

LOAD TRAIL



**INSPECTION, SERVICE
& MAINTENANCE**

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INSPECTION, SERVICE & MAINTENANCE

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INSPECTION, SERVICE & MAINTENANCE

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10.1 INSPECTION, SERVICE & MAINTENANCE SUMMARY CHARTS

You must inspect, maintain and service your trailer regularly to insure safe and reliable operation. If you cannot or are unsure how to perform the items listed here, have your dealer do them.

Note: In addition to this manual, also check the relevant component manufacturer's manual.

Inspection & Service Before Each Tow		
Item	Inspection / Service	Manual Section Reference
Breakaway Brakes > Electric > Hydraulic	Check operation Check operation	“Coupling to the Tow Vehicle” section
Breakaway Battery	Fully charged, connections clean	“Coupling to the Tow Vehicle” section and Section 10.2.3.3
Brakes > Electric > Surge	Check operation Check operation Check Master Cylinder Level	“Coupling to the Tow Vehicle” section
Shoes and Drums	Adjust	Section 8.2 & 10.2.1.4
Safety Chains & Hooks	Check for wear, damage	“Coupling to the Tow Vehicle” section
Coupler and Hitch Ball	Check for cracks, pits, and flats. Replace w/ ball & coupler having trailer GVW Rating. Grease. Check locking device & replace when worn.	“Coupling to the Tow Vehicle” section “Coupling to the Tow Vehicle” section Section 10.2.1.11
Gooseneck Ball	Check for cracks, pits, and flats. Replace w/ ball & coupler having trailer GVW Rating. Grease. Check locking device & replace when worn.	“Coupling to the Tow Vehicle” section “Coupling to the Tow Vehicle” section Section 10.2.1.13
Ring & Pintle	Check for cracks, pits and flats. Replace w/ ring and pintle having trailer GVW rating Grease. Check locking device & replace when worn.	“Coupling to the Tow Vehicle” section “Coupling to the Tow Vehicle” section Section 10.2.5.2
Tires	Check tire pressure when cold. Inflate as needed. Check for damage.	Sections 7.1 & 10.2.9 Sections 7.1 & 10.2.9
Wheels - Lug Nuts (Bolts) & Hub	Check for tightness Tighten. For new and remounted wheels, check torque after first 10, 25 & 50 miles of driving and after any impact	Section 7.1 Sections 8.1 & 10.2.13

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Inspection & Service Each Month		
Item	Service / Inspection	Manual Section Reference
Lubrication	Lubricate door hinges and dump body pivots	Section 10.2.11

Inspection & Service Every 6 Months or 6,000 Miles		
Item	Inspection / Service	Manual Section Reference
Brakes, electric > Magnets > Controller (in tow vehicle)	Check wear and current draw Check power output (amperage) and modulation	Section 10.2.1.7 Section 10.2.1.6 See Controller Mfr's Manual
Tires	Inspect tread and sidewalls thoroughly. Replace tire when treads are worn, when sidewall has a bulge, or sidewall is worn. Rotate Every 5,000 Miles	Section 10.2.9 Section 10.2.9 Section 10.2.9

Inspection & Service Every Year or 12,000 Miles		
Item	Inspection / Service	Manual Section Reference
Brakes, all types > Shoes & Drums	Check for scoring & wear. Replace per manufacturer's Specifications	Section 10.2.1.3 See Brake Manufacturer's Manual
Drop-leg Jack	Grease gears at t op.	See jack manufacturer's manual.
Structure > Frame Members > Welds	Inspect all frame members, bolts & rivets. Repair or replace dam- aged, worn or broken parts. Inspect all welds. Repair as needed	Section 0 Section 10.2.1.2
Wheels > Wheel Bearings > Rims	Disassemble / inspect / assemble and repack. Replace promptly if immersed in water Inspect for cracks & dents. Replace as needed.	Section 0 & See Axle Mfr's Manual Section 0
Structure > Axle Attachment Bolts	Check By Dealer	Section 0

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10.2 INSPECTION AND SERVICE INSTRUCTIONS

AXLE BOLTS, FRAME, SUSPENSION, & STRUCTURE

To perform many of the inspection and maintenance activities, you must jack up the trailer. When jacking and using jack stands, place them so as to clear wiring, brake lines, and suspension parts (springs, torsion bars, etc.). Place jacks and jack stands under the outer frame rail to which the axles are attached.

WARNING

Worn or broken suspension parts can cause loss of control and injury may result. Have trailer professionally inspected annually and after any impact.

WARNING

Never crawl under your trailer unless it is on firm and level ground and resting on properly placed and secured jack stands.

WARNING

Crushing hazard The tow vehicle and trailer could be inadvertently moved while a person is under the trailer. The tow vehicle engine must be off, ignition key removed and parking brakes set before entering the area under the trailer.

TRAILER STRUCTURE

Wash the trailer as needed with a power washer and a detergent solution.

10.2.1.1 Fasteners and Frame Members

Inspect all of the fasteners and structural frame members for bending and other damage, cracks, or failure. Repair or replace any damaged fastener and repair the frame member. If you have any questions about the condition or method of repair of fasteners or frame members, get the recommendation of, or have the repair done by your dealer.

WARNING

Broken or damaged fasteners or welds can cause injury or damage to trailer and contents. Inspect for, and repair all damaged parts at least once a year.

10.2.1.2 Welds

All welds can crack or fail when subjected to heavy loads or movement of cargo that was not properly tied to prevent movement. Any time that you know or suspect that the trailer has been subjected to heavy loads or movement of cargo, immediately inspect the welds and fasteners for damage. To prevent severe damage to your trailer, inspect all of the welds for cracks or failure at least once a year. If a weld failure is detected, contact your dealer.

INSPECTION, SERVICE & MAINTENANCE

WARNING

Broken or damaged fasteners or welds can cause injury or damage to trailer and contents. Inspect for, and repair all damaged parts at least once a year.

TRAILER BRAKES - ELECTRIC

10.2.1.3 Brake Shoes and Drums

Properly functioning brake shoes and drums are essential to ensure safety. You must have your dealer inspect these components at least once per year, or each 12,000 miles. Brake adjustment is not covered under the axle warranty.

The brake shoes must be adjusted after the first 200 miles of use, and each 3,000 miles thereafter. Most axles are fitted with a brake mechanism that will automatically adjust the brake shoes when the trailer is “hard braked” from a rearward direction. Read your axle and brake manual to see how to adjust your brakes. If you do not have this manual, contact your dealer for assistance.

10.2.1.4 Manually Adjusting Brake Shoes

Some braking systems are not automatically adjusted by hard stopping. These brakes require manual adjustment. The following steps apply to adjust most manually adjustable brakes. Read your axle and brake manual to see how to adjust your brakes. If you do not have this manual, contact your dealer for assistance.

- Jack up the trailer and secure it on adequate capacity jack stands.
- Be sure the wheel and brake drum rotate freely.
- Remove the adjusting-hole cover from the adjusting slot on the bottom of the brake backing plate.
- With a screwdriver or standard adjusting tool, rotate the starwheel of the adjuster assembly to expand the brake shoes. Adjust the brake shoes out until the pressure of the linings against the drum makes the wheel very difficult to turn. Note: Your trailer maybe equipped with drop spindle axles. See axle manual for your axle type. You will need a modified adjusting tool for adjusting the brakes in these axles. With drop spindle axles, a modified adjusting tool with about an 80 degree angle should be used.
- Rotate the starwheel in the opposite direction until the wheel turns freely with a slight drag.
- Replace the adjusting-hole cover.
- Repeat the above procedure on all brakes.
- Lower the trailer to the ground.

10.2.1.5 Brakes, Electric

Two different types of electric brakes may be present on the trailer: an emergency electric breakaway system, which acts only if the trailer comes loose from the hitch and the breakaway pin is pulled. The other brake is an electric braking system that acts whenever the brakes of the tow vehicle are applied.

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Breakaway Break

Breakaway Battery - This battery supplies the power to operate the trailer brakes if the trailer uncouples from the tow vehicle. Be sure to check, maintain and replace the battery according to the battery manufacturer's instructions.

Breakaway Switch - This switch causes the breakaway battery to operate the electric brakes if the trailer uncouples from the tow vehicle.

The lanyard for the pull pin is connected to the tow vehicle, and the switch is connected to the trailer. To check for proper functioning of the switch, battery and brakes, you must pull the pin from the switch and confirm that the brakes apply to each wheel. You can do this by trying to pull the trailer with the tow vehicle, after pulling the pin. The trailer brakes may not lock, but you will notice that a greater force is needed to pull the trailer. **Do Not Use Breakaway Switch as Parking Brake**

⚠ WARNING

If electric breakaway brakes do not operate when trailer is uncoupled from the tow vehicle, death or serious injury can occur. Check emergency breakaway brake system BEFORE each tow.

10.2.1.6 Tow Vehicle Operated Electric Brakes

The electric brakes that operate in conjunction with the tow vehicle brakes must be "synchronized" so that braking is properly distributed to the tow vehicle brakes and the trailer brakes. For proper operation and synchronization, read and follow the axle/brake and the brake controller manufacturers' instructions. If you do not have these instructions, contact your dealer for assistance.

10.2.1.7 Magnets for all Electric Brakes

To make certain an electrically-operated braking system will function properly, you must have your dealer inspect the magnets at least once a year, or each 12,000 miles. See the brake manual for wear and current inspection instructions.

TRAILER BRAKES – SURGE

(IF EQUIPPED)

10.2.1.8 Surge Brake Master Cylinder

Check fluid level prior to using the trailer. The master cylinder (1) is located on the tongue of the trailer. The fluid level must be maintained at no less than $\frac{1}{2}$ full, and no more than $\frac{1}{2}$ inch from the top. Use DOT type 3 or 4 automotive brake fluid.



Hydraulic Reservoir

INSPECTION, SERVICE & MAINTENANCE

10.2.1.9 Hydraulic Surge Brake

Before each tow, perform the following steps:

- Check that the brake master cylinder level as instructed above. Check for leaks and repair as required.
- Examine the actuator for wear, bent parts, corroded/seized parts, or other damage. Have the affected components replaced with genuine service parts.
- Check to determine that the actuator mounting bolts are tightened to the manufacturer's specification.
- Test the actuator and brake function as described in the Coupling to the Tow Vehicle section of this manual. Actuator travel over one inch indicates that the brakes need adjustment (or that the actuator has been structurally damaged). Actuator travel is the distance the coupler case assembly moves to the outer case during braking. Adjust the brakes following the instructions given in the brake installation manual. Failure to adjust brakes will result in loss of braking.
- Before storage or after extended use, apply motor oil to the coupler components and the internal rollers to keep them moving freely and to prevent corrosion.

See the surge brake manufacturer's manual for other inspection and maintenance activities. If you do not have this manual, contact your dealer for assistance.

10.2.1.10 Master Cylinder Bleeding

Remove the master cylinder's cap and fill the reservoir to three quarters full with DOT-3 or DOT 4 brake fluid. DO NOT allow brake fluid to contact painted surfaces since it will damage the finish. Wipe up any spills immediately and wash the area with water.

Bleed the brake system either manually or with a pressure bleeder. Pressure bleeding equipment simplifies the process, and is available at most automotive supply stores. Use the instructions provided with the pressure bleeder. If you chose to manually bleed the system, an assistant is required. Use the following steps to manually bleed the brake system:

- Disconnect the trailer from the tow vehicle and jack the trailer's tongue until it is horizontal. Make sure that the wheels are blocked so that the trailer will not roll away.
- Fill the master cylinder with fluid as described in 10.2.4.1.
- Install a bleeder hose on the bleeder screw of the farthest wheel cylinder from the actuator. If the trailer has multiple axles, bleed the rear axle first. Submerge the other end of the hose in a glass container of brake fluid, so that air bubbles can be observed.
- Open the bleeder screw and have your assistant stroke (but not release) the actuator. Brake fluid and/or air bubbles will flow into the jar. Close the bleeder screw. The helper can then allow the actuator to return to its rest position.

Repeat the process until no more bubbles are released with the stroke. Air trapped in the brake lines will greatly reduce your braking efficiency. Be sure to close the bleeder screw securely when the cylinder is fully bled. Repeat the bleeding operation at each wheel cylinder. During the bleeding process, replenish the master cylinder reservoir with fresh brake fluid so that the level does not fall below half full. This will ensure that no air is drawn into the system.

After all brakes have been bled, refill the master cylinder as described in section 10.2.4.1 before operating. Be sure to install the master cylinder filler cap.

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WARNING

Use only fresh brake fluid from a sealed container. DO NOT reuse fluid. After filling and bleeding, refill the actuator. Failure to maintain an adequate fluid level may cause brake failure.

TRAILER CONNECTION TO TOW VEHICLE

10.2.1.11 Bumper Pull Coupler and Ball

The coupler on the trailer connects to the ball attached to the hitch on the tow vehicle. The coupler, ball and hitch transfer the towing forces between the tow vehicle and the trailer. Before each tow, coat the ball with a thin layer of automotive bearing grease to reduce wear and ensure proper operation; and check the locking device that secures the coupler to the ball for proper operation.

See the coupler manufacturer's manual for other inspection and maintenance activities. If you do not have this manual, contact your dealer for assistance.

If you see or feel evidence of wear, such as flat spots, deformations, pitting or corrosion, on the ball or coupler, immediately have your dealer inspect them to determine the proper action to prevent possible failure of the ball and coupler system. All bent or broken coupler parts must be replaced before towing the trailer.

The coupler handle lever must be able to rotate freely and automatically snap into the latched position. Oil the pivot points, sliding surfaces, and spring ends with SAE 30W motor oil. Keep the ball pocket and latch mechanism clean. Dirt or contamination can prevent proper operation of the latching mechanism.

When replacing a ball, the load rating must match or exceed the GVWR of the trailer.

10.2.1.12 Ring and Pintle

The ring on the trailer connects to the pintle attached to the hitch on the tow vehicle. The ring, pintle and hitch transfer the towing forces between the tow vehicle and the trailer. Before each tow, coat the ring with a thin layer of automotive bearing grease to reduce wear and ensure proper operation; and check the locking device that secures the pintle to the ring for proper operation.

See the pintle manufacturer's manual for other inspection and maintenance activities. If you do not have this manual, contact your dealer for assistance.

If you see or feel evidence of wear, such as flat spots, deformations, pitting or corrosion, on the ring or pintle, immediately have your dealer inspect them to determine the proper action to prevent possible failure of the ring and pintle system. All bent or broken coupler parts must be replaced before towing the trailer.

The pintle handle lever must be able to rotate freely and automatically snap into the latched position. Oil the pivot points, sliding surfaces, and spring ends with SAE 30W motor oil. Keep the ring pocket and latch mechanism clean. Dirt or contamination can prevent proper operation of the latching mechanism. When replacing a ring, the load rating must match or exceed the GVWR of the trailer.

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10.2.1.13 Gooseneck Ball Receiver

The gooseneck receiver on the trailer connects to a hitch-mounted ball on the towing vehicle. The receiver, ball and hitch transfer the towing forces between the tow vehicle and the trailer. Before each tow, coat the ball with a thin layer of automotive bearing grease to reduce wear and ensure proper operation; and check the locking device that secures the receiver to the ball for proper operation.

See the gooseneck ball receiver manufacturer's manual for other inspection and maintenance activities. If you do not have a manual for the receiver, contact your dealer for assistance.

If you see or can feel evidence of wear, such as flat spots, pitting or corrosion, on the ball or receiver, immediately have your dealer inspect them to determine the proper action to prevent possible failure of the ball and receiver system.

When replacing a ball, the load rating must match or exceed the GVWR of the trailer.

LANDING LEG OR JACK

If a grease fitting is present, you must use a grease gun to lubricate the jack mechanism. Grease the gears in the top of hand-cranked jacks once a year, by removing the top of the jack and pumping or hand packing grease into the gears.

LIGHTS AND SIGNALS

Before each tow, check the trailer taillights, stoplights, turn signals and any clearance lights for proper operation.

WARNING

To avoid risk of collisions, all lights must work.

WHEEL RIMS

If the trailer has been struck, or impacted, on or near the wheels, or if the trailer has struck a curb, inspect the rims for damage (i.e. being out of round); and replace any damaged wheel. Inspect the wheels for damage every year, even if no obvious impact has occurred.

TIRES

Trailer tires may be worn out even though they still have plenty of tread left. This is because trailer tires have to carry a lot of weight all of the time, even when not in use. It is actually better for the tire to be rolling down the road than to be idle. During use, the tire releases lubricants that are beneficial to tire life. Using the trailer often also helps prevent flat spots from developing. The main cause for tire failure is improper inflation.

Before each tow, check the tire pressure to make sure it is at the level indicated on the tire sidewall or VIN label. Tire pressure must be checked while the tire is cold. Do not check tire pressure immediately after towing the trailer. Allow at least three hours for the tires to cool, if the trailer has been towed for as much as one mile.

Tires can lose air over a period of time. In fact, tires can lose 1-3 psi per month. This is because molecules of air, under pressure, weave their way from the inside of the tire, through the rubber to the outside. A drop in tire pressure could cause excessive heat build up. If the tire is under-inflated, even for a short period of time, the tire could suffer internal damage.

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TIRES

High towing speed in hot conditions degrades the tire significantly. As heat builds up during driving, the tire's internal structure starts to breakdown, compromising the strength of the tire. It is recommended to drive at moderate speeds.

Replace the tire before towing the trailer if the tire treads have less than 2/32 inch depth or the telltale bands are visible.

A bubble, cut or bulge in a side wall can result in a tire blowout. Inspect both side walls of each tire for any bubble, cut or bulge; and replace a damaged tire before towing the trailer.

If you are storing your trailer for an extended period, make sure the tires are inflated to the maximum rated pressure indicated on the sidewall or VIN label and that you store them in a cool, dry place such as a garage. Use tire covers to protect the tires from the harsh effects of the sun.

Tire / Wheel Components – Limited Warranty:

Load Trail LLC, warrants, subject to the terms, conditions, and limitations state herein, tires, and wheels to be free from defects in materials and workmanship.

1. This Limited Warranty applies only to the original purchaser for two years from the warranty start date.
2. The warranty period for the coating of the wheel is ninety (90) days from the warranty start date.
3. 100 % replacement for any material or manufacturing defects.
4. The Limited Warranty does not cover incidental or consequential damages, including, but not limited to, lost time, inconvenience, loss of vehicle use, cost of towing or transportation, related property damage or consequential damages of any type of nature.
5. The tire is worn past last 3/32 of tread depth at any point on tread contact surface

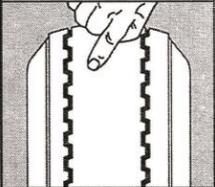
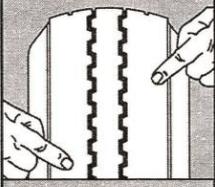
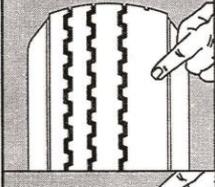
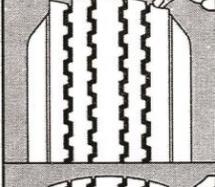
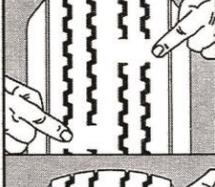
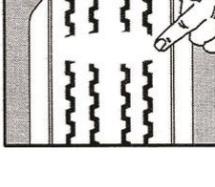
The warranty does not apply to the following:

- Tires or wheels subjected to overloading, under-inflation, improper mounting, fitment to incorrect rim, purposeful abuse or chemical contamination.
- Tires or wheels which have been patched, plugged or repaired or into which liquid balancers or sealants have been introduced.

6. This Limited Warranty makes no expressed claims of expected tire wear. Variables that affect tire wear are driving conditions, load and tire inflation pressure.

Note: All specifications subject to change without notice.

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	Condition	Possible Cause	Remedy
	Even Center Wear	Over Inflation	Check & Adjust Pressure When Cold
	Inside & Outside Wear	Under Inflation	Check & Adjust Pressure When Cold
	Smooth, Side Wear - One Side	Loss of Camber or Overloading	Check & Unload As Necessary Have Alignment Checked
	"Feathering" Across The Face	Axle Not Square To Frame or Incorrect Toe In	Square Axles Have Alignment Checked
	Cupping	Loose Bearings or Wheel Balance	Check Bearing Adjustment and Wheel & Tire Balance
	Flat Spots	Wheel Lockup	Adjust Brakes

Tire Inspection Chart

INSPECTION, SERVICE & MAINTENANCE

DEXTER AXLE IDENTIFICATION

In the unlikely event that you should require service assistance from Dexter Axle, Please have the lot (serial) number of the axle available when you call.

On all axles produced after April 2001, this nine digit number can be found near the center on the rear side of the axle beam. Look for the words DEXTER AXLE
And the lot number will be located directly under the name. For easier identification, rubbing a piece of chalk over the number may help bring out the engraving.

Recreational Vehicle axles that have been certified for use in Canada will also bear the letters CSA.



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Item	Function Required	Frequency			
		Weekly	3 Months or 3,000 Miles	6 Months or 6,000 Miles	12 Months or 12,000 Miles
Brakes	Test that they are operational.	At Every Use			
Brake Adjustment	Adjust to proper operating clearance (not required with Nev-R-Adjust® brakes).		●		
Brake Magnets	Inspect for wear and current draw.			●	
Brake Linings	Inspect for wear or contamination.				●
Brake Controller	Check for correct amperage and modulation.			●	
Brake Cylinders	Check for leaks, sticking.				●
Brake Lines	Inspect for cracks, leaks, kinks.				●
Trailer Brake Wiring	Inspect wiring for bare spots, fray, etc.				●
Breakaway System	Check battery charge and switch operation.	At Every Use			
Hub/Drum	Inspect for abnormal wear or scoring.				●
Wheel Bearings and Cups	Inspect for corrosion or wear. Clean and repack.				●
Seals	Inspect for leakage. Replace if removed.				●
Springs	Inspect for wear, loss of arch.				●
Suspension Parts	Inspect for bending, loose fasteners and wear.			●	
Suspension Wet Bolts & Equalizers	Grease.		●		
Extreme Duty Bushings	Grease.		●		
Hangers	Inspect welds.				●
Wheel Nuts and Bolts	Tighten to specified torque values.		●		
Wheels	Inspect for cracks, dents, or distortion.			●	
Tire Inflation Pressure	Inflate tires to mfg's specifications.	●			
Tire Condition	Inspect for cuts, wear, bulging, etc.		●		

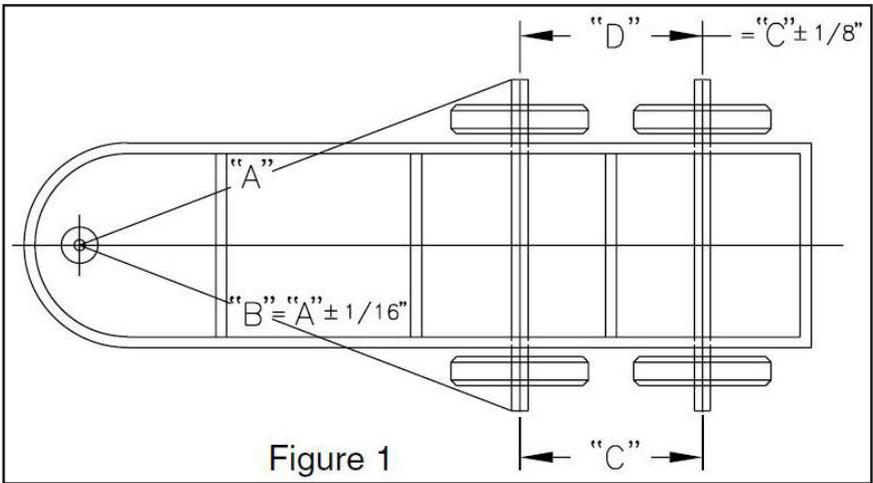
INSPECTION, SERVICE & MAINTENANCE

2K-8K DEXTER AXLE ALIGNMENT

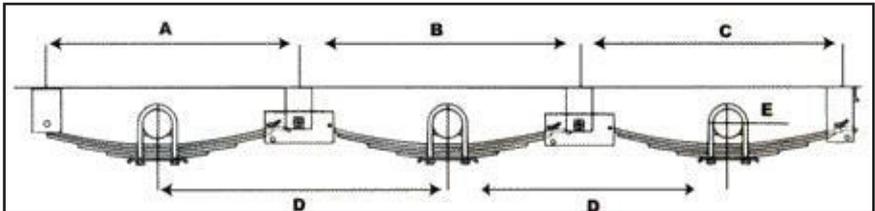
Axle Alignment - Alignment can be determined by measuring from the center of the coupler to the center of each end of the axles. The difference should not vary more than $1/16"$. In the case of multiple axles, the axles must also be in line with each other. The difference between the centers of one axle and end centers of the other axle must not vary more than $1/8"$.

How to measure:

1. Park trailer on level surface.
2. Measure from the center of the coupler to spindle center on each side. To Simplify the process, plumb lines may be dropped from the coupler and from the center line of each spindle end. Measurements "A" and "B" can then be tapped on the floor to eliminate any miss measurement due to sagging of the tape for long measurements. Compare A and B measurements. (see Figure 1)
3. Measure the distances "C" and "D" between the front and rear tandem axles. These distances must be within $1/8"$ of each other.



4. Measure from the center of the coupler to the front hanger bolt on each side of trailer.
5. Measure from the front hanger bolt to the equalizer center bolt on each side of trailer.
6. Measure from the equalizer center bolt to the rear hanger bolt on each side of trailer. (Measure according to the number of axles on trailer.)



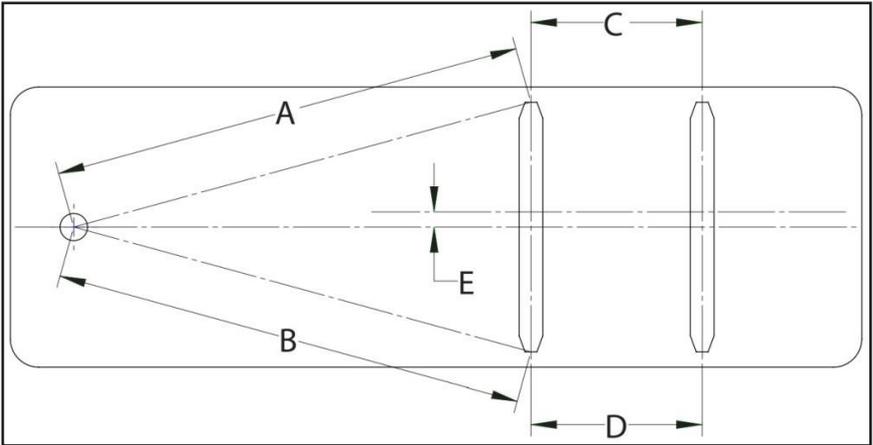
INSPECTION, SERVICE & MAINTENANCE

10K-15K DEXTER AXLE ALIGNMENT

Axle Alignment - Alignment can be determined by measuring from the center of the coupler to the center of each end of the axles. The difference should not vary more than $1/8"$. In the case of multiple axles, the axles must also be in line with each other. The difference between the centers of one axle and end centers of the other axle must not vary more than $1/16"$.

How to measure:

1. Park trailer on level surface.
2. Lateral Centerline (E). Determine lateral centerline of trailer body and axles by measuring distance E between trailer and axle centerline first, and correct so that distance E is $1/4"$ or less for each axle.
3. Thrust Angle (A,B). Measure distance A (curbside) then B (roadside) from the king pin or coupler to the front of the axle extension or axle centers. These must be equal to within 0.1 degree or $1/8"$ of each other ($A=B+1/8"$). Ensure the lateral tension (pulling force) applied to the measuring tape is the same for both A and B measurements. Use a tensioning device scale or optical (laser) to ensure accuracy.
4. Scrub Angle (C,D). Measure distances C (curbside) then D (roadside) between axles, measuring from front of axle extension to front of axle extension, or axle center to center. Adjust the rear axle so it aligns to the front axle. These also must be equal to within $1/16"$ of each other ($C=D+1/16"$). This measurement should be as close to zero as possible. The smaller the offset, the lower the rolling resistance and the better the fuel economy.



WHEEL BEARINGS

A loose, worn or damaged wheel bearing is the most common cause of brakes that grab. To check your bearings, jack up trailer and check wheels for side-to-side looseness. If the wheels are loose, or spin with a wobble, the bearings must be serviced or replaced. Contact the axle manufacturer regarding any warranty considerations.

INSPECTION, SERVICE & MAINTENANCE

WARNING

Never crawl under your trailer unless it is on firm and level ground and resting on properly placed and secured jack stands.

LUBRICATION

DANGER

Risk of death by crushing. Empty dump body before using body prop.

WARNING

Risk of death by crushing. Dump body or tilt deck can drop unexpectedly. Never go under a raised dump body. Use body prop for maintenance.

WARNING

Risk of death by crushing. Make sure dump body is empty. DO NOT manipulate the body safety prop if a person is near the control.

The body prop supplied as part of the trailer is to be used only when the dump body is empty. The purpose of the body prop is a back-up to the hydraulic system and will hold the empty dump body in a raised position while performing maintenance on the hoist, trailer body, or the trailer itself.

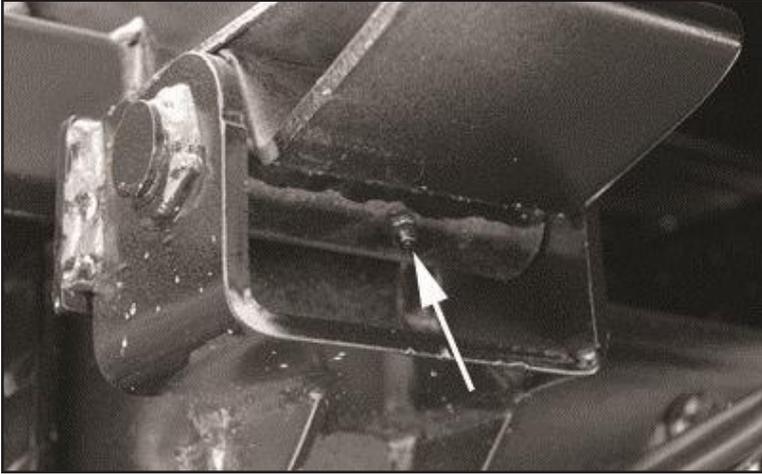
DO NOT use the body prop to support a loaded dump body.

DO NOT go under a raised dump body unless the dump body is supported by the body prop.

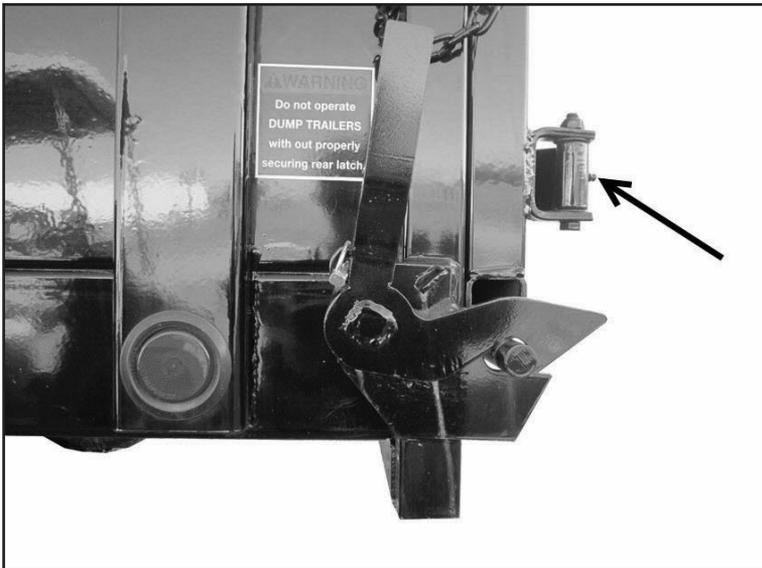
INSPECTION, SERVICE & MAINTENANCE

10.2.1.14 Dump Trailers

Pump grease into the dump body hinge fittings and rear door hinges every month.



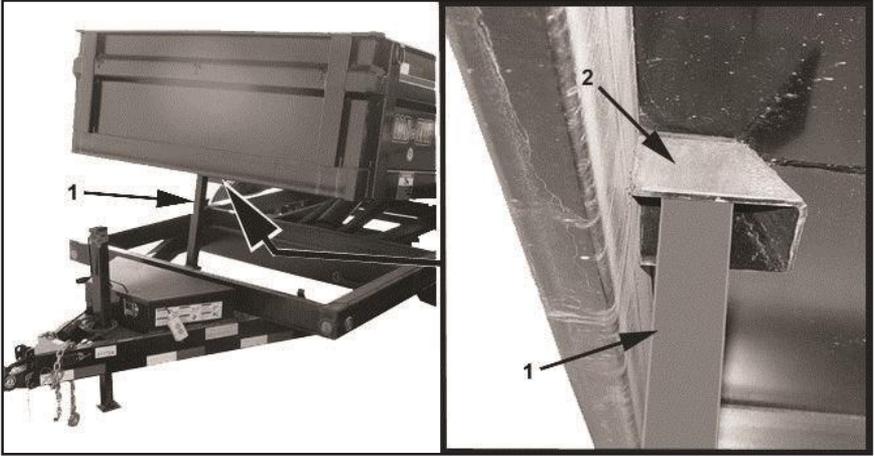
Lubricate Dump Body Pivot Hinges



Lubricate Door Hinges

Park the trailer on a firm and level surface. Raise the dump body and place the body prop (1) in the upright position. Lower the dump body onto the body prop. The body prop (1) must engage the receiver (2).

INSPECTION, SERVICE & MAINTENANCE



Dump Trailer Body Prop Engaged

Pump grease into the fittings on each end of the cylinder(s) and in the scissor mechanism (if equipped). The number of grease fittings and location on the scissor mechanism will vary by trailer model.



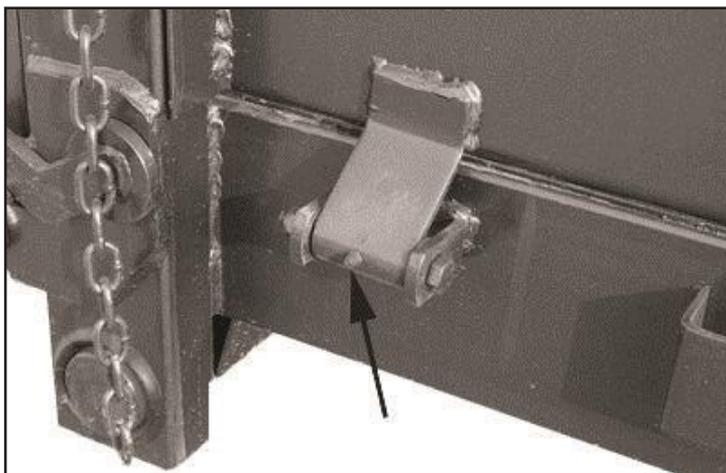
Lubricate Scissor Mechanism

INSPECTION, SERVICE & MAINTENANCE



Lubricate Scissor Mechanism

For trailers equipped with fold down sides, pump grease into each fitting on the fold down side hinges every month.



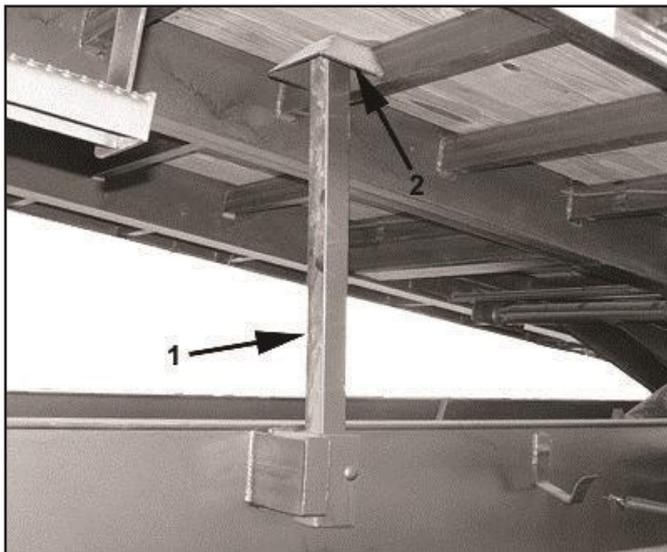
Lubricate Fold Down Side Panel Hinges

INSPECTION, SERVICE & MAINTENANCE

10.2.1.15 Tilt Deck Trailers

Pump grease into the tilt deck hinge grease fittings every month.

Park the trailer on a firm and level surface. Raise the tilt deck and place the safety prop (1) in the upright position. Lower the deck onto the safety prop. The safety prop (1) must engage the receiver (2).



Tilt Deck Trailer Safety Prop Engaged

Pump grease into the fittings on each end of the cylinder and at each pivot point of the scissor mechanism. The number of grease fittings and location on the scissor mechanism will vary by trailer model.

HYDRAULIC RESERVOIR

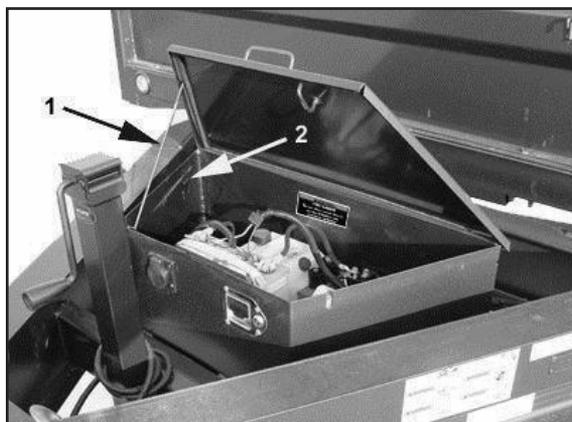
Check fluid level prior to using the trailer. The reservoir (1) is located inside the battery box. (Box on the tongue of the trailer illustrated in figure below.) The dump body must be fully lowered before checking fluid level. The reservoir should be filled to the full mark on the side of the reservoir. Fluid ejecting from the reservoir could indicate a low battery. (If the battery is not fully charged, the hydraulic pump will lose pressure causing hydraulic fluid to flow back into the hydraulic reservoir, overfilling the reservoir.)

KTI recommends using a premium hydraulic oil to ensure optimum performance and system life. Select oil that has anti-wear properties, rust and oxidation inhibitors, foam inhibitors and good stability. Examples of premium grade hydraulic oils: Chevron Rando HDZ, Mobil DTE 10, DTE 20 series, AMSOIL, and Shell Tellus.

Automotive Transmission Oils are acceptable under normal conditions.

Aviation Oils such as Valvoline ROYCO series or Mobil Aero HF or HFA may be used in prolonged, extreme cold environments.

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Hydraulic Reservoir

Lug Nuts

Lug nuts are prone to loosen right after a wheel is mounted to a hub. When driving on a remounted wheel, check to see if the lug nuts are tight after the first 10, 25 and 50 miles of driving, and before each tow thereafter.

⚠ WARNING

Lug nuts are prone to loosen after being first assembled. Death or serious injury can result. Check lug nuts for tightness on a new trailer, and after re-mounting a wheel at 10, 25 and 50 miles.

⚠ WARNING

Metal creep between the wheel rim and lug nuts (bolts) can cause rim to loosen. Death or injury can occur if wheel comes off. Tighten lug nuts (bolts) before each tow.

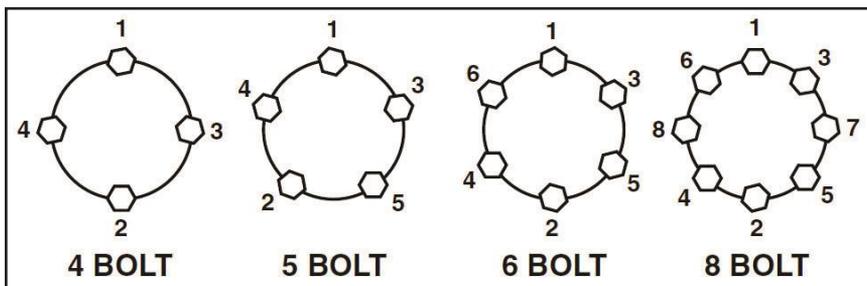
Tighten the lug nuts in three stages to the final torque for the axle size on your trailer, to prevent wheels from coming loose. Tighten each lug nut in the order shown in figure below. Use a calibrated torque wrench to tighten the fasteners. Verify that wheel studs are free of contaminants such as paint or grease, which may result in inaccurate torque readings. Over-tightening will result in breaking the studs or permanently deforming the mounting stud holes in the wheels, and will void the axle warranty.

INSPECTION, SERVICE & MAINTENANCE

WHEEL TORQUE REQUIREMENTS

5,200 lb. to 8,000 lb. Axles

WHEEL SIZE	1st STAGE	2nd STAGE	3rd STAGE
12"	20-25	35-40	50-75
13"	20-25	35-40	50-75
14"	20-25	50-60	90-120
15"	20-25	50-60	90-120
16"	20-25	50-60	90-120
16.5" x 6.75"	20-25	50-60	90-120
16.5" x 9.75"	55-60	120-125	175-225
14.5" Demount	Tighten Sequentially to 85-95		
17.5" Hub Pilot Clamp Ring & Cone Nuts	50-60	100-120	190-210
17.5" Hub Pilot 5/8" Flange Nuts	50-60	90-200	275-325



CAUTION

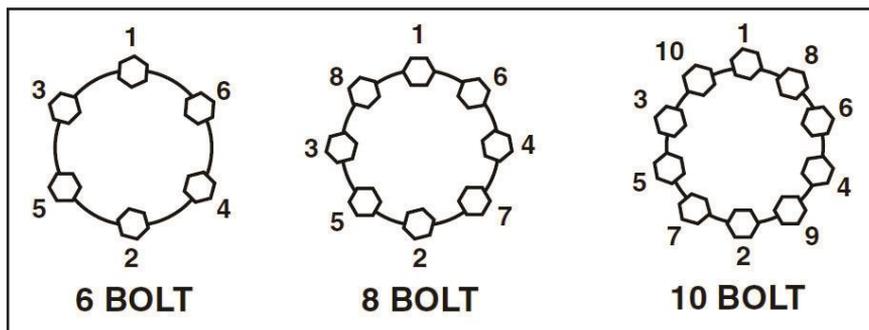
Proper matching of the tire/wheel combination is essential to proper function of your trailer running gear. Some tires may call for a maximum inflation pressure above the rim or wheel capacity. **DO NOT EXCEED MAXIMUM INFLATION PRESSURES FOR RIMS OR WHEELS.** Catastrophic failure may result.

INSPECTION, SERVICE & MAINTENANCE

WHEEL TORQUE REQUIREMENTS

9,000 lb. to 15,000 lb. Axles

DESCRIPTION	PART No.	APPLICATION	TORQUE MIN. FT. LBS.	TORQUE MAX. FT. LBS.
5/8-18 90° Cone Nut	006-109-00	Clamp Ring 033-052-01	190	210 - Greased Threads
3/4-10 Hex Nut	006-117-00	Demountable Rim Clamp	210	260
3/4-16 Spherical Nut	006-064-01, 02 006-069-01, 02	Single Wheel Inner Dual	450	500
1 1/8-16 Spherical Nut	006-070-01, 02	Outer Dual	450	500
5/8-18 Flange Nut	006-058-00	Wheels	275	325
M22-1.5	006-118-00	Swiveling Flange Nut	450	500



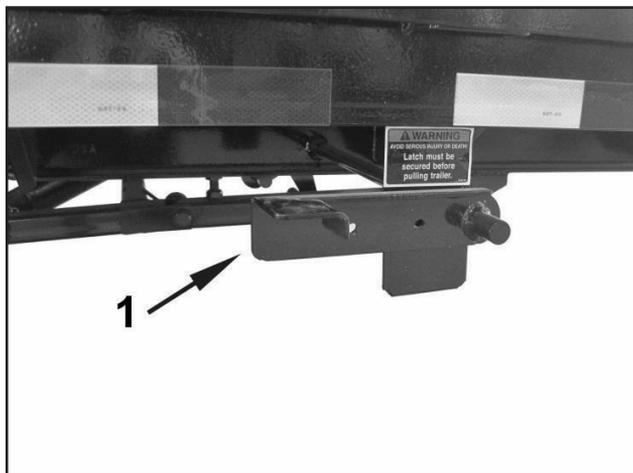
CAUTION

Proper matching of the tire/wheel combination is essential to proper function of your trailer running gear. Some tires may call for a maximum inflation pressure above the rim or wheel capacity. **DO NOT EXCEED MAXIMUM INFLATION PRESSURES FOR RIMS OR WHEELS.** Catastrophic failure may result.

INSPECTION, SERVICE & MAINTENANCE

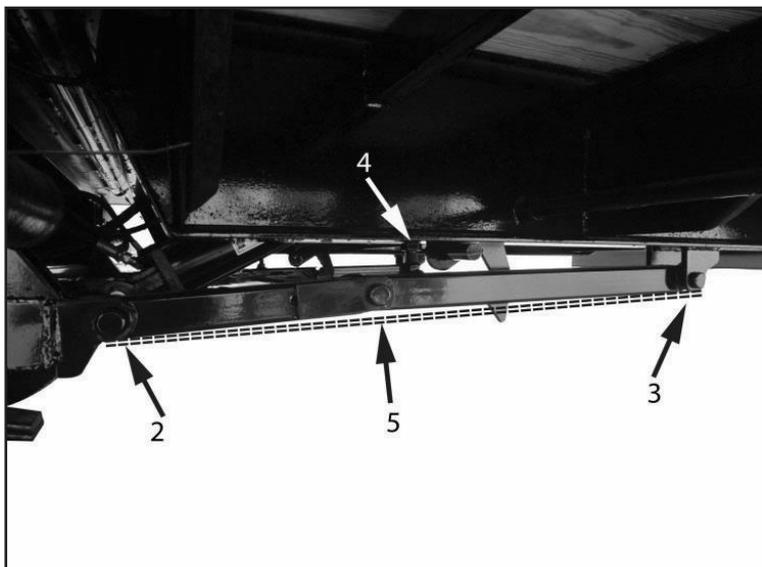
HYDRAULIC DOVE TAIL ADJUSTMENT

Make sure Lever is in lock position (1) as shown below.



DOVE TAIL LEVER

- Take a straight piece of metal and put under pins (2,3) as shown below.
- Adjust bolt (4) until there's a $\frac{1}{4}$ " gap (5) between the piece of metal and arm.



Hydraulic Dove Tail Arm Adjustment

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RIDEWELL AIRBAG SUSPENSION / AXLES



10.2.1.16 MAINTENANCE SCHEDULE

To keep your Ridewell suspension in optimum working order, we recommend the following maintenance:

	Every 1,000 Miles	1st 6,000 Miles of operation	Every 12,000 Miles	Every 50,000 Miles
Bushings				I
Air Springs	I			
Structure	I			
Ride Height	I			
Fastener Torque		T		T

I = INSPECT, L = LUBRICATE, T = TIGHTEN, R = REPLACE

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10.2.1.17 RIDEWELL TORQUE REQUIREMENTS



RIDEWELL SUSPENSION TORQUE CHART

ITEM	SIZE	TORQUE	
		(FT-LB)	(Nm)
Pivot Bolt/Nut	7/8" - 9NC	SEE BELOW	SEE BELOW
Shock Bolt/Nut	3/4" - 10NC	200 - 230	271 - 312
Air Spring Nut, Upper	3/4" - 16NF	45 - 50	61 - 68
Air Spring Nut, Lower	1/2" - 13NC	45 - 50	61 - 68
Air Spring Bolt, Lower	1/2" - 13NC	25 - 30	34 - 41

Torque pivot bolt using a 1" drive impact wrench and #6100054 E-20 Torx socket (or equivalent) until the Torx head shears off from the bolt.

Suspension fasteners to be retorqued initially at 6,000 miles (10,000 KM) and 50,000 miles (80,000 KM) increments thereafter. Do not retorque pivot fasteners.

10.2.1.18 RIDEWELL AXLE ALIGNMENT

The RAR-260 suspension is equipped with the Speed Set® alignment feature for simple, manual alignment of the axles. Depending on the suspension model, slots are provided in either the hanger sidewalls or bushing assemblies (see Figure 1a) which allow 0.5" of adjustment at each pivot connection.

1. Prior to alignment, position the suspension beams so that the pivot bolts are centered in the alignment slots. See Figure 1a.

2. Align the forward axle to the center of the kingpin to within $\pm 1/8"$.

See Figure 2.

3. Alignment procedure:

a. Loosen the pivot nut.

b. Move beam in the direction of desired axle movement. Use a 1/2" shank breaker bar inserted into the square hole in the adjuster plate. See Figure 1b. Ensure that both inboard alignment washer and outboard adjuster plate have moved in unison. It is important that the bushing is not skewed in the hanger prior to tightening.

c. Snug the pivot fasteners and re-check alignment measurements. Adjust if necessary.

d. Torque the pivot bolt using a 1" drive impact wrench and #6100054 E-20 Torx socket (or equivalent) until the Torx head shears off from the bolt.

Note: Torque the pivot bolt with the suspension at ride height to prevent pre-stressing the rubber pivot bushing. Note: It is imperative that the pivot fasteners be properly torqued prior to placing the trailer into service. Failure to torque the pivot fasteners will lead to slippage of the pivot joint, causing rapid wear of the components and ultimately leading to catastrophic failure of the suspension. Warranty coverage of the suspension is void if the pivot fasteners are not properly torqued.

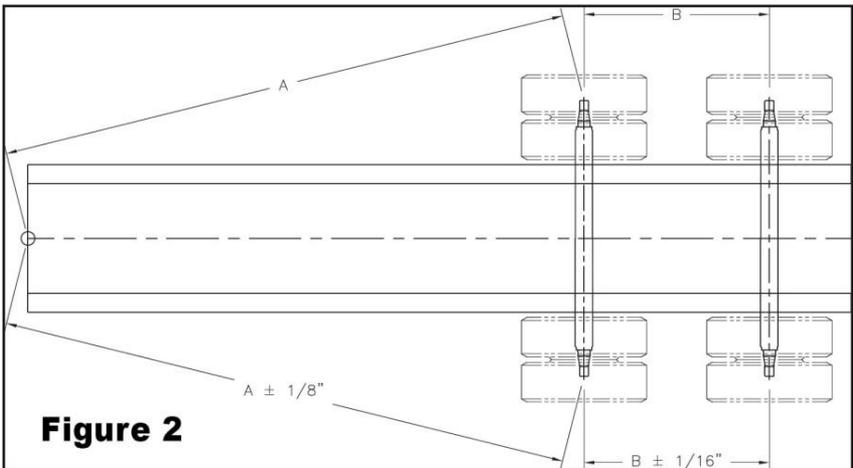
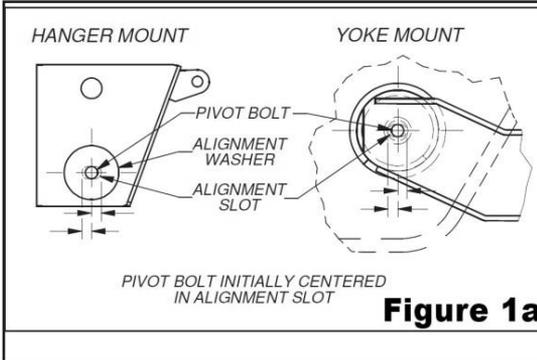
e. Welding alignment washers to the hanger sidewalls of hanger mount suspensions is not required or recommended.

4. Align the aft axle(s) to the forward axle to within $\pm 1/16"$ using the same procedure.

See Figure 2.

4. In general, small alignment changes can be made on one side (left beam or right beam). It is preferable that large alignment changes be made by splitting the difference from one side to the other (i.e. 1/2 the difference forward at one beam, 1/2 the difference aft at the other beam).

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10.2.1.19 RIDEWELL AXLE ALIGNMENT

The distance from the bottom of the trailer frame to the centerline of the axle.

1. Level the trailer so that Ride Arms of suspension is parallel to road surface. (As Quick Check)
2. Make sure valve is set to the neutral position (Figure 1) and air is applied to the bags.
3. Adjust the front axle ride height with the Vertical Link (symbol 4 in Figure 2) to measure 5-1/2" (Figure 3) from the bottom trailer frame to the centerline of the axle.
4. Secure the vertical linkage.

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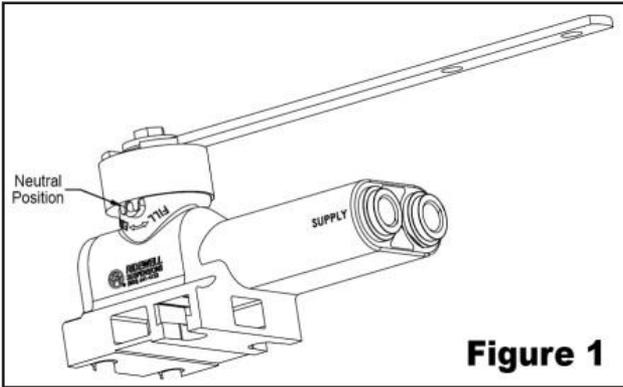


Figure 1

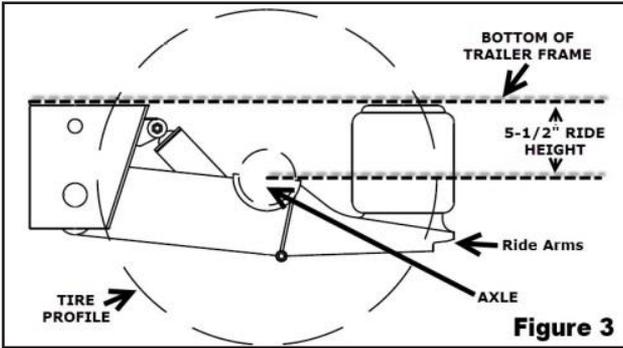


Figure 3

Symbol Identification

- | | | |
|--------------------------|-------------------|------------------------|
| 1 = Height Control Valve | 4 = Vertical Link | 7 = Lower Pin Assembly |
| 2 = Lever | 5 = "P" Connector | 8 = Lower Bracket |
| 3 = Upper Pin Assembly | 6 = Clamp | 9 = Upper Bracket |

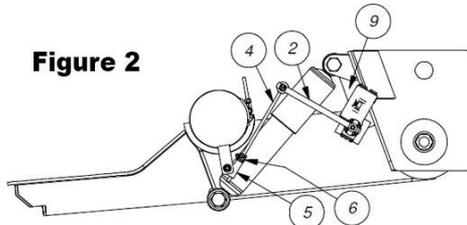
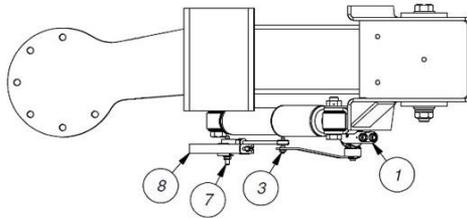


Figure 2

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10.2.1.20 AIR RIDE CONTROLS

When loading the air ride by any means other than using the ramps, the air should be released from the air bags.

To release the air without the use of the lift axle, use the valve located on the inside of the toolbox.

Air Valve Position • Release Air. See picture diagram 'A'.



Diagram A

Air Valve Position • Inflate Air Bags. See picture diagram 'B'.



Diagram B

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To let the air out with a lift axle the valve for the lift axle must be in the lift mode. Then, move the valve handle to point to the tool box door. See picture diagram 'C'.

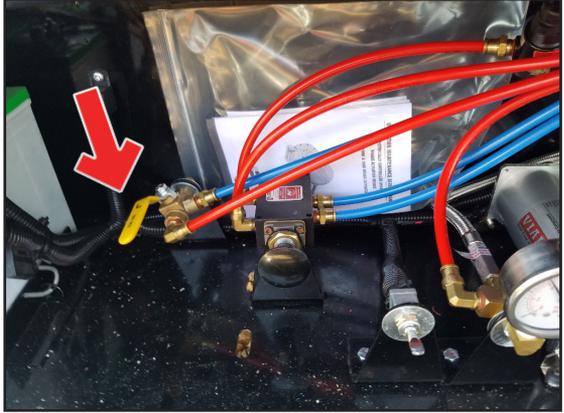


Diagram C

To travel with the lift axle up, push the lift axle valve handle inwards. See picture diagram 'D'.



Diagram D

To travel with the lift axle up, push the lift axle valve handle inwards. See picture diagram 'E'.

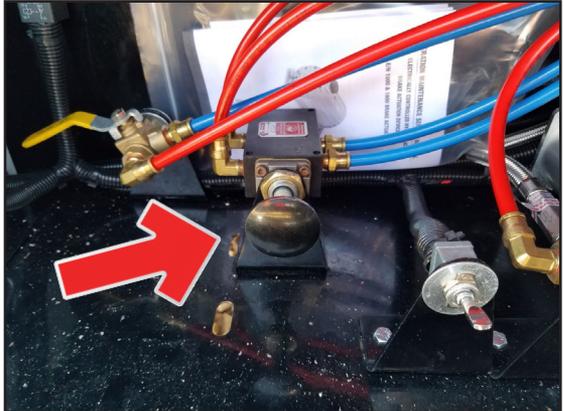


Diagram E

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HEAVY DUTY SUSPENSION SYSTEM (DEXTER HDSS)

CAUTION

HEAVY DUTY SUSPENSION TORQUE REQUIREMENTS

Before torquing equalizer bolts, level equalizers parallel to main frame members. After initial break-in period (up to 1,000 miles) and at least every 4 months thereafter; all bolts and nuts should be checked to ensure recommended torque is being maintained.

TORQUE VALUES FOR BOLTS WITH CLEAN DRY THREADS

1-1/8-7 UNC Nut	Oiled: 615 Ft. Lbs. Dry: 815 Ft. Lbs.
1-8 UNC Nut	Dry: 350 Ft. Lbs.
Spring Keeper Nut 5/8-18 UNF	Dry: 50 Ft. Lbs.
Track Rod Clamp Nut 5/8-11 UNC	Dry: 150 Ft. Lbs.
U-Bolt 3/4-10 UNC Nut	Dry: 200 Ft. Lbs.

Label No. 059-894-00 Rev. F



You cannot rely on visual inspection to detect loose fasteners.
USE A CALIBRATED TORQUE WRENCH!

The Dexter torque decal label should be installed on the side of the trailer in a visible location. Decals can be obtained free of charge by contacting Dexter.

Now let's look closely at the maintenance requirements for each of the suspension's main component groups.

Axle Clamp Group and Springs

1. Check the torque on the U-Bolt/Tie Plate nuts by alternately tightening opposing corners of the clamp assembly (see Figure 1).
 - A. U-Bolts are 3/4"-10 and the nuts should be torqued to a **dry level of 200 Ft. Lbs.**

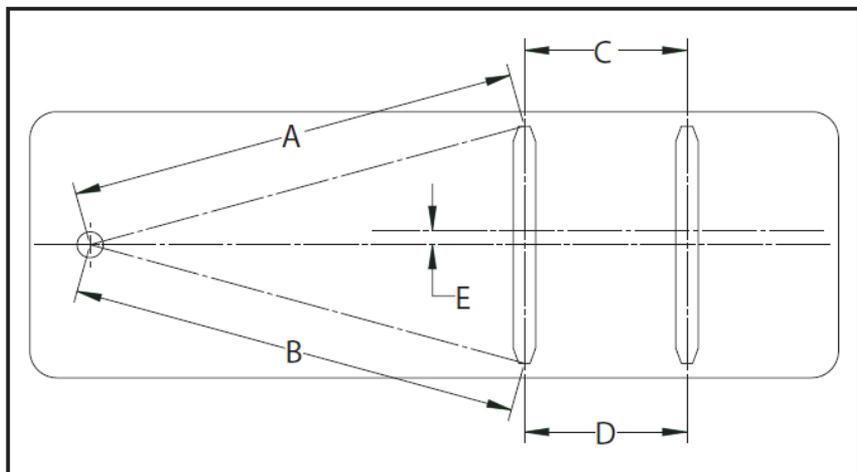


Figure 4

Adjusting

1. Loosen the adjustable track rod clamp bolts (see Figure 1) and turn the center rod to adjust as necessary (see torque min/max table).
2. After adjusting, tighten the adjustable track rod clamp nuts (see Figure 1) to proper torque (see torque min/max table) and recheck measurements.

Precautions

1. Always measure to the front axle ends for accurate alignment.
2. Avoid measuring to rims, suspension brackets, hub cap vent holes, brake drums, etc. This can result in improper alignment. For accurate measurements, use extenders.
3. Always align any succeeding axles with the front axles, not the kingpin.

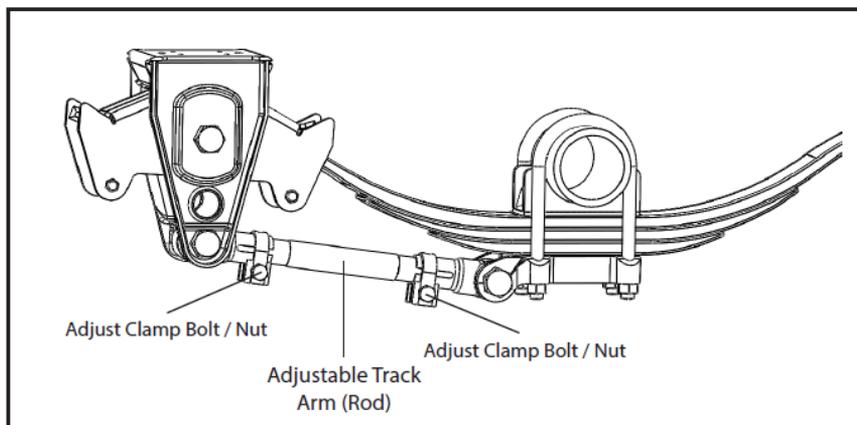


Figure 3

Measuring

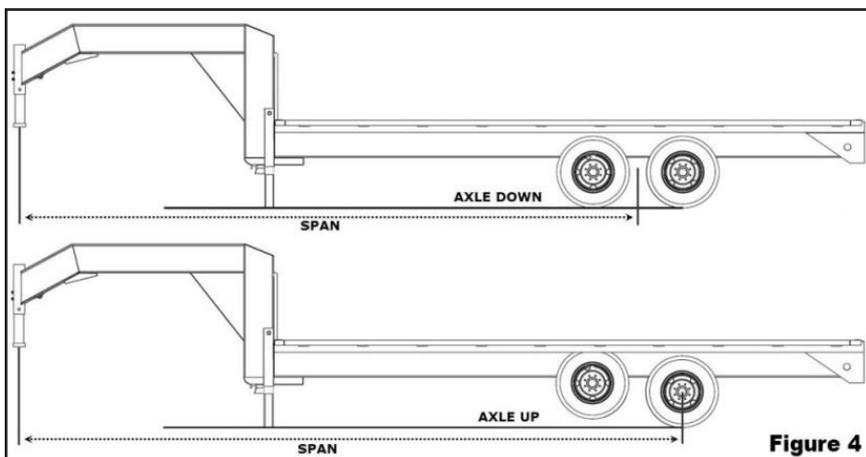
1. **Lateral Centerline (E).** Determine lateral centerline of trailer body and axles by measuring distance E between trailer and axle centerlines first, and correct so that distance E is 1/4" or less for each axle.
2. **Thrust Angle (A, B).** Measure distances A (curbside) then B (roadside) from the king pin to the front of the axle. These must be equal to within 0.1 degree or 1/8" of each other ($A = B \pm 1/8"$). Ensure the lateral tension (pulling force) applied to the measuring tape is the same for both A and B measurements. Use a tensioning device scale or optical (laser) to ensure accuracy.
3. **Scrub Angle (C, D).** Measure distances C (curbside) then D (roadside) between axles, measuring from front of axle extension to front of axle extension (same as center to center). These also must be equal to within 1/16" of each other ($C = D \pm 1/16"$). This measurement should be as close to zero as possible. The smaller the offset, the lower the rolling resistance and the better the fuel economy.

INSPECTION, SERVICE & MAINTENANCE

10.2.1.21 RIDEWELL SUSPENSION WITH LIFT AXLE

CAUTION DO NOT TOW LOADED TRAILER WHEN LIFT AXLE IS LIFTED, SERIOUS DAMAGE CAN OCCUR.

Caution must be exercised when using lift axles. Damage to the trailer frame and/or axles can result from overloading by lifting an axle so that the distance from the coupler to the remaining axles suddenly increases. See Figure 4.



When the front axle is lifted, the rear axle will take on the entire load, which could result in bending or causing other damage.

TRAILER STORAGE PREPARATION

If your trailer is to be stored for an extended period of time or over the winter, it is important that the trailer be prepared properly.

1. Remove the emergency breakaway battery and store inside out of the weather. Charge the battery at least every 90 days.
2. Jack up the trailer and place jack stands under the trailer frame so that the weight will be off the tires. Follow trailer manufacturer's guidelines to lift and support the unit. Never jack up or place jack stands on the axle tube or on the equalizers.

CAUTION

Do not lift or support the trailer on any part of the axle or suspension system. Never go under any trailer unless it is properly supported on jack stands which have been rated for the load. Improperly supported vehicles can fall unexpectedly and cause serious injury or death.

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3. Lubricate mechanical moving parts such as the hitch, and suspension parts, that are exposed to the weather.
4. Boat trailer axles are subject to repeated immersion. Before storing, remove brake drums; clean, dry and re-lubricate moving brake components; inspect bearings – clean and re-lubricate.
5. On oil lubricated hubs, the upper part of the roller bearings are not immersed in oil and are subject to potential corrosion. For maximum bearing life, it is recommended that you revolve your wheels periodically (every 2-3 weeks) during periods of prolonged storage.

AFTER PROLONGED TRAILER STORAGE INSPECTION PROCEDURE

BEFORE REMOVING TRAILER FROM JACK STANDS:

1. Remove all wheels and hubs or brake drums. Note which spindle and brake that the drum was removed from so that it can be reinstalled in the same location.
2. Inspect suspension for wear.
3. Check tightness of hanger bolt, shackle bolt, and U-bolt nuts per recommended torque values.
4. Check brake linings, brake drums and armature faces for excessive wear or scoring.
5. Check brake magnets with an ohmmeter. The magnets should check 3.2 ohms. If shorted or worn excessively, they must be replaced.
6. Lubricate all brake moving parts using a high temperature brake lubricant (LUBRICATE or Equivalent).
7. Remove any rust from braking surface and armature surface of drums with fine emery paper or crocus cloth. Protect bearings from contamination while so doing.
8. Inspect oil or grease seals for wear or nicks. Replace if necessary.
9. Lubricate hub bearings. Refer to procedure in manual.
10. Reinstall hubs and adjust bearings per instructions in manual.
11. Mount and tighten wheels per instructions in manual.

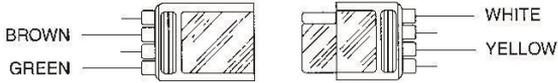
CAUTION

Do not get grease or oil on brake linings or magnet face.

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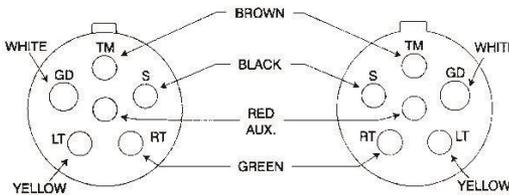
10.3 ELECTRICAL CONNECTOR WIRING DIAGRAMS

4 PIN CONNECTOR



COLOR	DESCRIPTION
Brown	Tail Lights
Green	Right Turn
White	Ground
Yellow	Left Turn

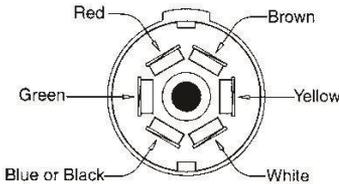
6 PIN CONNECTOR



PLUG	COLOR	DESCRIPTION
GD	White	Ground
S	Black	Electrical Brakes (if equipped)
LT	Yellow	Left Turn Signal
RT	Green	Right Turn Signal
TM	Brown	Tail Lights
CENTER	Red	Charge Line

NOTE: Identify contacts by looking into the open end of plug or socket.

7 PIN CONNECTOR



COLOR	DESCRIPTION
White	Ground
Blue or Black	Electrical Brakes (if equipped)
Yellow	Left Turn Signal
Green	Right Turn Signal
Brown	Tail Lights
Red	Charge Line

Electrical Connectors

Note: Center post on vehicle plug must be active with reverse indicator if trailer is equipped with hydraulic surge brake



Load Trail
220 FM 2216
Sumnr, TX 75486
www.loadtrail.com