BRAZOS
TRAILERS.COM
430-540-3400

LowBoy Trailer Owner's Manual

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Section 1 – Introduction and Warranty

A Word from the Brazos Trailer Manufacturing Team

We thank you for choosing a Brazos Trailer. Our Team has worked hard to engineer and deliver a trailer that by design, will prove to be the most dependable heavy-duty trailer on the market. Whether your needs are commercial, industrial, or governmental, be assured that we have the trailer designed to accomplish the task.

The rugged design of the Brazos Trailer will provide you with both reliable structural support, as well as dependable service. Our over land testing assures that each unit meets all design requirements, no matter the environment it is used in. We hope that you will use your Brazos Trailer in a safe manner, allowing you to obtain the same results.

Building the Brazos Trailer family of trailers has been exciting for us because we know their capabilities and stand firmly behind their performance. As a commitment to our users, your comments have been reviewed, and many have been incorporated into product design.

Thank you for choosing Brazos Trailer Manufacturing.

Warranty

Brazos Trailer Manufacturing, LLC

Warranty Policy

Brazos Trailer Manufacturing, LLC. is known for providing exceptional customer service. We focus on acting quickly so you can get your semitrailer back on the road. Your calls are important to us. We guarantee your call will be answered by a human, not a recording, and your problem addressed immediately.

If you have any questions about the condition of your semitrailer, or wish to share any concerns, call us at (430) 540-3400.

The warranty is void for any damage caused by misuse, abuse, neglect, or acts of nature.

The warranty does not cover any defects or costs caused by:

- Misuse and subsequent damage.

Misuse is defined by, but not limited to, the cases described below:

- Modification, alteration, repair or service of this product by anyone other than repair shops approved by Brazos Trailer Manufacturing, LLC.
- Physical abuse to, overload of, or misuse of, the product or operation thereof in a manner contrary to the instructions accompanying the product.
- Any use of the product other than that for which it was designed.
- Failure to comply with care and maintenance instructions accompanying the product.

Brazos Trailer Manufacturing, LLC prides itself on manufacturing the best quality trailers on the market. However, should a problem be encountered, we back our trailers with the best warranty in the industry.

This Limited Warranty does not apply to and does not cover defects in material and workmanship due to or in any way arising out of:

- Failure to properly maintain the Trailer or any other improper maintenance of the Trailer.
- Abnormal use and service, including (without limitation) loading, unloading and/or transportation of non-uniformly distributed loads, use with corrosive cargo, and/or failure to adequately restrain or secure loads such that the Trailer is subjected to strains or impacts greater than are imposed by normal use.
- Total weight of Trailer and cargo exceeding the Gross Vehicle Weight Rating (GVWR) stated on the vehicle identification plate affixed to the Trailer by Brazos or the loading of each axle exceeding the Gross Axle Weight Rating (GAWR) listed on the vehicle identification plate.
- Accidents; Any other misuse or negligence.

In addition, this Limited Warranty does not cover:

- Tires
  – Except with respect to title
- Used goods sold by Brazos, all of which are sold “as is.”
- Except with respect to title, items or parts not manufactured by Brazos.
  – Provided, that Brazos will, as an accommodation to First User, pass on to First User any warranty it receives from the manufacturer of such items or parts, but only to the extent allowed by such manufacturer.
  – Trailers that have been repaired or altered by anyone other than an authorized repair facility approved by Brazos, unless in Brazos’ sole and exclusive judgment, such repairs are in no way responsible for the condition complained of.
  – Parts that are not defective but that wear out under normal use, such as (but not limited to) light bulbs, electrical receptacles, paint and coatings, brakes, linings, drums and return springs, equalizers, torque rod and camshaft bushings, camshafts, slack adjusters, brake cylinder diaphragms, springs, slider pads, wheel bearings, oil and oil seals, rim clamps and studs, gaskets and sealers, and all types of floors and floorboards.

If First User notifies Brazos in writing within the applicable warranty period of a defect in the Trailer and Brazos determines, after such tests and/or inspections as Brazos deems appropriate, that such Trailer or part is not in conformity with this Limited Warranty, Brazos will repair or replace, at its sole option, such defective Trailer or part, provided First User returns such Trailer or part to such repair facility as may be designated by Brazos, freight prepaid. No Trailer or part shall be returned without Brazos’ prior approval. This shall be First User’s exclusive remedy for Brazos’ liability hereunder. Any claims not made within the applicable warranty period are deemed waived by First User. In lieu of repairing or replacing the defective Trailer or part, Brazos may, at its sole option, refund the purchase price of such Trailer or part.

THIS IS BRAZOS’ ONLY WARRANTY. BRAZOS MAKES NO OTHER WARRANTY OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED. ALL

IMPLIED WARRANTIES OF MERCHANTABILTY AND/OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED BY BRAZOS AND EXCLUDED. Brazos' liability to First User, or anyone claiming through or on behalf of First User, with respect to any claim or loss arising out of the Trailer or alleged to have resulted from an act or omission of Brazos, whether negligent or otherwise, and whether in tort, contract, or otherwise, including failure to deliver, delay in delivery, or breach of warranty, shall be limited to an amount equal to the purchase price of the Trailer or part with respect to which such liability is claimed or, where appropriate and at the option of Brazos, to repair or replacement of the Trailer or part. In no event shall Brazos be liable for any bodily injury, death, or property damage resulting from or in any way arising out of the Trailer or its sale, use, or manufacture or for any cargo loss or loss of use. Brazos is not responsible for any financial loss due to lack of use of the Trailer or any expenses arising therefrom, including but not limited to lodging, fuel, towing, loss of revenue and other expenses or damages.

IN NO EVENT SHALL BRAZOS BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSSES, OR EXPENSES. This Limited Warranty may not be changed except in writing by an authorized officer of Brazos. THE PROVISIONS OF THIS LIMITED WARRANTY SHALL BE INTERPRETED AND GOVERNED UNDER THE LAWS OF THE STATE OF TEXAS. This Limited Warranty gives you specific rights, and you may also have other rights that vary from state to state.

The maximum load indicated on the VIN plate may or may not be a legal load on the highway you plan to use.

TThe cargo should be properly loaded, blocked and braced to prevent load shifts and to comply with the following sections of the Department of Transportation Regulations, Subpart 1 –

Protection against Shifting and Falling Cargo:

- Section 393.100 – General rules for protection against shifting or falling cargo.
- Section 393.102 – Securement systems. To properly secure cargo, it is important that the working load limits of the tie-downs be known, as well as the working load limits of the anchor points.
- Section 393.104 – Blocking and Bracing.
- Section 393.106 – Front-end structure. Your trailer may or may not be equipped with a "rated" bulkhead. It is your responsibility to ensure compliance with 393.106.

Beginning March 1, 1998, all trailers are required by law to have anti-lock brake systems on at least one axle per FMVSS-121 (49CFR 571.121). A "4S-2M" system means there are 4 sensors and 2 modulator valves controlling the axles, while a "2S-1M" system is 2 sensors and 1 modulator valve. Refer to the manufacturer of the ABS system for specific information on the various components.

Brazos Trailer Manufacturing's full Warranty is as follows:

LIMITED WARRANTY

Brazos Trailer Manufacturing LLC. (“Manufacturer”) warrants to the original consumer purchaser that the trailer produced by the Manufacturer (the “Product”) will be free from defects in material and workmanship for a period of one year, except as herein limited, from the date of the first retail purchase, provided all stated conditions and exclusions are satisfied. This warranty is limited to the first retail purchaser and it is not transferable.

Manufacturer’s sole obligation under this limited warranty is to repair or replace, at its option, any part or component of the Product that was furnished and installed by Manufacturer and that proves defective in material and /or workmanship during the first year following the date of delivery to the Purchaser. Such repair or replacement will be performed by Manufacturer or, with Manufacturer’s prior express authorization, at a repair facility designated or approved by Manufacturer. **Manufacturer assumes no responsibility to reimburse Purchaser or pay for repairs made without Manufacturer’s prior express authorization or at repair facilities not designated or approved by Manufacturer.**

Return Warranty Card for Coverage

The original purchaser must complete and return the warranty card provided with the product to the Manufacturer within 30 days of purchase or this Limited Warranty will be null and void. In addition to validating your warranty coverage, returning the registration card will allow Manufacturer to provide you with notice of any condition Manufacturer may need to supply after you have purchased the product.

Action Required in the Event of a Defect

For Warranty coverage, you must immediately contact the dealer from which your unit was purchased to make a warranty claim. The dealer that sold you the trailer will initiate the claims process in order to obtain approval for warranty work. Prior to warranty repairs, dealer must verify unit number, purchase date, and original ownership. The dealer must obtain an authorization from the manufacturer prior to repair of the trailer. Also, please be advised, some parts or accessories may need to be replaced by third party suppliers, and in some cases the defective part may need to be returned for reimbursement or inspection.

You must pay all incidental expenses incurred in obtaining warranty service, including, without limitation, transportation of the product and delivery charges to and from the dealer or manufacturer.

Items Excluded From Warranty

1. Damage or deterioration due to normal wear and tear, salt, road grime, application of or exposure to corrosive chemicals or other corrosive materials (including without limitation magnesium chloride or calcium chloride) or arising from an accident or use of the product.
2. Defects arising from operator’s negligence, misuse, abuse, loading the unit beyond its gross weight limitations, improper loading, accidents, acts of God, improper connection or disconnection from/to trailer, or other contingencies beyond the control of Manufacturer.
3. Repairs made necessary by reason of failure to follow ordinary and customary maintenance procedures, including procedures recommended by manufacturer or component manufacturers.
4. Repairs made necessary by reason of repairs or alterations or installation of aftermarket accessories not performed by Manufacturer.
5. Paint (Surface corrosion caused from stone chips, scratches, removal of decals, reverse impact or similar surface damage.)
6. Tarp System other than electric motor (Arms, Axle, Springs, Pins, Mesh material)
7. Tires

DISCLAIMER OF IMPLIED WARRANTIES AND LIMITATION OF DAMAGES

ANY EXPRESS OR IMPLIED WARRANTY NOT PROVIEDED HEREIN, INCLUDING WITHOUT IMPLIED LIMITATION, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ANY REMEDY FOR BREACH OF CONTRACT, WHICH BUT FOR THIS PROVISION MIGHT ARISE BY IMPLICATION OR OPERATION OF LAW, ARE HEREBY EXCLUDED AND DISCLAIMED. IF THEY CANNOT BE DISCLAIMED, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE ARE EXPPRESSLY LIMITED TO THE ONE YEAR TERM.

UNDER NO CIRCUMSTANCES SHALL MANUFACTURER BE LIABLE TO PURCHASER OR ANY OTHER PERSON FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER ARISING OUT OF BREACH OF WARRANTY, BREACH OF CONTRACT, TORT, OR OTHERWISE. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, TRANSPORTATION TO AND FROM THE DEALER OR MANUFACTURER TO GET WARRANTY SERVICE, LOSS OF TIME, LOSS OF USE, LOSS OF REVENUES, SALARIES OR COMMISSIONS, LODGING, TOWING CHARGES, BUS FARES, CAR RENTALS, GASOLINE EXPENSE, TELEPHONE CHARGES, INCONVENIENCE, AND THE COST OF REPAIRING OR REPLACING OTHER PROPERTY WHICH IS DAMAGED BECAUSE OF A DEFECT IN THE PRODUCT. MANUFACTURER IS NOT RESPONSIBLE FOR ANY DOWN TIME, LOST PROFITS, PUNITIVE, INDIRECT OR DIRECT DAMAGES ARISING FROM THE TIME ASSOCIATED WITH PAINT OR OTHER REPAIRS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES SO THE PRECEDING LIMITATION MAY NOT APPLY TO YOU.

NOTWITHSTANDING ANYTHING TO THE CONTRARY HEREIN, THIS LIMITED WARRANTY IS LIMITED TO REPAIR OR REPLACEMENT AND IF SUCH WARRANTY FAILS BECAUSE ATTEMPTS AT REPAIR ARE NOT COMPLETED WITHIN A REASONABLE TIME, OR IT FAILS FOR ANY OTHER REASON, ANY DAMAGES ARE LIMITED TO THE LESSOR OF THE EITHER THE COST OF NEEDED REPAIRES OR REDUCTION IN THE MARKET VALUE OF THE TRAILER CAUSED BY THE LACK OF REPAIRS, IN ANY CASE.

No dealer, distributor, agent, representative of Manufacturer, or other person is authorized to make any representation or a promise of warranty concerning Manufacturer's products on behalf of the manufacturer except to refer the purchaser to this Limited Warranty.

Legal Remedies of Purchaser

This warranty provides specific legal rights. You may have additional rights not included in this warranty which vary from state to state. No Action to enforce this warranty shall begin more than six months after a defect is discovered and shall not commence after expiration of the stated warranty period.

Introduction

Congratulations on purchasing your new Brazos Trailers LowBoy Heavy Duty Trailer. We have developed this manual to assist you in understanding the proper and safe use, operation, and care of the trailer.

It is the operator's first responsibility to take the time to read and understand the contents of this manual and become completely familiar with your responsibilities, equipment controls and their functions, and the safety features prior to operation.

Included in this manual is specific information on all major components such as the frame style, trailer body and operator's controls, in addition to maintenance and servicing recommendations. Suppliers of components not provided by Brazos Trailers may have their own operator, maintenance, and warranty manuals and service procedures concerning maintenance, service, and care. Be sure to read this information completely and follow their directions.

NOTICE

The illustrations and components provided in this manual may be slightly different than which is installed on your model. Contact Brazos Trailers for model specific information concerning optional equipment installed by Brazos Trailers.

Owner Responsibilities

The complete family of Brazos Trailers are classified as heavy duty over the road construction trailers. Therefore, each trailer must be registered. Check with your State for specific requirements.

Important Numbers and Warning Labels

The identification numbers of the trailer and component systems are important and should be kept in a safe place. Record the serial numbers, model, and registration numbers immediately after purchase for future reference. You will need to report these numbers to the authorities in case of theft, fire damage, etc.

Warning Labels

There are warning labels or decals located at various locations on the trailer. Take notice of these warning labels and follow the recommended precautions and procedures noted on the labels.

Warranty Registration

Upon purchase of your Brazos Trailer, all identifying numbers will be on file with Brazos Trailers.

Vehicle Identification Number

The VIN (Vehicle Identification Number) tag is located on the side of the gooseneck (Figure 1-1). The VIN tag must be clearly visible at all times and must not be altered, removed, or tampered with in any way. You will need to know the VIN for any warranty questions or future transactions.

MFD BY: BRAZOS TRAILER MANUFACTURING DATE OF MFG: XX/2021
GVWR: 34019 KG (75000 LB)

	GAWR	WITH TIRES	RIMS AT	COLD
FRONT	11340 KG (25000 LB)	11R24.5	8.25X24.5	827 KPA (120 PSI) DUAL
1ST INNER				
2ND INNER				
REAR	11340 KG (25000 LB)	11R24.5	8.25X24.5	827 KPA (120 PSI) DUAL

THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

V.I.N. 4B9BKDG26MH054434 TYPE: TRAILER BRAZ32X48PV

Figure 1-1 – VIN Tag Location

General Information

Operator and passenger education, along with proper care of your trailer, is essential to ensure that your use of this trailer will be safe and productive. In this manual we will suggest safe operating techniques, describe all components, controls and their functions, and basic maintenance procedures for the Brazos Trailer.

⚠WARNING

Failure to require compliance with all safety precautions related to misuse, overloading, and wearing of required personal safety equipment at all times, can result in serious bodily injury and even death.

A pre-operation trailer inspection should be the first daily safety procedure. This procedure will make sure the trailer, and all approved options and attachments, are in safe operational and ready condition. For assistance, in conducting this pre-operation inspection, refer to the Pre-start Trailer Inspection information in this manual, as well as using the Brazos Trailer inspection sheet that will assist you in making sure the Brazos Trailer is safely service ready.

Before operating the Brazos Trailer, it is mandatory that the operator fully read and understand the operator's manual to become familiar with all controls, their functions, and the safety features of the Brazos Trailer.

It is extremely important that first time operators find a smooth, spacious area with no obstacles, (buildings, ditches, trees, overhead obstructions, etc.) to allow the operator to be become completely familiar with the operation of all Brazos Trailer controls and functions including starting, stopping, braking, turning and disconnecting the gooseneck from the trailer body before putting the trailer into a working environment.

Basic Safety Recommendations:

- Before beginning trailer operation, make sure that each operator reads and understands the safety instructions presented in the Safety Section of this manual.
- Before beginning trailer operation, make sure that each operator reads and understands the instructions presented in the Operating Instructions Section of this manual.
- Make sure all gear is properly stowed and secured before moving the trailer.
- Always make sure the hydraulic controls are in the neutral position (disengaged) before attempting to start the tractor engine.
- Make sure everyone is a safe distance away from the trailer when starting or when attempting to operate the trailer.
- Make sure that all machinery is properly secured to the trailer using DOT approved chains and binders.
- No one under the age of twenty-one (21) should be allowed to operate the trailer. The operator must also hold a valid Driver's License and CDL, with the appropriate endorsements for the state where the trailer will be operated.

Section 2 – Safety

Safety Introduction

Following the safety guidelines set forth in this manual will assist you in safely operating, maintaining, and servicing your Brazos Trailer. Before operating the Brazos Trailer check the regulations, restrictions and safe guards for the area. Contact your local authorities for any information pertaining to the area where you will be operating.

Be Prepared - Get to Know All Operating and Safety Instructions

This is the Safety Alert Symbol.

Wherever it appears, either in this manual or on safety signs on the trailer, you should be alert to the potential for personal injury or accidents. Always observe safety precautions and follow recommended procedures.

Learn the Signal Words Used with the Safety Alert Symbol

The words **"DANGER", "WARNING",** and **"CAUTION"** are used throughout this manual, and on labels on the trailer to indicate hazards or unsafe practices. All three statements indicate that safety is involved. Observe the precautions indicated whenever you see the Safety Alert symbol no matter which signal word appears next to the Safety Alert symbol.

⚠ DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

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

⚠ CAUTION

CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to personal injury. This type of statement is used to draw attention to a procedure that needs to be followed to prevent trailer damage.

Safety Precautions

Since Brazos Trailer Inc. has no direct control over trailer application or operation, following the proper safety practices is the responsibility of the owner and/or operator. Remember that this trailer is only as safe as those who operate it. Safety tips shown throughout this Operator's Manual must be followed at all times.

NOTICE

The illustrations and components provided in this manual may be slightly different than what is installed on your model. Contact Brazos Trailer for unit specific information concerning optional equipment installed at the factory.

General Safety

- Never operate the Brazos Trailer without first completely reading and understanding this Owner's Manual.
- No one under the age of twenty one (21) should be allowed to operate the trailer. The operator must also hold a valid Driver's License and CDL with the appropriate endorsements for the state where the trailer will be operated.
- Never operate the trailer under the influence of alcohol, awareness altering drugs, or medications that would affect your ability to operate safely.
- Keep children clear from the work site area at all times.

- Never allow a child to operate the trailer.
- Serious injury or death involving children can occur. Stay alert and be aware of your surroundings at all times. Stop operations if children wander onto the job site. Resume work only when the operating area is clear.
- Keep all non-operating personnel away from the trailer during operation.
- Make sure all gear is properly stowed and secured before operation.
- Make sure that all machinery is properly secured to the trailer using DOT approved chains and binders.
- Wearing protective clothing and gear, such as hard hats, safety glasses, safety shoes, hearing protection, breathing protection, and long pants and shirts when working is highly recommended. Do not operate in clothing or shoes which will expose skin or feet to possible flying debris.
- Clothing should be relatively close fitting. Loose clothing, long hair, rings, and other jewelry should be avoided because of the danger of catching them on trailer parts or controls, or on any moving parts, either on the trailer or any attachment.
- Keep hands/fingers and feet clear from all moving parts.
- Never touch trailer components while they are hot.
- Use only original Brazos Trailer or approved replacement parts and attachments. Imitation parts may lead to unit damage and/or injury to personnel. The trailers' warranty may be voided if unauthorized parts and attachments are used.

Operating Safety

⚠WARNING

If the following operational requirements are not properly followed, serious injury can occur.

- Plan ahead and learn as much as possible about your job-site area before beginning any work.
- Know the exact location of overhead power lines or obstructions.
- Prior to use, perform the Pre-Start Trailer Inspection and Daily Trailer Maintenance to make sure that the trailer is in safe operating condition. Use the Pre-Start Trailer Inspection checklist in this manual as a guide.
- Never operate a malfunctioning trailer.
- Keep hands, gloves, shoes, control knobs, and tractor operator cab clean. Slippery controls can cause you to lose control, which may result in an accident.
- Make sure to remain seated in the tractor cab seat, with the seat belt fastened at all times during trailer operation.
- When working on an unfamiliar site, review, understand and follow job site safety rules.
- Keep the work site clear of all non-operating personnel. Should a non-authorized person enter the work area, stop trailer operation until the work area is clear.
- Prior to unloading the trailer, inspect the path you will travel and work site area for potential hazards, including but not limited to firm solid roadways and stable and level soil conditions at the work site.
- If any of these conditions exist, correct the hazard or obstruction before entering the site. If any of these conditions cannot be corrected, avoid operating on them or traveling near them.
- Be extremely cautious traveling through or near trees, brush, shrubs or any obstacles which might obscure your vision. These might hide potential hazards, such as the edge of a steep slope, deep holes, large rocks, etc.

- Be extremely cautious when operating near a ditch or embankment where loose or soft ground conditions could cause the surface to give way under the trailer, causing it to become unstable. If there is a drop off along the edge of the roadway (1, Figure 2-1), a shear line can be created (3, Figure 2-1). The shear line is the distance from the drop off into the roadway, equal to the depth of the drop off (2, Figure 2-1) – i.e. a 6 foot drop off requires driving no closer than 6 feet from the edge of the roadway. Increased ground pressure caused by the loaded trailer can cause the roadway to shear or collapse under the trailer.

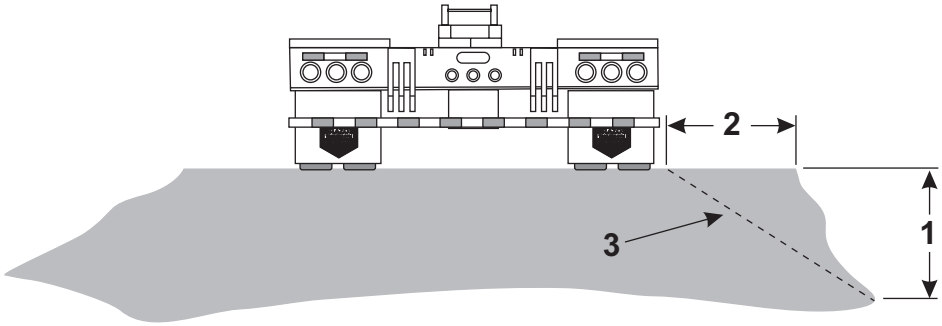

Figure 2-1 – Road Edge Shear

- Never exceed the rated capacity of the trailer. Trailer specifications can be found in the Operator's Manual.
- Never attempt to operate any attachment without first understanding proper installation and operating procedures.
- Operate all controls slowly and smoothly and never abruptly stop any function. This can cause the trailer to become unstable.
- Make sure that all machinery is properly secured to the trailer using DOT approved chains and binders.
- Always look in the direction of travel.
- Come to a complete stop prior to changing travel directions.
- When using the spreader beam/4th axle assembly, it is required to lock the spreader beam pivot in the straight position before backing up the trailer.
- Reduce speed and proceed with caution when traveling in reverse or turning.
- When approaching a raised portion of a roadway (railroad tracks, speed tables, etc.) use extreme caution not to ground the trailer.
- When using the spreader beam/4th axle assembly, make sure to avoid rough or rolling terrain. If the trailer is supported only by the tractor and spreader beam/4th axle assembly severe damage to the trailer and loss of trailer control could occur.
- Approach corners slowly, turning too fast or sharply may cause loss of trailer control.
- If the trailer is involved in an accident, or inadvertently damaged during operation, stop and perform a thorough inspection. Make sure the trailer is in safe operating condition prior to resuming work.
- Be alert to any unusual reaction to any of the controls. If anything unusual is noticed, shut the trailer down and thoroughly inspect it to determine the cause of the problem. Do not operate the trailer until all required repairs have been made.
- If the tractor and trailer must be left unattended, set all brake systems, shut the tractor engine down and remove the key, and make sure that the tractor cannot be started by an unauthorized individual.
- When the trailer is being loaded, make sure that the load is as evenly distributed as possible and properly secured to the trailer.

Service & Maintenance Safety

⚠WARNING

Maintenance work can be hazardous if not done in a careful manner. All personnel should realize the hazards and strictly follow safe maintenance practices. Failure to comply with these safety precautions may result in serious personal injury and/or death.

- Use only Brazos Trailer supplied or approved replacement parts and attachments. Imitation parts may lead to trailer damage and/or injury to personnel. Warranty may be voided if unauthorized parts and attachments are used.
- Wear the proper protective clothing and personal safety equipment necessary to perform the maintenance or service required.
- Prior to performing maintenance or service, park the trailer on a solid and level area away from obstructions and/or work site hazards.
- Be sure the area has adequate light and is well ventilated.
- Clean-up any oil, grease, mud, water, or snow which might cause the floor surface to become slippery.
- If the trailer requires maintenance, take the trailer out of service and attach a "Do Not Operate" tag.

⚠WARNING

Hydraulic oil under pressure can penetrate body tissue causing serious injury and possible death. When troubleshooting a hydraulic system for leaks, always use cardboard or wood as a detector. DO NOT USE YOUR BARE HANDS. If you are injected with hydraulic oil or any other fluids, immediately seek treatment by a doctor trained in the treatment of penetrating fluid injuries.

- If maintenance or repairs are required on any part of the hydraulic system, make sure that all residual hydraulic pressure has been relieved by operating the trailer hydraulic controls after the pony engine has been shut off.
- Know where all pinch points and moving parts on the trailer are. These areas must be avoided to prevent serious injury.
- Remove only those guards or covers on the component being serviced and replace them immediately upon completion of the work.
- Never attempt to adjust or service trailer components while they are hot.
- When working under a raised trailer, make sure to use proper bracing, such as blocks, to prevent the trailer from falling.
- Chock the trailer wheels to prevent unanticipated trailer movement before starting any work.

Hydraulic System Hazards

⚠WARNING

Hydraulic oil under pressure can penetrate body tissue causing serious injury and possible death. When troubleshooting a hydraulic system for leaks, always use cardboard or wood as a detector. DO NOT USE YOUR BARE HANDS. If you are injected with hydraulic oil or any other fluids, immediately seek treatment by a doctor trained in the treatment of penetrating fluid injuries.

The hydraulic system is under pressure whenever the tractor engine is running and the trailer hydraulic lines are connected, or the pony motor power unit is running. The hydraulic system may hold pressure even after the engine is shut off. After shutting off the tractor engine or pony motor power unit, move the hydraulic control levers forward or backward to release any stored hydraulic pressure. Some components will retain residual or trapped pressure. Use extreme caution when removing any hydraulic component.

During inspection of the hydraulic system:

- Shut off the tractor engine or the pony motor power unit and cycle all hydraulic controls to release residual pressure.
- Wait for the hydraulic fluid to cool down before disconnecting any hydraulic lines. Hot hydraulic fluid can cause severe burns.
- Hydraulic fluid can cause permanent eye injury. Wear safety glasses or a full face shield to provide appropriate eye protection.

Trailer Decal Locations

For safety, each semitrailer has a series of decals and warning labels applied. During the daily semitrailer safety inspection, the condition of each decal or label needs to be checked. If any are damaged or unreadable, they must be replaced with a genuine Brazos Trailers decal or warning label.

The following are the locations of each type of decal on the semitrailer.

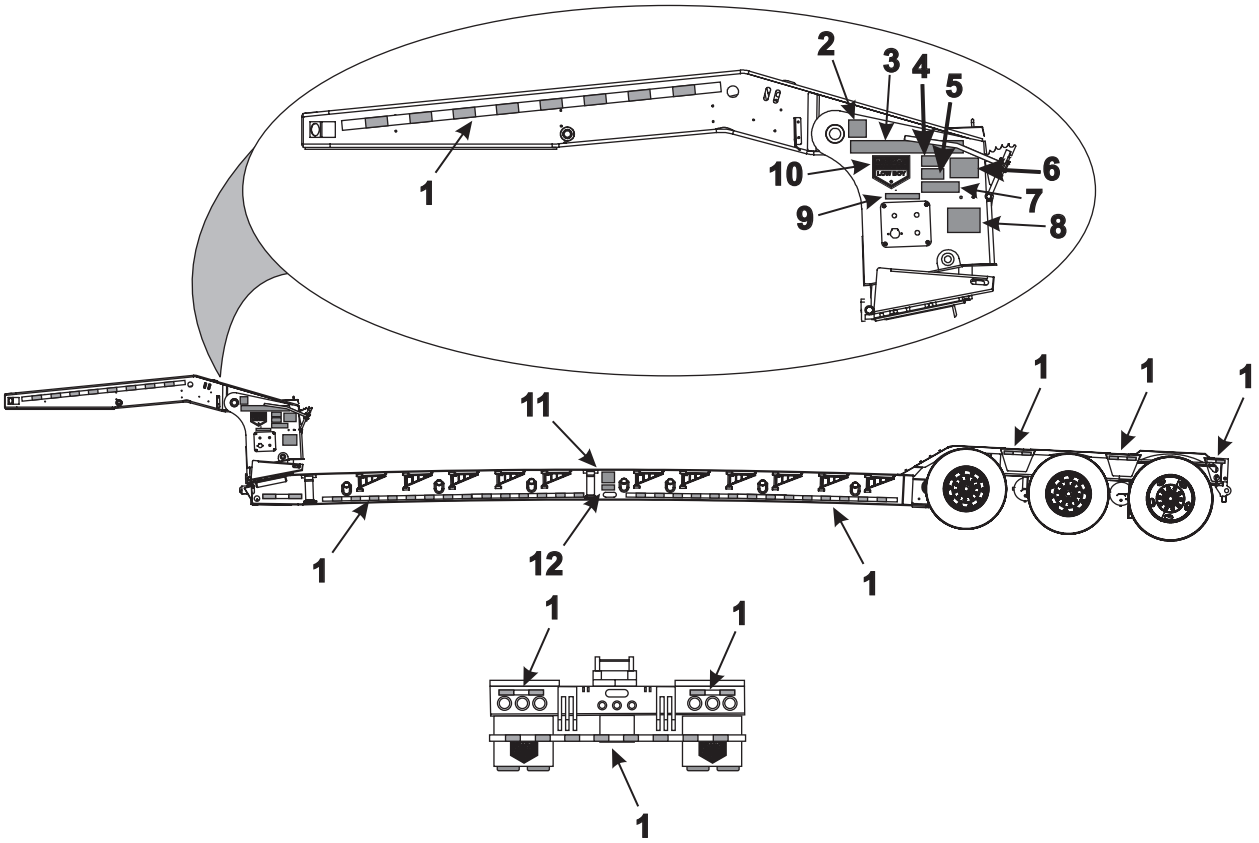

Figure 2-2 – Trailer Side and Rear Decal and Warning Label Locations

Item No.	Description	Part Number
1	Conspicuity Decal	
2	Lubrication Guide Decal	
3	Model Decal	
4	Safe Loading Warning Decal	
5	Fully Engage Hauling Pin Warning Decal	
6	Wheel Torque Caution Decal	
7	VIN Tag	
8	Gooseneck Hauling Pin Caution Decal	
9	Hauling Pin Lever Decal	
10	Brazos Low Boy Trailer Logo	
11	Do Not Side Load Decal	
12	Load Centerline Caution Decal	

Section 3 – Semitrailer Orientation, Pre-Start Inspection and Operation

NOTE: All view references are made from the operator's position, with the operator seated in the tractor cab, facing forward.

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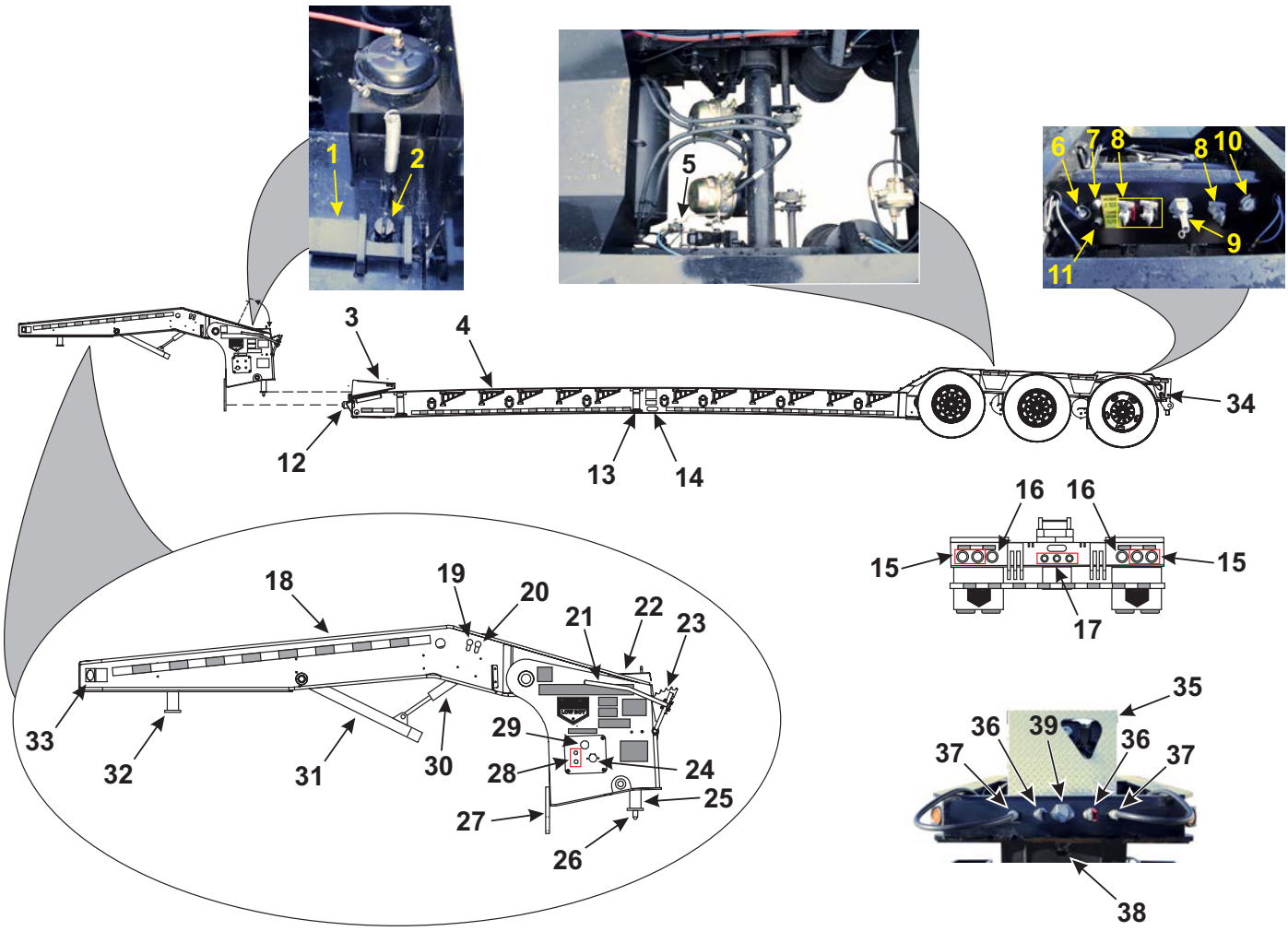


Figure 3-1 – Semitrailer Orientation Views

Item No.	Description
1	Safety Lock Pin Cover Guard
2	Safety Lock Pin
3	Loading Ramp
4	Outriggers (stored)
5	Air Bag Load Balance Linkage
6	Hazard Light Switch
7	Air Bag Inflation Control
8	Flip Axle Air Line Connections
9	FlipAxle Electrical Connection
10	Air Bag Pressure Gauge
11	Lift Axle (FlipAxle) Air Bag Control
12	Bull Pins
13	Heavy Duty Outrigger Attachment Pocket
14	Side Marker Light
15	Taillight
16	Hazard Light (Flashing)
17	Rear Marker Light
18	Gooseneck Assembly
19	Gooseneck Lift Control Lever
20	Deck Height Control Lever
21	Deck Height Adjustment Lever
22	Hauling Pin Inspection Cover
23	Deck Height Control Pockets
24	Tractor electrical connection
25	Hauling Pin
26	Hauling Pin Lock Pin
27	Gooseneck Connection Teardrop
28	Trailer Pneumatic Connection
29	Hauling Pin Lever Activation Control
30	Gooseneck Lift Arm Cylinder
31	Gooseneck Lift Arm
32	King pin (moveable)
33	Front marker light
34	Rear Marker Lights
35	Auxiliary Power Unit
36	Tractor Pneumatic Connection
37	Hydraulic Connection
38	King Pin
39	Tractor Pneumatic Connection

Pre-Trip Inspection

⚠WARNING

IMPROPER USE OF THE TRAILER COULD CAUSE SERIOUS INJURY OR DEATH. BEFORE OPERATING THE TRAILER, OR PERFORMING MAINTENANCE, THE OPERATOR MUST READ AND UNDERSTAND THE ENTIRE OPERATOR'S MANUAL, REVIEW TRAILER CONTROLS, LOCATE AND REVIEW ALL WARNINGS AND SAFETY PLACARDS AND RELEVANT OPERATOR SAFETY MATERIALS INCLUDING WRITTEN, VISUAL, VIDEO OR VERBAL INSTRUCTIONS.

It is mandatory to do a visual inspection of the tractor and semitrailer before beginning operation, during all trips, and an end of day inspection.

NOTICE

- While the responsibility for major checks, service and adjustments of a tractor and semitrailer may belong to a company's maintenance department, it is the driver's responsibility to make sure that the condition of a tractor or semitrailer is safe for operation. As stated in the Federal Motor Carrier Safety Administration (FMCSA, Section 396) and CDL Class A requirements, the driver must do a full and complete pre-trip and post-trip inspection as well as making on-the-road observations of any tractor and semitrailer problem conditions. If any problems are noted, a written report of the problem observed must be filed immediately.
- The following inspection information is a brief listing of inspection and daily service procedures. More detailed information on doing all Daily Service checks is located later in this section.

⚠WARNING

When inspecting a tractor and semitrailer, hookups, and/or repairs, be aware of your physical positioning. The tractor and/or semitrailer may move unexpectedly causing death or serious injury.

The inspection should include:

1. Check and clean all decals, conspicuity tape, reflectors, and warning signs. If any decals, conspicuity tape, reflectors or warning signs are damaged, replace those items.

⚠WARNING

Hydraulic oil under pressure can penetrate body tissue causing serious injury and possible death. When troubleshooting a hydraulic system for leaks, always use cardboard or wood as a detector. DO NOT USE YOUR BARE HANDS. If you are injected with hydraulic oil or any other fluids, immediately seek treatment by a doctor trained in the treatment of penetrating fluid injuries.

2. Check hydraulic lines and hoses for signs of damage or leaks. **NOTE:** Hydraulic systems can retain pressure even if the unit is not connected to the tractor.
3. Inspect the trailer for any signs of damage, cracked welds, or loose fasteners.
4. Check to make sure that all wheel lug nuts are tight and torqued to the proper setting. NOTE: Lug nuts on new wheels can shift and settle quickly after being assembled. After 50 – 100 miles of driving, recheck the lug nuts for proper torque – 450 - 550 lb.-ft.
5. Check to make sure all tires are at proper inflation.
6. Turn on the tractor lights and make sure all semitrailer marker lights are clean and working.
7. If the load requires the use of the wide load indicator lights, make sure these are activated and working properly.
8. After the semitrailer has been securely attached to the tractor, make sure that the trailer has been set to the proper load height before moving the semitrailer.
9. Make sure that the physical dimensions of the load comply with all local and state highway requirements.
10. Make sure that the load weight and axle weight load complies with all local and state highway requirements.
11. When using the outriggers, make sure to install the wide load flags and signs at the front and rear of the tractor and trailer.

Coupling Tractor to Semitrailer

Knowing how to couple and uncouple the tractor to the semitrailer correctly is basic to safe operation of combination vehicles. Different tractors require different techniques, so learn the details for coupling and uncoupling the tractors you operate. The general coupling and uncoupling procedures are listed below.

⚠WARNING

Incorrect coupling and uncoupling of the tractor to or from the trailer can result in accidents causing serious injury or death. Not all tractors are identical. Be aware of the differences in the vehicles you operate.

1. Inspect the fifth wheel.

   Check the fifth wheel assembly:

   - Make sure that there are no damaged or missing parts.
   - Inspect that the mounting to the tractor is secure, with no visible cracks in the frame, etc. (Figure 3-2).

Figure 3-2 - Tractor Fifth Wheel

⚠WARNING

The use of a lube plate or slick plate may prevent proper coupling creating a hazardous condition. Make sure to use only SAE approved lubricants.

- Make sure that the fifth wheel plate is lubricated with an SAE approved grease. Failure to maintain adequate lubrication could result in steering problems and/or damage to the semitrailer due to friction between mounting surfaces.
- Check that the fifth wheel is in the proper coupling position with the fifth wheel plate tilted down towards rear of tractor (1, Figure 3-3).

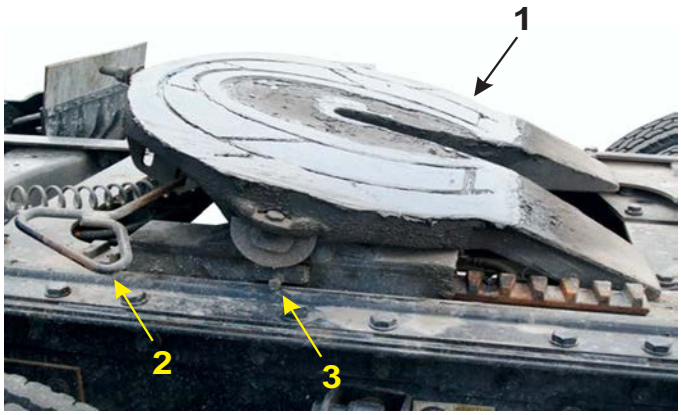


Figure 3-3 - Tractor Fifth Wheel in Coupling Position

- Check that the safety unlock handle is in the automatic lock position (2, Figure 3-3).
- Confirm that the sliding fifth wheel is locked in position (3, Figure 3-3).
- Make sure the fifth wheel jaws are fully opened (1, Figure 3-4).

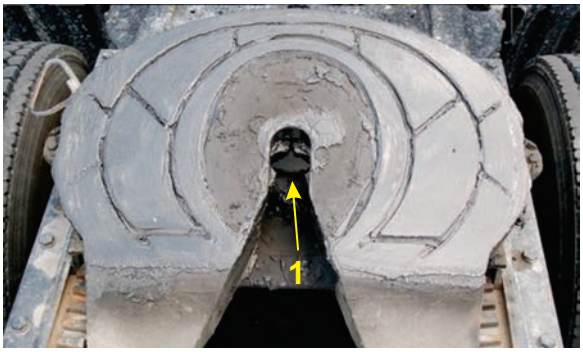


Figure 3-4 – Open Fifth Wheel Lock Jaws

2. Inspect the semitrailer kingpin (1, Figure 3-5) for damage and/or wear.

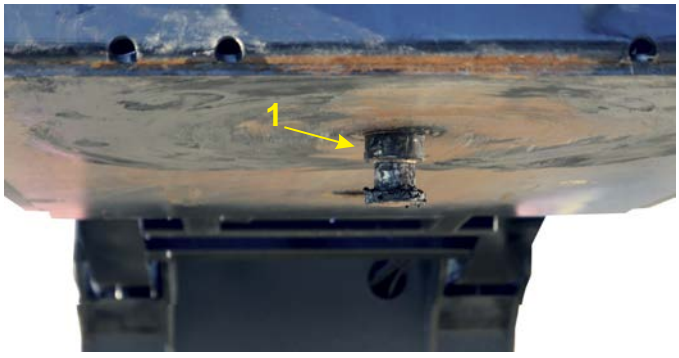
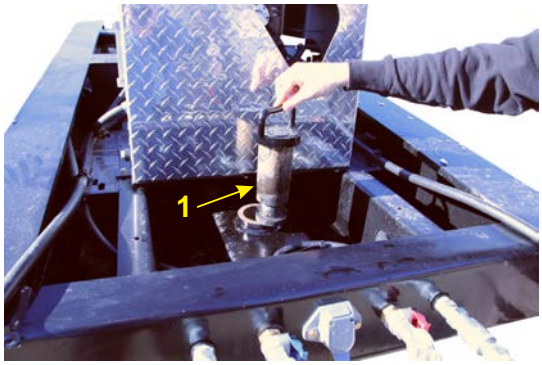


Figure 3-5 – Inspect King Pin

3. The Brazos LowBoy trailer features a moveable king pin (1, Figure 3-6) to accommodate tractor variations. The king pin can be moved from directly in front of the pony motor (2, Figure 3-6) to directly behind the pony motor (3, Figure 3-6). Move the king pin by lifting it using the handle from one location and placing it in position in the desired location.



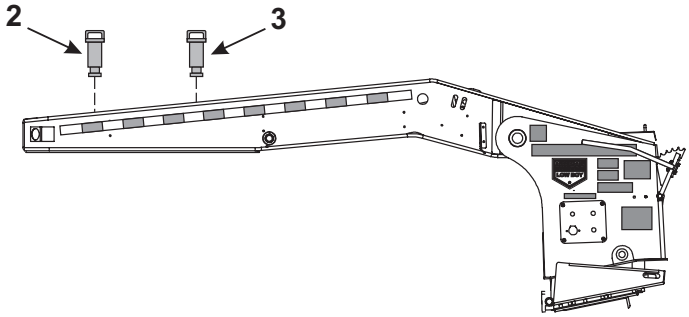


Figure 3-6 – Moveable Kingpin

4. Inspect work area to make sure the area is clear of workers or debris around both the tractor and semitrailer.
5. Before coupling the tractor.
   a. Always chock the trailer using chock blocks (5, Figure 3-7) when coupling the tractor and semitrailer.

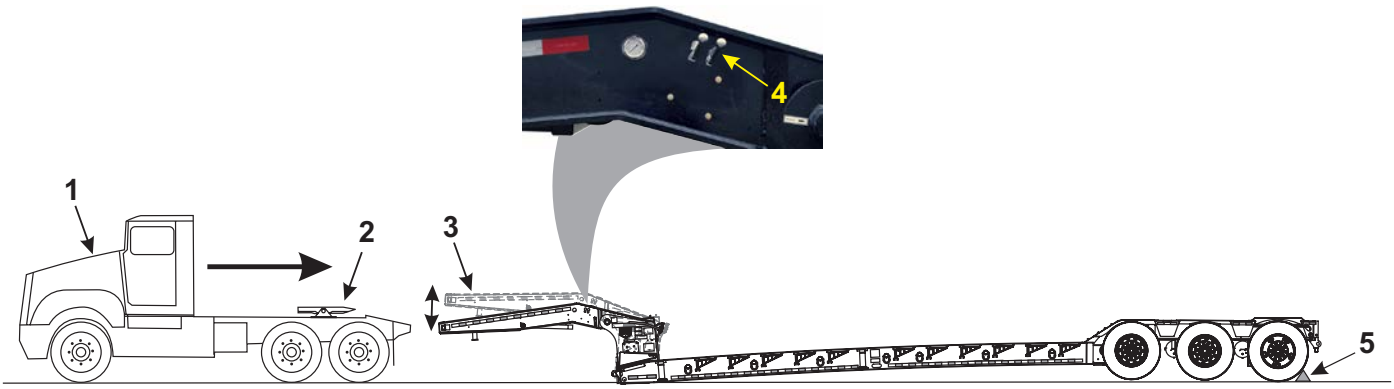


Figure 3-7 – Coupling Tractor to Semitrailer

6. Check the semitrailer coupler height.
   a. Back the tractor (1, Figure 3-7) in a straight line with the semitrailer, close to the nose of the semitrailer, but **DO NOT** back under the trailer at this point.
   b. Set the tractor parking brake and shift the transmission into NEUTRAL.
   c. Check to make sure that the semitrailer gooseneck (3, Figure 3-7) is just slightly below the fifth wheel height (2, Figure 3-7). If the semitrailer gooseneck is too low, it may strike the tractor. If the semitrailer gooseneck is too high, the fifth wheel may not couple correctly to the king pin.
   d. As needed, raise, or lower the trailer gooseneck using the hydraulic control (4, Figure 3-7) to raise the gooseneck.
7. Check to make sure the that fifth wheel and kingpin are aligned properly.
8. Check the coupler seals for any signs of wear or damage. Replace these seals as needed before connecting to the semitrailer.
9. Connect the electrical and pneumatic lines to the semitrailer. **NOTE:** If the tractor is equipped with a wet kit, connect the hydraulic lines from the tractor to the trailer.
   a. Inspect all flexible tractor service lines for signs of wear or damage.

⚠ CAUTION

- **As soon as the pneumatic (air) lines have been connected to the semitrailer, pressure will begin to build. The building air pressure will release the trailer brakes, allowing the trailer to move. Make sure the trailer wheels have been chocked (5, Figure 3-7).**
- **DO NOT stand between the trailer nose and tractor fifth wheel assembly in case the trailer moves forward. Severe injury could occur.**

   b. Connect the tractor service control airline (3, Figure 3-8) to the semitrailer service control coupler.

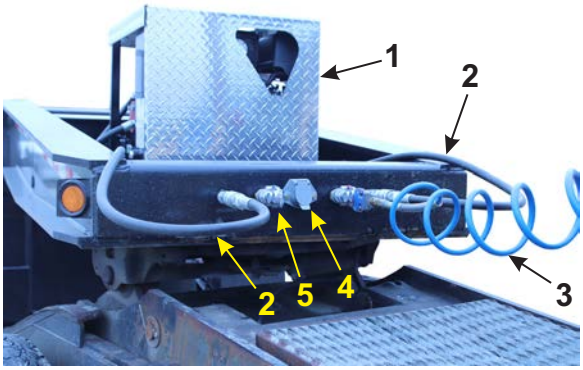


Figure 3-8 – Umbilical Connections from Tractor to Semitrailer

   c. Plug the electrical cord (4, Figure 3-8) into the trailer and secure the safety catch.

⚠ WARNING

Hydraulic oil under pressure can penetrate body tissue causing serious injury and possible death. When troubleshooting a hydraulic system for leaks, always use cardboard or wood as a detector. DO NOT USE YOUR BARE HANDS. If you are injected with hydraulic oil or any other fluids, immediately seek treatment by a doctor trained in the treatment of penetrating fluid injuries.

d. Connect the hydraulic supply line (2, Figure 3-8) from the tractor, if equipped with a wet kit, to the semitrailer quick connects. **NOTE:** Figure 3-8 shows the optional pony motor hydraulic system (1, Figure 3-8). If the trailer is equipped with the pony motor system, make sure to connect the hydraulic lines (2, Figure 3-8) to the trailer.

e. Make sure that all hydraulic, pressurized air and electrical lines are supported to prevent contact with any moving parts of either the tractor or semitrailer.

10. From the tractor cab, push either the Trailer Air Supply knob (1, Figure 3-9) or move the tractor protection control valve from the Emergency to the Normal position. Either of these actions will provide air pressure to the semitrailer brake system. Do not move the tractor until the entire pneumatic system has returned to the normal system pressure. **NOTE:** The air supply controls may vary from tractor to tractor.

Figure 3-9 – Tractor Air Supply Controls

11. When full pneumatic system pressure has been reached, shut off the tractor engine and listen for any air leaks. Locate and repair any air leaks before using the semitrailer.
12. With the tractor engine off, press the brake pedal and listen for the sound of the trailer brakes being applied.
13. If there are no problems with air leaks, start the tractor engine and allow the pneumatic system to build to full system pressure.
14. When full system pressure has been achieved, set the trailer brakes by pulling the Parking Brake control knob (2, Figure 3-9) outwards.
15. Couple the tractor to the semitrailer.

⚠WARNING

- **Never back under the semitrailer at an angle.**
- **Back tractor under the semitrailer slowly. DO NOT collide with the semitrailer.**

a. Using the frame lift hydraulic control (3, Figure 3-10) raise the gooseneck (1, Figure 3-10) until it is even with the tractor fifth wheel (2, Figure 3-10).

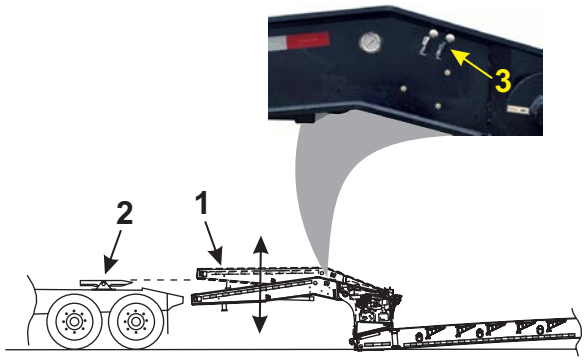


Figure 3-10 – Coupling Tractor to Semitrailer

b. Slowly back the tractor in a straight line under the trailer until the fifth wheel contacts the king pin and the fifth wheel jaws securely lock around the king pin (1, Figure 3-11). Stop moving the tractor as soon as the kingpin has been fully engaged and securely locked.

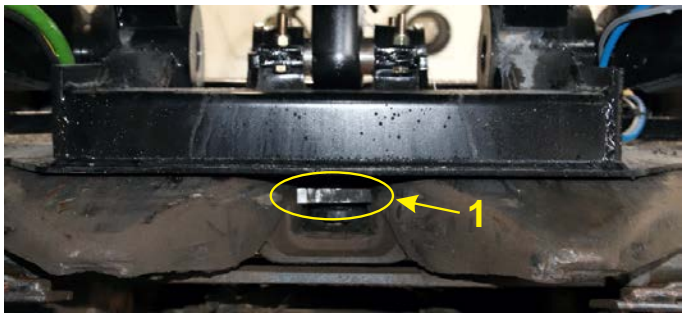


Figure 3-11 – Locked Kingpin

c. Put the tractor transmission in Neutral.

d. Make sure that the semitrailer parking brakes are engaged.

e. With the trailer brakes still applied, pull the semitrailer slightly forward to confirm a secure connection between the tractor and semitrailer.

16. Shut off the tractor engine and inspect the fifth wheel coupling.

⚠WARNING

Shut off the tractor engine and remove the ignition key to prevent unauthorized movement of the semitrailer.

a. After shutting off the engine and removing the ignition key, check the connection between the fifth wheel and the kingpin. There should be no space between these items. If there is space, the kingpin may be on top of the fifth wheel jaws (1, Figure 3-12), which would allow the trailer to come loose when the tractor is moved forward.

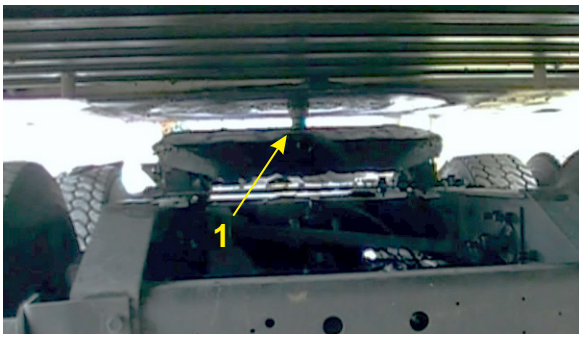


Figure 3-12 – Kingpin On Top of Fifth Wheel

b. Confirm that the kingpin has latched with the fifth wheel. Inspect the coupling to make sure the fifth wheel jaws have fully closed around the kingpin (1, Figure 3-13).

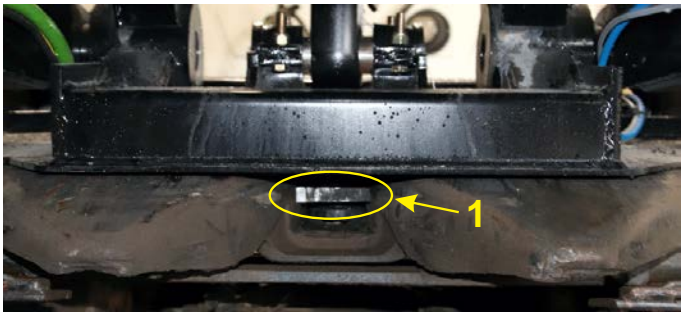


Figure 3-13 – Locked Kingpin

c. Check that the fifth wheel kingpin locking lever (1, Figure 3-14) is in the LOCK position. **NOTE:** Make sure that the safety catch is in position over the locking lever. On some fifth wheel systems, this safety catch needs to be positioned by hand.

Figure 3-14 – Fifth Wheel Lock lever

d. If the coupling is not correct, **DO NOT** drive the truck.

⚠WARNING

Crush Hazard. Keep hands and fingers away from the compression locks and compression lock seats.

17. Raise the trailer to the transport position.
    a. Secure the trailer in the proper transport height by adjusting the compression lock.
    b. Using the trailer frame lift hydraulic control raise the trailer body to allow the compression lock (1, Figure 3-15) to move above the compression lock seats.
    c. Using the Compression Lock Seat Lever (2, Figure 3-15), rotate the compression lock seats (3, Figure 3-15) to align with the compression lock. There are five compression lock seat height selections. **NOTE:** If the compression lock lever cannot be moved, make sure the hauling pin is in the travel position. (See Step 18)
    d. When the compression lock is over the needed compression lock seat, use the frame lift control lever to lower the trailer onto the compression seat (4, Figure 3-15).

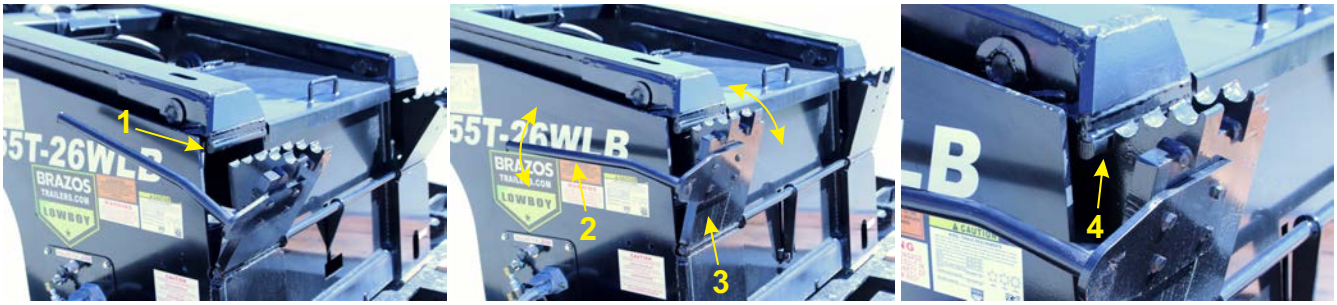


Figure 3-15 – Raise Trailer to Transport Position

e. Standard transport position with the trailer unloaded is shown in Figure 3-16.

Figure 3-16 – Standard Unloaded Transport Position

⚠WARNING

Before attempting to move the trailer, do a visual check to make sure the hauling pin is locked in the TRAVEL position.

18. Before moving the trailer, it is mandatory to do a visual check to make sure the hauling pin is locked in the travel position.
    a. Open the hauling pin access cover (1, Figure 3-17).
    b. The hauling pin is locked into the travel position when the lock cover plate fully covers the top of the hauling pin (2, Figure 3-17).

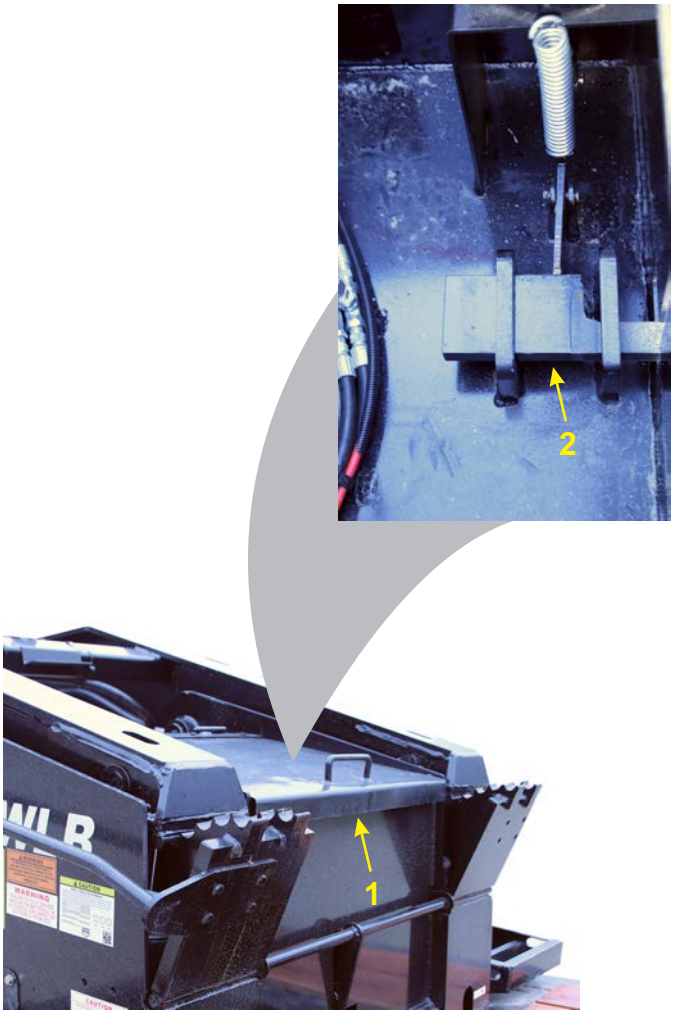


Figure 3-17 – Hauling Pin Check

c. If the compression lock lever cannot be moved, check to make sure the hauling pin control is pressed inwards to the LOCK position.

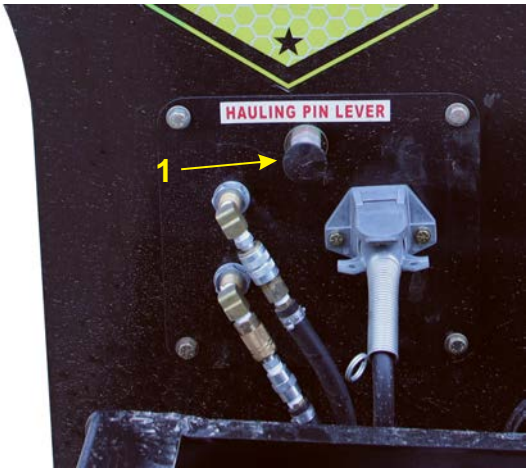


Figure 3-18 – Hauling Pin Lock Control

Disconnect the gooseneck from the trailer

1. Locate the trailer on solid and level ground (Figure 3-19).

Figure 3-19 – Load/Unload Position

2. Apply the tractor and trailer brakes.
3. If equipped with the pony motor hydraulic system (1, Figure 3-20) make sure the hydraulic lines (2, Figure 3-20) are connected and start the pony motor. If using the tractor wet kit, make sure the hydraulic lines are connected.

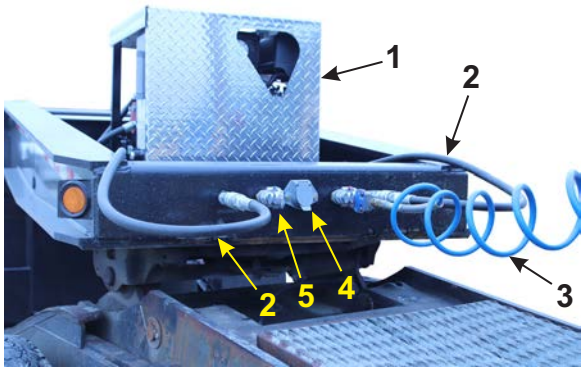


Figure 3-20 – Pony Motor Hydraulic Connections

⚠ CAUTION

Keep hands and feet clear of the trailer landing location.

4. Using the trailer frame lift hydraulic control (1, Figure 3-21) raise the trailer body to allow the compression lock to move above the compression lock seats (2, Figure 3-22).

Figure 3-21 – Hydraulic Controls

5. Using the compression lock seat lever (1, Figure 3-22), rotate the compression lock seats (3, Figure 3-22) fully outwards to the released position.

Figure 3-22 – Compression Lock Seat Released

6. Pull the Hauling Pin Lever control (1, Figure 3-23) outwards, moving the hauling pin to the raised disconnected position. **NOTE:** If the hauling pin will not release, back the tractor up slightly.

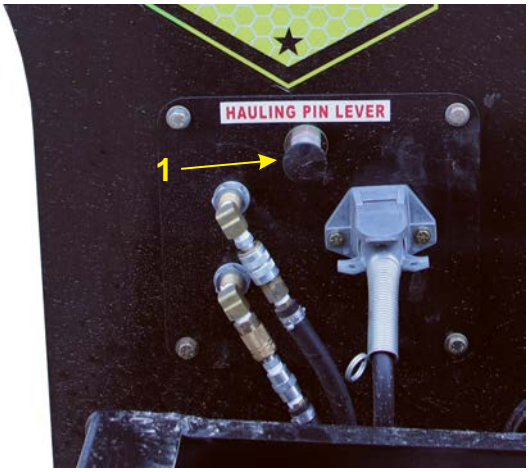


Figure 3-23 – Hauling Pin Lever Control

7. Open the hauling pin access cover to make sure the hauling pin is in the released position (1, Figure 3-24). **NOTE:** When the Hauling Pin is in the fully raised position, the compression lock seat lever will not be able to be moved from the released position.

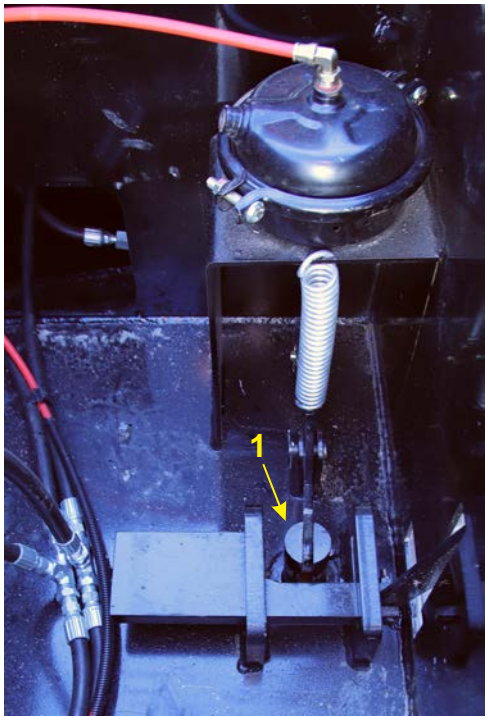


Figure 3-24 – Hauling Pin in Released Position

8. Using the trailer frame lift hydraulic control, lower the trailer body to the ground (1, Figure 3-25) and the main trailer hydraulic lift cylinders are fully retracted.

Figure 3-25 – Trailer Lowered to the Ground

9. Disconnect the air lines from the gooseneck quick couples (1, 2, Figure 3-26) and the electrical connector (3, Figure 3-26). Store these cables in the storage pocket (4, Figure 3-26).

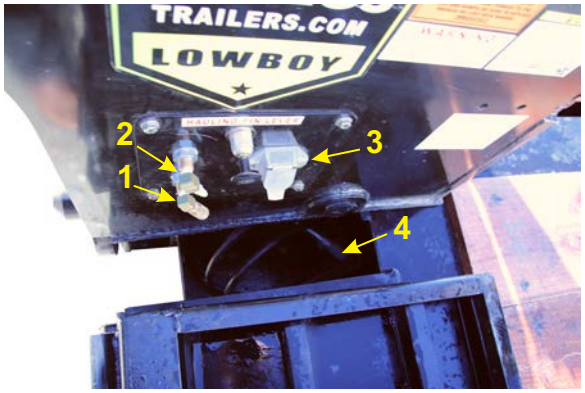


Figure 3-26 – Airline and Electrical Line Storage Pocket

10. Using the frame support arm hydraulic control (5, Figure 3-27), lower the frame support arm (1, Figure 3-27) onto the tractor frame (2, Figure 3-27). Press downwards on the frame support arm until the gooseneck teardrops (4, Figure 3-27) are not supporting the bull pins (4, Figure 3-27).

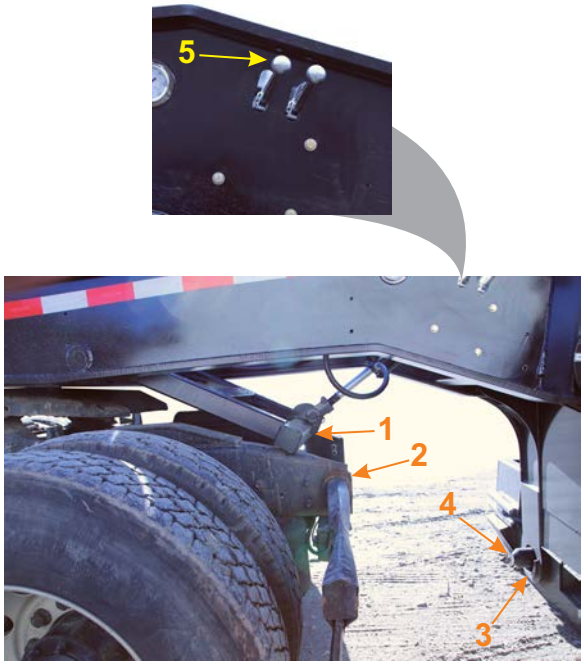


Figure 3-27 – Frame Support Arm

11. Slowly move the tractor forward until the gooseneck connection teardrops are free from the bull pins. Stop the tractor and apply its brakes.
12. Continue the downward movement of the frame support arm until the gooseneck is lifted upwards to the full travel of the frame support arm hydraulic cylinder.
13. Drive the tractor away from the trailer.
14. Flip the two loading ramps (1, Figure 3-28) into the service position.

Figure 3-28 – Trailer in Service Position

Loading the trailer

NOTICE

Brazos Trailers LowBoy trailer is designed to be loaded only from the front of the trailer. **DO NOT** side load onto this trailer.

⚠WARNING

- **Chock the rear wheels to prevent unexpected trailer movement.**
- **Know how to operate the equipment being loaded onto the trailer. If you do not know the proper and safe machine operation, have a trained operator load the machine onto the trailer.**
- **Make sure to read and understand all trailer operating instructions.**
- **Verify that the weight of the machine does not overload the trailer.**
- **Center the load on the trailer to provide the best trailer stability.**

1. Make sure the rear wheels are chocked to prevent unexpected trailer movement.
2. Verify that the machine weight does not exceed trailer specifications and roadway weight regulations.
3. Position the machine to be loaded at the front of the trailer with the tracks or wheels centered on the loading ramps as shown in Figure 3-29.

Figure 3-29 – Loading Machine onto Trailer

4. Slowly drive the machine onto the trailer.
5. Stop the machine when its centered front to rear on the trailer. See Figure 3-30.

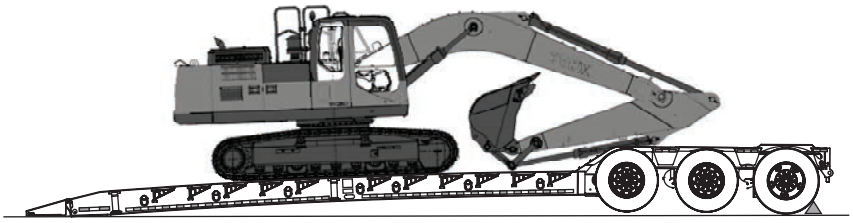


Figure 3-30 – Machine Loaded onto Trailer

6. Lower the machines front end attachment onto the trailer bed.
7. Secure the machine to the trailer using DOT approved chains (1, Figure 3-31) and binders (2, Figure 3-31). Secure the chains to the trailer using the "D" rings (3, Figure 3-31).

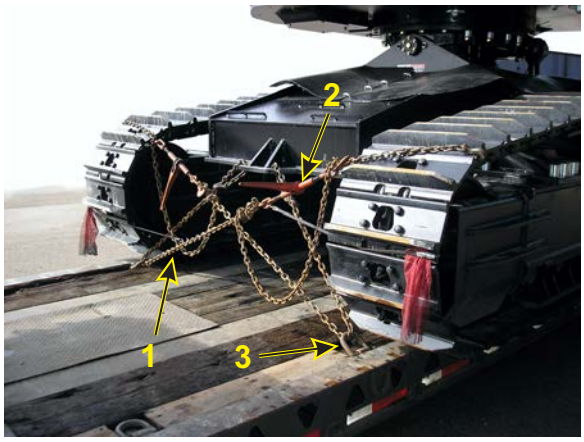


Figure 3-31 – Secure Load with Chains and Binders

8. Flip the loading ramps onto the trailer bed.

Wide Loads

⚠WARNING

DO NOT load a machine if the center line of the tracks/ wheels will be outside of the trailer frame.

1. If the wheels or tracks (4, Figure 3-32) of the machine being loaded onto the trailer will extend beyond the standard trailer width (1, Figure 3-32), use the outriggers (2, Figure 3-32) and support lumber (3, Figure 3-32) on the Brazos Trailers LowBoy. Make sure the centerline of the wheels/tracks (5, Figure 3-32) is no wider than the outside edges of the trailer (6, Figure 3-32).

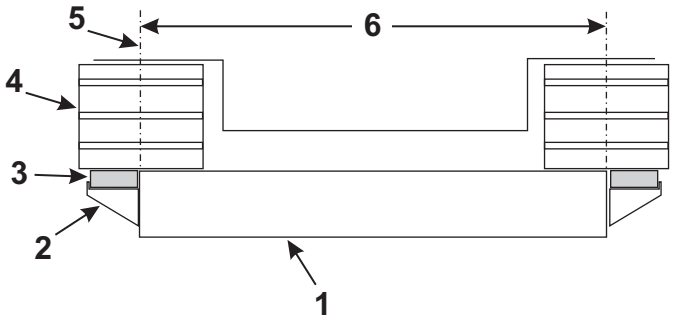


Figure 3-32 – Wide Load Maximum Width

2. Extend as many of the outriggers (1, Figure 3-33) as needed to support the wheels/tracks of the machine to be loaded.

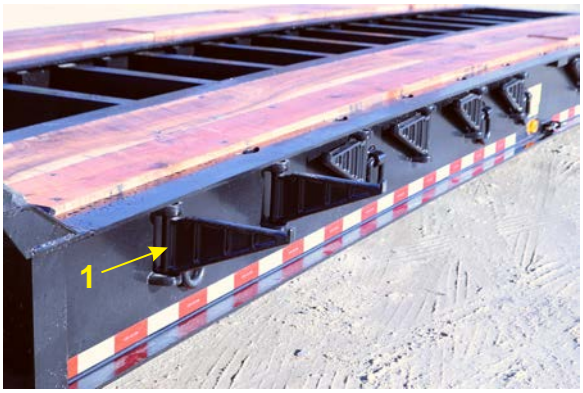


Figure 3-33 – Extend Outriggers

3. To provide the needed heavy-duty support, Brazos LowBoy trailers have a heavy-duty outrigger pocket at the center of the outside trailer frame on each side of the trailer.
4. Locate the heavy-duty outrigger pocket (1, Figure 3-34), near the center marker light.

Figure 3-34 – Heavy-Duty Outrigger Pocket

5. Install the heavy-duty outrigger (1, Figure 3-35) into the pocket and secure with the quick clip (2, Figure 3-35).

Figure 3-35 – Heavy Duty Outrigger Installed

6. Load the machine in the normal process and secure it to the trailer using DOT approved chains and binders.
7. Activate the rear flashing amber hazard lights by rotating the control switch located on a rear trailer frame member to the ON position. The flashing amber hazard lights will continue to operate when the trailer electrical power is connected until the control switch is rotated to the OFF position.

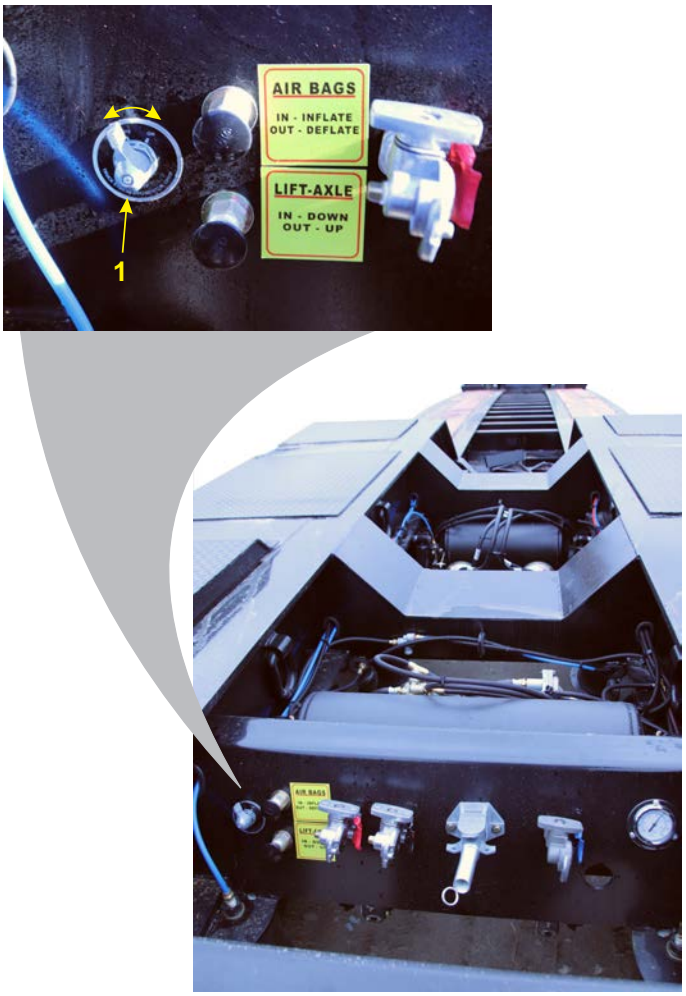


Figure 3-36 – Hazard Light On-Off Switch

Connecting the gooseneck to the trailer

1. Flip the loading ramps to the travel position.
2. Back the tractor straight towards the trailer. Apply the tractor brakes.
3. If equipped with the pony motor hydraulic system (1, Figure 3-37) make sure the hydraulic lines (2, Figure 3-37) are connected and start the pony motor. (See Pony Motor Operating instructions in this manual.) If using the tractor wet kit, make sure the hydraulic lines are connected.

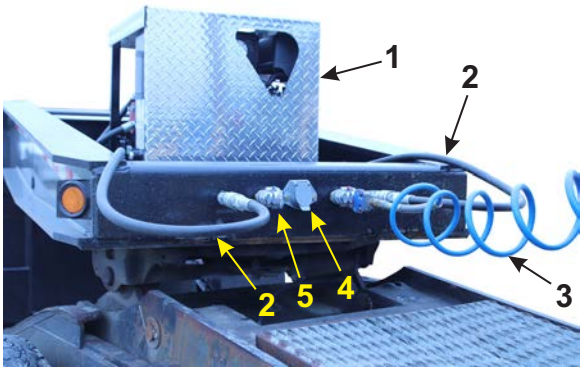


Figure 3-37 – Pony Motor Hydraulic Connections

4. Pull the Hauling Pin Lever control (1, Figure 3-38) outwards to make sure the hauling pin is fully retracted (1, Figure 3-39).

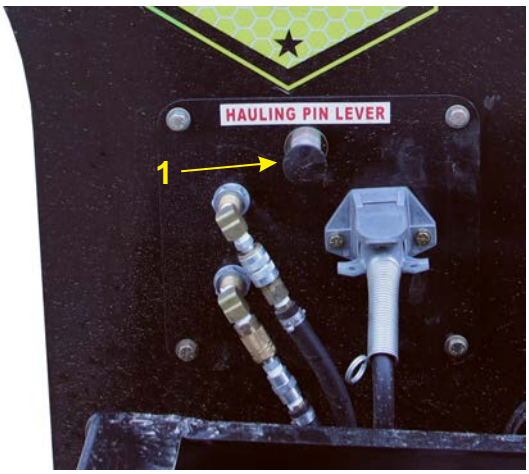


Figure 3-38 – Hauling Pin Lever Control

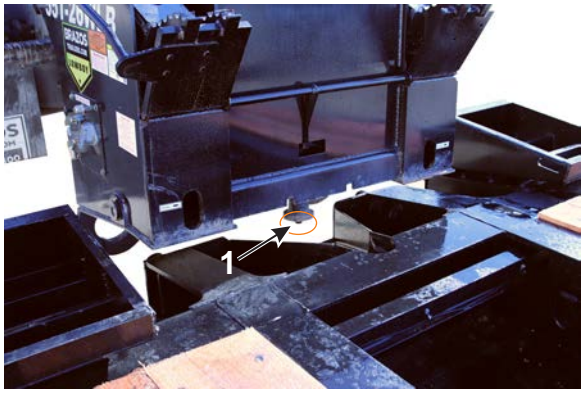


Figure 3-39 – Retracted Hauling Pin

5. Slowly back the tractor towards the trailer so that the gooseneck hauling pin is seated in the trailer hauling pin pocket and the gooseneck tear drops (1, Figure 3-40) are in full contact with the trailer frame and bull pins (2, Figure 3-40). **NOTE:** It may be necessary to lower the gooseneck using the frame support arm hydraulic control. As soon as the trailer gooseneck is properly seated, apply the tractor brakes.

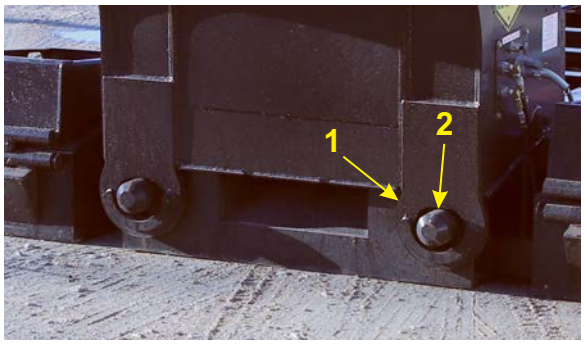


Figure 3-40 – Teardrops Seated Around Bullpins

6. Using the trailer frame lift hydraulic control, fully raise the trailer body upwards to the maximum lift. The compression lock (2, Figure 3-41) will now be higher than the compression lock seats (3, Figure 3-41). Using the compression lock lever (1, Figure 3-41), rotate the compression lock seats until one of the 5 compression lock seats are under the compression lock. Using the trailer frame lift hydraulic control lower the trailer frame until the compression lock is in full contact with the selected compression lock seat.

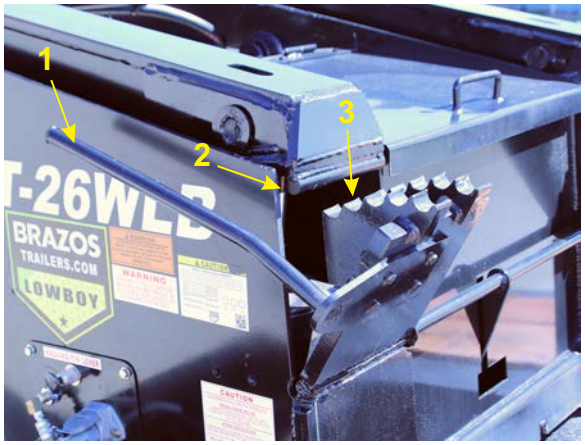


Figure 3-41 – Compression Lock and Seats

7. Push the hauling pin lever control inwards, lowering the hauling pin into the travel position. The hauling pin lock plate will slide over the hauling pin to lock it into the travel position.
8. Before moving the trailer, it is mandatory to visually inspect that the hauling pin lock plate is in the locked position. Open the hauling pin access cover (1, Figure 3-42). The hauling pin is locked into the travel position when the lock cover plate fully covers the top of the hauling pin (2, Figure 3-42).

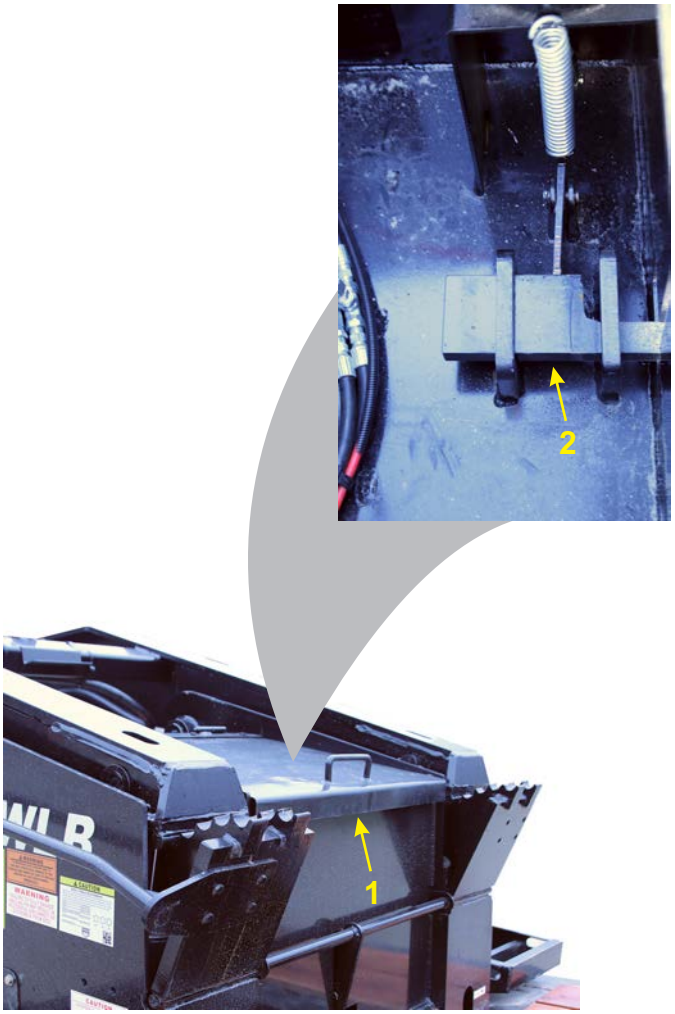


Figure 3-42 – Hauling Pin Check

9. Connect the trailer air lines (1, 2, Figure 3-43) to the quick connects and the trailer electrical connector (3, Figure 3-43).

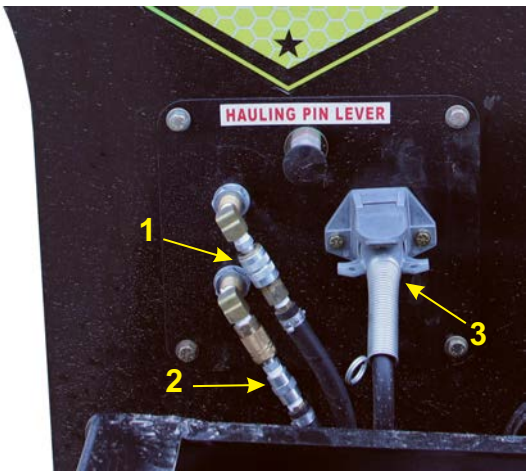


Figure 3-43 – Reconnect Air Line and Electrical Line

10. Allow the tractors air system to pressurize the trailer air system.
11. Air ride suspension system will inflate when the tractor air system is connected to the trailer. There is an automatic height control system built into the trailer (1, Figure 3-44). The system automatically adds or releases air from the air springs as needed to maintain the factory set ride height. The ride height adjustment linkage is attached to the trailer framework at the rear of the trailer.

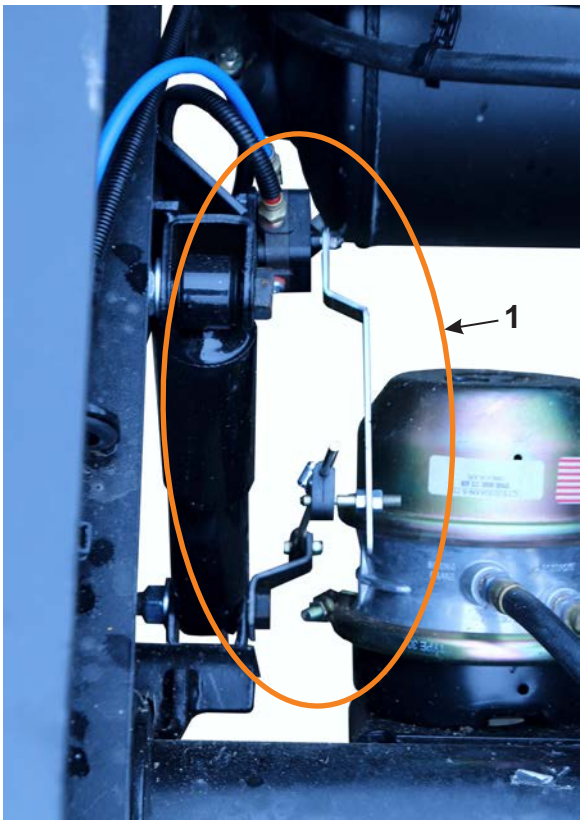


Figure 3-44 – Air Ride Suspension Adjustment Linkage

12. If needed, the air suspension can be manually adjusted to either fully release air pressure or inflate the rear axle air suspension to the full system pressure. Deflate the rear suspension by pulling the rear suspension control knob (1, Figure 3-45) outwards, reinflate the air suspension by pressing the control knob inwards.

Figure 3-45 – Rear Air Suspension Control

Manual Flip Axle

The manually positioned flip axle can be stored on the rear deck of the LowBoy trailer (1, Figure 3-46) when not in use. In this position, the standard trailer taillights, running lights and flashing hazard lights are not obstructed. The LowBoy trailer can be used for normal service with the flip axle in the stored position.

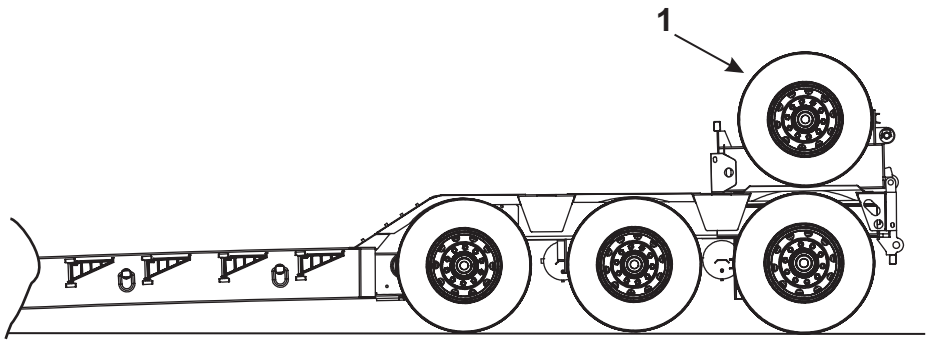


Figure 3-46 – Flip Axle Stored Position

To move the flip axle into the service position:

NOTE: Position the trailer on a solid level surface before beginning this process.

1. Remove the quick clip (1, Figure 3-47) securing each axle pivot pin (2, Figure 3-47) on the rear frame of the flip axle and remove the pivot pins. **NOTE:** Keep the pivot pins, washers, and quick clips for the installation of the flip axle onto the main trailer frame.

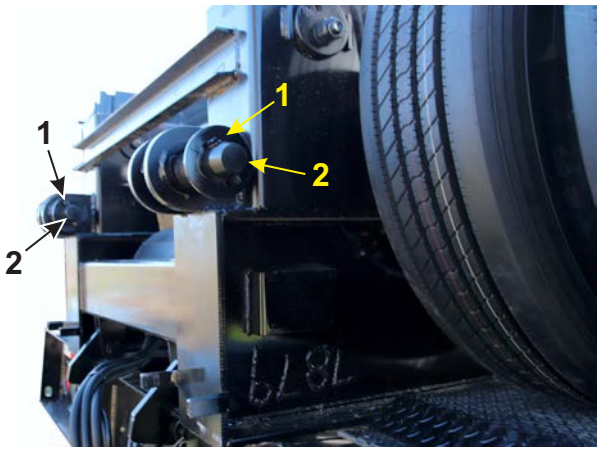


Figure 3-47 – Flip Axle Pivot Pin

⚠ CAUTION

- **Crush hazard. Keep hands and feet clear of the connection point between the rear trailer frame and the front of the flip axle frame.**
- **Crush hazard. Keep hands and feet clear of the flip axle assembly wheel landing location.**
- **Use caution when the flip axle assembly rotates over the rear of the main trailer assembly. There will be a weight shift onto the lifting system as the flip axle assembly rotates.**

2. Using a lifting device capable of lifting 4,536 kg (10,000 lbs.), hook a chain (2, Figure 3-48) to the front edge of the flip axle assembly (1, Figure 3-48) and slowly lift the assembly and move the lift system backwards. The axle assembly will rotate on the rear hinge bracket assembly upwards and backwards (3, Figure 3-48). **NOTE:** As the flip axle assembly rotates over the rear of the trailer mainframe, the entire weight of the flip axle assembly will transfer to the lifting chain.

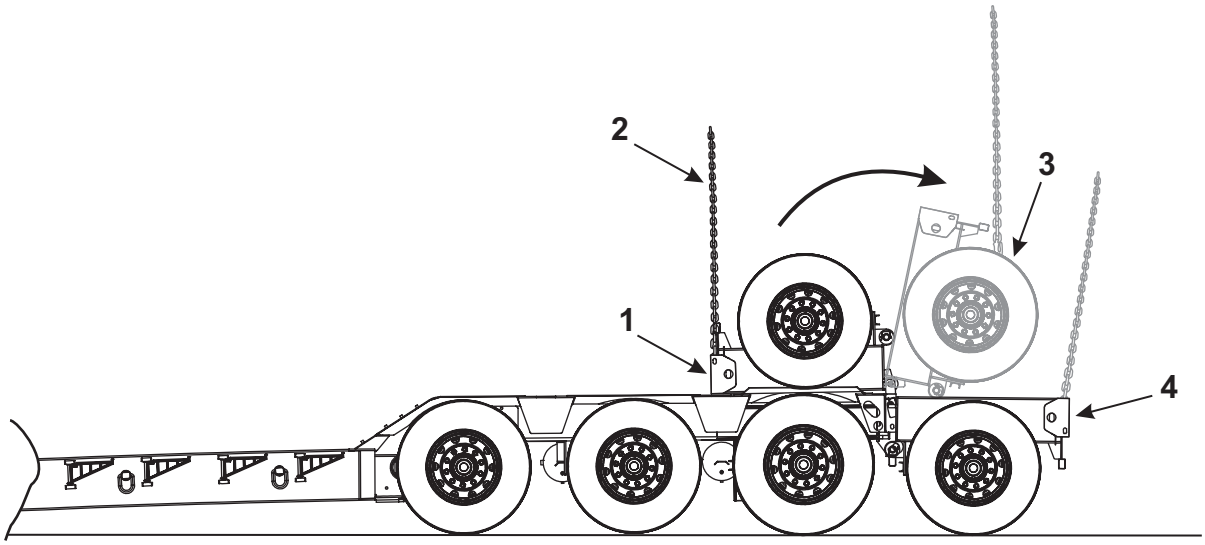


Figure 3-48 – Rotate Flip Axle into Service Position

3. Continue moving backwards and lower the flip axle assembly onto the ground. The axle assembly will rotate around the hinge bracket assembly into the service position (4, Figure 3-48).
4. When the flip axle assembly has been moved into position (1, Figure 3-49), use the lifting device to assist with aligning the main pivot point (2, Figure 3-49) on the flip axle assembly with the brackets on the rear of the trailer assembly.
5. Install the main pivot pins (4, Figure 3-49) removed earlier and secure them with a washer (3, Figure 3-49) and a quick clip (5, Figure 3-49) at each end of the pin. Do this on both sides of the trailer.

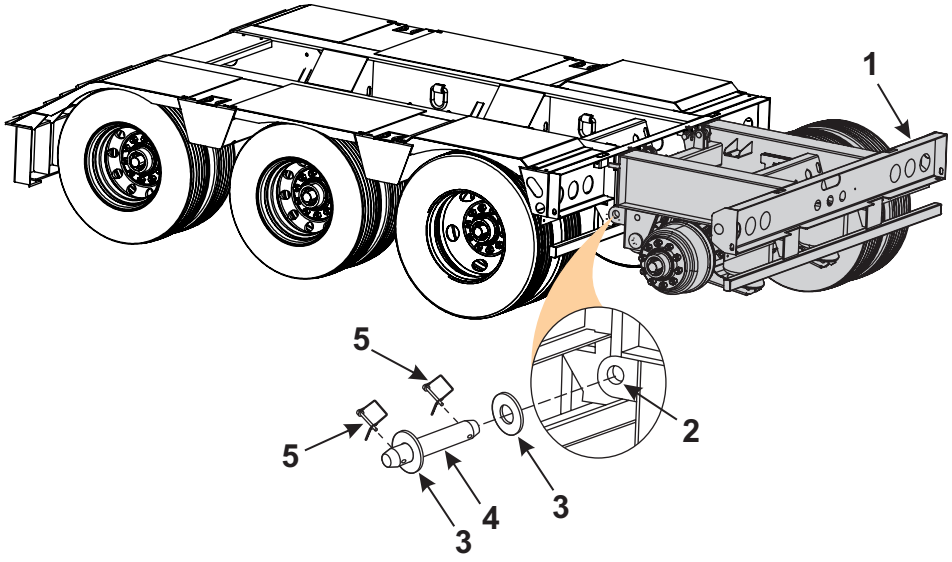


Figure 3-49 – Attach FlipAxle Pivot Pins

6. Attach the flip axle air lines (1, Figure 3-50) to the connectors and the electrical cable (2, Figure 3-50) to the electrical connector located at the rear frame member of the main trailer. After the air lines have been connected, rotate the shut off valves 90 degrees on each connector (3, Figure 3-50) to the OPEN position.

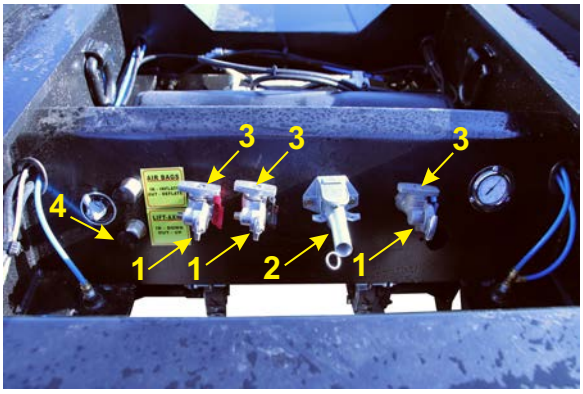


Figure 3-50 – Attach Air Lines and Electrical Cable

⚠ CAUTION

- **Crush hazard. Keep hands and feet clear of the connection point between the rear trailer frame and the front of the flip axle frame.**

7. Pressurize the air system to inflate the air suspension system for the trailer.
   a. Keep hands and all body parts away from the gap between the flip axle frame and the trailer frame.
   b. Inflate the flip axle air suspension by pulling the air suspension control knob (4, Figure 3-50) outwards to inflate the suspension and inwards to deflate the system.
8. Shimming the flip axle frame may be necessary to provide the proper load balance to all axles on the trailer. **NOTE:** The need for shimming the 4th axle will be determined by the position of the load on the trailer.
9. Position the trailer on a solid and level surface.
10. Make sure the air suspension system has been deactivated for the flip axle by shutting off the air pressure using the valves (3, Figure 3-51) at the air line connectors at the rear of the main trailer frame.

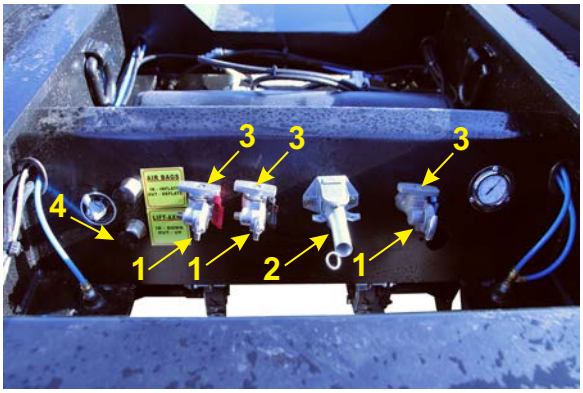


Figure 3-51 – Air Pressure Control Valves

c. Push the flip axle air suspension control knob (4, Figure 3-51) inwards to deflate the air suspension system. When the air suspension system has deflated, a gap will be created between the flip axle frame and the main trailer frame. This is the area to be shimmed.
d. Make sure the air suspension system on the main trailer has been inflated.
e. Trailer shims are stored on the flip axle frame (1, Figure 3-52).

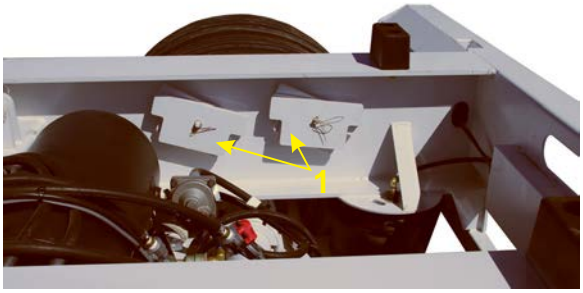


Figure 3-52 – Shim Storage

f. Using the provided shims, slide an equal number of shims (1, Figure 3-52) into the shim pocket (2, Figure 3-52) on each side of the flip axle trailer frame. Use the same thickness and number of shims on each side of the trailer.

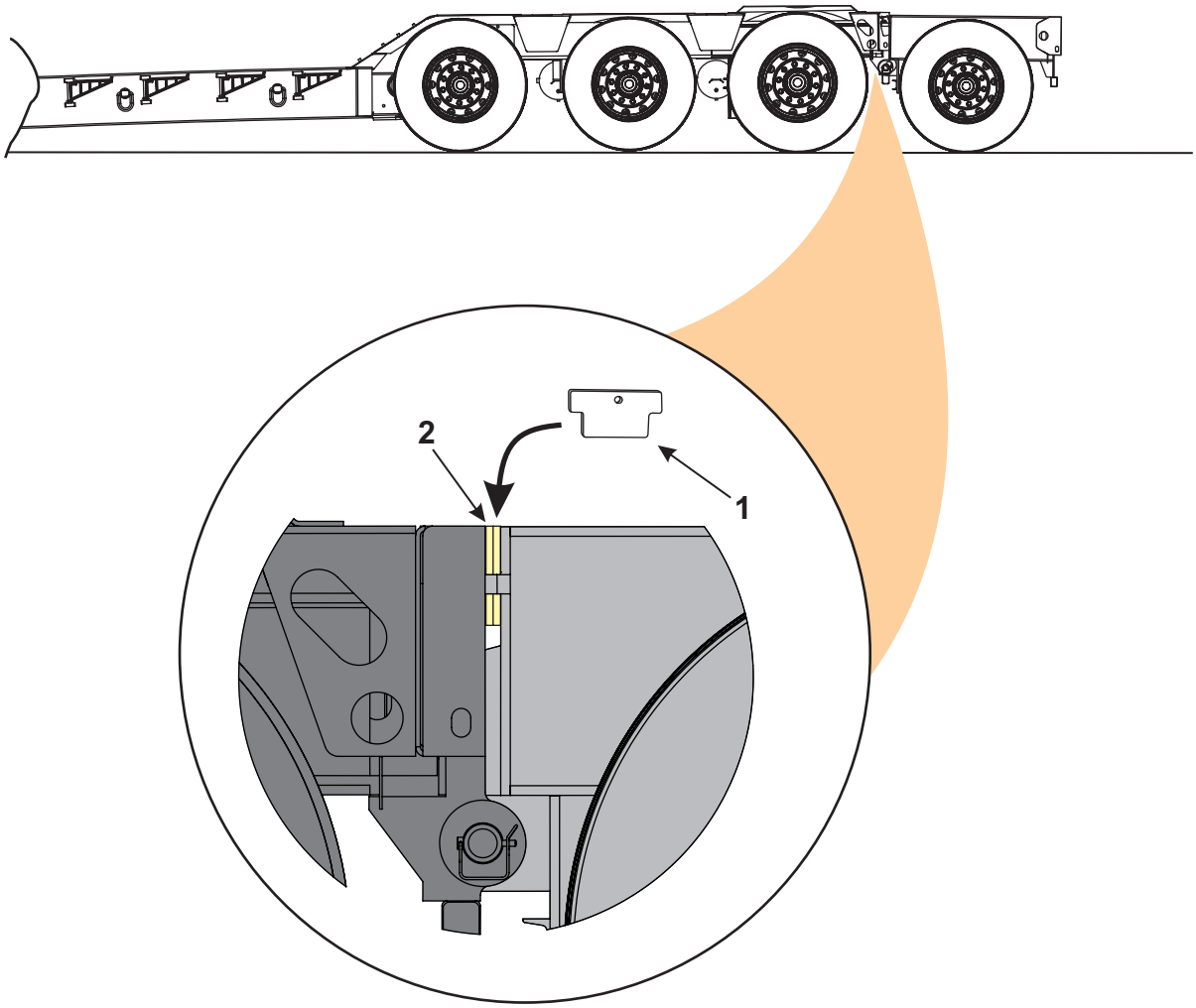


Figure 3-53 – Shim Installation

g. Open the valve at each air line connector.

h. Pull the air suspension control (4, Figure 3-53) knob outwards to inflate the flip axle air suspension system.

i. When the trailer and flip axle are level and there is no gap between these units, the trailer is ready for service.

Spreader Beam and 4th Axle

The Brazos LowBoy trailer is designed to use a spreader beam and 4th axle to spread out the weight of a large load. The spreader beam and 4th axle must be assembled and added to the main trailer. **NOTE:** Position the trailer on a solid level surface before beginning this process.

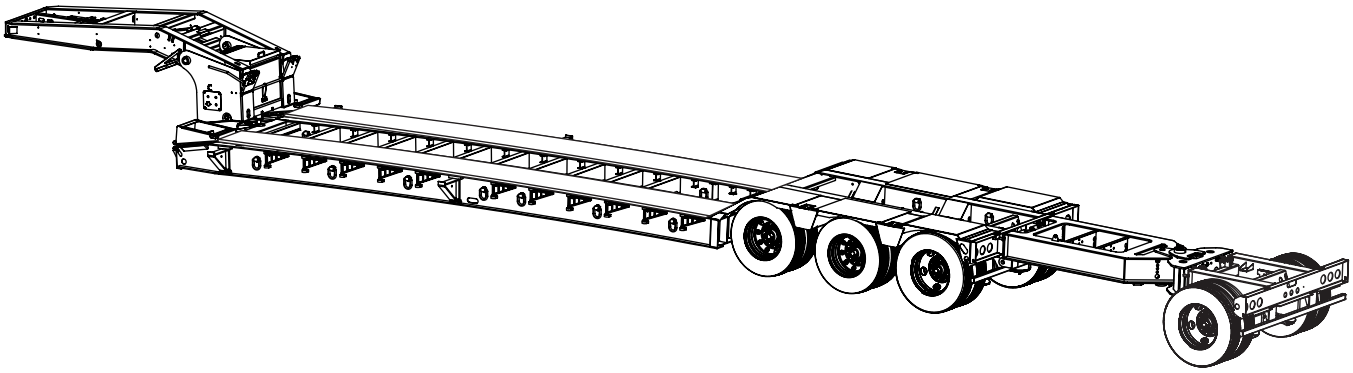


Figure 3-54 – LowBoy Trailer with Spreader Beam and 4th Axle

Assemble the spreader beam to the 4th axle:

⚠ CAUTION

- **Crush hazard. Make sure to keep hands and feet from under any components being lifted and moved into position.**
- **The spreader beam pivot assembly may move during the installation process if the pivot lock pin has not been engaged.**

1. The spreader beam assembly is made up of the spreader beam frame (1, Figure 3-55) and 4th axle assembly (2, Figure 3-55).

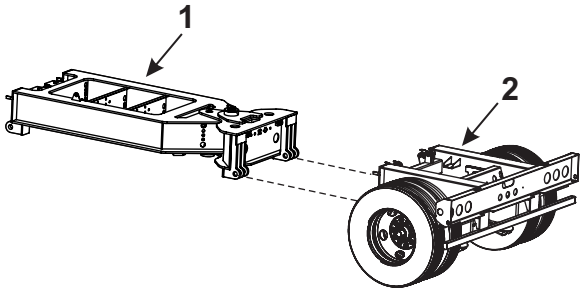


Figure 3-55 – Spreader Beam and 4th Axle

2. Move the low boy trailer, spreader beam and 4th axle onto a solid flat surface.
3. Using a lifting device capable of lifting 4,536 kg (10,000 lbs.), position the spreader beam (2, Figure 3-56) and 4th axle (3, Figure 3-56) behind the main trailer (1, Figure 3-56). Make sure to place wheel chocks (4, Figure 3-56) behind the 4th axle to prevent unexpected movement.

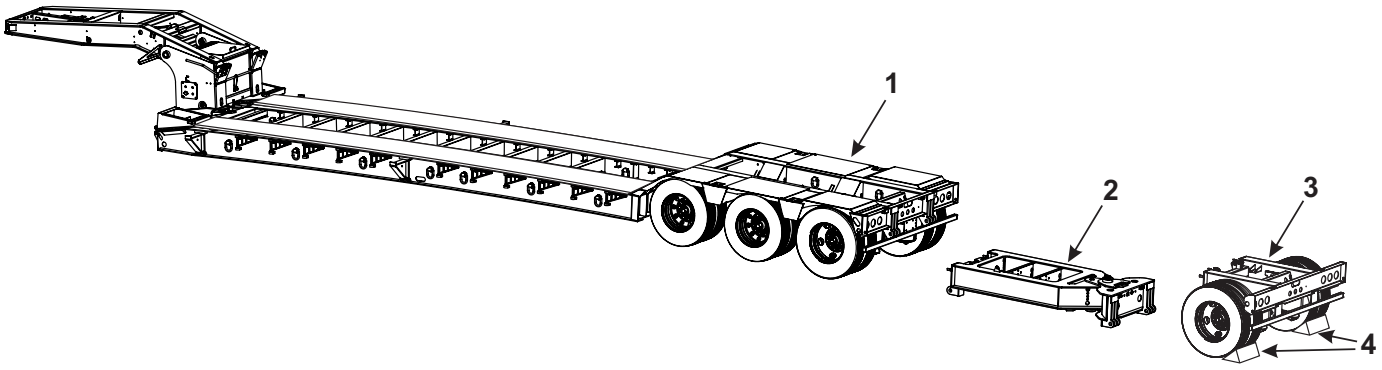


Figure 3-56 – Spreader Beam and 4th Axle Assembly

4. Support the front end of the 4th axle in a level position with a solid wooden block or jack stands.

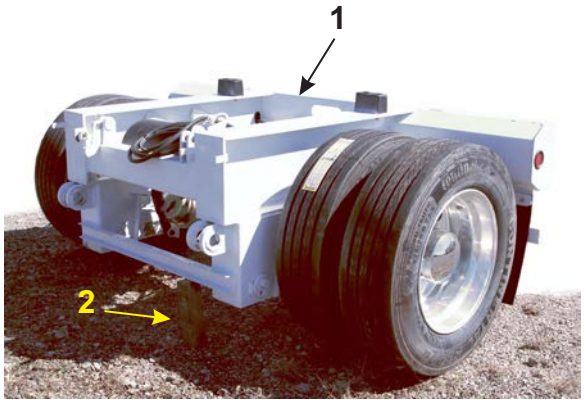


Figure 3-57 – 4th Axle Assembly

5. Make sure that the 4th axle assembly is secured in position using wheel chocks behind the wheels (5, Figure 3-58) and a solid block or jack stands at the front of the assembly (6, Figure 3-58). Using a lifting device capable of lifting 4,536 kg (10,000 lbs.) to lift the spreader beam (1, Figure 3-58). Make sure to lift the spreader beam with chains or straps (2, Figure 3-58) that will allow for a level lift. Align the main pivot point on the rear of the spreader beam assembly (7, Figure 3-58) with the pivot brackets (3, Figure 3-58) on the front of the 4th axle assembly.

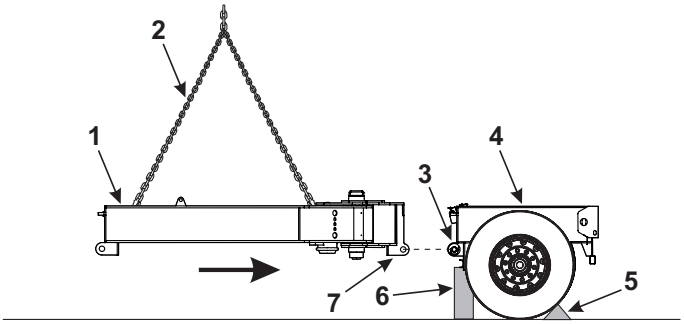


Figure 3-58 – Assemble Spreader Beam to 4th Axle

6. Install the main pivot pins (2, Figure 3-59) removed earlier and secure them with a washer (3, Figure 3-59) and a quick clip (4, Figure 3-59) at each end of the pin. Do this on both sides of the assembly.

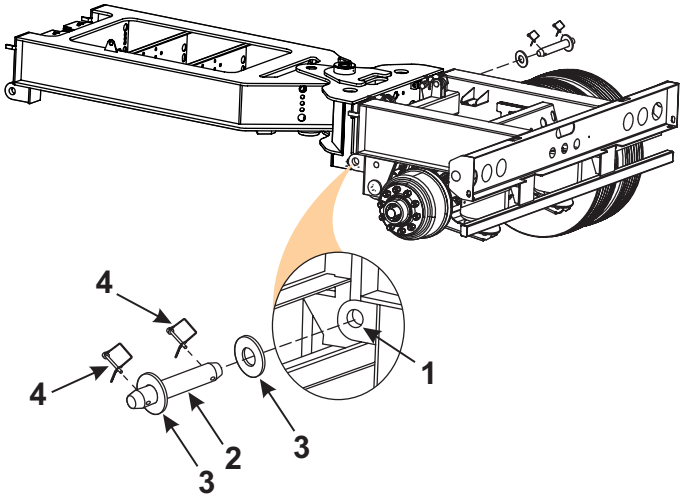


Figure 3-59 – Pin Spreader Beam to 4th Axle

7. Attach the 4th axle air lines to the connectors (1, Figure 3-60) and the electrical cable (2, Figure 3-60) to the electrical connector located at the rear frame member of the spreader beam.

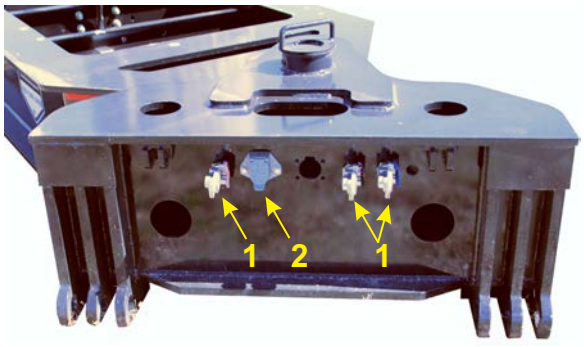


Figure 3-60 – Air Line and Electrical Connections

8. Move the spreader beam and 4th axle assembly (2, Figure 3-61) to the rear of the lowboy trailer (1, Figure 3-61). **NOTE:** If needed, lower the jack stand to support the assembled spreader beam and 4th axle.

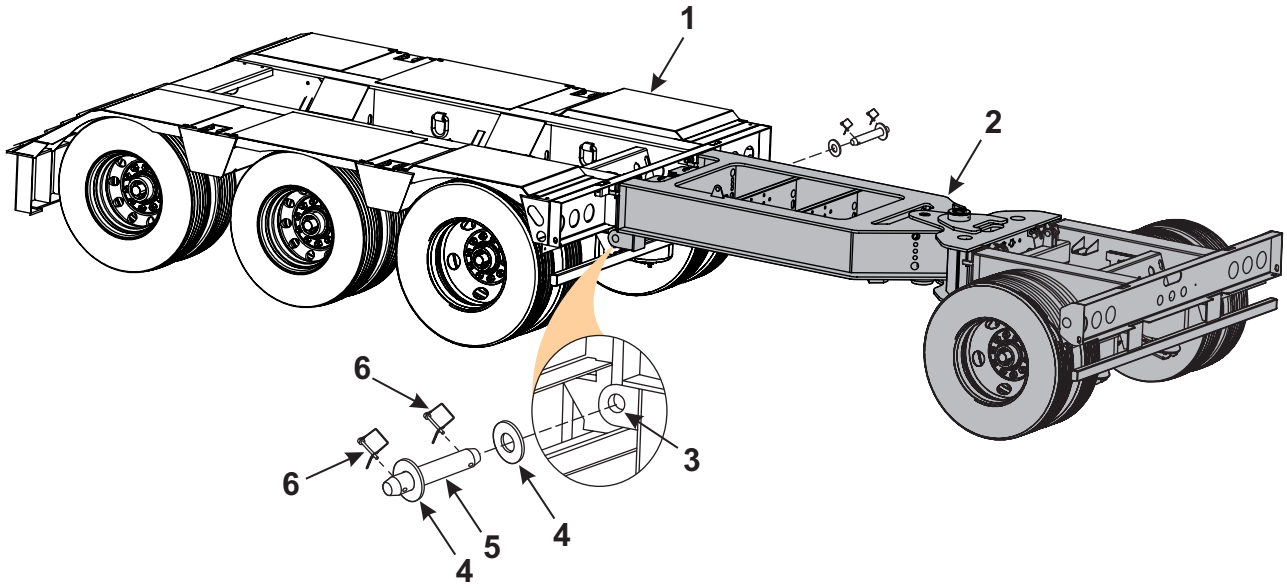


Figure 3-61 – Spreader Beam and 4th Axle Attached to LowBoy Trailer

9. Install the main trailer pivot pins (5, Figure 3-61) removed earlier and secure them with a washer (4, Figure 3-61) and a quick clip (6, Figure 3-61) at each end of the pin. Do this on both sides of the trailer.
10. Attach the spreader beam air lines (1, Figure 3-62) to the connectors and the electrical cable (2, Figure 3-62) to the electrical connector located at the rear frame member of the main trailer. After the air lines have been connected, rotate the shut off valves 90 degrees on each connector (3, Figure 3-62) to the OPEN position.

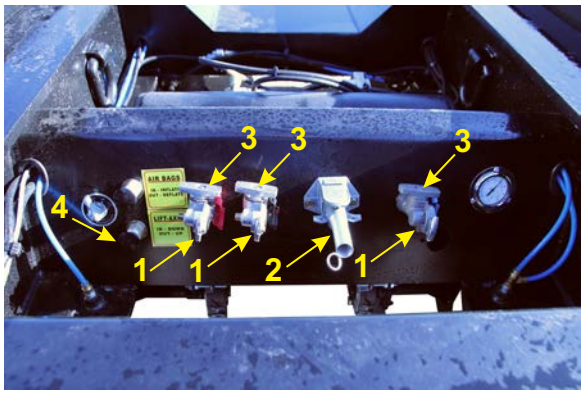


Figure 3-62 – Attach Air Lines and Electrical Cable

⚠ CAUTION

Crush hazard. Keep hands and feet clear of the connection points between the rear trailer frame, the front of the spreader beam and 4th axle frame.

11. Shimming the spreader beam assembly may be necessary to provide the proper amount of load bearing support across all axles.

NOTE:

- Shimming will need to be done between both the spreader beam and main trailer frame and between the 4th axle frame and spreader beam.
- The need for shimming the 4th axle frame and spreader beam will be determined by the position of the load on the trailer.
- Shims are stored on the spreader beam (1, Figure 3-63) and the 4th axle frame (2, Figure 3-63).

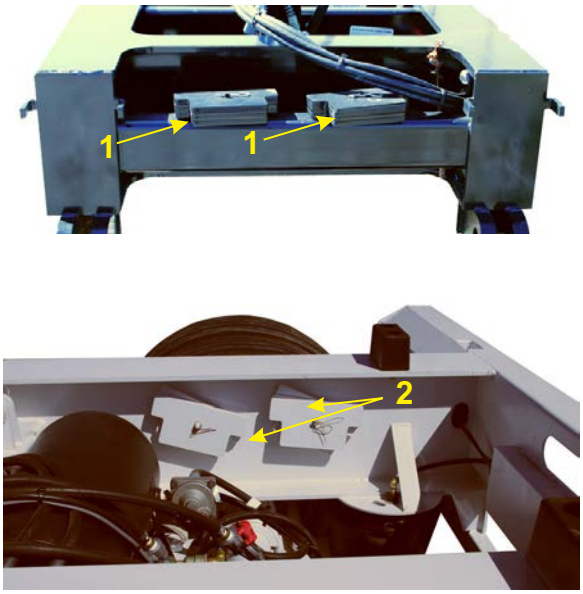


Figure 3-63 – Spreader Beam Assembly Shims

12. Using the provided shims, slide an equal number of shims (1, Figure 3-64) into the shim pocket (2, Figure 3-64) on each side of the spreader beam frame at the rear of the trailer. Use the same thickness and number of shims on each side of the trailer. **NOTE:** The same procedure is used for the shim pockets between the spreader beam and 4th axle.

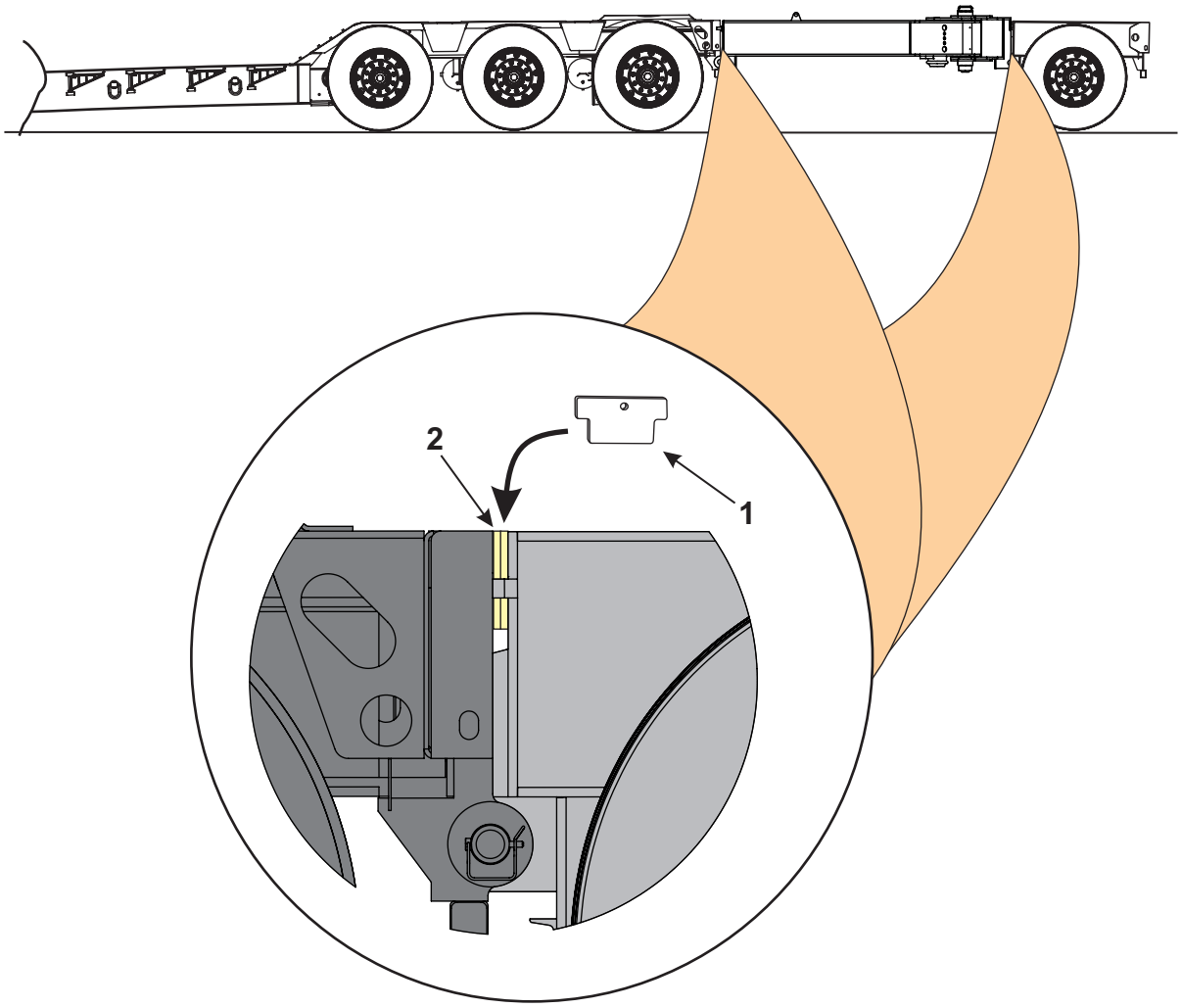


Figure 3-64 – Shimming Spreader Beam Assembly

13. Pressurize the air system to inflate the air suspension system for the trailer.
    a. Keep hands and all body parts away from the gaps between the spreader beam frame and the trailer frame, and the spreader beam frame and 4th axle frame.
    b. Inflate the spreader beam assembly air suspension by pulling the air suspension control knob (4, Figure 3-65) outwards to inflate the suspension and inwards to deflate the system.

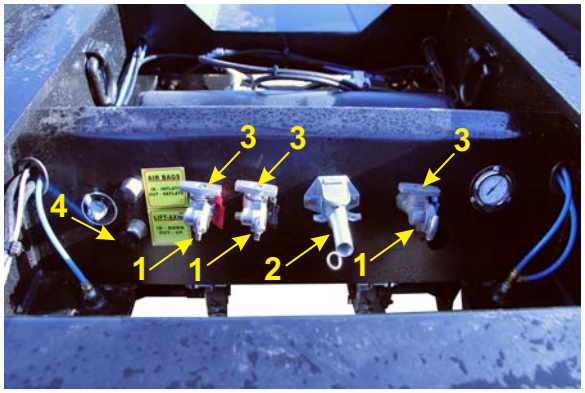


Figure 3-65 – Air Pressure Control Valves

c. When there is no gap between the trailer and spreader beam assembly the trailer is ready for service.

LowBoy Trailer Operation with Spreader Beam Assembly

⚠ DANGER

DO NOT DRIVE ON ROUGH OR ROLLING TERRAIN. IN THESE CONDITIONS, EXTREME PRESSURE CAN BE TRASFERRED TO 4TH AXLE. LOSS OF TRAILER CONTROL COULD RESULT.

The operation of the longer lowboy trailer with the spreader beam assembly requires some additional procedures.

1. Forward travel:
   a. When using the Spreader Beam Assembly with the 4th axle, driving on rough, uneven or rolling/dipping roads could cause the trailer to be supported only by the tractor and the 4th axle (1, Figure 3-66). Loss of trailer control or severe damage to the trailer could result.

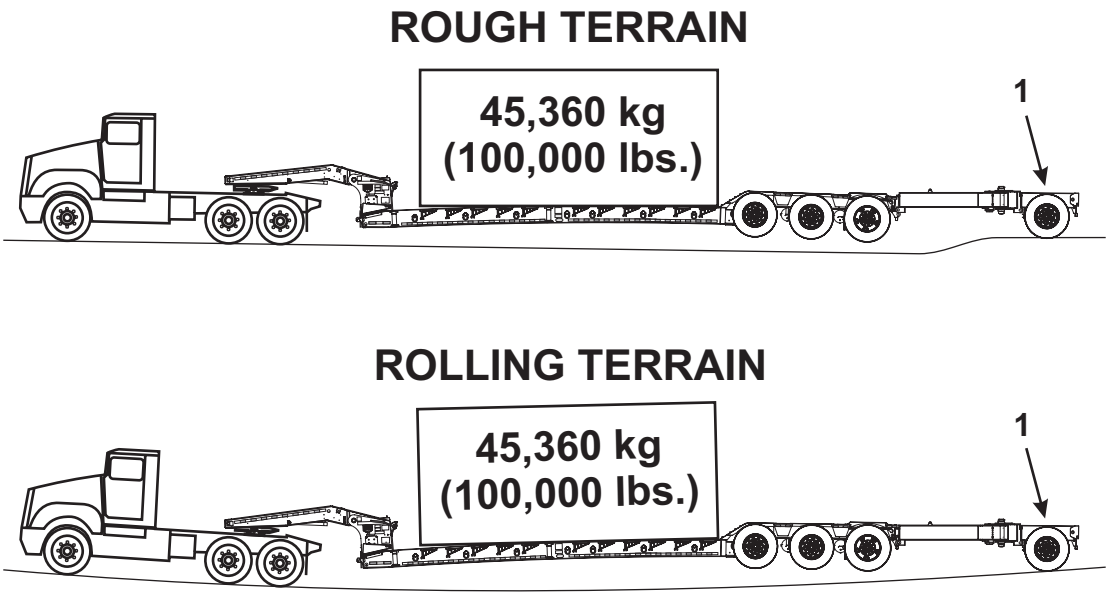


Figure 3-66 – Spreader Beam and 4th Axle Safety

   b. When hauling heavy loads make sure to select a travel route that will avoid these conditions.
   c. Make sure the amber flashing trailer hazard lights (1, Figure 3-67) have been turned on. This control switch (2, Figure 3-67) is located at the rear of the 4th axle. Rotate the switch to the ON position to turn the hazard lights on, OFF to turn the lights off.

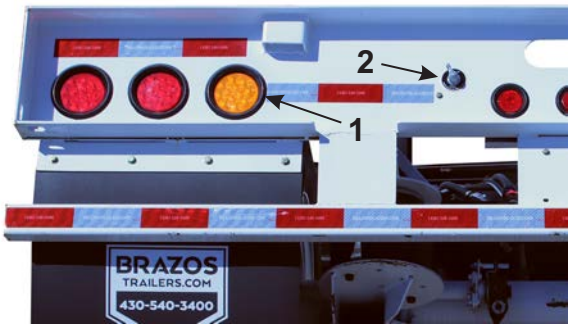


Figure 3-67 – Hazard Light and Switch

d. To enable better trailer control while turning in forward travel, the spreader beam has a pivot (1, Figure 3-68) that enables the 4th axle to rotate in turns.

e. Make sure the spreader beam pivot lock pin (2, Figure 3-68) is in the retracted position.

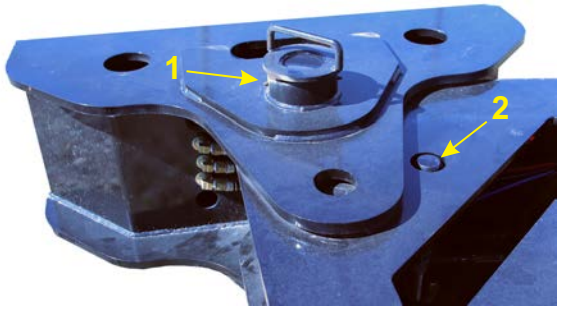


Figure 3-68 – Spreader Beam Pivot Lock Pin

f. Retract the pivot lock pin by pushing the control (1, Figure 3-69) located on the front spreader beam frame beam inwards.

Figure 3-69 – Spreader Beam Lock Pin Control

2. Backing up the lowboy:

   a. When the spreader beam is attached it is required that the pivot on the spreader beam is locked in the straight position.

      i. Make sure the entire trailer is positioned in a straight line and all systems are active.

      ii. The lock pin control (1, Figure 3-69) is located on the front spreader beam frame beam.

      iii. Pull the control outwards to raise the spreader beam lock pin (2, Figure 3-68) locking the spreader beam pivot (1, Figure 3-68) in the straight position.

Daily Maintenance

After the semitrailer is securely connected to the tractor and all safety checks have been completed, and before putting the semitrailer to work, perform the following Daily Maintenance.

1. Using a rubber hammer or equal, "thump" each tire. It is suggested to place your hand on the tire you are checking to better feel the response to this check. If you feel vibration, check the tire pressure with an accurate tire pressure gauge. If the tire is under inflated, reinflate or replace the tire before beginning the days trips.
2. Inspect all semitrailer lights to make sure they are working properly. Turn on the tractor lights and check the semitrailer front marker lights (1, Figure 3-70), side marker light (2, Figure 3-70), rear marker light (3, Figure 3-70) and the tail marker lights (6, Figure 3-70). **NOTE:** Check both sides of the semitrailer for the marker lights. Turn on the 4-way flashers and have an assistant step on the tractor brake pedal to check the brake lights and turn signals (4, Figure 3-70). Rotate the hazard light switch to turn on the flashing amber hazard lights (5, Figure 3-70).
3. Check and clean all decals, conspicuity tape, reflectors, and warning signs. If any decals, conspicuity tape, reflectors or warning signs are damaged, replace those items.

⚠WARNING

Hydraulic oil under pressure can penetrate body tissue causing serious injury and possible death. When troubleshooting a hydraulic system for leaks, always use cardboard or wood as a detector. DO NOT USE YOUR BARE HANDS. If you are injected with hydraulic oil or any other fluids, immediately seek treatment by a doctor trained in the treatment of penetrating fluid injuries.

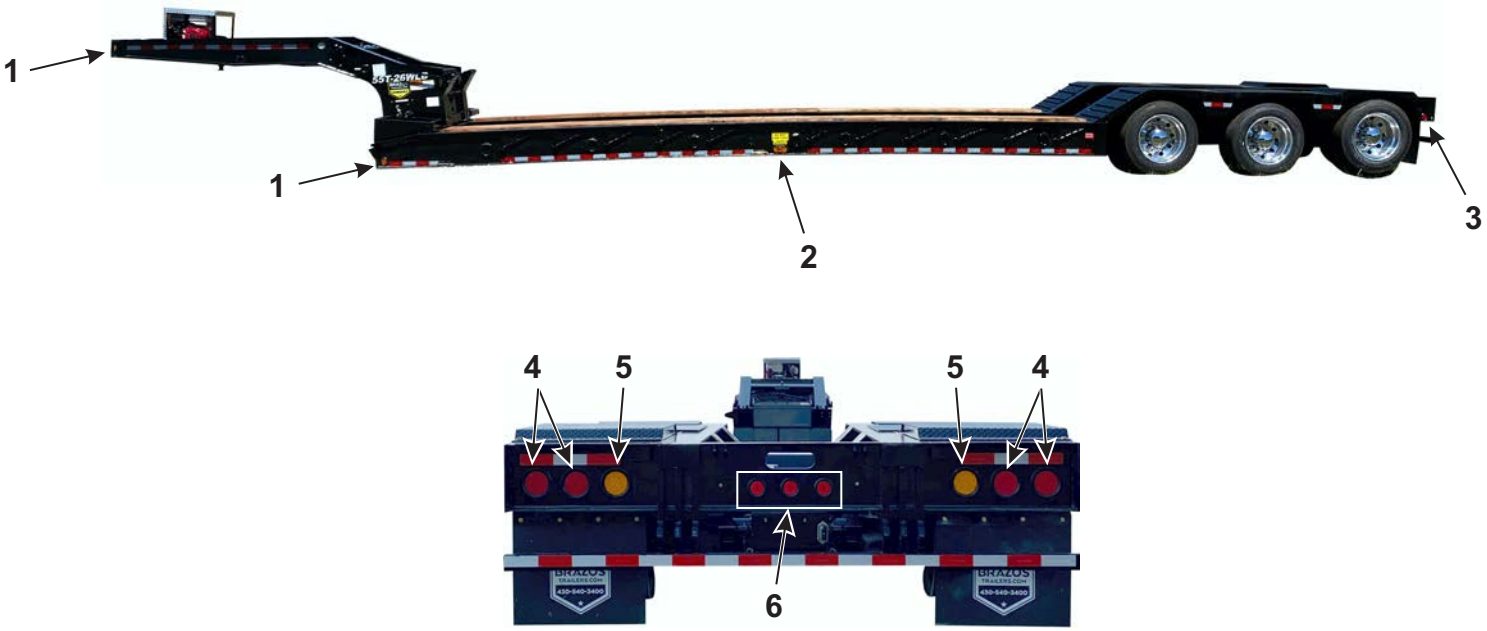


Figure 3-70 – Semitrailer Marker, Stop and Turn Signal Lights

4. Check hydraulic lines and hoses for signs of damage or leaks. **NOTE:** Hydraulic systems can retain pressure even if the unit is not connected to the tractor.
5. Inspect the trailer for any signs of damage, cracked welds, or loose fasteners.
6. Check to make sure that all wheel lug nuts (1, Figure 3-71) are tight and torqued to the proper setting. **NOTE:** Lug nuts on new wheels can shift and settle quickly after being assembled. After 50 – 100 miles of driving, recheck the lug nuts for proper torque.

Figure 3-71 – Wheel Lug Nuts

7. Make sure to bleed off moisture accumulated in the pressurized air tanks on the tractor. Release enough pressurized air to lower the overall system air pressure.
8. Inspect the semitrailer axle suspension system when under a load to make sure it is working properly. If any problem is noted, take the semitrailer out of service for immediate repairs.
9. If the lowboy trailer is equipped with the pony motor hydraulic system, check the hydraulic fluid level in the hydraulic tank (1, Figure 3-72). **NOTE:** Check the hydraulic fluid level only when the trailer is resting on the ground and all cylinders have been fully retracted. The proper fluid level should be approximately in the middle of the sight gauge (2, Figure 3-72).

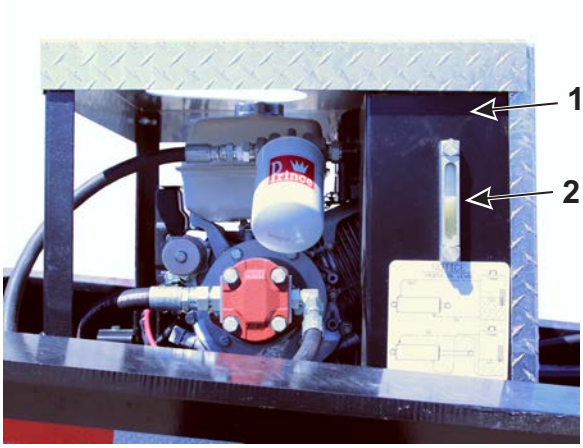


Figure 3-72 – Pony Motor Hydraulic Tank

10. Spreader beam lubrication.
    a. When using the spreader beam, on a daily basis, lubricate the spreader beam pivot using both grease zerks (1, Figure 3-73).

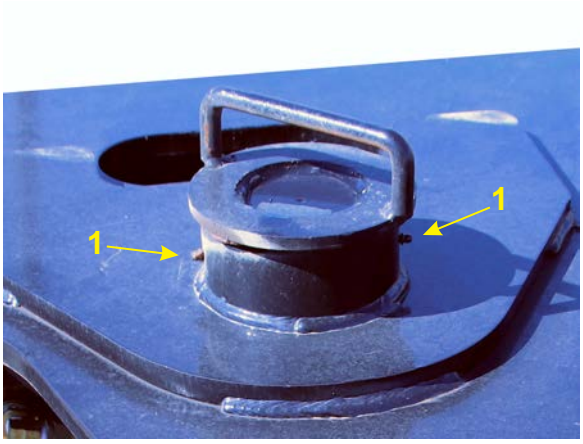


Figure 3-73 – Spreader Beam Lubrication

Section 4 – Routine Service and Maintenance

⚠ DANGER

IMPROPER USE OF THE SEMITRAILER COULD CAUSE SERIOUS INJURY OR DEATH. BEFORE OPERATING THE SEMITRAILER, OR PERFORMING MAINTENANCE, THE OPERATOR MUST READ AND UNDERSTAND THE ENTIRE OPERATOR'S MANUAL, REVIEW SEMITRAILER CONTROLS, LOCATE AND REVIEW ALL WARNINGS AND SAFETY PLACARDS AND RELEVANT OPERATOR SAFETY MATERIALS INCLUDING WRITTEN, VISUAL, VIDEO OR VERBAL INSTRUCTIONS.

⚠ WARNING

Hydraulic oil under pressure can penetrate body tissue causing serious injury and possible death. When troubleshooting a hydraulic system for leaks, always use cardboard or wood as a detector. DO NOT USE YOUR BARE HANDS. If you are injected with hydraulic oil or any other fluids, immediately seek treatment by a doctor trained in the treatment of penetrating fluid injuries.

The following information presents the routine service and maintenance required to make sure that the semitrailer functions safely and properly on a daily basis. The following procedures are suggested for the semitrailer driver. More detailed service information is contained in the Service Manual.

Table 4-1 – Service and Maintenance Schedule

Activity		Daily	New Trailer (200 Miles)	Weekly	Monthly	Annual
1	Safety decals	✓ and R				
2	Axle U-bolts					✓ and T
3	Frame and Structure	✓				
4	Air Suspension	✓				✓
5	Cracks in semitrailer assemblies or welds	✓				
6	Inspect Tire Pressure	✓ and A				
7	Inspect Tire Damage	✓			✓	
8	Inspect Wheel Lug Nuts	✓	✓		✓	
9	Wheel Bearings	✓		✓		✓
10	Axel Alignment	✓			✓	
11	Brake System	✓		✓	✓***	✓**
12	Hydraulic Hoses	✓				
13	Grease	✓ ‡		✓		
14	Visual Check for Loose/Missing Fasteners	✓				
15	Check Trailer Lights and Wiring	✓				
16	Air Line Water Separator	✓ and D			✓	
17	Check Safety Equipment and Tools	✓				
18	Check for air leaks from pneumatic system	✓				

Service Cycle - R = Replace ✓ = Check T = Tighten A = Add D = Drain

† Refer to engine manual for oil change cycles.

* First 200 miles, then follow normal service cycle.

** Service every12,000 miles or annually.

*** Check brake shoes every 3,000 miles

‡ Lubricate spreader beam pivot on a daily basis

Daily Maintenance Procedures

The operator is required to do the following daily service checks:

1. Check condition of all warning and instructional decals. Replace any damaged decals with genuine Brazos Trailers replacement decals.

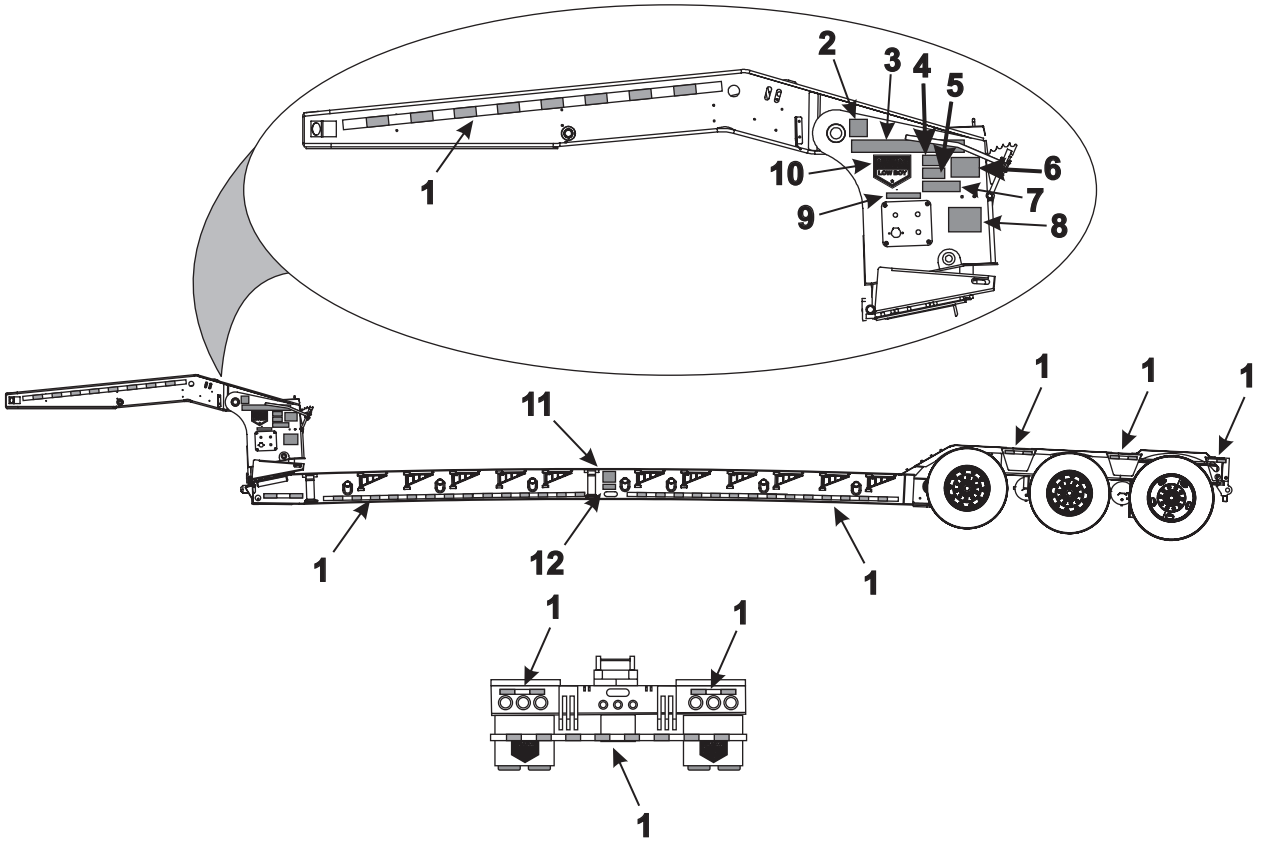


Figure 4-1 – Trailer Side and Rear Decal and Warning Label Locations

Item	Description	Part Number
1	Conspicuity Decal	
2	Lubrication Guide Decal	
3	Model Decal	
4	Safe Loading Warning Decal	
5	Fully Engage Hauling Pin Warning Decal	
6	Wheel Torque Caution Decal	
7	VIN Tag	
8	Gooseneck Hauling Pin Caution Decal	
9	Hauling Pin Lever Decal	
10	Brazos Low Boy Trailer Logo	
11	Do Not Side Load Decal	
12	Load Centerline Caution Decal	

2. Prior to each use, inspect all fasteners and structural frame members for bending and other damage, cracks and/or failure. Repair or replace any damaged components.
3. Inspect trailer suspension.
   a. Make sure all suspension mounting bolts are secure and not damaged. Inspect suspension for each side of the semitrailer.
   b. Inspect the air suspension (air bags) (1, Figure 4-2) for any signs of wear or damage. If any is noted, immediately take the trailer out of service.
   c. Inspect the air lines for the brakes and suspension for any signs of wear or damage. If any is noted, immediately take the trailer out of service.
   d. Inspect the air brake actuators (3, Figure 4-2) for signs of damage. If any is noted, immediately take the trailer out of service.
   e. Perform this inspection for each axle set on the trailer.

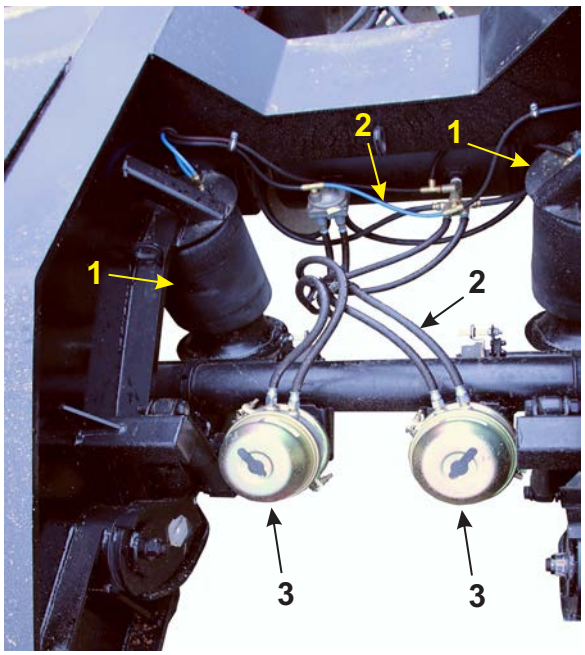


Figure 4-2 – Trailer Suspension

4. Inspect the air ride suspension automatic height control system built into the trailer. The system automatically adds or releases air from the air springs as needed to maintain the factory set ride height. The ride height adjustment linkage (1, Figure 4-3) is attached to the trailer framework at the rear of the trailer. Make sure that the linkage can move freely and does not show any signs of damage.

NOTICE

If operating the LowBoy trailer in snow or icy road conditions, check the height control system linkage (1, Figure 4-3) frequently for any build-up of ice or snow. Snow or ice build-up can prevent the height control system from functioning properly.

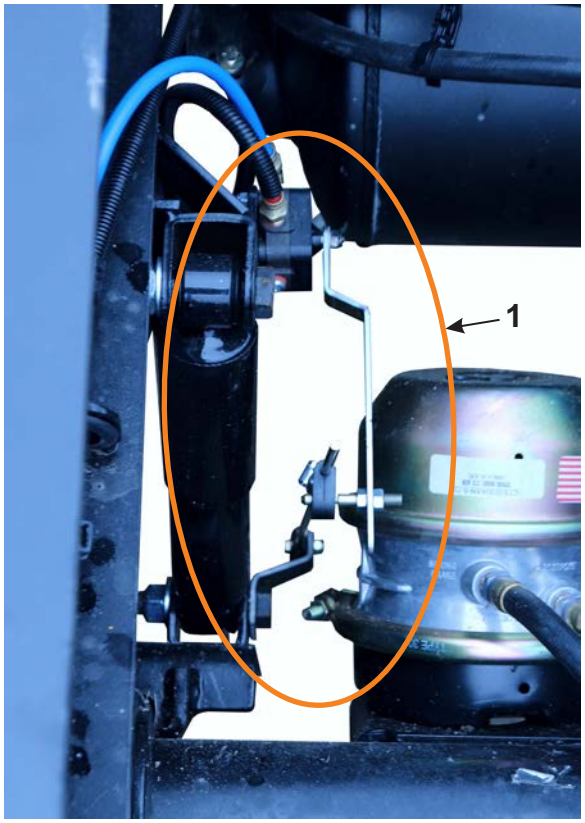


Figure 4-3 – Air Ride Suspension Adjustment Linkage

5. Inspect the semitrailer for cracks in welds, tubes, or steel and fasteners for damage prior to each use. Welds can stress crack or fail when subjected to wear, heavy loads, overloads, and movement of cargo. If any cracks are found, the semitrailer should be taken out of service immediately.
6. Do a pre-trip check on the tires and tire air pressure to look for worn, damaged, or improperly inflated tires and replace worn out tires immediately as they may cause serious injury or death.
   a. While checking inflation pressures, it is a good time to inspect your tires. Any time you see any damage to a tire or wheels/rims, the semitrailer should be taken out of service immediately.
   b. Semitrailer tires may be worn out even though they still have plenty of tread. This is because trailer tires carry a lot of weight all the time, even when not in use. The main cause of tire failure is improper inflation.

c. Tire pressure should be checked prior to each use as part of the pre-trip inspection. Always make sure tires are inflated to the pressure recommended by the tire manufacturer. The pressure must be checked while the tire is cool. Do not check the tire immediately after towing the semitrailer.

d. Wheel and tire manufacturers recommend adjusting the air pressure to the maximum PSI listed on the tire sidewall when the semitrailer is fully loaded. If the tires are underinflated the load carrying capacity of the tire could be affected. Tires can lose air over time. A reduction in tire pressure could cause the tire to become overloaded leading to excessive heat build-up. If the tire is underinflated, even for a brief period, the tire could suffer internal damage. Driving at higher than the recommended maximum speed can also cause internal damage to the tire.

7. Check all wheel parts for damage, including the wheels and ring clamps.
   a. Ensure the studs, nuts, and mounting faces of the hub and wheels are clean and free from grease and debris. Replace any defective parts.
   b. Check lug nut torque. If the lug nuts become loose, torque can cause the wheels to shimmy, resulting in damage to parts and extreme tire tread wear. Excessive mounting torque can cause studs to break and discs to crack in the stud hole area. Both cases could result in serious injury or death.
   c. Check for wheel cracking and worn mating face on hub or drum.
   d. If needing to replace a wheel assembly, do not inter-mix wheel types.
   e. Check for loose studs in the hub as well as broken or cracked studs and replace any damage parts prior to operation.
8. Check wheel hub gaskets and seals for leaks prior to each trip.
   a. Leaking seals can result in damaged wheel bearings and possible failure of the axle assembly and/or brakes.
   b. Check lubricant levels in each hub prior to every trip. Add lubricant when the level is low. Only add lubricant to the level indicated by the mark on the hub cap sight glass. Too much oil can damage the wheel bearings.
   c. As a preventative maintenance precaution, inspect all of the inner sides of the hub for leakage at least once a year or every 60,000 miles, whichever comes first.
9. Axle alignment also must be checked at regular intervals. If the semitrailer is not tracking properly, it should be taken out of service immediately.
10. The brake shoes must be adjusted after the first 200 miles of use and every 3,000 miles thereafter.
    a. The brake shoes must be adjusted after the first 200 miles of use and every 3,000 miles thereafter. Most axles are fitted with a brake mechanism that will automatically adjust the brake shoes when the trailer is “hard braked” while backing up.

⚠WARNING

- **Hydraulic oil under pressure can penetrate body tissue causing serious injury and possible death. When troubleshooting a hydraulic system for leaks, always use cardboard or wood as a detector. DO NOT USE YOUR BARE HANDS. If you are injected with hydraulic oil or any other fluids, immediately seek treatment by a doctor trained in the treatment of penetrating fluid injuries.**
- **The hydraulic system can retain high pressure even after the tractor has been disconnected from the semitrailer.**
- **Hydraulic cylinders are NOT to be used as a stabilizer on a dump body or dump trailer.**

11. Inspect the gooseneck lift cylinders for leaks or damage at the lower inspection port (1, Figure 4-4) and at the rod end of the cylinder (1, Figure 4-5). If any leaks or damage are noted, take the semitrailer out of service.

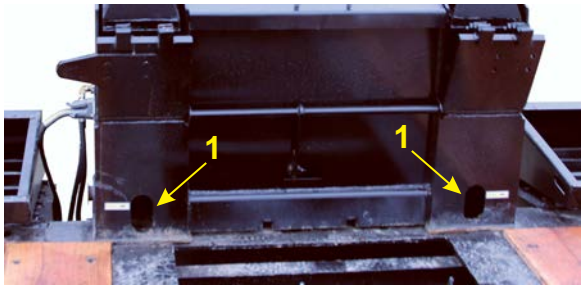


Figure 4-4 – Gooseneck Cylinder Lower Inspection Port

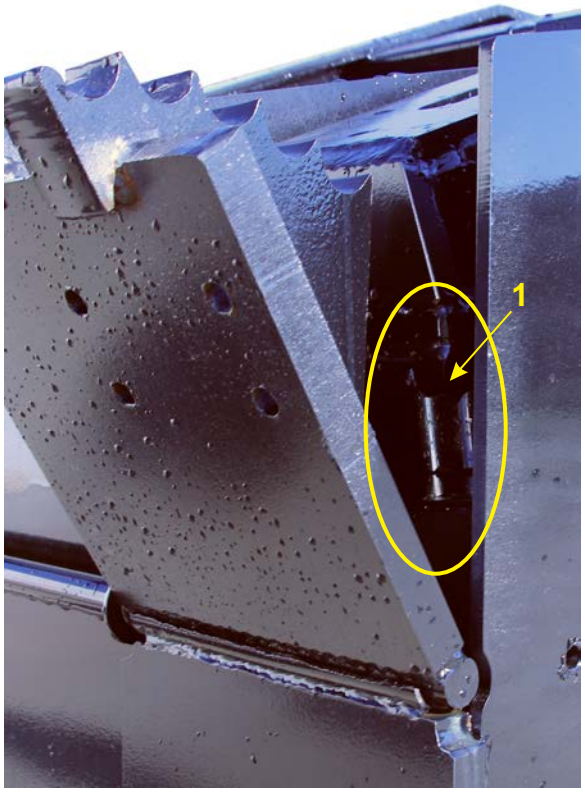


Figure 4-5 – Gooseneck Lift Cylinder Rod End

12. Inspect the entire semitrailer chassis for any loose or missing fasteners. Tighten or replace these fasteners as needed.

13. Turn on the tractor lights.
    a. Inspect all semitrailer lights to make sure they are working properly. Turn on the tractor lights and check the semitrailer front marker lights (1, Figure 4-6), side marker light (2, Figure 4-6), rear marker lights (4, Figure 4-6) and the rear hazard warning lights (5, Figure 4-6). **NOTE:** Check both sides of the semitrailer for the marker lights.
    b. Turn on the 4-way flashers and have an assistant step on the tractor brake pedal to check the brake lights and turn signals (4, Figure 4-6).
    c. Inspect the electrical wiring on the semitrailer for signs of wear or damage. If any is noted, take the semitrailer out of service.
    d. Inspect the cables from the tractor to the semitrailer for wear or damage. Make sure the cables are properly supported to prevent wear and/or damage to the semitrailer connectors.
    e. Make sure the cables are long enough to prevent accidental disconnection if the tractor and semitrailer jackknife.

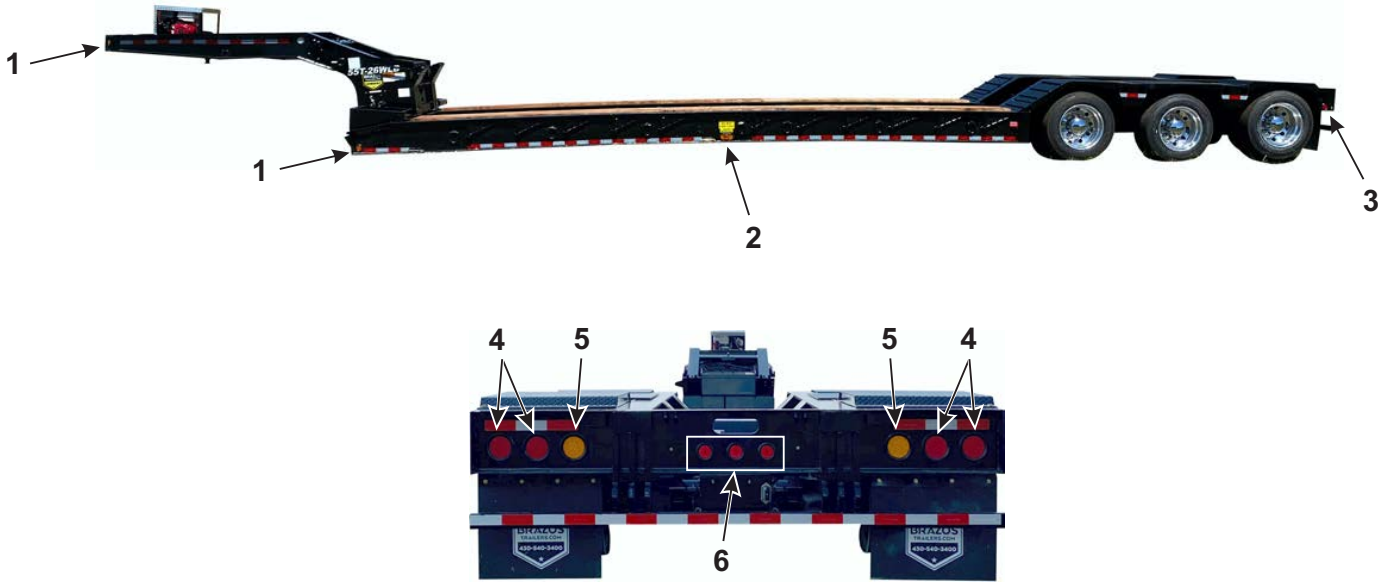


Figure 4-6 – Semitrailer Marker, Stop and Turn Signal Lights

14. Check and drain the airline water separator (1, Figure 4-7). **NOTE:** The style of water separator and its location will change from tractor to tractor.
    a. Open the drain cock at the bottom of the water separator to allow all water to drain out. Leave the drain cock open until only compressed air exits the water separator.

Figure 4-7 – Air Line Water Separator

15. Check the pneumatic system for air leaks.
    a. From the tractor cab, push either the Trailer Air Supply knob (1, Figure 4-8) or move the tractor protection control valve from the Emergency to the Normal position. Either of these actions will provide air pressure to the semitrailer brake system. Do not move the tractor until the entire pneumatic system has returned to the normal system pressure.

Figure 4-8 – Tractor Air Supply Controls

    b. When full pneumatic system pressure has been reached, shut off the tractor engine and listen for any air leaks. Locate and repair any air leaks before using the semitrailer. If the leak cannot be repaired, take the semitrailer out of service.
    c. With the tractor engine off, press the brake pedal and listen for the sound of the trailer brakes being applied.
    d. If there are no problems with air leaks, start the tractor engine and allow the pneumatic system to build to full system pressure.
    e. When full system pressure has been achieved, set the trailer brakes by pulling the Parking Brake control knob (2, Figure 4-8) outwards. Release the trailer brakes by pressing inwards on the Parking Brake control knob.

16. Check the tool kit, safety kit for flares and warning markers, and other safety equipment to make certain all are present and in good condition. Minor repairs or adjustments depend to a great extent upon the tools and equipment carried on the trailer.

⚠WARNING

When using the spreader beam assembly, the spreader beam pivot must be lubricated on a daily basis. Failure to properly lubricate the spreader beam pivot could result in loss of control of the trailer.

17. Spreader beam lubrication.
    a. When using the spreader beam, on a daily basis, lubricate the spreader beam pivot using both grease zerks (1, Figure 4-9).

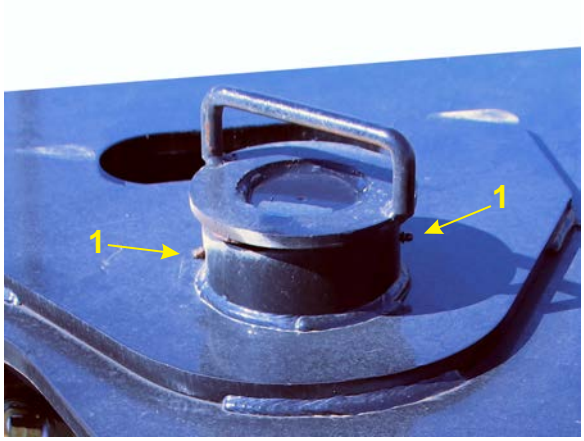


Figure 4-9 – Spreader Beam Lubrication

Weekly Maintenance Procedures

NOTICE

- Some of the following maintenance procedures will need to be done by a qualified semitrailer mechanic.
- It is recommended to do all gooseneck lubrication when it is attached only to the trailer, not to the tractor.
- There is a Lubrication Guide on the side of the gooseneck – Figure 4-10.

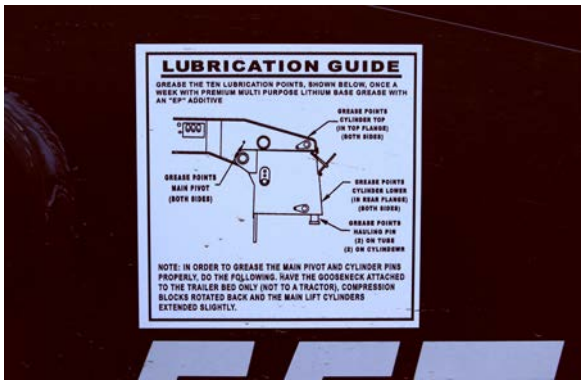


Figure 4-10 – Lubrication Guide Decal

1. Do all Daily Maintenance procedures.
2. Lubricate all grease zerks:
   a. Gooseneck hydraulic lift cylinders, the rod end (1, Figure 4-11) and base end (2, Figure 4-11) each have grease zerks. Make sure to lubricate both lift cylinders.

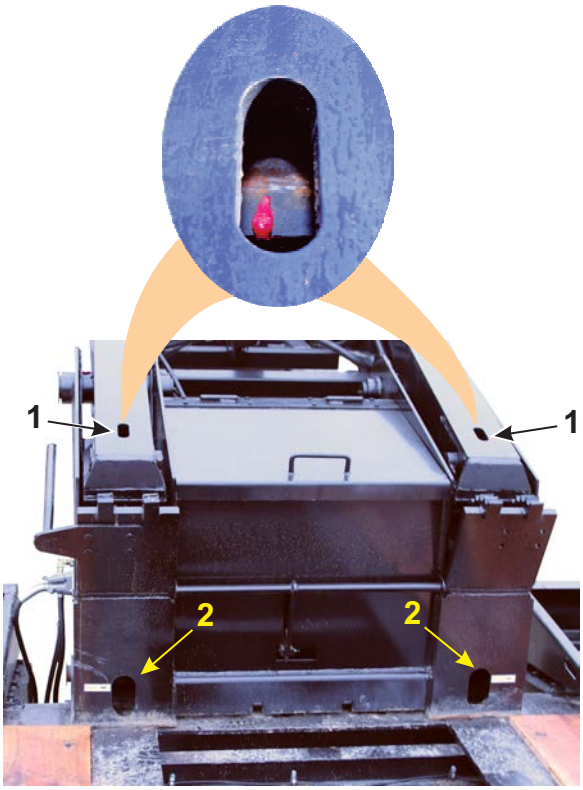


Figure 4-11 – Gooseneck Lift Cylinder Lubrication

   b. Gooseneck pivot shaft on both sides of the gooseneck assembly. Each shaft will have two grease zerks on the outside of the gooseneck (2, 3, Figure 4-12) and one on the inside of the gooseneck assembly (1, Figure 4-12).

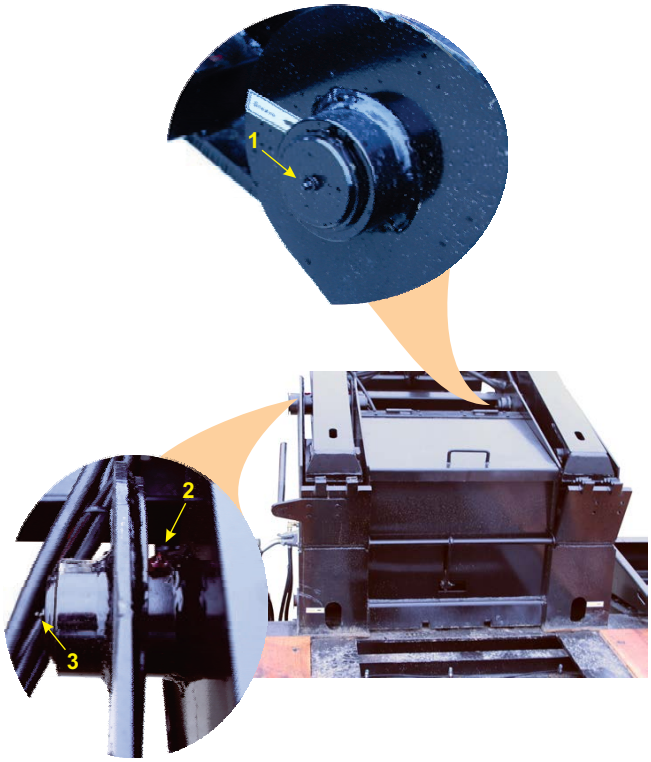


Figure 4-12 – Gooseneck Pivot Shaft Lubrication

c. Lubricate the haul pin (1, Figure 4-13) and haul pin lock pin (2, Figure 4-13). Extend the haul pin lock pin to the travel position. Apply grease around the entire haul pin lock pin shaft and around the lock pin.

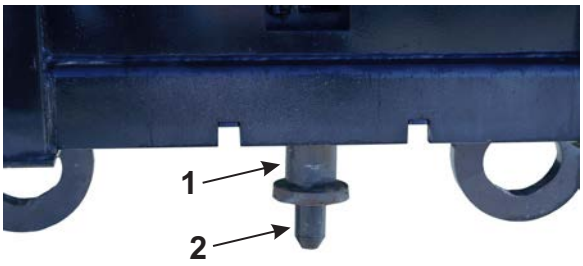


Figure 4-13 – Haul Pin and Haul Pin Lock Pin Lubrication

3. Adjust the semitrailer brakes:
   a. Check the travel of brake chamber push rod and adjust brakes if necessary. Push rod travel should be kept at a minimum of 1/2" without the brakes dragging.
   b. Inspect hose assemblies and gaskets for abrasions, swelling, or other damages. Replace as necessary.
4. Check to make sure cable and hoses between the tractor and semitrailer are properly supported (Figure 4-14), do not rub on tractor frame and do not show any signs of wear or damage.

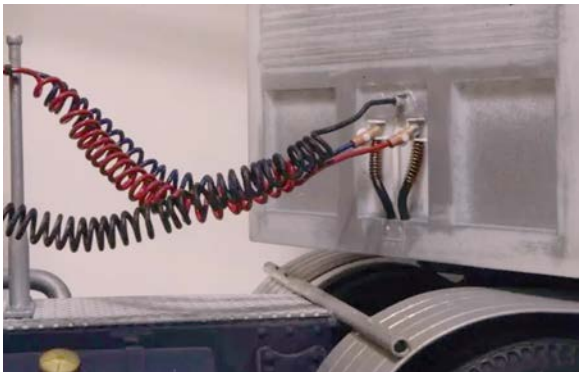


Figure 4-14 – Properly Supported Air and Brake Lines

5. Check the semitrailer brake linings (1, Figure 4-15) for lining thickness. Brake lining should be replaced if excessively worn.

Figure 4-15 – Brake Lining Inspection

6. Inspect tractor brake fluid reservoir and brake lines:
   a. Check to make sure all brake lines are properly fastened to the semitrailer frame or show any signs of damage.
   b. Make certain all brake line connections are tight.
   c. Check to make sure that the brake lines are properly supported so they do not rub on other trailer parts.
7. Check semitrailer electrical system:
   a. Inspect lights, wiring, and coupling sockets.
   b. Make sure all lights are clean and working properly. Replace any light that is not working properly.
   c. Secure loose wires to the semitrailer frame.
8. Inspect and tighten all wheel lug nuts, spring clips, and U-bolts.

Figure 4-16 – Check Lug Nuts

9. Check all tires.
   a. Check air pressure in all tires.

b. Measure and check all tires for proper mating and unserviceable condition. Serviceable tires that indicate abnormal wear should be rotated to other wheel positions.

c. Apparent mechanical defects should be corrected.

10. Check the axle for proper alignment. This deficiency is the most probable cause of tire wear.
11. Check the underside of the trailer frame, axle mounts and springs for any debris that may be trapped.
12. Inspect the air suspension assemblies for:
    a. Make sure all suspension mounting bolts are secure and not damaged. Inspect suspension for each side of the semitrailer.
    b. Signs of wear showing on the air bags (1, Figure 4-17) in the air suspension system.
    c. Damage to the air lines (2, Figure 4-17).
    d. Signs of damage or leaks at each of the air brake actuators (3, Figure 4-17).
    e. If any damage is noted, take the semitrailer out of service.

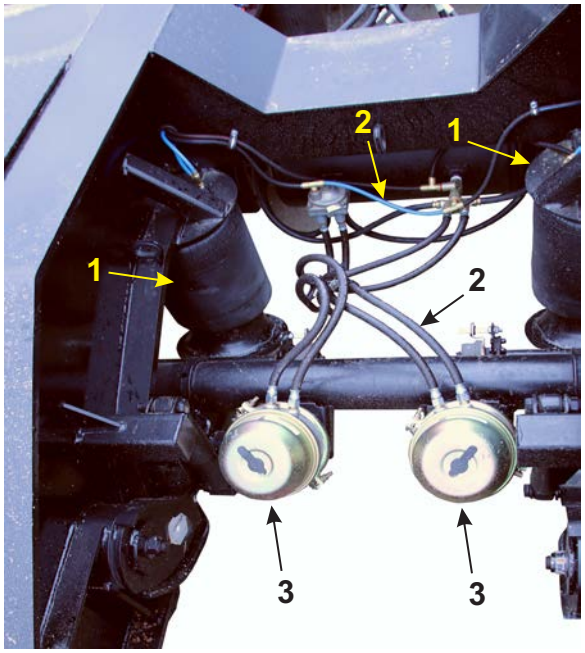


Figure 4-17 – Air Suspension Inspection

Annual/Seasonal Maintenance Procedures

NOTICE

Some of the following maintenance procedures will need to be done by a qualified semitrailer mechanic.

1. Do all Daily and Monthly maintenance procedures.
2. Check the axle for proper alignment and axle U-bolts.
    a. Make sure that the axle U-bolts nuts are tightened to the required torque.
    b. Check for proper axle alignment. This deficiency is the most probable cause of tire wear.
3. Check wheel hub gaskets and seals for leaks.
    a. Leaking seals can result in damaged wheel bearings and possible failure of the axle assembly and/or brakes.
    b. Check oil levels in each hub. Add lubricant when the level is low. Only add lubricant to the level indicated by the mark on the hub cap sight glass. Too much oil can damage the wheel bearings.
    c. As a preventative maintenance precaution, inspect all the inner sides of the hub for leakage at least once a year or every 60,000 miles, whichever comes first.