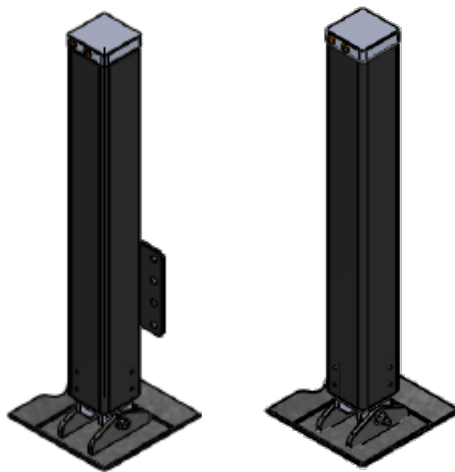


# ATLAS

## Installation & Operation Guide



[www.stillwellinc.com](http://www.stillwellinc.com)  
(612) 248-1110  
[info@stillwellinc.com](mailto:info@stillwellinc.com)

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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 12,000 lbs (per jack leg). Any other use of this product is prohibited. Stillwell Inc. will not be responsible for damages resulting from improper use, installation, or care of this product.

**DO NOT USE the Atlas with a trailer tongue weight which exceeds 12,000 lbs per jack leg!**

The Atlas is designed to be used for trailer applications only.  
Do not load a trailer without a tow vehicle connected and supporting the trailer load.

**Please see additional warnings on Page 16.**

## Before You Begin

The Atlas is designed to be used in trailer applications only. Any other use of this product is prohibited. Stillwell Inc. will not be responsible for damages resulting from improper use, installation, or care of this product. DO NOT load or unload trailer while the Atlas is supporting the load and the trailer is 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 the 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

### Selecting a Hydraulic Pump

The Atlas has been designed to provide customers with a fast operating trailer jack. For best performance, we recommend using one of the following pumps:

- **SJP-301** Pump, PUPD power unit, 12 VDC, 3200 PSI

The Atlas will also work with a number of industry standard pumps including those from companies such as KTI, Bucher, Bailey Hydraulics, etc.

Each of these companies offers pumps that are pre-configured to work with any of Stillwell Inc.’s line of products. Simply call your local hydraulic pump

sales representative and ask for their line of “Stillwell Inc. Compatible Pumps.”

## Hydraulic Pump Requirements

The Atlas is designed to work with a wide variety of double acting (also known as “Double Circuit”) hydraulic pumps. See NexGen Single Acting Adapter for Single Acting applications.

To determine what pump pressure (psi) 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 “**Load at Jack**” column below and purchase a double acting pump with a minimum pressure rating shown in the “**Pump Pressure**” column of Table 1 below.

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

**Table 1. Pump Pressure vs. Load at Jack**

### Note:

Stillwell Inc.’s hydraulic jacks should not be used with pumps that exceed 3200 PSI. The Atlas jack leg has #6 SAE female ports.

The Atlas is designed to operate quickly and safely. Table 2 below shows how much pressure (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 which pump to choose.

<b>Lift Speed vs. Lift Load at Jack</b>			
<b>Load at Jack (lbs.)</b>	<b>Pump Pressure (psi)</b>	<b>Lift Speed (in/sec)</b>	<b>Time to Full 26" Extension (sec)</b>
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

**Table 2. Lift Speed vs. Load at Jack**

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 any “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 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.

## Installation

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

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

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

### Bolting

Mount the jack leg to the trailer frame by bolting the mounting bracket to the front of the trailer at the desired location. See Figure 1 for the bolt pattern of the universal mounting bracket.

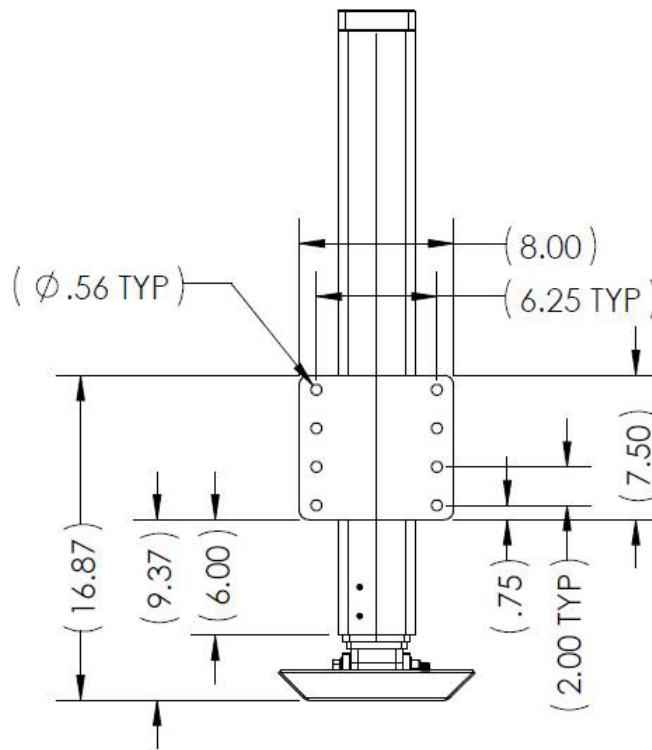
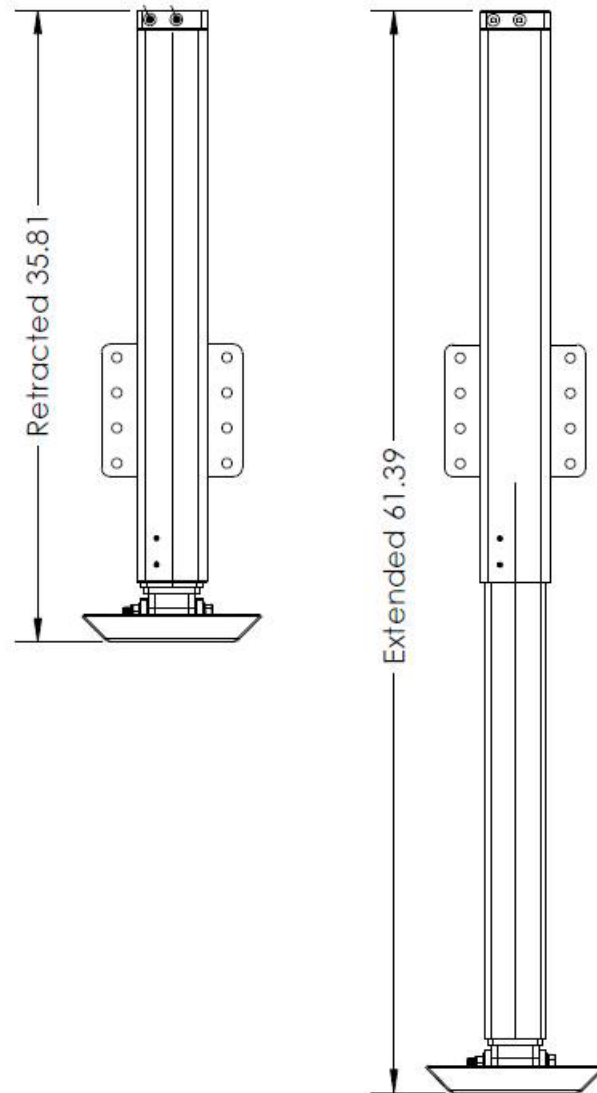


Figure 1. Mounting Bracket Dimensions [All Dimensions in Inches]

For best performance, consider the desired maximum extension height of your trailer to determine the desired mounting point of the jack leg. Maximum extension height of the jack leg is shown in Figure 2 below.



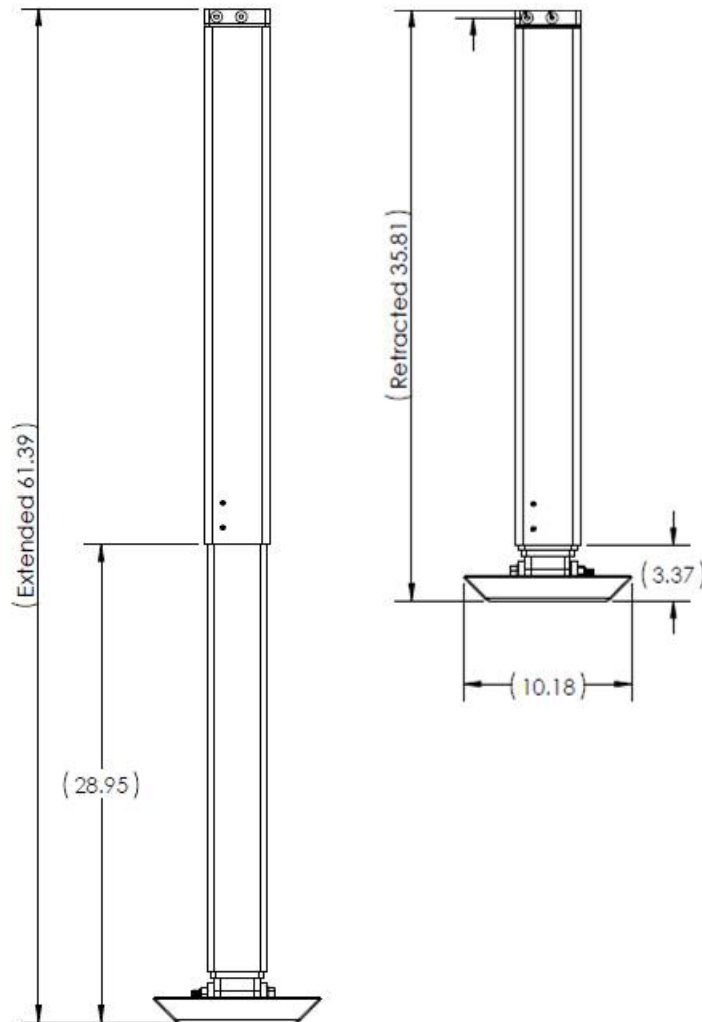
**Figure 2. Jack Height in Retracted and Extended Positions for Models with Universal Bracket [All Dimensions in Inches]**

## Welding

Mount the jack leg to the trailer frame by welding the outer 4 inch tube to the front of the trailer at the desired location. For best performance,



consider the desired maximum extension height of your trailer to determine the desired mounting point of the jack leg. Maximum extension height of the jack leg is shown in Figure 3 below.



**Figure 3. Jack Height in Extended and Retracted Positions [All Dimensions in Inches]**

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>

## Hose Fittings

The Atlas has #6 SAE female ports. When looking at the ports from the front of the jack, the extend port is on the right and the retract port is on the left as shown in Figure 4 below.

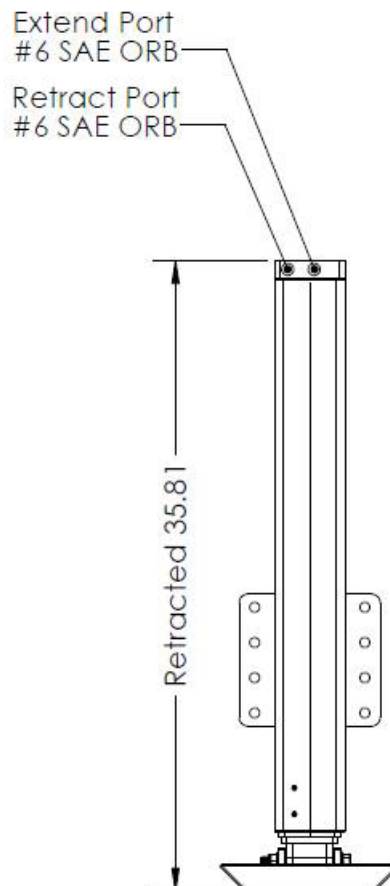


Figure 4. Front View of Atlas Showing Extend and Retract Ports

## Painting / Coating Operations

The Atlas features 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

### 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 1/4 of the total length (6.5") then retract the jack leg. Next, extend the jack leg to 1/2 the total length (13") then retract the jack leg. Extend the leg to 3/4 the total length (19.5") then retract the jack leg. Finally, fully extend the jack leg (26") then retract. This will bleed the leg of any air that may be trapped in the jack leg or hoses.
2. Extend the hydraulic leg to the desired height.
3. Confirm the trailer load weight has been relieved from your vehicle and the trailer's coupler has cleared your hitch before driving the vehicle away from the trailer.
4. DO NOT load or unload the trailer without the trailer being supported 100% by a tow vehicle.

### To Retract Hydraulic Leg

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

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

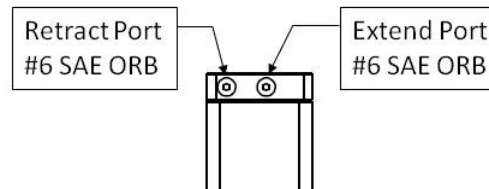
**DOUBLE ACTING JACK:** Requires double acting power unit.

**SINGLE ACTING JACK:** Requires single acting power unit and NeXgen Single Acting Adapter installed on retract port (see Figure 5).

## Troubleshooting

**Q: “Which port is used for extending and retracting the jack leg?”**

A: Looking at the ports from the front of the jack, the left port is for retracting and the right port is for extending. Both are #6 SAE.



**Figure 5. Extend and Retract Ports on Atlas Jack**

**Q: “The jack doesn’t extend at all.”**

A: Confirm that your battery is fully charged and properly grounded. Ensure that the 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 grounded. 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 the 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 while trying to operate the jack leg are caused by 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 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) 248-1110**

## Limited Two Year Warranty Policy

- Limited Warranty.** Stillwell Inc. ("Stillwell") provides a two (2) year limited warranty to the original consumer ("You") which purchased a Stillwell jack ("product"). Stillwell Inc. 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 meet 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 REPULATION 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 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 Inc.  
c/o Warranty Claims  
12401 Washburn Avenue South  
Burnsville, MN 55337

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.

## Additional Warnings

Using the Atlas incorrectly can result in serious injuries or accidents. It is essential to follow safety guidelines to ensure your well-being and the proper functioning of your Atlas Hydraulic Jacks.

1. Do not allow children or inexperienced individuals to operate the Atlas.
2. Never operate the Atlas while a person is underneath the trailer.
3. Avoid operating the jack on unlevel surfaces.
4. Do not adjust or alter any parts of the Atlas.

Engaging in improper use of the Atlas may result in severe injuries, including but not limited to broken bones, amputations, and death. Additionally, it can damage the Atlas and the attached trailer leading to costly repairs or replacements.

To ensure safe operation, please follow these safety measures:

- Always read and follow the manufacturer's instruction manual.
- Wear appropriate safety gear.
- Keep a safe distance from the Atlas foot and trailer when in operation.
- Routinely check system for any leaking oil to prevent failure of worn out hoses or adapters.

If you have any questions or concerns regarding the safe use of your Atlas, please contact our customer support at 612-248-1110 or visit our website [www.stillwellinc.com](http://www.stillwellinc.com).

Ignoring these safety precautions can lead to serious consequences. Please use your Atlas responsibly and ensure the safety of yourself and others.

