Wenger®

Owner's Manual
Stagemobile

Please take a few minutes to read this manual and to familiarize yourself with Stagemobile's unique operating features. If you should need additional information on your new Stagemobile unit, just write or phone.

Printed in USA 10/02 090A100-01

Wenger Corporation, 555 Park Drive, P.O. Box 448, Owatonna, Minnesota 55060-0448
Questions? Call.....USA: (800) 733-0393 • International (call collect): (507) 455-4100

Safety Information

Read and understand the Owners Manual. Use only Authorized and Trained personnel to set up, take down, and transport the Stagemobile. Support the Stagemobile on its jackstands on level ground before doing any service work.

Throughout this manual, you will find **SAFETY ALERT SYMBOLS AND SIGNAL WORDS** as shown at right:

DANGER

DANGER: Immediate hazards which WILL result in **severe personal injury or death** if the warning is ignored.

WARNING

WARNING: Hazards or unsafe practices which COULD result in **severe personal injury or death** if the warning is ignored.

CAUTION

CAUTION: Hazards or unsafe practices which COULD result in **minor or moderate injury** if the warning is ignored.

NOTE: 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.

Note the location of these Warning Decals:

For the end of the stage deck areas:

For the underside of the stage in 4 places:

SAFETY INFORMATION (CONTINUED)

⚠ WARNING

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

- Driving too fast for the road conditions (maximum speed when towing a trailer is 60 m.p.h.)
- Failure to adjust handling while towing the trailer
- Overloading the trailer or loading the trailer unevenly
- Shifting cargo
- Trailer improperly coupled to the hitch
- Inadequate tow vehicle or towing hitch
- Inoperable brakes, lights or mirrors
- Unsafe tires, lug nuts or wheels
- Not properly maintaining the trailer structure

This page and pages 4-9 contain safety information to help prevent these loss-of-control causes.

DRIVING TOO FAST

With ideal road conditions, the maximum speed when safely towing a trailer is 60 m.p.h. 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 60 m.p.h. while towing the trailer.

⚠ WARNING

Driving too fast for conditions can result in loss of control and cause death or serious injury.

Decrease your speed as road, weather and lighting conditions deteriorate.

FAILURE TO ADJUST HANDLING WHILE TOWING THE STAGEMOBILE

When towing a trailer, you 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 busses. Continued pulling of the trailer provides a stabilizing force to correct swaying. Do not apply the brakes to correct trailer swaying.
- Check rearview 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 around trees.

Safety Information (continued)

Overloading or Uneven Loading of the Stagemobile

- 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) as shown on the nameplate by the hitch (see p. 12). If you do not know the empty weight of the trailer, you must measure it at a commercial scale. In addition, you must distribute the load in the trailer such that the load on any tire or axle does not exceed the tire load rating or the Gross Axle Weight Rating (GAWR).

⚠ WARNING

An overloaded trailer can result in loss of control of the trailer, leading to death or serious injury.

Do not load a 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).

- 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. Weight also must be distributed in front of the axle to create a tongue weight that is in the proper range for stable trailer handling. For the Stagemobile, towed by a ball hitch (or bumper hitch), the tongue weight should be 10-15% of the loaded trailer weight.
- 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

Improper tongue weight (load distribution) can result in loss of control of the trailer, leading to death or serious injury. Make certain that tongue weight is within the allowable range.

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
- Keep the center of gravity low.

Safety Information (continued)

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. See page 23 for use of tie-down loops and straps and the channels for them in the floor of the Stagemobile.

⚠ WARNING

Shifting cargo can result in loss of control of the trailer, and can lead to death or serious injury.

Tie down all loads with proper sized fasteners, ropes, straps, etc.

• Make certain all fasteners securing traveling braces are tight. Also secure storage compartment doors (on Stagemobile units with these optional items).

⚠ WARNING

If a traveling brace unfastens or a storage compartment door opens, cargo may be ejected onto the road, resulting in death or serious injury to other drivers.

Always secure a door latch after closing.

Trailer Not Properly 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 may result in death or serious injury.

⚠ WARNING

Proper selection and condition of the coupler and hitch are essential to safely towing your trailer. A loss of coupling may result in death or serious injury.

- 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.

(continued on next page)

Safety Information (continued)

Trailer Not Properly Coupled to the Hitch (continued)

⚠ WARNING

An improperly coupled trailer can result in death or serious injury.

Do not move the trailer until:
- The coupler is secured and locked to hitch
- The safety chains are secured to the tow vehicle
- The trailer jack(s) are fully retracted

Do not tow the trailer on the road until:
- Tires and wheels are checked
- The trailer brakes are checked
- The breakaway switch is connected to the tow vehicle
- The load is secured to the trailer
- The trailer lights are connected and checked

- If your trailer comes loose from the hitch for any reason, we have provided safety chains so that control of the trailer can still be maintained.

⚠ WARNING

Improper rigging of the safety chains can result in loss of control of the trailer and tow vehicle, leading to death or serious injury, if the trailer uncouples from the tow vehicle.

- Fasten chains to frame of tow vehicle. Do not fasten chains to any part of the hitch.
- Cross chains underneath hitch and coupler with enough slack to permit turning and to hold tongue up, if the trailer comes loose.

- The Stagemobile is equipped with a breakaway brake system that applies the brakes on the trailer, if it 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.

⚠ WARNING

An inoperative breakaway brake system can result in a runaway trailer, leading to death or serious injury, if the coupler or hitch fails.

The breakaway cable must be connected to the tow vehicle, and NOT to any part of the hitch.

Test the function of the breakaway brake system before towing. If it is not working, have it serviced or repaired before towing.

Safety Information (continued)

Inadequate Towing Vehicle or Towing Hitch

- Make certain to check that both the towing vehicle and towing hitch are rated for adequate towing capacity for the Stagemobile.

DANGER

Use of a hitch with a load rating less than the load rating of the trailer can result in loss of control and may lead to death or serious injury.

Use of a tow vehicle with a towing capacity less than the load rating of the trailer can result in loss of control, and may lead to death or serious injury.

Be sure your hitch and tow vehicle are rated for the Gross Vehicle Weight Rating of your trailer.

Inoperable Brakes, Lights or Mirrors

- Be sure that the electric brakes and all of the lights on your Stagemobile are functioning properly before towing the trailer. Electric brakes and lights on the trailer are controlled via 7-pin electrical connector attached to the tow vehicle. Check the trailer tail lights 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 trailer lights. Do the same thing to check the turn signal lights.

- The Stagemobile has electric brakes and your tow vehicle will 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 m.p.h., manually operate the electric brake controller in the tow vehicle cab. You should feel the operation of the trailer brakes.

WARNING

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

Before each tow:
- Check that the taillights, brake lights and turn signals work
- 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 a towed trailer. You must provide mirrors on the towing vehicle that allow you to safely observe approaching traffic

Safety Information (continued)

Unsafe Tires, Lug Nuts or Wheels

- Stagemobile tires and wheels are more likely to fail than car tires and wheels because they carry a heavier load. Therefore, it is essential to inspect the trailer tires 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 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 can result in loss of control, leading to death or serious injury.
- Improper tire pressure causes an unstable trailer and can result in a tire blowout and loss of control. Therefore, before each tow you must also check the tire pressure. Tire pressure must be checked when tires are cold. Allow 3 hours cool-down after driving as much as 1 mile at 40 m.p.h. before checking tire pressure. NOTE: Trailer tires will be inflated to higher pressures than passenger vehicle tires.

⚠ WARNING

Improper tire pressure can result in a blowout and loss of control, which can lead to death or serious injury.

Be sure tires are inflated to pressure indicated on side wall before towing trailer.

- Since trailer wheels and lug nuts (or bolts) are subjected to greater side loads than automobile wheels, they are more prone to loosen. Before each tow, check to make sure they are tight. The proper tightness (torque) for lug nuts is listed at p. 30 in the *Inspection Service and Maintenance* section of this manual. Use a torque wrench to tighten the lug nuts. If you don't have a torque wrench, use a lug wrench (from your tow vehicle) and tighten the nuts as much as you can. Then have a service garage or trailer dealer tighten the lug nuts to the proper torque.
- Lug nuts are also prone to loosen after first being assembled. When driving a new trailer (or after wheels have been remounted), check to make sure they are tight after the FIRST 10, 25 AND 50 miles of driving and before each tow thereafter. Failure to perform this check can result in a wheel parting from the trailer and a crash, leading to death or serious injury.

⚠ WARNING

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

Lug nuts are prone to loosen after initial installation, which can lead to death or serious injury. Check lug nuts for tightness on a new trailer or when wheel(s) have been remounted after the FIRST 10, 25 AND 50 miles of driving.

Improper lug nut torque can cause a wheel parting from the trailer, leading to death or serious injury.

Tighten lug nuts before each tow.

SAFETY INFORMATION (CONTINUED)

NOT PROPERLY MAINTAINING THE TRAILER STRUCTURE

- 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. Don't add any accessories other than those provided as options by Wenger Corporation.
- Before making any alteration to the Stagemobile, contact Wenger Corporation at 1-800-733-0393 and describe the alteration you are contemplating. Alteration of the trailer structure or modification of mechanical, electrical, plumbing, heating or other systems on the trailer must be performed only by qualified technicians who are familiar with the system as installed on your trailer.

REPORTING SAFETY DEFECTS

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

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 and Wenger Corporation.

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (or 366-0123 in Washington D.C. area) or write to: NHTSA, U.S. Department of Transportation, Washington, DC 20590. You can also obtain other information about motor vehicle safety from the Hotline.

Call 1-800-733-0393 to reach Wenger Corporation.

SAFETY INFORMATION (CONTINUED)

SAFETY PRECAUTIONS WHEN USING THE STAGEMOBILE

SETUP AND OPERATION

- Use only authorized and trained personnel to set up and take down the Stagemobile. Insist that those who handle the unit be familiar with this manual.
- Never raise or lower the stage decks while people are under it or inside the Stagemobile. Keep bystanders away until the stage decks, railings and stairs are set up and fully secured.
- Never lower the stage decks without first extending the stabilizing jacks and leveling the unit.
- Never move the Stagemobile with the stage decks in the lowered position, as the decks and their supports will be damaged.
- Use only experienced, competent drivers. Be extra careful when turning, and be conservative when accelerating and braking.

⚠ WARNING

To avoid personal injury, keep bystanders away during setup.

WIND PRECAUTIONS

- Heavy winds present a danger to people and equipment on the large surface area of the stage when the Stagemobile is set up. If the wind rises (or threatens to rise) above 30 mph, remove all personnel and equipment from the stage surface.

⚠ WARNING

Heavy winds may injure people or damage equipment on the stage.

ELECTRICAL POWER

- Wenger recommends that a licensed electrician make any necessary connections between the Stagemobile and auxiliary power sources, or provide you with a cord and plug suitable for use with auxiliary power sources.

⚠ WARNING

Power sources pose a risk of death due to electrocution or fire:

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

Stagemobile Unit Specifications

Intended Use:
The Stagemobile unit is intended for use as a temporary performance stage. Common uses include theater, concerts and other special events. **Note:** This unit should not be used for any other purpose without the written consent of Wenger Corporation.

Load and Performance Ratings:
- Uniform live load on the deck surface = 150 lbs./sq. ft.
- Lateral load parallel to the deck nosing = 24 lbs. per linear ft. of nosing
- Lateral load perpendicular to the deck nosing = 10 lbs. per linear ft. of nosing
- Lateral or vertical load to upper member of back rails and end rails = 200 lbs. applied at any point

⚠ WARNING

Do not use the Stagemobile unit to anchor or support any other structure.
Do not place booths, concession stands, canopies, signs, banners, lighting towers, etc. on the stage without the written consent of Wenger Corporation.

System Description:
- A typical Stagemobile unit consists of the trailer and its support frame, fold-down stage decks and separate railing and stair assemblies that attach to the stage.
- A unit may be supplied with a stage size of 16'x16', 16'x20' or 16'x24'. Stage height is 3'. Leveling capacity, provided at each column, is +/- 2".
- Units with 16'x20' or 16'x24' stages have a double-axle.

Towing the Stagemobile Unit

Trailer Information

The "Trailer VIN Tag" location figure shows the location of the Vehicle Identification Number (VIN) tag on your trailer. The trailer VIN tag contains the following critical safety information for the use of your trailer.

- GAWR: The maximum gross weight that an axle can support. It is the lowest of axle, wheel, or tire rating. Usually, the tire or wheel rating is lower than the axle rating, and determines GAWR.
- 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 within it (such as cargo, water, food and other supplies). 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.

  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.
- PSIC: The tire pressure (Pounds per Square Inch) measured when Cold.
- VIN: The Vehicle Identification Number.

EMPTY WEIGHT: Some information that comes with the trailer (such as the Manufacturer's Statement of Origin) is not a reliable source for "empty" or "net" weight. The shipping documents list average or standard weights and your trailer may be equipped with options. To determine the "empty" or "net" weight of your trailer, weigh it on an axle scale. To find the weight of the trailer using an axle scale, you must know the axle weights of your tow vehicle without the trailer coupled. Some of the trailer weight will be transferred from the trailer to the tow vehicle axles, and an axle scale weighs all axles, including the tow vehicle axles.

Tow Vehicle and Tow Hitch Information

When equipping a new vehicle or an older vehicle to tow your trailer, ask the vehicle dealer for advice on how to 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.
- **Towing Hitch:** The towing hitch attached to your tow vehicle must have a capacity equal to or greater than the load rating of the trailer you intend to tow. The hitch capacity must also be matched to the tow vehicle capacity.
- **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 the electric brakes on the trailer. Your manufacturer provides electric brakes on trailers with a GVWR of 3,000 pounds or more. The brake controller is not the same as the safety breakaway brake system that is be equipped on the trailer.

(Continued on next page)

Towing the Stagemobile Unit (Continued)

Tow Vehicle and Tow Hitch Information (Continued)

- **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 case, 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 your Stagemobile, 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:** It is sensible to have a fire extinguisher in the tow vehicle.
- **Emergency Flares and Emergency Triangle Reflectors:** It is wise to carry these warning devices even if you are not towing a trailer. It is particularly important to have these 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.

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

⚠ DANGER

Use of a hitch with a load rating less than the load rating of the trailer can result in loss of control and may lead to death or serious injury.

Use of a tow vehicle with a towing capacity less than the load rating of the trailer can result in loss of control, and may lead to death or serious injury.

Be sure your hitch and tow vehicle are rated for the Gross Vehicle Weight Rating of your trailer.

Towing the Stagemobile Unit (Continued)

Driving a vehicle with the Stagemobile 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.

As you did when learning to drive an automobile, find an open area with little or no traffic for your first practice trailering. Of course, before you start towing the trailer, you must follow all of the instructions for inspection, testing, loading and coupling. Also, before you start towing, adjust the mirrors so you can see the trailer as well as the area to the rear of it.

Drive slowly at first, 5 m.p.h. 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 rig a few times from speeds no greater than 10 m.p.h. If your trailer is equipped with brakes, try using different combinations of trailer/electric brake and tow vehicle brake. Note the effect that the trailer brakes have when they are the only brakes used. When properly adjusted, the trailer brakes will come on just before the tow vehicle brakes.

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

IMPORTANT: Moving your Stagemobile from one location to another is like moving any large trailer. Because of the size and weight of the unit, use a tow vehicle that has adequate towing capacity and is suitably equipped to tow a trailer of this size.

⚠ WARNING

To avoid personal injury, and vehicle damage, never tow Stagemobile with an undersized vehicle.

Towing the Stagemobile Unit (continued)

Safe Trailer Towing Guidelines

- Recheck the load tiedowns to make sure the load will not shift during towing.
- Make certain the load does not exceed the ratings of the axles, wheels, tires, tow vehicle, hitch and other components.
- Always distribute cargo properly to improve Stagemobile handling and maintain the tongue weight rating for the hitch.
- 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.
- Adjust the brake controller to engage the trailer brakes before the tow vehicle brakes.
- Use your mirrors to verify that you have room to change lanes or pull into traffic.
- Use your turn signals well in advance.
- 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 60 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.
- Do not brake while in a curve unless absolutely necessary. Instead, slow down before you enter the curve and power through the curve. This way, the towing vehicle remains "in charge."
- Do not apply the brakes to correct extreme trailer swaying. Continued pulling of the trailer, and even slight acceleration, will provide a stabilizing force.
- Never tow the unit when there are strong crosswinds.
- Always slow down sufficiently before cornering with the Stagemobile.
- Never back the Stagemobile over curbs.
- Always tow Stagemobile “level” or parallel to roadway.
- Make regular stops, about once each hour. Confirm that:
    - —the coupler is secure to the hitch and is locked
    - —electrical connections are secure
    - —there is appropriate slack in the safety chains
    - —there is appropriate slack in the breakaway switch pullpin cable
    - —the tires are not visibly low on pressure
    - —the cargo is secure and in good condition

⚠ WARNING

Stagemobile can tip over if towing precautions are not followed.

Towing the Stagemobile Unit (continued)

Connecting the Towing Vehicle

1. Tie-downs connect into channels in the floor inside the Stagemobile unit (see p. 23). Locate cargo between channels, and securely tighten the tie-down straps which are provided. Place cargo properly to improve trailer handling (see p. 4).
2. Be sure that the hitch on the towing vehicle is at the correct height so the Stagemobile will be level front-to-rear (as measured on a level surface) when towed.
    - We have utilized a Ball Hitch coupler that is suitable for the size and weight of the trailer. The load rating of the coupler and the necessary ball size are listed on the trailer tongue. 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. Also, the ball size must be the same as the coupler size.
    - Wipe the hitch ball clean and inspect it visually and by feel for flat spots, cracks and pits.
    - Rock the ball 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.
    - 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.
    - Lubricate the hitch ball and the inside of the coupler with a thin layer of automotive bearing grease.

⚠ WARNING

Coupler-to-hitch mismatch can result in uncoupling, leading to death or serious injury. Be sure the LOAD RATING of the hitch ball is equal or greater than the load rating of the Stagemobile coupler. Be sure the SIZE of the hitch ball matches the size of the coupler.

A worn, cracked or corroded hitch ball can fail while towing, and may result in death or serious injury. Before coupling trailer, inspect the hitch ball for wear, corrosion and cracks. Replace worn or damaged hitch ball.

A loose hitchball nut can result in uncoupling, leading to death or serious injury. Be sure the hitch ball is tight to the hitch before coupling the trailer.

(Continued on next page)

Towing the Stagemobile Unit (continued)

Connecting the Towing Vehicle (Continued)

3. Use the hitch jack to raise the front of the Stagemobile until the bottom surface of the coupler is above the top of the hitch ball.
4. Open the coupler locking mechanism. In the open position, the coupler is able to drop fully onto the hitch ball.
5. Slowly back the towing vehicle so that the hitch ball is near or aligned under the coupler.
6. Use the jack to lower the coupler until it fully engages the hitch ball. If the coupler does not line up with the hitch ball, adjust the position of the tow vehicle.
    - Engage the coupler locking mechanism. In the engaged position, the locking mechanism must securely hold the coupler to the hitch ball.
    - Insert a pin or lock through the hole in the locking mechanism.
    - Be sure the coupler is all the way on the hitch ball and the locking mechanism is engaged. A properly engaged locking mechanism will allow the coupler to raise the rear of the tow vehicle. Using the trailer 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: Overloading can damage the jack. Do not use it to raise the tow vehicle more than 1 inch.

⚠ WARNING

If the coupler can't be secured to the hitch ball, do not tow the trailer. Call Wenger Corp. at 1-800-733-0393 for assistance.

7. Attach the emergency pull-off cable to the towing vehicle. **IMPORTANT:** Never disconnect the pull-off cable by pulling the pin out of the switch on the Stagemobile. If the pin is pulled from the switch, the Stagemobile brakes are activated and will drain the charged battery cell.
    - Connect the pull-off cable to the tow vehicle so that the pin will be pulled out before all of the slack in the safety chains is taken up. Do not connect the pull-off 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.
    - Remove the pull pin 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 brakes are repaired. Immediately replace the pull pin. The breakaway brake system battery discharges rapidly when the pull pin is removed.

(Continued on next page)

Towing the Stagemobile Unit (continued)

Connecting the Towing Vehicle (Continued)

8. Raise the Stagemobile hitch jack and rotate it to the traveling position.
9. Attach the safety chains from the towing vehicle to the Stagemobile.
    - 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:
        —cross underneath the coupler
        —loop around a frame member of the tow vehicle or to holes provided in the hitch system (but, do not attach them to an interchangeable part of the hitch assembly)
        —have enough slack to permit tight 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.

⚠ WARNING

Improper rigging of the safety chains can result in loss of control of the trailer and tow vehicle, leading to death or serious injury, if the trailer uncouples from the tow vehicle.

10. Attach the 7-pin, 12-volt electrical supply cord to the towing vehicle, to operate the stop, turn, marker, clearance, and license-plate lights, and the electrical brakes.
    - Check all lights for proper operation (see p. 7)
    - Check electric brakes for proper operation.
        —Before towing the Stagemobile, you must operate the brake controller while trying to pull the trailer in order to test that the electric brakes operate. While towing the trailer at less than 5 m.p.h., manually operate the electric brake controller in the tow vehicle cab. You should feel the operation of the trailer brakes.

⚠ WARNING

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

11. Option: Be sure that the access doors enclosing the storage area underneath the stage floor are secured in their closed positions and locked.
12. Tongue weight as measured on a certified scale should be 10–15% of the GVWR.

SELECTING A LOCATION

IMPORTANT: Read all precautions on page 10 before you begin.

Position the Stagemobile unit in its intended location. The ground at the location should be as level as possible for safe setup and usage of the stage. The front of the stage must be the long edge of one of the stage decks that will fold down during the setup process.

Check for any possible obstructions (trees, power or light poles, overhanging wires, etc.) which might be in the way of performers or equipment when stage is in use.

Be sure to park where there is access to adequate electrical supply to operate any necessary equipment or make provision for portable electrical supply, if necessary.

DISCONNECTING THE TOWING VEHICLE

⚠ WARNING

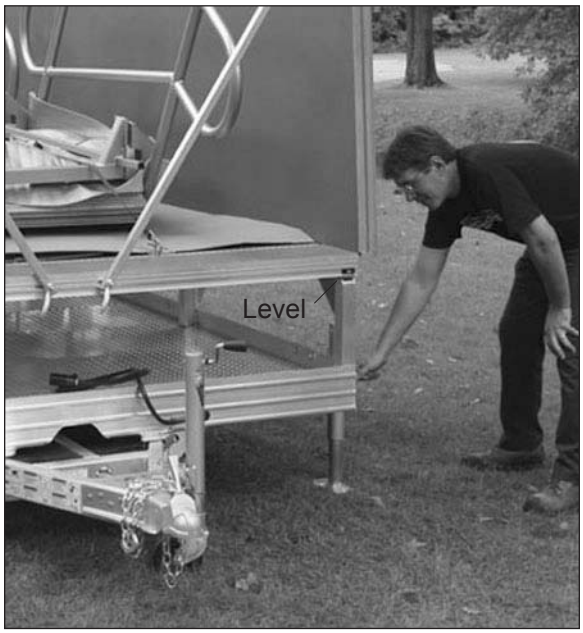
To avoid personal injury, use only authorized and trained personnel.

1. Block the Stagemobile's wheels with chocks.
2. Free the safety chains.
3. Disconnect the 7-pin, 12-volt electrical supply cord which connects the brake and running lights to the towing vehicle.
4. Disconnect the emergency pull-off cable from the towing vehicle's hitch.
   IMPORTANT: Disconnect the breakaway cable from the towing vehicle, rather than pulling the pin out of the switch on the Stagemobile. If the pin is pulled from the switch, the Stagemobile brakes are activated and will drain the charged battery cell.
5. Before extending hitch jack, make certain the ground surface below the jack will support the tongue load.
6. Pull the locking pin from the hitch jack and rotate the wheel from its traveling position so the wheel is toward the ground. Re-insert the locking pin to secure the jack in this position. Manually turn the crank arm to lower the wheel until it firmly sits on the ground.
7. Disengage the towing vehicle hitch, then use the crank of the Stagemobile hitch jack to raise the Stagemobile coupler until it clears the towing vehicle hitch.
8. Move the towing vehicle away.

Erecting the Stage

1. Unhook the tarp's elastic strap from the trailer frame and remove the tarp covering the trailer. Fold and store the tarp in the storage area under neath the trailer body.

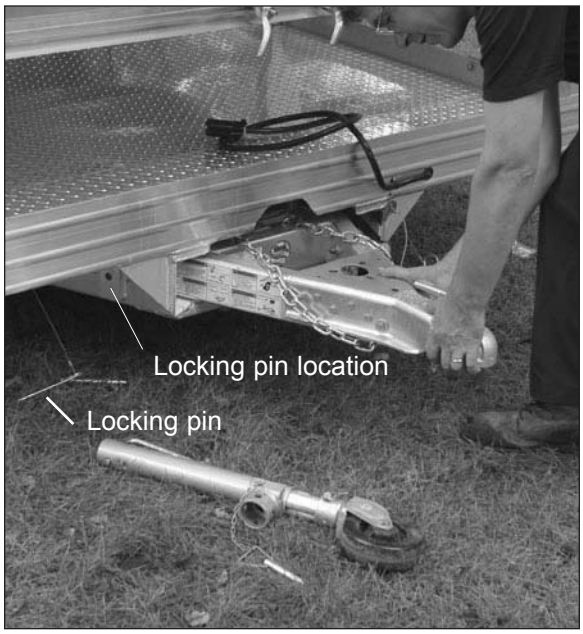
2. Pull the locking pin from each of the four manual leveling jacks located near the trailer corners. Rotate each jack from its traveling position so the foot of the jack faces the ground.



3. Turn the jack crank arms to bring each foot in contact with the ground. Use the small bubble levels located at opposite trailer corners and adjust the jacks until each foot is firmly against the ground and the trailer is level.

4. Raise the hitch jack wheel and remove the locking pin. Remove the parking wheel from the trailer hitch.

ERECTING THE STAGE (CONTINUED)



5. Pull the 4 locking pins that are located on either side of the hitch assembly underneath the trailer body. Push in on the front of the hitch and slide it completely into its housing within the underside of the trailer body. Place the hitch jack in the lower storage compartment.

6. Unhook the cords holding the leveling supports in their traveling positions on the underside of each stage deck.

Erecting the Stage (continued)

7. Unscrew the fasteners holding the traveling braces at each end of the trailer. Remove the diagonal braces from the fasteners.

8. Remove the top braceassembly at each end. If a helper is available, have them help hold the decks upright, especially on a windy day.

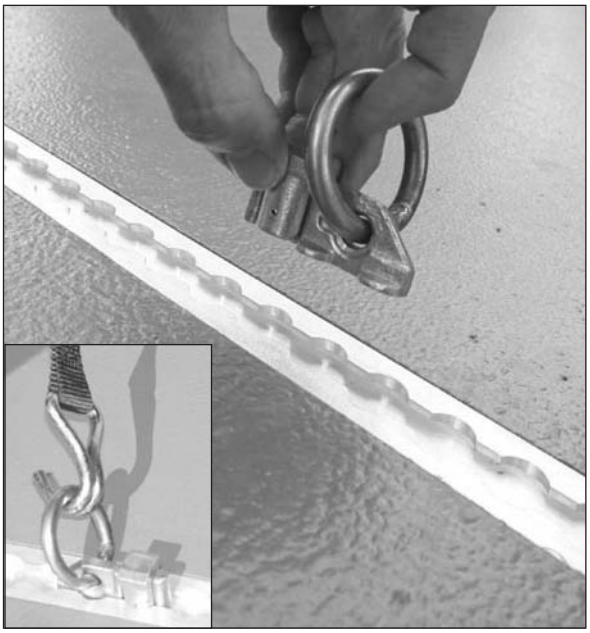
9. Begin lowering one stage deck. The deck supports will swing out as the deck is lowered. Lower the deck until the support feet rest on the ground.

⚠ WARNING

To avoid personal injury, never lower a stage deck while people are under it.

Erecting the Stage (continued)

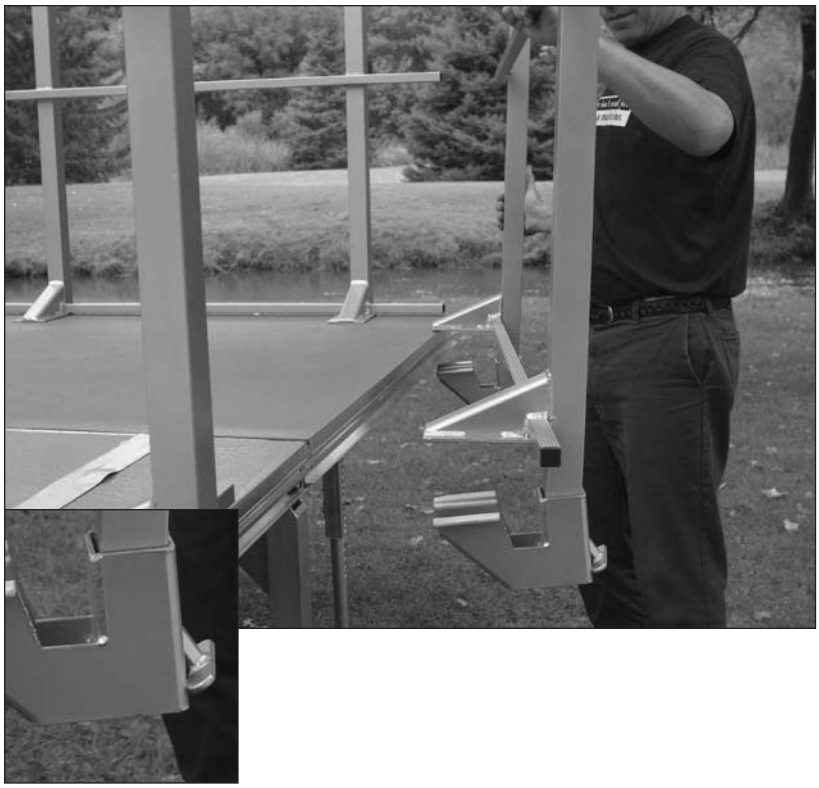
10. Level the deck by first adjusting the supports nearest its cor ners. Adjust each support by pulling the locking pin and moving the foot down until the foot rests firmly on the ground, then re-insert the locking pin in the appropriate hole (see inset photo). Adjustment can be made in 1/4" increments. After adjusting the corner supports, do the same to the remaining supports for this deck. Check to make certain the deck is level, readjusting if necessary. Then lower and level the other deck in the same manner.



11. Unhook the tie-down straps from the tie-down loops (inset photo) and unload the railings and other stage hardware. Remove each tie-down loop from the channels in the stage floor: lift the round part and slide it along the channel until its flanges align with openings in the channel.

12. Press a fill strip into each channel in the stage floor. Make certain a strip is fully inserted into each channel to prevent edges and gaps which can trip performers or snag equipment.

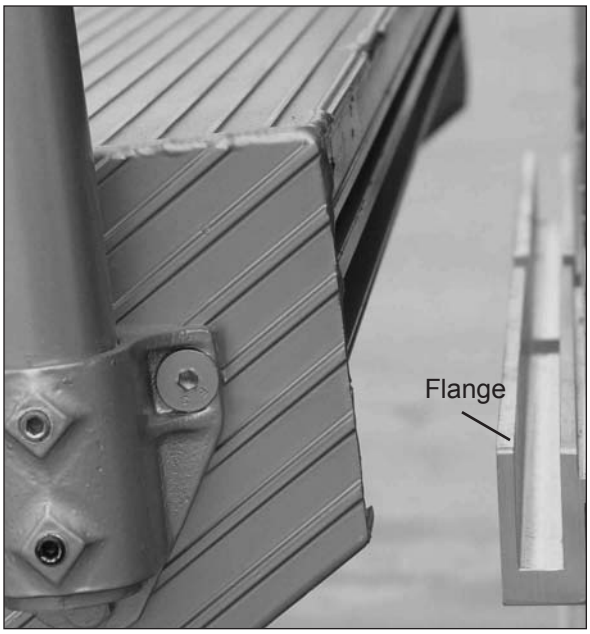
Attaching Optional Railings and Stairs



1. Lift each railing section into position, sliding the “C-clamp” feet over the edge of the stage. Note the position of the T-handle that will be used to tighten each foot once the railing is in place (see inset photo): each T-handle must be loose and resting on the outer edge of the railing frame for the feet to slide over the edge of the stage.

2. After the feet of the railing section are fully inserted over the edge of the stage, lift each lower foot until you can slide the T-handle to the bottom of the foot, then tighten the T-handle to clamp the foot securely (see inset photo). Once all railing sections are attached, check to make certain each section is firmly secured.

Attaching Optional Railings and Stairs (continued)



3. Slide the attachment flanges into place in the stage edge at the stair location. With a helper, position the stair assembly with the top edge of the top tread at the flanges. Lift the bottom end of the stair to slide the top edge onto the flanges, then lower the bottom end to secure the stair assembly in place.

4. Snap the stage skirt onto the fasteners located on the underside of the stage.

5. After stage assembly is complete, check all connections to make certain the stage is secure before making electrical hookups, placing equipment or allowing performers on it.

   Note: Disassembling the Stagemobile unit is the reverse of the set-up procedures.

Inspection Service & Maintenance

You must inspect, maintain and service your trailer regularly to insure safe and reliable operation. If you cannot or are unsure how to perform the items listed here, have an authorized service representative do them (call Wenger Corporation for assistance). Note: Also inspect, maintain and service the tow vehicle according to its manual.

Inspection and Service before Each Use	
Item	Inspection / Service
Breakaway Brakes > Electric	 Check operation
Breakaway Battery	Fully charged, connections clean
Brakes	Check operation
Coupler and Hitch Ball	Check for cracks, pits, and flats. Replace with ball & coupler having trailer GVW Rating. Grease. Check locking device & replace.
Safety Chain(s) & Hooks	Check for wear and damage
Tires	Check tire pressure when cold. Inflate as needed.
Wheels: Lug Nuts & Hub	Check for tightness Tighten. For new and remounted wheels, check torque after first 10, 25 & 50 miles of driving and after any impact
Deck hinges & slide	Spray with non-staining lubricant such as WD-40 to prevent stiff operation

Inspection and Service Each 6 Months or 6,000 Miles	
Item	Inspection / Service
Tires	Rotate at 5,000 miles Inspect tread and sidewalls thoroughly. Replace tire when treads are worn, when sidewall has a bulge, or sidewall is worn
Brakes: Magnets Tow Vehicle Controller	 Check wear and current draw Check power output (amperage) and modulation
Structure	Clean dirt buildup, lubricate hinges and slides

Inspection Service & Maintenance (continued)

Inspection and Service Each Year or 12,000 Miles	
Item	Inspection / Service
Brakes	Check for scoring and wear
Trailer tongue jack	Grease gears at top
Structure: Frame members Welds Axle attachment bolts	 Inspect all frame members, bolts & rivets. Repair or replace damaged, worn or broken parts Inspect all welds, repair as needed Check by authorized service personnel
Wheels: Sealed hub bearings Rims	 Check and confirm free running. Replace if not (sealed bearings aren't serviceable). Inspect for cracks & dents. Replace as necessary. Tighten. For new and remounted wheels, check torque after first 10, 25 & 50 miles of driving and after any impact

Here is inspection and service information for major components of the Stagemobile. Other helpful information can be found within the *Safety Information* and *Towing the Stagemobile Unit* sections. To perform many of the inspection and maintenance activities, you must support the Stagemobile on its jack stands on level ground.

⚠ WARNING

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

Stagemobile Structure & Suspension

- The stage deck receives the most abuse. Check it thoroughly after every use and make repairs or replacements as necessary.
- Examine all structural frame members, fasteners and welds for bending, cracking, or other damage or failure at least once a year. Repair or replace as necessary.

⚠ WARNING

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

Inspection Service & Maintenance (continued)

Trailer Brakes

The Stagemobile has two different types of electric brakes: an **emergency electric breakaway system**, which acts only if the trailer comes loose from the hitch and the breakaway pin is pulled; and an **electric braking system** that acts whenever the brakes of the tow vehicle are applied.

- Emergency Breakaway Brake
  - —Breakaway battery: This battery supplies the power to operate the trailer brakes if the trailer uncouples from the tow vehicle. Be sure to check, maintain and replace the battery according to the battery manufacturer' instructions.
  - —Breakaway switch: This switch causes the breakaway battery to operate the electric brakes if the trailer uncouples from the tow vehicle. The pull cable for the pull pin is connected to the tow vehicle, and the switch is connected to the trailer. To check for proper functioning of the switch, battery and brakes, you must pull the pin from the switch and confirm that the brakes apply to each wheel. You can do this by trying to pull the trailer with the tow vehicle, after pulling the pin. The trailer brakes may not lock, but you will notice that pulling the trailer requires greater force.

⚠ WARNING

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

- Tow Vehicle Operated Electric Brakes
  - —The electric brakes that operate in conjunction with the tow vehicle brakes must be "synchronized" so that braking is properly distributed to the tow vehicle brakes and the trailer brakes. For proper operation and synchronization, read and follow the axle/brake and the brake controller manufacturers' instructions. If you do not have these instructions, call Wenger Corporation at 1-800-733-0393 for a free copy.

Stagemobile Connection to Tow Vehicle: Coupler and Ball

- The coupler on the Stagemobile connects to the ball attached to the hitch on the tow vehicle. Before each tow, coat the ball with a thin layer of automotive bearing grease to reduce wear and ensure proper operation. Also check the locking device that secures the coupler to the ball for proper operation.
- If you see or feel evidence of wear, such as flat spots, deformations, pitting or corrosion, on the ball or coupler, immediately have them inspected to determine the proper action to prevent possible failure of the towing system. All bent or broken coupler parts must be replaced before towing the trailer.
- The coupler handle lever must rotate freely and automatically snap into the latched position. Oil the pivot points, sliding surfaces, and spring ends with SAE 30W motor oil. Keep the ball pocket and latch mechanism clean. Dirt or contamination can prevent proper operation of the latching mechanism.
- When replacing a ball, the load rating must match or exceed the GVWR of the Stagemobile.

Inspection Service & Maintenance (continued)

Hitch Jack and Jack Stands

- Grease the gears in the top of hand-cranked jacks once a year, by removing the top of each jack and pumping or hand packing grease into the gears.

Tires

- Before each tow, be sure the tire pressure is at the value indicated on the sidewall. Tire pressure must be checked while the tire is cold. Do not check the tire pressure immediately after towing the trailer. Allow at least three hours for a tire to cool, if the trailer has been towed for as much as one mile. Replace the tire before towing the trailer if the tire treads have less than 1/16 inch depth or the telltale bands are visible.
- A bubble, cut or bulge in a side wall can result in a tire blowout. Inspect both side walls of each tire for any bubble, cut or bulge; and replace a damaged tire before towing the trailer.

⚠ WARNING

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

Wheel Rims

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

Wheel Bearings

- A loose, worn or damaged wheel bearing is the most common cause of brakes that grab.
  - —To check your bearings, jack trailer and check wheels for side-to-side looseness. If the wheels are loose, or spin with a wobble, the bearings must be replaced.
  - —Stagemobile axles are built with sealed bearings that are not serviceable. Sealed bearings must be replaced as complete units.

Inspection Service & Maintenance (continued)

Wheel Lug Nuts

- Lug nuts are prone to loosen right after a wheel is mounted to a hub. When driving on a remounted wheel, check to see if the lug nuts are tight after the FIRST 10, 25 AND 50 miles of driving and BEFORE EACH TOW thereafter.

⚠ WARNING

Lug nuts are prone to loosen after initial installation, which can lead to death or serious injury. Check lug nuts for tightness on a new trailer or when wheel(s) have been remounted after the FIRST 10, 25 AND 50 miles of driving.

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

Tighten lug nuts before each tow.

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

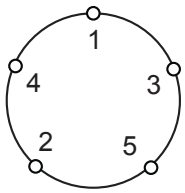
Lug Nut Torque – Steel Wheels

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

Lug Nut Torque – Aluminum Wheels

Rim Size	Stud Size	Torque Foot-pounds
15 inch (5 hole)	1 1/2 inch	65 to 75

Lug Nut Tightening Sequence



WARRANTY

Wenger Stagemobile is guaranteed free of defects in materials and workmanship for three full years.

Our guarantee assures you of either a full refund or repair or replacement of the defective materials or workmanship without charge, at the discretion of our Customer Service Department. Just call a Customer Service Representative at 1-800-733-0393 and state the reason you are dissatisfied. If a product return is necessary, your representative will issue a return authorization. This is your sole remedy for breach of this warranty.

Should you have a question or problem with any Wenger product, don't hesitate to call, even if the product is past warranty. It's important to us that all our customers be satisfied.

This is the sole warranty made by Wenger. Wenger disclaims all other warranties, including the warranties of merchantability and fitness for a particular purpose, as well as all liability for incidental, consequential, special, and indirect damage. Wenger liability for direct damages shall be limited to the amount you paid for the product involved. Wenger reserves the right to make product changes without obligation to incorporate such changes into products previously sold.

Some states do not allow the exclusion or limitation of damages or warranties, so the above may not apply to you. This warranty gives you specific legal rights. You may also have other rights which vary from state to state.