

# Operating and Servicing Instructions for

# E P C O

# HYDRAULIC TROLLEY JACKS

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- (1) **This is an Arc Lift Jack** and care should be taken when lifting to see that the castor wheels are in line with the lifting arm, so that the Jack can travel under the load. Otherwise the lifting pad is liable to slip off, or put an undue strain on the point being lifted.
- (2) **For Easy Positioning** of the Jack under the point of lift, use the lever (73) on the left of the handle. If this lever is gripped in the left hand and the handle moved, the sliding dog (83) at the bottom of the handle will engage in the slots in the frame, making the handle and the Jack rigid. The Jack can then be pivoted on the castor wheels and positioned at will.
- (3) **Safety Device.** Remove Pivot pin (58) of Release operating cam (62) to prevent accidental lowering of Jack. Use also Axle stands for greater safety.
- (4) **Lowering the load.** Remembering the heavy load being dealt with, care should be taken not to lower too quickly. Gently pull the lever (73) on the right of the handle and lower the load under your perfect control.
- (5) **The correct amount of oil** must be kept in the oilbox. To check level, lower Jack fully, remove oilbox lid and fill with **EPCO Jack Oil** to  $\frac{1}{2}$ " of the top, and replace oilbox lid.

**IMPORTANT**—Hydraulic Brake Fluid, or oil with an alcoholic content must not be used, as it would cause the Ram Cup Leather (26) to become brittle and contract, with the result that the ram fails to hold the pressure.

The use of any other than **EPCO Jack Oil** or Vacuum 'Arctic' renders our guarantee null and void.

- (6) **Regular attention** should be given to your EPCO Jacks. Periodically clean, and lubricate all moving parts, inspect oilbox and tighten up glands, bolts, etc. Dirt and grit are the common enemies of hydraulic operated equipment.



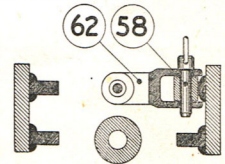
Part Number	Name of Part	Jack Model Number						
		70	75	80	85	90	95	100
78	Handle Bottom ... ..	16/-	17/-	16/-	18/-	17/-	19/-	18/-
80	Handle Bottom Lever ... ..	2/4	2/4	2/4	2/4	2/4	2/4	2/4
81	Handle Bottom Lever Screw ... ..	6d.	6d.	6d.	6d.	6d.	6d.	6d.
83	Release Bar ... ..	1/6	1/10	1/6	1/10	1/10	1/10	1/10
84	Handle Bottom Spring ... ..	1/-	1/-	1/-	1/-	1/-	1/-	1/-
86	Handle Bottom Bolt ... ..	1/4	1/11	1/11	2/1	2/-	2/1	2/-
87	Handle Bottom Tube ... ..	1/2	1/9	1/9	2/6	2/-	2/6	2/-
88	Castor Brackets (each) ... ..	7/6	9/-	9/-	9/-	9/-	9/-	9/-
89	Castor Thrust Race Balls (per set) ... ..	1/-	1/2	1/2	1/2	1/2	1/2	1/2
90	Castor Thrust Race Plates (1 Race) ... ..	2/-	2/3	2/3	2/3	2/3	2/3	2/3
91	Castor Forks and Centre Pin (each) ... ..	6/-	7/6	7/6	7/6	7/6	7/6	7/6
94	Castor Wheel Spindle ... ..	9d.	1/-	1/-	1/-	1/-	1/-	1/-

Part Number	Name of Part	Jack Model Number						
		70	75	80	85	90	95	100
95	Castor Wheel ... ..	1/6	2/-	2/-	2/-	2/-	2/-	2/-
99	Compensating Strap Bolts ... ..	1/3	1/3	1/3	1/6	1/6	2/-	1/6
101	Castor Centre Pin Retaining Screw and Nut ... ..	7d.	7d.	7d.	7d.	7d.	7d.	7d.
106	Handle Top Lever Screw ... ..	6d.	6d.	6d.	6d.	6d.	6d.	6d.
138	Medallion (Elephant) ... ..	3/6	3/6	3/6	3/6	3/6	3/6	3/6
139	L.P. Suction Valve Spring ... ..	1/2	1/4	1/4	1/4	1/4	1/6	1/4
	Handle Complete ... ..	45/-	48/6	45/-	52/6	52/6	55/-	52/6

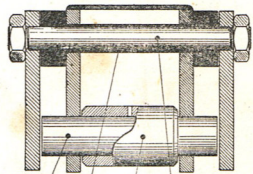
Jack Oil—per Quart 3/6; per 1/2 gal. 5/6; per 1 gal. 10/-

# SPARE PARTS FOR ALL MODELS

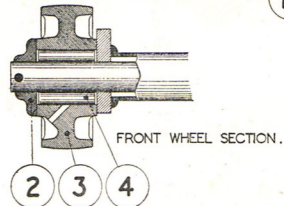
Please state part number, also Jack Model and Serial No. when ordering



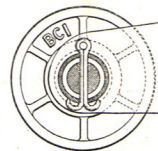
CAM BRACKET SECTION.



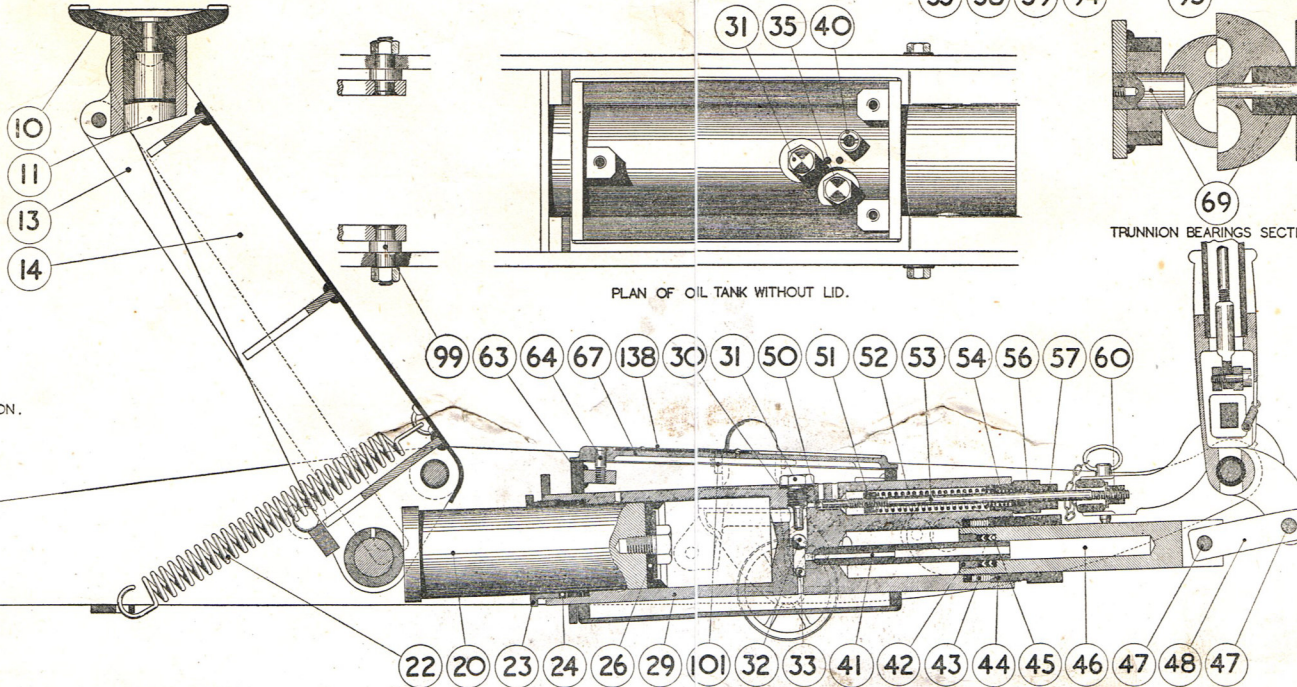
BELLCRANK BOLT SECTION.



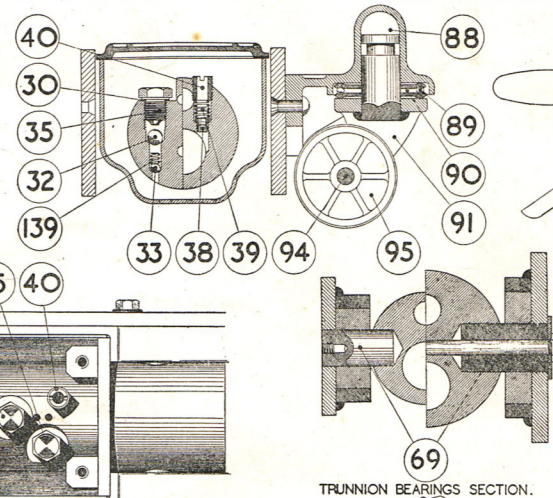
FRONT WHEEL SECTION.



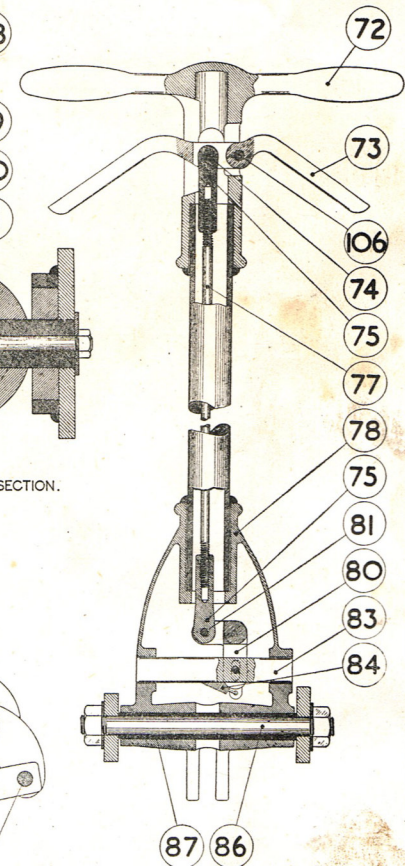
FRONT END OF JACK.



PLAN OF OIL TANK WITHOUT LID.

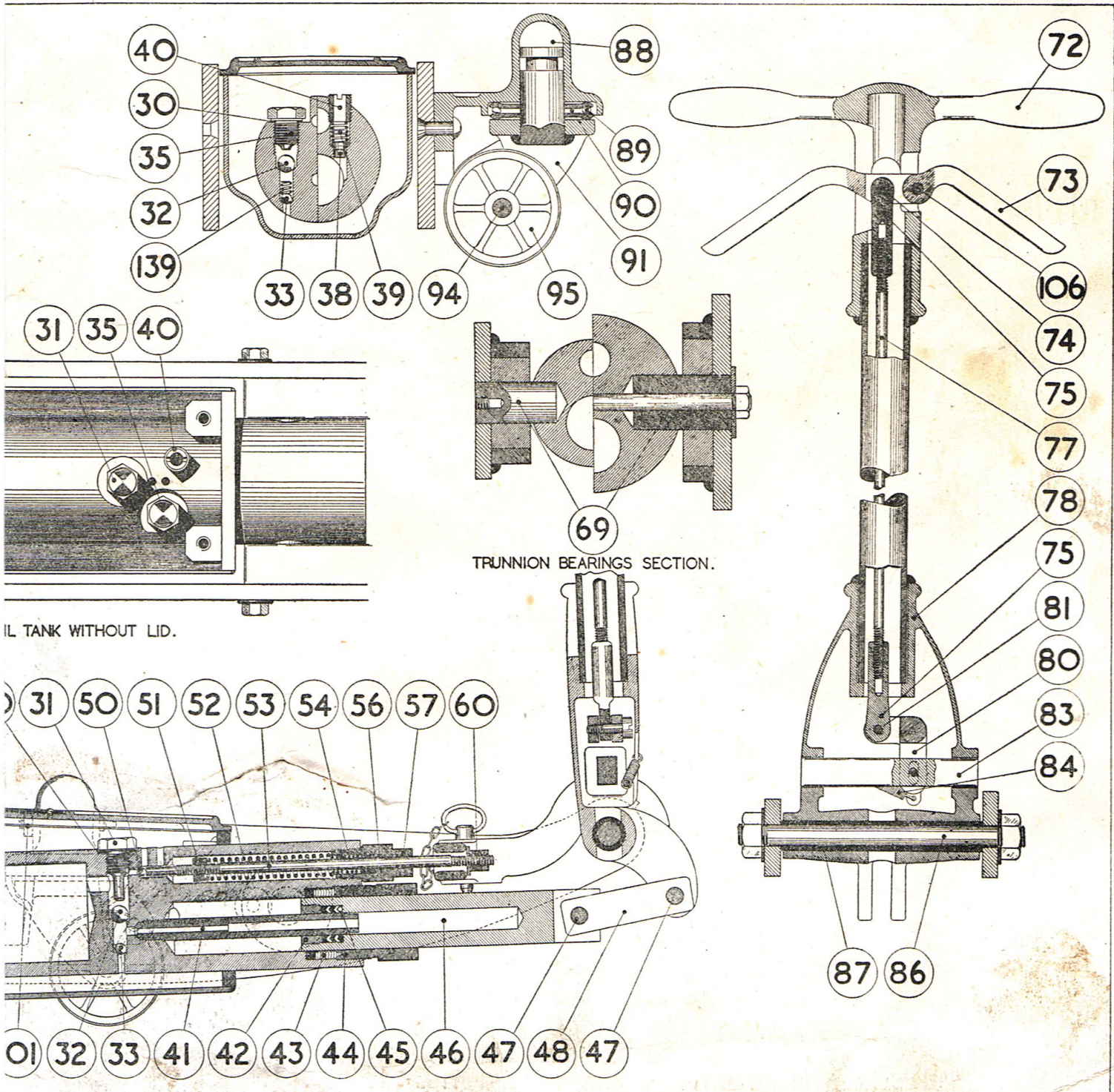


TRUNNION BEARINGS SECTION.



Part Number	Name of Part	Jack Model Number						
		70	75	80	85	90	95	100
95	Castor Wheel ... ..	1/6	2/-	2/-	2/-	2/-	2/-	2/-
99	Compensating Strap Bolts ... ..	1/3	1/3	1/3	1/6	1/6	2/-	1/6
101	Castor Centre Pin Retaining Screw and Nut	7d.	7d.	7d.	7d.	7d.	7d.	7d.
106	Handle Top Lever Screw ... ..	6d.	6d.	6d.	6d.	6d.	6d.	6d.
138	Medallion (Elephant) ... ..	3/6	3/6	3/6	3/6	3/6	3/6	3/6
139	L.P. Suction Valve Spring ... ..	1/2	1/4	1/4	1/4	1/4	1/6	1/4
	Handle Complete ... ..	45/-	48/6	45/-	52/6	52/6	55/-	52/6

Jack Oil—per Quart 3/6; per 1/2 gal. 5/6; per 1 gall. 10/-



## MAINTENANCE AND ADJUSTMENTS

**Chassis**—Grease nipples are provided for high-pressure greasing, situated as follows:—

Handle base (2). Bellcrank main bolt (2). Castor bracket spindles (2).

Oil holes in front and back wheels and other moving parts should be oiled regularly.

**Hydraulic Unit**—Pressure medium is pure hydraulic oil to Epco specification. No responsibility can be accepted if other oils are used, with the exception of Vacuum 'Arctic' Oil. Our experience shows that indifferent oil leads to trouble.

### **Hydraulic Brake Fluid must not be used.**

When refilling always filter the oil. To check level: lower Jack fully, remove the three screws in oilbox lid and fill to  $\frac{1}{2}$ " of the top. Do not overfill. The capacity is approximately twice that required.

**Remove Valves and Clean Out**—It is recommended for Hydraulic Trolley Jacks that the unit is emptied of oil and flushed out, and replenished with fresh clean oil at least every nine months. Remove lid and empty oil from oilbox. Take out High-Pressure Plug (31), Low Pressure Plug (35) and By-pass Valve (40). Turn Jack on its side and balls will roll out. Thoroughly clean and replace valves as follows:—

**Valve 31**—One small ball, one large ball and screwed plug.

**Valve 35**—One small ball, one large ball and screwed plug, with small coil distance spring incorporated between the two balls.

**Valve 40**—Mushroom by-pass valve, spring and screwed plug. Screw down sufficiently to obviate valve lifting under no load. This valve by-passes when load is being lifted. It is advantageous to re-seat the ball valves by giving the ball a sharp tap on its seating with a soft rod and hammer.

Fill up with filtered **EPCO Jack Oil** and pump up and release fully two or three times to expel air.

**To Remove Unit from Chassis**—Take off release cam (62) and pin (58) from handle link. Remove trunnion retaining screws and extract trunnions by means of screwed holes. Lift rear part of complete unit and slide out towards handle.

**To Remove Bellcrank Lever**—Lower to bottom, lift crosshead (11) clear, take off spring (22), remove one nut of centre bolt (16) and extract bolt. Bellcrank can then be lifted straight out.

**To Replace H.P. Packing**—Remove handle and connecting link pin (47), unscrew L.P. gland (44) slightly. Withdraw L.P. plunger (46). H.P. gland (42) can then be tightened. This should be tightened just enough to make the packing (45) tight on the H.P. ram. If packing is badly worn, new packings should be fitted. Replace L.P. plunger and tighten gland until packing lightly grips plunger.

**The Release Cam (65)** should have a working clearance of approximately  $\frac{1}{16}$ " from handle bottom. Adjust as follows: unlock locknuts (60) until this clearance is obtained, and re-lock. Care should be taken to see that the spindle (53) does not turn.

**To Replace Ram Cup Leather**—Remove unit from chassis, unscrew ram gland (23) and extract packing (24), then withdraw ram (20). Cup leather (26) on end of ram can then be replaced. Care should be taken when replacing ram that the lip of the leather is not damaged by the edge of the cylinder. Replace packings (24) making sure that the joints are staggered. Screw in gland (23) and tighten lightly to prevent seeping only.

### QUERIES AND ANSWERS

<u>Jack does not rise when handle is pumped.</u>	Examine oil level.
	Top up with correct grade of oil.
	Release cam bearing hard on handle bottom.
	Foreign matter keeping a ball valve off its seating.
	Ram cup leather not opening out to cylinder walls or porous (faulty).
	Release cam not actuating release spindle.
<u>Jack does not lower when release lever is operated.</u>	Ram gland too tight.
	See that all moving parts etc. are free.
	Broken return spring.
<u>See-sawing of Bellcrank when pumping.</u>	Foreign matter under delivery valve.
<u>If handle creeps to upright position, when load is being raised.</u>	Oil too heavy.
	Very cold weather (oil congealed).
<u>Jack handle missing half a stroke.</u>	Spring between delivery and suction valve missing.
	Foreign matter under release or delivery valve.
<u>Creeping down under load</u>	Faulty cup leather.
<u>External oil leaks.</u>	Tighten all glands.