



SPECIFICATIONS

	Pos. 1	Pos. 2	Pos. 3	Pos. 4
Max. Boom Ht.	93-1/4"	88"	82"	76-3/4"
Min. Boom Ht.	0	3"	9"	15"
Boom Capacity	1/2 Ton	1 Ton	1-1/2 Ton	2 Ton
Boom Ext. From End to Ram	48-1/2"	41-1/4"	34-1/2"	27-1/4"
Base Dimensions – Open				
Width Back				31-1/2"
Width Front.....				33-1/2"
Length.....				66-1/2"
Base Dimensions – Folded				
Width Back				31-1/2"
Width Front.....				22-3/4"
Depth				21-1/2"
Power Unit				Heavy Duty
Net Weight.....				188 Lbs.
Gross Weight				202 Lbs.

Meets or exceeds ASME PALD-1997 standards for performance & safety.



**THIS OPERATING
MANUAL CONTAINS
IMPORTANT SAFETY
INFORMATION.**

**READ CAREFULLY
AND UNDERSTAND
ALL INFORMATION
BEFORE OPERATING
THIS TOOL.**

**SAVE THIS MANUAL
FOR FUTURE USE.**

! WARNING



THIS CRANE IS DESIGNED FOR ENGINE LIFTING PURPOSES ONLY.

WHEN REMOVING ENGINES FROM VEHICLES, BE SURE THAT THE FRONT OF THE VEHICLE IS NOT JAMMED AGAINST THE HYDRAULIC UNIT. FAILURE TO OBSERVE THIS WARNING COULD RESULT IN A DROPPED ENGINE.

A VISUAL INSPECTION SHOULD BE MADE BEFORE EACH USE OF THE CRANE, CHECKING FOR LEAKING HYDRAULIC FLUID AND CRACKED, DAMAGED, LOOSE OR MISSING PARTS.

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

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

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

MAKE SURE THAT BOOM IS FULLY LOWERED BEFORE ADDING OIL TO UNIT RESERVOIR.

THIS MOBILE 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 MOBILE CRANE INSTABILITY AND POSSIBLE LOSS OF LOAD.

NO ALTERATIONS TO THE MOBILE CRANE SHALL BE MADE. USE ONLY SLINGS OR CHAINS WITH CAPACITY GREATER THAN THAT OF THE LOAD BEING LIFTED.

READ, STUDY AND UNDERSTAND THE INSTRUCTION MANUAL PACKED WITH THIS CRANE BEFORE USING CRANE.

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

CSE-4000

4000 Lb. Engine Crane

OWNER/USER RESPONSIBILITY

The owner and/or user must have a thorough understanding of the manufacturer's operating instructions and warnings before using this mobile crane. Personnel involved in the use and operation of equipment shall be careful, competent, trained, and qualified in the safe operation of the equipment and its proper use when servicing motor vehicles and their components. Warning information should be emphasized and understood. If the operator is not fluent in English, the manufacturer's 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.

Owner and/or user must study and maintain for future reference the manufacturer's instructions. Owner and/or user is responsible for keeping all warning labels and instruction manuals legible and intact. Replacement labels and literature are available from the manufacturer.

ASSEMBLY INSTRUCTIONS

NOTE: An assistant is required to assemble this unit and minimize the potential hazards and/or injury.

1. Line up the holes on the Caster Wheel (11) with the matching holes on the Base (1) and attach with bolt (12), washer (32) and nut (13).
2. Slide the right front leg extension (seam to the inside & wheel angled slightly inward)(#2R) into right side of base (#1) until the second pin hole (marked with "A" on the parts drawing and sticker marking on leg) aligns with the pin hole on base. **DO NOT USE FIRST HOLE AS PERMANENT DAMAGE TO THE BASE WILL RESULT. THE FIRST HOLE IS FOR STORAGE PURPOSES ONLY!** Slide pin (#30) through holes in leg extension and base and secure pin with clip (#31). Then, install set screw (#4) into threaded nut on side of base and tighten against leg extension for extra support. Now, repeat this procedure for the left front leg extension.

CAUTION: The leg extensions have been installed correctly if the wheels on the leg extension are pointing straight ahead and NO HOLES are visible on the length of the leg extension.
3. With the help of an assistant, install the Support Post (5) onto the base using Bolts (27), Washers (26) and Nuts (14). Install the Support Strap (6) onto the base using Bolts (16), Washers (22) and Nuts (14). Align holes at the upper end of the support strap with the second hole from the top in support post using Bolt (17), Washer (22) and Nut (15). Once aligned, tighten the bolts securely.
4. Install the Hydraulic Ram (7) to the support bracket on the support post using Bolt (23), Washer (22) and Nut (15). Once secured, lean the hydraulic ram against the support post temporarily.
5. Install the Boom (9) on top of the support post and secure with Bolt (18), Washer (20) and Nut (21).

6. Align and install the top of the hydraulic ram into the welded fork on the boom and secure with Bolt (19), Washer (22) and Nut (15).
7. Slide Boom Extension (10) into boom and secure with Bolt (24), Washer (26) and Nut (14).
8. Install the Hook and Chain (28) at the end of the boom extension using Bolt (25), Washer (26) and Nut (14).
9. Slide the Handle (8) on the socket on the hydraulic ram.

OPERATING INSTRUCTIONS

1. Lock the boom in place for the proper weight marking using the lock pin **BEFORE APPLYING THE LOAD TO THE LIFT**. Do not exceed the rated capacity and travel limits of the equipment.
2. Use appropriate levellers, slings or chains around the load capable of sustaining the load before using the hook to lift it. Make sure that the latching mechanism is working properly before lifting or moving the load.
3. Once the load is securely hooked in place, lift the load by turning the release valve clockwise until closed, and pumping the jack until the load is clear of any obstruction. Move very carefully avoiding slopes in the direction of travel. Avoid sudden or swinging movements of the load. To lower the load, turn the release valve on the hydraulic jack counterclockwise very slowly.

TROUBLE SHOOTING

SYSTEM AIR PURGE

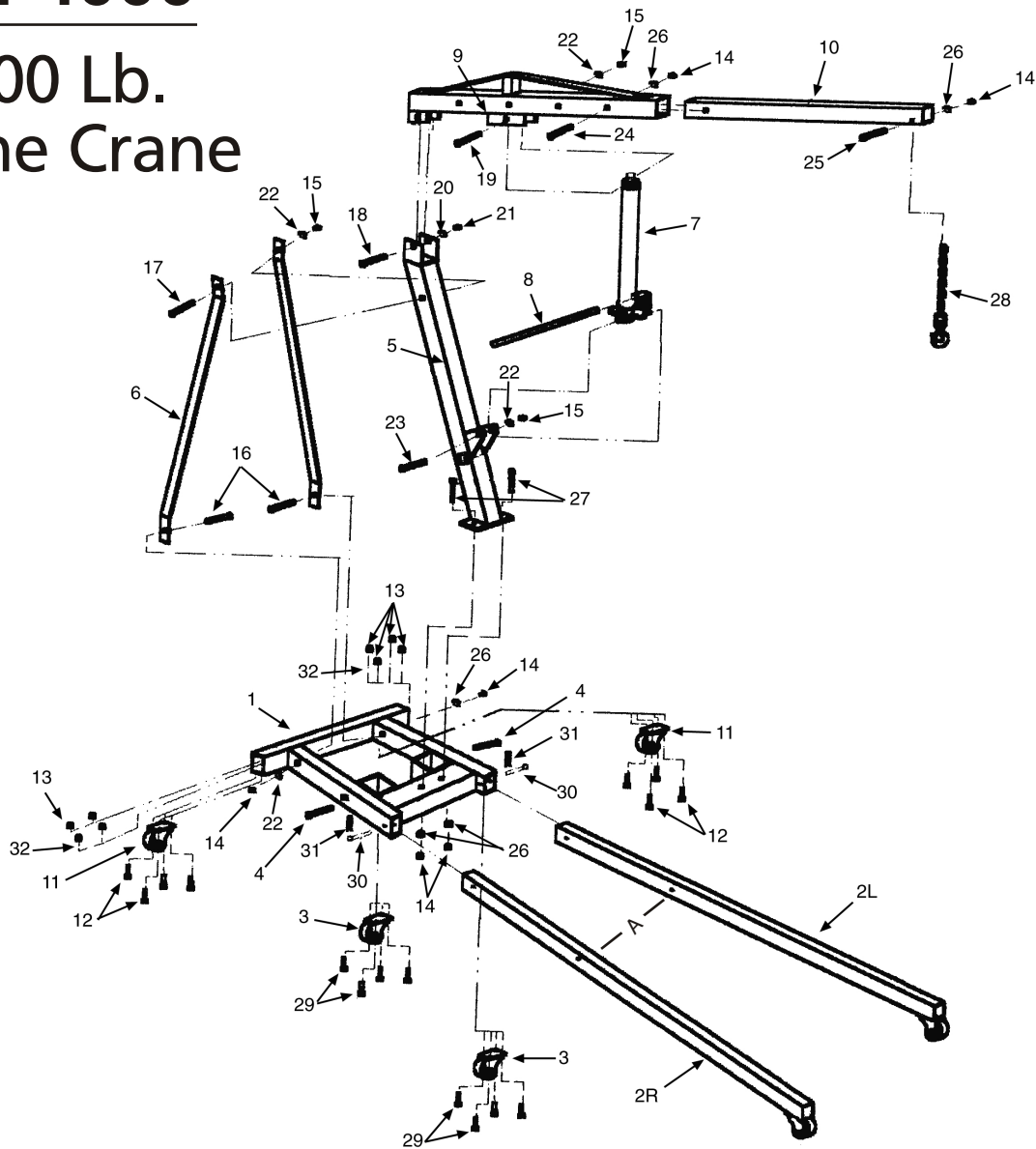
1. Turn release valve counterclockwise one full turn to open.
2. Pump handle eight full strokes.
3. Turn release valve clockwise to closed position.
4. Pump handle until the lift arm reaches maximum height and continue to pump several times to remove trapped air in the ram.
5. Turn release valve counterclockwise one full turn to open and allow lift arm to retract.
6. Close release valve and check for proper pump action. It may be necessary to perform the above move more than once to assure air is evacuated totally.

OTHER SYMPTOMS

Jack will not lift to full height:	Low oil level
Jack will not hold:	Release valve not closing Dirt in hydraulic jack oil or pump valves not sealing Refer to Air Purge Section
Lift arm will not lower:	Cylinder ram binding Release valve broken Parts worn
Jack feels spongy when lifting:	See Air Purge section

CSE-4000

4000 Lb. Engine Crane



ITEM #	PART #	DESCRIPTION	QTY.	ITEM #	PART #	DESCRIPTION	QTY.
1	RS5217A01BL2	Base	1	*17		Bolt M16 x 100	1
**2R	RS5217A02RBL2	Right Front Leg Ext. w/fixed wheel	1	*18		Bolt M18 x 110	1
**2L	RS5217A02LBL2	Left Front Leg Ext. w/fixed wheel	1	*19		Bolt M16 x 70	1
3	RSSC250A	2-1/2" Caster	2	*20		Washer 18	1
*4		Set Screw M12 x 25	2	*21		Nut M18	1
5	RS5217A05BL2	Support Post	1	*22		Washer 16	5
6	RS5217A06BL2	Support Strap	2	*23		Bolt M16 x 85	1
***7	RS5060B	Hydraulic Long Ram	1	*24		Bolt M14 x 80	1
8	RS5040BHDL	Handle	1	*25		Bolt M14 x 70	1
9	RS5217A09BL2	Boom	1	*26		Washer 14	6
10	RS5217A10	Boom Extension	1	*27		Bolt M14 x 120	2
11	RSSC350A	3-1/2" Caster	2	28	RS521131	Hook with Chain	1
*12		Bolt M8 x 16	8	*29		Bolt M8 x 12	8
*13		Nut M8	8	*30		Pin	2
*14		Nut M14	6	*31		Clip	2
*15		Nut M16	3	*32		Lock Washer	8
*16		Bolt M14 x 95	2				

*Only available in Bolt Kit (Part #RS5217ABK).

**Fixed wheel replacement #RSW400

***Seal Kit for hyd. ram is RS6645SK

MAINTENANCE AND INSPECTION

1. Inspect the crane before each use. Check for cracks in the jack support, boom and boom extension. Check for loose, missing or damaged parts and for hydraulic oil leaks. If the crane is damaged in any way, it should be removed from service immediately.
2. Check for unauthorized modification of the product. Modifications to this product and/or use of unapproved attachments are prohibited due to the potential hazards that are associated with improper use.
3. Any crane which appears to be damaged in any way, found to be worn, or operates abnormally **MUST BE REMOVED FROM SERVICE UNTIL REPAIRED**. Owners and/or operators should be aware that repair of the equipment requires specialized knowledge and facilities. Only factory authorized parts, labels and decals shall be used on this equipment.
4. If jack is subjected to abnormal load or shock, remove from service and have it examined by an Authorized Repair Service.
5. Clean all surfaces and maintain all labels and warnings.
6. Grease Pivot Points:
 - A. Boom to Upright Support Post
 - B. Ram Mount to Boom

A list of authorized repair facilities is available from the manufacturer.

CHECK OIL LEVEL

WARNING

Always purchase those products labeled "Hydraulic Jack Oil". Do not use brake or transmission fluids, as they can damage the seals.

1. Turn release valve counterclockwise to allow ram to fully retract.
2. Remove fill plug.
3. With jack in vertical position, proper oil level should be even with bottom of hole. If low, fill with NEW, clean hydraulic jack oil and recheck level. **Do not overfill!!**
4. Replace filler plug.
5. Turn release valve counterclockwise one full turn to open and allow lift arm to retract.
6. Close release valve and check for proper pump action. It may be necessary to perform the above move more than once to assure air is evacuated totally.

STORAGE

1. Lower the boom (9) to its lowest position.
2. Remove clips and pins (30, 31) and loosen set screws (4) holding front legs (2) to the base (1). Remove front legs from base and position them vertically in the storage pockets located slightly to the rear of the front pair of caster wheels (3) on base.
3. Reinstall the clips and pins removed in step 2 to secure the leg extension safely in the vertical position and to prevent the loss of parts.

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Repair kits and replacement parts are available for many Cornwell products, regardless of whether or not the product is still covered by a warranty plan.

Cornwell Quality Tools Company
667 Seville Road • Wadsworth, OH 44281-1094