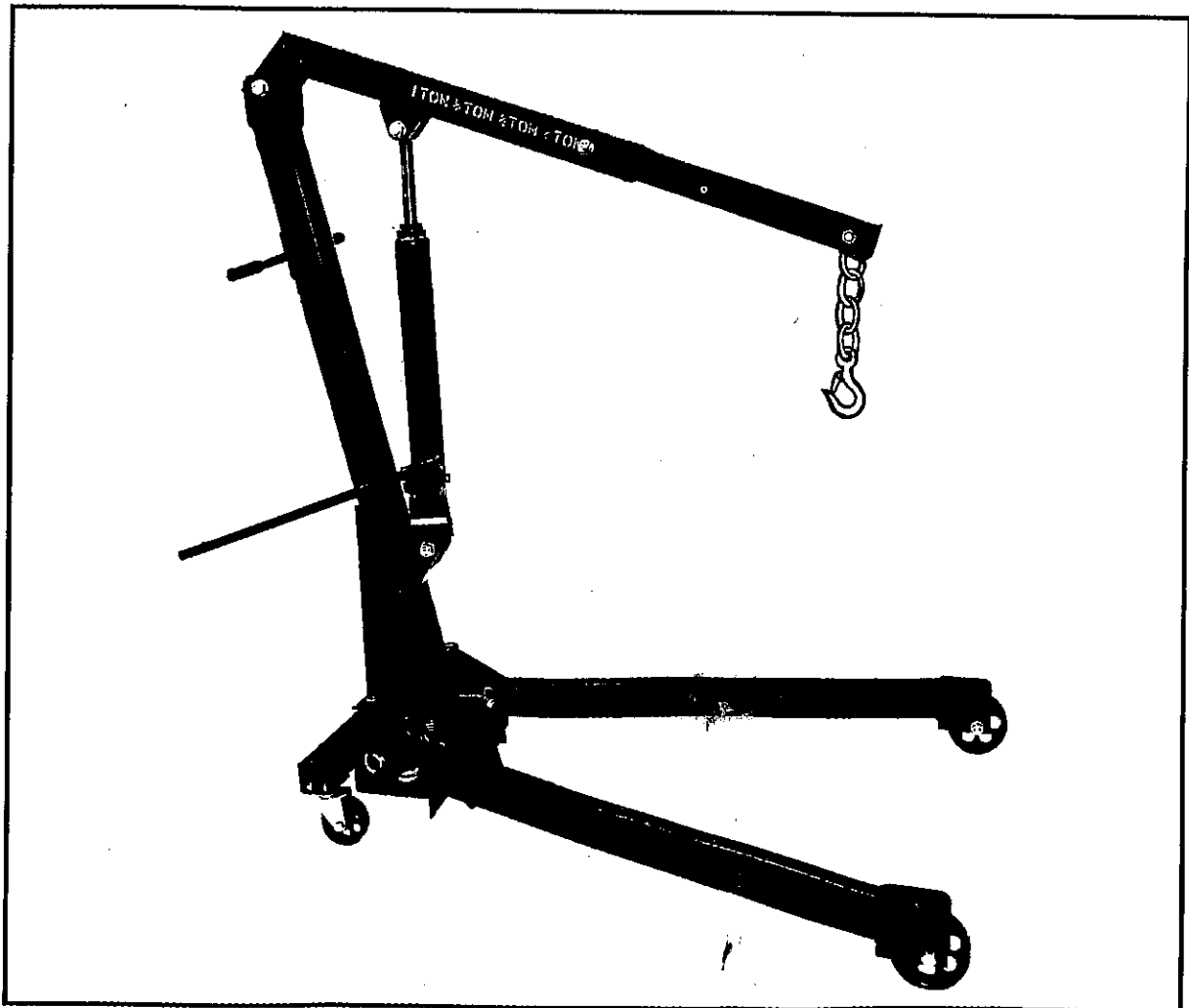


# HYDRAULIC ENGINE CRANE

## • INSTRUCTIONS •

IMPORTANT: IT IS IMPORTANT THAT YOU READ AND UNDERSTAND THIS INSTRUCTION MANUAL BEFORE USING YOUR ENGINE CRANE. ALWAYS ENSURE ITS CORRECT USE, WHICH WILL HELP PREVENT DAMAGE AND INJURY.



# SPECIFICATION

While every effort has been made to ensure accuracy of information given in this manual is correct at the time of going to print, we reserve the right to change specification without notice.

Lifting capacity position 1 .....	1000kg.
Lifting capacity position 2 .....	750kg.
Lifting capacity position 3 .....	500kg.
Lifting capacity position 4 .....	250kg.
Maximum lifting height min.jib ext .....	79 $\frac{1}{2}$ INCH.
Maximum lifting height max.jib ext .....	88 $\frac{1}{2}$ INCH.
Length of jib position 1 .....	35 $\frac{1}{2}$ INCH.
Length of jib position 2 .....	39 INCH.
Length of jib position 3 .....	42 $\frac{1}{2}$ INCH.
Length of jib position 4 .....	46 INCH.
Height of frame .....	6 $\frac{1}{4}$ INCH.
Length of frame .....	49 $\frac{1}{4}$ INCH.
Overall height .....	55 $\frac{1}{8}$ INCH.
Width of frame max. ....	37 $\frac{1}{2}$ INCH.
Distance between center of rear wheels .....	23 $\frac{1}{2}$ INCH.

# WARNING

- Do not overload. Overloading could cause damage or failure of the engine crane.
- Never use the crane on an uneven floor surface as this could result in the crane tipping over
- Always lock the legs and jib in position before lifting a load.
- The nuts and bolts supplied with the crane are all high strength and should not be substituted for inferior types.
- Before each use ensure that all nuts and bolts are correctly fitted and tight.
- Never exceed the safe working loads indicated on the jib.

**FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN LOSS OF LOAD AND/OR PERSONAL INJURY OR DAMAGE TO PROPERTY.**

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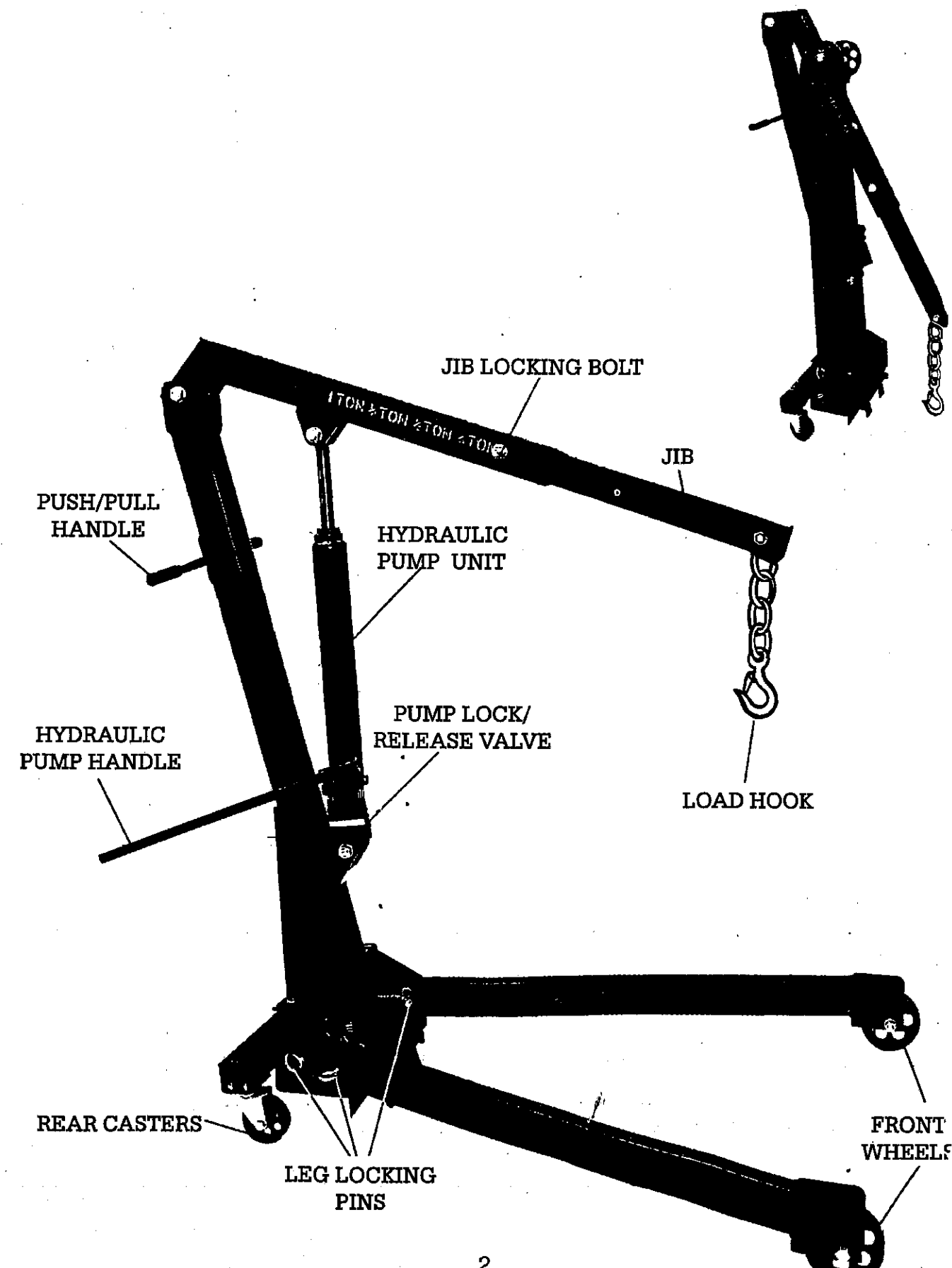
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## KNOW YOUR ENGINE CRANE



# ASSEMBLY INSTRUCTIONS

NOTE: During the assembly procedure, nuts and bolts should be hand-tightened only. Once assembly is complete, nuts and bolts must be fully tightened.

1. Attach the castor wheels (# 24) to the base using bolts (#16) nuts (#23) and lock washers (#17).
2. Referring to the spare parts drawing, insert one leg (#31) into the base (#28) and lock the leg in place using two locking pins (#4). Secure these in place using two split-type pins(#5). Now repeat this procedure for another leg.
3. Attach the main support post (#20) to the base assembly (#28) using bolts (#8), nuts (#10) and flat washers (#9).
4. Now secure the boom (#7) to the main support post (#20) using bolt (#15), nut (#13) and flat washer (#12).
5. Attach the ram unit (#21) to the main support post (#20) using bolt (#22), nut (#13) and flat washer (#12).
6. Insert boom extension (#6) into the main boom (#7), secure in one of the four positions using bolt (#8), nut (#10) and flat washer (#9).
7. Secure handle (#18) to the main support post (#20) using four bolts (#16) and four lock washers (#17).

8. Now tighten all nuts and bolts.

# OPERATING INSTRUCTIONS

**WARNING!**

▲ THIS DOUBLE PUMP LONG RAM IS DESIGNED FOR LIFTING PURPOSES ONLY - NOT FOR SUPPORTING LOADS.

▲ DO NOT LOAD BEYOND ITS RATED CAPACITY.

**IMPORTANT:** It is possible that air has got into the hydraulic system, causing poor lifting performance. Purge any air from the system by fully opening release valve ( turn handle counterclockwise as shown ), then while holding the boom down, operate pump handle rapidly several times.

**TO RAISE LOAD**

Close release valve by turning handle CLOCKWISE to a SNUG-TIGHT position. (DO NOT OVERTIGHTEN).

**TO LOWER LOAD**

Open release valve by turning handle COUNTERCLOCKWISE very slowly. The speed of lowering the load is controlled by how much you turn the handle.

**NOTE:**

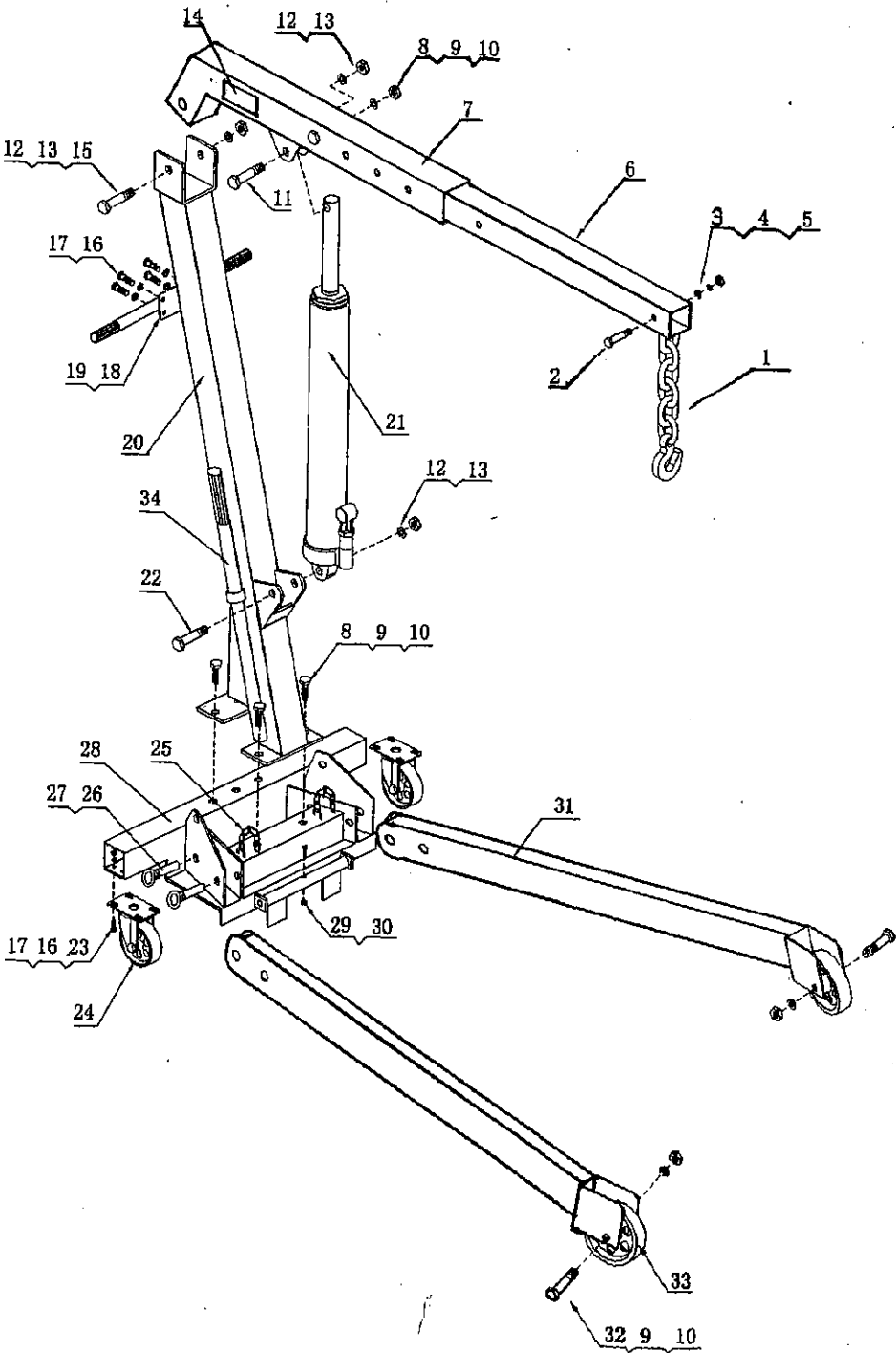
Front legs must always be locked in down position before applying load and/or raising boom.

Boom must be in fully lowered position before raising legs. Legs must never be raised when crane is carrying load. Legs must be locked in place when raised.

# 1 TON HYDRAULIC ENGINE CRANE

## SPARE PARTS LIST/DRAWING

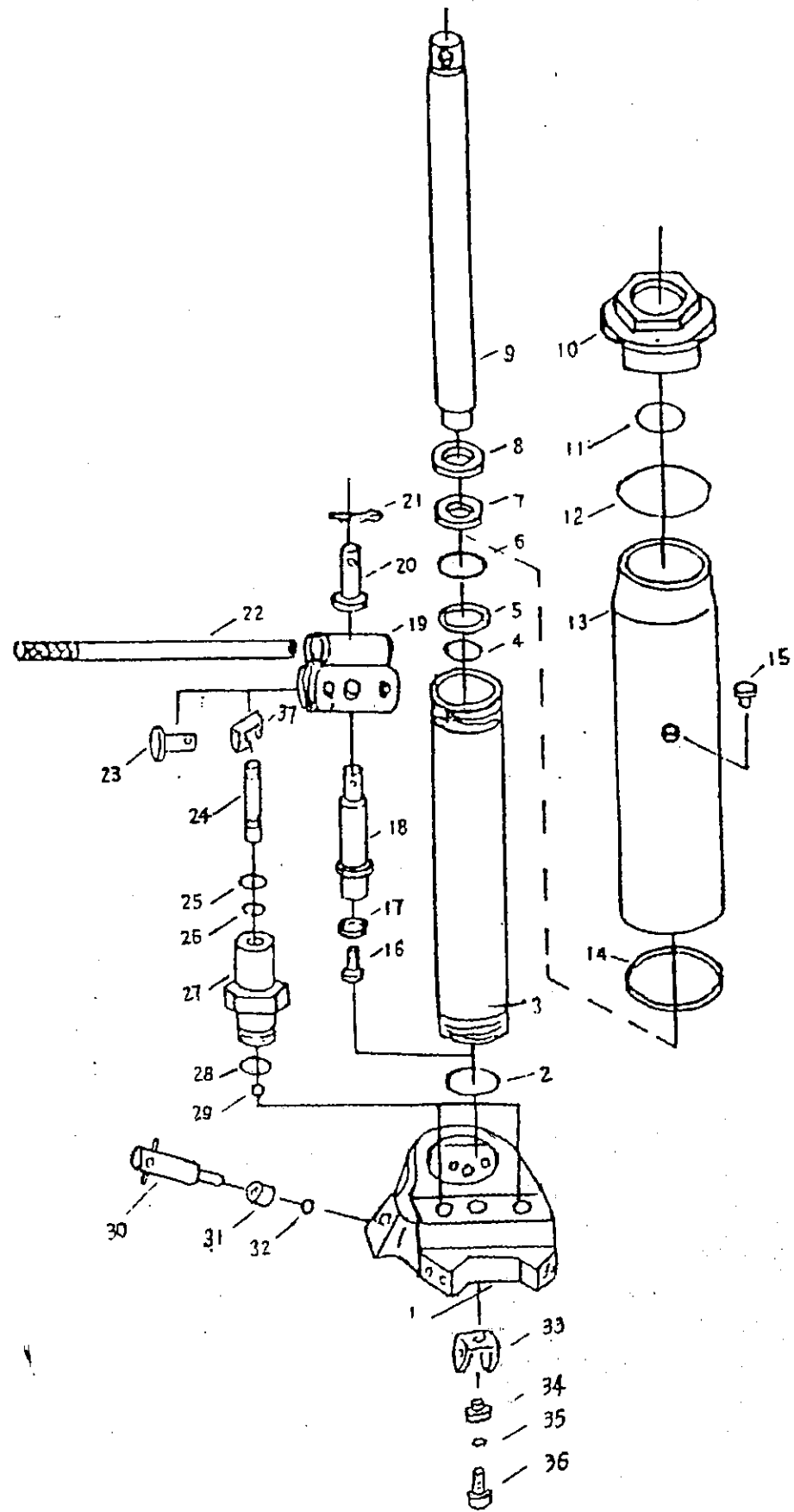
REF No.	DESCRIPTION	QTY
1	Chain & Hook Assembly	1
2	Bolt M12×80	1
3	Flat Washer Ø12	1
4	Lock Washer Ø12	1
5	Nut M12	1
6	Boom Extension	1
7	Boom	1
8	Bolt M14×100	6
9	Flat Washer Ø14	8
10	Nut M14	8
11	Bolt M16×80	1
12	Flat Washer Ø16	3
13	Nut M16	3
14	Warning Label	1
15	Bolt M16×120	1
16	Bolt M8×20	12
17	Lock Washer Ø8	12
18	Handle	1
19	Handle Sleeve	2
20	Main Post	1
21	Ram Unit	1
22	Bolt M16×90	1
23	Nut M8	8
24	3 1/2" Swivel Caster	2
25	Chain	2
26	Lock Pin	4
27	Split "R" Pin	4
28	Base	1
29	Bolt M6×30	1
30	Mnut M6	1
31	Leg	2
32	Bolt M14×85	2
33	Rigid Wheel	2
34	Jack Handle	1



# 1 TON HYDRAULIC ENGINE CRANE

## SPARE PARTS LIST/DRAWING

Ref. No.	Qty	Description
1	1	Valve block
2	1	Copper washer
3	1	Cylinder
4	1	Retaining ring
5	1	Washer
6	1	O-ring
7	1	O-ring retainer
8	1	Ram seal washer
9	1	Ram
10	1	Tank nut
11	1	O-ring
12	1	Sealing gasket
13	1	Reservoir
14	1	Trapezoid seal ring
15	1	Oil plug
16	1	Screw
17	1	Spring washer
18	1	Stand
19	1	Handle socket
20	1	Shaft
21	3	Cotter pin
22	1	Handle
23	2	Plunger pin
24	2	Plunger
25	2	Back-up ring
26	2	O-ring
27	2	Pump panel
28	2	Copper washer
29	2	Ball
30	1	Screw
31	1	Seal ring
32	1	Ball
33	1	Supporter
34	1	Bush
35	1	Spring washer
36	1	Screw
37	2	Plunger link



## MAINTENANCE

**IMPORTANT:** When adding or replacing oil, always use a good grade hydraulic jack oil such as Shell Tellus 22.

Avoid mixing different grades/types of oil. **DO NOT** use brake fluid, alcohol, glycerine, detergent motor oil or dirty oil. Improper fluid can cause serious internal damage to long ram.

When adding oil, be **VERY CAREFUL** not to permit dirt or foreign matter to get into the system. Check ram and plunger every 3 months for any signs of rust or corrosion. Clean as needed and wipe with an oily cloth.

When not using the long ram, always leave the jib in the fully lowered position.

## TROUBLE SHOOTING

Trouble	Probable Cause	Remedy
Will not hold load.	Dirt on valve seats.	1. Lower lifting boom. Close the release valve and remove oil filler plug. 2. Place one foot on the leg and pull up the lifting boom to its full height by hand. 3. Open the release valve to lower the lifting boom. 4. Worn seals.
Will not lift load. Will not lift to its full height. Pump feels unsteady under load. Pump will not lower completely.	Air block.	1. Open the release valve and remove oil filler plug. 2. Pump handle a couple of full strokes and close the release valve.
Pump will not lift to its full height. Pump feels unsteady under load.	The reservoir could be overfilled. Low hydraulic oil level.	Check the oil level. Remove the filler plug. Top up oil to correct level.
Pump feels unsteady under load.	The pump cup seal could be worn out.	Replace cup seal with a new one.
Will not lower completely.	Air block. Unit requires lubrication.	Release air from hydraulic pump by removing filler plug. Oil external moving parts.