



# Step Deck and Flatbed 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 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 MERCHANTABILITY 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.

The 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 PROVIDED 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 EXPRESSLY 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 REPAIRS 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 Step Deck Trailer or Flatbed 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 (Figure 1-1) is located on the front of the trailer. 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.

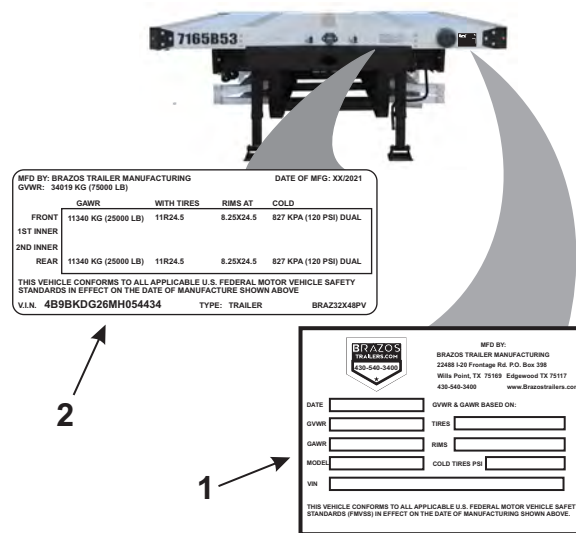


Figure 1-1 – VIN Tag Location

## 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 become completely familiar with the operation of all Brazos Trailer controls and functions including starting, stopping, braking, turning 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.
- 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 safeguards 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.

## Brazos Step Deck and Flatbed Trailers

- 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.
- 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.

## 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.

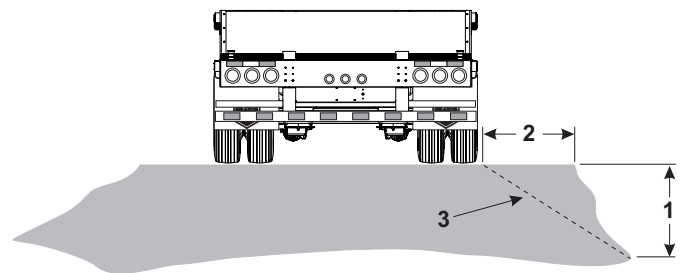


Figure 2-1 – Road Edge Shear

- 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.
- 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.
- Reduce speed and proceed with caution when traveling in reverse or turning.
- 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.**

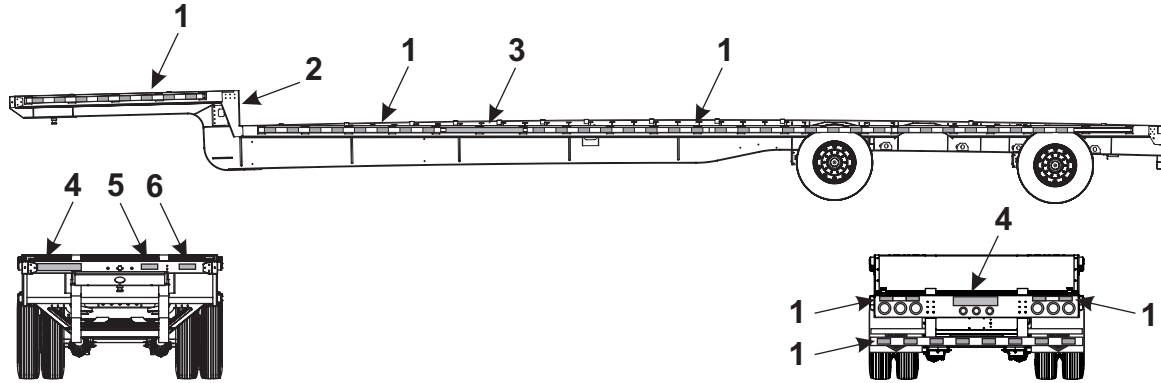
- Use only Brazos Trailer supplied or approved replacement parts and attachments. Imitation parts may lead to trailer damage and/or injury to personnel. Warranty may be voided if unauthorized parts and attachments are used.
- Wear the proper protective clothing and personal safety equipment necessary 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.
- 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.

**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.

**Step Deck Semitrailer**



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

Item	Description	Part Number
1	Conspicuity Decal	
2	Brazos Step Deck Trailer Logo	
3	Place Coil Here Decal	
4	Model Decal	
5	GVWR Decal	
6	VIN Tag	



Flatbed Semitrailer

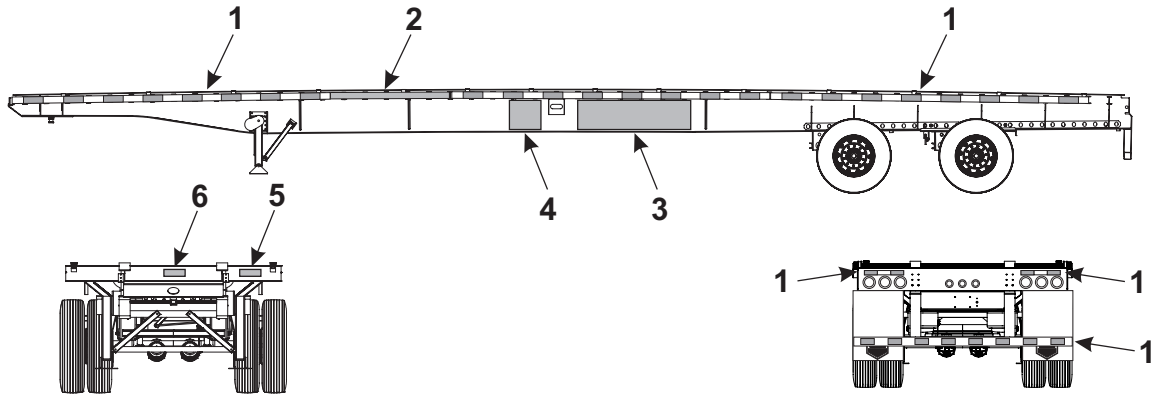


Figure 2-3 – Flatbed Trailer Side and Rear Decal and Warning Label Locations

Item	Description	Part Number
1	Conspicuity Decal	
2	Place Coil Here Decal	
3	Brazos Corporate Decal	
4	Brazos Flatbed Trailer Logo	
5	VIN Tag	
6	GVWR 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.

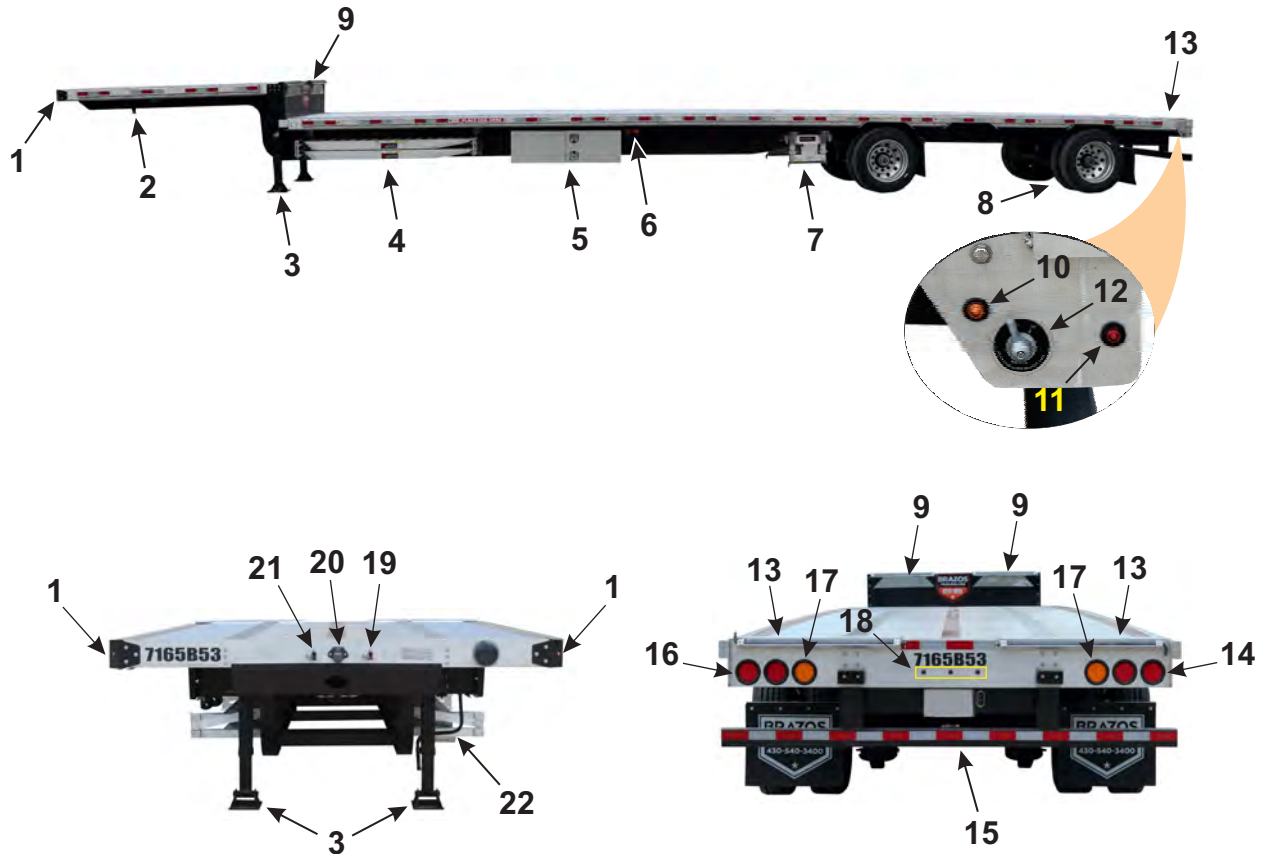


Figure 3-1 – Drop Deck Trailer Orientation

Item No.	Description
1	Front marker light
2	King Pin
3	Load Leg and Landing Pads
4	Loading Ramp (Optional)
5	Storage Compartment (Optional)
6	Side Marker Light
7	Ramp Support (Optional)
8	Moveable Rear Axle
9	Upper Deck Ramp Attachment Bar
10	ABS Light
11	Rear Marker Light

Item No.	Description
12	Hazard Light Switch
13	Rear Ramp Attachment Bar
14	Right Rear Taillight and Turn Signal
15	ICC Bumper
16	Left Rear Taillight and Turn Signal
17	Hazard Light (Flashing)
18	Rear Marker Lights
19	Tractor Pneumatic Connection
20	Tractor electrical connection
21	Tractor Pneumatic Connection
22	Load Leg Crank Handle

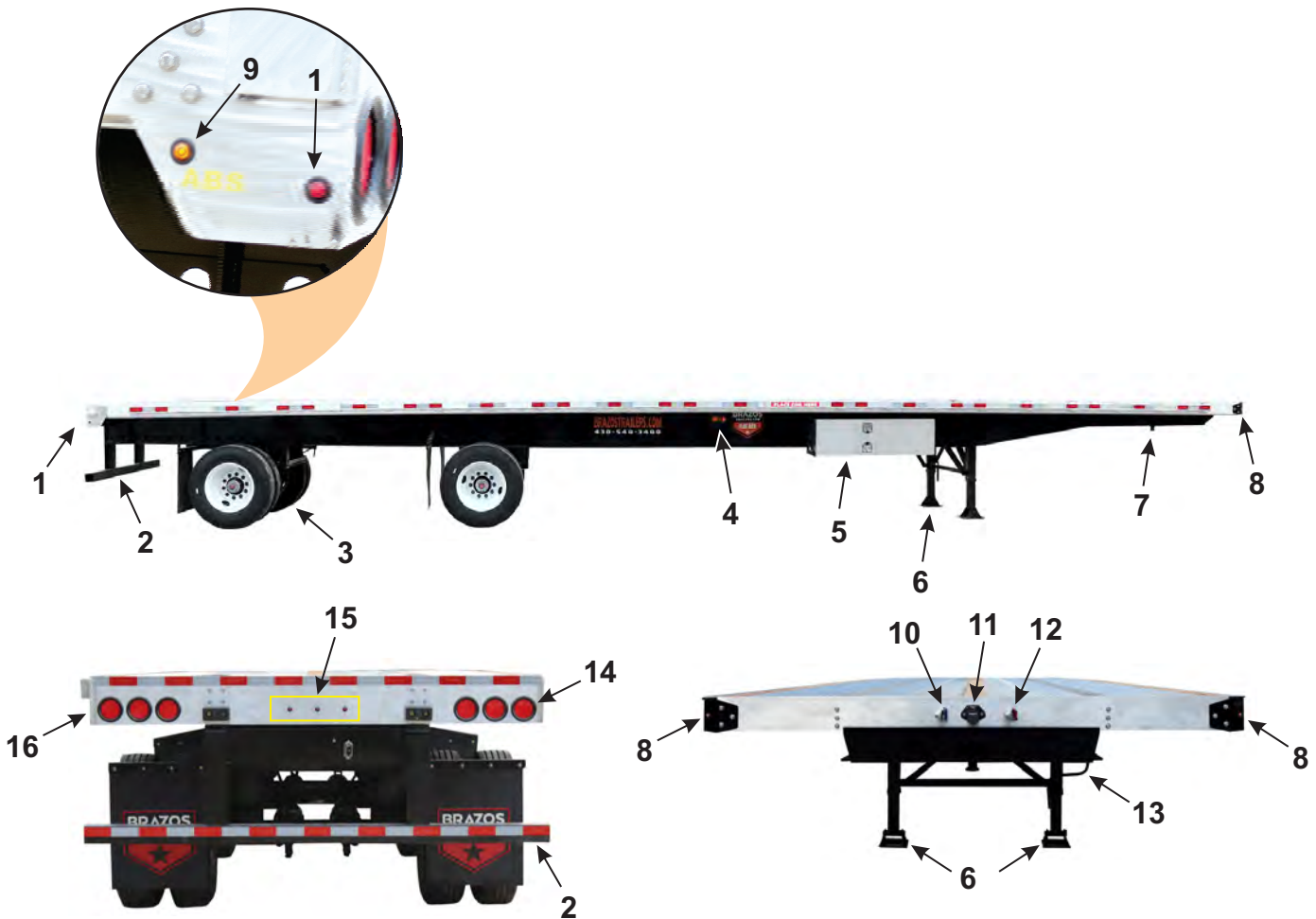


Figure 3-2 – Flatbed Trailer Orientation

Item No.	Description
1	Rear Marker Light
2	ICC Bumper
3	Moveable Rear Axle
4	Side Marker Light
5	Storage Compartment (Optional)
6	Load Leg and Landing Pads
7	King Pin
8	Front marker light

Item No.	Description
9	ABS Light (Left Rear Corner of Trailer)
10	Tractor Pneumatic Connection
11	Tractor electrical connection
12	Tractor Pneumatic Connection
13	Load Leg Crank Handle
14	Right Rear Taillight and Turn Signal
15	Rear Marker Lights
16	Left Rear Taillight and Turn Signal

 **DANGER**

**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.**

## Pre-Trip Inspection

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.  
Inspect the trailer for any signs of damage, cracked welds, or loose fasteners
2. 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.
3. Check to make sure all tires are at proper inflation.
4. Turn on the tractor lights and make sure all semitrailer marker lights are clean and working.
5. If the load requires the use of the wide load indicator lights, make sure these are activated and working properly.
6. Make sure that the physical dimensions of the load comply with all local and state highway requirements.
7. Make sure that the load weight and axle weight load complies with all local and state highway requirements.

## 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. See [Figure 3-3](#).

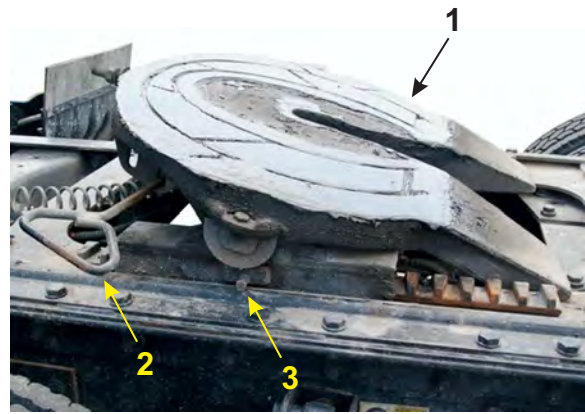


**Figure 3-3 – Tractor Fifth Wheel**

### **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 3-4](#)).



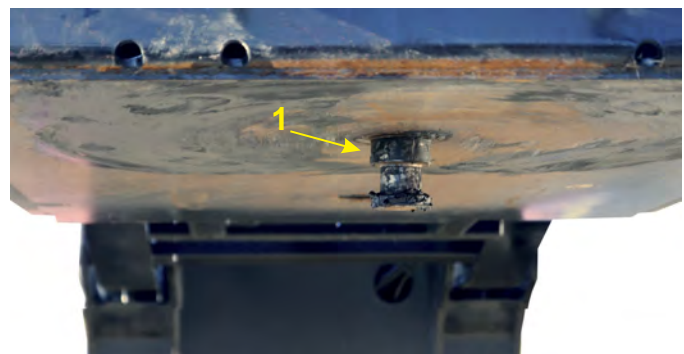
**Figure 3-4 – Tractor Fifth Wheel in Coupling Position**

- Check that the safety unlock handle is in the automatic lock position (2, [Figure 3-4](#)).
- Confirm that the sliding fifth wheel is locked in position (3, [Figure 3-4](#)).
- Make sure the fifth wheel jaws are fully opened (1, [Figure 3-5](#)).



**Figure 3-5 – Open Fifth Wheel Lock Jaws**

2. Inspect the semitrailer kingpin (1, [Figure 3-6](#)) for damage and/or wear.



**Figure 3-6 – Inspect King Pin**

3. Inspect work area to make sure the area is clear of workers or debris around both the tractor and semitrailer.
4. Before coupling the tractor.

- a. Always chock the trailer using chock blocks (4, Figure 3-7) when coupling the tractor and semitrailer.

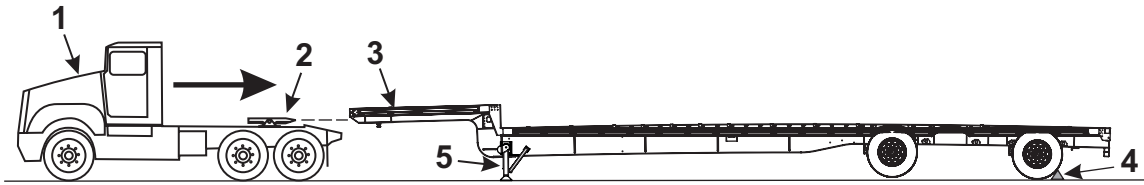


Figure 3-7 – Coupling Tractor to Semitrailer

5. 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 nose (3, Figure 3-7) is just slightly below the fifth wheel height (2, Figure 3-7). If the semitrailer nose is too low, it may strike the tractor. If the semitrailer nose 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 load leg hand crank (5, Figure 3-7) to raise the trailer nose.
6. Check to make sure that the fifth wheel and kingpin are aligned properly.
7. Check the coupler seals for any signs of wear or damage. Replace these seals as needed before connecting to the semitrailer.
  - a. Connect the electrical and pneumatic lines to the semitrailer. 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 airlines (1, Figure 3-8) to the semitrailer service control coupler.

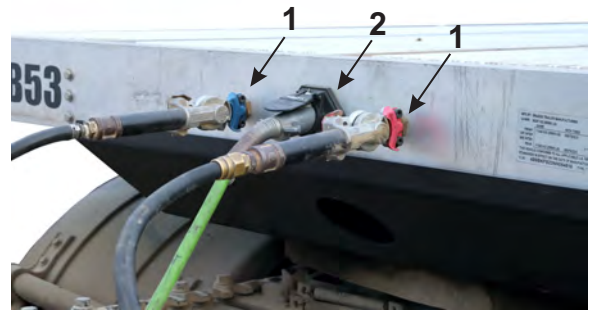


Figure 3-8 – Umbilical Connections from Tractor to Semitrailer

- c. Plug the electrical cord (2, Figure 3-8) into the trailer and secure the safety catch.
8. 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

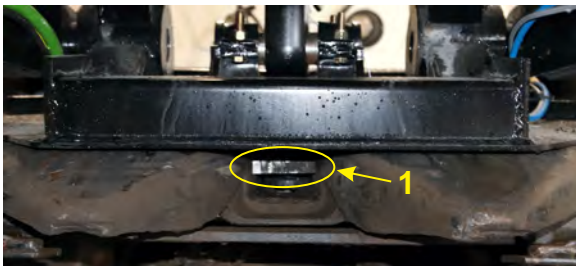
9. When full pneumatic system pressure has been reached, shut off the tractor engine and listen for any air leaks. Locate and repair any air leaks before using the semitrailer.
10. With the tractor engine off, press the brake pedal and listen for the sound of the trailer brakes being applied.

## Brazos Step Deck and Flatbed Trailers

11. If there are no problems with air leaks, start the tractor engine and allow the pneumatic system to build to full system pressure.
12. When full system pressure has been achieved, set the trailer brakes by pulling the Parking Brake control knob (2, [Figure 3-9](#)) outwards.
13. 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. 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 3-10](#)). Stop moving the tractor as soon as the kingpin has been fully engaged and securely locked.



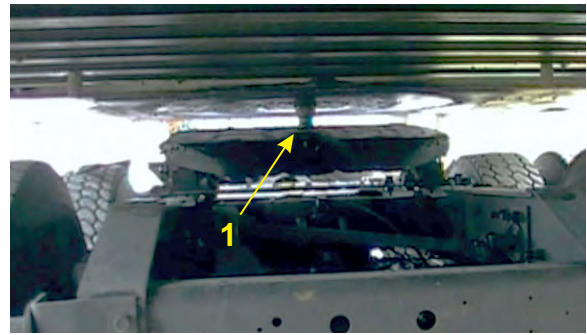
**Figure 3-10 – Locked Kingpin**

- b. Put the tractor transmission in Neutral.
  - c. Make sure that the semitrailer parking brakes are engaged.
  - d. With the trailer brakes still applied, pull the semitrailer slightly forward to confirm a secure connection between the tractor and semitrailer.
14. Shut off the tractor engine and inspect the fifth wheel coupling.

### **WARNING**

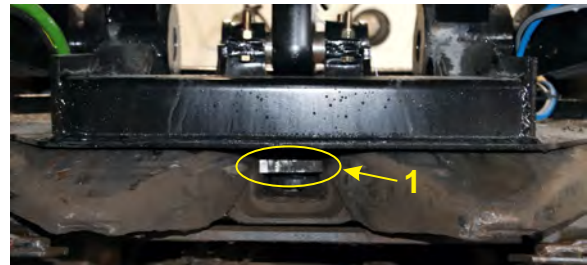
**Shut off the tractor engine and remove the ignition key to prevent unauthorized movement of the semitrailer.**

- 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 3-11](#)), which would allow the trailer to come loose when the tractor is moved forward.



**Figure 3-11 – 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 3-12](#)).



**Figure 3-12 – Locked Kingpin**

- c. Check that the fifth wheel kingpin locking lever (1, [Figure 3-13](#)) 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 3-13 – Fifth Wheel Lock lever**

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



## Loading the trailer

### NOTICE

- When transporting a machine, the Brazos Trailers Step Deck trailer is designed to be loaded only from the rear of the trailer. **DO NOT** side load any machinery onto this trailer. The step deck trailer can be loaded using a standard loading dock or the optional load ramps.
- The loading instructions will apply to both the Step Deck trailer and Flatbed trailer, except as indicated in any of the following procedures.

### WARNING

- **Chock the rear wheels to prevent unexpected trailer movement.**
- **Set the trailer and tractor brakes 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 or load does not overload the trailer.**
- **Center the load on the trailer to provide the best trailer stability.**
- **DO NOT load a machine if the center line of the tracks/wheels will be outside of the trailer frame.**

### NOTICE

The following loading instructions are for the Step Deck trailer.

## Loading Dock Procedures

1. Make sure the drop deck trailer is securely connected to the tractor to prevent unexpected trailer movement during all loading procedures.
2. Position the trailer square to the loading dock. See [Figure 3-14](#).



Figure 3-14 – Trailer Square to Loading Dock

3. Set the tractor and trailer brakes.
4. Verify that the machine weight does not exceed trailer specifications and roadway weight regulations.
5. Drive the machine onto the trailer, centering the machine on the width of the trailer (1, [Figure 3-15](#)).



Figure 3-15– Centerline of Trailer

6. Make sure that the load is evenly balanced, from both the front to rear of the trailer as well as centered on the trailer ([Figure 3-16](#)).



Figure 3-16– Fully Loaded Trailer

## Brazos Step Deck and Flatbed Trailers

7. When the trailer is fully loaded, make sure to secure the load with DOT approved chains (1, [Figure 3-17](#)) and binders (2, [Figure 3-17](#)), or straps (4, [Figure 3-17](#)). Make sure that the chains are wrapped around the stake pockets (3, [Figure 3-17](#)) and that the hooks are seated in either the stake pockets or hooked to the rub rail (5, [Figure 3-17](#)).



Figure 3-17– Loaded Secured with Chains, Binders and Straps

## 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 (2, [Figure 3-18](#)) of the machine being loaded onto the trailer will extend beyond the standard trailer width (1, [Figure 3-18](#)), make sure the centerline of the wheels/tracks (2, [Figure 3-18](#)) is no wider than the outside edges of the trailer (4, [Figure 3-18](#)).

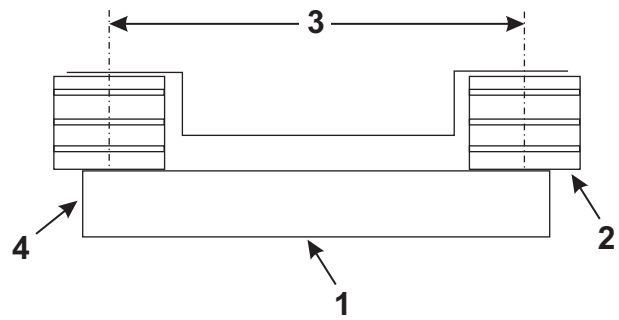


Figure 3-18– Wide Load Maximum Width

2. Load the machine in the normal process and secure it to the trailer using DOT approved chains and binders.
3. Activate the rear flashing amber hazard lights (Step Deck trailer only) by rotating the control switch to the ON position (4, [Figure 3-19](#)). The hazard light switch (1, [Figure 3-19](#)) is located at the left rear of the trailer body between the ABS indicator light (2, [Figure 3-19](#)) and the left rear marker light (3, [Figure 3-19](#)).

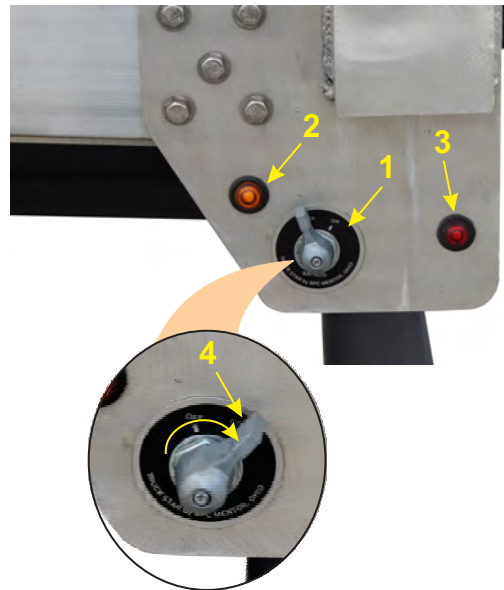


Figure 3-19 – Hazard Light On-Off Switch

The flashing amber hazard lights (1, [Figure 3-20](#)) will continue to operate when the trailer electrical power is connected until the control switch is rotated to the OFF position.



Figure 3-20 – Step Deck Safety Hazard Lights

## Loading Step Deck trailer with optional ramp system

If the Step Deck trailer is equipped with the optional loading ramps, additional set-up procedures need to be followed. **NOTE:** Depending on the ability of the machine being loaded to climb a slope, the optional ramp system can be set-up two ways at the rear of the trailer.

### **WARNING**

- Prevent unexpected trailer movement. Before setting up the optional ramp system, make sure the tractor and trailer brakes have been set, and wheel chocks have been placed in front of the trailer tires.
- Before loading the trailer using the optional ramps, make sure the ramps are securely attached to the trailer and ramp stands if these are used.

The optional ramp system (1, Figure 3-21) and one ramp stand (2, Figure 3-21) is stored under the trailer deck on each side of the trailer.



Figure 3-21– Optional Ramp Storage

The ramps can be used in several combinations:

### Single Ramp Set

1. Park the trailer on solid, level ground.
2. This example is for a single set of ramps at the rear of the trailer. See Figure 3-22.



Figure 3-22 – Single Set of Ramps

If the machine being loaded can climb the pitch of a single set of ramps, this set-up can be attached to the rear end of the trailer.

- a. Remove the ramp latch pin (1, Figure 3-23) from each mounting bracket (2, Figure 3-23) at the rear of the trailer.



Figure 3-23 – Ramp Latch Pin and Mounting Bracket

- b. Position the ramp (1, Figure 3-24) in the rear mounting bracket (2, Figure 3-24).
- c. Install the latch pin (3, Figure 3-24) and secure it using the quick clip (4, Figure 3-24), securing the ramp to the trailer.

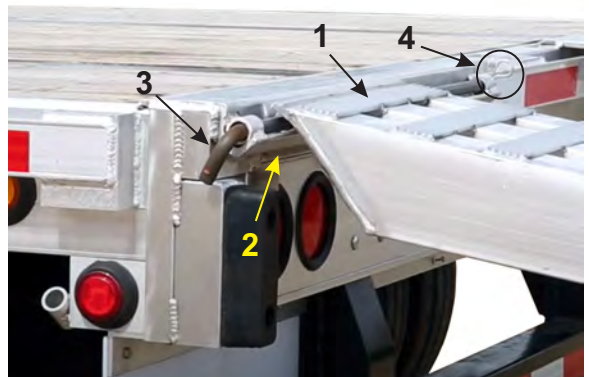


Figure 3-24 – Ramp Secured to Trailer

- d. Repeat this process on the opposite side of the trailer.

## Brazos Step Deck and Flatbed Trailers

- e. The rear single set of loading ramps are now ready for use.

### Double ramp set at the rear of the trailer

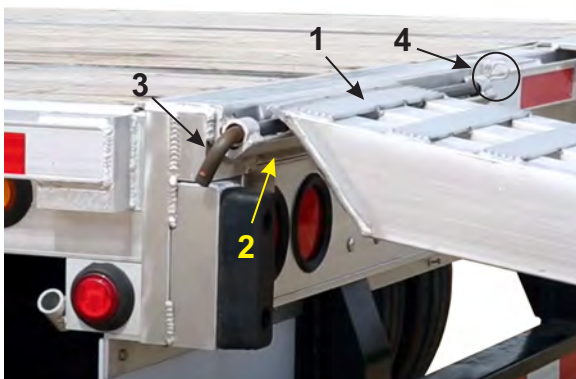
If the machine being loaded requires a gentler ramp angle, the four ramps in the ramp kit can be combined, along with the ramp stands, to create a longer loading ramp system.

1. Locate the trailer on solid and level ground.
2. The ramp stands are secured under the trailer deck. One stand on each side of the trailer.
3. Place the ramp stands behind the trailer.
4. Remove the ramp latch pin (1, [Figure 3-25](#)) from each mounting bracket (2, [Figure 3-25](#)) at the rear of the trailer.



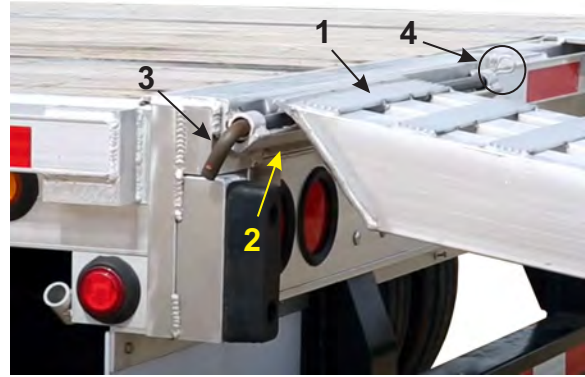
**Figure 3-25 – Ramp Latch Pin and Mounting Bracket**

5. Position the upper ramp (1, [Figure 3-26](#)) in the rear mounting bracket (2, [Figure 3-26](#)).
6. Install the latch pin (3, [Figure 3-26](#)) and secure it using the quick clip (4, [Figure 3-26](#)), securing the upper ramp to the trailer.



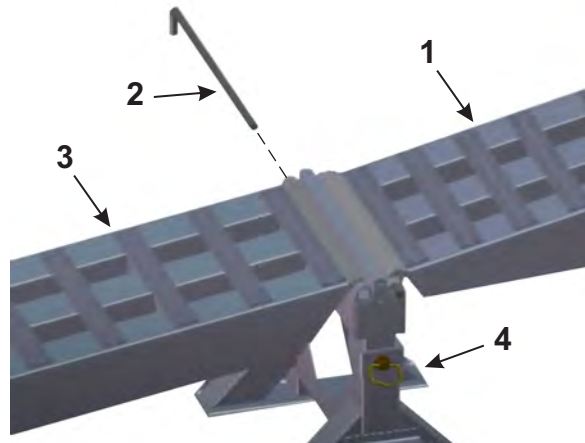
**Figure 3-26 – Ramp Secured to Trailer**

7. Secure the upper ramp section (1, [Figure 3-27](#)) to the front side of the ramp stand (3, [Figure 3-27](#)) using the latch pin (2, [Figure 3-27](#)) and quick clip.



**Figure 3-27 – Upper Ramp on Ramp Stand**

8. Attach the lower ramp (3, [Figure 3-28](#)) to the rear side of the ramp stand (4, [Figure 3-28](#)) using the latch pins (2, [Figure 3-28](#)) and quick clip. The upper (1, [Figure 3-28](#)) and lower ramps are now properly attached to the trailer.



**Figure 3-28– Lower Ramp on Ramp Stand**

9. Repeat these procedures for the second set of ramps.
10. If the loading procedures require that the ramps are raised to provide a flatter final stage, the ramp stands can be adjusted upwards.
11. Before loading, place solid support blocks (1, [Figure 3-29](#)) under each side of the ICC bumper (2, [Figure 3-29](#)), providing solid support to the ground at the tail end of the trailer.

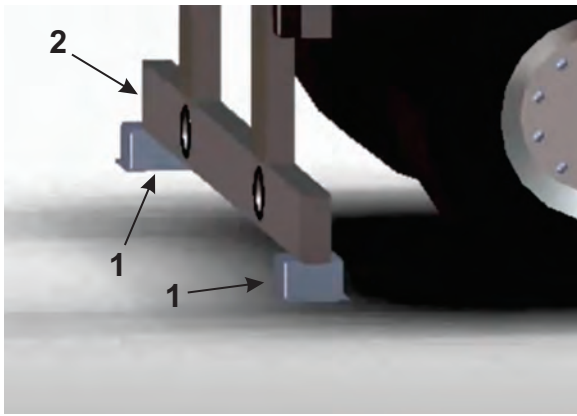


Figure 3-29– Support Blocks

12. The double ramp system is now ready for use. See Figure 3-30.



Figure 3-30 – Double Ramp System

### Step Deck Ramp System

The Step Deck section of the trailer can be used for rolling stock for additional load capacity. The optional ramp system can be attached to the step deck to allow for “drive on” access.

1. Park the trailer on solid, level ground.
2. Remove the ramp latch pin (1, Figure 3-31) from each mounting bracket (2, Figure 3-31) at the step deck portion of the trailer.

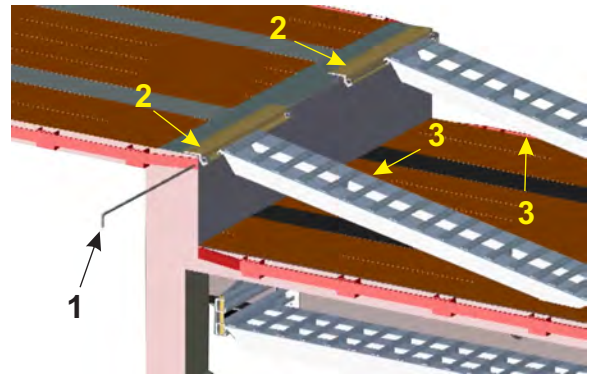


Figure 3-31 – Step Deck Ramp Set-up

3. Position the ramp (3, Figure 3-31) in the step deck mounting bracket.
4. Install the latch pin (1, Figure 3-31) and secure it using the quick clip, securing the ramp to the step deck portion of the trailer.
5. Repeat this process on the opposite side of the trailer.
6. The step deck loading ramps are now ready for use. Figure 3-32.

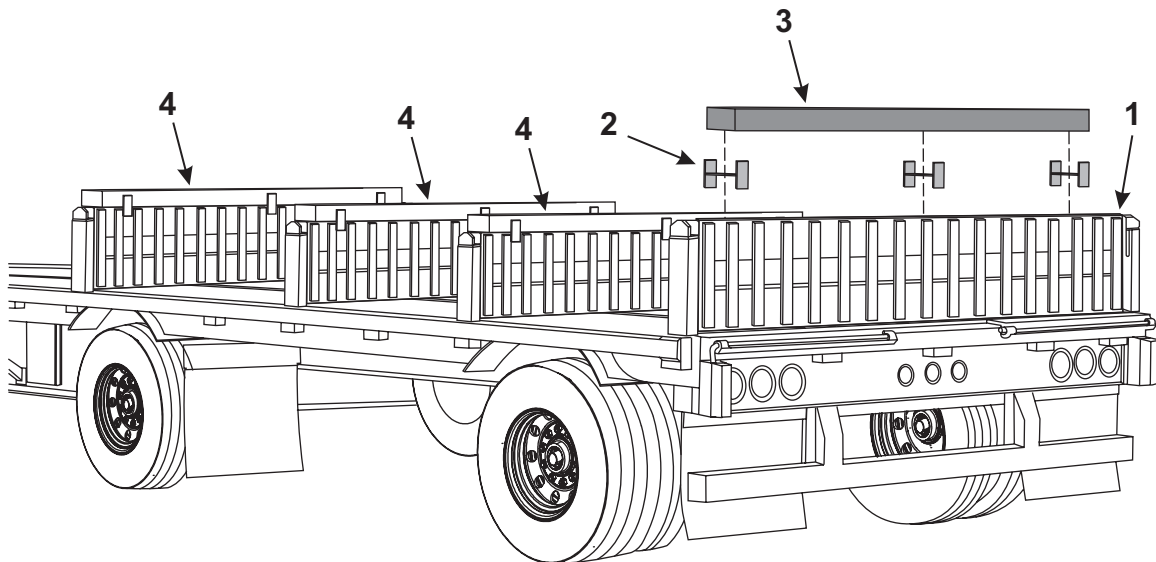


Figure 3-32 – Step Deck Ramps

### Load Leveler System

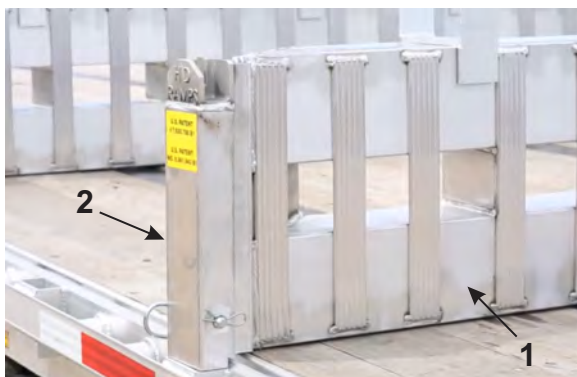
The optional ramp system can be converted to enable a long load to be transported on the step deck trailer. The set up for this use of the ramps is:

1. Remove the ramps from the storage area under the trailer deck.
2. Position the ramps (1, [Figure 3-33](#)) across the trailer width, evenly spaced along the length of the trailer (4, [Figure 3-33](#)).



**Figure 3-33 – Position Ramps Across Trailer**

3. Install the Load Leveler stake pocket stakes (2, [Figure 3-34](#)) on each end of the ramp sections (1, [Figure 3-34](#)), and into the trailer rub rail stake pockets.

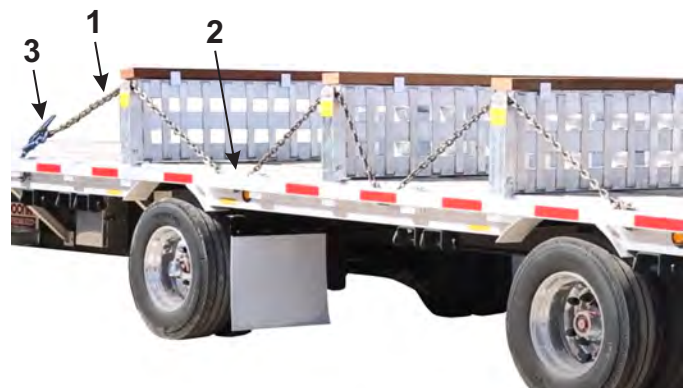


**Figure 3-34 – Load Leveler Stake Pocket Stakes**

4. Install the lumber clips (2, [Figure 3-33](#)) onto the top of the ramp sections. **NOTE:** The lumber clips are located in the trailer storage cabinet.
5. Install 4" x 4" lumber on top of the ramp sections (3, [Figure 3-33](#)). The addition of this lumber serves two purposes. The lumber will bring the top of the ramp sections even with the top of the step deck, and will

also protect the loading ramps from damage when used in the load leveler process.

6. Install load chains over the top of each stake pocket stake (1, [Figure 3-35](#)) and through adjacent stake pockets (2, [Figure 3-35](#)). Tension the chain the DOT approved chain binders (3, [Figure 3-35](#)).



**Figure 3-35 – Load Chains and Binders**

- The trailer can now be used for longer level loads using the top of the step deck.



Figure 3-36 – Level Load Using Step Deck

## Rear Split Axle Slide Adjustment

### WARNING

- When operating the slide mechanism, avoid all pinch points. Death or serious injury could result.
- Make sure the area underneath and around the trailer are clear of any personnel or obstructions.

The rear split axle of the trailer can slide forwards or backwards to adjust load balance and for local road load laws. For reference, each hole on the adjustment slide equals approximately 250 – 300 lbs. being moved either forward or backwards.

**NOTE:** The following slide axle procedures can be used for either the Drop Deck trailer or the Flatbed trailer.

## Split Axle Slide Adjustment

- Position the tractor and trailer on firm, solid ground.
- Set the tractor brakes, not the trailer brakes.
- The rear brake control (2, Figure 3-37) and lock pin activation lever (1, Figure 3-37) are located between the two rear axles on the driver's side of the trailer.



Figure 3-37 – Slide Axle Controls

- Set the rear axle brakes by pulling the brake activation knob (2, Figure 3-37) on the rear brake control. This control will set the rear axle brakes and will inflate the Step Deck trailer air bags, raising that trailer body so that the rear wheels will clear the wheel wells.
- Move the trailer slightly either forwards or backwards to confirm that the axle brake has been set.
- Release the slide axle lock pins by pulling the lock lever outwards until it locks into the RELEASED position (1, Figure 3-38).



Figure 3-38 – Axle Lock Pin Lever

**NOTE:** The rear axle has two sets of lock pins (1, Figure 3-39), one in front of the axle and the other behind the axle. Check to make sure that slide axle lock pins have been drawn in on both sides of the trailer, allowing the axle assembly to move.



Figure 3-39 – Axle Lock Pins

## *Brazos Step Deck and Flatbed Trailers*

7. Slowly move the trailer forward or backwards until the rear axle is in the proper position.
8. When the rear axle is in the proper position.
  - a. Lock the tractor brakes.
  - b. Move the axle pin lock lever back to the LOCKED position (2, [Figure 3-40](#)). The axle lock pins (3, [Figure 3-40](#)) should extend, locking the axle to the trailer.



**Figure 3-40 – Slide Lock Controls**

- c. Check to make sure the lock pins on both sides of the trailer are fully extended, locking the rear sliding axle in position. **NOTE:** It may be necessary to rock the trailer slightly for the pins to fully engage.
    - d. Release the rear slide axle brakes by pressing the brake activation knob (1, [Figure 3-40](#)) inwards releasing the air pressure. The rear axle brakes will release, and if using the Step Deck trailer, the air bags will deflate.
9. The trailer is ready for use.



## 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.
  - a. Turn on the tractor lights and check the semitrailer front marker lights (1, [Figure 3-41](#)), side marker light (2, [Figure 3-41](#)), rear marker light (5, [Figure 3-41](#)) and the tail marker lights (8, [Figure 3-41](#)). **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 (6, 9, [Figure 3-41](#)) and turn signals (6, [Figure 3-41](#)).
  - c. Rotate the hazard light switch (4, [Figure 3-41](#)) to turn on the flashing amber hazard lights (7, [Figure 3-41](#)).

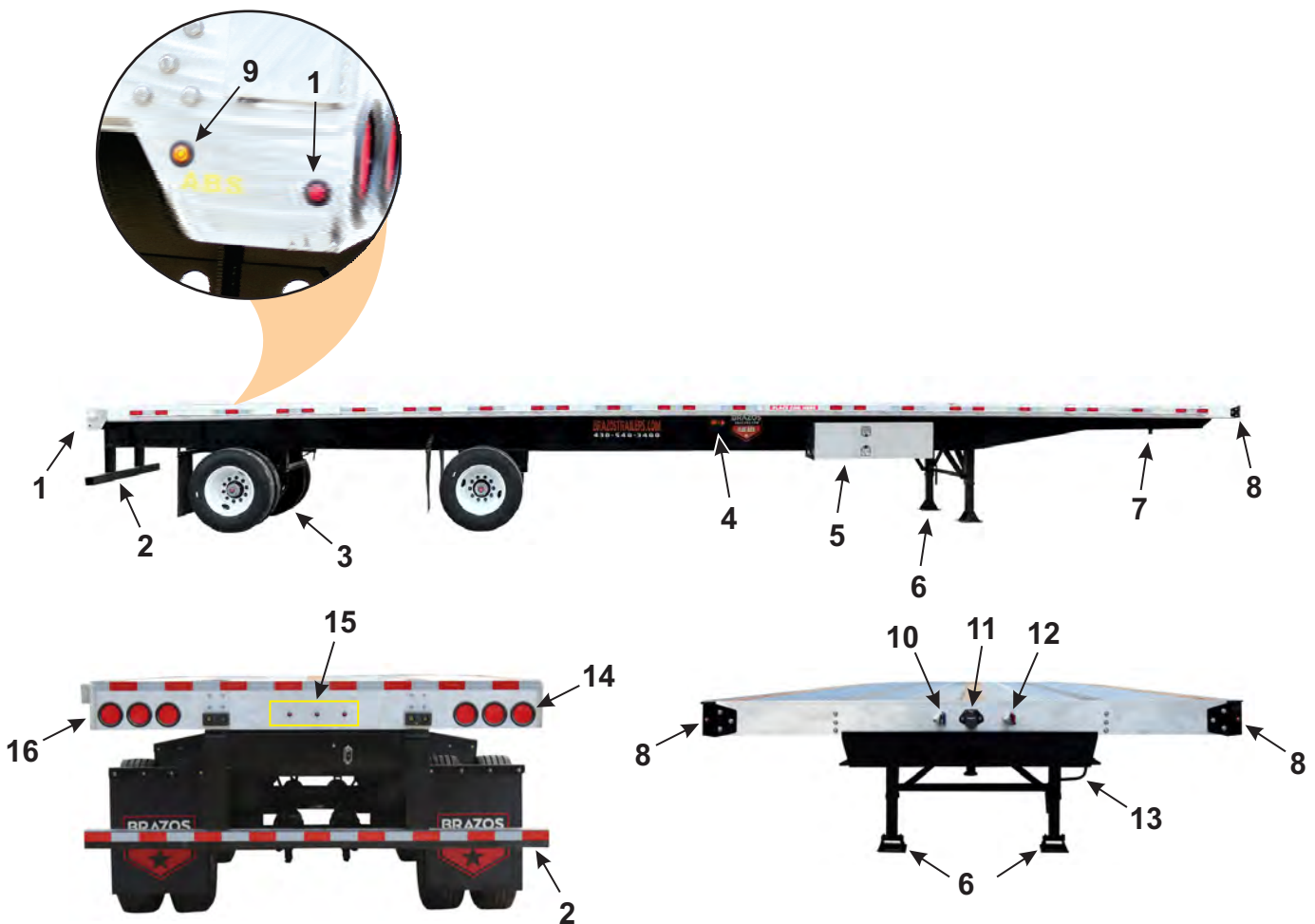


Figure 3-41 – Semitrailer Marker, Stop and Turn Signal Lights

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.
4. Inspect the trailer for any signs of damage, cracked welds, or loose fasteners.
5. Check to make sure that all wheel lug nuts (1, [Figure 3-42](#)) 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 3-42 – Wheel Lug Nuts**

6. 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.
7. Inspect the semitrailer axle suspension system when under a load to make sure it is working properly. If any problems are noted, take the semitrailer out of service for immediate repairs.
- 8.

## Section 4 – Routine Service and Maintenance



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.

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 Bag Suspension	✓		✓		✓
5	Air Bag Suspension Shock Absorber Security Bands	✓		✓		✓
7	Cracks in Semitrailer Assemblies or Welds	✓				
8	Inspect Tire Pressure	✓ and A				
9	Inspect Tire Damage	✓			✓	
10	Inspect Wheel Lug Nuts and Rims for Damage	✓	✓		✓	
11	Wheel Bearings	✓		✓		✓
12	Wheel Hubs			✓		
13	Axel Alignment				✓	
14	Brake System	✓		✓	✓****	✓***
15	Grease			✓		
16	Visual Check for Loose/ Missing Fasteners	✓				
17	Check Trailer Lights and Wiring	✓			✓	
19	Check for air leaks from pneumatic system	✓				

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

† Refer to engine manual for oil change cycles.

\* First 200 miles, then follow normal service cycle.

\*\* Service every 12,000 miles or annually.

\*\*\* Check brake shoes every 3,000 miles.

## Daily Maintenance Procedures

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

1. Check to make sure all hazard warning decals are readable and in good condition. Replace any decals that are not readable or damaged.

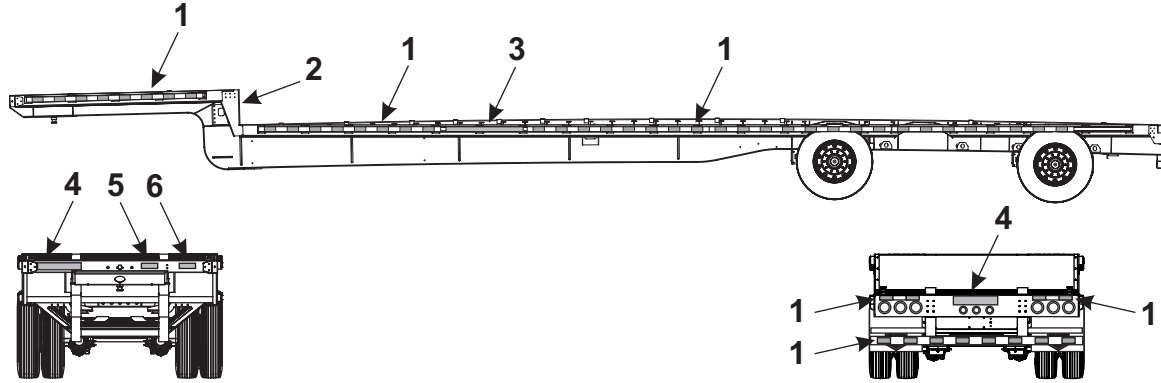


Figure 4-1 – Step Deck Trailer Decals

Item	Description	Part Number
1	Conspicuity Decal	
2	Brazos Step Deck Trailer Logo	
3	Place Coil Here Decal	
4	Model Decal	
5	GVWR Decal	
6	VIN Tag	

## Flatbed Semitrailer

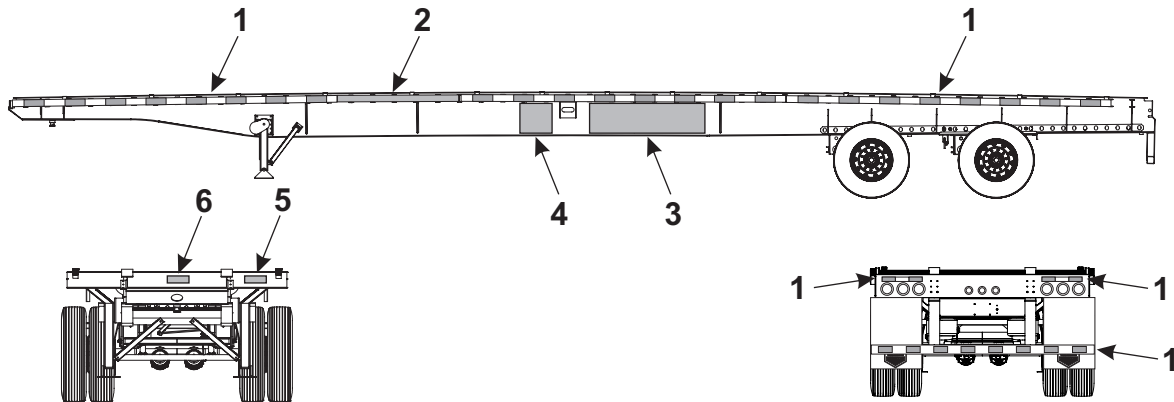
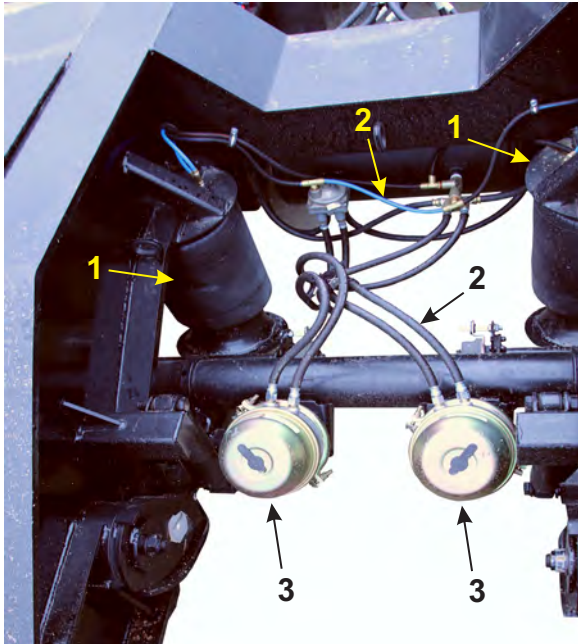


Figure 4-2 – Flatbed Trailer Side and Rear Decal and Warning Label Locations

Item	Description	Part Number
1	Conspicuity Decal	
2	Place Coil Here Decal	
3	Brazos Corporate Decal	
4	Brazos Flatbed Trailer Logo	
5	VIN Tag	
6	GVWR 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. The trailer is equipped with an air bag suspension system. Inspect the air bags (1, [Figure 4-3](#)) and air lines (2, [Figure 4-3](#)), for signs of wear or damage. If any damage or wear is noted, the semitrailer should immediately be taken out of service until all repairs have been completed.



**Figure 4-3 – Airbag Suspension**

- b. Inspect the air brake actuators (3, [Figure 4-3](#)) for signs of damage. If any is noted, immediately take the trailer out of service.
  - c. Perform this inspection for each axle set on the trailer.
4. 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.
5. 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.
6. 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 (1, [Figure 4-4](#)) 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 (3, [Figure 4-4](#)) 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.



**Figure 4-4 – Wheel Inspection**

7. 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 (4, [Figure 4-4](#)) 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.
8. Axle alignment also must be checked at regular intervals. If the semitrailer is not tracking properly, it should be taken out of service immediately.
9. 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.
10. Inspect the entire semitrailer chassis for any loose or missing fasteners. Tighten or replace these fasteners as needed.
11. Turn on the tractor lights.
  - a. Step Deck trailer lights:
    - i. Inspect all semitrailer lights to make sure they are working properly. Turn on the tractor lights and check the semitrailer front marker light (1, [Figure 4-5](#)), side marker light (2, [Figure 4-5](#)), rear corner marker light (5, [Figure 4-5](#)) and the rear marker lights (8, [Figure 4-5](#)). **NOTE:** Check both sides of the semitrailer for the marker lights.
    - ii. Turn on the 4-way flashers and have an assistant step on the tractor brake pedal to check the brake lights and turn signals (6, 9, [Figure 4-5](#)).
    - iii. Turn on the hazard flashers by rotating the control switch (4, [Figure 4-5](#)) to the ON position. The amber hazard flashers (7, [Figure 4-5](#)) on both sides of the trailer rear should flash.

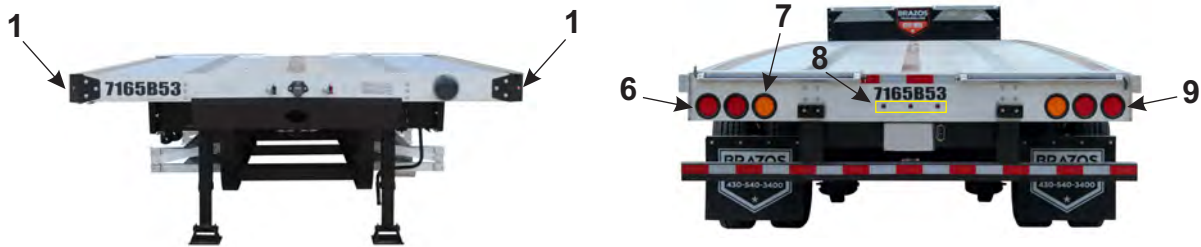
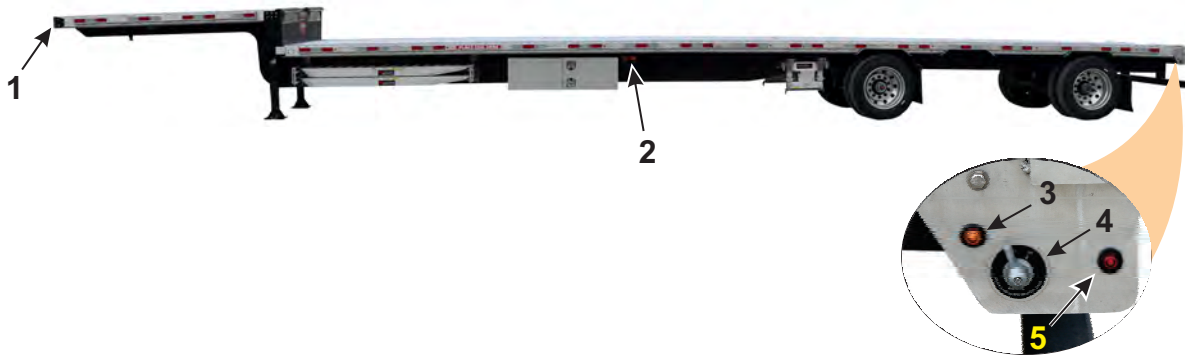


Figure 4-5 – Step Deck Trailer Lights

b. Flatbed trailer lights:

- i. Inspect all semitrailer lights to make sure they are working properly. Turn on the tractor lights and check the semitrailer front marker light (3, Figure 4-6), side marker light (2, Figure 4-6), rear corner marker light (1, Figure 4-5) and the rear marker lights (5, Figure 4-6). **NOTE:** Check both sides of the semitrailer for the marker lights.
- ii. 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, 6, Figure 4-6).

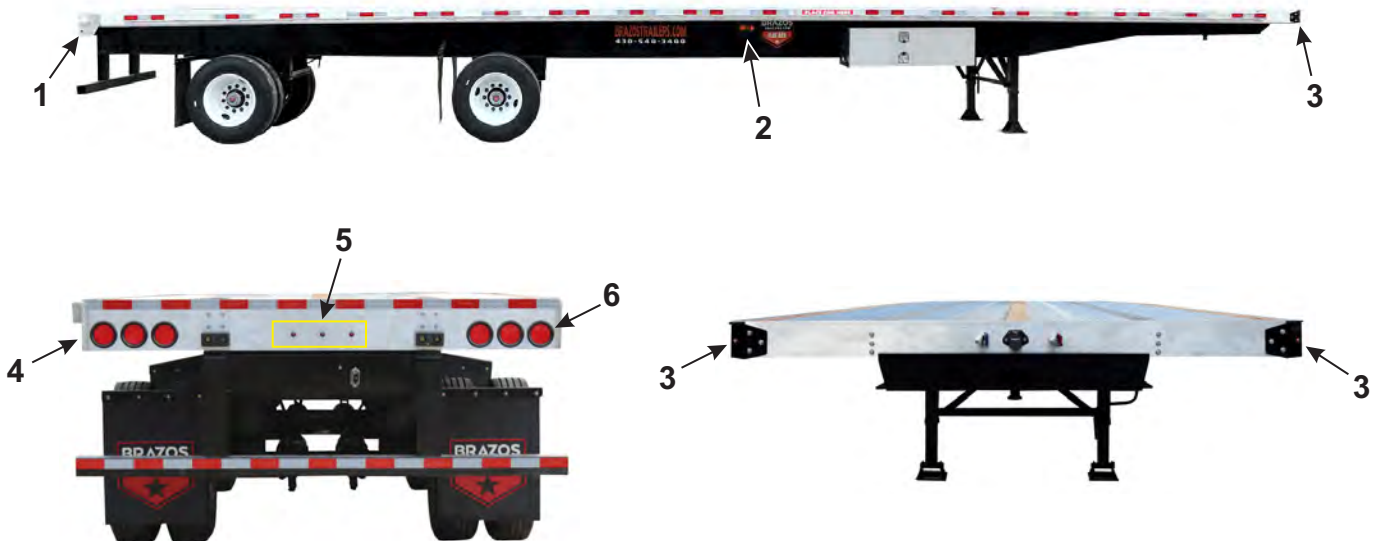


Figure 4-6 – Step Deck Trailer Lights

## Brazos Step Deck and Flatbed Trailers

- 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.
12. 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**

13. 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.
14. 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.

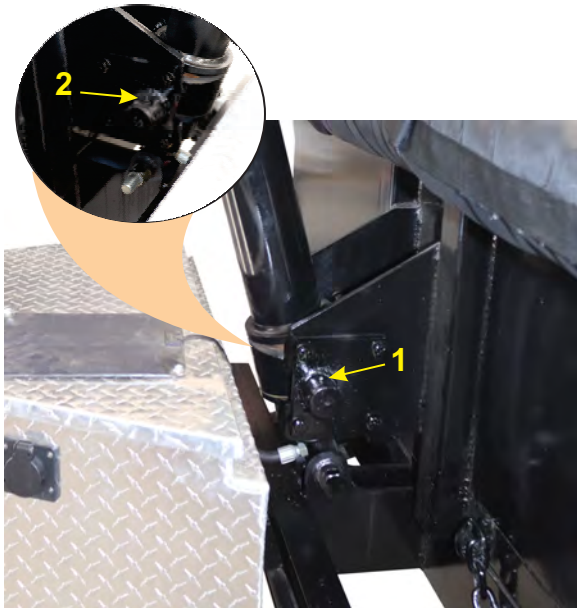


## Weekly Maintenance Procedures

### NOTICE

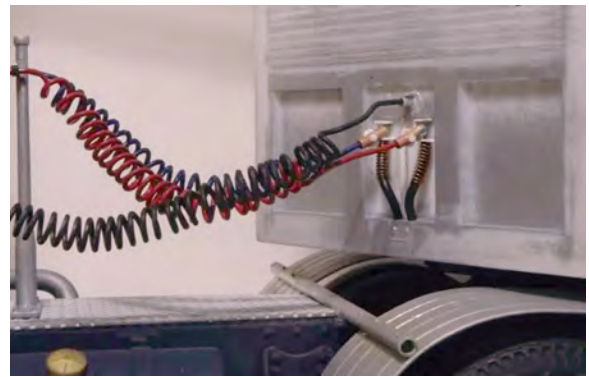
Some of the following maintenance procedures will need to be done by a qualified semitrailer mechanic.

1. Do all Daily Maintenance procedures.
2. Lubricate all grease zerks:
  - a. Grease brake actuator rods and bushings (1, [Figure 4-9](#)).



**Figure 4-9 – Brake Actuator Rods and Bushings**

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 4-10](#)) do not rub on tractor frame and do not show any signs of wear or damage.



**Figure 4-10 – Properly Supported Air and Brake Lines**

5. Check the semitrailer brake shoe linings (1, [Figure 4-11](#)) for lining thickness. Brake shoe lining should be replaced if excessively worn.



**Figure 4-11 – Brake Shoe 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.

## Brazos Step Deck and Flatbed Trailers

8. Inspect and tighten all wheel lug nuts (1, [Figure 4-12](#)), spring clips, and U-bolts.



**Figure 4-12 – 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 underside of the trailer frame, axle mounts and springs for any debris that may be trapped.

## Monthly Maintenance Procedures

1. Do all Daily and Weekly maintenance procedures.
2. Inspect all tires for signs of wear or damage. Replace any tire that shows signs of damage or wear.
3. Inspect the wheel lug nuts (2, [Figure 4-13](#)) to make sure they are at the proper torque setting.
4. Inspect the wheel rims at the hub (3, [Figure 4-13](#)) and around the lug nuts (4, [Figure 4-13](#)) to make sure there are no cracks or signs of wear. If any wear or damage is noted, the trailer is required to be taken out of service until repairs have been completed.



**Figure 4-13 – Wheel and Lug Nut Inspection**

5. Check the axle for proper alignment. This deficiency is the most probable cause of tire wear.
6. Check the radius rod rubber bushings to make sure they are in good condition and free of oil or grease.
7. Check the semitrailer brake shoe linings (1, [Figure 4-14](#)) for lining thickness. Brake shoe lining should be replaced if excessively worn.



**Figure 4-14 – Brake Shoe Lining Inspection**

8. Inspect the electrical wiring on the semitrailer for signs of wear or damage. If any is noted, take the semitrailer out of service.
9. 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.
10. Make sure the cables are long enough to prevent accidental disconnection if the tractor and semitrailer jackknife.

## 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, Weekly 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. Inspect the spring assemblies for:
  - a. Excessive spring sag.
  - b. Shifted or broken spring leaves.
  - c. Loose or damaged spring clips.
  - d. Check the leaf spring U-bolts to make sure the U-bolt nuts are torqued properly.
  - e. If any damage is noted, take the semitrailer out of service.
4. The trailer is equipped with an air bag suspension system. Inspect the air bags (1, [Figure 4-15](#)) and air lines (2, [Figure 4-15](#)), for signs of wear or damage. If any damage or wear is noted, the semitrailer should immediately be taken out of service until all repairs have been completed.

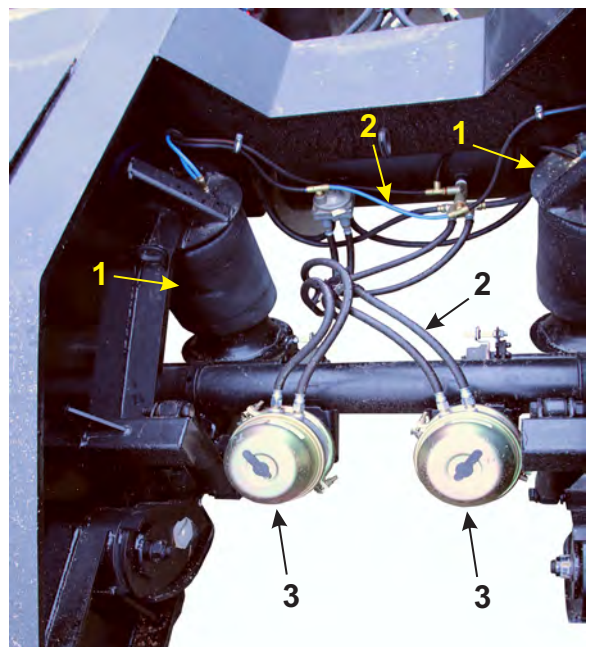


Figure 4-15 – Airbag Suspension

## Brazos Step Deck and Flatbed Trailers

5. Check wheel bearings and 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 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 (4, [Figure 4-16](#)). Too much oil can damage the wheel bearings.



**Figure 4-16 – Inspect Wheel Hub**

- 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.
6. Inspect the electrical wiring on the semitrailer for signs of wear or damage. If any is noted, take the semitrailer out of service.
7. 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.
8. Make sure the cables are long enough to prevent accidental disconnection if the tractor and semitrailer jackknife.
9. Check the semitrailer brake shoe linings (1, [Figure 4-17](#)) for lining thickness. Brake shoe lining should be replaced if excessively worn.



**Figure 4-17 – Brake Shoe Lining Inspection**



