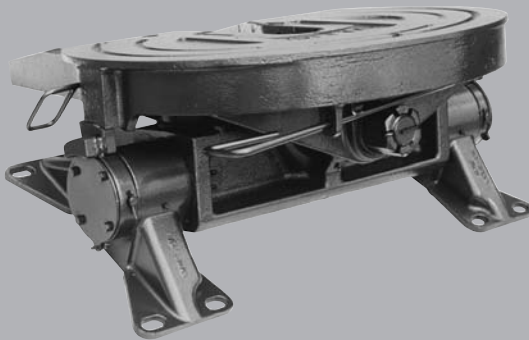


Owners Manual

FW2080 Series Fifth Wheel

Installation
Operation
Maintenance Procedures
Comprehensive Warranty



FW2080 SERIES FIFTH WHEEL



Failure to read, understand, and follow the important information contained in these instructions may result in a hazardous condition or cause a hazardous condition to develop.

FW2080 Installation Instructions

For detailed installation procedures refer to the **Fifth Wheel Installation Instructions** in this booklet.

In addition to these procedures, the mounting plate should have a minimum thickness of .75"

Attach the fifth wheel to the mounting plate using four 7/8" grade 8 bolts, lock washers, and grade C lock nuts minimum for each bracket. Each bracket must be provided with a fore-aft shear stop. This can be accomplished by welding the bracket to the mounting plate or bolting or welding a shear stop adjacent to the front or rear of the bracket.

FW2080 Operating Instructions

A fully oscillating fifth wheel such as the FW2080 Series is less stable than a conventional semi-oscillating fifth wheel which will result in different handling characteristics. Extreme caution should be exercised when cornering or making lane changes, etc.

This fifth wheel must only be used in applications where the loaded center of gravity (trailer and load) is at or below the top surface of the fifth wheel top plate. For detailed operating procedures refer to the **Fifth Wheel Operating Instructions** in this booklet.

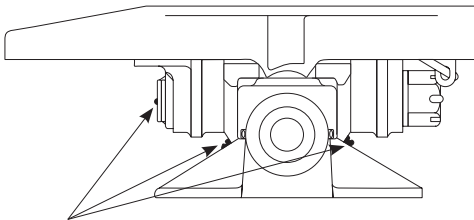
FW2080 Maintenance Instructions

For detailed maintenance procedures refer to the **Fifth Wheel Maintenance Instructions** in this booklet.

In addition to these instructions, the following specific instructions are required.

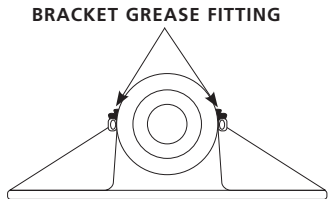
Lubrication:

When the fifth wheel is lubricated, grease the rocker and bracket assemblies through the grease fittings as shown in **Figures 1** and **2** below.



ROCKER GREASE FITTINGS

Figure 1



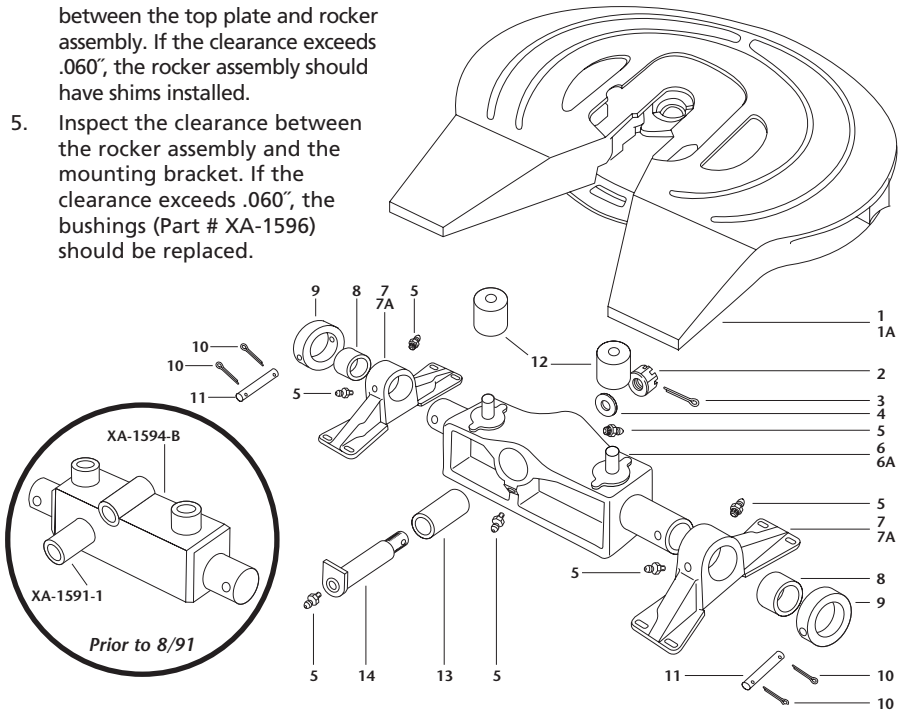
BRACKET GREASE FITTING

Figure 2

Periodic inspections and Adjustments

When conducting the periodic inspections, include the following procedures:

1. Inspect the rocker and bracket assembly for bent, worn, or damaged parts. Replace with Holland parts only.
2. Check the side-to-side oscillation for free play. If any free play is noted, the rubber bushings (Part # XB-70) should be replaced.
3. Check the side-to-side free play between the top plate and rocker assembly. If the clearance exceeds .060", replace the bushing, part number XA-06110.
4. Check the fore-aft clearance between the top plate and rocker assembly. If the clearance exceeds .060", the rocker assembly should have shims installed.
5. Inspect the clearance between the rocker assembly and the mounting bracket. If the clearance exceeds .060", the bushings (Part # XA-1596) should be replaced.



ITEM	PART NO.	NO.	PART NAME
1	XA-2081-DA	1	Fifth wheel top plate – 2" kingpin
1A	XA-2081-OA	1	Fifth wheel top plate – 3-1/2" kingpin
2	XB-780-1	1	Hex slotted nut 2-1/4"-4-1/2" socket
3	XB-781-1	1	Cotter pin 5/16" x 3-1/2"
4	XA-782	1	Washer
5	XB-H-38	7	Grease zerk
6	XA-05952	1	Rocker arm only
6A	XA-05952-A	1	Rocker arm sub-assembly (includes grease zerks and bushing)
7	XA-1595	2	Bracket only
7A	XA-1595-A	2	Bracket sub-assembly (includes grease zerks and bushing)
8	XA-1596	2	Cast iron bushing
9	XA-1597	2	Collar
10	XB-382	4	Cotter pin 3/16" x 1-1/4"
11	XA-1584-2	2	Pin
12	XB-70	2	Rubber cushion
13	XA-06110	1	Cast iron bushing
14	XA-1589-1	1	Bolt subassembly

For parts breakdown and rebuilding information for XA-2081 Series Top Plate, see Holland Publication XL-FW247-01.

INSTALLATION INSTRUCTIONS





General Safety Information

It is important to read, understand, and follow the important information contained in these installation instructions. Failure to do so may result in a hazardous condition or cause a hazardous condition to develop.

All welding should be performed by an AWS certified welder using a low hydrogen process and AWS E70XX filler metal. Failure to weld correctly may cause distortion, damage, and/or result in insufficient strength and subsequent joint failure which, if not avoided, could result in death or serious injury.

Prior to welding take precautions to ensure that the tractor electrical system is not damaged due to the welding process.

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 genuine Holland 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:

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 Holland literature.
4. As recommended in Holland literature (available from Holland or Holland distributors).

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. Applications other than recommended.


Installation

General Recommendations

1. Every user and installer using Holland products either recommended or not recommended by Holland, must thoroughly satisfy himself that the installation procedure used is appropriate for the vehicle, product and application.
2. Consult the Holland literature for fifth wheel capacities and applications.
3. Consult the tractor manufacturer's body builder's book and the latest SAE and D.O.T. standards for additional installation methods. 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 Grade 8, 5/8" minimum diameter bolts and Grade "C" locknuts for mounting. Follow bolt manufacturer's recommended torque value and procedure when installing.
6. 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.
7. 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 mounting angle to a frame rail, and the distance between bolts must not exceed 8", except when cutouts are required in the mounting angles.
9. Whenever a cutout is made on the mounting angle, such as required to bypass spring hangers, a 1" minimum radius should be used and bolts should be placed within 1-1/2", but not closer than 1" of the cut, fore and aft.
10. The mounting angle should have a minimum thickness as shown in Chart 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 of mounting materials wherever contact is made with the tractor frame.

CHART 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"

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

 WARNING Do not use U-bolts in fifth wheel installations. Use only new Grade 8 bolts and new Grade C lock nuts, sized 5/8" minimum diameter. 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 may result in death or serious injury.

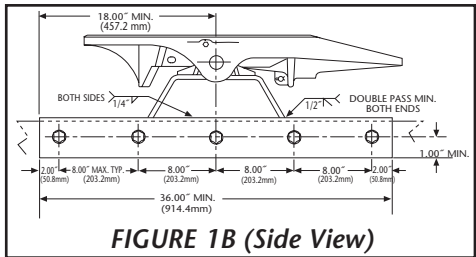
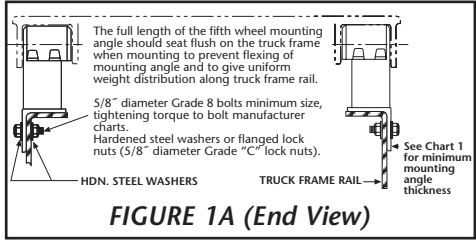
13. Trailer pick-up ramps are recommended at the rear of the truck-tractor frame.
14. When mounting to aluminum frames, follow the tractor manufacturer's recommendations. Holland has available a stationary mounting angle intended for use with aluminum frames. Contact Holland or Holland distributors for 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 7 of this publication.

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 4.

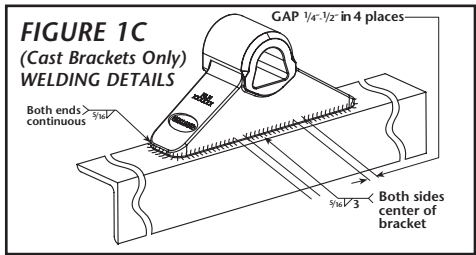
Bracket with Mounting Angle (see Figure 1A, 1B, and 1C):

- 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 5, follow the recommendations in **FIGURE 1**.



Bracket for Angle Mounting (see Figure 1A, 1B, and 1C):

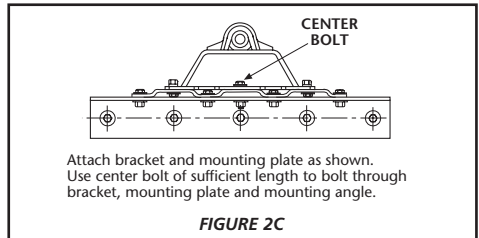
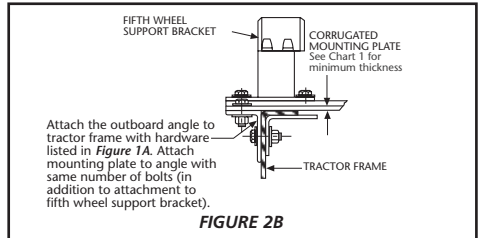
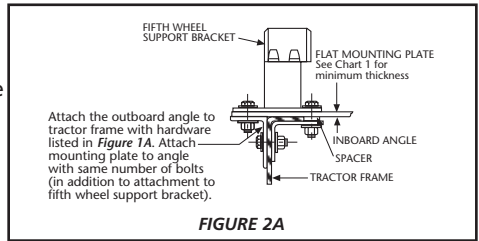
- Holland brackets for angle mounting are intended to be welded to mounting angles at the time of installation.
- See "Installation: General Recommendations" on page 5, for angle thickness and material (use 4" minimum horizontal and 3-1/2" minimum vertical leg size). The recommended length of each mounting 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.
- 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:
 - Securely position the mounting angle to the tractor frame.
 - Bolt the angles to the tractor as shown in **FIGURES 1A and 1B**.
 - Position the brackets on the angles and verify the correct spacing to mount the fifth wheel.
 - For fabricated brackets (a welded assembly), 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.
 - 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):

1. Holland brackets with mounting base are intended for installation on either corrugated or flat mounting plates.
2. In addition to the information given in "Installation: General Recommendations," on page 3, follow the recommendations in **FIGURES 2A, 2B, and 2C.**
3. 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.



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.
2. Check the fifth wheel locking mechanism with a Holland TF-TLN-5001 (2') or TF-TLN-1500 (3-1/2') 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.

⚠ 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.

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.
4. Apply a generous coating of grease to the top of the fifth wheel plate, where it will contact the trailer plate.
5. Apply a generous coating of grease to the front lock and lock jaws.

OPERATING INSTRUCTIONS

⚠️WARNING

1. Failure to read, understand, and follow the important information contained herein may result in a hazardous condition or cause a hazardous condition to develop.
2. Relative to tractor-trailer operations, there are other checks, inspections, and procedures not listed here, which are necessary, prudent, and/or required by law. The following is in addition to these, and pertains to the fifth wheel only.
3. Perform these procedures with the area clear of obstacles and other personnel.

Coupling Procedures

1. Check out the equipment before coupling.
 - A. Make sure that the fifth wheel is properly lubricated, that the locks are open, and that the ramps are tilted down in the proper position.
 - B. Make sure the mounting of the fifth wheel to the tractor frame is in good condition and is tight.
2. Back up close to the trailer, centering the kingpin on the throat of the fifth wheel. **STOP.**
3. Block the trailer wheels, connect the brake lines and light cord. Be sure any slack in the lines is supported so the brake lines do not become tangled. Set the trailer brakes.
4. Check to see that the trailer is at the proper height for coupling. The leading edge of the trailer upper coupler plate should initially contact the fifth wheel top bearing surface 4" to 6" behind its pivot axis as the tractor backs under the trailer. Follow instructions published separately for safe operation of the trailer to raise or lower the trailer to obtain this position.

⚠️WARNING

Attempting to couple with the trailer at an improper height could result in a false or improper coupling. Failure to properly couple tractor and trailer could cause separation, resulting in property damage, serious injury or death.

5. Back under the trailer, keeping the trailer kingpin centered in the throat of the fifth wheel.
6. After picking up the trailer with the fifth wheel — **STOP** — then continue backing until the fifth wheel locks firmly on the kingpin. Stopping helps prevent hitting the kingpin too hard.
7. Back up tightly against the kingpin. Then pull forward to test the completeness of the coupling as an INITIAL check.

⚠️WARNING

A direct visual inspection is required to assure proper coupling. Improper coupling can pass the initial pull test. Sound is unreliable. Do not take for granted that you are properly coupled. Get out of the cab and look. Failure to properly couple tractor and trailer could cause separation, resulting in property damage, serious injury or death.

Coupling Procedures *continued*

8. Visually check to see that the kingpin is in the fifth wheel locks, not overhanging the fifth wheel or caught in a grease groove. There should be no gap between the trailer bolster plate and the fifth wheel. (See **FIGURE 1**.) Check for proper coupling by looking into the throat of the fifth wheel. Check the locks as shown in **FIGURE 1** for Type "A" locks.

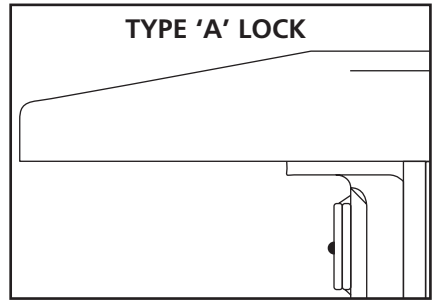


FIGURE 1

⚠ WARNING If you do not obtain a proper coupling, repeat this sequence. Do not use any fifth wheel which fails to operate properly. Failure to properly couple tractor and trailer could cause separation, resulting in property damage, serious injury or death.

9. If your fifth wheel is equipped with a manual secondary lock, engage it.
10. Using low gear, retract the landing gear until unloaded. Then, shift to high gear and continue cranking until they are fully retracted. Fold down or remove the crank handle and place it in the crank handle holder.
11. Check the brake lines and light cord.
12. Remove the wheel blocks and continue with pre-trip inspection.

Uncoupling Procedures

1. Set trailer brakes with tractor protection switch.
2. Back into the kingpin and set emergency brake on the tractor.
3. Block the trailer wheels.
4. Wind down the landing gears in high gear until they touch the ground. Shift to low gear and crank a few extra turns. Do not raise the trailer off the fifth wheel. It may be necessary to provide a base for the landing gear in poor parking conditions. Fold down or remove the crank handle and place it in the crank handle holder.
5. Disconnect the light cord and brake lines. Attach the dummy air coupling to keep foreign material from entering the brake lines.
6. Unlock the fifth wheel, including the manual secondary lock if so equipped.
7. Release the tractor emergency brake and pull out slowly from under the trailer. Let the trailer slide down the fifth wheel and pick-up ramps, being careful that the trailer landing gear touches the ground with minimal impact.

NOTE: When uncoupling the Type A fifth wheel, it is normal for the release handle to move to the closed position. It is not necessary to pull the release handle to recouple.

MAINTENANCE PROCEDURES



1. Failure to read, understand, and follow the important information contained herein may result in a hazardous condition or cause a hazardous condition to develop.
2. All maintenance must be performed by a qualified person using proper tools and safe procedures.
3. All maintenance must be performed while the tractor is uncoupled from the trailer.

As-Needed Lubrication

1. Keep a water-resistant lithium-base grease applied to the trailer contact surface of the fifth wheel plate.
2. Apply grease to the bearing surface of the support bracket through the grease fittings on the side of the fifth wheel plate. The plate must be lifted up slightly to relieve weight on the bracket while applying grease.
3. Spray diesel oil on the rack and slide path of the bracket on sliding fifth wheels.

Periodic Inspections and Adjustments

NOTE: All of the following must be performed every 30,000 miles or 3 months, whichever comes first. Perform the inspections after steam cleaning to assure a good inspection.

Inspection — General

1. Inspect the fifth wheel mounting. Check torque and replace any missing or damaged bolts. Check for broken or distorted components and repair or replace as needed.
2. Inspect the fifth wheel assembly for bent, worn or broken parts. Replace with HOLLAND parts only.

Fifth Wheel Locking Mechanism Inspection and Adjustment

1. Check the operation of the fifth wheel locking mechanism using a HOLLAND TF-TLN-5001 (2" kingpin) or TF-TLN-1500 (3-1/2" kingpin) Lock Tester. Inspect for proper locking as described in the "Operating Instructions" in this manual.



Do not use any fifth wheel which does not operate properly. Failure to properly couple tractor and trailer could cause separation, resulting in property damage, serious injury or death.

2. Check adjustment of the fifth wheel locks and adjust as required. Use the procedure as follows for the appropriate locking mechanism. If the locks cannot be properly adjusted due to wear, the fifth wheel must be rebuilt or replaced. Contact your HOLLAND Distributor to order the appropriate rebuilding kit or fifth wheel.



Improper adjustment can cause improper locking of the mechanism. If the fifth wheel does not operate properly, DO NOT USE IT! Failure to properly couple tractor and trailer could cause separation, resulting in property damage, serious injury or death. Repeat the adjustment procedures or contact your nearest Holland representative.

Type "A" Lock Adjustment

The lock adjustment screw is found in the crotch on the right side as shown (**FIGURES 1 & 2**).

1. Close the locks with the lock tester. Visually check to make sure locks are fully closed.
2. Tighten the adjustment screw by turning clockwise until tight, using a 1/2" Allen wrench or Allen socket extension.
3. Loosen the adjustment screw by turning it counterclockwise 1½ turns. The locks are now properly adjusted.
4. Verify this adjustment by locking and unlocking several times. Again visually check to make sure locks are fully closing.
5. If locks will not close completely, loosen the adjustment screw by turning it counterclockwise ¼ turn. Repeat Step 4.

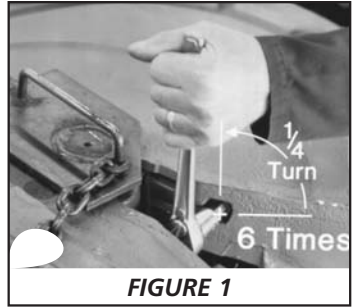


FIGURE 1

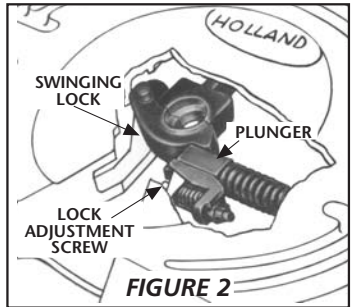


FIGURE 2

WARRANTY

COMMERCIAL PRODUCTS WARRANTY

HOLLAND warrants all Commercial Products (products other than those normally used for personal, family or household purposes) manufactured by it, when properly installed, to be free from defects in material and workmanship under normal use and service for a period of two (2) years from the date of manufacture, with the exception of elevating fifth wheels for which the warranty period is ninety (90) days. This warranty is void with respect to any product which has been altered in any way from its manufactured condition, such as intentional modification, accident, corrosion, misuse, failure to provide necessary and reasonable maintenance and is exclusive from normal wear. The sole responsibility of HOLLAND under this warranty is limited to repairing or replacing at the factory any part or parts which are returned, with transportation charges prepaid, and are found to be defective to the

satisfaction of HOLLAND. Written authorization from HOLLAND must be obtained prior to returning this warranty. HOLLAND shall not be liable in any event, for proximate, incidental, consequential or other damages, including but not limited to damages for loss of production or injury to persons or property arising out of any breach of this warranty.

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY OR A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE EXTENDING BEYOND THAT SET FORTH ABOVE.

Holland reserves the right, without giving prior notice, to change specifications and dimensions as designs are altered or improved. Options other than those shown may be provided. Contact the factory for information.

SAF-HOLLAND 5-YEAR COMPREHENSIVE FIFTH WHEEL WARRANTY

SAF-HOLLAND warrants all fifth wheel commercial products (other than those normally used for personal, family, or household purposes) manufactured after July 1, 1990, to be free from defects in material or workmanship for a period of 5 years from the date of manufacture, except elevating fifth wheels, which will carry a 180-day warranty. This warranty covers only defects in materials or workmanship and does not cover failures due to any of the following:

1. Normal wear
2. Improper installation
3. Intentional modification
4. Damage as a result of an accident
5. Corrosion
6. Misuse or abuse
7. Failure to provide reasonable maintenance

This warranty does not guarantee a particular service life of the product since service life will vary with application, degree of use, operating environment, level of maintenance, and other factors beyond our control.

Holland's sole responsibility for any fifth wheel product or part determined by Holland to be defective and covered by this warranty is limited to repairing or replacing the product or part, and to providing an allowance to be applied to the labor cost of removal and replacement.

Prior authorization from Holland must be obtained before replacing or returning any part, or incurring any labor cost for removal. No charges for expense incurred in parts, labor, or transportation by unauthorized persons will be allowed under this warranty. Holland reserves the right to request the return of any part or fifth wheel assembly (with transportation charges prepaid) claimed to be covered by this warranty.

Holland shall not be liable, in any event, for proximate, incidental, consequential, special, or other damages, including — but not limited to — damages for loss of production, loss of profits, loss of opportunity, or injury to persons or property arising out of any breach of this warranty.

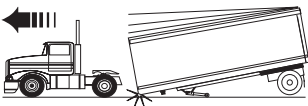
THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER WARRANTY EXTENDING BEYOND THAT SET FORTH ABOVE.



From fifth wheel rebuild kits to suspension bushing repair kits, SAF-HOLLAND Original Parts are the same quality components used in the original component assembly. SAF-HOLLAND Original Parts are tested and designed to provide maximum performance and durability. Will-fits, look-alikes or worse yet counterfeit parts will only limit the performance potential and could possibly void SAF-HOLLAND's warranty. Always be sure to spec SAF-HOLLAND Original Parts when servicing your SAF, Holland or Neway product.

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



Failure to properly install, operate, or maintain this fifth wheel could result in tractor and trailer separation causing death or serious injury to others.

