Service Manual

Liftall 1253/1202/1553/1554

Service Manual - Liftall 1253/1202/1553/1554

Section 1 - General Information

Section 2 - Care and Safety

Section 3 - Routine Maintenance

Section B - Body and Framework

Section C - Electrics

Section D - Controls

Section E - Hydraulics

Section F - Transmission

Section G - Brakes

Section K - Engine



Publication No.
9813/1650



Copyright © 2007 JCB SERVICE. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any other means, electronic, mechanical, photocopying or otherwise, without prior permission from JCB SERVICE.

Issued by JCB India Limited, 23/7, Mathura Road, Ballabgarh - 121004, Haryana (India). Tel 0129 4266000 Fax 0129 2260001

World Class Customer Support

MidWestTech | JCB Liftall 1253, 1202, 1553, 1554 Crane Service Manual | Publication 981... Order the manual at mid-west-tech.com >

Contents Page No.

General Information
Machine Identification 1-1
Machine Identification Plate 1-1
Load Chart 1-3
Torque 1-7
Torque Settings 1-7
Tightening Torque Values for Metric Hardware 1-8
Tightening Torque Values for Hydraulic Hoses 1-8
Tightening Torque Values for Hydraulic Adaptor 1-8
Service Tools 1-9
Numerical List 1-13
Tool Detail Reference 1-15
Section B - Body and Framework 1-15
Section C - Electrics 1-19
Section E - Hydraulics 1-20
Section K - Engine 1-34

MidWestTech | JCB Liftall 1253, 1202, 1553, 1554 Crane Service Manual | Publication... Order the manual at mid-west-tech.com >

Contents **Page No.**

Service Requirements 3-1
Introduction 3-1
Owner/Operator Support 3-1
Service/Maintenance Agreements 3-1
Initial Service and Inspection 3-2
Fit for Purpose Tests for Lifting Equipment 3-2
Obtaining Replacement Parts 3-2
Health and Safety 3-3
Lubricants 3-3
Battery 3-5
Service Schedule 3-7
How to Use the Service Schedules 3-7
Calendar Equivalents 3-7
Pre-Start Cold Checks, Service Points and Fluid Levels 3-8
Fluids, Lubricants and Capacities 3-11
Fuels 3-12
Prepare the Machine for Maintenance 3-13
Introduction 3-13
How to Make the Machine Safe 3-13
Cleaning the Machine 3-14
Introduction 3-14
Preparing the Machine for Cleaning 3-15
Cleaning the Machine 3-15
Checking For Damage 3-17
Check the Machine Body and Structure 3-17
Check the Tyres 3-17
Check the Seat and Seat Belt 3-17
Check the Hydraulic Hoses and Fittings 3-18
Check the Electrical Circuits 3-18
Checking The ROPS/FOPS Structure 3-18
Checking Hooks, Shackles and Chains 3-19
Greasing 3-22
Greasing Points 3-22
Oiling 3-26
Park Brake Clevis 3-26
Clutch Pedal Linkage 3-26
Brakes 3-27
Introduction 3-27
Checking the Brake Fluid Level 3-27
Electrical System 3-29
Battery 3-29
Jump Starting the Engine 3-31
Fuses 3-32
Engine 3-33
Oil and Filter 3-33
Cooling System 3-36
Adjusting the Fan Belt 3-37
Air Intake System 3-38
Fuel System 3-42
Introduction 3-42
Fuel System 3-42
Draining Fuel Tank Impurities 3-47

MidWestTech | JCB Liftall 1253, 1202, 1553, 1554 Crane Service Manual | Publication... Order the manual at mid-west-tech.com >

Contents **Page No.**

Hydraulic System 3-48
Introduction 3-48
Checking the Fluid Level 3-49
Hydraulic Tank Cap/Breather 3-50
Changing the Return Line Filter Element 3-50
Changing the Suction Strainer 3-51
Transmission 3-52
Gearbox 3-52
Wheels and Tyres 3-54
Water Ballast 3-54
Tyre Inflation 3-55
Wheel Nuts 3-56

MidWestTech | JCB Liftall 1253, 1202, 1553, 1554 Crane Service Manual | Publication... Order the manual at mid-west-tech.com >

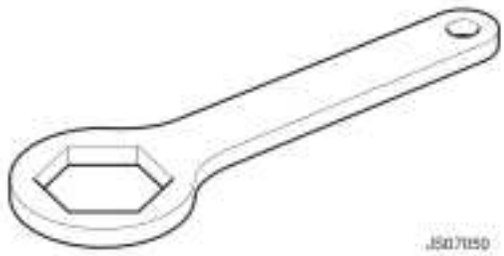


Fig 65. Ram Piston Nut Removal/Fitting Spanner

993/99512	Spanner 55 mm A/F
993/99513	Spanner 60 mm A/F
993/99514	Spanner 65 mm A/F
993/99515	Spanner 70 mm A/F
993/99516	Spanner 75 mm A/F
993/99517	Spanner 85 mm A/F
993/99518	Spanner 90 mm A/F
993/99519	Spanner 100 mm A/F
993/99520	Spanner 110 mm A/F
993/99521	Spanner 115 mm A/F
SSP0046	Spanner 80 mm A/F
SSP0047	Spanner 95 mm A/F

MidWestTech | JCB Liftall 1253, 1202, 1553, 1554 Crane Service Manual | Publication... Order the manual at mid-west-tech.com >

Electrical Harness

Wiring Harness Cut-in Information

Liftall 1253/1202 Models

Table 2.

S.No.	Part Number	Cut-in Number	Wiring Harness
1	332/Y7446	From machine serial no. 6600185 onwards	Chassis Harness
2	334/Y1913	From machine serial no. 1900952 onwards	Panel Harness
	332/Y7447	From machine serial no. 6600185/1900500 to 6600785/1900951	Panel Harness
	332/Y2378	From machine serial no. 6600001 to 6600184	Panel Harness
3	332/Y5800	From machine serial no. 6600185 onwards	Maxi Fuse Harness
	332/Y2379	From machine serial no. 6600001 to 6600184	Maxi Fuse Harness
4	333/Y7474	From machine serial no. 1900952 onwards	Boom Harness
	332/Y7445	From machine serial no. 6600185/1900500 to 6600785/1900951	Boom Harness
	332/Y2376	From machine serial no. 6600001 to 6600184	Boom Harness
5	332/Y2739	From machine serial no. 6600001 onwards	Overload Harness
6	334/Y1912	From machine serial no. 1900952 onwards	Cab Harness
	332/Y7448	From machine serial no. 6600185/1900500 to 6600785/1900951	Cab Harness
	332/Y2407	From machine serial no. 6600001 to 6600184	Cab Harness
7	332/Y7622	N/A	Overhoist Harness (Liftall 1202 with winch model)

Liftall 1553/1554 Models

Table 3.

S.No.	Part Number	Cut-in Number	Wiring Harness
1	332/Y7446	From machine serial no. 2087062 onwards	Chassis Harness
2	334/Y1913	From machine serial no. 2087062 onwards	Panel Harness
3	332/Y5800	From machine serial no. 2087062 onwards	Maxi Fuse Harness
4	333/Y7474	From machine serial no. 2087062 onwards	Boom Harness
5	332/Y2739	From machine serial no. 2087062 onwards	Overload Harness
6	334/Y1912	From machine serial no. 2087062 onwards	Cab harness

MidWestTech | JCB Liftall 1253, 1202, 1553, 1554 Crane Service Manual | Publication... Order the manual at mid-west-tech.com >

Table 7. Trouble Shooting

Trouble		Probable Cause		Possible Remedy
External leakage	a	Seal failure.	a	Replace seal.
	b	Damaged in casting	b	Replace casting.
	c	Damaged or defective seal between housing and mounting cap.	c	Replace seal.
Leakage at fittings	a	Cracked or damaged flange or fittings.	a	Replace flange or fittings.
	b	Damaged or defective flange threads	b	Replace flange.
	c	Damaged or defective O-ring seal	c	Replace O-ring seal.
	d	Burr on mating surfaces.	d	Remove burr.
Loss in pump RPM under load.	a	Power source too small pump being used.	a	Provide larger power source. See HP requirements for pump being used.
Pump not delivering oil	a	Pump does not prime.	a	Bleed air from system.
	b	Wrong direction on shaft rotation	b	Reverse direction of shaft. Convert pump to reverse direction of rotation. (Check rotation arrows on identification Plate and cam ring.)
	c	Tank fluid level too low.	c	Add fluid and check level to be certain suction line is submerged.
	d	Fluid inlet line or suction strainer clogged as undersized	d	Clean strainer of all foreign material. Provide proper size strainer (should have a capacity equal to 2 × pump volume in GPM).
	e	Air leak in suction line.	e	Tighten and seal connections Replace seals
	f	Fluid viscosity too heavy to pick up prime.	f	Use lighter viscosity fluid.
	g	Broken pump shaft or internal parts.	g	Replace damaged parts per overhaul instructions.
Pump not developing pressure	a	Relief valve setting too low.	a	Reset relief valve.
	b	Relief valve sticking open.	b	Check for defective or malfunctioning valve. Check for defective or
	c	Vane hold out pins not loading vanes.	c	Disassemble and check pins and pin bores for burrs or damage. Check for foreign material.
	d	Free re circulation of fluid to tank being allowed	d	Check directional control valve for open centre or neutral position. Check for open bypass valve.

MidWestTech | JCB Liftall 1253, 1202, 1553, 1554 Crane Service Manual | Publication... Order the manual at mid-west-tech.com >



Fig 254.

2 Unscrew hex screw ⇨ *Fig 255. (F-73)*.



Fig 255.

3 Remove the screw along with locking washer ⇨ *Fig 256. (F-73)*.



Fig 256.

4 Remove bull gear locking plate ⇨ *Fig 257. (F-73)*.



Fig 257.

5 Remove bull gear shim ⇨ *Fig 258. (F-74)*.

MidWestTech | JCB Liftall 1253, 1202, 1553, 1554 Crane Service Manual | Publication... Order the manual at mid-west-tech.com >



Fig 143.

10 Fit the spring of hi-low shifter ⇨ *Fig 144. (F-44)*.



Fig 144.

11 Fit the spring seat ⇨ *Fig 145. (F-44)*.



Fig 145.

12 Insert the split pin to lock the spring seat and bend it ⇨ *Fig 146. (F-44)*.



Fig 146.

Note: *Repeat the same procedure on forward-reverse Shifter.*

13 Complete assembly of shifter housing ⇨ *Fig 147. (F-45)*.

MidWestTech | JCB Liftall 1253, 1202, 1553, 1554 Crane Service Manual | Publication... Order the manual at mid-west-tech.com >