Service Manual

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Section C - Electrics

Section E - Hydraulics

Section F - Gearboxes

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Schematic Diagrams

JCB 323 and 327

⇨ Fig 1. (C-3)

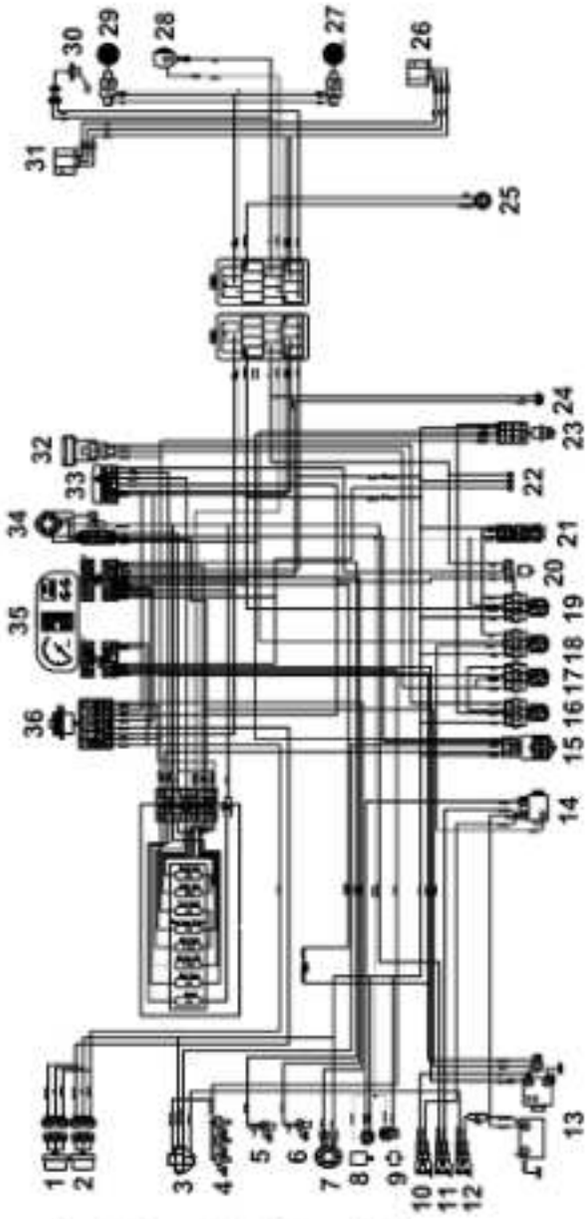


Fig 1. 323 and 327 Schematic Diagram

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Table 9. Lifting speed too slow

Possible Cause	Action
All possible causes given in ⇨ *Table 8. Lift will not rise (E-38)*	Repair as given in ⇨ *Table 8. Lift will not rise (E-38)*
Control valve spool stroke too small.	Inspect, adjust or replace link mechanism as required.
Broken compensator spring in control valve (unloading valve 1).	Replace spring.
Sticking poppet (unloading valve 2)	Lap valve after repairing minor flaws with oil stone.

Table 10. Lift lowers when adjusting knob is fully closed

Possible Cause	Action
Sticking poppet.	Lap poppet after cleaning and repairing minor flaws with oil stone.
Damaged valve seat.	Replace valve.
Damaged O-ring.	Replace.

Table 11. Lift will not lower

Possible Cause	Action
Slow return check valve is set to the lock position.	Set knob to the fast position.
Sticking sloe return check valve poppet.	Lap poppet after cleaning and repairing minor flaws with oil stone.
Seized lift shaft.	Apply grease and repair or replace bushes and/or shaft as required.
Sticking main spool.	Lap after cleaning and repairing minor flaws with oil stone. Replace only as an assembly.

Table 12. Lowering speed too slow

Possible Cause	Action
All possible causes given in ⇨ *Table 11. Lift will not lower (E-39)*	Repair as given in ⇨ *Table 11. Lift will not lower (E-39)*
Insufficient lowering of control lever.	Lower lever sufficiently.
Excessively closed slow return check valve.	Open slow return check valve sufficiently.

Table 13. Relief valve beeps when hydraulic control lever is raised

Possible Cause	Action
Incorrectly adjusted lever stopper check valve.	Adjust correctly.
Incorrectly adjusted link mechanism.	Inspect, adjust. repair or replace os required.

Table 14. Overheating fluid

Possible Cause	Action
Excessively high working pressure.	Inspect and adjust.
Working fluid viscosity too high or too low.	Replace fluid with correct viscosity.
Insufficient fluid.	Replenish.

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Power Steering Valve Unit

Specification

Displacement	63 cc/rev
Rated flow	16 litres/min
Maximum system pressure	125 kgf/cm^2
Maximum back pressure	20 kgf.cm^2
Maximum temperature	95 deg C
Input torque	0.1 - 0.2 kgf/m
Inlet relief pressure setting	110 - 115 kgf/cm^2 (at 12 litres/min)
Recommended filter	Nominal 10 micron

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Hydraulic System

Fault:

⇨ *Table 8. Lift will not rise (E-38)*
⇨ *Table 9. Lifting speed too slow (E-39)*
⇨ *Table 10. Lift lowers when adjusting knob is fully closed (E-39)*
⇨ *Table 11. Lift will not lower (E-39)*
⇨ *Table 12. Lowering speed too slow (E-39)*
⇨ *Table 13. Relief valve beeps when hydraulic control lever is raised (E-39)*
⇨ *Table 14. Overheating fluid (E-39)*
⇨ *Table 15. Pump noisy (E-40)*
⇨ *Table 16. Excessive wear, deflection or damage to pump (E-40)*
⇨ *Table 17. Oil leaks from pump (E-40)*
⇨ *Table 18. Oil leaks from piping or joints (E-40)*
⇨ *Table 19. Oil leaks around lift arm (E-40)*
⇨ *Table 20. Independent PTO clutch slips or is slow in engaging (E-40)*
⇨ *Table 21. Independent PTO clutch is too quick in engaging (E-41)*

Table 8. Lift will not rise

Possible Cause	Action
Insufficient engine speed.	Increase engine speed slightly.
Insufficient transmission oil.	Replenish.
Suction line taking in air.	Tighten securely or replace broken parts.
Damaged or worn hydraulic pump.	Repair or replace pump.
Incorrect adjustment or worn link.	Adjust or replace link.
Excessive load.	Reduce load.
Broken cylinder.	Replace.
Viscosity of transmission oil too low.	Replace oil with SAE80 grade.
Incorrectly adjusted relief valve.	Adjust relief false to correct setting.
Internal leaks.	Inspect cylinder and valves. Replace damaged seals.
Sticking sequential valve spool.	Disassemble and wash spool clean. Replace if necessary.
Damaged control valve: Sticking compensator plunger (unloading valve 1. Blocked orifices in pilot passage. Sticking poppet (unloading valve 2). Sticking check valve plunger.	Lap valve after repairing minor flaws with oil stone. Clean with compressed air. Correct minor flaws with oil stone. Lap valve after repairing minor flaws with oil stone.
Sticking poppet in slow return check valve.	Lap poppet after cleaning and repairing minor flaws with oil stone.

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Charging System

Fault:

⇨ *Table 19. Battery is low in charge or discharge (C-14)*
⇨ *Table 20. Battery is charging at a high rate (battery over heating) (C-14)*
⇨ *Table 21. No output from alternator (C-14)*
⇨ *Table 22. Intermittent or low alternator output (C-14)*
⇨ *Table 23. Warning light dim (C-15)*
⇨ *Table 24. Warning light is normal but battery is discharged (C-15)*
⇨ *Table 25. Warning light is lit during operation (C-15)*
⇨ *Table 26. Warning light flashes intermittently (C-15)*

Table 19. Battery is low in charge or discharge

Possible Cause	Action
Loose or worn alternator drive belt.	Check, adjust tension or replace.
Defective battery: It will not accept or hold a charge. Electrolyte level Low.	Check condition of battery and replace if necessary.
Excessive resistance due to loose charging system connections.	Check, clean and tighten circuit connections.
Faulty alternator.	Check, and repair or replace.

Table 20. Battery is charging at a high rate (battery over heating)

Possible Cause	Action
Defective battery.	Check condition of battery and replace if necessary.
Faulty alternator.	Check, and repair or replace.

Table 21. No output from alternator

Possible Cause	Action
Alternator drive belt is broken.	Replace and tension correctly.
Loose connection or broken cable in charge system.	Inspect system, tighten connections and repair or replace faulty wiring.
Faulty voltage regulator.	Check and replace.
Faulty alternator.	Check, and repair or replace.

Table 22. Intermittent or low alternator output

Possible Cause	Action
Faulty external charging circuit connections.	Inspect system, clean and tighten connections.
Faulty rotor slip rings or brushes in alternator.	Inspect, repair or replace.
Defective monitor and warning light.	Check and replace.
Faulty rectifier or rectifying diodes in alternator.	Check and replace.

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