PART NO. WDCS-EN-00

HITACHI

Reliable solutions

Workshop Manual

ZH210LC-5B

Hybrid Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TODCS-E
Technical Manual (Troubleshooting)	: Vol. No.TTDCS-E
Workshop Manual	: Vol. No.WDCS-E
Engine Manual	: Vol. No.ETDCA-EN, EWDCA-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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Cylinder

Rod

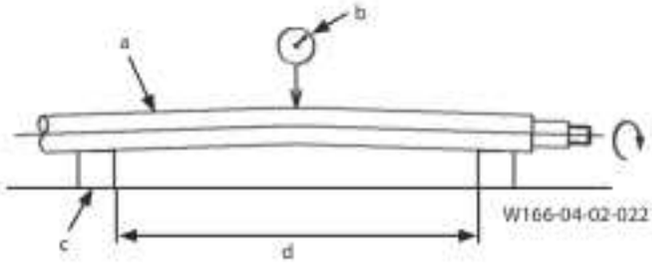


W105-04-02-094

Unit: mm (in)

Cylinder Name	Recommended Size After Re-manufacturing (A)
Boom	$85^{-0.012}_{-0.037}$ ($3.35^{-0.0005}_{-0.001}$)
Arm	$95^{-0.012}_{-0.037}$ ($3.74^{-0.0005}_{-0.001}$)
Bucket	$80^{-0.01}_{-0.023}$ ($3.15^{-0.0004}_{-0.0009}$)
Positioning	$100^{-0.012}_{-0.037}$ ($3.94^{-0.0005}_{-0.0010}$)

Rod Bend and Run Out

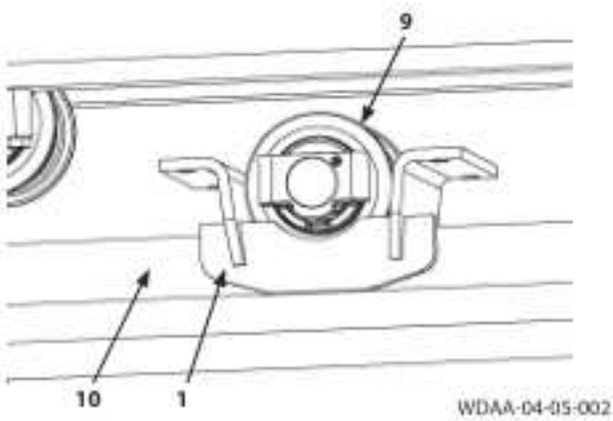


a- Cylinder Rod
b- Dial Gauge
c- V Block
d- 1 m (39.4 in)

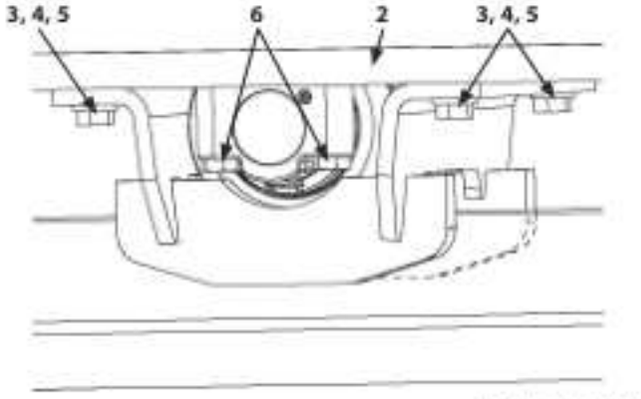
Unit: mm (in)

Bend	Run Out	Remedy
0.5 (0.020)	1.0 (0.039)	Repair
1.0 (0.039)	2.0 (0.079)	Replace

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WDAA-04-05-002



WDAA-04-05-003

Installation

CAUTION: Track guard (1) weight: 22 kg (49 lb)

Lower roller (9) weight: 35 kg (78 lb)

1. Fit the matching marks made when removing and place track guard (1) and lower roller (9) onto track link (10) by using a forklift.
2. Lower the machine so that the position to install lower roller (9) can be adjusted.
3. Fit the bolt (6) holes of track frame (2) and lower roller (9). Install lower roller (9) with bolts (6) (4 used).

   : 27 mm

   : 460 N·m (46 kgf·m, 340 lbf·ft)
4. Install track guard (1) with washers (5) (4 used), spring washers (4) (4 used), and bolts (3) (4 used) by using a pry bar.

   : 27 mm

   : 500 N·m (50 kgf·m, 370 lbf·ft)

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Removal and Installation of Hose Rupture Valve for Arm Cylinder

Removal

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

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

1. Disconnect hoses (8, 9, and 10) from hose rupture valve (1). Cap the open ends.

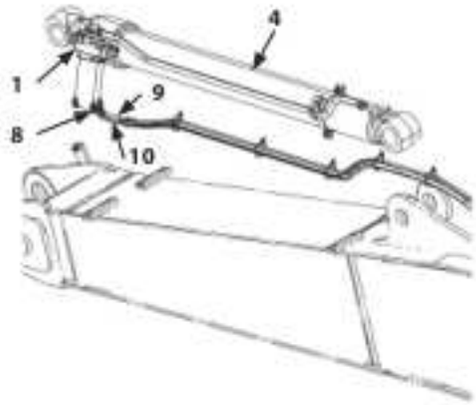
   : 19 mm, 27 mm

2. Remove socket bolts (7) (4 used). Remove O-ring (6) and pipe (5) from hose rupture valve (1). Cap the open ends.

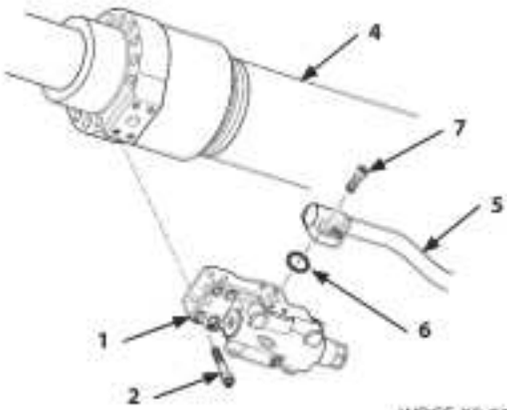
   : 10 mm

3. Remove socket bolts (2) (4 used) from hose rupture valve (1). Remove hose rupture valve (1) from arm cylinder (4).

   : 10 mm



WDCA-05-03-011



WDCF-05-03-001

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