

# OPERATOR'S MANUAL

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## OX TRAILERS



**“As Strong As An Ox”®**

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### INTRODUCTION

**THANK YOU FOR BUYING AN OX TRAILER.** By choosing Ox, you have partnered with the finest truck and trailer equipment manufacturer in the industry. This manual is provided to assist you in the safe operation of your trailer and guide you in the development of your own preventative maintenance program that will keep your investment in top condition throughout its life cycle.

**IMPORTANT!!** Read this manual thoroughly prior to operation. This manual should be kept readily accessible for any potential operator at all times. Should you have any questions or concerns, please contact your dealer or an Ox Trailers customer service representative before use. An Ox Trailers representative can be reached Monday through Friday, 8:00am to 5:00pm (Central Time):

Toll Free: 1-800-648-1101 • Office: 1-205-932-8142 • Fax: 1-205-932-2594  
[oxsales@tbei.com](mailto:oxsales@tbei.com) or visit, [www.oxbodies.com](http://www.oxbodies.com) for further information.

### REPORTING SAFETY DEFECTS

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

If NHTSA receives similar complaints, it may open an investigation, and if it is found that a safety defect exists in a group of vehicles, NHTSA may order a recall and remedy Campaign. However, NHTSA cannot become involved in individual problems between you, your dealer or distributor, and/or Ox Trailers.

To contact NHTSA, you may 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, D.C. 20590. You can also obtain other information about motor vehicle safety from the hotline.

# TRAILER OPERATION

**POWER TAKEOFF CONTROLS:** The power take-off (PTO) unit is an auxiliary drive mechanism that attaches to the tractor's transmission and utilizes engine power to drive the hydraulic pump that lifts the trailer body. Controls are located in the tractor cab with "ENGAGE and "DISENGAGE" positions.

**NOTE:** When the PTO is engaged, the engine speed should never exceed 1200 RPM; higher speeds will shorten the pump life and create high pressures that can damage seals in the cylinder. Most hydraulic pumps are rated at 2000 PSI. Under no circumstances should your trailer body be subjected to hydraulic pressures in excess of 2500 PSI.

**HOIST CONTROLS:** The hoist control is usually a three-way valve located in the tractor cab. It has three positions, "LIFT", "HOLD" and "LOWER". This valve controls the flow of hydraulic fluid to and from the trailer's hoist cylinder.

## PTO & HOIST OPERATION:

1. Depress the engine clutch and shift PTO lever into the "Engage" position, shift the hoist control valve into the "LIFT" position, and accelerate the engine slightly (without racing or operating above moderate speed) as required to lift the trailer body.
2. If necessary, to maintain proper load material discharge speed, shift the hoist control valve into "HOLD" position to maintain present trailer position, then shift back into the "LIFT" position to continue raising as needed. The hoist will stop automatically at full elevation, when the cylinder is fully extended.
3. Shift the hoist control valve to the "HOLD" position to prevent excessive pressure from building in the hydraulic system.
4. Depress the engine clutch and shift the PTO lever into the "DISENGAGED" position, shift the hoist control valve into the "LOWER" position. The hoist will automatically stop when the body is fully lowered.
5. When the dump operation is complete, the body is fully lowered, and the unit is ready for transit, shift the hoist control valve from "LOWER" to "HOLD". This will prevent the oil from completely draining out of the cylinder and into the reservoir tank preventing air from entering the cylinder and hydraulic system.

**IMPORTANT!!** Serious damage to the pump can occur if the PTO remains in gear while the truck is in transit. DO NOT operate the PTO while the truck is in gear, unless the trailer must be used in a low speed, brief duration, spreading operation.

## QUARTER FRAME (HYBRID) & FRAMELESS TRAILER OPERATION:

1. When in a normal payload dumping situation, lock either the tractor brakes or the trailer brakes, leaving the other brakes unlocked, thus permitting the set of unlocked wheels to roll towards the locked wheels as the trailer body is elevated.
2. If the payload is being dumped into a hopper, against a stockpile, or in a specific area, the trailer brakes should be locked allowing the tractor to roll back toward the trailer.
3. In a situation where it is necessary to slightly spread the payload over a small area as it is being dumped, lock the tractor brakes allowing the trailer to roll forward.

**IMPORTANT!!** **NEVER** lock both the tractor and trailer brakes during payload dumping operations as doing so can result in catastrophic damage to the equipment.

## TAILGATE OPERATION:

1. Unlock tailgate prior to elevating a loaded trailer body; otherwise, the payload will build up against the tailgate causing excessive forces on the body structure.
2. Before dumping payload, verify tailgate for proper operation and hook engagement, hook area for possible load material interference, tailgate contact with the body before locking the gate, and the area behind the trailer before opening the tailgate.
3. After payload dumping is complete, make sure tailgate is closed and locked before leaving the dumpsite.

**TARP CONTROLS:** The tarp control is a two-way lever located in the tractor cab. It has two positions, "RETRACT" and "DEPLOY". This controls the position of the tarp over the trailer body and payload.

## TARP OPERATION:

1. Shift tarp control lever into "RETRACT" position. Make sure tarp is fully retracted before elevating trailer body.
2. After trailer body has been completely lowered after payload dumping is complete, and before tractor/trailer begins moving in transit, shift tarp control lever into "DEPLOY" position. Make sure tarp is fully deployed before tractor/trailer begins moving.

**NOTE:** Tarping is mandatory in most states to prevent commodities being hauled from leaving the trailer when in transit. Check local and state tarping requirements before hauling any materials.

## GENERAL OPERATING REMINDERS:

The following is a list of general operating conditions and procedures you should observe at all times.

## NEVER:

- Load vehicle beyond its rated capacity (Found on the vehicle certification plate as the GVWR rating.)
- Operate trailer body IN TRANSIT with the body slightly raised, the cylinder pressurized and the control valve in hold position.
- Leave the controls while the trailer body is elevated.
- Operate hoist unless tractor and trailer are on a firm, level surface.
- Operate hoist until the tractor and trailer are in line.
- Operate hoist while personnel or equipment are nearby.
- Operate hoist in strong or gusty winds.
- Raise trailer body during an electrical storm.
- Raise trailer body near electrical wires.
- Move vehicle at higher than creep speed while trailer body is elevated.
- Attempt to dislodge a sticking load by jerking the trailer and punching the brakes.
- Stand behind trailer when dumping a payload. Both tailgate and discharging material may cause serious injury or death.

## CAUTION:

Before raising the trailer body, observe front, both sides, and rear of tractor and trailer for personnel. DO NOT raise the trailer body if anyone is approaching the area, or already close enough to be hit if tractor and/or trailer were to tip over. Misoperation of a trailer can result in serious injury to nearby personnel or damage to equipment and property.

## ALWAYS:

- Raise all trailer airlift axles (if equipped) before dumping payload.
- Deflate air ride suspension air springs (if equipped) before dumping payload.
- Stay at the controls while raising and lowering the trailer body, paying close attention to the operation. Keep the body in sight. Be prepared to stop or lower the trailer body instantly.
- Lower trailer body with extreme caution, with the safety of personnel and property your utmost concern, especially if the trailer body becomes stuck in the raised position.
- Feather trailer body down slowly, to avoid a build up of pressure in the hoist, if it becomes necessary to lower the body while loaded.
- Place control valve in neutral position immediately after lowering.
- Operate trailer hoist at a maximum pressure of less than 2500 (PSI).

# TRAILER INSPECTION/MAINTENANCE

**VIN NUMBER/CERTIFICATION:** The VIN Number/Certification label contains important information about your trailer, some of which you must know for safe, legal operations. As prescribed by law, the label is of self-destructive construction, and cannot be removed.

**WEIGHT RATINGS:** The Gross Axle Weight Rating (GAWR) is the structural capacity of the lowest rated item on the running gear assembly which includes suspension, springs, wheels, hubs, drums, bearings, breaks, rims, tires, and axle. The GAWR also denotes the structural capacity with a uniformly distributed load when the trailer is supported by its kingpin and axles.

**IMPORTANT:** the GAWR is correct at time of manufacture. Changes to any item in the running gear assembly may change the GAWR.

**AXLE ALIGNMENT:** Axle alignment should be checked at time of delivery if unit is received direct from the factory. If delivery comes from an Ox Trailer dealer or distributor, alignment should be checked after the first 500 miles and semi-annually thereafter.

**BRAKE SYSTEM:** Satisfactory operation of the brake system requires proper maintenance and a clean, dry air supply from the tractor. Trailer brakes should be inspected and adjusted frequently as part of a Trailer Preventative Maintenance Program.

- Drain air tanks daily to remove moisture and other contaminants.
- DO NOT pour any liquids such as antifreeze or alcohol into the system. Valve seal deterioration and valve malfunction will result.
- Check brake system periodically for air leaks. Check spring brakes for proper operation when supply air line pressure is vented, and released when air line is re-pressurized.
- DO NOT operate trailer with parking brakes caged or disabled in any way. This renders emergency and parking brakes inoperable.
- DO NOT attempt to disassemble spring brakes without first caging the spring. This could result in mortal injury.

**ELECTRICAL SYSTEM:** For proper system performance,

- Clean all lights, reflectors, and reflective tape when dirty.
- Inspect wiring system periodically for frays or corrosion.
- As needed, apply more dielectric grease to connectors to prevent corrosion.
- Replace broken/worn components or burned-out bulbs with the equivalent items meeting or exceeding Federal Standard 108 requirements.

**FIFTH WHEEL & KING PIN:** Inspect the kingpin and its bottom-locking flange at regular intervals for any chips, cracks, and undue wear. When inspecting the assembly, review the load bearing plate surrounding the pin for any galling, bending, cracking, or other abnormal wear.

**OIL & GREASE SEALS:** Always replace the oil seals or grease seals each time a wheel is removed. Replacement should be done in accordance with manufacturer specifications.

**TAILGATE:** Inspect the locking mechanism daily for proper operation, insuring that the hooks adequately engage the lower tailgate pins.

**TIRES:** Check daily for proper tire inflation with an accurate gauge when tires are cold. Always inflate tires in accordance to the pressure guidelines molded on the tire by the tire manufacturer.

**NOTE:** Tire inflation pressures provided on the VIN label may only be applicable for tires that were provided at original date of manufacture. Under-inflation or over-inflation of tires will reduce tire life, and create dangerous operating conditions. Use extreme caution when handling tires. Follow industry regulations and safety standards at all times.

**TIRE CARRIER:** Inspect tire carrier prior to each trip. Replace or repair worn, cracked, damaged or missing brackets, retaining chain, and hardware.

**SPRING SUSPENSIONS:**

- Check closely for broken springs and missing bolts that may lead to axle shift.

- If equipped with an equalizer, insure equalizer oscillation is not restricted.
- Check all hangers and wear pads for wear, replace as needed.
- Check all bolts for proper torque at regular intervals.
- Inspect all welds for deterioration/cracks.

**AIR RIDE SUSPENSIONS:** The height control valve maintains a constant height by pressurizing or exhausting air in the air springs.

- If necessary, adjust valve using manufacturer's recommended procedure. Do not operate suspension above designed ride height.
- Check hangers and other weldments for deterioration/cracks.
- Inspect air springs for wear or cracking.
- Check all bolts for proper torque at regular intervals.

**WHEELS OR RIMS:** Improperly matched wheels or rims and tires can create dangerous conditions, producing tire failures. Use proper tire size when mounting tires on wheels or rims.

- Check wheels or rims thoroughly for any cracks, bent flanges, and other distorted areas. Replace if defective. Cracks may be caused by improper tire selection, overloading, or underinflation.
- Always use extreme caution when working with tires, wheels or rims, following established safety procedures.

**WHEELS:** Cracked wheels, loose, bent or missing studs or nuts are among wheel defects that will cause hazardous operations. Inspect the assembly carefully and correct any defects immediately.

- Properly torque inner and outer cap nuts, flange nuts, and wheel nuts on spoke wheels.
- If trailer is delivered direct to you from the manufacturing plant, re-torque all nuts on arrival. Check wheel systems manufacturer for recommended torque specification.
- When necessary to mount tire and wheel assembly on the trailer, use accepted mounting and safety procedures only.

**WHEEL BEARING ADJUSTMENT:** During the semi-annual inspection, or when a wheel hub has to be removed for maintenance, adjust wheel bearings as follows:

1. Torque the inner axle nut to 125 ft. lbs. While rotating the wheel, in order to properly seat the bearing and oil seals.
2. Loosen the nut 1/3 of a turn.
3. Install the lock washer so that dowel on the inner nut will align with the nearest hole on the lock washer.
4. Install the outer lock nut and tighten to 150-200 ft. lbs.

**NOTE:** The wheel must have .001" to .010" end play to be within recommended oil and bearing adjustment tolerances.

**HYDRAULIC SYSTEM:** Contamination, overheating, and air entrapment in the oil account for most hydraulic system problems.

- Keep system clean, filled to proper level (do not overfill), replace oil as recommended by the hydraulic system manufacturer or more frequently based on trailer operating conditions.
- Use manufacturer recommended hydraulic oil or Dextrin automatic transmission fluid. Do not combine fluid types.
- Use a high quality return line filter in the hydraulic system.
- Inspect all hydraulic and hoist components daily, during pre-trip inspection for wear, including hoses, fittings, couplers, valves, hoist, hoist pins, piping etc.
- Make sure hydraulic system is de-pressurized before performing any repairs. NEVER attempt to remove any component while the system is pressurized.

**OTHER:**

- Inspect, clean, and lubricate all trailer pivot points weekly.
- Bleed air from hoist weekly if hoist is not equipped with an automatic bleeder.

*Over time, even with proper maintenance, some components may eventually wear and require replacement. For spare or replacement components an Ox Trailer parts representative can be reached Monday through Friday, 8:00am to 5:00pm (Central Time):*

Toll Free: 1-800-877-3319 • Office: 1-205-932-8132  
Or visit [www.oxbodies.com](http://www.oxbodies.com) for further information.

# INSPECTION SCHEDULE

Safety and proper maintenance go hand in hand. Make sure that these inspections are included in your safety guide and preventative maintenance schedule.

## PRE-TRIP INSPECTION AND SAFETY CHECK LIST:

- Adjust trailer upper-coupler height to ensure smooth mating with tractor fifth wheel.
- Inspect upper coupler and kingpin for any irregularities.
- Before backing under trailer, check for obstructions or personnel behind trailer.
- After coupling, rock trailer slightly to ensure kingpin engagement.
- Check to ensure that tractor fifth wheel is properly locked to trailer kingpin.
- Check tractor and trailer air and electrical connectors for cleanliness, air leaks, wear, chafing, and proper seating.
- Disconnect trailer brakes. Brakes should apply immediately when airlines are disconnected.
- Inspect all reflectors and lights, including stop and turn signals for proper operation, cleanliness and missing or damaged parts.
- Check landing gear assembly for bent braces, loose bolts and proper operation of legs.
- Retract landing gear to full UP position and secure handle.
- Drain brake reservoirs and inspect brake system for damage and air leaks.
- Check brake linings for proper thickness.
- Adjust brakes as necessary.
- Fully charge air brake system, turn off tractor engine, and apply brakes for one minute. The pressure gauge should not fall more than 3 PSI during the one-minute brake application.
- Check tires for proper pressure using an air gauge.
- Check tires for tread depth, uneven wear, and damage.
- Check hubcap oil and grease seals for leaks, and that oil is at proper level indicated on hubcap.
- Inspect rim clamps or wheel studs for looseness.
- Check wheels for cracks.
- Inspect spare tire carrier frame and hardware for cracks, excessive wear, and metal deterioration.
- Check spare tire is properly secured to tire carrier.
- Check suspension for loose bolts, broken or damaged components and cracked welds.
- Inspect mud flaps and attachments.
- Close and secure tailgate.
- Check proper load distribution when trailer is loaded.
- Check, if applicable, for proper placard and shipping papers.

## WEEKLY INSPECTION:

- Inspect, clean and lubricate all trailer pivot points.
- Bleed air from hoist if not equipped with an automatic bleeder.

## INSPECTION AT END OF FIRST 500 MILES:

Note: If this trailer was delivered direct to you from manufacturer, check axle alignment, tighten axle U-bolts, and re-torque wheel nuts on arrival.

- Conduct pre-trip inspection.
- Check axle alignment.
- Tighten axle U-bolts.
- Adjust brakes.
- Re-torque wheel nuts.

## MONTHLY INSPECTION

- Conduct pre-trip inspection.
- Inspect brake linings for excessive wear. When linings are replaced, check drums for excessive wear, heat cracks and grooving.
- Check that travel of brake-chamber push rod, and automatic brake adjustment are working properly.
- Check and re-torque wheel nuts.
- Inspect tires.
- Check axle alignment.
- Check for loose or missing fasteners, and replace or tighten as necessary.
- Check for any cracked welds.
- Check optional items as required.
- Inspect, clean, and lubricate all trailer pivot points.

## SEMI-ANNUAL INSPECTION

- Conduct 500-mile inspection.
- Conduct monthly inspection.
- Inspect foundation brakes, cams and shoes.
- Inspect and clean wheel bearings. Refill to proper oil level.
- Inspect body parts, sides, floor, draft arms, tailgate hardware, hoist, and hydraulic system.
- Inspect chassis frame or suspension bogie for damaged, cracked or worn parts.
- Inspect upper coupler and king pin for excessive wear.
- Inspect finish on trailer, replace as necessary.
- Inspect, clean, and lubricate all trailer pivot points.

## WARNING AND INFORMATION DECALS:

Every Ox Trailer is labeled with a series of decals that provide important information and instructions on the safe operation and maintenance of the trailer. Follow information and instructions on these decals in conjunction with information and instructions contained within this manual at all times.

**IMPORTANT!!** Decals that become damaged or illegible should be replaced immediately. Replacement decals are available through Ox Trailers.