



Operation & Safety Manual

Rock Line Products Inc.
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503100

FOREWARD

This manual is a very important tool! Keep it with the machine at all times. The purpose of this manual is to provide owners, users, operators, lessors, and lessees with the precautions and operating procedures essential for the safe and proper trailer operation for its intended purpose. It is important to stress proper trailer usage at all times. All information in this manual must be read and understood before any attempt is made to operate the trailer.

Because the manufacturer has no direct control over trailer operation and application, proper safety practices are the responsibility of the owners, users, operators, lessors, and lessees.

All instructions in this manual are based upon the use of the trailer under proper operating conditions, with no deviations from the original design. Any alteration or modification of the trailer is strictly forbidden without written approval from Rock Line.

Due to continuous product improvements, Rock Line reserves the right to make specification changes without prior notification. Contact Rock Line for updated information.

IMPORTANT NOTICE

DO NOT weld on the trailer without first disconnecting the battery. Failure to do so can damage the electronic sensors that control the air suspension. These will not be covered under warranty.

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SAFETY SYMBOLS

SAFETY ALERT SYMBOLS AND SAFETY SIGNAL WORDS



This is the Safety Alert Symbol. It is used to alert you to the potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

The Safety Alert Symbol will be used with the appropriate Safety Signal Word of "DANGER", "WARNING" or "CAUTION" to a potential hazard and designate a level of seriousness. The Safety Signal Words are inserted throughout this manual in Black/White. On the machine, the Safety Signal Words will have either a Red, Orange, or Yellow background as part of a safety sign or decal. The "DANGER", "WARNING", and "CAUTION" Safety Signal Words, definitions, and associated colors are as follows:

DANGER

INDICATES AN IMMINENTLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN SERIOUS INJURY OR DEATH. THIS SIGNAL WORD IS USED IN THE MOST EXTREME CASES. WHEN INSTALLED ON THE TRAILER, THIS SIGNAL WORD WILL HAVE A RED BACKGROUND AS PART OF A DECAL.

WARNING

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN SERIOUS INJURY OR DEATH. WHEN INSTALLED ON THE TRAILER, THIS SIGNAL WORD WILL HAVE AN ORANGE BACKGROUND AS PART OF A DECAL.

CAUTION

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH IF NOT AVOIDED, MAY RESULT IN MINOR OR MODERATE INJURY. IT MAY ALSO BE USED TO ALERT AGAINST UNSAFE PRACTICES. WHEN INSTALLED ON THE TRAILER, THIS SIGNAL WORD WILL HAVE A YELLOW BACKGROUND AS PART OF A DECAL.

The "IMPORTANT" Safety Signal Word may also appear in this manual or on the machine. This Safety Signal Word typically will not appear with the Safety Alert Symbol, but contains important information that must be followed for safe and proper operation. The "IMPORTANT" Safety Signal Word definition and associated color is as follows.

NOTICE

INDICATES PROCEDURES ESSENTIAL FOR SAFE OPERATION AND WHICH, IF NOT FOLLOWED, MAY RESULT IN A TRAILER MALFUNCTIONED DAMAGE. WHEN INSTALLED IN A TRAILER, THIS SIGNAL WORD WILL HAVE A GREEN BACKGROUND AS PART OF A DECAL.

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SAFETY PRECAUTIONS

SAFETY INFORMATION

ALERT SYMBOLS AND SIGNAL WORDS

An owner's manual that provides general trailer information cannot cover all of the specific details necessary for the proper combination of every trailer, tow vehicle and hitch. Therefore, you must read, understand and follow the instructions given by the tow vehicle and trailer hitch manufacturers, as well as the instructions in this manual.

AIR-TOW trailers are built with components produced by various manufacturers. Some of these items have separate instruction manuals that were originally shipped with the product. Where this manual indicates that you should read another manual, and you do not have that manual, call ROCK LINE to obtain a copy.

The safety information in this manual is denoted by the safety alert symbols and signal words listed below:

DANGER

INDICATES AN IMMINENTLY HAZARDOUS SITUATION. IF NOT AVOIDED, WILL RESULT IN SERIOUS INJURY OR DEATH. THIS DECAL WILL HAVE A RED BACKGROUND.

WARNING

INDICATES A POTENTIALLY HAZARDOUS SITUATION. IF NOT AVOIDED, COULD RESULT IN SERIOUS INJURY OR DEATH. THIS DECAL WILL HAVE AN ORANGE BACKGROUND.

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NOTICE

INDICATES PROCEDURES ESSENTIAL FOR SAFE OPERATION. THIS DECAL WILL HAVE A GREEN BACKGROUND.

LOCAL AND NATIONAL REGULATIONS

In many regions, a trailer is considered a motor vehicle. As such, there are regulations (height, width, brakes etc.) that must be followed by the owner and operator. It is the responsibility of the trailer owner and operator to determine which regulations apply and to comply with these requirements.

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SAFETY PRECAUTIONS

MAJOR HAZARDS

Safe and proper usage of the trailer is essential to avoid accidents. Unsafe usage, separation of trailer from tow vehicle and loss of control of the trailer or trailer/tow vehicle combination can result in death or serious injury. Common causes for trailer accidents include:

- Driving too fast for conditions
- Failure to adjust handling while towing a trailer
- Trailer improperly coupled to the hitch
- Incorrect use of safety chains
- Incorrect use of breakaway brake
- Unsafe tires, lug nuts or wheels
- Unsafe load distribution or overload
- Shifting cargo
- Inappropriate cargo
- Inoperable brakes, lights or mirrors
- Modifying the trailer
- Inadequate tow vehicle or towing hitch
- Not properly maintaining the trailer structure.

Driving too Fast for Conditions

With ideal road conditions, the maximum speed when safely towing a trailer is 55 mph. If you drive too fast, the trailer tires will overheat and possibly blowout. As your speed increases, you are more likely to suddenly lose control. Never exceed 55 mph while towing the trailer.



WARNING

DECREASE YOUR SPEED AS ROAD, WEATHER AND LIGHTING CONDITIONS DETERIORATE.

Failure to Adjust Handling While Towing a Trailer

When towing a trailer, your tow vehicle will have decreased acceleration, increased stopping distance, and increased turning radius (which means you must make wider turns to keep from hitting curbs, vehicles, and anything else that is on the inside corner). In addition, you will need a longer distance to pass, due to slower acceleration and increased length.

Be alert for slippery conditions. You are more likely to be affected by slippery road surfaces when driving a tow vehicle with a trailer, than driving a tow vehicle without a trailer.

Anticipate the trailer "swaying." Swaying is the trailer reaction to the air pressure wave caused by passing trucks and buses. Continued pulling of the trailer provides a stabilizing force to correct swaying. Do not apply the brakes to correct trailer swaying.

Check rear view mirrors frequently to observe the trailer and traffic.

Use lower gear when driving down steep or long grades. Use the engine and transmission as a brake. Do not ride the brakes, as they can overheat and become ineffective.

Be aware of your trailer height, especially when approaching roofed areas and when around trees.

Hitting a bump or depression in the road surface or running off the shoulder of the road, and then returning to the road surface, can adversely affect the stability of the trailer or towing vehicle.

Rounding a corner or curve at excessive speed can adversely affect the stability of the trailer or towing vehicle.

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SAFETY PRECAUTIONS

Trailer Improperly Coupled to the Hitch

It is critical that the trailer be securely coupled to the hitch, and that the safety chains are correctly attached. Uncoupling could result in death or serious injury!



CAUTION

DO NOT MOVE THE TRAILER UNTIL THE COUPLER IS SECURED AND LOCKED TO HITCH, THE SAFETY CHAINS ARE SECURED TO THE TOW VEHICLE AND THE TRAILER JACK(S) ARE FULLY RETRACTED.

Mismatch of Trailer and Hitch

The use of a Weight Carrying Hitch instead of a Weight Distributing Hitch can place too much tongue load on the rear end of the towing vehicle. This combined loading can cause the rear end of the towing vehicle to sag downward and the forward end to be raised upward, causing steering problems and towing vehicle sway at other than slow speeds.



CAUTION

BE SURE YOUR HITCH AND TOW VEHICLE ARE RATED FOR THE GROSS VEHICLE WEIGHT RATING OF YOUR TRAILER.

DO NOT TOW THE TRAILER ON THE ROAD UNTIL THE TIRES AND WHEELS ARE CHECKED, THE TRAILER BRAKES ARE CHECKED, THE BREAKAWAY CABLE IS CONNECTED TO THE TOW VEHICLE, THE LOAD IS SECURED TO THE TRAILER AND THE TRAILER LIGHTS ARE CONNECTED AND CHECKED.

Incorrect Use of Safety Chains

If your trailer comes loose from the hitch for any reason, safety chains are provided so that control of the trailer can still be maintained. The chains originally supplied with the trailer are of proper size. Be sure the chains are not allowed to drag while towing. If links become worn, replace with proper size chain. Always check that the chains are attached to the tow vehicle before towing.



CAUTION

FASTEN CHAINS ONLY TO THE FRAME OF THE TOW VEHICLE. DO NOT FASTEN CHAINS TO ANY PART OF THE HITCH UNLESS THE HITCH HAS HOLES OR LOOPS SPECIFICALLY FOR THAT PURPOSE. CROSS CHAINS UNDERNEATH HITCH AND COUPLER WITH ENOUGH SLACK TO PERMIT TURNING AND TO HOLD TONGUE UP IF THE TRAILER COMES LOOSE.

Incorrect Use of Breakaway Brake

When equipped with brakes, a breakaway brake system applies the brakes on your trailer if your trailer comes loose from the hitch for any reason. The safety chains and breakaway brake system must be in good condition and properly rigged to be effective.



CAUTION

THE BREAKAWAY CABLE MUST BE CONNECTED TO THE TOW VEHICLE, AND NOT TO ANY PART OF THE HITCH. BEFORE TOWING THE TRAILER, TEST THE FUNCTION OF THE BREAKAWAY BRAKE SYSTEM. IF THE BREAKAWAY BRAKE SYSTEM IS NOT WORKING, DO NOT TOW THE TRAILER; HAVE IT SERVICED OR REPAIRED.

Unsafe Tires, Lug Nuts or Wheels

It is essential to visually inspect the trailer tires and wheels before each tow.

If a tire has a bald spot, bulge, cuts, is showing any cords, or is cracked, replace the tire before towing. If a tire has uneven tread wear, take the trailer to a dealer or service center for diagnosis. Uneven tread wear can be caused by tire imbalance, axle misalignment or incorrect inflation.

Tires with too little tread will not provide adequate tracking on wet roadways and could result in loss of control, leading to death or serious injury.

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SAFETY PRECAUTIONS

MAJOR HAZARDS

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- Driving too fast for conditions
- Failure to adjust handling while towing a trailer
- Trailer improperly coupled to the hitch
- Incorrect use of safety chains
- Incorrect use of breakaway brake
- Unsafe tires, lug nuts or wheels
- Unsafe load distribution or overload
- Shifting cargo
- Inappropriate cargo
- Inoperable brakes, lights or mirrors
- Modifying the trailer
- Inadequate tow vehicle or towing hitch
- Not properly maintaining the trailer structure.

Driving too Fast for Conditions

With ideal road conditions, the maximum speed when safely towing a trailer is 55 mph. If you drive too fast, the trailer tires will overheat and possibly blowout. As your speed increases, you are more likely to suddenly lose control. Never exceed 55 mph while towing the trailer.



WARNING

DECREASE YOUR SPEED AS ROAD, WEATHER AND LIGHTING CONDITIONS DETERIORATE.

Failure to Adjust Handling While Towing a Trailer

When towing a trailer, your tow vehicle will have decreased acceleration, increased stopping distance, and increased turning radius (which means you must make wider turns to keep from hitting curbs, vehicles, and anything else that is on the inside corner). In addition, you will need a longer distance to pass, due to slower acceleration and increased length.

Be alert for slippery conditions. You are more likely to be affected by slippery road surfaces when driving a tow vehicle with a trailer, than driving a tow vehicle without a trailer.

Anticipate the trailer "swaying." Swaying is the trailer reaction to the air pressure wave caused by passing trucks and buses. Continued pulling of the trailer provides a stabilizing force to correct swaying. Do not apply the brakes to correct trailer swaying.

Check rear view mirrors frequently to observe the trailer and traffic.

Use lower gear when driving down steep or long grades. Use the engine and transmission as a brake. Do not ride the brakes, as they can overheat and become ineffective.

Be aware of your trailer height, especially when approaching roofed areas and when around trees.

Hitting a bump or depression in the road surface or running off the shoulder of the road, and then returning to the road surface, can adversely affect the stability of the trailer or towing vehicle.

Rounding a corner or curve at excessive speed can adversely affect the stability of the trailer or towing vehicle.

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SAFETY PRECAUTIONS

Improper tire pressure may cause an unstable trailer and could result in a tire blowout and loss of control. Tires must be inspected and inflated in accordance with section 4 of this manual.



CAUTION

TRAILER TIRES MAY BE INFLATED TO HIGHER PRESSURES THAN PASSENGER VEHICLE TIRES. UNDER-INFLATED FRONT TIRES ON THE TOWING VEHICLE COULD CAUSE STEERING PROBLEMS. LOW PRESSURE IN THE REAR TIRES OF THE TOWING VEHICLE COULD CAUSE THE VEHICLE TO SWAY.

Trailer wheels and lug nuts are subjected to significant side loads during tow. Before each tow, visually inspect the lug nuts for loosening. Lug nuts must be tightened to the proper torque in accordance with Pg. 37 of this manual.

Overload

The total weight of the load you put in or on the trailer, plus the empty weight of the trailer itself, must not exceed the trailer's Gross Vehicle Weight Rating (GVWR). If you do not know the empty weight of the trailer, you must measure it at a scale.

Determining the load limits of a trailer includes more than understanding the load limits of the tires alone. On all trailers there is a VIN (Vehicle Identification No.) label and Tire Information Label that is located on the forward half of the left (road) side of the unit. The VIN label indicates 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 support. If there are multiple axles, the GAWR of each axle will be provided.

Steps for Determining Correct Load Limit

- Locate the statement, "The weight of cargo should never exceed XXX kg or XXX lbs." on your vehicle's placard.
- This figure equals the available amount of cargo or load capacity.
- Determine the total weight of cargo being loaded on the vehicle. That weight must not exceed the available cargo load capacity.

MANUFACTURED BY:	_____	DATE:	_____
GVWR:	_____ KG (_____ LB)	TIRE:	_____ RIM: _____
GAWR:	_____ KG (_____ LB PER AXLE WITH _____		
AIR PRESSURE:	_____ KPA (_____ PSI COLD SINGLE		
THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.			
V.I.N.	_____	TYPE:	_____
		MODEL:	_____

V.I.N. TAG



WARNING

DO NOT LOAD A TRAILER SO THAT THE WEIGHT EXCEEDS THE TRAILER GROSS VEHICLE WEIGHT RATING (GVWR) OR GROSS AXLE WEIGHT RATING (GAWR).

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SAFETY PRECAUTIONS

Unsafe Load Distribution

Uneven load distribution can cause tire, wheel, axle or structural failure. Be sure your trailer is properly loaded. A proper weight distribution is equal, right to left, and creates a tongue weight that is in the proper range for stable trailer handling (between 10-15% of the total weight of the cargo and the trailer). Towing stability also depends on keeping the center of gravity as low as possible. Load heavy items on the floor and over the axles, but do not exceed the axle load rating (GAWR). When loading additional items, be sure to maintain even side-to-side weight distribution and proper tongue weight.

⚠ WARNING

MAKE CERTAIN THAT THE TONGUE WEIGHT IS WITHIN THE ALLOWABLE RANGE. BE SURE TO DISTRIBUTE THE LOAD FRONT-TO-REAR TO PROVIDE PROPER TONGUE WEIGHT, DISTRIBUTE THE LOAD EVENLY, RIGHT AND LEFT, TO AVOID TIRE OVERLOAD AND KEEP THE CENTER OF GRAVITY LOW.

Shifting Cargo

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

⚠ WARNING

TIE DOWN ALL LOADS WITH PROPER SIZED FASTENERS, ROPES, STRAPS, ETC. IF YOUR TRAILER IS ENCLOSED OR EQUIPPED WITH AN OPTIONAL TAILGATE, THE TAILGATE MUST BE SECURELY LATCHED BEFORE TOWING THE TRAILER.

Inappropriate Cargo

If your trailer is designed for specific cargo, only carry that cargo in the trailer. A utility trailer must not be used to carry certain items, such as people, containers of hazardous substances or containers of flammable substances.

⚠ WARNING

DO NOT TRANSPORT PEOPLE ON OR INSIDE THE TRAILER. THE TRANSPORT OF PEOPLE PUTS THEIR LIVES AT RISK AND MAY BE ILLEGAL.

DO NOT TRANSPORT FLAMMABLE, EXPLOSIVE, POISONOUS OR OTHER DANGEROUS MATERIALS IN YOUR TRAILER. EXCEPTIONS: FUEL IN THE TANKS OF EQUIPMENT BEING HAULED; FUEL STORED IN THE TANK OF AN ON-BOARD GENERATOR

Tire Information

The Tire Information Label provides tire and loading information and a statement regarding maximum cargo capacity. Inspect this label.

TIRE AND LOADING INFORMATION			
The weight of the cargo should never exceed _____ Kg or _____ Lbs.			
TIRE	SIZE	COLD TIRE PRESSURE	SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION
FRONT			
REAR			
SPARE			

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 and 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 VIN label and/or on the Tire Information Label. This value should never exceed the maximum cold inflation pressure stamped on the tire.

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SAFETY PRECAUTIONS

Inoperable Brakes, Lights or Mirrors

Be sure that all of the lights on your trailer are functioning properly before towing your trailer. Lights on a trailer are controlled via a connection to the tow vehicle, generally a multi-pin electrical connector. Check the trailer taillights by turning on your tow vehicle headlights. Check the trailer brake lights by having someone step on the tow vehicle brake pedal while you look at the trailer lights. Have someone activate the tow vehicle's turn signals to check the trailer's turn signal lights.

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

⚠ WARNING

BEFORE EACH TOW CHECK THAT THE TAILLIGHTS, BRAKE LIGHTS AND TURN SIGNALS WORK AND CHECK THAT THE ELECTRIC BRAKES WORK BY OPERATING THE BRAKE CONTROLLER INSIDE THE TOW VEHICLE.

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

Modifying the Trailer

Essential safety items can be damaged by altering your trailer. Even simply driving a nail or screw to hang something can damage an electrical circuit, hydraulic line or other feature of the trailer.

Before making any alteration to your trailer, contact your dealer or ROCK LINE at 909-392-4648 between the hours of 8:00 AM and 4:00 PM Pacific Coast time and describe the alteration you are contemplating. Alteration of the trailer structure or modification of mechanical, electrical, hydraulic or other systems on your trailer must be approved by ROCK LINE and performed only by qualified technicians who are familiar with the system as installed on your trailer.

Inadequate Tow Vehicle or Towing Hitch

It is essential for the tow vehicle and towing hitch to have a rated towing capacity equal or greater than the trailer Gross Vehicle Weight Rating (GVWR). Vehicle manufacturers will provide you with the maximum capacities of their various models. The hitch ball size must be the same as the coupler size. The height of the hitch ball must equal that of the trailer coupler. If the hitch ball is too small, too large, is underrated, is loose or is worn, the trailer could come loose from the tow vehicle, and could cause death or serious injury.

⚠ WARNING

BE SURE THE HITCH LOAD RATING IS EQUAL TO OR GREATER THAN THE LOAD RATING OF THE COUPLER. BE SURE THE HITCH SIZE MATCHES THE COUPLER SIZE. OBSERVE THE HITCH FOR WEAR, CORROSION AND CRACKS BEFORE COUPLING. REPLACE WORN, CORRODED OR CRACKED HITCH COMPONENTS BEFORE COUPLING THE TRAILER TO THE TOW VEHICLE. BE SURE THE HITCH COMPONENTS ARE TIGHT BEFORE COUPLING THE TRAILER TO THE TOW VEHICLE.

Not Properly Maintaining the Trailer Structure

Proper maintenance is essential for all trailer structural components to operate properly. Structural components can consist of the trailer deck assembly, deck latching mechanism, suspension, and axle components. To ensure safe and proper operation of the trailer, make sure that the proper maintenance and inspections are performed.

SAFETY WARNING LABELS ON YOUR TRAILER

All decals and safety warning labels are placed on the trailer for a reason. Read, understand, and follow the directions of all the decals. Should the decals become worn or defaced, replace them immediately. Use the appropriate part number and order from your local dealer or direct from the trailer manufacturer.

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SAFETY PRECAUTIONS

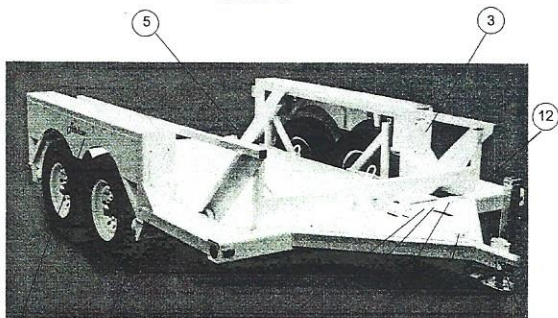
REPORTING SAFETY DEFECTS

If you believe that your trailer has a defect that could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying ROCK LINE.

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

To contact NHTSA, you may call the Vehicle safety Hotline toll-free at 1888-327-4236; go to <http://nhtsa.safercar.gov>; or write to: Administrator, NHTSA, 1200 New Jersey Avenue SE, Washington, DC 20590

DECALS



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DECALS

Order decals by part no.

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NOTICE

You are required to comply with all local, state, and national requirements for trailer operation including brakes, licensing, and any additional equipment that may be necessary.

Contact your State Motor Vehicle Department for more information.

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CRUSHING HAZARD
Stand Clear of deck when lowered!

6 700056

WARNING
ALWAYS use safety chains.
Check load trailer & construction tags.
Do not load:
1. EXCEED chains' load rating/weight.
2. ALLOW deck for trailer to turn.
3. ATTCU chains' hooks exceeding tow vehicle frame.

7 700054

WARNING
Interlocking with vehicle trailer to close lower than tow vehicle. Do not:
1. CHECK that load (LOAD RATING) is same as GVWR and never exceeds GVWR.
2. CHECK COUPLER, SAFETY CHAINS, AND SAFETY CHAIN HOOKS.
3. USE CHAINS that are not rated for use with trailer.
4. LOCK coupler when pin is pushed.
5. UNLOAD trailer when pin is pushed.

8 700057

WARNING
Interlocking with vehicle trailer to close lower than tow vehicle.
1. CHECK that load (LOAD RATING) is same as GVWR and never exceeds GVWR.
2. LOCK one clamp for pins using a pin or padlock.
3. UNLOAD trailer when pin is pushed.

9 700058

WARNING
Use proper tie-down technique.
1. Check that load (LOAD RATING) is same as GVWR and never exceeds GVWR.
2. Tie and stretch for damage.
3. Log load for inspection.
4. Reinspect load at the first stop.
5. Do not tie down if driving.

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DO NOT OVERLOAD

- Always center load side to side.
- Position load to achieve the required tongue weight.
- Secure load to designated tie-down points only.

Improper loading could result in unsecured loads or loss of control and serious injury or death.

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DO NOT EXCEED 55 M.P.H.

or the legal speed limit - whichever is lower

Excessive speed could result in loss of control and serious injury or death!

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CONTROLS

Pull and hold travel latch while starting to lower deck.

DOWN

UP

Check that travel latch locks when deck is fully raised!

1 Read and understand Owners Manual and all decals before use. Do not use trailer until its inspected and operating properly.

2 CHECK (BEFORE DOWNING):

- Tires are inflated to correct pressure.
- Load is within rated capacity and properly secured to trailer proper tie-down usage.
- Load is secure to trailer frame and
- Trailer pin is released.

3 MAKE CERTAIN:

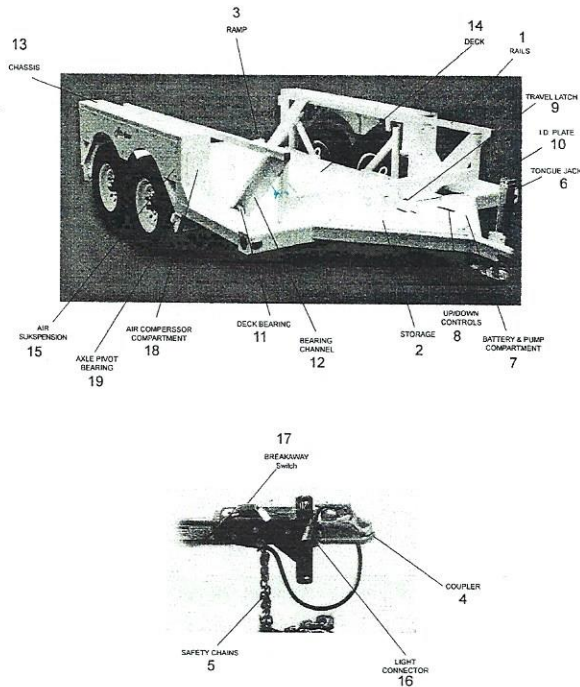
- Coupler pin and travel latch are locked.
- Safety chains are properly attached.
- All tie-downs are used properly.
- Trailer is properly secured and braked.
- Trailer is in correct position.
- Trailer is in correct position.

Property damage, serious injury, or death could result from improper use.

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TRAILER FEATURES



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TRAILER FEATURES

TRAILER FEATURES

1. **Rails** - These surround the front and sides of the deck and provide a means to aid in the proper placement of cargo.
2. **Storage** - This compartment is used to secure the owners manual, tools and other items.
3. **Ramp** - The rear portion of the deck that slants to the ground
4. **Coupler** - A device on the tongue of the trailer that connects to the hitch on the tow vehicle.
5. **Safety Chains** - If the coupler connection comes loose, the safety chains can keep the trailer attached to the tow vehicle. With properly rigged safety chains, it is possible to keep the tongue of the trailer from digging into the road pavement, even if the coupler-to-hitch connection comes apart.
6. **Tongue Jack** - A device on the trailer that is used to raise and lower the coupler to aid in coupling and uncoupling the trailer. The jack is sometimes called the "landing gear."
7. **Motor/Pump Battery Compartment** - This compartment holds the motor/pump, battery, fuse box and air suspension switch. The battery provides the electrical power for raising and lowering the trailer deck and the power for the electrically operated breakaway brake system. The pump/motor provides hydraulic fluid to the cylinder that raises the deck into place for transport.
8. **Up/Down Control** - The control lever used to activate the hydraulic system to lower or elevate the deck.
9. **Travel Latch** - A mechanism that prevents the deck from lowering to the ground unintentionally.
10. **Identification Plate** - This placard contains the Vehicle Identification Number (VIN) and weight ratings for the trailer.
11. **Deck Bearing** - This component is attached to the chassis and guides the bearing channel when the trailer deck is being raised or lowered.
12. **Bearing Channel** - This component is part of the trailer deck and rides on the deck bearing when the deck is being raised or lowered.
13. **Chassis** - This is the structural frame work of the trailer.
14. **Deck** - This is the surface where cargo is placed for transport. It can be lowered for loading and raised for transport.
15. **Air Suspension** - System designed to absorb bumps and allows a smooth ride.
16. **Trailer Lighting (and braking) connector** - A device that connects electrical power from the tow vehicle to the trailer. Electricity is used to turn on brake lights, running lights, and turn signals as required. In addition, if you trailer has a separate braking system, the electrical connector will also supply power to the brakes from the tow vehicle.
17. **Breakaway Switch/Cable** - If the coupler connection comes loose, the breakaway cable can activate emergency electrical brakes on the trailer. The breakaway cable must be rigged to the tow vehicle with appropriate slack that will activate the brakes if the coupler connection comes loose.
18. **Air Compressor compartment** - houses, air compressor, air vent valve, electrical relay and connection to the ride height sensor.
19. **Axle Pivot Bearing** - Taper Bearings which carry the load and rotation of the axle.

⚠ WARNING

DO NOT MOVE THE TRAILER UNTIL THE COUPLER IS SECURED AND LOCKED TO HITCH, THE SAFETY CHAINS ARE SECURED TO THE TOW VEHICLE AND THE TRAILER JACK(S) ARE FULLY RETRACTED.

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GENERAL INFORMATION

GENERAL

Trailer VIN Information

The VIN (vehicle identification number) plate is located on the forward left side of the trailer frame.

MANUFACTURED BY: _____	DATE: _____
GVWR: _____ KG (____) LB	
GAWR: _____ KG (____) LB PER AXLE WITH _____ TIRE _____ RIM	
AIR PRESSURE: _____ PSI COLD _____ KPA	
THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.	
V.I.N. _____	TYPE _____ MODEL _____

The Trailer Identification Plate contains the following critical safety information for the use of your trailer.

- GVWR** - The maximum allowable gross weight of the trailer and its contents. The gross weight of the trailer includes the weight of the trailer and all of the items being carried. GVWR is sometimes referred to as GTWR (Gross Trailer Weight Rating), or MGTW (Maximum Gross Trailer Weight). GVWR, GTWR and MGTW are all the same rating.
- GAWR** - The maximum gross weight that an axle can support. The sum total of the GAWR for all trailer axles may be less than the GVWR for the trailer, because some of the trailer load is to be carried by the tow vehicle, rather than by the trailer axle(s). The total weight of the cargo and trailer must not exceed the GVWR, and the load on an axle must not exceed its GAWR.
- RIMS** - Specification of rims equipped on the trailer.
- TIRES** - Size and load rating of tires equipped on the trailer.
- INFLATION** - The tire pressure (Pounds per Square Inch) measured when Cold.
- VIN** - The Vehicle Identification Number is a 17 digit serial number located on the trailer identification plate.

COUPLER

A coupler connects to a ball that is located on or under the rear bumper of tow vehicle. This system of coupling a trailer to a tow vehicle is sometimes referred to as "bumper pull"

The trailer is equipped with a ball hitch coupler that is suitable for the size and weight of the trailer. Your trailer may be equipped with a 2" or a 2-5/16" coupler. The load rating of the coupler and the necessary ball size are listed on the trailer tongue. Do not change the coupler to a smaller size. You must provide a hitch and ball for your tow vehicle, where the load rating of the hitch and ball is equal to or greater than that of your trailer. The ball size must be the same as the coupler size. If the hitch ball is too small, too large, is underrated, is loose or is worn, the trailer can come loose from the tow vehicle, and may cause death or serious injury.

⚠ WARNING

THE TOW VEHICLE, HITCH AND BALL MUST HAVE A RATED TOWING CAPACITY EQUAL TO OR GREATER THAN THE TRAILER GVWR (GROSS VEHICLE WEIGHT RATING). IT IS ESSENTIAL THAT THE HITCH BALL BE OF THE SAME SIZE AS THE COUPLER.

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TRAILER OPERATION

BRAKES

Governmental regulation may contain various brake requirements. Some of these regulations may require the use of electric brakes only or require brakes on all wheels of a tandem axle trailer.

NOTE: It is the responsibility of the owner to meet the requirements of all governmental regulations in his state.

TOW VEHICLE AND HITCH INFORMATION

Follow all of the safety precautions and instructions in this manual and the manuals of the tow vehicle and the hitch to ensure safety of persons, cargo, and satisfactory life of the trailer.

If the vehicle or hitch is not properly selected and matched to the Gross Vehicle Weight Rating (GVWR) of your trailer, you can cause an accident that could lead to death or serious injury. If you already have (or plan to buy) a tow vehicle, make certain your trailer rating (GVWR) is equal to or less than the towing capacity and hitch rating of the tow vehicle.

BE SURE YOUR HITCH AND TOW VEHICLE ARE RATED FOR THE GROSS VEHICLE WEIGHT RATING OF YOUR TRAILER.

⚠ DANGER

BE SURE YOUR HITCH AND TOW VEHICLE ARE RATED FOR THE GROSS VEHICLE WEIGHT RATING OF YOUR TRAILER.

Tow Vehicle and Hitch

When equipping a vehicle to tow your trailer, ask the vehicle dealer for advice on how to properly outfit the towing vehicle. Discuss the following information and equipment with the vehicle dealer.

Overall Carrying and Towing Capacity of Vehicle

Vehicle manufacturers will provide you with the maximum capacities of their various models. No amount of reinforcement will give a 100 horsepower, 2,500 pound truck the towing capacity that a 300 horsepower, 5,000 pound truck has.

Towing Hitch

The towing hitch attached to your tow vehicle must have a capacity equal to or greater than the GVWR rating of the trailer you intend to tow. The height of the hitch ball must equal that of the trailer coupler. The hitch capacity must also be matched to the tow vehicle capacity.

⚠ WARNING

THE UNDERSIDE OF THE TRAILER TONGUE MUST BE BETWEEN 17" AND 19" ABOVE LEVEL GROUND BEFORE TOWING. ADJUST THE COUPLER OR TOW VEHICLE HITCH TO ACHIEVE THIS HEIGHT.

Coupler Height Adjustment

Remove the bolts securing the coupler to the mounting bracket. Move the coupler up or down to the desired height. Secure with the bolts. For the PintJee Hitch Coupler, torque the two bolts to 225 ft lb (305 Nm). For the Ball Couplers, torque the four bolts to 150 ft lb (203 Nm).

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TRAILER OPERATION

Hitch 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.

Suspension System

Sway bars, shock absorbers, heavy duty springs, heavy-duty tires and other suspension components must be able to sufficiently serve the size and weight of the trailer that is going to be towed.

Brake Controller

The brake controller is part of the tow vehicle and is essential in the operation of trailers equipped with electric brakes. The brake controller is not the same as the safety breakaway brake system that may be equipped on the trailer.

Side View Mirrors

The size of the trailer that is being towed and your state law regulations determine the size of the mirrors. However, some states prohibit extended mirrors on a tow vehicle, except while a trailer is actually being towed. In this situation, detachable extended mirrors are necessary. Check with your dealer or the appropriate state agency for mirror requirements.

Heavy Duty Flasher

A Heavy Duty Flasher is an electrical component that may be required when your trailer turn signal lights are attached to the tow vehicle flasher circuit.

Electrical Connector

An Electrical Connector connects the light and brake systems on the trailer to the light and brake controls on the towing vehicle.

Heavy Duty Engine Oil Cooling System

The tow vehicle engine works harder when a trailer is being towed. Depending on the size of the trailer, you may need to install a separate engine oil cooler. Inadequate cooling may result in sudden engine failure. Ask the tow vehicle dealer if it is necessary to install a heavy duty cooling system.

Automatic Transmission Oil Cooler

The automatic transmission of a towing vehicle handles more power when a trailer is being towed. Inadequate cooling will shorten transmission life, and may result in sudden transmission failure. Ask the tow vehicle dealer if it is necessary to install a separate oil cooler for the automatic transmission.

Fire Extinguisher

A fire extinguisher should be carried in the tow vehicle.

Emergency Flares and Emergency Triangle Reflectors

Carry these warning devices when towing a trailer because the hazard flashers of your towing vehicle will not operate for as long a period of time when the battery is running both the trailer lights and tow vehicle lights.

COUPLING AND UNCOUPLING THE TRAILER

The trailer must be properly and securely coupled to the hitch of the tow vehicle.



UNCOUPLING OF THE TRAILER DURING TRANSPORT MAY RESULT IN DEATH OR SERIOUS INJURY.

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TRAILER OPERATION

Before Coupling the Trailer to the Tow Vehicle

Be sure the size and rating of hitch ball match the size and rating of the coupler. Hitch balls and couplers are marked with their size and rating.

Wipe the hitch ball clean and inspect it visually and by feel for flat spots, cracks and pits.



BEFORE EACH TOW, INSPECT THE HITCH BALL FOR WEAR, CORROSION AND CRACKS BEFORE COUPLING TRAILER. REPLACE WORN OR DAMAGED HITCH BALL.

NOTE: Rock the hitch ball in all directions to make sure it is tight to the hitch, and visually check that the hitch ball nut is solid against the lock washer and hitch frame.

ALSO CHECK FOR PROPER TONGUE HEIGHT!

Prepare the Coupler and Hitch

Lubricate the hitch ball and the inside of the coupler with a thin layer of automotive bearing grease to reduce wear and ensure proper operation. If your trailer is equipped with a tongue jack, raise the coupler above the ball height.



BEFORE EACH TOW, BE SURE THE HITCH BALL IS TIGHT TO THE HITCH BEFORE COUPLING THE TRAILER.

1. Wipe the inside and outside of the coupler clean and inspect it visually for cracks and deformations; feel the inside of the coupler for worn spots and pits.
Be sure the coupler is tight to the tongue of the trailer. All coupler fasteners must be visibly solid against the trailer frame.
2. Raise the bottom surface of the coupler to be above the top of the hitch ball by using the tongue jack.
3. Be sure the coupler opens up to accept the ball from the tow vehicle.
4. Once the coupler on the trailer is open, align the tow vehicle up with the trailer coupler.
5. Using the tongue jack, lower the entire weight of the trailer on to the ball of the tow vehicle.
6. Latch the coupler into the closed, locked position.
7. Insert the pin into the hole behind the latch to assure it remains locked.
8. Be sure the coupler is all the way on the hitch ball and the collar/locking mechanism is engaged. A properly engaged locking mechanism will allow the coupler to raise the rear of the tow vehicle. Using the tongue jack, test to see that you can raise the rear of the tow vehicle by 1 inch, after the coupler is locked to the hitch.

NOTE: If the coupler cannot be secured to the hitch ball, do not tow the trailer.



9. Retract the tongue jack until it is fully retracted.

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TRAILER OPERATION

Rig the Safety Chains

Visually inspect the safety chains and hooks for wear or damage. Replace worn or damaged safety chains and hooks before towing.

Rig the safety chains so that they:

- a. Cross each other underneath the coupler.
- b. Loop around a frame member of the tow vehicle or to holes provided in the hitch system (DO NOT attach them to an interchangeable part of the hitch assembly).
- c. Have enough slack to permit light turns, but not be close to the road surface, so if the trailer uncouples, the safety chains can hold the tongue up above the road.



FASTEN CHAINS TO FRAME OF TOW VEHICLE. DO NOT FASTEN CHAINS TO ANY PART OF THE HITCH UNLESS THE HITCH HAS HOLES OR LOOPS SPECIFICALLY FOR THAT PURPOSE.

CROSS CHAINS UNDERNEATH HITCH AND COUPLER WITH ENOUGH SLACK TO PERMIT TURNING AND TO HOLD TONGUE UP, IF THE TRAILER COMES LOOSE.

Attach and Test Electric Breakaway Brake System

If the coupler or hitch fails, a properly connected and working breakaway brake system will apply electric brakes on the trailer. The safety chains will keep the tow vehicle attached and as the brakes are applied at the trailer's axles, the trailer/tow vehicle combination will come to a controlled stop.

The breakaway brake system includes a battery, a switch with a pulpin, and a breakaway brake controller. Read and follow the instructions here as well as the instructions that have been prepared by the breakaway brake controller manufacturer.

The breakaway brake system may be fitted with a charging facility that draws power from the tow vehicle. If the electrical system on your tow vehicle does not provide power to the breakaway brake battery, you must periodically charge the battery to keep the breakaway brake system in working order.

1. Connect the pull pin cable to the tow vehicle so that the pulpin will be pulled out before all of the slack in the safety chains is taken up. Do not connect the pulpin cable to a safety chain or to the hitch ball or hitch ball assembly. This would keep the breakaway brake system from operating when it is needed.
2. Remove the pulpin from the switch and test tow the trailer, at less than 5 m.p.h. You should feel the trailer resisting being towed, but the wheels will not necessarily be locked. If the brakes do not function, do not tow the trailer until the brakes are repaired.
3. Immediately replace the pulpin. The breakaway brake system battery discharges rapidly when the pulpin is removed.

BEFORE TOWING, CONNECT THE BREAKAWAY CABLE TO THE TOW VEHICLE, AND NOT TO THE HITCH, BALL OR SUPPORT. TEST THE FUNCTION OF THE BREAKAWAY BRAKE SYSTEM. IF THE BREAKAWAY BRAKE SYSTEM IS NOT WORKING, DO NOT TOW THE TRAILER. HAVE IT SERVICED OR REPAIRED.



TO AVOID POSSIBLE INJURY DO NOT TOW THE TRAILER WITH THE PULLPIN REMOVED AND THE BREAKAWAY BRAKE SYSTEM ON BECAUSE THE BRAKES WILL OVERHEAT WHICH CAN RESULT IN PERMANENT BRAKE FAILURE.

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TRAILER OPERATION

Connect the Electrical Cables

Connect the trailer lights to the tow vehicle's electrical system using the electrical connectors.

Check all lights for proper operation:

- a. Clearance and Running Lights (Turn on tow vehicle headlights).
- b. Brake Lights (Step on tow vehicle brake pedal).
- c. Turn Signals (Operate tow vehicle directional signal lever).
- d. Backup Lights (Put tow vehicle gear shift into reverse).

Check electric brakes for proper operation.

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



BEFORE EACH TOW CHECK THAT THE TAILLIGHTS, BRAKE LIGHTS AND TURN SIGNALS WORK. CHECK THAT THE ELECTRICAL BRAKES WORK BY OPERATING THE BRAKE CONTROLLER INSIDE THE TOW VEHICLE.

Uncoupling the Ball Hitch Trailer with Tongue Jack

Follow these steps to uncouple your ball hitch trailer from the tow vehicle:

1. Block or chock trailer tires to prevent the trailer from rolling, before jacking the trailer up.
2. Disconnect the electrical connector.
3. Disconnect the breakaway brake switch cable. For an electric breakaway brake system, promptly replace the pull pin in the switch box.
4. Disconnect the safety chains from the tow vehicle.
5. Unlock the coupler and open it.
6. Before extending the tongue jack, make certain the ground surface below the jack pad will support the tongue load.
7. Rotate the jack handle (or crank) clockwise. This will slowly extend the tongue jack and transfer the weight of the trailer tongue to the jack.

LOADING THE TRAILER

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

- a. Overall load weight
- b. Load weight distribution
- c. Proper tongue weight
- d. Securing the load properly

To determine that you have loaded the trailer within its rating, you must consider the *distribution* of weight, as well as the total weight of the trailer and its contents. The trailer axles carry most of the total weight of the trailer and its contents (Gross Vehicle Weight, or "GVW"). The remainder of the total weight is carried by the tow vehicle hitch. It is essential for safe towing that the trailer tongue and tow vehicle hitch carry the proper amount of the loaded trailer weight, otherwise the trailer can suddenly sway at towing speed. Read the "Tongue Weight" section below.

Towing stability also depends on keeping the center of gravity as low as possible. Load heavy items on the deck and over the axles. When loading additional items, be sure to maintain even side-to-side weight distribution and proper tongue weight. The total weight of the trailer and its contents must never exceed the total weight rating of the trailer (Gross Vehicle Weight Rating, or "GVWR").

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TRAILER OPERATION

⚠ WARNING

DO NOT LOAD THE TRAILER SO THAT THE WEIGHT ON ANY TIRE EXCEEDS ITS RATING. DO NOT EXCEED THE TRAILER GROSS VEHICLE WEIGHT RATING (GVWR) OR AN AXLE GROSS AXLE WEIGHT RATING (GAWR).

Tongue Weight

It is critical to have a portion of the trailer load carried by the tow vehicle. The trailer tongue must exert an appropriate downward force on the hitch. This is necessary for two reasons. The proper amount of tongue weight is necessary for the tow vehicle to be able to maintain control of the tow vehicle/trailer system. If there is not enough weight on the tongue, the tongue exerts an upward pull on the hitch, the rear wheel of the tow vehicle can lose traction or grip and cause loss of control or the trailer can suddenly become unstable at high speeds.

Tongue weight is necessary to insure that the trailer axle(s) do not exceed their Gross Axle Weight Rating (GAWR). For a ball hitch trailer the tongue weight should be between 10% and 15% of the total trailer weight, including the cargo. For example, a trailer, with a loaded weight of 4,000 pounds, should have 10-15% of 4,000 pounds on the tongue. That is, the trailer would have 400 to 600 pounds on its tongue.

⚠ WARNING

MAKE CERTAIN THAT TONGUE WEIGHT IS WITHIN THE ALLOWABLE RANGE. BE SURE TO DISTRIBUTE THE LOAD FRONT TO REAR TO PROVIDE PROPER TONGUE WEIGHT, DISTRIBUTE THE LOAD EVENLY, RIGHT AND LEFT, TO AVOID TIRE OVERLOAD; AND KEEP THE CENTER OF GRAVITY LOW.

Checking Tongue Weight

To check the tongue weight, the tow vehicle and trailer must be on level ground, as they will be when the trailer is being towed.

If you know the weight on your tow vehicle axles when you are not towing a trailer, trailer tongue weight can be determined with the use of a truck axle scale.

The recommended method of checking tongue weight is to use an accessory called a "tongue weight scale." Contact your dealer to check on the availability of a tongue weight scale.

If necessary, the tongue weight may also be determined through the use of a personal scale. When using a personal scale, the loaded trailer must be on a smooth and level surface and the front and rear of the trailer wheels must be blocked. If the tongue weight exceeds the personal scale capacity, a lever arrangement will be required to determine the tongue weight.

⚠ WARNING

BEFORE CHECKING TONGUE WEIGHT, BLOCK TRAILER WHEELS, FRONT AND REAR.

The tongue weight can also be checked at an axle weighing scale.

Tongue Height

Proper tongue height is critical to maintaining stability during towing. After the trailer is loaded, check the tongue height and ensure that the underside of the tongue is 17"-19" above the ground.

⚠ WARNING

THE UNDERSIDE OF THE TRAILER TONGUE MUST BE BETWEEN 17" AND 19" ABOVE LEVEL GROUND BEFORE TOWING. ADJUST THE COUPLER OR TOW VEHICLE HITCH TO ACHIEVE THIS HEIGHT.

⚠ WARNING

DO NOT TRANSPORT FLAMMABLE, EXPLOSIVE, POISONOUS OR OTHER DANGEROUS MATERIALS IN YOUR TRAILER. EXCEPTIONS ARE: FUEL IN THE TANKS OF EQUIPMENT BEING HAULED, FUEL STORED IN THE TANK OF AN ON-BOARD GENERATOR.

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TRAILER OPERATION

Preparing the Trailer for Loading

Before loading cargo onto the trailer:

Chock wheels on the left and right sides of the trailer to prevent movement to the front or rear while loading.

Inspect the deck of the trailer (and the interior, if trailer is enclosed) for corrosion or damage, and inspect the hold down openings, "D"-rings and/or track system used to secure loads. Hold down openings must be sturdy with no visible cracks or kinks. "D"-rings and track systems must be tight and must not be bent.

If the deck or any required hold-down is damaged, do not load the cargo. Bring the trailer to your dealer or a competent repair service before using it to carry cargo.

⚠ WARNING

INSPECT "D"-RINGS, AND TEST THEM FOR LOOSENESS BEFORE LOADING CARGO.
DO NOT USE A DAMAGED OR LOOSE "D"-RING TO SECURE CARGO.

Loading the Trailer

AIR-TOW trailers are equipped with a hydraulically lowered deck instead of ramps. The lowering deck feature allows for easier loading and unloading.

When loading the trailer:

- Read all trailer decals before loading.
- Be sure all personnel are clear when raising or lowering the deck.
- Never exceed the capacity of the trailer.
- Always center the load side-to-side and load to the proper tongue weight.
- Confirm correct coupler height when loaded.
- Never allow "rear-heavy" loads. This will cause sway and loss of control.
- After raising the deck, make sure the travel latch is engaged and locked.
- Be sure the cargo is securely tied to the deck. Do not tie to the outer frame.

⚠ WARNING

DO NOT TRANSPORT PEOPLE ON OR INSIDE THE TRAILER.
THE TRANSPORT OF PEOPLE PUTS THEIR LIVES AT RISK AND MAY BE ILLEGAL.

The hydraulically lowered trailer deck is fitted with a travel latch that keeps the trailer in the driving (up) position. After the trailer is loaded, the cargo is secured with hold-downs, and the deck has been raised to the travel position, be sure the travel latch has locked the trailer deck into place.

Couple the trailer securely to the tow vehicle before attempting to unlock the deck and load the trailer. Be sure all personnel are clear when lowering deck.

Unlatch and hold the travel latch. Move the "up/down" control handle to the "down" position. Move the control handle slowly to "feather" or control the speed of lowering. The travel latch may be released once the deck starts to lower.

The deck alarm is designed to give intermittent beeps as the deck is lowered. The alarm should sound automatically when the deck control lever is moved to the "down" position.

If equipped, open the gate or door of the trailer. After the trailer deck has been lowered to the ground, the trailer may be loaded. Ensure that the load is centered side-to-side and forward to where approximately 10% - 15% of the total load is positioned at the trailer tongue.

Secure the properly positioned load by tying it to the trailer deck using appropriate straps and tensioning devices. Be sure you secure to the deck only and not to the outer trailer chassis. There are tie down locations along both sides as well as

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TRAILER OPERATION

the front rail. Since the trailer "ride" can be bumpy and rough, secure the load so that it does not shift while the trailer is being towed.

After securing the load, close and latch the gate or door of the trailer, if equipped.

Ensure all personnel are clear and raise the deck to the travel position by simply moving the "up/down" control handle to the "up" position. Stop when the deck is all the way up (continuing to hold the control will cause the fluid to be pumped through the by-pass relief valve). At this "up" position, the spring loaded travel latch will automatically lock into place. Visually check that the travel latch locks the deck into position.

⚠ WARNING

BEFORE TOWING THE TRAILER ENSURE THAT THE TRAVEL LATCH HAS PROPERLY LATCHED INTO PLACE.

⚠ WARNING

TIE DOWN ALL LOADS WITH PROPER FASTENERS, ROPES, STRAPS, ETC. IF YOUR TRAILER IS ENCLOSED OR EQUIPPED WITH AN OPTIONAL TAILGATE, THE DOORS OR TAILGATE MUST BE SECURELY LATCHED BEFORE TOWING THE TRAILER.

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TRAILER OPERATION

Trailer Maneuvering

Driving a vehicle with a trailer in tow is vastly different from driving the same vehicle without a trailer in tow. Acceleration, maneuverability and braking are all diminished with a trailer in tow. It takes longer to get up to speed; you need more room to turn and pass, and more distance to stop when towing a trailer. You will need to spend time adjusting to the different feel and maneuverability of the tow vehicle with a loaded trailer. Because of the significant differences in all aspects of maneuverability when towing a trailer, the hazards and risks of injury are also much greater than when driving without a trailer. You are responsible for keeping your vehicle and trailer in control, and for all the damage that is caused if you lose control of your vehicle and trailer.

When learning to drive with a trailer in tow, find an open area with little or no traffic to practice trailering. Before you start towing the trailer, you must follow all of the instructions for inspection, testing, loading and coupling. Also adjust the mirrors so you can see the trailer as well as the area to the rear of it.

Drive slowly at first, 5 mph or so, and turn the wheel to get the feel of how the tow vehicle and trailer combination responds. Next, make some right and left hand turns. Watch in your side mirrors to see how the trailer follows the tow vehicle. Turning with a trailer attached requires more room.

Stop the tow vehicle (with the trailer coupled) a few times from speeds no greater than 10 m.p.h. If your trailer is equipped with electric brakes, try using different combinations of trailer brake and tow vehicle brake. Note the effect that the trailer brakes have when they are the only brakes used. When properly adjusted, electric trailer brakes will come on just before the tow vehicle brakes.

It will take practice to learn how to drive a tow vehicle in reverse with a trailer attached. Take it slow. Before backing up, get out of the tow vehicle and look behind the trailer to make sure that there are no obstacles. Some drivers place their hands at the bottom of the steering wheel, and while the tow vehicle is in reverse, "think" of the hands as being on the top of the wheel. When the hands move to the right (counter-clockwise, as you would do to turn the tow vehicle to the left when moving forward), the rear of the trailer moves to the right. Conversely, rotating the steering wheel clockwise with your hands at the bottom of the wheel will move the rear of the trailer to the left, while backing up. Be careful not to allow the trailer to turn too much, because it will hit the rear of the tow vehicle. To straighten, either pull forward, or turn the steering wheel in the opposite direction.

Safe Trailer Towing Guidelines

- Recheck the load tie downs to make sure the load will not shift during towing.
- Before towing, check coupling, safety chain, safety brake, tires, wheels and lights.
- Check the lug nuts or bolts for tightness.
- Check coupler tightness after towing 50 miles.
- When equipped with electric brakes, adjust the brake controller to engage the trailer brakes before the tow vehicle brakes. Your dealer can assist you by making this adjustment.
- Be aware of the width of the trailer, which, in most cases will be wider than the tow vehicle. This is especially important when turning, passing, and pulling next to a curb.
- Be sure your rear view mirrors are adjusted properly. Use your mirrors to verify that you have room to change lanes or pull into traffic.
- Use your turn signals well in advance.
- Increase speed slowly when starting the tow. Carefully watch the trailer and if you observe any trailer sway, stop and reposition the load.
- Allow plenty of stopping space for your trailer and tow vehicle.
- Do not drive so fast that the trailer begins to sway due to speed. Never drive faster than 55 m.p.h.
- Allow plenty of room for passing. A rule of thumb is that the passing distance with a trailer is 4 times the passing distance without a trailer.
- Shift your automatic transmission into a lower gear for city driving.
- Use lower gears for climbing and descending grades.
- Do not ride the brakes while descending grades; they may get so hot that they stop working. Then you will potentially have a runaway tow vehicle and trailer.
- To conserve fuel, don't use full throttle to climb a hill. Instead, build speed on the approach.
- Slow down for bumps in the road. Take your foot off the brake when crossing the bump.

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