



Bumper Hitch Dump Trailer Owner's Manual



Table of Contents

Section 1 – Introduction and Warranty	1-1
A Word from the Brazos Trailer Manufacturing Team	1-1
Warranty Policy	1-2
Introduction.....	1-6
Owner Responsibilities	1-6
Important Numbers and Warning Labels.....	1-6
Warning Labels	1-6
Warranty Registration	1-6
Vehicle Identification Number	1-6
General Information	1-7
Section 2 – Safety	2-1
Safety Introduction.....	2-1
Safety Precautions.....	2-1
Major Hazards.....	2-2
Improper sizing of trailer to tow vehicle	2-2
Driving too fast	2-2
Adjust driving when towing a trailer	2-2
Trailer not properly coupled to hitch.....	2-2
Proper use of safety chains	2-3
Proper connection of the breakaway brake lanyard.....	2-3
Matching trailer and hitch.....	2-3
Worn tires, loose wheels and lug nuts	2-3
Improper loading.....	2-4
Shifting cargo.....	2-4
Inappropriate cargo.....	2-5
Inoperable Brakes or Lights	2-5
Trailer modifications.....	2-5
Dump trailer hazards	2-5
Trailer towing recommendations	2-6
Safe trailer towing guidelines	2-6
Safety warning labels	2-7
Reporting safety defects	2-8

Section 3 – Bumper Hitch Dump Trailer Orientation, Pre-Start Inspection and Operation

3-1
Pre-Trip Inspection 3-2
Coupling Tow Vehicle to Dump trailer 3-4
 Dump trailer operation 3-6
 Loading and Unloading Operations 3-6
 Dump Trailer Hazards 3-7
 Bulk Loads 3-7
 Fixed Loads 3-12
 Ramp Installation and Use 3-13
 Bulk Load 3-14
Daily Maintenance 3-15

Section 4 – Routine Service and Maintenance 4-1

Daily Maintenance Procedures 4-2
Weekly/Monthly Maintenance Procedures 4-5
Annual/Seasonal Maintenance Procedures 4-8

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. As an example, we are using AR450 steel in the bed of our dump style trailers. AR450 is a steel product with an impressive surface hardness. This steel has been specifically designed for use in rugged environments and applications, which promotes longevity in our trailers. 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 bumper hitch dump trailer 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 bumper hitch dump trailer, 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 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 tag is located adjacent to the front storage box (Figure 1-1). This 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 information on this tag for any warranty questions or future transactions.




		MFD BY:	
		BRAZOS TRAILER MANUFACTURING	
		22488 I-20 Frontage Rd. P.O. Box 398	
		Wills Point, TX 75169 Edgewood TX 75117	
		430-540-3400 www.Brazostrailers.com	
DATE	<input type="text"/>	GVWR & GAWR BASED ON:	
GVWR	<input type="text"/>	TIRES	<input type="text"/>
GAWR	<input type="text"/>	RIMS	<input type="text"/>
MODEL	<input type="text"/>	COLD TIRES PSI	<input type="text"/>
VIN	<input type="text"/>		
<small>THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS (FMVSS) IN EFFECT ON THE DATE OF MANUFACTURING SHOWN ABOVE.</small>			

Figure 1-1 – VIN Tag Location

General Information

Operator 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 or 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 and opening the dump gates 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.
- No one under the age of twenty-one (21) should be allowed to operate the trailer.

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 are the responsibility of the owner and/or operator of the trailer. 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.

DANGER

- **USE OF AN UNDER-RATED HITCH, BALL OR TOW VEHICLE CAN RESULT IN LOSS OF TRAILER CONTROL LEADING TO DEATH OR SERIOUS INJURY.**
- **MAKE CERTAIN YOUR HITCH AND TOW VEHICLE ARE RATED FOR YOUR TRAILER.**
- **MAKE SURE THE HITCH BALL IS THE PROPER SIZE FOR THE TRAILER HITCH.**

CAUTION

The Brazos Trailers bumper hitch dump trailer uses electric brakes that require a brake control system in the tow vehicle. If a brake controller is not used, full trailer braking will be applied whenever the tow vehicle brakes are applied, which could result in loss of trailer control.

Major Hazards

Loss of control of the trailer or trailer/tow vehicle combination can result in death or serious injury. The most common causes for loss of control are:

- Improper sizing the trailer for the tow vehicle.
- Incorrect hitch ball size.
- Excessive Speed: Driving too fast for the conditions.
- Improper braking and steering under sway conditions
- Overloading and/or improper weight distribution.
- Not keeping wheel lug nuts tight.
- Failure to adjust driving behavior when towing a trailer.
- Not maintaining proper tire pressure
- Improper or mis-coupling of the trailer to the hitch.

Improper sizing of trailer to tow vehicle

Trailers that weigh too much for the tow vehicle can cause stability problems, which can lead to death or serious injury. The additional strain put on the engine and drive-train may lead to serious tow vehicle maintenance problems.

Do not exceed the maximum towing capacity of your tow vehicle. The towing capacity of your tow vehicle, in terms of maximum Gross Trailer Weight (GTW) and maximum Gross Combined Weight Rating (GCWR) can be found in the tow vehicle Owner's Manual.

Driving too fast

WARNING

Driving too fast for conditions can result in loss of control and cause death or serious injury. Drive slower when towing a trailer.

With ideal road conditions, the maximum recommended speed for safely towing a bumper hitch trailer is 55 mph. Driving too fast can cause the trailer to sway, increasing the possibility for loss of control. The higher speeds may also cause your tires to overheat, increasing the possibility of a blowout.

Adjust driving when towing a trailer

When towing a trailer, there will be decreased acceleration, increased stopping distance, and increased turning radius. The trailer will change the handling characteristics of the

tow vehicle, making it more sensitive to steering inputs and more likely to be pushed around in windy conditions or when being passed by large vehicles. In addition, the combination will need a longer distance to pass, due to slower acceleration and increased length. With this in mind:

- If the trailer begins to sway, reduce vehicle speed and steer as little as possible to stay on the road. Use small “trim-like” steering adjustments. Do not attempt to steer out of the sway, which will only make it worse.
- Do not apply the tow vehicle brakes to correct trailer swaying. On the other hand, application of the trailer brakes alone will tend to straighten out the combination, especially when going downhill.
- Check rearview mirrors frequently to observe trailer and traffic.
- Be alert for slippery conditions. A tow vehicle/trailer combination are more likely to be affected by slippery road surfaces than driving the tow vehicle without a trailer.
- Anticipate the trailer “swaying.” Swaying can be caused by an incorrectly loaded trailer i.e.: too much weight behind the trailer axles, excessive steering, wind gusts, roadway edges, or by the trailer reaction to the pressure wave created by passing trucks and busses.
- Use lower gear when driving down steep or long grades. Use the engine and transmission as a brake as much as possible. Do not ride the brakes, as they can overheat and become ineffective.

Trailer not properly coupled to hitch

WARNING

- Proper selection and condition of the coupler and hitch are essential to safely towing a trailer.
- A loss of coupling may result in death or serious injury.
- Hitch size must match coupler size.
- Be sure hitch load rating is equal to or greater than load rating of the coupler.
- Be sure hitch components are tight before coupling trailer to tow vehicle.
- Observe hitch for wear, corrosion and cracks before coupling. Replace worn, corroded or cracked hitch components before coupling trailer to tow vehicle.
- An improperly coupled trailer can result in death or serious injury.

- Do not move the trailer until:
 - Coupler is secured and locked to hitch.
 - Safety chains are secured to tow vehicle.
 - Trailer jack is fully retracted.
 - Trailer brakes are checked.
 - Tires and wheels are checked.
 - Breakaway brake switch lanyard is connected to tow vehicle.
 - The trailer lights are connected and checked.
 - Load is secured to trailer.

It is critical that the trailer be securely coupled to the hitch, and that the safety chains and emergency breakaway brake lanyard are correctly attached. Uncoupling while traveling may result in death or serious injury to you and to others.

Proper use of safety chains

WARNING

- Improper rigging of the safety chains can result in loss of control of the trailer and tow vehicle, leading to death or serious injury, if the trailer uncouples from the tow vehicle.
- Cross chains underneath hitch and coupler with enough slack to permit turning and to hold tongue up if the trailer comes loose.
- Fasten chains to frame of tow vehicle. Do not fasten chains to any part of the hitch unless the hitch has holes or loops specifically for that purpose.

Safety chains are provided so that control of the trailer can be maintained if your trailer comes loose from the hitch.

Proper connection of the breakaway brake lanyard

WARNING

- An ineffective or inoperative breakaway brake system can result in a runaway trailer, leading to death or serious injury if the coupler or hitch fails.
- Breakaway lanyard must be connected to the tow vehicle, NOT to any part of the hitch.
- Before towing trailer, test the function of the breakaway brake system. If the breakaway brake system is not working, do not tow the trailer. Have it serviced or repaired.

The Brazos bumper hitch dump trailer is equipped with a breakaway brake system that can apply the brakes on the trailer if it comes loose from the hitch. The breakaway brake system, including battery, must be in good condition and properly rigged to be effective.

Matching trailer and hitch

DANGER

- BE SURE HITCH AND TOW VEHICLE ARE RATED FOR THE GROSS VEHICLE WEIGHT RATING (GVWR) OF YOUR TRAILER.
- USE OF A HITCH WITH A LOAD RATING LESS THAN THE LOAD RATING OF THE TRAILER CAN RESULT IN LOSS OF TRAILER CONTROL AND MAY LEAD TO DEATH OR SERIOUS INJURY.
- USE OF A TOW VEHICLE WITH A TOWING CAPACITY LESS THAN THE LOAD RATING OF THE TRAILER CAN RESULT IN LOSS OF CONTROL, AND MAY LEAD TO DEATH OR SERIOUS INJURY.

Worn tires, loose wheels and lug nuts

Inspect all trailer tires before each tow. If a tire has a bald spot, bulge, cut, cracks, or is showing any cords, replace the tire before towing.

If a tire has uneven tread wear, take the trailer to a trailer service center for diagnosis. Uneven tread wear can be caused by tire imbalance, axle misalignment or incorrect inflation. Tires with too little tread will not provide adequate frictional forces on wet roadways and can result in loss of control, leading to death or serious injury.

Improper tire pressure causes increased tire wear and may reduce trailer stability, which can result in a tire blowout or possible loss of control. Therefore, before each tow you must also check the tire pressure. The proper tire pressure is listed on the Certification / VIN label, normally mounted on the front left side of the trailer, and should be checked when tires are cold. Allow 3 hours cool-down after driving as much as 1 mile at 40 mph before checking tire pressure.

WARNING

- Inflate tires to pressure stated on the Certification/ VIN label. Improper tire pressure may cause unstable trailer. Blowout and loss of control may occur. Death or serious injury can result. Make sure of proper tire pressure before towing trailer.
- Metal creep between the wheel rim and wheel nuts or bolts may cause rim to loosen. Death or injury can occur if wheel comes off.
- Tighten lug nuts or bolts before each tow. Wheel nuts or bolts are prone to loosen after being first assembled. Death or serious injury can result.
- Check wheel nuts or bolts for tightness on a new trailer, and after re-mounting a wheel at 10, 25 and 50 miles.

Brazos Belly Bumper Hitch

- **Inadequate wheel nut or bolt torque can cause a wheel to separate from the trailer, leading to death or serious injury. Verify wheel nuts or bolts are tight before each tow.**

The tightness of the wheel nuts or bolts is very important for keeping the wheels properly seated to the hub. Before each tow, check to make sure they are tight. The proper tightness (torque) for wheel nuts or bolts and tightening sequence is listed in the Inspection, Service and Maintenance section of this manual. Use a torque wrench to tighten the lug nuts and use the crisscross star pattern sequence. Improper tightening of the lug nuts voids the axle warranty.

Wheel nuts or bolts are also prone to loosen after first being assembled. When driving a new trailer (or after wheels have been remounted), check to make sure they are tight after the first 10, 25 and 50 miles of driving and before each tow thereafter. Failure to perform this check can result in a wheel separating from the trailer and a crash, leading to death or serious injury.

Improper loading

WARNING

- **An overloaded trailer can result in failure or loss of control of the trailer, leading to death or serious injury.**
- **Never load a trailer so that the weight on any tire exceeds its rating.**
- **Never exceed the trailer Gross Vehicle Weight Rating (GVWR) or axle Gross Axle Weight Rating (GAWR).**

The total weight of the load you put on the trailer, plus the empty weight of the trailer itself, must not exceed the trailer's Gross Vehicle Weight Rating (GVWR). If you do not know the empty weight of the trailer plus the cargo weight, you must weigh the loaded trailer at a commercial scale. In addition, you must distribute the load in the trailer such that the load on any axle does not exceed the Gross Axle Weight Rating (GAWR).

If your trailer is equipped with a Tire & Loading Information Placard, mounted next to the Certification / VIN label, the cargo capacity weight stated on that placard is only a close estimate. The GVWR and GAWR are listed on the Certification / VIN label normally located on the front left side of the trailer.

WARNING

- **Improper tongue weight (load distribution) can result in loss of control of the trailer, leading to death or serious injury.**
- **Make certain that tongue weight is within the allowable range.**
- **A flowable load must be evenly distributed throughout the body.**
- **Distribute the load evenly, right and left.**
- **Keep the center of gravity low.**
- **Distribute the load front-to-rear to provide proper tongue weight (see chart).**

Improper front / rear load distribution can lead to an unstable trailer or poor tow vehicle handling. Poor trailer stability results from tongue weights that are too low, and poor tow vehicle stability results from tongue weights that are too high. Refer to the "Loading and Unloading" section for more information.

The trailer will have the proper weight distribution if the load is evenly distributed in the dump body. For non-flowable loads, i.e.: demolition bubble, etc., locate the load such as to provide the proper tongue weight. After loading, be sure to check that none of the axles are overloaded. Uneven left / right load distribution can cause tire, wheel, axle or structural failure. Be sure your trailer is also evenly loaded left / right. Towing stability depends on keeping the center of gravity as low as possible.

Shifting cargo

WARNING

- **A shifting load can result in failure, or to loss of control of the trailer, and can lead to death or serious injury.**
- **You must tie down all loads with proper sized fasteners, chains, straps, etc. to prevent the load from shifting while towing.**
- **If a door opens, your cargo may be ejected onto the road, resulting in death or serious injury to other drivers.**
- **Always secure door latch after closing. Place a linchpin in the catch.**

Since the trailer "ride" can be bumpy and rough, you must secure the cargo so that it does not shift while the trailer is being towed.

Brazos Trailers bumper hitch trailer is equipped with a catch that has a hole for a linchpin, use a linchpin to prevent the door latch from opening.

Inappropriate cargo

WARNING

- Do not transport people inside or on your trailer. Besides putting their lives at risk, the transport of people in or on a trailer is illegal.
- Do not transport flammable, explosive, poisonous or other dangerous materials in your trailer. The exception is fuel in the tank of a vehicle or equipment being hauled.

Inoperable Brakes or Lights

WARNING

Improper electrical connection between the tow vehicle and the trailer will result in inoperable lights and electric brakes, and can lead to collision.

Before each tow:

- Check that the electric brakes work by operating the brake controller inside the tow vehicle.
- Check that all lights and turn signals work.

Brazos Trailers bumper hitch trailer has electric brakes. The tow vehicle must have an electric brake controller that sends power to the trailer brakes. Before towing the trailer, you must operate the brake controller while trying to pull the trailer in order to confirm that the electric brakes operate. While towing the trailer at less than 5 mph, manually operate the electric brake controller in the tow vehicle cab. You should feel the operation of the trailer brakes.

You must provide mirrors that allow you to safely observe approaching traffic. Standard mirrors usually do not provide adequate visibility for viewing traffic to the sides and rear a towed trailer.

Trailer modifications

Modification of the trailer structure or alteration of your trailer can make the trailer unsafe and will void all warranty options. Before making any alteration to the trailer, contact your dealer or Brazos Trailers and describe the alteration you are contemplating.

Dump trailer hazards

DANGER

- NEVER ALTER OR SUBSTITUTE ANY HYDRAULIC SYSTEM COMPONENT. DEATH OR SERIOUS INJURY MAY RESULT.
- AN ALTERED OR COMPONENT SUBSTITUTED HYDRAULIC SYSTEM MAY MALFUNCTION, RESULTING IN THE DUMP BODY FALLING WITHOUT WARNING.
- NEVER ALTER OR SUBSTITUTE ANY HYDRAULIC SYSTEM COMPONENT.
- ELECTROCUTION HAZARD.
 - DUMP BODY COMING NEAR OR CONTACTING POWER LINES CAN CAUSE ELECTROCUTION.
 - ELECTROCUTION CAN OCCUR WITHOUT CONTACT.
 - VERIFY THERE ARE NO OVERHEAD POWER LINES OVER OR NEAR THE TRAILER BEFORE RAISING DUMP BODY.

WARNING

- A soft and/or uneven surface may cause tow vehicle and trailer to tip over when dump body is raised.
- Raise dump body ONLY if tow vehicle and trailer are both on a firm and level surface.
- An overloaded trailer or improperly distributed load can result in death or serious injury.
- An overloaded trailer can cause hydraulic system to malfunction, resulting in dump body falling.
- A load that is improperly distributed in the trailer can result in the trailer tipping over when the dump body is raised.

A dump trailer is specifically designed for hauling cargo that is to be dumped. A dump trailer is not designed for transporting livestock and/or horses. The major hazards associated with dump trailers are:

- Trailer contacting or coming near overhead power lines when body is raised.
- Overloading.
- Improper weight distribution; both side to side and front to rear.
- Modifying or altering dump controls.
- Not dumping from a solid and level foundation.
- Not fully opening rear doors when dumping.
- Getting under a raised dump body.
- Not using, or improperly using the body prop.

Brazos Belly Bumper Hitch

- Modifying or altering hydraulic components.
- Jerking the trailer, or hydraulics, to loosen the load.

Trailer towing recommendations

Driving a vehicle with a trailer in tow is vastly different from driving the same vehicle without a trailer in tow. Acceleration, maneuverability and braking are all diminished with a trailer in tow. It takes longer to get up to speed; you need more room to turn and pass, and more distance to stop when towing a trailer.

Before towing a loaded trailer for the first time, spend time adjusting to the different feel and maneuverability of the tow vehicle with a loaded trailer. Because of the significant differences in all aspects of maneuverability when towing a trailer, the hazards and risks of injury are also much greater than when driving without a trailer.

It is the vehicle drivers responsible for keeping the vehicle and trailer in control, and for all the damage that might be caused if control of the tow vehicle and trailer is lost. It is suggested to:

- Find an open area with little or no traffic for the first practice.
- Before towing the trailer, follow all of the instructions for inspection, testing, loading and coupling.
- Make sure to adjust the mirrors so that the trailer and the area around the rear of the trailer can be seen.
- Drive slowly at first, 5 mph or so, and turn the wheel to get the feel of how the tow vehicle and trailer combination responds.
- Make some right and left hand turns. Watch in your side mirrors to see how the trailer follows the tow vehicle. Turning with a trailer attached requires more room.
- Stop the rig a few times from speeds no greater than 10 mph. The Brazos Trailers bumper hitch dump trailer is equipped electric with brakes, controlled by controls in the tow vehicle. When properly adjusted, the trailer brakes will come on just before the tow vehicle brakes.
- Practice backing up the tow vehicle with a trailer attached. Take it slow. Before backing up, get out of the tow vehicle and look behind the trailer to make sure that there are no obstacles.
- Some drivers place their hands at the bottom of the steering wheel, and while the tow vehicle is in reverse, “think” of the hands as being on the top of the wheel. When the hands move to the right (counter-clockwise, as you would do to turn the tow vehicle to the left when moving forward), the rear of the trailer moves to the right. Rotating the steering wheel clockwise with your hands at the bottom of the wheel will move the rear of the trailer to the

left, while backing up. Be careful not to allow the trailer to turn too much, because it will hit the rear of the tow vehicle. To straighten the rig, either pull forward, or turn the steering wheel in the opposite direction.

Safe trailer towing guidelines

- Before towing, check hitch coupling, safety chain, brakes, tire condition and air pressure, wheels and lights.
- Check the lug nuts or bolts for tightness.
- Recheck the load tie downs to make sure the load will not shift during towing. If using the tarp, make sure that it is secured in the closed position and tightened to prevent load loss.
- Check hitch coupler tightness after towing 50 miles.
- Adjust the brake controller to engage the trailer brakes before the tow vehicle brakes. Follow the brake controller manufacturer’s literature.
- Use the vehicle mirrors to verify that there’s room to change lanes or pull into traffic.
- Use the turn signals well in advance.
- Allow plenty of stopping space for the trailer and tow vehicle.
- Use lower gears for climbing and descending grades.
- Do not ride the brakes while descending grades; they may get so hot that they stop working. Then you will potentially have a runaway tow vehicle and trailer.
- Do not apply the tow vehicle brakes to correct extreme trailer swaying. Instead, lightly apply the trailer brakes with the hand controller.
- Make regular stops, about once each hour. Confirm that:
 - The coupler is secure to the hitch and is locked.
 - Electrical connectors are made.
 - There is appropriate slack in safety chains.
 - There is appropriate slack in breakaway lanyard.
 - The tires are not visibly low on pressure.
 - The cargo is secure and in good condition.
- Slow down for bumps in the road.
- Do not brake while in a curve unless absolutely necessary. Instead, slow down before entering the curve.
- Do not drive so fast that the trailer begins to sway due to speed. Generally never drive faster than 55 m.p.h.
- Allow plenty of room for passing. A rule of thumb is that the passing distance with a trailer is 4 times the passing distance without a trailer.

Safety warning labels

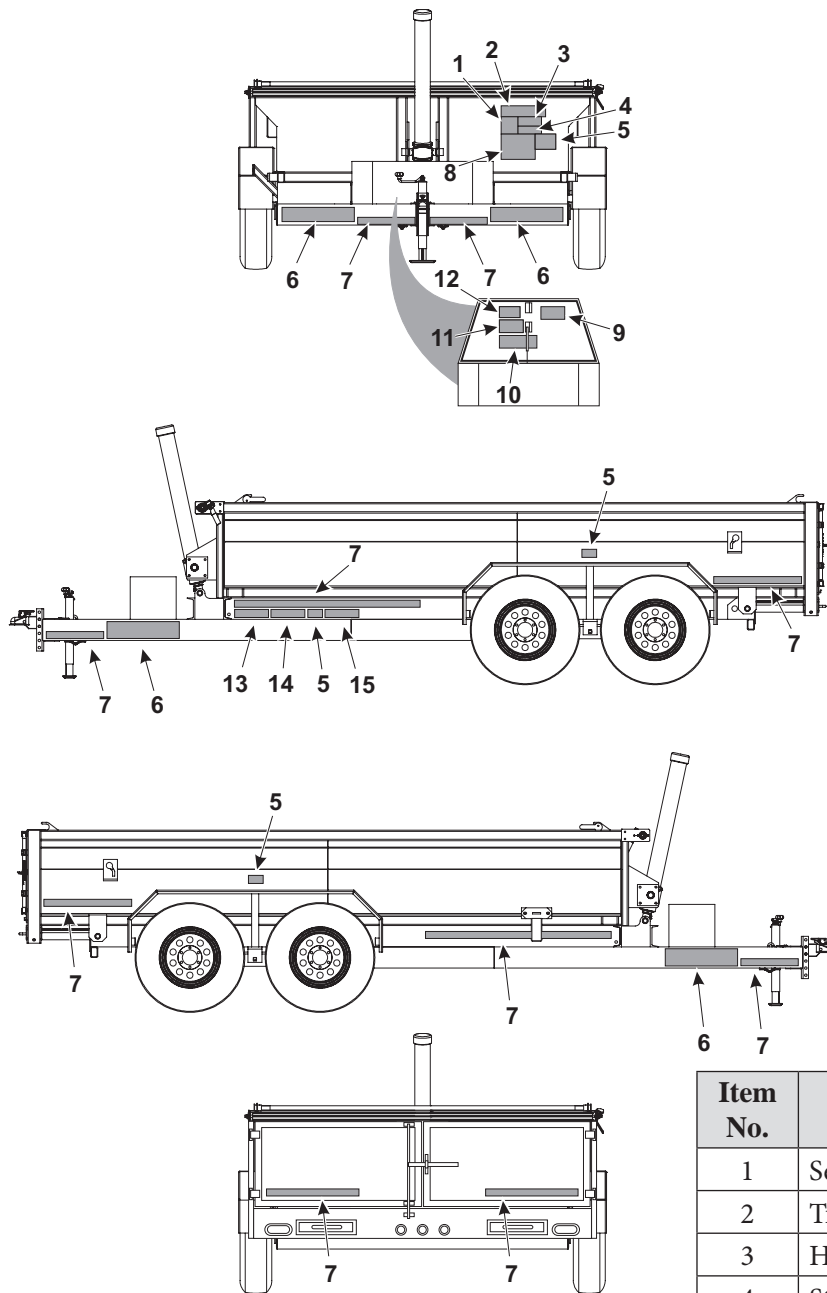


Figure 2-2 – Safety Decal Locations

Item No.	Description
1	Secure gate Caution decal
2	Trailer misuse Warning decal
3	Heavy door Danger decal
4	Stand clear of cables Warning decal
5	Check wheel lugs Warning decal
6	Brazos Trailers decal
7	Conspicuity decal
8	Do not go under raised trailer decal
9	Penetrating fluid injury Warning decal
10	Failure to maintain batter Caution decal
11	Trailer condition check Warning decal
12	Read operator's manual Warning decal
13	Before towing checklist Caution decal
14	Trailer misuse Warning decal
15	Overload hazard Warning decal

Brazos Belly Bumper Hitch

Reporting safety defects

If you believe that your vehicle has a defect that could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Brazos Trailers, Inc.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); or go to <http://www.safercar.gov>; or write to:

Administrator, NHTSA,
1200 New Jersey SE,
Washington, DC 20590

You can also obtain other information about motor vehicle safety from <http://www.safercar.gov>.

Section 3 – Bumper Hitch Dump Trailer Orientation, Pre-Start Inspection and Operation

NOTE: All view references are made from the operator’s position, with the operator seated in the tow vehicle, facing forward.

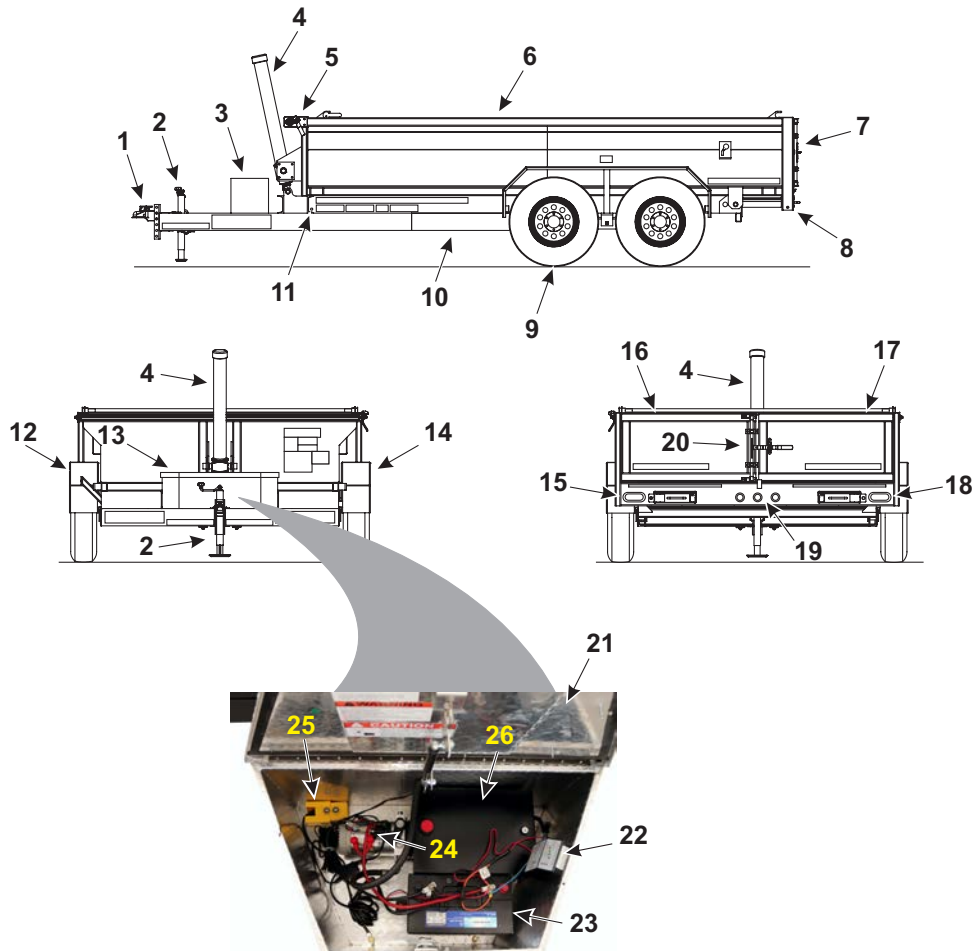


Figure 3-1 – Bumper Hitch Dump Trailer Orientation Views

Item No.	Description
1	Adjustable hitch assembly
2	Trailer Jack
3	Hydraulic systems cabinet
4	Dump hoist cylinder
5	Tarp
6	Dump body
7	Tailgate
8	Rear marker light
9	Tandem wheel assembly
10	Trailer frame
11	Front marker light
12	Right fender
13	Hydraulic systems cabinet

Item No.	Description
14	Left fender
15	Left turn signal
16	Left trailer gate
17	Right trailer gate
18	Right turn signal
19	Rear marker lights
20	Trailer gate latch assembly
21	Solar cell (battery charging) on cabinet lid
22	110 VAC battery charger connection
23	Battery
24	Hydraulic pump
25	Hydraulic system control pendant
26	Hydraulic oil tank

 **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 tow vehicle and dump trailer before beginning operation, during all trips, and an end of day inspection.

 **WARNING**

When inspecting a trailer, hookups, and/or repairs, be careful of your positioning. The trailer may move unexpectedly causing death or severe injury.

NOTICE

- It is the driver's responsibility to make sure that the condition of a tow vehicle and dump trailer is safe for operation. 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.

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 severe 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 tow vehicle lights and make sure all trailer marker lights are clean and working (1, 2, 4, [Figure 3-2](#)).



Figure 3-2– Trailer Lights

7. Make sure the rear trailer doors are closed and securely latched.
8. After the trailer has been securely attached to the tow vehicle, make sure the support jack and landing pad has been fully retracted into the travel position and the crank handle has been stowed securely before moving the trailer.
9. Make sure that both trailer ramps (2, 3, [Figure 3-3](#)) are properly stored and each one is secured with a quick clip (1, [Figure 3-3](#)). Make sure the ring on the quick clip is in the downward locked position.

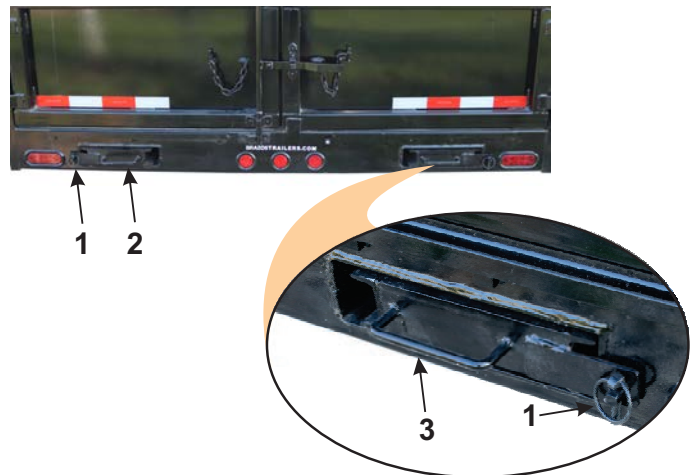


Figure 3-3 – Trailer Ramps Stored and Secured

Coupling Tow Vehicle to Dump trailer

Knowing how to couple and uncouple the tow vehicle to the dump trailer correctly is basic to safe operation of combination vehicles. The general coupling and uncoupling procedures are listed below.

DANGER

- **INCORRECT COUPLING AND UNCOUPLING OF THE TOW VEHICLE TO OR FROM THE DUMP TRAILER CAN RESULT IN ACCIDENTS CAUSING DEATH OR SERIOUS INJURY.**
- **USE OF A HITCH WITH A LOAD RATING LESS THAN THE LOAD RATING OF THE TRAILER CAN LEAD TO LOSS OF TRAILER CONTROL AND MAY LEAD TO DEATH OR SERIOUS INJURY.**
- **USE OF A TOW VEHICLE WITH A TOWING CAPACITY LESS THAN THE LOAD RATING OF THE TRAILER CAN LEAD TO LOSS OF TRAILER CONTROL AND MAY LEAD TO DEATH OR SERIOUS INJURY.**

1. Inspect the tow vehicle hitch assembly.
Check the tow vehicle hitch assembly:
 - Make sure that there are no damaged or missing parts.
 - Inspect that the hitch receiver (3, [Figure 3-4](#)) mounting to the tow vehicle is secure, with no visible cracks in the frame, etc.

WARNING

A loose hitch ball or hitch ball nut can result in the trailer uncoupling from the tow vehicle, leading to death or serious injury.

- Inspect the hitch ball (1, [Figure 3-4](#)) to make sure it is tight and does not show any signs of wear or cracking and that the hitch ball or the hitch ball nut do not move.
- Check that the ball mount (2, [Figure 3-4](#)) has been installed securely into the hitch receiver.
- Make sure that the ball mount lock pin (4, [Figure 3-4](#)) has been installed and is properly securing the ball mount to the hitch assembly.

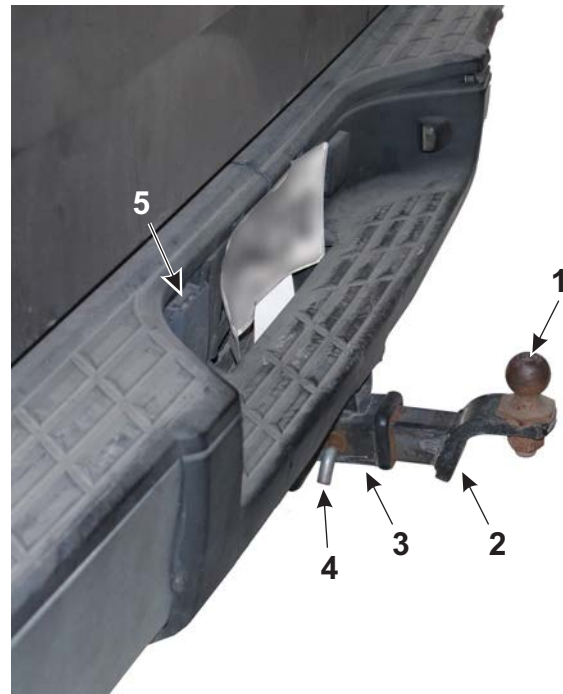


Figure 3-4 – Tow Vehicle Hitch Assembly

2. Lubricate the hitch ball with a light coating of automotive bearing grease.
3. Remove the coupler safety latch pin and open the coupler lock (1, [Figure 3-5](#)). **NOTE:** When the coupler lock has been opened, the coupler will drop onto the hitch ball.
4. Carefully back the tow vehicle, aligning the hitch ball (3, [Figure 3-5](#)) with and under the coupler (2, [Figure 3-5](#)).

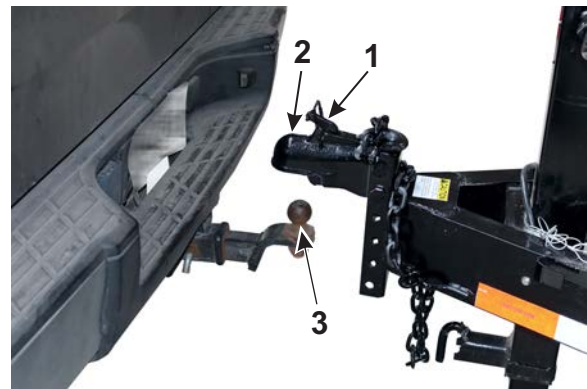


Figure 3-5 – Align Hitch Receiver and Hitch Ball

CAUTION

Crush Hazard. Keep hands and fingers from the between the hitch ball and coupler while the trailer is being lowered.

5. Using the trailer jack, slowly lower the coupler (1, [Figure 3-6](#)) onto the hitch ball (2, [Figure 3-6](#)),

allowing the hitch assembly to take the full trailer tongue weight.

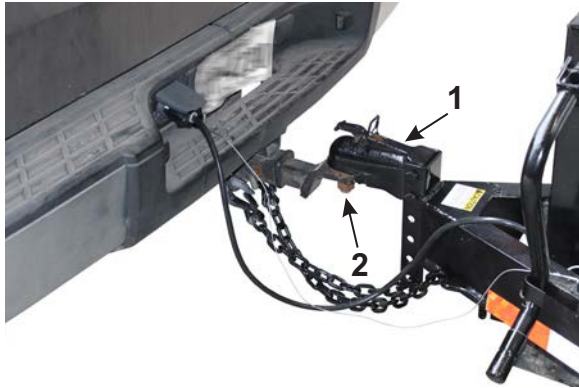


Figure 3-6 – Trailer on Hitch

⚠ WARNING

If the trailer hitch cannot be securely locked to the hitch ball, do not use the dump trailer.

6. Close and secure the coupler hitch lock (1, Figure 3-7) with the quick clip (2, Figure 3-7).



Figure 3-7 – Locked Coupler and Quick Clip

7. Using the trailer jack, slowly raise the trailer slightly to confirm that the hitch is properly locked to the hitch ball.
8. Lower the trailer jack until the entire tongue weight of the trailer is supported by the hitch. Continue raising the jack to its fully retracted position. **NOTE:** It may be necessary to pull the trailer jack lock pin to fully raise the landing pad to the transport position.

⚠ WARNING

- Inspect trailer safety chains and hooks for signs of wear or damage. Repair or replace any damaged items. Trailer uncoupling from the tow vehicle can lead to death or serious injury.
- Do Not connect the trailer safety chains to any removeable part of the hitch assembly, only to the frame or holes in the hitch assembly designed for the safety hooks.

9. Connect trailer safety chains to the tow vehicle hitch.
 - a. Inspect the safety chains and hooks for signs of wear or damage. If any is noted, replace or repair the damaged items before using the dump trailer.
 - b. Crisscross the safety chains (1, Figure 3-8) under the coupler and firmly connect them to the tow vehicle. If possible, use the holes provided in the hitch assembly (2, Figure 3-8) to connect and secure the safety hooks.
 - c. Make sure the chains are loose enough to allow for a tight turn and to hold the tongue up if the trailer becomes loose, but not enough slack that they to drag on the road surface.



Figure 3-8 – Attach Trailer Safety Chains

⚠ WARNING

- Make sure to connect the electrical cable to the tow vehicle.
- Check to make sure all trailer lights and turn signals are functional.

Brazos Belly Bumper Hitch

10. Connect the trailers electrical cable to the tow vehicle.
 - a. Connect the trailer light cable to the tow vehicle's connector (1, Figure 3-9).
 - b. Turn on the tow vehicles lights and with an assistant, confirm that all of the trailer lights are working properly, and that the brake and turn signals are also working properly.

NOTICE

The trailer brakes are electric brakes. The electrical cable connection will also connect the trailer brake controller installed on the tow vehicle to the trailer brakes. Follow the trailer brake controller's operating instructions to set and test the trailer brakes.



Figure 3-9– Electrical Connection

WARNING

Loss of trailer control from the tow vehicle can lead to death or serious injury. Attach the emergency brake system breakaway lanyard to the tow vehicle body.

11. Attach breakaway brake lanyard to the tow vehicle. Brazos Trailers bumper hitch dump trailer has a breakaway brake system. If the hitch coupling fails and the trailer breaks loose from the tow vehicle, the brake system lanyard will pull away from the tow vehicle, applying the trailer brakes automatically, bringing the trailer to a controlled stop.
 - a. Connect the breakaway lanyard (1, Figure 3-10) to the tow vehicle body, but not to the hitch assembly, or any moveable parts, such as the trailer chains or electrical cable.
 - b. Leave enough slack in the lanyard so that it will not be pulled away from the trailer when turning.



Figure 3-10 – Breakaway Brake Lanyard

Dump trailer operation

Loading and Unloading Operations

Improper trailer loading causes many accidents and deaths. To safely load a trailer, you must consider:

- Overall load weight.
- Load weight distribution.
- Proper tongue weight.
- Securing the load properly.

WARNING

Do not transport people inside or on your trailer. Besides putting their lives at risk, the transport of people in or on a trailer is illegal.

To determine that you have loaded the trailer within its rating, you must consider the distribution of weight, as well as the total weight of the trailer and its contents. The trailer axles carry most of the total weight of the trailer and its contents (Gross Vehicle Weight, or “GVW”). The remainder of the total weight is carried by the tow vehicle hitch.

It is essential for safe towing that the trailer tongue and tow vehicle hitch carry the proper amount of the loaded trailer weight, otherwise the trailer can develop an undesirable sway at towing speeds, or the rear of the towing vehicle can be overloaded.

The load distribution must be done so that no component part of the trailer is loaded beyond its rating. It is important to consider the rating of the tires, wheels and axles. For tandem axle trailers, make sure that the front-to-rear load distribution does not result in overloading either axle.

Towing stability also depends on keeping the center of gravity as low as possible. Load heavy items on the trailer floor and over the axles. When loading additional items, be sure to maintain even side-to-side weight distribution and proper tongue weight. The total weight of the trailer

Section 3 – Bumper Hitch Dump Trailer Orientation, Pre-Start Inspection and Operation

and its contents must never exceed the total weight rating of the trailer (Gross Vehicle Weight Rating, or “GVWR”).

Do not transport people, containers of hazardous substances, or flammable liquids. The exception is fuel in the tank of vehicles or equipment being hauled.

Dump Trailer Hazards

DANGER

- **NEVER ALTER OR SUBSTITUTE ANY HYDRAULIC SYSTEM COMPONENT. DEATH OR SERIOUS INJURY MAY RESULT.**
- **AN ALTERED OR SUBSTITUTED COMPONENT IN THE HYDRAULIC SYSTEM MAY CAUSE A MALFUNCTION, RESULTING IN THE RAISED DUMP BODY FALLING WITHOUT WARNING.**

A dump trailer is specifically designed for hauling cargo that is to be dumped. A dump trailer is not designed for transporting livestock and/or horses. The major hazards associated with dump trailers are:

- Overloading.
- Improper weight distribution; both side to side and front to back.
- Modifying or altering dump controls.
- Not dumping from a solid and level location.
- Not fully opening rear doors when dumping.
- Getting under a raised dump body.
- Not using, or improperly using the body prop.
- Modifying or altering hydraulic components.
- Jerking the trailer, or hydraulics, to loosen load.
- Trailer contacting or coming near overhead power lines when the body is raised.

WARNING

- **A soft and/or uneven surface may cause tow vehicle and trailer to tip over when dump body is raised.**
- **Make sure that the dump trailer and tow vehicle are in as straight a line as possible before dumping. If the dump trailer is at an angle to the tow vehicle when dumping, an unstable condition could result in the trailer tipping over.**
- **Raise dump body ONLY if tow vehicle and trailer are both on a firm and level surface.**
- **An overloaded trailer or improperly distributed load can result in death or serious injury.**
- **An overloaded trailer can cause hydraulic system to malfunction, resulting in the dump body falling.**

- **A load that is improperly distributed in the trailer can result in the trailer tipping over when the dump body is raised.**
- **Do not exceed the trailer Gross Vehicle Weight Rating (GVWR) or an axle Gross Axle Weight Rating (GAWR).**
- **Do not load a trailer so that the weight on any tire or axle exceeds its rating.**

The Brazos Trailers Bumper Hitch Dump trailer can be used to transport bulk loads, such as dirt, stone, gravel, etc. This trailer can also be used to transport a “fixed” load, such as a skid steer loader, mini-excavator, lawn mowers, etc. Each of these load types needs to be handled differently.

Bulk Loads

WARNING

- **Load in the trailer must not exceed capacity and must be distributed evenly.**
- **Trailer must be coupled to tow vehicle before loading or dumping the trailer.**
- **The tow vehicle and trailer are both on a firm level surface.**
- **Make sure the rear trailer doors have been closed and secured before loading bulk materials.**
- **An overloaded trailer or improperly distributed load can result in loss of trailer control that can lead to death or severe injury.**
- **To prevent uncontrolled trailer raising while traveling, disconnect the trailer lift control from the controller.**
- **To prevent uncontrolled trailer raising while traveling, secure the dump body to the trailer frame using the latch hook (1, [Figure 3-11](#)) and chain (2, [Figure 3-11](#)).**

Determine the payload, or cargo capacity, by subtracting the empty weight of the trailer from the GVWR given on the VIN tag. Determine the density of the material to be loaded and dumped so that you will know the approximate amount of material that may be safely loaded, carried, and dumped.

1. Trailer loading
 - a. Couple the trailer to the tow vehicle.
 - b. Park the tow vehicle and trailer on a firm and level surface, and in a straight line. Attempting to load on a soft or uneven surface, or if the trailer is at an angle from the tow vehicle may

Brazos Belly Bumper Hitch

cause the trailer to overturn, which can result in death or severe injury.

- c. Clear the area around the trailer.
- d. Close and latch trailer doors.
- e. Using the chain hook (1, [Figure 3-11](#)) welded to the trailer dump body, make sure the trailer tilt latch chain is secured in the transport position (2, [Figure 3-11](#)). This chain will prevent the trailer dump body from bouncing or raising while in transit.

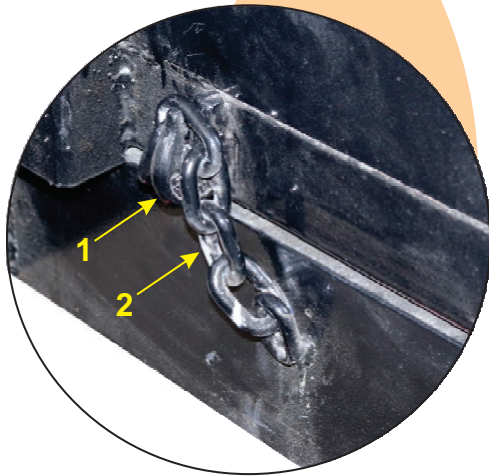


Figure 3-11 – Trailer Dump Body Latch Chain Locked

- f. Use common sense when loading. If you are uncertain of the weight of the material, load a small amount and weigh your trailer. It is much easier to add to a light load than to remove material from an overloaded trailer.
- g. Level (evenly distribute) the load within the trailer from front to back and from side to side (1, [Figure 3-12](#)).

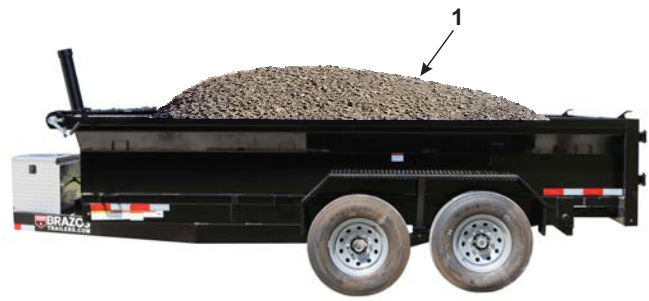


Figure 3-12 – Evenly Loaded Trailer

- h. If the trailer is overloaded, **DO NOT** attempt to raise the dump body. The excess material must be removed by equipment designed for this purpose, or by hand. Raising the trailer will shift the load towards the rear of the trailer, which can cause trailer sway when traveling.
2. Brazos Trailers recommends using the tarp when hauling bulk product.
 - a. Push the tarp crank (1, [Figure 3-13](#)) handle down (2, [Figure 3-13](#)) and rotate 90° from the travel position to the work position.
 - b. Rotate the tarp crank handle lock (3, [Figure 3-13](#)) to the unlocked position.



Figure 3-13 – Tarp in Travel Position

- c. Pull the tarp (4, [Figure 3-13](#)) to the rear of the trailer, stopping just beyond the tarp tension brackets (5, [Figure 3-13](#)).
- d. Move the tarp crank handle lock to the lock position and rotate the tarp crank handle to tighten the tarp over the loaded trailer. When the tarp is properly tightened, continue rotate the tarp crank handle slightly until the crank handle lock falls into position, holding the tarp in the tensioned position.

Section 3 – Bumper Hitch Dump Trailer Orientation, Pre-Start Inspection and Operation

- e. Rotate the tarp crank handle to the travel position when the tarp is in position.
- f. Before dumping the trailer, it is suggested to roll the tarp into the stored position by reversing the steps for extending the tarp.

3. Trailer unloading

DANGER

- A LOWERING OR FALLING DUMP BODY CAN RESULT IN DEATH OR SERIOUS INJURY.
- NEVER ENTER THE AREA UNDER THE DUMP BODY UNLESS THE EMPTY DUMP BODY IS SUPPORTED BY THE BODY PROP.
- THE BODY PROP IS DESIGNED TO SUPPORT AN EMPTY DUMP BODY ONLY.
- NEVER SUPPORT A LOADED DUMP BODY BY THE BODY PROP.
- UNLOAD THE DUMP BODY BEFORE USING BODY PROP.

WARNING

- An overloaded trailer can cause hydraulic system to malfunction, resulting in the dump body falling.
- A load that is improperly distributed in the trailer can result in the trailer tipping over when the dump body is raised.
- Raised dump body can drop or tip over suddenly, causing death or severe injury.
- Make sure the trailer is on level, firm ground, and that the tow vehicle and trailer are in a straight line before dumping.
- Keep others away while dumping.
- Never leave the work area when the dump body is in the raised position.
- Stay at the hydraulic controls until dump body has been fully lowered.
- Lower dump body before moving the trailer.
- If the load does not leave the dump body, lower the dump body and manually free the load.
- Never attempt to free a load from a raised dump body.

CAUTION

- Bulk materials may shift during travel, putting pressure on the rear gates. Use caution and stand to one side to prevent injury when unlocking the rear gates in case the gates pop open.
- Make sure there are no obstructions that would prevent the trailer from raising properly.
 - a. Release the trailer lock chain (2, Figure 3-14) from the dump bed lock hook (1, Figure 3-14) before raising the trailer.

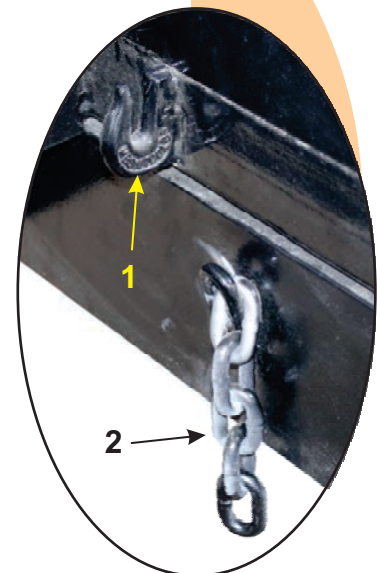


Figure 3-14 – Trailer Dump Body Latch Chain Released

Brazos Belly Bumper Hitch

- b. Release the rear trailer gate lock (1, [Figure 3-15](#)) and open the rear trailer gates. **DO NOT** stand directly behind the gates when releasing the lock.



Figure 3-15 – Rear Gate Lock

- c. Secure both gates in the open position (1, [Figure 3-16](#)) using the door chains (2, [Figure 3-16](#)) and lock brackets (3, [Figure 3-16](#)) on each side of the trailer.

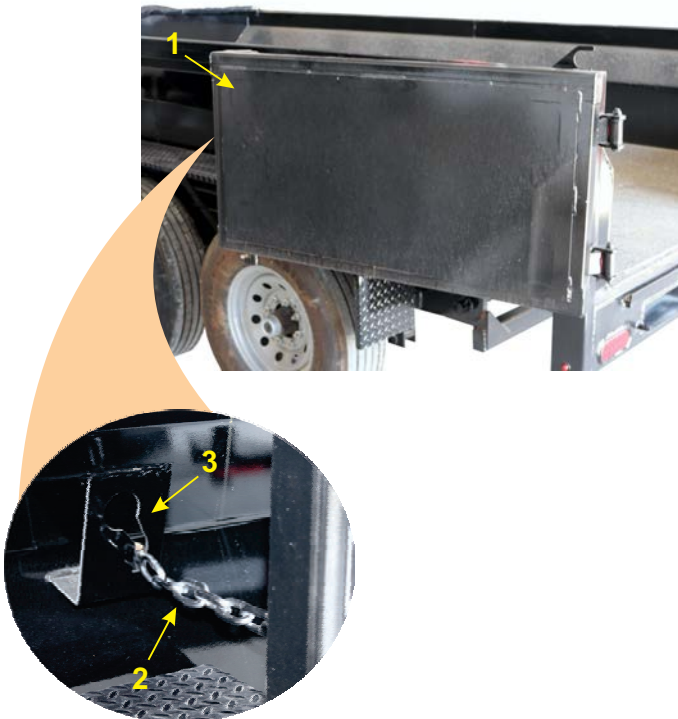


Figure 3-16 – Secure Gate in Open Position

- d. The hydraulic system and battery box are located on the trailer frame at the nose of the trailer. (1, [Figure 3-17](#)).



Figure 3-17 – Battery Box

- e. Open lid latch and raise the battery box lid to access the dump body hydraulic control switch.
- f. Locate the dump body controller (1, [Figure 3-18](#)). While using the dump body controller, position yourself in a safe location clear of the dump body.

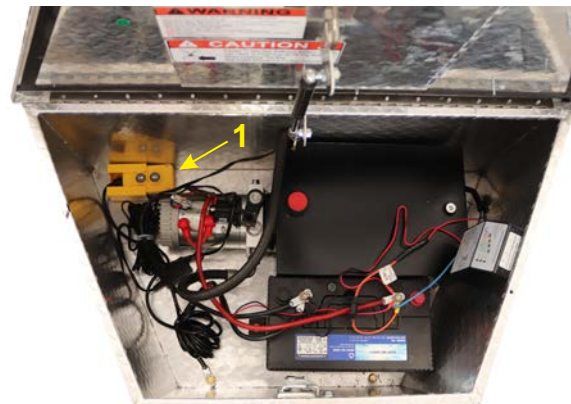


Figure 3-18 – Hydraulic Controller Location

- g. Press and hold UP button (1, [Figure 3-19](#)) on the controller to raise the dump body.

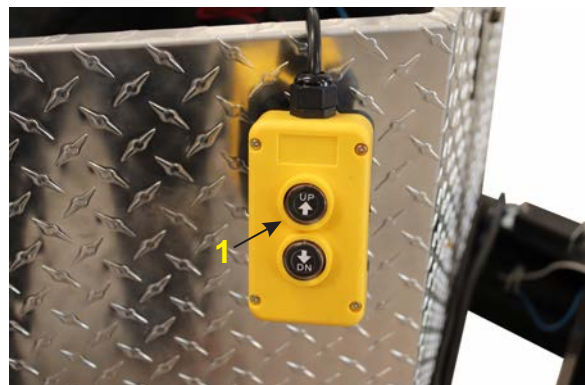


Figure 3-19 – Hydraulic Raise Button

Section 3 – Bumper Hitch Dump Trailer Orientation, Pre-Start Inspection and Operation

- h. Release the button when the body has reached approximately the halfway point of its dumping angle, or if the load begins to shift rearward. Never leave the dump body control when operating the dump body.
- i. **DO NOT** drive forward and stop quickly to “shock” the load out of the body. **DO NOT** “jerk” the raised dump body using the up and down control buttons to dislodge the load. The proper procedure for a stuck load is to fully lower the dump body and dislodge the stuck material by hand.
- j. You may need to raise the dump body higher after a portion of the load has been discharged to slide the remaining material to the rear of the dump body.
- k. After discharging the load, press and hold DN (down) button (1, [Figure 3-20](#)) to lower the dump body. Release the button when the dump body is fully lowered.



Figure 3-20 – Hydraulic Lower Button

- l. Disconnect the trailer lift control cable from the hydraulic controller before traveling. Place dump body control in the battery box. Close and lock battery box.
- m. Before moving trailer make sure that the tailgate is closed and securely latched (1, [Figure 3-21](#)). Make sure that the lock lever has been secured in the latched position by the lock clip (2, [Figure 3-21](#)).

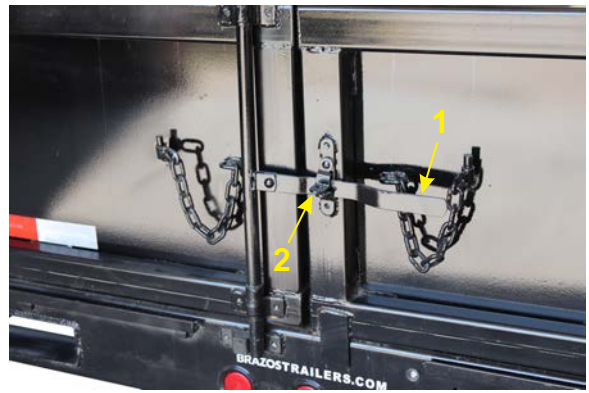


Figure 3-21 – Latch and Secure Rear Gates

- n. Secure the trailer dump body in the lowered position by hooking the trailer lock chain (1, [Figure 3-22](#)) over the dump bed lock hook (2, [Figure 3-22](#)).

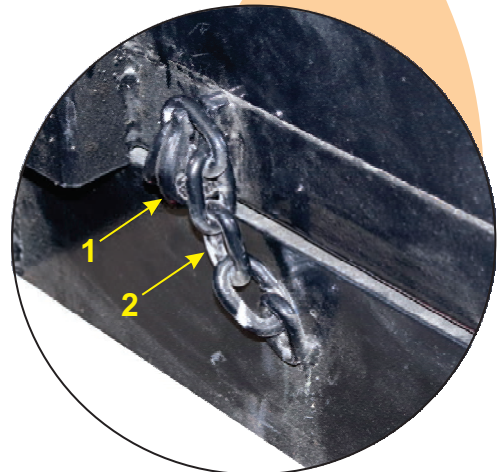


Figure 3-22 – Trailer Body Travel Lock

Fixed Loads

⚠ WARNING

- Load in the trailer must not exceed capacity and must be distributed evenly.
- Trailer must be coupled to tow vehicle before loading the trailer.
- The tow vehicle and trailer are both on a firm level surface and in a straight line.
- Make sure the ramps are securely installed before loading fixed loads.
- An overloaded trailer or improperly distributed load can result in death or severe injury.
- To prevent uncontrolled trailer raising while traveling, disconnect the trailer lift control from the controller.
- To prevent uncontrolled trailer raising while traveling, secure the dump body to the trailer frame using the latch hook (1, **Figure 3-23**) and chain (2, **Figure 3-23**).
- After using the trailer ramps, make sure to slide the ramps fully under the trailer and secure in the stored position.

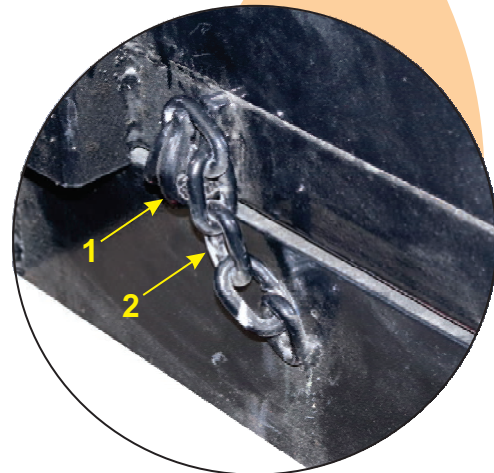


Figure 3-23 – Trailer Dump Body Latch Chain Locked

Ramp Installation and Use

Brazos dump trailers are equipped with removable ramps for loading small equipment, or large and bulk items. If needed, the ramps are stored under the trailer bed and secured in the stored position with quick clips. To use the ramps:

1. Make sure the trailer is properly coupled to the tow vehicle, as shown in [Figure 3-24](#), before attempting to load anything onto the trailer.



Figure 3-24 – Trailer Properly Attached to Tow Vehicle

2. Open both of the tailgates (1, [Figure 3-25](#)) and using the lock chains (2, [Figure 3-25](#)), secure in the open position.

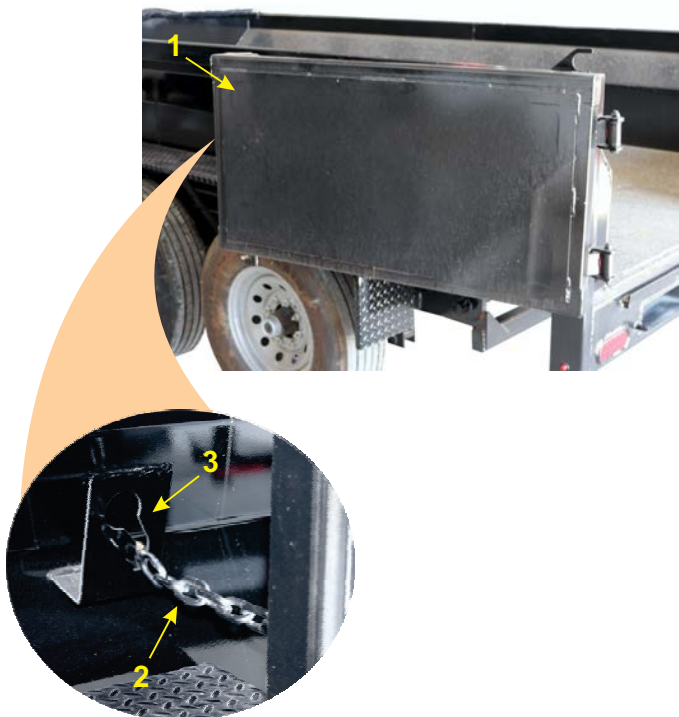


Figure 3-25 – Trailer Gates Opened and Secured in Open Position

3. Remove the ramp quick clips (1, [Figure 3-26](#)) from each ramp (2, 3, [Figure 3-26](#)) and slide each ramp out from under the trailer.

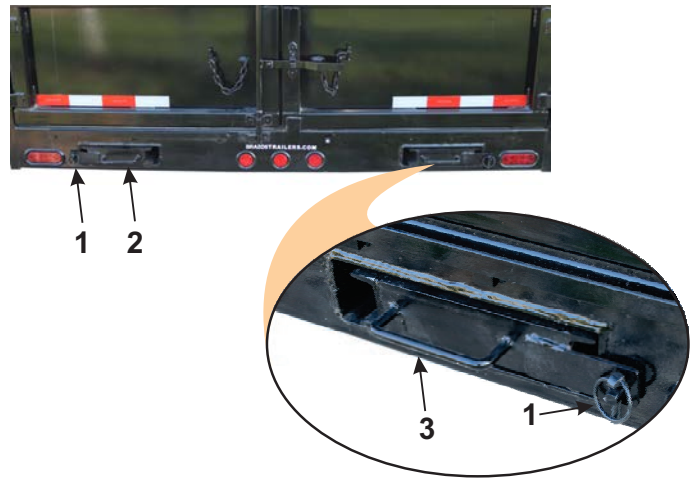


Figure 3-26 – Trailer Ramp Storage and Quick Clips

4. Attach the ramps (1, [Figure 3-27](#)) to the trailer bed using the lock lip (2, [Figure 3-27](#)) that is across the rear width of the trailer.

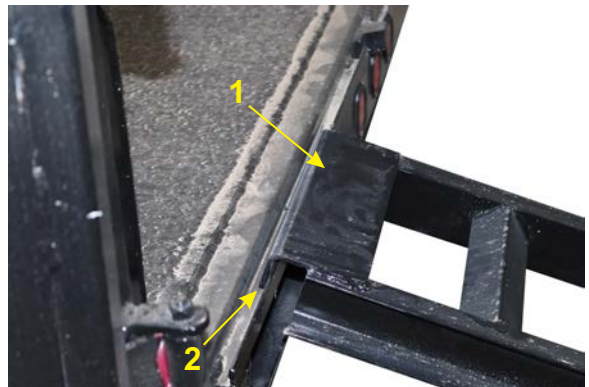


Figure 3-27 – Attach Ramps to Trailer Bed

NOTE: The ramps can be positioned as needed across the width of the trailer ([Figure 3-28](#)), matching the wheel base width of the machine being loaded.



Figure 3-28 – Adjust Ramp Width

Brazos Belly Bumper Hitch

5. Drive machine onto the trailer, positioning the machine over the axles, with the heavy end of the machine towards the front of the trailer.
6. Use the D rings (3, [Figure 3-29](#)) at each corner of the trailer to secure the machine to the trailer using the proper DOT approved tie down chains (2, [Figure 3-29](#)) and binders (1, [Figure 3-29](#)).

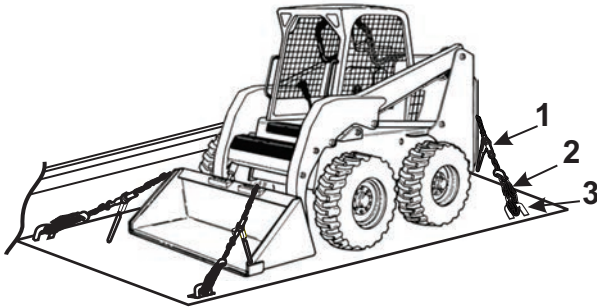


Figure 3-29 – Machine Tied Down to Trailer

7. After loading, remove the ramps from the service position at the rear of the trailer. Return the ramps to the under deck transport location (2, 3, [Figure 3-30](#)) and secure them using the quick clips (1, [Figure 3-30](#)). **NOTE:** Make sure to flip the quick clip lock ring to the downwards lock position.

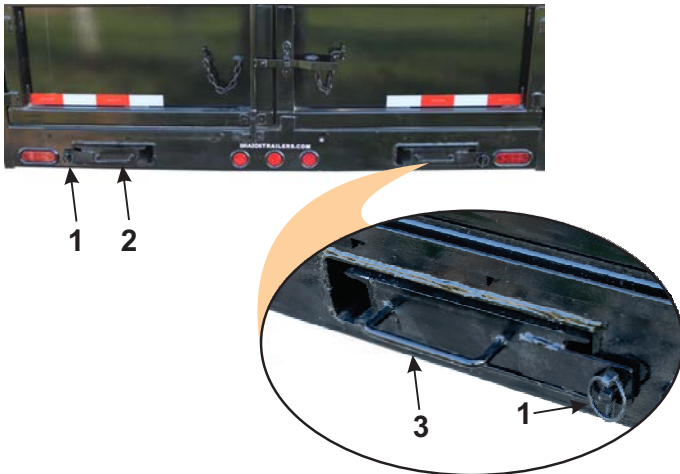


Figure 3-30 – Trailer Ramp Storage and Quick Clips

8. Close and secure the tailgate.

Bulk Load

Large and bulky loads can be transported using the Brazos dump trailer. For this process:

1. Make sure the trailer is properly coupled to the tow vehicle before attempting to load anything onto the trailer.
2. Open both of the tailgates and using the lock chains, secure in the open position,
3. Using an appropriate lifting device, place the load onto the trailer bed. Make sure that the heavier portion of the load is over and slightly in front of the trailer axles, distributing the load weight as evenly as possible.
4. Secure the load to the trailer using the proper DOT approved tie down chains and binders, using the D rings at each corner of the trailer.
5. Close and secure the tailgate.

Daily Maintenance

After the bumper hitch trailer is securely connected to the tow vehicle, and all safety checks have been completed, and before putting the trailer to work, perform the following Daily Maintenance.

NOTICE

- The following service schedule is based on “normal” use of the dump trailer. If this unit is being used in extremely dirty or rough areas, the recommended service schedule may need to be shortened.
- See the Maintenance Section of this manual for additional maintenance procedures.

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 any trips.
2. Inspect all trailer lights to make sure they are working properly. Turn on the tow vehicle lights and check the trailer front side marker light (1, [Figure 3-31](#)), rear side marker light (2, [Figure 3-31](#)) and the trailer tail marker lights (4, [Figure 3-31](#)). **NOTE:** Check both sides of the trailer for the marker lights. Turn on the 4-way flashers and have an assistant step on the tow vehicle brake pedal to check the trailer brake lights and left and right turn signals (3, 5, [Figure 3-31](#)).



Figure 3-31 – Bumper Hitch Dump Trailer Marker, Stop and Turn Signal Lights

Brazos Belly Bumper Hitch

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 severe 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.

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 3-32](#)) 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 3-32 – Wheel Lug Nuts

7. Wipe off the solar panel (1, [Figure 3-33](#)) used to trickle charge the hydraulic system battery.

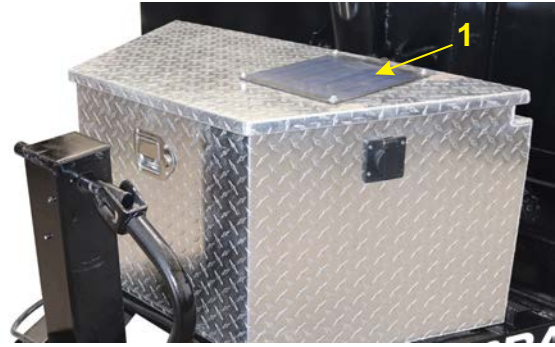


Figure 3-33 – Clean Solar Panel

8. Check the hydraulic system battery charge. Open the storage compartment cover and locate the battery condition tester (1, [Figure 3-34](#)). Press the button on the display panel. The battery charge level will be shown by the LED's. As needed, plug the power cord into the charger port (1, [Figure 3-35](#)) on the side of the storage compartment.

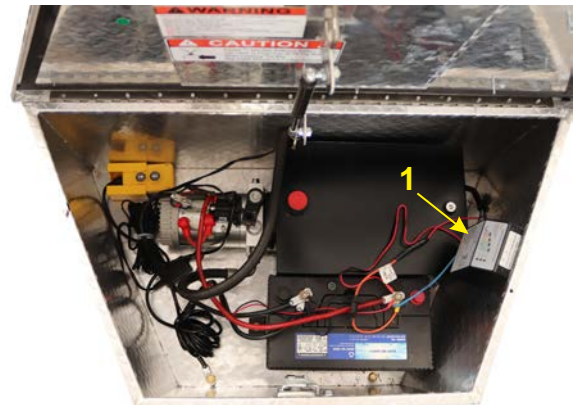


Figure 3-34 – Battery Condition Tester



Figure 3-35 – Battery Charger Port

Section 4 – Routine Service and Maintenance

DANGER

IMPROPER USE OF THE DUMP TRAILER COULD CAUSE SERIOUS INJURY OR DEATH. BEFORE OPERATING THE DUMP TRAILER, OR PERFORMING MAINTENANCE, THE OPERATOR MUST READ AND UNDERSTAND THE ENTIRE OPERATOR'S MANUAL, REVIEW DUMP TRAILER 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 dump trailer functions safely and properly on a daily basis. The following procedures are suggested for the dump trailer driver. More detailed service information is contained in the Service Manual.

NOTE: If the dump trailer is used weekly on a routine basis, do the Weekly/Monthly service procedures on a Weekly basis. If the trailer is only infrequently used, do the Weekly/Monthly service procedures on a Monthly basis.

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	Leaf Spring Suspension			✓	✓
5	Cracks in bumper hitch dump trailer assemblies or welds	✓			
6	Inspect Tire Pressure	✓ and A			
7	Inspect Tire Damage	✓		✓	
8	Inspect Wheel Lug Nuts	✓	✓	✓	
11	Brake System	✓		✓***	✓**
12	Hydraulic Hoses	✓			
13	Inspect Hydraulic Lift Cylinder	✓			
14	Grease			✓	
15	Visual Check for Loose/Missing Fasteners	✓			
16	Check Trailer Lights and Wiring	✓		✓	
17	Clean Battery Charger Solar Panel	✓			

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

After the bumper hitch trailer is securely connected to the tow vehicle, and all safety checks have been completed, and before putting the trailer to work, perform the following Daily Maintenance.

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

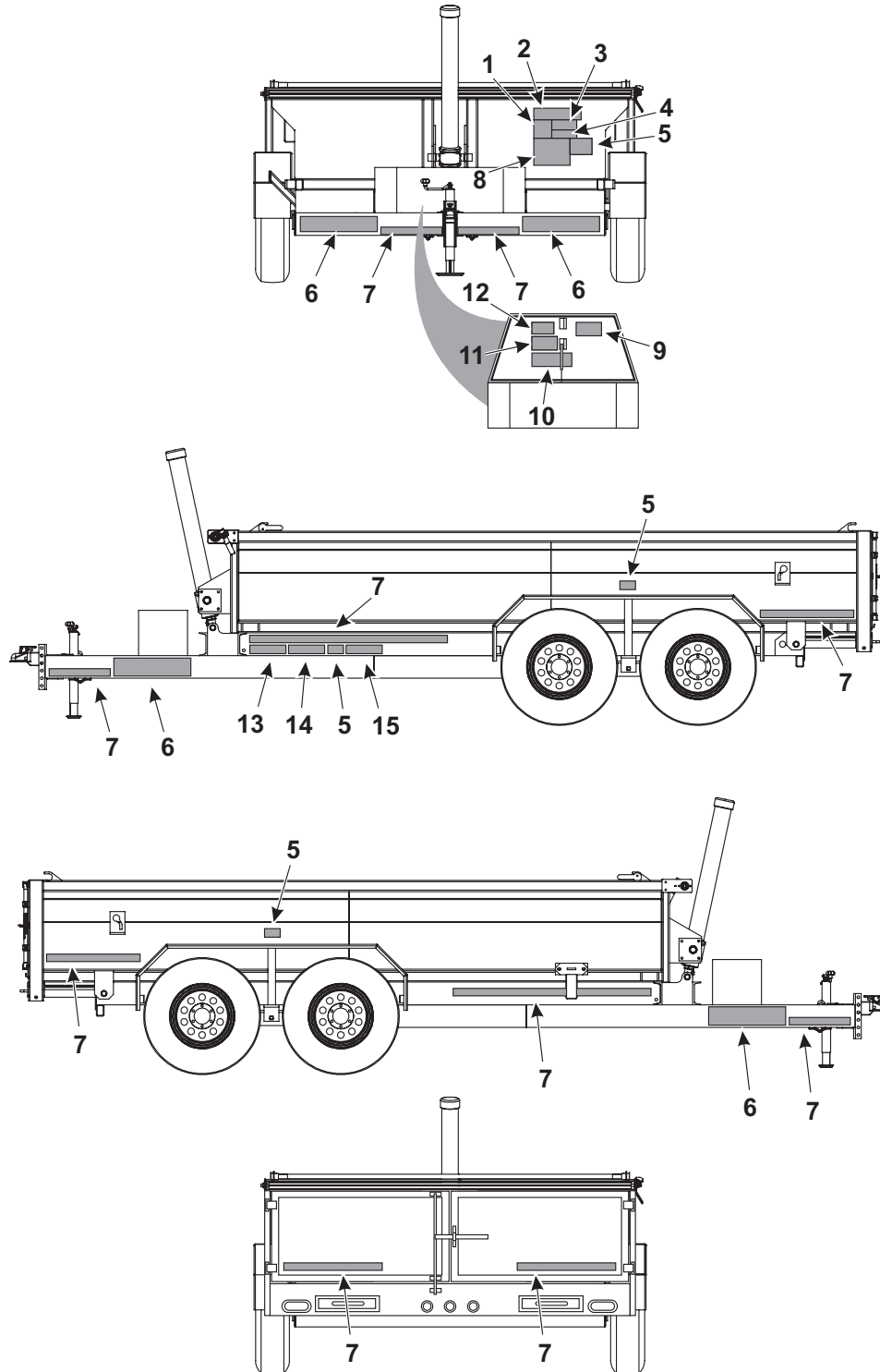


Figure 4-1 – Trailer Side Decal and Warning Label Locations

Item	Description	
1	Secure gate Caution decal	
2	Trailer misuse Warning decal	
3	Heavy door Danger decal	
4	Stand clear of cables Warning decal	
5	Check wheel lugs Warning decal	
6	Brazos Trailers decal	
7	Conspicuity decal	
8	Do not go under raised trailer decal	
9	Penetrating fluid injury Warning decal	
10	Failure to maintain batter Caution decal	
11	Trailer condition check Warning decal	
12	Read operator’s manual Warning decal	
13	Before towing checklist Caution decal	
14	Trailer misuse Warning decal	
15	Overload hazard Warning decal	

- 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 any trips.
- Inspect all trailer lights and wiring connections to make sure they are working properly. Turn on the tow vehicle lights and check the trailer front side marker light (1, [Figure 4-3](#)), rear side marker light (2, [Figure 4-3](#)) and the trailer tail marker lights (4, [Figure 4-3](#)). **NOTE:** Check both sides of the trailer for the marker lights.

⚠ DANGER

CRUSH HAZARD. BEFORE DOING ANY WORK UNDER A RAISED DUMP TRAILER BODY, INSERT THE TRAILER SERVICE SUPPORT (1, [Figure 4-2](#)) AND LOWER THE DUMP BODY ONTO THE SERVICE SUPPORT UNTIL IT IS FULLY SUPPORTING THE DUMP BODY WEIGHT.

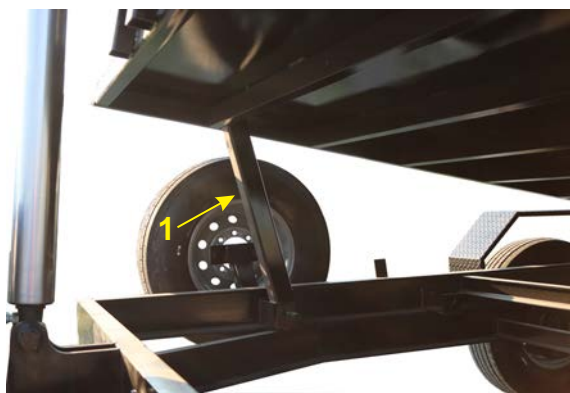


Figure 4-2 – Dump Body Service Support

Turn on the 4-way flashers and have an assistant step on the tow vehicle brake pedal to check the trailer brake lights and left and right turn signals (3, 5, [Figure 4-3](#)).



Figure 4-3 – Bumper Hitch dump Trailer Marker, Stop and Turn Signal Lights

4. 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 severe 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.

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

8. Wipe off the solar panel (1, [Figure 4-5](#)) used to trickle charge the hydraulic system battery.

Weekly/Monthly Maintenance Procedures

NOTICE

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

NOTE: If the dump trailer is used weekly on a routine basis, do the Weekly/Monthly service procedures on a Weekly basis. If the trailer is only infrequently used, do the Weekly/Monthly service procedures on a Monthly basis.

1. Do all Daily Maintenance procedures.
2. Lubricate all grease zerks:
 - a. Grease the lift cylinder trunnion mount on the left (1, [Figure 4-8](#)) and right (2, [Figure 4-8](#)) side of the cylinder.



Figure 4-5 – Clean Solar Panel

9. Check the hydraulic system battery charge. Open the storage compartment cover and locate the battery condition tester (1, [Figure 4-6](#)). Press the button on the display panel. The battery charge level will be shown by the LED's. As needed to fully charge the battery, plug the power cord into the charger port (1, [Figure 4-7](#)) on the side of the storage compartment.

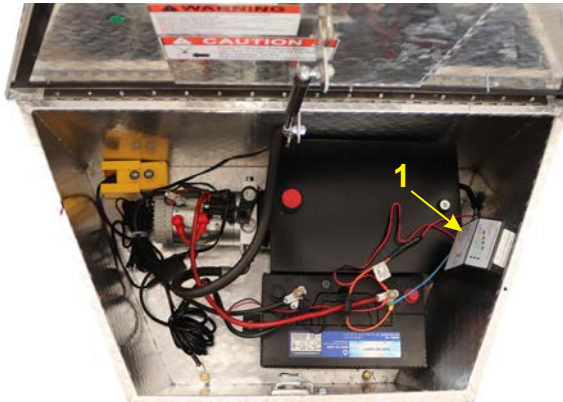


Figure 4-6 – Battery Condition Tester



Figure 4-7 – Battery Charger Port

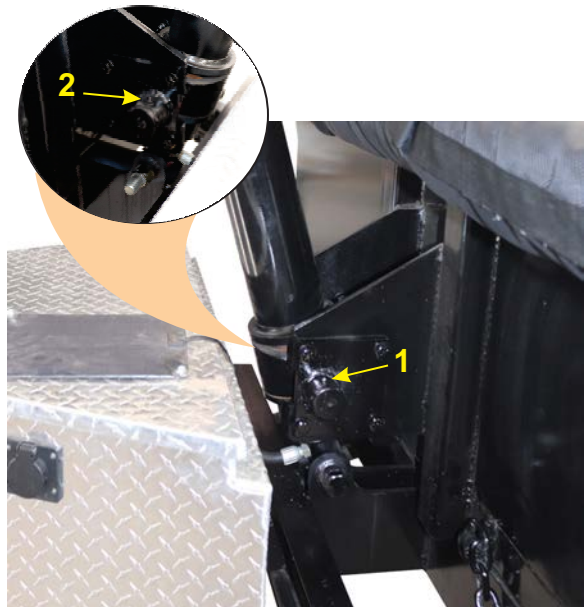


Figure 4-8 – Hydraulic Cylinder Trunnion Mount Grease Zerks

Brazos Belly Bumper Hitch

- b. Dump body pivots. At the rear of the trailer there are two dump body pivots that need to be greased. There is one grease zerk (1, [Figure 4-9](#)) on each side of the trailer just behind the wheel fender. Make sure to lubricate each side of the trailer.

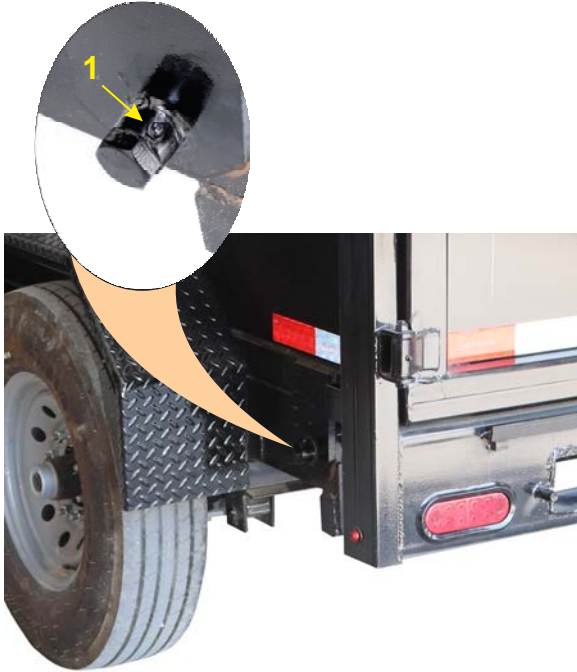


Figure 4-9 – Dump Pody Pivot Grease Zerks

- c. Tailgate pivots. The manually opened tailgates have one grease zerk on each hinge. Grease the zerk (1, [Figure 4-10](#)) on each of the hinge pivots.



Figure 4-10 – Tailgate Grease Zerks

3. Adjust the trailer brakes.

The Brazos Dump Trailer is equipped with electric trailer brakes, controlled by a brake controller in the tow vehicle. The trailer brakes are auto-adjusting, which normally happens while backing up the trailer with the brakes applied.

To manually adjust the trailer brakes:

- a. Begin by chocking the trailer wheels and jacking up one side of the trailer by the frame.

- b. Raise the trailer until the wheel can spin freely. Place a jack stand under the frame for working support ([Figure 4-11](#)).

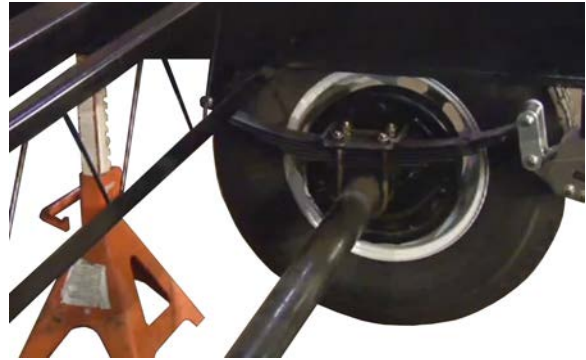


Figure 4-11 – Trailer Supported on Jack Stand

- c. Located at the bottom of the wheel hub are the brake adjuster ports (1, [Figure 4-12](#)) with protective rubber plugs inserted.



Figure 4-12 – Brake Adjuster Ports

- d. Remove the rubber adjustment cover (1, [Figure 4-13](#)) to access the trailer brake adjuster.

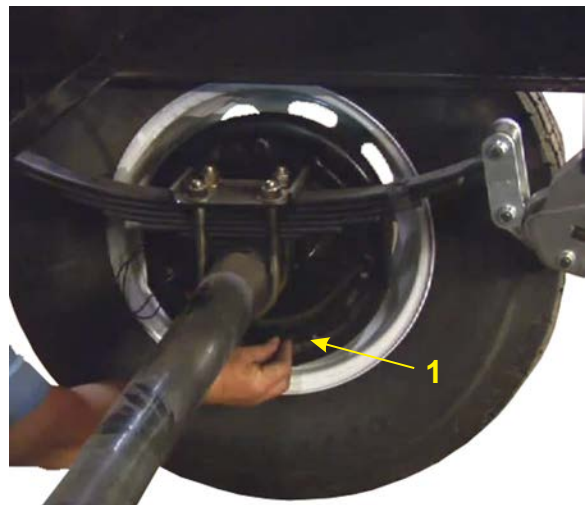


Figure 4-13 – Remove Brake Adjuster Access Cover

- e. Using a brake spoon or brake adjustment tool (1, [Figure 4-14](#)) turn the star wheel adjuster inside the brake chamber. The adjuster is typically located below the brake drum.

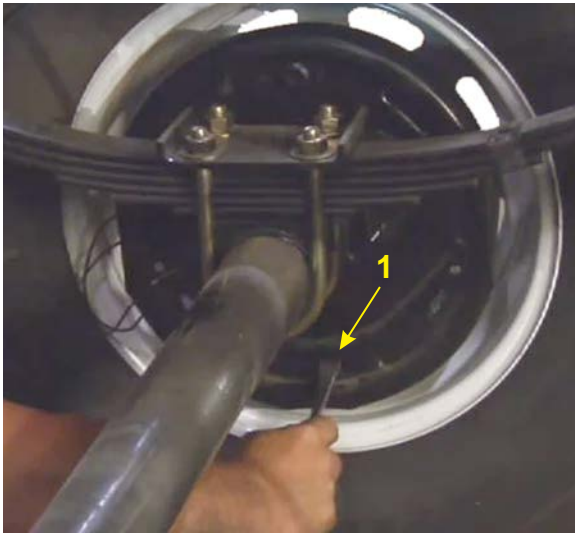


Figure 4-14 – Rotate Brake Adjuster

- f. Rotate the brake adjuster by pressing downwards on the brake adjuster tool. This will tighten the brake pads or shoes.
- g. Rotate the brake adjuster wheel one click at a time. Spin the tire between each click to make sure it spins freely.
- h. Continue this adjustment until the trailer tire becomes difficult to turn. Rotate the brake adjustment wheel the opposite direction to slightly loosen the tire.
- i. The tire should spin freely but still have a slight scraping sound or slight drag, indicating that the trailer brake pads are properly engaged.
- j. Replace the rubber plugs on the trailer brake access point.

⚠ DANGER

CRUSH HAZARD. BEFORE DOING ANY WORK UNDER A RAISED DUMP TRAILER BODY, INSERT THE TRAILER SERVICE SUPPORT (1, [Figure 4-15](#)) AND LOWER THE DUMP BODY ONTO THE SERVICE SUPPORT UNTIL IT IS FULLY SUPPORTING THE DUMP BODY WEIGHT.



Figure 4-15 – Dump Body Service Support

4. Check bumper hitch dump trailer 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 trailer frame.
5. Inspect and tighten all wheel lug nuts (1, [Figure 4-16](#)).



Figure 4-16 – Check Lug Nuts

6. 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.
7. Check the axle for proper alignment. This deficiency is the most probable cause of tire wear.
8. Check the underside of the trailer frame, axle mounts and springs for any debris that may be trapped.

Brazos Belly Bumper Hitch

9. 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 (1, [Figure 4-17](#)) to make sure the U-bolt nuts are torqued properly.

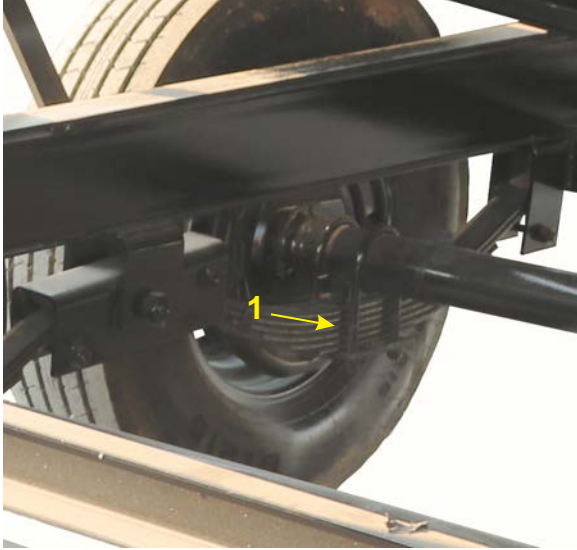


Figure 4-17 – Leaf Spring U-Bolts

- e. If any damage is noted, take the dump trailer out of service.

Annual/Seasonal Maintenance Procedures

NOTICE

Some of the following maintenance procedures will need to be done by a qualified bumper hitch dump trailer 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. 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 bumper hitch dump trailer out of service.
4. 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 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.

