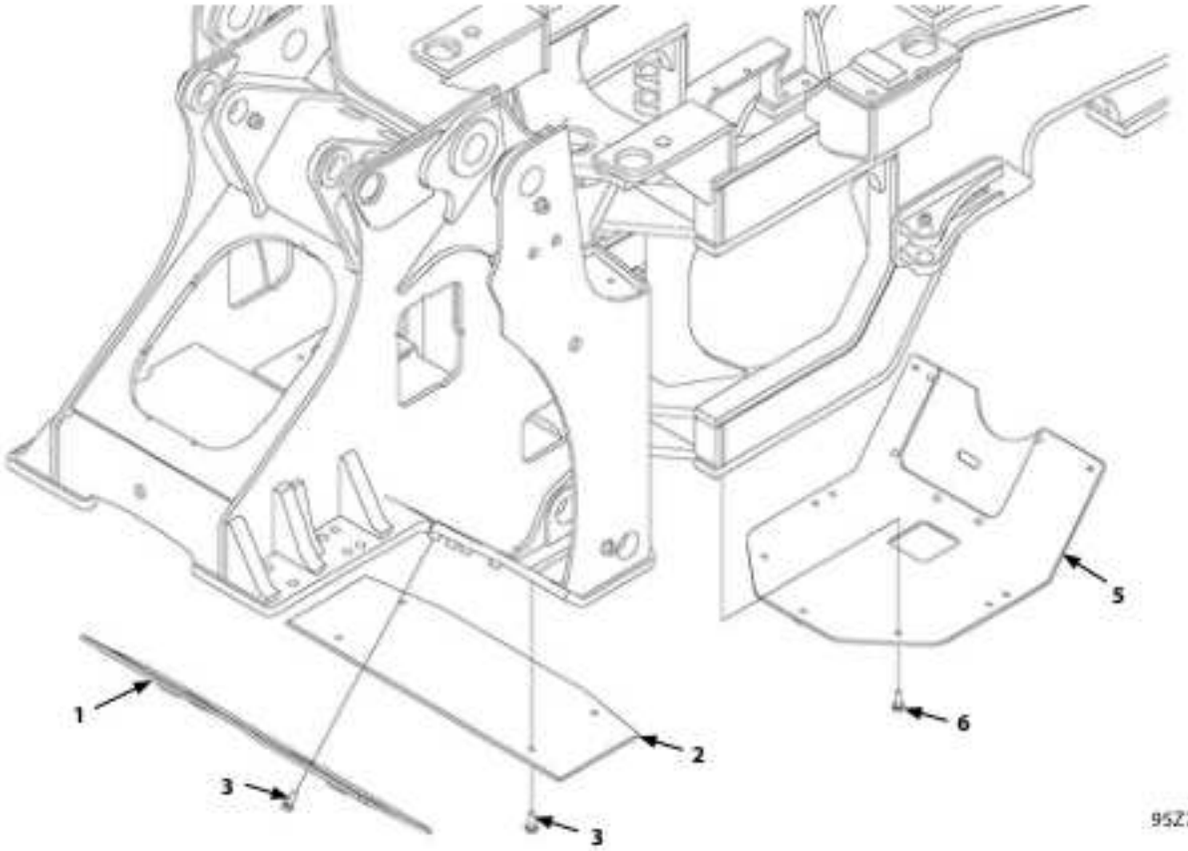
: 93.7 N·m (9.55 kgf·m, 69 lbf·ft)

24. Calk the two pin holes indicated by bold arrows.

25. Attach O-ring (66) to clutch assembly (49).

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Removal and Installation of Propeller Shaft



95Z7B-W4-04-01-01

Removal of Bottom Covers (Option)

1. Set the machine position for inspection and maintenance. (Refer to W1-6-1.)

CAUTION: Belly guard (1) weight: 54 kg (119 lb)
Belly guard (2) weight: 54 kg (119 lb)

IMPORTANT: Remove belly guard (1) (option) while holding them. Be careful not to drop them.

2. Set a stand and a jack under belly guards (1, 2) respectively, and hold them.

3. Remove bolts (3) (8 used) and remove belly guard (1).

: 19 mm

4. Remove bolts (3) (4 used) and remove belly guard (2).

: 19 mm

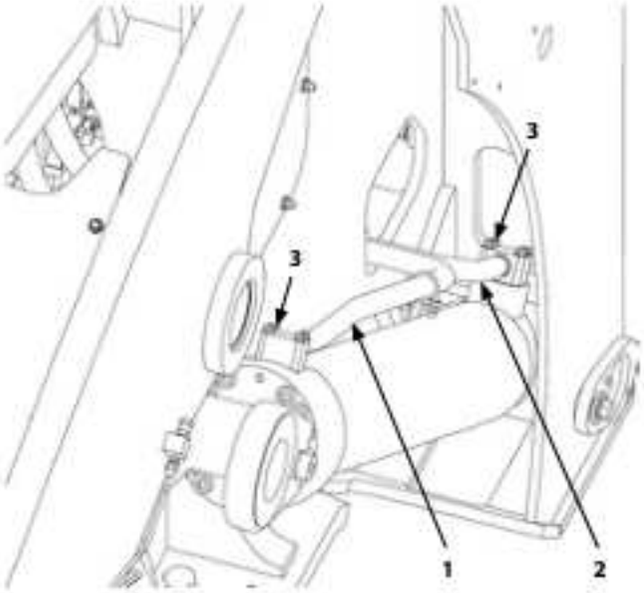
CAUTION: Belly guard (5) weight: 92 kg (203 lb)

5. Set a stand and a jack under belly guard (5) and hold it.

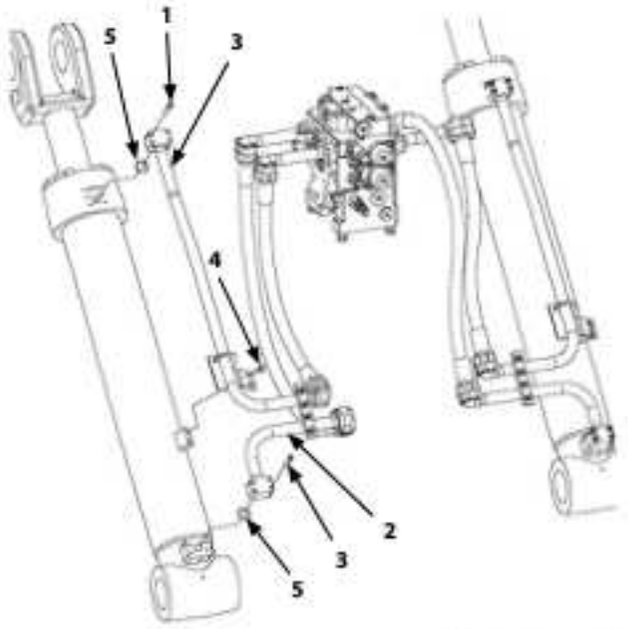
6. Remove bolts (6) (9 used) and remove belly guard (5).

: 19 mm

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9SZ7B-WS-02-01-01

CAUTION: Bleed air from the hydraulic oil tank. (Refer to W1-4-1.)

CAUTION: Release any pressure in the front hydraulic circuit. (Refer to W1-5-1.)

9. Place containers under the disconnecting part of pipes (1, 2).
   Remove bolts (3) (8 used) and bolts (4) (2 used).
   Disconnect pipes (1, 2).
   Remove O-rings (5) (2 used).

   : 17 mm

   : 8 mm

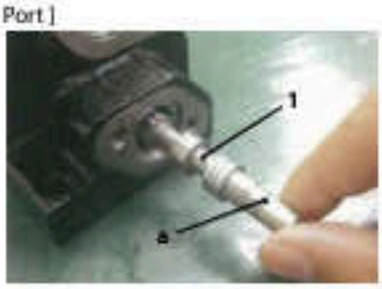
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Assembly of Control Valve (for Hydraulic Type JSS)

IMPORTANT:

- **Clean all the parts and dry with compressed air. If clean cloth is used, be sure that no lint remains in/on the parts.**
- **If a part is damaged or wear, replace it with a new one.**
- **Apply oil to the moving parts.**

[Pia Port]



VBB-112-09

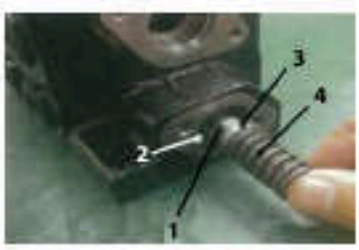
CAUTION: Be careful not damage spool (1) and casing hole.

IMPORTANT: Do not force spool (1) into the hole.

IMPORTANT: Check that spool (1) moves smoothly after installation.

1. Insert spool (1) into Pia port.

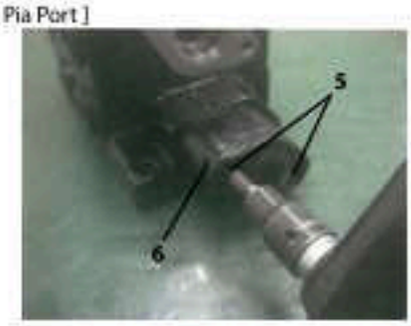
NOTE: Be advised that spool (1) with identification groove (a) comes to the Pia port side.



VBB-112-07

2. Attach O-ring (2) at port Pia.
   Install spring seat (3) and spring (4) to spool (1).

[Pia Port]



VBB-112-10

3. Install Pia port cover (6) with socket bolts (5) (2 used).

   : 5 mm (0.2 in)

   : 12 N-m (1.2 kgf-m, 8.9 lbf-ft)

[Pib Port]



VBB-112-11

4. Install the parts to Pib port in the same manner as port Pia.
   Install cover (8) with socket bolts (7) (2 used) to Pib port.

   : 5 mm (0.2 in)

   : 12 N-m (1.2 kgf-m, 8.9 lbf-ft)

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