SERVICE MANUAL

LOADALL (ROUGH TERRAIN VARIABLE REACH TRUCK)
530-110, 530-70

EN - 9813/8300 - ISSUE 1 - 09/2016

This manual contains original instructions, verified by the manufacturer (or their authorized representative).

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Foreword

The Operator's Manual

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You and others can be killed or seriously injured if you operate or maintain the machine without first studying the Operator's Manual. You must understand and follow the instructions in the Operator's Manual. If you do not understand anything, ask your employer or JCB dealer to explain it.

Do not operate the machine without an Operator's Manual, or if there is anything on the machine you do not understand.

Treat the Operator's Manual as part of the machine. Keep it clean and in good condition. Replace the Operator's Manual immediately if it is lost, damaged or becomes unreadable.

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Introduction

A schematic wiring diagram is a simplified pictorial representation of the machines hydraulic circuit. It shows the components of the circuit as simplified hydraulic symbols, and the connections between the different components. The schematic diagram is used to troubleshoot problems and to make sure that all the connections have been made and that everything is present. Detailed schematics for individual systems are given in the relevant PIL section.

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Cause	Remedy
5) Do Transducer 12V Supply Test V2- refer to (PIL 33-66) and record voltage.	Yes = Done, No = Check Ignition ON, fuse condition, battery condition, test box connections. Repair as required.
6) Are the transducer output signals OK?	Yes = Go to 8, No = Go to 9
7) Do Display Unit Functional Test and re-calibrate.	Yes = Done, No = Replace display box
8) Can the display unit be re-calibrated?	Yes = Go to 10, No = Go to 11
9) Do Transducer Output Test (V3)- refer to (PIL 33-66) and Transducer Output Test (V4)- refer to (PIL 33-66).	Yes = Done, No = Go to 12
10) Has frequent re-calibration been required?	Yes = Possible transducer slipping. Remove the transducer, clean surfaces and re-torque bolts. Refer to LLMI Axle Transducer
11) Do Transducer Output Test (V3) and Transducer Output Test (V4)	Yes = Replace display unit, No = Go to 13
12) Do Harness Wiring Continuity and Short Circuit Tests and repair as required. OK now?	Yes = Done, No = Check for uneven mounting surfaces or bolt not tightened correctly. Refer to LLMI Axle Transducer
13) Check transducer fixed securely. OK now?	Yes = Suspect faulty transducer, No = Possible transducer slipping. Remove the transducer, clean surfaces and re-torque bolts.

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Technical Data

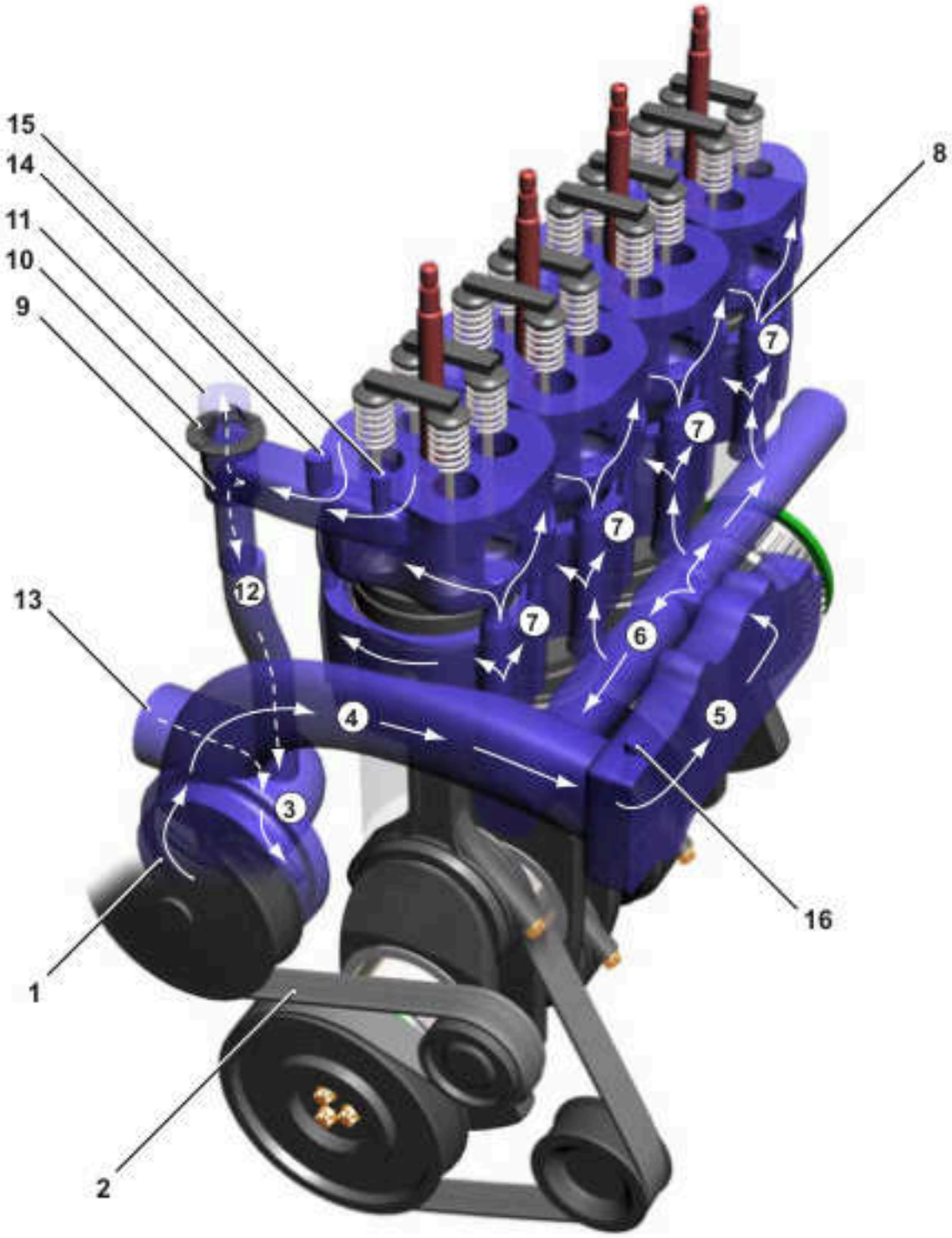
Table 294. Locking Fluids Approved Product Information

Subsection	Commercial name	Product Number	Colour	Shelf life	Strength	Comments
High strength	Loctite 270 R.A.S. threadlock for studs (red)	4101/0100	Green fluorescent	365d	80–120bar breakaway strength	For the retention of threads up to M20 diameter where disassembly is unlikely and for locking bearings etc. onto shafts and into housing. Has a maximum gap fill of 0.05mm.
High strength	Loctite 638	4101/1400	Green, UV fluorescent	365d	More than 250bar compressive shear strength	Maximum gap fill of 0.25mm. Maximum strength at room temperature.
High strength	Permabond A115	4101/0500	Red, fluorescent	365d	100–150bar prevailing strength	Fast curing (10–15min) thread locking up to M20, especially for use on oily surfaces, plated and clean parts.
High strength	Loctite 648 Permabond A118	4101/0600	Green, fluorescent	365d	More than 250bar compressive shear strength	Designed for holding gears and sprockets onto gearbox shafts and rotors on electric motor shafts.
High strength	Loctite 2701	4101/1700	Green	365d	260–500bar breakaway torque	Designed for permanent locking and sealing of threaded fasteners. Particularly suited for use on inactive substrates and/or where maximum resistance to hot oil is required.
Medium to high	Loctite 243	4101/1100	Blue	365d	140–340bar breakaway torque	Suitable for all nuts, bolts, screws up to M36.
Medium strength	Permabond A119	4101/0900	Blue	365d	80–120bar static shear strength	Maximum gap fill of 0.25mm. Handling strength in 10–15min.
Medium strength	Loctite 640	4101/1200	Green, fluorescent	365d	150–330bar static shear strength	Product has a slow cure rate, used on parts unlikely to be disassembled.
Medium strength	Loctite 242 Permabond A1042 Permabond A113	4101/0200	Blue, fluorescent	365d	80–120bar static shear strength	Suitable for all nuts, bolts and screws up to M36 and hydraulic fittings up to 25mm in diameter. Permabond A113 and A1042 are the preferred choices. The difference between A113 and A1042 is timing for handling and working strength. A113 handling time 10–25min, working strength 1h. A1042 handling time 5–10min, working strength 30min.
Low strength	Loctite 222	4101/0300	Purple, fluorescent	365d	15–40bar	For screwed fasteners up to M20 that require easy disassembly or frequent adjustment. Maximum gap fill of 0.05mm. Achieves handling strength in 10–30min.
Low strength	Permabond A1098	4101/1500	Blue	365d	120bar shear strength	Allows dismantling of parts for maintenance. Suitable for sealing small hydraulic and pneumatic fittings. Handling strength in 5–10min.

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Component Identification

Figure 313.

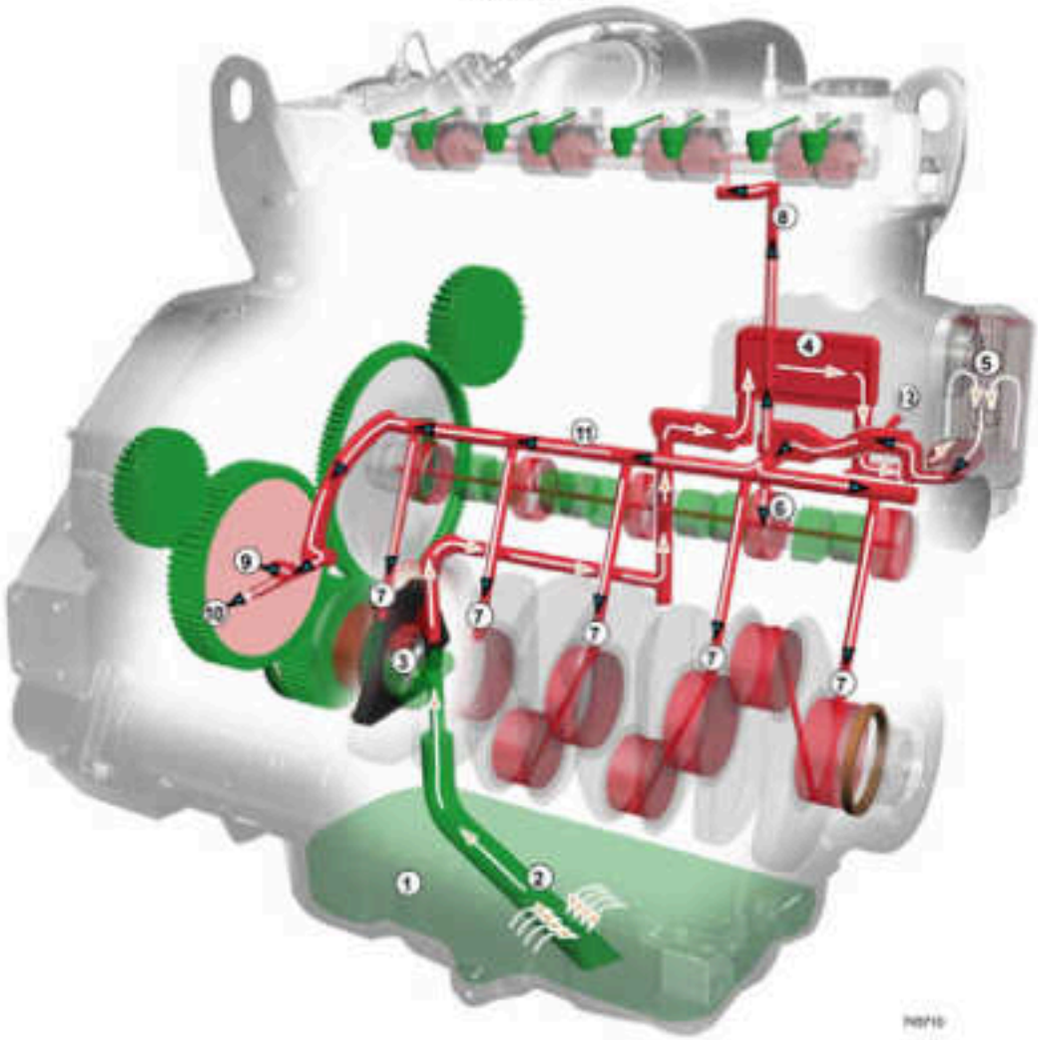


1	Coolant pump	2	Drive belt

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Component Identification

Figure 213.



1	Oil sump	2	Suction strainer
3	Oil pump	4	Oil cooler
5	Filter	6	Camshaft - high pressure oil feed
7	Crankshaft main bearings - high pressure oil feed	8	Rocker assembly - high pressure oil feed
9	PTO (Power Take-Off) idler gear bearing/ timing case - high pressure oil feed	10	External high pressure oil feed connection (crankcase) - Turbocharger (if installed)
11	Main high pressure oil feed gallery (crankcase) Green- Oil at sump pressure Pink- Oil at lower pressure but higher than sump pressure	12	Oil pressure switch Red- Oil at high pressure

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