PART NO. WDBG-EN-00

HITACHI

Reliable solutions

Workshop Manual

ZX160LC-5G

Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TODBG-EN
Technical Manual (Troubleshooting)	: Vol. No.TTDBG-EN
Workshop Manual	: Vol. No.WDBG-EN
Engine Manual	: Vol. No.EDAG-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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Pin



W142-03-07-004

Unit: mm (in)

	Standard	Allowable Limit	Remedy
A	212 (8.35)	-	Replace
B	38 (1.50)	[35 (1.4)]	

NOTE: *Values in [ ] are just for reference.*

Bushing



W105-03-07-023

Unit: mm (in)

	Standard	Allowable Limit	Remedy
A	137.5 (5.41)	-	Replace
B	38.7 (1.52)	[39.7 (1.56)]	
C	59 (2.32)	[54 (2.13)]	

NOTE: *Values in [ ] are just for reference.*

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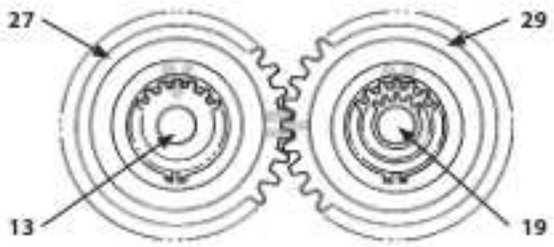
CAUTION: The pump casing (51) assembly weight: 72 kg (160 lb)

25. Install eyebolts (M12, Pitch 1.75 mm) (2 used) to the socket bolt (71) holes (2 places) of pump casing (51). Attach nylon slings onto the eyebolts. Hoist and remove the pump casing (51) assembly from gear casing (47). Shafts (13, 19) and gears (27, 29) are removed with pump casing (51) together.

    Place pump casing (51) with the regulator mounting surface up.

26. Remove spring pins (48) (2 used) and gasket (28) from gear casing (47).

27. Put the matching marks on the meshed position of the splines on shafts (13, 19) and gears (27, 29). Put the matching marks on the meshed position of gears (27, 29).



W137-02-04-007

28. Remove retaining rings (26) (2 used) from shafts (13, 19). Remove gears (27, 29) from shafts (13, 19).

CAUTION: The pump casing (51) assembly weight: 67 kg (150 lb)

29. Attach nylon slings onto pump casing (51). Hoist and place the pump casing (51) assembly with the selector head (66) mounting side down.

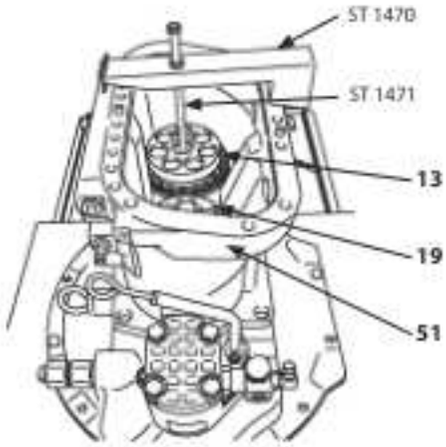
30. Remove plug (24) from pump casing (51). Remove O-ring (23) from plug (24).

    : 19 mm

CAUTION: The pump casing (51) assembly weight: 67 kg (150 lb)

31. Attach nylon slings onto pump casing (51). Hoist and place the pump casing (51) assembly on a wooden block with the pump transmission side down. Use the wooden block (100 mm (3.94 in) or more square).

32. Remove the shaft (13, 19) assembly from pump casing (51) by using the special tools (ST 1470, ST 1471). Bearings (10, 12) are removed with shafts (13, 19) together.



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