

FW3510

FIFTH WHEEL

OPERATING MANUAL



You must read and understand the instructions in this manual before operating your fifth wheel.

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

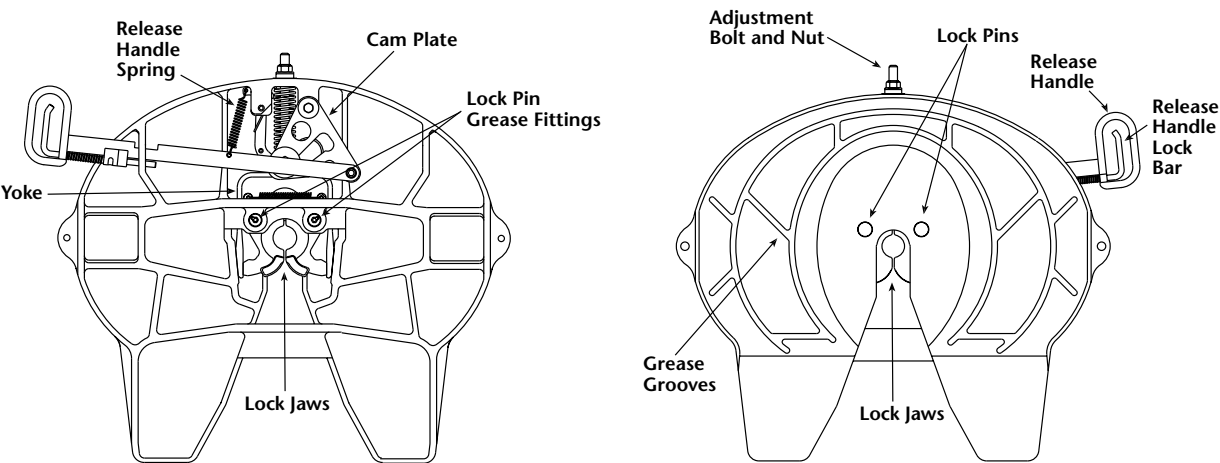
These instructions apply to the proper operation of your fifth wheel only. There are other important checks, inspections, and procedures not listed here that are necessary, prudent, and/or required by law.

Table of Contents

1. Component Part Identification and Specifications	
1.1 Identification of component parts	2
1.2 Important specifications	2
2. Operating Instructions	
2.1 Pre-service inspection	3
2.2 Trailer coupling procedures	3-4
2.3 Trailer uncoupling procedures	5
3. Routine Inspection and Maintenance	
3.1 As Needed Lubrication	6
3.2 Required Inspections and Adjustments	6-8
3.2.1 General fifth wheel inspection	6
3.2.2 Inspection of locking mechanism	7
3.2.3 Lock adjustment procedure	7
3.2.4 Adjustment of sliding fifth wheel mechanism	8

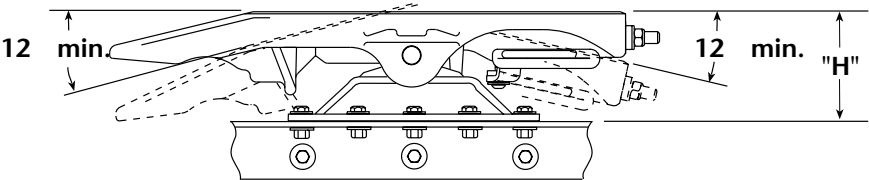
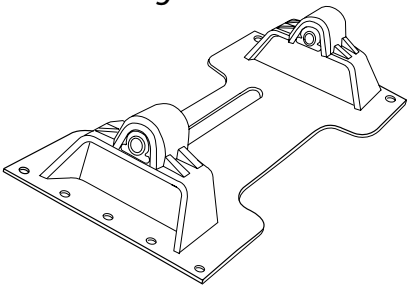
1. Component Part Identification and Specifications

1.1 Identification of Component Parts



1.2 Important Specifications

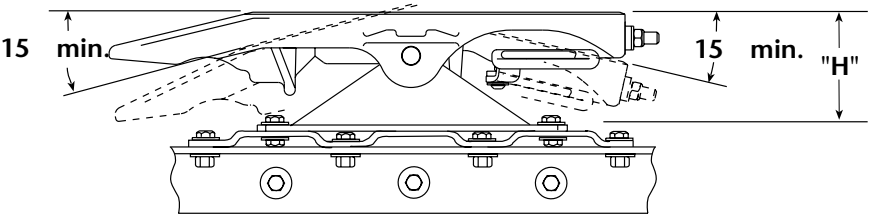
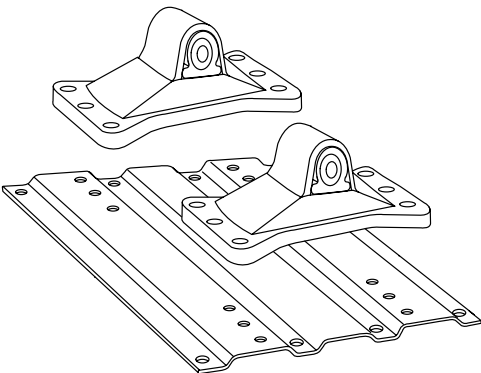
**"Weightsaver"
Mounting Bracket**



Fifth Wheel Model No.	D-Value	Max. Vertical Load	Fifth Wheel Height* "H"
FW3510-140	150 kN	20 tonne	140 mm
FW3510-160	150 kN	20 tonne	160 mm
FW3510-190	150 kN	20 tonne	190 mm
FW3510-230	150 kN	20 tonne	230 mm

**Fifth Wheel Height "H" Does Not Include Mounting Plate Thickness*

**"ISO/DIN Style"
Mounting Bracket**



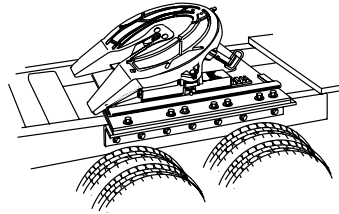
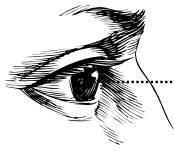
Fifth Wheel Model No.	D-Value	Max. Vertical Load	Fifth Wheel Height* "H"
FW3510-150	150 kN	20 tonne	150 mm
FW3510-180	150 kN	20 tonne	180 mm
FW3510-200	150kN	20 tonne	200mm

**Fifth Wheel Height "H" Does Not Include Mounting Plate Thickness*

2. Operating Instructions

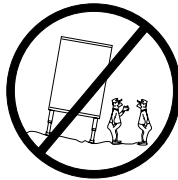
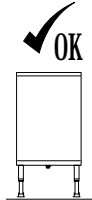
2.1 Pre-service Inspection

- ① Inspect the fifth wheel mounting.

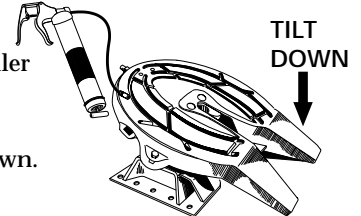


- Tighten loose fasteners
- Replace missing fasteners
- Repair/replace cracked components

- ② Make sure the coupling area is flat, level and clear of obstacles and persons



- ③ Lubricate the fifth wheel-to-trailer contact surface with grease.
Tilt the ramps down.

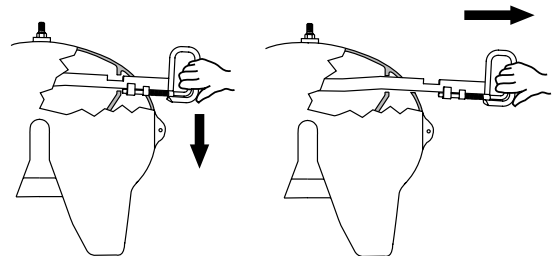


- ④ Make sure the locks are open.



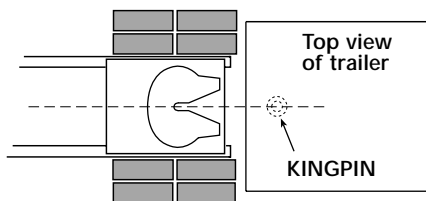
If the locks are closed:

- Grip handle
- Pull "trigger"
- Slide back/left (to disengage the lock)
- Pull handle out

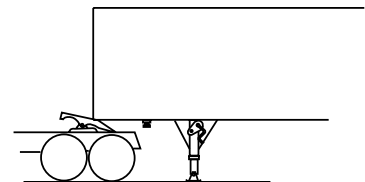


2.2 Trailer Coupling Procedure

- ① Center the kingpin with the fifth wheel center.



- ② Back the tractor close to the trailer and STOP.

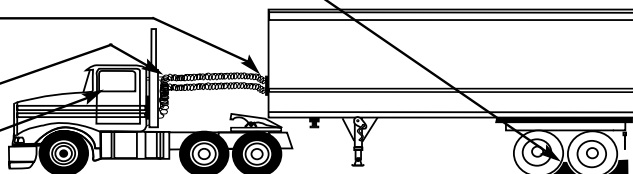


- ③ Chock trailer wheels

- ④ Connect brake and electrical lines

- ⑤ Support slack in lines to prevent interference

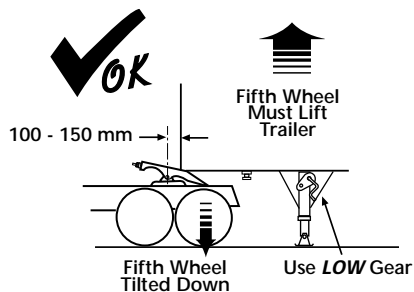
- ⑥ Set trailer brakes



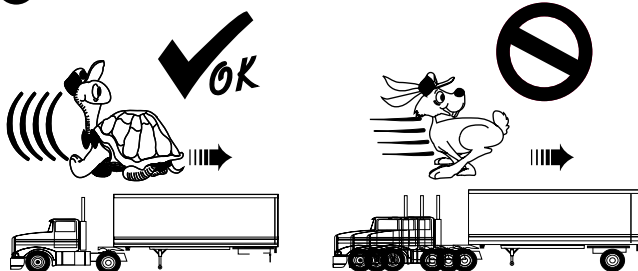
2. Operating Instructions (continued)

2.2 Trailer Coupling Procedures (continued)

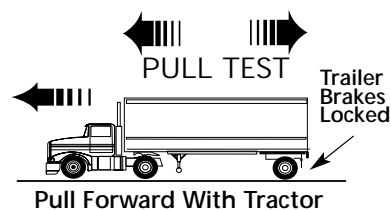
- 7 Adjust trailer height so the fifth wheel will lift the trailer. The Trailer should contact the fifth wheel 100 – 150 mm behind the fifth wheel bracket pin.



- 8 SLOWLY back into trailer.

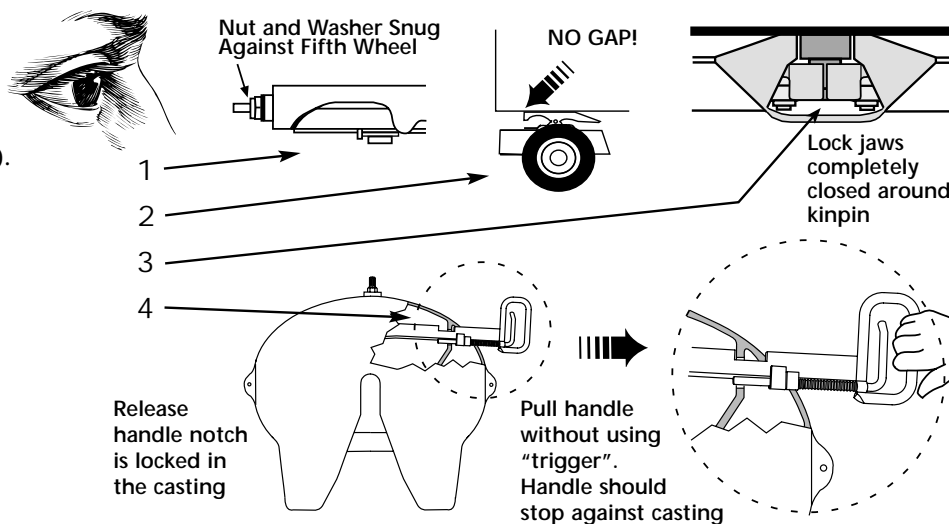


- 9 Do a pull test.



The coupling procedure is not complete without a visual inspection. You must get out of the tractor and verify that the fifth wheel is properly coupled to the kingpin as shown below.

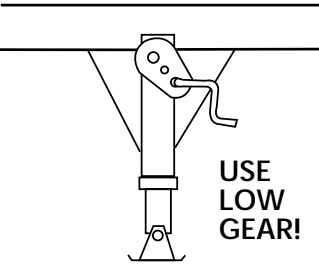
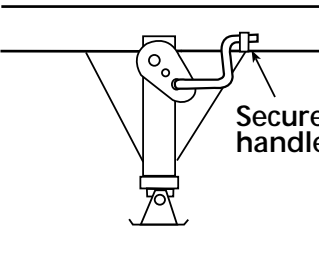
- 10 Get out of the tractor. Visually check that the fifth wheel is locked (steps 1-4 at right).



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

2. Operating Instructions (continued)

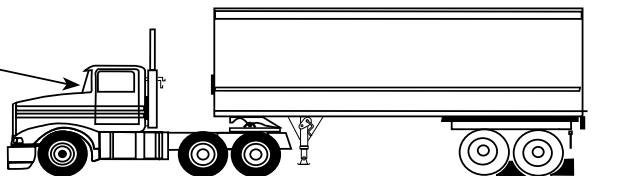
2.2 Trailer Coupling Procedures (continued)

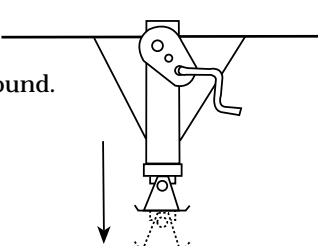
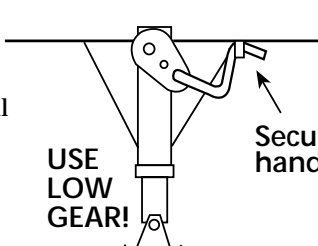
- 11 Retract landing gear until pads come off the ground.
- 
- 12 Switch to high gear, fully retract, then secure crank handle.
- 

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

2.3 Trailer Uncoupling Procedure

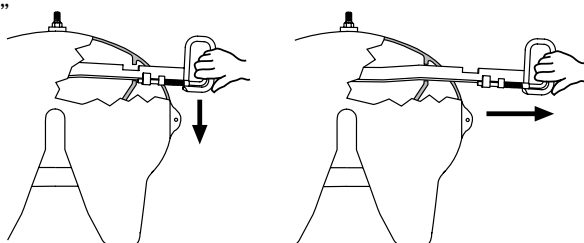
- 1 Position tractor and trailer on firm, level ground — clear of obstacles and persons.
- 2 Set trailer brakes.
- 3 Slowly back tractor tightly against trailer.
- 4 Set tractor brakes.
- 5 Chock trailer wheels.



- 6 Extend landing gear until pads just touch the ground.
- 
- 7 Switch to low gear, and crank an additional 4 – 8 turns.
- 

- 8 Unlock fifth wheel with release handle.

- Grip handle
- Pull “trigger”
- Slide back/left (to disengage lock)
- Pull handle out



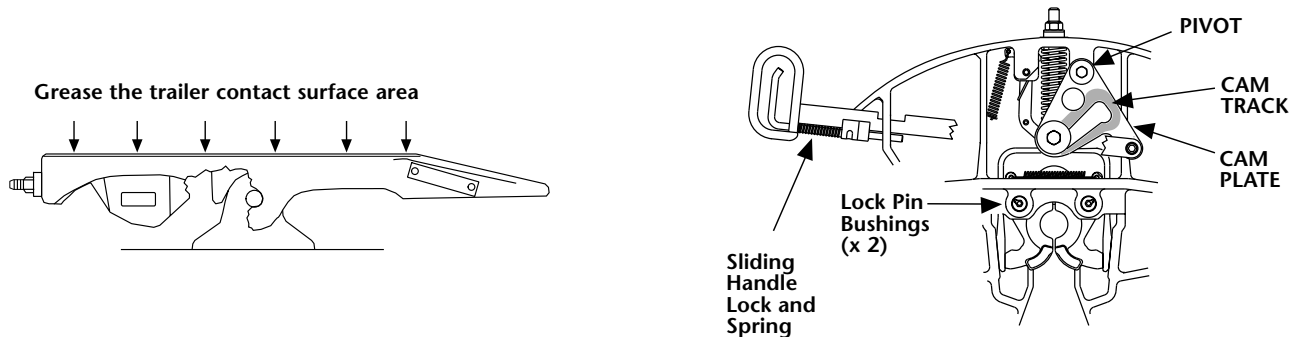
- 9 Disconnect brake and electrical lines.

- 10 Release tractor brakes and slowly drive away from the trailer.

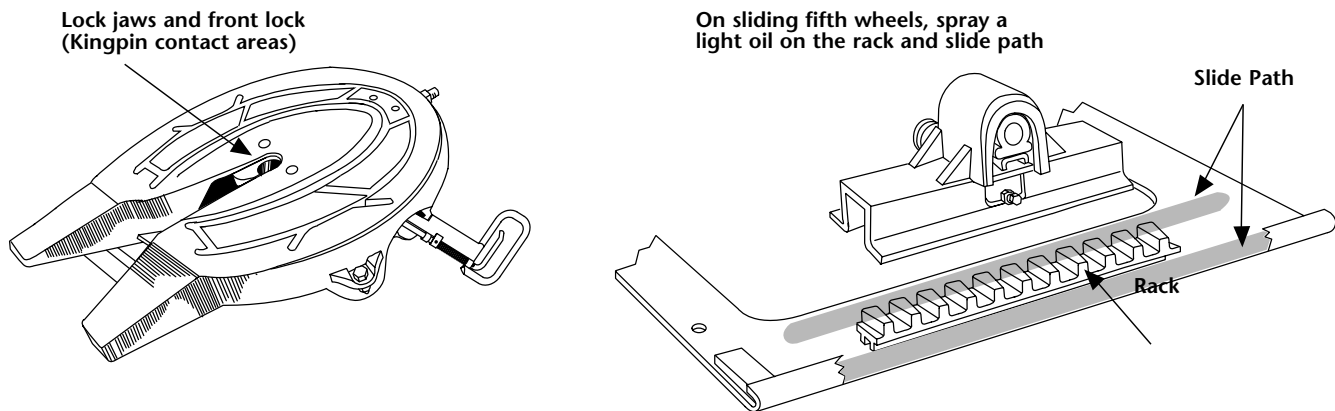
3. Maintenance Procedures

3.1 As Needed Lubrication

Note: Maintain adequate lubrication on the following surfaces by inspecting and re-lubricating at regular intervals.



Use water-resistant lithium based grease



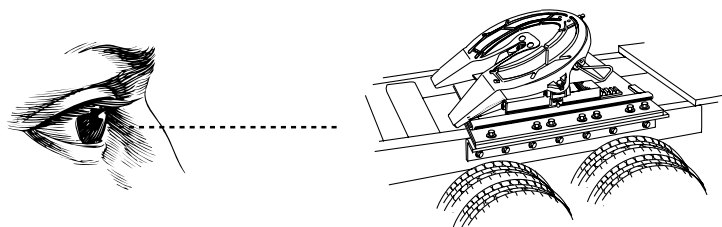
3.2 Required Inspections and Adjustments

NOTE: Perform the following every three (3) months or 50,000 km, whichever comes first. Thoroughly clean all components before inspecting or adjusting.

3.2.1 General Fifth Wheel Inspection

Inspect the fifth wheel mounting and fifth wheel assembly

- Tighten loose bolts and fasteners.
- Check bolt and fastener torque.
- Replace missing or damaged bolts
- Replace bent, worn, or broken parts.



Use only genuine Holland parts kits

3. Maintenance Procedures (continued)

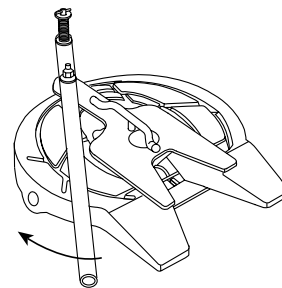
3.2 Required Inspections and Adjustments (continued)

NOTE: Perform the following every three (3) months or 50,000 km, whichever comes first. Thoroughly steam clean all components before inspecting or adjusting.

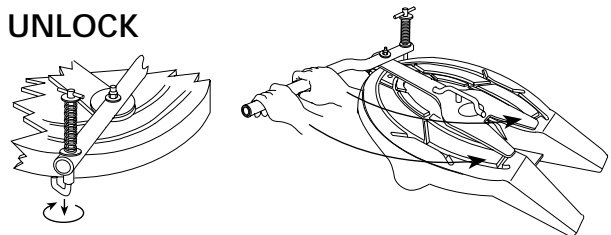
3.2.2 Inspection of Locking Mechanism

- 1 Verify the proper operation of the fifth wheel by locking and unlocking the fifth wheel locks using a Holland Kingpin Lock Tester TF-TLN-1000 or TF-TLN-5001.
- 2 Set tool on the fifth wheel and rotate the handle.
- 3 Push down and rotate the “J” hook under the fifth wheel, then pull the handle back.

TO LOCK



TO UNLOCK



- 4 After each attempt, verify that the fifth wheel is properly locked, as shown below.

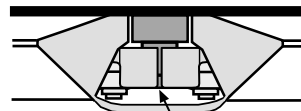


WARNING

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

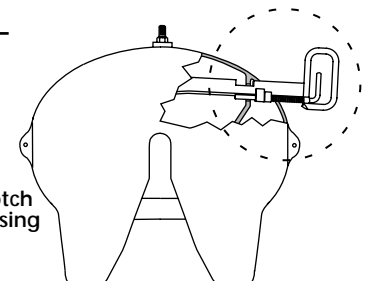
DO NOT use any fifth wheel that fails to operate properly.

Nut and bushing snug against the fifth wheel



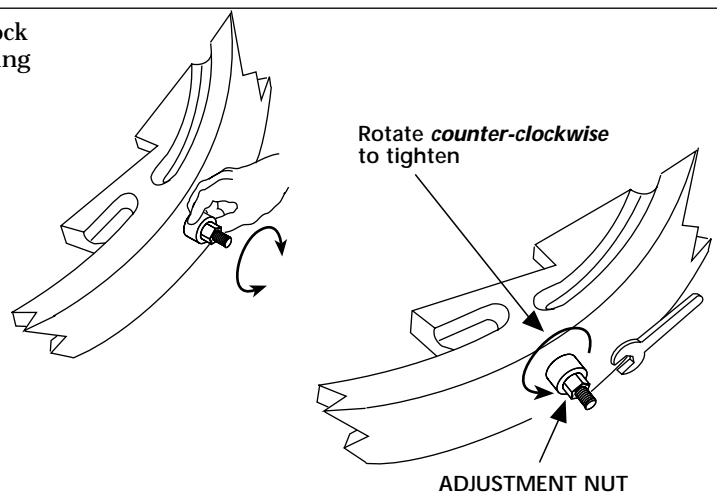
Locks completely closed around the kingpin

Release handle notch is locked in the casing



3.2.3 Lock Adjustment Procedure

- 1 Close the locks using a Holland Lock Tester, and rotate the rubber bushing between the adjustment nut and the casting.
- 2 If the bushing is tight, rotate the adjustment nut counter-clockwise until the bushing is snug, but can still be rotated by hand.



3. Maintenance Procedures (continued)

3.2 Required Inspections and Adjustments (continued)

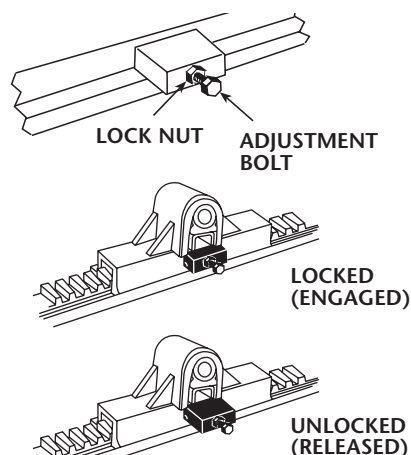
3.2.4 Adjustment of Sliding Fifth Wheel Mechanism (if so equipped)

- 1** Loosen the lock nut and turn the adjustment bolt out (counter-clockwise).
- 2** Disengage and engage the locking plungers. Verify that the plungers have seated properly as shown.
- 3** Now tighten the adjustment bolt until it contacts the rack.
- 4** Turn the adjustment bolt clockwise an additional 1/2 turn then tighten the lock nut securely.



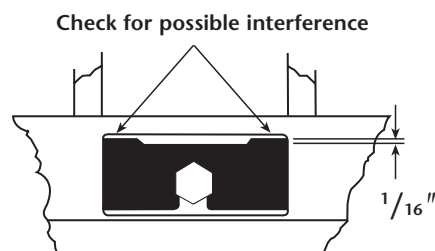
WARNING

Proper adjustment of the sliding bracket locking plungers must be performed at installation, and maintained at regular intervals using the adjustment bolts for both plungers. Proper adjustment is required for proper operation, load transfer, and load distribution.



If the plungers do not release fully to allow the fifth wheel to slide:

- A. Check the air cylinder or the manual slide operating lever for proper operation. Replace if necessary.
- B. Check plunger adjustment as explained above.
- C. If a plunger is binding on 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 at right. Re-install and adjust the plungers as explained above.



If the locking plungers are too loose:

- A. Check the plunger adjustment as explained above.
- B. Check the plunger springs for proper compression. Replace if necessary.
- C. Check for plunger wear. If necessary, replace as described above.

After inspection and adjustment, re-lubricate all moving parts with a light, rust resistant oil.



The Holland Group, Inc.
Holland, MI 49423
United States
Phone: (616) 396-6501
Fax: (616) 396-1511



Holland Europe GmbH
Altenkamp 9
D-33758
Schloss Holte-Stukenbrock
Germany
Phone: +49 (0) 5207-89560
Fax: +49 (0) 5207-895656

Holland Eurohitch Ltd.
Hoo Farm Industrial Estate
Worcester Road
Kidderminster
Worcestershire
DY11 7RA
Phone: +44 (0) 1562-732010
Fax: +44 (0) 1562-732020

Holland Hitch (Aust.) Pty. Ltd.
Melton, Victoria, Australia
Phone: 61-(0)3-9743-6799
Fax: 61-(0)3-9747-9617

Holland Transtrade
(Thailand) Company, Ltd.
Bangkok, Thailand
Phone: 66 (0)2-513-8758
Fax: 66 (0)2-513-8757

Nippon Holland, Ltd.
Tokyo, Japan
Phone: 81-(0)3-3461-9130
Fax: 81-(0)3-3463-1407

Holland Transtrade
Far East SDN BHD
Shah Alam, Malaysia
Phone: 60 (0)3 734-2888
Fax: 60 (0)3 736-5588