Service Manual

JS160, JS180, JS190 - Tier III Auto

Service Manual - JS160, JS180, JS190 - Tier III Auto

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Section 2 - Care and Safety

Section 3 - Routine Maintenance

Section B - Body & Framework

Section C - Electrics

Section E - Hydraulics

Section F - Transmission

Section J - Track & Running Gear

Section K - Engine



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JS240/260 and Variants

Table 8.

Item	Capacity	Fluid/Lubricant	JCB Part No.	Container Size(1)
ENGINE	21.5 litres (4.7 UK gal) (5.6 US gal)	JCB Engine Oil HP 15W40 -15°C to +40°C (5°F to 104°F)	4001/1505	20 Litres
		JCB Engine Oil HP 10W30 -30°C to +30°C (-22°F to 86°F)	4001/1705	20 Litres
COOLING SYSTEM	26.8 litres (5.9 UK gal) (7.1 US gal)	JCB HP Coolant ⇨ *Coolant Mixtures (3-25)*	4006/1120	20 Litres
TRACK GEARBOX	2 x 4.7 litres (2 x 1 UK gal) (2 x 1.2 US gal)	JCB HP90 Gear Oil	4000/0301	5 Litres
SLEW GEARBOX	6 litres (1.3 UK gal) (1.6 US gal)		4000/0305	20 Litres
TRACK ROLLERS AND IDLER WHEEL				
RECOIL SPRING CYLINDER		JCB Special HP Grease	4003/2017	400g
HYDRAULIC SYSTEM	241 litres (53 UK gal) v(63.6 US gal)	JCB Hydraulic Fluid HP32 -20°C to +15°C (-4°F to 59°F)	4002/1024	200 Litres
		JCB Hydraulic Fluid HP46 -10°C to +30°C (14°F to 86°F)	4002/0803	
		JCB Hydraulic Fluid HP68 0°C to +40°C (32°F to 104°F)	4002/0701	
SLEW RING		JCB Special HP Grease	4003/2017	400g
- BEARING	100 g (0.22 lb)			
- GEAR TEETH	17 kg (37.5 lb)		4003/2006	12.5kg
ALL OTHER GREASE POINTS	–			
FUEL TANK	343 litres (75.5 UK gal) (90.6 US gal)	⇨ *Fuel System (3-74)*		

(1) For information about the different container sizes that are available (and their part numbers), contact your JCB Dealer.

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Cab Harness (includes Engine Harness) - Type C

Connector Identification

Table 21.

Item	Connector	Function
1 - 10 ⇨ *Cab Harness 'A' 332/J3254 - Issue 3 (C-229)*		
1	C0173	Earth Header
2	C0174	Earth Header
3	C0175	Earth Header
4	C0176	Earth Header
5	C115	Lever Limit Switch
6	C222	Interior Lamp Switch
7	C33	(Dozer On Switch (wheeled only))
8	C32	Lever Hammer Switch
9	C34	Horn Switch
10	EH	Earth Header
11 - 25 ⇨ *Cab Harness 'B' 332/J3254 - Issue 3 (C-230)*		
11	C219	Auxiliary 1
12	C226	Auxiliary 2
13	C0253	Tech 2
14	C11	Diagnostic Connector
15	C13	Redundancy Switch
16	C214	Lower Wiper
17	C228	Wiper 2
18	C110	Diode 1 Washer
19	C161	Diode 5
20	C155	Diode 3 Redundancy 1
21	C156	Diode 4 Redundancy 2
22	C320	Int Lamp Diode
23	C0256	ECM Engine
24	C224	Volt Dropper
25	C318	Qualcom Tracking
26 - 30 ⇨ *Cab Harness 'C' 332/J3254 - Issue 3 (C-231)*		
26	C254	Lift Pump
27	C230	Refuel Pump Relay
28	C271	Emergency Stop
29	C0257	ECM Engine
30	C0263	Barometric
31 - 34 ⇨ *Cab Harness 'D' 332/J3254 - Issue 3 (C-232)*		
31	C252	Tier 3 Link
32	C296	Fusebox
33	C349	Beacon Relay
34	C251	Main Relay
35 - 39 ⇨ *Cab Harness 'E' 332/J3254 - Issue 3 (C-233)*		
35	C1	Connector A
36	C0218	HVAC Unit Connector
37	C8	ECU Connector A
38	C164	Earth Connector
39	C4	Wheeled Option Cab
40 - 46 ⇨ *Cab Harness 'F' 332/J3254 - Issue 3 (C-234)*		
40	C180	Fascia Link 1
41	C0214	Cab Roof Harness
42	C10	ECU Connector C
43	C9	ECU Connector B
44	C6	24V Supply
45	C5	24V Supply (battery)
46	C0250	
47 - 62 ⇨ *Cab Harness 'G' 332/J3254 - Issue 3 (C-235)*		
47	C0214	Cab Roof Harness
48	C112	Breaker Pilot Switch
49	C172	Blanking Connection
50	C0232	Merge Flow Solenoid B
51	C167_1	Plug
52	C163	Merge Solenoid Valve C
53	C163_1	Plug
54	C169	Ham/Aux/Sol V C
55	C169_1	Plug
56	C204	Boom Up Pressure Switch
57	C71_1	Plug
58	C73	Swing Pilot Switch
59	C221	Auto Mode Pressure Switch
60	C57	Boom Priority
61	C201	Lower Wiper
62	C201_1	Plug
63 - 72 ⇨ *Cab Harness 'H' 332/J3254 - Issue 3 (C-236)*		
63	C22	Throttle Dial
64	C0027	Lever Switch
65	C30	Grab CCW/CW
66	C184	Key Switch A
67	C43	Boom Priority Switch

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Counterbalance Valve

Symptom	Possible Cause	Remedy
a Motor does not run or rotation speed is slow.	**1** Plunger not switching.	
	i External pilot pressure not present.	Inspect the piping for damage.
	ii Foreign matter between plunger and body.	Completely remove foreign matter, repair any damage and reassemble after cleaning. Renew if damage or leakage is excessive.
	iii Orifice clogged.	Completely remove foreign matter, repair any damage and reassemble after cleaning. Renew if damage or leakage is excessive.
	iv Foreign matter caught between dumper piston and cap.	Renew spring. Completely remove foreign matter, repair any damage and reassemble after cleaning. Renew if damage or leakage is excessive.
b Motor does not stop or stops slowly.	**1** Plunger does not return.	
	i Foreign matter between plunger and body.	Completely remove foreign matter, repair the damaged part and reassemble after cleaning. Renew if damage or leakage is excessive.
	ii Spring broken.	Renew spring. Completely remove foreign matter, repair any damage and reassemble after cleaning. Renew if damage or leakage is excessive.
	iii Spring not fitted.	Fit spring in specified position.
	iv Orifice clogged.	Reassemble after cleaning.
c Rotation varies.	**1** Plunger does not move smoothly.	
	i Foreign matter between plunger and body.	Completely remove foreign matter, repair any damage and reassemble after cleaning. Renew if damage or leakage is excessive.
	ii Orifice clogged.	Reassemble after cleaning.
d Abnormal noise is heard.	**1** Plunger does not return.	
	i Foreign matter between plunger and body.	Completely remove foreign matter, repair any damage and reassemble after cleaning. Renew if damage or leakage is excessive.
	ii Spring broken.	Renew spring. Completely remove foreign matter, repair any damage and reassemble after cleaning. Renew if damage or leakage is excessive.
	iii Orifice clogged.	Reassemble after cleaning.
e Travel not linear.	**1** Dumper piston or cap is excessively worn.	Renew dumper piston and cap. Completely remove foreign matter, repair any damage and reassemble after cleaning.

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Fault Finding

JCB Servicemaster

TC-810

Introduction

Servicemaster is a gateway application allowing a large number of vehicle support applications to be linked using one familiar interface. The interface acts as a graphical tool for selecting the target vehicle from a database of vehicle families and triggering the particular service tool application desired. This removes the need for a user to 'remember' every individual service tool available and select which one is intended for a particular machine.

The interface also provides several key features that will accompany all JCB projects, a multi language editing tool that provides a means of individual text string translation for all JCB applications and the means to select a localised language translation for each JCB application.

The contents of this document aim to explain to you, the user, how to operate this application and to make most of its functionality.



CD65010

Fig 105.

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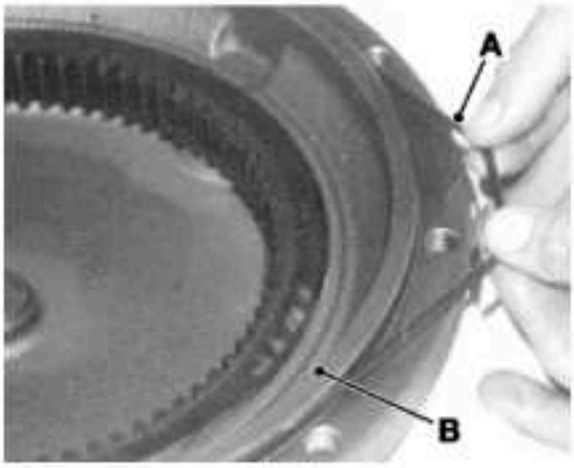


Fig 143.

17 Assemble the end cover **A** onto the gearbox housing **B**.

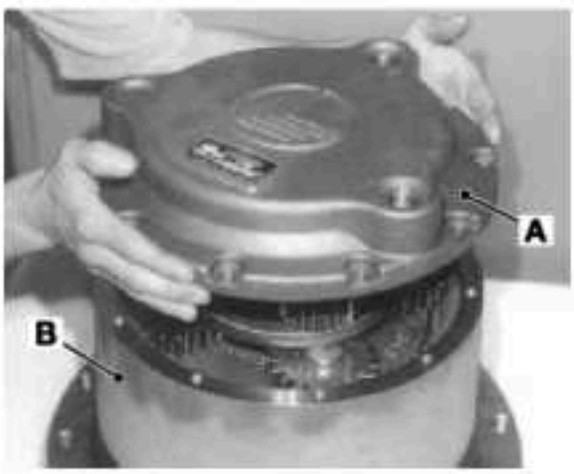


Fig 144.

18 Fix the cover **B** to the gearbox housing using bolts **A** and torque tighten to 75 Nm (55 lb/ft).

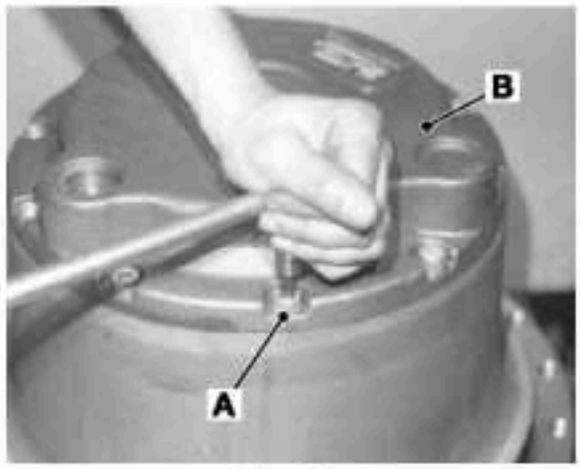


Fig 145.

19 Fill the gearbox with oil, see ***Section 3, Changing Gearbox Oil***.



Fig 146.

20 Torque tighten the two plugs **A** to 30 Nm (22 lb/ft).

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