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## MODELS 78100 1000 LB. CAPACITY & 78108 1250 LB. CAPACITY ENGINE STANDS SETUP • OPERATING • MAINTENANCE INSTRUCTIONS

Note: Revision letters (A, B, C, D etc.) after model numbers have been omitted as they do not affect the setup, operating and maintenance instructions of a particular jack unless otherwise noted.

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### **IMPORTANT: READ THESE INSTRUCTIONS BEFORE OPERATING**

**BEFORE USING THIS DEVICE, READ THIS MANUAL COMPLETELY AND THOROUGHLY, UNDERSTAND ITS 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 portable automotive lifting devices 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 motor vehicles or their components caused primarily by improperly securing loads, overloading, off-centered loads, use on

other than hard level surfaces, 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 this manual prior to using this device. It is also the responsibility of the device owner to keep this manual intact and in a convenient location for all to see and read. If the manual is lost or not legible, contact Norco Industries, Inc. for a free replacement. 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.

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### **⚠ WARNING**

- Inspect the engine stand before each use. Do not use the engine stand if it is damaged, altered, modified, in poor condition, or has loose or missing hardware or components. Take corrective action before using the engine stand.
- Do not use the engine stand beyond its rated capacity. The engine weight is determined at a point where the center of the engine is located not more than 18" from the mounting plate.
- Use only on a hard level surface.
- Wear approved eye protection.
- Assure load is centered and secured to mounting attachments. Consult the engine manufacturer for the proper mounting hole locations.
- Use grade 5 bolts or better to mount adapters to engines and to secure adapter components together.
- Threaded holes in adapters and engine blocks must be clean and not damaged to insure thread engagement. A bolt thread engagement must be equal to 1-1/2 times the bolt thread diameter in order to maintain strength requirements.
- Lock the mounting head assembly rotating mechanism by tightening the two hexagonal head bolts on top of the stand's upright tube before applying a load.
- Off-center loads may make the load and handle rotate in either direction when the rotational locking device is released. Release the rotational locking device slowly and carefully by backing off the hexagonal head bolts on top of the stand's upright tube one at a time.
- Keep body from underneath engine when being lifted or suspended.
- No alterations should be made to this product.
- Only attachments and/or adapters supplied by Norco shall be used.

# OPERATING INSTRUCTIONS

## MOUNTING THE ENGINE

1. Consult the vehicle or engine manufacturer for the engine's center of gravity. The engine's center of gravity will have to be aligned with the rotational axis of the engine stand's mounting head assembly.
2. Remove the clutch bell housing from the engine and secure any other engine parts that might be loose or hanging from the engine.
3. Remove the mounting head assembly from the engine stand's upright assembly. Make sure the four engine adapter arms are loosely connected to the mounting head assembly. Fasten the four engine adapter arms to the engine using the proper bolt thread size and length. Remember to use grade 5 bolts or better. Do not tighten the bolts.
4. Align the rotational axis of the mounting head assembly as close as possible to the engine's center of gravity. Tighten the four bolts that secure the engine adapter arms to the engine and the bolts, flat washers and nuts that connect the other end of the engine adapter arms to the mounting head assembly.
5. Attach an engine lifting bar or sling to the engine and raise the engine with a shop crane or lifting device with a load capacity that can adequately handle the engine weight. Once the engine is lifted

to the desired height, slowly push the engine with the mounting head assembly pointing toward the receiver at the top of the engine stand upright assembly. The tubular section of the mounting head assembly should telescope inside the receiver all the way. Secure the mounting head assembly tube inside the receiver by tightening the two hexagonal head bolts located on top of the receiver.

6. Make sure the setup is stable and slowly and carefully remove the shop crane or engine lifting device.

7. Install the handle in the hole of the exposed end of the mounting head assembly tube and secure it with the bolt, nut and plastic cap provided.

## REMOVING THE ENGINE

1. Attach an engine lifting bar or sling to the engine. Connect the bar or sling to a shop crane or lifting device and slowly lift the engine just high enough to take pressure off the engine stand.

2. Remove the handle from the mounting head assembly tube. Loosen the two locking bolts at the top of upright assembly receiver and slowly and carefully maneuver the engine away from the stand.

3. Unscrew the four bolts that connect the engine adapter arms to the engine.

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## PREVENTATIVE MAINTENANCE

1. Always store the engine stand in a well protected area where it will not be exposed to inclement weather, corrosive vapors, abrasive dust, or any other harmful elements. The engine stand must be cleaned of water, snow, sand, or grit before using.
2. Lubricate the wheels, casters and mounting head assembly tube with a general purpose grease.
3. Every engine stand owner is responsible for keeping the jack

label clean and readable. Use a mild soap solution to wash external surfaces of the stand. Contact Norco Industries for a replacement label if your stand label is not readable.

4. Inspect the stand before each use. Do not use the stand if any component is cracked, broken or bent. Do not use the stand if it has loose or missing hardware or components, or is modified in any way. Take corrective action before using the stand again.

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## 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.

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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.