

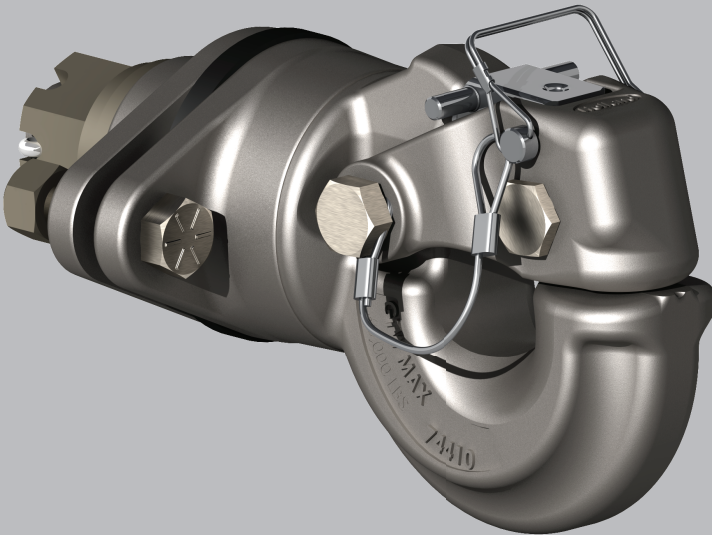
Owner's Manual

PH-760SL21

NoLube[®] Swivel Type Pintle Hook

Installation, Operation and Maintenance Procedures

- For on/off-road applications
- Maximum GTW: 60,000 lb. (27,216 kg)
Maximum Vertical Load: 12,000 lb. (5,443 kg)
Weight (Approx.): 40 lb. (18 kg)



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Introduction

This manual provides information necessary for the proper operation, maintenance, and inspection of the SAF HOLLAND pintle hook.

NOTE: For Holland replacement components contact SAF-HOLLAND Customer Service: 1-888-396-6501.

Warranty

Refer to the complete warranty for the country in which the product will be used. A copy of the written warranty can be downloaded from our SAF-HOLLAND website (www.safholland.us).

Notes, Cautions, and Warnings

You must read and understand all of the procedures presented in this manual before starting any work on the pintle hook.

NOTE: In the United States, work shop safety requirements are defined by federal and/or state Occupational Safety and Health Act. Equivalent laws may exist in other countries. This manual is written based on the assumption that OSHA or other applicable employee safety regulations are followed by the location where work is performed.

Proper tools must be used to perform the maintenance and repair procedures described in this manual.

Throughout this manual, you will notice the terms "NOTE", "IMPORTANT", "CAUTION", and "WARNING" followed by important product information. So that you may better understand the manual, those terms are 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, may result in property damage.

CAUTION Indicates a potentially hazardous situation which, if not avoided, may 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

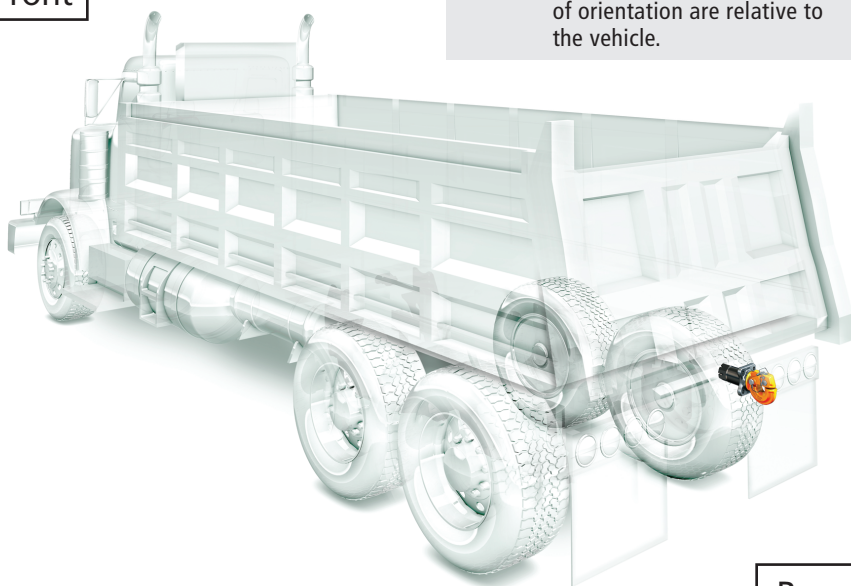
IMPORTANT: Read this manual before using this product. Keep this manual in a safe location for future reference.

Read and observe all Warning and Caution hazard alert messages in this publication. They 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 can result in equipment failure which, if not avoided, could result in death or serious injury.

Front

NOTE: In this manual, all descriptions of orientation are relative to the vehicle.

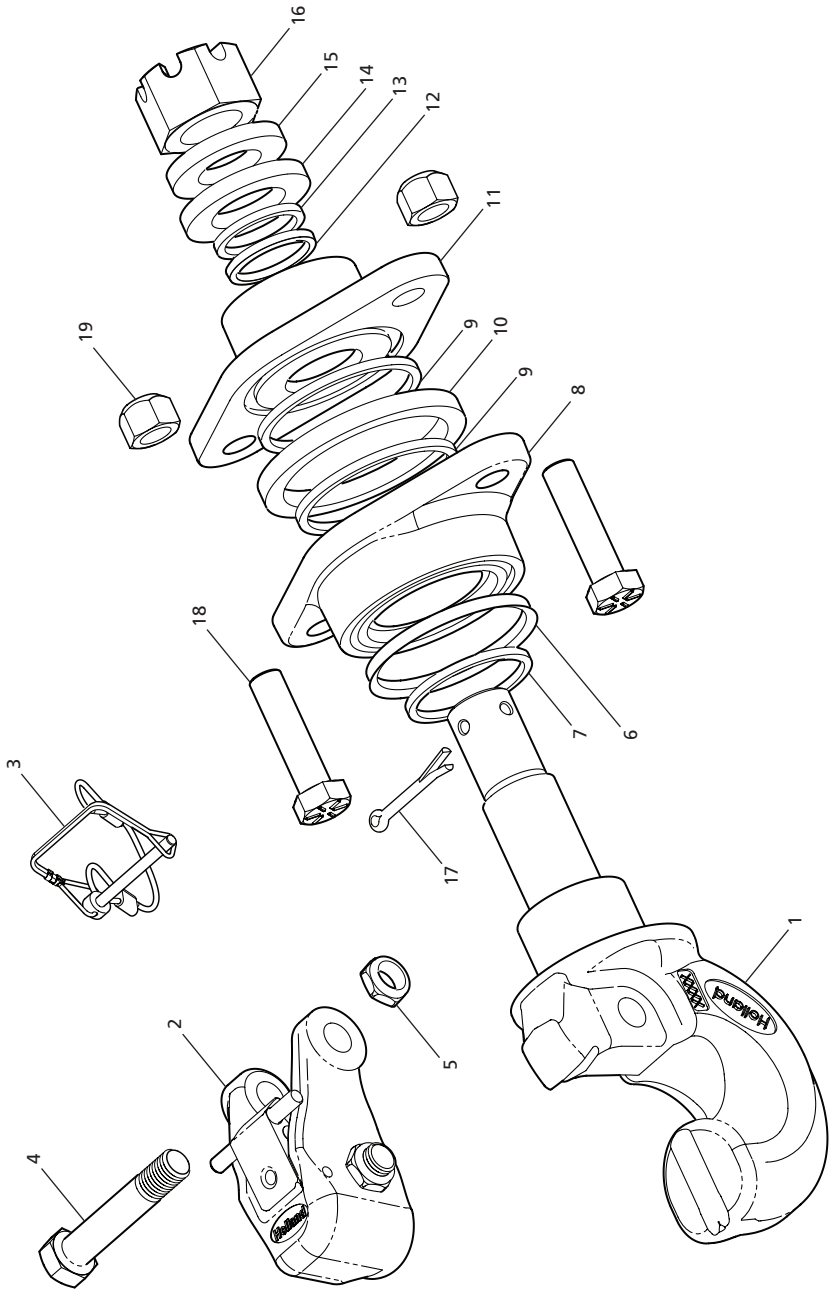


Rear

Exploded View

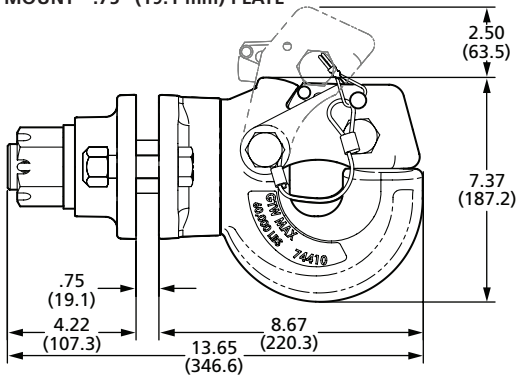
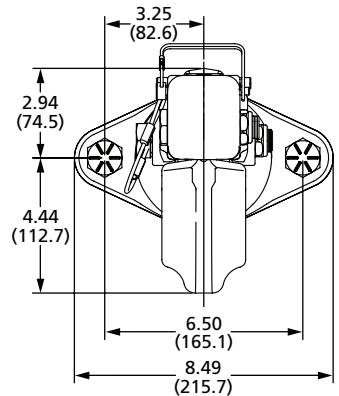
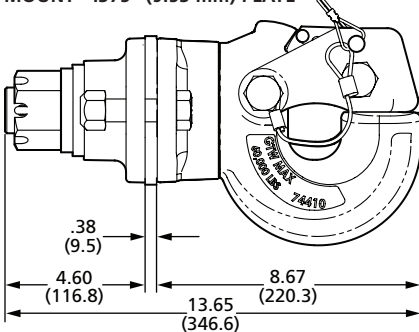


SAF-HOLLAND Group



ITEM	PART NUMBER	QTY.	DESCRIPTION
1	XA-11461-1	1	Pintle Hook, Coated
2	XA-10545-3	1	Assembly, Latch, Heavy Duty
3	XB-S10647	1	Pin & Lanyard S/A (Tethered Lock Pin)
4	XB-10537	1	HHCS 3/4" -16 x 4" (Latch Bolt)
5	XB-03104	1	Nut, 3/4" -16 Jam Lock Grade A Zinc Pl. (Latch Nut)
6	XB-10539	1	Seal, Housing Face (V-Ring Seal)
7	XB-10569	1	Washer, Felt
8	XA-11462	1	Flange Assembly, Rear
9	XB-11465	2	Face Seal, Square Cut (Square O-Ring)
10	XB-11466	1	Flange Spacer, Shipping (Shipping Spacer)

ITEM	PART NUMBER	QTY.	DESCRIPTION
11	XA-11467	1	Flange Assembly, Front
12	XB-11470	1	U-Cup Seal, Front
13	XB-11471	1	Felt Washer, Front
14	XB-11472	1	Washer, Special (.375" (9.53 mm) Spacer)
15	XA-768	1	Washer, Special
16	XB-771-1	1	Nut, 1-1/2"-12 Hex Slotted Zinc Pl. (Castellated Nut)
17	XB-T-60	1	Cotter, 1/4" x 2-1/2" (Cotter Pin)
18	XB-772	2	Bolt 3/4" -16 x 3" (3/4" Grade 8 Bolts)
19	XB-HNH-34-F	2	Nut, Lock 3/4"-16 (3/4" Lock Nut)

MOUNT - .75" (19.1 mm) PLATE

MOUNT - .375" (9.53 mm) PLATE


2. Drawbar Eye Dimensions

3" (76.2 mm) I.D with a 1.63" (41.3 mm) diameter cross section.

3. Load Ratings Per SAE J847

This product meets or exceeds the testing requirements for SAE J847 Type II Loads.

Maximum GTW: 60,000 lb. (27,216 kg)

Maximum Vert. Load: 12,000 lb. (5,443 kg)

4. Towing Applications

For general over-the-road towing. Use ONLY with a non-swivel type drawbar. For off-road applications, reduce the above capacities by 25%.

IMPORTANT: Off-road refers to terrain on which a tractor-trailer operates which is unpaved and rough, or ungraded. Any terrain not considered part of the system of public roads falls under this heading.

5. General Information

1. Do not modify or add to the product.
2. Do not weld on this product.
3. This product is covered by SAF-Holland's Commercial Warranty. SAF-Holland reserves the right, without giving prior notice, to change specifications and dimensions as designs are altered or improved.
4. Inspect the coupling device on the tow vehicle for proper operation. Do not use any coupling device that does not operate properly.

5. Other steps and inspections are also required. Consult D.O.T. regulations and American Trucking Association for complete coupling and uncoupling procedures. These cover items such as cargo securement, brakes, lights, safety chains, and other important requirements.

6. General Safety Information

This equipment must not be used in a careless manner.

During Operation:

1. Maintain adequate vertical (tongue) load to properly control the towed unit (generally 10% of maximum GTW) but do not exceed the rated capacities.
2. Do not damage the latch. Be particularly careful during coupling and uncoupling.
3. Wear safety goggles during installation and removal.
4. Never strike any part of the item with a steel hammer.

7. Mounting Instructions

NOTE: It is suggested that this installation be performed with two persons.

1. Use a mounting structure of sufficient strength to support the rated capacity of the pintle hook in accordance with SAE J849 and SAE J847 respectively.
2. Check for either .75" (19.1 mm) or .375" (9.53 mm) mounting plate thickness and follow appropriate instructions according to the plate thickness on the following pages.
3. The bolt holes and mounting clearance area are detailed in **(Figure 1)**.
4. This pintle hook system seals the flanges of the mounting structure using square O-rings. The mounting structure should be cleaned and prepared on the inboard and outboard mounting surfaces to properly accept and function with O-ring seals.
5. Ensure that all seals and felt washers are used, properly installed, and not damaged during the install. If any of the seals or felt washers are damaged or lost during the install, refer to Section 10 for replacement seal kit information.
6. During disassembly retain all components on a clean work surface to avoid any scratching, denting, marring, or damage to the pintle hook shank coating, flange coating, and flange bushings.

NOTE: During disassembly the flanges can move and the seals may dislodge and need to be resealed by carefully pressing them back into their correct groove by hand prior to install.

7. Begin disassembly by removing the two (2) 3/4" Grade 8 bolts (XB-772) and 3/4" lock nuts (XB-HNH-34-F) **(Figure 2)**.

Figure 1

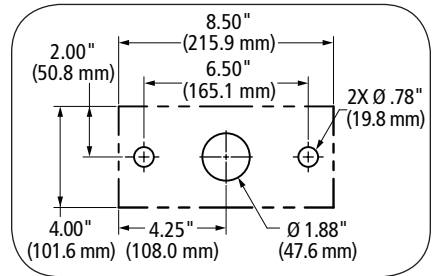
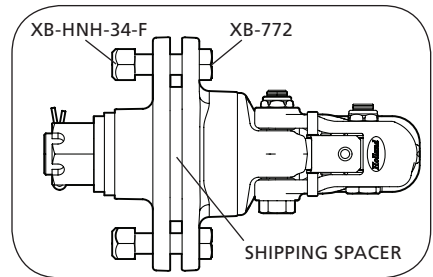


Figure 2



8. Remove the cotter pin (XB-T-60), castellated nut (XB-771-1), washer (XA-768), and optional .375" spacer (XB-11472) (**Figure 3**).
9. For .75" (19.1 mm) plate mount discard the .375" (9.53 mm) spacer (XB-11472). For .375" (9.53 mm) plate mount retain the .375" (9.53 mm) spacer (XB-11472).
10. Carefully remove the front flange assembly (XA-11467) from the pintle hook paying attention not to damage the front felt washer (XB-11471), U-cup seal (XB-11470), or square O-ring seals (XB-11465) (**Figure 4**).
11. Remove and discard the single large diameter assembly shipping spacer (XB-11466). Do not remove the rear flange square O-ring (XB-11465) or rear flange assembly (XA-11462) (**Figure 5**).
12. Ensure the square O-rings (XB-11465) are seated in the front mounting flange and rear mounting flange correctly.

NOTE: For mounting to .75" (19.1 mm) plate, see steps 13a-24a, pages 9-11.

For mounting to .375" (19.53 mm) plate, see steps 13b-24b, pages 12-15.

Figure 3

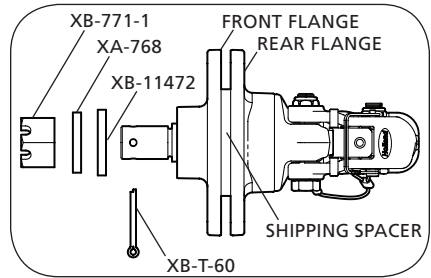


Figure 4

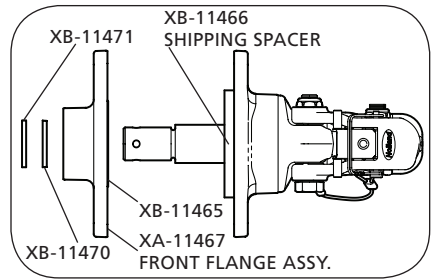
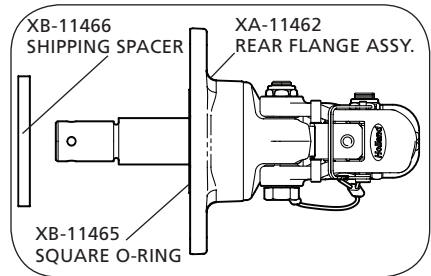
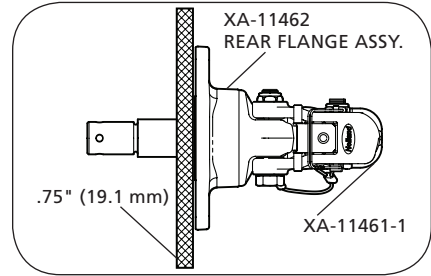


Figure 5

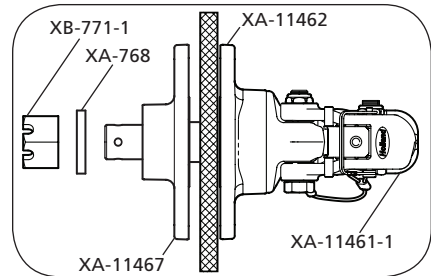


For mounting to .75" (19.1 mm) plate:

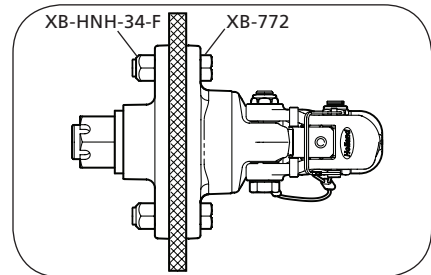
13a. Position the pintle hook (XA-11461-1) and rear flange assembly (XA-11462) (containing the square O-ring, V-ring seal, and large felt washer) on the cleaned and prepared mounting surface ensuring the square O-ring is not damaged or pinched, and hold the pintle hook compressed against the rear flange and mounting surface (**Figure 6**).

Figure 6


14a. While holding the pintle hook (XA-11461-1) and rear flange (XA-11462) compressed against the mounting surface, carefully position the front flange assembly (XA-11467) containing the square O-ring onto the pintle shank, allow the bushings to align both flanges and pintle hook shank, then install the washer (XA-768) and castellated nut (XB-771-1). Hand tighten only at this time to hold the assembly in place (**Figure 7**).

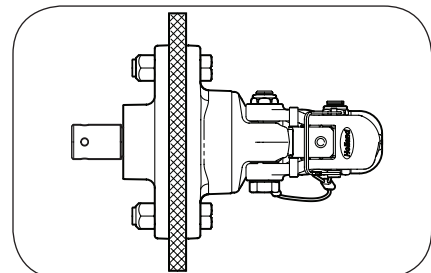
Figure 7


15a. Align the flange bolt holes, install the two 3/4" Grade 8 bolts (XB-772) and lock nuts (XB-HNH-34-F), and properly tighten. The recommended minimum torque is 200 ft-lbs. (271.16 N•m), per SAE J429 (**Figure 8**).

Figure 8


16a. Once the flanges are bolted and torqued to the mounting structure, hold the pintle hook compressed against the rear flange and remove the castellated nut and washer (**Figure 9**).

CAUTION Do not let go of the pintle hook from this point forward as once the castellated nut and washer are removed the pintle hook can fall out of the flanges, which, if not avoided, may result in minor or moderate injury.

Figure 9


17a. While holding the pintle hook compressed against the rear flange, ensure that it can rotate freely by hand (**Figure 9**).

18a. While continuing to hold the pintle hook compressed against the rear mounting flange, carefully install the U-cup seal (XB-11470) in the correct orientation with the cupped surface facing away from the bushing (**Figure 10 and Figure 11**).

19a. Continue holding the pintle hook compressed against the rear mounting flange and seat the U-cup seal (XB-11470) against the bushing using the round head of the cotter pin or another dull tool which will not damage, cut, or puncture the U-cup seal (**Figure 12**).

20a. Continue holding the pintle hook compressed against the rear mounting flange and install the felt washer (XB-11471) over the U-cup seal (**Figure 13**).

Figure 10

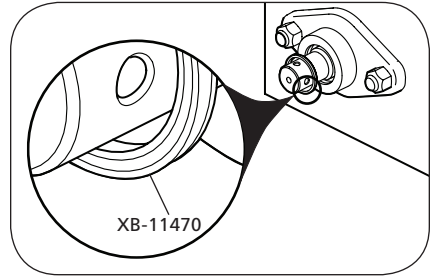


Figure 11

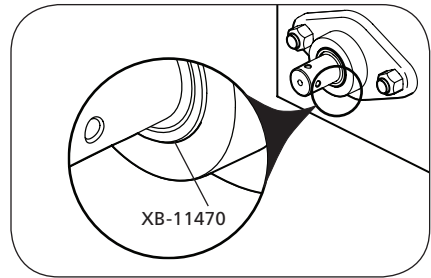


Figure 12

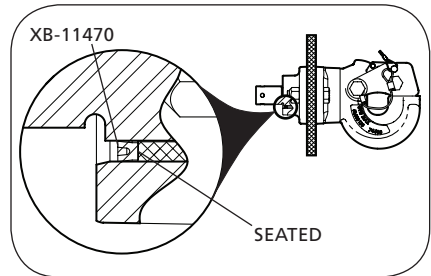
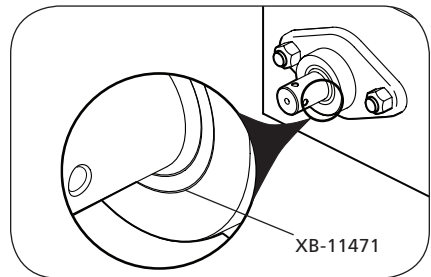


Figure 13



21a. Continue holding the pintle hook compressed against the rear mounting flange and ensure the felt washer is seated against the U-cup seal (**Figure 14**).

22a. Continue holding the pintle hook compressed against the rear mounting flange and install the washer (XA-768) and castellated nut (XB-771-1) hand tight (**Figure 15**).

23a. Torque the castellated nut to 50 ft-lbs. (67.8 N•m) and back off the minimum required to insert the cotter pin (XB-T-60) through the first available hole in the castellated nut and pintle shank, then spread the ends of the cotter pin (**Figure 16**).

24a. The pintle hook should rotate freely by hand with a maximum gap of .04" (1.0 mm) between the rear mounting flange and pintle hook (**Figure 17**).

WARNING

Failure to install the cotter pin can lead to the backing off of the castellated nut and separation of pintle hook from the flanges, which, if not avoided, could result in death or serious injury.

Figure 14

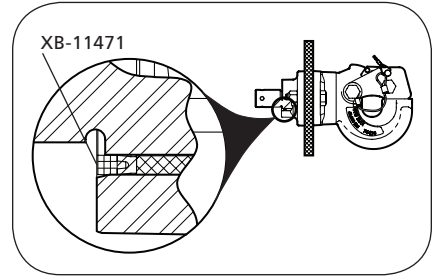


Figure 15

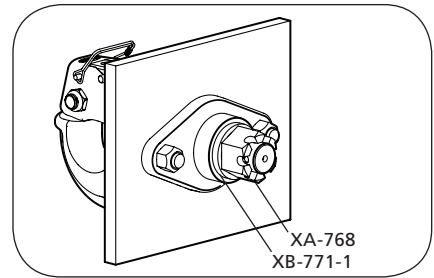


Figure 16

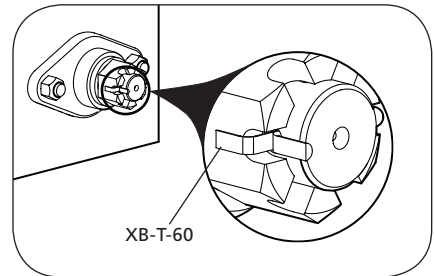
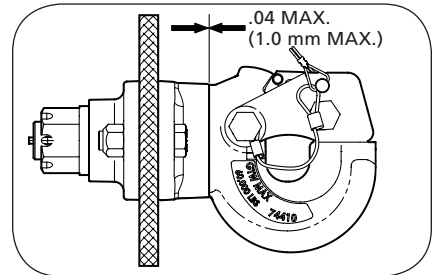


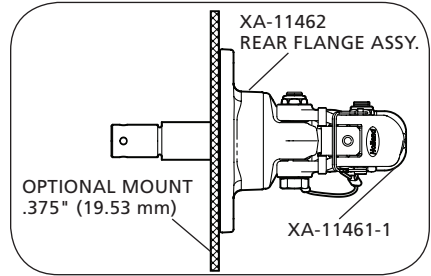
Figure 17



For mounting to .375" (19.53 mm) plate, continued from page 8:

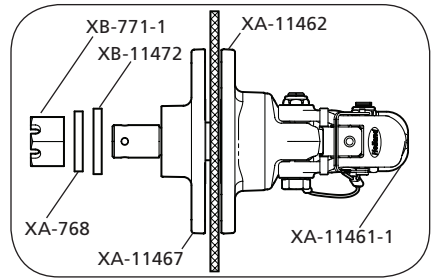
13b. Position the pintle hook (XA-11461-1) and rear flange assembly (XA-11462) (containing the square O-ring, V-ring seal, and large felt washer) on the cleaned and prepared mounting surface ensuring the square O-ring is not damaged or pinched, and hold the pintle hook compressed against the rear flange and mounting surface (**Figure 18**).

Figure 18



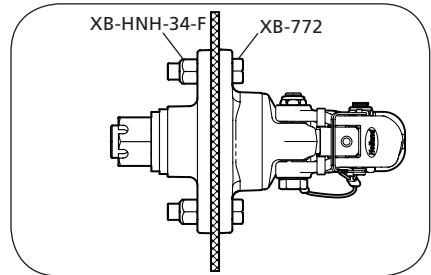
14b. While holding the pintle hook (XA-11461-1) compressed against the rear flange (XA-11462), carefully position the front flange assembly (XA-11467) containing the square O-ring onto the pintle shank, allow the bushings to align both flanges and pintle hook shank, then install the washer (XA-786), .375" (9.53 mm) spacer (XB-11472), and castellated nut (XB-771-1). Hand tighten only at this time to hold the assembly in place (**Figure 19**).

Figure 19



15b. Align the flange bolt holes, install the two 3/4" Grade 8 bolts (XB-772) and nuts (XB-HNH-34-F), and properly tighten. The recommended minimum torque is 200 ft-lbs. (271.16 N•m), per SAE J429 (**Figure 20**).

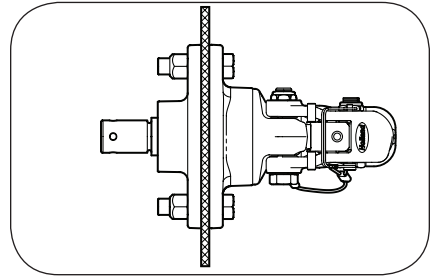
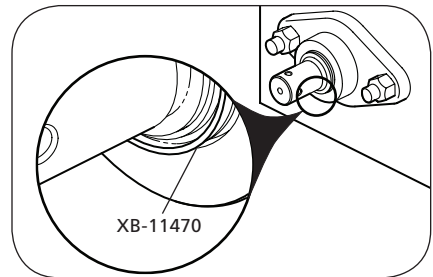
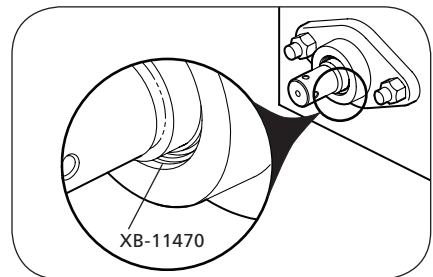
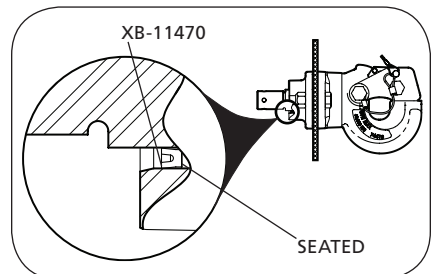
Figure 20



- 16b. Once the flanges are bolted and torqued to the mounting structure, hold the pintle hook compressed against the rear flange and remove the castellated nut (XB-771-1), washer (XA-768), and .375" (9.53 mm) spacer (XB-11472) (**Figure 21**).

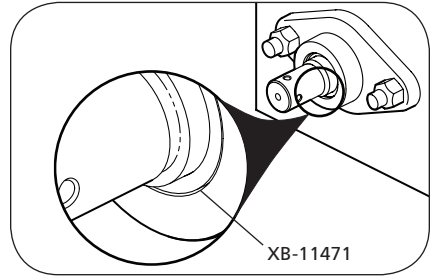
CAUTION Do not let go of the pintle hook from this point forward as once the castellated nut, .375" (9.53 mm) spacer, and washer are removed the pintle hook can fall out of the flanges, which, if not avoided, may result in minor or moderate injury.

- 17b. While holding the pintle hook compressed against the rear flange, ensure that it can rotate freely by hand (**Figure 21**).
- 18b. While continuing to hold the pintle hook compressed against the rear mounting flange, carefully install the U-cup seal (XB-11470) in the correct orientation with the cupped surface facing away from the bushing (**Figure 22 and Figure 23**).
- 19b. Continue holding the pintle hook compressed against the rear mounting flange and seat the U-cup seal (XB-11470) against the bushing using the round head of the cotter pin or another dull tool which will not damage, cut, or puncture the U-cup seal (**Figure 24**).

Figure 21

Figure 22

Figure 23

Figure 24


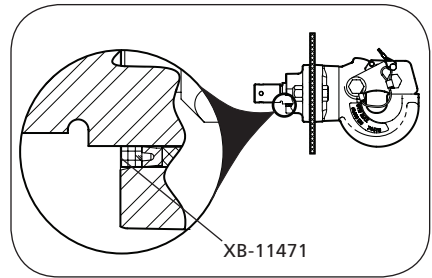
20b. Continue holding the pintle hook compressed against the rear mounting flange and install the felt washer (XB-11471) over the U-cup seal (**Figure 25**).

Figure 25



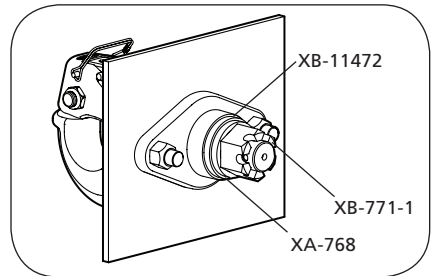
21b. Continue holding the pintle hook compressed against the rear mounting flange and ensure the felt washer is seated against the U-cup seal (**Figure 26**).

Figure 26



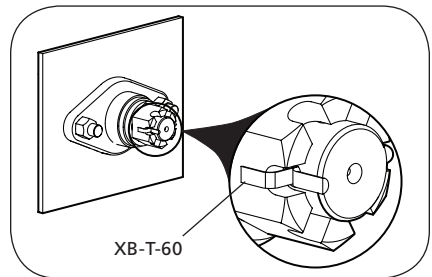
22b. Continue holding the pintle hook compressed against the rear mounting flange and install the special washer (XA-768 – 2.75" (69.9 mm) OD x .375" (9.53 mm) thick, the special washer spacer (XB-11472 - 3.00" (76.2 mm) OD x .375" (9.53 mm) thick, and castellated nut (XB-771-1) hand tight (**Figure 27**).

Figure 27



23b. Torque the castellated nut to 50 ft-lbs. (67.8 N•m) and back off as required to insert the cotter pin (XB-T-60) through the castellated nut and pintle shank, then spread the ends of the cotter pin (**Figure 28**).

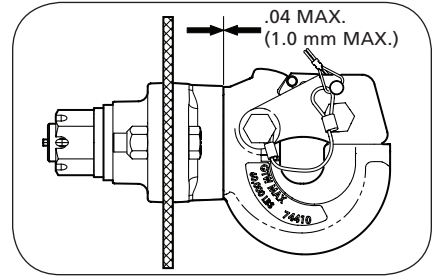
Figure 28



⚠ WARNING Failure to install the cotter pin can lead to the backing off of the castellated nut and separation of pintle hook from the flanges, which, if not avoided, could result in death or serious injury.

24b. The pintle hook should rotate freely by hand with a maximum gap of .04" (1.0 mm) between the rear mounting flange and pintle hook (**Figure 29**).

Figure 29



8. Operating Instructions

1. Before operating, inspect for proper operation, worn, damaged, or missing parts, and a secure mounting. Correct as required before use.
2. Make sure the pintle is in the proper coupling position with the latch on top (**Figure 30**).
3. Unlock and remove the tethered lock pin (**Figure 30**).
4. Lift the lock handle away from the vehicle until the lock clears the lock seat on the hook body, open the latch by rotating the latch assembly up towards the vehicle until the latch is in its most upright position, then release the lock handle (**Figure 31 and Figure 32**).
5. Position the drawbar eye over the horn of the pintle and lower into place.
6. Push the latch closed. When correctly locked, the lock handle will rotate and move up until it is flush with the top of the latch (**Figure 33**).
7. Insert the tethered lock pin through the latch and lock holes, and then close the tethered wire lock pin (**Figure 30**).

⚠ WARNING Failure to correctly lock the latch can result in separation of the pintle hook and drawbar, which, if not avoided, could result in death or serious injury.

Figure 30

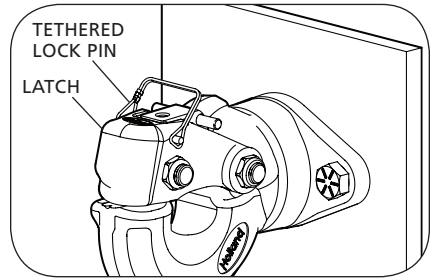


Figure 31

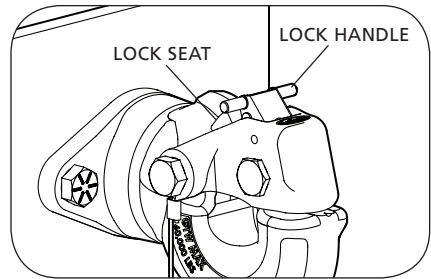
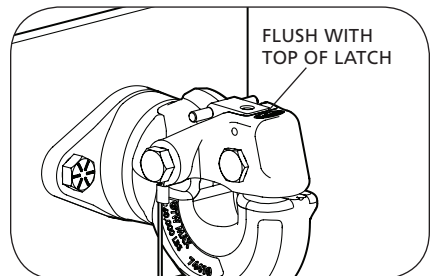


Figure 32



Figure 33



9. Maintenance

For proper performance, the following maintenance steps should be performed every 30,000 miles (48,280 km) or three months, whichever comes first.

⚠ WARNING Failure to inspect and maintain the pintle hook may result in separation of the pintle hook and drawbar, which, if not avoided, could result in death or serious injury.

1. Clean and check for proper operation. Inspect for worn, damaged or missing parts. Replace as required using only Genuine SAF-Holland parts.
2. Inspect, in particular, the coupling contact area. Replace complete product when wear exceeds 0.188" (4.76 mm) from the original surface profile. Wear gage (TF-10521) is available for purchase (**Figure 34**).
3. With the latch closed, measure the gap between the hook and the latch while lifting up on the latch. Replace the latch when the gap exceeds 0.375" (9.53 mm) (**Figure 35**). See Section 10.
4. Check for axial play by pushing and pulling, fore and aft on the pintle hook and measure the gap between the mounting flange and the pintle hook (**Figure 36**). When the gap exceeds 0.04" (1.0 mm), remove the cotter pin and tighten the nut 1/6 of a full turn and reinstall the cotter pin. Verify the pintle hook will rotate freely by hand.

Figure 34

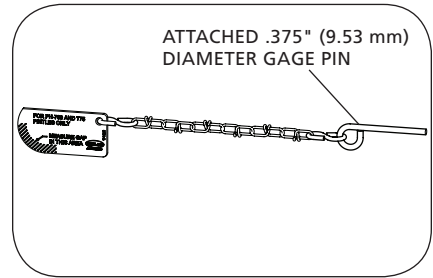


Figure 35

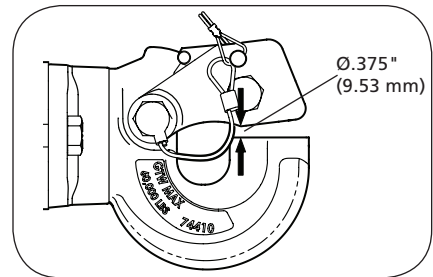
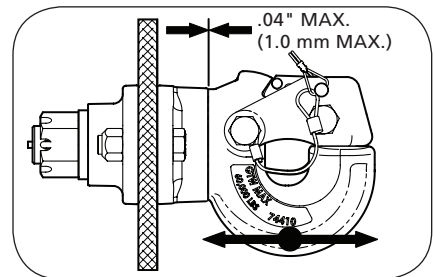
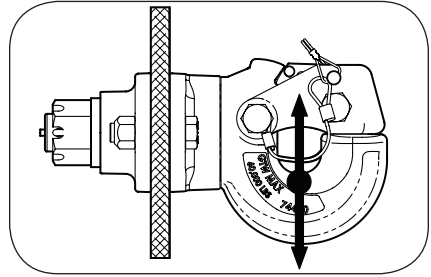


Figure 36



5. Check for vertical play by lifting up and pushing down on the pintle hook (**Figure 37**). When vertical play exceeds 0.125" (3.18 mm), the flange bolts should be removed, rotate flanges 180°, and remount flange bolts and nuts. When up and down play exceeds 0.25" (6.35 mm) after the flanges have previously been rotated 180°, the flanges should be replaced.
6. Re-verify torques on the mounting fasteners. Refer to Section 7, Step 15a or Step 15b.

Figure 37



10. Replacement Kits

Seal Kit (RK-11491)

During the initial installation, if the seals or felt washers become damaged or lost, order seal kit (**Figure 38**).

ITEM	PART NUMBER	QTY.	DESCRIPTION
1	XB-11471	1	Felt Washer, Front
2	XB-11470	1	U-Cup Seal, Front
3	XB-11465	2	Face Seal, Square Cut (Square O-Ring)
4	XB-10569	1	Washer, Felt
5	XB-10539	1	Seal, Housing Face (V-Ring Seal)

Flange Kit (RK-11492)

If the pintle hook is still in working condition, the flanges have been rotated 180° one time, and the up and down play still exceeds .25" (6.35 mm), order flange kit (**Figure 39**).

ITEM	PART NUMBER	QTY.	DESCRIPTION
1	XA-11467	1	Flange Assembly, Front
2	XB-11471	1	Felt Washer, Front
3	XB-11465	2	Face Seal, Square Cut (Square O-Ring)
4	XB-10569	1	Washer, Felt
5	XA-11462	1	Flange Assembly, Rear
6	XB-10539	1	Seal, Housing Face (V-Ring Seal)
7	XB-HNH-34-F	2	Nut, Lock 3/4"-16 (3/4" Lock Nut)
8	XB-11470	1	U-Cup Seal, Front
9	XB-772	2	Bolt 3/4"-16 X 3" (3/4" Grade 8 Bolts)
10	XB-T-60	1	Cotter, 1/4" X 2-1/2" (Cotter Pin)

Latch Kit (RK-10545-1)

If the latch gap exceeds .375" (9.53 mm), order latch kit (**Figure 40**).

ITEM	PART NUMBER	QTY.	DESCRIPTION
1	XA-10545-3	1	Assembly, Latch, Hvy Duty
2	XB-03104	1	Nut, 3/4"-16 Jam Lock Gr. A Zinc Pl. (Latch Nut)
3	XB-S10647	1	Pin & Lanyard S/A (Tehtered Lock Pin)
4	XB-10537	1	HHCS 3/4"-16 x 4" Lg. (Latch Bolt)

Figure 38

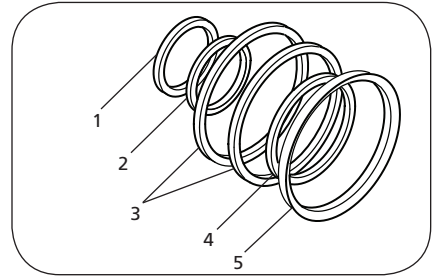


Figure 39

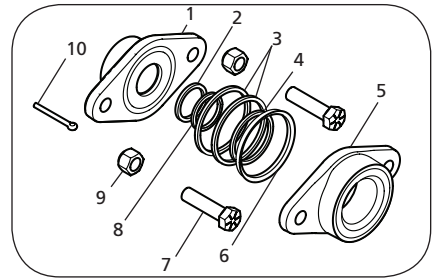
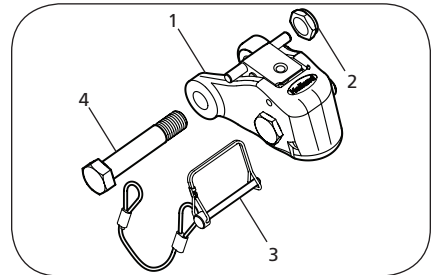


Figure 40





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