PART NO. WJAC91-EN-00

HITACHI

Reliable solutions

Workshop Manual

ZX470LC-5G

Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TOJAC91-EN
Technical Manual (Troubleshooting)	: Vol. No.TTJAC91-EN
Workshop Manual	: Vol. No.WJAC91-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:**
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.

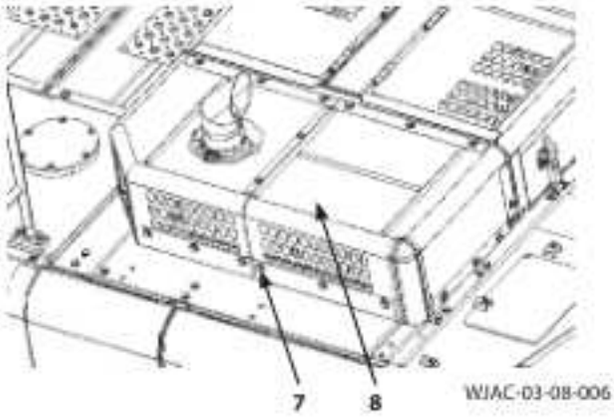
Example: 24.5 MPa (250 kgf/cm², 3560 psi)

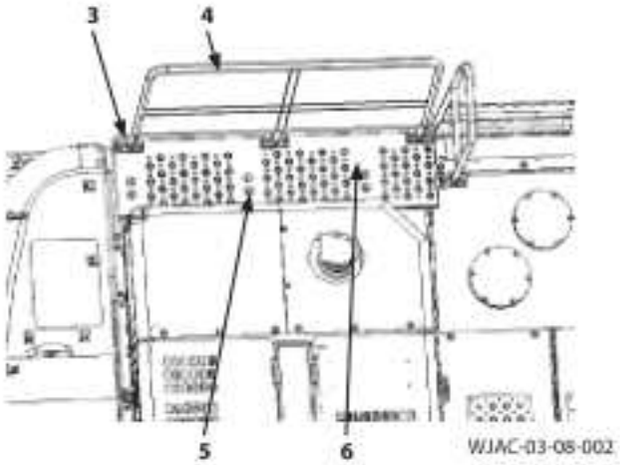
A table for conversion from SI units to other system units is shown below for reference purposes.

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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CAUTION: The cover (8) assembly weight: 23 kg (51 lb)

46. Install the cover (8) assembly with bolts, washers (7) (19 used).

: 19 mm

: 90 N-m (9 kgf-m, 66 lbf-ft)

CAUTION: Step (6) weight: 26 kg (58 lb)

47. Install step (6) with bolts, washers (5) (6 used).

: 19 mm

: 90 N-m (9 kgf-m, 66 lbf-ft)

CAUTION: Handrail (4) weight: 21 kg (47 lb)

48. Attach nylon slings onto handrail (4). Hoist and hold handrail (4).

49. Install handrail (4) with bolts, washers (3) (6 used).

: 19 mm

: 90 N-m (9 kgf-m, 66 lbf-ft)

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11. Alternator

Condition	Possible Cause	Correction
Battery dead	Loose alternator drive belt	Adjust
	Low battery fluid	Replenish
	Defective battery terminals	Replace
	Blown fuse	Replace
	Poor contact between the fuse holder and fuse	Repair
	Low battery fluid specific gravity	Adjust
	Broken or poorly connected starter switch and regulator terminal wire	Repair
	Broken or poorly connected regulator terminal and alternator terminal wire	Repair
	Defective alternator ground circuit	Repair
	Defective voltage regulator	Replace
	Defective diode	Replace
	Grounded or broken alternator stator coil	Repair or replace
	Broken rotor coil	Replace
	Excessive electrical load	Check the alternator output at normal operating speed
Battery overcharged	Poor connections or open circuit	Correct
	Poor ground connection of voltage regulator	Correct
	Voltage set of regulator too high	Replace
	Defective voltage regulator	Replace
Flashing charge light or fluctuating ammeter indication	Loose belt	Adjust
	Defective starter switch contacts	Replace
	Broken or poorly connected wiring	Replace or reconnect
Charge light on but gim while operating	Loose starter switch terminal wiring	Retighten
	Excessive resistance of alternator and fuse holder terminal wire	Replace the wire with a large one
	Defective starter switch contacts	Replace
Alternator noise	Defective alternator bearing	Replace or regrease
	Exposed stator coil wires	Replace
	Short circuit of the stator coil	Replace
Charge circuit fuse blown	Grounded terminal wiring	Repair
	Defective alternator end flame diode	Replace the end flame assembly
	Out of voltage regulator adjustment	Replace
	Reversed battery connections	Correct

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