

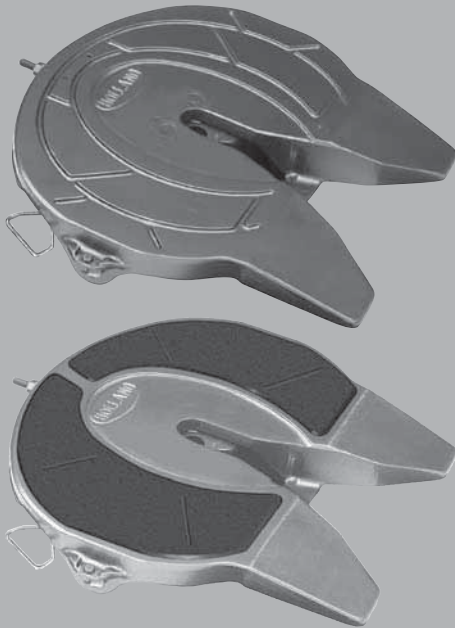


SAF-HOLLAND Group

Owners Manual

FW35 and FW31 **NoLube**® Series Fifth Wheel

- Operation
- Maintenance Procedures
- Comprehensive Warranty



GENERAL SAFETY INSTRUCTIONS

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.

CAUTION

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

WARNING

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.

OPERATING INSTRUCTIONS



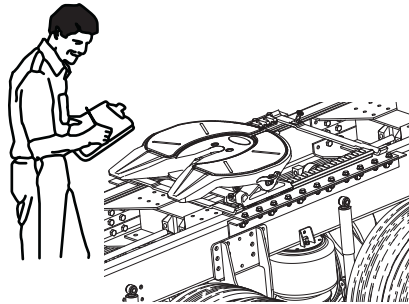
You must read and understand the following instructions before operating your fifth wheel.

Failure to follow all the operating procedures contained in these instructions may result in a hazardous condition or cause a hazardous condition to develop.

These instructions apply to the proper operation of your fifth wheel only. There are other important checks, inspections, and procedures not listed here that are necessary, prudent, and/or required by law.

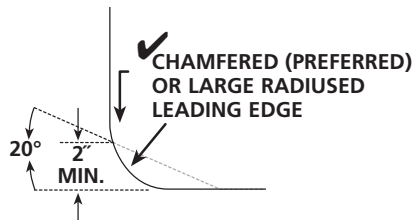
Fifth Wheel Inspections

1. Inspect the fifth wheel mounting.
 - Confirm that the lube plates are in place and firmly attached. (FW31 NoLube only.)
 - 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.

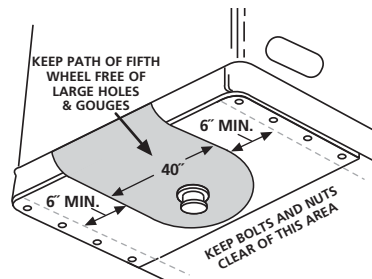


Trailer Upper Coupler Inspections

1. Inspect the leading edge of the trailer bolster/skid plate. It must be free of any square or sharp edges.



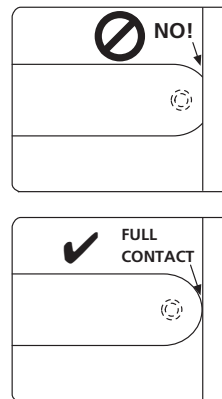
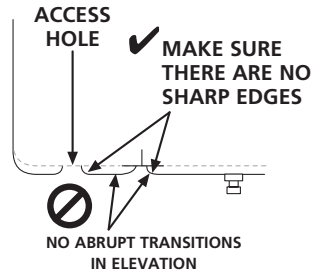
2. Make sure there are no bolts or nuts extending below the bolster/skid plate within 6" of the fifth wheel travel path while coupling.
3. The area that is supported by the fifth wheel should be free of any large holes or gouges.



OPERATING INSTRUCTIONS *continued*

Trailer Upper Coupler Inspections *continued*

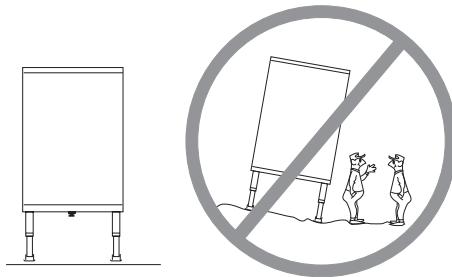
- Any access holes that the fifth wheel passes below should have chamfered or radius edges.
- Check that any splits from the skid plate to bolster plate are welded adequately and that there are no sharp edges or abrupt changes in elevation.
- The upper coupler should extend adequately rearward to maintain 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.
- Inspect the kingpin for excessive wear and damage (use Holland tool TF-0110 Kingpin Gage) along with bolster bow (see *SAE 1700*).



FW35 Coupling Procedures

IMPORTANT: FW31 NOLUBE COUPLING AND UNCOUPLING PROCEDURES ARE NOT THE SAME.
SEE PAGES 9 - 14.

- Make sure the tractor and trailer coupling area is flat, level and clear of persons and obstacles.



- Lubricate the fifth wheel-to-trailer contact surface with grease. Tilt the ramps down.



continued

OPERATING INSTRUCTIONS *continued*

FW35 Coupling Procedures *continued*

3. Make sure the locks are open. To open locks, pull release handle.
If Air Release equipped, set tractor brakes and actuate the fifth wheel control valve to open the locks.

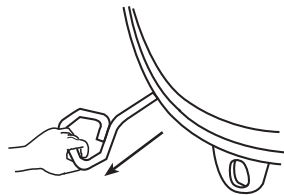


Locks are closed and the fifth wheel is locked.
DO NOT attempt to couple!

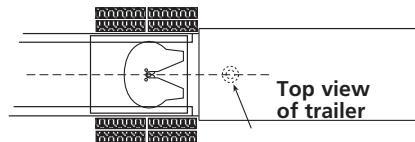


The locks are open and ready to couple.

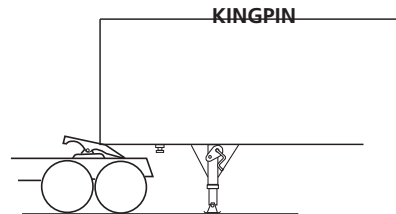
If locks are closed, pull release handle all the way out.



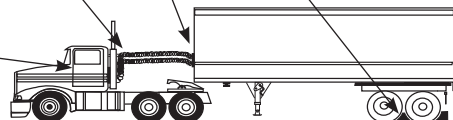
4. Center kingpin with fifth wheel.



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



6. Chock trailer wheels.
7. Connect brake lines and light cord.
8. Support slack in lines to prevent interference.
9. Set trailer brakes.



⚠ WARNING



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

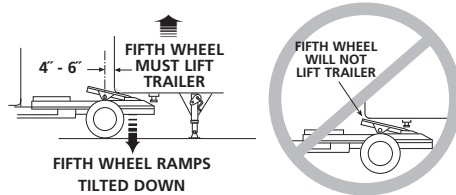
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OPERATING INSTRUCTIONS *continued*

FW35 Coupling Procedures *continued*

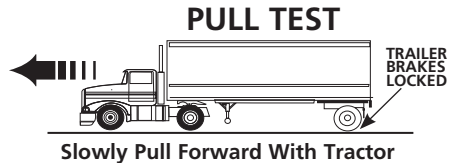
10. Adjust trailer height so fifth wheel will lift trailer. Trailer should contact fifth wheel 4" - 6" behind fifth wheel bracket pin.

⚠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.



11. Slowly back into trailer.

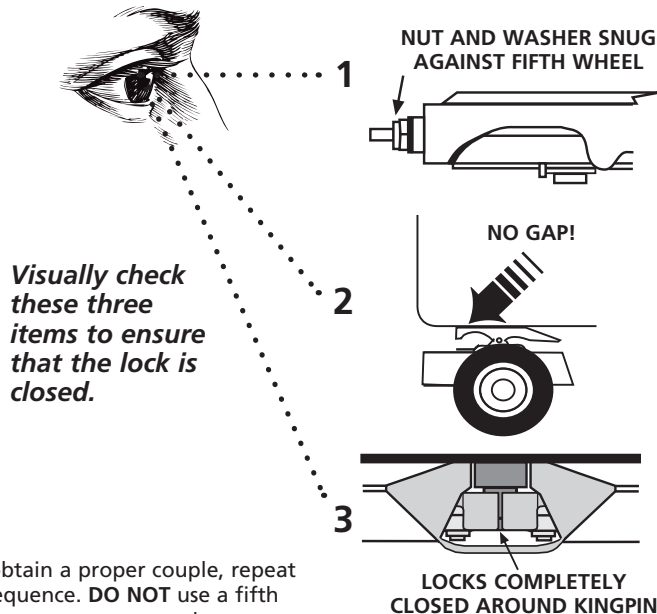
12. Do a pull test as an **INITIAL CHECK**.



13. Perform a visual inspection to verify a correct couple. **DO NOT RELY ON SOUND.** Get out of the tractor.

⚠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 cause separation which, if not avoided, could result in death or serious injury.



14. If you do not obtain a proper couple, repeat the coupling sequence. **DO NOT** use a fifth wheel that fails to operate properly.

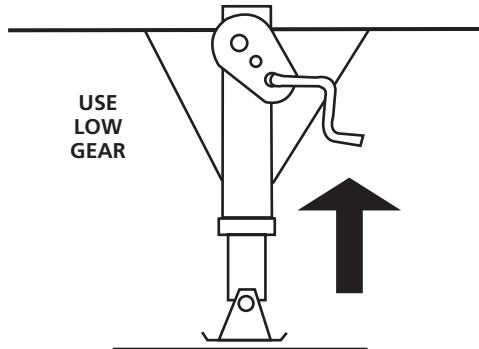
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OPERATING INSTRUCTIONS *continued*

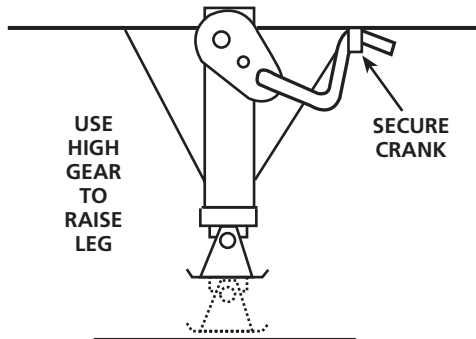
FW35 Coupling Procedures *continued*

- Using the low gear setting, raise the landing gear until the pads come off the ground.

IMPORTANT: Refer to the landing gear manufacturer's instructions for safe operation of the trailer to fully retract landing gear.



- Switch to high gear and fully retract landing gear. Secure the crank handle.



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

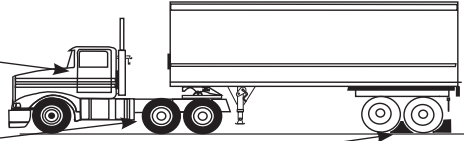
⚠️ WARNING

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.

OPERATING INSTRUCTIONS *continued*

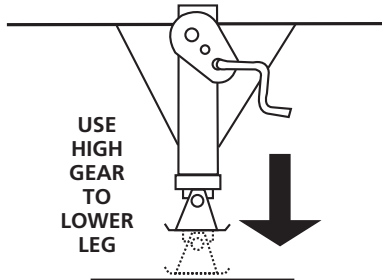
FW35 Uncoupling Procedures

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.

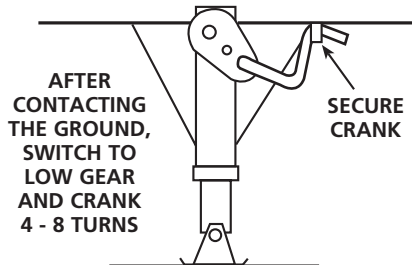


6. Using the high gear setting, lower the landing gear until the pads just touch the ground.

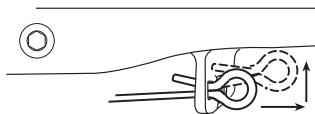
IMPORTANT: Follow your landing gear manufacturer's instructions for safe operation of the trailer to transfer trailer weight off the fifth wheel. Do not raise trailer off the fifth wheel.



7. Switch to LOW GEAR and crank an additional 4-8 turns.
IMPORTANT: DO NOT raise the trailer off the fifth wheel.



8. Disconnect brake lines and light cord.
9. If equipped, pull secondary lock handle and hook on casting.

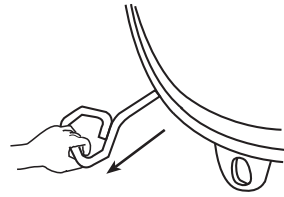


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OPERATING INSTRUCTIONS *continued*

FW35 Uncoupling Procedures *continued*

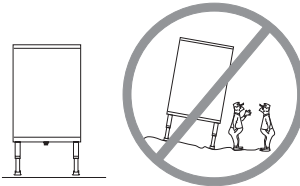
10. Pull primary release handle. If Air Release equipped, actuate the fifth wheel control valve to open the locks.
11. Release tractor brakes and slowly drive away from trailer. Let the trailer slide down the fifth wheel, being careful that the trailer landing gear touches the ground with minimal impact.



FW31 Coupling Procedures

IMPORTANT: FW35 COUPLING AND UNCOUPLING PROCEDURES ARE NOT THE SAME. SEE PAGES 4 - 9.

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



2. Make sure the locks are open. To open locks, pull release handle.
If Air Release equipped, set tractor brakes and actuate the fifth wheel control valve to open the locks.



Locks are closed and the fifth wheel is locked.
DO NOT attempt to couple!

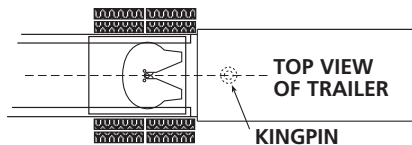
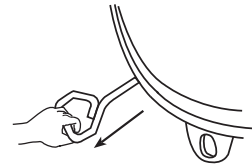


The locks are open and ready to couple.

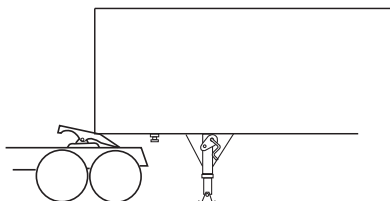
If locks are closed, pull release handle all the way out.

3. Center kingpin with fifth wheel.

IMPORTANT: DO NOT MAKE CONTACT BETWEEN THE FIFTH WHEEL AND TRAILER.



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

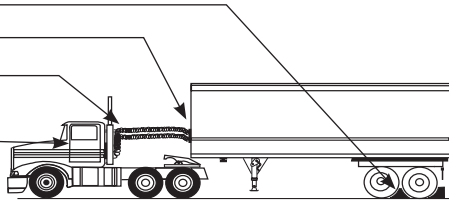


continued

OPERATING INSTRUCTIONS *continued*

FW31 Coupling Procedures *continued*

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

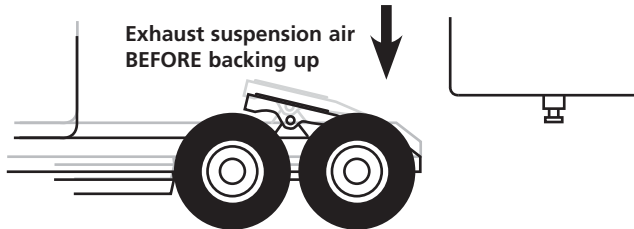


WARNING

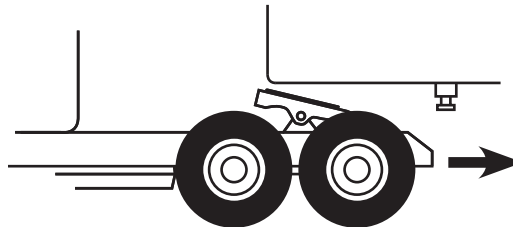


Failure to properly install, operate, or maintain this fifth wheel may cause tractor and trailer separation which, if not avoided, could result in death or serious injury.

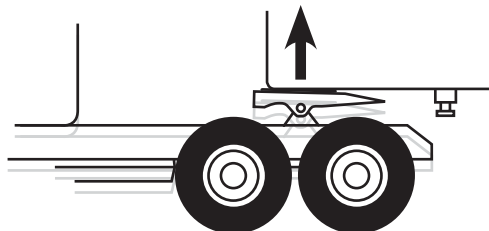
9. Completely exhaust air from tractor suspension, ensuring that the fifth wheel is below the contact surface of the trailer.



10. Slowly back the tractor just past the leading edge of the trailer so that fifth wheel is under the trailer. **DO NOT ATTEMPT TO COUPLE. KINGPIN SHOULD NOT BE ENGAGED AT THIS STEP.**



11. Air-up the tractor air suspension to ride height. Fifth wheel plate face must make complete contact with the bolster plate.

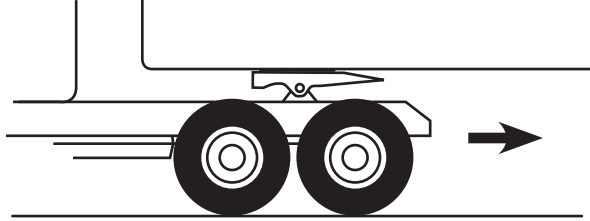


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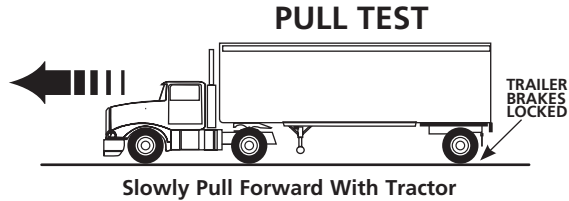
OPERATING INSTRUCTIONS *continued*

FW31 Coupling Procedures *continued*

12. Slowly back into trailer.



13. Do a pull test as an INITIAL CHECK.

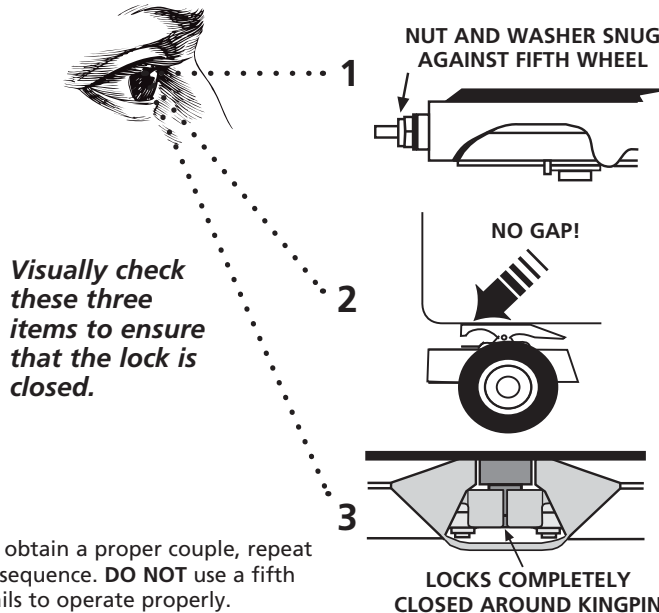


14. Perform a visual inspection to verify a correct couple. **DO NOT RELY ON SOUND.**

Get out of the tractor.

⚠ 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 cause separation which, if not avoided, could result in death or serious injury.



Visually check these three items to ensure that the lock is closed.

15. If you do not obtain a proper couple, repeat the coupling sequence. **DO NOT** use a fifth wheel that fails to operate properly.

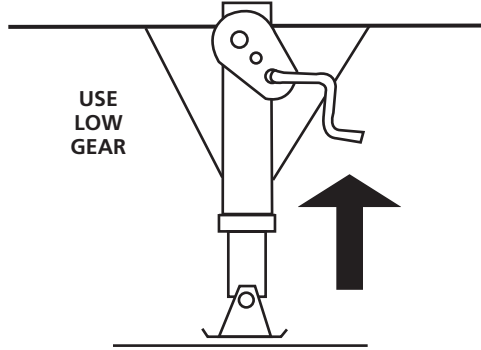
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OPERATING INSTRUCTIONS *continued*

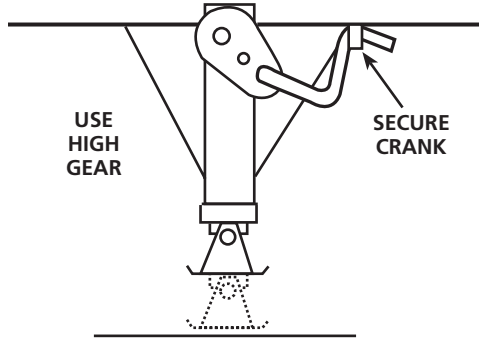
FW31 Coupling Procedures *continued*

16. Using the low gear setting, raise the landing gear until the pads come off the ground.

IMPORTANT: Refer to the landing gear manufacturer's instructions for safe operation of the trailer to fully retract landing gear.



17. Switch to high gear and fully retract landing gear. Secure the crank handle.



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

⚠ WARNING

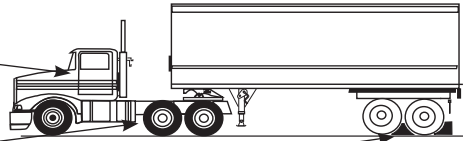
Do not operate the vehicle without fully retracting the landing gear. Failure to fully retract the landing gear to attain sufficient ground clearance for transit may result in damage to the landing gear or components which, if not avoided, could result in death or serious injury.

FW31 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.

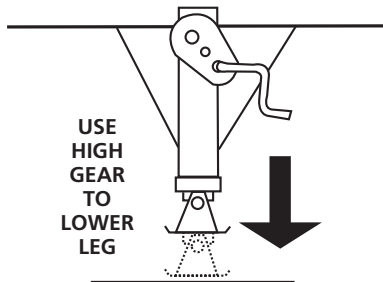


4. Set tractor brakes.

5. Chock trailer wheels.

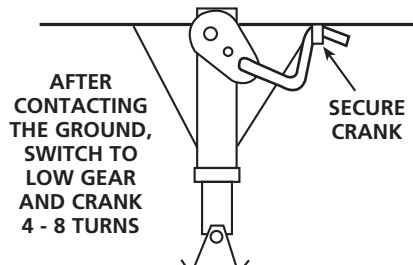
6. Using the high gear setting, lower the landing gear until the pads just touch the ground.

IMPORTANT: Follow your landing gear manufacturer's instructions for safe operation of the trailer to transfer trailer weight off the fifth wheel. Do not raise trailer off the fifth wheel.



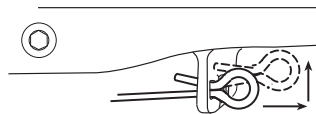
7. Switch to LOW GEAR and crank an additional 4-8 turns.

IMPORTANT: DO NOT raise the trailer off the fifth wheel.



8. Disconnect brake lines and light cord.

9. If equipped, pull secondary lock handle and hook on casting.

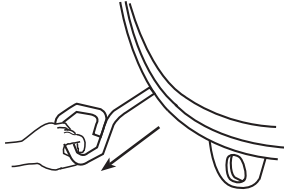


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OPERATING INSTRUCTIONS *continued*

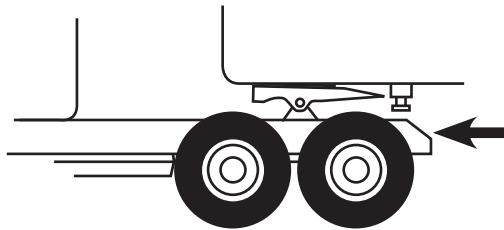
FW31 Uncoupling Procedures *continued*

10. Pull primary release handle. If Air Release equipped, actuate the fifth wheel control valve to open the locks.

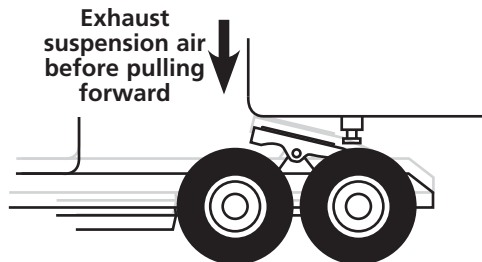


11. Release the tractor brakes and slowly pull forward 12" to disengage kingpin from fifth wheel. The fifth wheel should be between the front edge of the trailer and kingpin.

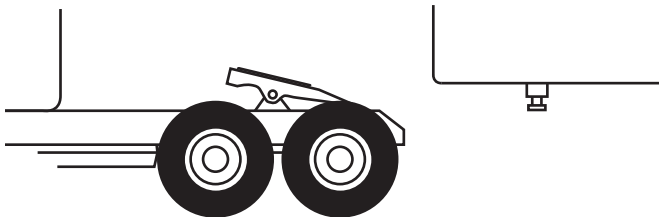
IMPORTANT: DO NOT DRIVE THE TRACTOR FREE OF THE TRAILER.



12. Completely exhaust air from tractor suspension, ensuring that the fifth wheel is below the bolster plate contact surface of the trailer.



13. Slowly pull forward away from the trailer.
14. Air-up tractor air suspension to ride height.



continued

OPERATING INSTRUCTIONS *continued*

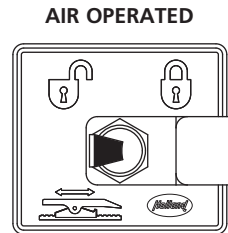
Fifth Wheel Slide Adjustment

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 by moving cab switch to unlock position.

NOTE:
Switch style may differ
by OEM design.



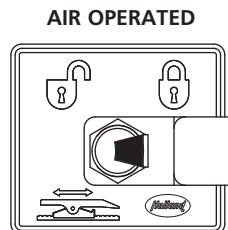
**Move cab switch
to unlock position.**

4. Slowly drive the tractor forward or backward to position the fifth wheel.

5. Re-engage the slide locking plungers by moving cab switch to lock position. Verify that plungers have engaged by performing a tug test.

NOTE: Retract landing gear if lowered.

NOTE:
Switch style may differ
by OEM design.



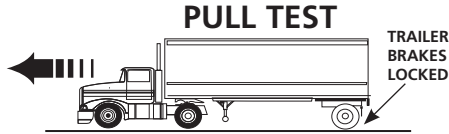
**Move cab switch
to lock position.**

continued

OPERATING INSTRUCTIONS *continued*

Fifth Wheel Slide Adjustment *continued*

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



Slowly Pull Forward With Tractor



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

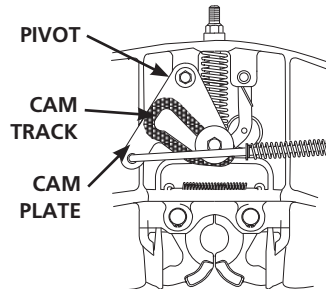
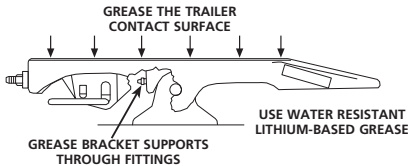


You must read and understand the following instructions before operating your fifth wheel.

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.

FW35 As-Needed Lubrication



Lubricate the cam track and pivot with a light oil or diesel oil.

Do not use any fifth wheel that does not operate properly. If your fifth wheel does not operate properly, **DO NOT USE IT!**



Failure to properly couple tractor and trailer may cause separation which, if not avoided, could result in death or serious injury.

Contact your nearest SAF-HOLLAND representative for assistance.

Required Inspections and Adjustments

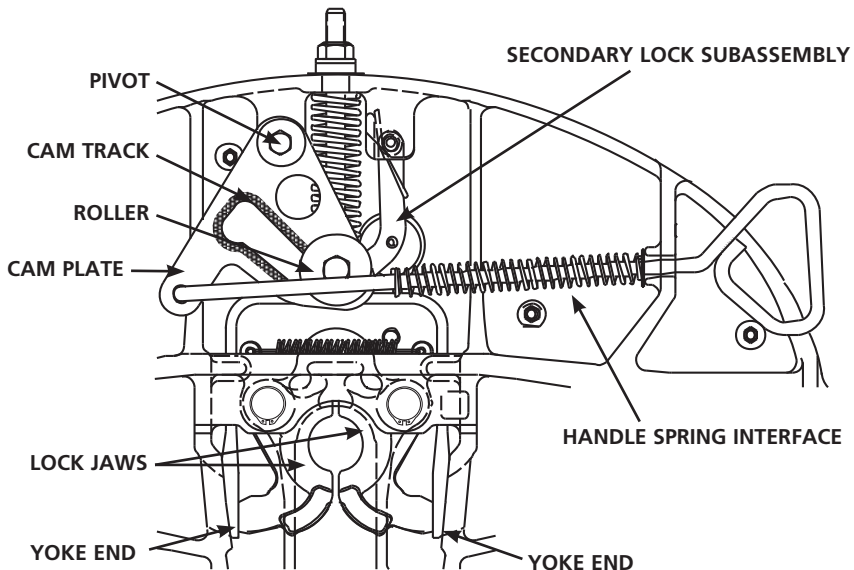
Perform the following every six months or 60,000 miles, whichever comes first. Thoroughly clean all components before inspecting or adjusting.

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 SAF-HOLLAND Original Parts only.
4. Make sure the bracket pin retention bolts and locknuts are in place and tight.
5. Inspect the components in the figure below for wear. If any components are worn, broken, or damaged, replace them.

IMPORTANT: STEPS 6 AND 7 APPLY TO FW31 NOLUBE MODEL ONLY.

6. Confirm that the lube plates are in place and properly attached.
7. Clean the lube plates to remove dry, dirty residual grease.



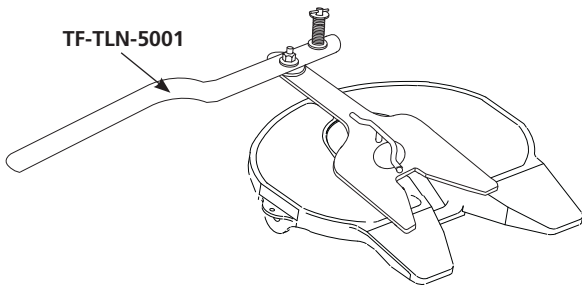
MAINTENANCE PROCEDURES *continued*

Required Inspections and Adjustments *continued*

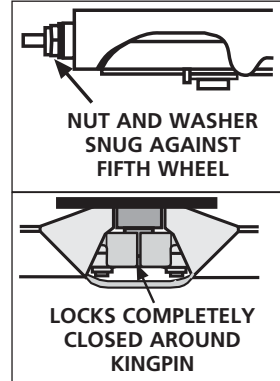
Inspection – Locking Mechanism

1. Verify operation by opening and closing locks with Holland Kingpin Lock Tester model no. TF-TLN-5001 (2" kingpin).

Adjustment – Locking Mechanism



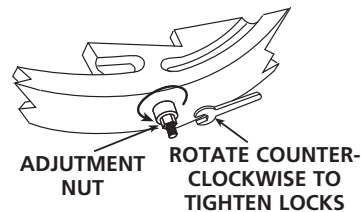
A PROPERLY CLOSED FIFTH WHEEL



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.
4. Rotate the rubber bushing that is located between the adjustment nut and the casting.
5. If the bushing is tight, rotate the nut on the yoke shank counter-clockwise until the bushing is snug, but rotatable by hand.



THE BUSHING SHOULD BE SNUG, BUT YOU SHOULD BE ABLE TO ROTATE IT.



The bushing should be 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.

⚠️ WARNING Improper adjustment can cause improper locking of the fifth wheel. An improperly coupled tractor and trailer may separate while in use which, if not avoided, could result in death or serious injury.

If your fifth wheel does not operate properly, DO NOT USE IT! Repeat the adjustment procedures or contact your nearest SAF-HOLLAND representative for assistance.

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 wheel 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, tube 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 our purchase or 600,000 miles (whichever comes first):

1. Operate as described in our FW35 Series operation and maintenance literature;
2. Maintain an acceptable wear limit between the fifth wheel locks and a new SAE J7006 kingpin when adjusted in accordance with our FW35 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 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 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 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 of 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 and 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:

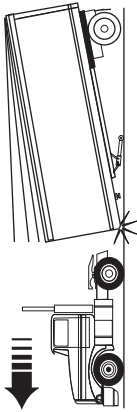
This warranty does not cover any FW35 Series fifth wheel or component that fails, malfunctions or is damaged as a result of accident, abuse, improper use, improper installation, intentional modification, corrosion, or failure to provide reasonable maintenance.

THIS WARRANTY IS OUR SOLE WARRANTY IN REGARD TO COVERED FW35 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.



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