Service Manual

JCB 8250 Fastrac

Service Manual - JCB 8250 Fastrac

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Fluids, Lubricants and Capacities

Note: *New engines DO NOT require a running-in period. The engine/machine should be used in a normal work cycle immediately, glazing of the piston cylinder bores, resulting in excessive oil consumption, could occur if the engine is gently run-in. Under no circumstances should the engine be allowed to idle for extended periods; (e.g. warming up without load). While 15W/40 oil is recommended for most climates, limited use of low viscosity oils such as 10W/30 is permitted to provide easier starting and sufficient oil flow at temperatures below -5°C (23°F). Continued use of low viscosity oils can decrease engine life and will require different service intervals.* ⇨ *Service Schedules (3-7)*

Table 1.

ITEM	CAPACITY		FLUID/LUBRICANT	INTERNATIONAL SPECIFICATION
	Litres	UK Gal		
Fuel Tank	577	127	Diesel Oil	ASTM D975-66T Nos. 1D, 2D
Engine (Oil)	24	5.3	JCB Engine Oil EP 15W/40 (-20 to +40 deg C)	API CH-4 or ACEA E3/ B3A3, SAE15W/40(1)
Engine (Coolant)	33	7.7	JCB High Performance Antifreeze & Inhibitor/ Water ⇨ *Coolant Mixtures (3-14)*	ASTM D6210
Transmission	75	16.5	JCB V-Tronic Transmission Fluid	ZF TE-ML06, B and C
Rear 3 Point Linkage Cross-shaft	0.2	0.04	JCB V-Tronic Transmission Fluid	ZF TE-ML06, B and C
Clutch	0.5	0.1	JCB V-Tronic Clutch Fluid	Pentosin CHF 11S
Front Axle			JCB HD90 Gear Oil	API-GL-5, MIL-L-2105C
- Axle Beam	16	3.5		
- Hubs (each)	4	0.9		
Rear Axle			JCB HD90 Gear Oil	API-GL-5, MIL-L-2105C
- Axle Beam	56	12.3		
- Hubs (each)	7	1.5		
Brake System			JCB Brake Fluid Dot 4 (capacity given is for each reservoir)	SAE J1703 DOT 4
- Front	0.75	0.2		
- Rear (2 reservoirs)	0.75	0.20		
Hydraulic System(2)	180	40	JCB Hydraulic Fluid HP46 (Above 38°C,100°F)	ISO VG46
			JCB Hydraulic Fluid HP32 (Below 38°C,100°F)	ISO VG32
Grease Points			JCB HP Grease	Lithium complex NLGI No.2 consistency including extreme pressure additives
Front PTO Gearbox (optional)	7	1.5	JCB HP Universal ATF	ZF TE-MIL 09,11,12,14

(1) If API CH-4 or ACEA E3/B3A3 engine oil AT SAE 15W/40 is not available, the engine oil must be changed at 250 hours, using the following alternative oils: For -20°C to +40°C: JCB Engine Oil HP15W/40 or for -25°C to +30 °C: JCB Engine Oil HP10W/30.

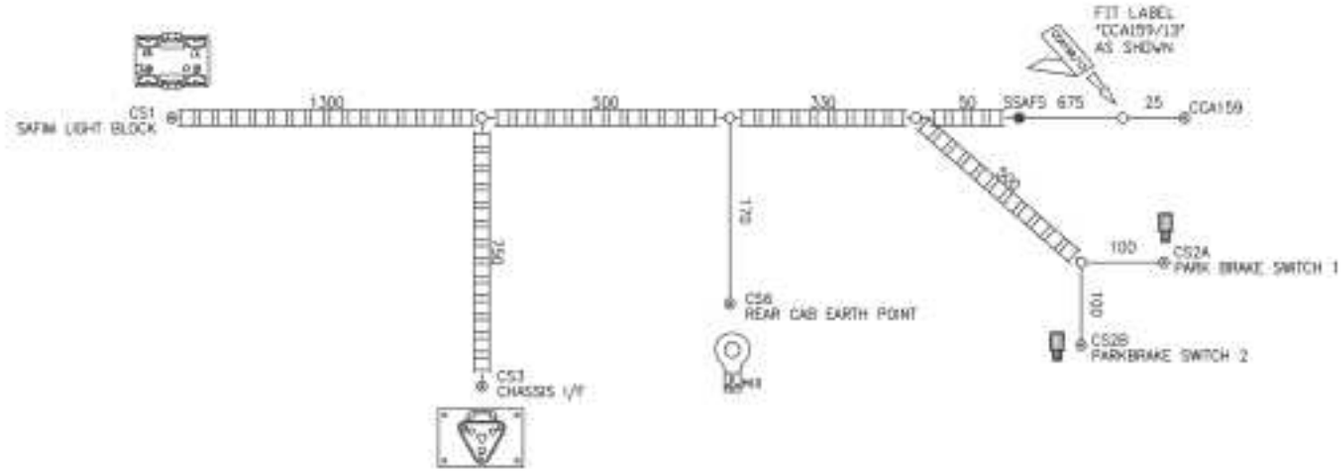
(2) The total hydraulic system capacity depends on the equipment being used. Watch level indicator on hydraulic tank

Coolant Mixtures

T3-008_3

Check the strength of the coolant mixture at least once a year, preferably at the start of the cold period.

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Wire ID	Wire#	Type	Length	From	Pin	To	Pin	Terminal 1	Seal 1	Terminal 2	Seal 2
388	0.5A	1.0	2180	CS1	M	SSAFS	3	7201/0451	-	-	-
498	0.5	1.0	700	SSAFS	2	CCA159	12	-	-	-	-
401	1.0B	1.0	850	SSAFS	1	CS2A	1	-	-	7201/0446	-
514	0.5A	1.0	2180	CS2B	1	CS3	A	7201/0460	-	7204/0028	01-12-16
515	0.5	1.0	2650	CS1	18	CS3	B	7201/0451	-	7204/0028	01-12-16
558	2.5	1.0	1400	CS6	1	CS3	C	-	-	7204/0028	01-12-16

CS1
SAFIM LIGHT BLOCK
A 1.0 SW1-3
B 1.0 CS1-B
C
D
4 Way Cori Light Fem Hsg : 1 : 7234/0008

CS2A
PARK BRAKE SWITCH 1
1.0 SW1-3
1 Way Pax Lock Housing Straight : 1 : 7201/0403

CS2B
PARKBRAKE SWITCH 2
1.0 SW1-6
1 Way Pax Lock Housing Straight : 1 : 7201/0403

CS3
CHASSIS I/F
A 1.0 A58-
B 1.0 CS1-
C 1.0 B56-
3 Way DTM Pin Housing Flange Mount : 1 : 7213/0037
3 Way DTM Wedge : 1 : 7213/0014

CS6
REAR CAB EARTH POINT
1.0 CS3-
Ring Terminal M10 0.5-1.0 : 1 : 7207/1513
Adhesive Lined Heatshrink : 1 : 7000/3212

CCA159
PCB
12 1.0 SW1-3
0.5-1.0 JPT Fem Term Unsealed : 1 : 7201/0920

SSAFS
SAFFLY SPLICE
1.0 CS2A-
1.0 SW1-6
1.0 CS1-
In Line Ultrasonic Splice : 1 : 7080/3104
Adhesive Lined Heatshrink : 1 : 7000/3212

332-S8008-1-SHEET1

Fig 76. SAFIM Cab Harness 332/S8008 SHEET 1

⇨ *Table 24. SAFIM Cab Harness 332/S8008 (C-86)*

Table 24. SAFIM Cab Harness 332/S8008

⇨ *Fig 76. (C-86)*

Key to Connectors:

CS1	SAFIM Light Block
CS2A	Park Brake Switch 1
CS2B	Park Brake Switch 2
CS3	Chassis Interface
CS6	Rear Cab Earth
CCA159	PCB

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8 Remove the anti-rotation screw **15** and roll pin **16** from the castellated nuts. Remove castellated nuts **17** and **18**; remove the split bearing carriers **19** and **20**.

9 Remove the oil passage dowel **21**. Remove and discard O-rings **22**.

10 Remove the differential assembly **23** with bearings **24** and **25**.

Note: *During a differential lock repair or piston replacement, inspect the housing for scores, marks or damage which could cause a leak. If necessary, polish the housing with oil-lubricated 800 grade or fine abrasive paper to remove any marks. Alternatively, renew the housing.*

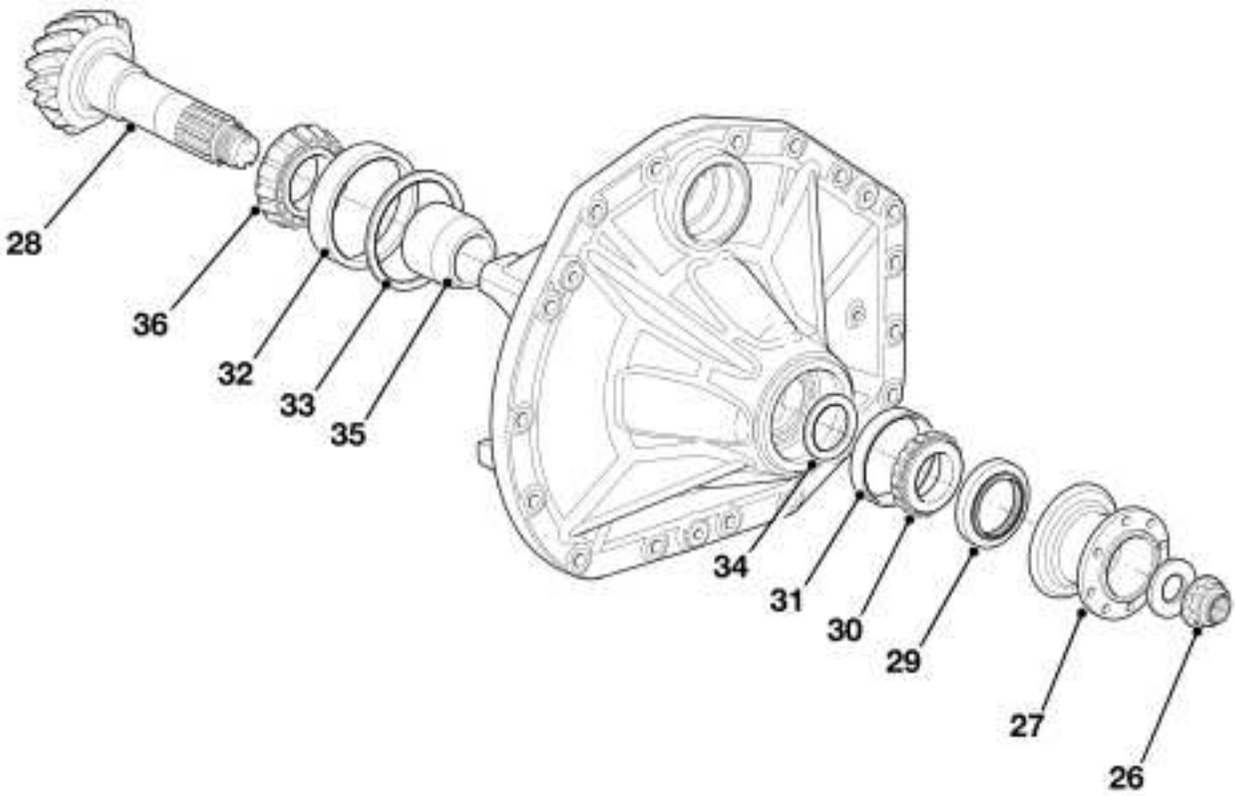


Fig 125.

11 Remove the pinion nut **26**. Discard the nut.

12 Remove the drive flange **27**.

13 Drive the pinion shaft **28** out of the drive head carrier.

14 Prise the shaft seal **29** out of the bore.

15 Remove the taper roller bearing **30** and tap out the bearing cup **31**.

16 Tap out the bearing cup **32** from the opposite bearing housing and remove the pinion bearing depth shim **33**.

17 Remove the pinion bearing pre-load shim **34**, spacer **35** and bearing **36** from the pinion shaft.

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2 Switch the Ignition `On'.

3 As the first instrument panel buzzer has finished sounding, engage the transport lock **T**.

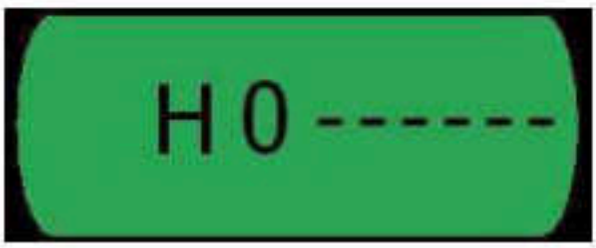
4 Before the second instrument panel buzzer has finished sounding, slowly cycle the green spool lever **1** from its central neutral position to extend **V**, then to retract **W**, and back to neutral **N**. ⇨ *Fig 36. (E-31)*

The instrument panel will display a code and begin to count down from 25 seconds.

Valve Slices Currently Configured

Upon accessing Configuration Mode the spool valve slices which are connected and configured will be displayed on the instrument panel. Slices configured are identified by the prefix `H'.

Some examples of valve slice configuration that may be seen on the instrument panel are as follows:



C071750

Fig 37. One or more slices connected but none yet configured. ('0' indicates Bosch state)



C071740

Fig 38. All six slices connected and configured correctly.



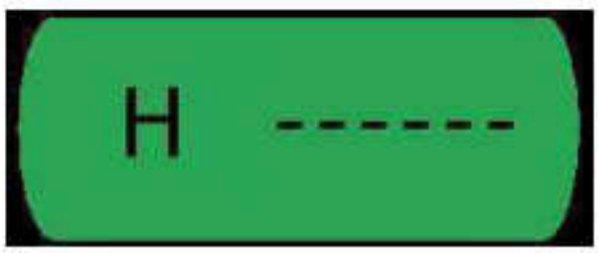
C071808

Fig 39. A Bosch default slice is connected ('0') and can be configured as either slice 2 or 5. Slices have been connected and configured to positions 1, 3. 4 and 6.



C071755

Fig 40. Slices 1, 2, 3, 4 and 6 (front hitch) configured. Slice 5 either not fitted or not connected.



C071758

Fig 41. Either: No slices connected, CAN2 wiring or supply fuse fault or non-compatible slice connected. Slices each need returning to Bosch state first using the following method:

Configuring `Bosch' Slices

The object of this procedure is to make sure that each valve slice is correctly identified to its proper position number on the Fastrac. ⇨ *Table 8. (E-31)* When configured, each valve slice will store this identity even if it is unplugged.

To wipe the slice memory it must be restored to Bosch state, ⇨ *Returning Configured Slices to Bosch State (E-35)*

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Earths

Table 51.

Connections: See ⇨ Fig 93. (🗋 C-128)	
1	**Roof Earth Point (CCA133)**
EP	⇨ Fig 84. (🗋 C-105)
GD	⇨ Fig 84. (🗋 C-105)
GE	⇨ Fig 84. (🗋 C-105)
GF	⇨ Fig 84. (🗋 C-105)
PE	⇨ Fig 89. (🗋 C-116)
PF	⇨ Fig 89. (🗋 C-116)
RA	⇨ Fig 90. (🗋 C-119)
RB	⇨ Fig 90. (🗋 C-119)
RC	⇨ Fig 90. (🗋 C-119)
RD	⇨ Fig 90. (🗋 C-119)
RE	⇨ Fig 90. (🗋 C-119)
RF	⇨ Fig 90. (🗋 C-119)
RG	⇨ Fig 90. (🗋 C-119)
RH	⇨ Fig 90. (🗋 C-119)
RJ	⇨ Fig 90. (🗋 C-119)
RP	⇨ Fig 90. (🗋 C-119)
RR	⇨ Fig 90. (🗋 C-119)
RS	⇨ Fig 90. (🗋 C-119)
RT	⇨ Fig 90. (🗋 C-119)
RU	⇨ Fig 90. (🗋 C-119)
RV	⇨ Fig 90. (🗋 C-119)
SL	⇨ Fig 91. (🗋 C-121)
VB	⇨ Fig 90. (🗋 C-119)
2	**Front Cab Earth Point 1 (CR38)**
SK	⇨ Fig 91. (🗋 C-121)
3	**Rear Cab Earth Point 1 (CCA135)**
BA	⇨ Fig 83. (🗋 C-102)
FB	⇨ Fig 84. (🗋 C-105)
GC	⇨ Fig 84. (🗋 C-105)
HD	⇨ Fig 85. (🗋 C-107)
PB	⇨ Fig 89. (🗋 C-116)
RM	⇨ Fig 90. (🗋 C-119)
RN	⇨ Fig 90. (🗋 C-119)
SA	⇨ Fig 90. (🗋 C-119)
4	**Rear Cab Earth Point 2 (CCA165)**
HP	⇨ Fig 85. (🗋 C-107)
KE	⇨ Fig 86. (🗋 C-109)
PA	⇨ Fig 88. (🗋 C-114)
5	**Rear Cab Earth Point 3 (CCA166)**
EA	⇨ Fig 84. (🗋 C-105)
RY	⇨ Fig 90. (🗋 C-119)
SB	⇨ Fig 90. (🗋 C-119)
TA	⇨ Fig 92. (🗋 C-124)
TB	⇨ Fig 92. (🗋 C-124)
TC	⇨ Fig 92. (🗋 C-124)
TD	⇨ Fig 92. (🗋 C-124)
TE	⇨ Fig 92. (🗋 C-124)
6	**Rear Cab Earth Point 4 (CS6)**
SN	⇨ Fig 91. (🗋 C-121)
7	**Switch Panel Earth Point (CCA137)**
EN	⇨ Fig 84. (🗋 C-105)
FG	⇨ Fig 84. (🗋 C-105)
FW	⇨ Fig 84. (🗋 C-105)
FX	⇨ Fig 84. (🗋 C-105)
HK	⇨ Fig 85. (🗋 C-107)
HX	⇨ Fig 85. (🗋 C-107)
HY	⇨ Fig 85. (🗋 C-107)
JE	⇨ Fig 85. (🗋 C-107)
JF	⇨ Fig 85. (🗋 C-107)
MV	⇨ Fig 87. (🗋 C-112)
MW	⇨ Fig 87. (🗋 C-112)
MY	⇨ Fig 87. (🗋 C-112)
MZ	⇨ Fig 87. (🗋 C-112)
PD	⇨ Fig 89. (🗋 C-116)
RZ	⇨ Fig 90. (🗋 C-119)
SD	⇨ Fig 90. (🗋 C-119)
SE	⇨ Fig 90. (🗋 C-119)
VA	⇨ Fig 91. (🗋 C-121)
VF	⇨ Fig 91. (🗋 C-121)
8	**Chassis Earth 5 (ABS4)**
NH	⇨ Fig 87. (🗋 C-112)
NJ	⇨ Fig 87. (🗋 C-112)
9	**Engine Earth Point (M12)**
K	⇨ Fig 82. (🗋 C-99)
10	**Chassis Earth 6 (CBN06)**
AV	⇨ Fig 82. (🗋 C-99)
11	**Chassis Earth M10 (CBN04)**
12	**Chassis Earth 4 (C40)**
EK	⇨ Fig 84. (🗋 C-105)
FC	⇨ Fig 84. (🗋 C-105)
FR	⇨ Fig 84. (🗋 C-105)
FS	⇨ Fig 84. (🗋 C-105)
GZ	⇨ Fig 84. (🗋 C-105)
KW	⇨ Fig 86. (🗋 C-109)
KX	⇨ Fig 86. (🗋 C-109)
KY	⇨ Fig 86. (🗋 C-109)
NC	⇨ Fig 87. (🗋 C-112)
PC	⇨ Fig 89. (🗋 C-116)
RK	⇨ Fig 90. (🗋 C-119)
RL	⇨ Fig 90. (🗋 C-119)
RW	⇨ Fig 90. (🗋 C-119)

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