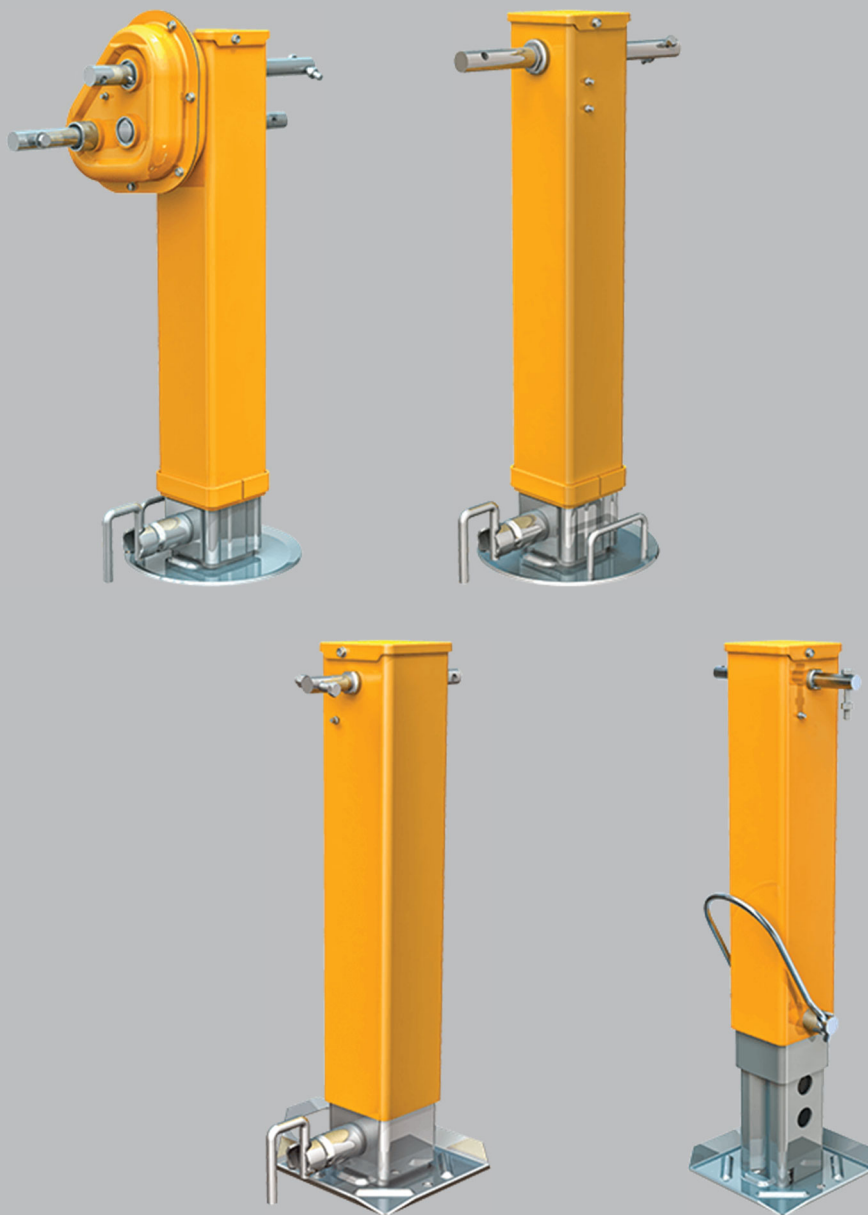


Installation, Operation and Maintenance Manual

Gooseneck Jacks



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Introduction

This manual provides information necessary for the installation, operation and maintenance of the SAF-HOLLAND® Model 48000, Model 49000, and Atlas model gooseneck jacks.

Read this manual before using or servicing this product and keep it in a safe location for future reference. Updates to this manual, which are published as necessary, are available on the internet at www.safholland.us.

When replacement parts are required, SAF-HOLLAND highly recommends the use of only SAF-HOLLAND Original Parts. A list of technical support locations that supply SAF-HOLLAND Original Parts and an Aftermarket Parts Catalog are available on the internet at www.safholland.com or contact Customer Service at 888-396-6501.

Warranty

Refer to the complete warranty for the country in which the product will be used. A copy of the written warranty is included with the product or available on the internet at www.safholland.com.

Notes, Cautions, and Warnings

Before starting any work on the unit, read and understand all the safety procedures presented in this manual. This manual contains the terms “NOTE”, “IMPORTANT”, “CAUTION”, and “WARNING” followed by important product information. These terms are defined as follows:

NOTE: Includes additional information to enable accurate and easy performance of procedures.

IMPORTANT: Includes additional information that if not followed could lead to hindered product performance.

CAUTION Used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, could result in property damage.

CAUTION Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

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

I. Safety Instructions

General and Servicing Safety Instructions

- Read and observe all Warning and Caution hazard alert messages. The alerts provide information that can help prevent serious personal injury, damage to components, or both.

⚠ WARNING Failure to follow the instructions and safety precautions in this manual could result in improper servicing or operation leading to component failure which, if not avoided, could result in death or serious injury.

- All maintenance should be performed by a properly trained technician using proper/special tools, and safe procedures.

NOTE: In the United States, workshop safety requirements are defined by federal and/or state Occupational Safety and Health Act (OSHA). Equivalent laws may exist in other countries. This manual is written based on the assumption that OSHA or other applicable employee safety regulations are followed by the location where work is performed.

IMPORTANT: Verify before installation that the jack selected will withstand the load and have the correct travel/extension requirements for the trailer.

- DO NOT operate the jack if it is cracked, bent, or any other damage is present. Using damaged jacks could result in death or serious injury.

⚠ WARNING Failure to check condition of the jack prior to operating could result in unexpected performance which, if not avoided, could result in death or serious injury.

⚠ WARNING Using damaged jacks could result in unexpected performance which, if not avoided, could result in death or serious injury.

- Properly support and secure the vehicle from unexpected movement when servicing the jack.

NOTE: If possible, unload the trailer before performing any service procedures.

⚠ WARNING Failure to secure the trailer from rolling, when operating the jack, could result in death, serious injury or property damage.

⚠ WARNING Failure to properly support and secure the trailer during installation of the jack could create a crush hazard which, if not avoided, could result in death or serious injury.

- DO NOT walk/crawl underneath a trailer during coupling/uncoupling or while it is supported by the jack/kingpin stand.
- If possible, unload the trailer before performing any maintenance or service procedures.

⚠ WARNING Failure to keep clear from underneath the trailer could create a crush hazard which, if not avoided, could result in death or serious injury.

2. Model Identification

The serial tag is located along the side of the upper housing behind the grease fitting of each jack (**Figures 1 and 2**). The first number is the part number, described below, and the second number is the serial number. To properly identify the HOLLAND® jack and its components when communicating with SAF-HOLLAND or a dealer, please record the part and serial numbers below and refer to them when ordering replacement parts.

Part Number

LG4 7 0 1 - 7 0 0 0 00 000

Log No. Accessory No.
Contact SAF-HOLLAND
Customer Service for Special
Options and Accessories

Footware

- 0 - No Footware
- 1 - Sandshoe 4.50" x 10" x 10"
- 2 - Sandshoe 4.50" x 10" x 12"
- 3 - Sandshoe 2" x 10" x 10"
- 9 - Special

Grease

- 0 - Standard Pack

Retract Tube

- 0 - Standard
- 2 - 48000 Cam Lock/Dual Pin w/o Spring
- 3 - 48000/Dual Pin Spring Loaded
- 4 - Atlas 55 Drop Leg
- 9 - Special

Shafts

- 0 - Universal
- 1 - Reverse
- 8 - Special
- 9 - Conventional

Leg Assembly

- 0 - Sets
- 1 - Left Hand
- 2 - Right Hand

Mounting

- 7 - Gooseneck

Travel

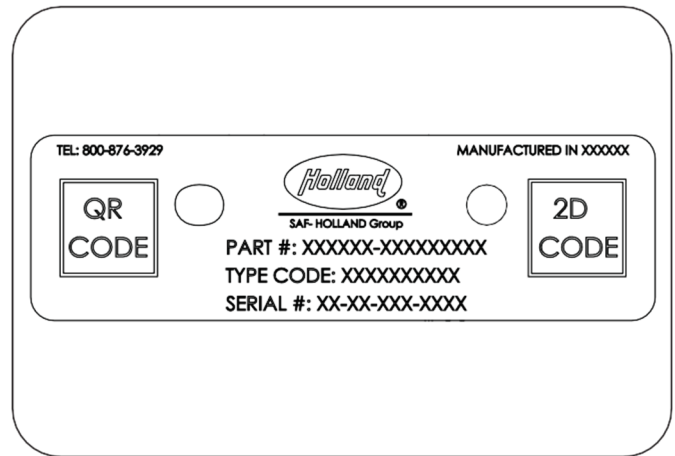
- 1 - Special
- 2 - 12"
- 3 - 13.50"
- 5 - 15.50"
- 7 - 17"
- 9 - 19"

Model

- LG4 - Atlas 55
- LG8 - 48000
- LG9 - 49000
- LGD - Dual Pin

IMPORTANT The serial tag contains all pertinent information related to the jack configuration and warranty. It is recommended that the serial tag remains attached to the jack at all times in the event of a warranty claim and/or part replacement.

Figure 1

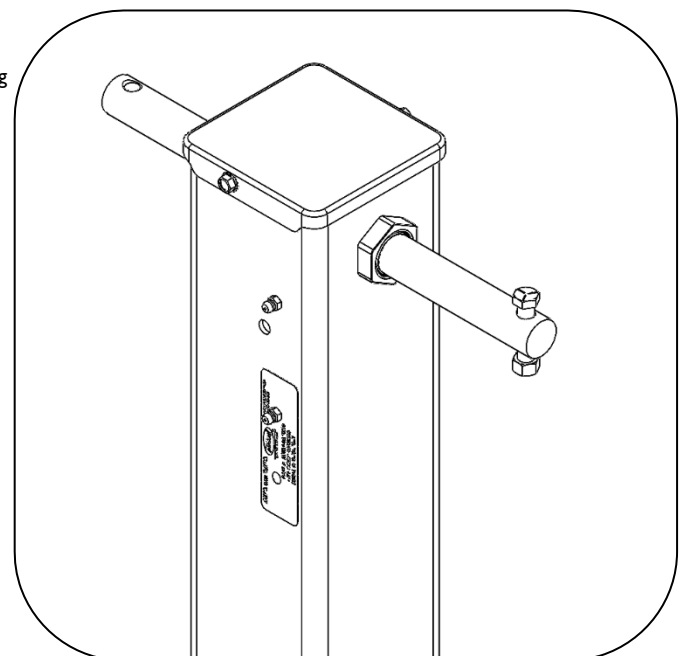


Part No: _____

Serial No: _____

Purchase Date: _____

Figure 2



3. Pre-Installation Instructions

Prior to installation of the jack, correctly size the leg to the trailer. There **MUST** be 12" (304.8 mm) minimum ground clearance, when the jack is fully retracted.

Ensure that the legs have sufficient travel to raise the trailer from the fifth wheel 1-3" (25.4 - 76.2 mm) without over-extension. **DO NOT** force the jack past its stops.

CAUTION Failure to operate the jack within the maximum extension or retraction including repeated winding to its physical stops could, if not avoided, cause damage to the jack.

IMPORTANT Provide adequate clearance between the jack shaft bushings, jack shaft, shift shaft and the trailer frame. If the bushings or shafts are tight against the frame, damage and hard cranking will result (**Figure 3**).

CAUTION Failure to provide adequate clearance between the jack shaft bushings, jack shaft, shift shaft, and the trailer frame could cause hard cranking and wear which, if not avoided, could result in minor/moderate injury or component damage.

Before installation of the jacks, ensure that they are both in the fully retracted position. Both jacks **MUST** be extended equally at all times.

NOTE: This only applies to applications that require two coupled jacks. If the application requires one jack, continue to Section 4 – Recommended Bracing.

WARNING Failure to extend the jacks evenly could cause trailer to tip over, which, if not avoided, could result in death, serious injury, or property damage.

WARNING Failure to extend the jacks evenly could increase the potential for spring back, which, if not avoided, could result in death or serious injury.

Ensure the cross-shaft is of adequate length for the application. When installed, the cross-shaft should have 1/8" (3 mm) to 3/8" (9.5 mm) of side-to-side free play. It should also rotate freely with the jack shaft when installed (**Figure 4**). A cross shaft which is too long will cause binding resulting in stiff operation and excessive bushing wear.

CAUTION Failure to ensure the cross-shaft is installed at adequate length and has free play could result in stiff operation which, if not avoided, could result in property damage

Figure 3

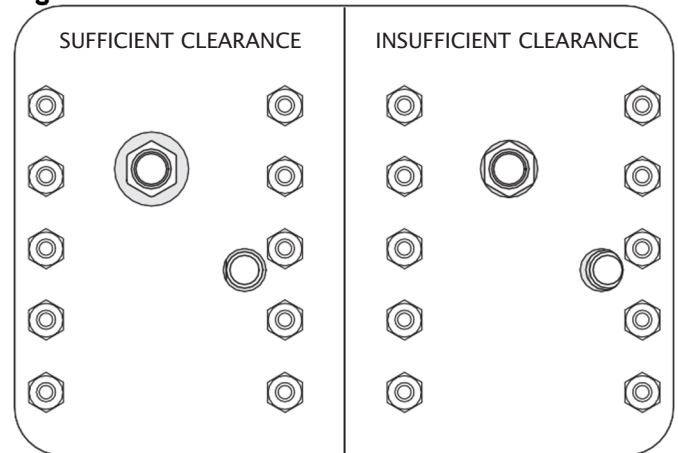
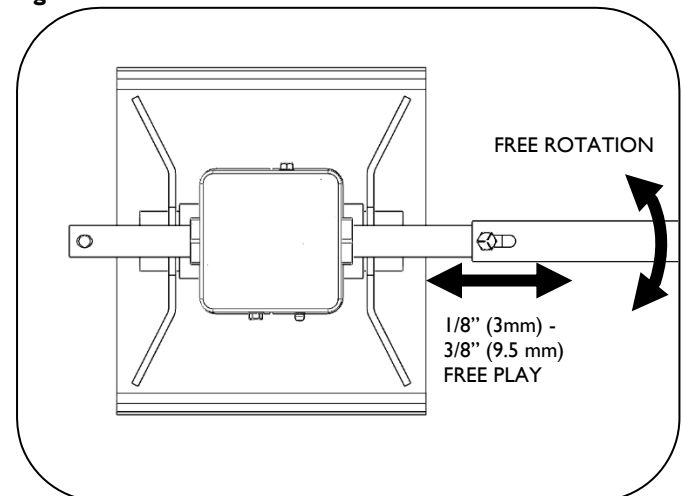


Figure 4



4. Recommended Bracing

Installers are responsible for ensuring that the mounting structure and mounting method are adequate for the intended imposed loads, use and application in accordance with trailer design specifications.

The location of the mounting system should be located no less than 6" vertically from the top of the jack (**Figure 5**). If the mounting system is to be welded onto the upper housing tube, **all welds are required** to be located no less than 6" away from the top of the jack.

It is recommended, but not required, that additional bracing should be installed no more than 6.50" vertically from the bottom of the upper housing tube.

NOTE: DO NOT install strut brackets in the center of the housing without proper backing and DO NOT attach the brackets to the housing band (**Figure 6**).

NOTE: DO NOT allow weld for strut brackets to penetrate through the housing and contact the retract tube.

⚠ WARNING Failure to follow the installation instructions and bracing recommendations in this manual could create a crush hazard which, if not avoided, could result in death, serious injury or property damage.

CAUTION Failure to install the jack per the preceding instructions and recommendations could cause faulty operation which, if not avoided, could cause property damage and void the warranty.

Figure 5

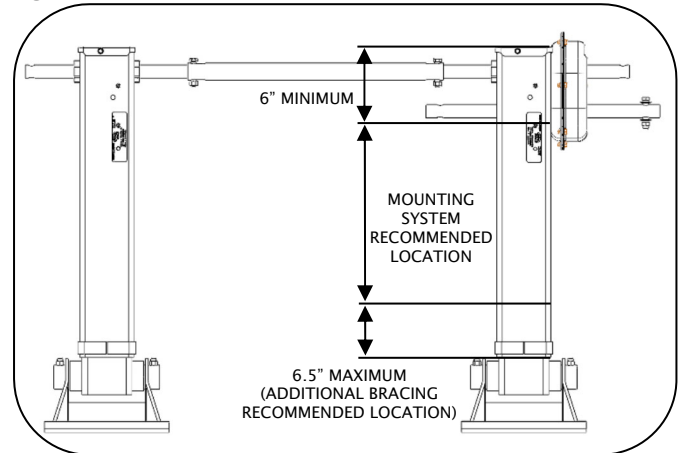
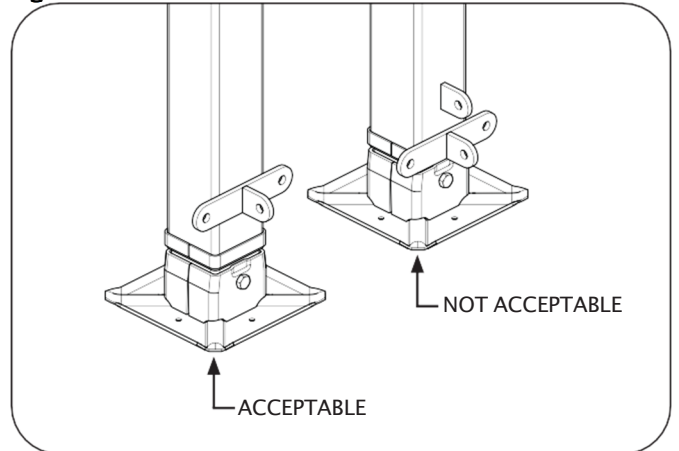


Figure 6



5. Welding Standards

5.1 Welding Standards

This specification applies to all components supplied by SAF-HOLLAND, and its products. The customer assumes full responsibility for weld integrity if weld material and procedures differ from those listed below.

5.2 Workmanship

All welding on SAF-HOLLAND products MUST be performed by a welder qualified according to the appropriate AWS standard for the weld being made or an equivalent standard. It is the responsibility of the customer to provide good workmanship when welding on SAF-HOLLAND products.

5.3 Material

Items to be welded that are made from low carbon or high-strength alloy steel are to be welded with AWS filler metal specification AWS A5.18, filler metal classification ER-70S-3, ER-70S-6 or equivalent unless specified on the installation drawing.

NOTE: Any substitution for filler material from the above standard MUST comply, as a minimum, with the following mechanical properties:

Tensile Strength - 72k psi (496 MPa)

Yield Strength - 60k psi (414 MPa)

Charpy V Notch - 20ft.-lbs. (27 N•m) at 0°F (-17.7°C)

Elongation - 22%

The recommended welding gas for gas metal arc welding (GMAW) is 90% Argon / 10% CO₂. If a different gas is used, welds MUST comply with penetration requirements illustrated (**Figure 7**). Where the installation drawing specifies different than above, the drawing shall prevail.

5.4 Procedures

Tack welds used for positioning components are to be located in the center of the final weld, where practical. Tack weld should be completely fused to the finish weld.

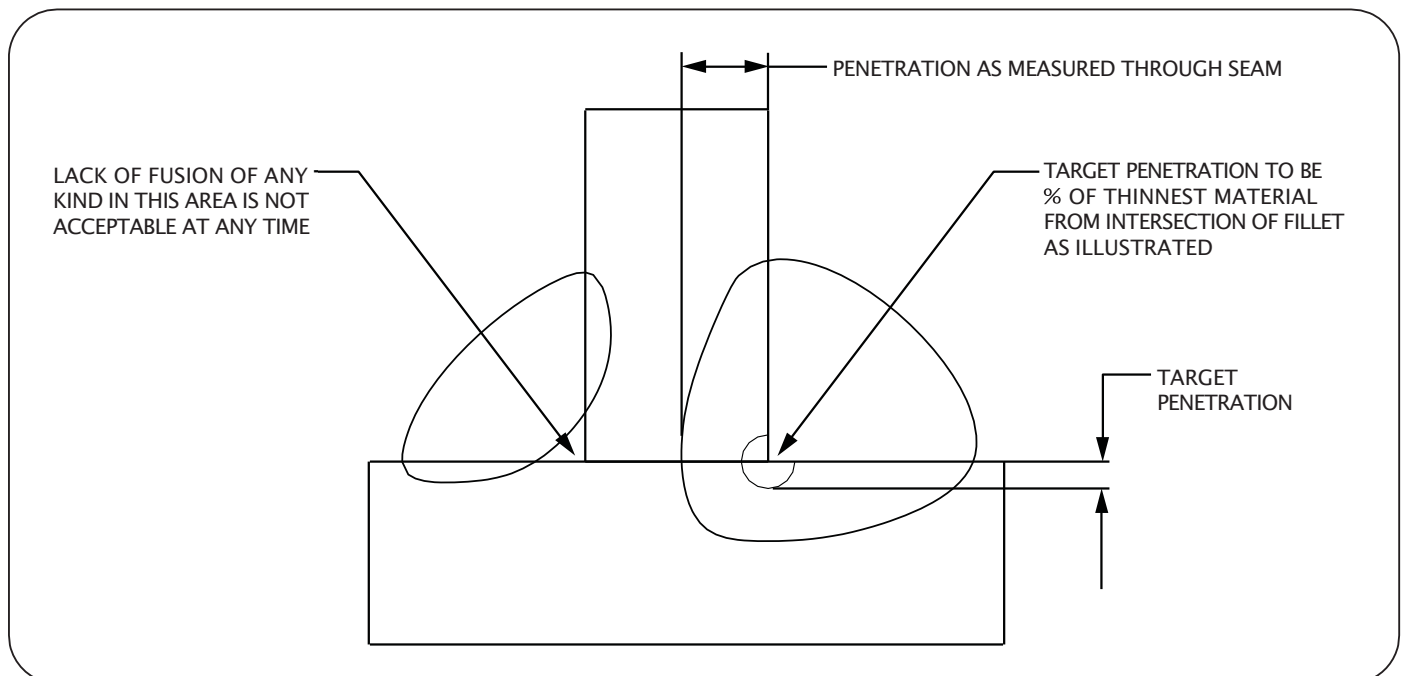
DO NOT break the arc at the end of the weld. Back up all finish welds at least 1/2" (12.7 mm) or a sufficient amount to prevent craters at the end of the weld. Where weld is shown to go around corners, it is assumed the corner represents a stress concentration area.

DO NOT start or stop the weld within 1" (25.4 mm) of the corners. Particular care should be taken to prevent undercutting in this area.

5.5 Weld Size

If weld size is NOT specified, the effective throat of the weld MUST be no smaller than the thinnest material being welded (**Figure 7**).

Figure 7



6. Installation Instructions

1. On a level surface, support the front of the trailer with either a kingpin stand, or while coupled to a tractor (**Figure 8**).

2. Set the parking brakes and chock the tires.

⚠ WARNING Failure to properly support the trailer and chock the tires during installation of the jack could create a crush hazard which, if not avoided, could result in death or serious injury.

3. Using a square, check that the jack mounting surfaces are perpendicular to the ground. If the system requires more than one jack, ensure that they are parallel to each other.
4. Install the jack(s) and cross-shaft (if applicable) to the trailer frame. If the mounting system uses mounting bolts, torque the fasteners to the manufacturer's specifications. Ensure the cross-shaft lock nuts are snug, but the cross-shaft is allowed side-to-side free-play.
5. Install the additional bracing. Refer to Section 4, (Recommended Bracing), for the minimum bracing requirements. If the additional bracing utilizes mounting bolts, torque the fasteners to the manufacturer's specifications.

IMPORTANT: After installing the bracing, use a square to ensure that the jacks have remained aligned with the trailer and each other as illustrated (**Figure 9**).

6. Install the crank handle onto the input shaft. Position the washers on the outside of the crank handle. Insert the bolt through both the washers and the shaft, and secure with nut (**Figure 10**).
7. Ensure proper operation by extending and retracting the trailer's jack. Verify the crank handle is allowed to engage and disengage freely.
8. If using coupled jacks, extend the jacks to ensure that both jacks reach the ground simultaneously.

⚠ WARNING Failure to maintain two hand control of handle and release **SLOWLY** could cause spring back which, if not avoided, could result in death or serious injury.

9. Install the crank hanger and ensure that the handle can be adequately secured.
 - Locate Hanger on right-hand side of leg centerline for outside mount.
 - Locate Hanger on left-hand side of leg centerline for inside mount.

Figure 8

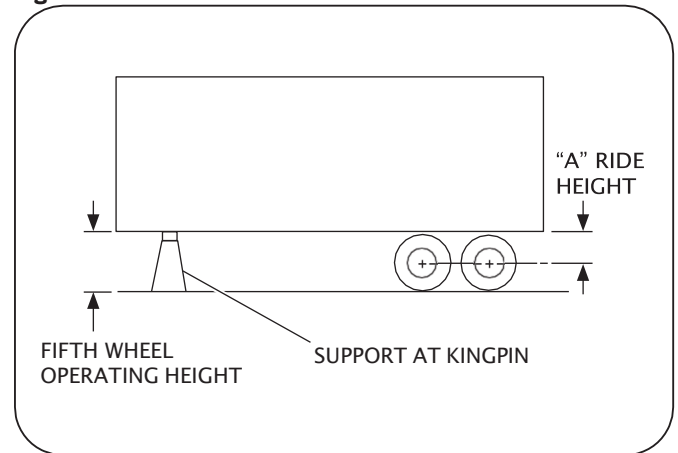


Figure 9

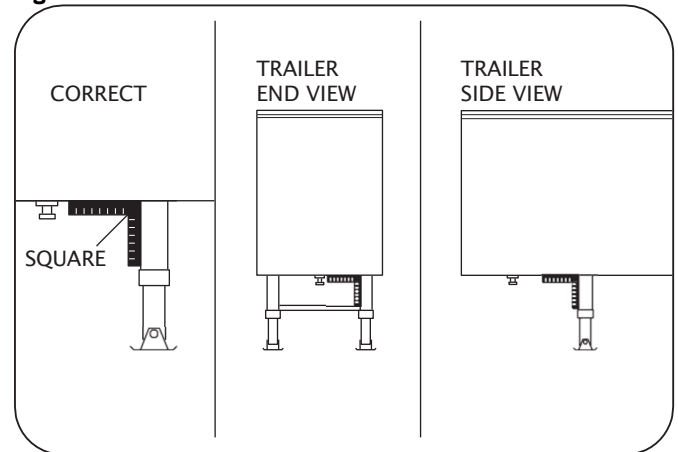
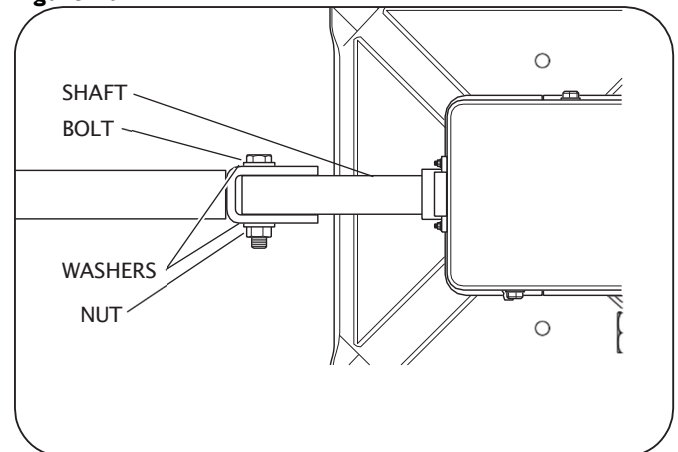


Figure 10



CAUTION Failure to secure the crank handle when NOT in use could allow unplanned jack extension which, if not avoided, could result in property damage.

10. Verify that all braces, crank handle and footware are properly attached and that all bolts are tightened to fastener manufacturer torque specifications.

7. Gooseneck Jack Operation

7.1 Pre-Operation Inspection

The jack should be visually inspected prior to use. Make sure the jacks are square to the trailer on both sides. Visually check for damaged, loosened or broken components. Repair or replace the damaged jack.

WARNING Failure to check the condition of the jack prior to operating could result in use of damaged product which, if not avoided, could result in death or serious injury.

7.2 Gooseneck Jack Orientation

Refer to Section 7.2 (Landing Gear Orientation) of the Atlas Installation, Operation and Maintenance Manual (XL-LG20004UM-en-US) for Atlas model gooseneck jacks.

The installer is responsible for a mounting orientation that does not hinder the operation of the jack while attached to the trailer. All jack features should be safely accessible to the user while attached to the trailer. These features include but are not limited to (**Figure 11**):

- Serial tag (1)
- Crank handle (2)
- Grease fittings (3)
- Spring handles (applies only to drop legs) (4)
- Footware handles (5)

Gooseneck jacks utilize an adaptor sleeve that connects the crank handle to the input shaft. This adaptor sleeve may be relocated to the opposite end of the jack shaft if the application requires it (**Figure 12**).

If utilizing an Atlas model gooseneck with a sandshoe, the jack must be orientated such that the foot articulates about the trailer frame length (**Figure 13**).

The jack should not be located or orientated about the trailer in a manner that may impact other objects while in transit. All components of the jack should remain within the body of the trailer frame while in transit.

CAUTION Failure to ensure that jacks are properly stowed while in transit could result in property damage.

Figure 11

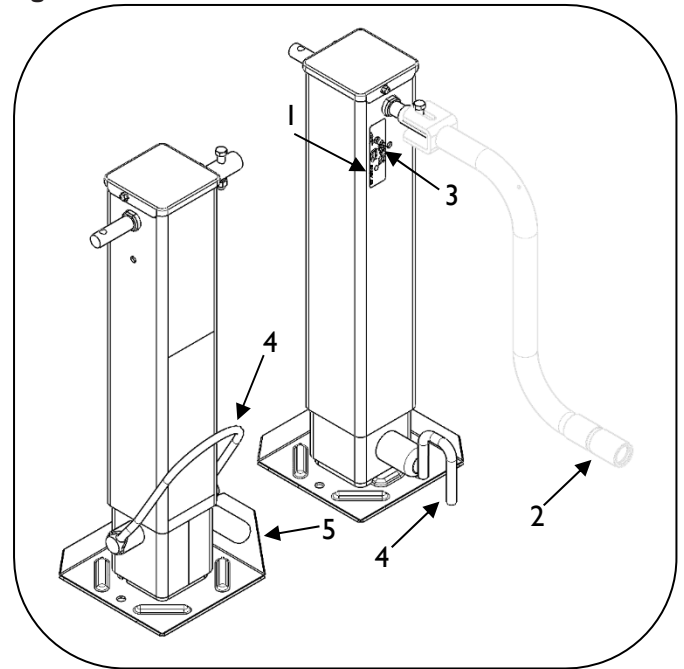


Figure 12

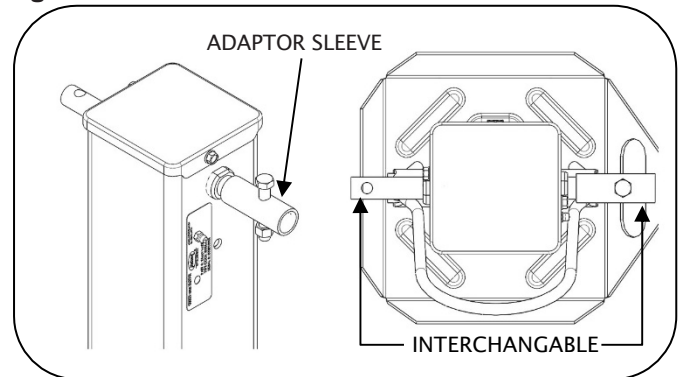
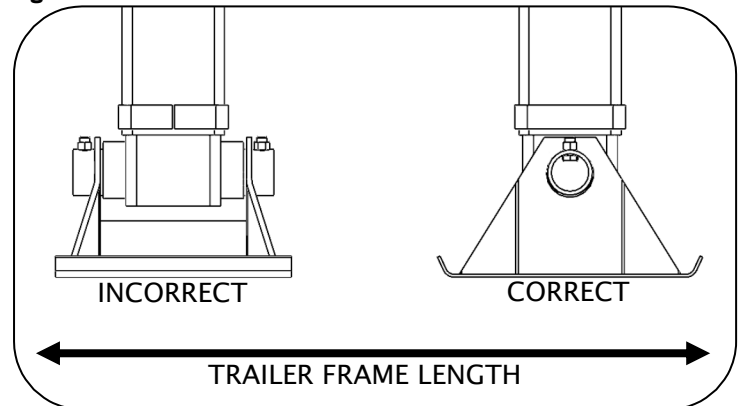


Figure 13



7.3 Jack Operation During Coupling

CAUTION Failure to perform procedures in a lighted area that is clear of obstacles and personnel could lead to a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTE: If utilizing a two-speed Atlas model gooseneck jack, ensure that the jack is in low gear. Refer to Section 7.3 (Landing Gear Operation During Coupling) of the Atlas Installation, Operation, and Service Manual (XL-LG20004UM-en-US).

NOTE: For specific coupling instructions relating to the fifth wheel, tractor, and trailer, refer to the respective manufacturer's instructions.

1. Make sure the coupling area is flat, level and clear of persons and obstacles.
2. Prepare the fifth wheel, tractor and trailer for coupling per the manufacturer's instructions.
3. Back up to the trailer per the fifth wheel, tractor, and trailer manufacturer's instructions, centering the kingpin with the throat of the fifth wheel as illustrated (**Figure 14**).

IMPORTANT: DO NOT attempt to couple until steps 4-6 are completed.

IMPORTANT: DO NOT couple the tractor and trailer at an angle.

CAUTION Failure to align the tractor and the trailer properly could result in damage to the jack.

4. Engage the tractor parking brake and chock the trailer wheels. Connect the brake lines and the electrical connections. Support the slack in the line to prevent interference.
5. Make sure that the crank handle is engaged (**Figure 15**).
6. With two hands on the crank handle, adjust the trailer height according to the fifth wheel, tractor, and trailer manufacturer's recommendations.

WARNING Failure to maintain two hand control of the handle and release SLOWLY could cause spring back, which, if not avoided, could result in death or serious injury.

7. Release the tractor parking brake. Couple and verify that the fifth wheel jaws are locked per the fifth wheel manufacturer's recommendations.
8. Engage the tractor parking brake. Retract the jack until the pads just come off the ground (**Figure 16**).

Figure 14

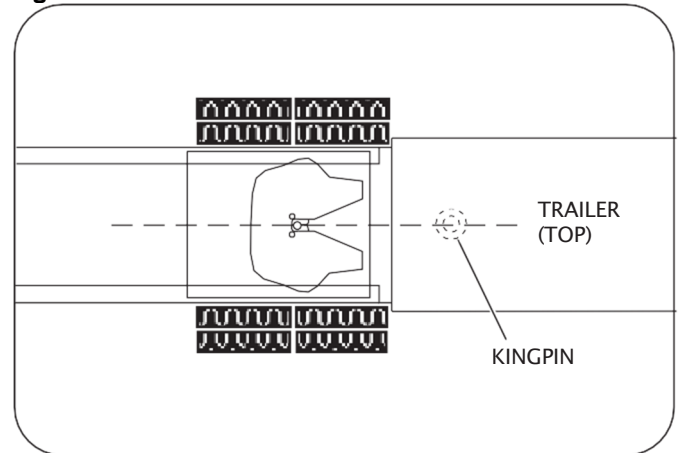


Figure 15

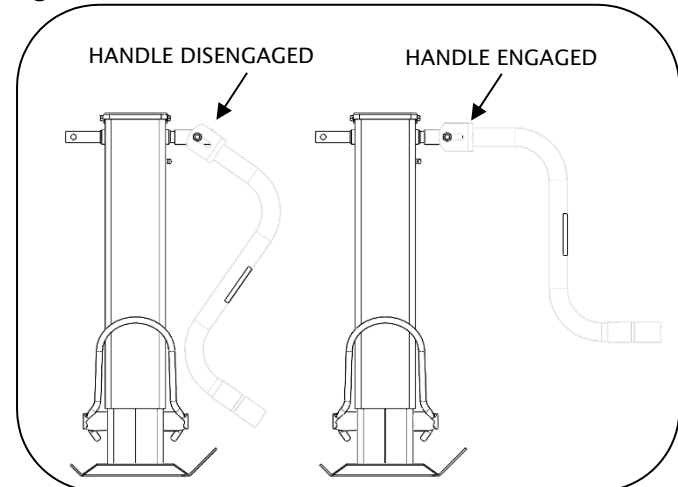
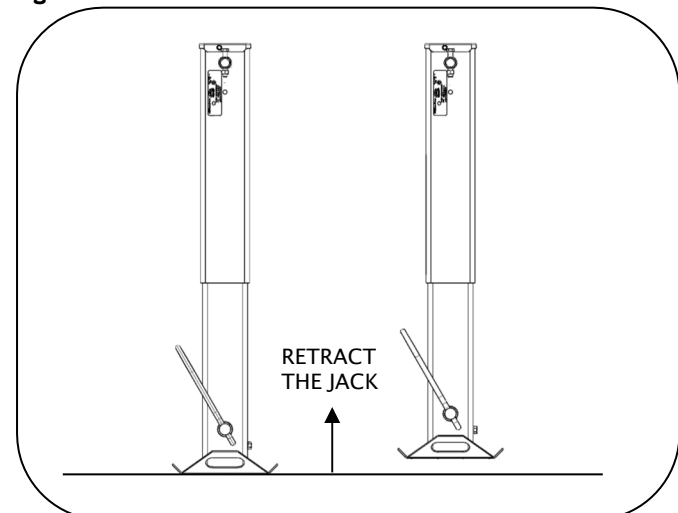


Figure 16



9. Release the tractor parking brake. Re-verify that the fifth wheel jaws are locked per the fifth wheel manufacturer's recommendations. Reapply the tractor parking brake.
10. Full retract the jacks and secure the crank handle.

CAUTION Failure to retract the jack(s) fully before moving the trailer could result in property damage.

CAUTION Failure to secure the crank handle when NOT in use could allow unplanned jack extension which, if not avoided, could result in property damage.

11. Complete all pre-trip inspection and operation procedures.

7.4 Jack Operation During Uncoupling

NOTE: If utilizing a two-speed Atlas model gooseneck jack, ensure that the jack is in low gear. Refer to Section 7.4 (Landing Gear Operation During Uncoupling) of the Atlas Installation, Operation, and Service Manual (XL-LG20004UM-en-US).

NOTE: For specific uncoupling instructions relating to the fifth wheel, tractor, and trailer, refer to the respective manufacturer's instructions.

1. Position the tractor and the trailer on a well-lit, level surface, clear of persons and obstacles. Verify that the surface beneath the jack is capable of supporting the trailer weight. Also ensure that the tractor and trailer are in line with each other.

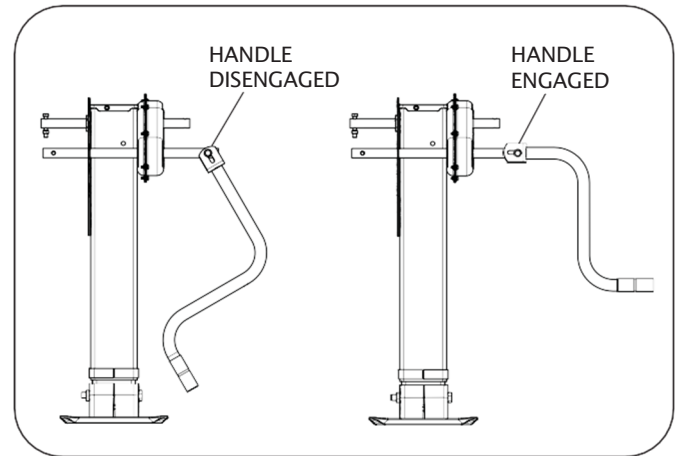
NOTE: If necessary, place jack pads on a support plank to prevent the jack from sinking into the supportive surface. (This is especially important with liquid cargo, where a shift in the contents could overturn the trailer).

CAUTION Failure to align the tractor and trailer properly could result in damage to the jack(s).

WARNING Failure to rest the jack pads on a hard, flat surface, could result in trailer tip-over which, if not avoided, could result in death or serious injury.

2. Engage the trailer brakes. Slowly back tractor tightly against the trailer. Set the tractor brakes and chock the trailer wheels.
3. Engage the trailer brakes. Slowly back tractor tightly against the trailer. Set the tractor brakes and chock the trailer wheels.
4. Engage the jack crank handle (**Figure 17**).

Figure 17



5. Extend the jack until the pads just touch the ground (**Figure 18**).

CAUTION

Failure to operate the jack within the maximum extension or retraction including repeated winding to its physical stops could, if not avoided, cause damage to the jack.

⚠ WARNING

Failure to maintain two hand control of the handle and release **SLOWLY** could cause spring back which, if not avoided, could result in death or serious injury.

6. Secure the crank handle in the crank hanger.

CAUTION

Failure to secure the crank handle when **NOT** in use could allow unplanned jack operation which, if not avoided, could result in property damage.

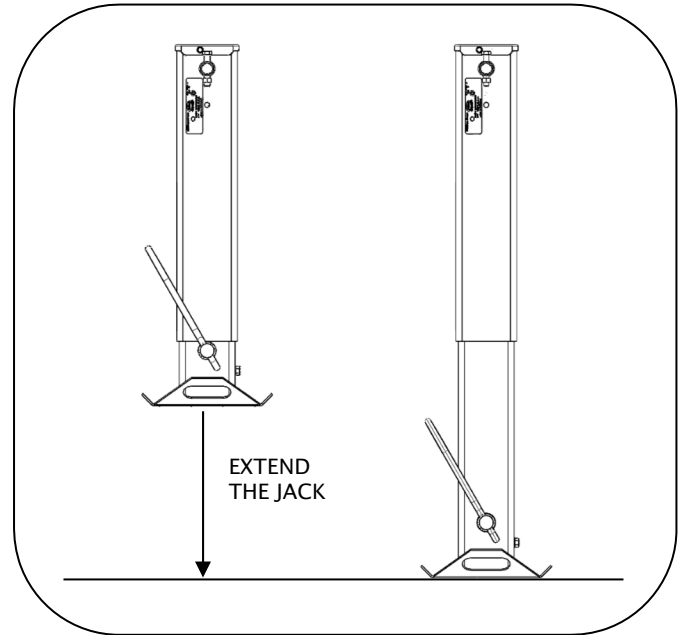
7. Per the manufacturer's instructions, release the fifth wheel, disconnect the airlines and the electrical cord. Release the tractor brakes. Slowly drive away from the trailer until the fifth wheel disengages from the kingpin but remains under the trailer.
8. Engage the tractor parking brake. Get out and inspect the jack and the support surface for proper trailer support.

⚠ WARNING

Failure to properly support the trailer could result in trailer instability which, if not avoided, could result in death, serious injury or property damage.

9. Complete the uncoupling procedures per the fifth wheel, tractor, and trailer manufacturer's recommendations.

Figure 18



7.5 Drop Leg Operation

⚠ WARNING Failure to perform procedures in a lighted area that is clear of obstacles and personnel could lead to a hazardous situation which, if not avoided, could result in minor or moderate injury.

1. Ensure that the trailer is properly supported prior to disengaging the drop tube spring handle. Also, inspect the drop tube and spring handle for any loose or damaged components.

⚠ WARNING Failure to check the condition of the jack prior to operating could result in use of damaged product which, if not avoided, could result in death or serious injury.

2. Release the drop tube by disengaging the spring lock (**Figure 19**).
 - Standard Drop Tube: Pull out on the spring lock handle to disengage the lock pin.
 - Cam-Lock Drop Tube: Pull out on the spring lock handle and turn 90° to lock handle in the disengaged position.
 - Dual-Pin Drop Tube: Push down on the spring lock until the handle falls in the cam lock, securing the handle in the disengaged position.
3. Extend the drop tube until the jack contacts the ground.

NOTE: If utilizing a spring-loaded drop leg, the drop tube must be pulled to the desired extended position.

4. Engage the spring lock and slide the drop tube upward until the lock pin engages. Continue operation per directions.

The drop tube is to be fully retracted prior to transit. Ensure that the trailer is fully supported prior to disengaging the spring lock. Pull the drop tube to the fully retracted position and engage the spring lock, engaging the spring pins.

IMPORTANT: If utilizing a spring-loaded drop leg, be aware that the drop tube will return automatically once the spring handle is disengaged (**Figure 20**). Ensure all body parts and objects are clear from the drop tube path.

⚠ CAUTION Failure to stay clear of the drop tube while disengaging the spring lock could result in minor or moderate injury.

Figure 19

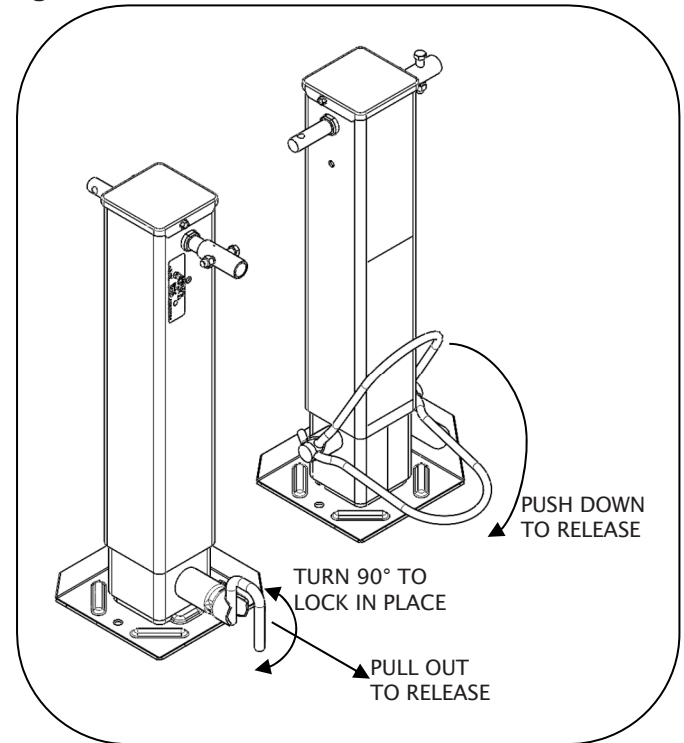
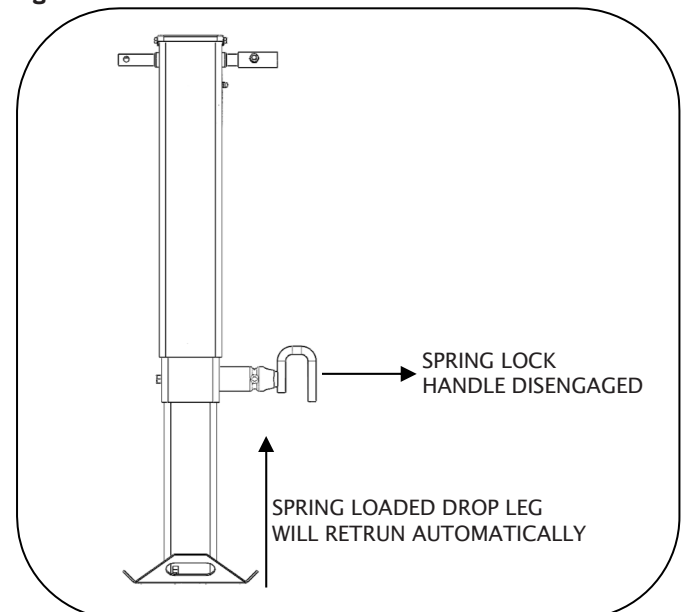


Figure 20



8. Routine Service and Inspection

Table 1

Procedure	Interval	Notes
Jack Inspection	Every use	Replacement/repair required if components are visibly damaged, loose, or broken.
Lubrication	Every six (6) months	More frequently in excessively moist and dusty conditions, as well as if not used for extended periods of time.
Cleaning	With the vehicle	
Hardware Inspection	Every 6 months	
Jack Alignment	Every 6 months	Inspection required if the jack is visibly bent or damaged.

*DO NOT use lubrication containing Teflon.

8.1 Jack Inspection (Before Use)

Before use, inspect the jack for cracks, bent components, or damaged/missing hardware, and any noticeable defects. The jack must be repaired prior to operation to avoid damage and possible injury.

⚠ WARNING Failure to check the condition of the jack prior to operating could result in use of damaged product which, if not avoided, could result in death or serious injury.

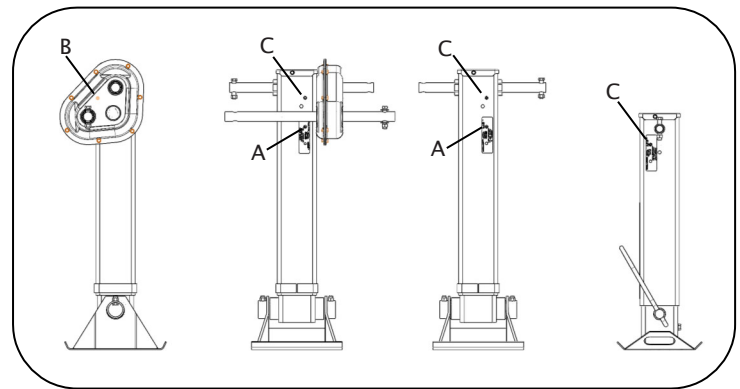
8.2 Lubrication

The jack requires lubrication whether it is used frequently or sits idle for extended periods of time. If left idle and un-greased, hard cranking could result. Use SAF-HOLLAND (XL-LG20081SD-en-US) grease for optimum performance. Follow these steps to maintain expected performance (**Figure 21**):

CAUTION Failure to properly lubricate the jack when required could result in damage to the jack geartrain.

10. Place the trailer on level ground, chock the tires, and support the trailer independently of the jack.
11. Fully retract the jack and extend the leg 2-3 turns and lubricate the lift-screw assembly through grease fitting "A". Apply 1/2 lb. of grease.
12. If applicable, lubricate the gearbox using grease fitting "B". Apply 1/4 lb. of grease.
13. Lubricate the bevel gear, using grease fitting "C". Apply 1/4 lb. of grease.
14. Distribute the lubrication by fully extending and retracting the leg several times.

Figure 21



8.3 Cleaning

No special cleaning of the jack is required; however, the jack should be cleaned with the rest of the vehicle.

NOTE: DO NOT directly aim water at the jack shafts and bushings or up into the retract assembly. Water infiltration into the gearbox and housing could cause corrosion.

CAUTION

Failure to prevent water infiltration into the shafts, bushings and retract assembly, could result in damage to the jack.

8.4 Hardware Inspection

Perform the following procedures to ensure the jack is in proper working order:

1. Inspect the mounting system for cracks or other signs of damage. If the mounting system uses fasteners, tighten or replace them as necessary.
2. Repair or replace any broken or damaged part of the jack assembly or mounting structure.

WARNING

Failure to repair or replace damaged jack components can result in unsafe product conditions which, if not avoided, could result in death or serious injury.

3. Inspect the crank handle bolt and the lock nut. Tighten or replace as necessary.
4. Inspect the crank handle. If the handle connecting tabs, tube or grip are bent or damaged, replace the handle.
5. Cross shaft connection bolts and lock nuts should be secure but allow side-to-side play in the cross shaft.
6. Inspect the footware for damage and replace if the components are bent or cracked. If removable footware is present, ensure all mounting bolts and fasteners are tightened and footware is secure.
7. For Atlas model gooseneck jacks, check for proper shift shaft engagement in both high and low gear and proper shifting between gears. Rebuild if necessary.

NOTE: The crank shaft should translate approximately 5/8" between high and low gear.

8. Rebuild or replace the jack with excessive play in the shafts and bushings.

8.5 Jack Alignment

Check to make sure the jacks are aligned with the trailer and parallel with each other using a square (**Figure 22**). Bent or damaged jacks are an indication of possible damage to the lift screw, lift nut or other internal components and should be replaced.

NOTE: Atlas model jacks utilize a floating nut retract tube design. The retract tube may appear to be loose inside of the upper housing tube but **DOES NOT** constitute as a damaged leg (**Figure 23**). However, if the jack upper housing shows signs of wear or cracking around the band area, the jack must be replaced.

Figure 22

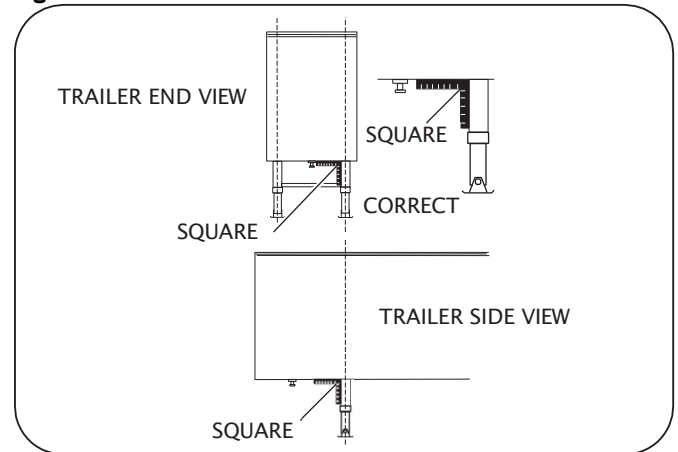
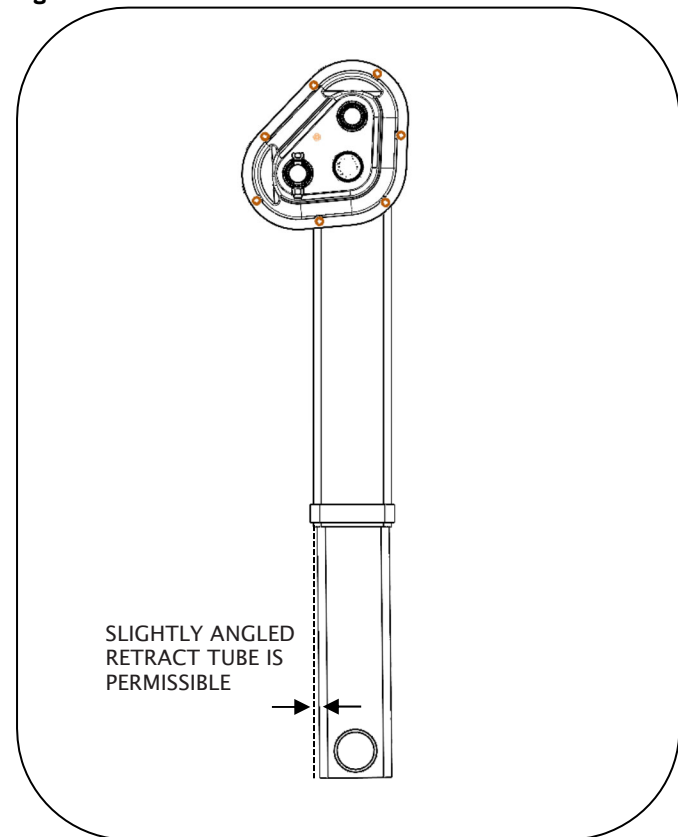


Figure 23



9. Troubleshooting

For Atlas model Gooseneck trailer jacks, refer to Section 9 (Troubleshooting) of the Atlas Installation, Operation and Maintenance Manual (XL-LG20004UM-en-US).

Table 2

PROBLEM	POSSIBLE CAUSE	RESOLUTION
Hard to Crank Jack	Turning the crank in the wrong direction.	Refer to "Gooseneck Jack Operation" for proper crank rotation.
	Cross shaft binding.	Inspect cross-shaft bolts. Back off bolts to allow lateral (side to side) movement of the cross shaft. Straighten or shorten cross shaft to eliminate binding.
	Misaligned jacks.	Legs MUST be parallel and extend and retract evenly. Remove cross driveshaft and adjust the jacks to the same height.
	Lack of grease.	Grease the jack as provided in the "Lubrication" section.
	Damaged lift screw or nut.	Check the jack for signs of impact (accident) damage. Disconnect cross shaft and crank legs individually to determine which jack is damaged. Replace the damaged jack.
	Interference between powder metal bushing or jackshaft of gearbox and trailer mounting surface.	Trailer mounting surface may need to be modified to ensure no interference between bushing or jackshaft and trailer surface.
	Upper housing or retract tube may be bent.	Replace damaged part(s) or jack.
	Excessive wear or damage to pinion gear or bevel gear.	Replace the jack.
	Shaft bushing is pushed inside the housing.	Replace the jack.
	Weld blow-through where strut bracket is welded to housing.	Grind weld as required and re-weld. (With no-load on the jack, the retract tube should have free play inside the housing).
Hard to crank trailer jack under load only.	Damaged collar.	Replace the jack.
	Damaged thrust bearing.	Replace the jack.
Jackshaft jams or skips while turning.	Lift screw is damaged.	Examine the lift nut and screw of the inner leg assembly for impact (accident) damage. Replace the jack as necessary.
	Worn, broken, or damaged gears (missing teeth).	Examine pinion gear and bevel gear for missing teeth or other signs of damage or wear. Replace leg as necessary.
Driving leg operates but opposite leg DOES NOT.	Broken/damaged cross driveshaft bolt.	Replace the cross-driveshaft bolt.
	Broken/damaged cross driveshaft.	Replace the cross driveshaft.
	Bevel gear pin/pinion gear pin sheared in opposite leg.	Remove upper leg cover. Check for damaged or missing pins under bevel gear, or in pinion gear and replace as necessary.
	Bevel gear/pinion gear damaged in non-gearbox leg.	Remove upper leg cover. Check for damaged gears. Replace jack as necessary.
Opposite leg operates, but driving leg DOES NOT.	Bevel gear pin/pinion gear pin sheared in driving leg.	Remove upper leg cover. Check for damaged or missing pins under bevel gear, or in pinion gear and replace as necessary.
	Bevel gear/pinion gear damaged in gearbox leg.	Remove upper leg cover. Check for damaged gears. Replace jack as necessary.
Both legs will NOT operate but jackshaft turns.	Bevel gear pin/pinion gear pin sheared in both legs.	Remove upper leg covers. Check for damaged or missing pins under bevel gear, or in pinion gear and replace as necessary.
	Bevel gear/pinion gear damaged in both legs.	Remove upper leg covers. Check for damaged gears. Replace jacks as necessary.
Legs are locked and will NOT turn	Bent retracting screw or damaged riser nut and screw.	Check the jacks for signs of impact (accident) damage. Disconnect cross shaft and attempt to crank legs individually to determine which leg is damaged. Replace the affected jack(s).
Drop tube is seized	Damaged/seized spring handle/retaining pin.	Check the spring handle for any damage or deformation. Remove and treat areas with corrosion. Replace components or jack as necessary.
	Damaged retract/drop tube	Extend the leg fully and check for damage or deformation of the retract tube. Replace the jack as necessary.





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