

OPERATING INSTRUCTIONS

- 1. This crane is equipped with a hydraulic bottle jack specifically designed for this application. Install the two-piece handle into the pump receiver when activating the pump. The release valve knob must be turned in a clockwise direction until tight before the jack can be pumped. Turning the release valve knob very slowly in a counterclockwise direction lowers the load in a safe controlled manner. There should never be a reason to turn the release valve knob in a counterclockwise direction more than two full turns at any time.
- 2. Before lifting, determine the weight of the load to be lifted. Extend the boom to its required length making sure the capacity at that extension exceeds the weight of the load to be lifted. Secure the telescopic boom tubes together with the bolts or pins provided. If the crane is equipped with telescopic legs make sure the wheels on the front legs are extended and secured beyond the reach of the boom and the wheels on the rear legs are extended and secured to their maximum length for side to side stability. Do not lift or move a load with a center of gravity that extends either to the side beyond the width of the frame or back legs or the front beyond the front wheels.
- 3. This crane is equipped with telescopic front legs and rear caster mounting tubes. Each of the inner telescoping tubes has a warning label that indicates the maximum extension for each tube. **Do not extend the tubes beyond the indicated**

safety line. To adjust the telescoping leg and caster tubes, release the pressure on each tube by turning the cocking bolt counterclockwise to allow the telescoping tube to be moved in or out to the desired position.

WARNING: Do not attempt to adjust the telescopic tubes or boom extension position while the crane is loaded.

WARNING: Do not extend the telescopic tubes or boom extension position beyond the maximum extension line indicated on the inner tube warning labels.

WARNING: Do not leave a loaded crane unattended for any length of time, as boom drift may occur. If necessary, transfer the load to a proper storage/staging location.

The boom extension tube is inserted into the boom and held in the desired position with a hitch pin and bridge pin combination. The inner boom extension tube has a warning label that indicates the maximum extension. **Do not extend the boom beyond the indicated safety line.** To adjust the boom extension position, align the holes in the inner and outer boom tubes and insert the locking pin to hold the boom length. Insert the bridge pin into the hitch pin to secure.

PREVENTATIVE MAINTENANCE

- 1. Always store the crane in a well protected area where it will not be exposed to inclement weather, corrosive vapors, abrasive dust, or any other harmful elements. The crane must be cleaned of water, snow, sand, or grit before using.
- 2. Lubricate moving parts once a month with a general purpose grease.
- 3. It should not be necessary to refill or top off the reservoir with hydraulic fluid unless there is an external leak. An external leak requires immediate repair which must be performed in a dirt-free environment by qualified hydraulic repair personnel who are familiar with this equipment. Norco Authorized Service Centers are recommended. **IMPORTANT: In order to prevent seal damage and hydraulic failure, never use alcohol, hydraulic brake fluid, or transmission oil in the hydraulic system.**

- 4. Every crane owner is responsible for keeping the crane label clean and readable. Use a mild soap solution to wash external surfaces of the crane but not any moving hydraulic components. Contact Norco Industries for a replacement label if your crane label is unreadable.
- 5. Inspect the crane before each use. Do not use the crane if any component is cracked, broken, bent, shows sign of damage, or leaks hydraulic fluid. Do not use the crane if it has loose or missing hardware or components, or is modified in any way. Take corrective action before using the crane again.
- 6. Do not attempt to make any hydraulic repairs unless you are a qualified hydraulic repair person that is familiar with this equipment.

REPAIR SERVICE

If your Norco product requires service or repair, contact the Norco Customer Service Department for the location of the nearest Norco Authorized Service Center.

Norco Industries, Inc.
365 West Victoria St.
Compton, CA 90220
(310) 639-4000 • Fax: (310) 639-7411
www.norcoindustries.com

It will be necessary to provide the Norco Authorized Service Center with a copy of the bill of sale if requesting warranty repair. If the authorized service center determines your product is eligible for warranty repair, the repair will be made at no charge and returned freight prepaid. The cost of non-warrantable service, repair, and return freight is the customer's responsibility.



78107 2500 LB. CAPACITY ENGINE CRANE
SETUP • OPERATING • MAINTENANCE INSTRUCTIONS

IMPORTANT: READ THESE INSTRUCTIONS BEFORE OPERATING

THIS CRANE COMPLIES WITH ASME PASE - PART 12 - SHOP CRANE GUIDELINES.

BEFORE USING THIS CRANE, READ THIS MANUAL AND THE ADDITIONAL INSTRUCTION MANUALS ON THE PUMP COMPLETELY AND THOROUGHLY, UNDERSTAND THEIR OPERATING PROCEDURES, SAFETY WARNINGS AND MAINTENANCE REQUIREMENTS. FAILURE TO DO SO COULD CAUSE ACCIDENTS RESULTING IN SERIOUS OR FATAL PERSONAL INJURY AND/OR PROPERTY DAMAGE.

The use of shop cranes is subject to certain hazards that cannot be prevented by mechanical means, but only by the exercise of intelligence, care, and common sense. It is therefore essential to have owners and personnel involved in the use and operation of equipment who are careful, competent, trained, and qualified in the safe operation of the equipment and its proper use. Examples of hazards are dropping, tipping, or slipping of loads caused primarily by improperly securing loads, overloading, off- centered loads, lifting or moving a load that has a center of gravity that

extends beyond the crane's wheels, use on other than a hard level surface, and using equipment for a purpose for which it was not designed. It is the responsibility of the owner to make sure all personnel read these manuals prior to using this device. It is also the responsibility of the device owner to keep these manuals intact and in a convenient location for all to see and read. If the manuals are lost or not legible, contact Norco Industries, Inc. for free replacements. If the operator is not fluent in English, the product and safety instructions shall be read to and discussed with the operator in the operator's native language by the purchaser/owner or his designee, making sure that the operator comprehends its contents.

WARRANTY

This product is covered by a Limited Lifetime Warranty. For details see the back cover of Norco's product catalog. For additional information, visit www.norcoindustries.com.

WARNING

- Inspect the crane before each use. Do not use the crane if it is damaged, altered, modified, in poor condition, leaking hydraulic fluid, or has loose or missing hardware or components. Take corrective action before using the crane. Some weepage around the bottle jack piston is normal and should not be a cause for concern.
- Do not use crane beyond its rated capacity and that capacity is determined by the boom position. Consult the product label for exact capacity at the boom position.
- Wear approved eye protection.
- Stay out from underneath a load that is being lifted or suspended.
- Use only on a hard level surface. Use extreme caution when moving a loaded crane around a corner. A load can swing out beyond the wheels and cause the crane to tip over. Do not allow a load to swing or drop violently while lowering or moving.

- The crane legs must always extend beyond the end of the boom before a load is lifted. Do not lift or move a load that has a center of gravity that extends beyond the crane's front wheels or the width of the back of the crane.
- Do not extend the boom or legs beyond the maximum extension line indicated on the maximum extension warning labels located on the inner tubes.
- Before moving the crane, lower the load to the lowest possible point.
- Use only slings or chains with a rated capacity greater than the weight of the load to be lifted.
- Do not leave a loaded crane unattended for any length of time, as boom drift may occur. If necessary, transfer the load to a proper storage/staging location.

SETUP

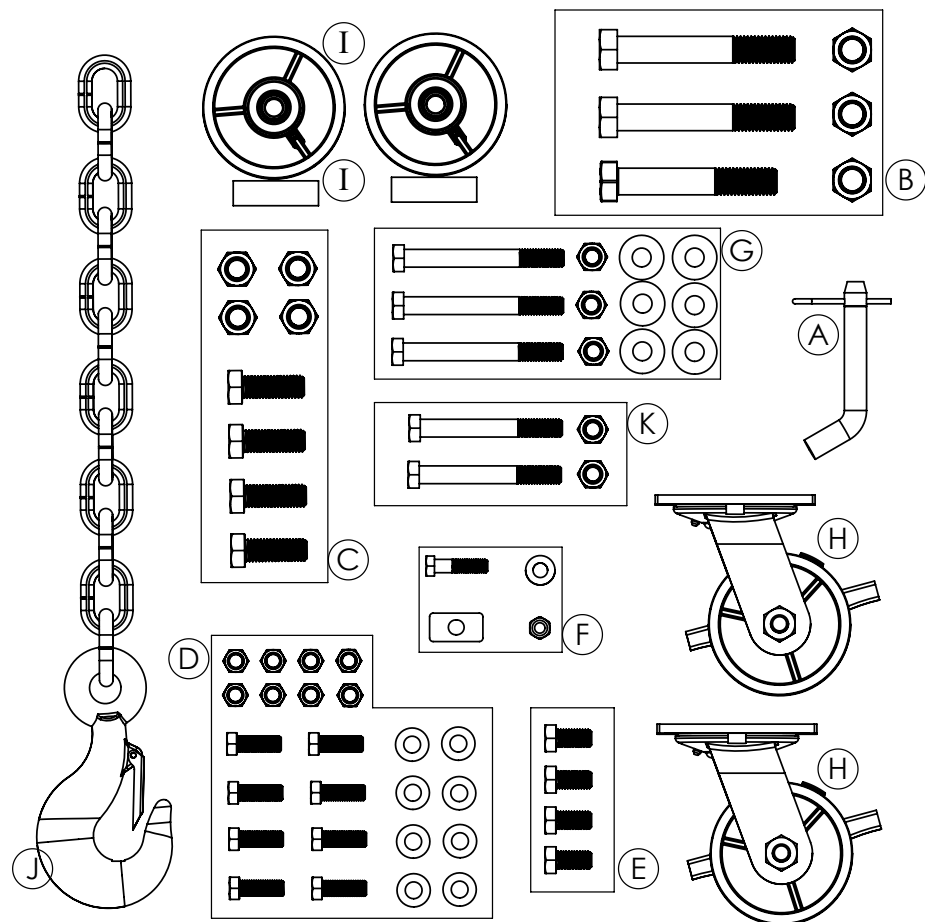
PURGING AIR FROM THE MANUAL PUMP SYSTEM

- a. Open the release valve by turning the release valve knob in a counterclockwise direction two full turns.
- b. Pump the handle ten full strokes.

- c. Close the release valve by turning the release valve knob in a clockwise direction until tight.
- d. Pump the jack until the ram is extended to maximum height.
- e. If the condition remains, repeat steps "a" through "d" until air is purged from the system.

HARDWARE KIT FOR 78107 ENGINE CRANE

#	DESCRIPTION	BAG	QTY
1	HITCH PIN 5/8 X 3.0 CLR ZN	A	1
2	BRIDGE PIN 9/64 CLR ZN	A	1
3	BOLT 3/4-10 HEX 5.0 LENGTH GRADE 8	B	2
4	BOLT 3/4-10 HEX 4.5 LENGTH GRADE 8	B	1
5	3/4-10 NYLON INSERT LOCK NUT PLATED	B	3
6	5/8- 11 NYLON INSERT LOCK NUT	C	4
7	BOLT 5/8-11 HEX 1.75 LENGTH GRADE 5 CLR ZN	C	4
8	NUT 7/16-20 NYLOC HEX GRADE 2 CLR ZN	D	8
9	BOLT 7/16-20 HEX 1.25 LENGTH GRADE 5	D	8
10	WASHER 7/16 ID ROUND GRADE 9	D	8
11	1/2-13 X 1 HEX HEAD BOLT GR 5 PLATED	E	4
12	BOLT 3/8-16 HEX 1.5 LENGTH GRADE 5	F	1
13	WASHER 3/8 ID GRADE 9 CLEAR ZINC	F	1
14	WASHER FOR 78107 PERCH ASSEMBLY	F	1
15	NUT 3/8-16 HEX NYLOC GRADE 5	F	1
16	1/2-13 X 4.5 HEX HEAD CAP SCREW GR 5 PLATED	G	3
17	1/2-13 NYLON INSERT LOCK NUT PLATED	G	3
18	1/2 WASHER CLR ZN	G	6
19	CASTER ASSEMBLY W \ LOCK	H	2
20	FRONT CASTER WHEEL ASSEMBLY	I	2
21	BUSHING FOR FRONT CASTER WHEEL	I	2
22	CHAIN AND HOOK ASSEMBLY	J	1
23	1/2-13 X 4 HEX HEAD CAP SCREW GR 5 PLATED	K	2
24	1/2-13 NYLON INSERT LOCK NUT PLATED	K	2



TORQUE SPECIFICATIONS

TORQUE 3/8 NUT/BOLT - 2 FT-LBS
TORQUE 7/16 NUT/BOLT - 5 FT-LBS
TORQUE 1/2 NUT/BOLT - 2 FT-LBS
TORQUE 5/8 NUT/BOLT - 20 FT-LBS
TORQUE 3/4 NUT/BOLT - 5 FT-LBS

ASSEMBLE AS SHOWN

