Service Manual

JS Auto Range - Wheeled Excavators - JCB Engine

Section 1 - General Information

Section 2 - Care & Safety

Section 3 - Maintenance

Section B - Body & Framework

Section C - Electrics

Section D - Controls

Section E - Hydraulics

Section F - Transmission

Section K - Engine



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Technical Data

Static Dimensions

JS145W - Monoboom

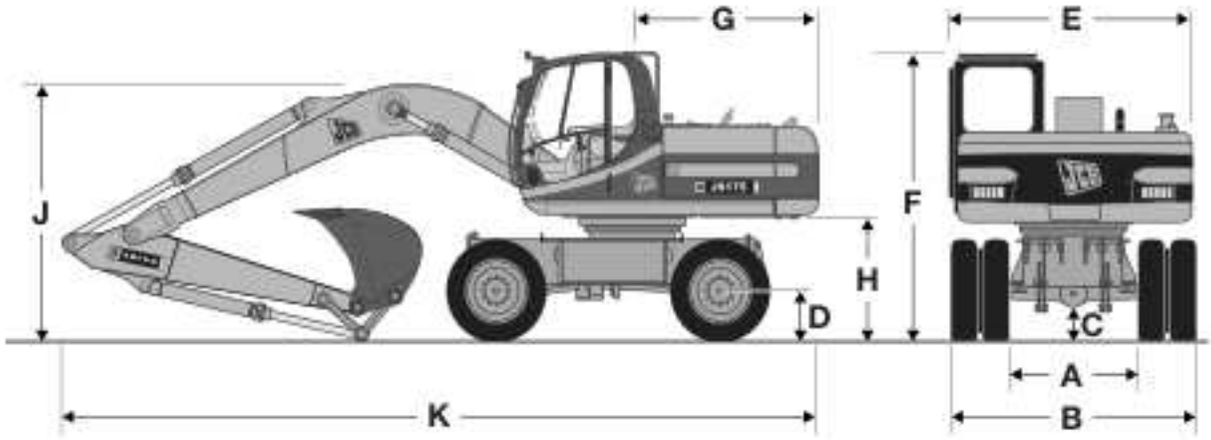


Fig 1.

Table 1.

Dimensions in millimetres (ft. in)	
A Internal width between dual wheels	1330 (4 ft 4 in)
B External width between dual wheels	2490 (8 ft 2 in)
C Ground clearance	350 (1 ft 1 in)
D Height to axle centre line for dual wheels	498 (1 ft 7 in)
D Height to axle centre line for single wheels	519 (1 ft 8 in)
E Overall width	2410 (7 ft 11 in)
F Height over cab	3040 (10 ft 10 in)
G Tail length	2135 (7 ft 0 in)
H Clearance under counterweight	1240 (4 ft 1in)

Table 2.

Dipper lengths	2.1m	2.5m	3.0m
J Transport height	3040 (10 ft 0 in)	3040 (10 ft 0 in)	3040 (10 ft 0 in)
K Transport length	7665 (25 ft 2n)	7685 (25 ft 3in)	7715 (25 ft 4in)

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JS160W

The item numbers in the following table are identified on the Hydraulic Schematic diagram. ⇨ *Fig 1. (E-15).*

Table 2. Component Identification

Item	Part number	Description
1	20/925738	Slew motor
2	332/J2973	Pressure Switch
3	332/K6946	Cylinder Arm
4	25/222471	HBCV Arm
5	332/K6945	Cylinder Bucket
6	331/44476	Cylinder Tab Boom
7	332/K6944	Cylinder Mono Boom
8	25/222559	Valve , HBCV Boom
9	JRJ0346	Steer and Priority Unit
10	25/222749	Valve, Brake
11	JHJ0096	Accumulator
12	701/80554	Pressure Switch
13	332/J0669	Pressure Switch
14	JLJ0232	Filter, Line
15	332/J2697	Manifold HBCV
16	333/J2904	Main Pump
17	JTJ0028	Test Point
18	332/J6423	Control Valve
19	332/K1365	Mult-Station
23	32/925214	Filter, Line
24	332/J4236	Pressure Switch
25	332/J0670	Pressure Switch
26	JLJ0286	Valve Relief
28	333/J2539	Oil Cooler
29	333/J2309	Return Manifold
30	KNJ0287	Filter, Line
31	332/J8132	Plexus filter
32	32/925963	Hydraulic tank air breather
33	332/J8748	Hydraulic tank
34	32/925359	Filter Strainer
35	KRJ1600	Relief Valve
36	32/925185	Filter Return
37	KHJ0568	Filter, Line
38	JLJ0186	Valve Check
39	332/K2446	Solenoid Valve
40	45/908400	Q.R.C
41	45/910100	Q.R.C
42	25/222891	Remote Valve
43	332/J0669	Pressure Switch
44	25/222638	Valve Shuttle
45	25/222892	Remote Valve
46	45/910500	Q.R.C
47	45/910400	Q.R.C
48	332/J0671	Pressure Switch
49	928/60209	Remote Valve
50	25/220040	Cushion Valve
53	25/222709	2 Station Valve
54	45/920117	Rotary Coupling
55	JGOLV087	Stabiliser Ram
56	331/51158	Cab Manifold
57	332/J6567	Logic Valve
58	453/30750	Front Axle
59	JLA0255	Articulation Ram
60	332/J8787	Drive Motor
61	05/205700	Transmission
62	561/60228	Cylinder Dozer LH
63	561/60227	Cylinder Dozer RH
64	928/60251	Valve Main Dozer
65	JLJ0235	Control Valve
66	450/42700	Rear Axle
67	332/K6946	Boom Positioning Ram
68	25/222471	HBCV Valve
69	25/221009	Solenoid Valve
70	25/222218	Hammer /Aux change over solenoid
71	332/J8554	Line Filter
72	331/41610	Manifold Block
73	25/223203	Control Valve
77	JLJ0284	Manifold Tank
78	KHJ0897	TAP
79	JLV1614	Manifold Tab Hose Burst

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Assembly of the Piston Rod

The cylinder components must be cleaned before assembly. The piston and cylinder head must be cleaned before seal assembly and be kept clean up until this stage. Do not clean piston or cylinder head with seals fitted.

1 Secure the piston rod pack on the bench, brace the piston rod head.

2 Carefully fit the cylinder head onto the piston rod ensuring that the threads are not damaged.

3 Fit the cushion ring **A**.

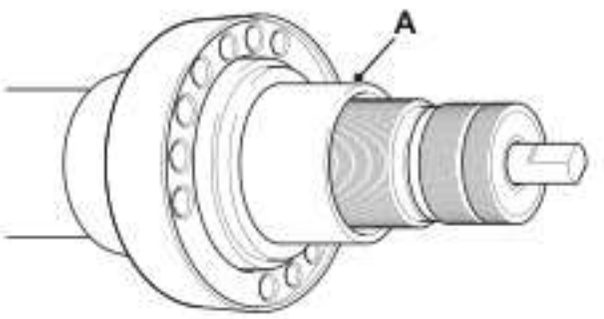


Fig 93.

4 Assemble the piston head onto the piston rod. Fit the Jig to piston and torque tighten the piston to stated torque value, refer to ***Section B, Technical Data.***

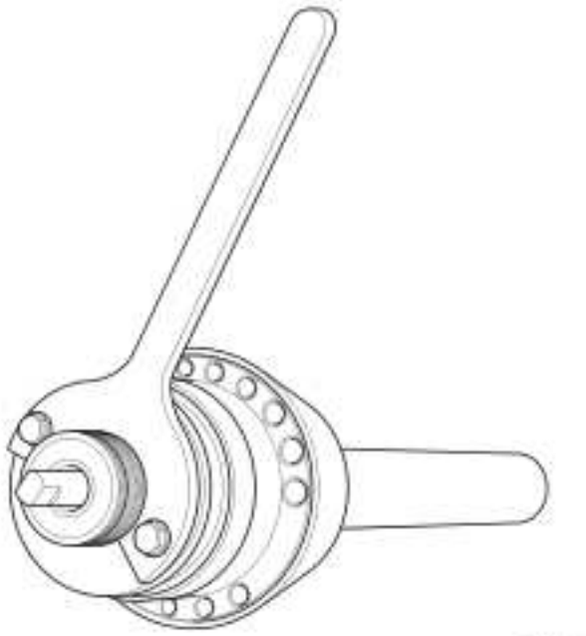


Fig 94.

5 Assemble the nut onto the piston rod and torque tighten to stated torque value, refer to ***Section B, Technical Data.***

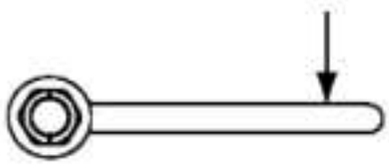


Fig 95.

6 Locate and fasten the stop screw **X** and torque tighten to stated torque value, refer to ***Section B, Technical Data.***

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Fault Finding

JCB Servicemaster

Introduction

Servicemaster is a gateway application allowing a large number of vehicle support applications to be linked using one familiar interface. The interface acts as a graphical tool for selecting the target vehicle from a database of vehicle families and triggering the particular service tool application desired. This removes the need for a user to 'remember' every individual service tool available and select which one is intended for a particular machine.

The interface also provides several key features that will accompany all JCB projects, a multi language editing tool that provides a means of individual text string translation for all JCB applications and the means to select a localised language translation for each JCB application.

The contents of this document aim to explain to you, the user, how to operate this application and to make most of its functionality.



Fig 1.

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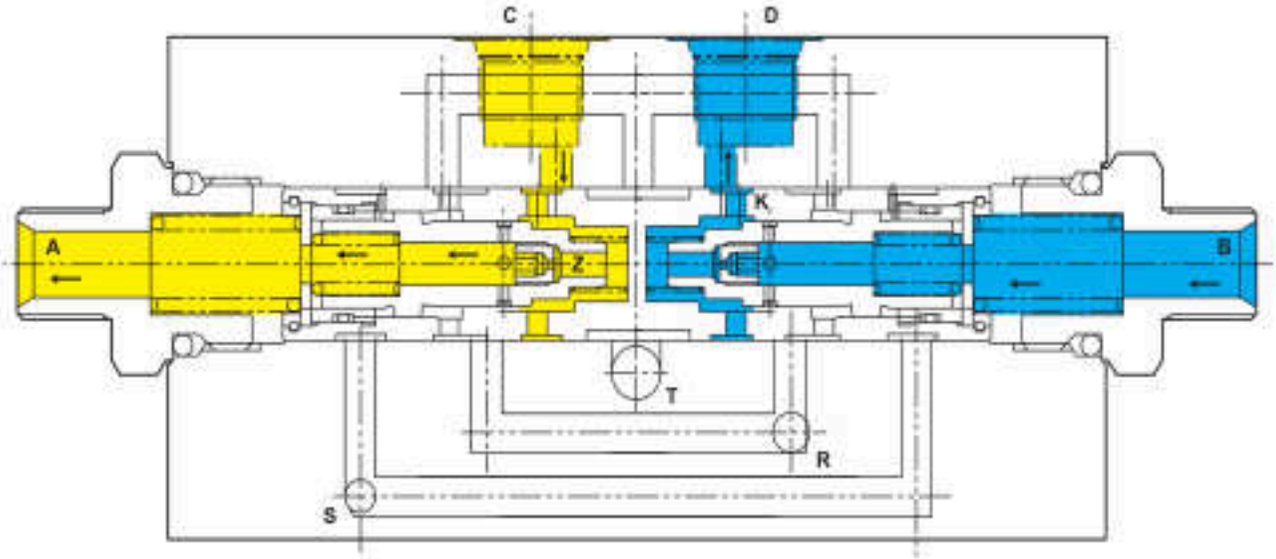


Fig 4. Cushioned Mode - Hand controller moved from dipper in to neutral

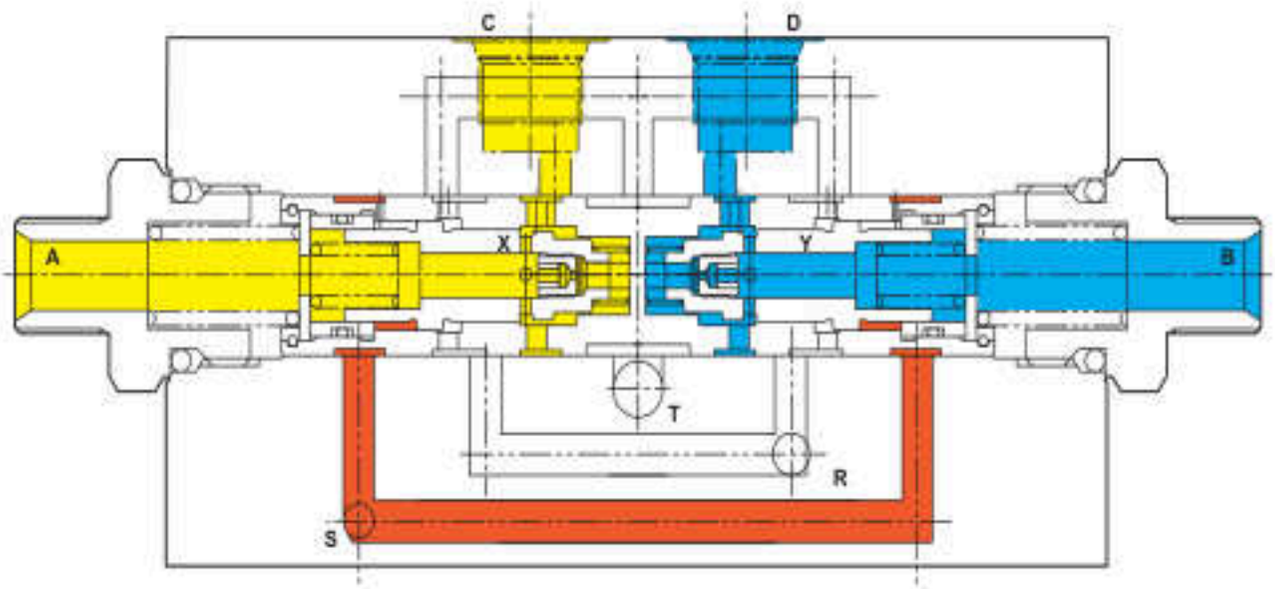


Fig 5. Cushion Control off

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