PART NO. WACD90-EN-00

HITACHI

Reliable solutions

Workshop Manual

ZX20U-5A

Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual	: Vol. No.TACD90-EN
Workshop Manual	: Vol. No.WACD90-EN
Engine Manual	: Vol. No.EACD-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.

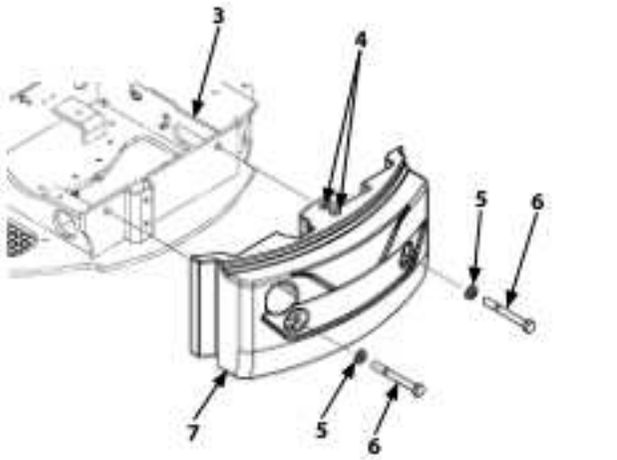
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Unit: mm (in)

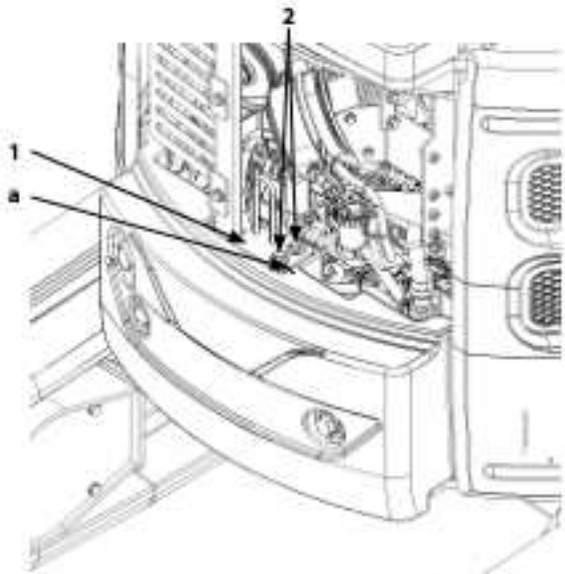
	Part Name	Standard	Allowable Limit	Remedy
H	Pin	35 (1.38)	34 (1.34)	Replace
	Bushing (Bucket Cylinder)	35 (1.38)	36.5 (1.44)	
	Bushing (Link A)	35 (1.38)	36.5 (1.44)	
	Link B	35 (1.38)	36.5 (1.44)	
I	Pin	35 (1.38)	34 (1.34)	
	Bushing (Arm)	35 (1.38)	36.5 (1.44)	
	Link B	35 (1.38)	36.5 (1.44)	
J	Pin	35 (1.38)	34 (1.34)	
	Bushing (Link A)	35 (1.38)	36.5 (1.44)	
K	Pin	35 (1.38)	34 (1.34)	
	Bushing (Arm)	35 (1.38)	36.5 (1.44)	
L	Pin	71 (2.80)	70 (2.76)	
	Bushing (Main Frame)	71 (2.80)	72.5 (2.86)	
	Bushing (Swing Post)	71 (2.80)	72.5 (2.86)	
M	Pin	71 (2.80)	70 (2.76)	
	Bushing (Main Frame)	71 (2.80)	72.5 (2.86)	
	Bushing (Swing Post)	71 (2.80)	72.5 (2.86)	
N	Pin	40 (1.58)	39 (1.54)	
	Bushing (Boom Swing Cylinder)	40 (1.58)	41.5 (1.63)	
O	Pin	40 (1.58)	39 (1.54)	
	Bushing (Boom Swing Cylinder)	40 (1.58)	41.5 (1.63)	
P	Pin	30 (1.18)	29 (1.14)	
	Bushing (Blade)	30 (1.18)	31.5 (1.24)	
Q	Pin	35 (1.38)	34 (1.34)	
	Bushing (Blade Cylinder)	35 (1.38)	36.5 (1.44)	
R	Pin	35 (1.38)	34 (1.34)	
	Bushing (Blade Cylinder)	35 (1.38)	36.5 (1.44)	

IMPORTANT: When replacing HN bushing for the front attachment, install it by using a press.

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WACC50-03-02-004



WACC50-03-02-003

a- Matching Mark

Installation

CAUTION: Counterweight (7) weight: 125 kg (280 lb)

1. Install the eyebolts (M12, Pitch 1.75 mm) (2 used) to bracket (1) mounting holes (4). Hoist counterweight (7). Place counterweight (7) onto main frame (3). Slide counterweight (7) to the front side.
2. Install counterweight (7) to main frame (3) with bolts (6) (2 used) and washers (5) (2 used).

   : 30 mm

   : 400 N·m (40 kgf·m, 295 lbf·ft)

3. Fit the matching mark (a) on bracket (1) and counterweight (7). Install bracket (1) with bolts, washers (2) (2 used).

   : 19 mm

   : 90 N·m (9 kgf·m, 66 lbf·ft)

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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.)

5. Disconnect hoses (7) (2 used) from bucket cylinder (1).

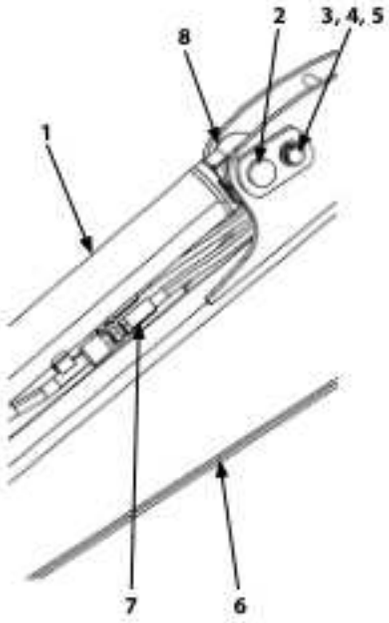
   : 22 mm

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.

6. Attach nylon slings onto bucket cylinder (1). Hoist and hold bucket cylinder (1). Remove bolt (3), spring washer (4), and bushing (5) from arm (6). Remove pin (2) by using a bar and a hammer. Remove shims (8) from both sides of the cylinder tube boss.

   : 19 mm

7. Remove bucket cylinder (1) from arm (6).



WACC50-05-02-005

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