



Silver Eagle Converter Dolly Operators' Manual



SILVER EAGLE
MANUFACTURING COMPANY

Introduction

Congratulations on your purchase of a Silver Eagle Converter Dolly.

It is important to read through this manual and acquaint every operator with the features and safety procedures required of this equipment. Owning any vehicle operated on public roadways requires maintenance to allow the vehicle and its systems to operate safely. Operators must follow all safety procedures set forth in this manual.

Periodic safety inspections are essential to maintain the systems that affect safe transit. Such inspections, and others not listed herein, are the responsibility of the owner and assignees who operate this converter dolly. These safety inspections should be performed with regularity and records should be kept of each inspection. Any discrepancies should be reported to the maintenance department.


Any questions or correspondence directed to Silver Eagle Manufacturing Company should always include the Vehicle Identification Number (VIN), which is etched onto a metal plate on the drawbar of the dolly.

Again, congratulations on your converter dolly purchase. You've made an important step in the future of hauling more freight.

Vehicle identification

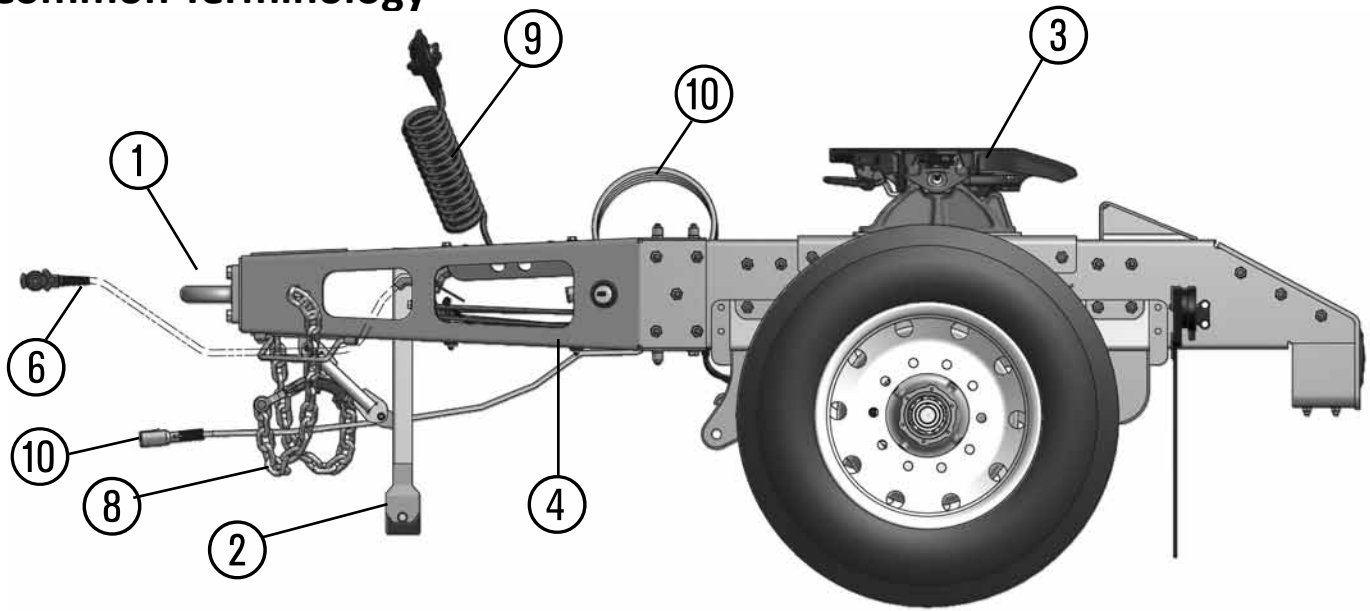
Federal law dictates that every dolly has a unique Vehicle Identification Number (VIN). The VIN plate is located on the drawbar of the dolly. Other important data on this plate includes the model designation, date of manufacture, Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR). It is the responsibility of the operator to understand the maximum legal load limits for each state and province in which this equipment will be used.

WARNING: Removing or altering a VIN plate is prohibited by Federal Law.

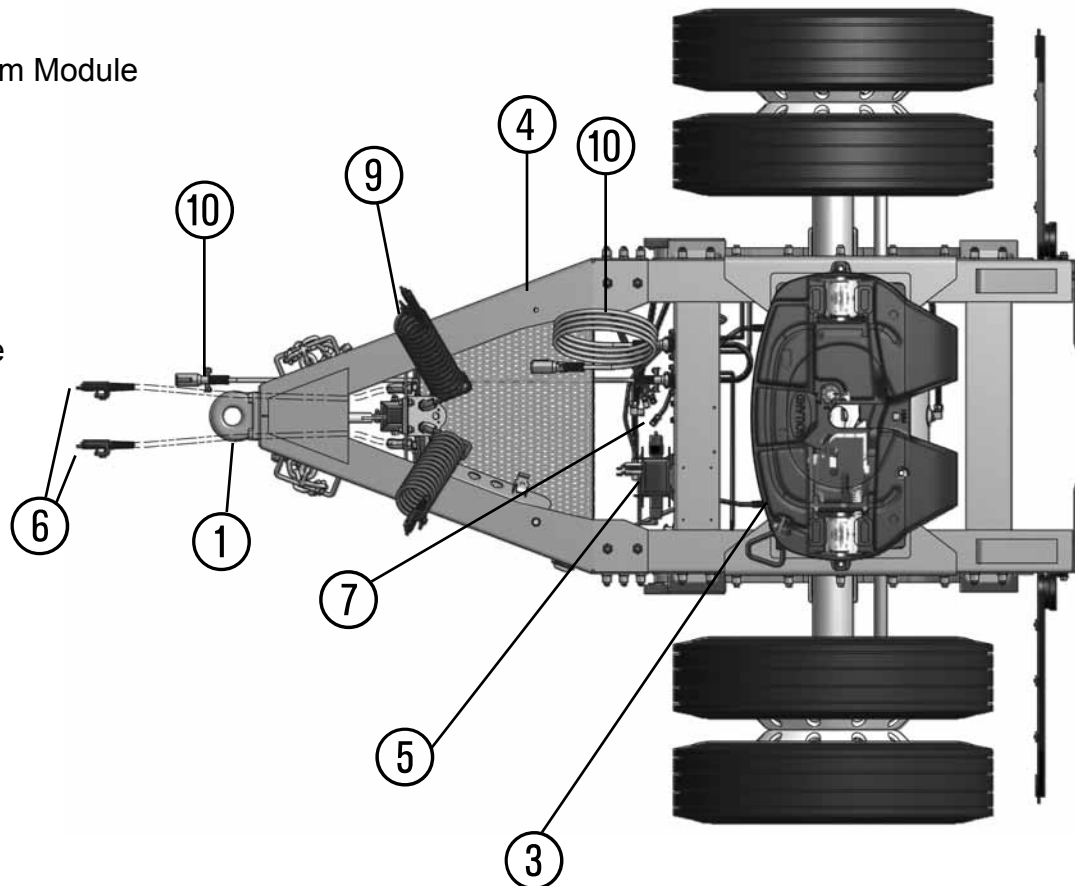
		
MANUFACTURED BY: SILVER EAGLE MANUFACTURING COMPANY, INC. 5825 NE SKYPORT WAY PORTLAND, OREGON 97218		
DATE OF MANUFACTURE <small>MONTH - YEAR</small>	GROSS VEHICLE WEIGHT RATING	GROSS AXLE WEIGHT RATING
<input type="text"/>	20,000 LB	20,000 LB
WITH <input type="text"/>	TIRE AND <input type="text"/>	RIM
<small>COLD WITH DUAL WHEELS</small>		
AT <input type="text"/>	PSI	<input type="text"/>
THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.		
VEHICLE IDENTIFICATION NUMBER <input type="text"/>		
VEHICLE TYPE	<input type="text"/>	MODEL <input type="text"/>
<input type="text"/>	TRAILER CONVERTER DOLLY	VAST20
<input type="text"/>	U.S. PATENT NO. 6,056,309	P/N 13426

The information contained herein is considered accurate as of the date it was published. We suggest you follow these guidelines and procedures to ensure the longevity of your converter dolly. These guidelines are not all inclusive. All operators are responsible for ensuring compliance with all applicable state and U.S. DOT regulations. ©2010 Silver Eagle Manufacturing Company. All rights reserved. Rev. 6/10.

Common Terminology



- 1. Eye
- 2. Jack/Support Leg
- 3. Fifth Wheel
- 4. Drawbar
- 5. Anti-lock Braking System Module
- 6 Glad Hands
- 7. Hostling Valve
- 8. Chains
- 9. Air lines
- 10. 7-way Electrical Cable



Using this Operators' Manual:

This Operator's Manual provides recommended guidelines for the safe operation of this dolly. It is important to follow these recommendations, as well as maintenance information, and to use extreme caution during the operation of this dolly to ensure dependable vehicle performance. All persons operating this dolly should familiarize themselves with these recommendations.

All illustrations, descriptions and specifications contained within this manual were in effect when this manual was approved for use. Silver Eagle Manufacturing Company reserves the right to discontinue dolly models, and/or change standard and optional specifications at any time without notice.

Safety Instructions: It is imperative to always comply with the following to ensure the highest degree of safety:

1. Operate pursuant to the safety guidelines set by governmental entities, including:
Operate all vehicles in accordance with Federal, State, Provincial and local statutes, as well as temporary rules and regulations.
 - a. All operators must be properly licensed and trained on this equipment
 - b. Perform all U.S. Department of Transportation required inspections, repairs and maintenance.
 - c. Maintain the documentation with identifying information, including company number, make, serial or VIN, year and tire size.
2. Perform scheduled maintenance and proper repair including:
 - a. All components and the entire dolly should be inspected according to a regular schedule.
 - b. Never transport with a dolly that has damage or inoperable systems.
 - c. Ensure that all maintenance is performed by a qualified individual.
 - d. Ensure that repairs are done using approved parts, components and procedures. Use of parts not provided by Silver Eagle Manufacturing Company may void your warranty.
3. Perform pre-trip safety inspections, as well as regular inspections during rest stops, including:
 - a. Carefully inspect the fifth-wheel connection to the trailer king pin.
 - b. Carefully inspect the coupling of the dolly to the forward trailer.
 - c. Check air tanks to ensure air is available for braking systems
 - d. Check the braking system and each set of brakes individually for prescribed adjustment and correct operation.
 - e. Visually check all lights while parking lights and emergency flashers are activated to ensure all lights operate properly.
4. Use safety cautions during operation of the vehicle, including:
 - a. Use a "spotter" when backing into tight or crowded areas to ensure the safety of persons and property. The driver must assume complete responsibility for the movement of the trailer and dolly combination.
 - b. Never operate any equipment until you have read and understand all safety labels attached to the dolly. Always comply with all safety instructions.
 - c. Never perform maintenance or inspection, climb onto or under a dolly or dolly and trailer configuration, unless it is properly secured on a solid and level surface.

Systems you should know:

The trailer's upper coupler and kingpin

A trailer's Upper Coupler transfers the weight of the front of the trailer to the Fifth Wheel Plate of the dolly. This heavy component incorporates the kingpin that is the key connection for the dolly/trailer connection. Maintaining both is vital for safe operation of any dolly/trailer combination.



Any damage to the upper coupler or kingpin and any fasteners to the adjacent trailer structure can compromise the structural integrity of the trailer. Never allow the dolly to be coupled and operated with a trailer until the trailer has had an inspection of the upper coupler and kingpin for damage. Report any damage immediately to your supervisor.

When repairs are required, a certified repair facility should use certified fasteners identical in both size and strength rating as used by the original equipment manufacturer. Any structural repairs to the upper coupler or installation of a replacement kingpin must be done with extreme caution to replicate the original structure.



Never operate a dolly/trailer configuration without first making a visual inspection to endure proper coupling and locking by the fifth wheel jaws. This visual inspection is required by law, as instances can occur when a pull test will not dislodge an improperly coupled trailer. Listening for the lock to close is insufficient as a test. A visual inspection is mandatory.

The dolly's fifth wheel

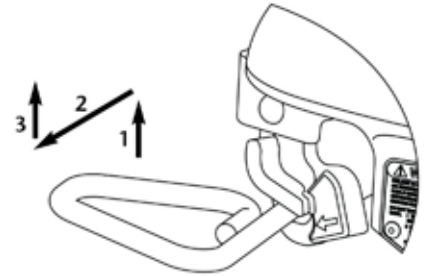
The dolly's fifth wheel is the point that couples the trailer's kingpin to the dolly. Silver Eagle Dolly Fifth Wheels are designated for use with standard SAE kingpins that are in good condition and are securely mounted or locked in position in the trailer. They are used for on-highway applications within the capacities stated on Silver Eagle literature. Maintaining the fifth wheel is vital for safe operation of any dolly/trailer combination.



The fifth wheel is an integral part of the Silver Eagle Converter Dolly. Failure to properly operate or maintain this fifth wheel may result in dolly/trailer separation, which, if not avoided, could result in death or serious injury.

Operating the Fifth Wheel — For Falcon and Condor Models:

1. Begin by inspecting the fifth wheel with every use and during every trip. Be certain to inspect the fifth wheel and mounting to ensure:
 - a. Fasteners, including the bracket pin retention bolts and lock nuts must be in place and tight.
 - b. Missing fasteners are replaced.
 - c. Any missing, cracked or otherwise damaged components are replaced with OEM repair parts.
2. Make sure the lock is open. To open the fifth wheel lock:
 - a. LIFT handle up
 - b. PULL handle all the way out
 - c. LIFT handle up to hook on to fifth wheel.
3. Tilt ramps downward toward rear of dolly



LIFT handle, PULL handle and LIFT again.



When locks are closed—fifth wheel is locked—the indicator arrow points directly to the release handle. Indicator “cups” or cradles the release handle when lock mechanism is closed. DO NOT attempt to couple when lock is closed! Attempting to couple the fifth wheel when lock is closed may result in damage to the fifth wheel.

Operating the fifth wheel — for Eagle models

1. Begin by inspecting the fifth wheel with every use and during every trip. Be certain to inspect the fifth wheel and mounting to ensure:
 - a. Fasteners, including the bracket pin retention bolts and lock nuts must be in place and tight.
 - b. Missing fasteners are replaced.
 - c. Any missing, cracked or otherwise damaged components are replaced with genuine Silver Eagle repair parts
2. Make sure the lock is open. To open the fifth wheel lock:
 - a. LIFT handle up

PULL handle all the way out. If the handle will not pull outward when the vehicle is in a relaxed condition, use landing gear to raise the trailer and unload the dolly fifth wheel.

- a. LIFT handle up to hook on to fifth wheel.



When locks are closed—fifth wheel is locked—the indicator arrow points directly to the release handle. Indicator “cups” or cradles the release handle when lock mechanism is closed. DO NOT attempt to couple when lock is closed! Attempting to couple the fifth wheel when lock is closed may result in damage to the fifth wheel.



To assure king pin capture, view the fifth wheel from its right side. A window will show the king pin is thoroughly locked. Do not attempt to drive without assuring capture of the kingpin in this window.

Safe Maneuvering of Converter Dollies

Converter dollies are heavy pieces of equipment and are not typically designed for manual movement by one person over long distances. Tandem axle dollies in particular cannot be steered by hand. If in doubt, seek assistance to lift or maneuver a dolly, or use powered equipment

1. Whenever possible, position the dolly within a foot or two of the front of the trailer to be towed with a tractor or yard truck.
2. Position the towing trailer within a foot or two of the dolly's eye.
3. This dolly, like most dollies, has a point where it will tip upward/backward. Be aware of this balance point.

General Safety

The most common injuries are pinched hands and lower back strains. Use safe work methods when handling your dolly:

1. Follow all OSHA regulations and guidelines for safe lifting practices.
2. Wear Gloves.
3. Do not hold the eye to move the dolly toward the hitch. Once a dolly starts rolling it is difficult to stop, and you can pinch or smash your hand when the eye meets the hitch. Other injuries are possible.
4. Lift with two points of contact.
5. Lift the dolly with the strength of your legs, not your back.
6. Use handles provided
7. Tongue "breakaway" weight may be reduced by repositioning the safety hooks rearward. Lift weight may also be reduced by dropping the hooks to the ground. Before using this practice make sure this will not interfere with the dolly's safe movement.
8. Avoid pulling sideways to move the dolly forward or back. Whenever possible, push from the hips with the body aligned forward as if walking normally.

Lifting Procedure

1. Release brakes by using the hostling valve. Brakes will release when the valve is pushed in and apply when pulled out. **Do not try to apply the brakes with the hostling valve while it is rolling. The tongue can rapidly rotate upward or downward causing injury. If your dolly is not equipped with a hostling valve, be certain to drain the air tank prior to attempting to move the dolly. If your dolly is a tandem axle dolly, only attempt to move with the use of a lifting machine or forklift.**
2. Position air lines, electrical connectors, and safety chains so that they do not interfere with lifting and maneuvering the converter dolly.
3. Using safe lifting practices: lift the dolly at the forward-most practical location on the drawbar (tongue) or use handles on sides of drawbar.
4. Having lifted the drawbar, reposition one hand under the handle at the side of the drawbar. At this point in the lifting procedure, one hand should be positioned on the handle and the other near the lunette eye.
5. Now it is safe to move the dolly. If moving toward the hitch, immediately move your forward hand to the handle or another part of the frame to keep hands away from any pinch points.
6. Move dolly keeping weight centered between feet, and use the hips for leverage whenever possible. **Note: Be sure to keep hands free from the drawbar eye area and avoid yard depressions which may cause the dolly to stop or twist suddenly.**
7. If the dolly is being parked, be sure the brakes are set and/or the wheels are chocked.



When moving the dolly, keep hands clear of the lunette eye.



At normal handling heights ranging from 31 inches to 34 inches from the ground, the converter dolly typically exerts a downward force ranging from 20 to 50 pounds. Dolly tip-over should occur only when the lunette eye is 37 inches or higher from the ground.

Proper Coupling and Uncoupling Operations

No dolly/trailer configuration should be operated unless it has been properly coupled and visually inspected. Prior to coupling or uncoupling, follow these inspection guidelines:

1. Thoroughly inspect the trailer's upper coupler, kingpin and landing gear for damage, excessive wear or corrosion.
2. Always ensure trailer parking brakes are engaged or wheels are well chocked before beginning the coupling process.
3. Place the lead trailer/dolly combination straight in front of the trailer as close to center as possible. Never approach the trailer from an angle, as you could damage landing gear.

Secure the second or rear trailer

If the second trailer does not have spring brakes, drive the tractor close to the trailer, connect the emergency line, charge the trailer air tank, and disconnect the emergency line. This will set the trailer emergency brakes if the slack adjusters are correctly adjusted. Chock the wheels.



For safe handling on the road, the more heavily loaded semitrailer must always be in the first position behind the tractor. The lighter trailer should be in the rear.

1. Position the converter dolly in front of the second or rear trailer:
 - a. Release the dolly brakes by opening the air tank petcock or by using the hostling valve.
 - b. If possible, wheel the dolly into position by hand so it is in line with the kingpin of the second trailer. If you are unable to move the dolly by hand, use a tractor to better position the dolly via the following:
 - I. Move dolly to rear of first semitrailer and couple it to the trailer
 - II. Lock pintle hook
 - III. Secure dolly support in raised position
 - IV. Pull dolly into position as close as possible to nose of the second semitrailer
 - V. Lower dolly support
 - VI. Unhook dolly from first trailer
 - VII. Wheel dolly into position in front of second trailer in line with the kingpin
2. Connect the converter dolly to the front trailer:
 - a. Back first semitrailer into position in front of the dolly tongue.
 - b. Hook dolly to front trailer:
 - c. Lock pintle hook
 - d. Secure converter gear support in raised position
3. Connect the converter dolly to the rear trailer:
 - a. Lock trailer brakes and/or chock wheels.
 - b. Make sure trailer height is correct. (It must be slightly lower than the center of the fifth-wheel so the trailer is raised slightly when the dolly is pushed under.)
 - c. Back converter dolly under rear trailer.
 - d. Raise landing gear slightly off ground.
 - e. Test coupling by pulling against pin of rear trailer.
 - f. Check coupling and locking jaws.
 - g. Connect safety chains, air hoses, and electrical cords.
 - h. Close converter dolly air tank petcock, and shut-off valves at rear of second trailer.
 - i. Open shut-off valves at rear of first trailer and on the dolly, if so equipped.
 - j. Raise the landing gear completely.
 - k. Charge trailers and check for air at the rear of the second trailer by opening the emergency line shut-off.



Never operate a dolly/trailer configuration without first making a visual inspection to ensure proper coupling and locking by the fifth wheel jaws. This visual inspection is required by law, as instances can occur when a pull test will not dislodge an improperly coupled trailer. Listening for the lock to close is insufficient as a test. A visual inspection is mandatory.

- a. Any visual inspection must include using a flashlight to ensure the fifth wheel jaws have closed completely encapsulating the kingpin shank.
- b. The locking lever is in the locked position.
- c. The upper coupler and fifth wheel are touching with no light between the two. **Coupling Twin Trailers**

Uncoupling double trailers



Uncouple trailers only on level and solid surfaces. Never attempt to uncouple a dolly from its lead trailer while the dolly is still connected to a trailer. First, remove the trailer from the dolly and then uncouple the dolly from the lead trailer.

1. Uncouple rear trailer:
 - a. Park rig in a straight line.
 - b. Apply parking brakes.
 - c. Chock wheels of the second trailer.
 - d. Lower the landing gear of the second semitrailer enough to remove some weight from the dolly.
 - e. Close air shut-offs at rear of the first semitrailer and on the dolly, if so equipped.
 - f. Disconnect all dolly air and electric lines and secure them.
 - g. Release dolly brakes.
 - h. Release converter dolly fifth-wheel latch.
 - i. Slowly pull tractor, first semitrailer and dolly forward to pull dolly out from under rear semitrailer.
2. Uncouple rear trailer alternative
 - a. Lower dolly landing gear (if equipped).
 - b. Disconnect safety chains.
 - c. Release pintle hook on first semitrailer.
 - d. Unhook dolly from first semitrailer.
 - e. Apply dolly brakes from first semitrailer.
 - f. Slowly pull clear of dolly.



Never unlock the pintle hook with the dolly still under the rear trailer. The dolly tow bar may fly up, possibly causing injury, and making it very difficult to re-couple.

Coupling and uncoupling triple trailers

1. Couple second and third trailers:
 - a. Couple second and third trailers using the method for coupling doubles.
 - b. Uncouple tractor and pull away from the second and third trailers.
2. Couple tractor/first semitrailer to second/third trailers:
 - a. Couple tractor to first trailer. Use the method already described for coupling tractor-semitrailers.
 - b. Move converter dolly into position and couple first trailer to second trailer using the method for coupling doubles. Triples rig is now complete.
3. Uncouple triple trailer rig:
 - a. Uncouple third trailer by pulling the dolly out, then unhitching the dolly, using the method for uncoupling doubles.
 - b. Uncouple remainder of rig as you would any double-bottom rig using the method already described.

Bobtailing

If you need to transport a dolly without a trailer coupled to its fifth wheel (bobtailing), you can accomplish it by following these procedures:

For dollies weighing less than 3000 lbs

Dollies weighing less than 3000 lbs must have their air and brake lines disconnected from the lead vehicle when being transported in a bobtailing configuration. Lights are required to be operational.

1. Disconnect service air line from the lead trailer.
2. Disconnect emergency air line from the lead trailer.
3. Drain all air from the air tank to ensure that no brakes will apply during the transit of an unladen dolly.



Do not rely on the hostling valve (if equipped) to keep the brakes released during the duration of the trip. Be certain to drain all air from the air tank to prevent the brakes from applying.

4. Connect the 7-way cable from the converter dolly to the lead vehicle to ensure lights are operational.

This meets the requirements of CFR 393.42 as the converter dolly is under 3000 pounds, and is less than 40% of axle weights of the towing vehicle. For the full CFR, see: <http://www.fmcsa.dot.gov/rules-regulations/administration/fmcsr/fmcsrruletext.aspx?chunkkey=090163348002391>.

For dollies weighing greater than 3000 lbs

Dollies weighing more than 3000 lbs must have their air and brake lines connected to the lead vehicle when being transported in a bobtailing configuration. Lights are required to be operational.

1. Connect service air line to the lead vehicle.
2. Connect emergency air line to the lead vehicle.
3. Connect the 7-way cable from the converter dolly to the lead vehicle to ensure lights are operational.
4. Ensure the service and emergency air lines for the rear trailer are attached to the dummy gladhand holders on the dolly frame.

Recommended Maintenance Schedule

Axle	
Every 1,000 miles	Check axle for oil levels and leaks
Every 5,000 miles or 30 days	Check and tighten axle seat bolts to 420 lbs./ft. torque.
Wheels	
First 50-100 miles	Check wheel nut torque at every dismount
Fifth Wheel	
Every 5,000 miles or every 30 days	Tighten fifth wheel leaf spring U-bolts
Every 6 months or 60,000 miles	Steam clean and verify proper operation
Every 6 months or 60,000 miles	Test and adjust fifth wheel locking mechanism
Draw Bar	
Every 5,000 miles or every 30 days	Inspect drawbar eye assembly and tighten shank nut as required. <i>NOTE: Tighten shank nut until shock absorber bushings bulge almost to outer edge of shock housing. Be sure to reconnect the shank nut safety wire after tightening shank nut.</i>
Overall Maintenance	
Every 5,000 miles or every 30 days	Tighten all fasteners as required. Replace any worn, stripped or missing fasteners with appropriate grade and strength.
Every 5,000 miles or every 30 days	Inspect all air lines and electrical cables for chafing, kinking, leakage or damage.

For additional information, please contact Silver Eagle Manufacturing Company directly at:

Silver Eagle Manufacturing Company

5825 NE Skyport Way

Portland, Oregon 97218

Phone: (800) 547-6792

Fax: (503) 335-2171

Web: www.SilverEagleMfg.com

Email: trans-sales@SilverEagleMfg.com

