Service Manual

JS Auto Range - Tracked Excavators
JS85

Section 1 - General Information

Section 2 - Operator's Manual

Section B - Body and Framework

Section C - Electrics

Section E - Hydraulics

Section F - Transmission

Section J - Track & Running Gear

Section K - Engine



Publication No.
9813/3750-01



Copyright © 2004 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 Technical Publications, JCB Aftermarket Training, Woodseat, Rocester, Staffordshire, ST14 5BW, England. Tel +44 1889 591000 Fax +44 1889 591450

World Class Customer Support

MidWestTech | JCB JS85 Auto Range Tracked Excavator Service Manual | Publication 981... Order the manual at mid-west-tech.com >

Contents Page No.

Introduction
Identifying Your Machine 1-1

Safety
Introduction 1-3

Use
Introduction 1-5
Scope 1-6
Personnel 1-6
Applications 1-6
Newest Data 1-6
Format 1-7
Left Side, Right Side 1-8
Hydraulic Schematic Codes 1-9
Colour Codes 1-9

Routine Maintenance
Maintenance Schedules 1-11

General Procedures
Introduction 1-13
Parking the Machine and Making it Safe 1-14
Venting the Hydraulic Pressure 1-15
Connecting/Disconnecting Hydraulic Hoses 1-16
Battery Disconnection/Connection 1-17
Removing and Replacing Components 1-18
Preparation 1-18
Original Components 1-18
New Components 1-18
Torques and Fixings 1-18
Battery Charging System Precautions 1-19
Gas Hydraulic Bladder Accumulators 1-20
Replacement 1-20
Charging 1-20

Service Consumables
Introduction 1-23
Sealing and Retaining Compounds 1-24

Torque Settings
Introduction 1-25
Zinc Plated Fasteners and Dacromet Fasteners 1-26
Introduction 1-26
Bolts and Screws 1-26
Hydraulic Connections 1-30
'O' Ring Face Seal System 1-30
'Torque Stop' Hose System 1-33
'Positional Type' Hydraulic Adaptors 1-34
Fitting Procedure 1-34

Service Tools
Numerical List 1-35

MidWestTech | JCB JS85 Auto Range Tracked Excavator Service Manual | Publicatio... Order the manual at mid-west-tech.com >

Contents **Page No.**

Tool Detail Reference 1-36
Body and Framework 1-36
Electrics 1-40
Hydraulics 1-41
Special Tool for removal of the Brake Piston 1-46
Hydraulics 1-47
Hydraulic Rams Dismantling and Assembly 1-47
Boom Cylinder parts break down 1-48
Arm Cylinder parts break down 1-50
Bucket Cylinder parts break down 1-52
Dozer Blade parts break down 1-54

MidWestTech | JCB JS85 Auto Range Tracked Excavator Service Manual | Publicatio... Order the manual at mid-west-tech.com >

Table 21.

Track shoe width	Dozer	Weight
450mm (17⅞in)	No dozer	8,105kg (17,868lb)
450mm (17⅞in)	Dozer	8,555kg (18,860lb)
600mm (23⅝in)	No dozer	8,335kg (18,375lb)
600mm (23⅝in)	Dozer	8,785kg (19,367lb)

MidWestTech | JCB JS85 Auto Range Tracked Excavator Service Manual | Publication... Order the manual at mid-west-tech.com >

Wires and Connectors

⇨ *Fig 45. Circuit (C-74)*

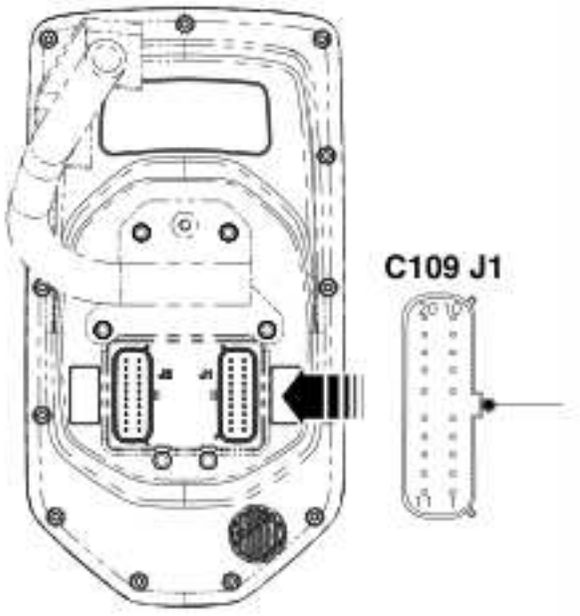


Fig 44. Harness Connectors C109

Harness Connector C109 - J1 (grey)	
Pins	**Details**
1	Digital input - work lights switch
2	Wake up signal (+ 24V ignition)
3	Not used
4	Not used
5	Not used
6	CAN shield
7	CAN_L
8	CAN_H
9	Earth
10	Battery (+ 24V)
11	Digital input - seat occupant switch, seat belt switch
12	Not used
13	Not used
14	Not used
15	Not used
16	Not used
17	Not used
18	Not used
19	Not used
20	High side input - MECU (warning buzzer Malfunction Indicator Light (MIL) activation)

MidWestTech | JCB JS85 Auto Range Tracked Excavator Service Manual | Publicatio... Order the manual at mid-west-tech.com >

Item	Nm	Kgf m	lbf ft
27	20	2	14.7

Fault Finding

Symptom	Possible cause	Remedy
Low secondary pressure.	Primary pressure is low.	Apply the correct primary pressure.
	Spring **4** is damaged.	Renew the spring.
	Clearance between the spool and seating is too large.	Renew the remote control valve assembly.
	The handle unit is loose.	Dismantle, reassemble or renew the handle unit.
Unstable secondary pressure.	Sliding parts are sticking.	Release the sticking part.
	Fluctuations in the tank line pressure.	Check return line and filter for blockage.
	Air is trapped in the piping.	Operate the valve several times to remove the air.
High secondary pressure.	The tank line pressure is too high.	Check return line and filter for blockage.
		Release the sticking part.

MidWestTech | JCB JS85 Auto Range Tracked Excavator Service Manual | Publicatio... Order the manual at mid-west-tech.com >

Engine and Power Control

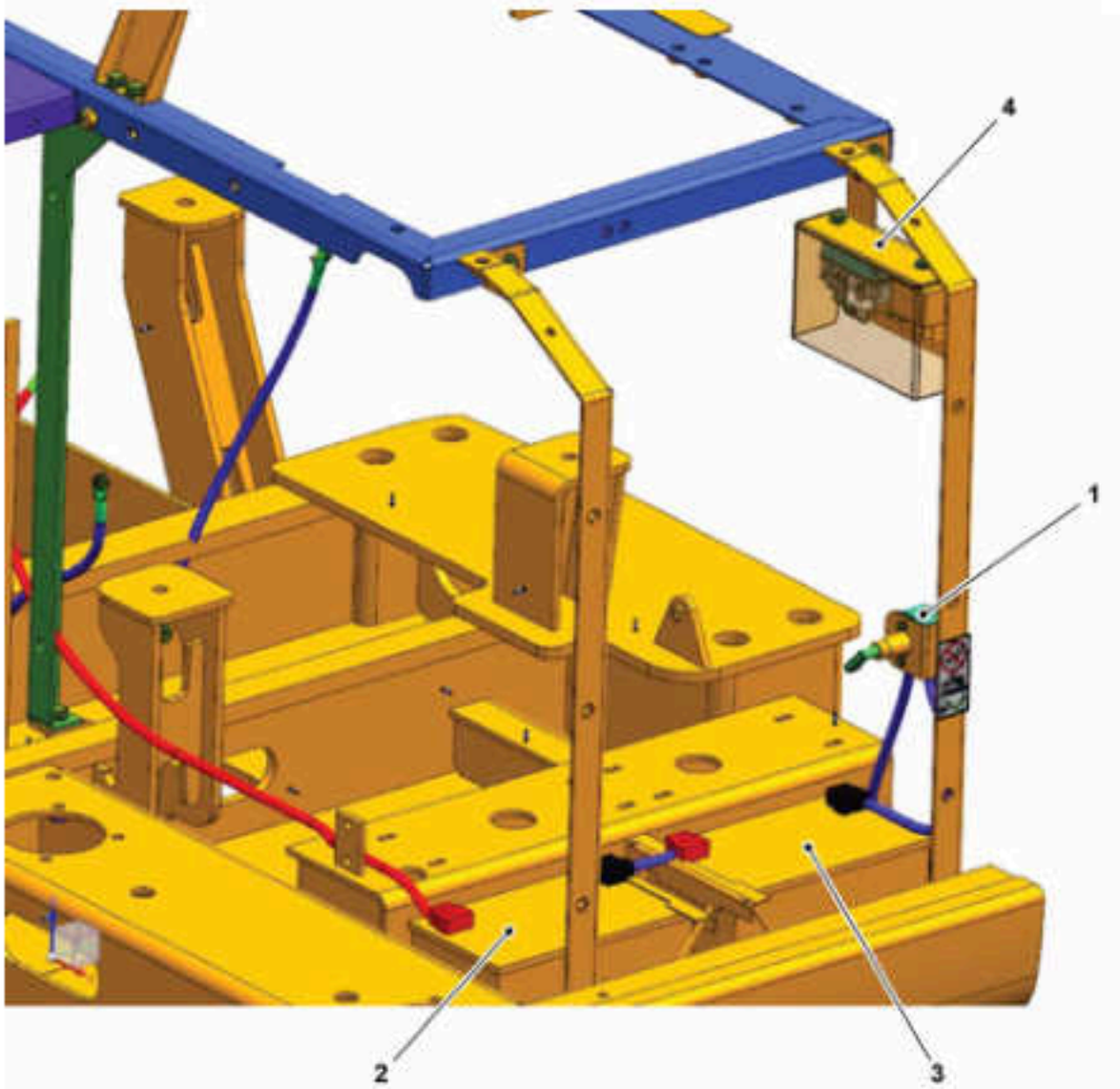
Battery Power Supply and Distribution

Overview

The machine has two 12V batteries **2** and **3** connected in series to give a 24V power supply. The batteries are located in a compartment on the LH side of the machine.

A battery isolator switch **1** is connected in the earth cable between the batteries and the revolving chassis. This enables isolation of the complete machine electrical system during maintenance procedures.

The relay box **4** and the main fuse PCB inside the cab. This connects some devices and circuits permanently to the battery supply.



C128578

Fig 52.

MidWestTech | JCB JS85 Auto Range Tracked Excavator Service Manual | Publicatio... Order the manual at mid-west-tech.com >

Dismantling the Piston Rod from the Cylinder Tube Assembly

Loosen the End Cap



Fig 15.

1 Place the tool at the groove of end cap.

2 Hit the tool with a hammer so that the end cap can be loosened.

3 Be sure not to cause rod damage (dent or scratch).

Rod Disassembly



Fig 16.

1 Pull the rod from the cylinder tube.

2 Be sure not to cause rod and piston seals damage (dent or scratch).

Set-screw Disassembly

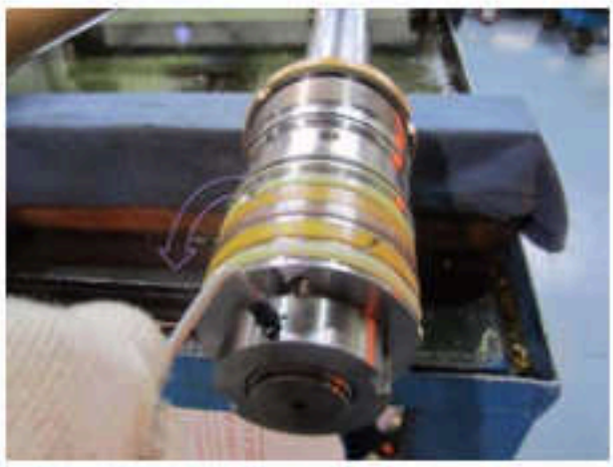


Fig 17.

1 Loosen the set-screw with hex socket wrench.

2 Be sure not to cause rod and piston seals damage (dent or scratch).

Piston Nut Disassembly



Fig 18.

MidWestTech | JCB JS85 Auto Range Tracked Excavator Service Manual | Publicatio... Order the manual at mid-west-tech.com >