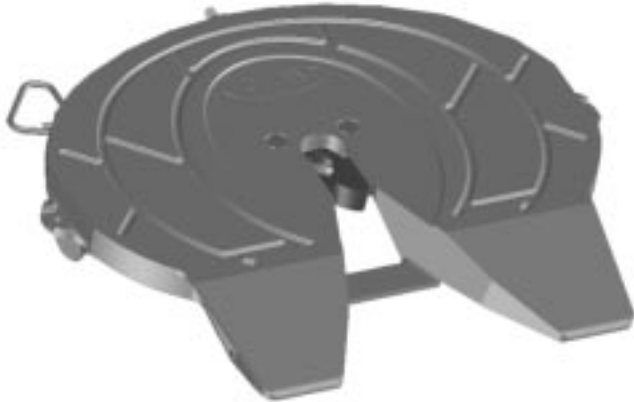




XA-351-S10180

XA-351-S10180 FIFTH WHEEL

REBUILD PROCEDURES



WARNING

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

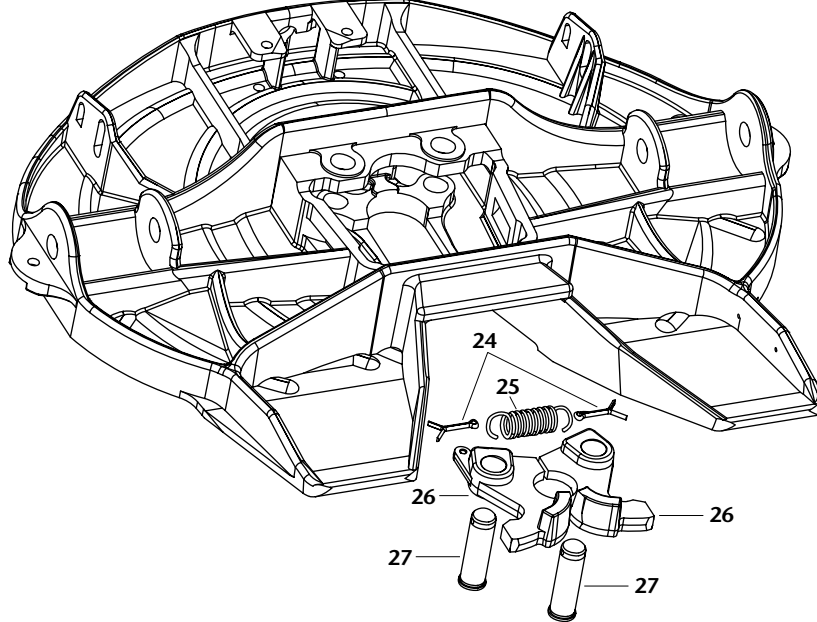
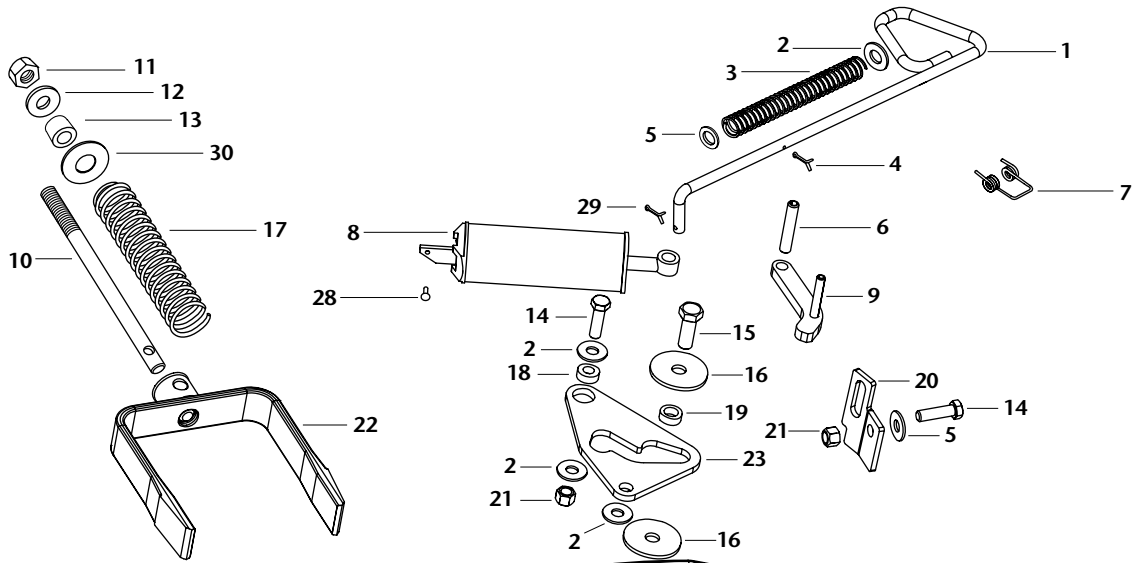
Failure to follow all of the important operating procedures contained in these instructions may result in a hazardous condition or cause a hazardous condition to develop.

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.

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XA-351-S10180 COMPONENT PARTS BREAKDOWN



NOTE:
The item numbers in this parts breakdown, and in the chart below, correspond to the item numbers referenced throughout this manual.

XA-351-S10180 PARTS SPECIFICATION LIST

ITEM NO.	PART NO.	QTY.	DESCRIPTION	ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	XA-10180	1	Release handle	16	XB-07431	2	Washer, 5/8" I.D. x 2 5/8" O.D.
2	XB-T-49	4	Washer, 1/2" I.D. x 1 3/8" O.D.	17	XB-1505	1	Spring
3	XB-07974	1	Handle spring	18	XA-1029	1	Roller, 1/2" I.D.
4	XB-07508	1	Cotter pin, 1/8" x 1 1/4"	19	XA-1507	1	Cam roller, 5/8" I.D.
5	XB-PW-1732-1-116	1	Washer, 1/2" I.D. x 1 1/16" O.D.	20	XA-09963	1	Handle plate
6	XB-21-S-500-2750	1	Roll pin	21	XB-T-69-A	2	Locknut, 1/2"-20
7	XB-2149	1	Torsion spring	22	XA-07295	1	Yoke sub-assembly
8	XA2524-R-16-6	1	Air cylinder	23	XA-1715	1	Cam plate
9	XA-3542-L	1	Secondary lock	24	XB-5	2	Cotter pin, 1/4" x 2"
10	XA-1706	1	Yoke shaft	25	XB-07628	1	Extension spring
11	XB-HNH-34-F	1	Lock nut, 3/4"	26	XB-07296	1	Lock set
12	XB-PW-1316-112	1	Washer, 3/4" I.D. x 1 1/2" O.D.	27	XA-07292-T	2	Lock pin
13	XB-1127	1	Rubber washer	28	XB-09155	1	Drive screw
14	XB-2083	2	Hex head cap screw, 1/2"-20 x 1 3/4"	29	XB-06336	1	Cotter pin, 3/16" x 1 1/4"
15	XB-CX-58-F-134	1	Hex head cap screw, 5/8"-18 x 1 3/4"	30	XB-02312	1	Lock adjustment tag



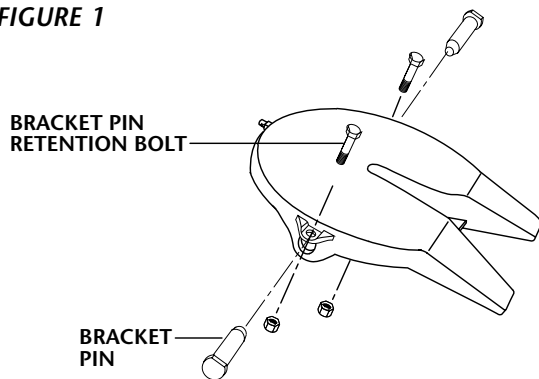
WARNING

1. All fifth wheel maintenance must be performed by a qualified service technician using proper tools and safe procedures.
2. Use only genuine Holland parts.
3. Wear safety goggles during disassembly and assembly of the fifth wheel.
4. Keep fingers away from all potential pinch points on the fifth wheel.
5. Do not weld on this product. Do not deviate from the instructions contained in this manual. Any changes or deviations from these procedures will void all warranties, express or implied, unless prior written consent is obtained from Holland.
6. Always verify proper operation and adjust the fifth wheel following the procedures contained in this manual before placing back into service.

DISASSEMBLY AND INSPECTION

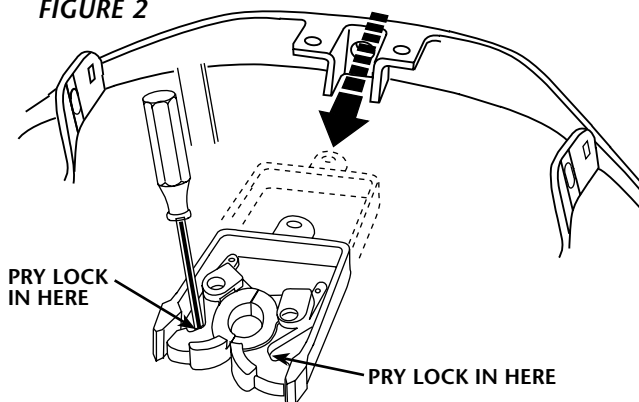
1. Disconnect any air line and electric cable. Next, remove the bracket pin retention bolts and bracket pins and remove the fifth wheel from the mounting brackets. Place the fifth wheel upside down on a level work surface.

FIGURE 1



2. Close the locks by prying each of the locks until the yokes snap close as shown in FIGURE 2 below.

FIGURE 2

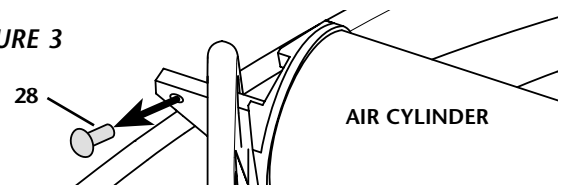


WARNING

The locking mechanism is under strong spring pressure. **KEEP HANDS AND FINGERS AWAY FROM THE LOCKING MECHANISM!**

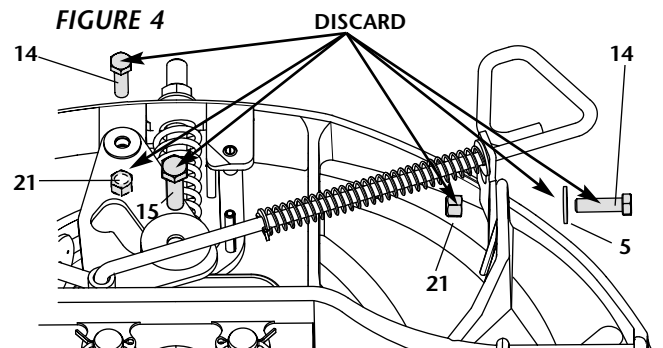
3. Remove the drive screw (ITEM 28) from the air cylinder and discard.

FIGURE 3



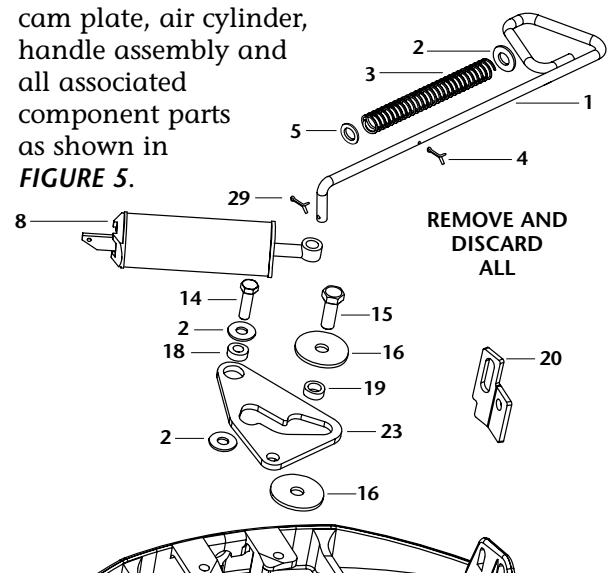
4. Remove and discard the yoke bolt (ITEM 15), cam bolt (ITEM 14) and nut (ITEM 21), and handle bracket bolt (ITEM 14), nut (ITEM 21), and washer (ITEM 5).

FIGURE 4



5. Remove and discard the cam plate, air cylinder, handle assembly and all associated component parts as shown in FIGURE 5.

FIGURE 5



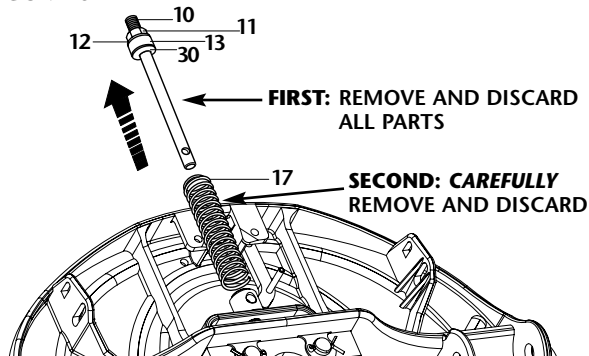
DISASSEMBLY AND INSPECTION *continued*

- Remove the yoke shaft (ITEM 10), lock nut (ITEM 11), washer (ITEM 12), rubber washer (ITEM 13), and lock adjustment tag (ITEM 30) by pulling them out through the front of the fifth wheel top plate as shown in FIGURE 6 below. Next, using both hands, carefully remove the yoke spring (ITEM 17).

CAUTION: The yoke spring is under compression. Use care when removing.

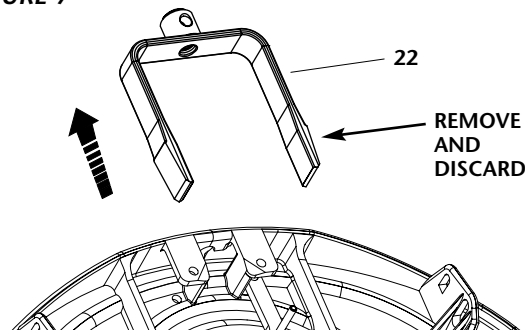
Discard both the yoke shaft and yoke spring.

FIGURE 6



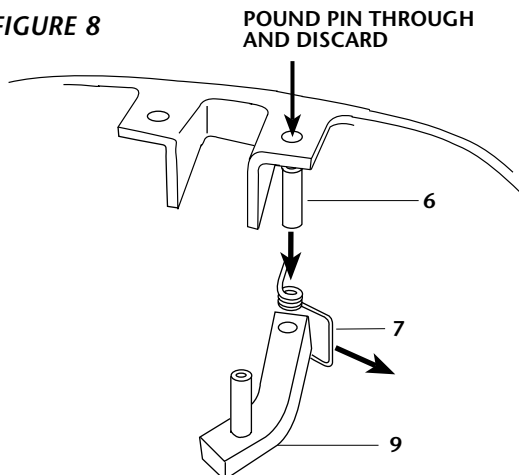
- Remove the yoke (ITEM 22) from the casting and discard.

FIGURE 7



- Pound the roll pin (ITEM 6) out through the casting. Remove and discard the secondary lock (ITEM 9), and torsion spring (ITEM 7).

FIGURE 8

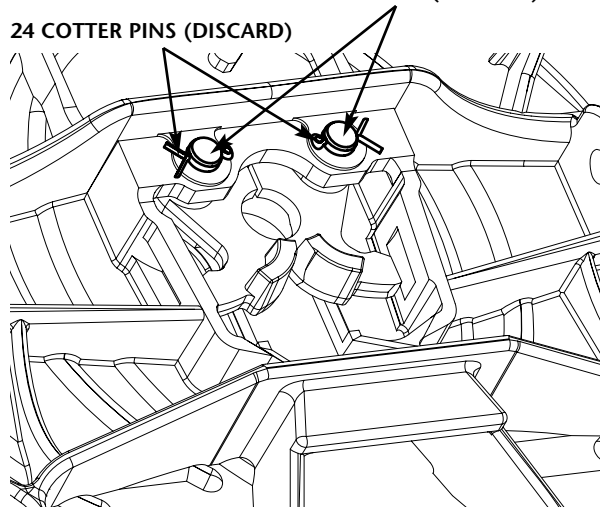


- Remove the cotter pins (ITEM 24) from both of the lock pins (ITEM 27), drive the lock pins out of the casting, and then discard.

FIGURE 9

27 LOCK PINS (DISCARD)

24 COTTER PINS (DISCARD)

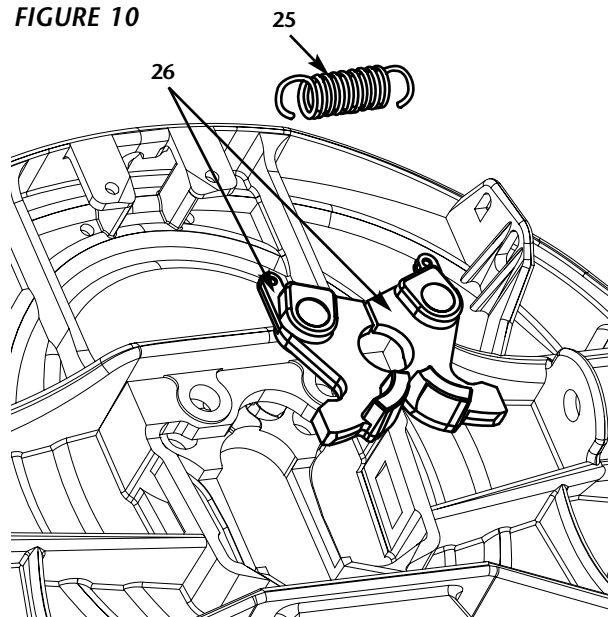


- Remove and discard the lock jaws (ITEM 26) and lock return spring (ITEM 25).

FIGURE 10

25

26



RESASSEMBLY

- Thoroughly steam clean the entire top plate.
- Inspect the fifth wheel top plate casting. Check for cracks in the top plate casting.

LOCK INSTALLATION

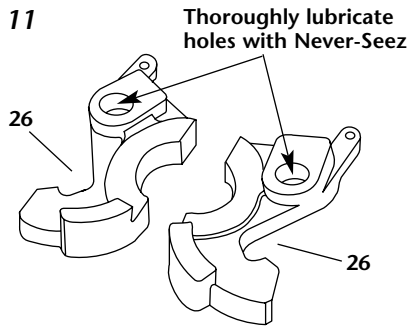


WARNING

Do not attempt to repair or rebuild if the top plate is cracked or distorted, or if the lock pins do not fit tightly in the top plate. If this is the case, the top plate may fail or the locks may malfunction.

1. Lubricate the lock pin holes of the lock jaws (*ITEM 26*) with Never-Seez (provided in kit). **DO NOT SUBSTITUTE.**

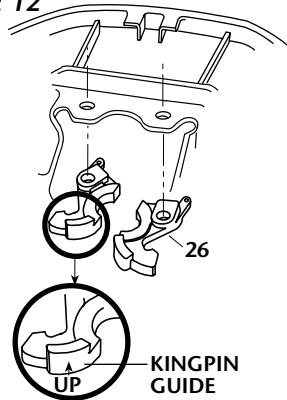
FIGURE 11



2. Align the lock jaws (*ITEM 26*) in the casting, as shown.

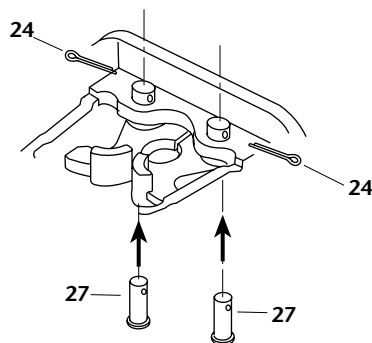
With fifth wheel upside down, position lock jaws so that kingpin guides are facing **up**, as shown in *FIGURE 12*.

FIGURE 12



3. Align the holes in the lock pins (*ITEM 27*) so that cotter pins can be inserted, as shown.

FIGURE 13

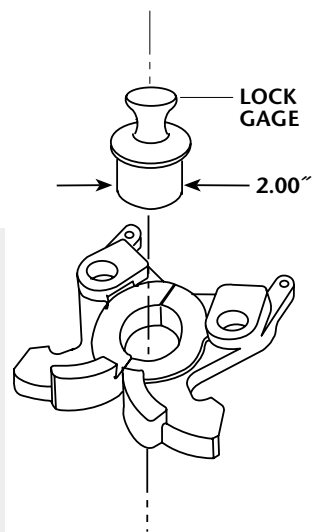


4. Drive pins into the casting until the heads are flush with the casting.
5. Insert cotter pins (*ITEM 24*) and spread.

6. Position a 2" diameter "plug" into the lock jaws.

A lock gage, Holland part number TF-0237, is available at all Holland distributors.

FIGURE 14



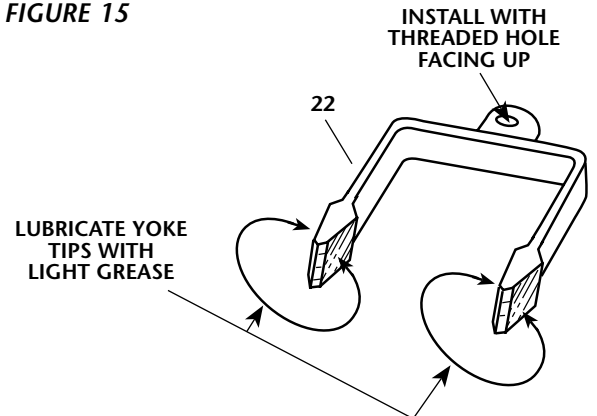
WARNING

You must use a Holland lock gage (TF-0237) or a precision plug that is 2.000" ± .005" for proper installation of the locking mechanism.

YOKE INSTALLATION

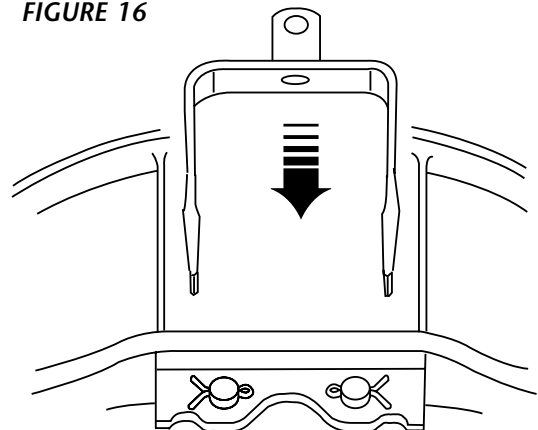
1. Lubricate the tips of the yoke with a light grease, as shown.

FIGURE 15



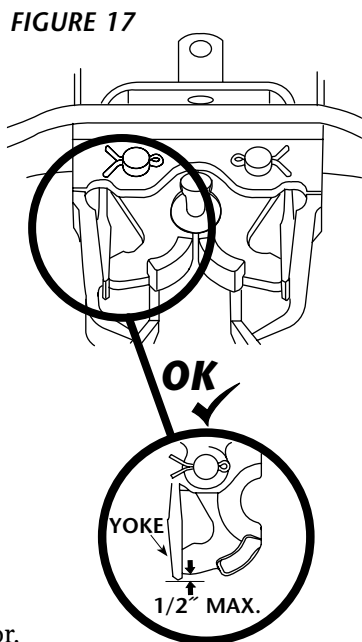
2. With the threaded hole facing up, slide the yoke (*ITEM 22*) into the casting. Tap lightly to seat the yoke around the locks.

FIGURE 16

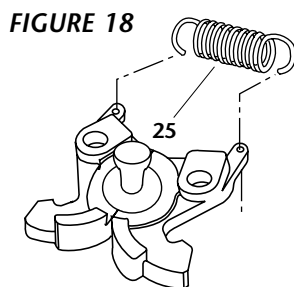


YOKE INSTALLATION continued

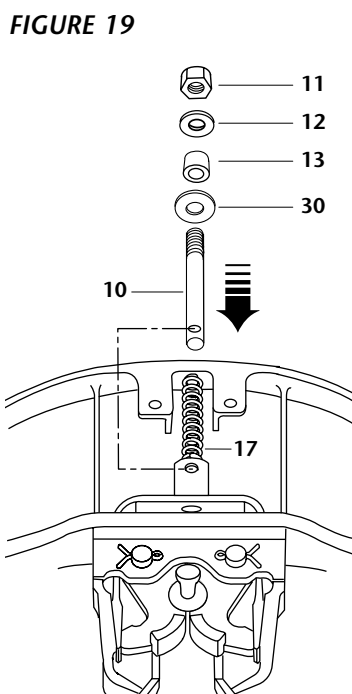
- Inspect the amount of yoke tip engagement. Yoke tips must extend flush with the end of the locks and no more than 1/2" past the locks. If the new yoke extends more than 1/2" past the locks, **DO NOT USE.** Discard it and order Holland part number XA-07295-IHK from your nearest Holland distributor.



- Install lock spring (ITEM 25), as shown in FIGURE 18.



- Install yoke spring (ITEM 17) as shown in FIGURE 19.

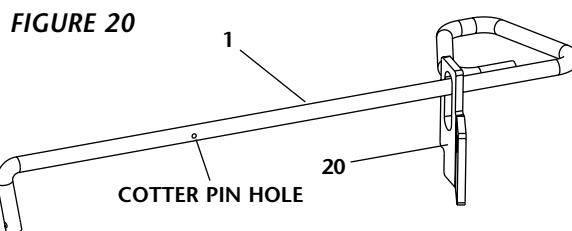


- Next, slide the yoke shaft (ITEM 10) into the casting, through the spring and into the yoke. Align the recessed hole in the shaft with the threaded hole in the yoke

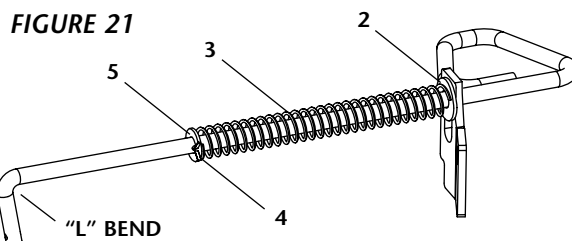
In this order, slide the adjustment tag (ITEM 30), rubber washer (ITEM 13) and 1 1/2" O.D. washer (ITEM 12) onto the yoke shaft. Then start the lock nut (ITEM 11) fingertight.

RELEASE HANDLE INSTALLATION

- Slide the release handle (ITEM 1) through the slot in the handle plate (ITEM 20) as shown below in FIGURE 20.



- In this order, slide the washer (ITEM 2), handle spring (ITEM 3) and another washer (ITEM 5) over the "L" bend in the release handle.

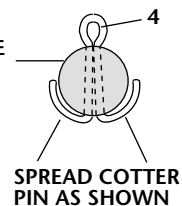


- Compress the spring using the washer (ITEM 5) until the cotter pin hole (see FIGURE 20) is exposed. Then, insert the cotter pin (ITEM 4 – see FIGURES 21 and 22) into the hole.

- Spread the cotter pin and wrap it completely around the release handle.

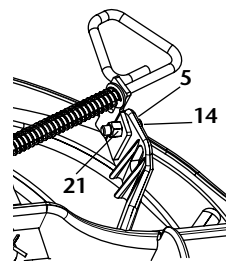
FIGURE 22

RELEASE HANDLE
CROSS-SECTION



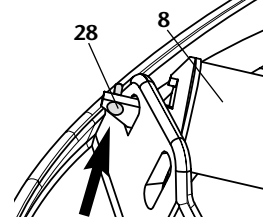
- Place the handle assembly in the fifth wheel. Put a washer (ITEM 5) onto the hex head screw (ITEM 14) and slide it through the casting and bracket as shown in FIGURE 23. Tighten down the nut (ITEM 21).

FIGURE 23



- Insert the air cylinder (ITEM 8) through the smaller of the two holes in the casting as shown in FIGURE 24, and pound a drive screw (ITEM 28) through the hole in the air cylinder.

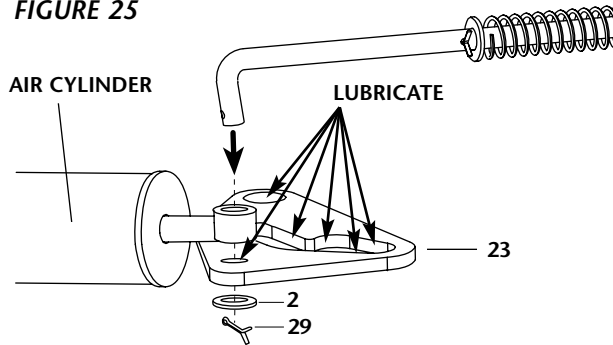
FIGURE 24



CAM PLATE INSTALLATION

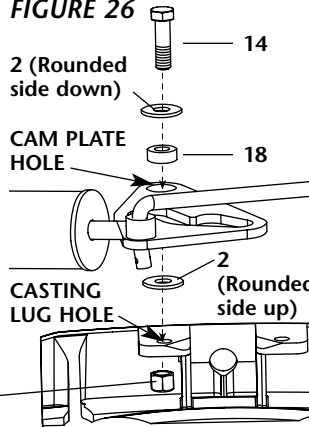
1. Inspect the cam plate (*ITEM 23*) for burrs. Remove as required.
2. Lubricate the cam plate track and pivot hole with a light grease.
3. Place the release handle through the loop end of the air cylinder, cam, and washer, as shown in *FIGURE 25*. Secure with a cotter pin (*ITEM 29*).

FIGURE 25



4. Position the cam plate attachment hole over the proper casting lug hole, as shown in *FIGURE 26*.

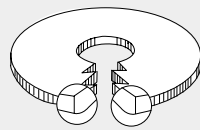
FIGURE 26



5. Slide a $1\frac{3}{8}$ " O.D. washer (*ITEM 2*) between the cam plate and casting lug hole with the rounded side of the washer facing the cam plate.

NOTE: When installing the washers (*ITEMS 2 and 16*), the rounded side of the washers must always face the cam plate.

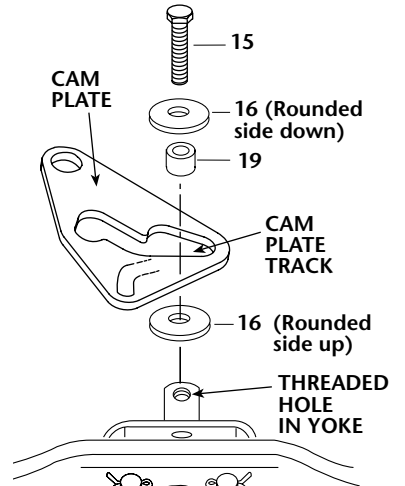
FIGURE 27



6. Install the $\frac{1}{2}$ " I.D. roller (*ITEM 18*) into the cam plate and place a second $1\frac{3}{8}$ " O.D. washer (*ITEM 2*) on top of the roller with the rounded side facing the cam plate.
7. Install the $\frac{1}{2}$ " bolt (*ITEM 14*) through the washer, roller, cam, washer, and top plate lug.
8. Secure the bolt with a $\frac{1}{2}$ " nut (*ITEM 21*). Tighten securely. Then check for free movement of the cam plate.
9. Next, align the cam plate track over the threaded hole in the yoke.
10. Slide a $2\frac{5}{8}$ " O.D. washer (*ITEM 16*) between the yoke and the cam plate with the rounded side of the washer facing the cam plate.

11. Place a $\frac{5}{8}$ " I.D. roller (*ITEM 19*) into the cam plate track, then place a $2\frac{5}{8}$ " O.D. washer (*ITEM 16*) over the roller with the rounded side of the washer facing the cam plate.

FIGURE 28



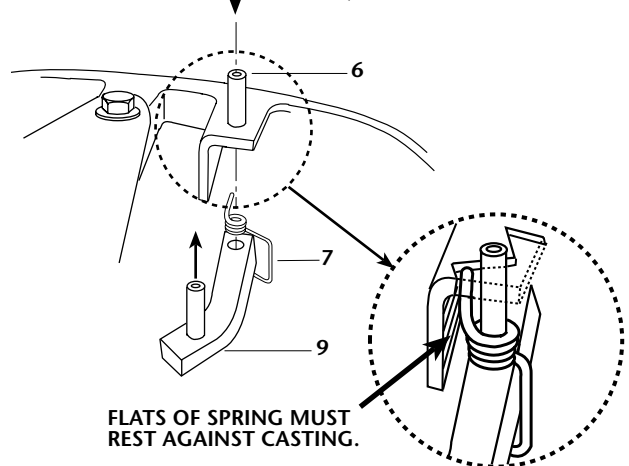
12. Check the alignment of the recessed hole in the yoke shaft.
13. Install the $\frac{5}{8}$ " bolt (*ITEM 15*) through the washer (*ITEM 16*), roller (*ITEM 19*), cam plate, and first washer (*ITEM 16*) and into the threaded hole in the yoke as shown in *FIGURE 28*. Make sure that the bolt enters the drilled hole in the yoke shaft.
14. Tighten the bolt securely, then check for free movement of the cam plate.

SECONDARY LOCK INSTALLATION

Automatic Version

1. Start the roll pin (*ITEM 6*) into the hole in the top plate lug hole opposite the cam attachment bolt.

FIGURE 29 START THE PIN, POSITION THE LOCK, THEN DRIVE PIN.

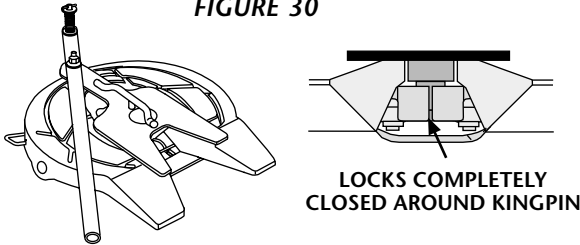


2. Assemble the torsion spring (*ITEM 7*) to the secondary lock (*ITEM 9*), as shown.
3. Drive the roll pin (*ITEM 6*) through the spring and lock until it is flush with the casting.
4. Check the lock spring for tension and the lock for free movement.

LOCK ADJUSTMENT

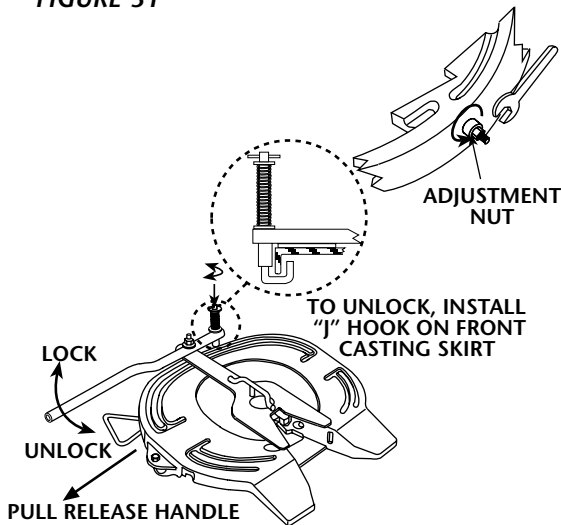
1. Pull the primary release handle (*ITEM 1*) to open the locks and remove the 2" plug.
2. Turn the fifth wheel right side up and close the locks using a Holland Lock Tester. See Holland publication XL-FW340 for operating instructions for a Holland TF-TLN-5001 kingpin lock tester.

FIGURE 30



3. Verify that the locks are completely closed around the kingpin, as shown in *FIGURE 30*.
4. Now, alternate tightening the adjustment nut and attempting to rotate the lock tester back and forth, as shown. Continue tightening until the lock tester can be rotated but some resistance is felt in the lock tester.

FIGURE 31



The fifth wheel is properly adjusted when there is resistance between the locks and the lock tester, but the lock tester can still be rotated by hand, as shown in *FIGURE 31*.

4. Pull the release handle and remove the lock tester.
5. Mount the fifth wheel back onto the tractor.

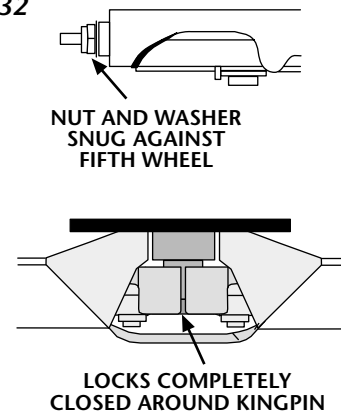
OPERATION CHECK

Before you use your fifth wheel, you must verify that it is operating properly.

1. Open and close the fifth wheel at least three (3) times using a Holland Lock Tester.

Each time you close the locks, verify that the locks have closed completely around the kingpin and that the adjustment nut and rubber bushing are seated snug against the casting, as shown in *FIGURE 32*.

FIGURE 32



2. Check for resistance between the locks and lock tester one final time, adjust as needed.

The fifth wheel is now ready for operation.

For additional maintenance procedures, refer to Holland publication XL-FW308-XX, "Fifth Wheel Maintenance Procedures."



If the fifth wheel does not operate properly, **DO NOT USE IT!** Either disassemble and repeat rebuilding procedures or contact your nearest Holland representative for assistance. Never use a fifth wheel that does not operate properly.

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