EX-CELL

2 TON ENGINE CRANE

MODEL W1000

VOLTEA PAGINA PARA VER VERSION EN ESPANOL

OWNER AND/OR OPERATOR RESPONSIBILITY

Owner and/or operator shall study the instructions in this manual before operating crane. This manual must be kept for future reference. If the manual is lost, contact the manufacturer for a replacement manual.

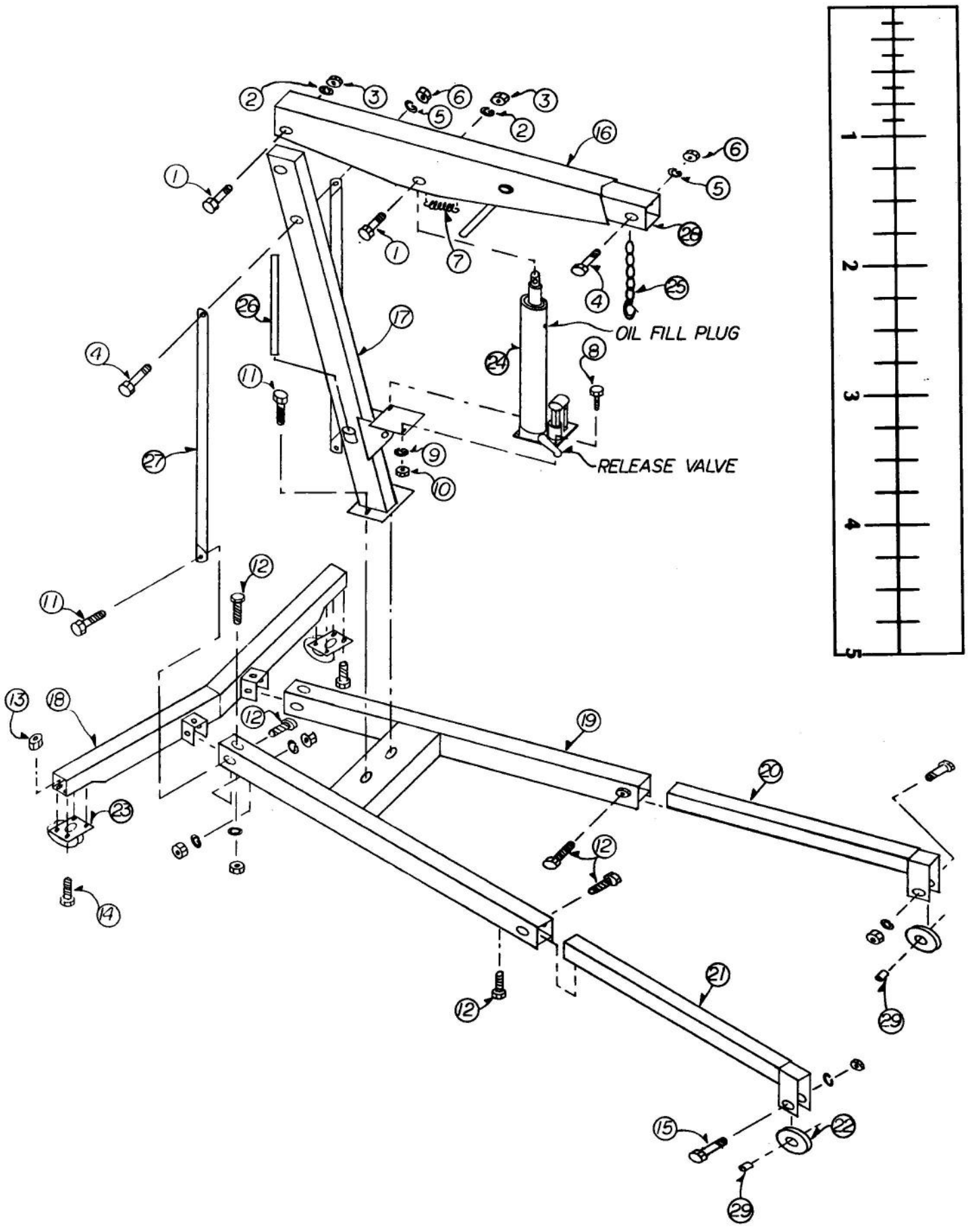
The owner and/or operator shall have an understanding of the operating instructions and warnings before operating the engine crane. Warning information shall be emphasized and understood. If the operator is not fluent in English, the instructions and warnings shall be read to and discussed with the operator in the operator's native language by the purchaser/owner, making sure that the operator comprehends its contents.

INSPECTIONS

Visual inspections shall be made before each use of the engine crane by checking for leaks and damaged, loose, or missing parts. ALL REPLACEMENT PARTS MUST BE ORDERED FROM THE MANUFACTURER. Damaged or missing parts include the warning decals on the hydraulic jack and on the boom.

Each engine crane shall be inspected immediately if the engine crane is believed to have been subjected to an abnormal load or shock.

Any engine crane which appears to be damaged in any way, is found to be badly worn, or operates abnormally SHALL BE REMOVED FROM SERVICE.


OIL FILL PLUG
RELEASE VALVE

ITEM	P/N	DESCRIPTION	QTY.	BOX
1	W13	Bolt, $5/8 \times 4\,1/2$	2	1
2	W14	Lockwasher, $5/8$	2	1
3	W15	Nut, $5/8$	2	1
4	W16	Bolt, $1/2 \times 4\,1/2$	2	1
5	W17	Lockwasher, $1/2$	10	1
6	W18	Nut, $1/2$	10	1
7	W32	Spring	1	1
8	F060	Bolt, $3/8 \times 1\,1/2$	2	1
9	F107	Lockwasher, $3/8$	2	1
10	F109	Nut, $3/8$	2	1
11	W20	Bolt, $1/2 \times 1\,1/4$	4	1
12	W21	Bolt, $1/2 \times 1$	8	1
13	F344	Locknut $5/16$	8	1
14	F121	Bolt, $5/16 \times 3/4$	8	1
15	W22	Bolt, $1/2 \times 3$	2	1
16	W23	Boom	1	2
17	W24	Jack Post	1	2
18	W25	Rear Legs	1	3
19	W26	Front Legs	1	1
20	W27	Left Leg Extension	1	3
21	W28	Right Leg Extension	1	3
22	W4	Wheel	2	1
23	W3	Caster Wheel	2	1
24	W5	Hydraulic Jack	1	2
25	W1	Chain w/hook	1	1
26	W29	Jack Handle	1	1
27	W30	Brace	2	1
28	W31	Boom Extension	1	3
29	W90	Bushing	2	1

ASSEMBLY INSTRUCTIONS

NOTE: Because of the weight, some parts of the assembly require two people.
FINGER TIGHTEN ALL NUTS AND BOLTS ON INITIAL SET UP.

1. Lay the rear legs assembly (18) upside down on the floor. Attach the swivel casters to the rear legs assembly using four $5/16 \times 3/4$ bolts and locknuts for each caster.

2. Use the boom extension (28) as a temporary support by laying it parallel to the rear legs assembly about one foot from the brackets. Place the front legs assembly (19) upside down on the floor so that it overhangs the boom extension by about six inches, and lines up with the brackets on the rear legs assembly.

3. Place the brackets of the rear legs assembly (18) into the front legs assembly (19) and insert one $1/2 \times 1$ bolt thru each bracket from beneath the front legs assembly and finger tighten a lockwasher and nut onto each bolt. Install one $1/2 \times 1$ bolt thru each bracket from the inside of the front legs assembly (Ref. A) and install the lockwashers and nuts. Securely tighten all four of these nuts.

4. Remove the boom extension from beneath the front legs assembly. Place the leg extensions (20) (21) on the floor upside down in front of the front legs assembly. Insert bushings (29) and install the wheels onto the leg extensions using the $1/2 \times 3$ bolts, lockwashers and nuts. Insure that the wheels of the leg extensions are slanted toward the inside of the front legs assembly.

5. Slide the leg extensions into the front legs assembly approximately 9 inches so that the threaded hole in the extension is directly below the large hole in the front legs assembly. Install a $1/2 \times 1$ bolt in the threaded hole in each leg extension and tighten securely.

6. Slide the leg extensions into the front legs assembly until the wheels are about 8 inches from the end of the front legs assembly. Secure the leg extensions by installing $1/2 \times 1$ bolts thru the nuts located near the ends of the front legs assembly. Roll this entire lower section to it's upright position on all four wheels.

7. Place the jack post assembly (17) onto the front legs assembly and secure it with two $1/2 \times 1\,1/4$ bolts. The nuts have been welded to the bottom side of the cross piece of the front legs assembly. Finger tighten only.

8. Install the brace straps (27) by loosely attaching to the front legs assembly with $1/2 \times 1\,1/4$ bolts, lockwashers, and nuts. Attach both straps to the jack post assembly using one $1/2 \times 4\,1/2$ bolt, lockwasher, and nut.

9. Position the hydraulic jack (24) on the jack post assembly as shown in this drawing, and secure with two $3/8 \times 1\,1/2$ bolts, lockwashers, and nuts. Use the jack handle (26) to raise the ram about 8 inches and lean the jack against the jackpost assembly. Place the jack handle into the holding ring on the side of the jack post assembly.

10. Lay the boom (16) on the floor so that the adjusting handle is toward your feet and the hole for mounting to the jack post is to your left. Position the boom extension (28) at the left end of the boom so that the slotted hole is near the end of the boom and is facing the same direction as the boom handle. Slide the boom extension into the boom until the pin aligns with the first hole on the left end of the boom. Adjust the boom handle so

that the pin on the boom extension extends through that hole. Insure that the boom extension cannot slide either direction because the boom handle has forced the locking pin into position. NOTE: BOOM EXTENSION MUST BE LOADED FROM REAR OF BOOM. THIS ALLOWS SAFETY PIN TO ENGAGE IN BOOM.

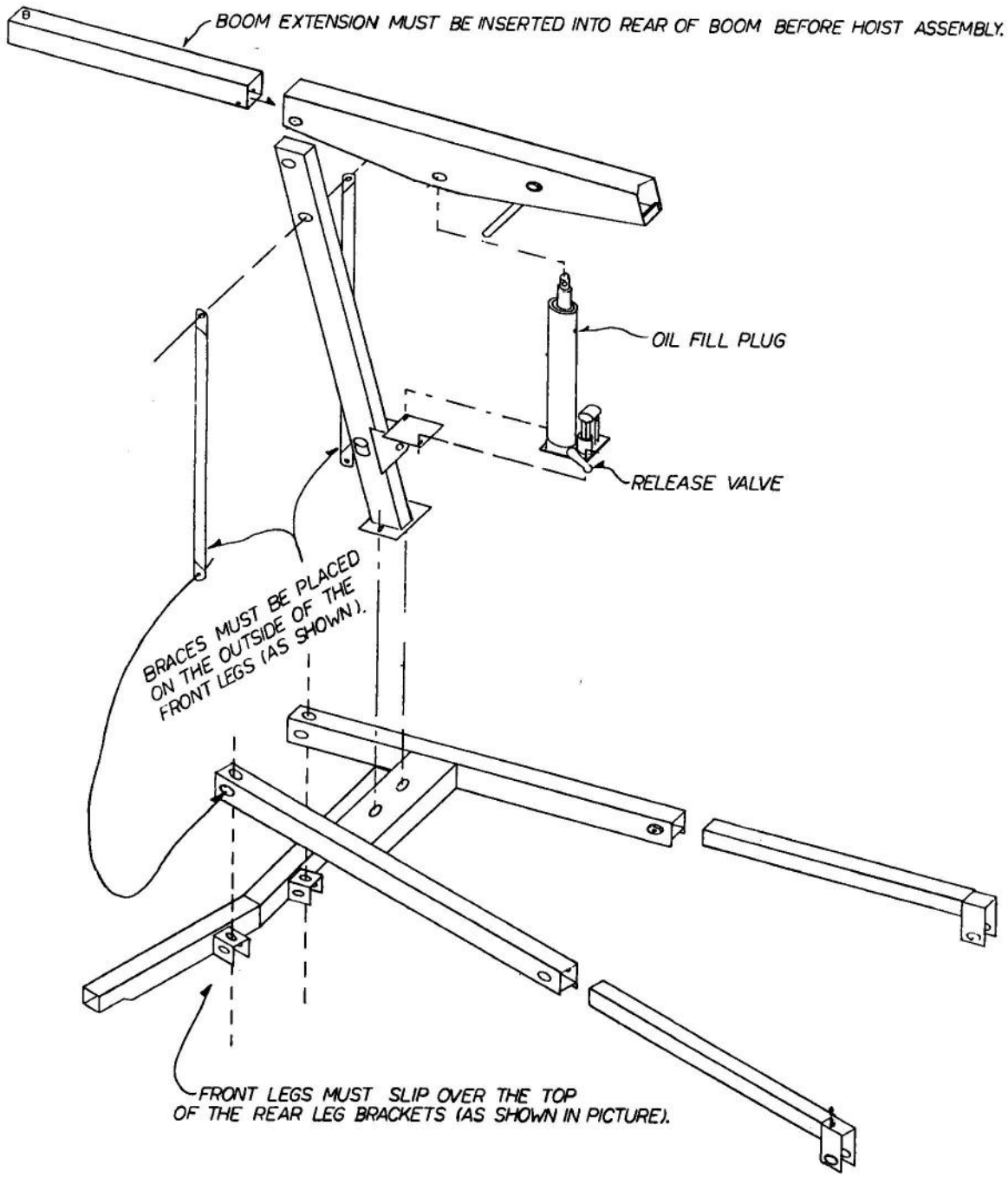
11. Attach the boom to the jack post assembly (17) with a $^5/_8$ x $4^1/_2$ bolt, lockwasher, and nut.

12. Lift the boom to the horizontal position and swing the jack away from the jack post so that the hole in the jack ram aligns with the hole in the boom, and install a $^5/_8$ x $4^1/_2$ bolt, lockwasher and nut. Attach spring (7) to welded nut on underside of boom and welded nut on boom handle.

13. Attach the chain (25) to the boom extension using a $^1/_2$ x $4^1/_2$ bolt, lockwasher and nut.

14. Tighten all bolts and nuts.

NOTE: Sometimes, during shipment and/or handling, air gets into the hydraulic system causing poor lifting performance. To purge air from the system see #1 maintenance instructions.



OPERATING INSTRUCTIONS

1. The capacity of the crane varies with the boom and leg position. The capacities are stamped on the boom extension and on the leg extensions. Whenever possible, use the crane with the boom and leg extensions in their innermost positions where the crane capacity is the greatest. Extend the boom and legs only when necessary to reach the load.

2. Close the release valve on the jack. Avoid overtightening the release valve — the tighter it is closed the harder it is to "crack" it open for slow lowering. Pump the jack to raise the load to the desired height.

3. If the load is to be moved, raise it only high enough to clear the floor. Move the crane slowly and avoid sudden stops that could cause the load to swing violently.

4. When lowering the load, open the release valve slowly, and lower the load slowly. Avoid sudden stops because this causes abnormally high stresses on the crane.

MAINTENANCE INSTRUCTIONS

1. To purge air from the hydraulic jack:

   a). Open the release valve by turning it counter-clockwise two full turns.
   b). Pump the hydraulic unit about 6 full strokes.
   c). Close the release valve and continue pumping until the boom has raised several feet.
   d). Open the release valve and slowly lower the boom. **NOTE:** Avoid overtightening the release valve - the tighter it is closed the harder it is to "crack" it open for very slow lowering.

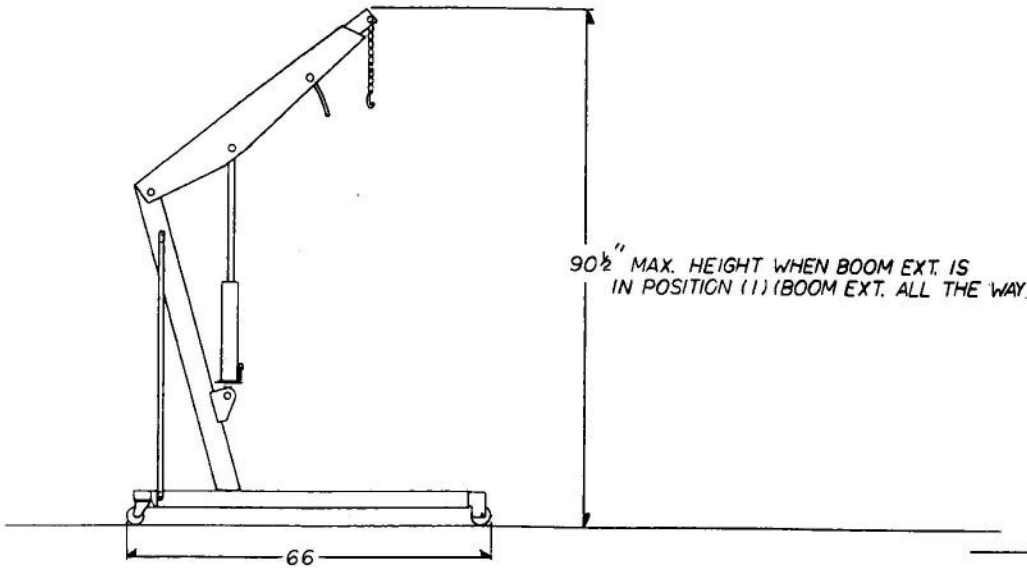
2. To add oil to the hydraulic jack, make sure the boom is in the lowered position, remove the oil fill plug (see drawing), and squirt clean hydraulic jack oil into the hole. In most cases, the addition of a few ounces of oil is sufficient. Fill to level of filler hole. Do not overfill. **NOTE:** Do not use brake or shock absorber fluids. They have ingredients harmful to the jack's oil seals.

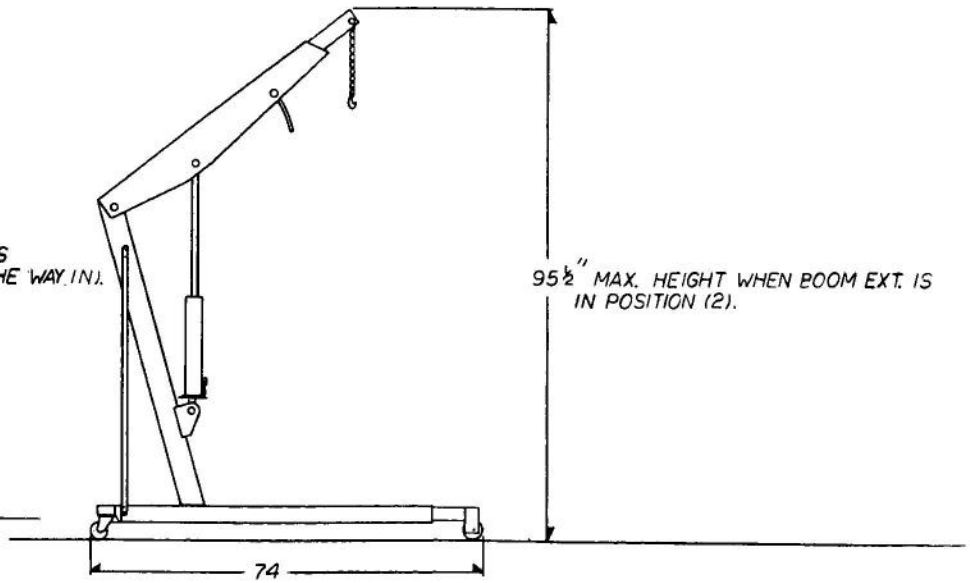
3. Oil all moving joints periodically (at least every 60 days) with a medium weight machine oil or motor oil.

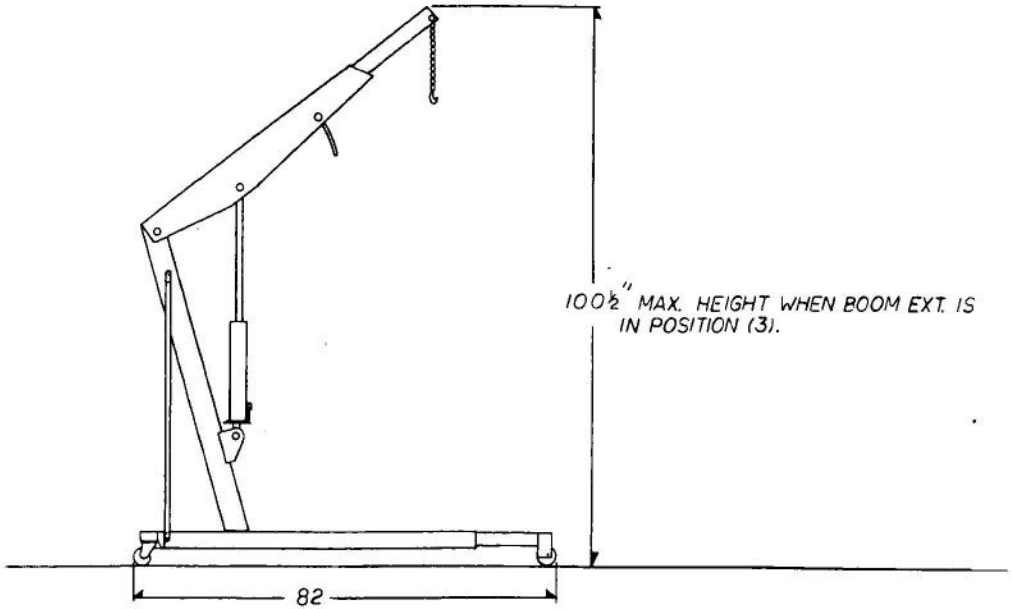
4. Check ram every 3 months for any signs of rust or corrosion. Clean as needed and wipe with an oily cloth. When not using the crane, always leave the boom and the pump plunger all the way down.

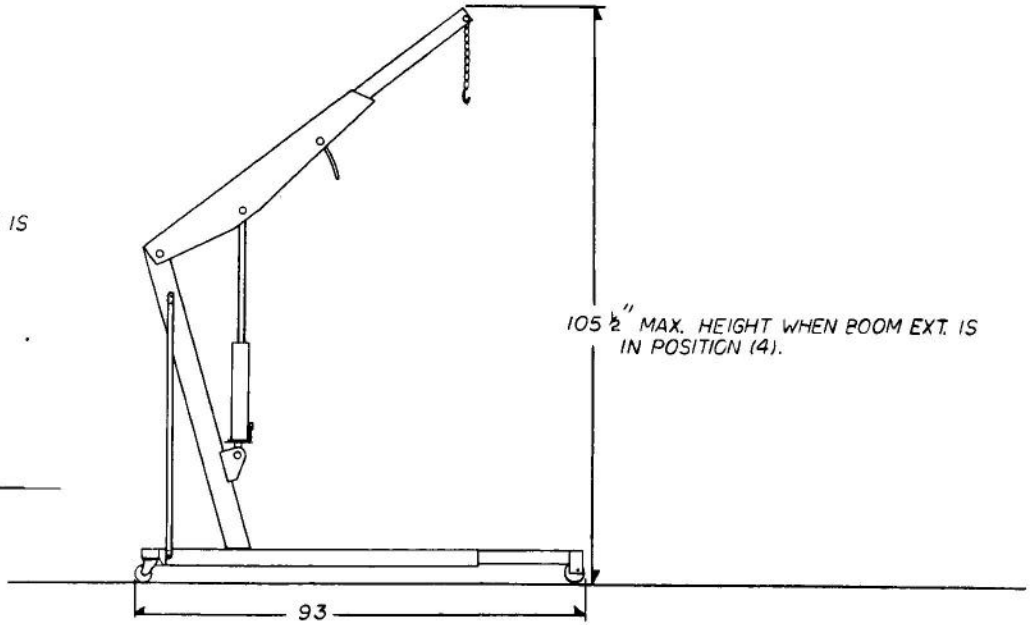
TROUBLE SHOOTING

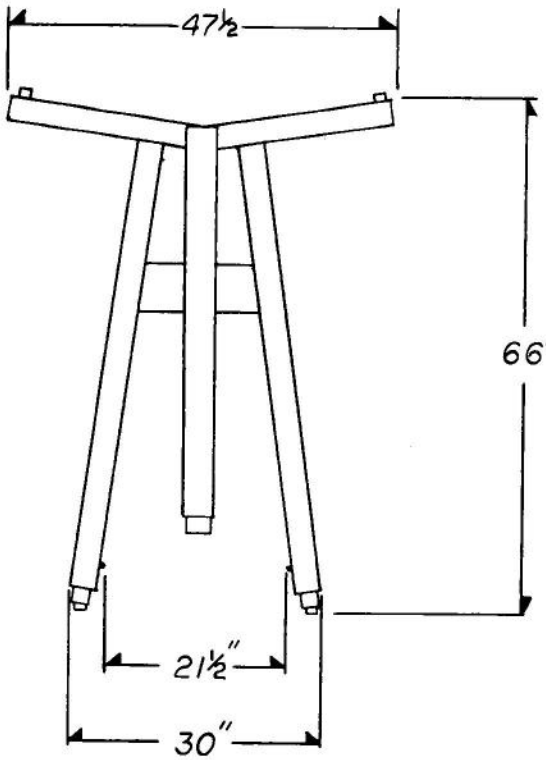
PROBLEM	SOLUTION
Will not lift load Will not lift full height Pump feels "spongy" under load	The jack could be low on oil. See #2 under maintenance instructions.
Will not lift load Will not lift full height Pump feels "spongy" under load	The jack could be airbound - open the release valve two full turns and pump the handle about 6 full strokes to purge air from the pump and valving.
Handle raises under load Handle lowers under load Will not lift load Will not hold load	Valves might not be closing - make certain that release valve is closed. Starting with the boom in the full lowered position, SLOWLY raise the boom a few feet by hand. Open release valve and let the boom decend into the lowered position. Crane should now operate properly.


90½" MAX. HEIGHT WHEN BOOM EXT. IS IN POSITION (1) (BOOM EXT. ALL THE WAY IN).
66

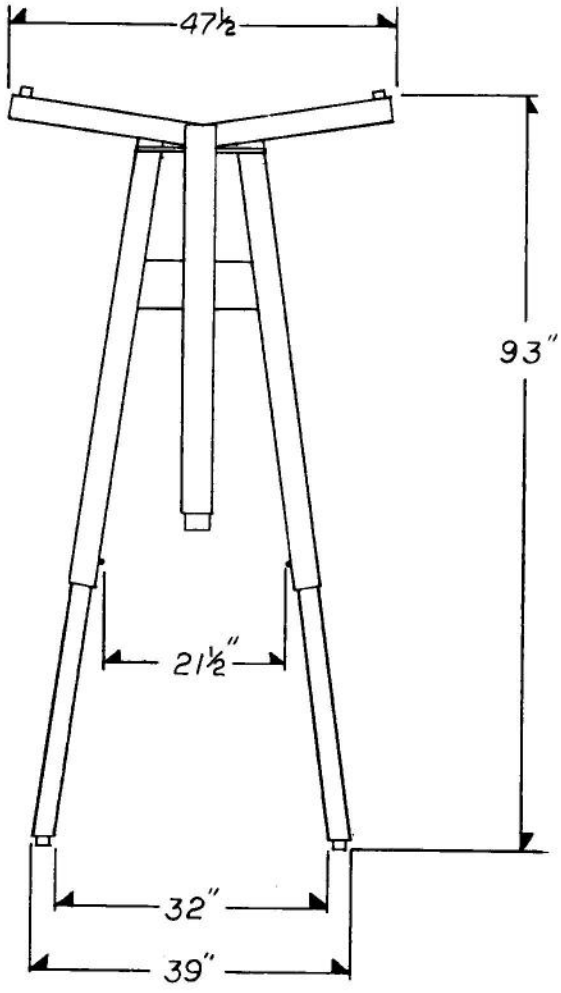

95½" MAX. HEIGHT WHEN BOOM EXT. IS IN POSITION (2).
74


100½" MAX. HEIGHT WHEN BOOM EXT. IS IN POSITION (3).
82


105½" MAX. HEIGHT WHEN BOOM EXT. IS IN POSITION (4).
93


47½
66" LEG EXT. ALL THE WAY IN.
21½"
30"

TOP VIEW


47½
93" LEG EXT. ALL THE WAY OUT.
21½"
32"
39"

WARNING

1. DO NOT OVERLOAD. OVERLOADING CAN CAUSE DAMAGE TO OR FAILURE OF THE ENGINE CRANE.

2. ASSURE THAT THE LOAD IS NOT ALLOWED TO DROP SUDDENLY OR SWING DURING TRANSPORTING.

3. MAKE SURE BOOM IS FULLY LOWERED BEFORE ADDING OIL TO THE JACK OR RESERVOIR.

4. STUDY AND UNDERSTAND THE OPERATING INSTRUCTIONS IN THIS OWNER MANUAL BEFORE OPERATING.

5. THIS ENGINE CRANE IS DESIGNED FOR USE ONLY ON HARD LEVEL SURFACES CAPABLE OF SUSTAINING THE LOAD. USE ON OTHER THAN HARD LEVEL SURFACES CAN RESULT IN ENGINE CRANE INSTABILITY AND POSSIBLE LOSS OF LOAD AND/OR INJURY.

6. LOWER BOOM AND LOAD TO THE LOWEST POSSIBLE POSITION BEFORE TRANSPORTING.

7. FAILURE TO HEED THESE WARNINGS MAY RESULT IN LOSS OF LOAD, DAMAGE TO THE ENGINE CRANE, AND/OR FAILURE RESULTING IN PERSONAL INJURY OR PROPERTY DAMAGE.

EX-CELL

Ex-Cell Manufacturing Company, Inc.

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For Technical Assistance, Please Call **1-800-622-2160** M – F 8:00 A.M. – 5:00 P.M. CST

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Automotive Accessories

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