Service Manual



JS130W, JS145W, JS160W, JS175W

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



Publication No. **9803/6590-4**



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.

World Class



Section 1 - General Information

Page No.
1-1
1-3
1-5
1-9
1-13
1-16
1-35
1-37
-

1-i 1-i



Introduction

About this Manual

Machine Model and Serial Number

This manual provides information for the following model(s) in the JCB machine range:

JCB JS130W from serial number 01060300 to 01060999.

JCB JS145W from serial number 01314300 to 01314599.

JCB JS145W from serial number 01458000 to 01458999.

JCB JS145W from serial number 01613000 to 1613999.

JCB JS160W from serial number 01421600 to 01421799.

JCB JS160W from serial number 01451000 to 01451999.

JCB JS175W from serial number 01505100 to 01505284.

JCB JS175W from serial number 01505286 to 01505499.

Using the Service Manual

T11-00

This publication is designed for the benefit of JCB Distributor Service Engineers who are receiving, or have received, training by JCB Technical Training Department.

These personnel should have a sound knowledge of workshop practice, safety procedures, and general techniques associated with the maintenance and repair of hydraulic earthmoving equipment.

The illustrations in this publication are for guidance only. Where the machines differ, the text and/or the illustration will specify.

General warnings in Section 2 are repeated throughout the manual, as well as specific warnings. Read all safety statements regularly, so you do not forget them.

Renewal of oil seals, gaskets, etc., and any component showing obvious signs of wear or damage is expected as a matter of course. It is expected that components will be cleaned and lubricated where appropriate, and that any opened hose or pipe connections will be blanked to prevent excessive loss of hydraulic fluid and ingress of dirt.

Where a torque setting is given as a single figure it may be varied by plus or minus 3%. Torque figures indicated are for dry threads, hence for lubricated threads may be reduced by one third.

The manufacturer's policy is one of continuous improvement. The right to change the specification of the machine without notice is reserved. No responsibility will be accepted for discrepancies which may occur between specifications of the machine and the descriptions contained in this publication.

Finally, please remember above all else safety must come first!

Section Numbering

T11 005

The manual is compiled in sections, the first three are numbered and contain information as follows:

- 1 General Information includes torque settings and service tools.
- 2 Care and Safety includes warnings and cautions pertinent to aspects of workshop procedures etc.
- 3 Maintenance includes service schedules and recommended lubricants for all the machine.

The remaining sections are alphabetically coded and deal with Dismantling, Overhaul etc. of specific components, for example:

- A Attachments
- **B** Body and Framework, etc.

Section contents, technical data, circuit descriptions, operation descriptions etc. are inserted at the beginning of each alphabetically coded section.

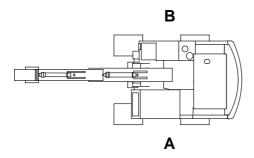


Section 1 - General Information Introduction

About this Manual

Left Side, Right Side

In this manual, 'left' ${\bf A}$ and 'right' ${\bf B}$ mean your left and right when you are seated correctly in the machine.



Cross References

T1-004_2

In this publication, page cross references are made by presenting the subject title printed in bold, italic and underlined. It is preceded by the 'go to' symbol. The number of the page upon which the subject begins, is indicated within the brackets. For example: ⇒ Cross References (↑ 1-2).



Section 1 - General Information Introduction

Identifing Your Machine

Identifing Your Machine

Machine Identification Plate

Your machine has a data plate located on the outside the cab as shown at **A**. The machine serial number is inscribed at **B** which is the base plate of the rear frame.

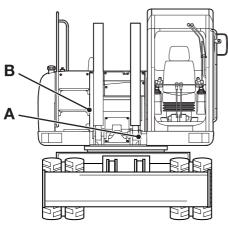


Fig 1.

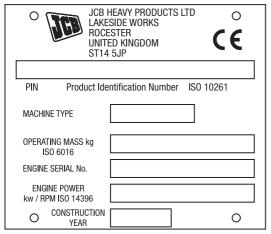


Fig 2.

Typical Product Identification Number (PIN)

1 2 3 4JCB JW175 C 01018354

- 1 World Manufacturer Identification (JCB)
- 2 Machine Type and Model (JW175 = JS175 Wheeled)
- 3 Randomly generated check letter.
- 4 Machine Serial Number (01018354)



Section 1 - General Information Introduction

Identifing Your Machine

Component Identification Plates

Typical Engine Identification Number

If the engine is replaced by a new one, the data plate serial number will be wrong. Either stamp the new number on the plate or stamp out the old one. This will prevent the wrong number being quoted when you order replacement parts.

The engine number is stamped at A.

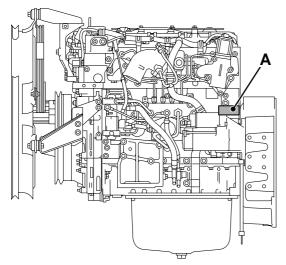
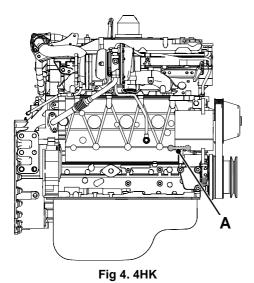


Fig 3. 4JJ

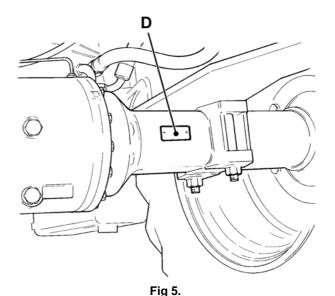


Axle Serial Plate

The axle serial number is stamped on a plate ${\bf D}$ mounted to the rear face of the axle.

When replacement parts are required, always ensure that the correct parts are obtained, e.g. in the case of gear replacements, always check the part number stamped on the gear, and the number of teeth.

When ordering replacement parts, quote the details on the serial plate as shown.



1-4 9803-6590-3 **1-4**



Zinc Plated Fasteners and Dacromet Fasteners

Torque Settings

Zinc Plated Fasteners and Dacromet Fasteners

T11-002

Introduction

Some external fasteners on JCB machines are manufactured using an improved type of corrosion resistant finish. This type of finish is called Dacromet and replaces the original Zinc and Yellow Plating used on earlier machines.

The two types of fasteners can be readily identified by colour and part number suffix. ⇒ *Table 1. Fastener Types* (↑ 1-5).

Table 1. Fastener Types

Fastener Type	Colour	Part No. Suffix
Zinc and Yellow	Golden finish	'Z' (e.g. 1315/3712Z)
Dacromet	Mottled silver finish	'D' (e.g. 1315/3712D)

Note: As the Dacromet fasteners have a lower torque setting than the Zinc and Yellow fasteners, the torque figures used must be relevant to the type of fastener.

Note: A Dacromet bolt should not be used in conjunction with a Zinc or Yellow plated nut, as this could change the torque characteristics of the torque setting further. For the same reason, a Dacromet nut should not be used with a Zinc or Yellow plated bolt.

Note: All bolts used on JCB machines are high tensile and must not be replaced by bolts of a lesser tensile specification.

Note: Dacromet bolts, due to their high corrosion resistance are used in areas where rust could occur. Dacromet bolts are only used for external applications. They are not used in applications such as gearbox or engine joint seams or internal applications.

Bolts and Screws

Use the following torque setting tables only where no torque setting is specified in the text.

Note: Dacromet fasteners are lubricated as part of the plating process, do not lubricate.

Torque settings are given for the following conditions:

Condition 1

- Un-lubricated fasteners
- Zinc fasteners
- Yellow plated fasteners

Condition 2

- Zinc flake (Dacromet) fasteners
- Lubricated zinc and yellow plated fasteners
- Where there is a natural lubrication. For example, cast iron components

Verbus Ripp Bolts

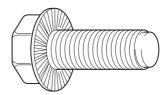


Fig 1.

Torque settings for these bolts are determined by the application. Refer to the relevant procedure for the required settings.



Zinc Plated Fasteners and Dacromet Fasteners

Table 2. Torque Settings - UNF Grade 'S' Fasteners

Bolt	Size	Hexagon (A/F)	Condition 1 Condition		Condition	2		
in.	mm	in.	Nm	kgf m	lbf ft	Nm	kgf m	lbf ft
1/4	6.3	7/16	11.2	1.1	8.3	10.0	1.0	7.4
5/16	7.9	1/2	22.3	2.3	16.4	20.0	2.0	14.7
3/8	9.5	9/16	40.0	4.1	29.5	36.0	3.7	26.5
7/16	11.1	5/8	64.0	6.5	47.2	57.0	5.8	42.0
1/2	12.7	3/4	98.00	10.0	72.3	88.0	9.0	64.9
9/16	14.3	13/16	140.0	14.3	103.2	126.0	12.8	92.9
5/8	15.9	15/16	196.0	20.0	144.6	177.0	18.0	130.5
3/4	19.0	1 1/8	343.0	35.0	253.0	309.0	31.5	227.9
7/8	22.2	1 15/16	547.0	55.8	403.4	492.0	50.2	362.9
1	25.4	1 1/2	814.0	83.0	600.4	732.0	74.6	539.9
1 1/8	31.7	1 7/8	1181.0	120.4	871.1	1063.0	108.4	784.0
1 1/4	38.1	2 1/4	1646.0	167.8	1214.0	1481.0	151.0	1092.3

Table 3. Torque Settings - Metric Grade 8.8 Fasteners

Bolt	Size	Hexagon (A/F)	/F) Condition 1 Condition 2		Condition 2		2	
ISO Metric Thread	mm	mm	Nm	kgf m	lbf ft	Nm	kgf m	lbf ft
M5	5	8	5.8	0.6	4.3	5.2	0.5	3.8
M6	6	10	9.9	1.0	7.3	9.0	0.9	6.6
M8	8	13	24.0	2.4	17.7	22.0	2.2	16.2
M10	10	17	47.0	4.8	34.7	43.0	4.4	31.7
M12	12	19	83.0	8.5	61.2	74.0	7.5	54.6
M16	16	24	205.0	20.9	151.2	184.0	18.8	135.7
M20	20	30	400.0	40.8	295.0	360.0	36.7	265.5
M24	24	36	690.0	70.4	508.9	621.0	63.3	458.0
M30	30	46	1372.0	139.9	1011.9	1235.0	125.9	910.9
M36	36	55	2399.0	244.6	1769.4	2159.0	220.0	1592.4

1-6 9803-6590-3 **1-6**



Zinc Plated Fasteners and Dacromet Fasteners

Table 4. Metric Grade 10.9 Fasteners

Bolt	Bolt Size		(Condition	1	Condition 2		2
ISO Metric Thread	mm	mm	Nm	kgf m	lbf ft	Nm	kgf m	lbf ft
M5	5	8	8.1	0.8	6.0	7.3	0.7	5.4
M6	6	10	13.9	1.4	10.2	12.5	1.3	9.2
M8	8	13	34.0	3.5	25.0	30.0	3.0	22.1
M10	10	17	67.0	6.8	49.4	60.0	6.1	44.2
M12	12	19	116.0	11.8	85.5	104.0	10.6	76.7
M16	16	24	288.0	29.4	212.4	259.0	26.4	191.0
M20	20	30	562.0	57.3	414.5	506.0	51.6	373.2
M24	24	36	971.0	99.0	716.9	874.0	89.1	644.6
M30	30	46	1930.0	196.8	1423.5	1737.0	177.1	1281.1
M36	36	55	3374.0	344.0	2488.5	3036.0	309.6	2239.2

Table 5. Metric Grade 12.9 Fasteners

Bolt	Size	Hexagon (A/F)	(Condition	1	(Condition	2
ISO Metric Thread	mm	mm	Nm	kgf m	lbf ft	Nm	kgf m	lbf ft
M5	5	8	9.8	1.0	7.2	8.8	0.9	6.5
M6	6	10	16.6	1.7	12.2	15.0	1.5	11.1
M8	8	13	40.0	4.1	29.5	36.0	3.7	26.5
M10	10	17	80.0	8.1	59.0	72.0	7.3	53.1
M12	12	19	139.0	14.2	102.5	125.0	12.7	92.2
M16	16	24	345.0	35.2	254.4	311.0	31.7	229.4
M20	20	30	674.0	68.7	497.1	607.0	61.9	447.7
M24	24	36	1165.0	118.8	859.2	1048.0	106.9	773.0
M30	30	46	2316.0	236.2	1708.2	2084.0	212.5	1537.1
M36	36	55	4049.0	412.9	2986.4	3644.0	371.6	2687.7

1-7 9803-6590-3 **1-7**



Zinc Plated Fasteners and Dacromet Fasteners

Table 6. Torque Settings - Rivet Nut Bolts/Screws

Bolt Size				
ISO Metric Thread	mm	Nm	kgf m	lbf ft
M3	3	1.2	0.1	0.9
M4	4	3.0	0.3	2.0
M5	5	6.0	0.6	4.5
M6	6	10.0	1.0	7.5
M8	8	24.0	2.5	18.0
M10	10	48.0	4.9	35.5
M12	12	82.0	8.4	60.5

Table 7. Torque Settings - Internal Hexagon Headed Cap Screws (Zinc)

Bolt Size			
ISO Metric Thread	Nm	kgf m	lbf ft
M3	2.0	0.2	1.5
M4	6.0	0.6	4.5
M5	11.0	1.1	8.0
M6	19.0	1.9	14.0
M8	46.0	4.7	34.0
M10	91.0	9.3	67.0
M12	159.0	16.2	117.0
M16	395.0	40.0	292.0
M18	550.0	56.0	406.0
M20	770.0	79.0	568.0
M24	1332.0	136.0	983.0

1-8 9803-6590-3 **1-8**



Hydraulic Connections

Hydraulic Connections

T11-003

'O' Ring Face Seal System

Adaptors Screwed into Valve Blocks

Adaptor screwed into valve blocks, seal onto an 'O' ring which is compressed into a 45° seat machined into the face of the tapped port.

Table 8. Torque Settings - BSP Adaptors

BSP Adaptor Size	Hexagon (A/F)			
in.	mm	Nm	kgf m	lbf ft
1/4	19.0	18.0	1.8	13.0
3/8	22.0	31.0	3.2	23.0
1/2	27.0	49.0	5.0	36.0
5/8	30.0	60.0	6.1	44.0
3/4	32.0	81.0	8.2	60.0
1	38.0	129.0	13.1	95.0
1 1/4	50.0	206.0	21.0	152.0

Table 9. Torque Settings - SAE Connections

	1		ttillige of the coll		
SAE Tube	SAE Port	Hexagon (A/F)			
Size	Thread Size	mm	Nm	kgf m	lbf ft
4	7/16 - 20	15.9	20.0 - 28.0	2.0 - 2.8	16.5 - 18.5
6	9/16 - 18	19.1	46.0 - 54.0	4.7 - 5.5	34.0 - 40.0
8	3/4 - 16	22.2	95.0 - 105.0	9.7 - 10.7	69.0 - 77.0
10	7/8 - 14	27.0	130.0 - 140.0	13.2 - 14.3	96.0 - 104.0
12	1 1/16 - 12	31.8	190.0 - 210.0	19.4 - 21.4	141.0 - 155.0
16	1 5/16 - 12	38.1	290.0 - 310.0	29.6 - 31.6	216.0 - 230.0
20	1 5/8	47.6	280.0 - 380.0	28.5 - 38.7	210.0 - 280.0

1-9 9803-6590-3 **1-9**



Hydraulic Connections

Hoses Screwed into Adaptors

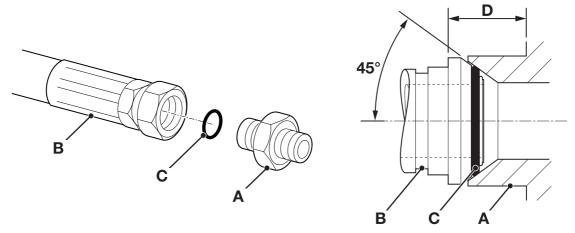


Fig 2.

Hoses **2-B** screwed into adaptors **2-A** seal onto an O' ring **2-C** which is compressed into a 45° seat machined into the face of the adaptor port.

Note: Dimension **2-D** will vary depending upon the torque applied.

Table 10. BSP Hose - Torque Settings

BSP Hose Size	Hexagon (A/F)			
in.	mm	Nm	kgf m	lbf ft
1/8	14.0	14.0 - 16.00	1.4 - 1.6	10.3 - 11.8
1/4	19.0	24.0 - 27.0	2.4 - 2.7	17.7 - 19.9
3/8	22.0	33.0 - 40.0	3.4 - 4.1	24.3 - 29.5
1/2	27.0	44.0 - 50.0	4.5 - 5.1	32.4 - 36.9
5/8	30.0	58.0 - 65.0	5.9 - 6.6	42.8 - 47.9
3/4	32.0	84.0 - 92.0	8.6 - 9.4	61.9 - 67.8
1	38.0	115.0 - 126.0	11.7 - 12.8	84.8 - 92.9
1 1/4	50.0	189.0 - 200.0	19.3 - 20.4	139.4 - 147.5
1 1/2	55.0	244.0 - 260.0	24.9 - 26.5	180.0 - 191.8



Hydraulic Connections

Adaptors into Component Connections with Bonded Washers

Table 11. BSP Adaptors with Bonded Washers - Torque Settings

BSP Size			_
in.	Nm	kgf m	lbf ft
1/8	20.0	2.1	15.0
1/4	34.0	3.4	25.0
3/8	75.0	7.6	55.0
1/2	102.0	10.3	75.0
5/8	122.0	12.4	90.0
3/4	183.0	18.7	135.0
1	203.0	20.7	150.0
1 1/4	305.0	31.0	225.0
1 1/2	305.0	31.0	225.0

Hydraulic Connections

'Torque Stop' Hose System

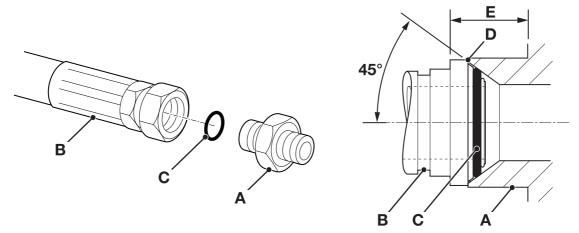


Fig 3.

`Torque Stop' Hoses **3-B** screwed into adaptors **3-A** seal onto an 'O' ring **3-C** which is compressed into a 45° seat machined in the face of the adaptor port. To prevent the 'O' ring being damages as a result of over tightening, 'Torque

Stop' Hoses have an additional shoulder **3-D**, which acts as a physical stop.

Note: Minimum dimension 3-E fixed by shoulder 3-D.

Table 12. BSP `Torque Stop' Hose - Torque Settings

BSP Hose Size	Hexagon (A/F)			
in.	mm	Nm	kgf m	lbf ft
1/8	14.0	14.0	1.4	10.0
1/4	19.0	27.0	2.7	20.0
3/8	22.0	40.0	4.1	30.0
1/2	27.0	55.0	5.6	40.0
5/8	30.0	65.0	6.6	48.0
3/4	32.0	95.0	9.7	70.0
1	38.0	120.0	12.2	89.0
1 1/4	50.0	189.0	19.3	140.0
1 1/2	55.0	244.0	24.9	180.0



Service Tools

Numerical List

The tools listed in the table are special tools required for carrying out the procedures described in this manual. These tools are available from JCB Service.

Some tools are available as kits or sets, the part numbers for parts within such kits or sets are not listed here. For full

details of all tools, including the content of kits and sets, refer to *Tool Detail Reference*, *Section 1*.

Note: Tools other than those listed will be required. It is expected that such general tools will be available in any well equipped workshop or be available locally from any good tool supplier.

Part Number	Description	See Section
-	Bonded Washers - see Tool Detail Reference (Section 1) for content	E
-	Female Cone Blanking Plugs - see Tool Detail Reference (Section 1) for content	E
-	Female Connectors - see Tool Detail Reference (Section 1) for content	E
-	Hydraulic Flow Test Equipment - see Tool Detail Reference (Section 1) for content	E
-	Hydraulic Hand Pump Equipment - see Tool Detail Reference (Section 1) for content	E
-	Male Adapters - BSP x BSP - see Tool Detail Reference (Section 1) for content	E
-	Male Adapters - BSP x NPT (USA only) - see <i>Tool Detail Reference (Section 1)</i> for content	E
-	Male Cone Blanking Caps - see Tool Detail Reference (Section 1) for content	E
-	Pressure Test Points - Adaptors - see Tool Detail Reference (Section 1) for content	E
-	Pressure Test Points - 'T' Adaptors - see Tool Detail Reference (Section 1) for content	E
-	Rivet Nut Tool - see Tool Detail Reference (Section 1) for content	В
331/22966	Pump Drive Alignment Tool	E
331/31069	Test Block for A.R.V.	E
4104/1310	Hand Cleaner	В
892/00039	Spool Clamp	E
892/00041	De-glazing Tool	K
892/00137	Micro-Bore Hose	E
892/00180	Seal Fitting Tool	Н
892/00223	Hand Pump	E
892/00253	Hydraulic Circuit Pressure Test Kit - see Tool Detail Reference (Section 1) for content	E
892/00254	Hose	E
892/00271	Adapter	E
892/00272	Adapter	E
892/00273	Adapter	Е
892/00274	Adapter	E

1-13 9803-6590-3 **1-13**



Numerical List

Part Number	Description	See Section
892/00275	Adapter	E
892/00276	Adapter	E
892/00277	Adapter	E
892/00279	Gauge	E
892/00280	Gauge	E
892/00281	AVO Meter	С
892/00284	Digital Tachometer	С
892/00285	Hyd. Oil Temperature Probe	С
892/00298	Fluke Meter	С
892/00334	Ram Seal Fitting Tool	E
892/00346	Gauge	E
892/00347	Connector	E
892/00706	Test Probe	E
892/00842	Glass Lifter	В
892/00843	Folding Stand for Holding Glass	В
892/00845	Cartridge Gun	В
892/00846	Glass Extractor (Handles)	В
892/00847	Nylon Spatula	В
892/00848	Wire Starter	В
892/00849	Braided Cutting Wire	В
892/01016	Ram Protection Sleeve for 25 mm Rod Diameter	E
892/01017	Ram Protection Sleeve for 30 mm Rod Diameter	E
892/01018	Ram Protection Sleeve for 40 mm Rod Diameter	E
892/01019	Ram Protection Sleeve for 50 mm Rod Diameter	E
892/01020	Ram Protection Sleeve for 50 mm Rod Diameter (slew ram)	E
892/01021	Ram Protection Sleeve for 60 mm Rod Diameter	E
892/01022	Ram Protection Sleeve for 60 mm Rod Diameter (slew ram)	E
892/01023	Ram Protection Sleeve for 65 mm Rod Diameter	E
892/01024	Ram Protection Sleeve for 70 mm Rod Diameter	E
892/01025	Ram Protection Sleeve for 75 mm Rod Diameter	E
892/01026	Ram Protection Sleeve for 80 mm Rod Diameter	E
892/01027	Piston Seal Assembly Tool	E
926/15500	Rubber Spacer Blocks	В
992/02800	ARV Extractor	E
992/09300	Hexagon Spanner 55mm A/F	E
992/09400	Hexagon Spanner 65mm A/F	E
992/09500	Hexagon Spanner 75mm A/F	E



Numerical List

Part Number	Description	See Section
992/09600	Hexagon Spanner 85mm A/F	E
992/09700	Hexagon Spanner 95mm A/F	E
992/09900	Hexagon Spanner 115mm A/F	E
992/10000	Hexagon Spanner 125mm A/F	E
992/10100	Spool Clamp	E
992/12300	12V Mobile Oven	В
992/12400	24V Static Oven (2 Cartridge)	В
992/12800	Cut-Out Knife	В
992/12801	'L' Blades	В
993/68100	Slide Hammer Kit - see Tool Detail Reference (Section 1) for content	В

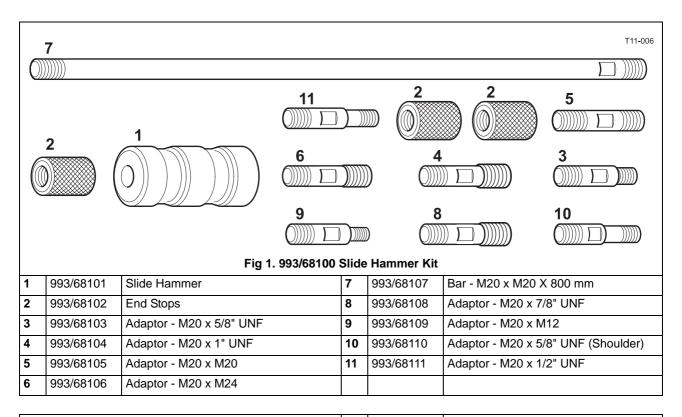
1-15 9803-6590-3 **1-15**

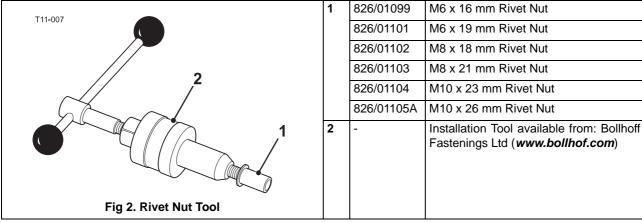
Tool Detail Reference

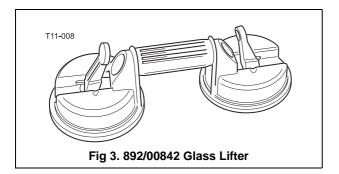
Tool Detail Reference

Section B - Body and Framework

Note: Not all service tools are illustrated.



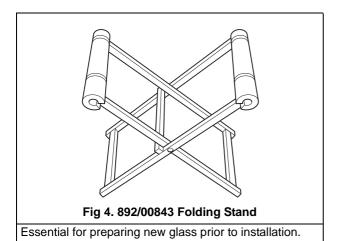


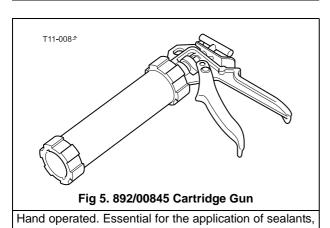


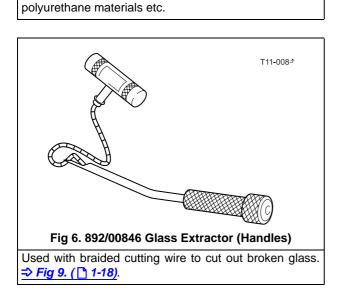
Minimum 2 off - Essential for glass installation, 2 required to handle large panes of glass. Ensure suction cups are protected from damage during storage.



Tool Detail Reference

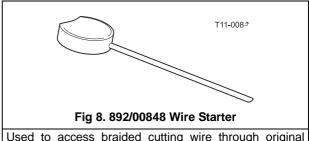








General tool used for smoothing sealants - also used to re-install glass in rubber glazing because metal tools will chip the glass edge.



Used to access braided cutting wire through original polyurethane seal. ⇒ Fig 9. (1-18).



Tool Detail Reference

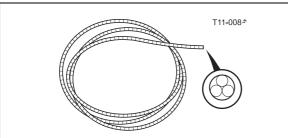


Fig 9. 892/00849 Braided Cutting Wire

Consumable heavy duty cut-out wire used with the glass extraction tool. ⇒ Fig 6. (1-17). Approx 25 m length.

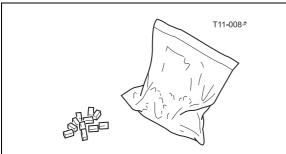


Fig 10. 926/15500 Rubber Spacer Blocks

Used to provide the correct set clearance between glass edge and cab frame. Unit quantity = 500 off.

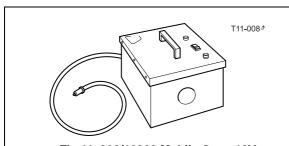
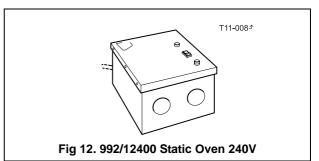


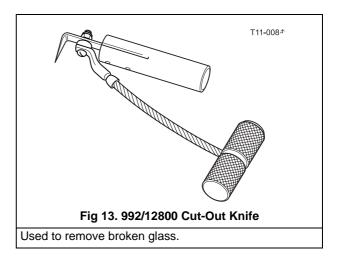
Fig 11. 992/12300 Mobile Oven 12V

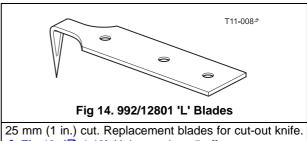
1 cartridge capacity. Required to pre-heat adhesive prior to use. It is fitted with a male plug (703/23201) which fits into a female socket (715/04300).



Required to pre-heat adhesive prior to use. No plug supplied.

Note: 110V models available upon request - contact JCB Technical Service.





⇒ Fig 13. (1-18). Unit quantity = 5 off.



Tool Detail Reference



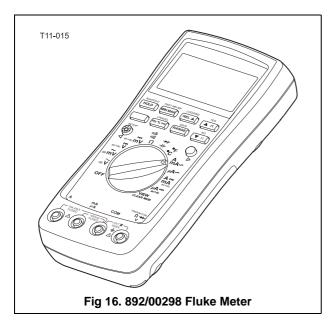
Special blend for the removal of polyurethane adhesives (454g; 1 lb tub).

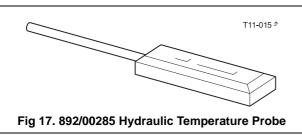


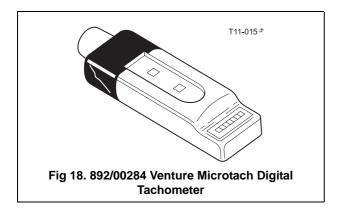
Tool Detail Reference

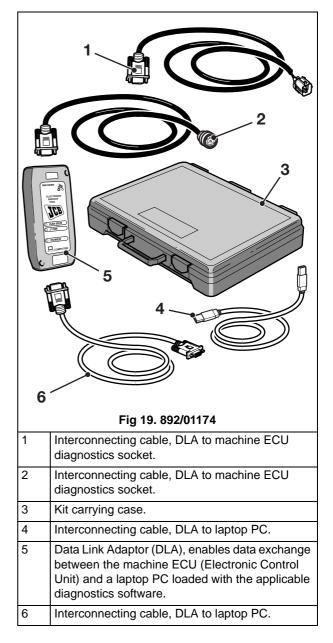
Section C - Electrics

Note: Not all service tools are illustrated.







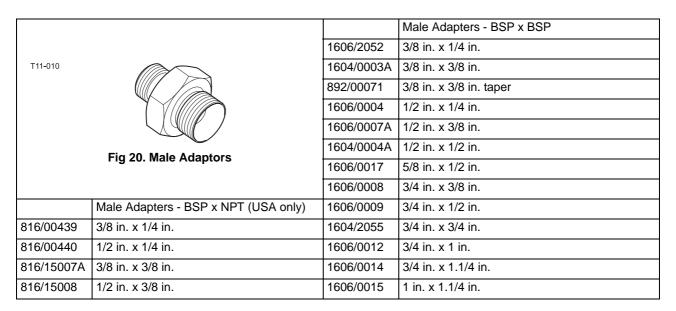


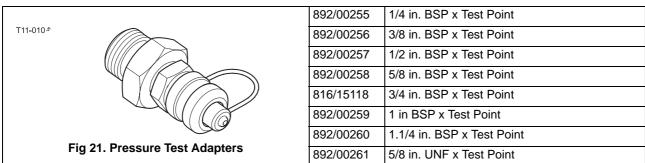


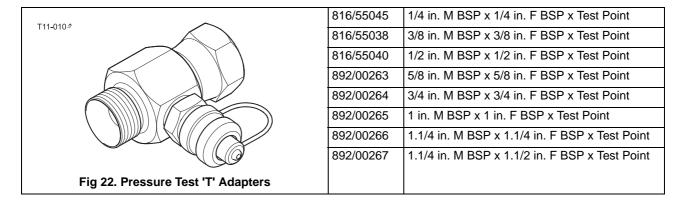
Tool Detail Reference

Section E - Hydraulics

Note: Not all service tools are illustrated.

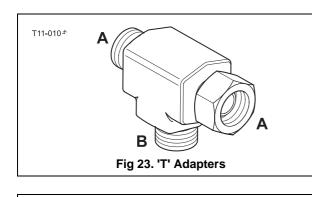








Tool Detail Reference



892/00047	3/8 in. BSP (A) x 1/4 in. BSP (B)
892/00048	1/2 in. BSP (A) x 1/4 in. BSP (B)
892/00049	5/8 in. BSP (A) x 1/4 in. BSP (B)
816/50043	3/4 in. BSP (A) x 1/4 in. BSP (B)
892/00051	1 in. BSP (A) x 1/4 in. BSP (B)
816/50005	1/2 in. BSP (A) x 1/2 in. BSP (B)
816/60096	3/4 in. BSP (A) x 3/4 in. BSP (B)
816/00017	1 in. BSP (A) x 1 in. BSP (B)



Fig 24.	Female	Blanking	Caps
---------	---------------	-----------------	------

892/00055A	1/4 in. BSP
892/00056A	3/8 in. BSP
892/00057	1/2 in. BSP
892/00058A	5/8 in. BSP
892/00059A	3/4 in. BSP
892/00060	1 in. BSP



Fig 25. Male Cone Blanking Caps

816/90045	1/4 in. BSP
816/00189A	3/8 in. BSP
816/00190A	1/2 in. BSP
816/90022	5/8 in. BSP
816/90274	3/4 in. BSP
816/90205	1 in. BSP

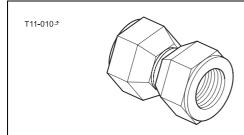


Fig 26. Female Connectors

892/00074	3/8 in. BSP x 3/8 in. BSP
892/00075	1/2 in. BSP x 1/2 in. BSP
892/00076	5/8 in. BSP x 5/8 in. BSP
892/00077	3/4 in. BSP x 3/4 in. BSP



Fig 27.	Bonded	Washers

1406/0011	1/4 in. BSP
1406/0018	1/2 in. BSP
1406/0014	5/8 in. BSP
1406/0021	3/4 in. BSP
1406/0029	1.1/4 in. BSP



Download the full PDF manual instantly.

Our customer service e-mail: aservicemanualpdf@yahoo.com