



Service Manual

JS 200W

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Introduction

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 the whole machine.

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

- A = Optional Equipment**
- 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.

Page cross references are generally made by presenting the subject title printed in bold, followed by the title of the section containing the subject. For example:

“**24** If the axle is still on the machine, fit the brake calipers (see **Brake Caliper Removal and Replacement**, Section G).”

Note: If only the subject title in bold is given, i.e. no section title, the cross reference is to another part of the same section.

Use the contents list at the beginning of each section to find the exact page number.

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.

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Your machine has a Data Plate, located inside the cab, as shown at **A**. The machine serial number is inscribed at **B** and the engine number has two serial number plates **C** and **D**.

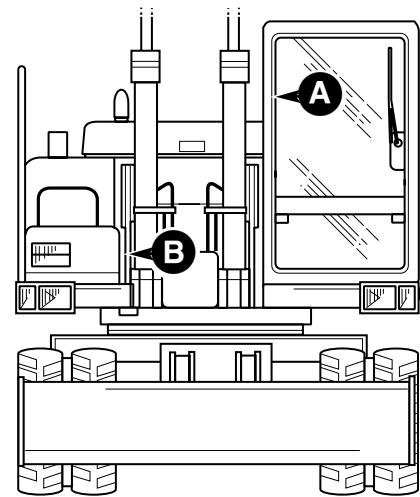
Tier 2 engine number plate is positioned at **E**.

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.

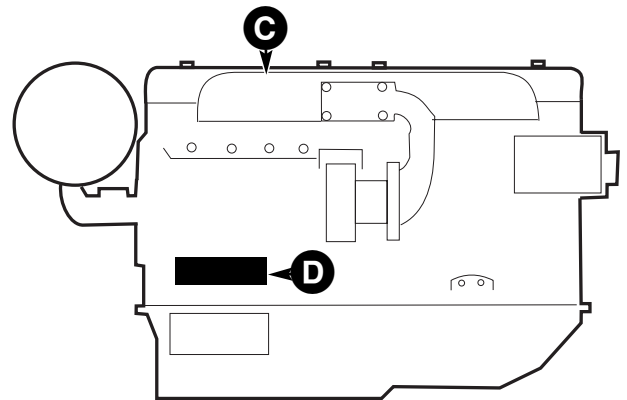
Typical Engine Identification Number

YH 50727 U 500405 D
L **M** **N** **O** **P**

- L** Engine Type
YH = 6 cylinder turbo
- M** Build Number
- N** Country of Origin
- O** Engine Sequence Number
- P** Year of Manufacture



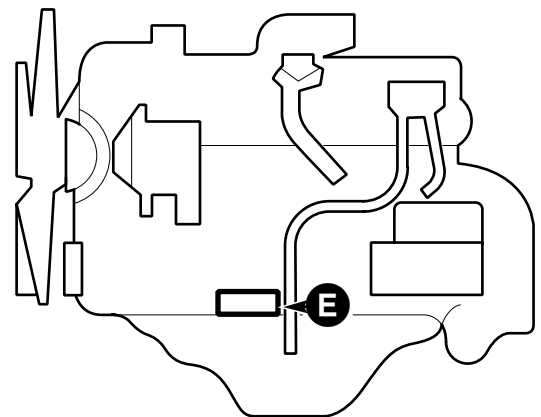
JS06050



Axle Serial Plate

The axle serial number is stamped on a plate mounted to the rear face of the axle.

- 1 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.
- 2 When ordering replacement parts, quote the details on the serial plate as shown.



JS06060

Torque Settings

Note 1: The figures quoted are for non-plated fasteners and are to be used only when there is no torque setting specified in the relevant procedure in this service manual.

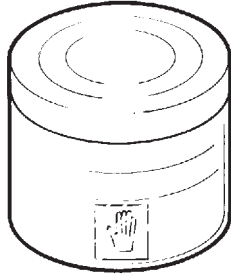
Note 2: The 4T grade settings DO NOT APPLY to fasteners used on the engine. If any 4T specification fasteners are found on the engine, these must be tightened to the figure quoted in the relevant engine manual.

Bolt Size	Strength Grade of Bolt or Stud											
	4T			8.8			10.9			12.9		
	Nm	kgf m	lbf ft	Nm	kgf m	lbf ft	Nm	kgf m	lbf ft	Nm	kgf m	lbf ft
M3	0.39	0.04	0.28	-	-	-	-	-	-	-	-	-
M4	0.78	0.08	0.57	-	-	-	-	-	-	-	-	-
M5	1.67	0.17	1.2	-	-	-	-	-	-	-	-	-
M6	2.84	0.29	2.1	8.04	0.82	5.9	11.3	1.15	8.3	-	-	-
M8	7.06	0.72	5.2	19.6	2.00	14.5	27.7	2.82	20.4	48.0	4.9	35
M10	14.0	1.43	10.3	39.1	3.99	28.8	55.0	5.61	40.6	94.0	9.6	69
M12	24.6	2.51	18.1	68.5	6.98	50.5	96.2	9.81	71	166	16.9	122
M16	61.9	6.31	45.7	173	17.6	127.6	242	24.7	178.5	400	40.8	295
M20	122	12.4	90	337	34.4	249	475	48.4	350	-	-	-
M22	167	17.0	123	464	47.3	342	652	66.5	481	-	-	-
M24	210	21.4	155	584	59.5	431	821	83.7	606	-	-	-
M27	311	31.7	229	864	88.1	637	1220	124	900	-	-	-
M30	420	42.8	310	1170	119	863	1650	168	1217	-	-	-
M33	576	58.7	425	1600	163	1180	2260	230	1667	-	-	-
M36	736	75.1	543	2050	209	1512	2880	294	2124	-	-	-
M39	961	98.0	709	2680	273	1977	3760	383	2773	-	-	-
M42	1190	121	878	3300	336	2434	4640	473	3422	-	-	-
M45	1490	152	1099	4140	422	3054	5820	593	4293	-	-	-
M48	1780	182	1312	4960	506	3659	6970	711	5141	-	-	-

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

Service Tools

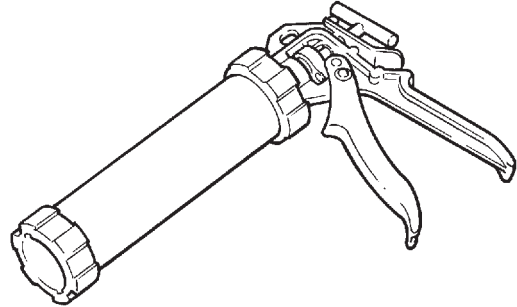
Body and Framework (Section B)



S186240

Hand Cleaner - special blend for the removal of polyurethane adhesives.

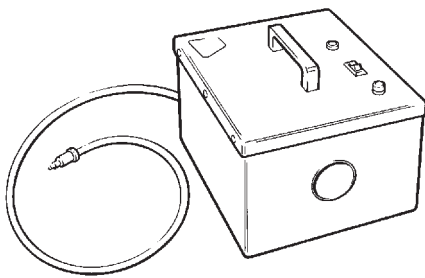
4104/1310 (454g; 1lb tub)



S186270

Cartridge Gun - hand operated - essential for the application of sealants, polyurethane materials etc.

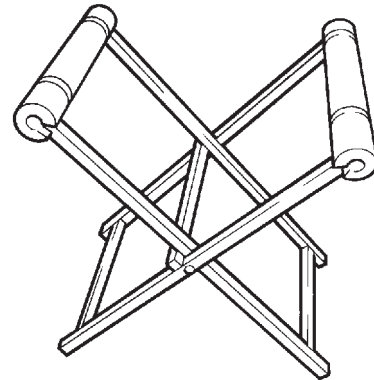
892/00845



S186250

12V Mobile Oven - 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).

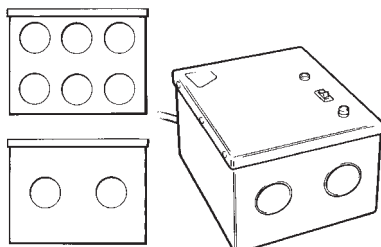
992/12300



S186280

Folding Stand for Holding Glass - essential for preparing new glass prior to installation.

892/00843

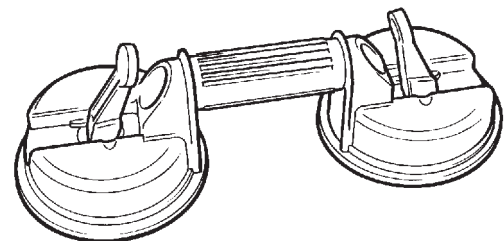


S186260

240V Static Oven - available with 2 or 6 cartridge capacity - required to pre-heat adhesive prior to use. No plug supplied. Note: 110V models available upon request - contact JCB Technical Service

992/12400 - 2 cartridge x 240V

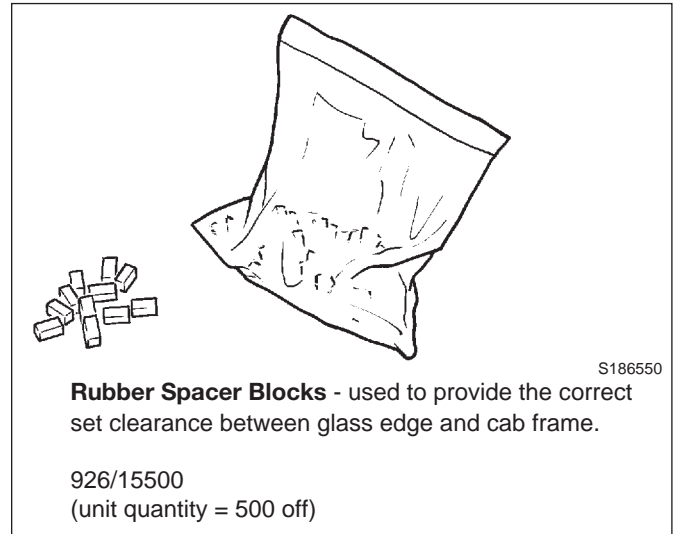
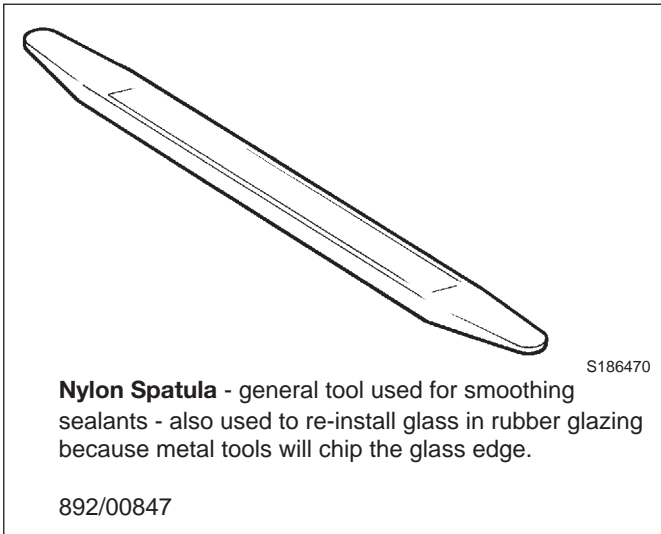
992/12600 - 6 cartridge x 240V



S186300

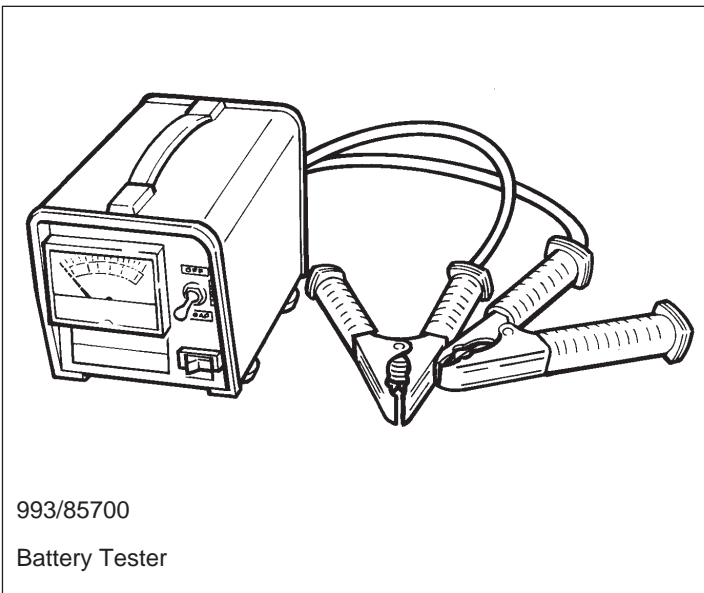
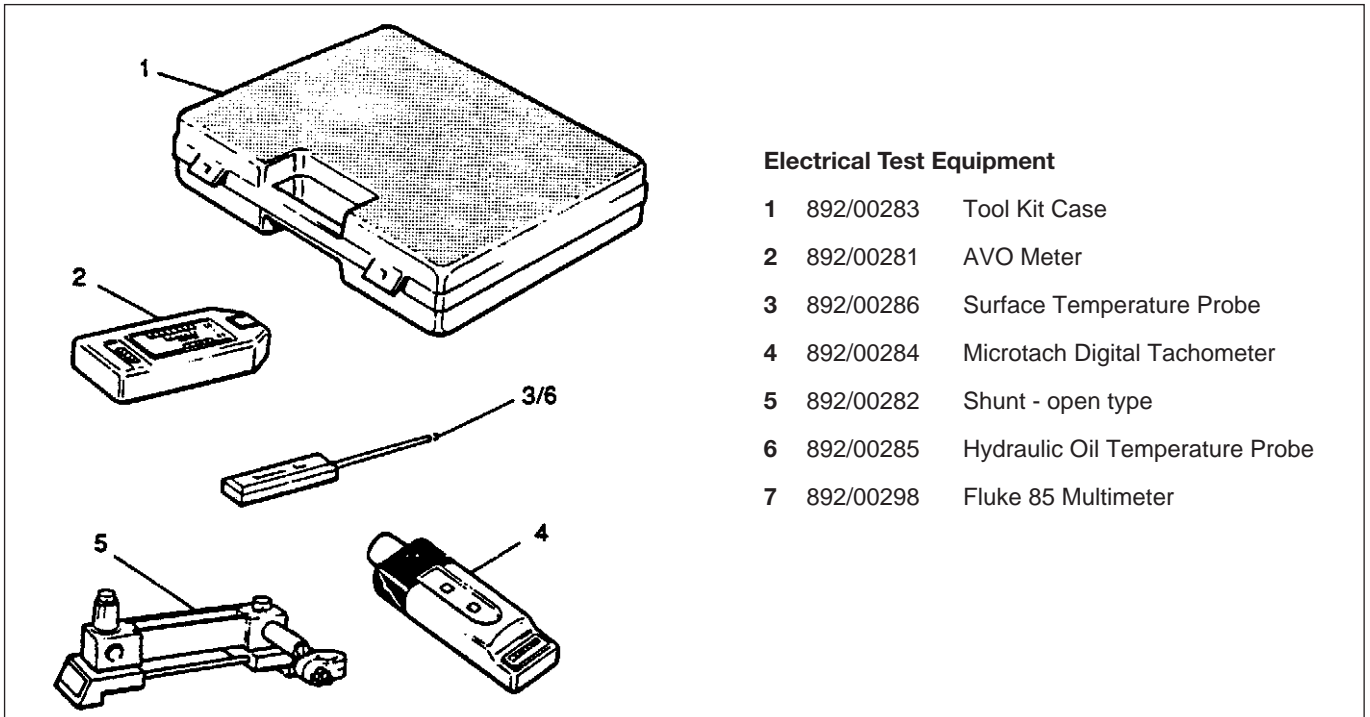
Glass Lifter - minimum 2 off - essential for glass installation, 2 required to handle large panes of glass. Ensure suction cups are protected from damage during storage.

892/00842

Service Tools (cont'd)**Body and Framework (Section B) (cont'd)**

Service Tools (cont'd)

Electrics (Section C)

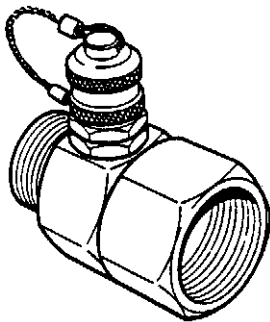
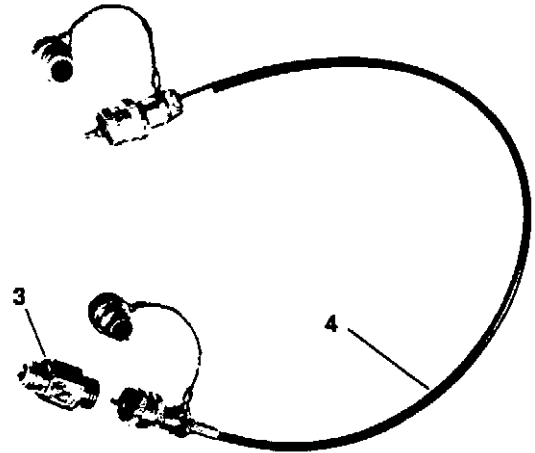
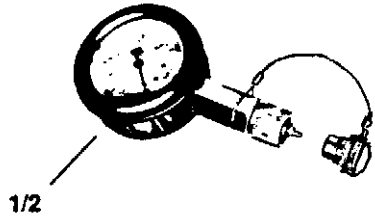


Service Tools (cont'd)

Hydraulics (Section E)

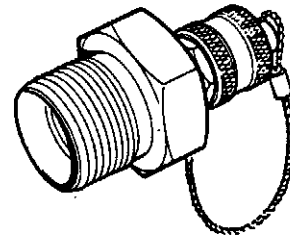
Hydraulic Pressure Test Gauges and Connections

- | | | |
|---|-----------|--|
| 1 | 892/00279 | Pressure Gauge 0-400 bar (0-6000 lbf/in ²) |
| 2 | 892/00346 | Pressure Gauge 0-70 bar (0-1000 lbf/in ²) |
| 3 | 892/00347 | Connector |
| 4 | 892/00254 | Hose |



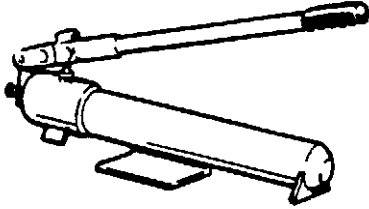
Pressure Test 'T' Adapters

- | | |
|-----------|--|
| 892/00262 | 1/4 in M BSP x 1/4 in F BSP x Test Point |
| 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 M BSP x 5/8 in F BSP x Test Point |
| 892/00264 | 3/4 in M BSP x 3/4 in F BSP x Test Point |
| 892/00265 | 1 in M BSP x 1 in F BSP x Test Point |
| 892/00266 | 1,1/4 in M BSP x 1,1/4 in F BSP x Test Point |
| 892/00267 | 1,1/2 in M BSP x 1,1/2 in F BSP x Test Point |

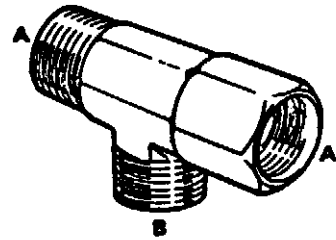


Pressure Test Adapters

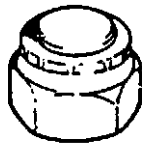
- | | |
|-----------|---------------------------|
| 892/00255 | 1/4 in BSP x Test Point |
| 892/00256 | 3/8 in BSP x Test Point |
| 892/00257 | 1/2 in BSP x Test Point |
| 892/00258 | 5/8 in BSP x Test Point |
| 816/15118 | 3/4 in BSP x Test Point |
| 892/00259 | 1 in BSP x Test Point |
| 892/00260 |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

Service Tools (cont'd)**Hydraulics (Section E) (cont'd)****Hand Pump Equipment**

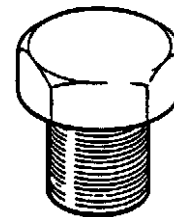
892/00223	Hand Pump
892/00137	Micro-bore Hose 1/4 in BSP x 5 metres
892/00274	Adapter 1/4 in M BSP x 3/8 in M BSP Taper
892/00262	1/4 in M BSP x 1/4 in F BSP x Test Point
892/00706	Test Probe
892/00278	Gauge 0 - 40 bar (0 - 600 lb/in ²)
892/00279	Gauge 0 - 400 bar (0 - 6000 lb/in ²)
892/00280	Gauge 0 - 600 bar (0 - 8500 lb/in ²)



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)
816/00018	1 in BSP (A) x 1 in BSP (B)

**Female Cone Blanking Plug**

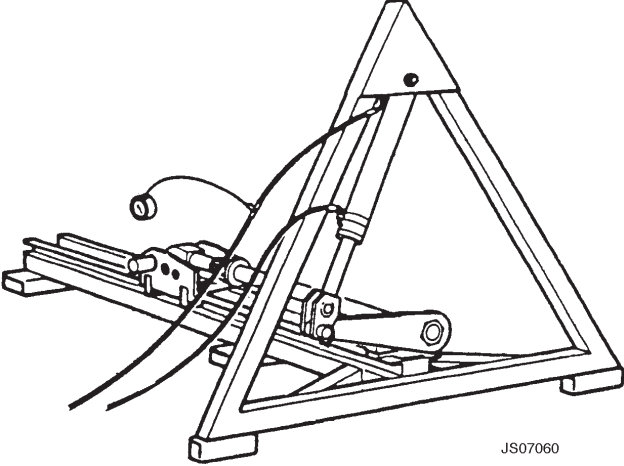
892/00055	1/4 in BSP
892/00056	3/8 in BSP
892/00057	1/2 in BSP
892/00058	5/8 in BSP
892/00059	3/4 in BSP
892/00060	1 in BSP

**Male Cone Blanking Plug**

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

Service Tools (cont'd)

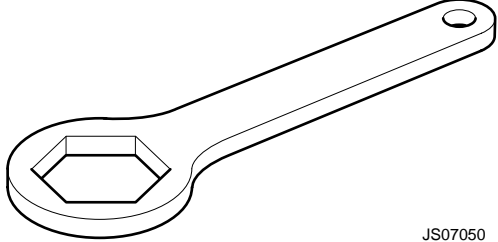
Hydraulics (Section E) (cont'd)



JS07060

Ram Piston Nut Removal/Fitting Rig

993/99525	Rig Assembly (not including spanners and ram)
993/99522	Anchor Side Plate (supplied loose unwelded)
993/99523	Anchor Cross Member (supplied loose unwelded)
993/99524	Ram Eye End Modification Plate Assembly
556/43400	Lift Ram
545/18000	Lynch Pin
811/50232	1,1/4" Pivot Pin



JS07050

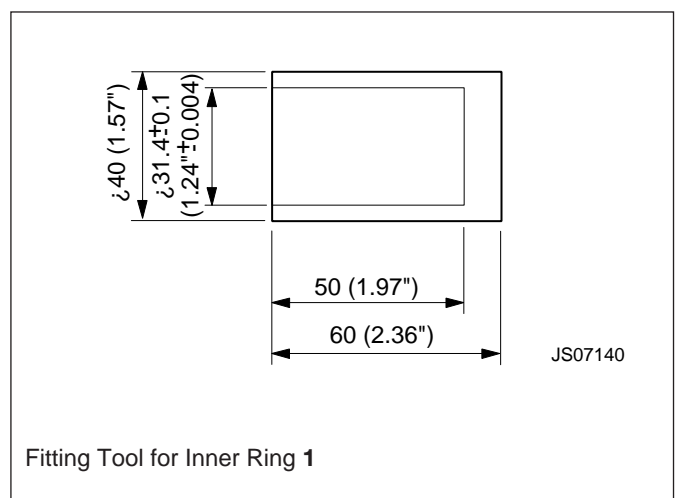
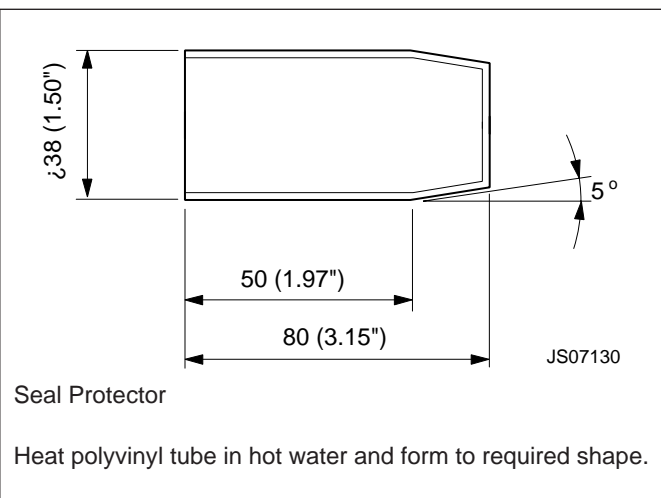
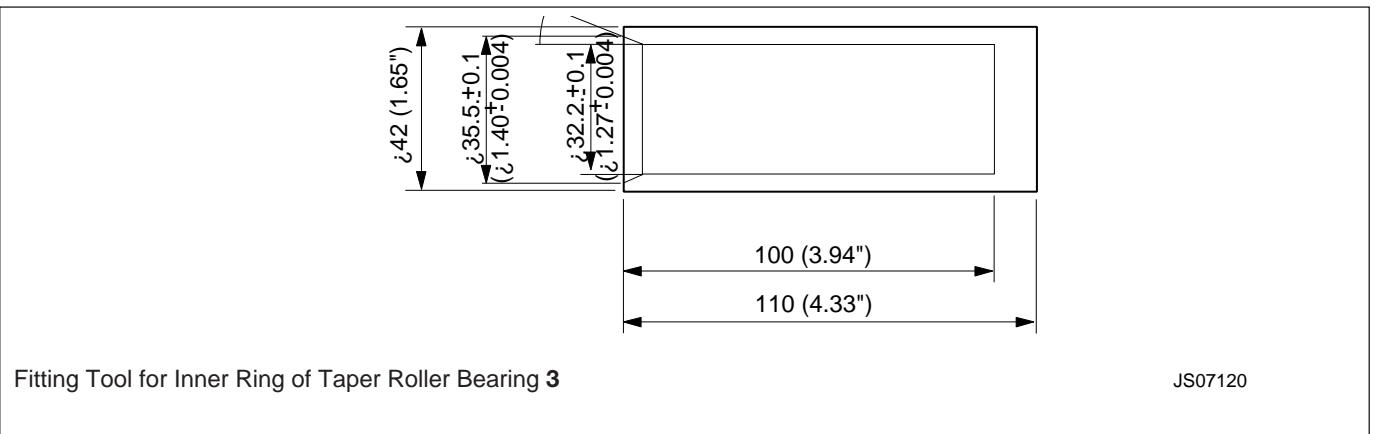
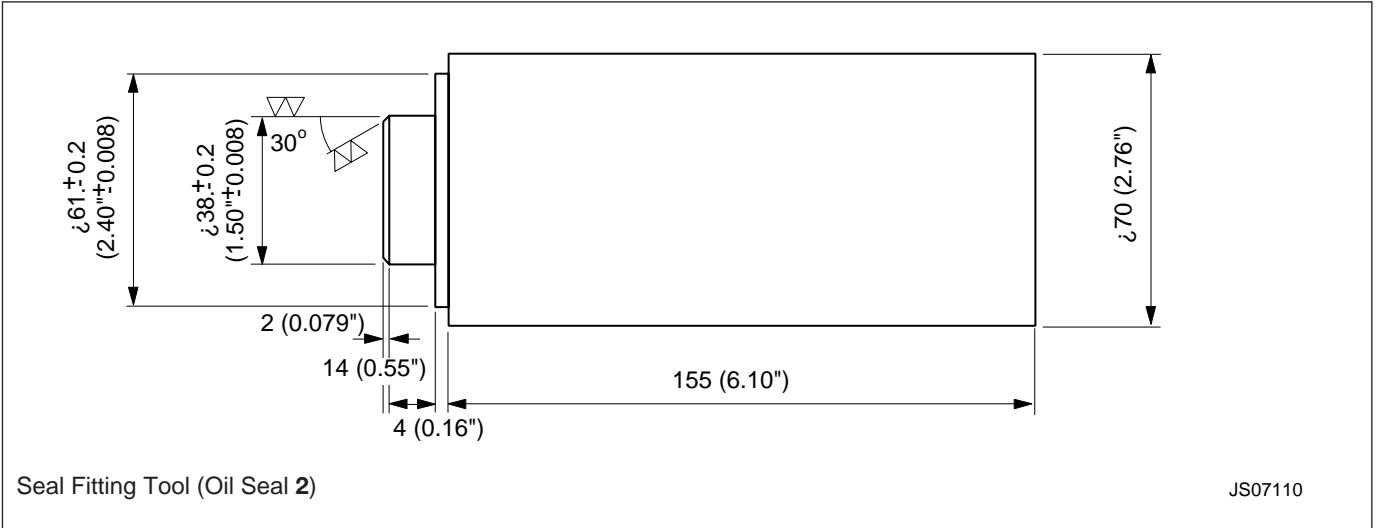
Ram Piston Nut Removal/Fitting Spanner

993/99512	Spanner 55 mm A/F
993/99513	Spanner 60 mm A/F
993/99514	Spanner 65 mm A/F
993/99515	Spanner 70 mm A/F
993/99516	Spanner 75 mm A/F
SSP0046	Spanner 80 mm A/F
993/99517	Spanner 85 mm A/F
993/99518	Spanner 90 mm A/F
SSP0047	Spanner 95 mm A/F
993/99519	Spanner 100 mm A/F
993/99520	Spanner 110 mm A/F
993/99521	Spanner 115 mm A/F

Service Tools (cont'd)

Hydraulics (Section E) (cont'd)

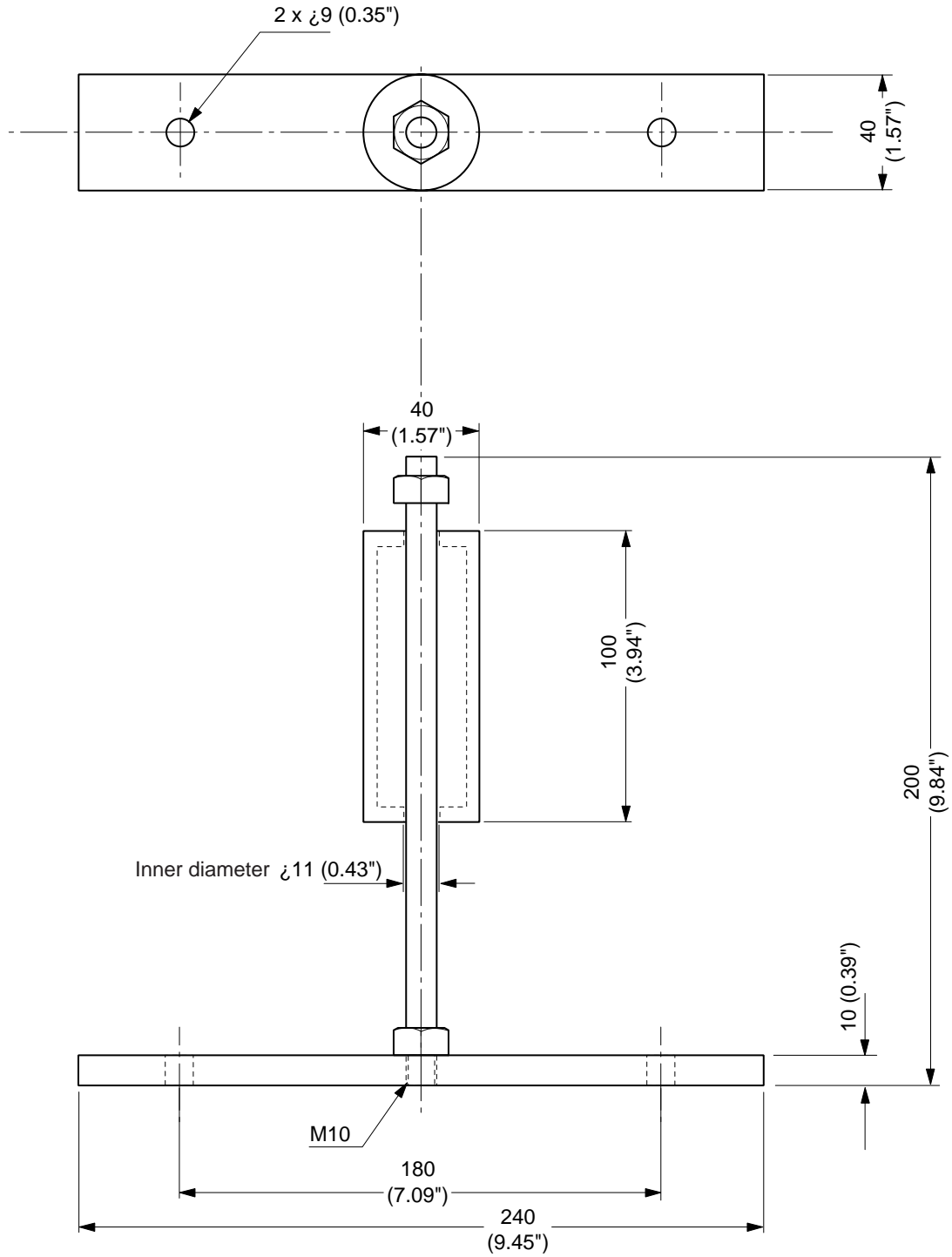
Slew Motor Unit



Service Tools (cont'd)

Hydraulics (Section E) (cont'd)

Slew Motor Unit



JS07100

Puller for Brake Piston

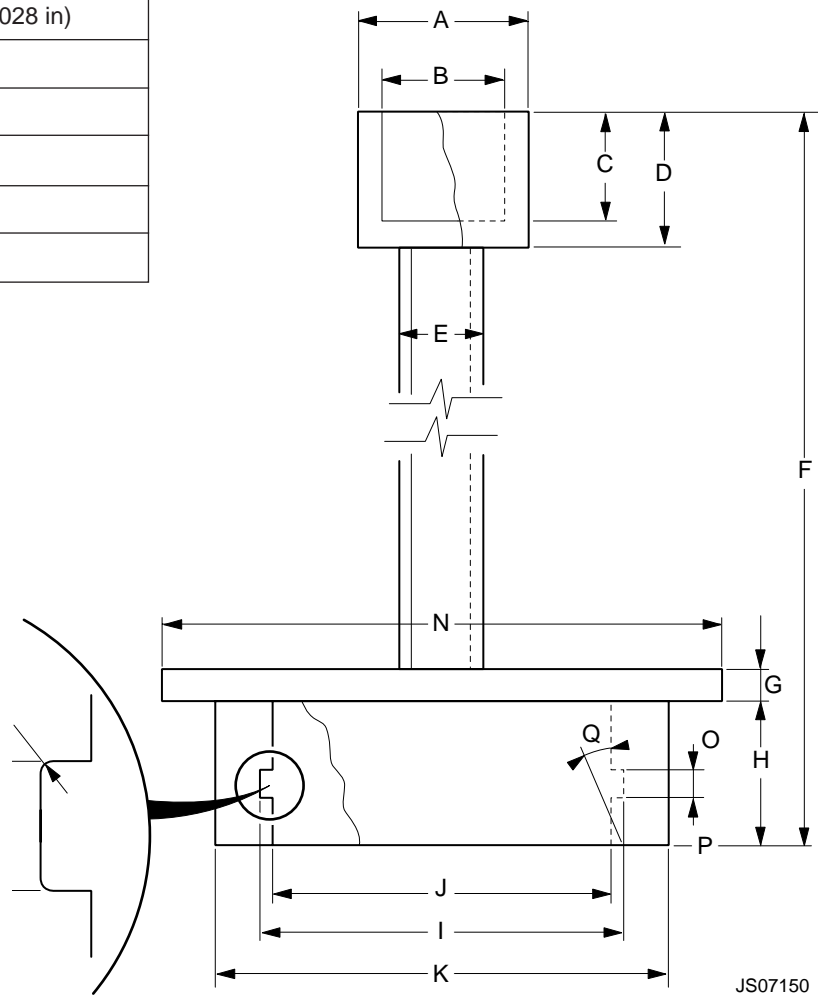
Stud is threaded M10 on both ends for 20 mm (0.8 in) and fitted with two M10 nuts.

Service Tools (cont'd)

Hydraulics (Section E) (cont'd)

Hydraulic Tank

A	Dia. 40 mm (1.57 in)
B	Dia. 26 mm (1.02 in)
C	40 mm (1.47 in)
D	50 mm (1.97 in)
E	Dia. 10 mm (0.39 in)
F	550 mm (21.7 in)
G	9 mm (0.35 in)
H	24 mm (0.94 in)
I	Dia. 81 mm $\begin{smallmatrix} +0 \\ -0.1 \end{smallmatrix}$ (3.91 in $\begin{smallmatrix} +0 \\ -0.004 \end{smallmatrix}$)
J	Dia. 76 mm $\begin{smallmatrix} +0 \\ -0.1 \end{smallmatrix}$ (2.99 in $\begin{smallmatrix} +0 \\ -0.004 \end{smallmatrix}$)
K	24 mm (0.94 in)
L	95 mm (3.74 in)
M	Radius 0.7 mm (0.028 in)
N	120 mm (16.5 in)
O	4.0 mm (0.157 in)
P	3.0 mm (0.118 in)
Q	15°
O-ring	G75



JS07150

Blank for Suction Strainer

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