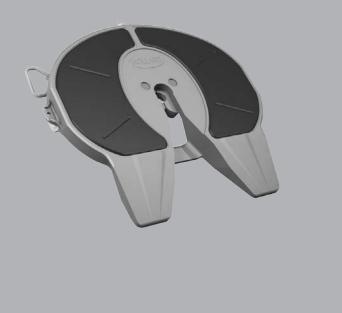


### **Owners Manual**

### FW33 and XA-331 LowLube Series Fifth Wheels

- Installation
- Operation
- Maintenance Procedures
- Comprehensive Warranty





XL-FW484 Rev E

### Notes, Cautions, and Warnings

You must read and understand all of the safety procedures presented in this manual before starting any work on the SAF-HOLLAND product.

**NOTE:** In the United States, work shop safety requirements are defined by federal and/or state Occupational Safety and Health Act or equivalent laws in other countries. This manual is written based on the assumption that OSHA or other applicable employee safety regulations are followed by the location where work is performed.

Proper tools must be used to perform the maintenance and repair procedures described in this manual. Many of these procedures require special tools.

Throughout this manual, you will notice the terms "**NOTE**", "**IMPORTANT**", "**CAUTION**", and "**WARNING**" followed by important product information. So that you may better understand the manual, those terms are as follows:

**NOTE:** Includes additional information to enable accurate and easy performance of procedure.

**IMPORTANT:** Includes additional information that if not followed could lead to hindered product performance.

CAUTION

Used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, may result in property damage.



Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

### Fifth Wheel Design and Intended Use

- 1. For pulling trailers with standard SAE kingpins which are in good condition and securely mounted or locked in position in the trailer.
- 2. For on-highway hauling applications.
- 3. Within the capacities stated in SAF-HOLLAND literature.
- 4. As recommended in SAF-HOLLAND literature (available from www.safholland.us).

### Holland Fifth Wheels are NOT Designed or Intended For

- 1. Use with non-SAE kingpins, such as kingpins which are bent, improper size or dimensions, not secured to maintain SAE configuration, or which are installed in warped trailer bolster plates.
- 2. Tow-away operations which damage or interfere with the proper operation of the fifth wheel.
- 3. The attachment of lifting devices.
- 4. The transport of loads in excess of rated capacity.
- 5. Off-highway applications and use.
- 6. Applications other than recommended.

### Installation

### **General Recommendations**

- Every user and installer using SAF-HOLLAND products either recommended or not recommended by SAF-HOLLAND, must thoroughly satisfy himself that the installation procedure used is appropriate for the vehicle, product and application.
- 2. Consult the SAF-HOLLAND literature for fifth wheel capacities and applications.
- Consult the tractor manufacturer's body builder's book and the latest SAE and D.O.T. standards for additional installation methods. SAF-HOLLAND recommends the *T.M.C. Recommended Maintenance Practice 603B* for installation procedures.
- 4. Determine the proper fifth wheel position, or, in the case of a sliding fifth wheel, the range of proper positions. Proper positioning of the fifth wheel is important for weight distribution, swing clearance and handling characteristics. See SAE J701a for proper placement, as well as the tractor manufacturer's body builder's book.
- 5. Use only new Grade 8, 5/8" minimum diameter bolts and new Grade "C" locknuts in all mounting holes.
- Bolt holes can be 1/32" larger in diameter than the bolt fastener. Bolts must be adequately tightened using charted torque ranges in foot-pounds for the recommended Grade 8, 5/8" diameter bolts. Larger diameter Grade 8 bolts and coated fasteners may be used.
- The bolts attaching the fifth wheel mounting angles to the truck frame require hardened steel washers under both the bolt and under the locknut, unless flanged head bolts or flanged head locknuts are employed.
- 8. A minimum of 5 bolts are required to attach each stationary mounting angle and a minimum of 6 bolts are required to attach a sliding fifth wheel frame rail, and the distance between bolts must not exceed 8", except when cutouts are required in the mounting angles. When attaching an outboard angle to the fifth wheel slide plate, all mounting holes are to be used on each side.
- 9. Whenever a cutout is made on the mounting angle, such as required to bypass spring hangers, a 1<sup>°</sup> minimum radius should be used and bolts should be placed within 1-1/2<sup>°</sup>, but not closer than 1<sup>°</sup> of the cut, fore and aft.
- 10. The mounting angle should have a minimum thickness as shown in *TABLE 1* and should be steel specification ASTM A 36.
- 11. When initially positioning the fifth wheel for frame holes, the full length of the fifth wheel or slider mounting angles should seat flush on the top and side surface of the truck-tractor frame rails where channel-type rails are employed. There should not be a gap over the top of the truck frame rails. The base of the fifth wheel assembly and of the mounting angle members should seat flush on the top of the frame rail to prevent flexing and to give uniform weight distribution. It is also recommended to chamfer or smooth sharp edges and corners

TABLE 1		
Fifth Wheel Vertical Capacity	Minimum Mounting Angle Thickness	Minimum Mounting Plate Thickness
12,000 lbs.	1/4″	1/4″
20,000 lbs.	5/16″	1/4″
40,000/45,000 lbs.	5/16″	5/16″
50,000/55,000 lbs.	3/8″	3/8″
62,500/70,000 lbs.	1/2″	1/2″
100,000 lbs.	3/4″	3/4″
165,000 lbs.	3/4″	1″

of mounting materials wherever contact is made with the tractor frame.

12. If the fifth wheel is to be mounted using a mounting plate (bracket with mounting base), refer to TABLE 1 for minimum plate thickness recommendations.

**WARNING** Do not use U-bolts in fifth wheel installations. Use only new Grade 8, 5/8" minimum diameter bolts and new Grade C lock nuts in all mounting holes. Failure to do so may result in structural failure of the installation with a potential loss of the fifth wheel assembly, mounting structure, and/or trailer and could result in death or serious injury.

- 13. Trailer pick-up ramps are recommended at the rear of the truck-tractor frame.
- 14. When mounting to aluminum frames, follow the tractor manufacturer's recommendations. SAF-HOLLAND has available a stationary mounting angle intended for use with aluminum frames. Contact SAF-HOLLAND or distributors of Holland brand products for availability.
- 15. Review, in addition, the specific information on the following pages for each type of fifth wheel mounting, as well as *"Inspection and Lubrication Prior to Use"* on page 8 of this publication.

### **INSTALLATION INSTRUCTIONS** continued

NOTE: The full length of the fifth wheel mounting angle should seat flush on the truck frame to prevent flexing of mounting angle and to give uniform weight distribution along truck frame rail.

### **Stationary Fifth Wheel Installation**

Prior to proceeding with the installation of the stationary fifth wheel assembly, carefully review the "General Safety Information" section on page 2.

### **Bracket with Mounting Angle**

(see Figure 1A, 1B, and 1C):

- 1. Holland brackets with mounting angle are provided with the bracket welded in the center of a 36" long angle with a 4" minimum horizontal and 3-1/2" minimum vertical leg size, and to a specific tractor frame width. Verify that the bracket and tractor frame width are the same.
- In addition to the information. given in "Installation: General Recommendations" on page 3, follow the recommendations in FIGURE 1.

### Bracket for Angle Mounting

(see Figure 1A, 1B, and 1C):

- 1. Holland brackets for angle mounting are intended to be welded to mounting angles at the time of installation.
- 2. See "Installation: General Recommendations" on page 3, for angle thickness and material (use 4" minimum horizontal and 3-1/2" minimum vertical leg size). The

đ lock nuts (5/8" diameter Grade "C" See Table 1 lock nuts). for minimum HDN. STEEL WASHERS TRUCK FRAME R mounting angle thickness FIGURE 1A (End View) 18.00<sup>~</sup> MIN (457.2 mm) BOTH SIDES  $\sum_{1/4}$ 1/2" DOUBLE PASS MIN BOTH ENDS Ψ ሐ ሐ 1.00" MIN 00" - 8.00" MAX. TYP. - 0.8mm) (203.2mm) 8.00\* - 8.00" -36.00<sup>°</sup> MIN (914.4mm) FIGURE 1B (Side View) FIGURE 1C GAP (Cast Brackets Only) 1/4" - 1/2" in 4 places WELDING DETAILS Both ends continuous> 5/16"

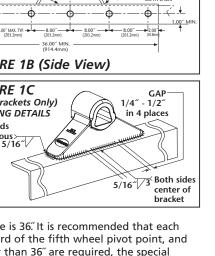
5/8" diameter Grade 8 bolts

minimum size, tightening torque to bolt manufacturer charts

Hardened steel washers or flanged

recommended length of each mounting angle is 36." It is recommended that each angle extend a minimum length of 18" forward of the fifth wheel pivot point, and not less than 12" to the rear. If angles shorter than 36" are required, the special recommendations of the tractor manufacturer should be obtained.

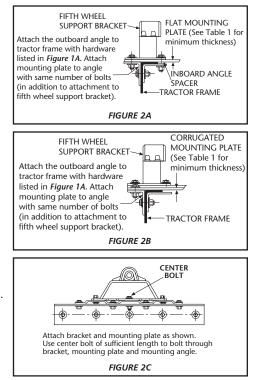
- 3. In addition to the information given in "Installation: General Recommendations." follow the recommendations given in FIGURES 1A, 1B, and 1C. The following sequence is suggested for both fabricated and cast brackets:
  - A. Securely position the mounting angle to the tractor frame.
  - B. Bolt the angles to the tractor as shown in FIGURES 1A and 1B.
  - C. Position the brackets on the angles and verify the correct spacing to mount the fifth wheel.
  - D. For fabricated brackets (a welded asssembly), weld the bracket to the mounting angle with 1/4" fillet welds on both sides, and 1/2" groove welds on both ends, as shown in FIGURES 1A and 1B. The welds should be continuous around the bracket and joined at the corners.
  - E. For cast brackets (single piece), weld with 5/16" fillet weld, as shown in FIGURE 1C. The welds must be continuous around the bracket ends.



### Stationary Fifth Wheel Installation continued

### Bracket with Mounting Base (See Figures 2A, 2B, and 2C):

- Holland brackets with mounting base are intended for installation on either corrugated or flat mounting plates.
- In addition to the information given in "Installation: General Recommendations," on page 3, follow the recommendations in FIGURES 2A, 2B, and 2C.
- See "Installation: General Recommendations" on page 3 for angle thickness and material. The mounting angle should be 1" longer than the mounting plate, and be 36" minimum length. Use 3" minimum horizontal and 3-1/2" minimum vertical leg size. Longer horizontal legs may be required with narrow frame widths.



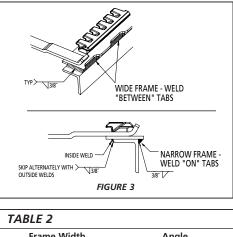
### Sliding Fifth Wheel Installation - ILS Slider

Prior to proceeding with the installation of the sliding fifth wheel assembly, carefully review the "General Safety Information" section on page 2.

### Inboard Angle Mounting

(See Figures 3 and 4):

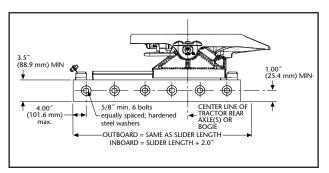
- Angles must be installed on the sliding fifth wheel base plate plate to facilitate mounting. See "Installation: General Recommendations," on page 3, for angle thickness and material.
- Use a mounting angle which is at least 2" longer than the slide base, 36" minimum length, and 3-1/2" minimum vertical leg size. For horizontal leg size, see TABLE 2. The fifth wheel top may be removed from the base plate for ease of handling.
- Position the angles on the slide plate for the required frame width. Be sure to keep the plate centered left to right, and front to rear on the mounting angles.
- Weld as shown in *FIGURE 3*. Outside welds to have a 3/8" fillet weld placed either on or between the tabs, depending on frame



Frame Width Dimension (Inches)	Angle Horizontal Leg Size (Inches)
33-1/4″ - 33-1/2″	3″
33-5/8″ - 34-1/2″	3-1/2″
34-5/8″ - 35″	4″

width. Inside welds to be  $3/8^{"}$  fillet skip weld alternating with the outside welds so that they are staggered along the angle. Also weld the fifth wheel base plate to the top of the angle at the ends of the plate as shown in *FIGURE 3*.

- 5. Attach the slider plate and mounting angles to the tractor using recommendations in *"Installation: General Recommendations,"* on page 3 and in *FIGURE 4*.
- 6. Reassemble the fifth wheel top plate to the slider base plate, if it was removed previously.

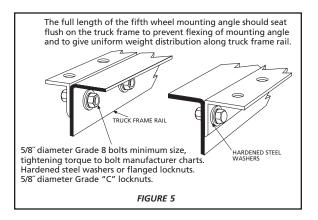


### Sliding Fifth Wheel Installation - ILS Slider continued

### **Outboard Angle Mounting**

(See Figure 5):

- If angles are not installed, see "Installation: General Recommendations," on page 3, for thickness and material. Use 3" minimum horizontal and 3-1/2" minimum vertical leg size. Longer horizontal legs may be required with narrow frame widths. The recommended length of each mounting angle is the same length as the slide base mounting plate.
- In addition to the information given in "Installation: General Recommendations," on page 3, follow the recommendations in FIGURE 5. The following sequence is suggested:
  - A. Securely position the mounting angles to the tractor frame and attach as shown in *FIGURE 5*. Follow the bolting recommendations as shown in *FIGURE 4*. Angles must be flush with the top of the truck frame.
  - B. Locate the slide base and center left to right and front to rear on the mounting angles. Clamp in place and drill 21/32<sup>°</sup> diameter holes using the mounting plate as a template if holes are not provided in the angle.
  - C. Align holes in the slide plate with outboard angle mounting holes and bolt using Grade 8 fasteners, hardened steel washers and Grade C locknuts, properly tightened, (see *FIGURE 5*). Use all mounting holes on the fifth wheel.



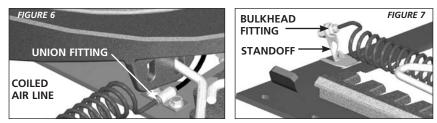
### **INSTALLATION INSTRUCTIONS** continued

### Attachment of Air-Activated Slide Release – If Required

- 1. Mount the cab control valve in accordance with the instructions provided. It should be readily accessible to the driver, but protected to prevent accidental activation.
- 2. Attach an air line, using appropriate fittings to the "air" or "in" port of the valve. Use an air source recommended by the tractor manufacturer. Use fittings and lines of suitable pressure rating.
- 3. Make sure that the air supply to the fifth wheel and slide base is turned off.
- 4. Remove any masking that may be present on the bulkhead and union fittings.
- 5. Connect the coiled air line by pushing it into the union fitting as shown in *FIGURE 6.*
- 6. Connect the other end of the coiled air line by pushing it into the bulkhead fitting on the standoff as shown in *FIGURE 7.*

**NOTE:** If there are any undesired line interferences, there is an optional hole in the standoff that the bulkhead fitting can be mounted in.

7. Turn on the air supply to the fifth wheel and slide base; check for proper function.



### **Inspection and Lubrication Prior to Use**

- 1. Review the installation. Be sure all nuts and bolts are in place and properly tightened. Be sure all necessary steps were properly followed and that all components removed to facilitate installation are reinstalled.
- Check the fifth wheel locking mechanism with a Holland TF-TLN-5001 (2<sup>°</sup>) or TF-TLN-1500 (3-1/2<sup>°</sup>) Lock Tester. Examine for proper locking as described in the "Operating Instructions" of this manual. This must be done to assure that the mechanism has not been damaged by shipment, handling, or storage.

### 

Failure to properly install, operate, or maintain this fifth wheel may result in tractor and trailer separation which, if not avoided, could result in death or serious injury.

- 3. Apply grease to the bearing surface of the support bracket through the grease fittings on the side or front of the fifth wheel pockets. The top plate must be lifted up slightly to ensure proper application of grease. (NOTE: This is not required on Holland LowLube and NoLube top plates.)
- 4. Apply a generous coating of grease to the top of the fifth wheel plate, where it will contact the trailer plate. (**NOTE:** This is not required on Holland LowLube and NoLube top plates.)
- 5. Apply a generous coating of grease to the front lock and lock jaws.

### **OPERATING INSTRUCTIONS**



Failure to properly install, operate, or maintain this fifth wheel may result in tractor and trailer separation which, if not avoided, could result in death or serious injury.

### **Fifth Wheel Inspections**

- 1. Inspect the fifth wheel and mounting.
  - Confirm that the lube plates are in place and firmly attached.
  - Tighten loose fasteners.
  - Replace missing fasteners.
  - Repair/replace missing, cracked or otherwise damaged components.



- For sliding fifth wheels, make sure both plungers are fully engaged (see Page 14).
- 2. Make sure the lock is open. To open the lock, pull the release handle all the way out. If Air Release equipped, set tractor brakes and actuate the fifth wheel control valve to open the locks.



 Inspect the lock jaws. If they appear dry, apply grease to lock jaws and front of throat directly or through the lube tube grease fitting. Coupled lock jaws and front of throat can be lubricated through lube tube grease fitting (see page 15).



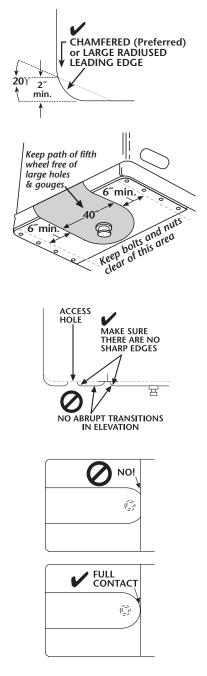
The locks are open and ready to couple.



4.

### **Trailer Upper Coupler Inspections**

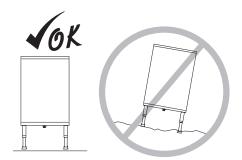
- Inspect the leading edge of the trailer bolster/skid plate. It must be free of any square or sharp edges.
- 2. Make sure there are no bolts or nuts extending below the bolster/skid plate within 6" of the fifth wheel travel path while coupling.
- The area that is supported by the fifth wheel should be free of any large holes or gouges.
- Any access holes that the fifth wheel passes below should have chamfered or radius edges.
- Check that any splits from the skid plate to bolster plate are welded adequately and that there are no sharp edges or abrupt changes in elevation.
- The upper coupler should extend adequately rearward to maintain full contact with the fifth wheel during tight turning. If it does not, at a minimum, the rear edges should be chamfered or radius edges.
- Make sure that any upper coupler residual grease is free of heavy coarse grit.
- Ensure that the upper coupler fifth wheel contact surface is free of rust. *Do not paint the contact area!* The area should be conditioned with rust inhibitor such as a light oil.
- 9. Inspect the kingpin for excessive wear and damage (use Holland tool TF-0110 Kingpin Gage) along with bolster bow (see *SAE 1700*).



### **OPERATING INSTRUCTIONS** continued

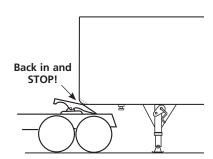
### **Coupling Procedures**

1. Make sure the coupling area is flat, level, and clear of persons and obstacles.



2. Center the fifth wheel with the kingpin and back up straight.





TRAILER (TOP)

**KINGPIN** 

- 4. Chock trailer wheels. -
- 5. Connect brake lines and light cord.
- Support slack in lines to prevent interference.
- 7. Set trailer brakes.



Failure to properly install, operate, or maintain this fifth wheel may result in tractor and trailer separation which, if not avoided, could result in death or serious injury.

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### **OPERATING INSTRUCTIONS** continued

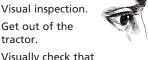
### **Coupling Procedures** continued

8. Adjust trailer height so fifth wheel will lift trailer. Trailer should contact fifth wheel 4" - 6" behind fifth wheel bracket pin.

Attempting to couple with the trailer AWARNING at an improper height may result in a false or improper coupling, allowing tractor and trailer separation, which, if not avoided, could result in death or serious injury.

- Slowly back into trailer.
- 10. Do a pull test as an INITIAL CHECK.
- 11. Visual inspection. Get out of the

tractor.



NUT AND WASHER SNUG AGAINST FIFTH WHEEL 2 LOCKS COMPLETELY 2 CLOSED AROUND

TI-O Y

the lock is closed.

An improperly coupled tractor and trailer may separate while in use which, if not avoided, could result in death or serious injury.

Do not use any fifth wheel that fails to operate properly. Failure to properly couple tractor and trailer may cause separation which, if not avoided, could result in death or serious injury.

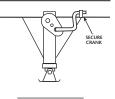
If you do not obtain a proper couple, repeat the coupling sequence.

- 12. Retract landing gear until pads come off the ground.
- 13. Follow instructions published separately for safe operation of the trailer to fully retract landing gear and secure crank handle.

### Do not operate the vehicle without fully **A**WARNING retracting the landing gear. Failure to fully

retract the landing gear to attain sufficient ground clearance for transit may result in damage to the landing gear or components which, if not avoided, could result in death or serious injury.

14. Check the brake lines and light cord. Remove the wheel chocks and continue with a pre-trip inspection.



Wrong

FIFTH WHEEL \_ MUST LIFT TRAILER

> TRAILER BRAKES LOCKED

FIFTH WHEEL

PULL TEST

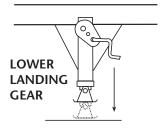
PULL FORWARD WITH TRACTOR

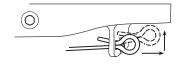
FIFTH WHEEL WILL NOT

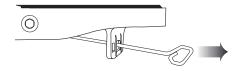
### **OPERATING INSTRUCTIONS** continued

### **Uncoupling Procedures**

- 1. Position tractor and trailer on firm, level ground clear of obstacles and persons.
- 2. Set trailer brakes. -
- 3. Slowly back tractor tightly against trailer.
- 4. Set tractor brakes.
- 5. Chock trailer wheels.
- Lower landing gear until pads just touch the ground. (NOTE: Follow instructions published separately for safe operation of the trailer to transfer trailer weight off fifth wheel. Do not raise trailer off the fifth wheel.)
- Disconnect brake lines and light cord. Attach the brake line to a dummy coupling to keep the line clean.
- 8. If equipped, pull secondary lock handle and hook on casting.
- 9. Pull primary release handle.
- 10. Release tractor brakes and slowly drive away from trailer. Let the trailer slide down the fifth wheel, being careful that the trailer landing gear touches the ground with minimal impact.







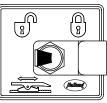
### Fifth Wheel Slide Adjustment

1. Position tractor and trailer in a straight line on level ground.

- 2. Lock the trailer brakes.
  - **CAUTION** The trailer must be stopped and the trailer brakes locked to prevent damage to the tractor or trailer by uncontrolled sliding of the fifth wheel.
- 3. Release slide locking plungers.
- 4. Move cab switch to unlock position.

NOTE: Switch style may differ by OEM design.





Move cab switch to unlock position.

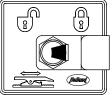
- 5. Slowly drive the tractor forward or backward to position the fifth wheel.
- 6. Re-engage the slide locking plungers. Verify that plungers have engaged by performing a tug test.

NOTE: Retract landing gear if lowered.

NOTE:

Switch style may differ by OEM design.

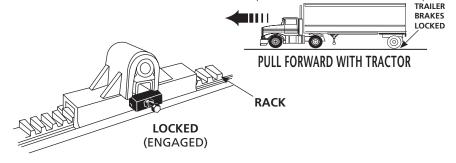




Move cab switch to lock position.

|| PULL TEST ||

7. Do a pull test to make sure plungers are properly engaged and locked into the slide base.



**WARNING** Do not operate the vehicle if the plungers are not fully engaged (locked). Failure to properly engage plungers and slide base may cause loss of vehicle control which, if not avoided, could result in death or serious injury.

### MAINTENANCE PROCEDURES

### **AWARNING** You must read and understand the following instructions before operating your fifth wheel.

All maintenance must be performed by a qualified person using proper tools and safe procedures.

All maintenance must be performed while the tractor is uncoupled from the trailer.

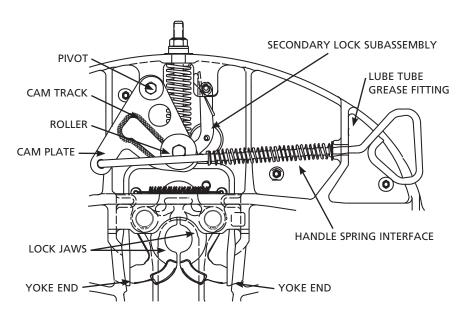
Failure to follow all the maintenance procedures contained in these instructions may result in a hazardous condition or cause a hazardous condition to develop which, if not avoided, could result in death or serious injury.

### **Required Inspections and Adjustments**

Perform the following every six months or 60,000 miles, whichever comes first. Clean all components before inspecting or adjusting.

### **General Fifth Wheel Inspection**

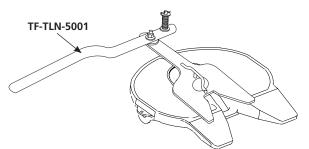
- 1. Inspect the fifth wheel mounting. Check the torque and replace any missing or damaged bolts. Check for broken, worn, or damaged parts; replace as needed.
- 2. Thoroughly clean the fifth wheel locking mechanism every 6 months or 60,000 miles (see the figure below). Re-check operation with TF-TLN-5001 Lock Adjustment Tool.
- 3. Inspect the fifth wheel for bent, worn or broken parts. Replace with Holland parts only.
- 4. Make sure the bracket pin retention bolts and locknuts are in place and tight.
- 5. Confirm that the lube plates are in place and properly attached.
- 6. Clean the lube plates to remove dry, dirty residual grease.
- 7. Inspect the components in the figure below for wear. If any are worn, broken, or damaged, replace them.



Apply grease to lock jaws and front of throat directly or through lube tube grease fitting.

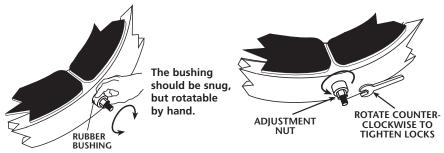
### **Required Inspections and Adjustments** *continued* **Inspection – Locking Mechanism**

 Check the operation of the fifth wheel locking mechanism using a Holland TF-TLN-5001 (2" kingpin) Lock Adjustment Tool. Inspect for proper locking as described in "Operating Instructions."



### Adjustment – Locking Mechanism

- 1. Using **ONLY** a Holland TF-TLN-5001 Lock Adjustment Tool, lock the fifth wheel.
- 2. Close the locks using a Holland lock tester.
- 3. Check the release handle it must be fully retracted.
- Rotate the rubber bushing that is located between the adjustment nut and the casting.
- If the bushing is tight, rotate the nut on the yoke shank counter-clockwise until the bushing is snug, but rotatable by hand.



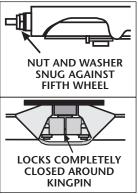
- 6. Verify the adjustment by locking and unlocking several times using the Lock Adjustment Tool; check for proper locking.
- 7. If there is a large amount of fore and aft movement with the adjustment tool when verifying adjustment, check to make sure the lock is fully engaged.

**A**WARNING Improper adjustment can cause improper locking of the fifth wheel. If the fifth wheel does not operate properly, **DO NOT USE IT!** 

Attempting to couple with the trailer at an improper height may result in a false or improper coupling, allowing tractor and trailer separation which, if not avoided, could result in death or serious injury.

Repeat the adjustment procedures or contact your nearest Holland representative for assistance.

A PROPERLY CLOSED FIFTH WHEEL



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## HOLLAND FW35 SERIES FIFTH WHEEL NORTH AMERICAN COMMERCIAL WARRANTY

## SAF-HOLLAND's Commitment:

We warrant each FW35, FW33, and FW31 fifth wheel (herein referred to as "FW35 Series") manufactured after June 1, 1996, when properly installed on your vehicle and maintained in accordance with our requirements, as follows:

# I. Materials and Workmanship:

Our FW35 Series fifth wheels will be free from defects in material and workmanship for six years or 600,000 miles (whichever comes first) when used for approved applications.

In approved applications, lube plates (FW33 and FW31) are warranted for two years or 200,000 miles (whichever comes first).

# II. Application Specific Performance Guarantee:

In addition, when your FW35 Series fifth wheel is used in Standard Duty Applications (as defined below) it will, for six years after the date of your purchase or 600,000 miles (whichever comes first):

- Operate as described in our FW35 Series operation and maintenance literature.
- Maintain an acceptable wear limit between the fifth wheel locks and a new SAE J700b kingpin when adjusted in accordance with our FW35 Series maintenance literature.

# Standard Duty Applications require that your vehicle:

Operates on-highway only, 22 has a maximum gross combined vehicle weight (1) operates on-highway only, 22 has a maximum gross combined vehicle weight (95,000 lbs. (including tractor, trailer and cargo); and 3) has a maximum of five axles. If any FW35 Series fifth wheel or component part is determined to have a defect in material and workmanship or if it does not perform as warranted in a Standard Duty Application, we will cover the cost to repair replace the product or part. We will provide a reasonable labor allowance for removal, and repair or replacement, and will provide you with parts or reimburse you for parts at your acquisition cost, provided this does not exceed the suggested list price.

### Your Responsibilities:

You are responsible for proper installation, operation and maintenance (including lubrication) as specified in our publications on FW35 Series fifth wheels and for using the product in recommended applications within rated capacities.

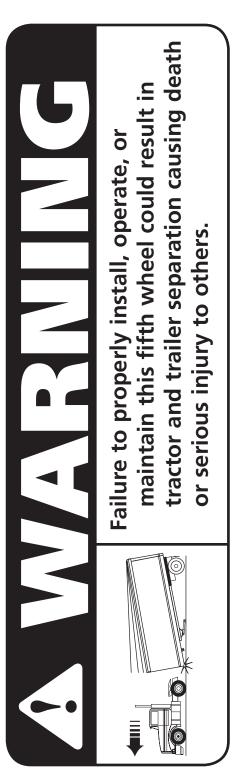
You are required to obtain prior authorization from us or an authorized customer service representative before replacing or returning any part. You may be required to make the product or part claimed to be covered by this warranty available to us and/or returned to us for review and evaluation. You may also be required to provide any or all of the following information: vehicle mileage and VIN #, product model # and serial # as shown on the serial tag installed on the product, date of purchase, and application and use information.

### **Exclusions and Limitations:**

This warranty does not cover any FW35 Series fifth wheel or component that fails, mailunctions or is damaged as a result of accident, abuse, improper use, improper installation, intentional modification, corrosion, or failure to privide reasonable maintenance.

THIS WARRANTY IS OUR SOLE WARRANTY IN REGARD TO COVERED FW35 SERIES FIFTH WHEELS. WE MAKE NO OTHER WARRANTIES, EXRESS OR MULIED, OR ON RECHANTABILITY OR FINUES FOR A PATTICULAR UNEPOSE. IN NO EVENT SHALL WE BESPONSIBLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND.

operation, and maintenance of this product. Read and Enclosed is important information for the installation, understand this information. IMPORTANT:





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