Before proceeding, verify that your fifth wheel top plate is a XA-3501 model by following the 3 steps below:

1. **OK**
   - YOKE SHAFT EXTENDS OUT OF THE FRONT OF THE FIFTH WHEEL
   - ![Diagram](image1)

2. **WRONG TROUBLESHOOTING SECTION**
   - ![Diagram](image2)
   - **CORRECT TROUBLESHOOTING SECTION**
   - ![Diagram](image3)
   - XA-351 SERIES
     - (Manufactured after 6/1/96)
     - XA-331 SERIES
     - IF YOU HAVE THIS FIFTH WHEEL, REFER TO THE XA-351 TROUBLESHOOTING GUIDE SECTION.
   - XA-3501 SERIES
     - Open loop release handle
     - Bracket pin retained internally
     - TROUBLESHOOTING HINTS FOR THIS MODEL FIFTH WHEEL TOP PLATE ARE CONTAINED IN THIS SECTION.

3. **Serial Number Tag Identification**
   - For this troubleshooting section, the part number on the serial number tag should begin with one of the following:
     - FW3500
     - FW3540
     - FW3590
     - FW2535
     - XA-3501
   - ![Part & Serial Number Tag](image4)
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REBUILD KIT NUMBERS

LEFT HAND RELEASE
RK-63500 (STANDARD)
RK-63505 (W/Manual Secondary Lock)
RK-63508 (W/Lock Pin Bushings)
RK-63510 (W/Lock Pin Bushings & Manual Secondary Lock)

RIGHT HAND RELEASE
RK-63501 (STANDARD)
RK-63506 (W/Manual Secondary Lock)
RK-63509 (W/Lock Pin Bushings)
RK-63511 (W/Lock Pin Bushings & Manual Secondary Lock)
PROBLEM: Difficult to uncouple from trailer

Cause

1. The secondary lock is not released.

2. The tractor may be putting pressure against locks.

3. Rust or grime build-up on locking mechanism.

Remedy

1. If manual secondary, pull manual secondary release handle out and up, hooking it on casting, as shown in Figure 1.

2. Lock the trailer brakes, then back the tractor tight against the kingpin to relieve pressure on the locks. Lock the tractor brakes. Pull release handle.

3. Lubricate all moving parts including release handle, as shown below. Operate several times to work in lubricant. Follow recommended lubrication schedule as detailed in XL-FW303 and Service Bulletin #9. (See Figure 2).
PROBLEM: Difficult to uncouple from trailer (con’t.)

**Cause**

4. Attempting to couple too fast.

5. Tractor too low – putting pressure on locking mechanism

6. Bent kingpin, damaged bolster plate, or improper use of “lube plate”.

**Remedy**

4. Slowly back the tractor up to the trailer. Pick up the trailer with the fifth wheel. STOP. Then continue backing until the fifth wheel locks firmly to the kingpin. Stopping helps prevent hitting the kingpin too hard.

5. Reinfl ate tractor air suspension to return to proper ride height.

6. Check the kingpin with a Holland TF-0110 kingpin gage and bolster plate with a 48” straight edge — repair or replace as required. (See Figure 3 and Figure 4 below, and Service Bulletin #20.)

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**Figure 3**

**Figure 4**
PROBLEM: Difficult to uncouple from trailer (con't.)

Cause

7. Fifth wheel locks adjusted too tight.

8. Release handle will not stay out or must be held out when unlocking.

9. Bent yoke shaft (Item 6) damaged during improper coupling attempt.

10. Other missing or damaged release system parts.

11. Casting bent at throat restricting movement.

Remedy

7. Re-adjust fifth wheel locks following the procedures in the Lock Adjustment section of the maintenance instructions included with your fifth wheel, Holland publication #XL-FW-308.

8. Damaged release handle or fifth wheel requires rebuilding. Replace release handle or rebuild fifth wheel using proper rebuild kit for your model fifth wheel.

9. Rebuild fifth wheel.

10. Inspect and replace as necessary with Holland parts.

11. Replace complete fifth wheel top plate.

PROBLEM: Difficult to couple to trailer

Cause

1. The trailer may be too high; the kingpin is not entering the locks properly.

2. Locks are closed.

Remedy

1. Chock trailer wheels. Then using LOW GEAR, lower the trailer landing gear until the bolster plate is aligned with the fifth wheel as shown in Figure 5.

2. Pull release handle and verify that locks are open (see Figure 6).
PROBLEM: Difficult to couple to trailer (con’t.)

Cause

3. Excess accumulation of rust or grime is interfering with lock operation.

4. Bent release handle (Item 12L or 12R) or damaged during improper coupling attempt.

5. Bent yoke shaft (Item 6) damaged during improper coupling attempt.

6. Bent kingpin, damaged bolster plate, or improper use of “lube plate.”

7. The locks (Item 1) may be damaged or installed upside down.

8. Casting bent at throat restricting movement.

9. Cam bolts tightened too tight after rebuild, restricting cam plate movement.

10. Release handle spring or crimp damaged or broken.

Remedy

3. Lubricate all moving parts including release handle. Operate several times to work in lubricant. Follow recommended lubrication schedule as detailed in XL-FW303 and Service Bulletin #9.

4. Replace release handle using proper Holland release handle kit.

5. Rebuild fifth wheel.

6. Repair trailer. (See Service Bulletin #20, Service Bulletin #4 and #4a.)

7. Inspect and replace, or re-install properly, using proper rebuild kit for your model fifth wheel.

8. Replace complete fifth wheel top plate.

9. Loosen bolts as required following rebuild procedures provided with rebuild kit.

10. Replace release handle using proper Holland release handle kit.

PROBLEM: Excessive movement of kingpin within lock jaws

Cause

1. Kingpin wear.

2. Fifth wheel out of adjustment.

Remedy

1. Check kingpin for wear with Holland TF-0110. Replace kingpin if necessary.

2. Adjust fifth wheel following the procedures in the Lock Adjustment section of the maintenance instructions included with your fifth (Holland publication XL-FW-303). If fifth wheel still cannot be adjusted, rebuild fifth wheel using proper rebuild kit for your model fifth wheel.
PROBLEM: XA-1313 pins raising

Cause
1. Kingpin too short or improperly installed “lube plate.”
2. Too much movement of jaw(s) in casting.

Remedy
1. Check kingpin length using Holland Kingpin Gage TF-0110. If a lube plate is used, kingpin length must meet SAE dimensions after installation. (For additional kingpin specification information, refer to Holland Service Bulletins 4 and 4a, and Figure 7.)
2. Shim jaw(s) in casting using P/N XB-05859 as shown in Figure 8.

PROBLEM: Hard steering or binding

Cause
1. Lack of lubrication on fifth wheel-to-trailer upper coupler contact surface.
2. Lack of lubrication in operating mechanism
3. Warped bolster plate.

Remedy
1. Thoroughly lubricate fifth wheel top plate with a high pressure lithium-base grease.
2. Lubricate fifth wheel as shown in Figure 9. Follow recommended lubrication schedule as described in XL-FW303 and Service Bulletin #9.
3. Check bolster plate for flatness. Replace if necessary. (Refer to Service Bulletin #20.)
# FW3500 (XA-3501) FIFTH WHEEL Trouble-Shooting Guide

## ITEM | PART NO. | NO. REQ'D | PART NAME
--- | --- | --- | ---
1 | XA-1704 | 1 | Lock jaws
2 | XA-1313 | 2 | Lock pin
3 | XB-5 | 2 | Cotter pin 1/4" x 2"
4 | XA-1703-F | 1 | Yoke sub-assy.
5 | XB-1505 | 1 | Spring
6 | XA-1706 | 1 | Yoke shaft
7 | XB-02312 | 1 | Lock adjustment tag
8 | XB-1127 | 1 | Rubber washer
9 | XB-PW-1316-112 | 1 | Washer 11/2" O.D. x 13/16" I.D.
10 | XB-HNH-34-F | 1 | Locknut 3/4"-16
11 | XB-T-49 | 3 | Washer 13/4" O.D. x 9/16" I.D.
12L | RK-1707-M | 1 | Left hand release handle sub-assy. (Part No. (11) must be installed on handle for complete assembly.)
12R | RK-1707-6 | 1 | Right hand release handle sub-assy. (Part No. (11) must be installed on handle for complete assembly.)
13 | XA-1705 | 1 | Cam plate
14 | XA-1029 | 1 | Roller
15 | XB-2083 | 1 | Bolt 1/2"-10 x 13/4"
16 | XB-T-69-A | 1 | Locknut 1/2"-20
17 | XB-1030-1 | 2 | Washer
18 | XA-1507 | 1 | Roller
19 | XB-CX-58-F-134 | 1 | Bolt 5/8"-18 x 13/4"
20L | XA-3542-L | 1 | Secondary lock, left hand
20R | XA-3542-R | 1 | Secondary lock, right hand

## ITEM | PART NO. | NO. REQ'D | PART NAME
--- | --- | --- | ---
21 | XB-2149 | 1 | Torsion spring
22 | XB-21-S-S00-2750 | 1 | Roll pin
23 | XA-3514 | 1 | Lock guard
24 | XB-1044 | 1 | Torsion spring
25 | XA-1055 | 1 | Pin
26 | XB-16 | 2 | Cotter pin 1/8" x 1"
27 | XB-H-38 | 2 | Grease fitting
28 | XA-3542-M | 1 | Manual secondary lock handle
29 | XA-3528 | 1 | Manual secondary lock
30 | XA-01241 | 2 | Lock pin bushing
31 | XA-01242 | 2 | Lock pin bushing
32 | XB-21-S-250-1875 | 2 | Roll pin - MUST be used with part nos. (2) when wheel is equipped with lock pin bushings
33 | XA-2016 | 2 | Bracket pin
34 | XB-21-S-375-1750 | 2 | Roll pin
35A | XB-1604-5 | 2 | Rubber bushings (for fifth wheels mfd. prior to 5/82)
35B | XB-0011-1 | 2 | Rub. bush. (no longer available - order XA-0011-2 and see service bulletin no. 16 for instructions)
35C | XB-0011-2 | 2 | Rubber bushings (for fifth wheels mfd. after 6/87)
36 | TF-0110 | 1 | Kingpin gage
37 | TF-0237 | 1 | 2" Lock gage
38 | TF-TLN-1000 | 1 | Kingpin lock tester

### MODELS EQUIPPED WITH MANUAL SECONDARY LOCK

### MODELS EQUIPPED WITH LOCK PIN BUSHINGS

### NOT INCLUDED IN REBUILD KIT

### ACCESSORIES:

- TF-TLN-1000 2" Kingpin Lock Tester
- TF-0110 Kingpin Gage

* Additional parts included in RK-63505, RK-63506, RK-63510 or RK-63511 rebuild kits.
* Additional parts included in RK-63508, RK-63510, RK-63511 rebuild kits.
† Not included in rebuild kits.