

Loading the Trailer

Gate the livestock tightly to keep them from moving or falling during transportation.

Close the loading doors (either swinging or roll-up) and raise the drop ramp.

Secure the trailer door catch with a linchpin or similar device, so that the catch and door cannot open while the trailer is being towed.

^ WARNING

If the door opens, your cargo may be ejected onto the road, resulting in death or serious injury to other drivers.

Always secure the door latch after closing.
Place a linchpin in the catch.

4. CHECKING THE TRAILER BEFORE AND DURING EACH TOW

4.1. PRE-TOW CHECKLIST

Before towing, double-check all of these items:

- Tires, wheels and lug nuts (see the “Major Hazards” section starting on page 3 of this manual)
- Coupler secured and locked (see the “Coupling and Uncoupling the Trailer” section starting on page 32 of this manual)
- Safety chains properly rigged to tow vehicle, not to hitch or ball (see the “Coupling to the Tow Vehicle” chapter starting at Page 27 of this manual)
- Test of lights: Tail, Stop, Turn and Backup
- Safety breakaway switch cable fastened to tow vehicle, not to safety chains (see the “Coupling to the Tow Vehicle” chapter starting at Page 27 of this manual)
- Cargo properly loaded, balanced and tied down (see the “Loading the Trailer” chapter starting at page 65 of this manual)
- Tongue weight
- Doors and gates latched and secured
- Fire extinguisher
- Flares and reflectors

4.2. MAKE REGULAR STOPS

After each 50 miles, or one hour of towing, stop and check the following items:

- Coupler secured
- Safety chains are fastened and not dragging
- Cargo secured
- Cargo door latched and secured

5. BREAKING-IN A NEW TRAILER

5.1. RETIGHTEN LUG NUTS AT FIRST 10, 25 & 50 MILES

Wheel lugs can shift and settle quickly after being first assembled, and must be checked after the **first** 10, 25 and 50 miles of driving. Failure to perform this check may result in a wheel coming loose from the trailer, causing a crash leading to death or serious injury.

^ WARNING

Lug nuts are prone to loosen after initial installation, which can lead to death or serious injury.

Check lug nuts for tightness on a new trailer or when wheel(s) have been remounted after the first 10, 25 and 50 miles of driving.

5.2. ADJUST BRAKE SHOES AT FIRST 200 MILES

Brake shoes and drums experience a rapid initial wear. The brakes must be adjusted after the first 200 miles of use, and each 3,000 miles thereafter. Some axles are fitted with a mechanism that will automatically adjust the brake shoes when the trailer is "hard braked" from a forward direction. Read your axle and brake manual to see if your brakes adjust automatically. If you do not have the axle and brake manual, call Dalton Enterprises, Inc. at (276) 686-9178.

Breaking-in a New Trailer

A hard stop is used to:

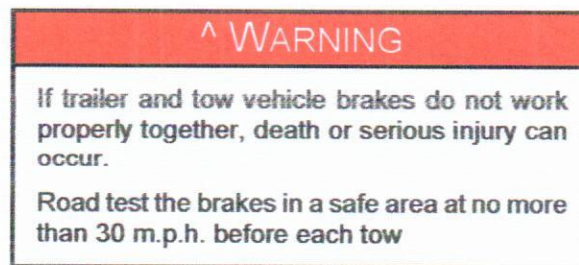
- confirm that the brakes work;
- confirm that the trailer brakes are properly synchronized with the tow vehicle brakes; and for many braking systems,
- automatically adjust the brake shoes.

If your trailer is not fitted with automatically adjusting brakes, the brakes will need to be manually adjusted. See section 7.2.5.2, “Manually Adjusting Brake Shoes,” for instructions.

5.3. SYNCHRONIZING THE BRAKE SYSTEMS

Trailer brakes are designed to work in synchronization with the brakes on the tow vehicle. Do not use either brake system alone to stop the combined tow vehicle and trailer.

When the tow vehicle and trailer braking systems are synchronized, both braking systems contribute to slowing, and the tongue of the trailer will neither dive nor rise sharply.



To insure safe brake performance and synchronization, read and follow the axle/brake and the brake controller instructions from the manufacturer. If you do not have these instructions, call Dalton Enterprises, Inc. (276) 686-9178.

6. ACCESSORIES

This chapter provides some basic information for the safe operation of several accessories. For many accessories, such as generators and LP appliances, the manufacturer of the accessory has also provided instructions. You must read and follow these instructions before using the accessory. If you are uncertain whether you have all of the instructions, call Dalton Enterprises, Inc. at (276)686-9178 before operating the accessory. The following accessories are described in this section:

- Gasoline (or LP) and Diesel Generators
- Accessory Battery
- “Shore Power” connections which provide power by “plugging the trailer in” to an external source of electrical power
- LP Gas Fuel System
- Vending or Accessory Doors
- Electric-powered Landing Gear

Many accessories introduce the risk of fire. If you have an accessory on your trailer, make sure you have a fire extinguisher charged and ready before operating the accessory. Check the fire extinguisher at least once a month. If the fire extinguisher is discharged even partially, it must be recharged. Follow the fire extinguisher manufacturer’s instructions for recharging the extinguisher after use.

Accessories

6.1. GASOLINE-POWERED ELECTRIC GENERATORS

If your trailer is equipped with a generator, you must have and follow the generator manufacturer's instructions. Carbon monoxide gas is present in the exhaust of all gasoline and diesel engines, as well as from other burning fuels such as LP gas and charcoal.

Carbon Monoxide is an odorless gas that can cause death. Be certain exhaust from any running engine or burning fuels can not accumulate in areas where people or animals are likely to be present. Conditions that can redirect exhaust fumes are, for example:

- ◆ Being drawn in by fans or ventilators operated in a trailer;
- ◆ Prevailing wind;
- ◆ Being trapped between adjacent trailers, vehicles or buildings; or
- ◆ Being trapped between or in a snow bank or other materials that can redirect fumes.
- ◆ You must have an operating carbon monoxide detector inside the accommodation spaces of your trailer.

Accessories

^ WARNING

Operating gasoline and diesel generators can lead to death or serious injury by:

- Carbon Monoxide
- Fire and Explosion
- Electrocutation

Have a working carbon monoxide detector in the accommodation spaces before operating a generator.

Do not refuel a running generator or refuel near ignition sources.

Before starting the generator, check fuels and oil levels. The generator may have to run for two or three minutes before it allows drawing electricity from it. Read the generator instruction manual. If you do not have the generator instruction manual, call Dalton Enterprises, Inc. at (276) 686-9178.

Never exceed the capacity of the generator.

Before turning off the generator, remove the electrical load and let the engine run for two or three minutes to cool the generator.

Accessories

6.2. ACCESSORY BATTERY

Your trailer may be outfitted with an accessory battery that operates lighting, electric landing gear, slide-outs or other accessories. An accessory battery may be kept charged either by the tow vehicle or by the generator or shore power.

A disconnect switch may be provided to disconnect the accessory battery when you do not plan to be using the trailer for an extended period, such as seasonal storage. If there is no disconnect switch, then remove the cables from the battery terminals.

The accessory battery must be kept in a charged condition during storage. The battery could freeze and break if it becomes discharged.

6.3. SHORE POWER

Shore power is the delivery of electrical power from another source to a power inlet on your trailer. To connect your trailer to this source, you must have a "shore power" cord, specifically designed for this use. **DO NOT USE AN ORDINARY EXTENSION CORD.** The trailer end of this cord is connected to an electrical box on the trailer, sometimes referred to as a "motor base." This box contains circuit breakers and/or fuses and may include a power converter to change the shore power (usually 110 volts alternating current) into 12 volts direct current.

Do not assume that a shore power supply is correctly wired. Shore power may have incorrect polarity or not have the safety ground. Before connecting your trailer, test shore power by using a polarity and ground tester. Both can be purchased at electronic stores.

If you have shore power, your trailer may be fitted with Ground-Fault Interrupting outlets (GFI). If you have GFI

Accessories

protection, you must periodically test the outlets by pressing the "TEST" button that is located on the GFI-equipped outlet.

^ WARNING

Shore power poses a risk of death due to electrocution or fire

- Always use an electrical cord specifically designed for shore power connection. Never use an ordinary extension cord.
- Always connect the electrical cord to a grounded source of shore power.
- Do not remove the "third prong" from the shore power plug.
- Connect only to source of proper voltage.
- Make certain polarity is correct.
- Do not overload electrical circuits.
- Always replace fuses or circuit breakers with correct rating.

6.4. LP GAS FUEL SYSTEM

LP gas systems are installed to operate a variety of appliances, such as stoves, refrigerators, heating units and electrical generators. The exhaust fumes from burning LP gas contain carbon monoxide. Carbon monoxide gas is odorless and can cause death or serious brain injury if inhaled. The exhaust from LP appliances must be directed to the outdoors. You must have an operating carbon monoxide detector in the accommodation space of your trailer.

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^ Danger

You can die or be brain damaged by Carbon Monoxide.

Make certain the exhaust from LP appliances is directed to the outdoors.

Have a working carbon monoxide detector in the accommodation spaces of your trailer before operating any LP gas appliance.

Do not operate portable grills or stoves inside the trailer.

When used for the first time, or after a period of storage, the LP gas lines will be full of air and must be purged of air, before the appliances will stay lit. Have the LP gas lines purged by your trailer dealer, or an LP gas dealer.

An LP gas system is designed to operate with a supply of LP gas only, NOT natural gas. A natural gas supply is unsafe for the system's pressure regulation devices.

^ WARNING

Risk of death due to fire or explosion.

Only connect an LP gas system to a supply of LP gas, NOT natural gas.

Do not store LP gas tanks inside the trailer.

Only fill an LP gas tank 80% full.

Only fill the tank with LP gas (butane or propane).

Overfilled tanks can release gas and cause an explosion.

Keep the shutoff valve on your LP gas tank closed at all times, except when you are operating an LP gas appliance.

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Before opening the LP shutoff valve, turn off all LP gas appliances. If an appliance is on when you open the shutoff valve, LP gas will accumulate in the trailer, which can result in an explosion.

Do not use a wrench to open or close the shutoff valve. If the shutoff does not completely stop the flow of LP gas when it is hand-tightened, replace the shutoff valve.

LP gas leaks can result in fire or explosion. If your trailer is equipped with an LP gas system, it must also be equipped with an LP gas detector. The LP gas detector will be located near the floor to detect the heavier-than-air LP gas. If a leak is suspected, use a soapy water solution to search for the leak. Do not use a solution that contains ammonia or chlorine (common in window and other household cleaning compounds), because those chemicals will cause LP piping corrosion.

^ WARNING

Risk of fire or explosion

If LP gas is detected (by smell or by the LP gas detector):

- Do not touch electrical switches
- Extinguish flames and pilot lights
- Open doors for ventilation
- Shut off LP gas supply at the LP tank
- Leave the area until odor clears

Correct the source of LP gas leakage before using LP appliances.

Do not use a flame to locate the source of an LP gas leak.

LP gas is either propane or butane that is compressed into liquid form. LP gas must be completely vaporized before

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being burned. Butane gas will not operate if the outside temperature is below 32 degrees Fahrenheit.

^ Notice

Use Butane only when the temperature is above freezing (32 degrees F).

Propane gas will operate at temperatures as low as minus 44 degrees Fahrenheit (-44 F).

Keep the regulator for the LP gas system (located near the LP gas tank) covered with a guard to protect it from road debris.

LP gas is prohibited on some roadways, bridges and tunnels. Check a map and with Departments of Transportation (or with the AAA) for travel routes that do not have such restrictions.

6.4.1. LP Gas System Troubleshooting

- ◆ Having liquid “gas” at your appliance is an indication that the LP gas tank is overfilled, or that the temperature is too cold.
- ◆ If your LP gas appliances do not stay lit, it might be because your LP gas system is contaminated with air or moisture. Many LP gas vendors have facilities to purge the air from an LP gas system.
- ◆ If your LP gas system is not providing gas, even when the shutoff valve is open, it might be because the LP gas regulator has frozen water in it.

Accessories

^ WARNING

Risk of fire or explosion

Never use a flame, heat lamp or hair dryer to thaw an LP gas regulator. Use an incandescent light bulb.

Do not remove the regulator cover or attempt to service the LP gas regulator.

6.5. VENDING & ACCESSORY DOORS

A vending or accessory door opens vertically and has a hinge along its top edge. These heavy doors are equipped with spring-assisted lifting, usually with a device known as a “gas spring.” The gas spring lifting device is not designed to hold a vending door up. You must use the provided solid “prop rods” to hold a vending door in the open position.

^ WARNING

Gas springs lose their lifting capability with age and cold weather; and can cause the door to fall, resulting in injury.

Always hold the door open until the prop rods are in place.

Always use prop rods to hold vending or accessory doors open.

Be prepared to hold the weight of the door when removing the prop rod.

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6.6. ELECTRIC-POWERED LANDING GEAR

The landing gear (also known as the jack) on your trailer may be powered with an electric motor. The landing gear is operated up or down using controls located near the landing gear.

If the motor does not operate, such as when the battery is fully discharged, the landing gear can be operated manually with a socket wrench

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7. INSPECTION SERVICE & MAINTENANCE

7.1. 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 & Maintenance

Inspection and Service before Each Use		
Item	Inspection / Service	Manual Section Reference
Breakaway Brakes > Electric > Hydraulic	Check operation Check fluid level	Sections 2.2.1.5 & 2.2.2.4 Section 7.2.5.4
Breakaway Battery	Fully charged, connections clean	Sections 2.2.1.5 & 2.2.2.4 Section 7.2.5.3.A.(i)
Brakes, all types	Check operation	Section 5.3
Shoes and Drums	Adjust	Section 5.2 7.2.5.2
Brakes, Hydraulic - Vacuum Actuated	Check gauge for proper vacuum of 18 In. Hg. (inches of mercury)	Section 7.2.5.4.A
Coupler and Hitch Ball	Check for cracks, pits, and flats. Replace w/ball & coupler having trailer GVW Rating. Grease. Check locking device & replace.	Section Section Section & 7.2.6.1
Gooseneck Ball	Check for cracks, pits, and flats. Replace w/ball & coupler having trailer GVW Rating. Grease. Check locking device & replace when worn.	Section 2.2.2.1 Section 2.2.2.1 Section & 7.2.6.2
Safety Chain(s) & Hooks	Check for wear and damage	Sections 2.2.1.4 & 2.2.2.3
Tires	Check tire pressure when cold. Inflate as needed.	Sections 4.1 & 7.2.10
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 4.1 Sections 5.1 & 7.2.13

Inspection Service & Maintenance

Inspection and Service each 3 Months or 3,000 Miles		
Item	Inspection / Service	Manual Section Reference
Structure > Rubber mats and floor > Hinges, Doors and dividers	Remove mats. Wash both sides. Wash floor Inspect. Repair or replace damaged, worn or broken parts	Section 7.2.2 Sections 3.2.3.1, 3.2.4.1 & 7.2.2

Inspection and Service each 6 Months or 6,000 Miles		
Item	Inspection / Service	Manual Section Reference
Tires	Rotate @ 5,000 miles	Section 7.2.10
Brakes, electric > Magnets > Controller (in tow vehicle)	Check wear and current draw Check power output (amperage) and modulation	Section 7.2.5.3.C Section 7.2.5.3.B See Controller Mfr's Manual
Structure > Roof Vents > Windows	Clean dirt buildup, lubricate hinges and slides	Section 7.2.2
Tires	Inspect tread and sidewalls thoroughly. Replace tire when treads are worn, when sidewall has a bulge, or sidewall is worn	Section 7.2.10 Section 7.2.10

Inspection Service & Maintenance

Inspection and Service Each Year or 12,000 Miles		
Item	Inspection / Service	Manual Section Reference
Brakes, all types > Shoes and drums	Check for scoring and wear. Replace per manufacturer's specifications	Section 7.2.5.1 See Brake Mfr's Manual
Jack, Drop-leg	Grease gears at top	See Jack Mfr's Manual
Structure > Frame members > Welds > Slide-out	Inspect all frame members, bolts & rivets. Repair or replace damaged, worn or broken parts. Inspect all welds. Repair as needed Clean dirt build-up. Lubricate slides, shafts and gears	Section 7.2.1 Section 7.2.2.2 Section 7.2.4
Wheels > Sealed Bearings (Hubs) > UNSEALED Bearings (Hubs) > Rims	Check and confirm free running. Replace if not (sealed bearings are not serviceable) Disassemble / inspect / assemble and repack. Replace promptly if immersed in water Inspect for cracks & dents. Replace as needed.	Section 7.2.12 Section 7.2.12.1 See Axle Mfr's Manual Section 7.2.11
Structure > Axle Attachment Bolts	Check BY DEALER	Section 7.2.1

Inspection Service & Maintenance

7.2. INSPECTION AND SERVICE INSTRUCTIONS

7.2.1. Axle Bolts, Frame, Suspension, & Structure

^ WARNING

Worn or broken suspension parts can cause loss of control and injury may result.

Have trailer professionally inspected annually and after any impact.

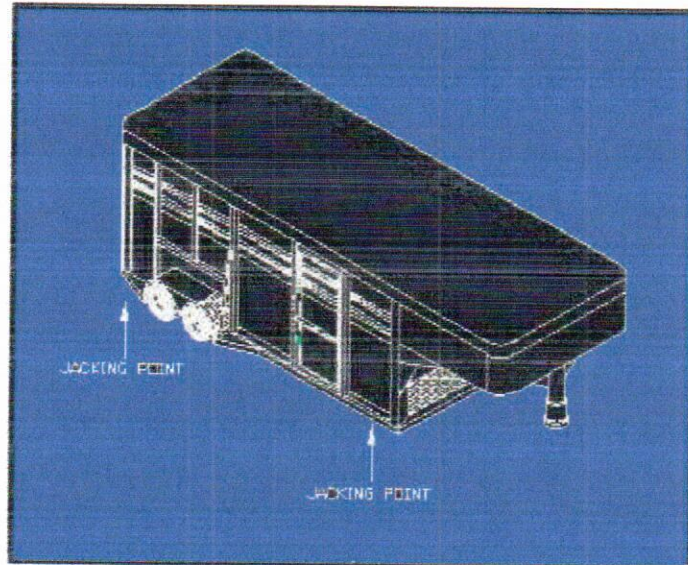
To perform many of the inspection and maintenance activities, you must jack up the trailer. “Jacking Points for All Trailers” figure indicates the general areas where jacks and jack stands may be applied.

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 inside of the perimeter strip on the supporting structure to which the axles are attached.

Inspection Service & Maintenance



Jacking Point for Trailer



Jacking Points for Trailer

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^ WARNING

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

7.2.2. Trailer Structure

Because the trailer floor receives the most abuse, it will most likely corrode before any other part of the structure. This is particularly true for horse and livestock trailers, having floors subjected to urine and manure. The urine and manure are corrosive to the aluminum flooring and other structural parts of the trailer.

Remove the rubber mats from the floor of the trailer, and wash them, at least every three months. Using a power washer and a detergent solution, wash both sides of the rubber mat, as well as the floor and walls of the trailer. Rinse the rubber mat and the trailer floor and walls. Be sure the rubber mat and trailer floor are completely dry before replacing the rubber mat.

7.2.2.1. 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.

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The various fastener types used on your trailer are:

- Bolts, which are used mainly for attaching door and gate hinges to the trailer body;
- Drive Rivets, which are used to attach the sides and roof panels of the body to each other.
- Bolts may be at various locations on the sub-frame
- Bolts are not user serviceable. If you detect a loose bolt fastener, do not tow the trailer. Call your dealer for instructions.
- Pulled Rivets are used to attach sheets to vertical structure on lap areas.

^ 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.

7.2.2.2. Welds

All welds can crack or fail when subjected to heavy loads or movement of cargo that was not properly tied to prevent movement. Anytime 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.

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^ WARNING

Improper weld repair will lead to early failure of the trailer structure and can cause serious injury or death.

Do not repair cracked or broken welds unless you have the skills and equipment to make a proper repair. If not, have the welds repaired by your dealer.

7.2.3. Drop Ramp Torsion Springs

If your trailer has a drop-ramp door, the weight of the door may be partially held by a torsion spring and a cable. Stand to the side when opening the drop ramp. You could be hurt if you are behind the drop ramp and the counterbalance does not work.

Inspect the cable and cable ends regularly for fraying and signs of loosening. If released, a torsion spring can inflict serious injury.

The torsion spring and cable are not user serviceable. The torsion spring must be serviced by a person who is trained in torsion spring safety.

7.2.4. Slide-Outs

The optional slide-out facility is fitted with shafts, bushing, gears and sliding members located on the underside of the trailer. These parts are exposed to road grime, water and possible salt spray. Clean and lubricate the moving parts regularly to keep the slide-out from seizing.

Follow the instructions below to clean and lubricate the slide-out mechanism at least once per season, and more

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frequently if your trailer is operated in dusty or salt-spray environments.

- ◆ Clean the locations where the drive shaft passes through the bushings.
- ◆ Hand-pack grease on the gears.
- ◆ Grease the sliding track.

7.2.5. Trailer Brakes

7.2.5.1. 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.

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 adjust the brakes during a hard stop. Read your axle and brake manual to see how to adjust your brakes. If you do not have this manual, call Dalton Enterprises, Inc. at (276) 686-9178.

7.2.5.2. 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, call Dalton Enterprise, Inc. at (276) 686-9178.

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.

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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.

7.2.5.3. 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.

7.2.5.3.A. BREAKAWAY BRAKE

7.2.5.3.A. (i) 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.

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7.2.5.3.A. (ii) BREAKAWAY SWITCH

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

The pull cable 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.

^ 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.

7.2.5.3.B. 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 instructions from the manufacturer. If you do not have these instructions, call Dalton Enterprise Inc. at (276) 686-9178 for a free copy.

7.2.5.3.C. MAGNETS FOR ALL ELECTRIC BRAKES

To make certain an electrically-operated braking system will function properly, you must have your dealer inspect

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the magnets at least once a year, or each 12,000 miles. See the brake manual for wear and current inspection instructions.

7.2.5.4. Brakes, Hydraulic (vacuum, air or electric operated)

If your trailer has hydraulically-operated brakes, they function the same way the hydraulic brakes do on your tow vehicle. The hydraulic braking system must be inspected by a dealer, at least as often as the brakes on the tow vehicle, but no less than once per year. This inspection includes an assessment of the condition and proper operation of the wheel cylinders, brake shoes, brake drums and hubs.

You must check the fluid level in the master cylinder reservoir at least every three months. If you tow your trailer an average of 1,000 miles per month in a hot and dry environment, you must check the brake fluid level once a month. The brake fluid reservoir is located on the tongue of the trailer or near the gooseneck. Fill with DOT 4 brake fluid.

7.2.5.4.A. VACUUM-OPERATED HYDRAULIC

When towing a trailer, the vacuum gauge, which is located inside the cab of the tow vehicle, must indicate 18 In. Hg. (inches of mercury) or more at all times.

^ WARNING

If the vacuum gauge in tow vehicle is not at or above 18 In. Hg. (inches of mercury), damage to the brake system will result and the brakes may become inoperable.

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7.2.5.4.B. AIR PRESSURE-OPERATED HYDRAULIC

Air/hydraulic braking systems are typically used when the tow vehicle has a diesel engine. The tow vehicle has an air compressor that routes the air to an air/hydraulic mechanism, which sends brake fluid to the wheel cylinders.

The air pressure gauge in your tow vehicle indicates the current air pressure. See your tow vehicle manual for the proper air pressure.

7.2.5.4.C. ELECTRICAL-OPERATED HYDRAULIC

Electric/hydraulic braking systems, which are mounted on the trailer, use a small electrically-driven pump to generate hydraulic pressure, which operates the brake cylinders. Like electrical brakes, an electric/hydraulic braking system is operated by an electrical signal from the tow vehicle.

7.2.6. Trailer Connection to Tow Vehicle

7.2.6.1. 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, call Dalton Enterprises, Inc. at (276) 686-9178.

If you see or feel evidence of wear, such as flat spots, deformations, pitting or corrosion, on the ball or coupler,

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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.

7.2.6.2. Gooseneck

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, call Dalton Enterprises, Inc. (276) 686-9178.

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.

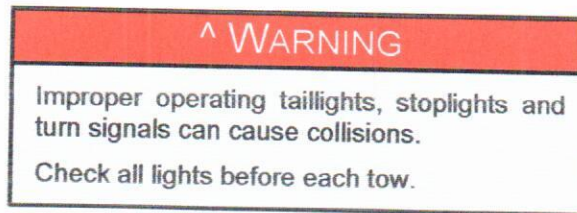
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7.2.7. Landing Leg or Jack

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.

7.2.8. Lights and Signals

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



7.2.9. Accessory Battery

Your trailer may be outfitted with an accessory battery that operates lighting, electric landing gear, slide-outs or other accessories. An accessory battery may be kept charged either by the tow vehicle or by the generator or shore power. See the manual for the accessory battery.

A disconnect switch may be provided to disconnect the accessory battery when you do not plan to be using the trailer for an extended period, such as seasonal storage. If there is no disconnect switch, then remove the cables from the battery terminals.

The accessory battery must be kept in a charged condition during storage. The battery could freeze and break if it becomes discharged.

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7.2.10. Tires

Before each tow, be sure the tire pressure is at the value indicated on the sidewall. Tire pressure must be checked while the tire is cold. Do not check the tire pressure immediately after towing the trailer. Allow at least three hours for a tire to cool, if the trailer has been towed for as much as one mile. Replace the tire before towing the trailer if the tire treads have less than 1/16 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.

^ WARNING

Worn, damaged or under-inflated tires can cause loss of control, resulting in damage, serious injury and possibly death.

Inspect tires before each tow.

7.2.11. 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.

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7.2.12. Wheels, Bearings and Lug Nuts

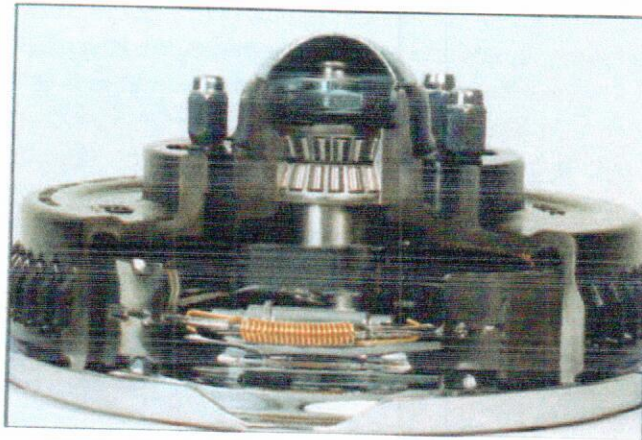
Dexter Nev-R-Lube Drums/Bearings

The Nev-R-Lube axle has a pre-set bearing adjustment, pre-lubricated at the bearing factory to be resistant of contamination.

The bearing is sealed for life for no bearing maintenance.

This increases the durability and reliability of the bearing. The Dexter warranty is for 5-years or 100,000 miles against defects in material or workmanship.

Refer to your Dexter Manual for removal instructions.



Dexter Nev-R-Lube

If your axles are equipped with the Dexter Nev-R-Lube hubs, then refer to the Dexter Nev-R-Lube Axle Operation Maintenance service Manual that is included in your trailer packet for information.

Dexter E-Z Lube Drums/Bearings

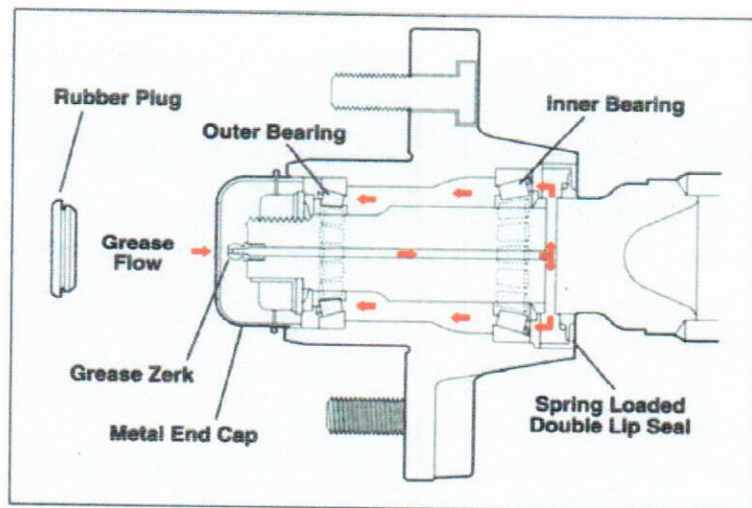
If your axle is equipped with the Dexter E-Z Lube feature, the bearings can be periodically lubricated without removing the hubs from the axle. This feature consists of

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axle spindles that have been specially drilled and fitted with a grease zerk in their ends. When grease is pumped into the zerk, it is channeled to the inner bearing and then flows back to the outer bearing and eventually back out the grease cap hole.

The procedure is as follows:

- ◆ Remove the rubber plug from the end of the grease cap.
- ◆ Place a standard grease gun onto the grease zerk located in the end of the spindle. Make sure the grease gun nozzle is fully engaged on the fitting.
- ◆ Pump grease into the zerk. The old displaced grease will begin to flow back out the cap around the grease gun nozzle.
- ◆ When the new, clean grease is observed, remove the grease gun, wipe off any excess, and replace the rubber plug in the cap.
- ◆ Rotate hub or drum while adding grease.



Dexter EZ Lube

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A loose, worn or damaged wheel bearing is the most common cause of brakes that grab.

To check your bearings, jack 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.

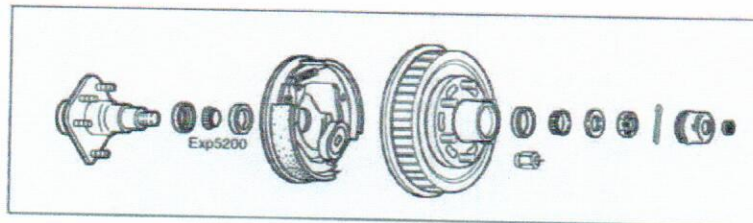
Most trailer axles are built with sealed bearings that are not serviceable. Sealed bearings must be replaced as complete units.

7.2.12.1. Unsealed Bearings (Hubs)

If your trailer has unsealed axle bearings, they must be inspected and lubricated once a year or 12,000 miles to insure safe operation of your trailer.

If a trailer wheel bearing is immersed in water, it must be replaced.

If your trailers have not been used for an extended amount of time, have the bearings inspected and packed more frequently, at least every six months and prior to use.



Dexter EZ Lube axle, bearing and brake assembly

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Follow the steps below to disassemble and service the UNSEALED wheel bearings.

- ◆ After removing the grease cap, cotter pin, spindle nut and spindle washer (items 7-10 in “Exploded Wheel Bearing” figure), remove the hub and drum to inspect the bearings for wear and damage.
- ◆ Replace bearings that have flat spots on rollers, broken roller cages, rust or pitting. Always replace bearings and cups in sets. The inner and outer bearings are to be replaced at the same time.
- ◆ Replace seals that have nicks, tears or wear.
- ◆ Lubricate the bearings with a high quality EP-2 automotive wheel bearing grease.
- ◆ Every time the wheel hub is removed and the bearings are reassembled, follow the steps below to check the wheel bearings for free running and adjust
- ◆ Turn the hub slowly, by hand, while tightening the spindle nut, until you can no longer turn the hub by hand.
- ◆ Loosen the spindle nut just until you are able to turn it (the spindle nut) by hand. Do not turn the hub while the spindle nut is loose.
- ◆ Put a new cotter pin through the spindle nut and axle.
- ◆ Check the adjustments. Both the hub and the spindle nut should be able to move freely (the spindle nut motion will be limited by the cotter pin).

7.2.13. Lug Nuts (Bolts)

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.

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^ WARNING

Lug nuts are prone to loosen after initial installation, which can lead to death or serious injury.

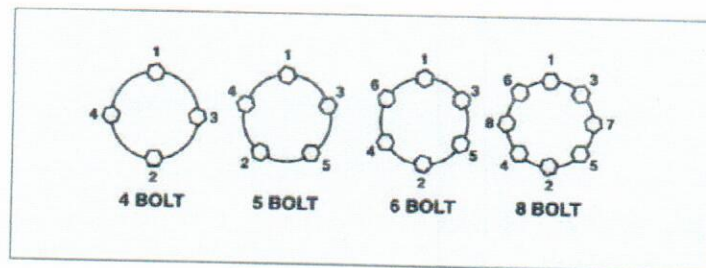
Check lug nuts for tightness on a new trailer or when wheel(s) have been remounted after the first 10, 25 and 50 miles of driving.

^ WARNING

Metal creep between the wheel rim and lug nuts will cause rim to loosen and could result in a wheel coming off, leading to death or serious injury.

Tighten lug nuts before each tow.

Tighten the lug nuts to the proper torque for the axle size on your trailer, to prevent wheels from coming loose. Use a torque wrench to tighten the fasteners. If you do not have a torque wrench, tighten the fasteners with a lug wrench as much as you can, then have a service garage or dealer tighten the lug nuts to the proper torque. Over-tightening will result in breaking the studs or permanently deforming the mounting stud holes in the wheels.



Lug nut sequence of tightening

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Lug Nut Torque - Steel Wheels		
Axle Rating Pounds	Stud Size	Torque Foot-pounds
3,500 to 7,000	$\frac{1}{2}$ inch	80 to 95
8,000	9/16 inch	120 to 140
9,000	5/8 inch	175 to 225
10,000	5/8 inch flanged	275 to 325
12,000	$\frac{3}{4}$ inch flanged	375 to 425

Lug Nut Torque - Aluminum Wheels		
Rim Size	Stud Size	Torque Foot-pounds
15 inch (5 or 6 hole)	$\frac{1}{2}$ inch	65 to 75
16 inch (8 hole)	$\frac{1}{2}$ inch	65 to 75