



ICE HOUSE AXLE OEM INSTALLATION MANUAL

L I P P E R T
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System Information

This manual will detail the procedure for the installation of an ice house axle.

CAUTION

Moving parts can pinch, crush or cut. Keep clear and use caution.

Resources Required

- Floor jack
- Jack stands
- Multi-purpose grease (see grease specs below for more information)
- Ratchet and standard socket set
- Grease gun

CAUTION

Do not mix lithium, calcium, sodium or barium complex greases. Chemical compatibility problems may occur. If you are changing from one chemical grease to another, be sure all old grease is removed prior to applying new grease. If the old grease is not removed completely, chemical compatibility problems may result in component failure or damage.

CAUTION

Always wear eye protection when servicing the axle, brakes, hubs, springs and wheels. Failure to wear eye protection may result in serious injury.

Installation

NOTE: LCI recommends a NLGI #2 grade lithium complex EP grease for all applications contained within this manual. A molybdenum-based grease is preferred.

1. Lift frame according to manufacturer's recommendations. Support with appropriately weight-rated jack stands.

⚠ WARNING

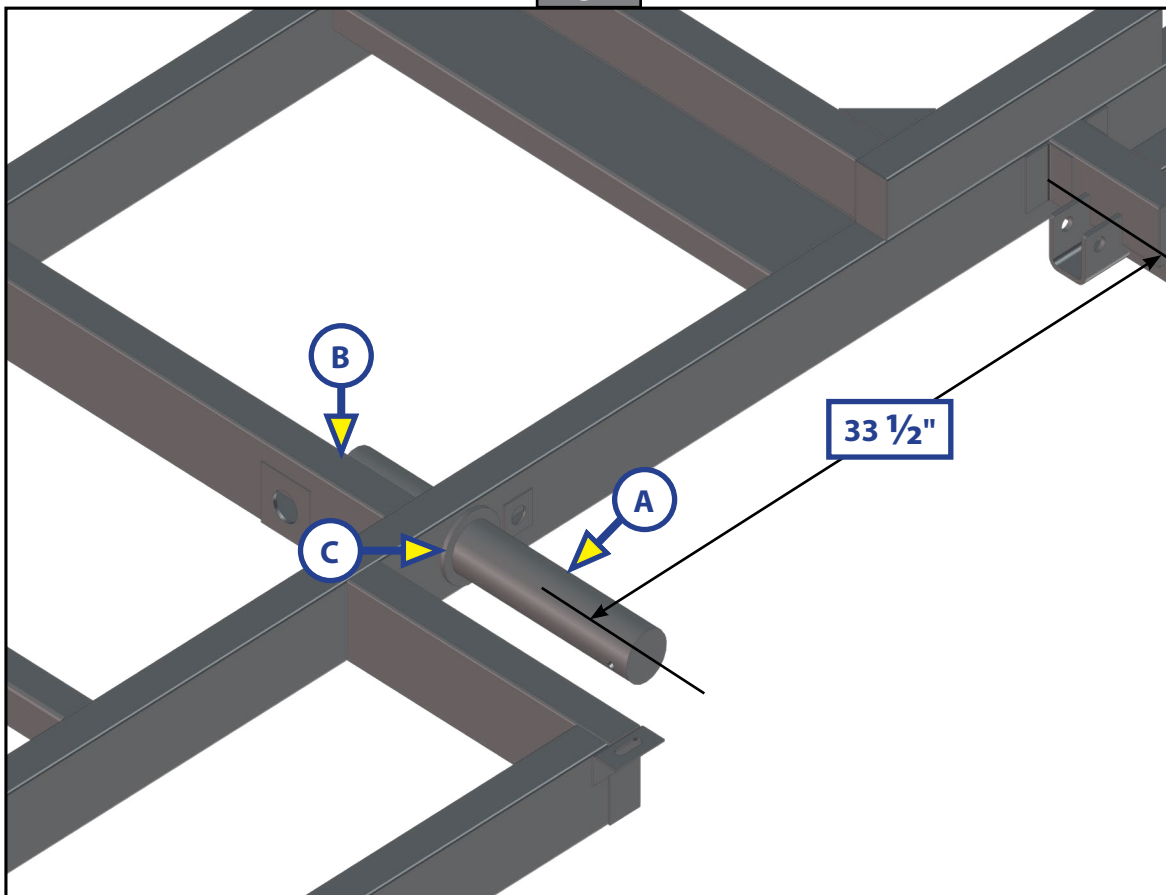
Lift trailer by the frame and never the axle or suspension. Do not go under the trailer unless it is properly supported by jack stands. Unsupported trailers can fall causing death or serious injury.

2. Cut a 2.56" diameter hole into the frame rail, and fit the axle pivot shaft (Fig. 1A) and washer assembly through the hole so it is flush to the frame rail.
3. Place a cross member just ahead of the pivot shaft to weld the rod to (Fig. 1B).

NOTE: Suitable structure to hold the pivot shaft is optional, but suitable structure to support the pivot shaft is required.

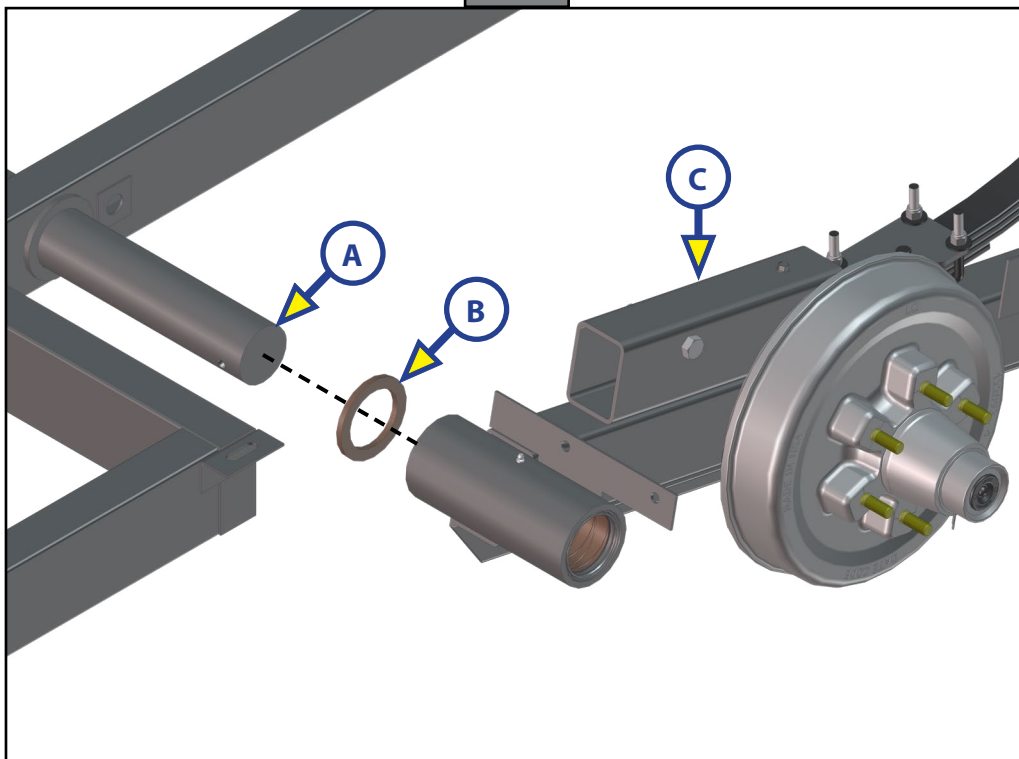
4. Make sure that pivot shaft is square to the frame front-to-back or slightly tipped forward up to $\frac{1}{16}$ " ($0 - \frac{1}{4}^\circ$ toe in) for the toe alignment.
5. Make sure that pivot shaft is tipped down to set the axle camber from $\frac{3}{32}$ " to $\frac{3}{16}$ " ($\frac{1}{2} - 1^\circ$).
6. Weld around the washer a full 360° to the frame (Fig. 1C).
7. Weld the pivot shaft sticking through the inside of the frame rail all the way around to the cross member.
8. Measure $33 \frac{1}{2}$ " from the center of the pivot shaft to position the rear hanger weldment (Fig. 1).
9. Before axle install, grease the pivot shaft (Fig. 1A) with lithium-based multipurpose grease. Enough grease should be used to leave a thin film on the pivot shaft.

Fig. 1



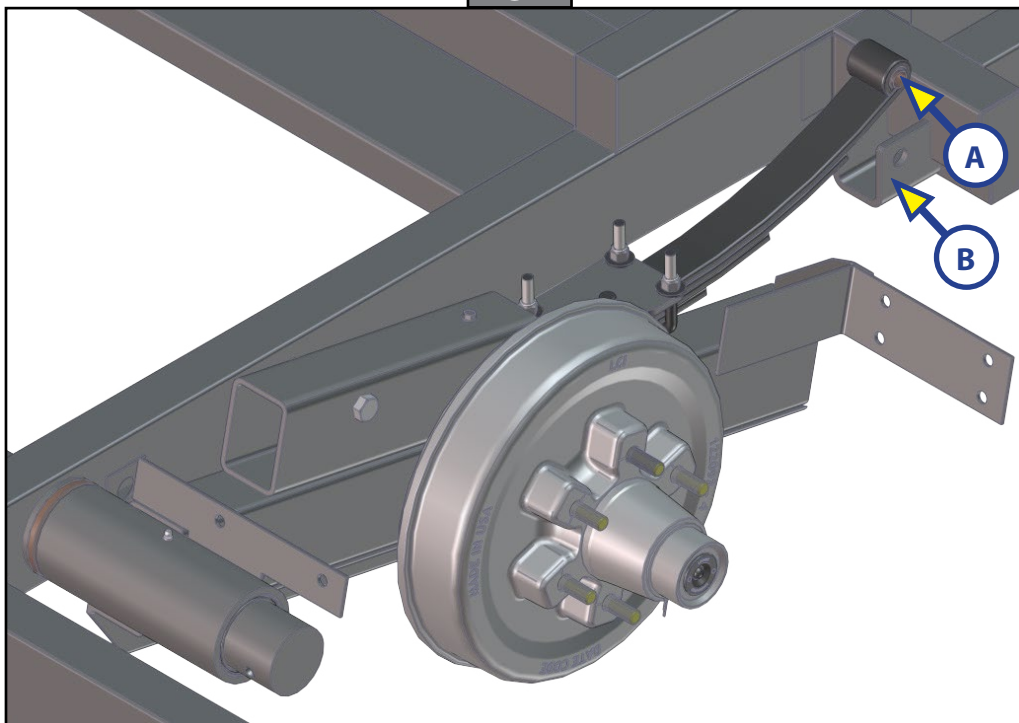
10. Install a bronze wear washer (Fig. 2B) onto the pivot shaft (Fig. 2A). After installing the bronze wear washer, install the axle assembly (Fig. 2C) onto the pivot shaft (Fig. 2A).

Fig. 2



11. Support the axle assembly with an appropriately weight-rated floor jack. Ensure the rear spring eye (Fig. 3A) is above the hanger (Fig. 3B).

Fig. 3



12. Install the second brass wear washer (Fig. 4B) and collar (Fig. 4C) onto the pivot shaft (Fig. 4A).
13. Install a $\frac{3}{8}$ " - 16 x 3 $\frac{1}{2}$ " bolt (Fig. 5A) and nut (Fig. 5B). The nut should be on the front side away from the tire and the head of the bolt near the tire (Fig. 5). Tighten to 25 lb-ft of torque.

Fig. 4

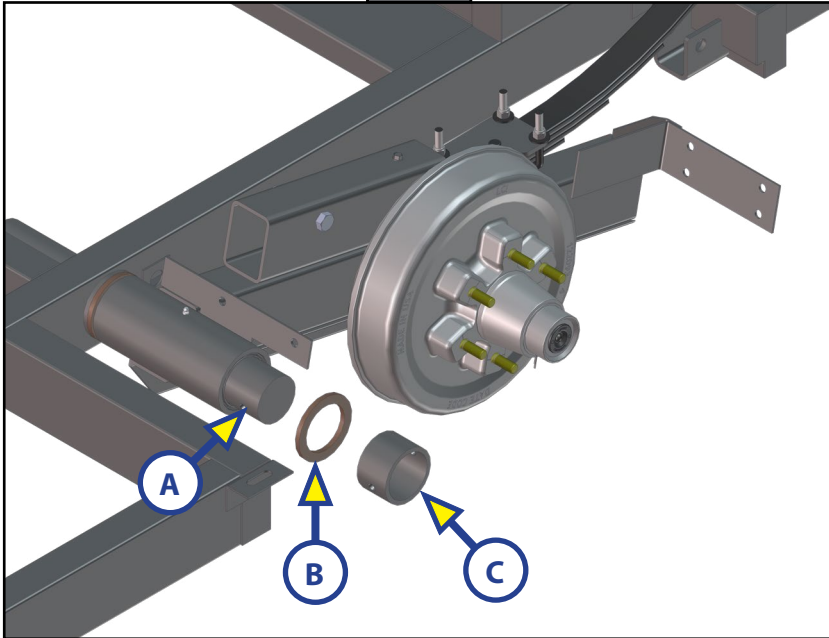
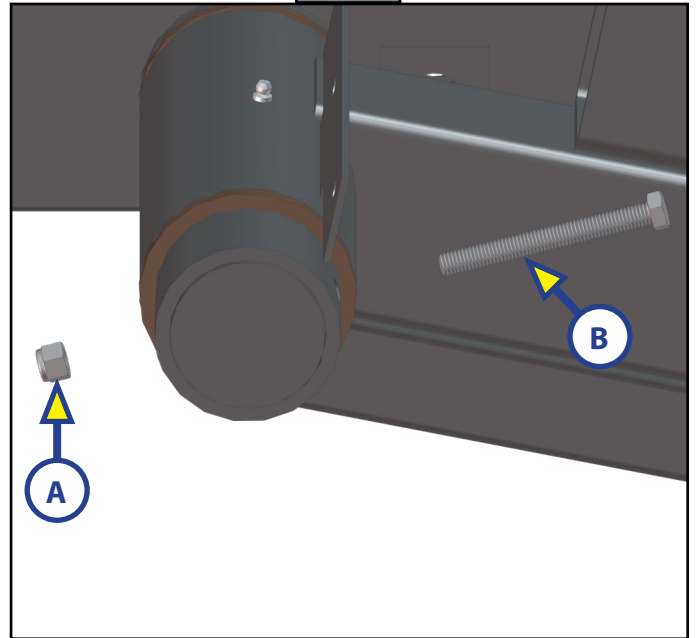
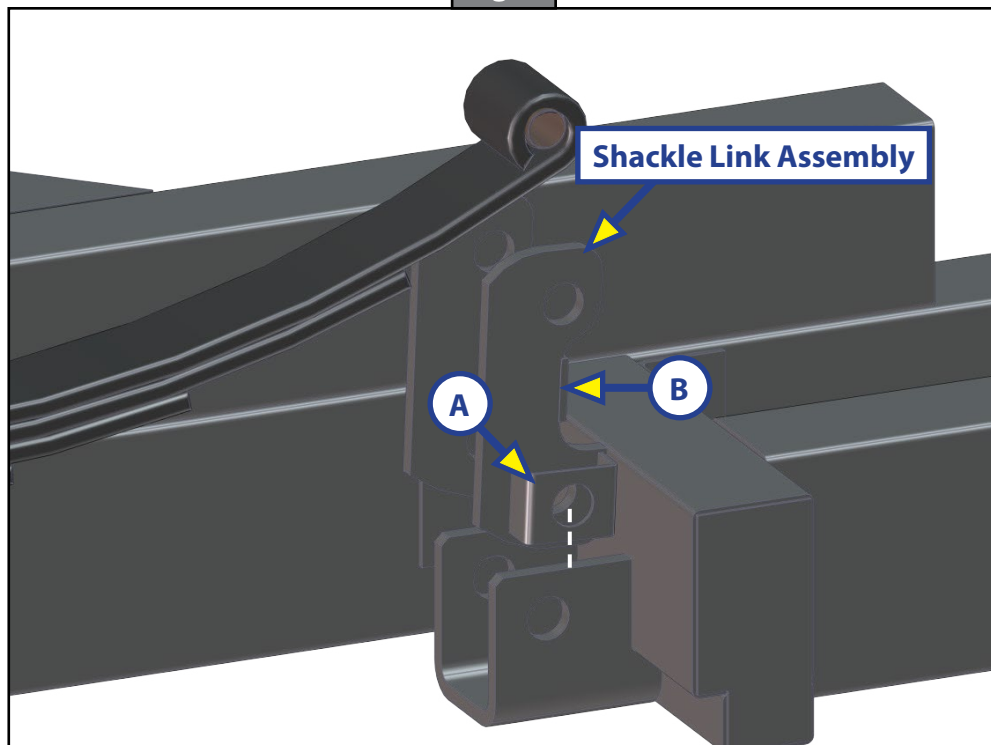


Fig. 5



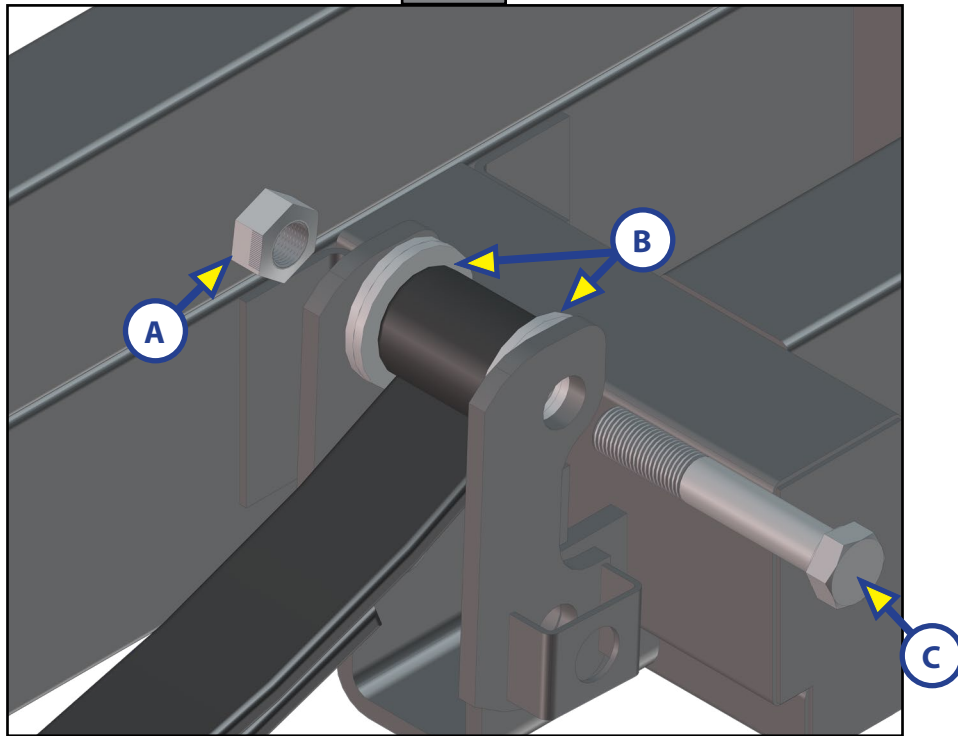
14. Dry fit the shackle link assembly to the frame. The scallop in the shackle assembly (Fig. 6B) should be facing the rear of the trailer and the square bracket (Fig. 6A) facing outward.

Fig. 6



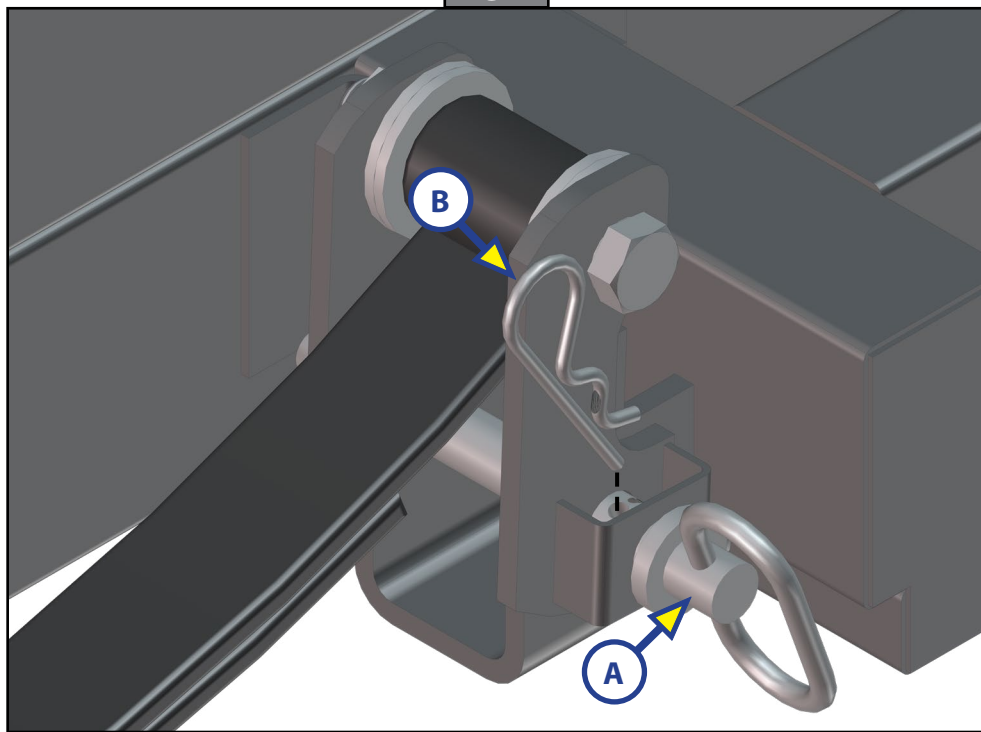
15. Dry fit (2) washers on the inside of each side of the shackle link (Fig. 7B). Install a $\frac{9}{16}$ " - 18 x 3 $\frac{1}{2}$ " bolt (Fig. 7C) in the top of the top link assembly and the rear spring eye (Fig. 7). Tighten the $\frac{9}{16}$ " nut (Fig. 7A) to 30 lb-ft of torque.

Fig. 7



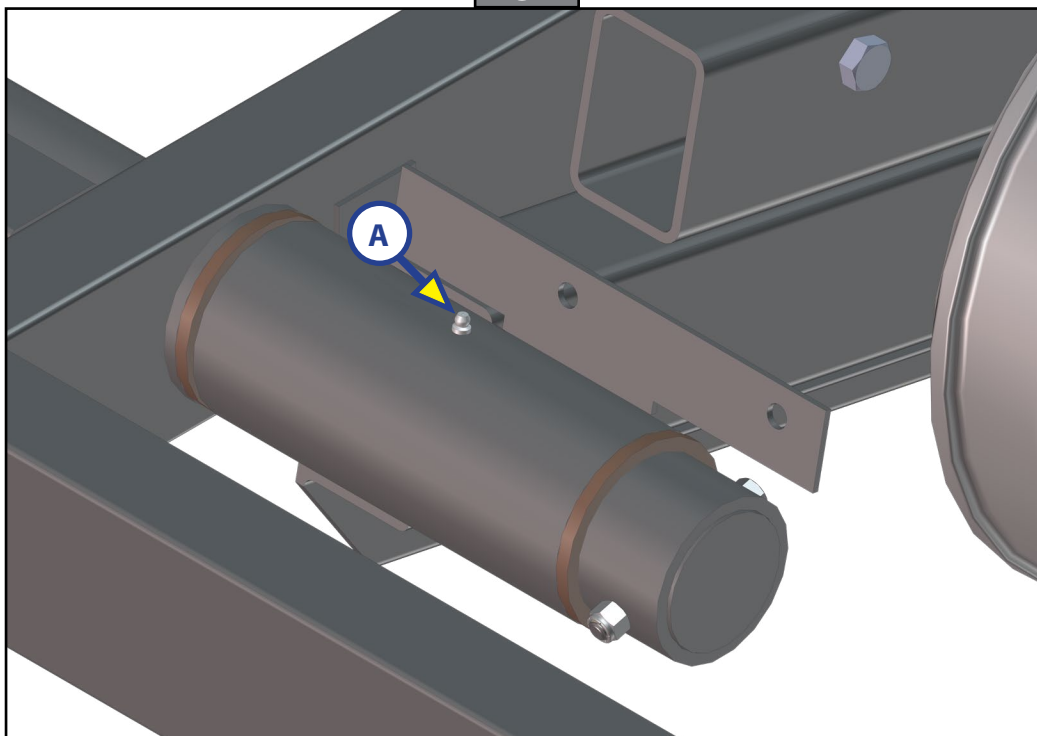
16. Install the hitch pin (Fig. 8A) in the lower hole of shackle link assembly and through the frame hanger. Install the hair pin cotter pin (Fig. 8B) into the hitch pin between the shackle and square bracket (Fig. 8).

Fig. 8



17. Use a grease gun to grease the zerk (Fig. 9A) located on the front pivot tube.

Fig. 9



NOTE: 80 milliliters or $\frac{3}{8}$ of a cup of lithium-based multipurpose grease should be used on each side of the trailer.

18. Repeat the installation procedure for the opposite side of the trailer.

Maintenance Schedule

Item	Function Required	Weekly	3 Months / 3,000 Miles	6 Months / 6,000 Miles	12 Months / 12,000 Miles
Brakes	Test that they are operational.	At Every Use			
Breakaway System	Check battery charge and switch operation.	At Every Use			
Brake Adjustment	Adjust to proper operating clearance.		◆		
Brake Magnets	Inspect for wear and current draw.			◆	
Brake Linings	Inspect for wear or contamination.				◆
Brake Controller	Check for correct amperage and modulation.			◆	
Trailer Brake Wiring	Inspect wiring for bare spots, fray, etc.				◆
Hub/Drum	Inspect for abnormal wear or scoring.				◆
Wheel Bearing	Inspect for corrosion or wear. Clean and repack.				◆
Seals	Inspect for leakage. Replace if removed.				◆
Springs	Inspect for wear, loss of arch.				◆
Suspension Parts	Inspect for bending, loose fasteners, wear.			◆	
Hangers	Inspect welds.				◆
Wheel Nuts and Bolts	Tighten to specified torque values.		◆		
Wheels	Inspect for cracks, dents, or distortion.			◆	
Tire Inflation Pressure	Inflate tires to mfg's specifications.	◆			
Tire Condition	Inspect for cuts, wear, bulging, etc.		◆		
Pivot Shaft	Apply grease through grease zerk (see grease specifications on page 2).		◆		

This image shows a full page of blank, lined paper. It features approximately 28 evenly spaced horizontal black lines across its entire width, typical of notebook or legal stationery. The background is a solid off-white color, and there are no margins, text, or other markings present.



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