PART NO. WDCR-EN-00

HITACHI

Reliable solutions

Workshop Manual

ZX220LC-GI

Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TODCR-EN
Technical Manual (Troubleshooting)	: Vol. No.TTDCR-EN
Workshop Manual	: Vol. No.WDCR-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)

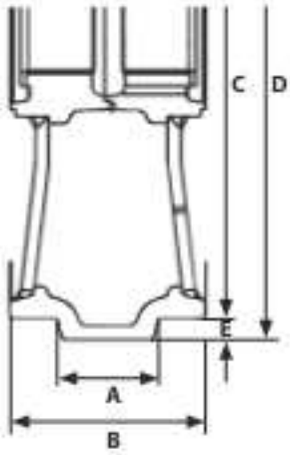
A table for conversion from SI units to other system units is shown below for reference purposes.

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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Front Idler



W166-03-05-001

Unit: mm (in)

	Standard	Allowable Limit	Remedy
A	84 (3.31)	[66 (2.60)]	Build up welding and hand finishing
B	159 (6.26)	-	
C	507 (20.0)	[489 (19.3)]	
D	545 (21.5)	-	
E	19 (0.75)	25 (0.98)	

NOTE: Values in [ ] are just for reference.

Axle and Bushing

Unit: mm (in)

		Standard	Allowable Limit	Remedy
Axle	Outer Diameter	75.0 (2.95)	[74.2 (2.92)]	Replace
Bushing	Inner Diameter	75.0 (2.95)	[76.0 (2.99)]	
	Flange Thickness	6.0 (0.27)	[5.2 (0.205)]	

NOTE: Values in [ ] are just for reference.

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CAUTION: Drum (04) weight: 49 kg (110 lb)

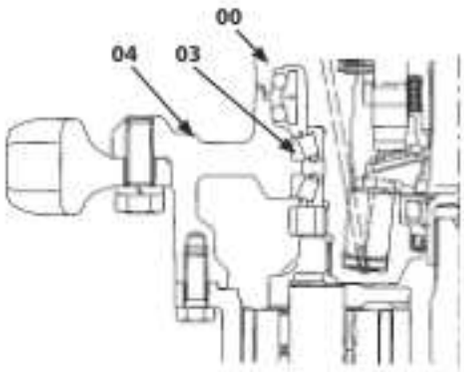
4. Install eyebolts (M20, Pitch 2.5 mm) (2 used) to the bolt (06) holes on drum (04). Attach nylon slings onto the eyebolts. Hoist drum (04). Place drum (04) with the ring gear (20) side down.

CAUTION: Metal fragments may fly off when a hammer is used. Wear necessary protection, such as goggles, hard hat, etc. in order to prevent personal injury.

IMPORTANT: Do not tap except for the outer race of roller bearing (03).

5. Evenly tap and install the outer race of roller bearing (03) of the travel motor (00) side to drum (04) by using a bar and a hammer.

NOTE: Check that the outer race of roller bearing (03) on the travel motor (00) side is installed completely.



WDCD-04-02-003

IMPORTANT: Handle floating seal (02) with care. (Refer to W2-4-5.)

6. Apply grease onto O-ring of other side of floating seal (02). Install one side of floating seal (02) to drum (04).

NOTE: If it is difficult to install O-ring of floating seal (02), push O-ring to the periphery direction by using a bamboo spatula.

CAUTION: Drum (04) assembly weight: 59 kg (135 lb)

7. Install eyebolts (M20, Pitch 2.5 mm) (2 used) to the bolt (06) holes on drum (04). Attach nylon slings onto the eyebolts. Hoist drum (04) assembly. Place drum (04) assembly with the travel motor (00) side down.

CAUTION: Sprocket (05) weight: 46 kg (105 lb)

CAUTION: When installing sprocket (05), gather up the nylon slings and hoist sprocket (05) horizontally. Do not drop sprocket (05).

IMPORTANT: Fit the chamfered side of sprocket (05) to the drum (04) side.

8. Attach nylon slings onto sprocket (05). Hoist sprocket (05). Place sprocket (05) onto drum (04).

9. Degrease the bolt (06) holes on drum (04) and bolts (06) (16 used). Apply LOCTITE #262 or THREEBOND #1386B onto bolts (06) (16 used). Install sprocket (05) to drum (04) with spring washers (07) (16 used) and bolts (06) (16 used).

: 30 mm

: 485 N-m (48.5 kgf-m, 360 lbf-ft)

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