



FW83/XA-231 OWNERS MANUAL

LOWLUBE
FIFTH WHEEL
TECHNOLOGY



LowLube Fifth Wheel

- Operation Instructions
- Maintenance Procedures

**QUESTIONS OR COMMENTS?
CALL 1-888-396-6501**

www.safholland.us



GENERAL SAFETY INSTRUCTIONS

Safety Signal Words



DANGER indicates an imminently hazardous situation which, if not avoided, **will** result in death or serious injury.



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



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



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

1. Keep Work Area Clean

Cluttered areas and benches invite accidents.

2. Keep fingers away from all potential pinch points in the fifth wheel.

3. All fifth wheel maintenance must be performed by a qualified service technician using proper tools and safe procedures.

4. Use only SAF-HOLLAND original parts.

5. Use Safety Goggles

Glasses or goggles not in compliance with ANSI or CSA can cause serious injury when damaged or broken.

6. Wear Proper Apparel

Do not wear loose clothing, gloves, neckties, jewelry (rings, wristwatches, etc.) that can get caught in moving parts. Non-slip footwear is recommended.

FIFTH WHEEL DESIGN AND INTENDED USE:

Holland Fifth Wheels are Designed and Intended to Be Used:

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

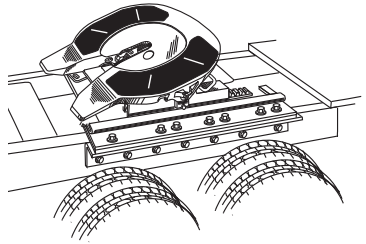
Holland Fifth Wheels are NOT Designed or Intended For:

1. Use with non-SAE kingpins, such as kingpins which are bent, improper size or dimensions, not securely maintained to 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 wheels.
3. The attachment of lifting devices.
4. The transport of loads in excess of rated capacity.
5. Applications other than recommended.

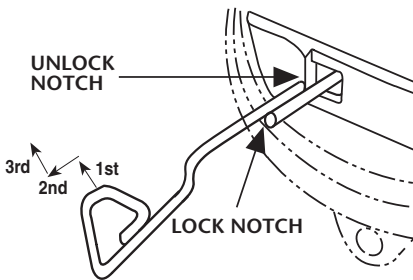
OPERATING INSTRUCTIONS

FIFTH WHEEL INSPECTIONS

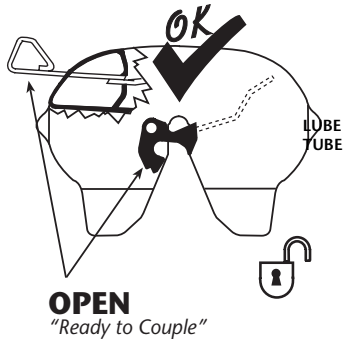
1. Inspect the fifth wheel and mounting.
 - Confirm that the lube plates are in place and firmly attached.
 - Tighten loose fasteners.
 - Replace missing fasteners.
 - Repair/replace missing, cracked or otherwise damaged components.



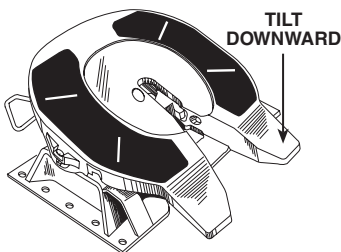
2. Make sure the lock is open. To open lock, pull secondary lock handle and hook on casting if equipped. Then pull primary release handle as shown.



3. Inspect the lock jaw; if it appears dry, apply grease to lock jaw and front of throat directly, or through the lube tube grease fitting located near the front, left side of the fifth wheel.



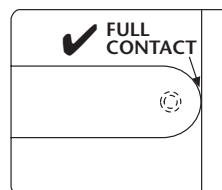
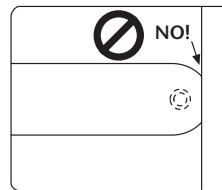
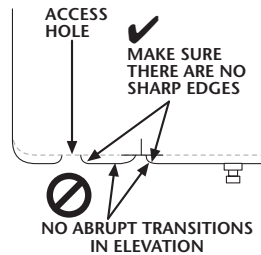
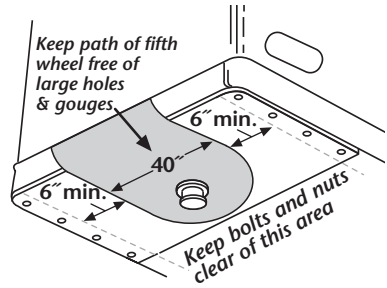
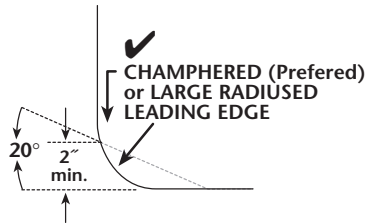
4. Tilt the ramps down.



OPERATING INSTRUCTIONS

TRAILER UPPER COUPLER INSPECTIONS

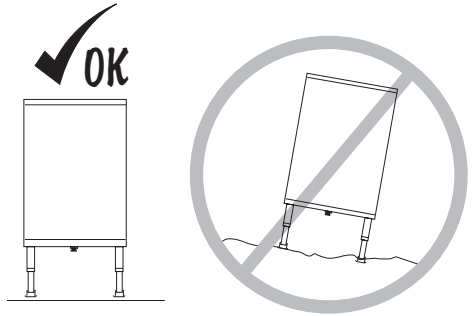
1. Inspect the leading edge of the trailer bolster/skid plate. It must be free of any square or sharp edges.
2. Make sure that there are no bolts or nuts extending below the bolster/skid plate within 6" of the fifth wheel travel path while coupling.
3. The area that is supported by the fifth wheel should be free of any large holes or gouges.
4. Any access holes that the fifth wheel passes below should have chamfered or radius edges.
5. 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.
6. 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.
7. Make sure that any upper coupler residual grease is free of heavy coarse grit.
8. Ensure that the upper coupler fifth wheel contact surface is free of rust. **Do not paint 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).



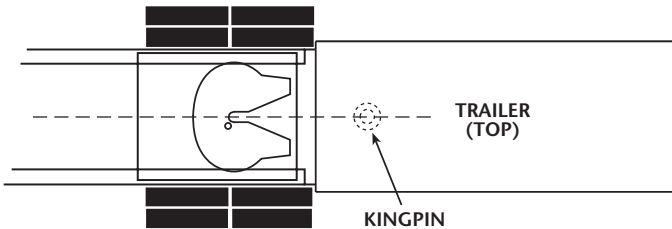
OPERATING INSTRUCTIONS

COUPLING PROCEDURES

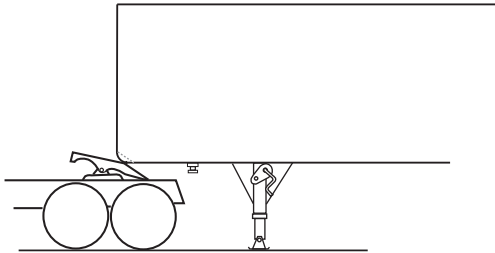
1. Make sure coupling area is flat, level and clear of persons and obstacles.



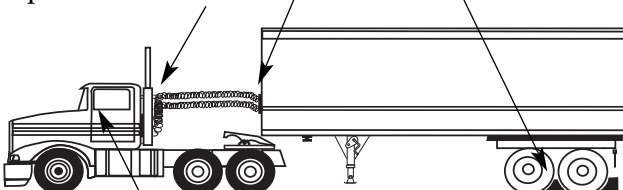
2. Center fifth wheel with kingpin and back up straight.



3. Back tractor close to trailer and **STOP**.




4. Chock trailer wheels.
5. Connect brake lines and light cord.
6. Support slack in lines to prevent interference.



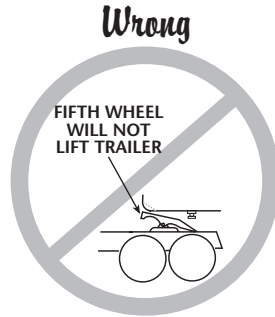
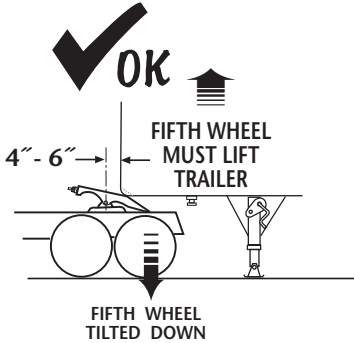
7. Set trailer brakes.

OPERATING INSTRUCTIONS

COUPLING PROCEDURES

<p>⚠ WARNING</p> 	<p>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.</p>
--	--

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

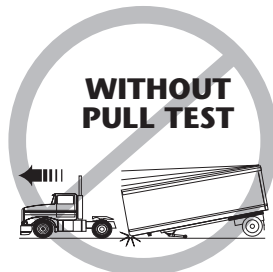
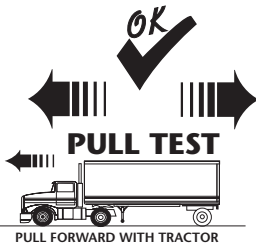


⚠ WARNING Attempting to couple with the trailer at an improper height may result in a false or improper coupling, allowing tractor and trailer separation which, if not avoided, could result in death or serious injury.

9. Slowly back into trailer.



10. Do a pull test as an **INITIAL CHECK**.



OPERATING INSTRUCTIONS

COUPLING PROCEDURES

11. Visual Inspection.

GET OUT OF THE TRACTOR!

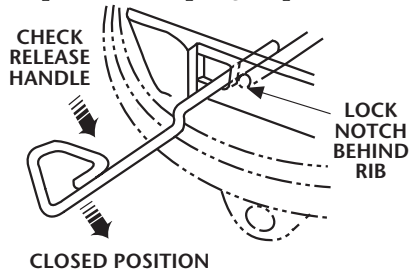
VISUALLY check that the lock is CLOSED!

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

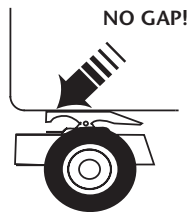
⚠️ WARNING Do not use any fifth wheel that fails to operate properly. Failure to properly couple tractor and trailer may allow separation while in use which, if not avoided, could result in death or serious injury.

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

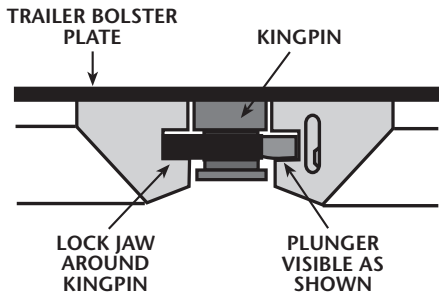
1
✓



2
✓



3
✓



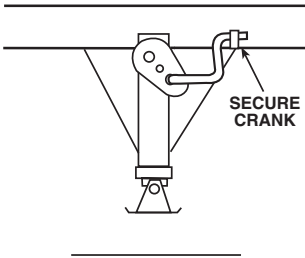
**DO NOT
RELY ON
SOUND**

OPERATING INSTRUCTIONS

COUPLING PROCEDURES

12. Follow instructions published separately for safe operation of the trailer to fully retract landing gear and secure crank handle.

⚠ WARNING **DO NOT operate the vehicle without fully 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.

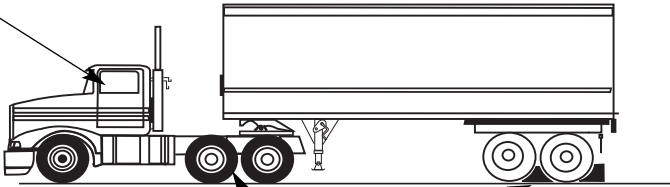


13. Re-check brake lines and light cord. Remove wheel chocks, continue with pre-trip inspection.

OPERATING INSTRUCTIONS

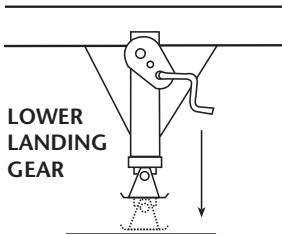
UNCOUPLING PROCEDURES

1. Position tractor and trailer on firm, level ground clear of obstacles and people.
2. Set trailer brakes.
3. Slowly back tractor tightly against trailer.



4. Set tractor brakes.
5. Chock trailer wheels.
6. 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.

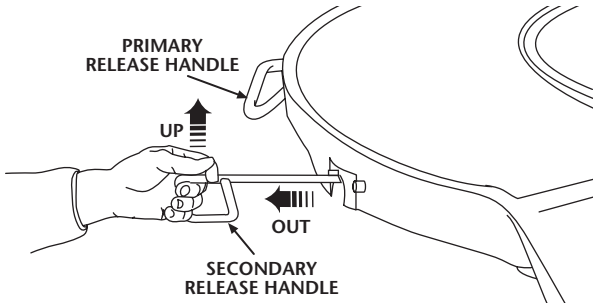


7. Disconnect brake lines and light cord.
Attach brake line to dummy coupling to keep line clean.

OPERATING INSTRUCTIONS

UNCOUPLING PROCEDURES

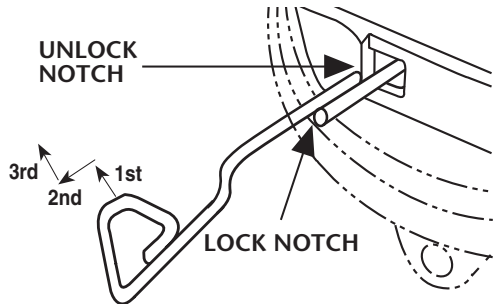
8. If equipped, pull secondary lock handle and hook on casting (located on left/road side of fifth wheel).



9. Pull primary release handle.

To unlock primary release handle:

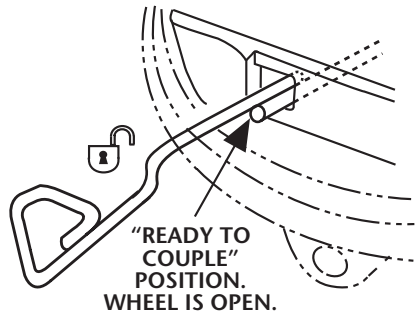
- 1st move handle forward
- 2nd pull handle out
- 3rd hook the unlock notch of the handle on the casting as shown.



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 touch the ground with minimal impact.

11. **NOTE:** *It is normal after uncoupling for the release handle to come off the unlock notch and move to a “ready to couple” position.*



OPERATING INSTRUCTIONS

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.

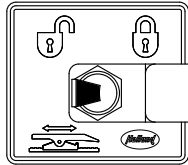
MANUAL SLIDE

Pull release lever, lift up and hook in place.



AIR OPERATED

Move cab switch to unlock position.



NOTE:

Switch style may differ by OEM design.

4. Visually check that both plungers are fully extended (unlocked), as shown in *Figure 4A*.

Figure 4A

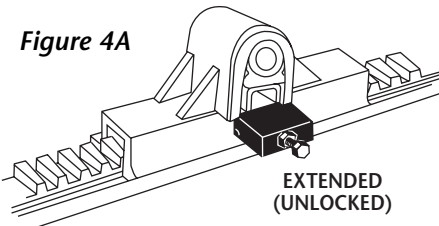
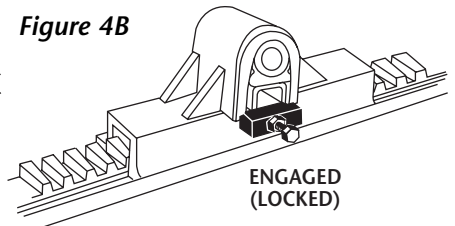


Figure 4B



NOTE: If the plungers do not release, using low gear on the landing gear, raise the trailer to relieve pressure on the plungers. This will allow the fifth wheel to slide easier.

OPERATING INSTRUCTIONS

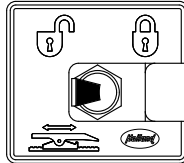
FIFTH WHEEL SLIDE ADJUSTMENT

5. Slowly drive the tractor forward or backward to position the fifth wheel.
6. Re-engage the slide locking plungers. Verify that both plungers have fully engaged (locked).

NOTE: Retract landing gear if lowered.

AIR OPERATED

Move cab switch to lock position.



NOTE:

Switch style may differ by OEM design.

MANUAL SLIDE

Trip the release lever by tapping it downward as shown, and allowing it to spring back.



⚠️ WARNING

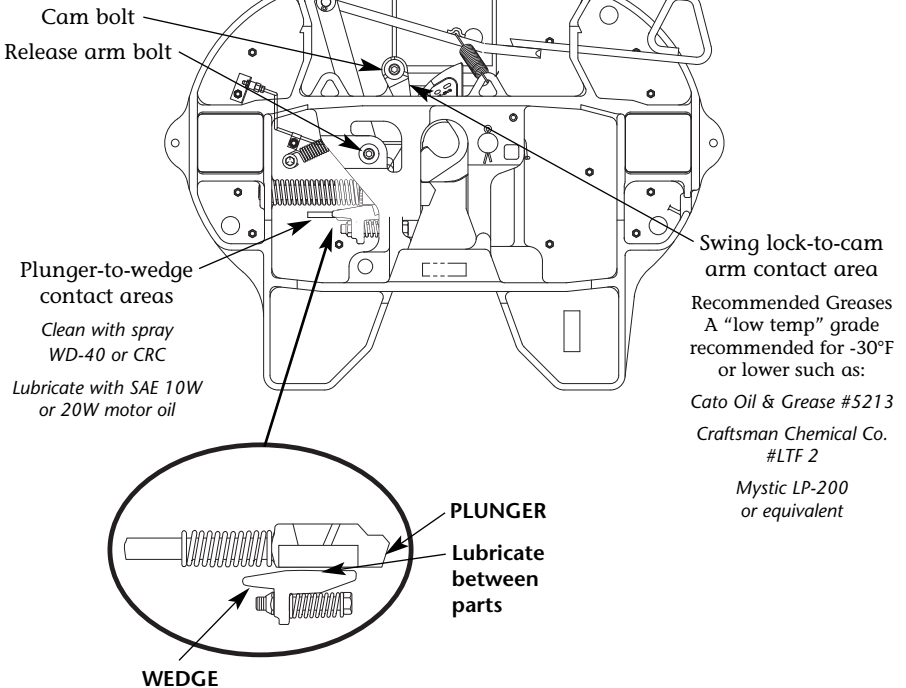
Do not operate the vehicle if the plungers are not fully engaged (locked). Failure to properly engage plungers and slide base may cause loss of vehicle control which, if not avoided, could result in death or serious injury.

MAINTENANCE PROCEDURES

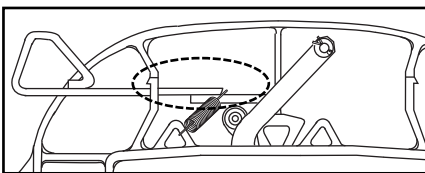
AS-NEEDED LUBRICATION

- IMPORTANT!** Always maintain adequate lubrication in fifth wheel locking mechanism, if it appears dry, apply grease to lock jaw and front of throat directly, or through the lube tube grease fitting located near the front left side of the fifth wheel.

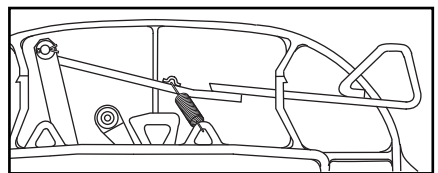
CLEAN/ LUBRICATE



- Inspect the release handle. If your fifth wheel is a **RIGHT HAND** (curb side) release, apply grease along the release handle where it contacts the handle spring.



**Right Hand Release
with Sliding Spring
(Grease Required)**



**Left Hand Release
with Fixed Spring
(No Grease Required)**

MAINTENANCE PROCEDURES

AS-NEEDED LUBRICATION

3. For Fifth Wheels with Sliding Brackets:

Release and slide fore and aft to assure entire mechanism functions properly. Apply a light oil to the slide path. Apply Never-Seez™ to the plunger and plunger pocket. Reposition and lock sliding mechanism.

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

If your fifth wheel does not operate properly, contact your nearest Holland representative for assistance.

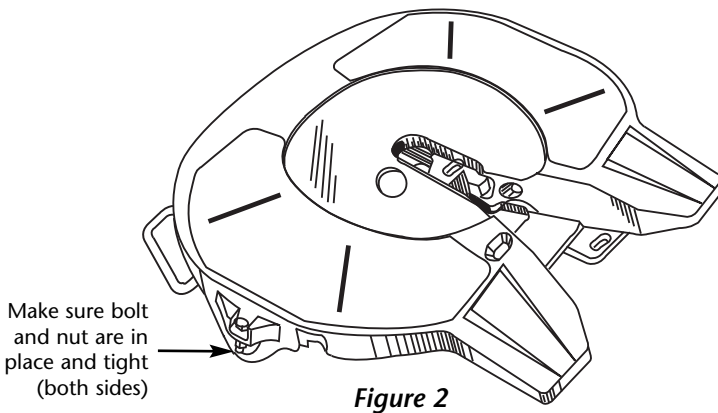
MAINTENANCE PROCEDURES

REQUIRED INSPECTION AND ADJUSTMENT

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

General Fifth Wheel Inspection

1. Inspect the fifth wheel mounting. Check 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 and relubricate (see *Figure 1*). 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, as shown in *Figure 2*.
5. Confirm that the lube plates are in place and properly attached.



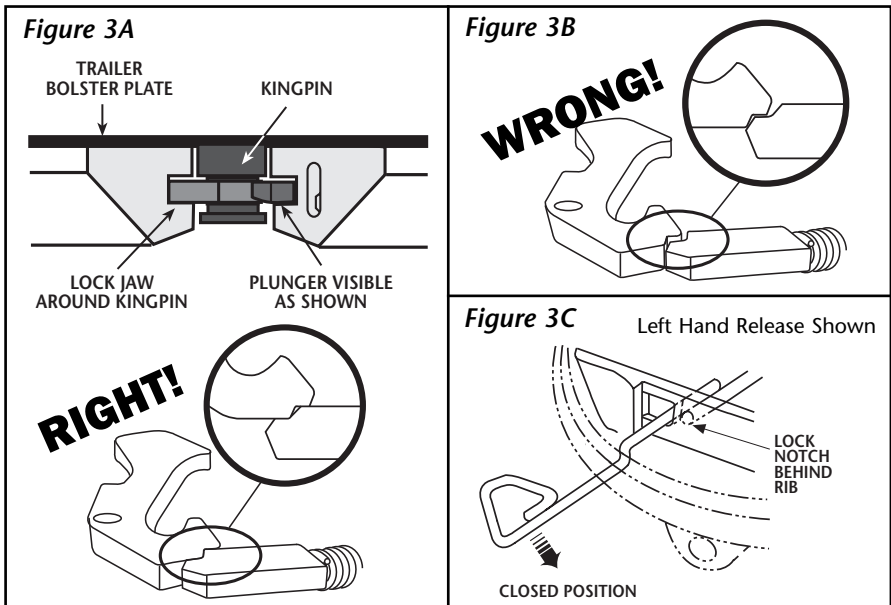
6. Clean lube plates when dry, dirty residual grease base is present. A scratch-brite pad can be used to clean the plate.

MAINTENANCE PROCEDURES

REQUIRED INSPECTION AND ADJUSTMENT

Inspection – Locking Mechanism

1. 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 "Fifth Wheel Operating Instructions," Holland publications XL-FW353.
2. **IMPORTANT!** The lock is properly closed when:



Adjustment – Locking Mechanism (when required)

1. Using **ONLY** a Holland TF-TLN-5001 Lock Adjustment Tool, lock the fifth wheel.
2. **Check the plunger – it must be visible behind the lock and engaged on both steps**, as shown in *Figure 3A*. If the plunger is not visible or not engaged on both steps (*Figure 3B*), turn the adjustment bolt counterclockwise 1/2 turn, then try to lock the locks again.
3. **Check the release handle** – it must be fully retracted and the handle lock notch must be behind the rib as shown in *Figure 3C*.

MAINTENANCE PROCEDURES

REQUIRED INSPECTION AND ADJUSTMENT

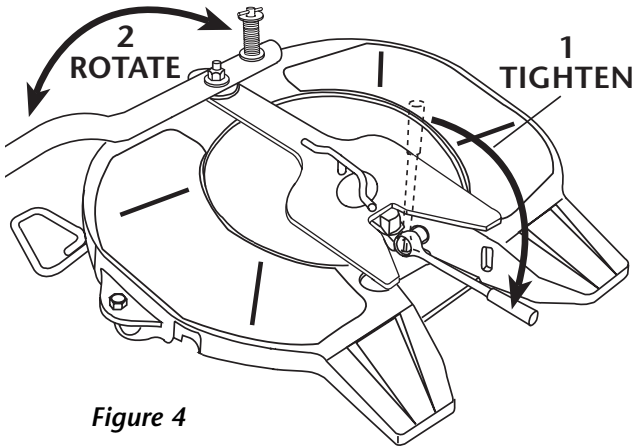


Figure 4

- Using a 15/16" socket, tighten the locks by turning the lock adjustment bolt clockwise 1/4 turn at a time. Remove the socket wrench from the bolt and rotate the lock adjustment tool, as shown in *Figure 4*, to check for resistance between the lock and lock adjustment tool.
- Continue to alternate tightening (clockwise) the adjustment bolt 1/4 turn at a time, removing the socket wrench, and rotating the lock adjustment tool until you feel resistance against the lock adjustment tool. Once you begin to feel resistance, **STOP!**
- At this point, the fifth wheel is **OVERADJUSTED** and **NOT** useable.

⚠ WARNING Using an overadjusted fifth wheel can cause improper locking of the fifth wheel. If the fifth wheel does not operate properly, **DO NOT USE IT!** An improperly coupled tractor and trailer may separate while in use which, if not avoided, could result in **DEATH** or **SERIOUS** injury.

- Loosen the adjustment bolt counter-clockwise **TWO FULL TURNS (720°)**. The lock is now properly adjusted.

MAINTENANCE PROCEDURES

REQUIRED INSPECTION AND ADJUSTMENT

8. Verify this adjustment by locking and unlocking several times using the Lock Adjustment Tool; check for proper locking (See *Figure 3A* and *Figure 3C*).
9. 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 engaged in **both** steps (*Figure 3A*).

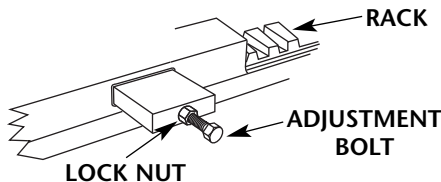
If the lock is only engaged on one step, repeat **Step 2** (on previous page), of the Adjustment Procedure until the lock engages on both steps. (See *Figure 3A*.)

⚠ WARNING Using an overadjusted fifth wheel can cause improper locking of the fifth wheel. If the fifth wheel does not operate properly, **DO NOT USE IT!** An improperly coupled tractor and trailer may separate while in use which, if not avoided, could result in **DEATH** or **SERIOUS** injury.

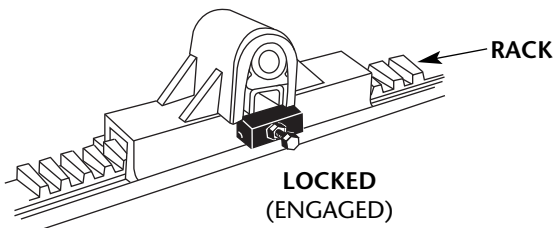
Repeat the adjustment procedures or contact your nearest Holland representative for assistance.

Adjustment – Fifth Wheel Slide Mechanism

1. Loosen lock nut and turn the adjustment bolt out (counter-clockwise).



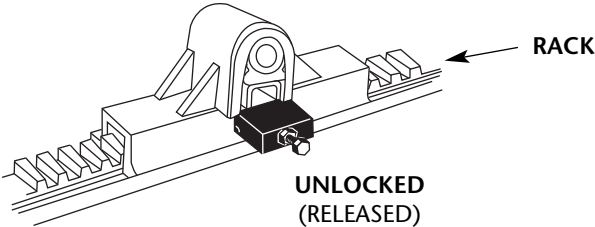
2. Disengage and engage the locking plungers. Verify that plungers have engaged properly, as shown.



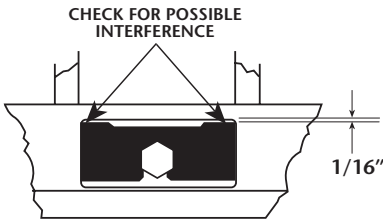
MAINTENANCE PROCEDURES

REQUIRED INSPECTION AND ADJUSTMENT

3. Now tighten adjustment bolt until it contacts the rack.



4. Turn the adjustment bolt clockwise an additional 1/2 turn, then tighten the lock nut securely.
5. If plungers do not release fully to allow fifth wheel to slide:
 - a. Check the air cylinder for proper operation. Replace if necessary.
 - b. Check plunger adjustment as explained above.
 - c. If a plunger is binding in the plunger pocket, remove the plunger using a Holland TF-TLN-2500 spring compressor. Grind the top edges of the plunger 1/16", as shown. Re-install and adjust the plungers as explained above.



CAUTION

Proper adjustment of the locking plungers must be performed at regular intervals and is required for proper operation, load transfer and distribution.

6. If the locking plungers are too loose:
 - a. Check plunger adjustment as explained above.
 - b. Check plunger springs for proper compression. Replace if necessary.
 - c. Check for plunger wear, and replace if necessary.

After inspection and adjustment, relubricate all moving parts with a light, rust resistant oil.

WARRANTY

HOLLAND FW8 SERIES FIFTH WHEEL NORTH AMERICAN COMMERCIAL WARRANTY



SAF-HOLLAND's Commitment:

We warrant each FW8 and FW83 (LowLube model) fifth wheel (herein referred to as "FW8 Series") manufactured after August 1, 2003, when properly installed on your vehicle and maintained in accordance with our requirements, as follows:

I. Materials and Workmanship:

Our FW8 Series fifth wheels will be free from defects in material and workmanship for five years or 500,000 miles (whichever comes first) when used for approved applications. In approved applications, lube plates (FW83 LowLube model) are warranted for two years or 200,000 miles (whichever comes first).

II. Application Specific Performance

Guarantee:

In addition, when your FW8 Series fifth wheel is used in Standard Duty Applications (as defined below) it will, for five years after the date of your purchase or 500,000 miles (whichever comes first):

1. Operate as described in our FW8 Series operation and maintenance literature;
2. Maintain an acceptable wear limit between the fifth wheel locks and a new SAC J700B Kingpin when adjusted in accordance with our FW8 Series maintenance literature.

Standard Duty Applications require that your vehicle:

- 1) operates on-highway only; 2) has a maximum gross combined vehicle weight of 95,000 lbs. (including tractor, trailer and cargo); and 3) has a maximum of five axles.

If any FW8 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 or 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 FW8 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 FW8 Series fifth wheel or component that fails, malfunctions or is damaged as a result of accident, abuse, improper use, improper installation, intentional modification, corrosion, or failure to provide reasonable maintenance.

THIS WARRANTY IS OUR SOLE WARRANTY IN REGARD TO COVERED FW8 SERIES FIFTH WHEELS. WE MAKE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OR OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL WE BE RESPONSIBLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND.

IMPORTANT: ENCLOSED IS IMPORTANT INFORMATION FOR THE INSTALLATION, OPERATION, AND MAINTENANCE OF THIS PRODUCT. READ AND UNDERSTAND THIS INFORMATION.



WARNING



FAILURE TO PROPERLY INSTALL, OPERATE, OR MAINTAIN THIS FIFTH WHEEL COULD RESULT IN TRACTOR AND TRAILER SEPARATION CAUSING DEATH OR SERIOUS INJURY TO OTHERS.

Part Number: _____ **Rev. Level:** _____



SAF-HOLLAND USA, Inc
888.396.6501 Fax 800.356.3929

SAF-HOLLAND Canada Limited
519.537.3494 Fax 800.565.7753
Western Canada
604.574.7491 Fax 604.574.0244

Copyright © July 2008-SAF-HOLLAND, Inc. All information contained in this document was correct at time of copyright, and is subject to change without notice. All rights reserved.
www.safholland.us