Service Manual

JS115,JS130,JS145 - Tier III Auto

Service Manual - JS115,JS130,JS145 - Tier III Auto

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Section 2 - Care & Safety

Section 3 - Maintenance

Section B - Body & Framework

Section C - Electrics

Section E - Hydraulics

Section F - Transmission

Section J - Track & Running Gear

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JS290 and Variants

Table 9.

Item	Capacity	Fluid/Lubricant	JCB Part No.	Container Size(1)
ENGINE	38 litres (8.4 UK gal) (10.1 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	38 litres (8.4 UK gal) (10.0 US gal)	JCB HP Coolant ⇨ *Coolant Mixtures (3-25)*	4006/1120	20 Litres
TRACK GEARBOX	2 x 3.5 litres (2 x 0.76 UK gal) (2 x 0.92 US gal)	JCB HD90 Gear Oil	4000/0301	5 Litres
SLEW GEARBOX	16 litres (3.5 UK gal) (4.2 US gal)		4000/0305	20 Litres
TRACK ROLLERS AND IDLER WHEEL				
RECOIL SPRING CYLINDER		JCB Special HP Grease	4003/2017	400g
HYDRAULIC SYSTEM	305 litres (67.1 UK gal) (80.6 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	–			
- GEAR TEETH	–		4003/2006	12.5kg
ALL OTHER GREASE POINTS	–			
FUEL TANK	650 litres (143.0 UK gal) (171.7 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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Bucket Close

For schematic, ⇨ *Fig 15. (🗋 E-45)*.

Servo pressure from the hand controller is sent from port 3 to port Pa7 of the Main control valve **14** and moves the Bucket spool into the bucket close position.

Flow from pump A1 is available at the Bucket spool via the parallel working gallery.

Flow is diverted to port A7 of the Main control valve to the Bucket ram **13**.

Returning oil from the Bucket ram enters the Main control valve at port B7 and is diverted to tank by the Bucket spool.

Servo pressure entering the main control valve at port Pp is blocked by the bucket spool causing back pressure to the restrictor which activates the Excavator pressure switch **52**

- **a** Dipper (1) spool
- **b** Boom (2) spool
- **c** Slew spool
- **d** Option spool
- **e** Travel (left) spool
- **f** Dipper (2) spool
- **g** Boom (1) spool
- **h** Bucket spool
- **i** Travel (right) spool
- **k** Linear Travel spool

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Parking Brake

Symptom	Possible Cause	Remedy
a Braking force is low or insufficient.	**1** Friction plates worn.	Renew discs. Completely remove foreign matter and repair damaged areas. After cleaning, reassemble.
	2 Counter places surface damaged or making poor contact.	Grind and recondition the affected area. Reassemble after cleaning. Renew plates if excessively damaged.
	3 Spring is deformed or damaged.	Renew the spring. Completely remove foreign matter and reassemble after cleaning.
b Motor speed low.	**1** Brake not releasing.	
	i Oil leaks due to broken O-ring.	Renew broken O-ring.
	ii Orifice is clogged.	Clean and reassemble.

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Fig 32.

13 Remove the two speed spool and spring.



Fig 34.

15 Remove the pistons.

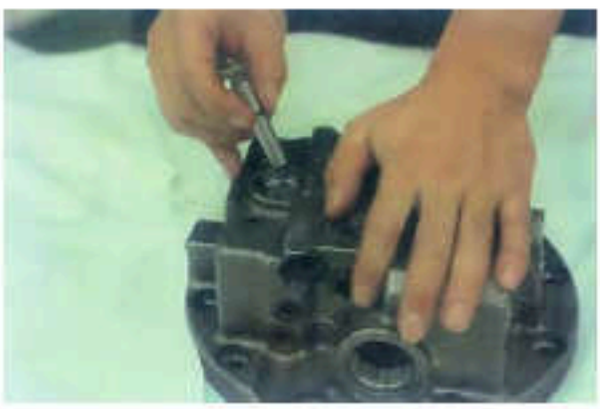


Fig 33.

14 Remove the piston plugs and remove the O-ring from the plugs. ⇨ *Fig 34. (F-24)*.



Fig 35.

16 Remove the ball check plugs from the rear flange. ⇨ *Fig 36. (F-25)*.

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Fig 108.

11 Locate the coupling.



Fig 109.

12 Using a hoist locate first reduction planet carrier into the gearbox housing. ⇨ *Fig 110. (F-50)*.



Fig 110.

13 Locate the first reduction sun gear ensuring it engages into the splines and gears.



Fig 111.

14 Locate thrust plate into position on the carrier. ⇨ *Fig 112. (F-51)*.

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