CX31B-CX36B
Hydraulic Excavator

Service Manual

Part No. 6-77100

CASE CONSTRUCTION

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3. ATTACHMENT DIMENSIONS

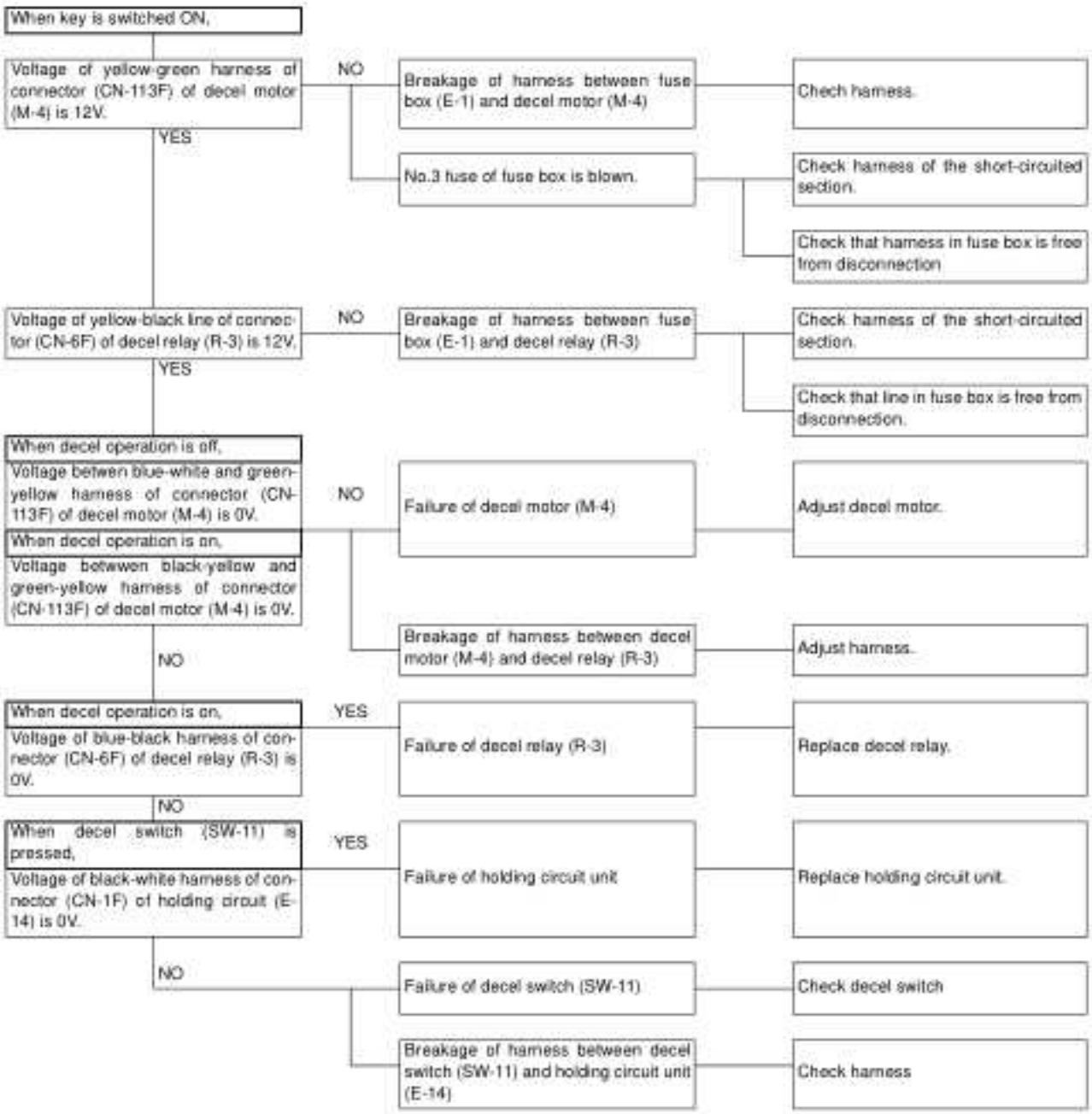
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43.2.4 Deceleration

43.2.4.1 Decel change operation in option can not be carried out.



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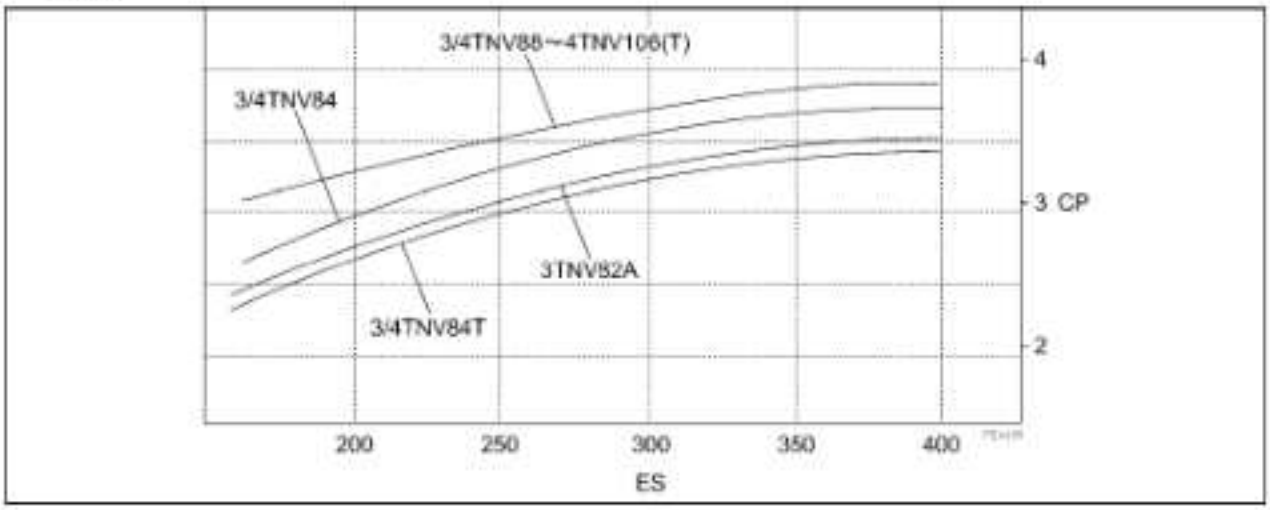
(5) 4TNV84

Engine name		Unit	4TNV84								
Engine specification class		-	CL		VM						
Type		-	Vertical, in-line, 4-cycle, water-cooled diesel engine								
Combustion chamber		-	Direct injection								
Number of x cylinders		-	4								
Cylinder bore x stroke		mm x mm	84 x 90								
Displacement		L	1.995								
Continuous rating	Revolving speed	Min^{-1}	1500	1800	-						
	Output	kW (hp)	14.9 (20.3)	17.7 (24.1)	-						
Rated output	Revolving speed	Min^{-1}	1500	1800	2000	2200	2400	2500	2600	2800	3000
	Output	kW (hp)	16.4 (22.3)	19.5 (26.5)	21.9 (29.8)	24.1 (32.8)	26.3 (35.8)	27.4 (37.3)	28.5 (38.7)	30.7 (41.7)	32.9 (44.7)
Max. no-load speed (±25)		Min^{-1}	1600	1895	2180	2400	2590	2700	2810	2995	3210
Ignition order		-	1-3-4-2-1(No.1 cylinder on flywheel side)								
Power take off		-	Flywheel								
Direction of rotation		-	Counterclockwise (viewed from flywheel)								
Cooling system		-	Radiator								
Lubrication system		-	Forced lubrication with trochoid pump								
Starting system		-	Electric								
Applicable fuel		-	Diesel ASTM N. 2-D tipo TT								
Applicable lubricant		-	SUPER GOLD 15W-40		SUPER GOLD 10W-30						
Lubricant capacity (oil pan)*	Total	L	7.4								
	Effective	L	2.3								
Coolant water capacity (engine only)		L	2.7								
Engine Dimensions ** (with flywheel housing)	Overall length	mm	683		658						
	Overall width	mm	498.5								
	Overall height	mm	617								
Engine mass (dry) ** (with flywheel housing)		kg	183		170						
Cooling fan (std.)		mm	370 mm O/D, 6 blades pusher type								
Crankshaft V pulley diameter & Fun V pulley diameter (std.)		mm	120 x 90		110 x 110						

* Engine oil capacity may differ from the above depending on an engine installed on a machine unit.
** Engine mass and dimensions without radiator.

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3. Engine speed and compression pressure (for reference)



CP. Compression pressure (Mpa) ES. Engine speed (min⁻¹)

4. Measured value and troubleshooting

When the measured compression pressure is below the limit value, inspect each part by referring to the table below.

No.	Item	Cause	Corrective action
1	• Air cleaner element	• Clogged element • Broken element • Defect at element seal portion	• Clean the element. • Replace the element.
2	• Valve clearance	• Excessive or no clearance	• Adjust the valve clearance.
3	• valve timing	• Incorrect valve clearance	• Adjust the valve clearance.
4	• Cylinder head gasket	• Gas leak from gasket	• Replace the gasket. • Retighten the cylinder head bolts to the specified torque. (See 51.4.2-2).
5	• Intake/exhaust vale • Valve seat	• Gas leak due to worn valve seat or foreign matter trapping • Sticking valve	• Lap the valve seat. (See 51.4.2-6). Replace the intake/exhaust valve.
6	• Piston • Piston ring • Cylinder	• Gas leak due to scratching or wear	• Perform honing and use an oversized part. (See 51.4.4(5)-(5-1), (5-4) and (6).

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Point 3

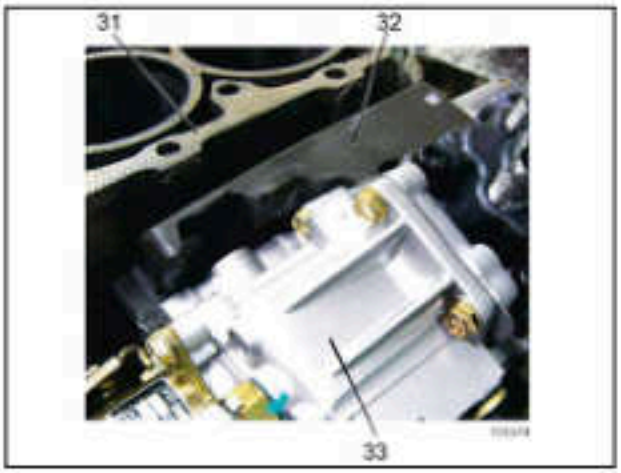
Disassemble

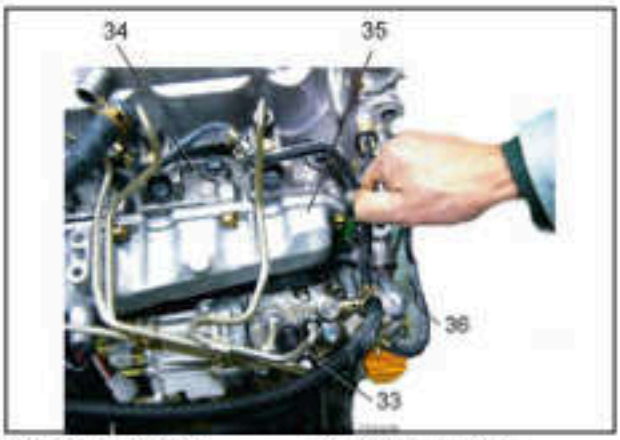
There is an acoustic material part to name as fuel pump spacer between the fuel pump and the cylinder block. Loosen fuel pump installation bolts with a closed wrench when disassembling a fuel pump.

NOTE: An intake manifold may obstruct the disassembly of the fuel pump by the engine model. Remove the fuel pump after removing the intake manifold first.

Reassemble

When installing a fuel pump on the gear case, put a fuel pump spacer between the cylinder blocks, and install it .





31. Cylinder block
32. Fuel pump spacer
33. Fuel pump
34. Cylinder head
35. Suction manifold
36. Closed wren

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(7) SWING CIRCUIT: Boom swing left operation

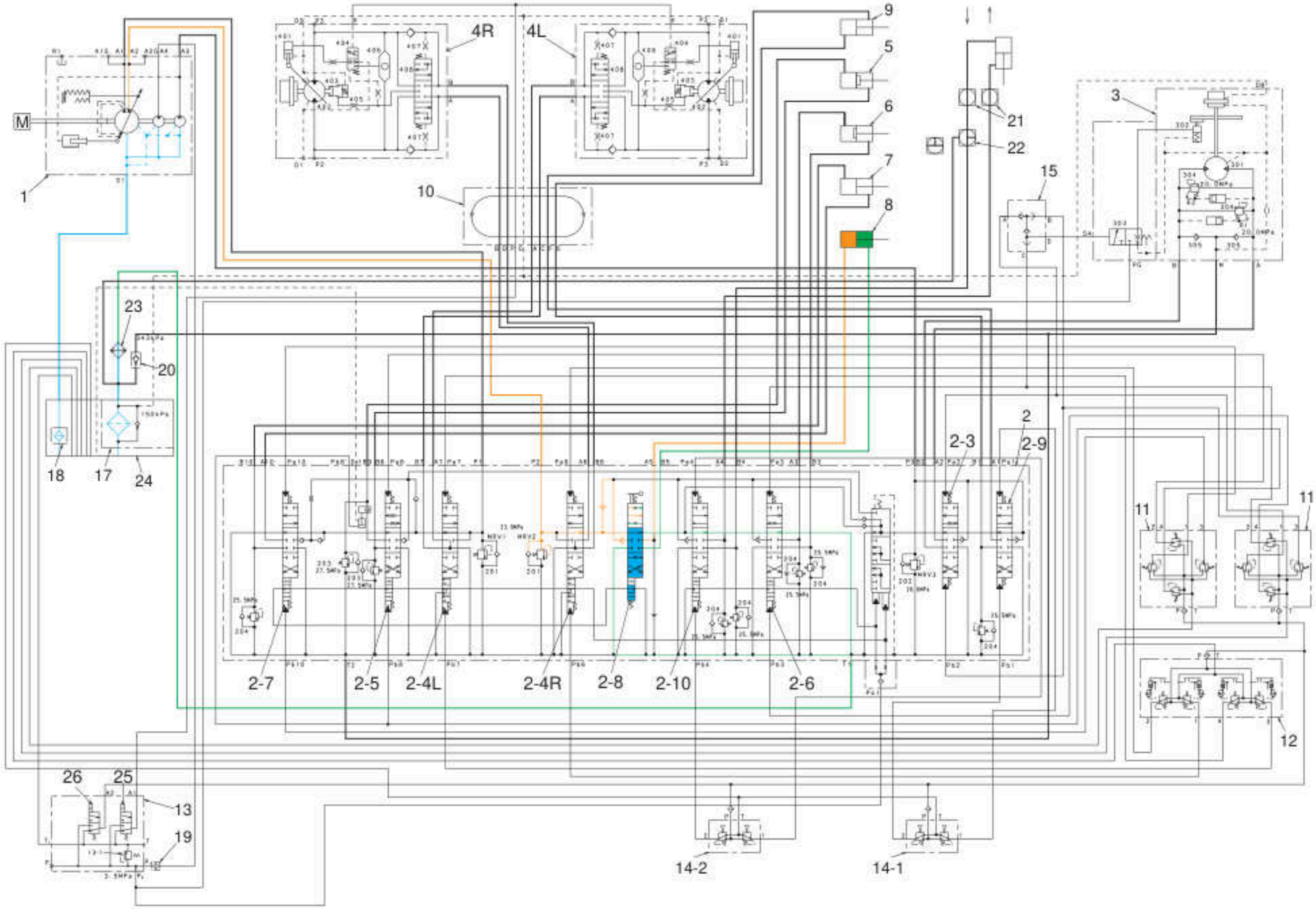


Fig. 71-8

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