



ATLAS

Installation & Operation Guide

Corporate Offices

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Warning

The Atlas is designed to be used in trailer applications only with a trailer tongue weight which does not exceed 12,000lbs (per jack leg). Any other use of this product is prohibited. Stillwell Jacks will not be responsible for damages resulting from improper use, installation or care of this product.

DO NOT USE any Stillwell jack with a trailer tongue weight which exceeds 12,000lbs per jack leg!

Stillwell jacks are designed to be used for trailer applications only. Do not load a trailer without a tow vehicle being connected and supporting the trailer load.

Before you begin...

Stillwell Jacks are designed to easily fit into your existing trailer manufacturing or assembly process.

Stillwell jacks are designed to be used in trailer applications only. Any other use of this product is prohibited. Stillwell Jacks will not be responsible for damages resulting from improper use, installation or care of this product. DO NOT load or unload trailer while jacks are supporting the load and not attached to a tow vehicle. ONLY load and unload a trailer when the trailer coupler is attached to a tow vehicle and the trailer is supported by the tow vehicle. Not following these instructions will void warranty and can cause serious damage to persons and property.

Tools Required for Installation:

- Welding supplies
- Wire cutters / crimpers
- Ratchet, sockets, wrench set

Supplies Required for Installation:

- Hydraulic pump & battery
(see “Hydraulic Pump Requirements” for specifications)
- Optional: Wire ties

Before you begin...

(continued)

Selecting a Hydraulic Pump

Stillwell Jacks have been designed to provide customers with a fast operating trailer jack. For best performance, we recommend using one of the following Pumps:

- **SJP-202** Double acting pump with manual release
- **SJP-202h** Double acting pump with manual hand pump and manual release

Stillwell Jacks also work with a number of industry standard pumps including those from companies such as KTI, Monarch (Bucher Hydraulics) and Bailey Hydraulics.

Each of these companies offer pumps that are pre-configured to work with any of Stillwell jacks line of products, simply call your local hydraulic pump sales representative and ask for their line of “Stillwell Jacks Compatible Pumps.”

Hydraulic Pump Requirements

Stillwell Jacks are designed to work with a wide variety of Double acting (also known as “Double Circuit”) hydraulic pumps.

To determine what PSI pump pressure is needed:

1. Determine the trailer tongue weight the jack will be required to lift.
The trailer tongue weight is often 10-15% of the gross vehicle weight of the trailer the jack will be mounted to.
2. Find the weight in the “**Force**” column below and purchase a single acting pump with a minimum pressure rating shown in the “**PSI**” column of the table below.

Force at Jack vs. Pump Pressure	
PSI	Force (lbs)
500	1,571
1000	3,142
1500	4,712
2000	6,283
2500	7,854
3000	9,425
3200	10,053

Note:

Stillwell Jacks should not be used with pumps that exceed 3200 PSI.
The Atlas jack leg has #4 SAE female ports.

Stillwell Jacks are designed to operate quickly and safely. The table below shows how much “PSI” is required to lift various tongue loads and the amount of time it will take for the jack to extend under specific loads. This will help in deciding what pump to choose.

Lift Speed vs. Lift Load at Jack			
Load at Jack (lbs.)	PSI	In/Sec.	Time to Full 26” Extension
1000	318	1.47	17
2500	796	1.23	21
5000	1592	0.98	26
7500	2387	0.86	30
10000	3183	0.74	35

For best performance, we recommend using a pump with the following features:

- Double-acting hydraulic pump circuit
- A 7:1 zero leak, PO Check valve, designed into the pump or plan on installing one in-line between the jack and pump. This should eliminate and “drift” or settling of the cylinder.

TIP: Avoiding problems with your hydraulic pump.

Most pump manufacturers will tell you that the number one cause of pump problems is due to poor wiring. Be sure to carefully read your pump manufacturer’s instruction guides to ensure proper selection of wires and groundings and follow their recommended installation procedures carefully.

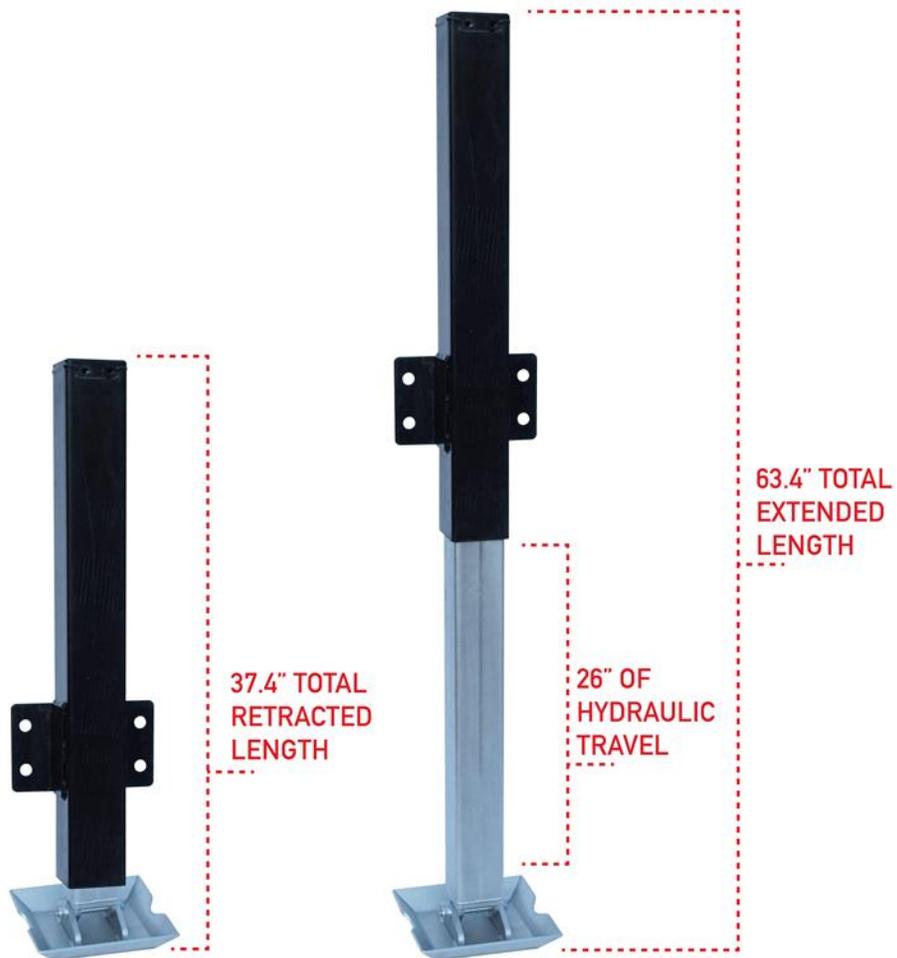
Failure to install the Atlas using methods other than those described in this document may result in denial of all warranty claims.

Before you begin...

Be sure to support the trailer weight with an appropriate trailer jack stand prior to installing the Atlas jack leg.

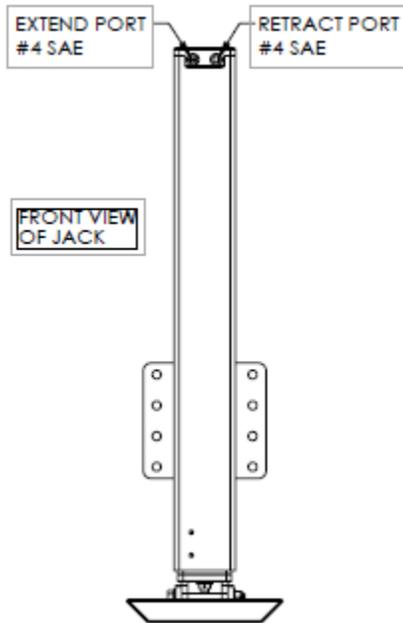
Mount the jack leg to the trailer frame by welding or bolting the mounting bracket to the front of the trailer at desired location.

For best performance, consider the desired maximum extension height (shown in the graphics below) of your trailer to determine the desired mounting point of the jack leg.



Hose Fittings

The Atlas has #4 SAE female ports. Most pumps have #6 SAE ports so be sure to verify before making purchases.



Welding...

DO NOT WELD DIRECTLY TO THE 4" TUBE.

A mounting plate is included allowing you to bolt or weld the bracket directly to the desired location on your trailer.

Ensure the mounting location will support the weight limits of the trailer prior to mounting the jack leg onto the trailer.

Welding should be done by a certified AWS welder using ASTM standard for welding to Carbon and Low Alloy Steel Tubes. These standards include:

- AWS Code D1.1
- ASTM A450 / A450M

Welding standards can be obtained by accessing the websites below:

- <http://www.astm.org/BOOKSTORE/COMPS/WELDING15.htm>
- <http://www.astm.org/Standards/A450.htm>

Paint / Coating Operations

Stillwell Jacks feature a rust and corrosion protected surface which allows you to paint as needed.

The jack leg can be mounted to your trailer before performing any painting or coating operations to allow for a consistent paint and coat application across the entire trailer, including the jack leg.

Operation

A. (Automatic) Hydraulic Leg Operation

TO LOWER HYDRAULIC LEG:

CAUTION: Before operating the hydraulic jack leg, ensure that the trailer is in a location with a flat, even surface below it which is capable of holding the weight of your trailer.

1. Using the control systems that came with your hydraulic pump, extend the hydraulic leg to desired height.
2. Confirm the trailer load weight has been relieved from your vehicle and cleared your hitch before driving vehicle away from trailer.
3. DO NOT load or unload trailer without the trailer being supported 100% by a tow vehicle.

TO RAISE HYDRAULIC LEG:

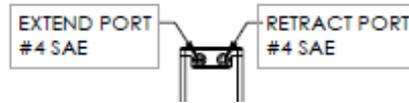
CAUTION: Before operating the hydraulic jack leg, be sure that your trailer has been properly aligned to a vehicle receptacle capable of holding the trailer's weight.

1. Position your vehicle (or appropriate jack stand) into alignment with the trailer hitch.
2. Using the control systems that came with your hydraulic pump, retract the hydraulic leg into contact with your vehicle's hitch.
3. Confirm the trailer load weight has been transferred to your vehicle fully.

Troubleshooting

Q: “What port is used for raising and retracting”

A: Looking at the ports, the left port is for extending and right port is for retracting. Both are #4 SAE.



Q: “The jack doesn’t extend at all.”

A: Confirm that your battery is fully charged and properly ground. Ensure that pump is running. Check the hydraulic fluid and all hydraulic fittings and confirm that oil is not leaking from fittings.

Q: “The jack doesn’t retract at all.”

A: Confirm that your battery is fully charged and properly ground. If battery power is not available, you may be able to use the pump’s manual override (if equipped) to retract the jack.

Q: “The jack operates for a few seconds, then stops.”

A: The battery on your hydraulic pump may be weak or drained. Perform a load test on your battery to confirm and charge if needed.

Q: “The jack leg won’t retract (or retracts slowly) once the weight is relieved.”

A: In most cases, the retraction speed of the jack is affected by the pump and hydraulic fluid you are using. We recommend you check the following:

1. Ensure that the hydraulic fluid can flow properly between the pump and the jack. Check to ensure your hydraulic lines are unobstructed and ensure that any filters in your pump are clean.
2. Use only recommended hydraulic fluid grades. Failure to do so will dramatically affect the speed and operation of the jack.
3. If your pump has a pressure compensated flow control valve it may be set improperly or not working properly. If oil flow is restricted when the jack is retracting (where oil is then returned to the pump through the flow controller) the jack leg will retract slowly. To correct this contact your pump

manufacturer about using a different flow control valve or a variable flow control valve.

NOTE: The retraction speed of the jack has been set by the pump, not the jack leg. Once weight is relieved from the jack the leg may appear to retract slowly to its full return position. This is normal and part of the safety mechanism that has been built into the jack leg to ensure a safe and steady retraction speed.

Q: “I see scratching (galling or polishing) on the side of the jack – is this normal?”

A: The Atlas includes a gall-less bearing system which minimizes the amount of galling (scratching caused by metal to metal contact). With heavy use this bearing system may polish the surface of the steel, which is normal.

In some situations, such as full extensions with full loads, galling can still be present. This is most commonly due to side-load forces which are exerted onto the jack. To minimize this, check to ensure your trailer’s load is within the weight specification of the trailer’s design and ensure that your trailer is parked on a flat, even surface when operating the Atlas. Do not load or unload trailer if it is not connected to a tow vehicle.

Q: “Do I need to lubricate the moving surfaces of the jack?”

A: The Atlas does not require lubrication between the metal tubes in order to operate. We recommend that you do NOT lubricate these areas as the lubrication may attract dirt which could cause the metal surfaces to scratch and wear and lead to accelerated rust.

Q: “Why do my jacks retract over night?”

A: Check your pump to verify proper fluid level and that all fittings are tight. Verify your pump has a proper check valve to lock the cylinder. If you do not know how to verify this contact your pump manufacturer for details.

NOTE: The majority of issues customers have are seen when trying to operate the jack leg however the issue is most often the pump, for best results please contact the pump manufacturer to troubleshoot your issues. If you have any questions or concerns regarding our jack legs please feel free to contact Stillwell Jacks.

Over 90% of troubleshooting calls to Stillwell Jacks are due to a weak or discharged battery, or poor ground connection on the battery. We recommend closely checking these items before calling.

If you require further assistance, please call us at:

(612) 548-4522

Limited Two Year Warranty Policy

- Limited Warranty.** Stillwell Jacks (“Stillwell”) provides a one (1) year limited warranty to the original consumer (“You”) which purchased a Stillwell jack (“product”). Stillwell Jacks warranty assures that the product will be free from defects in both materials and workmanship for a period of two (2) years. This warranty excludes normal wear and tear; provided that the installation and use of the product is in accordance with the product instructions including installation instructions, operation instructions and all warning labels. No other warranties express or implied, are provided. If the product does not with this warranty’s terms Stillwell will replace the product without charge to You.
- Limitations of Warranty.** This limited warranty does not cover (i) Normal wear and tear; (ii) Damage through abuse, neglect, accident or misuse; (iii) Improper installation, welding, mounting, maintenance, repair or operation; (iv) Damage due to overloading, side-loading or improper positioning of the product due to mounting or use; and (v) Alteration of the product in any manner other than by Stillwell with the exception of alterations made in accordance with product instructions which were performed in a workmanlike manner.
- Remedies.** IN NO EVENT SHALL STILLWELL BE LIABLE FOR ANY OTHER DAMAGES, INCLUDING WITHOUT LIMITATION, SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL, PUNITIVE OR EXEMPLARY DAMAGES, LOST PROFITS, LOST BUSINESS OPPORTUNITY, ATTORNEYS’ FEES, DAMAGE TO BUSINESS OR BUSINESS RELATIONSHIPS OR LOSS OF GOODWILL, WHETHER FOR BREACH OF WARRANTY OR FOR BREACH OF REPUTATION OF ANY CONTRACTUAL TERM OR LEGAL DUTY IN CONTRACT TORT, STATUTE OR OTHERWISE, RELATING TO THE SALE OF GOODS BY STILLWELL. In any event, Stillwell’s liability to You, regardless of the form of action, shall not exceed the total amount actually paid by You to Stillwell for the product. No action, regardless of form, arising out of or alleging either a breach of any warranty or a breach of contractual term or legal duty may be brought more than one (1) year after the cause of action accrues. Refunds shall not be issued on any goods which have been altered or defaced in any way, except for product which has been welded or mounted in compliance with Stillwell installation instructions, and which has been performed using reasonable quality workmanship. Stillwell shall not be responsible for disassembling cost and shall not issue a refund for any goods in assembled units. Stillwell’s sole liability for defective or non-conforming parts in breach of Stillwell’s warranty shall be determined by Stillwell and limited to either providing You with a replacement product, issuing a refund or performing repairs to the product.
- Warranty Claims.** Only warranty claims with prior verbal or written authorization by Stillwell Jacks will be recognized, all other claims will be denied. Stillwell will not be liable for service or labor charges incurred in removing or replacing a product or any damages of any kind. To make a warranty claim, contact Stillwell in writing at the address shown immediately below:

Stillwell Jacks
c/o Warranty Claims
10824 Nesbitt Ave S
Bloomington MN, 55437

Your written warranty claim must include (a) product model number; (b) purchase receipt; (c)

location where the unit was purchased; and (d) a brief description of the claim. A written response will be issued to your return address with instructions for returning the product. Any returned product that is replaced or refunded becomes the property of Stillwell. You will be responsible for return shipping costs. Please retain your purchase receipt as warranty claims will not be honored without it.

5. **Technical Advice.** Any technical advice furnished by Stillwell to You "THE CUSTOMER" before or after delivery of product in regard to the use of the product is furnished on the basis that it represents Stillwell's best judgment under the circumstances but that it is used at the Customer's sole risk. Stillwell makes no representations or warranties relating to such technical advice.
6. **Force Majeure.** Stillwell does not assume the risk of and shall not be liable for delay or failure to perform any of its obligations by reason of circumstances beyond the reasonable control of Stillwell (hereinafter "Events of Force Majeure"). Events of Force Majeure shall include without limitation, accidents, acts of God, strikes or labor disputes, acts, laws, rules or regulations of any government or government agency, fires, floods, delays or failures in delivery of carriers or suppliers, acts of terrorism, shortages of materials, failure of any equipment or tooling, or any other cause beyond Stillwell's reasonable control.
7. **Governing Law/Venue.** The rights and obligations of the parties hereunder shall be governed by the laws of the State of Minnesota, without regard to any conflict of laws provisions. Any dispute, controversy or claim involving Stillwell and You shall be venued in a state or federal court situated in the State of Minnesota and the parties each consent to the exclusive jurisdiction of such courts.
8. **Costs and Attorney's Fees.** In the event any action or suit is brought by either party by reason of any default or product failure due to improper usage, installation or operation of the product, the non-defaulting party shall be entitled to recover from the defaulting party all of its costs and expenses, including reasonable attorney's fees.
9. **Assumption of Risk.** You acknowledge and agree that any use of the product for purposes other than the specified use(s) stated in the product instructions is at Your own risk.
10. **Non-transferable.** This warranty is non-transferable.

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