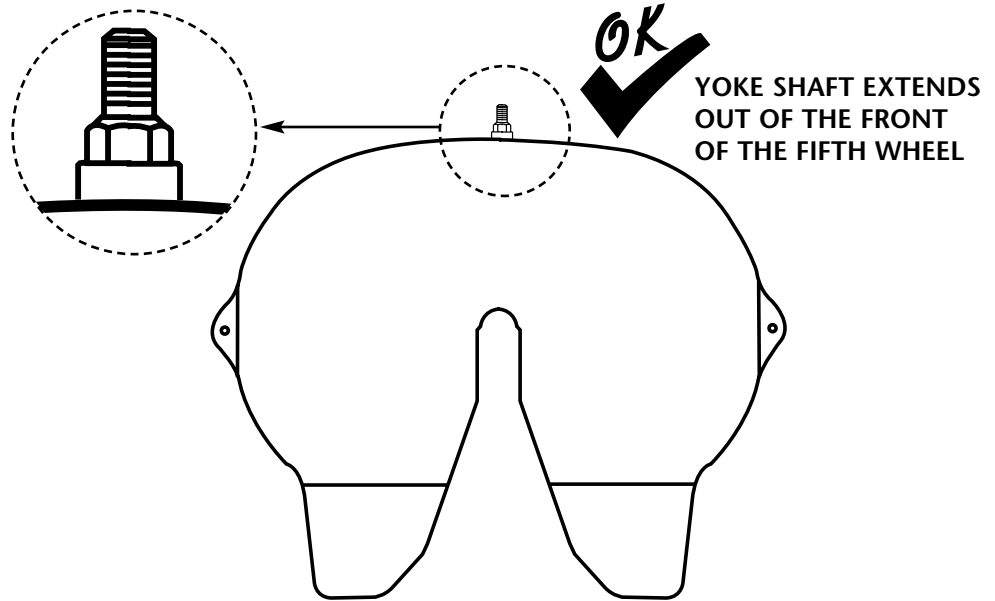


FW3500 (XA-3501) FIFTH WHEEL Trouble-Shooting Guide

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

1



2

WRONG TROUBLESHOOTING SECTION

XA-351 SERIES
(Manufactured after 6/1/96)
XA-331 SERIES

Closed loop release handle
Bolt and nut retention for bracket pin

IF YOU HAVE THIS FIFTH WHEEL, REFER TO THE XA-351 TROUBLESHOOTING GUIDE SECTION.

CORRECT TROUBLESHOOTING SECTION

XA-3501 SERIES

Open loop release handle
Bracket pin retained internally

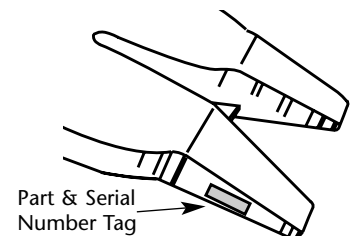
TROUBLESHOOTING HINTS FOR THIS MODEL FIFTH WHEEL TOP PLATE ARE CONTAINED IN THIS SECTION.

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**

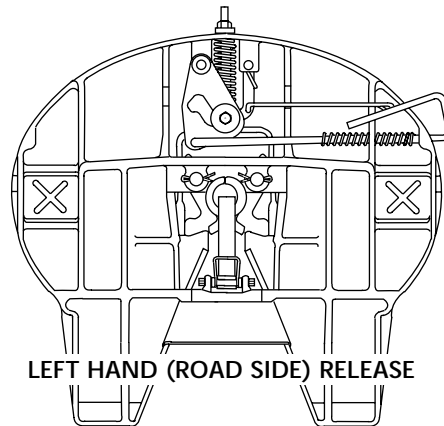




FW3500 (XA-3501) FIFTH WHEEL Trouble-Shooting Guide

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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*).

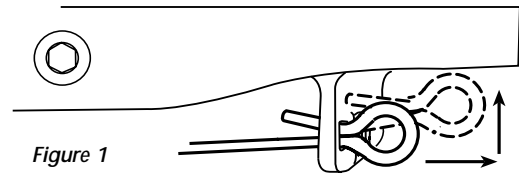


Figure 1

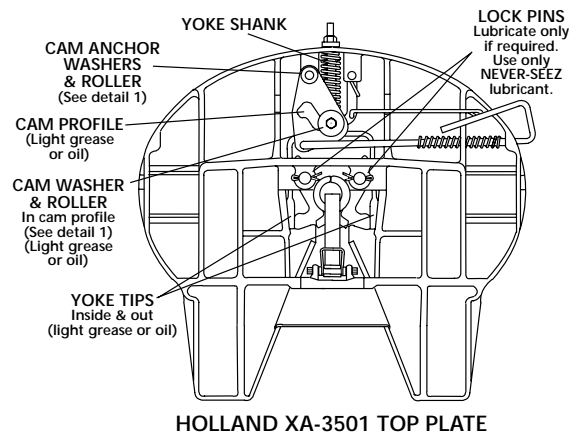
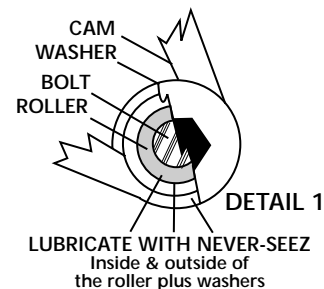


Figure 2



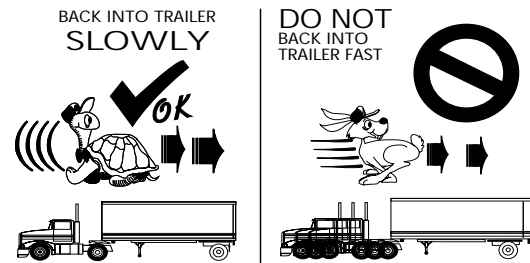
PROBLEM: Difficult to uncouple from trailer (con't.)

Cause

4. Attempting to couple too fast.

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. Tractor too low - putting pressure on locking mechanism
6. Bent kingpin, damaged bolster plate, or improper use of "lube plate".

5. Reinflate 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.)

Figure 3

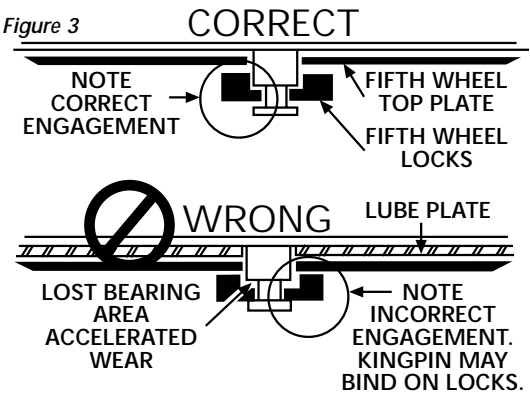
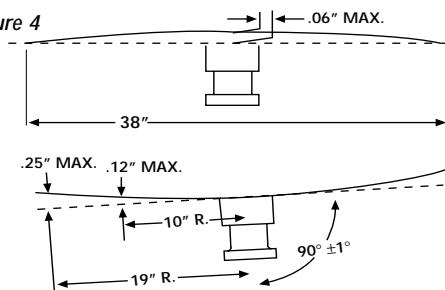
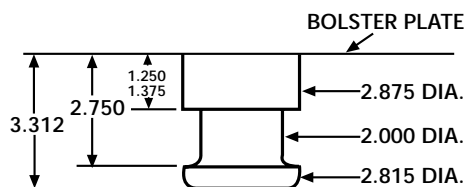


Figure 4

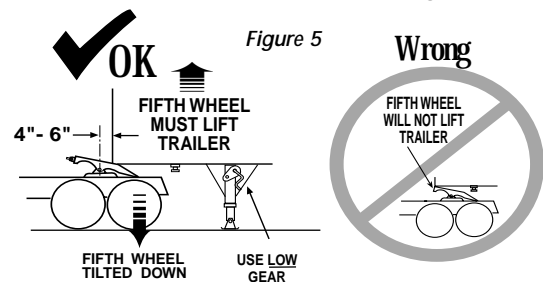


PROBLEM: Difficult to uncouple from trailer (con't.)

Cause	Remedy
7. Fifth wheel locks adjusted too tight.	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. Release handle will not stay out or must be held out when unlocking.	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. Bent yoke shaft (<i>Item 6</i>) damaged during improper coupling attempt.	9. Rebuild fifth wheel.
10. Other missing or damaged release system parts.	10. Inspect and replace as necessary with Holland parts.
11. Casting bent at throat restricting movement.	11. Replace complete fifth wheel top plate.

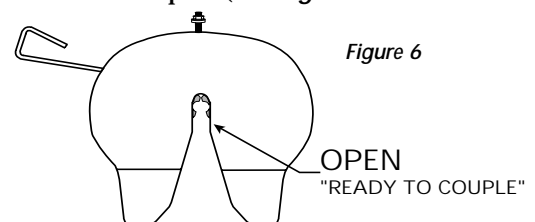
PROBLEM: Difficult to couple to trailer

Cause	Remedy
1. The trailer may be too high; the kingpin is not entering the locks properly.	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 <i>Figure 5</i> .



2. Locks are closed.

2. Pull release handle and verify that locks are open (see *Figure 6*).





FW3500 (XA-3501) FIFTH WHEEL

Trouble-Shooting Guide

PROBLEM: Difficult to couple to trailer (con't.)

Cause	Remedy
3. Excess accumulation of rust or grime is interfering with lock operation.	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. Bent release handle (<i>Item 12L</i> or <i>12R</i>) or damaged during improper coupling attempt.	4. Replace release handle using proper Holland release handle kit.
5. Bent yoke shaft (<i>Item 6</i>) damaged during improper coupling attempt.	5. Rebuild fifth wheel.
6. Bent kingpin, damaged bolster plate, or improper use of "lube plate."	6. Repair trailer. (See Service Bulletin #20, Service Bulletin #4 and #4a.)
7. The locks (<i>Item 1</i>) may be damaged or installed upside down.	7. Inspect and replace, or re-install properly, using proper rebuild kit for your model fifth wheel.
8. Casting bent at throat restricting movement.	8. Replace complete fifth wheel top plate.
9. Cam bolts tightened too tight after rebuild, restricting cam plate movement.	9. Loosen bolts as required following rebuild procedures provided with rebuild kit.
10. Release handle spring or crimp damaged or broken.	10. Replace release handle using proper Holland release handle kit.

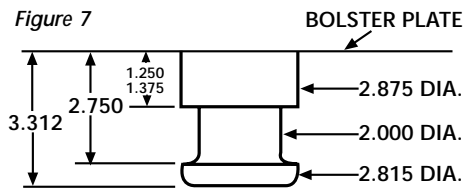
PROBLEM: Excessive movement of kingpin within lock jaws

Cause	Remedy
1. Kingpin wear.	1. Check kingpin for wear with Holland TF-0110. Replace kingpin if necessary.
2. Fifth wheel out of adjustment.	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."

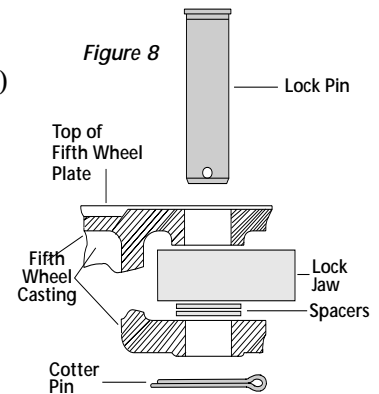


2. Too much movement of jaw(s) in casting.

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*.



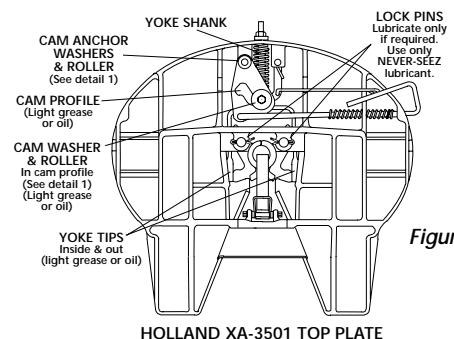
PROBLEM: Hard steering or binding

Cause

1. Lack of lubrication on fifth wheel-to-trailer upper coupler contact surface.
2. Lack of lubrication in operating mechanism

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.



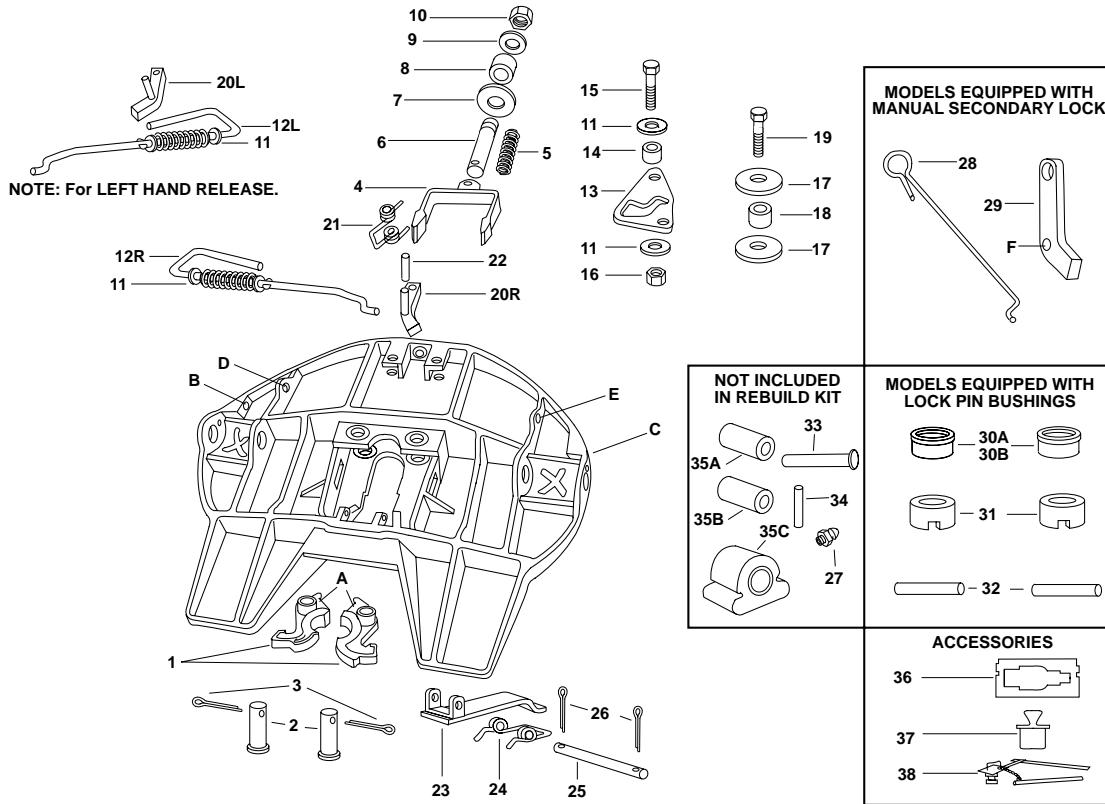
3. Warped bolster plate.

3. Check bolster plate for flatness. Replace if necessary. (Refer to Service Bulletin #20.)



GO THE DISTANCE.

FW3500 (XA-3501) FIFTH WHEEL Trouble-Shooting Guide



ITEM	PART NO.	NO. REQ'D	PART NAME	ITEM	PART NO.	NO. REQ'D	PART NAME
1	XA-1704	1	Lock jaws	21	XB-2149	1	Torsion spring
2	XA-1313	2	Lock pin	22	XB-21-S-500-2750	1	Roll pin
3	XB-5	2	Cotter pin 1/4" x 2"	23	XA-3514	1	Lock guard
4	XA-1703-F	1	Yoke sub-assy.	24	XB-1044	1	Torsion spring
5	XB-1505	1	Spring	25	XA-1055	1	Pin
6	XA-1706	1	Yoke shaft	26	XB-16	2	Cotter pin 1/8" x 1"
7	XB-02312	1	Lock adjustment tag	27	XB-H-38	2	Grease fitting
8	XB-1127	1	Rubber washer	*28	XA-3542-M	1	Manual secondary lock handle
9	XB-PW-1316-112	1	Washer 1 1/2" O.D. x 13/16" I.D.	*29	XA-3528	1	Manual secondary lock
10	XB-HNH-34-F	1	Locknut 3/4"-16	**30	XA-01241	2	Lock pin bushing
11	XB-T-49	3	Washer 13/4" O.D. x 9/16" I.D.	**31	XA-01242	2	Lock pin bushing
12L	RK-1707-M	1	Left hand release handle sub-assy. (Part No. (11) must be installed on handle for complete assembly.)	**32	XB-21-S-250-1875	2	Roll pin - MUST be used with part nos. (2) when wheel is equipped with lock pin bushings
12R	RK-1707-6	1	Right hand release handle sub-assy. (Part No. (11) must be installed on handle for complete assembly.)	†33	XA-2016	2	Bracket pin
13	XA-1705	1	Cam plate	†34	XB-21-S-375-1750	2	Roll pin
14	XA-1029	1	Roller	†35A	XB-1604-5	2	Rubber bushings (for fifth wheels mfd. prior to 5/82)
15	XB-2083	1	Bolt 1/2"-10 x 13/4"	†35B	XB-0011-1	2	Rub. bush. (no longer available - order XA-0011-2 and see service bulletin no. 16 for instructions)
16	XB-T-69-A	1	Locknut 1/2"-20	†35C	XB-0011-2	2	Rubber bushings (for fifth wheels mfd. after 6/87)
17	XB-1030-1	2	Washer	†36	TF-0110	1	Kingpin gage
18	XA-1507	1	Roller	†37	TF-0237	1	2" Lock gage
19	XB-CX-58-F-134	1	Bolt 5/8"-18 x 13/4"	†38	TF-TLN-1000	1	Kingpin lock tester
20L	XA-3542-L	1	Secondary lock, left hand				
20R	XA-3542-R	1	Secondary lock, right hand				

* 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.

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