

**Only**

**FONTAINE®**

**Gives You the No-Slack® Advantage**

# Instructions



## 3000 Series

- Installation Instructions
- Pre-Service Procedures
- Operating Instructions
- Inspection & Maintenance Procedures
- Warranty

**FOR YOUR SAFETY USE  
ONLY GENUINE FONTAINE  
SERVICE PARTS.  
USING NON-GENUINE  
PARTS VOIDS WARRANTY.**

Read before mounting or operating fifth wheel.

After fifth wheel is installed these important instructions must be permanently retained in the tractor glove box.

**WARNING:** Failure to follow these instructions could cause a hazardous operating condition.



## Fontaine® Fifth Wheel Handbook

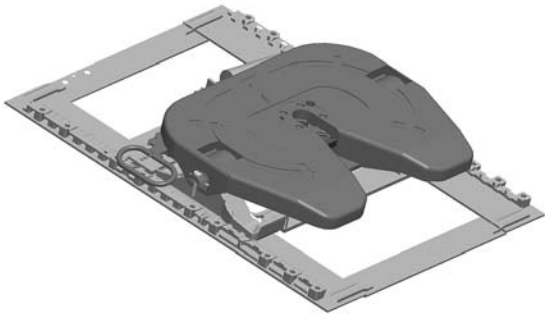
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For over 60 years, Fontaine has been passing customer performance tests by building fifth wheels with innovative technology, uncompromising quality, and features designed to ensure cost-efficient performance.

This handbook provides instructions and recommended procedures to ensure optimum performance from your new Fontaine 3000 Series fifth wheel. Included are: Installation Instructions, Pre-Service Procedures, Operating Instructions, Inspection and Maintenance Procedures, and Warranty Information. **Keep this handbook in the tractor glove box after your fifth wheel has been installed.**

If you have any questions concerning your new fifth wheel, our Customer Service Department is available to help you. (800) 874-9780.

For sales and service locations or for additional copies of this handbook go to our web site at [www.fifthwheel.com](http://www.fifthwheel.com).



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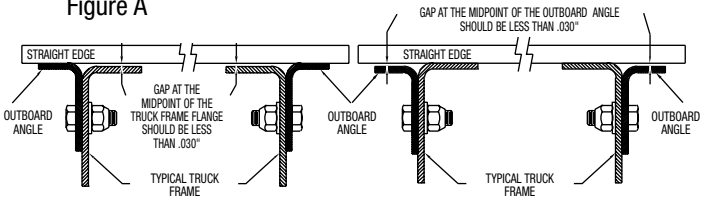
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# Installation Instructions

## General Mounting Instructions

1. **Do not** modify and/or customize any fifth wheel or mounting assembly without prior approval from Fontaine. Modifying or welding to the product without approval will void product warranty. Only Fontaine authorized procedures are acceptable. Welding must be performed by an AWS certified welder. **Note: The 3000 Series top plate is made of ductile iron.**
2. Installation shall be in accordance with DOT regulations, state and local ordinances, SAE and TMC practices and standards, and tractor manufacturers' recommendations.
3. All fifth wheels shall be located so that the tractor and trailer will maintain clearance at all times. On sliding fifth wheels, it may be necessary to "block out" forward slide positions.
4. All mounting fasteners must be a minimum of:  
5/8" (16.0mm) diameter - Grade 8 bolts  
5/8" (16.0mm) diameter - Grade C lock nuts  
5/8" (16.0mm) diameter - Hardened flat washers
5. Outboard mounting angles shall be ASTM-A-36 or equal with a minimum thickness of 5/16" (7.9mm).
6. Inboard mounting angles must have a 4" (101.5mm) minimum vertical and horizontal leg and shall not be less than 36" (913.7mm) long. (Stationary angle mounts only)
7. Outboard mounting angles must have a minimum horizontal leg of 3" (76.2mm) and vertical leg of 3-1/2" (88.8mm).
8. The full length, horizontal flange of the outboard mounting angles must be at the **same elevation** as the truck frame. The vertical leg of the angles must fit flush with the truck frame. **Warning: Failure to follow these specifications will void warranty and could effect product performance.** See Figure A.

Figure A



9. All mounting holes shall be drilled, not burned. All edges shall be ground smooth to prevent point loading.

10. When required to clear obstructions, cutouts in the mounting angles shall be smooth and straight with a minimum radius of 1" (25.4mm). No sharp corners are permitted and all edges shall be ground smooth. A minimum of two bolts is recommended beyond a cutout.

11. Care must be taken to avoid interference or contact between the fifth wheel and any other component when rear of fifth wheel is depressed. In order to prevent this, it is recommended that a stop be used. The stop should be positioned so that contact is made with the fifth wheel mounting plate.

12. Do not restrict normal rock of fifth wheel. This could create a hazardous operating condition.

13. All fifth wheels subjected to weather abuse must be thoroughly cleaned, inspected, and lubricated prior to installation.

14. Fifth Wheels should be mounted in the proper orientation relative to the tractor (See Figure B ).

**Do not** mount the fifth wheel upside down or backwards.

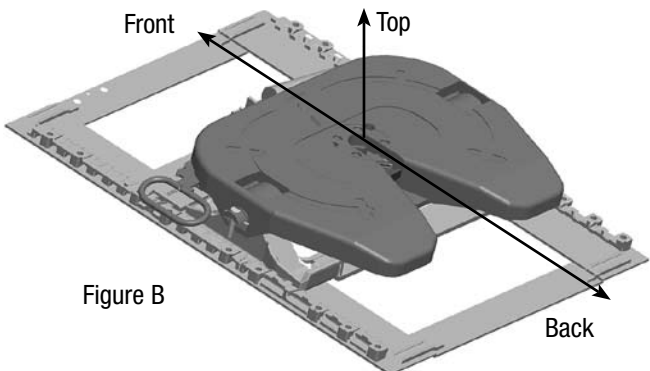


Figure B

## Fontaine® Fifth Wheel Handbook

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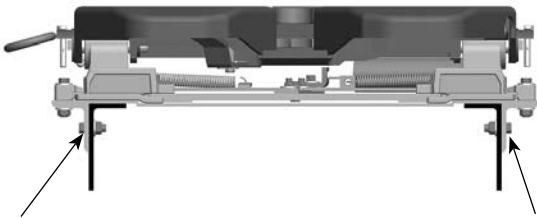
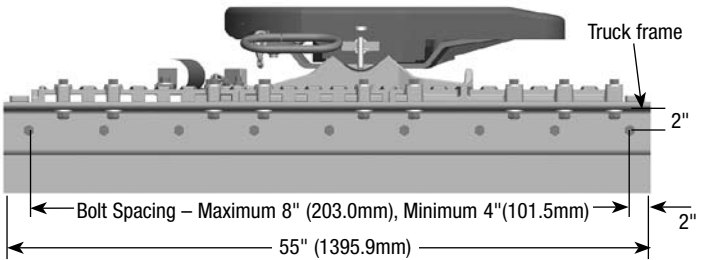
15. The trailer that is attached to the fifth wheel should impose a consistent vertical load. Repeated negative loading (trying to pull the fifth wheel off of the brackets with the kingpin) is not allowed. A **minimum** vertical static load applied to the fifth wheel through the trailer is 10% of the gross trailer weight.
16. **Do not** center load the fifth wheel. The vertical load should be distributed over the entire surface of the fifth wheel.
17. Fixed angle mounts (inboard angles) shall be flush with the top of the truck frame. (No gap between the truck frame and the angle). See Figure A on page 5.
18. **Do not** attempt to “block” 3000 series fifth wheels. A production “blocked” fifth wheel specifically designed for this application is available.

## Air and Manual Slide Bracket (ASB/MSB)

(Air Slide shown)

Adjustment of 24" mounting slide shown. Assemblies with greater adjustment require longer angle and additional mounting bolts. See suggested price list for angle sizes and lengths available. The full length of the horizontal flange of the outboard mounting angles must be at the **same elevation** as the truck frame. The vertical leg of the angle must fit **flush** with the truck frame.

See Figure A on page 5.



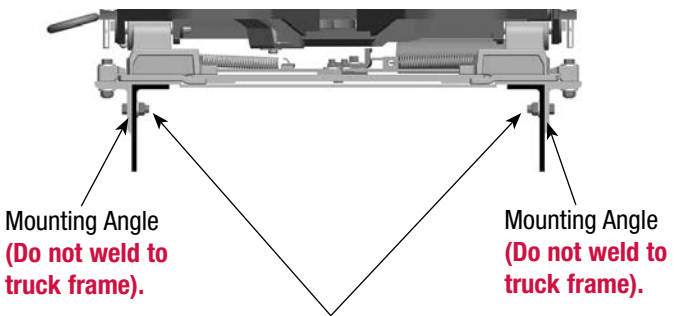
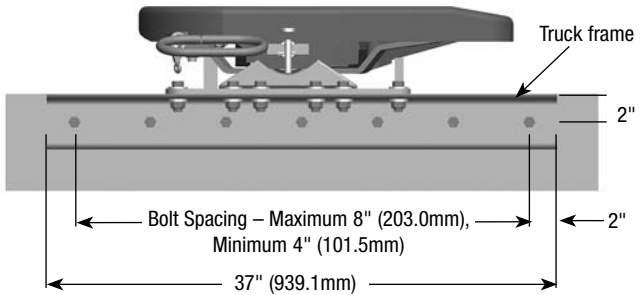
Mounting Angle  
**(Do not weld to truck frame).**

All mounting hardware must be a minimum of: 5/8" (16.0mm) Grade 8 bolts, Grade C locknuts with hardened steel washers, tightened to 90-122 ft. lbs

# Fontaine® Fifth Wheel Handbook

## Stationary and Adjustable Mounting Bracket (SMB/APB)

Mounting of 18" Adjustable Mounting Bracket shown. See suggested price list for angle sizes and lengths available. The full length of the horizontal flange of the out-board mounting angles must be at the **same elevation** as the truck frame. The vertical leg of the angle must fit **flush** with the truck frame. See Figure A on page 5.



All mounting hardware must be a minimum of: 5/8" (16.0mm) Grade 8 bolts, Grade C locknuts with hardened steel washers, tightened to 90-122 ft. lbs



## Section II – Pre-Service Procedures

### A. Fasteners

Make sure all nuts and bolts are in place and properly tightened.

Check all welds for cracks, breaks or separation.

Check to see if both bracket pins are in place and secured by retainer pins and cotter pins.

See Figure C and D.

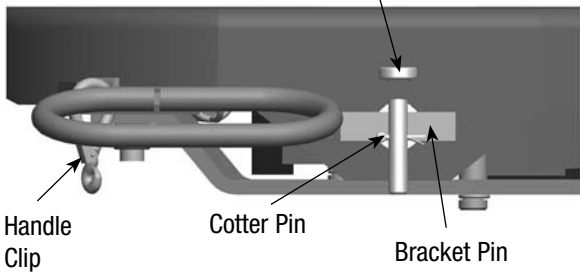
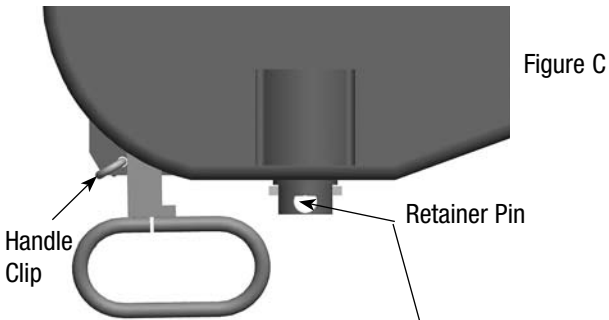


Figure D

## B. Lubrication

1. Inspect the trailer kingpin plate and top surface of the fifth wheel to make sure each is properly greased. A liberal coating of grease should be applied to the complete surfaces of both the trailer kingpin plate and the top surface of the fifth wheel. A paddle or brush will make this job easier.

**Do not use a lube plate (high density polyethylene) on top of the fifth wheel or kingpin bolster plate in lieu of grease without prior approval by Fontaine.** The additional thickness of this material can prevent the proper operation of the fifth wheel and can cause a dangerous condition.

2. Lubricate the fifth wheel lock prior to opening and closing. Referring to Figure E, grease the jaw and lockbar (wedge) on top and bottom. Separate the jaw and lockbar (wedge) with a large screwdriver and distribute the grease along the full length of the jaw and lockbar (wedge) mating surfaces. Open and close the fifth wheel several times to further distribute the grease. See Figure E.

Lightly oil other moving parts in the fifth wheel.

3. For sliding fifth wheels, lightly oil the slide locking mechanism. Operate the mechanism several times to ensure it is functioning properly.

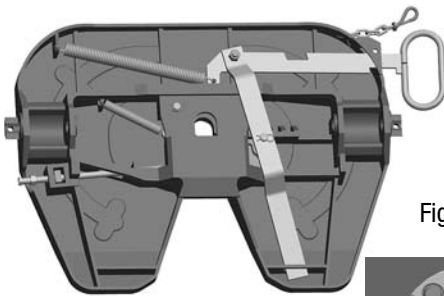
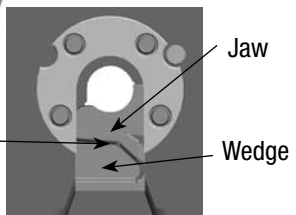


Figure E

Separate Jaw  
and Wedge.  
Grease full  
length.



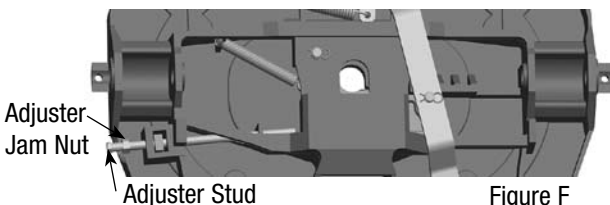
## C. Operation

1. Fontaine's 3000 Series fifth wheel opens by removing the handle clip, moving the pull handle slightly forward and pulling straight out until maximum opening stroke is achieved. At this point, the pull handle should again be moved slightly forward until the handle cut out sets up on the handle block located on the fifth wheel skirt.
2. Close the locking mechanism using a test kingpin or 2" (50.8mm) diameter pipe. Repeat several times making sure that all moving parts have adequate lubrication.
3. The pull handle grip should always be free of grease or any substance which could prevent a firm grip, causing the handle to slip and possibly resulting in injury.

## D. Adjustment Procedure

1. With the wheel in the closed position, loosen the adjuster jam nut and turn the adjuster stud counter clockwise (outward) until it is free from touching the end of the lockbar (wedge).
2. Insert a test kingpin or 2" (50.8mm) diameter shaft to ensure the locking mechanism is completely closed.
3. Turn the adjuster stud clockwise (inward) until it contacts the end of the lockbar (wedge). Now turn the adjuster stud clockwise (inward) an additional three complete revolutions. This will give the recommended .02" (0.525mm) running clearance. See Figure F.
4. Tighten the adjuster jam nut.

**Improper adjustment can cause the mechanism to bind and/or wear prematurely.**



## Section III – Operating Instructions

### COUPLING PROCEDURE:

1. Prior to coupling, inspect the fifth wheel to ensure a proper operation.
  - Examine the mounting assembly for securely fastened bolts, cracked welds or material separation.
  - Tilt the fifth wheel up and down to make sure that it moves freely. Rest the fifth wheel in the proper position by tilting it to the rear of the tractor and resting it on the stops.
  - Check the top surface of the fifth wheel for a liberal coating of grease.
  - If the tractor is equipped with an air sliding fifth wheel, actuate the air cylinder and check for air leaks. **WARNING: Air cylinder should not be disassembled as contents are under pressure.**
  - The fifth wheel should be in an unlocked position (See Figure G). When unlocked, the handle should be extended and the tips of the jaw and lockbar (wedge) visible. **DO NOT TRY TO COUPLE TO A CLOSED FIFTH WHEEL.**

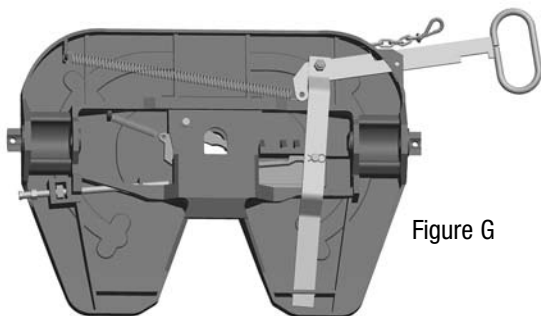


Figure G

2. The trailer kingpin should be inspected prior to coupling. The kingpin plate should be fully reinforced and of sufficient size to completely cover the fifth wheel. If the kingpin plate is too narrow, the uncovered portion of the fifth

wheel will collect dirt and foreign matter. This material may work into the fifth wheel locking mechanism, causing wear and difficulty uncoupling. This material can also cause galling of the fifth wheel and/or kingpin plate.

If the trailer kingpin plate is not fully reinforced, distortion can result causing:

- Non-uniform loading
- Variation in kingpin length
- Cutting and galling of the fifth wheel or kingpin plate

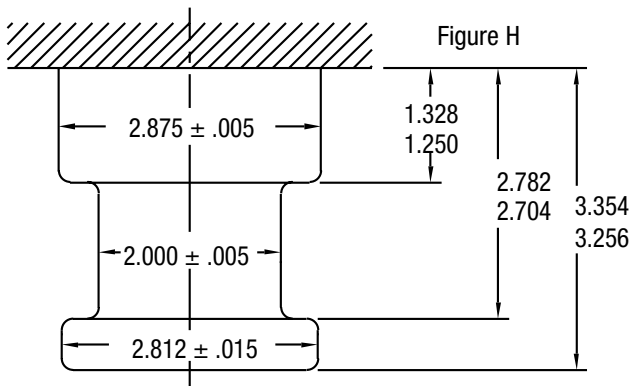
If the trailer kingpin plate is distorted enough to cause any of the conditions listed above, it is recommended that a new plate be installed.

The trailer kingpin plate must be properly greased.

Fontaine Fifth Wheels are designed and manufactured for use with all trailer kingpins that conform to SAE specifications, SAE J700, February 1993, and subject to the wear limits of SAE J2228, June 1993. These specifications cover SAE 2" (50.8mm) kingpins only.

The SAE standard kingpin can be checked using the dimensions given in Figure H.

### SAE STANDARD KING-PIN (SAE J700, FEB 93)



All dimensions in inches

3. Proper tractor/trailer alignment is critical to obtain a secure coupling and to avoid equipment damage.

Set the trailer brakes and raise the trailer to the proper height by extending the landing legs. If the trailer is positioned too high, the kingpin may jump the fifth wheel throat and locking mechanism altogether. Resulting damage may include: scoring the fifth wheel, bending the handle thus preventing the fifth wheel from properly locking to the kingpin, bending the kingpin, and other significant damage to the tractor or trailer.

Coupling should not be attempted if the trailer is too low. Costly damage may be incurred to the trailer, the kingpin, the kingpin plate, the fifth wheel, tractor drivetrain and truck frame.

4. To couple the fifth wheel to the kingpin, be sure the fifth wheel is positioned so that it tilts down at the rear and is resting on the stops.

Align the kingpin with the throat of the fifth wheel and ease the tractor toward the trailer. The trailer should strike the fifth wheel just at the top of the approach ramps. The fifth wheel will level with the kingpin plate and the kingpin should slide into the fifth wheel throat.

Coupling is complete when the fifth wheel locking mechanism snaps closed behind the kingpin and the handle clip is properly installed by the driver (See Figure H next page).

Verify secure coupling with a “tug test,” by easing the tractor forward to feel resistance of the load. If the coupling feels secure, visually inspect the fifth wheel. **The jaw and lockbar (wedge) must be locked in place behind the kingpin and the pull handle must be fully retracted and secured in place using the handle clip** (See Figure H next page).

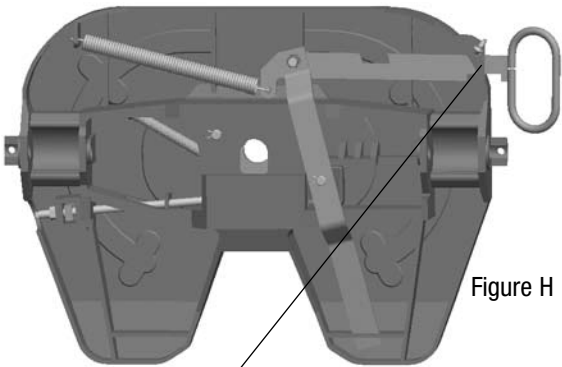
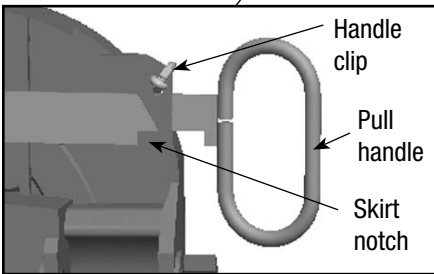


Figure H



Note: Pull handle must be fully retracted behind skirt notch and secured in place using the handle clip.

5. To position an air sliding fifth wheel, set the trailer brakes, unlock the cab control air valve and allow the air cylinder to retract the locking wedges. Ease the tractor forward or backward to move the fifth wheel to the desired position and lock the air valve. **Note: The fifth wheel must be in the locked position when changing slide positions.**

After the fifth wheel is properly positioned, inspect the locking wedges to ensure that they are fully engaged in the slide rail pockets.

**Under no circumstances should a sliding fifth wheel be repositioned while the tractor and trailer are in motion.**

**Do not attempt to slide the fifth wheel until all persons are clear of the vehicle.**

### UNCOUPLING PROCEDURE:

1. Prior to uncoupling, set the trailer parking brakes. Back the tractor gently but tightly against the trailer before setting the tractor parking brake. This will help relieve pressure from the fifth wheel locking mechanism.

**IF THE TRUCK IS EQUIPPED WITH AIR RIDE SUSPENSION, DO NOT DUMP THE AIR BEFORE OPENING THE FIFTH WHEEL. DOING SO MAY CAUSE A HARD TO OPEN SITUATION.**

2. Block the trailer wheels. If poor ground conditions exist, you may have to provide a base for the trailer landing gear.
  - Spring Suspension: lower landing gear until it contacts the ground. Give a few extra turns in low gear. **DO NOT** lift the trailer off of the fifth wheel.
  - Air Ride Suspension: lower landing gear until it contacts the ground. Add one additional turn. **DO NOT** raise the trailer off of the fifth wheel.
3. Disconnect the air and electrical lines.
4. Remove the handle clip and open the fifth wheel.
5. Pull out slowly from under the trailer. Let the trailer slide down the fifth wheel approach ramps. This will allow the air ride suspensions to adjust to unloaded height. **CAUTION: GOING TOO QUICKLY WILL CAUSE THE SUSPENSION TO BOUNCE, POSSIBLY DAMAGING THE TRAILER, TRACTOR FRAME RAILS OR SUSPENSION AIR BAGS.**



## **Section IV – Inspection and Maintenance Procedures**

### **Lubrication**

**Recommended every 6 weeks or 15,000 miles**

Follow the instructions provided in the Pre-Service Procedure, section B, on page 10 of this handbook.

Special precautions must be taken during cold weather to ensure that the Fontaine 3000 Series locking mechanism operates freely. Ice and sludge can build up and lubricants become thick and binding at low temperatures.

When the temperature drops below freezing, Fontaine recommends use of a cleaner or degreaser on the latching mechanism, making sure that the moving parts operate freely. This should be followed by an application of 90-weight oil to all moving parts. This procedure may also be necessary in operations where excessive road grime or grit is encountered.

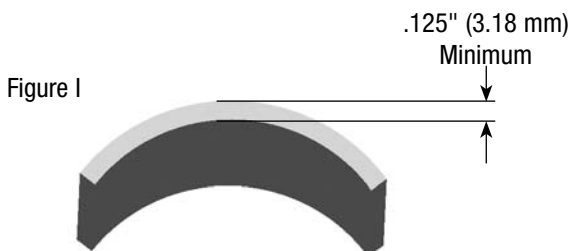
### **Inspections and Adjustments**

**Perform every 90 days or 30,000 miles**

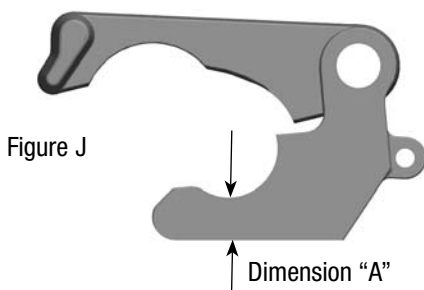
Using a suitable solvent, degrease the fifth wheel and mounting brackets and inspect for:

1. Cracks in the fifth wheel assembly, mounting brackets, and mounting parts.
2. Wear and/or damage to moving parts.
3. Correct placement of the handle clip.
4. Loose nuts and bolts in the fifth wheel and in the mounting hardware.
5. Securely fastened and properly working springs.
6. Check to see if both bracket pins are in place and secured by retainer pins and cotter pins.

7. Replace liners that are broken or have worn excessively, or, if the thickness is less than .125" (3.18 mm) at the top of the liner. See Figure I. Replace liners every 300,000 miles.



8. Check the locking jaw. If dimension "A" is less than 0.8" (20.25mm) replacement of the jaw and lockbar (wedge) is required. See Figure J.



Check the fifth wheel operation and adjustment. Using a test kingpin or 2" (50.88mm) diameter pipe, follow the instructions provided in the Pre-Service Procedure, section C and D, on page 11 of this handbook.

## **Section V – 3000 Series Limited Warranty**

### **Basic Limited Warranty**

Fontaine International, Inc. (Fontaine) warrants each 3000 series fifth wheel to be free from defects in material and workmanship for five years from date of sale, but does not cover failures due to:

1. Use with loads greater than the rated fifth wheel capacity.
2. Use in loads that are beyond federal, state and provincial highway limits, or in special overweight load permits.
3. Improper installation of fifth wheel (see the Fontaine 3000 Series Instruction Handbook for proper installation procedures – booklet LT-103).
4. Normal wear.
5. Accident.
6. Improper application.
7. Misuse, alteration or negligence.
8. Failure to properly maintain the fifth wheel (see the Fontaine 3000 Series Instruction Handbook for proper installation procedures – booklet LT-103).
9. Inadequate repairs or alterations that, in Fontaine's judgment, adversely affects the fifth wheel's performance or reliability.

Fontaine cannot guarantee the service life of any fifth wheel since service life can vary with application, usage, maintenance, environment, and other factors beyond Fontaine's control.

### Limited Performance Warranty

Fontaine warrants the performance of each 3000 series fifth wheel that is used in a “standard duty application,” for five years from the date of sale.

A “standard duty application” requires that (i) the vehicle is used 100% on highways with more than 30 miles (48.3km) between each stop, (ii) the vehicle does not exceed a gross combined vehicle weight of 95,000 lbs. (43,000 kilograms), (iii) the total number of towed axles does not exceed two and (iv) the road type is maintained concrete or asphalt.

Fontaine warrants that each fifth wheel covered hereunder shall operate as described in the Fontaine Instruction Handbook, and the locking mechanism (rotating locking jaw and locking wedge) will wear properly on the trailer kingpin when the fifth wheel is adjusted in accordance with the manufacturers specifications (see LT-103 Handbook).

Fontaine wheels are designed and manufactured for use with SAE 2” (50.8mm) trailer kingpins that conform to SAE specification (SAE J700, February 1993) and are subject to the wear limits of SAE specification (SAE J2228, June 1993).

### Replacement of Parts and Repairs

Authorization from Fontaine must be obtained before replacing or returning any part under this Limited Warranty. **All requests for reimbursement must be submitted within 45 days of the repair.**

If the fifth wheel does not perform as warranted in this Limited Warranty, or if there is any defect in the material or workmanship covered by this Limited

Warranty, Fontaine will, at its option, provide buyer with parts or reimburse the buyer for parts at its reasonable acquisition cost, up to the amount of the original suggested retail price. Further, Fontaine will cover labor cost in repairing the fifth wheel as long as the labor rate is reasonable and the repair time does not exceed Fontaine's Standard Rate Time chart. Fontaine may require the unit or part to be returned to Fontaine's factory or a Fontaine authorized representative for evaluation. All freight to and from Fontaine or a Fontaine authorized representative must be prepaid.

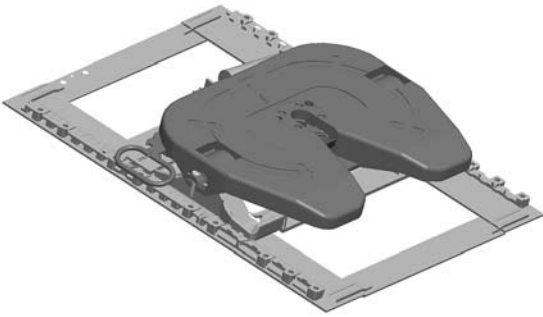
**This is Fontaine's only warranty. Fontaine makes no other warranty of any kind, expressed or implied. All implied warranties or merchantability and/or fitness for a particular purpose are hereby disclaimed by Fontaine and excluded.** This Limited Warranty may not be changed except in writing by an authorized officer of Fontaine. Any action for any alleged breach of this Limited Warranty must be commenced within one year after such alleged breach occurred or shall be forever barred.

The remedies stated above shall be exclusive for any and all claims by the original user, or anybody claiming through the original user, against Fontaine, whether based on contract, negligence, tort, or any other theory. **In no event shall Fontaine be liable for any incidental or consequential damages, losses, or expenses.**

This limited warranty gives the buyer specific legal rights, and buyer may also have other rights, which may vary depending on the state, province or country where the truck is registered.

*Note: This warranty is subject to revision without notice.*

**For sales and service locations or for additional copies of this handbook go to our web site at [www.fifthwheel.com](http://www.fifthwheel.com) or contact Customer Services at 1-800-874-9780.**







Fontaine Fifth Wheel

[www.fifthwheel.com](http://www.fifthwheel.com)