SERVICE MANUAL

LOADER
403

EN - 9813/4200 - ISSUE 3 - 06/2018

This manual contains original instructions, verified by the manufacturer (or their authorized representative).

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Foreword

The Operator's Manual

⚠

You and others can be killed or seriously injured if you operate or maintain the machine without first studying the Operator's Manual. You must understand and follow the instructions in the Operator's Manual. If you do not understand anything, ask your employer or JCB dealer to explain it.

Do not operate the machine without an Operator's Manual, or if there is anything on the machine you do not understand.

Treat the Operator's Manual as part of the machine. Keep it clean and in good condition. Replace the Operator's Manual immediately if it is lost, damaged or becomes unreadable.

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03 - Attachments, Couplings and Load Handling

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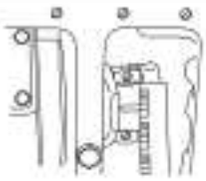
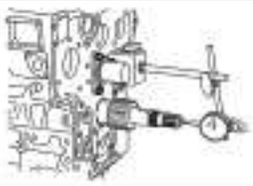
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Component		Calibration Data	
Illustration	**Description**	**Factory Specification**	**Allowable limits**
	Oil clearance between crankshaft journal and crankshaft bearing 2	0.04 –0.104 mm	0.2 mm
	Crankshaft journal outside diameter	59.921 –59.94 mm	-
	Crankshaft bearing 2 inside diameter	59.98 –60.025 mm	-
Crankpin and crankpin bearing			
	Oil clearance between crankpin and crankpin bearing	0.025 –0.087 mm	0.2 mm
	Crankpin outside diameter	46.959 –46.975 mm	-
	Crankpin bearing inside diameter	47 –47.046 mm	-
Crankshaft			
	Crankshaft side clearance	0.15 –0.31 mm	0.5 mm
Cylinder			
	Cylinder bore inside diameter (Standard size)	87 –87.022 mm	87.17 mm
	Cylinder bore inside diameter (Oversize)	87.25 –87.272 mm	87.42 mm

(1) A = Valve face angle, B = Valve seat angle, C = Valve seat width.
(2) D = TDC, E = BDC, F = Inlet valve open, G = Exhaust valve open, H = Exhaust valve close, J = Inlet valve close.
(3) K = Valve spring length, L = Valve spring tilt.

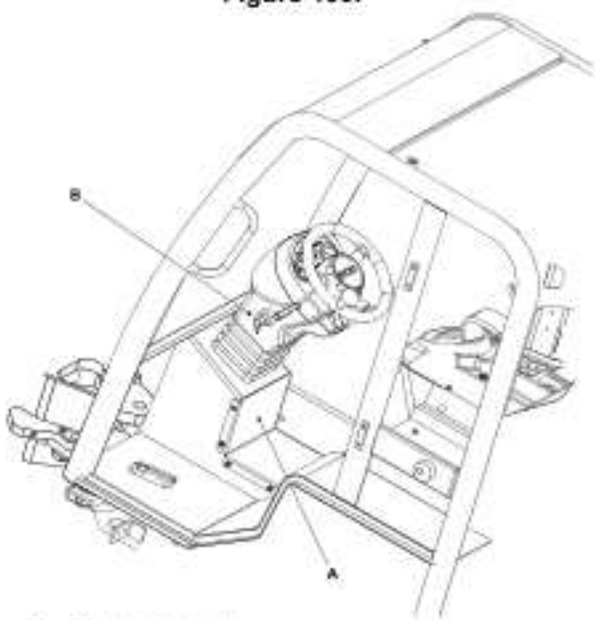
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Remove and Install

Remove

1. Make the machine safe. Refer to (PIL 01-03).
2. Install the articulation lock. Refer to (PIL 06-27).
3. Remove the steering wheel. Refer to (PIL 09-36).
4. Remove the floor mat from inside the cab (if installed). Refer to (PIL 09-48).
5. Remove the bolts and then remove the access panel from inside the cab.

Figure 199.



A Access panel
B Steering column

6. Remove the floor plate. Refer to (PIL 09-78).
7. Put a label on the hoses to help installation.
8. Disconnect the hydraulic hoses from the steer unit/valve.
9. Plug all the open ports and hoses to prevent contamination.
10. With the help of an assistant, support the steering column.
11. Remove the steering column. Refer to (PIL 25-12).
12. Support the steer valve, remove the nuts and washers.
13. Carefully remove the steer unit/valve.

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Table 89. Energy Transmissions and Conditioning

Symbol	Description
	Working line, return or feed
	Pilot control
	Drain lines
	Flexible pipe
	Line junction
	Crossing lines
	Air bleed
	Line plugged, also pressure test point
	Line plugged with take-off line
	QRC (Quick Release Coupling) - connected
	QRC - disconnected
	Tank - return line above fluid level
	Tank - return line below fluid level
	Header tank
	Pressure sealed tank
	Accumulator
	Filter or strainer
	Water trap
	Cooler - with no indication of coolant flow
	Cooler - indicating direction of coolant flow
	Heater

Table 90. Control Mechanisms

Symbol	Description
	Rotating shaft - one direction
	Rotating shaft - two directions
	Detent
	Locking device
	Over centre device
	Simple linkage
	General control
	Push button operated
	Lever operated
	Pedal operated
	Stem operated
	Spring operated
	Roller operated
	Roller trip operated (one directional)
	Solenoid one winding
	Solenoid two windings

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Check (Condition)

⚠ **WARNING** Damaged hoses can cause fatal accidents. Examine the hoses regularly. Do not use the machine if a hose or hose fixture is damaged.

WARNING Fine jets of fluid at high pressure can penetrate the skin. Keep face and hands well clear of fluid under pressure and wear personal protective equipment. Hold a piece of cardboard close to suspected leaks and then examine the cardboard for signs of fluid. If fluid penetrates your skin, get medical help immediately.

Examine the hoses for:

- Damaged hose ends
- Worn outer covers
- Ballooned outer covers
- Kinked or crushed hoses
- Exposed armouring in the outer covers
- Displaced hose end fittings.
- Worn cover sheathing or hose burst protection covering

Replace a damaged hose before you use the machine again.

The replacement hoses must be of the same size, standard and pressure rating. If necessary, for more information contact your JCB dealer.

1. Inspect the centre joint hose routing to check if the spiral wrapping is touching the bottom centre joint pin.

Figure 400.



2. Use a cable tie to support the hose through the end of the split pin.

Figure 401.



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06 - Cable

Check (Condition)

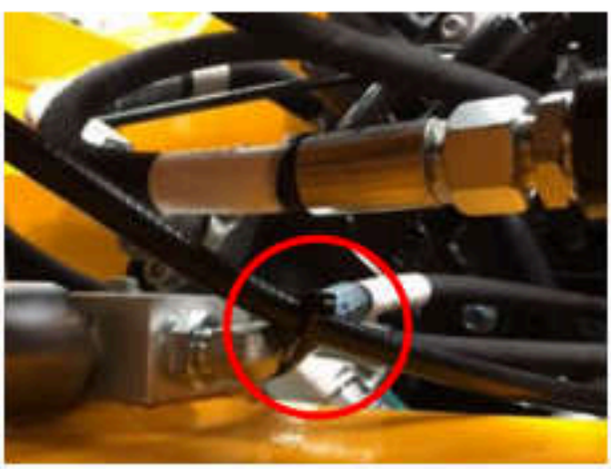
1. Make the machine safe.
   Refer to: PIL 01-03-27.
2. Inspect the part brake cable to check where it is secured.
   2.1. If part brake cable is secured on the hose, remove the cable tie.

Figure 193.



   2.2. Secure the cable to the adaptor to prevent the cable from fouling on the hose.

Figure 194.



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