PART NO. WNDJ-EN-00

HITACHI

Reliable solutions

Workshop Manual

ZW180-5A

Wheel Loader

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TONDJ-EN
Technical Manual (Troubleshooting)	: Vol. No.TTNDJ-EN
Workshop Manual	: Vol. No.WNDJ-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. MKSA system units and English units are also indicated in parentheses just behind SI units.

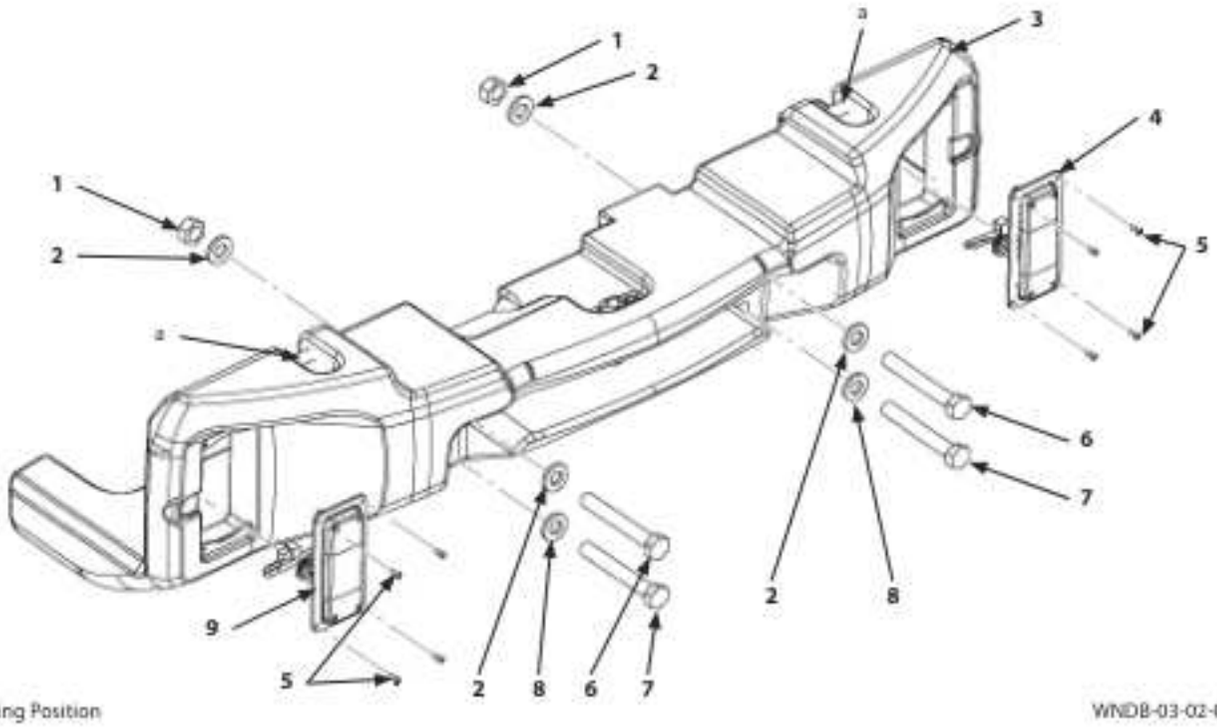
Example: 24.5 MPa (250 kgf/cm², 3560 psi)

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

NOTE: The numerical value in this manual might be different from the above-mentioned table.

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a: Hoisting Position

WNDB-03-02-001

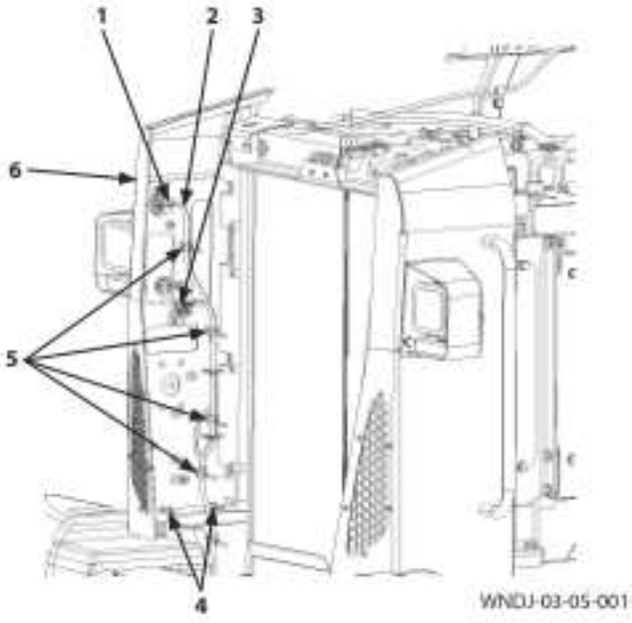
Installation

IMPORTANT: Keep the rear grill open when installing.

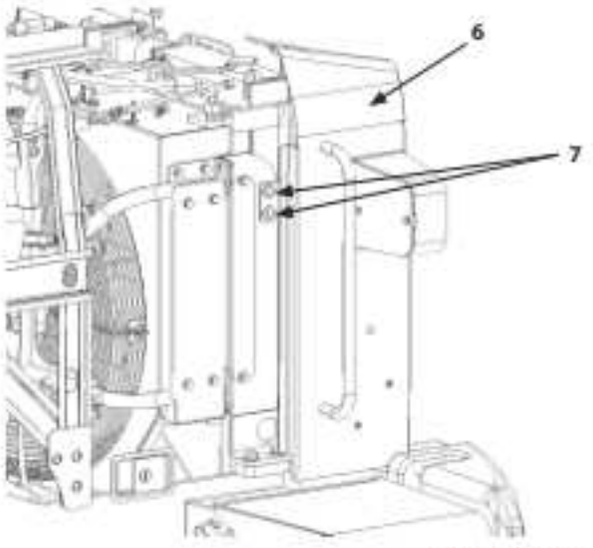
CAUTION: Counterweight (3) weight: 1350 kg (2980 lb)

1. Attach nylon slings onto hoisting positions (a) of counterweight (3). Hoist and fit counterweight (3) to the mounting holes on the rear frame.
2. Install counterweight (3) to the rear frame with bolts (6) (2 used), washers (2) (4 used), and nuts (1) (2 used).
   - : 46 mm
   - : 1510 N·m (151 kgf-m, 1110 lbf-ft)
3. Install washers (8) (2 used) and bolts (7) (2 used).
   - : 46 mm
   - : 1510 N·m (151 kgf-m, 1110 lbf-ft)
4. Install rear combination light (4) with bolts (5) (4 used).
   - : 5 mm
   - : 20 N·m (2 kgf-m, 15 lbf-ft)
5. Install rear combination light (9) with bolts (5) (4 used).
   - : 5 mm
   - : 20 N·m (2 kgf-m, 15 lbf-ft)
6. Install the battery boxes at right and left sides.
7. Close the rear grill.

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14. Disconnect connectors (1, 3).
15. Remove wire harness (2) from clips (5) (4 used).
16. Remove bolts, washers (4) (2 used).

: 19 mm

CAUTION: The rear side cover (6) assembly weight: 22 kg (49 lb)

17. Attach nylon slings onto the rear side cover (6) assembly. Hoist and hold the rear side cover (6) assembly.
18. Remove bolts, washers (7) (2 used). Remove the rear side cover (6) assembly.

: 17 mm

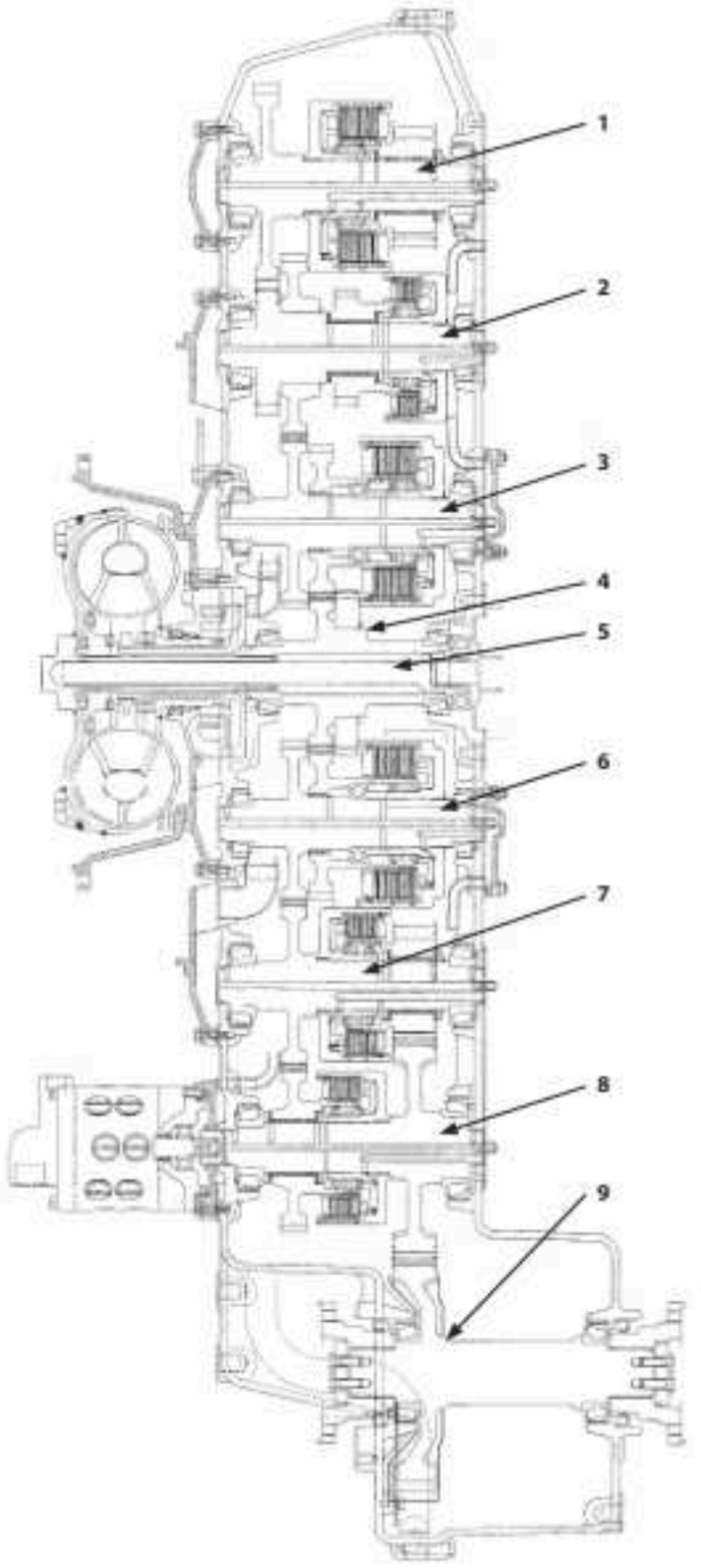
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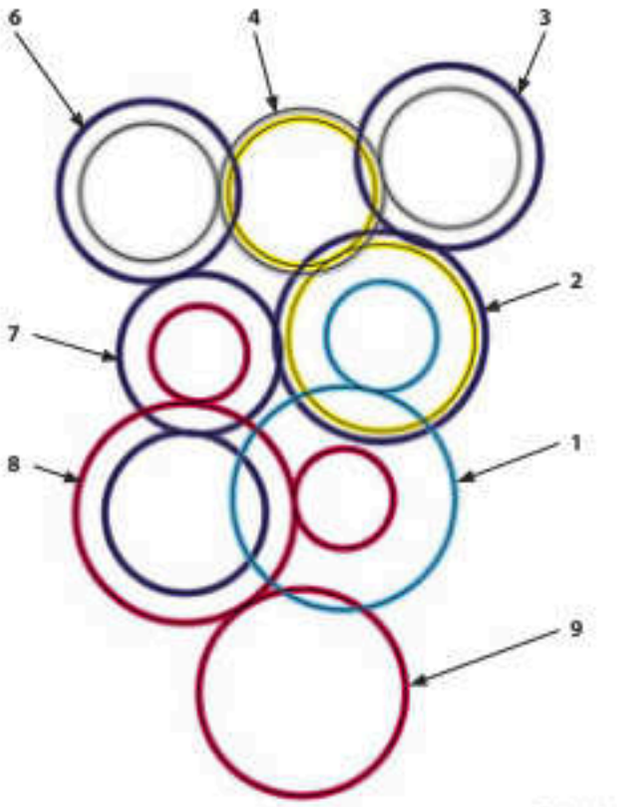
The drive unit is removed/installed and disassembled/assembled every unit as below.

- Oil Filter (3)
  - Refer to Removal and Installation of Oil Filter. (W4-2-2-4)
- Torque Converter (1)
  - Refer to Removal and Installation of Torque Converter. (W4-2-3-1)
- Transmission (2)
  - Refer to Removal and Installation of Hydraulic Pump Drive. (W4-2-4-1)
  - Refer to Removal and Installation of Clutch. (W4-2-4-10)
  - Refer to Disassembly and Assembly of Clutch. (W4-2-4-25)
- Transmission Control Valve (4)
  - Refer to Removal and Installation of Transmission Control Valve. (W4-2-5-1)
  - Refer to Removal and Installation of Duct Plate. (W4-2-5-4)
  - Refer to Disassembly and Assembly of Transmission Control Valve. (W4-2-5-7)
- Parking Brake (5)
  - Refer to Removal and Installation of Parking Brake (Replace the brake friction pad). (W4-2-6-1)
  - Refer to Removal and Installation of Flange at Output Shaft Side.) (W4-2-6-7)

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Detail of Transmission Assembly (2)





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1- First Speed Clutch (K1)
2- Fast-Speed Forward Clutch (K4)
3- Reverse Clutch (KR)
4- Input Shaft (AN)
5- Hydraulic Pump Drive
6- Slow-Speed Forward Clutch (KV)
7- Second Speed Clutch (K2)
8- Third Speed Clutch (K3)
9- Output Shaft (AB)

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