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MODELS 777 & 787 1000 LB. CAP. MOTORCYCLE LIFTS  
AND MODELS 877 & 887 750 LB. CAP. ATV LIFTS  
**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 lift is covered by a Limited Lifetime Warranty. For details see the back cover of Norco's product catalog.

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**⚠ WARNING**

- Visually inspect the lift before each use to make sure no hardware is loose, no components are bent, distorted, excessively worn or missing and there is no hydraulic fluid leak. Take appropriate corrective action before using the lift. Do not use this device for a purpose other than for which it was intended.
  - Do not exceed rated capacity.
  - Choose a clear and clean work area with plenty of room to work around the vehicle and a floor free from debris or obstructions.
  - Use only on a hard level surface.
  - Lift only on areas of the vehicle as specified by the vehicle manufacturer.
  - Lifting and lowering procedures require two people. Consult the "Operating Instructions" section of this manual for the specific procedures.
  - Do not attempt to lift or lower the vehicle without using the four load restraint tie-downs provided.
  - Make sure setup is stable and secure before lifting.
  - Keep all body parts clear of lift during raising and lowering operations.
  - This is a lifting device only. Immediately after lifting, insert the detent pin in either one of the two locating holes in the upright tube. Make sure the detent pin is able to support the lift arms on both sides of the upright. Slowly lower the lift arms to where they are barely touching the detent pin yet hydraulic pressure is still supporting the load.
  - Avoid excessive vehicle rocking or moving while on the lift.
  - Clear area if vehicle is in danger of falling.
  - Do not alter or modify this device.
  - Only attachments and/or adapters supplied by Norco shall be used.
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**SETUP**

1. Become familiar with the identification and function of the lift components. Refer to the enclosed drawing for part identification. If you have a model 787 or 887 lift, install the air disconnect of your choice in the air valve at the end of the jack's hose.
2. Secure the index #24 legs to the channels at the bottom of the index #2 upright assembly with the index #22 bolts and index #23 washers provided. Make sure the bolts are tight. **NOTE:** Sometimes the #24 legs do not sit perfectly flat on the ground because the ground is not perfectly flat or the legs were installed on the upright but not tightened when the legs were both perfectly flat. Occasionally, the legs may be as as much as 3/8" from being perfectly flat on a flat surface. This should not cause any concern since the weight of the motorcycle will flatten the base legs on the ground.
3. Slide the index #17 lift assembly on the ground and in between

the index #24 legs. Guide the upright portion of the index #17 lift assembly in between the index #15 upper guide arms and index #16 lift arms so the guide and lift arms straddle the upright portion of the lift assembly. Secure the index #16 lift arms to the bottom holes of the index #17 lift assembly upright using the index #10 shoulder bolt, index #29 washer and index #27 locknut provided. Do not tighten the locknut at this time. Secure the index #15 upper guide arms to the upright portion of the index #17 lift assembly using the same type of hardware (index numbers 27, 29 and 10) used to secure the lift arms. All nuts and shoulder bolts must be tightened against the upright portion of the index #17 lift assembly at this time. It will be necessary to use a 6mm allen wrench (not included) to keep the shoulder bolts from rotating when the locknuts are tightened. Tighten the locknuts all the way, then back them off 1/8 to 1/4 turn. **IMPORTANT: THIS METHOD OF ASSEMBLY**

## **IS NECESSARY IN ORDER TO ACHIEVE MAXIMUM LIFT STABILITY UNDER LOAD.**

4. Install the index #5 jack on the index #6 jack base using the index #13 screws and index #14 nuts provided. Secure the jack's ram to the index #2 upright assembly with the index #7 shoulder bolt, index #12 washers, and index #9 locknut provided. It may be necessary to open the release valve (turn the valve in a counterclockwise direction two full turns) on the jack so you can either extend or retract the jack's ram in order to align the holes.

**5. IMPORTANT: IF IT BECOMES NECESSARY TO REMOVE THE INDEX #34 NUTS AT ANY TIME, MAKE SURE THE INDEX #8 SET SCREWS ARE REMOVED FIRST BEFORE UNSCREWING THE NUTS. REINSTALLING THE NUTS REQUIRES THE SET SCREWS TO BE REINSTALLED IN THE NUTS AND RETIGHTENED WHEN THE NUTS ARE PROPERLY POSITIONED ON THE INDEX #32 THREADED STUDS.**

6. Sometimes air gets trapped in the hydraulic jack during

shipment. An air bound hydraulic jack feels spongy when pumped and may not allow the jack to pump full incremental strokes.

## **TO PURGE AIR FROM THE HYDRAULIC JACK:**

- a. Open the jack's release valve knob by turning it in a counterclockwise direction two full turns.
- b. Insert the index #4 handle in the jack's handle receiver and pump the handle about ten full pump strokes. If your lift is equipped with an air/hydraulic jack, make sure your jack is hooked up to an air line and depress the air valve for about 15 seconds.
- c. Close the jack's release valve knob by turning it in a clockwise direction until tight.
- d. Pump the jack until the lift is raised to maximum height.
- e. If the condition seems better but is still detectable, repeat steps "a" through "d" until air is purged from the jack.

## **OPERATING INSTRUCTIONS**

### **BECOME FAMILIAR WITH THE OPERATION OF THE LIFT BEFORE ATTEMPTING TO LIFT A MOTORCYCLE OR ATV.**

The motorcycle models 777 and 787 are not intended to raise an ATV and the ATV models 877 and 887 are not intended to lift a motorcycle unless the index #30 ATV lift arms are removed.

1. The index #31 wheels come in contact with the ground only when there is no load on the lift and the index #2 upright assembly handle is pulled back toward you. This will enable you to easily maneuver the lift from place to place as long as it is a hard level surface.

2. Once the lift is in the proper work location the upright assembly handle (index #2) can be used to slide the lift under the vehicle. Since the jack is only designed to be used on a hard level surface, there should be no difficulty in sliding the lift under a vehicle. Make sure there are no obstructions, cracks or crevices in the floor underneath the vehicle.

3. The lift consists of a parallelogram lift arm type assembly which arcs away from the index #2 upright assembly when a vehicle is lifted. The index #17 lift assembly is closest to the index #2 upright assembly when the lift assembly is all the way down and also in its highest lift position.

4. The lift is raised by first turning the index #5 jack's release valve knob all the way in a clockwise direction until it stops. Remove the index #4 pump handle from its holder on top of the index #2 upright assembly and insert it in the jack's pump handle receiver. Pump the handle up and down to raise the index #17 lift assembly or depress the air valve lever if equipped with the air/hydraulic jack.

5. The lift is lowered by slowly turning the index #5 jack's release valve knob in a counterclockwise direction. **IMPORTANT: THE MORE YOU TURN THE RELEASE VALVE KNOB IN A COUNTERCLOCKWISE DIRECTION, THE FASTER THE INDEX #17 LIFT ASSEMBLY LOWERS TO THE GROUND. IN ORDER TO LOWER A VEHICLE SAFELY, THE KNOB MUST BE TURNED VERY SLOWLY AND CAREFULLY. NEVER TURN THE RELEASE VALVE KNOB IN A COUNTERCLOCKWISE DIRECTION MORE THAN TWO FULL TURNS UNDER ANY CIRCUMSTANCE. OFTEN TIMES, 1/8 OF A TURN WILL BE SUFFICIENT TO LOWER A VEHICLE.**

### **LIFTING A MOTORCYCLE OR ATV**

**IMPORTANT: EVALUATE THE WORK TO BE PERFORMED ON THE VEHICLE BEFORE LIFTING IN ORDER TO DETERMINE IF ADDITIONAL SUPPORT EQUIPMENT IS NECESSARY. FOR EXAMPLE: ORDINARY DETAIL WORK, LIGHT WEIGHT ACCESSORY INSTALLATION AND COMPONENT REPAIR WOULD NOT REQUIRE ADDITIONAL SUPPORT EQUIPMENT. REMOVAL OR INSTALLATION OF ANY HEAVY MOTORCYCLE**

**COMPONENTS THAT WOULD AFFECT AND CHANGE THE WEIGHT DISTRIBUTION AND BALANCE OF THE MOTORCYCLE ON THE LIFT WILL REQUIRE ADDITIONAL SUPPORT EQUIPMENT. FOR EXAMPLE: REMOVING ONE TIRE AND WHEEL COMBINATION WILL SHIFT THE WEIGHT OF THE MOTORCYCLE TO THE OPPOSITE SIDE OF THE LIFT ARMS. MAKE SURE TO SUPPORT THE TIRE AND WHEEL COMBINATION NOT BEING REMOVED WITH THE OPTIONAL RIDER MODEL 789 TIRE STABILIZER STAND BEFORE PERFORMING THE WORK.**

1. Lift only on areas of the vehicle as specified by the vehicle manufacturer. This lift is designed for lifting vehicles with an exposed frame undercarriage. The weight of the vehicle must be evenly balanced on the two lift arms that make up the index #17 lift assembly. The center of balance on an engine is not necessarily the center of balance point of the whole vehicle. **IMPORTANT: DO NOT ATTEMPT TO RAISE ANY VEHICLE THAT CANNOT BE PROPERLY BALANCED ON THE LIFT.**

2. Since lifting and lowering procedures require two people, one person must hold the motorcycle in a vertical position. The second person must look underneath the vehicle frame to make sure there are no components extending down beyond the frame that can be damaged by lifting. If there are components extending down below the frame that will interfere with the lift arms making level contact with both sides of the vehicle frame, Rider Model 790 Lift Pads should be used to make four point contact with the vehicle frame. Rider Model 790 Lift Pads are sold in pairs as some motorcycles have frames that are not level to the ground. A four point contact with the frame will require two pairs of Model 790 Lift Pads. The second person can also determine if it is necessary to leave the motorcycle kickstand extended or retracted in order for the index #17 lift assembly arms to make contact with the motorcycle frame. The second person (person operating the lift) must slide the lift under the vehicle making sure the lift arms are properly positioned under the vehicle frame. The lift can now be pumped up under the frame. There should be equal distance on both sides of a motorcycle as it is lined up with the lift arms. Since the lift arcs when pumped, the lift operator must compensate for the arcing movement so the motorcycle is equally spaced on the lift arms when the lift arms come in contact with the motorcycle frame. Once the lift arms make contact with the motorcycle frame the motorcycle can be lifted very slowly while the first person continues to hold the motorcycle in a vertical position. During this initial lift procedure, both people can determine whether the motorcycle is properly balanced. If it is not, the motorcycle should be lowered to the ground and the lift arms should be repositioned under the motorcycle until the center of balance is achieved. This initial lift procedure must be repeated until the proper balance is achieved.

**IMPORTANT: THE MOTORCYCLE MUST ALWAYS BE HELD IN AN UPRIGHT VERTICAL POSITION BY ONE PERSON AT ALL TIMES DURING THIS INITIAL LIFT PROCEDURE.**

3. Once the center of balance point is achieved, the motorcycle may be lifted only to where both tires clear the ground. The lift operator can now attach the four safety tie-down straps with hooks to the holes at both ends of the lift arms on the index #17 lift assembly. The other ends of the tie-down straps are designed with soft-tie ends which give the operator the choice of using a hook or soft-tie to attach to the handle bars, frame or foot peg mounts. Using the soft-tie ends give more protection for painted and chromed motorcycle parts. Additional protection against scratching and abrasion can be achieved by using the optional Rider Equipment Model 810 Sheep Skin Handlebar Protectors.

**NOTE: RIDER EQUIPMENT TIE-DOWN MODELS 805 AND 815 ARE PACKAGED IN PAIRS AND COME IN A CONVENIENT TO USE PLASTIC STORAGE POUCH. BEFORE USING, PLEASE READ THE "IMPORTANT INSTRUCTIONS" SECTION AND VIEW THE IN-USE PHOTO OF THE TIEDOWNS ON THE CARD THAT IS INCLUDED IN THE PLASTIC POUCH. THERE IS ALSO AN IN-USE PHOTO OF THE MODEL 810 SHEEP SKIN HANDLE BAR PROTECTOR IN ITS POUCH.** The higher the hooks or soft-tie ends are positioned on the motorcycle, the more stability is achieved. After the hooks or soft-tie ends are positioned and tightened down, determine whether it will be necessary to provide additional stability by continuing to raise the motorcycle. If the motorcycle appears to move a little, additional motorcycle tie-downs are advised.

4. Once the motorcycle is secured with the tie-downs, raise the motorcycle to the desired work height. There are two work heights provided and are designated by the two holes in the side of the index #2 upright assembly. Remove the index #18 detent pin from its storage hole in the top of the index #2 upright assembly. Raise the motorcycle until the bottom edge of the index #16 lift arms clear either desired hole location of the index #2 upright assembly.

Insert the detent pin in the desired hole making sure the pin is able to support the index #16 lift arms on both sides of the upright. Slowly lower the lift to where the lift arms are barely touching the detent pin yet hydraulic pressure is still supporting the index #16 lift arms.

**5. IMPORTANT: READ THE FIRST PARAGRAPH IN THIS MANUAL UNDER "LIFTING A MOTORCYCLE OR ATV". POSITION THE OPTIONAL MODEL 789 TIRE STABILIZER STAND AT THIS TIME IF NECESSARY. KEEP THE STAND IN PLACE UNTIL ALL WORK IS COMPLETED.**

### LOWERING A MOTORCYCLE OR ATV

1. Make sure vehicle is properly balanced on lift before removing any additional support equipment or tire stabilizer stand.

2. Have one person grab the handle bars of the vehicle in preparation for its lowering and eventual removal from the lift.

3. The other person must remove the index #18 detent pin from its hole in the side of the index #2 upright assembly and store it in the appropriate hole on the top of the upright assembly.

The release valve knob on the jack can now be very slowly and carefully turned in a counterclockwise direction so the vehicle will slowly lower. As soon as the tires come within a couple of inches of contacting the floor, turn the release valve knob in a clockwise direction until closed. The vehicle tires should be at least a half an inch from touching the floor.

4. While one person is still stabilizing the motorcycle in a vertical position, the other person should remove the tiedown's hooks from the motorcycle and holes at both ends of the lift arms on the index #17 lift assembly. The motorcycle's kickstand should be pointed down and ready to make contact with the ground. After the tiedowns are removed, lower the motorcycle all the way to the ground so the index #17 lift arms clear the motorcycle frame and rest on the floor.

5. Slide the lift out from underneath the vehicle.

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## PREVENTATIVE MAINTENANCE

1. Always store the lift in a well protected area where it will not be exposed to inclement weather, corrosive vapors, abrasive dust, or any other harmful elements. The lift must be cleaned of water, snow, sand, or grit before using.

2. Check the free play in the hardware that secures the index #15 upper guide arms and index #16 lift arms to the index #2 upright assembly, index #17 lift assembly and index #6 jack base assembly. This free play check must be made before each use of the lift. If there seems to be too much lateral movement (free play) in the lift, tighten all the hardware. Remember that excessive tightening of the hardware could prevent the lift from lowering when no weight is on the lift. After tightening, back off the locknuts slightly before securing them with their set screws.

3. Check the free play in the hardware that secures the index #15 upper guide arms and index #16 lift arms to the index #2 upright assembly, index #17 lift assembly and index #6 jack base assembly. This free play check must be made before each use of the lift. If there seems to be too much lateral movement (free play) in the lift,

tighten all the hardware. Remember that excessive tightening of the hardware could prevent the lift from lowering when no weight is on the lift. After tightening, back off the locknuts slightly before securing them with their set screws.

4. It should not be necessary to refill or top off the index #5 jack 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. Contact the Rider Equipment Customer Service Office for the location of nearest authorized service center. **IMPORTANT: IN ORDER TO PREVENT SEAL DAMAGE AND JACK FAILURE, NEVER USE ALCOHOL, HYDRAULIC BRAKE FLUID, OR TRANSMISSION OIL IN THE JACK. USE CHEVRON HYDRAULIC OIL AW ISO 32 OR ITS EQUIVALENT UNOCAL AW 150.**

5. Every lift owner is responsible for keeping the lift labels clean and readable. Use a mild soap solution to wash external surfaces of the lift but not any moving hydraulic components.

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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.