PART NO. WJBF-EN-00

HITACHI

Reliable solutions

Workshop Manual

ZX
670LC-5G
670LCH-5G
670LCR-5G

Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TOJBF-EN
Technical Manual (Troubleshooting)	: Vol. No.TTJBF-EN
Workshop Manual	: Vol. No.WJBFEN

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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:**
Indicated 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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Hydraulic Circuit Pressure Release Procedure

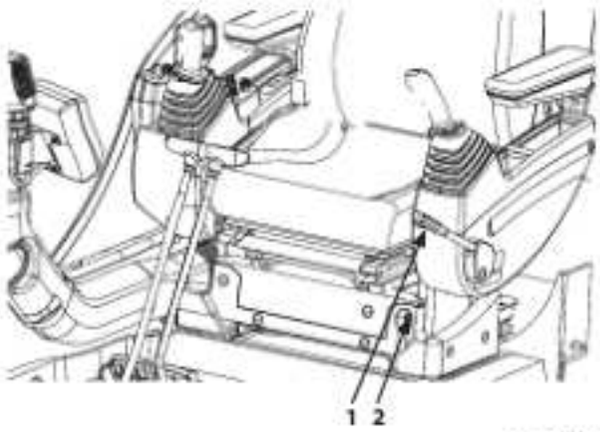
Release any remaining pressure as follows before removing/installing the front attachment.

1. Set pilot shut-off lever (1) to the UNLOCK position.
2. Turn engine stop switch (2) ON.

NOTE: Perform step 1 and step 2, and set the key switch to the START position. Although the starter rotates, the engine does not start.

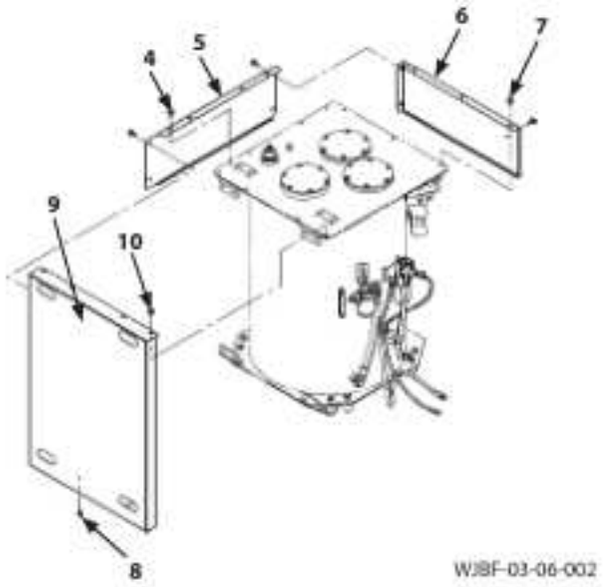
IMPORTANT: Battery will deplete. Operate the key switch for short period.

3. With the key switch set in the START position, operate the control lever in order to release any pressure in the hydraulic circuit 4 to 5 times.
4. Return pilot shut-off lever (1) to the LOCK position.
5. Turn engine stop switch (2) OFF.

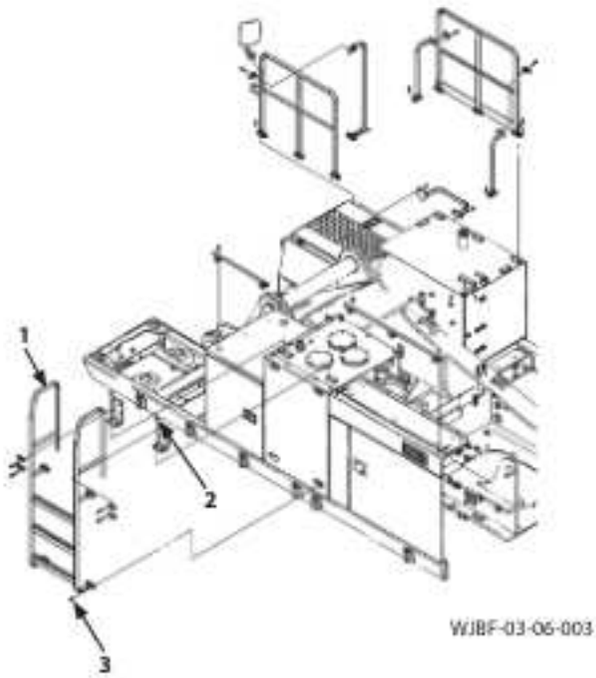


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WJBF-03-06-002



WJBF-03-06-003

CAUTION: Cover (9) weight: 34 kg (75 lb)

25. Install cover (9) with bolts, washers (10) (4 used).
    - : 19 mm
    - : 90 N·m (9 kgf·m, 66 lbf·ft)
26. Install bolts, washers (8) (2 used).
    - : 19 mm
    - : 90 N·m (9 kgf·m, 66 lbf·ft)
27. Install cover (6) with bolts, washers (7) (3 used).
    - : 19 mm
    - : 90 N·m (9 kgf·m, 66 lbf·ft)
28. Install cover (5) with bolts, washers (4) (8 used).
    - : 19 mm
    - : 90 N·m (9 kgf·m, 66 lbf·ft)

CAUTION: The handrail (1) assembly weight: 32 kg (71 lb)

29. Attach the nylon slings onto the handrail (1) assembly. Hoist the handrail (1) assembly.
30. Install the handrail (1) assembly with bolts, washers (2) (4 used).
    - : 19 mm
    - : 90 N·m (9 kgf·m, 66 lbf·ft)
31. Install bolts, washers (3) (8 used).
    - : 19 mm
    - : 90 N·m (9 kgf·m, 66 lbf·ft)

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6. Engine Cooling Trouble

Condition	Possible Cause	Correction
Overheating	Insufficient cooling water	Replenish coolant
	Defective pressure cap or clogged radiator core	Replace the radiator pressure cap or clean radiator core
	Defective water pump	Repair or replace the water pump
	Defective sealing cap resulting in the cooling water leakage	Replace the sealing cap
	Defective thermostat	Replace the thermostat
	Cooling system clogged by foreign material	Take out the foreign material from the cooling system
	Fuel injection timing improperly adjusted	Adjust the fuel injection timing

7. White Exhaust Smoke

Condition	Possible Cause	Correction
Trouble in the fuel system	Water particles in fuel	Replace the fuel
	Retarded fuel injection timing	Adjust the fuel injection timing
Low compression pressure	Blown out cylinder head gasket Worn cylinder liner Piston ring sticking or broken Improper seating between the valve and valve seat.	Replace the related parts
Trouble in the cooling system	Defective thermostat	Replace the thermostat
Trouble in the turbocharger system	Defective turbocharger	Repair or replace

8. Black Exhaust Smoke

Condition	Possible Cause	Correction
Trouble in the fuel system	Clogged air cleaner element	Clean or replace the air cleaner element
Trouble in the fuel system	Injection nozzle starting pressure tool low	Adjust or replace the injection nozzle
	Improper spray condition	
	Advanced fuel injection timing	Adjust the fuel injection timing
	Excessive injection volume	Adjust the injection volume
Trouble in the valve train	Worn camshaft lobe	Replace the camshaft

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