



OWNER'S MANUAL

CARGOMax™
KRT Xtreme Rugged Technology ————— With Ultra Body™

**THE ULTIMATE
“GRAB AND GO”
TRAILER!**



All trailer users should watch the 4 minute Basic Operations video prior to using trailer.

Go to www.floeintl.com/manuals-information and click on “Play Video”.

Retain this manual for future reference.



ATTENTION



ATTENTION



ATTENTION

Read and follow all safety rules and operating instructions carefully before using trailer.
Serious injury, potential death and/or mechanical failure could result from neglecting to take appropriate action.

We appreciate your business and hope you are proud of your new FLOE Cargo MaxXRT trailer – a pride that will continue throughout the years. If you shopped trailers before deciding on the Floe, you probably concluded that our trailer has numerous features not commonly found on others.



At FLOE International, we take great pride in providing the highest quality trailer, with the latest state-of-the-art features, at an affordable price. Each year we implement improvements to our product lines to ensure that we are on the “leading edge” and providing the best available trailer.

We are confident your FLOE trailer will provide you with years of trouble-free trailering, and that if you decide to buy another trailer, it is because you want another FLOE model.

Please take the time to read and understand this owner’s manual before towing your new trailer. The information offered here will have a direct impact on your safety, the safety of others, and the dependability of your trailer.

Thank you for choosing FLOE.

Sincerely,

Wayne Floe, CEO – Floe International

This manual includes the latest information at the time it was printed. We reserve the right to make changes in the product after that time without notice. Keep this manual so it will be available to whoever is using this product.

IMPORTANT SAFETY INFORMATION

Your safety and the safety of others is very important. We have provided many important safety messages in this manual and on your trailer. Always read and obey all safety messages.

If you do not understand any of these instructions, please ask your dealer or call FLOE customer service at 800-336-6337.

This is the safety alert symbol. This symbol alerts you to hazards that can cause serious injury or potential death to you and others, plus damage to the trailer. All safety messages will be preceded by the safety alert symbol and the word “WARNING” or “CAUTION”.



! WARNING

Serious injury, potential death or mechanical failure could result from neglecting to take appropriate action.

All safety messages will identify the hazard and tell you how to reduce the chance of injury.

Contents

For assembly instructions and part numbers refer to assembly instructions book.

Important Safety Information	3	Accessories	10
Reporting Safety Defects	3	Changing Tires.....	11
Hitch Selection.....	4	Inspections & Maintenance	11
Hitch Coupler Adjustment.....	4	Maintaining Hub Lubrication (XRT 8-57)	13
FLOE Tilt Clamp	5	Installing Wheel Hub (XRT 8-57).....	13
Secure Your Trailer.....	5	Super Lube Warranty (XRT 8-57)	14
Trailer Lighting System.....	6	Vortex Wheel Hub (XRT 9.5, 11, 13).....	15-16
Capacity & Weight Distribution.....	7	Questions and Answers	17
Proper Loading & Unloading	8	Tire Safety Information	18-29
Securing the Load.....	9	Warranty & Warranty Registration.....	30-31

Safety Information

READ AND UNDERSTAND THE OWNER'S MANUAL AND ALL WARNINGS/SAFETY PRECAUTIONS BEFORE USING TRAILER.

If the trailer is not assembled, installed, or operated properly, mechanical failure as well as serious injury or death could result. See to it that all users understand that this trailer requires the use of good judgement and the knowledge of its dangers and limitations.

SAFETY PRECAUTIONS

It is the owner's/operator's responsibility to check the following items each time before towing trailer.

- Never exceed the trailer or tongues maximum load capacity
- When possible, position load so the weight is centered over the axle
- Do not rely on the tailgate ramp to contain or stop cargo from sliding or rolling out of the trailer. Use good judgment and secure all cargo. Failure to do so may result in a road hazard which could cause serious injury and/or death.
- The ideal tongue weight should be 6% of the cargo weight but never over 125 lbs .
- Reduce speed and/or cargo weight when traveling on rough roads.
- Over loading and improper use of this trailer could cause structural damage, product failure and/or severe or fatal injury.
- Monitor load at regular intervals while traveling.
- Check that load is positioned to apply equal weight to all tires.
- Check that load is secured so it will not move while underway.
- Check that no structural damage to trailer exists, do not use if damaged.
- Check that trailer is level with tow vehicle.
- Check that trailer coupler is properly adjusted and securely attached to the hitch ball.
- Check that safety chains or cables are attached properly.
- Check that all lights are operating correctly.
- Check that bed locking system (tilt clamp) is properly secured.
- Check that tires are inflated to correct pressure and not excessively worn.
- Check that lug nuts on each wheel are tight.
- Check that wheel bearings are properly tightened and greased.

! WARNING !

LUG NUTS ON NEW WHEELS MUST BE RE-TORQUED AFTER THE FIRST 50 TO 100 DRIVING MILES.

This should be done as clamping loads can change following the initial installation due to the metal compression/elongation or thermal stresses affecting the wheels as they are breaking in, as well as to verify the accuracy of the original installation.

! WARNING !

Maximum tongue weight capacity is 125 lbs.
MAXIMUM CARGO CAPACITY FOR EVENLY BALANCED LOADS IS 1800 LBS (XRT 8-57); 2200 LBS (XRT 9.5-73, 11-73, 13-73)
Exceeding this load capacity could cause product failure and/or injury and death.

Reporting Safety Defects

If you believe that your trailer has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying FLOE International, Inc. at 1-800-336-6337.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or FLOE International, Inc.

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to <http://www.safercar.gov>; or write to: NHTSA, US Department of Transportation, 1200 New Jersey SE, Washington, D.C. 20590. You can also obtain other information about motor vehicle safety from <http://www.safercar.gov>.

! WARNING !

Failure to follow this manual's instructions may result in damage to your trailer or vehicle, and could cause severe or fatal injury to you or others.

Using your FLOE trailer

Hitch Selection & Use

When selecting a hitch, there are four important things to keep in mind:

- **Load capacity** -- Load should never exceed the load capacity of your hitch or tow vehicle.
- **Ball/hitch** -- All FLOE tilt trailers use 2" couplers. Make sure trailer is connected to a properly secured 2" ball and hitch.
- **In-set or out-set hitch** -- FLOE recommends an out-set or receiver-type hitch (See below).
- **Hitch Height** -- Hitch should be set so the trailer is level.

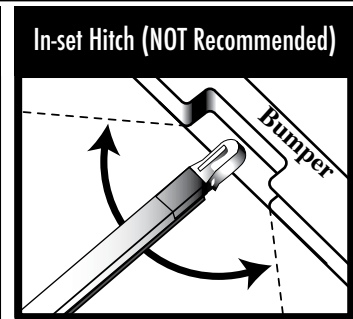
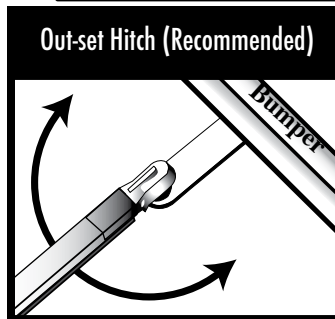
These illustrations show that a trailer's turning radius is significantly reduced when towed by vehicles equipped with an "in-set" hitch. To reduce the risk of tongue damage, we recommend the use of an "out-set" or "receiver-type" hitch.

! WARNING !

Pulling a trailer that is not level could greatly affect the trailer's performance and create an uncomfortable and dangerous situation while towing. It could also create excessive or negative tongue weight which can cause either tongue or axle damage.

! WARNING !

When turning or backing up, the vehicle operator must exercise good judgement. The manufacturer will not be responsible for damage from "jackknifing." Jackknifing is damage that results from the tongue or trailer coming in contact with the tow vehicle.



Using your FLOE trailer

Hitch Coupler Adjustment

All FLOE models have a lever lock hitch coupler. With a lever lock coupler, the amount of locking force can be adjusted to the diameter of the hitch-ball. A coupler that is adjusted too tight will make it difficult to push down on the lever lock and may cause vibration from the trailer to the tow vehicle. A coupler that is too loose runs the risk of coming off the hitch-ball. When properly adjusted you should be able to easily push down on the lever lock but yet not have any rattle between the hitch-ball and coupler when you apply upward force. To change the amount of locking force against the hitch-ball:

1. Release the hitch coupler locking lever (to its straight up position).
2. Locate the adjustment nut on the bottom of the hitch coupler.
3. Rotate the nut on the threaded shaft with a 3/4" socket. Turn counter-clockwise to decrease tightness, or clockwise to increase tightness.
4. Re-mount the trailer coupler on the hitch-ball.
5. Push down the hitch coupler locking lever to its original locking position.
6. Repeat steps 1 through 5 until a snug fit is obtained.

! WARNING !

Do not attempt to hook up or use any trailer that has structural damage. It is the operators responsibility to inspect the trailer before each use. A trailer failure could cause severe or fatal injury.

! WARNING !

When connecting your trailer to the towing vehicle, it is important that your hitch coupler is adjusted with the correct amount of force for both smooth and safe trailer performance. A loose coupler could disconnect and cause product damage and/or serious injury or death.

Using your FLOE trailer

Tilt Clamp

! WARNING !
Failure to properly tighten tilt clamp and secure safety cotter pin before towing trailer could cause the trailer to tilt while in transit. A trailer tilting while in transit could cause product failure, and/or severe or fatal injury.



Trailer in *level ramp mode* - slide clamp forward to tilt



Trailer in *limited tilt mode* using limiter strap and tailgate ramp



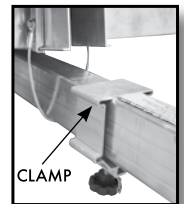
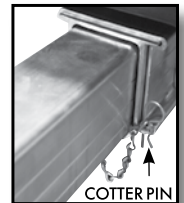
Trailer in *full tilt dump mode*

Note: If your trailer does not stay in the tilted position:

1. The tongue mounting bolt may not be tightened to optimal tension. Torque to 60 Ft/Lbs

The FLOE tilt clamp eliminates the hassle and rattle of a hitch pin design. To tilt, simply loosen the handle screw, remove the safety cotter pin, and slide clamp forward. When finished loading or unloading, slide clamp back on, replace cotter pin, and tighten handle screw.

1. Loosen knob on underside of tilt clamp.
2. Remove safety cotter pin.
3. Slide clamp forward. If the trailer is used without tailgate ramp, slide the limiter strap bracket ahead along with the tilt clamp. This will allow the bed to tilt back until it touches the ground.
4. To tilt trailer push down on rear of trailer.
5. Load trailer (see section on "Proper Loading and Unloading")
6. Tilt trailer back to horizontal position by pushing down on front of trailer.
7. Slide tilt clamp back to original position, replace safety cotter pin, and tighten the knob enough to prevent it from loosening during use.

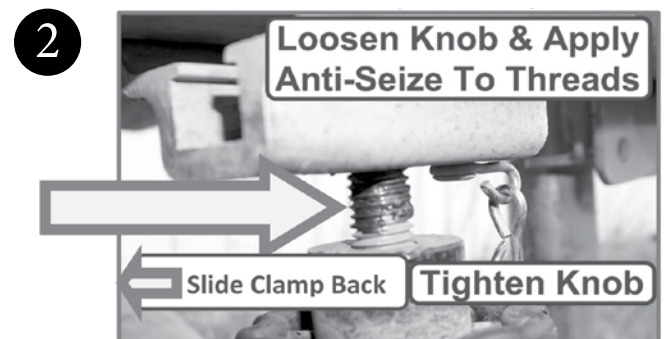


! WARNING !
Tilt Clamp bolt knob must be cleaned and greased annually to prevent significant corrosion. Failure to do so can result in repairs not covered by the warranty.

Greasing the Tilt Clamp



Tighten knob bolt. Using Q-Tip or small brush, apply anti-seize to as many threads as possible, and generously to the top of the nut.



Loosen knob bolt as much as possible. Last two threads are deformed on purpose - DO NOT FORCE PAST THEM - and apply anti-seize generously. Slide clamp back on and tighten knob as usual.

Using your FLOE trailer

Trailer Lighting System

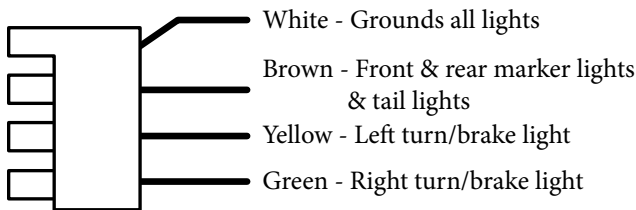
WIRE HARNESS CONNECTOR

- Your trailer is equipped with a plug-in receptacle on the trailer tongue (FIG. 1) to keep the electrical connector protected when not in use, as shown.



- To ensure trouble-free use, periodically inspect end plug for tight, corrosion-free contact and apply electrical grease as necessary to prevent future corrosion.

The wiring diagram below provides the information needed for wiring the towing vehicle harness/connector. It is important that the proper connections be made and that the system is tested before using your trailer.



PROPER CONNECTION OF WIRING HARNESS TO VEHICLE. ALWAYS MAKE SURE CONNECTIONS ARE TIGHT.



! WARNING !

Make sure the wiring harness for the lighting system is long enough so that it does not become unplugged when turning sharp corners. Disconnected lights can cause a serious or fatal accident.

! WARNING !

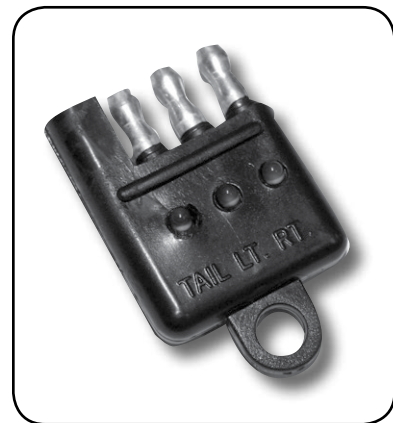
Lights must be properly connected to the tow vehicle and checked prior to each trailer use. Do not use trailer on any public road without all lights functioning properly. Malfunctioning lights fail to give other motorists proper notification of your actions and location which can cause a serious or fatal accident.

----- IMPORTANT -----

For wiring and light replacement parts, see the assembly instructions.

WIRING TESTER

To test the wiring on your tow vehicle you can purchase an inexpensive tester at most auto supply stores.

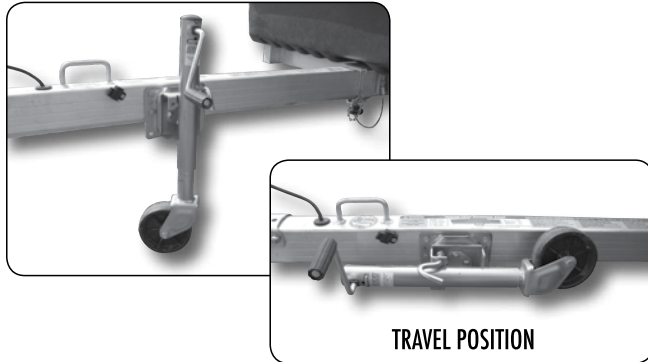


Using your FLOE trailer

Secure Your Trailer

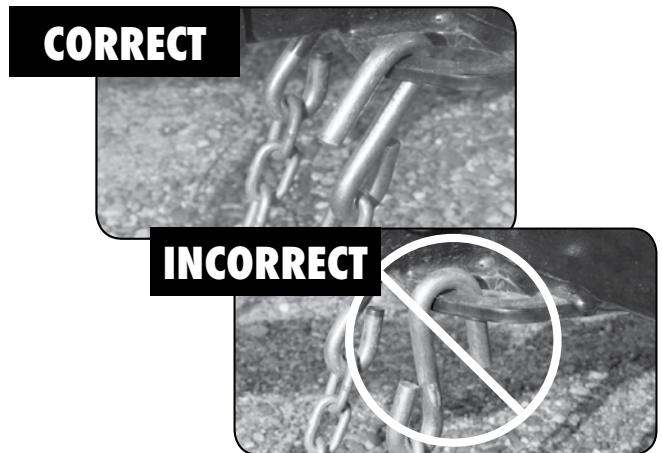
SECURING TONGUE JACK

Tongue jack must be properly secured in the travel position before moving the trailer (see image below). Simplifies coupling and uncoupling to a vehicle. Swivel wheel enables easy trailer movement by hand. Jack easily clamps to tongue and pivots up for travel.



CONNECTING SAFETY CHAINS

Safety chains must be hooked up every time the trailer is in use. To connect safety chains properly be sure they cross each other and the open end faces the trailer (see images below).



Loading your FLOE trailer

Capacities & Weight Distribution

Model	Dimensions	GVWR lbs/kgs	GAWR lbs/kgs	Cargo Load lbs/kgs	Net Wt. lbs/kgs	Standard Tires	Upgrade Tire	Max. tongue wt. - lbs/ kgs
XRT 8-57	8' x 57"	2140/969	2200/998	1800/815	290/132	5.30 x 12" -C	5.30 x 12" -C Mag	125/56
XRT 9.5-73	9.5' x 73"	2800/1270	3000/1360	2200/998	480/218	205-75R14 Steel	205-75R14 Alum	220/100
XRT 11-73	11' x 73"	2800/1270	3000/1360	2200/998	540/231	205-75R14 Steel	205-75R14 Alum	220/100
XRT 13-73	13' x 73"	2800/1270	3000/1360	2200/998	570/258	205-75R14 Steel	205-75R14 Alum	220/100

Never exceed Trailers Max GAWR (Gross Axle Weight Rating) and tongue weight capacity.

Trailers cargo load capacity is reduced by the weight of additional options such as ramps, gates or cargo caps.

CARGO WEIGHT DISTRIBUTION

- It is extremely important to never exceed the maximum cargo capacity.
- Maximum cargo capacities are for evenly distributed loads which place the majority of the cargo's weight directly over both wheels evenly. A good example of this would be hauling several sheets of plywood.
- Loads should also be placed to distribute equal weight to both tires. This will balance your load and give you the best wear on your tires.
- Never place more than 50% of the total cargo capacity on one side of the trailer.

TONGUE WEIGHT CAPACITY

- It is extremely important to never exceed the maximum tongue weight capacity. Over loading the tongue could cause it to bend or break. A broken tongue could cause a serious or fatal accident.
- Loads should be placed on the trailer so that proper weight is applied to the tongue. The ideal tongue weight should be 6% of the cargo weight but never over the max tongue weight. Increase or decrease the tongue weight by moving the load forward or backward.
- It is the users responsibility to understand what 125/220 pounds or less is.

Loading your FLOE trailer

Proper Loading & Unloading

1. Prior to using the trailer loaded or unloaded it is imperative that no structural damage exists. Do a visual check to ensure that none of the structural components are bent or cracked.
 - If damage does exist do not use the trailer until it has been repaired by an authorized repair service.
 - Under no circumstances should an attempt be made to straighten a bent structural component.
2. Never load or unload your trailer unless it is properly connected to your tow vehicle.
3. It is imperative that your tow vehicle and trailer are parked on level, even ground. Loading while parked on an incline or uneven ground could cause your trailer bumper to be at an improper angle.
4. Ensure the trailer is fully tilted and that it will stay in the tilted position until you have driven on to it.
5. Never load moving items such as ATVs and lawn mowers at speeds greater than 5 mph.
6. Never allow the load to cause the trailer to tilt down quickly and with a lot of force. This could cause structural damage to the tongue, tongue receiver and cross members.
7. After loading, make sure the tilt clamp is secure and will not work itself loose while being towed. Make sure the safety pin is attached.
8. Always test your footing before walking on the trailer's deck. It may get very slippery in cold, wet and snowy weather.

! WARNING !

Failure to follow the listed steps when loading or unloading could result in damage to your trailer, tow vehicle, the load you are hauling, and/or cause possible severe or fatal injury to yourself and others.

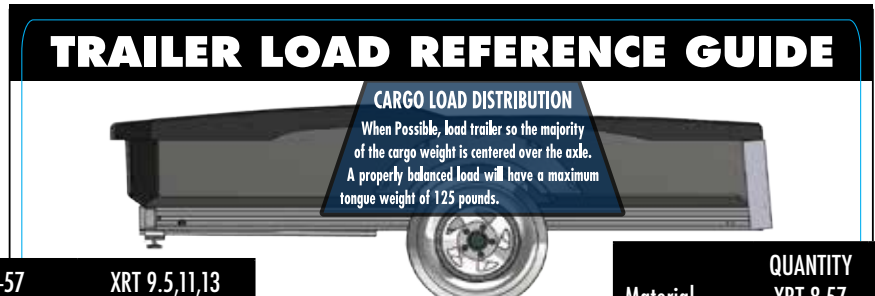
! WARNING !

When traveling on rough roads, reduce cargo weight and speed to avoid causing structural damage to the trailer. Failure to do so could cause product failure and/or injury and death.

! WARNING !

Never exceed the cargo load rating of your trailer. When the trailer is loaded with dense or wet materials the load can easily exceed the rated cargo capacity. Do not allow the volume of the trailer to determine the load of your trailer. Always verify the weight of the cargo you are hauling. Failure to do so can cause severe damage and/or failure to the hauling vehicle, the trailer and nearby vehicles.

! WARNING ! WHEN LOADING, ENSURE YOUR LOAD IS PROPERLY SECURED & EXIT THE TRAILER FROM THE FRONT TO AVOID TILTING THE TRAILER. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH.



Material	XRT 8-57	XRT 9.5,11,13
Wood Mulch	1 1/4 Yard	1 1/2 Yard
Shell Corn	30 Bushels	36 2/3 Bushels
Firewood	1 1/8 Face Cord	1 3/8 Face Cord
Peat	1 1/8 Yards	1 3/8 Yards
Black Dirt	3/4 Yard	1 Yard
Gravel	1/2 yard	3/5 Yard
Sand	1/2 yard	3/5 Yard

This information should only be used as a reference to assist in determining how much you can haul. Weights are based on normal moisture content.

Material	QUANTITY XRT 8-57	QUANTITY XRT 9.5,11,13
Pine Boards 2'x4'x8'	164	200
Sheetrock 4'x8'x5/8"	23	28
Plywood 4'x8'x1/2"	33	40
Sod Rolls 18"x72"	31	38

Loading your FLOE trailer

Securing The Load

TIE DOWN INSTRUCTIONS

1. Use any of the eight tie down D-rings in the trailer bed as needed to safely secure your load.
 - The maximum capacity of each D-ring is 500 lbs of cargo weight. For instance: an ATV weighing 800 lbs should be secured to four tie down loops as shown in (FIG. 4).
2. Cargo must be secured so that tie down restraints can not become loose while traveling.
 - If the load were to shift forward or backward it could cause excessive tongue weight or negative tongue weight. Either situation could be dangerous.
3. When securing hooks through the **SIDE** of the tie down D-rings, either direction is appropriate -- see (FIG. 1).
4. When securing hooks through the **TOP** of the D-rings, make sure the hook faces up -- see (FIG. 2). **NEVER** use hooks in the position shown in (FIG. 3) as this provides a greater chance of failure.
5. Do not place straps from the outside of the trailer over the bed as you may cause damage to the trailer bed.

! WARNING !

Do not ever strap the load to or over the side of the trailer bed. Doing so may lead to a dangerously unsecured load and may cause damage not covered under your warranty.

! WARNING !

Max tongue weight capacity for XRT 8-57 is 125 lbs;
XRT 9.5-73, 11-73, 13-73 is 220 lbs.

MAXIMUM CARGO CAPACITY FOR EVENLY BALANCED LOADS:
1800 lbs XRT 8-57 • 2200 lbs XRT 9.5-73, 11-73, 13-73

Exceeding these load capacities could cause product failure and/or injury and death.

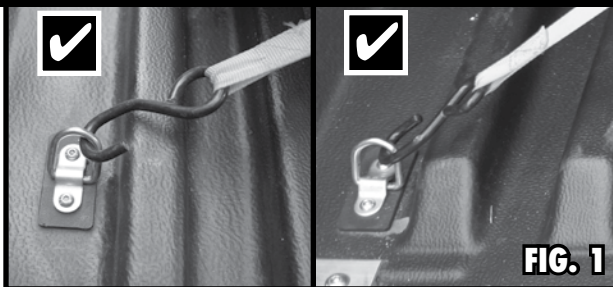
! WARNING !

Ensure that the load is adequately secured. Load may become loose during travel. Check your load while traveling. Unsecured loads can cause product damage, road hazards and/or cause severe injuries and death.

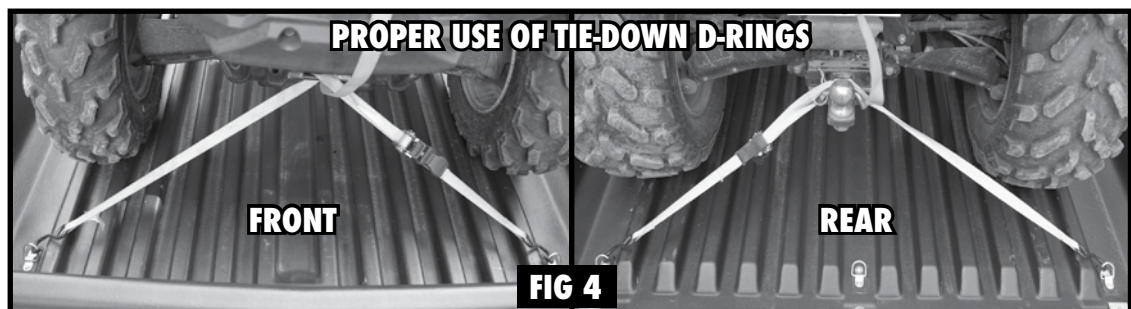
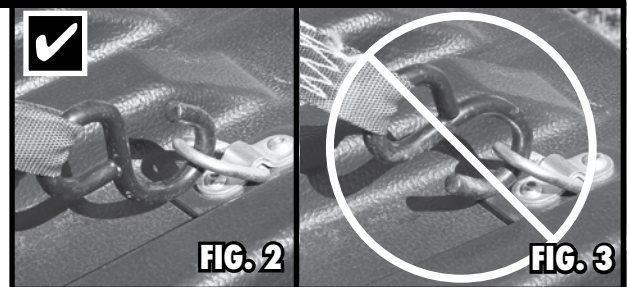
! WARNING !

When securing cargo, consider how it will behave if extreme acceleration, deceleration (fast braking), swerving, or poor road conditions occur. A load that shifts forward or backward may cause an unsafe situation which could result in product damage, severe injuries or even death.

SECURING THROUGH SIDE OF D-RING



SECURING THROUGH TOP OF D-RING



Procedure for

Aluminum Tailgate Ramp



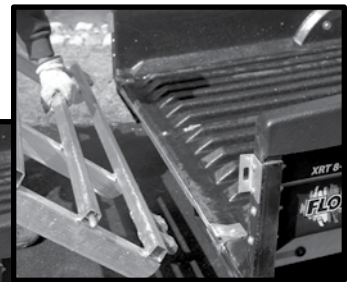
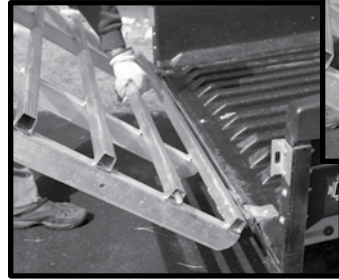
When using the tailgate ramp, the trailer can either be left in regular (upright) position, or partially tilted using the limiter strap. This creates the perfect angle for low clearance items.



To lower tailgate ramp, simply squeeze the spring-loaded center latch.

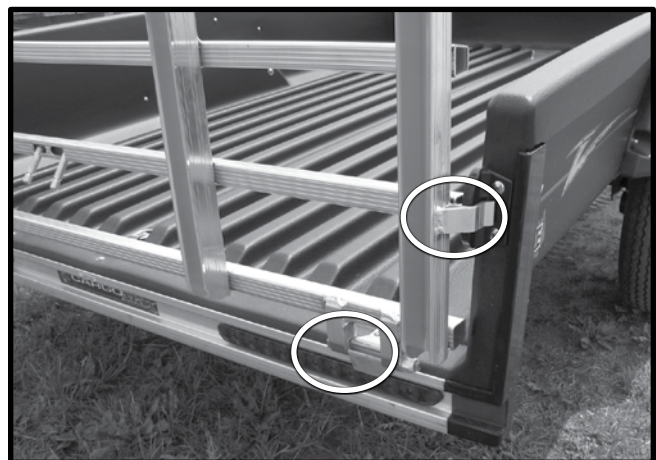
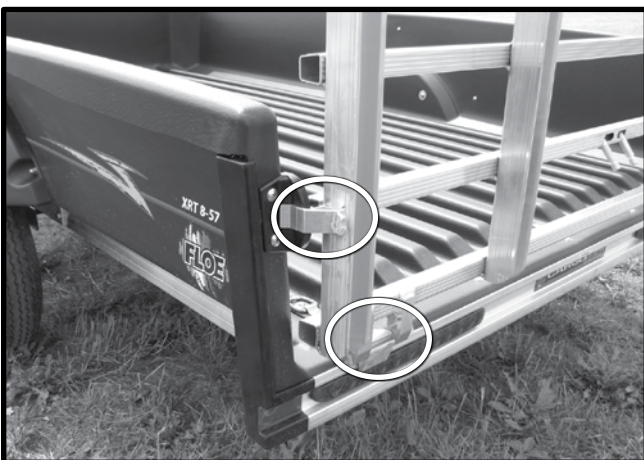


Tailgate ramp removes in seconds with no tools. Simply tilt back and remove.



Lubricating Tailgate Latch Pins

Tailgate latch pins must be regularly inspected, cleaned and lubricated with a spray silicone-based lubricant to prevent binding. Failure to do so can result in repairs not covered by the warranty.

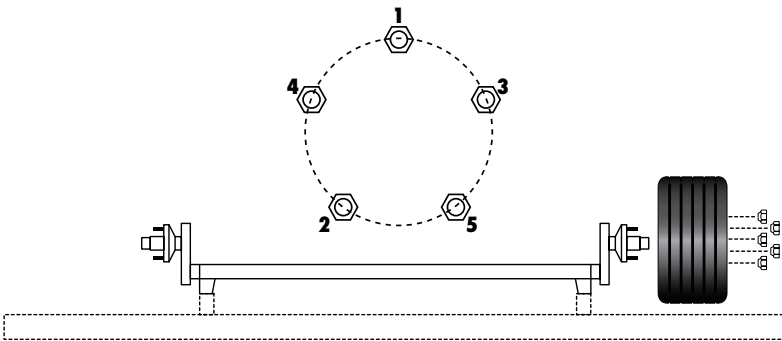


Procedure for Changing Tires

CHANGING TIRES

1. Start all lug nuts by hand to prevent cross-threading and to ensure proper nut-to-rim seal.
2. Tighten bolts in the sequence detailed below in stages, first tighten to 25 ft./lbs. then 60 ft./lbs. and finally to the torque specifications listed below.
3. Inflate tires to proper PSI as noted on the sidewall of the tire.
4. Lug nuts on new wheels must be re-torqued after the first 50 to 100 driving miles.

CARGO MAX LUG NUT TORQUE SPECIFICATIONS		
CargoMax Model	Steel Rims	Aluminum Rims
8-57	50-75 ft/lbs	90-120 ft/lbs
9.5-73, 11-73, 13-73	90-120 ft/lbs	90-120 ft/lbs



WARNING



LUG NUTS ON NEW WHEELS MUST BE RE-TORQUED AFTER THE FIRST 50 TO 100 DRIVING MILES.

This should be done as clamping loads can change following the initial installation due to the metal compression/elongation or thermal stresses affecting the wheels as they are breaking in, as well as to verify the accuracy of the original installation.



WARNING



Improper tire pressure can create severe dangers. Be sure your tires are always properly inflated.

The proper pressure for your tires can be found on the side wall of tire.



WARNING



Change worn tires. A tire failure could result in an uncontrollable road hazard.

Optional Accessories



MAG WHEEL

Dress up your Cargo Max with these stylish mag wheels. Always look great and will never need painting.



WARNING



Do not rely on the tailgate ramp to contain or stop cargo from sliding or rolling out of the trailer. Use good judgment and secure all cargo. Failure to do so may result in a road hazard which could cause serious injury and/or death.

Check web site for additional accessories and options.
www.floeintl.com

Procedure for

Inspections & Maintenance

It is very important to read and follow these maintenance procedures to help avoid trailer failure. Any trailer failure resulting from improper maintenance may void your warranty.

COMPONENT	INSPECTIONS & MAINTENANCE	AVOID
Structure/Frame	a) Do a visual check to ensure that none of the structural components are bent or cracked before towing. If damage does exist do not use the trailer until it has been repaired by an authorized repair service.	a) Loading the trailer in an unbalanced fashion (heavy on one side). b) Exceeding capacities of trailer and tongue.
Wheel Hubs	a) Adjust wheel bearings within the first 100 miles and every 2,000 miles, or annually thereafter, whichever comes first. (Inspect bearings, seals, and races - replace if worn.) To check for wear, jack up the trailer and pull on each wheel to see if there is any in and out play or "slop."	a) Getting sand in hubs or bearings. b) Neglecting to grease hubs.
Wheel Lugs	a) Lug nuts on new wheels should be re-torqued after the first 50-100 driving miles. This should be done as clamping loads can change following the initial installation due to the metal compression/elongation or thermal stresses affecting the wheels as they are breaking in, as well as to verify the accuracy of the original installation.	a) Leaving wheel lugs un-torqued for longer than 50-100 driving miles with new wheels.
Axle	a) Inspect trailing arms to make sure they are straight.	a) Leaving loaded for long periods
Tires	a) Keep tires properly inflated. b) Inspect periodically. (Replace when necessary)	a) Leaving loaded for long periods b) Driving with worn tires.
Aluminum Surfaces	a) Rinse periodically with water, particularly if driven on "salted" roadways. b) Remove grease, oil and dirt by scrubbing with soft bristle brush and mild detergent. Rinse with clean water.	a) Harsh, abrasive cleaners. b) Bolting or hard-mounting dissimilar metals to aluminum surfaces.
Molded Bed	a) Visually check for cracks.	a) Storage in direct sunlight.
Electrical System	a) Check that all lights are functioning properly before towing. b) Periodically check for build-up of oxidation or corrosion and clean when necessary. Use electrical grease in all wire and bulb connections to help prevent corrosion.	a) Leaving electrical connections exposed to elements and potential abrasions.
Tailgate Latch Pins	a) Remove debris from pins and lubricate with a silicone-based spray.	a) Neglecting to lubricate pins for long periods.
Tilt Clamp Knob	a) Remove debris and apply grease to knob threads.	a) Neglecting to grease threads for long periods.

XRT 8-57 Procedure for

Maintaining Hub Lubrication

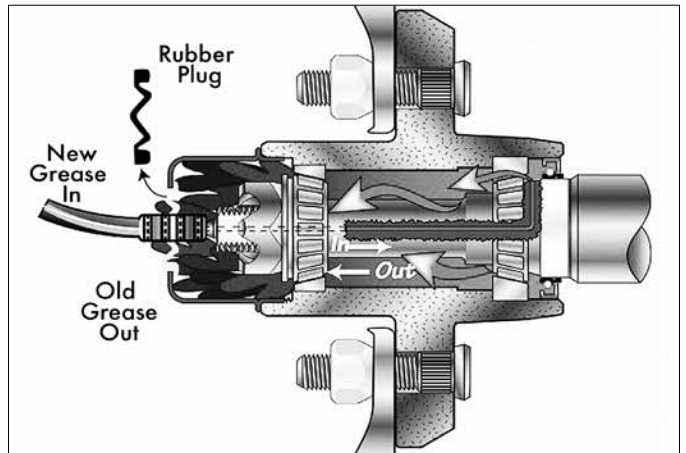
WHEEL HUB LUBRICATION

Your hub/spindle is equipped with a lubrication system. The bearings can be periodically lubricated without removing the hubs from the axle. The advantage to this system is that new grease saturates the inner bearing and outer bearing while pushing out the old grease, unlike systems that just push new grease on top of old grease.

1. Remove the rubber plug from the grease (hub) cap.
2. Use a standard grease gun on the grease fitting located at the end of the spindle, or behind the hub, making sure the grease gun nozzle is engaged on the fitting tightly.
3. Pump grease into the fitting, while slowly turning the wheel. Grease will flow out of the hub around the spindle.
4. When the grease appears to be the new clean grease, remove the grease gun and wipe off any excess grease.
5. Replace the rubber plug in the cap.

----- IMPORTANT -----

A complete inspection and greasing of wheel hubs is required annually or every 2,000 miles, whichever comes first.



XRT 8-57 Procedure for

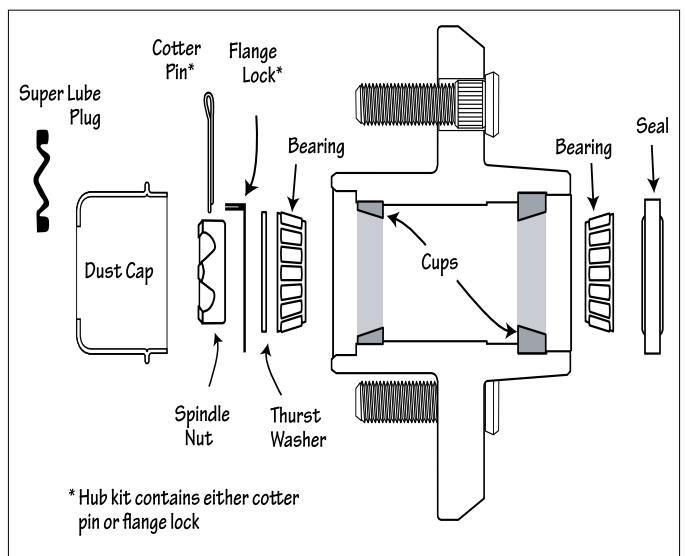
Installing Wheel Hub

REMOVAL/REMOUNTING FOR THE WHEEL HUB

Removing the hub for inspection or maintenance should be done in a safe location away from moving vehicles.

1. Safely elevate and block trailer so that it will not move.
2. Remove the tire/wheel assembly.
3. Remove the grease cap from the hub by prying around the edge of the cap.
4. Bend the locking tang washer to the "free" position.
5. Remove the spindle nut in a counterclockwise direction and remove the spindle washer.
6. Remove the hub from the spindle. Be careful not to allow bearings to fall out of the hub.
7. Clean bearing and cup surfaces, repack with lithium marine grade grease.
8. Place hub on spindle in reverse order as listed above. Rotate the hub while tightening the spindle nut to approximately 50 ft lbs. This translates into full hand pressure with a 12" long set of pliers or 12" long wrench.
9. Loosen the spindle nut. Do not rotate hub.
10. Finger tighten the spindle nut until snug, backing out only to line up the locking tang washer.

11. Bend the locking tang tab in place.
12. Replace grease/hub cap.
13. Test hub with wheel mounted for excessive play or tightness, readjust if required.



* Hub kit contains either cotter pin or flange lock



SUPER LUBE LIMITED WARRANTY

Limited Warranty TIE DOWN ENGINEERING Inc. ("TIE DOWN") warrants its products to be free from defects in material and workmanship for one year from date of delivery when properly maintained by the purchaser. One year for parts and labor.

This warranty does not apply to damage or loss caused by any or all of the following circumstances or conditions:

- Damage caused during installation.
- Parts, accessories, materials or components used with or replacing any TIE DOWN braking system not obtained from or approved in writing by TIE DOWN.
- Misapplication, misuse and failure to follow the directions or observe cautions and warnings on installation, operation, application, inspection or maintenance specified in any TIE DOWN quotation, acknowledgement, sales literature, specification sheet or installation instruction and service manual ("applicable literature").
- Use of product in any other application other than those described in TIE DOWN's product information materials.

If any TIE DOWN products are found upon TIE DOWN's examination to have been defective when supplied, TIE DOWN will either: credit the purchaser's account for the purchase price of the TIE DOWN product; replace the TIE DOWN product; or repair the product. TIE DOWN has sole discretion in choosing which option to provide. For this LIMITED WARRANTY to apply, TIE DOWN must receive notice of the alleged defect within 30 days of either the discovery of the alleged defect or the expiration of the warranty period, whichever is earlier. Any claim not made within this period shall conclusively be deemed waived.

If requested by TIE DOWN, purchaser shall return the alleged defective product to TIE DOWN for examination at purchaser's expense. TIE DOWN will not pay for expenses incurred in returning a product to TIE DOWN without TIE DOWN's prior written authority. TIE DOWN shall not be liable for any other expenses purchaser incurs to remedy any defect. Purchasers waive subrogation on all claims under any insurance.

Limitation of Liability: It is expressly agreed that the liability of TIE DOWN is limited and TIE DOWN does not function as an insurer. THE REMEDIES SET FORTH IN THIS WARRANTY SHALL CONSTITUTE THE EXCLUSIVE REMEDIES AVAILABLE TO THE PURCHASER OR USER AND ARE IN LIEU OF ALL OTHER REMEDIES, EXPRESS OR IMPLIED. THE LIABILITY OF TIE DOWN, WHETHER IN CONTRACT, IN TORT, UNDER ANY WARRANTY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE OF THE PARTICULAR PRODUCT MANUFACTURED, SOLD OR SUPPLIED BY TIE DOWN.

To Obtain Technical Assistance: To enable TIE DOWN to respond to a request for assistance or evaluation of customer or user operating difficulty, please provide at a minimum the following information by calling 404-344-0000:

- Model number, serial number and all other data on the specific component which appears to be involved in the difficulty.
- The date and from whom you purchased your TIE DOWN product.
- State your difficulty, being sure to mention at least the following: Application, Nature of load involved, and Weight of the load.

Field Service If field service at the request of the purchaser is rendered and the difficulty is found not to be with TIE DOWN's product, the purchaser shall pay the time and expense (at the prevailing rate at the time of service) of seller's field representative(s). Charges for service, labor and other expenses that have been incurred by the purchaser, its customer or agent without prior written authorization of TIE DOWN will not be accepted.

TIE DOWN EXTENDS NO WARRANTY, EXPRESS OR IMPLIED, ON PRODUCTS NOT MANUFACTURED BY TIE DOWN OR TO TIE DOWN'S DESIGN SPECIFICATION, INCLUDING BUT NOT LIMITED TO SUCH ITEMS AS NON-TIE DOWN TIRES, BRAKES, ACTUATORS, BEARINGS, HOSE AND TUBING. PURCHASER'S RECOURSE SHALL BE LIMITED TO ANY WARRANTY OF THE RESPECTIVE MANUFACTURERS.

THIS WARRANTY EXCLUDES ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY PURPOSE.

THIS WARRANTY DOES NOT COVER NOR EXTEND TO INCIDENTAL OR CONSEQUENTIAL DAMAGE. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

No representative has authority to make any representation, promise or agreement except as stated in this Limited Warranty. TIE DOWN reserves the right to make design and other changes upon its products without any obligation to install the same on any previously sold or delivered products.

DUE TO THE WIDE VARIATION IN USES TO WHICH TIE DOWN PRODUCTS (WHEELS, HUBS, BRAKES, ETC.) ARE SUBJECTED BY USERS, WE ARE UNABLE TO SPECIFY CARRYING CAPACITIES OR SPEEDS FOR A PARTICULAR APPLICATION. THEREFORE, THE MANUFACTURER MUST TEST HIS EQUIPMENT UNDER THE MOST SEVERE CONDITIONS TO DETERMINE THAT TIE DOWN PRODUCTS ARE SUITABLE.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THOSE DESCRIBED ABOVE. EFFECTIVE JANUARY 2003 THIS WARRANTY SUPERSEDES ALL PRIOR WARRANTIES, WRITTEN OR IMPLIED.

Part #08200

TIE DOWN ENGINEERING • 255 Villanova Drive SW • Atlanta, GA 30336
www.tiedown.com (404) 344-0000 Fax (404) 349-0401



082114, C1288

XRT 9.5-73, 11-73 & 13-73 Procedure for Vortex Hub/Spindle

Simple is best when it comes to Wheel bearing lubrication. Tie Down has adapted the best features of grease and oil lubrication to develop the Vortex hub. The Vortex hub bearing lubrication system provides long term continuous bearing lubrication and ease of service or inspection. Your trailer is equipped with Vortex hubs/spindles from Tie Down Engineering. The hubs are pre-grease and assembled at the factory and should not require any additional adjustments, The Vortex hub uses tapered roller bearings adjusted to a maximum .006 end play. The twelve sided castle nut easily maintains this maximum .006 end play. The configuration requires a minimal amount of end-play that is factored in at the time of assembly.



Vortex Features:

- Stainless steel wear sleeve on factory assembled spindle/hub units
- Vortex internal through the spindle lubrication system
- Super strong threaded removable grease cap
- Premium grade Lucas Oil Marine grease (100,000 miles)

WHAT MAKES THE VORTEX THE BEST

The rear seal rides on a stainless steel wear sleeve. This provides longer life for the seal as the surface does not corrode. Corroded or rusted seal surfaces act like sandpaper on the seal causing premature failure. Vortex lubrication makes changing or adding grease easy with no need to remove the hub. The threaded grease cap is easy to remove and replace. No more knocking the cap off with a hammer. Lucas Oil Marine grease is a premium lithium based complex fortified with rust and oxidation inhibitors, high pressure additives and provides a high degree of moisture resistance and washout properties. These features allow Tie Down Engineering to offer a 6 year, 100,000 mile limited warranty. See separate warranty sheet for details.

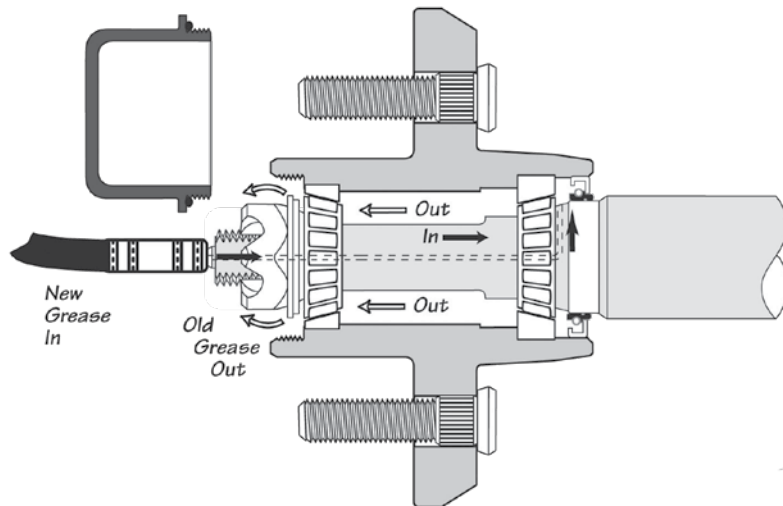
The Vortex hub/spindle is designed to be a no maintenance hub for 6 years. If you should need to add grease or remove the hubs for any reason, follow the instructions listed in this owner's manual. TO MAINTAIN THE FACTORY WARRANTY, LUCAS OIL MARINE GREASE MUST BE USED WHEN ADDING OR REPLACING GREASE IN THE VORTEX HUB.

ADDING OR CHANGING GREASE IN YOUR VORTEX HUB

Your Vortex hub/spindle is equipped with the Vortex Lubrication System. Should the hub/bearings require additional lubrication for any reason, the Vortex lubrication system allows you to do so without removing the hub or having to re-adjust the bearings. New Lucas Oil Marine grease is pumped into the zerc fitting at the end of the spindle, travels to the rear bearing where the new grease pushes out the old grease through the rear bearing, center of hub and through the front bearing.

1. Remove the Vortex grease cap, un-screwing in a counter clockwise rotation.
2. Use a standard grease gun loaded with Lucas Oil marine grease to pump grease into the zerc fitting located on the end of the spindle.

3. Pump the Lucas Oil Marine grease into the zerc fitting while slowly rotating the wheel. Grease will flow out of the hub around the front bearing.
4. When the grease appears to be the new clean grease, remove the grease gun.
5. Replace the Vortex grease cap. Turn in a clock-wise rotation until the o-ring on the cap is in contact with the hub surface. Turn an additional 1/4 turn to seal the Vortex cap to the hub. (This is similar to installing an oil filter in an automobile)



At times, Superlube Hubs may be substituted for the Vortex Hubs. These hubs use Marine Grade grease instead of Lucas Marine Oil. Refer to www.tiedown.com for details on this hub.

REMOVING/REMOUNTING FOR THE VORTEX HUB

Removing the Vortex hub for inspection or maintenance should be done in a safe location away from moving vehicles.

1. Elevate the trailer on level ground using the manufacturers instructions. Always use jack stands or other solid supports. Do not rely on a jack to support the trailer. Block wheels to keep the trailer from rolling.
2. Remove the tire/wheel assembly.
3. Place a newspaper or cloth on the ground under the hub to keep any parts from falling onto a dirty surface.
4. Remove the Vortex grease cap by un-screwing in a counter clockwise rotation.
5. Remove the cotter pin, castle nut (in a counter clockwise rotation) and washer.
6. Remove the hub from the spindle. If you have disc brakes, you will need to remove the brake caliper to remove the rotor. Follow separate instructions for disc brake rotor removal.
7. Be careful not to allow the bearings to fall out of the hub.
8. Clean bearing and cup surfaces.
9. To re-install, coat bearings with Lucas Oil Marine grease before re-installing.
10. Install bearings and place hub on spindle in reverse order as listed above. Rotate the hub while applying approximately 50 ft lbs of torque to the spindle nut. This translates into a full hand pressure load with a 12" long wrench. This "seats" the bearings.
11. Loosen the spindle nut to remove the torque applied. **DO NOT ROTATE THE HUB.**
12. Tighten the spindle nut until snug, backing off only enough to line up the cotter pin with the hole in the spindle.
13. Bend the cotter pin into place.
14. **LOAD HUB WITH LUCAS OIL MARINE GREASE USING THE INSTRUCTIONS FOR ADDING OR CHANGING GREASE.**
15. Replace the Vortex grease cap. Turn in a clock-wise rotation until the o-ring on the cap in contact with the hub surface. Turn an additional 1/4 turn to seal the Vortex cap to the hub. (This is similar to installing an oil filter in an automobile)
16. Replace tire/wheel, torque lug nuts according to wheel manufacturers instructions.
17. Test hub for proper end play by grabbing the tire and pulling the tire from side to side. Readjust if necessary.
18. **VERY IMPORTANT: RE-CHECK LUG NUTS AFTER 25 MILES OF USE.**

Questions & Answers

WHAT CAN CAUSE VIBRATION IN MY TOW VEHICLE?

1. Over-tight hitch coupler -- See procedure for adjusting hitch coupler earlier in this book.
2. Loose or worn wheel bearings -- See procedure for replacing wheel hub earlier in this book.
3. Loose wheels -- See procedure for changing tires earlier in this book.
4. New tires -- It is possible that the new tires are out of round. Once they are inflated to the proper PSI and used for a short period of time on a loaded trailer, they should work themselves round. New tires that are still out of round after an ample break in period may be defective and need to be replaced. Call the tire manufacturer or your local FLOE dealer for replacement.
5. Unbalanced wheel hubs -- If your tires are balanced and not out of round this may be the problem. Replace if necessary.

WHY DOES MY TRAILER SWAY OR WHIP?

1. Trailer is not being towed level -- Refer to hitch selection and use section of this manual.
2. Not enough tongue weight -- Refer to loading and unloading section of this manual.
3. Overloaded trailer -- Refer to loading and unloading section of this manual.
4. Too much tongue weight -- Refer to loading and unloading section of this manual.

WHY ARE MY TIRES WEARING UNEVENLY?

1. Unequal side-to-side loading -- Refer to Proper Loading and Unloading section of this manual.
2. Tires not inflated to proper PSI
3. Wheel bearings are not properly tightened & oiled.

CAN I REPLACE MY TIRES WITH LARGER ONES?

1. No, the 8-57 Cargo Max was designed for use with 5.30 x 12"-C tires and these may not be substituted for a larger size. A 12" mag wheel upgrade is available.
2. The 9.5-73, 11-73 & 13-73 Cargo Maxes were designed for use with 205-75R14 tires and these may not be substituted for a larger size. A 14" mag wheel upgrade is available.

WHERE DO I FIND MY VIN TAG?

1. The VIN tag is located under the bed of the Cargo Max -- on the tongue mount -- on the driver's side of the trailer.



WHY DO I KEEP BLOWING FUSES WHEN I CONNECT OR USE MY TRAILER LIGHTS?

1. A wire is cut or bare and is shorting out -- Visually locate and repair or replace.
2. Wrong size fuse in tow vehicle -- The trailer lighting system draws 1/2 amp not taking into account anything else on this circuit.

WHY DO MY LIGHTS BLINK ON AND OFF?

1. Corrosion on wire connections -- Check all connections for corrosion, clean and apply electrical grease to prevent future corrosion.
2. Improper or loose ground to tow vehicle -- This may cause all lights to blink or cause your marker lights to blink when you turn on your turn signals.

WHAT KIND OF GREASE SHOULD I USE IN MY HUBS?

1. For 8-57 trailers, high-quality high-temperature lithium wheel bearing grease should be used. Never use grease heavier than 265 A.S.T.M. penetration (No. 2 grade).
2. For 9.5-73, 11-73 & 13-73 Cargo Maxes, Lucas Oil Marine Grease must be used when adding or replacing grease in the Vortex hub.

----- IMPORTANT -----
For additional information, please contact your Authorized FLOE Dealer, visit our website at www.floeintl.com or call: 1-800-336-6337 to locate the dealer nearest you.

Tire Safety Information

This portion of the User's Manual contains tire safety information as required by 49 CFR 575.6.

Section 2.1 contains "Steps for Determining Correct Load Limit - Trailer".

Section 2.2 contains "Steps for Determining Correct Load Limit – Tow Vehicle".

Section 2.3 contains a Glossary of Tire Terminology, including "cold inflation pressure", "maximum inflation pressure", "recommended inflation pressure", and other non-technical terms.

Section 2.4 contains information from the NHTSA brochure entitled "Tire Safety – Everything Rides On It". This brochure, as well as the preceding subsections, describes the following items;

- Tire labeling, including a description and explanation of each marking on the tires, and information about the DOT Tire Identification Number (TIN).
- Recommended tire inflation pressure, including a description and explanation of:
 - A. Cold inflation pressure.
 - B. Vehicle Placard and location on the vehicle.
 - C. Adverse safety consequences of under inflation (including tire failure).
 - D. Measuring and adjusting air pressure for proper inflation.
- Tire Care, including maintenance and safety practices.
- Vehicle load limits, including a description and explanation of the following items:
 - A. Locating and understanding the load limit information, total load capacity, and cargo capacity.
 - B. Calculating total and cargo capacities with varying seating configurations including quantitative examples showing / illustrating how the vehicles cargo and luggage capacity decreases as combined number and size of occupants' increases. This item is also discussed in Section 3.
 - C. Determining compatibility of tire and vehicle load capabilities.
 - D. Adverse safety consequences of overloading on handling and stopping on tires.

1.1. STEPS FOR DETERMINING CORRECT LOAD LIMIT – TRAILER

Determining the load limits of a trailer includes more than understanding the load limits of the tires alone. On all trailers there is a Federal certification/VIN label that is located on the forward half of the left (road) side of the unit. This certification/VIN label will indicate the trailer's Gross Vehicle Weight Rating (GVWR). This is the most weight the fully loaded trailer can weigh. It will also provide the Gross Axle Weight Rating (GAWR). This is the most a particular axle can weigh. If there are multiple axles, the GAWR of each axle will be provided.

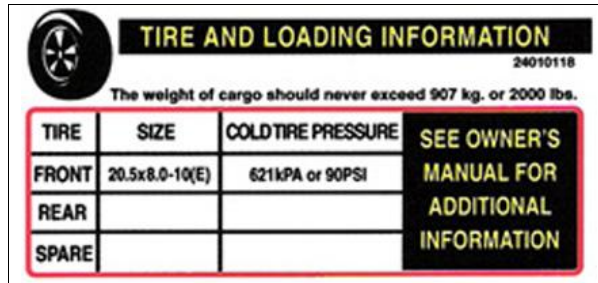
If your trailer has a GVWR of 10,000 pounds or less, there is a vehicle placard located in the same location as the certification label described above. This placard provides tire and loading information. In addition, this placard will show a statement regarding maximum cargo capacity. Cargo can be added to the trailer, up to the maximum weight specified on the placard. The combined weight of the cargo is provided as a single number. In any case, remember: the total weight of a fully loaded trailer can not exceed the stated GVWR.

For trailers with living quarters installed, the weight of water and propane also need to be considered. The weight of fully filled propane containers is considered part of the weight of the trailer before it is loaded with cargo, and is not considered part of the disposable cargo load. Water however, is a disposable cargo weight and is treated as such. If there is a fresh water storage tank of 100 gallons, this tank when filled would weigh about 800 pounds. If more cargo is being transported, water can be off-loaded to keep the total amount of cargo added to the vehicle within the limits of the GVWR so as not to overload the vehicle. Understanding this flexibility will allow you, the owner, to make choices that fit your travel needs.

When loading your cargo, be sure it is distributed evenly to prevent overloading front to back and side to side. Heavy items should be placed low and as close to the axle positions as reasonable. Too many items on one side may overload a tire. The best way to know the actual weight of the vehicle is to weigh it at a public scale. Talk to your dealer to discuss the weighing methods needed to capture the various weights related to the trailer. This would include the weight empty or unloaded, weights per axle, wheel, hitch or king-pin, and total weight.

Excessive loads and/or underinflation cause tire overloading and, as a result, abnormal tire flexing occurs. This situation can generate an excessive amount of heat within the tire. Excessive heat may lead to tire failure. It is the air pressure that enables a tire to support the load, so proper inflation is critical. The proper air pressure may be found on the certification/VIN label and/or on the Tire Placard. This value should never exceed the maximum cold inflation pressure stamped on the tire.

1.1.1. TRAILERS 10,000 POUNDS GVWR OR LESS



Tire and Loading Information Placard – Figure 1-1

1. Locate the statement, “The weight of cargo should never exceed XXX kg or XXX lbs.,” on your vehicle’s placard. See figure 1-1.
2. This figure equals the available amount of cargo and luggage load capacity.
3. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity.

The trailer’s placard refers to the Tire Information Placard attached adjacent to or near the trailer’s VIN (Certification) label at the left front of the trailer.

1.1.2. TRAILERS OVER 10,000 POUNDS GVWR (NOTE: THESE TRAILERS ARE NOT REQUIRED TO HAVE A TIRE INFORMATION PLACARD ON THE VEHICLE)

1. Determine the empty weight of your trailer by weighing the trailer using a public scale or other means. This step does not have to be repeated.
2. Locate the GVWR (Gross Vehicle Weight Rating) of the trailer on your trailer’s VIN (Certification) label.
3. Subtract the empty weight of your trailer from the GVWR stated on the VIN label. That weight is the maximum available cargo capacity of the trailer and may not be safely exceeded.

1.2. STEPS FOR DETERMINING CORRECT LOAD LIMIT – TOW VEHICLE

1. Locate the statement, “The combined weight of occupants and cargo should never exceed XXX lbs.,” on your vehicle’s placard.
2. Determine the combined weight of the driver and passengers who will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kilograms or XXX pounds.
4. The resulting figure equals the available amount of cargo and luggage capacity. For example, if the “XXX” amount equals 1400 lbs. and there will be five 150 lb. passengers in your vehicle, the amount of available cargo and luggage capacity is 650 lbs. (1400-750 (5 x 150) = 650 lbs.).
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage capacity calculated in Step # 4.
6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult the tow vehicle’s manual to determine how this weight transfer reduces the available cargo and luggage capacity of your vehicle.

1.3. GLOSSARY OF TIRE TERMINOLOGY

Accessory weight

The combined weight (in excess of those standard items which may be replaced) of automatic transmission, power steering, power brakes, power windows, power seats, radio and heater, to the extent that these items are available as factory-installed equipment (whether installed or not).

Tire Safety Information

Bead

The part of the tire that is made of steel wires, wrapped or reinforced by ply cords and that is shaped to fit the rim.

Bead separation

This is the breakdown of the bond between components in the bead.

Bias ply tire

A pneumatic tire in which the ply cords that extend to the beads are laid at alternate angles substantially less than 90 degrees to the centerline of the tread.

Carcass

The tire structure, except tread and sidewall rubber which, when inflated, bears the load.

Chunking

The breaking away of pieces of the tread or sidewall.

Cold inflation pressure

The pressure in the tire before you drive.

Cord

The strands forming the plies in the tire.

Cord separation

The parting of cords from adjacent rubber compounds.

Cracking

Any parting within the tread, sidewall, or inner liner of the tire extending to cord material.

CT

A pneumatic tire with an inverted flange tire and rim system in which the rim is designed with rim flanges pointed radially inward and the tire is designed to fit on the underside of the rim in a manner that encloses the rim flanges inside the air cavity of the tire.

Curb weight

The weight of a motor vehicle with standard equipment including the maximum capacity of fuel, oil, and coolant, and, if so equipped, air conditioning and additional weight optional engine.

Extra load tire

A tire designed to operate at higher loads and at higher inflation pressures than the corresponding standard tire.

Groove

The space between two adjacent tread ribs.

Gross Axle Weight Rating

The maximum weight that any axle can support, as published on the Certification / VIN label on the front left side of the trailer. Actual weight determined by weighing each axle on a public scale, with the trailer attached to the towing vehicle.

Gross Vehicle Weight Rating

The maximum weight of the fully loaded trailer, as published on the Certification / VIN label. Actual weight determined by weighing trailer on a public scale, without being attached to the towing vehicle.

Hitch Weight

The downward force exerted on the hitch ball by the trailer coupler.

Innerliner

The layer(s) forming the inside surface of a tubeless tire that contains the inflating medium within the tire.

Innerliner separation

The parting of the innerliner from cord material in the carcass.

Intended outboard sidewall

The sidewall that contains a white-wall, bears white lettering or bears manufacturer, brand, and/or model name molding that is higher or deeper than the same molding on the other sidewall of the tire or the outward facing sidewall of an asymmetrical tire that has a particular side that must always face outward when mounted on a vehicle.

Light truck (LT) tire

A tire designated by its manufacturer as primarily intended for use on lightweight trucks or multipurpose passenger vehicles.

Load rating

The maximum load that a tire is rated to carry for a given inflation pressure.

Maximum load rating

The load rating for a tire at the maximum permissible inflation pressure for that tire.

Maximum permissible inflation pressure

The maximum cold inflation pressure to which a tire may be inflated.

Maximum loaded vehicle weight

The sum of curb weight, accessory weight, vehicle capacity weight, and production options weight.

Measuring rim

The rim on which a tire is fitted for physical dimension requirements.

Pin Weight

The downward force applied to the 5th wheel or gooseneck ball, by the trailer kingpin or gooseneck coupler.

Non-pneumatic rim

A mechanical device which, when a non-pneumatic tire assembly incorporates a wheel, supports the tire, and attaches, either integrally or separably, to the wheel center member and upon which the tire is attached.

Non-pneumatic spare tire assembly

A non-pneumatic tire assembly intended for temporary use in place of one of the pneumatic tires and rims that are fitted to a passenger car in compliance with the requirements of this standard.

Non-pneumatic tire

A mechanical device which transmits, either directly or through a wheel or wheel center member, the vertical load and tractive forces from the roadway to the vehicle, generates the tractive forces that provide the directional control of the vehicle and does not rely on the containment of any gas or fluid for providing those functions.

Non-pneumatic tire assembly

A non-pneumatic tire, alone or in combination with a wheel or wheel center member, which can be mounted on a vehicle.

Normal occupant weight

This means 68 kilograms (150 lbs.) times the number of occupants specified in the second column of Table I of 49 CFR 571.110.

Occupant distribution

The distribution of occupants in a vehicle as specified in the third column of Table I of 49 CFR 571.110.

Open splice

Any parting at any junction of tread, sidewall, or innerliner that extends to cord material.

Outer diameter

The overall diameter of an inflated new tire.

Overall width

Tire Safety Information

The linear distance between the exteriors of the sidewalls of an inflated tire, including elevations due to labeling, decorations, or protective bands or ribs.

Ply

A layer of rubber-coated parallel cords.

Ply separation

A parting of rubber compound between adjacent plies.

Pneumatic tire

A mechanical device made of rubber, chemicals, fabric and steel or other materials, that, when mounted on an automotive wheel, provides the traction and contains the gas or fluid that sustains the load.

Production options weight

The combined weight of those installed regular production options weighing over 2.3 kilograms (5 lbs.) in excess of those standard items which they replace, not previously considered in curb weight or accessory weight, including heavy duty brakes, ride levelers, roof rack, heavy duty battery, and special trim.

Radial ply tire

A pneumatic tire in which the ply cords that extend to the beads are laid at substantially 90 degrees to the centerline of the tread.

Recommended inflation pressure

This is the inflation pressure provided by the vehicle manufacturer on the Tire Information label and on the Certification / VIN tag.

Reinforced tire

A tire designed to operate at higher loads and at higher inflation pressures than the corresponding standard tire.

Rim

A metal support for a tire or a tire and tube assembly upon which the tire beads are seated.

Rim diameter

This means the nominal diameter of the bead seat.

Rim size designation

This means the rim diameter and width.

Rim type designation

This means the industry of manufacturer's designation for a rim by style or code.

Rim width

This means the nominal distance between rim flanges.

Section width

The linear distance between the exteriors of the sidewalls of an inflated tire, excluding elevations due to labeling, decoration, or protective bands.

Sidewall

That portion of a tire between the tread and bead.

Sidewall separation

The parting of the rubber compound from the cord material in the sidewall.

Special Trailer (ST) tire

The "ST" is an indication the tire is for trailer use only.

Test rim

The rim on which a tire is fitted for testing, and may be any rim listed as appropriate for use with that tire.

Tread

That portion of a tire that comes into contact with the road.

Tread rib

A tread section running circumferentially around a tire.

Tread separation

Pulling away of the tread from the tire carcass.

Treadwear indicators (TWI)

The projections within the principal grooves designed to give a visual indication of the degrees of wear of the tread.

Vehicle capacity weight

The rated cargo and luggage load plus 68 kilograms (150 lbs.) times the vehicle's designated seating capacity.

Vehicle maximum load on the tire

The load on an individual tire that is determined by distributing to each axle its share of the maximum loaded vehicle weight and dividing by two.

Vehicle normal load on the tire

The load on an individual tire that is determined by distributing to each axle its share of the curb weight, accessory weight, and normal occupant weight (distributed in accordance with Table I of CRF 49 571.110) and dividing by 2.

Weather side

The surface area of the rim not covered by the inflated tire.

Wheel center member

In the case of a non-pneumatic tire assembly incorporating a wheel, a mechanical device which attaches, either integrally or separably, to the non-pneumatic rim and provides the connection between the non-pneumatic rim and the vehicle; or, in the case of a non-pneumatic tire assembly not incorporating a wheel, a mechanical device which attaches, either integrally or separably, to the non-pneumatic tire and provides the connection between tire and the vehicle.

Wheel-holding fixture

The fixture used to hold the wheel and tire assembly securely during testing.

1.4. TIRE SAFETY - EVERYTHING RIDES ON IT

The National Traffic Safety Administration (NHTSA) has published a brochure (DOT HS 809 361) that discusses all aspects of Tire Safety, as required by CFR 575.6. This brochure is reproduced in part below. It can be obtained and downloaded from NHTSA, free of charge, from the following web site:

http://www.nhtsa.dot.gov/cars/rules/TireSafety/ridesonit/tires_index.html

Studies of tire safety show that maintaining proper tire pressure, observing tire and vehicle load limits (not carrying more weight in your vehicle than your tires or vehicle can safely handle), avoiding road hazards, and inspecting tires for cuts, slashes, and other irregularities are the most important things you can do to avoid tire failure, such as tread separation or blowout and flat tires. These actions, along with other care and maintenance activities, can also:

- Improve vehicle handling
- Help protect you and others from avoidable breakdowns and accidents
- Improve fuel economy
- Increase the life of your tires.

This booklet presents a comprehensive overview of tire safety, including information on the following topics:

- Basic tire maintenance
- Uniform Tire Quality Grading System
- Fundamental characteristics of tires

Tire Safety Information

- Tire safety tips.

Use this information to make tire safety a regular part of your vehicle maintenance routine. Recognize that the time you spend is minimal compared with the inconvenience and safety consequences of a flat tire or other tire failure.

1.5. SAFETY FIRST—BASIC TIRE MAINTENANCE

Properly maintained tires improve the steering, stopping, traction, and load-carrying capability of your vehicle. Underinflated tires and overloaded vehicles are a major cause of tire failure. Therefore, as mentioned above, to avoid flat tires and other types of tire failure, you should maintain proper tire pressure, observe tire and vehicle load limits, avoid road hazards, and regularly inspect your tires.

1.5.1. FINDING YOUR VEHICLE'S RECOMMENDED TIRE PRESSURE AND LOAD LIMITS

Tire information placards and vehicle certification labels contain information on tires and load limits. These labels indicate the vehicle manufacturer's information including:

- Recommended tire size
- Recommended tire inflation pressure
- Vehicle capacity weight (VCW—the maximum occupant and cargo weight a vehicle is designed to carry)
- Front and rear gross axle weight ratings (GAWR—the maximum weight the axle systems are designed to carry).

Both placards and certification labels are permanently attached to the trailer near the left front.

1.5.2. UNDERSTANDING TIRE PRESSURE AND LOAD LIMITS

Tire inflation pressure is the level of air in the tire that provides it with load-carrying capacity and affects the overall performance of the vehicle. The tire inflation pressure is a number that indicates the amount of air pressure—measured in pounds per square inch (psi)—a tire requires to be properly inflated. (You will also find this number on the vehicle information placard expressed in kilopascals (kpa), which is the metric measure used internationally.)

Manufacturers of passenger vehicles and light trucks determine this number based on the vehicle's design load limit, that is, the greatest amount of weight a vehicle can safely carry and the vehicle's tire size. The proper tire pressure for your vehicle is referred to as the "recommended cold inflation pressure." (As you will read below, it is difficult to obtain the recommended tire pressure if your tires are not cold.)

Because tires are designed to be used on more than one type of vehicle, tire manufacturers list the "maximum permissible inflation pressure" on the tire sidewall. This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

1.5.3. CHECKING TIRE PRESSURE

It is important to check your vehicle's tire pressure at least once a month for the following reasons:

- Most tires may naturally lose air over time.
- Tires can lose air suddenly if you drive over a pothole or other object or if you strike the curb when parking.
- With radial tires, it is usually not possible to determine underinflation by visual inspection.

For convenience, purchase a tire pressure gauge to keep in your vehicle. Gauges can be purchased at tire dealerships, auto supply stores, and other retail outlets.

The recommended tire inflation pressure that vehicle manufacturers provide reflects the proper psi when a tire is cold. The term cold does not relate to the outside temperature. Rather, a cold tire is one that has not been driven on for at least three hours. When you drive, your tires get warmer, causing the air pressure within them to increase. Therefore, to get an accurate tire pressure reading, you must measure tire pressure when the tires are cold or compensate for the extra pressure in warm tires.

1.5.4. STEPS FOR MAINTAINING PROPER TIRE PRESSURE

- Step 1: Locate the recommended tire pressure on the vehicle's tire information placard, certification label, or in the owner's manual.
- Step 2: Record the tire pressure of all tires.
- Step 3: If the tire pressure is too high in any of the tires, slowly release air by gently pressing on the tire valve stem with the edge of your tire gauge until you get to the correct pressure.
- Step 4: If the tire pressure is too low, note the difference between the measured tire pressure and the correct tire pressure. These "missing" pounds of pressure are what you will need to add.
- Step 5: At a service station, add the missing pounds of air pressure to each tire that is underinflated.
- Step 6: Check all the tires to make sure they have the same air pressure (except in cases in which the front and rear tires are supposed to have different amounts of pressure).

If you have been driving your vehicle and think that a tire is underinflated, fill it to the recommended cold inflation pressure indicated on your vehicle's tire information placard or certification label. While your tire may still be slightly underinflated due to the extra pounds of pressure in the warm tire, it is safer to drive with air pressure that is slightly lower than the vehicle manufacturer's recommended cold inflation pressure than to drive with a significantly underinflated tire. Since this is a temporary fix, don't forget to recheck and adjust the tire's pressure when you can obtain a cold reading.

1.5.5. TIRE SIZE

To maintain tire safety, purchase new tires that are the same size as the vehicle's original tires or another size recommended by the manufacturer. Look at the tire information placard, the owner's manual, or the sidewall of the tire you are replacing to find this information. If you have any doubt about the correct size to choose, consult with the tire dealer.

1.5.6. TIRE TREAD

The tire tread provides the gripping action and traction that prevent your vehicle from slipping or sliding, especially when the road is wet or icy. In general, tires are not safe and should be replaced when the tread is worn down to 1/16 of an inch. Tires have built-in treadwear indicators that let you know when it is time to replace your tires. These indicators are raised sections spaced intermittently in the bottom of the tread grooves. When they appear "even" with the outside of the tread, it is time to replace your tires. Another method for checking tread depth is to place a penny in the tread with Lincoln's head upside down and facing you. If you can see the top of Lincoln's head, you are ready for new tires.

1.5.7. TIRE BALANCE AND WHEEL ALIGNMENT

To avoid vibration or shaking of the vehicle when a tire rotates, the tire must be properly balanced. This balance is achieved by positioning weights on the wheel to counterbalance heavy spots on the wheel-and-tire assembly. A wheel alignment adjusts the angles of the wheels so that they are positioned correctly relative to the vehicle's frame. This adjustment maximizes the life of your tires. These adjustments require special equipment and should be performed by a qualified technician.

1.5.8. TIRE REPAIR

The proper repair of a punctured tire requires a plug for the hole and a patch for the area inside the tire that surrounds the puncture hole. Punctures through the tread can be repaired if they are not too large, but punctures to the sidewall should not be repaired. Tires must be removed from the rim to be properly inspected before being plugged and patched.

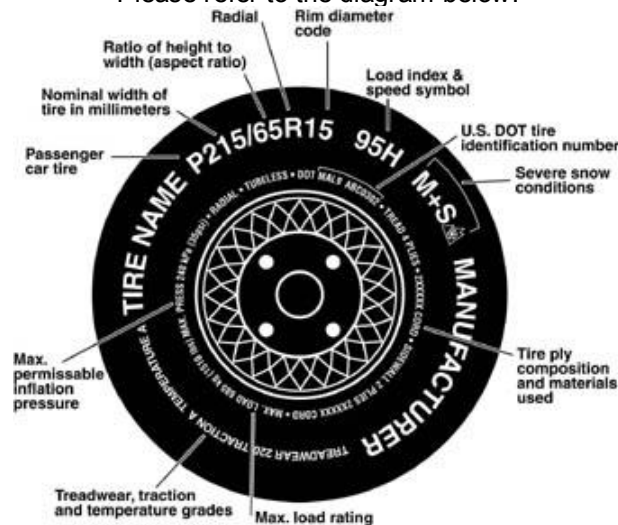
1.5.9. TIRE FUNDAMENTALS

Federal law requires tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides a tire identification number for safety standard certification and in case of a recall.

Tire Safety Information

1.5.9.1. Information on Passenger Vehicle Tires

Please refer to the diagram below.



P

The "P" indicates the tire is for passenger vehicles.

Next number

This three-digit number gives the width in millimeters of the tire from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

Next number

This two-digit number, known as the aspect ratio, gives the tire's ratio of height to width. Numbers of 70 or lower indicate a short sidewall for improved steering response and better overall handling on dry pavement.

R

The "R" stands for radial. Radial ply construction of tires has been the industry standard for the past 20 years.

Next number

This two-digit number is the wheel or rim diameter in inches. If you change your wheel size, you will have to purchase new tires to match the new wheel diameter.

Next number

This two- or three-digit number is the tire's load index. It is a measurement of how much weight each tire can support. You may find this information in your owner's manual. If not, contact a local tire dealer. Note: You may not find this information on all tires because it is not required by law.

M+S

The "M+S" or "M/S" indicates that the tire has some mud and snow capability. Most radial tires have these markings; hence, they have some mud and snow capability.

Speed Rating

The speed rating denotes the speed at which a tire is designed to be driven for extended periods of time. The ratings range from 99 miles per hour (mph) to 186 mph. These ratings are listed below. Note: You may not find this information on all tires because it is not required by law.

Tire Safety Information

Letter Rating	Speed Rating
Q	99 mph
R	106 mph
S	112 mph
T	118 mph
U	124 mph
H	130 mph
V	149 mph
W	168* mph
Y	186* mph

* For tires with a maximum speed capability over 149 mph, tire manufacturers sometimes use the letters ZR. For those with a maximum speed capability over 186 mph, tire manufacturers always use the letters ZR.

U.S. DOT Tire Identification Number

This begins with the letters "DOT" and indicates that the tire meets all federal standards. The next two numbers or letters are the plant code where it was manufactured, and the last four numbers represent the week and year the tire was built. For example, the numbers 3197 means the 31st week of 1997. The other numbers are marketing codes used at the manufacturer's discretion. This information is used to contact consumers if a tire defect requires a recall.

Tire Ply Composition and Materials Used

The number of plies indicates the number of layers of rubber-coated fabric in the tire. In general, the greater the number of plies, the more weight a tire can support. Tire manufacturers also must indicate the materials in the tire, which include steel, nylon, polyester, and others.

Maximum Load Rating

This number indicates the maximum load in kilograms and pounds that can be carried by the tire.

Maximum Permissible Inflation Pressure

This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

1.5.9.2. UTQGS Information

Treadwear Number

This number indicates the tire's wear rate. The higher the treadwear number is, the longer it should take for the tread to wear down. For example, a tire graded 400 should last twice as long as a tire graded 200.

Traction Letter

This letter indicates a tire's ability to stop on wet pavement. A higher graded tire should allow you to stop your car on wet roads in a shorter distance than a tire with a lower grade. Traction is graded from highest to lowest as "AA", "A", "B", and "C".

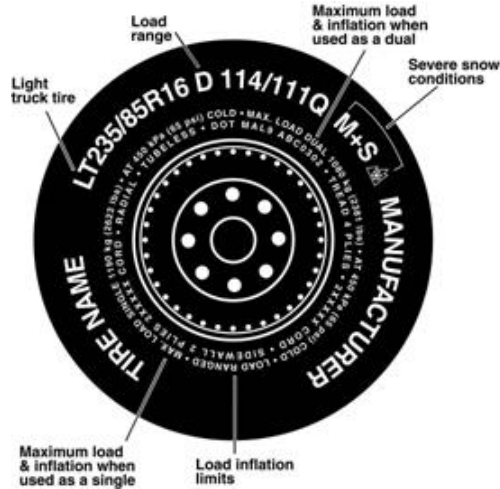
Temperature Letter

This letter indicates a tire's resistance to heat. The temperature grade is for a tire that is inflated properly and not overloaded. Excessive speed, underinflation or excessive loading, either separately or in combination, can cause heat build-up and possible tire failure. From highest to lowest, a tire's resistance to heat is graded as "A", "B", or "C".

Tire Safety Information

1.5.9.3. Additional Information on Light Truck Tires

Please refer to the following diagram.



Tires for light trucks have other markings besides those found on the sidewalls of passenger tires.

LT

The "LT" indicates the tire is for light trucks or trailers.

ST

An "ST" is an indication the tire is for trailer use only.

Max. Load Dual kg (lbs) at kPa (psi) Cold

This information indicates the maximum load and tire pressure when the tire is used as a dual, that is, when four tires are put on each rear axle (a total of six or more tires on the vehicle).

Max. Load Single kg (lbs) at kPa (psi) Cold

This information indicates the maximum load and tire pressure when the tire is used as a single.

Load Range

This information identifies the tire's load-carrying capabilities and its inflation limits.

1.6. TIRE SAFETY TIPS

Preventing Tire Damage

- Slow down if you have to go over a pothole or other object in the road.
- Do not run over curbs or other foreign objects in the roadway, and try not to strike the curb when parking.

Tire Safety Checklist

- Check tire pressure regularly (at least once a month), including the spare.
- Inspect tires for uneven wear patterns on the tread, cracks, foreign objects, or other signs of wear or trauma.
- Remove bits of glass and foreign objects wedged in the tread.
- Make sure your tire valves have valve caps.
- Check tire pressure before going on a long trip.
- Do not overload your vehicle. Check the Tire Information and Loading Placard or User's Manual for the maximum recommended load for the vehicle.

FLOE INTERNATIONAL, INC. CARGO MAX TRAILER 10 YEAR LIMITED WARRANTY

FLOE International warrants, to the original purchaser Cargo Max trailers to be free from original defects in materials and workmanship under the conditions and loads for which designed and from date of purchase as follows:

ALUMINUM TRAILER STRUCTURES, LIGHTING SYSTEM AND FORMED CARGO MAX BED

FLOE INTERNATIONAL will repair or replace, at its option, any portion of the aluminum structure, formed trailer bed and lighting system (excluding L.E.D. bulbs and lenses,) which fails as a result of a defect in material or workmanship during the first year after purchase. Thereafter, FLOE INTERNATIONAL will repair or replace any portion of the aluminum structure or lighting system which fails as a result of a defect in material or workmanship at a cost to the purchaser of a proportion of the existing manufacturer's suggested retail price as follows:

YEARS OWNED	% TO YOU OF CURRENT RETAIL PRICE	YEARS OWNED	% TO YOU OF CURRENT RETAIL PRICE
0-1	0%	5-6	75%
1-2	55%	6-7	80%
2-3	60%	7-8	85%
3-4	65%	8-9	90%
4-5	70%	9-10	95%

AXLE AND HUB

Axle, hubs, drums, brakes, bearings and seals are covered for a period of one (1) year from the date of purchase when installed, used and maintained properly by the purchaser. Warranty service is provided and performed by the manufacturer "Tie Down Engineering". Tie Down can be reached for warranty service during normal business hours at 404-477-6899, ext 1538.

TIRES

Warranty is provided by the tire manufacturer Green Ball Corp. Green Ball can be reached for warranty service during normal business hours at 1-800-946-9412.

This warranty covers only the cost of replacement of materials due to defects in materials or workmanship and represents the only warranty authorized by us. In order to receive performance under this warranty, all warranty repairs must be authorized in advance by Floe International. Floe International will not be responsible for any costs incurred for unauthorized repairs! Unauthorized repairs may void the warranty on items repaired! This warranty does not cover deck replacement labor, nor any possible damages due to overloading of trailer, damage resulting from road hazards, damage caused by wear rods or traction products, jackknifing, misuse, or negligence. This warranty covers personal use and does not apply to commercial or rental uses. The manufacturer is not responsible for damage where repairs have been made or attempted by others. Items purchased by FLOE INTERNATIONAL are warranted by the original manufacturer and warranty is extended to the original purchaser. FLOE INTERNATIONAL reserves the right to inspect and perform rework at its main facility (F.O.B.) McGregor, Minnesota. Freight is the responsibility of the consumer. Specifications may change without notice or obligation. To receive performance under this warranty, contact your authorized Floe Dealer.

THERE ARE NO OTHER EXPRESSED WARRANTIES OR ANY IMPLIED WARRANTIES.

**Our obligations under this warranty are limited to repair or replacement at our discretion,
AND WE SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND.**

This warranty gives you specific legal rights and you may have other rights which may vary from state to state.

Be sure to register your FLOE trailer. Register online at www.floeintl.com or by mailing your Warranty registration card to the address below.

FLOE International, Inc.
 Warranty Registration Department
 48473 State Highway 65
 McGregor, MN 55760-9514



WARRANTY REGISTRATION

NOTE: If you are unable to register online, please photocopy and fill out the form below and place in an envelope with proper postage or quickly register online. Please complete all information requested and address it to: FLOE International Inc., Warranty Registration Dept., 48473 State Hwy 65, McGregor, MN 55760-9514. FLOE INTERNATIONAL, INC. is not responsible for lost, stolen or misplaced warranty registrations.

NAME: _____ PHONE: _____ / _____

ADDRESS: _____ CITY: _____ STATE: _____ ZIP: _____

DATE PURCHASED: _____ / _____ / _____ PURCHASED FROM: _____

E-mail: _____

Yes please No you cannot contact me via e-mail with great offers and special promotions from FLOE International and it's quality authorized dealers.

PRODUCT PURCHASED *Please check all that apply*

CARGO MAX XRT 8-57 CARGO MAX XRT 9.5-73 CARGO MAX XRT 11-73 CARGO MAX XRT 13-73 VIN#: _____

Optional Tongue Jack Optional Tailgate Ramp Optional Mag Wheels Optional Spare Tire

TELL US ABOUT YOURSELF

How did you hear about FLOE: _____

Family Income: 25,000 - 50,000 50,000 - 75,000 75,000 - 100,000 100,000 - 150,000 150,000 - 250,000 over 250,000

Your Occupation: Professional/Technical Upper Management/Executive Middle Management Sales/Marketing Clerical/Service Worker Tradesman/Machine Operator/Laborer

Spouses Occupation: Professional/Technical Upper Management/Executive Middle Management Sales/Marketing Clerical/Service Worker Tradesman/Machine Operator/Laborer

Age Range: 18 - 29 30 - 45 46 - 60 over 60 Education: High School 2 year college 4 year college Graduate school

What most influenced you to buy a FLOE product: (select one) Advertisement Quality Warranty Price Style/Appearance Features/Benefits

Instantly register your FLOE products online! www.floeintl.com/registration

Your authorized FLOE Dealer:



FLOE INTERNATIONAL, INC.
48473 STATE HIGHWAY 65 • MCGREGOR, MN 55760
www.floeintl.com

All material copyright © 2017 FLOE International, Inc. Unauthorized reproduction is strictly prohibited.
Specifications subject to change without notice.