

Open front screen



# Section 1

## General Information

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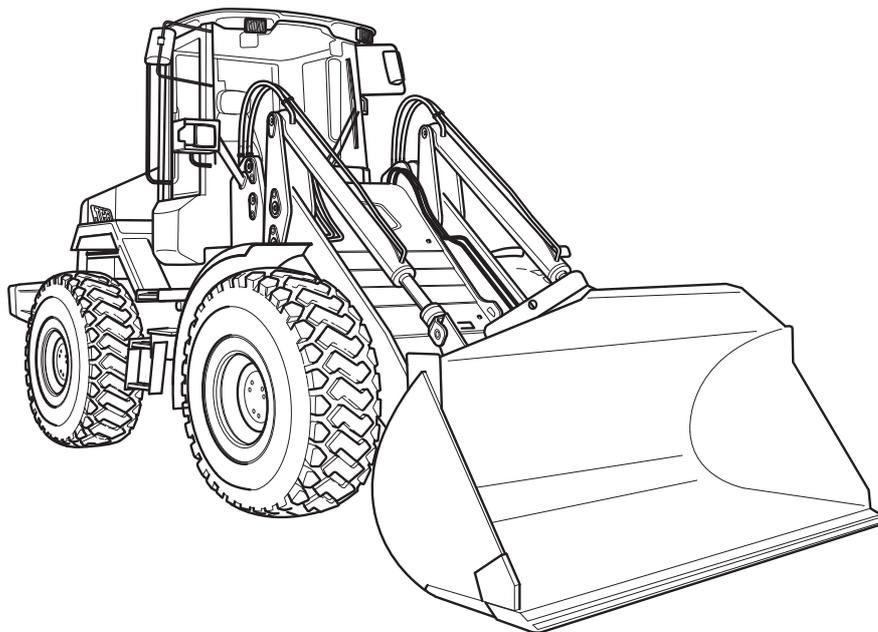
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Publication No.  
**9803/4150-13**



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# Section 1 - General Information

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# Section 1 - General Information

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# Introduction

## About this Publication

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.

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. Finally, please remember above all else **SAFETY MUST COME FIRST!**

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 & Safety - includes warnings and cautions pertinent to aspects of workshop procedures etc.
- 3 Routine 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 & Framework...etc.

The page numbering in each alphabetically coded section is not continuous. This allows for the insertion of new items in later issues of the manual.

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

All sections are listed on the front cover; tabbed divider cards align directly with individual sections on the front cover for rapid reference.

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.

'Left Hand' and 'Right Hand' are as viewed from the rear of the machine facing forwards.

This Service Manual covers the following machines:

411 Wheeled Loading Shovel from machine serial number 527000

416 Wheeled Loading Shovel from machine serial number 529000

411 Wheeled Loading Shovel from machine serial number M1241500

416 Wheeled Loading Shovel from machine serial number M1243000

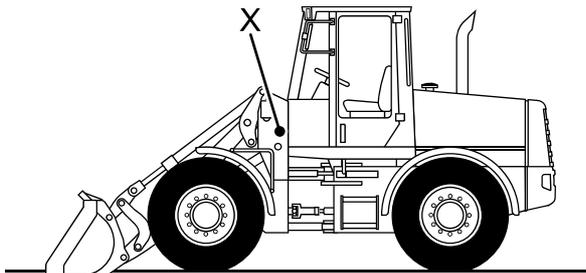
**Note:** Data and information for 412S Machines in this Service Manual may not be up to date. 412S and 414S Machines are now covered in Service Manual Part Number 9803/4170.

# Identifying your Machine

## Identification Plates

### Identification Plate

Your machine has an identification plate **1-X** mounted on the left hand side of the machine on the loader arm pillar. The serial numbers of the machine and its major units are stamped on the plate.



A203290-V2

Fig 1.

### Explanation of Vehicle Identification Number (VIN)

1	2	3	4	5
SLP	41100	S	E	0527001

- 1 World Manufacturer Identification, SLP = JCB
- 2 Machine Model, 41100 = 411
- 3 Year of Manufacture S, (P = 1993, R = 1994, S = 1995, T = 1996, V = 1997, W = 1998, X = 1999, Y = 2000, 1 = 2001, 2 = 2002, 3 = 2003, 4 = 2004)
- 4 Manufacturing Location (E = England)
- 5 Machine Serial Number (0527001)

The serial number of each major unit is also stamped on the unit itself. If a major unit is replaced by a new one, the serial number on the identification plate will be wrong. Either stamp the new number of the unit on the identification plate, or simply stamp out the old number.

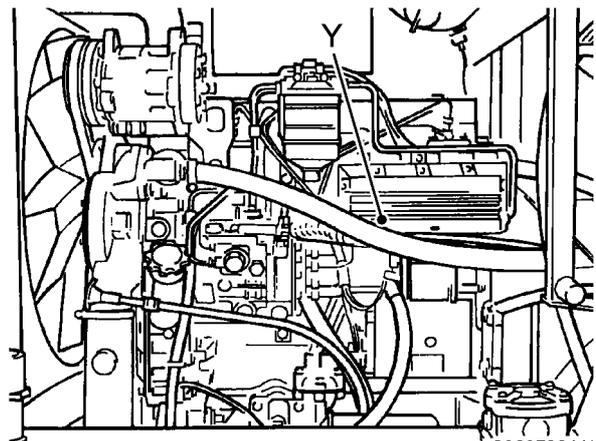
This will prevent the wrong unit number being quoted when replacement parts are ordered.

The machine and engine serial numbers can help identify exactly the type of equipment you have.

### Unit Identification

The engine serial number is stamped on a plate **2-Y** which is fastened to the right side of the cylinder block, near the fuel filter.

**Note:** For machines with the JCB 444 Series engine, see Section K, Technical Data.



S203700-V1

Fig 2.

### Typical Engine Identification Number

1	2	3	4	5
AA	50261	U	500405	P

1 Engine Type,

**A Series** - **AA** = 4 cylinder naturally aspirated, **AB** = 4 cylinder turbo.

**R Series** - **RG** = 4 cylinder turbo, low emission stage 2, **RJ** = 4 cylinder air to air charge cooled, low emission, stage 2.

2 Build Number

3 Country of Origin

4 Engine Sequence Number

5 Year of Manufacture

The Transmission serial number is stamped on plate **3-Z** as shown.

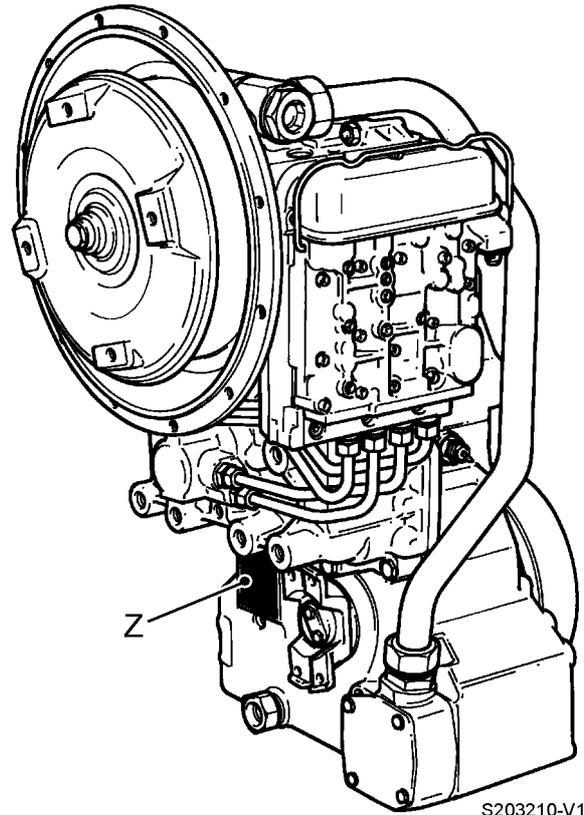


Fig 3.

# Torque Settings

## Zinc Plated Fasteners (golden finish)

Use only where no torque setting is specified in the text. Values are for dry threads and may be within three per cent of the figures stated. For lubricated threads the values should be REDUCED by one third.

### UNF Grade `S' Bolts

Dia.	Bolt size		Torque Settings		
	(mm)	Hexagon (A/F) mm	Nm	kgf m	lbf ft
1/4	6.3	7/16	14	1.4	10
5/16	7.9	1/2	28	2.8	20
3/8	9.5	9/16	49	5.0	36
7/16	11.1	5/8	78	8.0	58
1/2	12.7	3/4	117	12.0	87
9/16	14.3	13/16	170	17.3	125
5/8	15.9	15/16	238	24.3	175
3/4	19	1 1/8	407	41.5	300
7/8	22.2	1 5/16	650	66.3	480
1	25.4	1 1/2	970	99.0	715
1 1/4	31.7	1 7/8	1940	198.0	1430
1 1/2	38.1	2 1/4	3390	345.0	2500

### Metric Grade 8.8 Bolts

Dia.	Bolt size		Torque Settings		
	(mm)	Hexagon (A/F) mm	Nm	kgf m	lbf ft
M5	(5)	8	7	0.7	5
M6	(6)	10	12	1.2	9
M8	(8)	13	28	3.0	21
M10	(10)	17	56	5.7	42
M12	(12)	19	98	10	72
M16	(16)	24	244	25	180
M18	(18)	27	350	36	258
M20	(20)	30	476	48	352
M24	(24)	36	822	84	607
M30	(30)	46	1633	166	1205
M36	(36)	55	2854	291	2105

### Rivet Nut Bolts/Screws

Dia.	Bolt size (mm)	Torque Settings (for steel rivet nuts)		
		Nm	kgf m	lbf ft
M3	(3)	1.2	0.12	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

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

# Service Tools

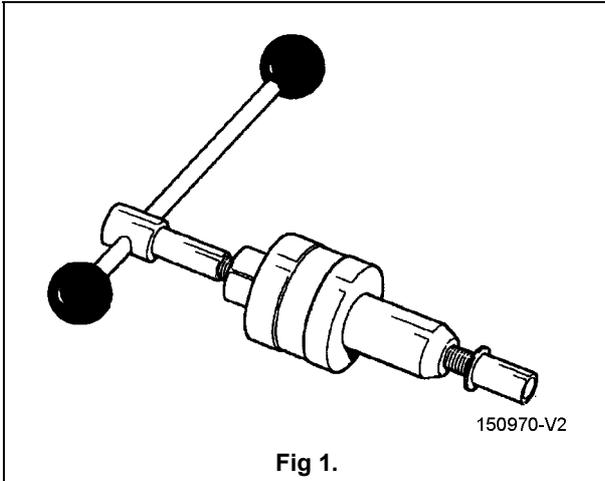
## Numerical List Section B - Body and Framework

The tools listed in the table are special tools required for removal and replacement of Body and Framework parts. These tools are available from JCB Service.

**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.

<b>Part Number</b>	<b>Description</b>	<b>Tool Detail Reference</b>
825/99849	Dummy Bush	<a href="#">⇒ Fig 12. (□ 1-8)</a>
825/99850	Bearing Locator	<a href="#">⇒ Fig 12. (□ 1-8)</a>
826/01179	M6 x 16mm Rivet Nut	<a href="#">⇒ Fig 1. (□ 1-6)</a>
826/01106	M6 x 19mm Rivet Nut	<a href="#">⇒ Fig 1. (□ 1-6)</a>
826/01177	M8 x 18mm Rivet Nut	<a href="#">⇒ Fig 1. (□ 1-6)</a>
826/01176	M10 x 23mm Rivet Nut	<a href="#">⇒ Fig 1. (□ 1-6)</a>
826/01333	M10 x 26mm Rivet Nut	<a href="#">⇒ Fig 1. (□ 1-6)</a>
892/00842	Glass Lifter	<a href="#">⇒ Fig 3. (□ 1-6)</a>
892/00843	Glass Stand	<a href="#">⇒ Fig 2. (□ 1-6)</a>
892/00844	Long Knife	<a href="#">⇒ Fig 11. (□ 1-8)</a>
892/00846	Glass Extractor (Handles)	<a href="#">⇒ Fig 8. (□ 1-7)</a>
892/00847	Nylon Spatula	<a href="#">⇒ Fig 4. (□ 1-6)</a>
892/00848	Wire Starter	<a href="#">⇒ Fig 6. (□ 1-7)</a>
892/00849	Braided Cutting Wire	<a href="#">⇒ Fig 10. (□ 1-8)</a>
926/15500	Rubber Spacer Blocks	<a href="#">⇒ Fig 5. (□ 1-7)</a>
992/12800	Cut-Out Knife	<a href="#">⇒ Fig 7. (□ 1-7)</a>
992/12801	'L' Blades	<a href="#">⇒ Fig 9. (□ 1-8)</a>

### Tool Detail Reference Section B - Body and Framework



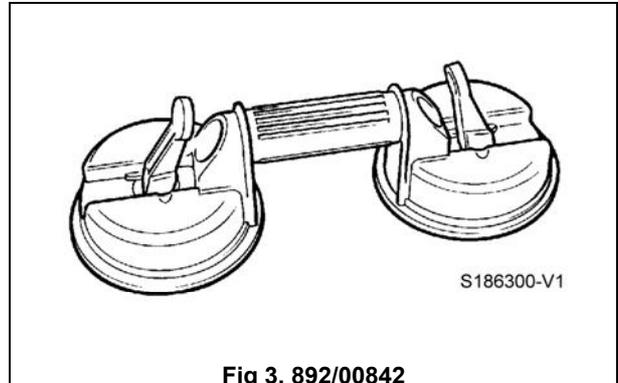
**Fig 1.**

**Note:** 826/01179 M6 x 16mm Rivet Nut, 826/01106 M6 x 19mm Rivet Nut, 826/01177 M8 x 18mm Rivet Nut, 826/01176 M10 x 23mm Rivet Nut, 826/01333 M10 x 26mm Rivet Nut

Installation Tool Available from:

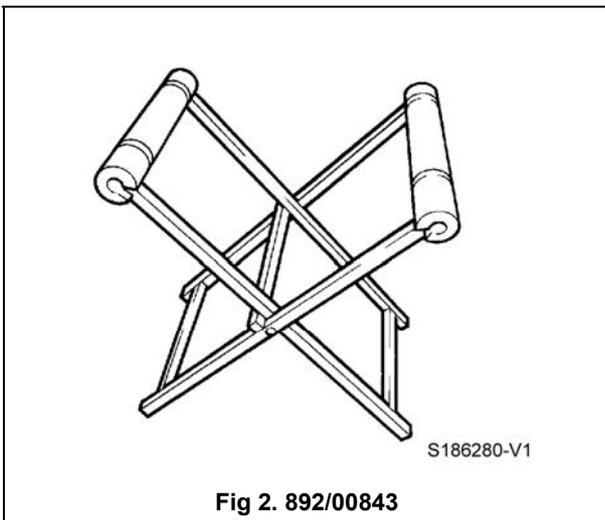
Bollhoff Fastenings Ltd.  
 Midacre  
 The Willenhall Estate  
 Rose Hill  
 Willenhall  
 West Midlands, WV13 2JW

**Note:** essential for preparing new glass prior to installation.

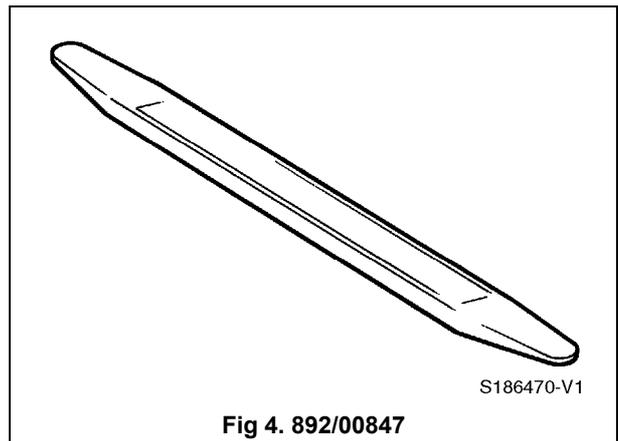


**Fig 3. 892/00842**

**Note:** - minimum 2 off - essential for glass installation, 2 required to handle large panes of glass. Ensure suction cups are protected from damage during storage.



**Fig 2. 892/00843**



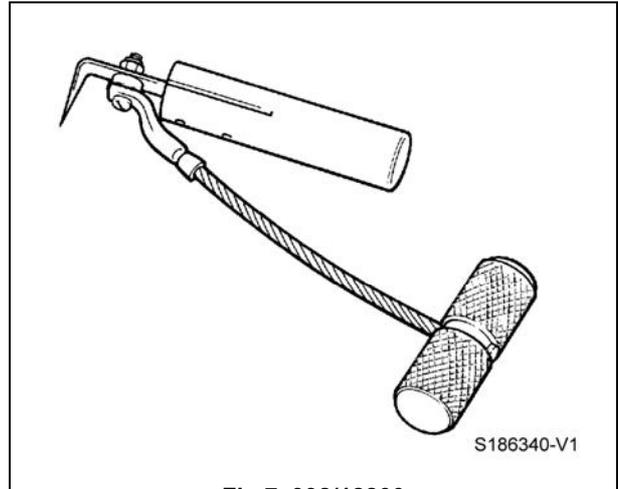
**Fig 4. 892/00847**

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



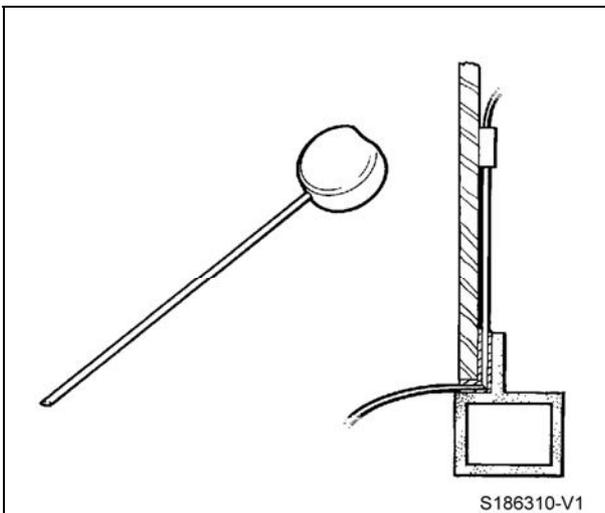
**Fig 5. 926/15500**

**Note:** - used to provide the correct set clearance between glass edge and cab frame. (unit quantity = 500 off)



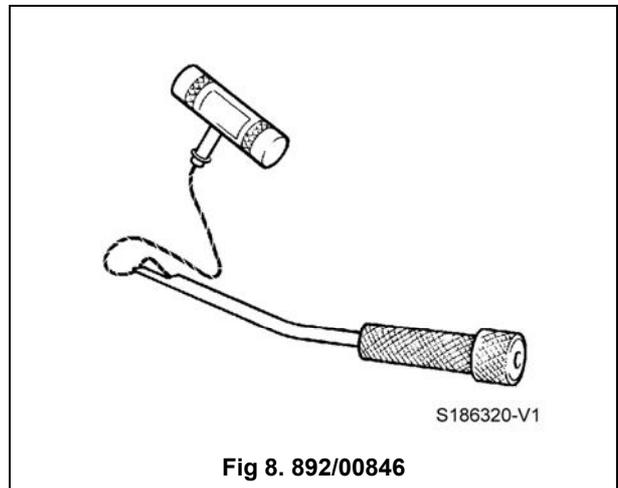
**Fig 7. 992/12800**

**Note:** - used to remove broken glass.



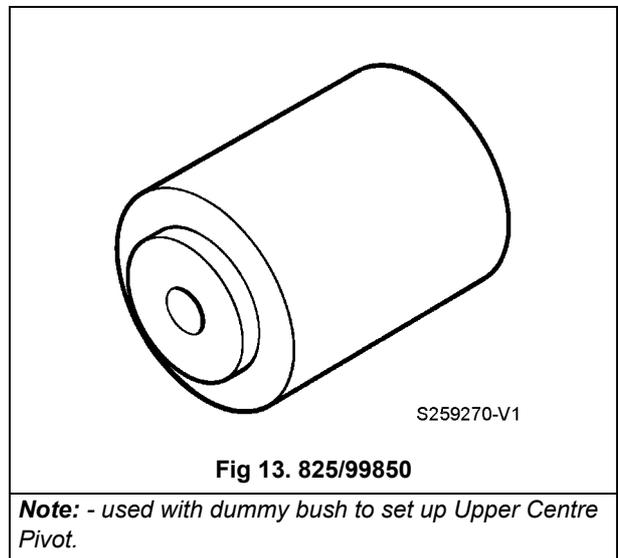
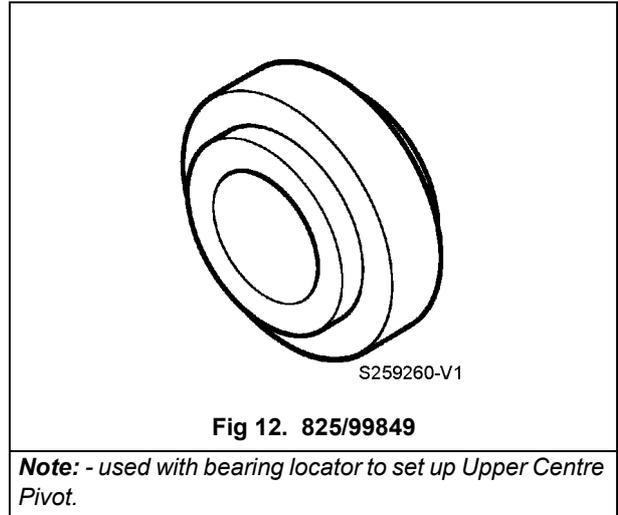
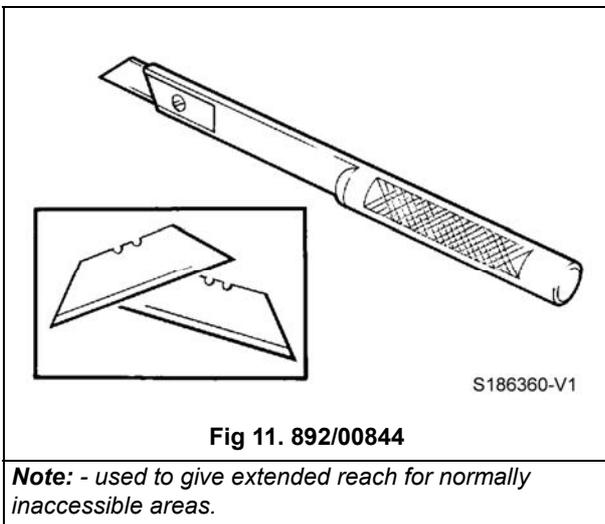
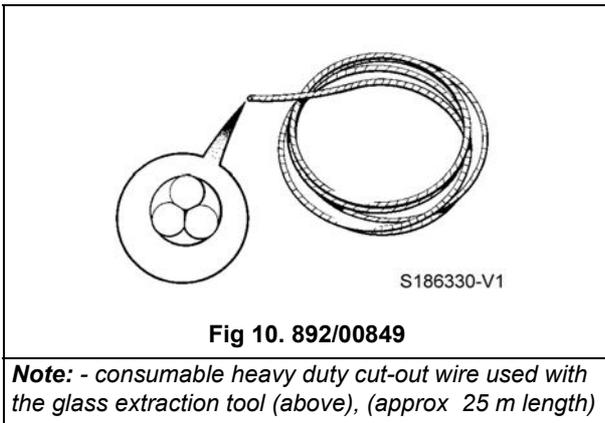
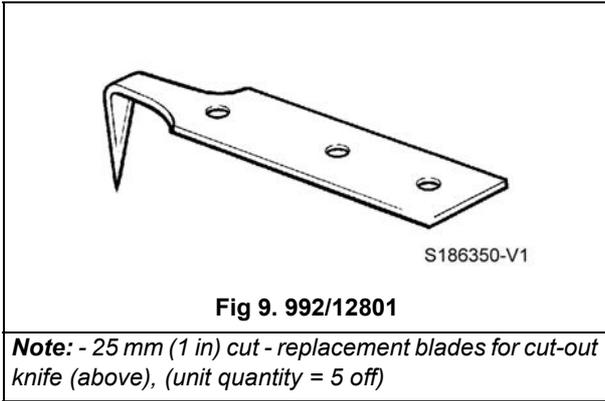
**Fig 6. 892/00848**

**Note:** - used to access braided cutting wire (below) through original polyurethane seal.



**Fig 8. 892/00846**

**Note:** - used with braided cutting wire (below) to cut out broken glass.





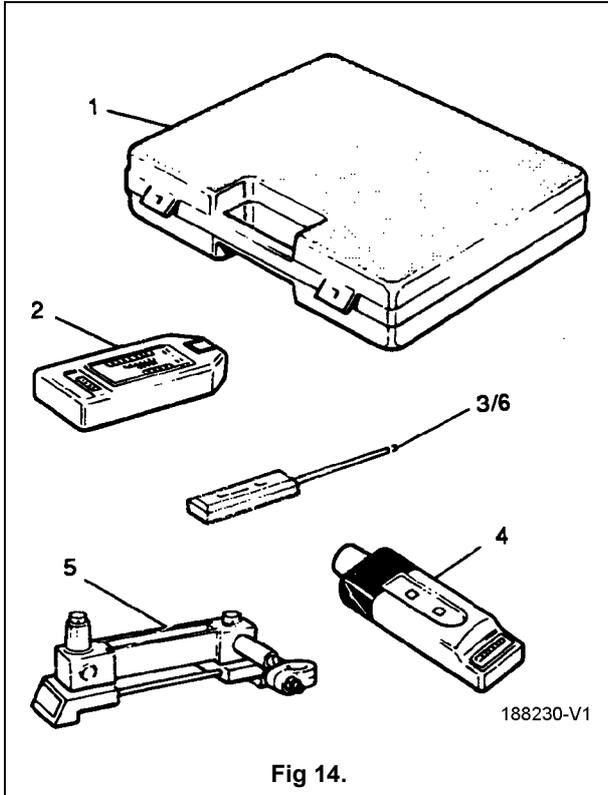
**Numerical List Section C - Electrics**

The tools listed in the table are special tools required for testing electrics. These tools are available from JCB Service .

**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.*

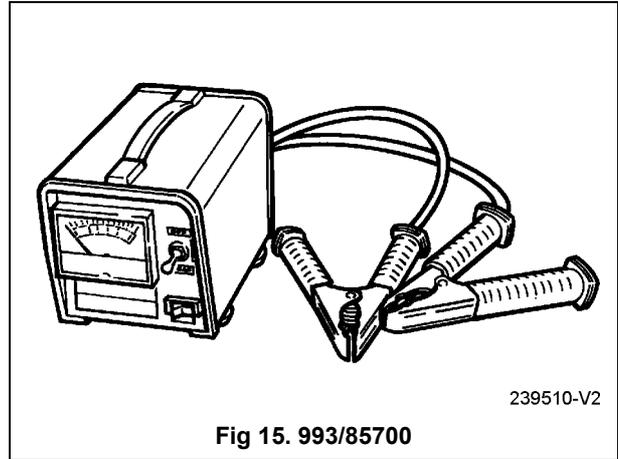
<b>Part Number</b>	<b>Description</b>	<b>Tool Detail Reference</b>
892/00282	Shunt	<a href="#">⇒ Fig 14. (□ 1-10)</a>
892/00283	Tool Kit Case	<a href="#">⇒ Fig 14. (□ 1-10)</a>
892/00284	Digital Tachometer	<a href="#">⇒ Fig 14. (□ 1-10)</a>
892/00285	Hyd. Oil Temperature Probe	<a href="#">⇒ Fig 14. (□ 1-10)</a>
892/00286	Surface Temperature Probe	<a href="#">⇒ Fig 14. (□ 1-10)</a>
892/00298	Fluke Meter	<a href="#">⇒ Fig 14. (□ 1-10)</a>
993/85700	Battery Tester	<a href="#">⇒ Fig 15. (□ 1-10)</a>

**Tool Detail Reference Section C - Electrics**



**Fig 14.**

1	892/00283 Tool Kit Case
2	892/00298 Fluke Meter
3	892/00286 Surface Temperature Probe
4	892/00284 Venture Microtach Digital Tachometer
5	892/00282 100 amp Shunt - open type
6	892/00285 Hydraulic Temperature Probe



**Fig 15. 993/85700**

239510-V2

### Numerical List Section E - Hydraulics

The tools listed in the table are special tools required for testing, removing and replacing hydraulics. These tools are available from JCB Service .

**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	Tool Detail Reference
1406/0011	Bonded Washer	<a href="#">⇒ Fig 18. ( 1-14)</a>
1406/0014	Bonded Washer	<a href="#">⇒ Fig 18. ( 1-14)</a>
1406/0018	Bonded Washer	<a href="#">⇒ Fig 18. ( 1-14)</a>
1406/0021	Bonded Washer	<a href="#">⇒ Fig 18. ( 1-14)</a>
1406/0029	Bonded Washer	<a href="#">⇒ Fig 18. ( 1-14)</a>
1604/0006	Adapter	<a href="#">⇒ Fig 19. ( 1-14)</a>
1612/0006	Adapter	<a href="#">⇒ Fig 19. ( 1-14)</a>
816/00189	Blanking Cap	<a href="#">⇒ Fig 21. ( 1-15)</a>
816/00190	Blanking Cap	<a href="#">⇒ Fig 21. ( 1-15)</a>
816/00193	Blanking Cap	<a href="#">⇒ Fig 21. ( 1-15)</a>
816/00196	Blanking Cap	<a href="#">⇒ Fig 21. ( 1-15)</a>
816/00197	Blanking Cap	<a href="#">⇒ Fig 21. ( 1-15)</a>
816/00294	Blanking Cap	<a href="#">⇒ Fig 21. ( 1-15)</a>
816/15118	Pressure Test Adapter	<a href="#">⇒ Fig 22. ( 1-15)</a>
816/20008	Adapter	<a href="#">⇒ Fig 19. ( 1-14)</a>
816/55038	Pressure Test Adapter	<a href="#">⇒ Fig 17. ( 1-14)</a>
816/55040	Pressure Test Adapter	<a href="#">⇒ Fig 17. ( 1-14)</a>
892/00039	Spool Clamp	<a href="#">⇒ Fig 25. ( 1-16)</a>
892/00055	Blanking Plug	<a href="#">⇒ Fig 20. ( 1-15)</a>
892/00056	Blanking Plug	<a href="#">⇒ Fig 20. ( 1-15)</a>
892/00057	Blanking Plug	<a href="#">⇒ Fig 20. ( 1-15)</a>
892/00058	Blanking Plug	<a href="#">⇒ Fig 20. ( 1-15)</a>
892/00059	Blanking Plug	<a href="#">⇒ Fig 20. ( 1-15)</a>
892/00060	Blanking Plug	<a href="#">⇒ Fig 20. ( 1-15)</a>
892/00074	Female Connector	<a href="#">⇒ Fig 23. ( 1-15)</a>
892/00075	Female Connector	<a href="#">⇒ Fig 23. ( 1-15)</a>
892/00076	Female Connector	<a href="#">⇒ Fig 23. ( 1-15)</a>
892/00077	Female Connector	<a href="#">⇒ Fig 23. ( 1-15)</a>
892/00137	Micro-Bore Hose	<a href="#">⇒ Fig 26. ( 1-16)</a>
892/00223	Hand Pump	<a href="#">⇒ Fig 26. ( 1-16)</a>
892/00239	Charging Tool	<a href="#">⇒ Fig 27. ( 1-16)</a>

Part Number	Description	Tool Detail Reference
892/00253	Pressure Test Kit	⇒ <a href="#">Fig 16. (1-14)</a>
892/00255	Pressure Test Adaptor	⇒ <a href="#">Fig 22. (1-15)</a>
892/00256	Pressure Test Adaptor	⇒ <a href="#">Fig 22. (1-15)</a>
892/00257	Pressure Test Adaptor	⇒ <a href="#">Fig 22. (1-15)</a>
892/00258	Pressure Test Adaptor	⇒ <a href="#">Fig 22. (1-15)</a>
892/00259	Pressure Test Adaptor	⇒ <a href="#">Fig 22. (1-15)</a>
892/00260	Pressure Test Adaptor	⇒ <a href="#">Fig 22. (1-15)</a>
892/00261	Pressure Test Adaptor	⇒ <a href="#">Fig 22. (1-15)</a>
892/00262	Pressure Test Adaptor	⇒ <a href="#">Fig 26. (1-16)</a>
892/00263	Pressure Test Adaptor	⇒ <a href="#">Fig 17. (1-14)</a>
892/00264	Pressure Test Adaptor	⇒ <a href="#">Fig 17. (1-14)</a>
892/00265	Pressure Test Adaptor	⇒ <a href="#">Fig 17. (1-14)</a>
892/00268	Flow Monitoring Unit	⇒ <a href="#">Fig 19. (1-14)</a>
892/00269	Sensor Head	⇒ <a href="#">Fig 19. (1-14)</a>
892/00270	Load Valve	⇒ <a href="#">Fig 19. (1-14)</a>
892/00274	Adapter	⇒ <a href="#">Fig 26. (1-16)</a>
892/00275	Adapter	⇒ <a href="#">Fig 19. (1-14)</a>
892/00279	Gauge	⇒ <a href="#">Fig 26. (1-16)</a>
892/00309	A.R.V. Pressure Test Kit	⇒ <a href="#">Fig 28. (1-17)</a>
892/00335	A.R.V. Cartridge Removal Tool	⇒ <a href="#">Fig 28. (1-17)</a>
892/00340	Test Block Body	⇒ <a href="#">Fig 28. (1-17)</a>
892/00341	Setting Body	⇒ <a href="#">Fig 28. (1-17)</a>
892/00343	Spanner	⇒ <a href="#">Fig 28. (1-17)</a>
892/00345	Anti-cavitation Lock Out Bung	⇒ <a href="#">Fig 28. (1-17)</a>
892/00706	Test Probe	⇒ <a href="#">Fig 26. (1-16)</a>
892/00948	Charging Tool	⇒ <a href="#">Fig 27. (1-16)</a>
892/01042	Charging Tool	⇒ <a href="#">Fig 27. (1-16)</a>
892/01043	Adapter	⇒ <a href="#">Fig 27. (1-16)</a>
992/09300	Spanner	⇒ <a href="#">Fig 24. (1-16)</a>
992/09400	Spanner	⇒ <a href="#">Fig 24. (1-16)</a>
992/09500	Spanner	⇒ <a href="#">Fig 24. (1-16)</a>
992/09600	Spanner	⇒ <a href="#">Fig 24. (1-16)</a>
992/09700	Spanner	⇒ <a href="#">Fig 24. (1-16)</a>
992/10000	Spanner	⇒ <a href="#">Fig 24. (1-16)</a>
992/10100	Spool Clamp	⇒ <a href="#">Fig 25. (1-16)</a>
993/68300	Adjusting Pin	⇒ <a href="#">Fig 28. (1-17)</a>



## Section 1 - General Information Service Tools

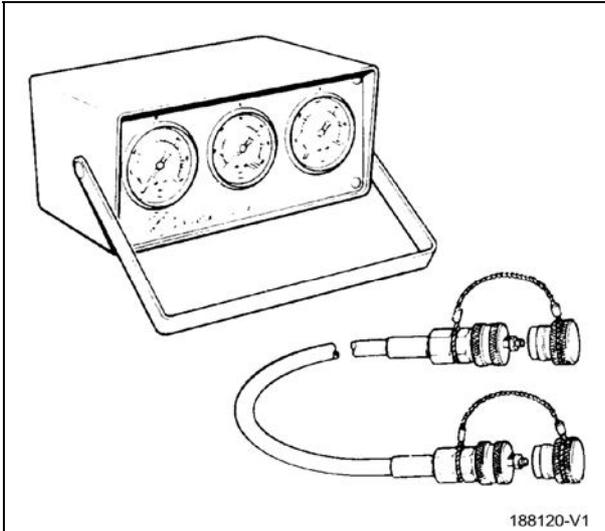
Numerical List Section E - Hydraulics

The following parts are replacement items for kits and would normally be included in the kit numbers above.

Replacement items for kit no. 892/00253

<b>Part Number</b>	<b>Description</b>	<b>Tool Detail Reference</b>
892/00201	Replacement Gauge	<a href="#">⇒ Fig 16. (□ 1-14)</a>
892/00202	Replacement Gauge	<a href="#">⇒ Fig 16. (□ 1-14)</a>
892/00203	Replacement Gauge	<a href="#">⇒ Fig 16. (□ 1-14)</a>
892/00254	Replacement Hose	<a href="#">⇒ Fig 16. (□ 1-14)</a>

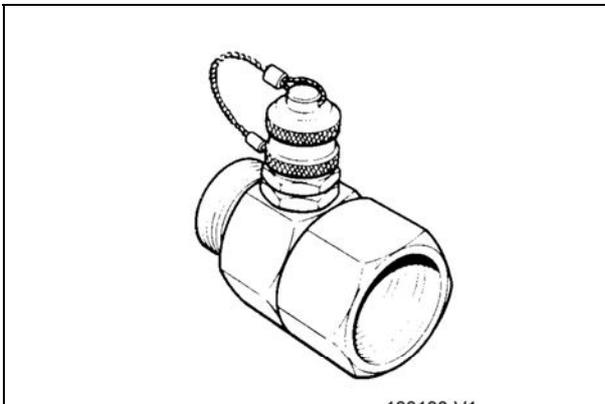
### Tool Detail Reference Section E- Hydraulics



188120-V1

**Fig 16. Hydraulic Circuit Pressure test Kit**

892/00253 Pressure Test Kit
892/00201 Replacement gauge 0-20 bar (0-300 lbf/in <sup>2</sup> )
892/00202 Replacement gauge 0-40 bar (0-600 lbf/in <sup>2</sup> )
892/00203 Replacement gauge 0-400 bar (0-6000 lbf/in <sup>2</sup> )
892/00254 Replacement Hose

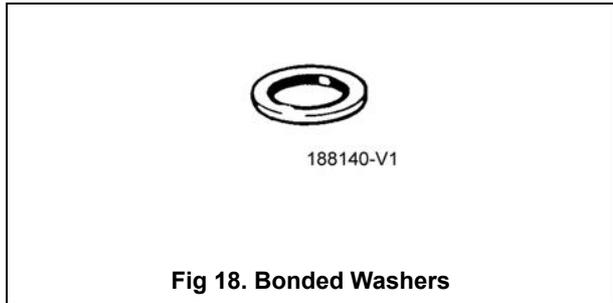


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**Fig 17. Pressure Test 'T' Adapters**

892/00262 1/4 in BSP x 1/4 in F BSP x Test Point
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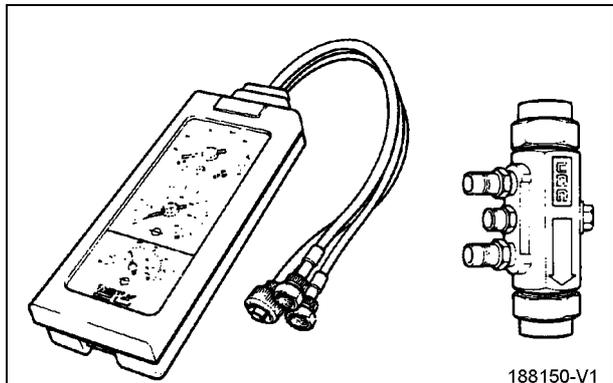
816/55038 3/8 in M BSP x 3/8 in F BSP x Test Point
816/55040 1/2 in M BSP x 1/2 in F BSP x Test Point
892/00263 5/8 in BSP x 5/8 in F BSP x Test Point
892/00264 3/4 in BSP x 3/4 in F BSP x Test Point
892/00265 1 in M BSP x 1 in F BSP x Test Point



188140-V1

**Fig 18. 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

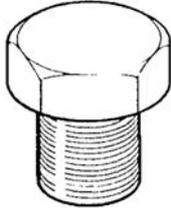


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**Fig 19. Flow Test Equipment**

892/00268 Flow Monitoring Unit
892/00269 Sensor Head 0 to 100 l/min (0 to 22 UK gal/min)
892/00270 Load Valve
1406/0021 Bonded Washer
1604/0006 Adapter 3/4 in M x 3/4 M BSP

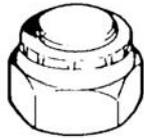
1612/0006 Adapter 3/4 in F x 3/4 M BSP
816/20008 Adapter 3/4 in F x 1/2 M BSP
892/00275 Adapter 1/2 in F x 3/4 M BSP



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**Fig 20. Female Cone Blanking Cap**

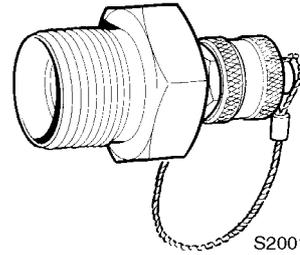
892/00055 1/4 in BSP
892/00056 3/8 in BSP
892/00057 1/2 in BSP
892/00058 5/8 in BSP
892/00059 3/4 in BSP
892/00060 1 in BSP



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**Fig 21. Male Cone Blanking Cap**

816/00294 1/4 in BSP
816/00189 3/8 in BSP
816/00190 1/2 in BSP
816/00197 5/8 in BSP
816/00196 3/4 in BSP
816/00193 1 in BSP



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**Fig 22. Pressure Test Adapters**

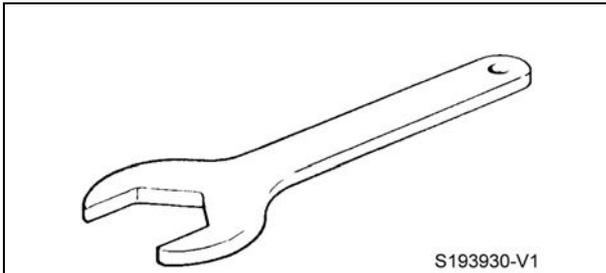
892/00255 1/4 in BSP x Test Point
892/00256 3/8 in BSP x Test Point
892/00257 1/2 in BSP x Test Point
892/00258 5/8 in BSP x Test Point
816/15118 3/4 in BSP x Test Point
892/00259 1 in BSP x Test Point
892/00260 1.1/4 in BSP x Test Point
892/00261 5/8 in UNF x Test Point



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**Fig 23. 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



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**Fig 24. Hexagon Spanners for Ram Pistons and End Caps**

992/09300 55 mm

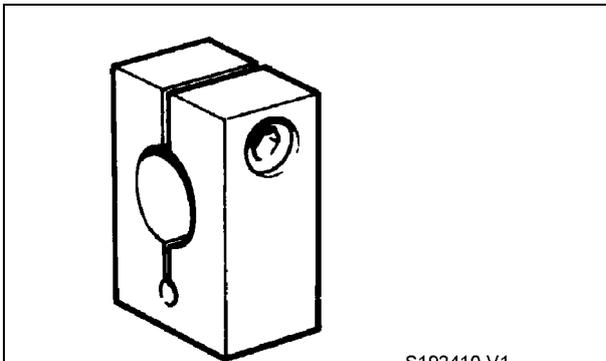
992/09400 65 mm

992/09500 75 mm

992/09600 85 mm

992/09700 95 mm

992/10000 125 mm

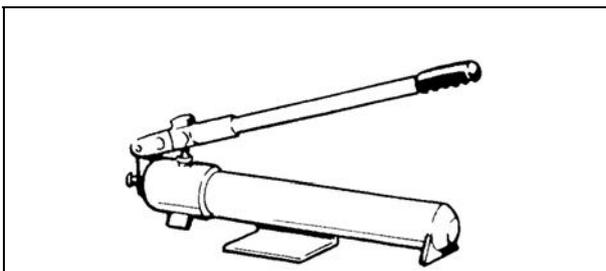


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**Fig 25. Spool Clamps**

892/00039 Spool Clamp

992/10100 Spool Clamp



S193850-V1

**Fig 26. Hand Pump Equipment**

892/00223 Hand Pump

892/00137 Micro-bore Hose 1/4 in BSP x 5 metres
892/00274 Adapter 1/4 in. M BSP x 3/8 in. M BSP Taper
892/00262 1/4 in M BSP x 1/4 in F BSP x Test Point
892/00706 Test Probe
892/00279 Gauge 0 - 400 bar (0 - 6000 lbf/in <sup>2</sup> )



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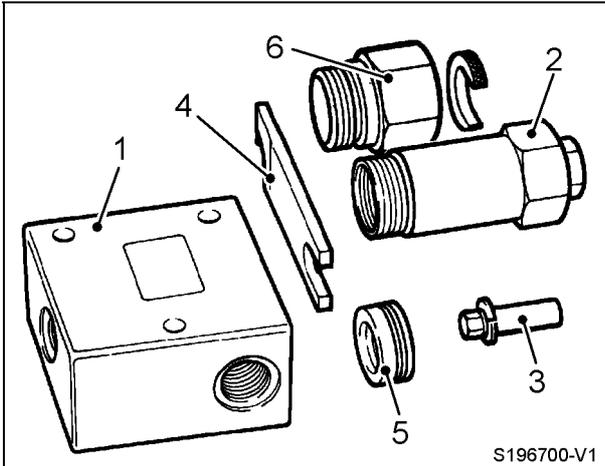
**Fig 27. Accumulator Charge Equipment**

892/00239 Charging Tool (Diaphragm Accumulators)

892/01042 Charging Tool (Diaphragm Accumulators)

892/01043 Adapter (use with 892/01042)

892/00948 Charging Tool (Piston Accumulators)



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**Fig 28. Components for Valve Block A.R.V. Testing**

892/00309 A.R.V. Pressure Test Kit
1 892/00340 Test Block Body
2 892/00341 Setting Body
3 993/68300 Adjusting Pin
4 892/00343 Spanner
5 892/00345 Anti-cavitation Lock Out Bung
6 892/00335 A.R.V. Cartridge Removal Tool



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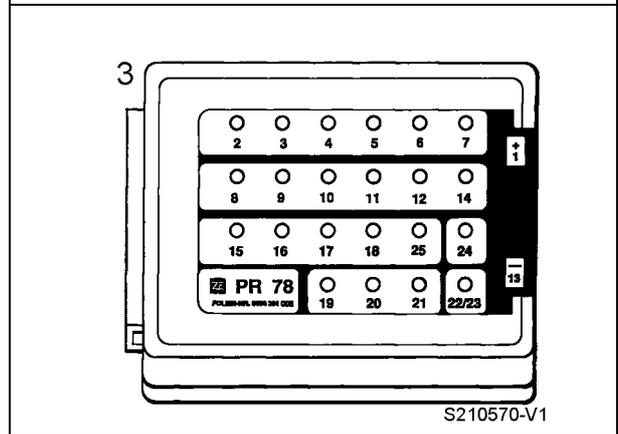
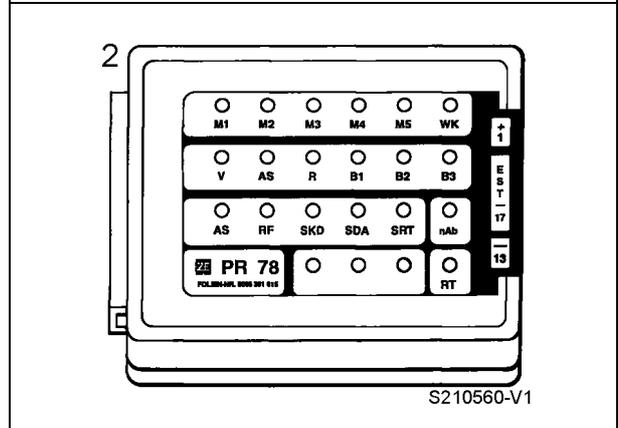
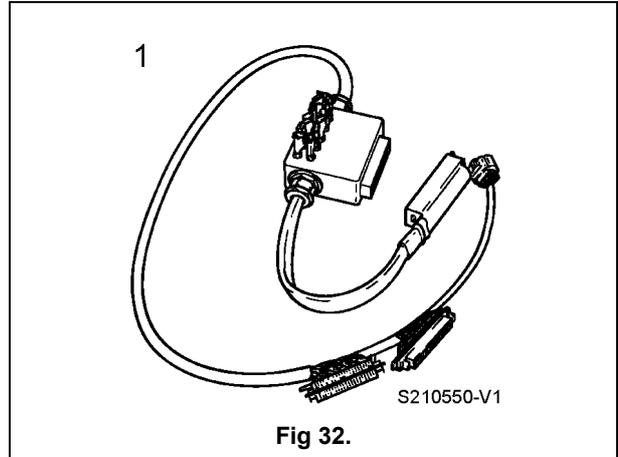
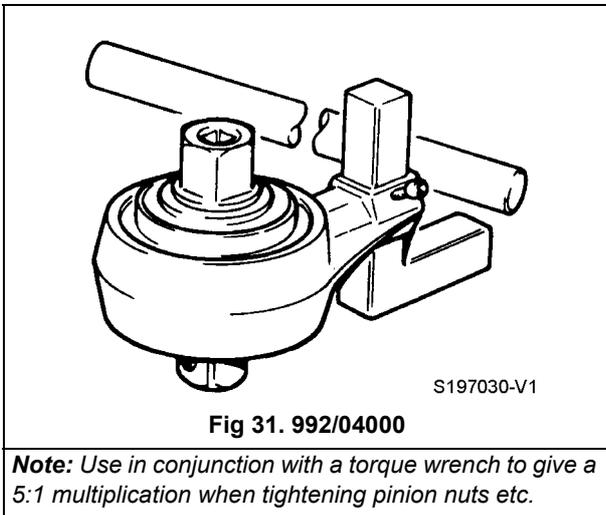
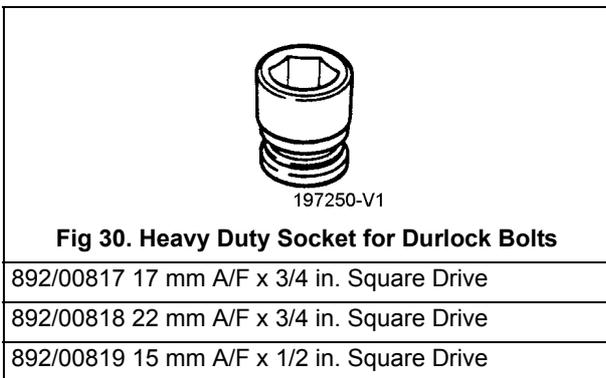
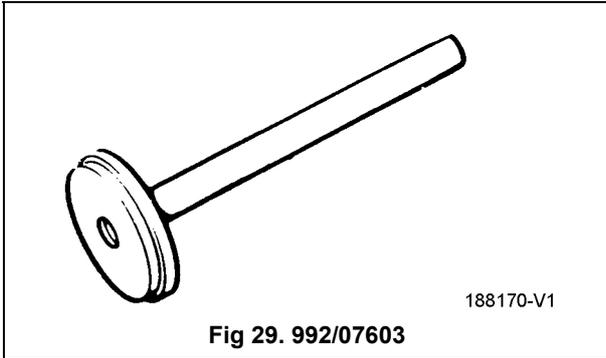
### Numerical List Section F - Transmission

The tools listed in the table are special tools required for removal and replacement of Body and Framework parts. These tools are available from JCB Service.

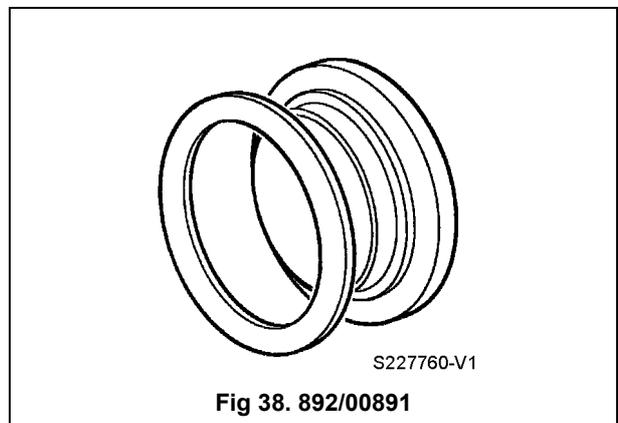
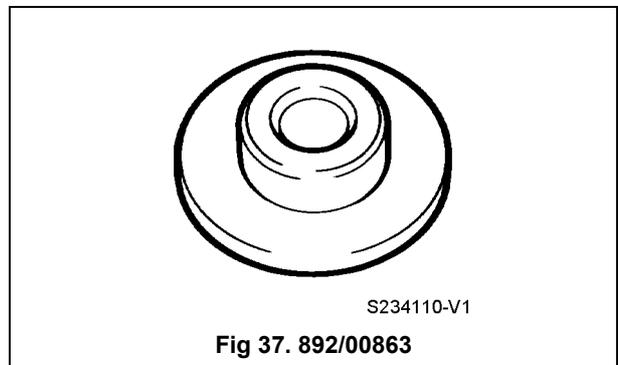
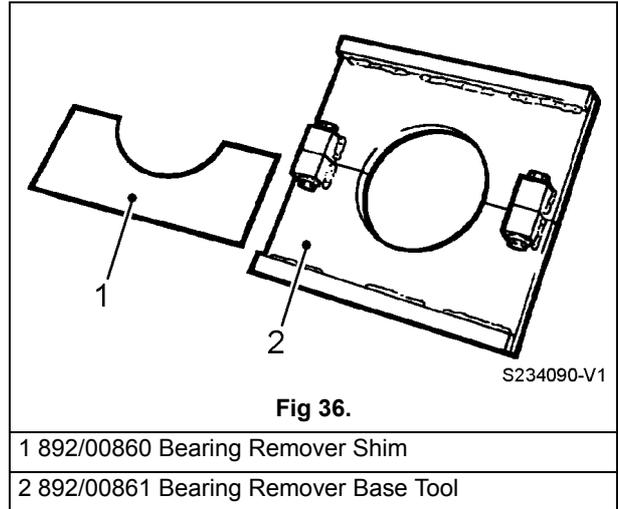
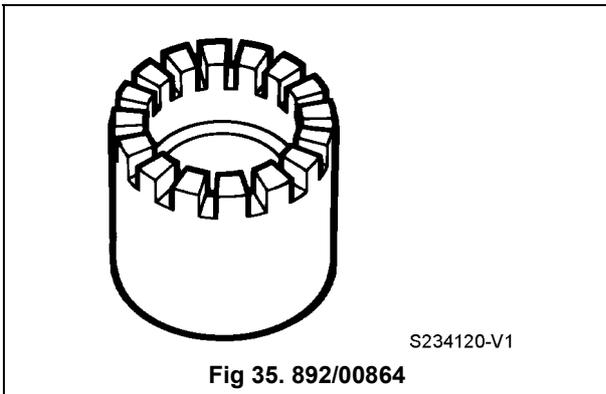
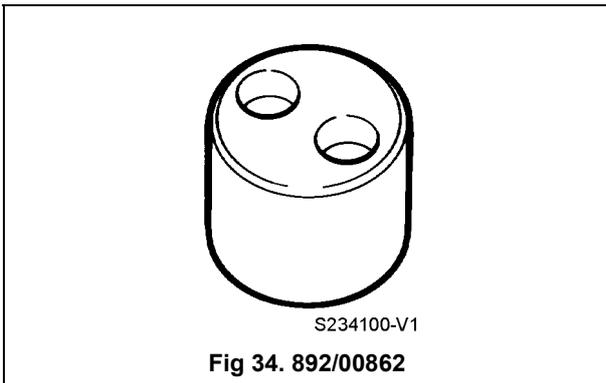
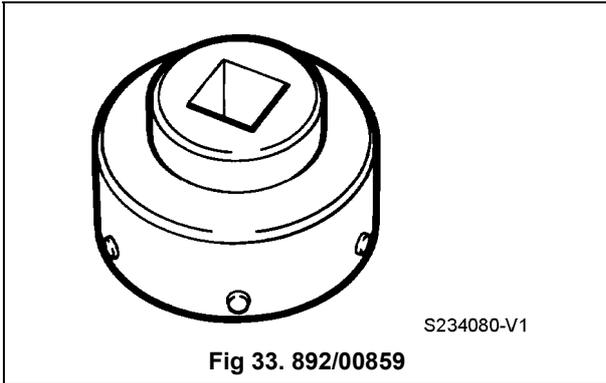
**Note:** Tools other than those listed will be required. It is expected that such general tools will be available in any well equipped workshop or be available locally from any good tool supplier.

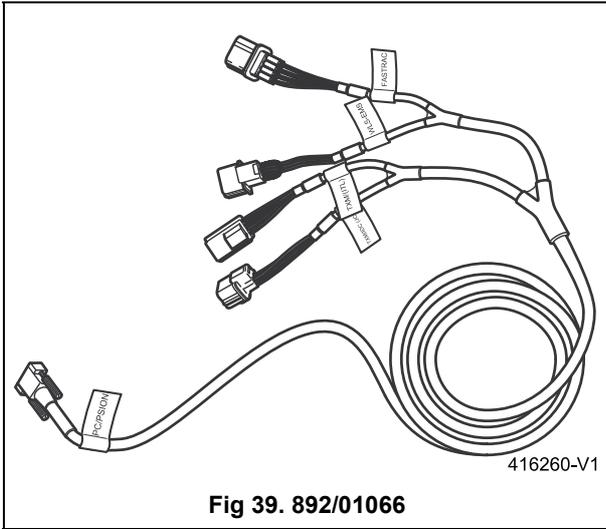
Part Number	Description	Tool Detail Reference
892/00817	Heavy Duty Socket	<a href="#">⇒ Fig 30. (□ 1-19)</a>
892/00818	Heavy Duty Socket	<a href="#">⇒ Fig 30. (□ 1-19)</a>
892/00819	Heavy Duty Socket	<a href="#">⇒ Fig 30. (□ 1-19)</a>
892/00859	Spanner Stake Nut	<a href="#">⇒ Fig 33. (□ 1-20)</a>
892/00860	Bearing Shim Remover	<a href="#">⇒ Fig 36. (□ 1-20)</a>
892/00861	Bearing Remover Base Tool	<a href="#">⇒ Fig 36. (□ 1-20)</a>
892/00862	Tab Washer Fitting Tool	<a href="#">⇒ Fig 33. (□ 1-20)</a>
892/00863	Blanking Plate Fitting Tool	<a href="#">⇒ Fig 37. (□ 1-20)</a>
892/00864	PD90 Locknut Spanner	<a href="#">⇒ Fig 35. (□ 1-20)</a>
892/00865	Computer Test Harness	<a href="#">⇒ Fig 32. (□ 1-19)</a>
892/00866	Computer Test Indicator Box	<a href="#">⇒ Fig 32. (□ 1-19)</a>
892/00867	Computer Test Interrogator Box	<a href="#">⇒ Fig 32. (□ 1-19)</a>
892/00891	Fitting Tool Assembly	<a href="#">⇒ Fig 38. (□ 1-20)</a>
892/01066	Interrogation lead	<a href="#">⇒ Fig 39. (□ 1-21)</a>
892/00909	Puller	<a href="#">⇒ Fig 35. (□ 1-20)</a>
992/04000	Torque Multiplier	<a href="#">⇒ Fig 31. (□ 1-19)</a>
992/07603	Replacer - Bearing Cup	<a href="#">⇒ Fig 29. (□ 1-19)</a>

### Tool Detail Reference Section F - Transmission



- 1 892/00865 Computer test harness
- 2 892/00866 Computer test indicator box
- 3 892/00867 Computer test interrogator box





**Fig 39. 892/01066**



## Section 1 - General Information Service Tools

Numerical List Section K - Engine

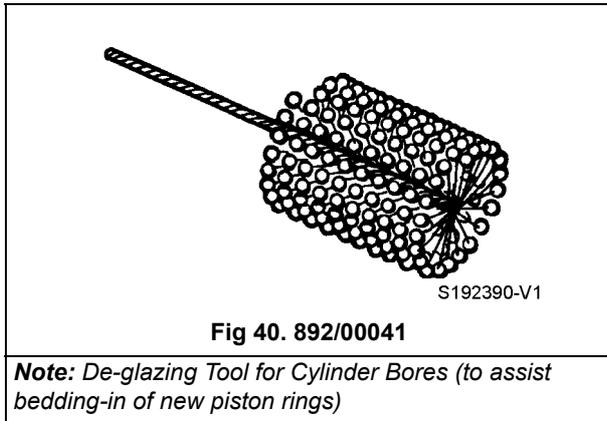
### Numerical List Section K - Engine

The tools listed in the table are special tools required for removal and replacement of Body and Framework parts. These tools are available from JCB Service.

**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	Tool Detail Reference
892/00041	De-glazing Tool	<a href="#">⇒ Fig 40. (□ 1-23)</a>

### Tool Detail Reference Section K - Engine



For details of other engine service tools refer to Perkins Service Manual Publication No. 9806/0100

## Service Consumables

### Sealing and Retaining Compounds

T11-001\_3

**Table 1.**

Type	Description	Part No.	Quantity
JCB Multi-Gasket	A medium strength sealant suitable for all sizes of gasket flanges, and for hydraulic fittings of 25-65 mm diameter.	4102/1212	50 ml
JCB High Strength Threadlocker	A high strength locking fluid for use with threaded components. Gasketing for all sizes of flange where the strength of the joint is important.	4102/0551	50 ml
JCB Retainer (High Strength)	For all retaining parts which are unlikely to be dismantled.	4101/0651	50 ml
JCB Threadlocker and Sealer	A medium strength locking fluid for sealing and retaining nuts, bolts, and screws up to 50 mm diameter, and for hydraulic fittings up to 25 mm diameter.	4101/0250	10 ml
		4101/0251	50 ml
JCB Threadlocker and Sealer (High Strength)	A high strength locking fluid for sealing and retaining nuts, bolts, and screws up to 50 mm diameter, and for hydraulic fittings up to 25 mm diameter.	4101/0550	10 ml
		4101/0552	200 ml
JCB Threadseal	A medium strength thread sealing compound.	4102/1951	50 ml
JCB Activator	A cleaning primer which speeds the curing rate of anaerobic products.	4104/0251	200 ml (Aerosol)
		4104/0253	1 ltr (Bottle)
JCB Cleaner/Degreaser	For degreasing components prior to use of anaerobic adhesives and sealants.	4104/1557	400 ml (Aerosol)
Direct Glazing Kit	For one pane of glass; comprises of: <ul style="list-style-type: none"> <li>- 1 x Ultra Fast Adhesive (310 ml)</li> <li>- 1 x Active Wipe 205 (30 ml)</li> <li>- 1 x Black Primer 206J (30 ml)</li> <li>- plus applicator nozzle etc.</li> </ul>	993/55700	
Ultra Fast Adhesive	For direct glazing.	4103/2109	310 ml
Active Wipe 205	For direct glazing.	4104/1203	250 ml
Black Primer 206J	For direct glazing.	4201/4906	30 ml
Clear Silicone Sealant	To seal butt jointed glass.	4102/0901	
Plastic to Metal Bonder	To seal plastic to metal joints.	4103/0956	50 g
Black Polyurethane Sealant	To finish exposed edges of laminated glass.	4102/2309	310 ml



Product: JCB 411,416 Wheeled Loader Service Repair Manual

Full Download: <https://www.arepairmanual.com/downloads/jcb-411416-wheeled-loader-service-repair-manual/>

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