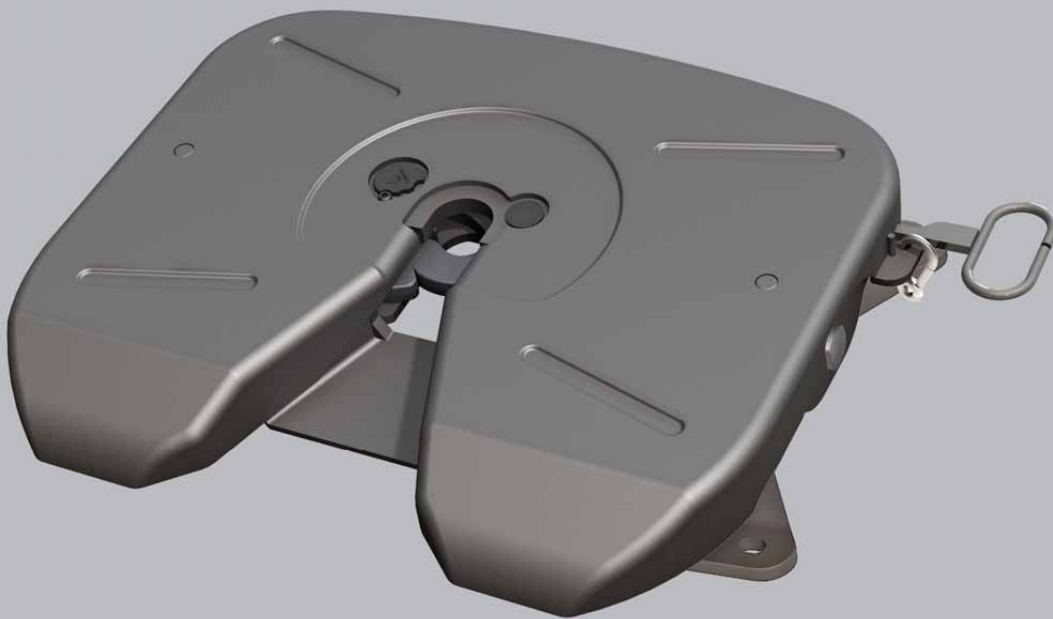


## Rebuild/Repair Manual

### FW20 Series Fifth Wheels

- RK-200-A Rebuild Kit



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## Introduction

This manual provides the information necessary to properly rebuild the HOLLAND® FW20, XA-11542 Series Fifth Wheels. Read this manual before using or servicing this product and keep it in a safe location for future reference. Updates to this manual, which are published as necessary, are available on the internet at [www.safholland.com](http://www.safholland.com).

When replacement parts are required, SAF-HOLLAND® highly recommends the use of only SAF-HOLLAND® Original Parts. A list of SAF-HOLLAND technical support locations that supply SAF-HOLLAND Original Parts can be found on the internet at [www.safholland.cn](http://www.safholland.cn) or contact Customer Service at +86 592 6388891 or refer to this manual’s back cover for the nearest location for assistance.

## Notes, Cautions, and Warnings

Before starting any work on the unit, read and understand all the safety procedures presented in this manual. This manual contains the terms “NOTE”, “IMPORTANT”, “CAUTION”, and “WARNING” followed by important product information. These terms are defined as follows:

**NOTE:** Includes additional information to enable accurate and easy performance of procedures.

**IMPORTANT:** Includes additional information that if not followed could lead to hindered product performance.

**CAUTION** Used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, could result in property damage.

**⚠ CAUTION** Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

**⚠ WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

## 1. General Safety Instructions

- Read and observe all Warning and Caution hazard alert messages. The alerts provide information that can help prevent serious personal injury, damage to components, or both.

**⚠ WARNING** Failure to follow the instructions and safety precautions in this manual could result in improper servicing or operation leading to component failure which, if not avoided, could result in death or serious injury.

- All repair and maintenance should be performed by a properly trained technician using proper/special tools, and safe procedures.

**NOTE:** Before rebuilding the HOLLAND® Fifth Wheel review the model number on the identification tag. This rebuild procedure applies only to models FW20, XA-11542 fifth wheel top plates.

**IMPORTANT:** All maintenance MUST be performed while the tractor is uncoupled from the trailer.

**IMPORTANT:** These instructions apply to the proper rebuild of FW20, XA-11542 series fifth wheel top plates only. There are other important checks, inspections, and procedures not listed here that are necessary, prudent, and/or required by law.

- For proper installation procedures, refer to SAF-HOLLAND® Installation Manual XL-FW10008BM-zh-CN available on the internet at [www.safholland.cn](http://www.safholland.cn).

**IMPORTANT:** Prior to operation of the fifth wheel, verify that the fifth wheel has been properly installed on the vehicle.

**⚠ WARNING** Failure to properly repair and install the fifth wheel could adversely affect performance resulting in tractor trailer separation which, if not avoided, could result in death or serious injury.

## 2. Model Identification

Fifth wheel serial tags are located on the right side of the fifth wheel top plate above the fifth wheel bracket pin, or on the pickup ramps (**Figure 1**).

The identification number and serial number are listed on the tag (**Figure 2**).

Figure 1

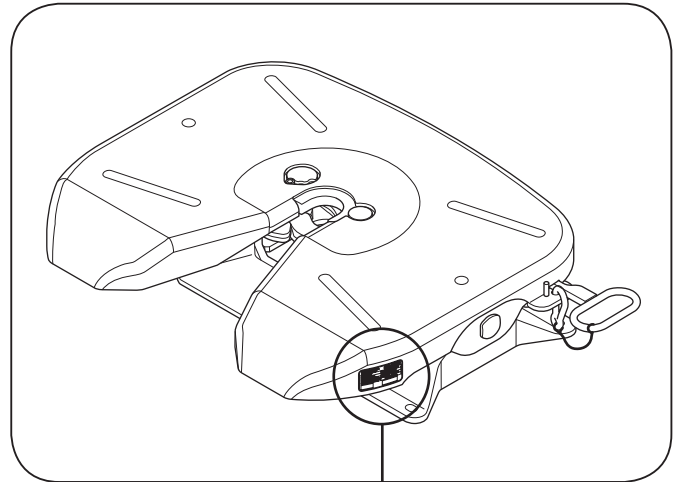
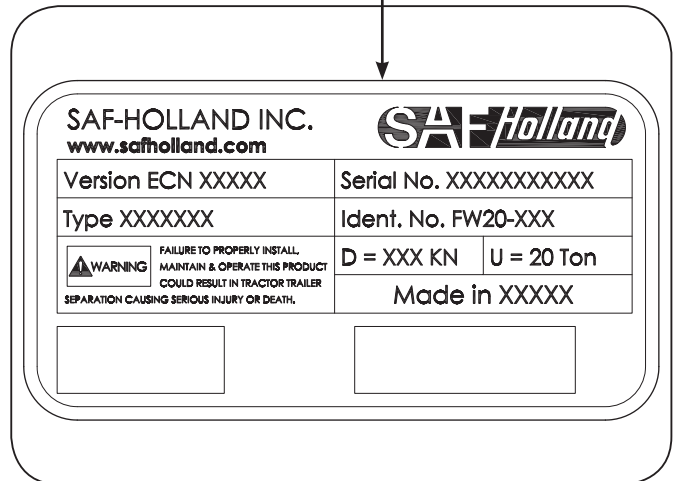
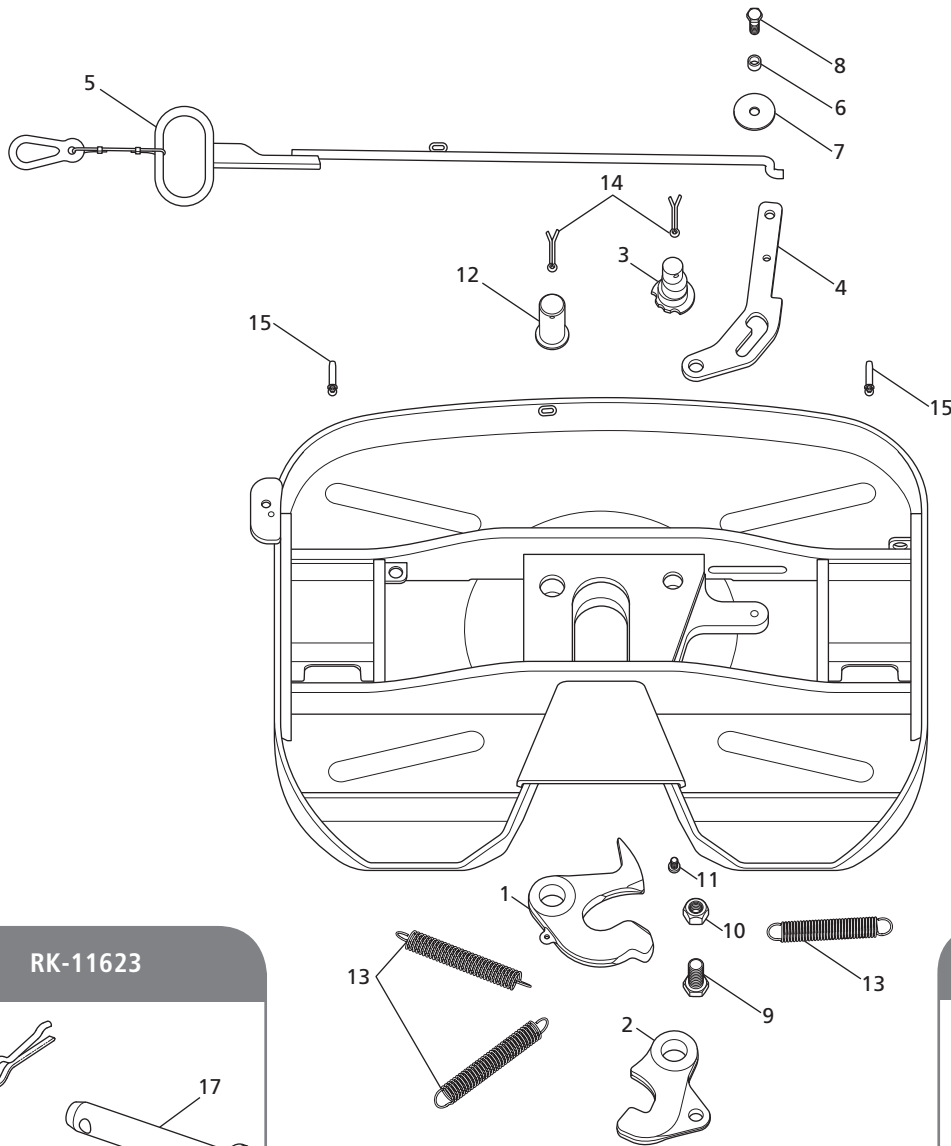
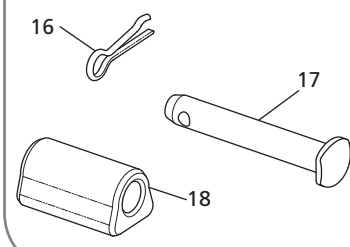


Figure 2

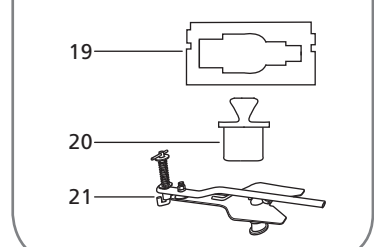




**RK-11623**



**Service Tools**



FW20 RK-200-A KIT PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Lock	XA-10486-C	1
2	Hook	XA-10487-C	1
3	Adjusting Pin	XA-10364-C	1
4	Release Cam	XA-11458-C	1
5	Release Handle	XA-11554	1
6	Release Cam Bushing	XA-10810-C	1
7	Washer	XB-10294-C	1
8	Hex Head Cap Screw, M12 x 1.75 x 40 mm	XB-HCS-M12-40-Z-C	1
9	Hex Head Cap Screw, M20 x 2.5 x 50 mm	XB-11615	1
10	Nut, M20 x 2.5	XB-11616	1
11	Low Head Socket Cap Screw, M10 x 1.5 x 16 mm	XB-11617	1

FW20 RK-200-A KIT PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
12	Lock Pin	XA-06344-C	1
13	Extension Spring (Lock/Release Handle/Cam)	XB-10489-C	3
14	Cotter Pin	XB-5-C	2
15	Lube Fitting, Extended, 90°	XB-05849-C	2
16*	Clinch Pin	9900169	2
17*	Bracket Pin	XA-11533	2
18*	Rubber Bushing	XB-0011-3-C	2
19*	Kingpin Gauge	TF-0110	1
20*	2" Lock Gauge (Plug)	TF-TLN-0237	1
21*	Kingpin Lock Tester	TF-TLN-5001	1

\* Not included in RK-200-A Rebuild Kit

## 3. Top Plate Removal

1. Remove clinch pins from the bracket pins on both sides of fifth wheel top plate (**Figure 3**).
2. Using a pry bar, pull fifth wheel bracket pins out of fifth wheel top plate (**Figure 3**).
3. Before placing the fifth wheel upside down, remove the low head socket cap screw and install the new one (**Figure 4**).
4. Using a lifting device capable of lifting 230 kg (507 lbs.), remove top plate from mounting base. Place fifth wheel upside down on a flat, clean working area.

**NOTE:** Follow instructions published by lifting device manufacturer for proper operation of lifting device.

5. Completely remove all components EXCEPT the new low head socket cap screw from the fifth wheel and discard.

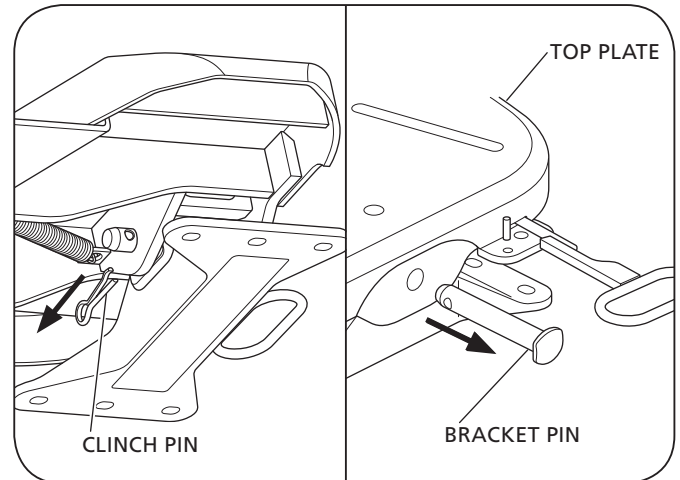
**IMPORTANT:** This rebuild kit contains all the components necessary to completely rebuild the fifth wheel top plate. DO NOT reuse old parts.

**NOTE:** The lock pin may be difficult to dislodge and may require force to remove.

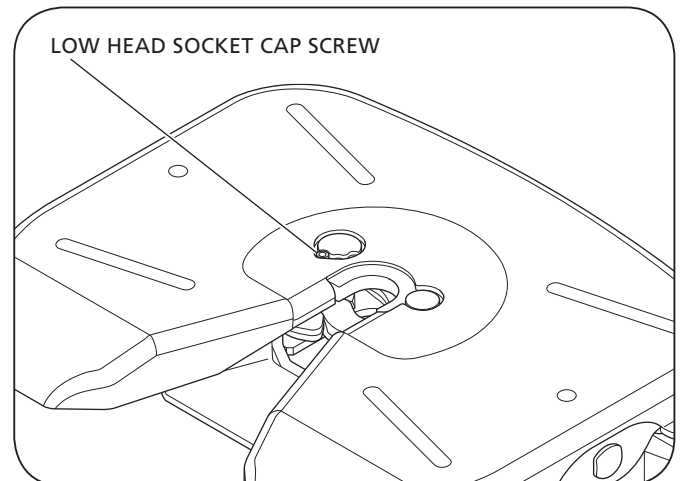
**CAUTION** DO NOT hit steel parts with a steel hammer as parts could break, sending steel fragments flying in any direction creating a hazard which, if not avoided could result in minor to moderate injury.

6. Thoroughly steam clean the top plate and front lock region to remove all grease.

**Figure 3**



**Figure 4**



- Inspect the top plate for cracks and flatness. If the top plate is cracked it **MUST** be discarded. The lock pin and adjusting pin on the HOLLAND® FW20 Series are slip fit, and are not designed to be press fit like other HOLLAND® fifth wheels. However, if either hole is elongated, the top plate **MUST** be replaced.

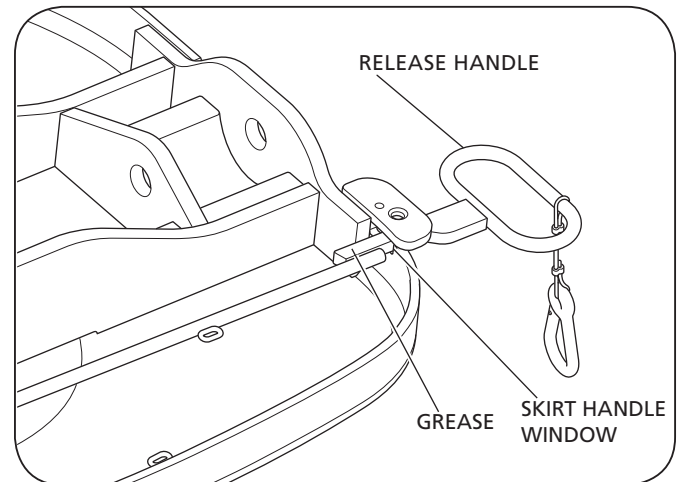
**NOTE:** The maximum allowable lock pin hole diameter is 36.3 mm (1.4"). The maximum allowable adjusting pin hole diameters are 42.47 mm (1.6") for the top, and 29.77 mm (1.1") for the bottom.

**⚠ WARNING** Failure to replace fifth wheels with cracks, elongated lock pin or adjusting pin holes could result in tractor trailer separation which, if not avoided, could result in death or serious injury.

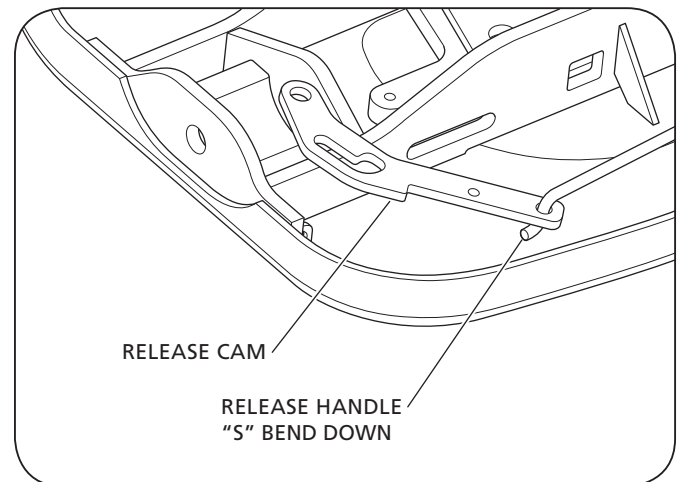
#### 4. Release Handle Installation

- Lubricate the release handle on both sides (**Figure 5**).
- Insert the release handle through the skirt handle window with "S" bend down (**Figure 5**).
- Install the release handle into the release cam (**Figure 6**).

**Figure 5**



**Figure 6**

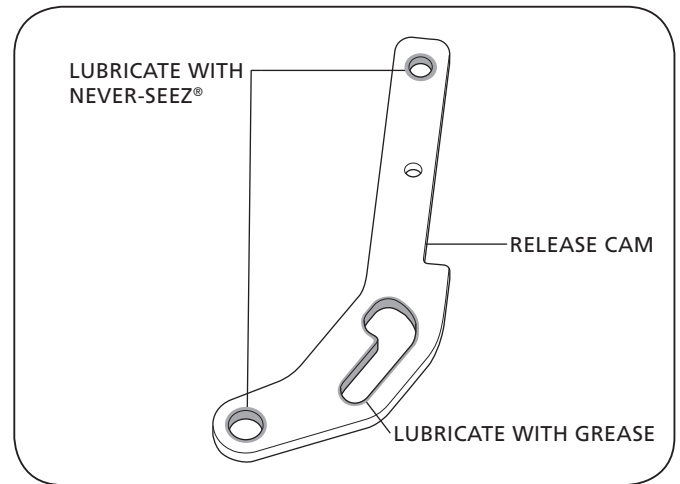


4. Lubricate holes on each end of the release cam with Never-Seez®. Also lubricate both sides around the cam slot and the cam slot itself with grease (**Figure 7**).
5. Feed the release cam through the slot in the main rib (**Figure 8**).

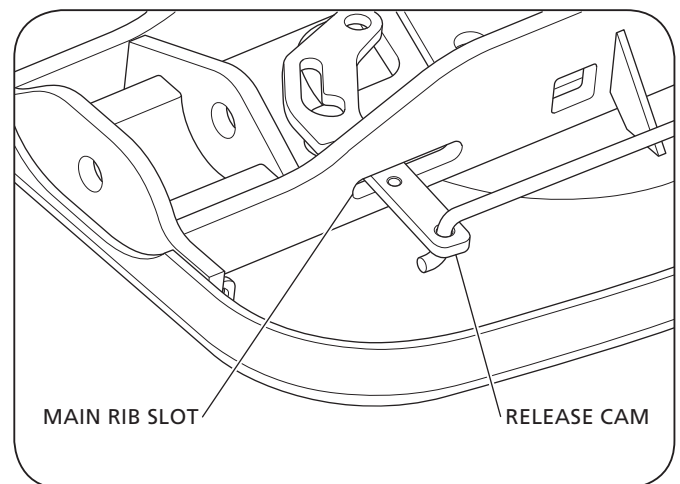
## 5. Lock Installation

1. Lubricate the hook (**Figure 9**).

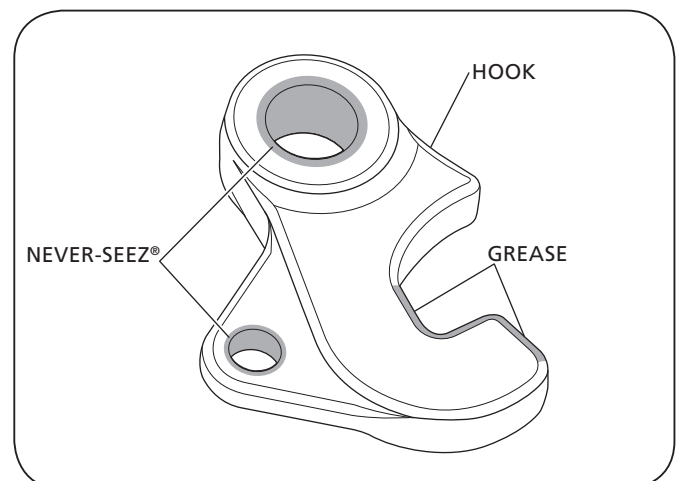
**Figure 7**



**Figure 8**



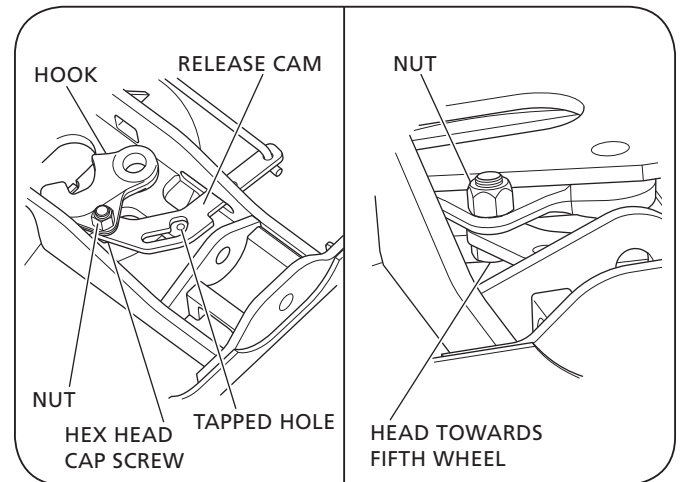
**Figure 9**



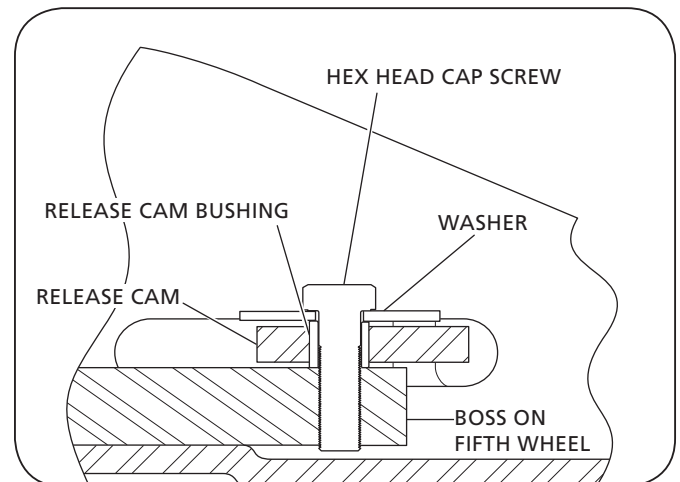


2. Place the hook over the release cam and install the M20 x 2.5 x 50 mm hex head cap screw with the head of the screw toward the fifth wheel. Install the M20 x 2.5 nut. Fully tighten the nut and then loosen one turn (**Figure 10**).
3. Move the hook and release cam into position so the cam slot is over the tapped hole in the fifth wheel (**Figure 10**).
4. Place the washer with the rounded side towards the release cam and bushing on the M12 x 1.75 x 40 mm hex head cap screw (**Figure 11**).
5. Secure the assembly by inserting the M12 x 1.75 x 40 mm hex head cap screw into the tapped hole in the boss of the fifth wheel and tighten to 54-68 N•m (40-50 ft.-lbs.) (**Figure 11**).
6. Lubricate the adjusting pin, the lock pin, and the lock (**Figure 12**).

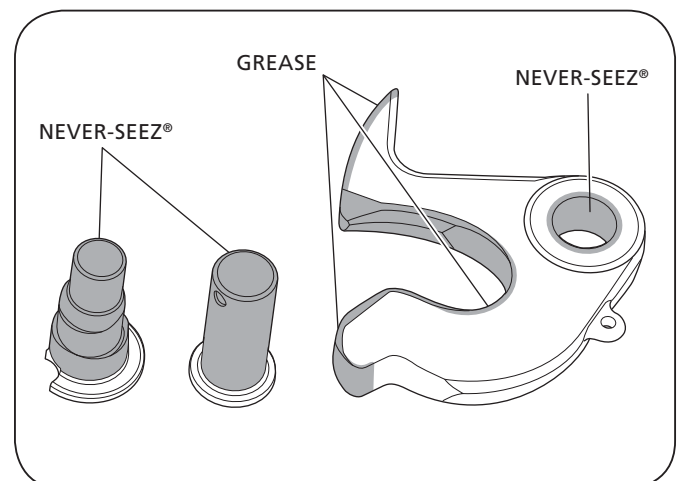
**Figure 10**



**Figure 11**



**Figure 12**



7. Align the hook and insert the adjusting pin so that it lines up with the first adjustment notch (**Figure 13**).
8. Install the cotter pin spreading both legs beyond 20° (**Figure 14**).

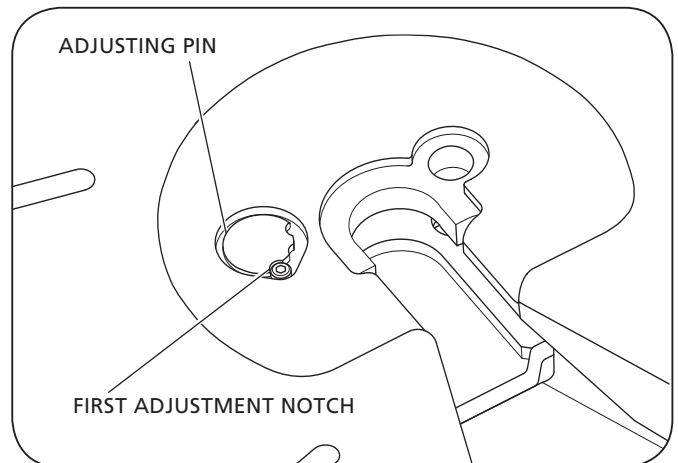
**⚠ WARNING** Failure to properly install the cotter pin in the lock pin, could result in tractor trailer separation which, if not avoided, could result in death or serious injury.

9. Align the lock and insert the lock pin and install the cotter pin spreading both legs beyond 20° (**Figure 14**).
10. Swing lock open and install the lock extension spring with the spring openings facing away from the face of the fifth wheel (**Figure 15**).
11. Swing lock closed and move handle, cam, and hook to "LOCKED" position. Install the release cam extension spring by hooking one end to the release cam first so that the spring opening is facing away from the face of the fifth wheel. Hook the other end to the spring anchor (**Figure 15**).
12. Install the release handle extension spring so that the spring openings face away from the face of the fifth wheel (**Figure 15**).
13. Using a lifting device capable of lifting 230 kg (507 lbs.), flip the fifth wheel over.

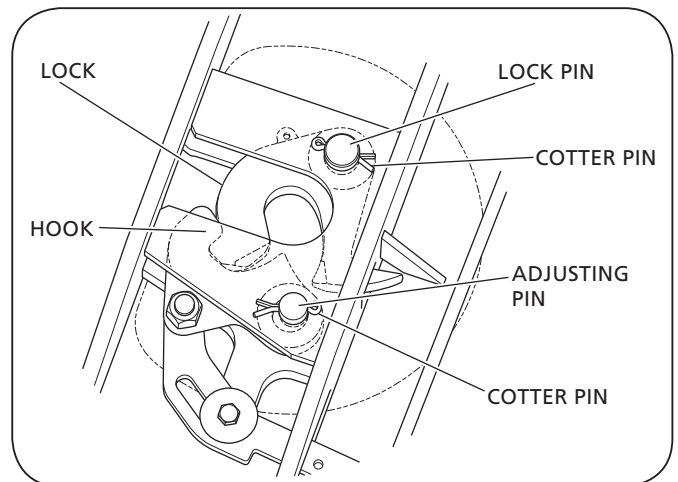
## 6. Lube Fitting Installation

1. Install the lube fittings into the threaded holes on each pocket (**Figure 15**).

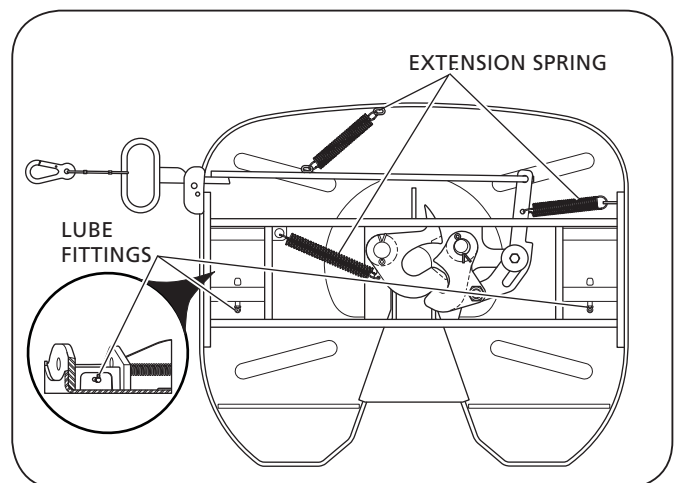
**Figure 13**



**Figure 14**



**Figure 15**



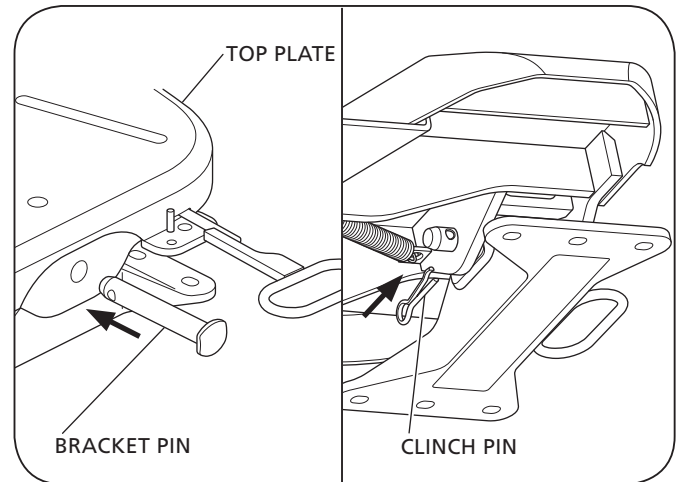
## 7. Top Plate Installation

1. Using a lifting device capable of lifting 230 kg (507 lbs.), install the fifth wheel top plate onto the mounting brackets.

**NOTE:** Follow the instructions published by lifting device manufacturer for proper operation of lifting device.

2. Install the bracket pins through the fifth wheel top plate and mounting brackets. Secure by installing the clinch pins (**Figure 16**).

**Figure 16**



## 8. Fifth Wheel Inspection and Adjustment

**⚠ WARNING** Failure to maintain proper fifth wheel adjustment could result in loss of vehicle control which if not avoided, could result in death or serious injury.

**NOTE:** To obtain proper fifth wheel adjustment SAF-HOLLAND® recommends the use of the HOLLAND® lock tester Part No. TF-TLN-5001, available from a local SAF-HOLLAND® distributor.

1. Pull the handle to open locks and verify that the locks are open (**Figure 17**).
2. Set the lock tester on fifth wheel top plate (**Figure 18**).
3. To lock the fifth wheel, rotate the handle on lock tester clockwise until the locks close around the kingpin (**Figure 18**).
4. Slide the lock tester forward and backward in the closed lock to check for the play between lock and kingpin. Ensure that the tool remains flat with full contact on the fifth wheel top plate. Use a pin gage to measure the free play. If the free play exceeds 2 mm (0.08") adjust the lock mechanism (**Figure 18**).
5. To adjust the lock, unscrew the low head socket cap screw until the head clears the adjusting pin. Rotate the adjusting pin clockwise, until the next notch lines up with the low head socket cap screw. Retighten the low head socket cap screw. Adjust only one (1) notch at a time (**Figure 19**).

**NOTE:** If the screw cannot be removed, remove the cotter pin from the bottom of the adjustment pin, then lift and rotate the pin to the next notch. Re-install the cotter pin and spread the pin legs beyond 20°.

Figure 17

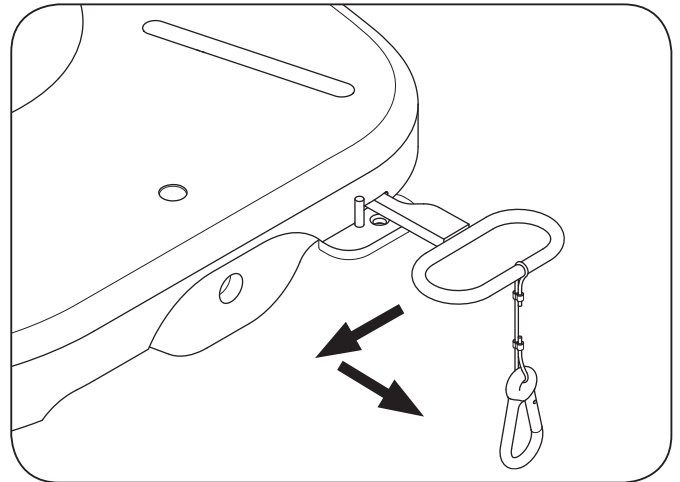


Figure 18

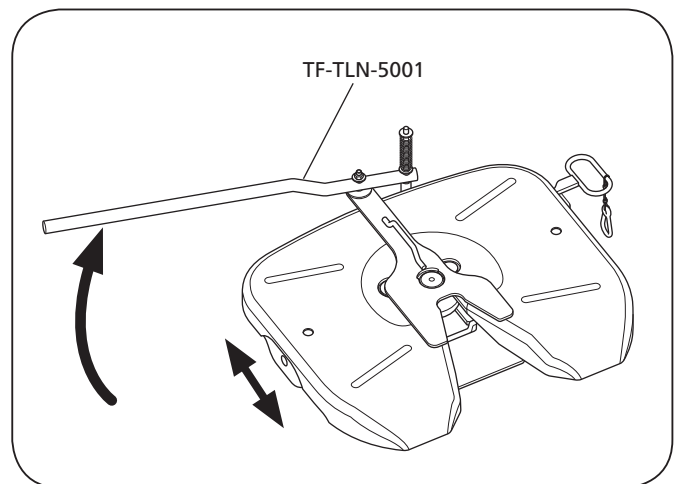
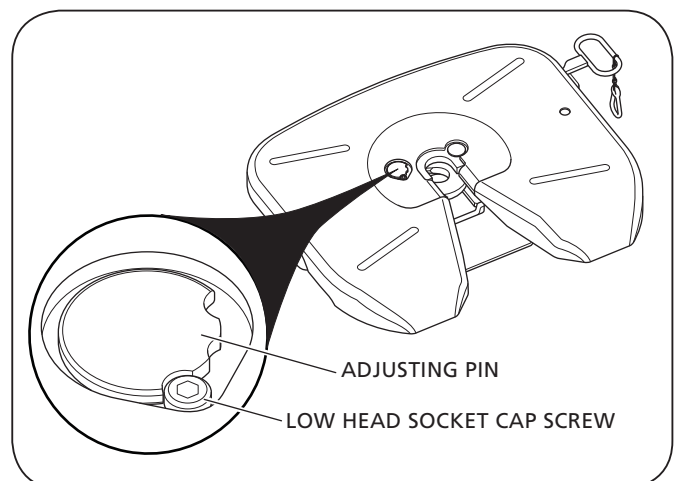


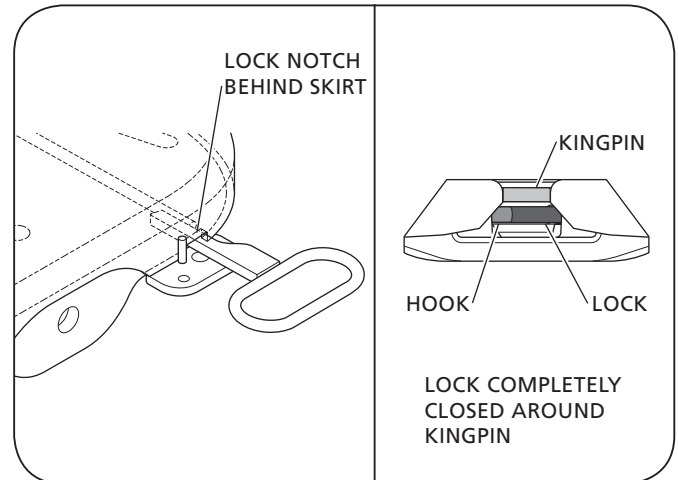
Figure 19



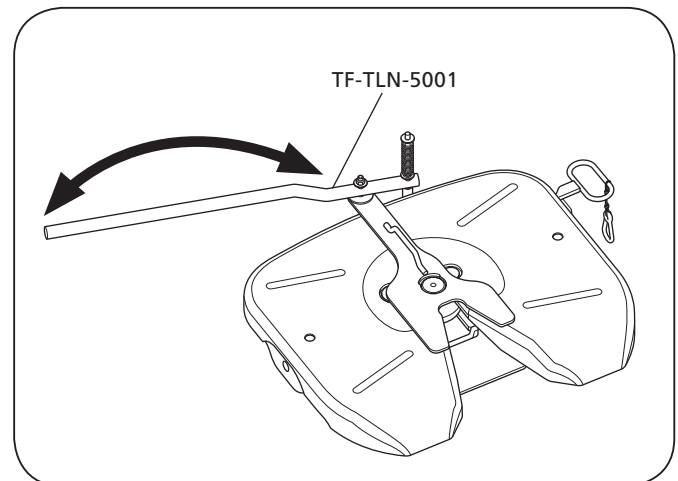
6. Verify the proper adjustment by locking and unlocking the fifth wheel several times with the lock tester. Check that the fifth wheel is properly locked (**Figure 20**).
7. Rotate the lock tester from side to side to ensure that the lock is not over tightened. The lock should not grip the kingpin and the tool should rotate freely (**Figure 21**).
8. Re-check for free play in the lock by sliding the lock tester forward and backward using a pin gage to measure the free play (**Figure 18**). Free play should be 1 mm (0.04") minimum. If free play still exceeds 2 mm (0.08"), repeat procedure and adjust one more notch.
9. Pull the release handle to unlock the fifth wheel. Push down and rotate "J" hook on the lock tester so that it hooks under the front skirt of the fifth wheel top plate (**Figure 22**). Pull the lock tester handle counter-clockwise to release the kingpin and remove the lock tester.

**IMPORTANT:** DO NOT use any fifth wheel which does not operate properly. If the fifth wheel does not operate properly, contact SAF-HOLLAND® Customer Service at +86 592 6388891 or refer to this manual's back cover for the nearest location for assistance.

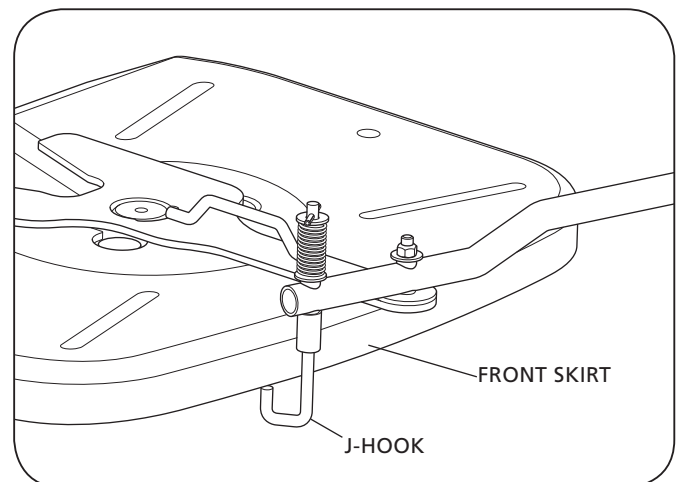
**Figure 20**



**Figure 21**



**Figure 22**









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. Non SAF-HOLLAND® parts will only limit the performance potential and could possibly void SAF-HOLLAND®'s warranty. Always be sure to specify SAF-HOLLAND® Original Parts when servicing SAF-HOLLAND® products.

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