



## 3-TON ALUMINUM/STEEL SERVICE JACK OWNER'S MANUAL



**⚠ WARNING** Read carefully and understand all **ASSEMBLY AND OPERATION INSTRUCTIONS** before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item# 46186

Thank you very much for choosing a Strongway product! For future reference, please complete the owner's record below:

Model: \_\_\_\_\_ Purchase Date: \_\_\_\_\_

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This jack is designed for certain applications only. The distributor cannot be responsible for issues arising from modification. We strongly recommend this jack not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the jack until you have first contacted the distributor to determine if it can or should be used for the application.

For technical questions please call **1-800-222-5381**.

## INTENDED USE

This service jack is intended for use on small to midsize vehicles. The hybrid aluminum and steel construction makes this jack light and durable. This jack features a dual piston design which gets the saddle to load quickly. The rubber saddle pad and foam handle pad inhibit scratching and marring of under car components that are suitable for lifting. The side handles make personal transporting of the jack easy. This jack is perfect for road side emergencies or garage use.

- Rear ball bearing mounted caster wheels for easy maneuverability
- 4 in. entry level lift height
- 18.25 in. maximum lift height
- 57.2 lbs.
- Dual pumps for rapid lifting – 7 strokes to max height
- Safety valve prevents overloading
- Universal joint release mechanism provides precise control for lowering load
- ASME PALD 2009 compliant

## TECHNICAL SPECIFICATIONS

Item	Description
Capacity	3 Tons
Minimum Lift Height	4 in.
Maximum Lift Height	18.25 in.
Lifting Range	14.25 in.
Caster Wheel Size	1.8 x .9 in.
Front Wheel Size	2.6 x 1.6 in.
Saddle Diameter	4.6 in.
Handle Length	1.3 x 45.35 in.
Dimensions	24 in. x 11.9 in. x 6 in.
Weight	57.2 lbs.

## GENERAL SAFETY RULES

### **WARNING**

**Read and understand all instructions.** Failure to comply with the following instructions and warnings listed below may result in serious injury.



**CAUTION:** Do not allow persons to operate or assemble this service jack until they have read this manual and have developed a thorough understanding of how the service jack works.

### **WARNING**

**The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur.** It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

## WARNING INFORMATION



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

### **⚠ WARNING**

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

## IMPORTANT SAFETY CONSIDERATIONS

### **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.

It is the responsibility of the owner to make sure all personnel read this manual prior to using the 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 or product labels are lost or not legible, contact Strongway for 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.

## THE NATURE OF HAZARDOUS SITUATIONS

### **⚠ WARNING**

The use of portable automotive lifting devices are 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 the 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, use on other than hard level surfaces, and using equipment for a purpose for which it was not designed.

## METHODS TO AVOID HAZARDOUS SITUATIONS

### **⚠ WARNING**

- Read, study, understand and follow all instructions before operating this device.
- Not for use by children or people with reduced mental capacity.
- Do not use under the influence of drugs or alcohol.
- Inspect work area. Ensure work area is free and clear of any hazards prior to use.
- Inspect the jack before each use. Do not use jack if damaged, altered, modified, in poor condition, leaking hydraulic fluid, or unstable due to loose or missing hardware or parts. Make corrections before using.
- Lift only on areas of the vehicle as specified by the vehicle manufacturer.
- Users and bystanders must wear eye protection that meets ANSI Z87.1 and OSHA standards.
- Do not use jack beyond its rated capacity.
- Do not shock load.

- This is a lifting device only. Immediately after lifting, support the vehicle with jack stands capable of sustaining the load before working on the vehicle.
- Use only on a hard level surface free from obstructions so the jack is free to reposition itself during lifting and lowering operations.
- Center load on saddle. Be sure setup is stable before working on vehicle.
- Do not move or dolly the vehicle while on the jack.
- Do not use any materials that may serve as risers, spacers or extenders between the stock lifting saddle and the load.
- Do not use any adaptors that replace the stock lifting saddle unless approved or supplied by the jack manufacturer.
- Always lower the jack slowly and carefully.
- This product may contain one or more chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands thoroughly after handling.
- Failure to heed these warnings may result in serious or fatal personal injury and/or property damage.

## CONSEQUENCES OF NOT AVOIDING HAZARDOUS SITUATIONS

### **⚠ WARNING**


Failure to read this manual completely and thoroughly, failure to understand its OPERATING INSTRUCTIONS, SAFETY WARNINGS, and MAINTENANCE INSTRUCTIONS and comply with them, and failure to comply with the METHODS TO AVOID HAZARDOUS SITUATIONS could cause accidents resulting in serious or fatal personal injury and/or property damage.

## SAVE THESE INSTRUCTIONS

## ON PRODUCT WARNING LABELS

**⚠ WARNING**

• Study, understand, and follow all instructions before operating this device. • Wear eye protection that meets ANSI Z87.1 and OSHA standards. • Do not exceed rated capacity. • Use only on hard, level surface. • Lifting device only. • Immediately after lifting, support the vehicle with appropriate means. • Do not move or dolly the vehicle while on the jack. • Lift only on areas of the vehicle as specified by the vehicle manufacturer. • No alterations shall be made to this product. • Only attachments and/or adapters supplied by the manufacturer shall be used. • Do not get under or allow anyone under the vehicle until it has been supported by jack stands. • Center load on saddle prior to lifting. • Use wheel chocks or other blocking device on opposing wheels before using jack. • Do not use this jack for any use other than the manufacturer specified usage. • Failure to heed these markings may result in personal injury and/or property damage.



LIMITED  
WARRANTY

**ONE  
YEAR**

MEETS  
**ASME PALD**  
SAFETY STANDARDS

**DANGER**

**DO NOT  
OVERLOAD**

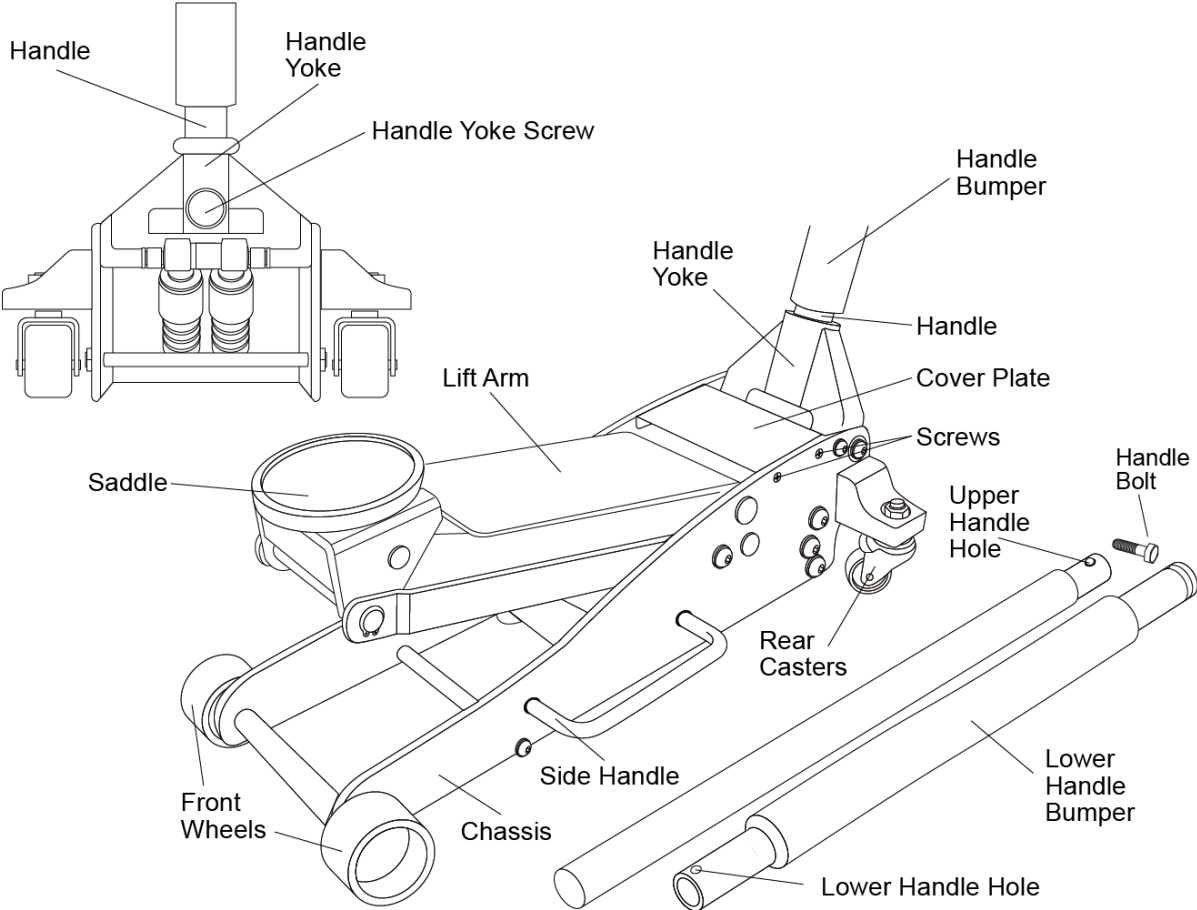
Distributed by Northern Tool + Equipment Co., Inc.  
Burnsville, MN 55306 | NorthernTool.com | Made in China

## SERVICE JACK USE AND CARE

- **Do not modify the service jack in any way.** Unauthorized modification may impair the function and/or safety and could affect the life of the equipment. There are specific applications for which the **service jack** was designed.
- **Always check for damaged or worn out parts before using the service jack.** Broken parts will affect the **service jack** operation. Replace or repair damaged or worn parts immediately.
- **Store idle service jack.** When the **service jack** is not in use, store it in a secure place out of the reach of children. Inspect it for good working condition prior to storage and before re-use.

# INSPECTION

Visual inspection should be made before each use of the jack, checking for leaking hydraulic fluid and damaged loose or missing parts. Any jack which appears to be damaged in any way, is found to be badly worn, or operates abnormally **MUST BE REMOVED FROM SERVICE** until necessary repairs are made.



## SETUP

***Refer to drawings on page 7 for identification of jack parts***

1. Remove 2-piece handle from box. Insert narrow portion of top handle into bottom handle, align top and bottom bolt holes, and secure with handle bolt provided.
2. Grease the inside of the handle yoke so the handle will rotate freely inside the yoke. Remove the handle yoke screw. Insert the end of the lower handle all the way in the handle yoke until it engages the release valve assembly. Secure the handle in the handle yoke by reinstalling the handle yoke screw and tightening the screw. Rotate the handle to see if it is rotating the release valve assembly. Pull on the handle to make sure it is secured in the handle yoke. If the release valve assembly is not rotating and/or the handle pulls out of the handle yoke, repeat step 2.
  - a) **IMPORTANT:** In most cases the jack should work normally right out of the box but it is not unusual for air to get trapped in the jack's hydraulic system during shipping and handling. There are several symptoms of an air trapped hydraulic system which include only partial incremental pump stroke, jack will not lift load, jack will not sustain load or pumping feels spongy under load. The following procedure will purge air from the hydraulic system and only needs to be done if experiencing the above mentioned conditions.
  - b) The saddle should be in its lowest position. Open the release valve two full turns by turning the handle counterclockwise. Pump the jack 10 to 15 times.
  - c) Close the release valve by turning the handle clockwise until it stops. Pump the jack to maximum height or as high as it will raise. If the pumping condition has improved, repeat steps a) through c) until all the air has been purged from the system.

**IMPORTANT: Before attempting to raise any vehicle, check vehicle service manual for recommended lifting surfaces.**



## OPERATING INSTRUCTIONS



This is the safety alert symbol used for the OPERATING INSTRUCTIONS section of this manual to alert you to potential personal injury hazards. Obey all instructions to avoid possible injury or death. **IMPORTANT:** Before attempting to raise any vehicle, check vehicle service manual for recommended lifting surfaces.

### OPERATION

1. Put vehicle transmission in park or in gear and then apply the emergency brake. To raise load: Turn the handle in a clockwise direction until tight. Position the jack under the load. Proceed to pump the handle in order to raise the lift arm to the load. As the saddle at the end of the lift arm gets closer to the load, reposition the jack so the saddle will contact the load firmly and the load is centered on the saddle. Make sure the saddle is correctly positioned. Raise the load to the desired work height. Place jack stands of appropriate capacity at the vehicle manufacturers' recommended support areas that provide stable support for the raised vehicle.



#### **DO NOT CRAWL UNDER VEHICLE WHILE LIFTING VEHICLE OR PLACING OR REMOVING THE JACK STANDS!**

Once jack stands are positioned, turn the jack handle **VERY SLOWLY** in a counterclockwise direction to lower the load to rest on the jack stands. Inspect the relationship between the jack stands and load to make sure the setup is stable and safe. If the setup is not stable or safe, follow the preceding steps until corrected.

2. **To lower load:** Follow the procedures mentioned in "To raise load" section of the OPERATING INSTRUCTIONS in order to raise the load off the jack stands. Once the load has cleared the jack stands, remove the jack stands from under the load and away from the work area. Turn handle very slowly in a counterclockwise direction until the load is completely lowered to the ground. Once the jack's lifting saddle has cleared the load, remove the jack from under the load. **CAUTION:** Keep hands and feet away from the hinge mechanism of the jack.

### PREVENTATIVE MAINTENANCE

- **Maintain your service jack.** It is recommended that the general condition of any **service jack** be examined before it is used. Keep your **service jack** in good repair by adopting a program of conscientious repair and maintenance. Have necessary repairs made by qualified service personnel.
  1. Always store the jack in a well-protected area where it will not be exposed to inclement weather, corrosive vapors, abrasive dust, or any other harmful elements. The jack must be cleaned of water, snow, sand or grit before using.
  2. The jack must be lubricated periodically in order to prevent premature wearing of parts. A general purpose grease must be applied to caster wheels, front axle, elevator arm, handle base pivot bolts, release mechanism and all other bearing surfaces. Worn parts resulting from inadequate or no lubrication are not eligible for warranty consideration. See page 9 for lubrication instructions.

**IMPORTANT: In order to prevent seal damage and jack failure, never use alcohol, hydraulic brake fluid, or transmission oil in the jack. Use hydraulic jack oil.**

3. Every jack owner is responsible for keeping the jack labels clean and readable. Use a mild soap solution to wash external surfaces of the jack but not any moving hydraulic components.
4. Inspect the jack before each use. Do not use the jack if any component is cracked, broken, bent, shows sign of damage or leaks hydraulic fluid. Do not use the jack if it has loose or missing hardware or components, or is modified in any way. Take corrective action before using the jack again.

## **OIL FILL INSTRUCTIONS**

It should not be necessary to refill the jack with hydraulic fluid unless there is visual leakage or it's the scheduled time for periodic maintenance. Any visual leak should be corrected before filling power unit with hydraulic oil. Follow these instructions for filling:

- a) The saddle should be in its lowest position. Remove the four screws that secure the cover plate to the jack frame so the oil filler screw can be removed from the hydraulic power unit reservoir tube.
- b) Look inside the oil fill screw hole. You should be able to see the top of the power unit's cylinder. The hydraulic fluid level should be no higher than the top of the cylinder. Correct the fluid level if it is not at the proper height. **CAUTION:** In order to prevent seal damage and jack failure, never use alcohol, hydraulic brake fluid, or transmission oil in the jack. Use hydraulic jack oil, a light turbine oil, Chevron Hydraulic Oil AW ISO 32 or Unocal Unax AW 150.
- c) Close the release valve by turning the handle clockwise until it stops. Pump the jack against a load of at least 500 pounds (225 Kgs). After the load is raised to maximum height, slightly turn the handle in a counterclockwise direction so the load is very slowly lowered, while simultaneously and quickly pumping the handle 5 or 6 full incremental pump strokes. After pumping, lower the lift arm to its full rest position.
- d) Install the oil fill screw. Rotate the handle in a clockwise direction until tight and pump the lift arm to maximum height without a load. If the pumping condition has improved, repeat steps a) through d) until all the air has been purged from the system. Reinstall the cover plate.

## **PROPER STORAGE**

It is recommended that the jack be stored in a dry location with all wheels touching the ground on a relatively level surface.

# HYDRAULIC MAINTENANCE GUIDE

IMPORTANT: Service jacks are designed for lifting purposes only; always support raised load with jack stands.

## REGULAR MAINTENANCE

### MONTHLY or as necessary (depending on usage)

#1 Using a grease gun, add grease to grease fitting in the lift arm pivot shaft.

(Use a multi-purpose NLGI type grease only.)

#2 Lubricate all linkages and pivot points.

(Use white lithium spray grease only.)

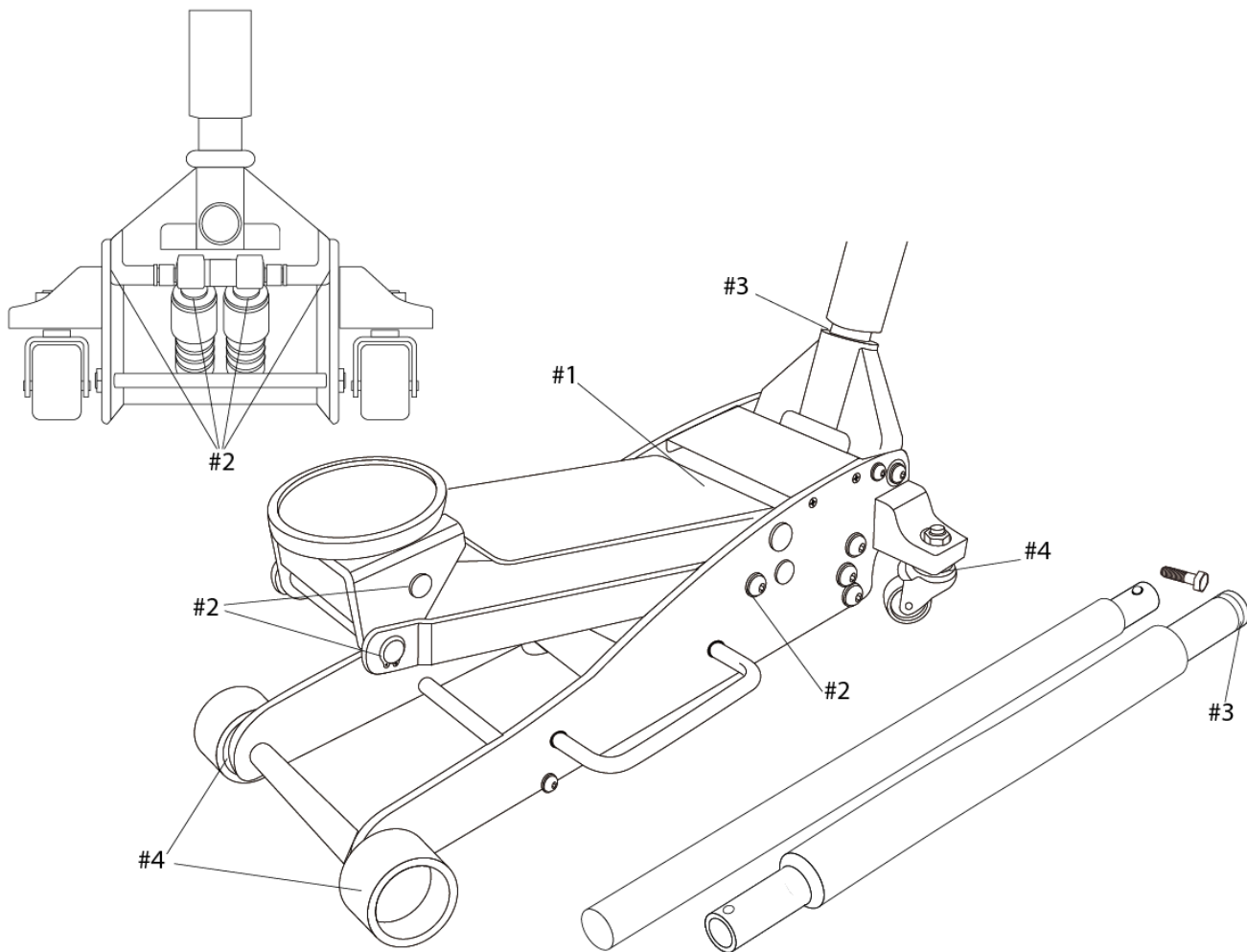
#3 Remove handle; lubricate handle receptacle and handle end.

(Use white lithium spray grease only.)

#4 Lubricate both rear casters bearings and both front wheels.

(Use white lithium spray grease only.)

Tighten all accessible hardware.

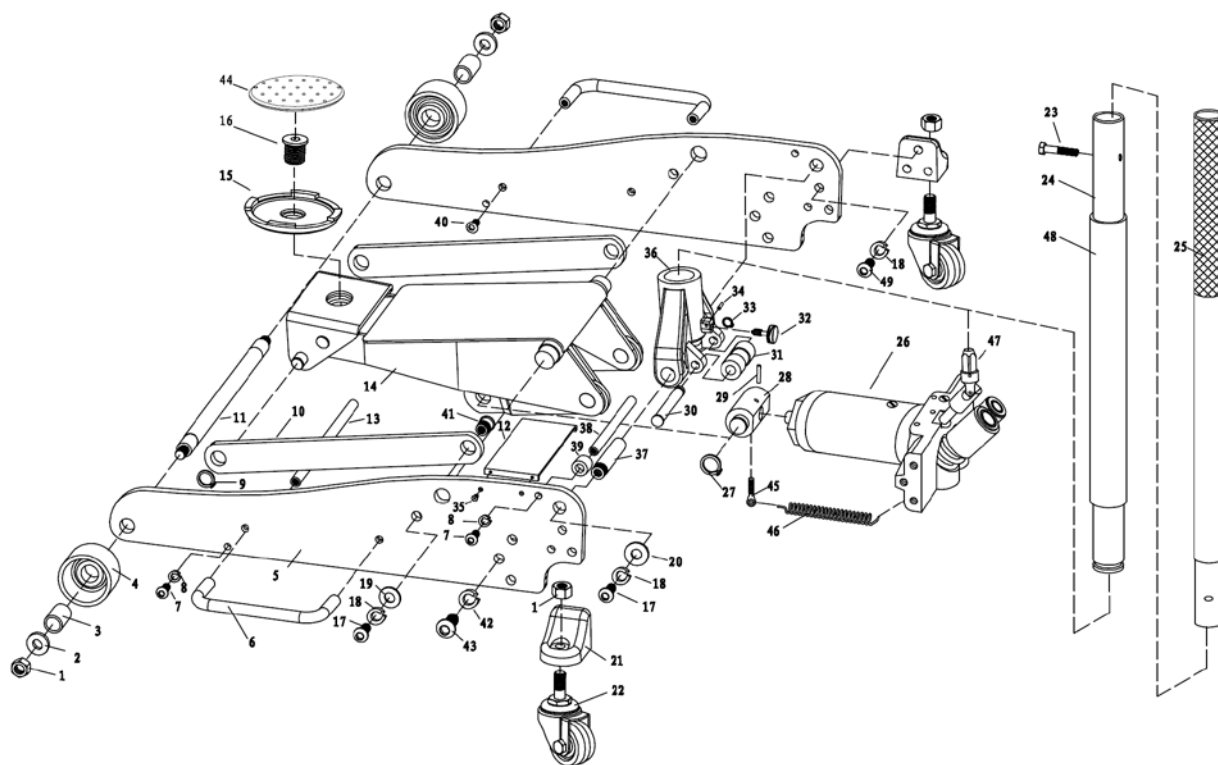


## TROUBLESHOOTING

Important: Service jacks are self-contained devices used for lifting, but not sustaining, a partial vehicular load. In accordance with ASME PALD Load Sustaining Test: "A load not less than the rated capacity...shall not lower more than 1/8" (3.18mm) in the first minute, nor a total of .1875" (4.76mm) in 10 minutes." Lowering within this range is considered normal operation and is NOT a warrantable defect.

<b>PROBLEM</b>	<b>ACTION</b>
Unit will not lift load	Purge air from hydraulic system by following procedure under SETUP.
Unit will not sustain load or feels "spongy" under load	Purge air from hydraulic system as above.
Unit will not lift to full height	Purge air from hydraulic system as above.
Unit will not lower completely	Check oil level. Make sure hydraulic system is not overfilled.
Handle tends to raise up while the unit is under load	Pump the handle rapidly several times to push oil past ball valves in power unit.
Unit still does not operate	Contact customer service.
Unit will not lift load	Purge air from hydraulic system by following procedure under SETUP.

# DIAGRAM & PARTS LIST



Part#	Description	Qty.	Part#	Description	Qty.
1	Locking Nut M12	4	26	Hydraulic Power Unit Assembly	1
2	Flat Washer 20	2	27	Retaining Ring 20	2
3	Front Wheel Bushing	2	28	Linkage Block	1
4	Front Wheel	2	29	Pin 4x40	1
5	Side Plate	2	30	Pump Roller Axle	1
6	Carrying Handle	2	31	Pump Roller	1
7	Screw M8x25	4	32	Handle Yoke Screw	1
8	Washer 8	4	33	Retaining Ring 12	1
9	Retaining Ring 16	2	34	Spring Pin 3x14	1
10	Radius Linkage	2	35	Screw M5x16	4
11	Front Wheel Axis	1	36	Handle Yoke	1
12	Covering plate	1	37	Handle Yoke Bolt	2
13	Lever Bar	1	38	Rod	1
14	Lift Arm Assembly	1	39	Rubber Guard	2
15	Saddle	1	40	Screw 8x25	4
16	Saddle screw	1	41	Long Linkage Axle	2
17	Screw M10x20	4	42	Spring Washer 12	6
18	Tooth Washer 10	10	43	Screw M12x25	6
19	Flat Washer 10	2	44	Saddle Pad	1
20	Flat Washer 10	2	45	Rolling Screw	2
21	Rear Caster Bracket	2	46	Return Spring	2
22	Rear Caster Assembly	2	47	Universal Joint Assembly	1
23	Screw M6x35	1	48	Handle Bumper	1
24	Lower Handle	1	49	Screw 10x25	6
25	Upper Handle	1			

For replacement parts and technical questions, please call **1-800-222-5381**.

## **Limited Warranty**

Northern Tool and Equipment Company, Inc. ("We" or "Us") warrants to the original purchaser only ("You" or "Your") that the Strongway product purchased will be free from material defects in both materials and workmanship, normal wear and tear excepted, for a period of one year from date of purchase. The foregoing warranty is valid only if the installation and use of the product is strictly in accordance with product instructions. There are no other warranties, express or implied, including the warranty of merchantability or fitness for a particular purpose. If the product does not comply with this limited warranty, Your sole and exclusive remedy is that We will, at our sole option and within a commercially reasonable time, either replace the product without charge to You or refund the purchase price (less shipping). This limited warranty is not transferable.

## **Limitations on the Warranty**

This limited warranty does not cover: (a) normal wear and tear; (b) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (c) damage from misapplication, overloading, or improper installation; (d) improper maintenance and repair; and (e) product alteration in any manner by anyone other than Us, with the sole exception of alterations made pursuant to product instructions and in a workmanlike manner.

## **Obligations of Purchaser**

You must retain Your product purchase receipt to verify date of purchase and that You are the original purchaser. To make a warranty claim, contact Us at 1-800-222-5381, identify the product by make and model number, and follow the claim instructions that will be provided. The product and the purchase receipt must be provided to Us in order to process Your warranty claim. Any returned product that is replaced or refunded by Us becomes our property. You will be responsible for return shipping costs or costs related to Your return visit to a retail store.

## **Remedy Limits**

Product replacement or a refund of the purchase price is Your sole remedy under this limited warranty or any other warranty related to the product. We shall not be liable for: service or labor charges or damage to Your property incurred in removing or replacing the product; any damages, including, without limitation, damages to tangible personal property or personal injury, related to Your improper use, installation, or maintenance of the product; or any indirect, incidental or consequential damages of any kind for any reason.

## **Assumption of Risk**

You acknowledge and agree that any use of the product for any purpose other than the specified use(s) stated in the product instructions is at Your own risk.

## **Governing Law**

This limited warranty gives You specific legal rights, and You also may have other rights which vary from state to state. Some states do not allow limitations or exclusions on implied warranties or incidental or consequential damages, so the above limitations may not apply to You. This limited warranty is governed by the laws of the State of Minnesota, without regard to rules pertaining to conflicts of law. The state courts located in Dakota County, Minnesota shall have exclusive jurisdiction for any disputes relating to this warranty.



Distributed by  
Northern Tool + Equipment Co., Inc.  
Burnsville, Minnesota 55306  
NorthernTool.com  
Made in China