SERVICE MANUAL

LOADALL (ROUGH TERRAIN VARIABLE REACH TRUCK)
531-70, 535-95, 536-60, 536-70, 536-70LP, 541-70, 550-80, 560-80

EN - 9823/0550 - ISSUE 1 - 03/2018

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

Copyright 2018 © 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.

www.jcb.com

Foreword

The Operator's Manual

⚠

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.

Contents

01 - Machine

03 - Attachments, Couplings and Load Handling

06 - Body and Framework

09 - Operator Station

12 - Heating, Ventilating and Air-Conditioning (HVAC)

15 - Engine

18 - Fuel and Exhaust System

21 - Cooling System

24 - Brake System

25 - Steering System

27 - Driveline

30 - Hydraulic System

33 - Electrical System

72 - Fasteners and Fixings

75 - Consumable Products

78 - After Sales

MidWestTech | JCB Loadall Rough Terrain 531-70, 535-95, 536-60, 536-70, 536-70LP, 541-... Order the manual at mid-west-tech.com >

01 - Machine

Contents **Page No.**

Acronyms Glossary 01-2

01-03 Safety
- 01-03-03 Safety - Yours and Others 01-3
- 01-03-06 Safety Warnings 01-4
- 01-03-09 General Safety 01-5
- 01-03-12 Maintenance Safety 01-6
- 01-03-18 Operating Safety 01-8
- 01-03-21 Worksite Safety 01-10
- 01-03-24 Risk Assessment 01-11
- 01-03-27 Maintenance Positions 01-12

01-06 About this Manual
- 01-06-03 Model and Serial Number 01-17
- 01-06-06 Using the Manual 01-18

01-09 Description
- 01-09-00 General 01-21
- 01-09-03 Log Moving/Object Handling 01-23
- 01-09-06 Optional Equipment and Attachments 01-24
- 01-09-12 Main Component Locations 01-25
- 01-09-15 Service Point Locations 01-26

01-33 Cleaning
- 01-33-00 General 01-35

MidWestTech | JCB Loadall Rough Terrain 531-70, 535-95, 536-60, 536-70, 536-70LP... Order the manual at mid-west-tech.com >

03 - Safety

Contents **Page No.**

01-03-03 Safety - Yours and Others 01-3
01-03-06 Safety Warnings 01-4
01-03-09 General Safety 01-5
01-03-12 Maintenance Safety 01-6
01-03-18 Operating Safety 01-8
01-03-21 Worksite Safety 01-10
01-03-24 Risk Assessment 01-11
01-03-27 Maintenance Positions 01-12

MidWestTech | JCB Loadall Rough Terrain 531-70, 535-95, 536-60, 536-70, 536-70LP... Order the manual at mid-west-tech.com >

09 - Description

Contents **Page No.**

01-09-00 General 01-21
01-09-03 Log Moving/Object Handling 01-23
01-09-06 Optional Equipment and Attachments 01-24
01-09-12 Main Component Locations 01-25
01-09-15 Service Point Locations 01-26

MidWestTech | JCB Loadall Rough Terrain 531-70, 535-95, 536-60, 536-70, 536-70LP... Order the manual at mid-west-tech.com >

Technical Data

For: 550-80 [5YW], 560-80 [5YY] ..... Page 30-4
For: 535-95 [5XB] ..... Page 30-5
For: 536-60 [5XC] ..... Page 30-6
For: 536-70 [5XE], 541-70 [5XD] ..... Page 30-7

(For: 550-80 [5YW], 560-80 [5YY])

Table 484. System Pressures

Circuit	Restriction	Relief Valve Setting
Neutral Circuit	Pressure limited by main valve block MRV (Main Relief Valve)	260bar (3,768.1psi)
Neutral Circuit	Fan Motor Circuit limited by the ARV (Auxiliary Relief Valve)	230bar (3,333.3psi)
Neutral Circuit	Trailer Brake Circuit limited by the ARV	145bar (2,101.4psi)
Neutral Circuit	Sway Circuit limited by the ARV	220bar (3,188.4psi)
Lift End	The lift circuit is limited to the MRV pressure	260bar (3,768.1psi)
Lift End	The extension circuit is limited to the MRV pressure	260bar (3,768.1psi)
Lift End	The tilt circuit is limited to the MRV pressure during normal operation and the parallel lift function when the tilt ram end stops is limited by the ARV	260bar (3,768.1psi)
Auxiliaries / Hitch	Auxiliary circuit is limited by the ARV	220bar (3,188.4psi)
Steer Circuit	Steer circuit is limited by the ARV	175bar (2,536.2psi)

MidWestTech | JCB Loadall Rough Terrain 531-70, 535-95, 536-60, 536-70, 536-70LP... Order the manual at mid-west-tech.com >

MidWestTech | JCB Loadall Rough Terrain 531-70, 535-95, 536-60, 536-70, 536-70LP... Order the manual at mid-west-tech.com >

Fault Code	Description	Severity
U059F-9A	Can Bus Message Error For Heater Ratio From Downstream NOx Sensor	Operator
U1501-88	Engine Can Fault	Trivial
U1501-88	Engine Can Fault	Trivial
U1502-88	Transmission Can Fault	Trivial
U1502-88	Transmission Can Fault	Trivial
U1503-88	Joystick Can Fault	Trivial
U1503-88	Joystick Can Fault	Trivial
U1504-88	Hydraulics Controller Can Fault	Critical
U1505-88	Machine Controller Can Fault	Trivial
U1506-88	Telematics Can Fault	Trivial
U1507-88	Immobilizer Can Fault	Trivial
U1508-88	Auxiliary Hydraulics Controller Can Fault	Operator
U1900-16	Livelink - Vehicle Battery Voltage Below Normal	Trivial
U1901-16	Livelink - Internal Voltage Below Normal	Trivial
U1902-18	Livelink - Telematics Output For Relay 0 Current Below Normal Or Open Circuit	Trivial
U1903-18	Livelink - Telematics Output For Relay 1 Current Below Normal Or Open Circuit	Trivial
U1904-85	Livelink - ECU Above Temperature Threshold	Trivial
U1905-84	Livelink - ECU Below Temperature Threshold	Trivial
U1906-96	Livelink - Accelerometer Internal Failure	Trivial
U1907-09	Livelink - Modem Jammed	Trivial
U1908-09	Livelink - GPS Antenna Not OK	Trivial
U1909-96	Livelink - No Comms With GPS Module	Trivial
U190A-09	Livelink - Sim Card Failure	Trivial
U190B-96	Livelink - No Comms With GSM Module	Trivial
U190C-86	Livelink - GSM Network Registration Failure	Trivial
U1910 -16	Relay 1 Failure - No Voltage Detected When Relay On	Trivial
U1910 -17	Relay 1 Failure - Voltage Detected When Relay Off	Trivial
U1911 -16	Relay 2 Failure - No Voltage Detected When Relay On	Trivial
U1911 -17	Relay 2 Failure - Voltage Detected When Relay Off	Trivial
U1912 -16	Relay 3 Failure - No Voltage Detected When Relay On	Trivial
U1912 -17	Relay 3 Failure - Voltage Detected When Relay Off	Trivial
U1913 -84	Supply Voltage Below Normal	Trivial

MidWestTech | JCB Loadall Rough Terrain 531-70, 535-95, 536-60, 536-70, 536-70LP... Order the manual at mid-west-tech.com >

Figure 719.



16. Reposition and use the same tools to measure the layshaft end float.

Figure 720.



17. Reposition and use the same tools to measure the output shaft end float. The output shaft bearing is preloaded and deflection should be zero.

Figure 721.



18. Measure the pump clutch shaft end float.

Figure 722.



19. Use the special tool to lock off the bevel pinion gear. Measure the bevel gear backlash. The tool is installed the opposite side of the transmission case.

MidWestTech | JCB Loadall Rough Terrain 531-70, 535-95, 536-60, 536-70, 536-70LP... Order the manual at mid-west-tech.com >

60 - Pilot Pressure Supply Main

Remove and Install

(For: 531-70 [5XA], 535-95 [5XB], 536-60 [5XC], 536-70 [5XE], 541-70 [5XD], 550-80 [5YW], 560-80 [5YY])

Remove

1. This procedure applies to servo pilot pressure valves installed from machine serial number 2472234 onwards.
2. Make the machine safe.
   Refer to: PIL 01-03.
3. Remove the cab side panel. Refer to Figure 1390.

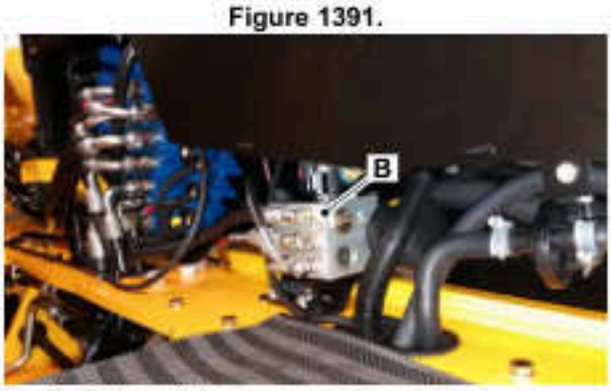
Figure 1390.



A Cab side panel

4. Identify the servo pilot pressure valve under the cab. Refer to Figure 1391.

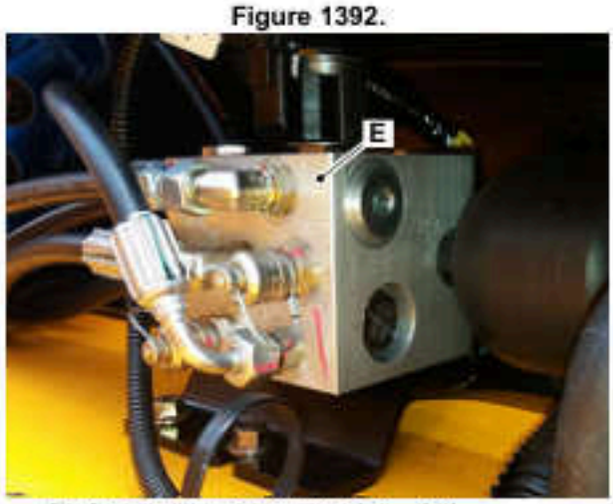
Figure 1391.



B Servo pilot pressure valve

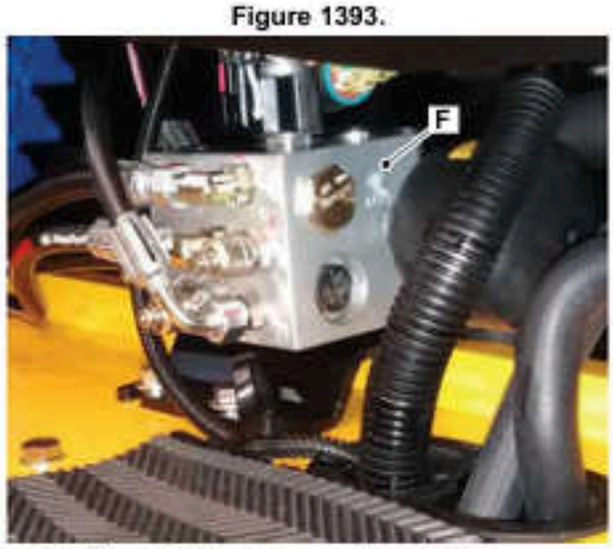
5. Discharge the hydraulic pressure .
   Refer to: PIL 30.
6. Refer to Refer to Figure 1392. and Refer to Figure 1393. for old and new servo pilot pressure valves.

Figure 1392.



E Servo pilot pressure valve - Old

Figure 1393.



F Servo pilot pressure valve - New

7. Unscrew and remove the filter cartridge. Be aware that there could be some residual hydraulic pressure. Refer to Figure 1394.

MidWestTech | JCB Loadall Rough Terrain 531-70, 535-95, 536-60, 536-70, 536-70LP... Order the manual at mid-west-tech.com >