Service Manual

JS 210, JS220 - JCB Engine

Service Manual - JS 210, JS220 - JCB Engine

Section 1 - General Information

Section 2 - Care and Safety

Section 3 - Routine Maintenance

Section B - Body and Framework

Section C - Electrics

Section E - Hydraulics

Section F - Transmission

Section J - Track and Running Gear

Section K - Engine



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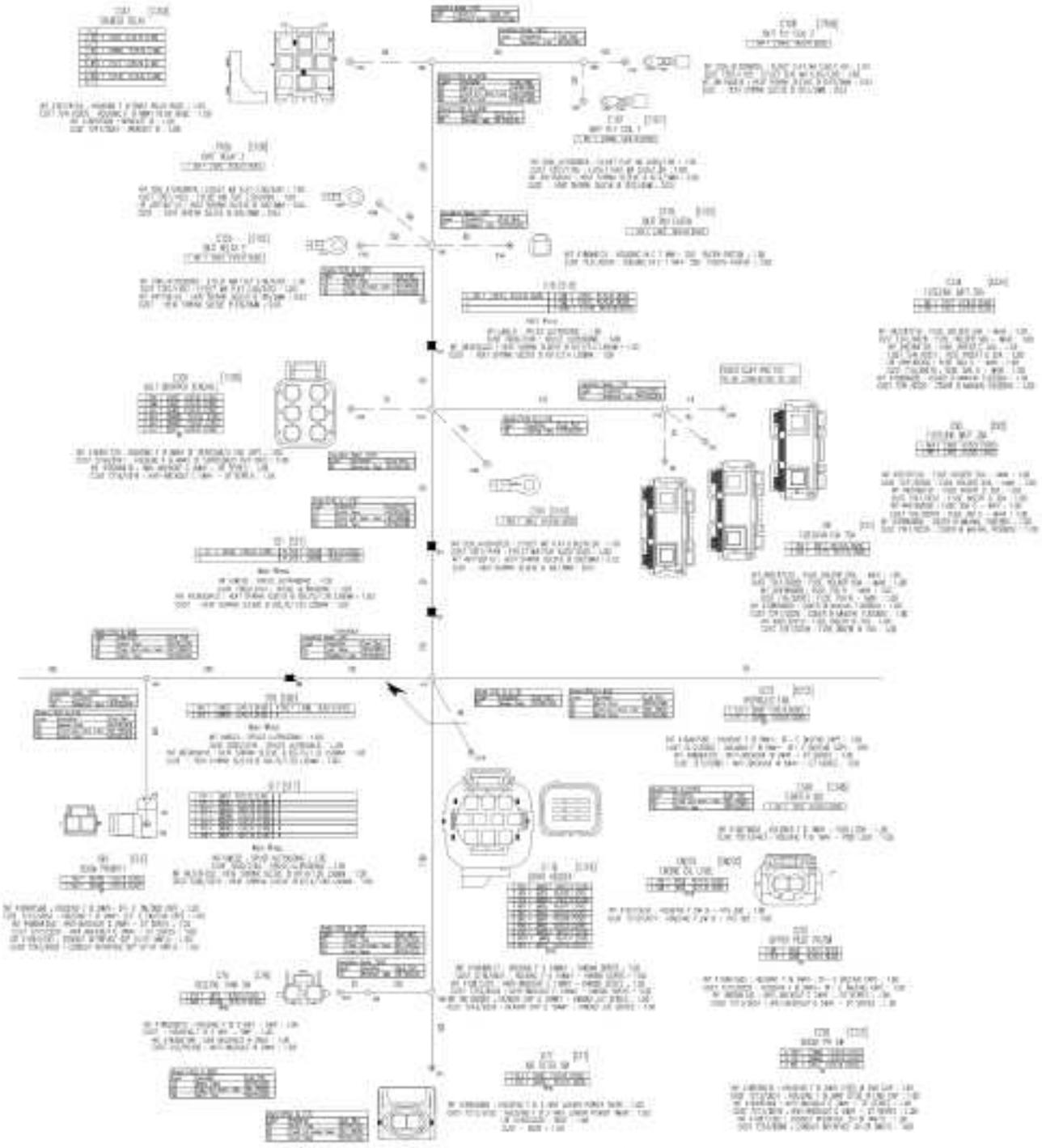


Fig 6. Main Harness B 333/J8122 - Issue 1

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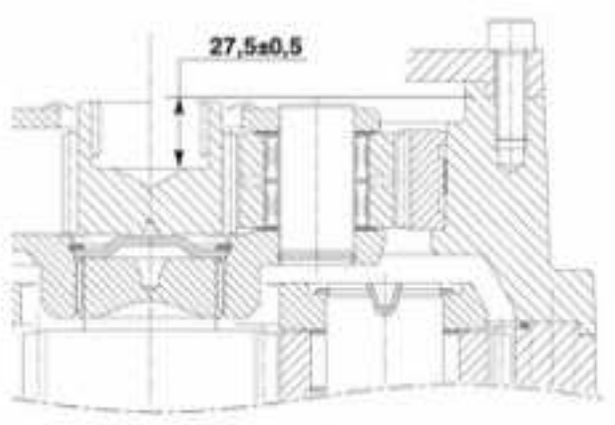


Fig 28.

12 If the dimension is incorrect adjust using the following procedure.

a With a higher value :

Reduce the width of the 1st reduction sun gear **B** in the axial direction flattening the support plate (reduction side).

b With a lower value :

Introduce adjusting spacers between the 1st reduction solar gear **B** and the 1st reduction planet gear set **A.**

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Fault Finding

Transmission

Traction Motor

Symptom	Possible Cause	Remedy
a Motor does not run.	**1** Device external to the piston motor or reduction gear malfunctioning.	Check that the specified pressurised oil is delivered to the motor input side. Inspect all associated devices and repair if necessary.
	2 Sliding area of motor is excessively worn, allowing pressurised oil to escape.	Renew the excessively worn part. Remove scratches and burrs from the surface and completely clean all parts. Reassemble.
	3 Malfunction resulting from damaged motor part(s), resulting in excessive noise.	Dismantle and renew the damaged part(s). Completely clean all parts and then reassemble.
	4 Relief valve operating due to excessive motor loading.	Check the load and only operate the machine with a suitable load.
b Motor speed low.	**1** Oil not supplied to motor at specified rate due to problems in hydraulic pump, pressure control valve etc.	Check that the specified pressurised oil is delivered to the motor input side. Inspect all associated devices and repair if necessary.
	2 Volume efficiency of motor low.	After dismantling, check for abnormal wear of the sliding area and repair or renew the worn parts.
c Motor speed varies greatly.	**1** Large amount of pressurised oil escapes and flows out of the drain port due to wear on the sliding area of the motor.	Dismantle and renew excessively worn parts. Clean all parts and reassemble.
	2 Wear in the bearings.	Renew motor bearings.
	3 Motor load is excessive and automatic 2-speed function is operating.	Check the load and only operate the machine with a suitable load.
d Oil leaks.	**1** Oil leaks due to damaged oil seals or O-rings.	Renew damaged oil seals or O-rings. When fitting an oil seal, be careful not to damage the lip. Check the system to ensure the running temperature does not exceed 80 °C. Take the necessary steps to ensure the temperature remains within the acceptable range.
	2 Refer to a2 and/or c1. ⇨ *Traction Motor (🗋 F-75)*	Refer to a2 and/or c1. ⇨ *Traction Motor (🗋 F-75)*
	3 Clogging due to foreign matter in drain pipe or long, narrow pipes causing the oil seal to break.	Clean the clogged drain piping. Recheck the piping system and reduce the passage resistance. Renew the oil seal taking care not to damage the lip.
e Abnormal noise, excessive speed and pressure variation due to cavitation.	**1** When the motor works as a pump, when the closed circuit is used, when the boost pressure is low (standard: 0.4 -5 kgf/cm²) or when the double counterbalance valve operates improperly, negative pressure is generated on the suction side of the motor, resulting in cavitation.	Recheck the hydraulic circuit and by remedying or renewing the double counterbalance valve, prevent the generation of negative pressure. Dismantle the motor and renew any abnormally worn or broken parts.

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Fig 14.

14 Remove the circlip **13** from its seat in the toothed ring **10**. ⇨ *Fig 15. (F-41)*.



Fig 15.

15 Remove the nos. 2 discs **12**. ⇨ *Fig 16. (F-41)*.



Fig 16.

16 By using a crowbar lift the toothed ring **16** from the gearbox housing **23**. ⇨ *Fig 17. (F-41)*.



Fig 17.

17 Remove the toothed ring **16**. ⇨ *Fig 18. (F-41)*.



Fig 18.

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Fig 14.

14 Remove the O-ring seal (61) and the backup rings (60) from their seats in the free piston (62).



Fig 16.

16 Take out the poppet (74) from its seat in the base plate (57).



Fig 15.

15 Remove the O-ring seal (59) from relief valve (58). Repeat the same steps for the 2nd relief valve disassembly.



Fig 17.

17 Remove the O-ring seal (76) and the backup rings (75) from their seats in the poppet (74).

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