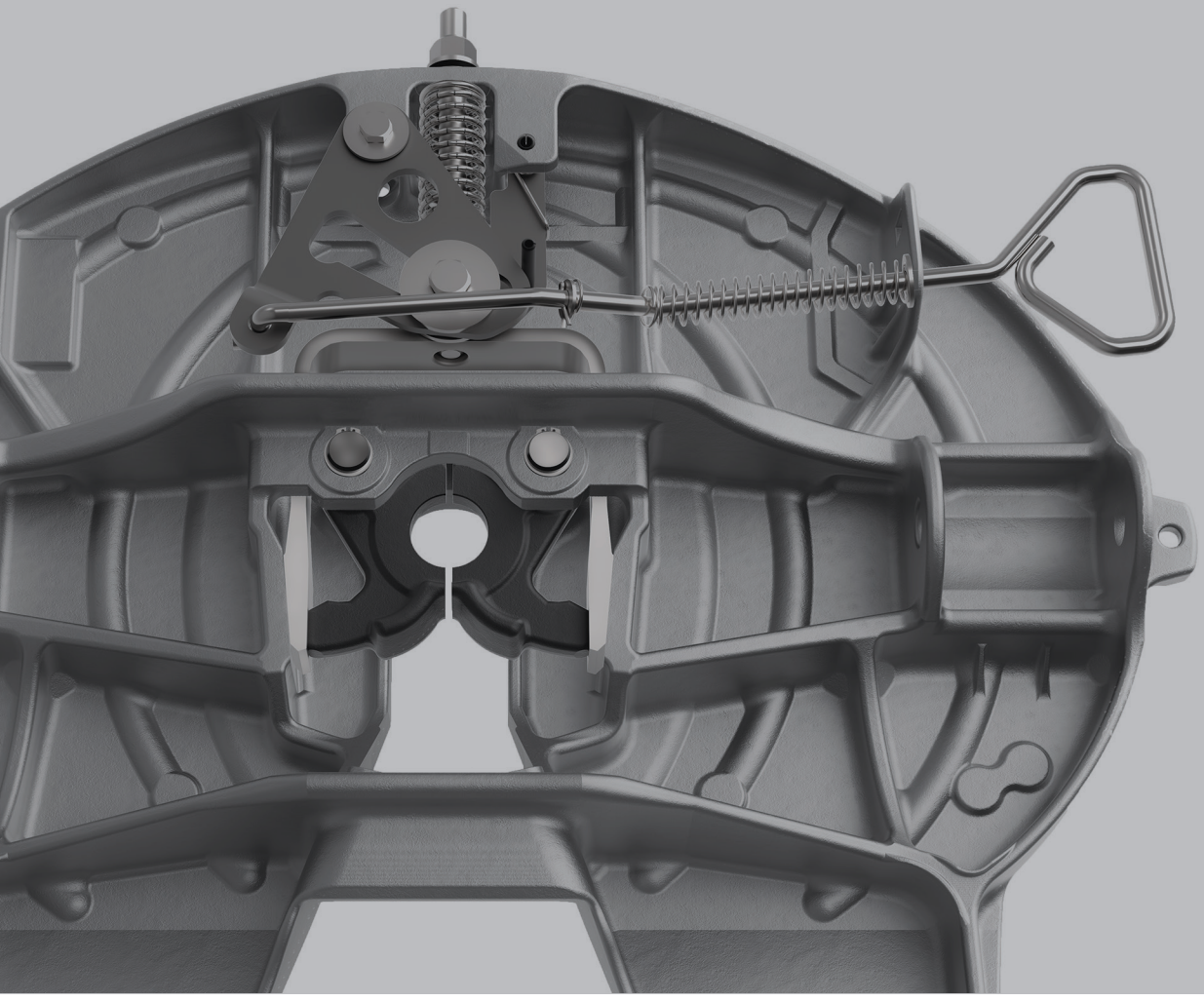
Holland®
SAF-HOLLAND Group

Rebuild/Repair Manual

35 Series Fifth Wheels

- FW35/XA-351, FW33/XA-331 (Low Lube) and FW31/XA-311 (NoLube™) Series
- FW35/XA-351-A-80-L, FW33/XA-331-A-80-L (Low Lube) and FW31/XA-311-A-80-L (NoLube™) Air Release Series



XL-FW20059RM-en-US Rev C

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Introduction

This manual provides the information necessary to properly rebuild FW35/XA-351, FW33/XA-331 (Low Lube) and FW31/XA-311 (NoLube) Series fifth wheels and FW35/XA-351-A-80-L, FW33/XA-331-A-80-L (Low Lube) and FW31/ XA-311-A-80-L (NoLube) Air Release Series fifth wheels manufactured after May 1, 1996.

Read this manual before using or servicing this product. Updates to this manual, which are published as necessary, are available on the internet at www.safholland.us.

When replacement parts are necessary, SAF-HOLLAND® requires the use of only SAF-HOLLAND Original Parts. A list of technical support locations that supply SAF-HOLLAND Original Parts and an Aftermarket Parts Catalog are available on the internet at www.safholland.us or contact Customer Service at 888-396-6501.

Notes, Cautions, and Warnings

Before starting work on any SAF-HOLLAND fifth wheel assembly, 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.

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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 safety procedures.

NOTE: In the United States, workshop safety requirements are defined by the federal and/or state Occupational Safety and Health Act (OSHA). Equivalent laws could 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.

NOTE: Before rebuilding the HOLLAND® Fifth Wheel, review the model number on the identification tag. This rebuild procedure applies only to model numbers starting with FW35/XA-351, FW33/XA-331 and FW31/XA-311.

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

IMPORTANT: These instructions apply to the proper rebuild of FW35/XA-351, FW33/XA-331 (Low Lube) and FW31/XA-311 (NoLube) Series fifth wheels and FW35/XA-351-A-80-L, FW33/XA-331- A-80-L (Low Lube) and FW31/XA-311-A-80-L (NoLube) Air Release 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 Installation Manual XL-FW10008BM-en-US available on the internet at www.safholland.us.

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

The fifth wheel serial tag is located on the handle side of the fifth wheel top plate near the pickup ramps ***(Figure 1)***.

The fifth wheel model number and serial number are listed on the tag as illustrated ***(Figure 2)***.

Use the following rebuild kits for FW35/XA-351, FW33/XA-331 (Low Lube) and FW31/XA-311 (NoLube) Series fifth wheels and FW35/XA-351-A-80-L, FW33/XA-331-A-80-L (Low Lube) and FW31/XA-311-A-80-L (NoLube) Air Release Series fifth wheels:

REBUILD KIT	FIFTH WHEEL/TOP PLATE	RELEASE
RK-351-A-L	FW35/XA-351 and FW33/XA-331 Manual Release	Left-Hand
RK-351-A	FW35/XA-351 and FW33/XA-331 Manual Release	Right-Hand
RK-351-A-02-L	FW35/XA-351 and FW33/XA-331 Manual Release with Manual Secondary Lock	Left-Hand
RK-351-A-02	FW35/XA-351 and FW33/XA-331 Manual Release with Manual Secondary Lock	Right-Hand
RK-351-A-80-L	FW35/XA-351-A-80-L and FW33/XA-331-A-80-L Air Release	Left-Hand

REBUILD KIT	FIFTH WHEEL/TOP PLATE	RELEASE
RK-311-A-L	FW31/XA-311 NoLube Manual Release	Left-Hand
RK-311-A	FW31/XA-311 NoLube Manual Release	Right-Hand
RK-311-A-02-L	FW31/XA-311 NoLube Manual Release with Manual Secondary Lock	Left-Hand
RK-311-A-02	FW31/XA-311 NoLube Manual Release with Manual Secondary Lock	Right-Hand
RK-311-A-80-L	FW31/XA-311-A-80-L NoLube Air Release	Left-Hand

Figure 1

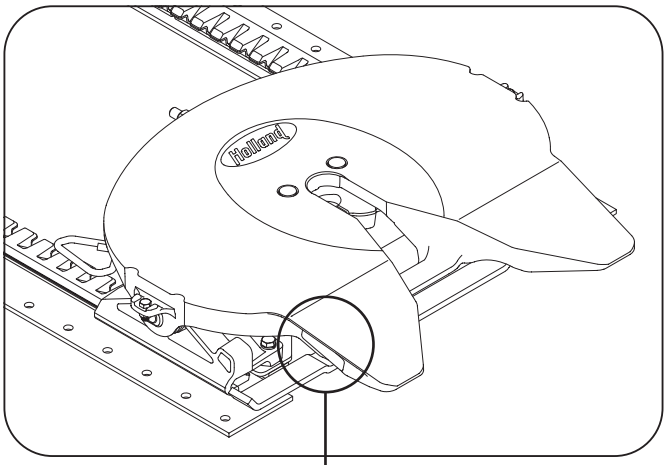
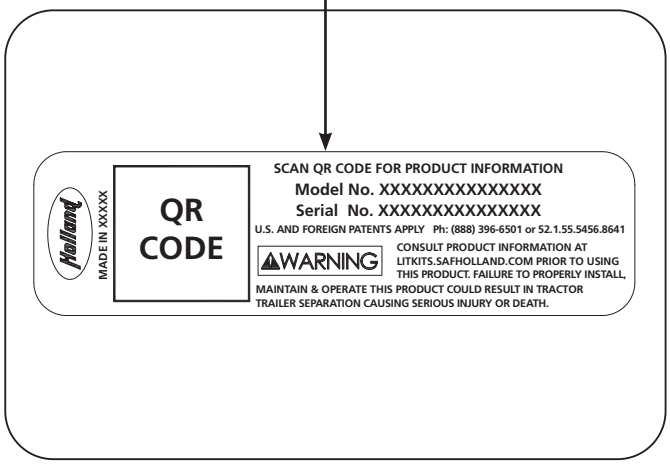


Figure 2



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3. Welding Standards

3.1 Scope

This specification applies to all components supplied by SAF-HOLLAND, and its products. The customer assumes full responsibility for weld integrity if weld material and procedures differ from those listed below.

3.2 Workmanship

All welding on SAF-HOLLAND products MUST be performed by a welder qualified according to the appropriate AWS standard for the weld being made or an equivalent standard. It is the responsibility of the customer to provide good workmanship when welding on SAF-HOLLAND products.

3.3 Material

Items to be welded that are made from low carbon or high-strength alloy steel are to be welded with AWS filler metal specification AWS A5.18, filler metal classification ER-70S-3, ER-70S-6 or equivalent unless specified on the installation drawing.

NOTE: Any substitution for filler material from the above standard must comply, as a minimum, with the following mechanical properties:

Tensile Strength - 72k psi (496 MPa)
Yield Strength - 60k psi (414 MPa)
Charpy V Notch - 20 ft.-lbs. (27 N•m) at 0o F (-17.7o C)
% Elongation - 22%

The recommended welding gas for gas metal arc welding (GMAW) is 90% Argon / 10% CO2. If a different gas is used, welds MUST comply with penetration requirements ***(Figure 3)***. Where the installation drawing specifies different than above, the drawing shall prevail.

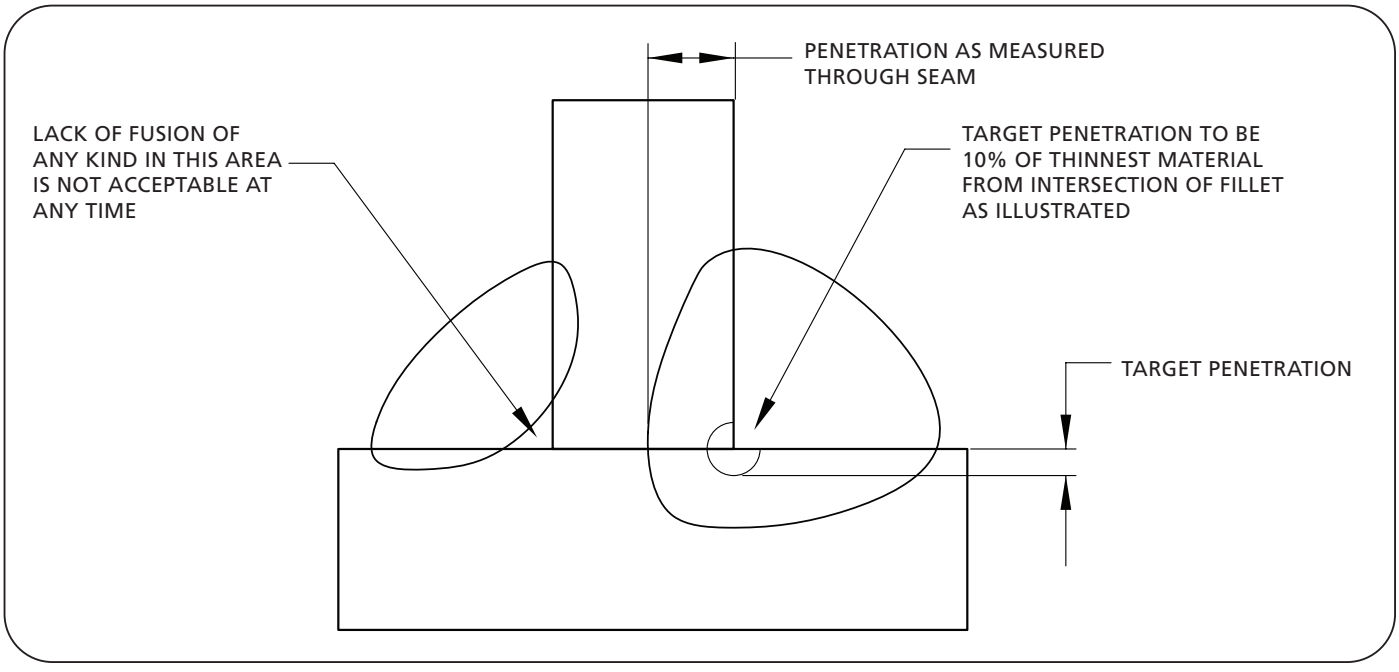
3.4 Procedures

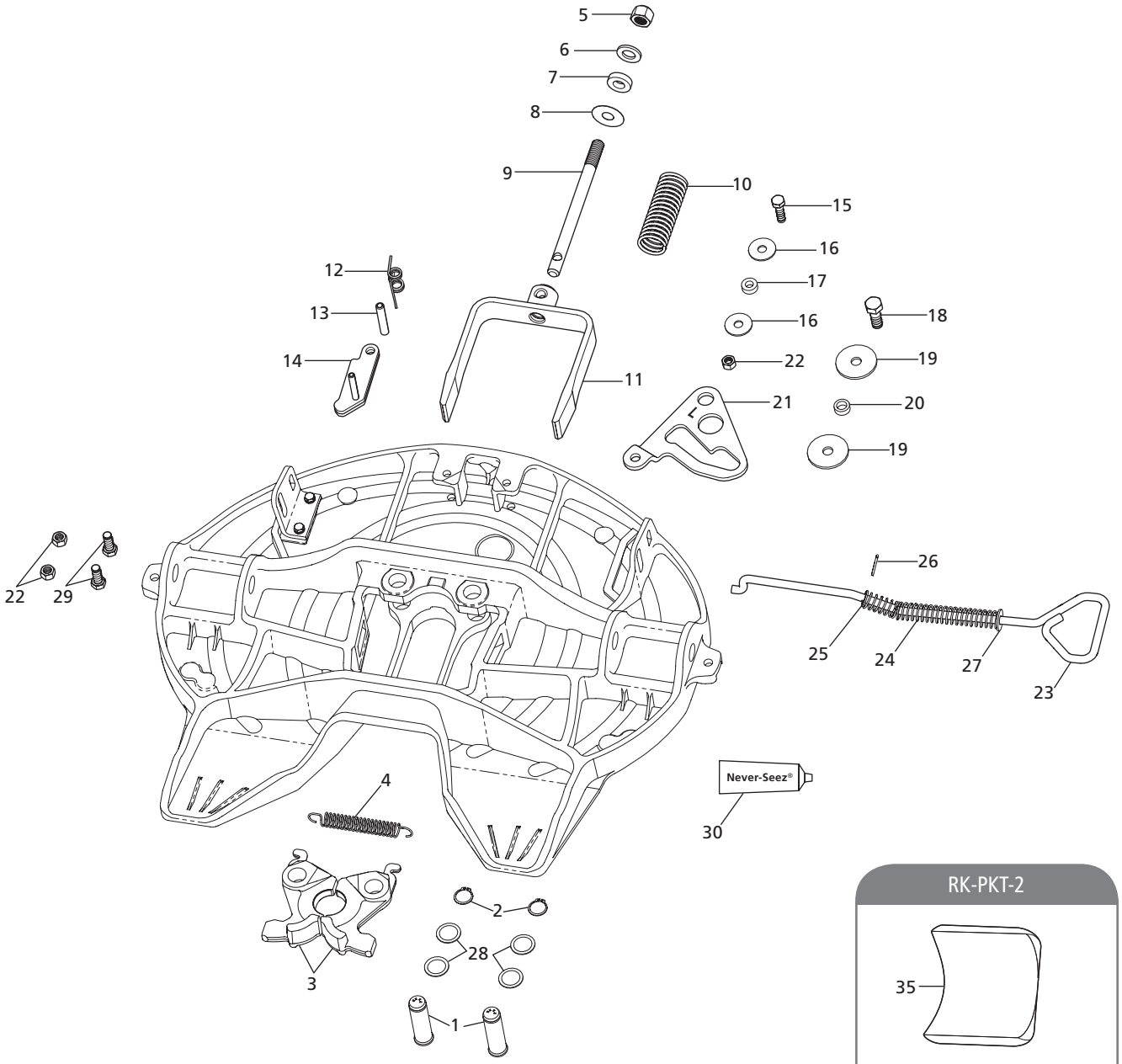
Tack welds used for positioning components are to be located in the center of the final weld, where practical. Tack weld should be completely fused to the finish weld. DO NOT break arc at the end of the weld. Back up all finish welds at least 1/2" (12.7 mm) or a sufficient amount to prevent craters at the end of the weld. Where weld is shown to go around corners, it is assumed the corner represents a stress concentration area. DO NOT start or stop weld within 1" (25.4 mm) of the corner. Particular care should be taken to prevent undercutting in this area.

3.5 Weld Size

If weld size is NOT specified, the effective throat of the weld MUST be no smaller than the thinnest material being welded ***(Figure 3)***.

Figure 3





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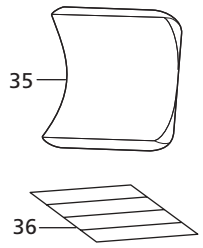

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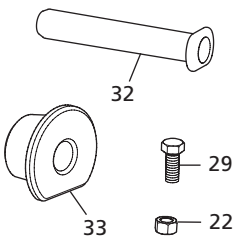

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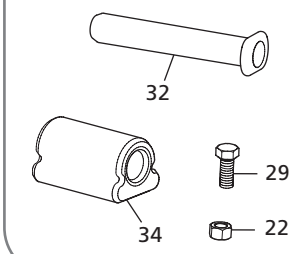
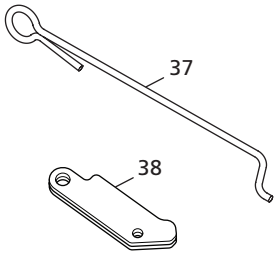
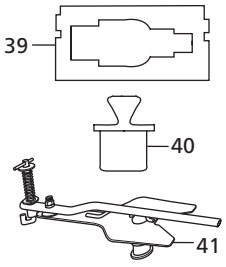


Manual Secondary Lock



Service Tools



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RK-351-A-L AND RK-351-A PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Lock Pin	XA-07292-1-P	2
2	Retaining Ring	XB-07398	2
3	Lock Set	XA-07296-P	1
4	Extension Spring	XB-07628-P	1
5	Lock Nut, 3/4"-16	XB-HNH-34-F	1
6	Washer, 1-1/2" O.D. x 13/16" I.D.	XB-PW-1316-112	1
7	Rubber Washer	XB-1127	1
8	Lock Adjustment Tag	XB-02312	1
9	Yoke Shaft	XA-1706-ST	1
10	Compression Spring	XB-1505-P	1
11	Yoke	XA-07295-P	1
12	Torsion Spring	XB-2149-P	1
13	Roll Pin, Ø1/2" x 2-3/4"	XB-21-S-500-2750P	1
14L	Secondary Lock, Left-Hand (included with RK-351-A-L kit)	XA-11992-L-P	1
14R	Secondary Lock, Right-Hand (included with RK-351-A kit)	XA-11992-R-P	1
15	Hex Head Cap Screw, 1/2"-20 x 1-3/4"	XB-2083	1
16	Washer, 1-3/4" O.D. x 9/16" I.D.	XB-08559	2
17	Roller, 1/2" I.D.	XA-1029-P	1
18	Hex Head Cap Screw, 5/8"-18 x 1-3/4"	XB-CX-58-F-134	1
19	Washer, 2-5/8" O.D. x 5/8" I.D.	XB-07431	2
20	Roller, 5/8" I.D.	XA-1507-1-P	1
21L	Cam Plate, Left-Hand (included with RK-351-A-L kit)	XA-07150-L-P	1
21R	Cam Plate, Right-Hand (included with RK-351-A kit)	XA-07150-R-P	1
22	Lock Nut, 1/2"-20	XB-T-69-A	3
23	Release Handle	XA-07151-1-P	1
24	Compression Spring	XB-07291-P	1
25	Washer, 1-1/16" O.D. x 9/16" I.D.	XB-PW-1732-1-116	1
26	Cotter Pin, Ø1/8" x 1-1/4"	XB-07508	1
27	Washer, 1-3/8" O.D. x 9/16" I.D.	XB-T-49	1
28	Washer, 1-5/8" O.D. x 1-3/16" I.D.	XB-05859-1	4
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
30	Never-Seez®, 7.5 Tube	XB-02967	1
*31	Lube Fitting	XB-H-38	2

*Only for use on XA-351 top plates without pocket inserts.

Note: Kits available from your local SAF-HOLLAND Distributor.

RK-10605 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
22	Lock Nut, 1/2"-20	XB-T-69-A	2
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
32	Bracket Pin	XE-06356-P	2
33	Rubber Bushing (cast brackets)	XB-10605	4

RK-06973-1 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
22	Lock Nut, 1/2"-20	XB-T-69-A	2
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
32	Bracket Pin	XE-06356-P	2
34	Rubber Bushing (fabricated brackets)	XB-0011-2	2

RK-PKT-2 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
35	Pocket Insert	XD-08908-PO	2
36	Double Face Tape	XB-09422	4

MANUAL SECONDARY LOCK			
ITEM	DESCRIPTION	PART NUMBER	QTY.
37	Manual Secondary Lock Release Handle (included with RK-351-A-02-L and RK-351-A-02 kits)	XA-3542-M-P	1
38	Manual Secondary Lock (included with RK-351-A-02-L and RK-351-A-02 kits)	XA-11992-P	1

SERVICE TOOLS			
ITEM	DESCRIPTION	PART NUMBER	QTY.
39	Kingpin Gauge	TF-0110	1
40	Lock Gauge, 2" (Plug)	TF-0237	1
41	Kingpin Lock Tester	TF-TLN-5001	1

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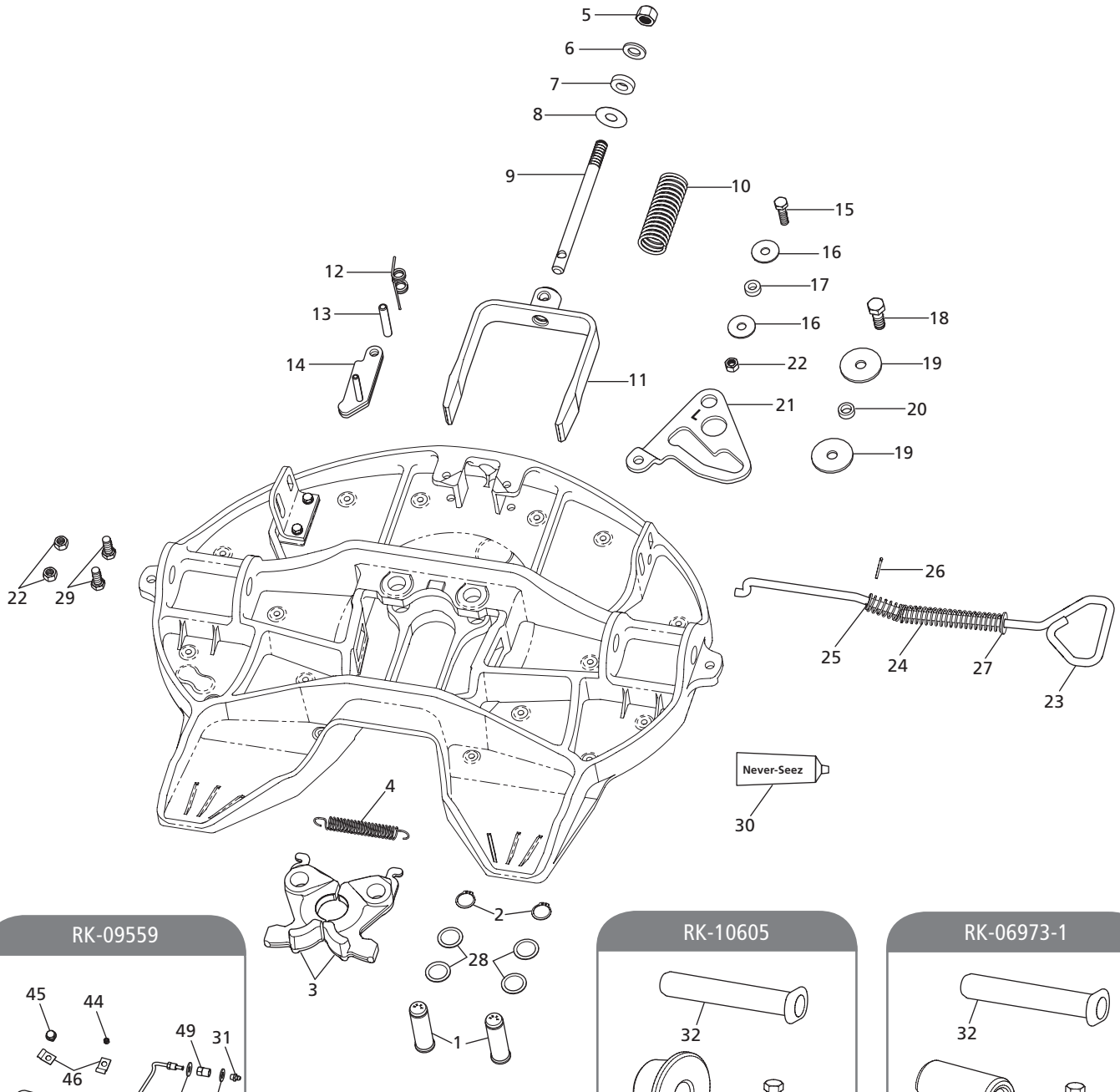

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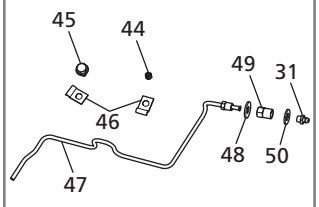

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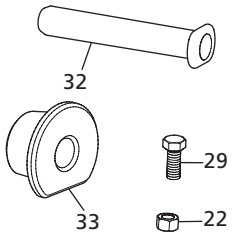

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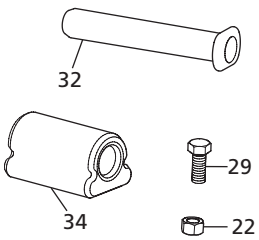

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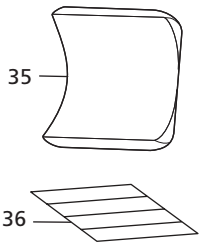

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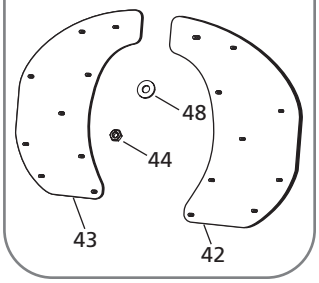
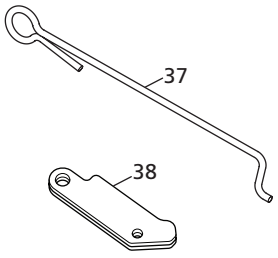
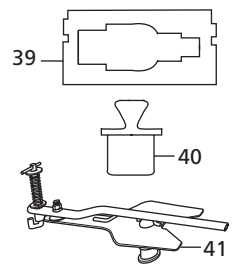


Manual Secondary Lock



Service Tools



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RK-351-A-L AND RK-351-A PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Lock Pin	XA-07292-1-P	2
2	Retaining Ring	XA-07398	2
3	Lock Set	XA-07296-P	1
4	Extension Spring	XB-07628-P	1
5	Lock Nut, 3/4"-16	XB-HNH-34-F	1
6	Washer, 1-1/2" O.D. x 13/16" I.D.	XB-PW-1316-112	1
7	Rubber Washer	XB-1127	1
8	Lock Adjustment Tag	XB-02312	1
9	Yoke Shaft	XA-1706-ST	1
10	Compression Spring	XB-1505-P	1
11	Yoke	XA-07295-P	1
12	Torsion Spring	XB-2149-P	1
13	Roll Pin, Ø1/2" x 2-3/4"	XB-21-S-500-2750P	1
14L	Secondary Lock, Left-Hand (included with RK-351-A-L kit)	XA-11992-L-P	1
14R	Secondary Lock, Right-Hand (included with RK-351-A kit)	XA-11992-R-P	1
15	Hex Head Cap Screw, 1/2"-20 x 1-3/4"	XB-2083	1
16	Washer, 1-3/4" O.D. x 9/16" I.D.	XB-08559	2
17	Roller, 1/2" I.D.	XA-1029-P	1
18	Hex Head Cap Screw, 5/8"-18 x 1-3/4"	XB-CX-58-F-134	1
19	Washer, 2-5/8" O.D. x 5/8" I.D.	XB-07431	2
20	Roller, 5/8" I.D.	XA-1507-1-P	1
21L	Cam Plate, Left-Hand (included with RK-351-A-L kit)	XA-07150-L-P	1
21R	Cam Plate, Right-Hand (included with RK-331-A- kit)	XA-07150-R-P	1
22	Lock Nut, 1/2"-20	XB-T-69-A	3
23	Release Handle	XA-07151-1-P	1
24	Compression Spring	XB-07291-P	1
25	Washer, 1-1/16" O.D. x 9/16" I.D.	XB-PW-1732-1-116	1
26	Cotter Pin, Ø1/8" x 1-1/4"	XB-07508	1
27	Washer, 1-3/8" O.D. x 9/16" I.D.	XB-T-49	1
28	Washer, 1-5/8" O.D. x 1-3/16" I.D.	XB-05859-1	4
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
30	Never-Seez, 7.5g Tube	XB-02967	1
*31	Lube Fitting	XB-H-38	2

*Only for use on XA-351 top plates without pocket inserts.

Note: Kits available from your local SAF-HOLLAND Distributor.

RK-331-1 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
42	Lube Plate, Left-Hand	XA-08125-L	1
43	Lube Plate, Right-Hand	XA-08125-R	1
44	Lock Nut, 5/16"-18	XB-08931	18
48	Washer, 7/8" O.D. x 3/8" I.D.	XB-05635	18

RK-10605 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
22	Lock Nut, 1/2"-20	XB-T-69-A	2
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
32	Bracket Pin	XE-06356-P	2
33	Rubber Bushing (cast brackets)	XB-10605	4

RK-06973-1 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
22	Lock Nut, 1/2"-20	XB-T-69-A	2
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
32	Bracket Pin	XE-06356-P	2
34	Rubber Bushing (fabricated brackets)	XB-0011-2	2

RK-PKT-2 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
35	Pocket Insert	XD-08908-PO	2
36	Double Face Tape	XB-09422	4

RK-09559 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
31	Lube Fitting	XB-H-38	1
44	Lock Nut, 5/16"-18	XB-08931	1
45	Thread-Cutting Screw, 5/16"-18 x 1/2"	XB-09185	1
46	Tube Clip	XB-09184-1	2
47	Lube Tube	XA-09181	1
48	Washer, 7/8" O.D. x 3/8" I.D.	XB-05635	1
49	Female Connector Fitting	XB-09183	1
50	Washer, 13/16" O.D. x 3/8" I.D.	XB-PWM-38-78	1

MANUAL SECONDARY LOCK			
ITEM	DESCRIPTION	PART NUMBER	QTY.
37	Manual Secondary Lock Release Handle (included with RK-351-A-02-L and RK-351-A-02 kits)	XA-3542-M-P	1
38	Manual Secondary Lock (included with RK-351-A-02-L and RK-351-A-02 kits)	XA-11992-P	1

SERVICE TOOLS			
ITEM	DESCRIPTION	PART NUMBER	QTY.
39	Kingpin Gauge	TF-0110	1
40	Lock Gauge, 2" (Plug)	TF-0237	1
41	Kingpin Lock Tester	TF-TLN-5001	1

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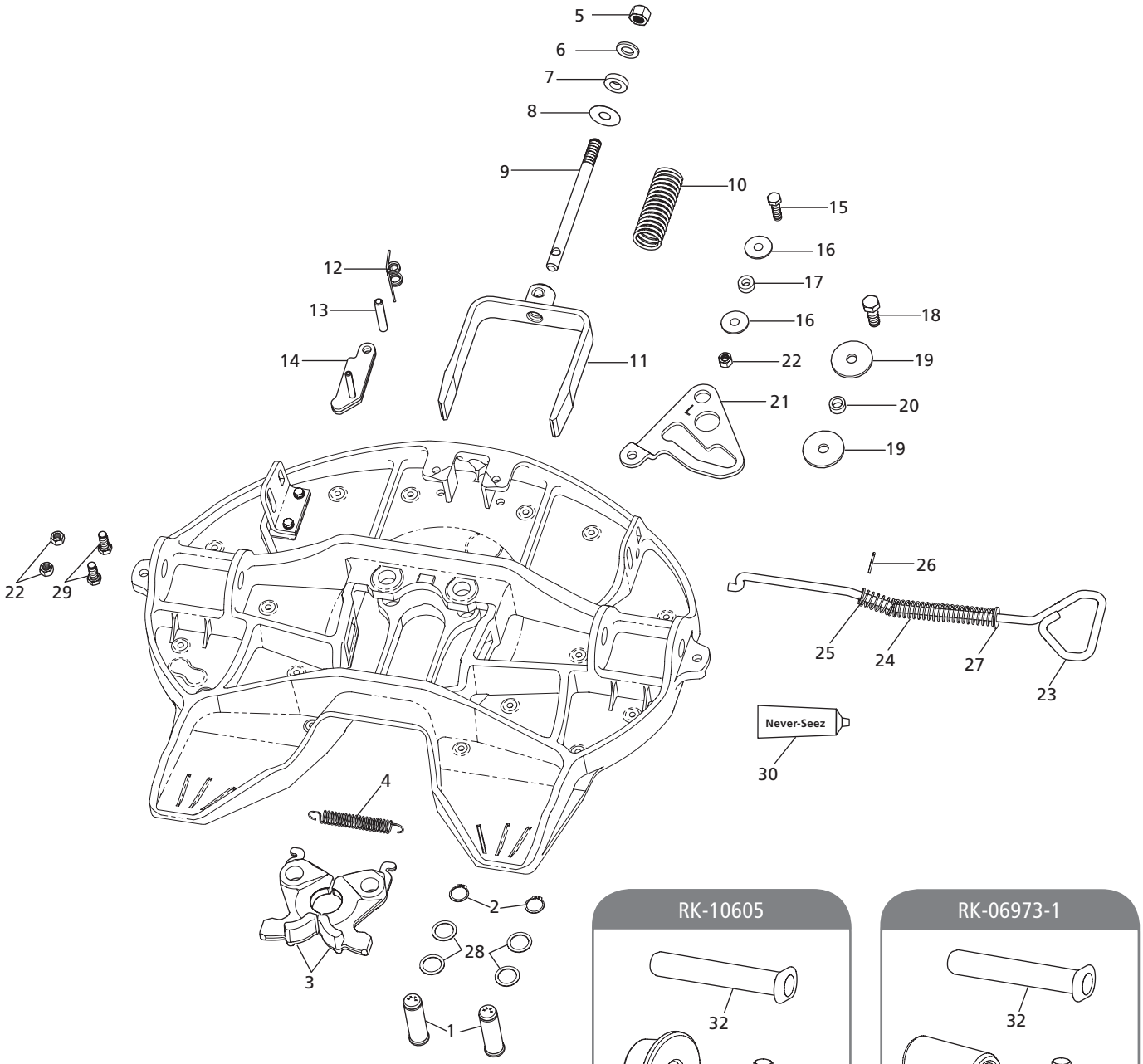

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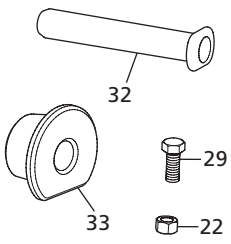

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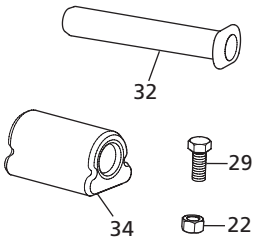

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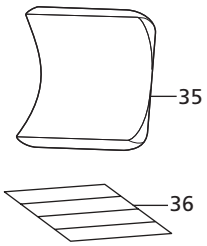

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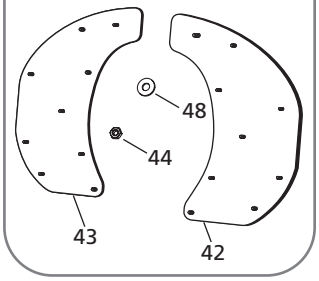
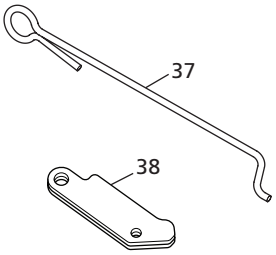
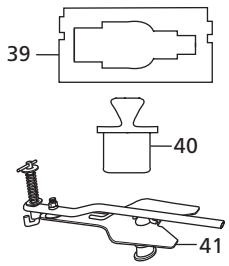


Manual Secondary Lock



Service Tools



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RK-311-A-L AND RK-311-A PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Lock Pin	XA-10256	2
2	Retaining Ring	XB-07398	2
3	Lock Set	XA-11692	1
4	Extension Spring	XB-07628-P	1
5	Lock Nut, 3/4"-16	XB-HNH-34-F	1
6	Washer, 1-1/2" O.D. x 13/16" I.D.	XB-PW-1316-112	1
7	Rubber Washer	XB-1127	1
8	Lock Adjustment Tag	XB-02312	1
9	Yoke Shaft	XA-1706-ST	1
10	Compression Spring	XB-1505-P	1
11	Yoke	XA-10257	1
12	Torsion Spring	XB-2149-P	1
13	Roll Pin, Ø1/2" x 2-1/2"	XB-21-S-500-2500P	1
14L	Secondary Lock, Left-Hand (included with RK-311-A-L kit)	XA-11992-L-P	1
14R	Secondary Lock, Right-Hand (included with RK-311-A kit)	XA-11992-R-P	1
15	Hex Head Cap Screw, 1/2"-20 x 1-3/4"	XB-2083	1
16	Washer, 1-3/4" O.D. x 9/16" I.D.	XB-08559	2
17	Roller, 1/2" I.D.	XA-10265	1
18	Hex Head Cap Screw - 5/8"-18 x 1-3/4"	XB-CX-58-F-134	1
19	Washer, 2-5/8" O.D. x 5/8" I.D.	XB-07431	2
20	Roller, 5/8" I.D.	XA-10343	1
21L	Cam Plate, Left-Hand (included with RK-311-A-L kit)	XA-10258	1
21R	Cam Plate, Right-Hand (included with RK-311-A kit)	XA-10450	1
22	Lock Nut, 1/2"-20	XB-T-69-A	3
23	Release Handle	XA-07151-1-P	1
24	Compression Spring	XB-07291-P	1
25	Washer, 1-1/16" O.D. x 9/16" I.D.	XB-PW-1732-1-116	1
26	Cotter Pin, Ø1/8" x 1-1/4"	XB-07508	1
27	Washer, 1-3/8" O.D. x 9/16" I.D.	XB-T-49	1
28	Washer, 1-5/8" O.D. x 1-3/16" I.D.	XB-05859-1	4
29	Hex Head Cap Screw - 1/2"-20 x 1-1/4"	XB-C-95	2
30	Never-Seez, 7.5g Tube	XB-02967	2

Note: Kits available from your local SAF-HOLLAND Distributor.

RK-10605 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
22	Lock Nut, 1/2"-20	XB-T-69-A	2
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
32	Bracket Pin	XE-06356-P	2
33	Rubber Bushing (cast brackets)	XB-10605	4

RK-06973-1 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
22	Lock Nut, 1/2"-20	XB-T-69-A	2
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
32	Bracket Pin	XE-06356-P	2
34	Rubber Bushing (fabricated brackets)	XB-0011-2	2

RK-PKT-2 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
35	Pocket Insert	XD-08908-PO	2
36	Double Face Tape	XB-09422	4

RK-331-1 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
42	Lube Plate, Left-Hand	XA-08125-L	1
43	Lube Plate, Right-Hand	XA-08125-R	1
44	Lock Nut, 5/16"-18	XB-08931	18
48	Washer, 7/8" O.D. x 3/8" I.D.	XB-05635	18

MANUAL SECONDARY LOCK			
ITEM	DESCRIPTION	PART NUMBER	QTY.
37	Manual Secondary Lock Release Handle (included with RK-311-A-02-L and RK-311-A-02 kits)	XA-3542-M-P	1
38	Manual Secondary Lock (included with RK-311-A-02-L and RK-311-A-02 kits)	XA-11992-P	1

SERVICE TOOLS			
ITEM	DESCRIPTION	PART NUMBER	QTY.
39	Kingpin Gauge	TF-0110	1
40	Lock Gauge, 2" (Plug)	TF-0237	1
41	Kingpin Lock Tester	TF-TLN-5001	1

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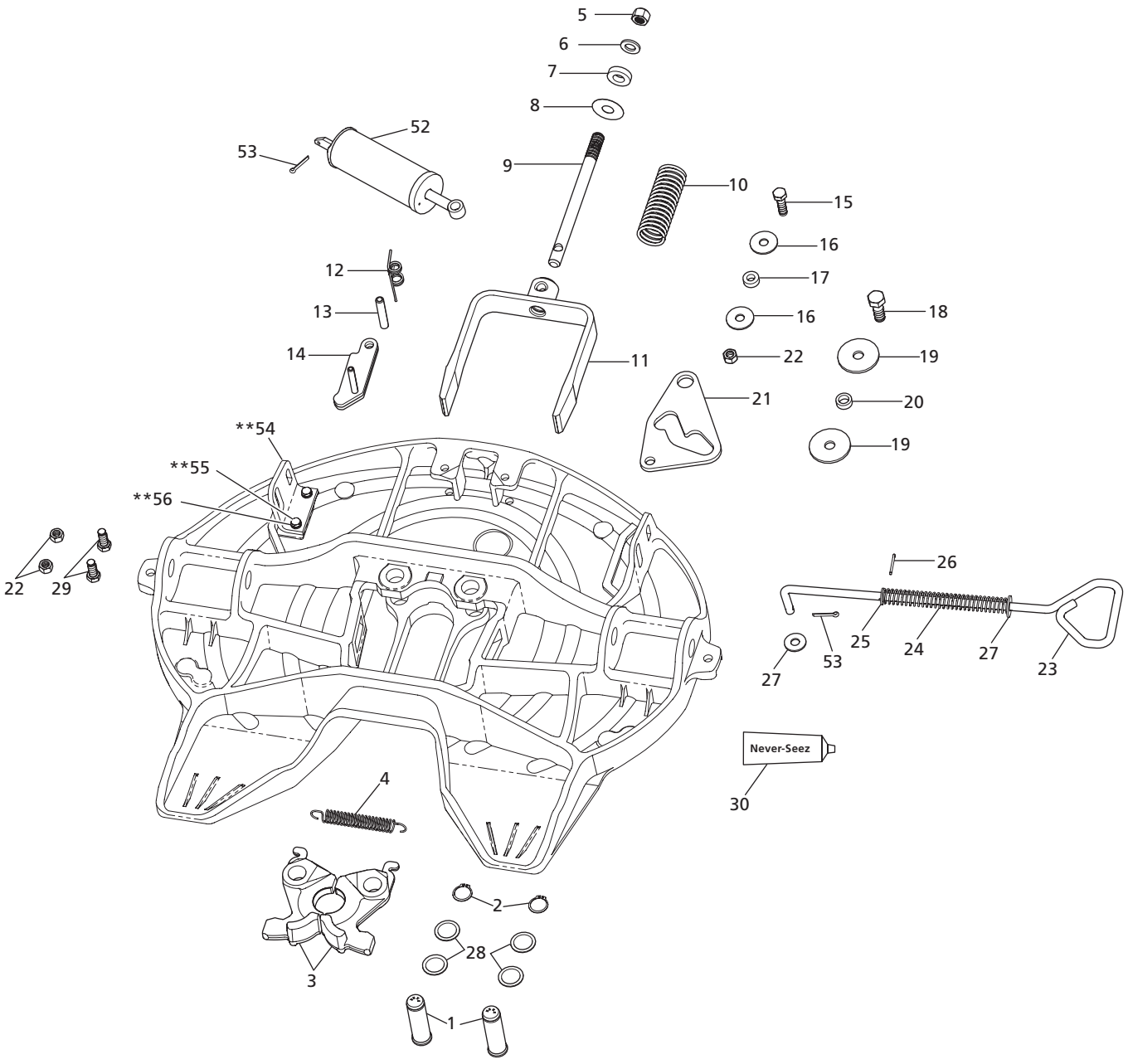

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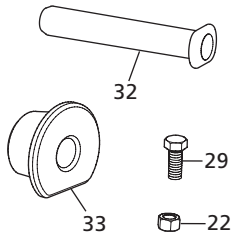

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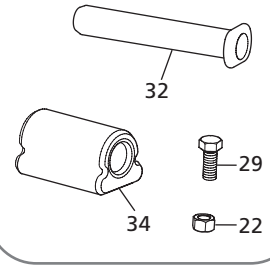

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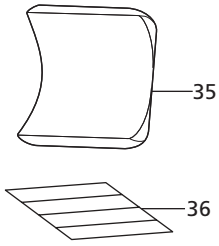
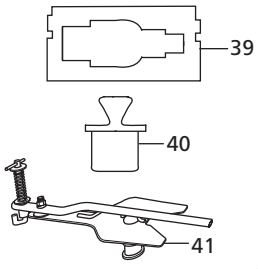


Service Tools



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RK-351-A-80-L PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Lock Pin	XA-07292-1-P	2
2	Retaining Ring	XB-07398	2
3	Lock Set	XA-07296-P	1
4	Extension Spring	XB-07628-P	1
5	Lock Nut, 3/4"-16	XB-HNH-34-F	1
6	Washer, 1-1/2" O.D. x 13/16" I.D.	XB-PW-1316-112	1
7	Rubber Washer	XB-1127	1
8	Lock Adjustment Tag	XB-02312	1
9	Yoke Shaft	XA-1706-ST	1
10	Compression Spring	XB-1505-P	1
11	Yoke	XA-07295-P	1
12	Torsion Spring	XB-2149-P	1
13	Roll Pin, Ø1/2" x 2-3/4"	XB-21-S-500-2750P	1
14	Secondary Lock, Left-Hand	XA-11992-L-P	1
15	Hex Head Cap Screw, 1/2"-20 x 1-3/4"	XB-2083	1
16	Washer, 1-3/4" O.D. x 9/16" I.D.	XB-08559	2
17	Roller, 1/2" I.D.	XA-1029-P	1
18	Hex Head Cap Screw, 5/8"-18 x 1-3/4"	XB-CX-58-F-134	1
19	Washer, 2-5/8" O.D. x 5/8" I.D.	XB-07431	2
20	Roller, 5/8" I.D.	XA-1507-1-P	1
21	Cam Plate	XA-1705-P	1
22	Lock Nut, 1/2"-20	XB-T-69-A	3
23	Release Handle	XA-07766-1-P	1
24	Compression Spring	XB-07974-P	1
25	Washer, 1-1/16" O.D. x 9/16" I.D.	XB-PW-1732-1-116	1
26	Cotter Pin, Ø1/8" x 1-1/4"	XB-07508	1
27	Washer, 1-3/8" O.D. x 9/16" I.D.	XB-T-49	2
28	Washer, 1-5/8" O.D. x 1-3/16" I.D.	XB-05859-1	4
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
30	Never-Seez, 7.5g Tube	XB-02967	1
*31	Lube Fitting	XB-H-38	2
52	Air Cylinder	XA-11713	1
53	Cotter Pin, Ø3/16" x 1-1/4"	XB-06336	2
**54	Bracket	XA-11211-P	1
**55	Hex Head Cap Screw, 3/8"-16 x 1"	XB-C-38-C-1	2
**56	Lock Washer, 11/16" O.D. x 3/8" I.D.	XB-T-61	2

*Only for use on XA-351 top plates without pocket inserts.

** For use in retrofitting a Manual Release top plate to Air Release. Refer to Section 5.

Note: Kits available from your local SAF-HOLLAND Distributor.

RK-10605 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
22	Lock Nut, 1/2"-20	XB-T-69-A	2
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
32	Bracket Pin	XE-06356-P	2
33	Rubber Bushing (cast brackets)	XB-10605	4

RK-06973-1 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
22	Lock Nut, 1/2"-20	XB-T-69-A	2
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
32	Bracket Pin	XE-06356-P	2
34	Rubber Bushing (fabricated brackets)	XB-0011-2	2

RK-PKT-2 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
35	Pocket Insert	XD-08908-PO	2
36	Double Face Tape	XB-09422	4

SERVICE TOOLS			
ITEM	DESCRIPTION	PART NUMBER	QTY.
39	Kingpin Gauge	TF-0110	1
40	Lock Gauge, 2" (Plug)	TF-0237	1
41	Kingpin Lock Tester	TF-TLN-5001	1

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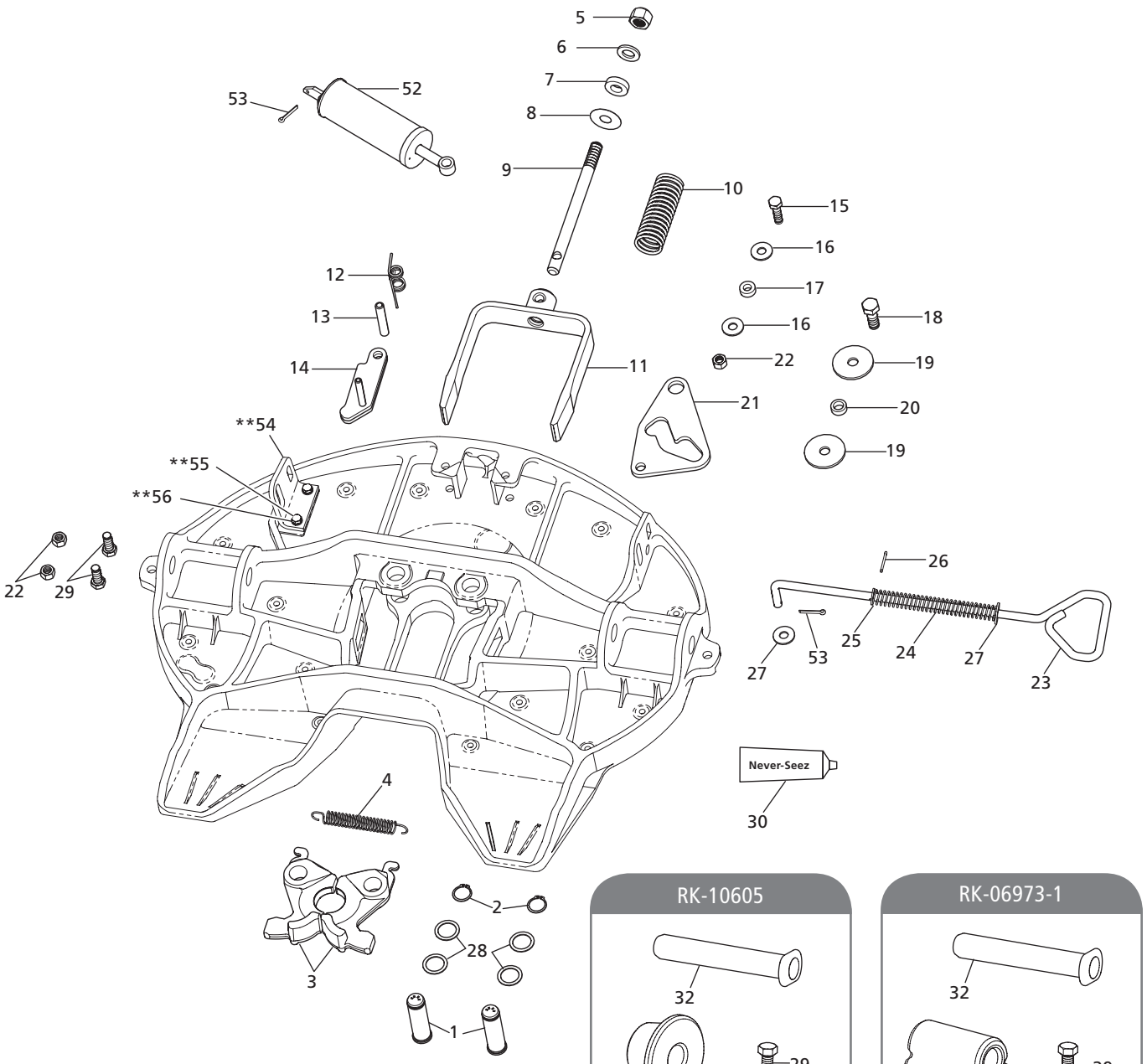

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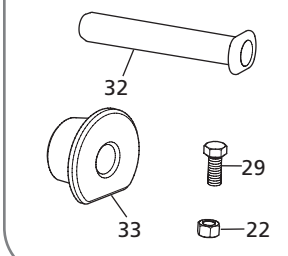

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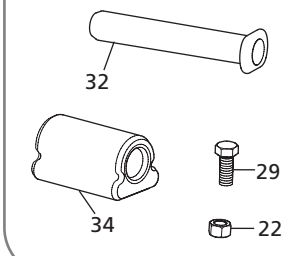

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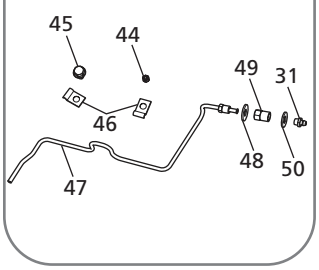

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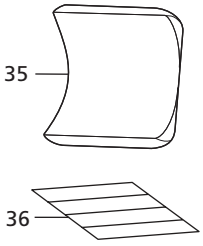

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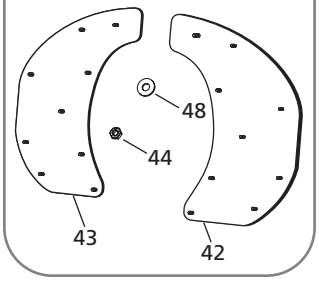
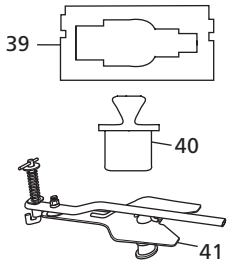


Service Tools



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RK-351-A-80-L PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Lock Pin	XA-07292-1-P	2
2	Retaining Ring	XB-07398	2
3	Lock Set	XA-07296-P	1
4	Extension Spring	XB-07628-P	1
5	Lock Nut, 3/4"-16	XB-HNH-34-F	1
6	Washer, 1-1/2" O.D. x 13/16" I.D.	XB-PW-1316-112	1
7	Rubber Washer	XB-1127	1
8	Lock Adjustment Tag	XB-02312	1
9	Yoke Shaft	XA-1706-ST	1
10	Compression Spring	XB-1505-P	1
11	Yoke	XA-07295-P	1
12	Torsion Spring	XB-2149-P	1
13	Roll Pin, Ø1/2" x 2-3/4"	XB-21-S-500-2750P	1
14	Secondary Lock, Left-Hand	XA-11992-L-P	1
15	Hex Head Cap Screw, 1/2"-20 x 1-3/4"	XB-2083	1
16	Washer, 1-3/4" O.D. x 9/16" I.D.	XB-08559	2
17	Roller, 1/2" I.D.	XA-1029-P	1
18	Hex Head Cap Screw, 5/8"-18 x 1-3/4"	XB-CX-58-F-134	1
19	Washer, 2-5/8" O.D. x 5/8" I.D.	XB-07431	2
20	Roller, 5/8" I.D.	XA-1507-1-P	1
21	Cam Plate	XA-1705-P	1
22	Lock Nut, 1/2"-20	XB-T-69-A	3
23	Release Handle	XA-07766-1-P	1
24	Compression Spring	XB-07974-P	1
25	Washer, 1-1/16" O.D. x 9/16" I.D.	XB-PW-1732-1-116	1
26	Cotter Pin, Ø1/8" x 1-1/4"	XB-07508	1
27	Washer, 1-3/8" O.D. x 9/16" I.D.	XB-T-49	2
28	Washer, 1-5/8" O.D. x 1-3/16" I.D.	XB-05859-1	4
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
30	Never-Seez, 7.5g Tube	XB-02967	1
*31	Lube Fitting	XB-H-38	2
52	Air Cylinder	XA-11713	1
53	Cotter Pin, Ø3/16" x 1-1/4"	XB-06336	2
**54	Bracket	XA-11211-P	1
**55	Hex Head Cap Screw, 3/8"-16 x 1"	XB-C-38-C-1	2
**56	Lock Washer, 11/16" O.D. x 3/8" I.D.	XB-T-61	2

*Only for use on XA-351 top plates without pocket inserts.

** For use in retrofitting a Manual Release top plate to Air Release. For XA-331 top plates, only the Handle Bracket (XA-11211-P) is required. Refer to Section 5.

Note: Kits available from your local SAF-HOLLAND Distributor.

RK-10605 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
22	Lock Nut, 1/2"-20	XB-T-69-A	2
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
32	Bracket Pin	XE-06356-P	2
33	Rubber Bushing (cast brackets)	XB-10605	4

RK-06973-1 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
22	Lock Nut, 1/2"-20	XB-T-69-A	2
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
32	Bracket Pin	XE-06356-P	2
34	Rubber Bushing (fabricated brackets)	XB-0011-2	2

RK-09559 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
31	Lube Fitting	XB-H-38	1
44	Lock Nut, 5/16"-18	XB-08931	1
45	Thread-Cutting Screw, 5/16"-18 x 1/2"	XB-09185	1
46	Tube Clip	XB-09184-1	2
47	Lube Tube	XA-09181	1
48	Washer, 7/8" O.D. x 3/8" I.D.	XB-05635	1
49	Female Connector Fitting	XB-09183	1
50	Washer, 13/16" O.D. x 3/8" I.D.	XB-PWM-38-78	1

RK-PKT-2 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
35	Pocket Insert	XD-08908-PO	2
36	Double Face Tape	XB-09422	4

RK-331-1 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
42	Lube Plate, Left-Hand	XA-08125-L	1
43	Lube Plate, Right-Hand	XA-08125-R	1
44	Lock Nut, 5/16"-18	XB-08931	18
48	Washer, 7/8" O.D. x 3/8" I.D.	XB-05635	18

SERVICE TOOLS			
ITEM	DESCRIPTION	PART NUMBER	QTY.
39	Kingpin Gauge	TF-0110	1
40	Lock Gauge, 2" (Plug)	TF-0237	1
41	Kingpin Lock Tester	TF-TLN-5001	1

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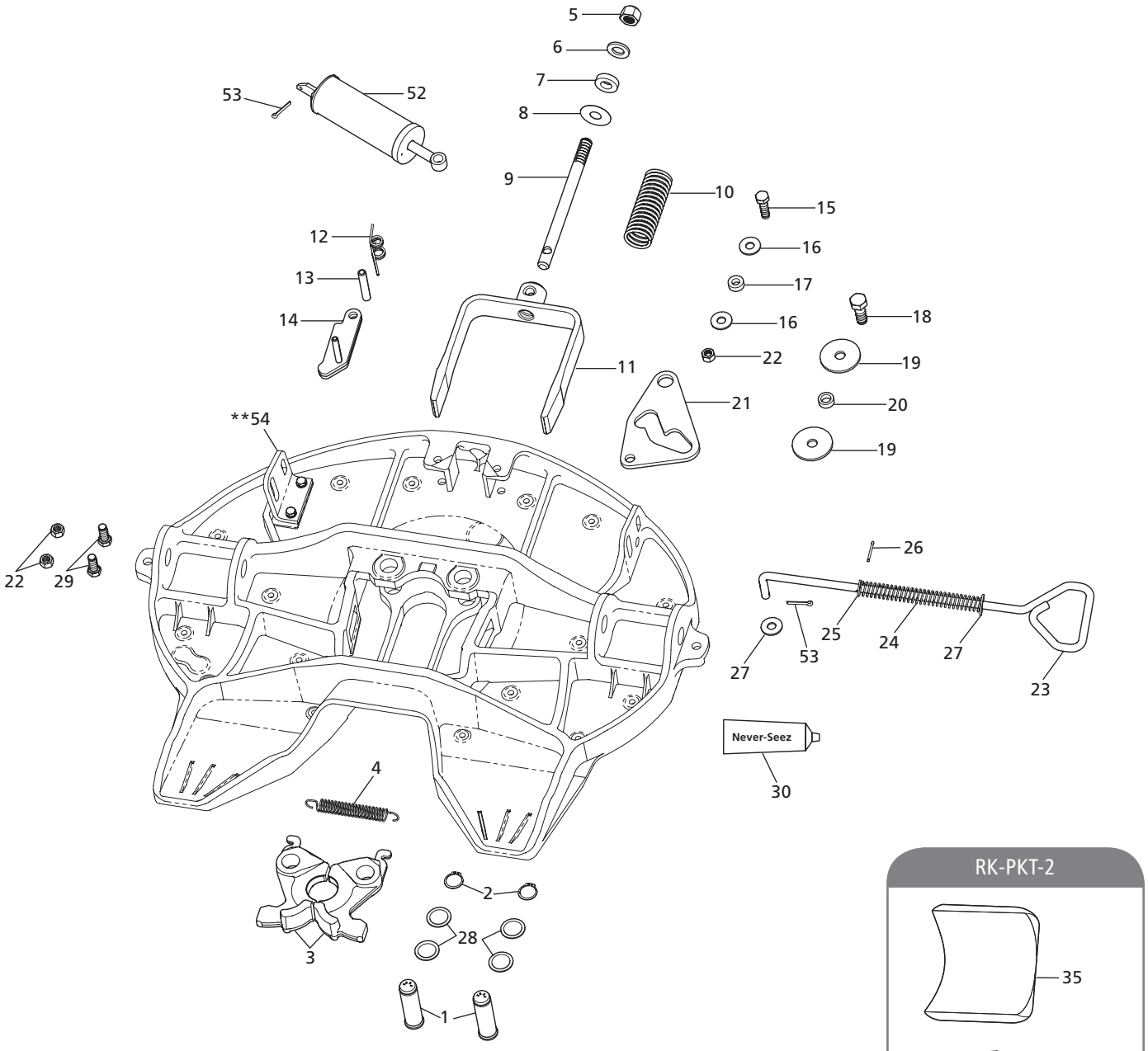

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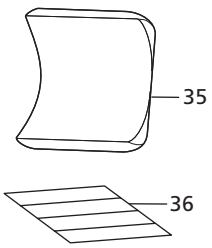

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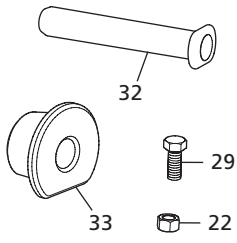

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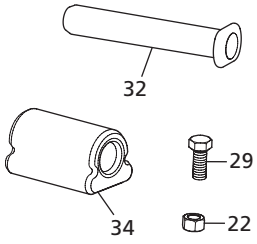
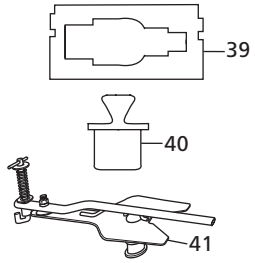


Service Tools



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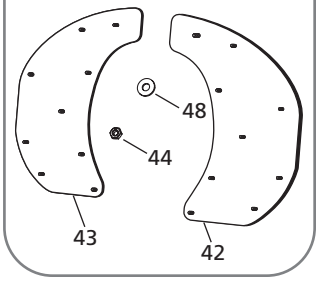

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RK-311-A-80-L PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Lock Pin	XA-10256	2
2	Retaining Ring	XB-07398	2
3	Lock Set	XA-11692	1
4	Extension Spring	XB-07628-P	1
5	Lock Nut, 3/4"-16	XB-HNH-34-F	1
6	Washer, 1-1/2" O.D. x 13/16" I.D.	XB-PW-1316-112	1
7	Rubber Washer	XB-1127	1
8	Lock Adjustment Tag	XB-02312	1
9	Yoke Shaft	XA-1706-ST	1
10	Compression Spring	XB-1505-P	1
11	Yoke	XA-10257	1
12	Torsion Spring	XB-2149-P	1
13	Roll Pin, Ø1/2" x 2-1/2"	XB-21-S-500-2500P	1
14	Secondary Lock, Left-Hand	XA-11992-L-P	1
15	Hex Head Cap Screw, 1/2"-20 x 1-3/4"	XB-2083	1
16	Washer, 1-3/4" O.D. x 9/16" I.D.	XB-08559	2
17	Roller, 1/2" I.D.	XA-10265	1
18	Hex Head Cap Screw, 5/8"-18 x 1-3/4"	XB-CX-58-F-134	1
19	Washer, 2-5/8" O.D. x 5/8" I.D.	XB-07431	2
20	Roller, 5/8" I.D.	XA-10343	1
21	Cam plate	XA-10453	1
22	Lock Nut, 1/2"-20	XB-T-69-A	3
23	Release Handle	XA-07766-1-P	1
24	Compression Spring	XB-07974-P	1
25	Washer, 1-1/16" O.D. x 9/16" I.D.	XB-PW-1732-1-116	1
26	Cotter Pin, Ø1/8" x 1-1/4"	XB-07508	1
27	Washer, 1-3/8" O.D. x 9/16" I.D.	XB-T-49	2
28	Washer, 1-5/8" O.D. x 1-3/16" I.D.	XB-05859-1	4
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
30	Never-Seez, 7.5g Tube	XB-02967	2
52	Air Cylinder	XA-11713	1
53	Cotter Pin, Ø3/16" x 1-1/4"	XB-06336	2
**54	Bracket	XA-11211-P	1

** For use in retrofitting a Manual Release top plate to Air Release. Refer to Section 5.

Note: Kits available from your local SAF-HOLLAND Distributor.

RK-10605 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
22	Lock Nut, 1/2"-20	XB-T-69-A	2
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
32	Bracket Pin	XE-06356-P	2
33	Rubber Bushing (cast brackets)	XB-10605	4

RK-06973-1 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
22	Lock Nut, 1/2"-20	XB-T-69-A	2
29	Hex Head Cap Screw, 1/2"-20 x 1-1/4"	XB-C-95	2
32	Bracket Pin	XE-06356-P	2
34	Rubber Bushing (fabricated brackets)	XB-0011-2	2

RK-PKT-2 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
35	Pocket Insert	XD-08908-PO	2
36	Double Face Tape	XB-09422	4

RK-331-1 PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY.
42	Lube Plate, Left-Hand	XA-08125-L	1
43	Lube Plate, Right-Hand	XA-08125-R	1
44	Lock Nut, 5/16"-18	XB-08931	18
48	Washer, 7/8" O.D. x 3/8" I.D.	XB-05635	18

SERVICE TOOLS			
ITEM	DESCRIPTION	PART NUMBER	QTY.
39	Kingpin Gauge	TF-0110	1
40	Lock Gauge, 2" (Plug)	TF-0237	1
41	Kingpin Lock Tester	TF-TLN-5001	1

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4. Top Plate Removal

IMPORTANT: The FW35 Series fifth wheel assembly has replaceable pocket inserts installed between the fifth wheel top plate and mounting base. When removing the top plate, the pocket inserts will either remain inside of the top plate pockets, on top of the mounting bracket caps, or may fall out. Take care NOT to lose the pocket inserts.

⚠CAUTION Failure to prevent pocket inserts from falling out of the top plate could cause a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

1. Remove the bracket pin retention bolts and nuts from both sides of the fifth wheel top plate and discard ***(Figure 4)***.
2. Using a pry bar, pull the bracket pins out of the fifth wheel top plate and set aside ***(Figure 4)***.
3. Using a lifting device capable of lifting 500 lbs. (227 kg), remove the top plate from the mounting base. Place the fifth wheel upside down on a flat, clean working area.

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

4. Completely remove all components except the pocket inserts from the fifth wheel and discard.

NOTE: For newer model standard right-hand FW35/XA-351-A fifth wheels and newer model FW35/XA-351-A-80-L air release fifth wheels, DO NOT remove the bracket that is bolted to the fifth wheel top plate casting.

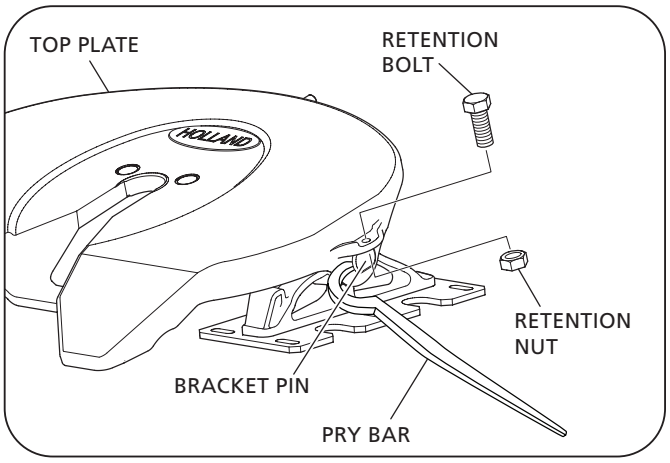
IMPORTANT: Rebuild kits contain all components necessary to completely rebuild the fifth wheel top plate. DO NOT reuse old parts.

IMPORTANT: DO NOT remove the pocket inserts unless they are cracked or worn. Refer to Section 13 for inspection information.

NOTE: Lock pins could be difficult to dislodge and could require force to remove.

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

Figure 4



5. Thoroughly steam clean the top plate.
6. Inspect the fifth wheel top plate for cracks and for loose lock pin holes. Fifth wheels with cracks or loose lock pin holes MUST be replaced.

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

NOTE: Follow the lubrication procedures in this manual for all fifth wheel models to ensure proper function.

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5. Bracket Installation (if Converting Manual Release Top Plate to Air Release)

NOTE: To retrofit a manual release top plate to an air release, the following steps are required for the newer versions of the FW35/ XA-351, FW33/XA-331 (Low Lube) and FW31/XA-311 (NoLube) Series top plates, as they DO NOT have a hole/slot for air cylinder installation cast into the top plate ***(Figure 5)***. This bracket must be installed prior to completing the rebuild steps throughout the remainder of this manual.

NOTE: For FW35/XA-351 or FW33/XA-331 (Low Lube) Series top plates, rebuild kit (RK-351-A-80-L) is required for retrofit. For FW31/XA-311 (NoLube) Series top plates, rebuild kit (RK-311-A-80-L) is required for retrofit.

5.1 Option 1 - Welding the bracket into place:

1. Remove the paint from the raised boss of the top plate and the bracket itself, where the contact surfaces will meet, as well as the surrounding area of the raised boss where the weld bead will be placed ***(Figure 6)***.
2. Place the bracket onto the raised boss ***(Figure 7)***. Ensure that the bracket is centered on the boss and the back of the bracket is tight against the casting wall ***(Figure 8)***.

Figure 6

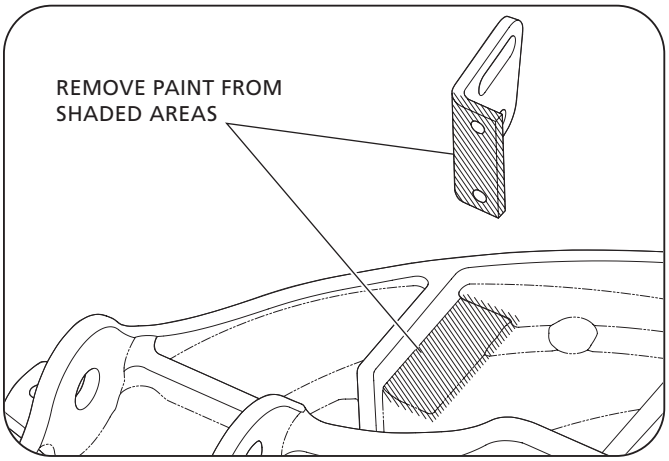


Figure 7

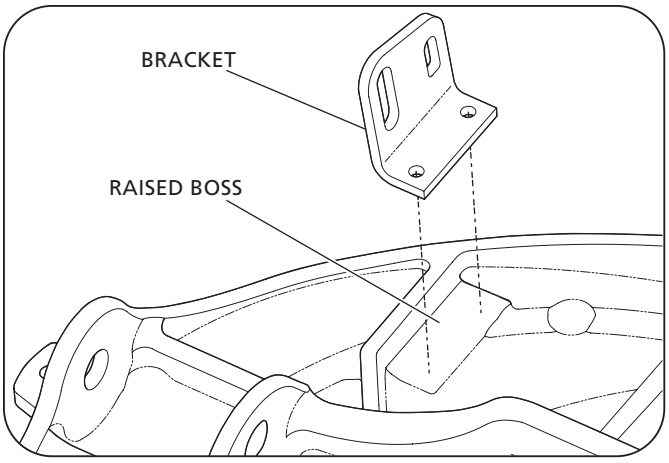


Figure 5

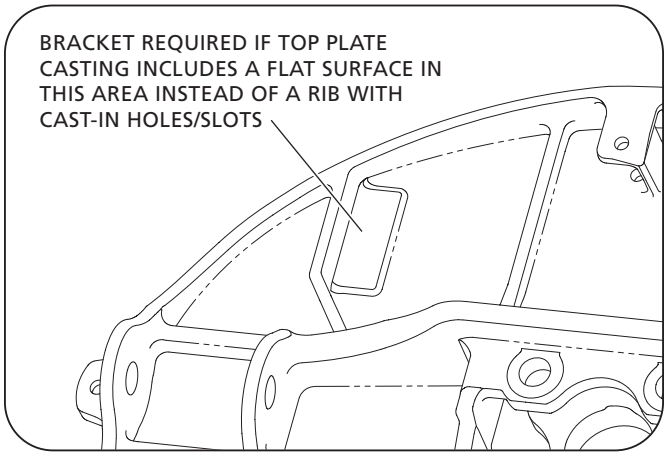
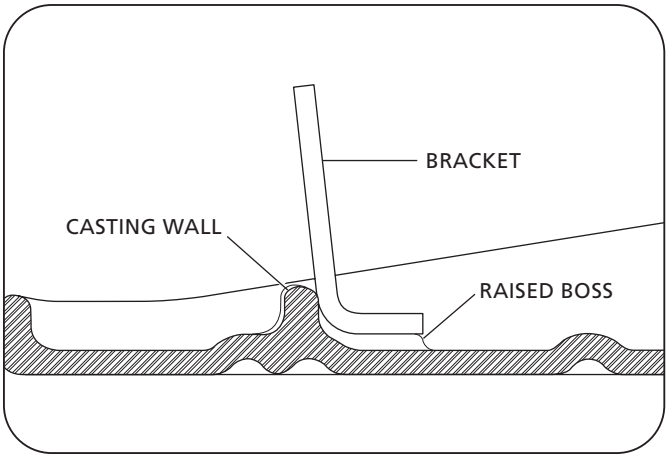


Figure 8



3. Secure the bracket to the top plate with a clamp.
4. Referencing the Welding Standards in Section 3, weld the bracket into place with a 1/4" fillet weld around the edges, as illustrated in ***Figure 9***.
5. Prime and paint the area affected by the weld procedure to prevent corrosion.

5.2 Option 2 - Securing the bracket using hex head cap screws and lock washers (for FW35/XA-351 Series top plates ONLY):

NOTE: A 5/16" drill bit, a 3/8"-16 tap, and thread-locking compound are needed to complete these steps and are NOT included with the kit.

1. Place the bracket on the raised boss ***(Figure 7)***. Ensure that the bracket is centered on the boss and the back of the bracket is tight against the casting wall ***(Figure 8)***.
2. Secure the bracket to the top plate with a clamp.
3. Using the bracket mounting holes as a guide, center punch each hole location. Remove the bracket.
4. Drill two (2) holes through the top plate at each punch location mark with a 5/16" drill bit.
5. Tap the holes using a 3/8"-16 tap. Ensure that the threaded holes are clean and free of debris.
6. Set the bracket back into place on the top plate. Apply thread-locking compound to the threads of the two (2) 3/8"-16 x 1" hex head cap screws. Using the hex head cap screws and two (2) 11/16" O.D. x 3/8" I.D. lock washers, secure the bracket to the top plate and tighten the hex head cap screws to 30 ft.-lbs. (41 N•m) (***Figure 10)***.

Figure 9

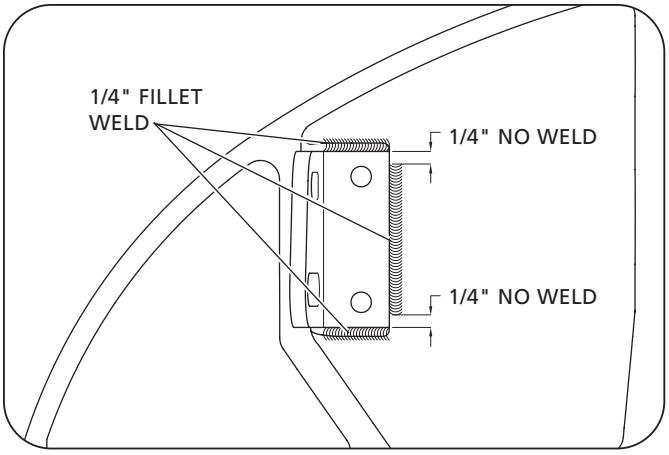
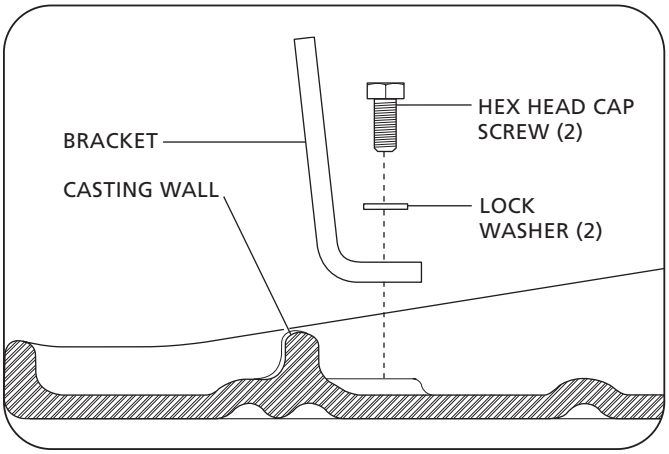


Figure 10



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6. Lock Installation

1. Lubricate the lock pin holes of the locks with Never-Seez (provided in kit, ***Figure 11***).

IMPORTANT: ONLY use Never-Seez when lubricating the lock pin holes of the locks. DO NOT use a substitute lubricant.

2. With the fifth wheel top plate upside down, align the lock pin holes of the locks with the lock pin holes in the top plate casting. Be certain to position the locks with the kingpin guides facing away from the top plate casting ***(Figure 12)***.
3. Insert shims (1-5/8" O.D. x 1-3/16" I.D. washers) between the top of the locks and the top plate casting. Position the shims to align with the lock pin holes. Use one (1) to two (2) shims per lock to fill the gap between the lock and the casting ***(Figure 13)***.
4. With the locks and shims properly positioned in the top plate casting, drive the lock pins through the locks, shims and casting holes until the heads of the lock pins are flush with the casting ***(Figure 13)***.
5. Install the retaining rings on the lock pins ***(Figure 13)***.

Figure 11

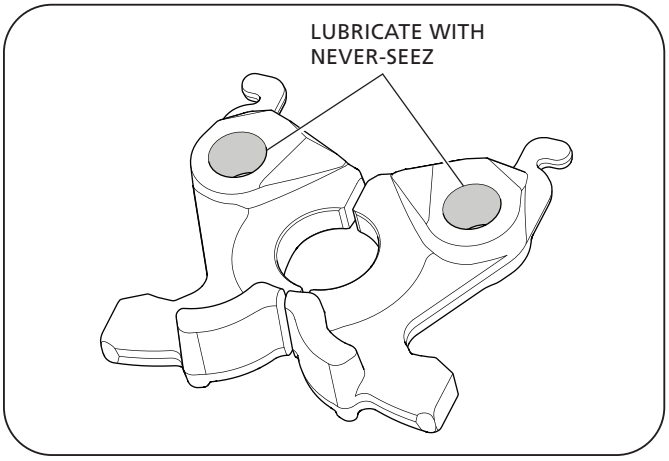


Figure 12

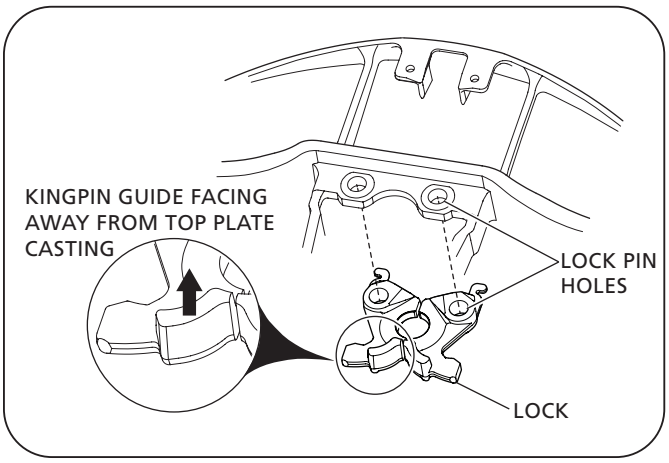
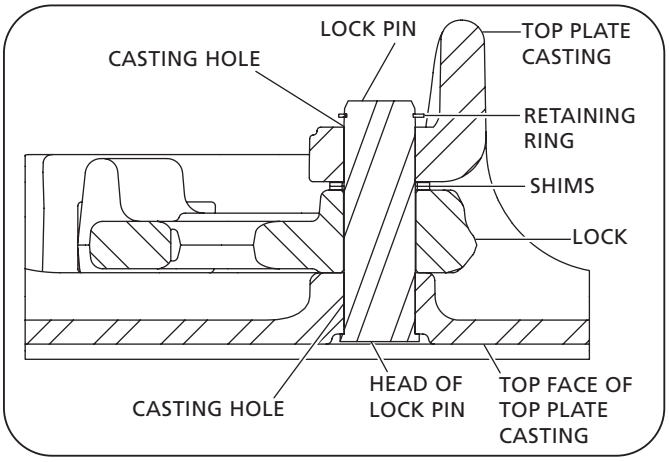


Figure 13



6. Insert a 2" (50.8 mm) diameter precision plug or the HOLLAND Lock Gauge (Part No. TF-0237) into the locks ***(Figure 14)***.

NOTE: A HOLLAND Lock Gauge (TF-0237) or a precision plug that is 2.000 +/- .005" (50.80 mm +/- 0.13 mm) in diameter MUST be used for proper installation of the locking mechanism.

7. Yoke Installation

1. Lubricate the tips of the yoke with a water-resistant lithium-based grease ***(Figure 15)***.
2. With the threaded hole facing up, slide the yoke into the casting. Tap lightly to seat the yoke around the locks ***(Figure 15)***.
3. Inspect the amount of yoke tip engagement. The yoke tips MUST be flush with the end of each lock or extend less than 1/2" (12 mm) beyond each lock ***(Figure 16)***.

NOTE: If the new yoke extends more than 1/2" (12 mm) beyond each lock, DO NOT USE. Discard it and order HOLLAND part number XA-07295-THK.

Figure 14

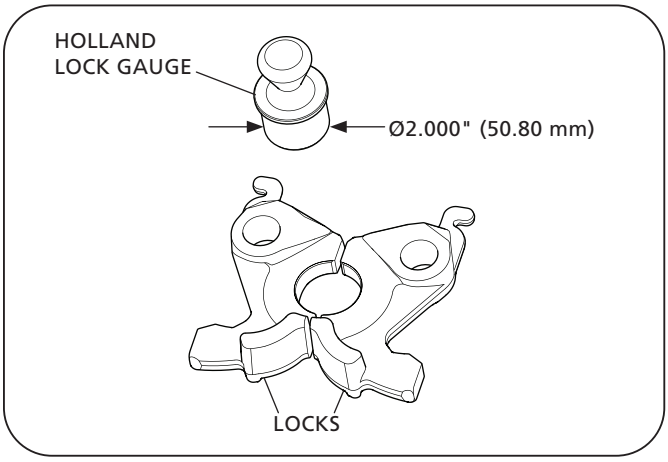


Figure 15

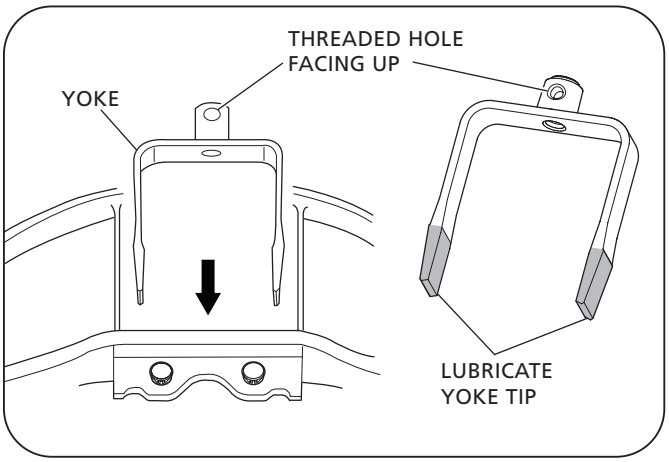
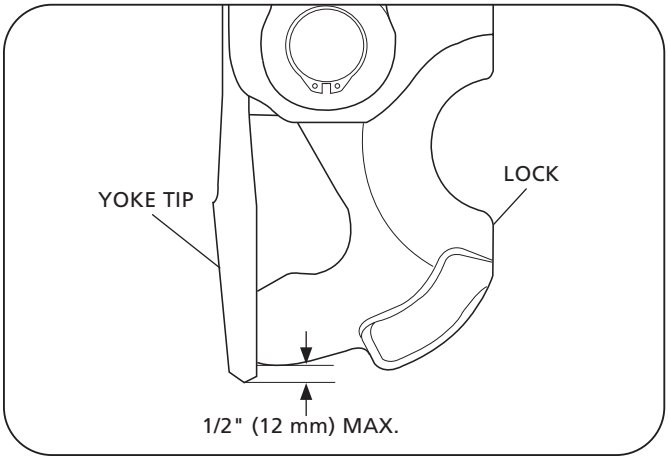


Figure 16



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4. Install the lock spring onto the locks ***(Figure 17)***.
5. Align the yoke spring ***(Figure 18)***.
6. Slide the yoke shaft through the hole at the front of the top plate casting, through the yoke spring, and into the hole at the end of the yoke. Align the recessed hole in the yoke shaft with the threaded hole in the yoke ***(Figure 18)***.
7. Slide the lock adjustment tag (instructions facing outward), rubber washer and 1-1/2" O.D. x 13/16" I.D. washer onto the yoke shaft ***(Figure 18)***.
8. Attach the 3/4"-16 lock nut to the end of the yoke shaft and turn by hand until tight ***(Figure 18)***.
9. Remove the HOLLAND Lock Gauge (or plug) from between the locks.

Figure 17

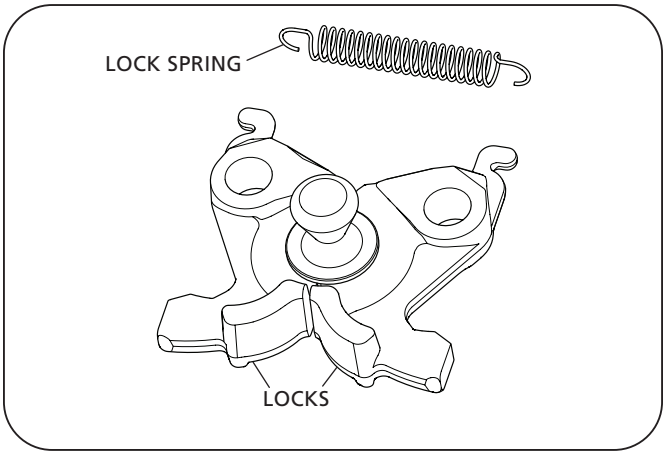
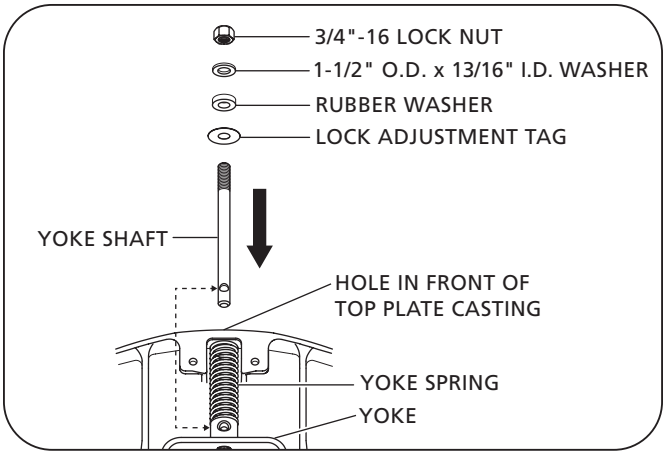


Figure 18



8. Release Handle Installation

For standard Left-Hand Release and Right-Hand Release:

1. Slide the release handle through the hole indicated in ***Figure 19***.
   - Left-Hand Release – Use Hole A
   - Right-Hand Release – Use Hole B
2. Slide the 1-3/8" O.D. x 9/16" I.D. washer, handle spring, and 1-1/16" O.D. x 9/16" I.D. washer, in order, over the "S" bend of the release handle ***(Figure 20)***.
3. Compress the handle spring using the 1-1/16" O.D. washer until the cotter pin hole is exposed ***(Figure 20)***.
4. Insert the Ø1/8" cotter pin into the hole on the release handle. Spread the cotter pin ends and wrap them completely around the release handle, as illustrated ***(Figure 20)***.

For Air Release:

1. Slide the "L" bend of the release handle through the hole indicated in ***Figure 21***.
2. Slide the 1-3/8" O.D. x 9/16" I.D. washer, handle spring, and 1-1/16" O.D. x 9/16" I.D. washer, in order, over the "L" bend of the release handle. (Reference handle assembly in ***Figure 20***.)
3. Compress the handle spring using the 1-1/16" O.D. washer until the cotter pin hole is exposed ***(Figure 20)***.
4. Insert the Ø1/8" cotter pin into the hole on the release handle. Spread the cotter pin ends and wrap them completely around the release handle, as illustrated ***(Figure 20)***.
5. Insert the flat mounting tab of the air cylinder through the front top plate casting hole or bracket hole in ***Figure 21***, with the tapered end of the air cylinder tab facing up. Secure with a Ø3/16" cotter pin through the hole in the air cylinder tab and spread the cotter pin ends outward, in opposing directions, to secure the cotter pin into place.

Figure 19

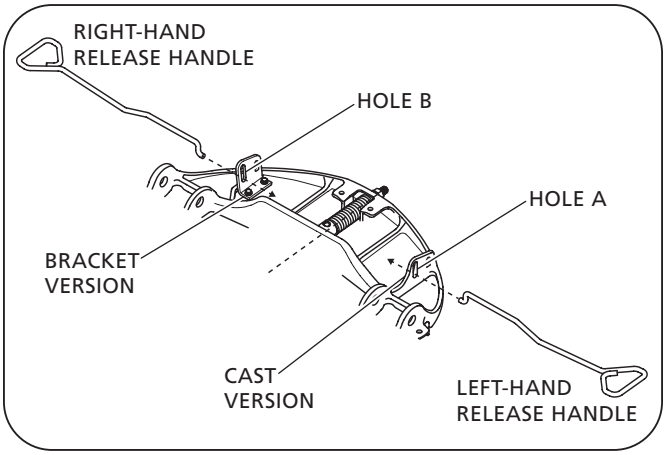


Figure 20

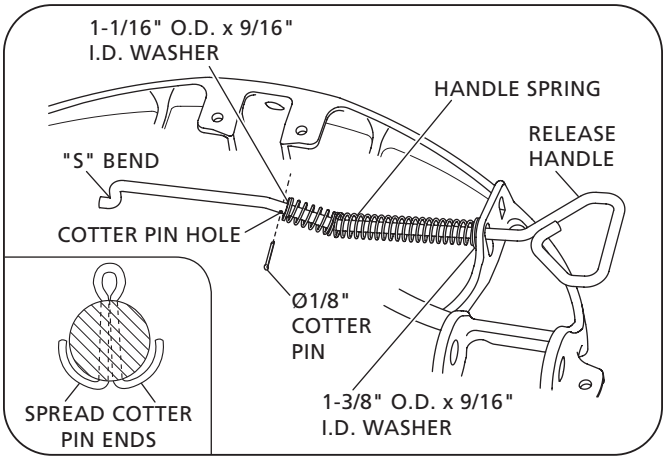
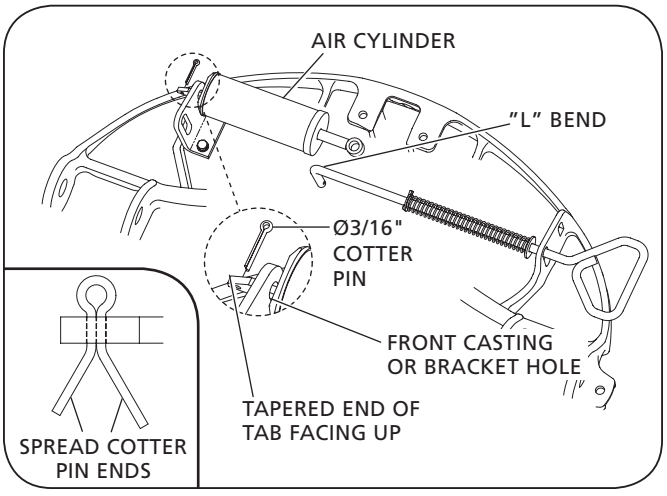


Figure 21



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9. Cam Plate Installation

1. Inspect the cam plate for burrs and machine off as necessary.
2. Lubricate the cam plate track and pivot hole with a water-resistant lithium-based grease ***(Figure 22)***.
3. ***Figure 22***: For standard Left-Hand and Right-Hand Release, install the cam plate onto the handle "S" bend. (Left-Hand shown, Right-Hand opposite.)

For Air Release, insert the "L" bend of the release handle through the hole at the end of the air cylinder rod and then through the cam plate. Place the 1-3/8" O.D. x 9/16" I.D. washer over the end of the handle, insert the Ø3/16" cotter pin, and spread the cotter pin ends, wrapping them completely around the release handle ***(Figure 23)***.

Figure 22

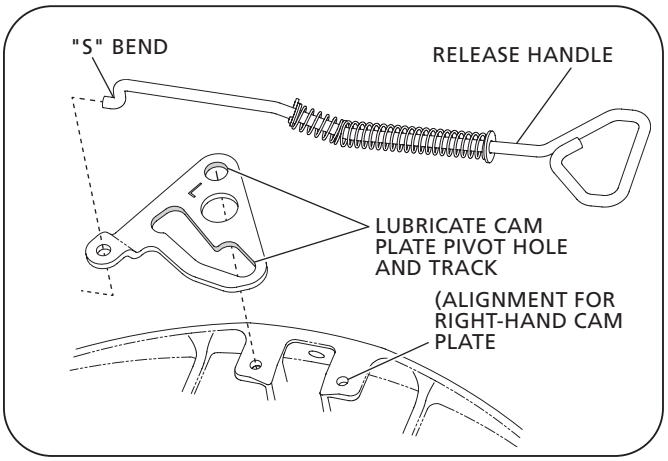
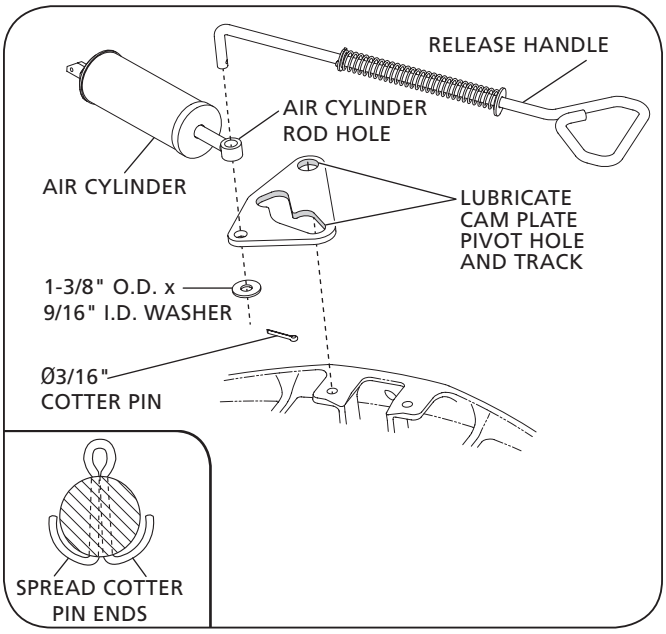


Figure 23



4. Position the cam plate attachment hole over the top plate casting lug hole, as illustrated ***(Figure 24)***.
5. Place one of the 1-3/4" O.D. x 9/16" I.D. washers between the cam plate and the lug hole with the rounded side of the washer facing the cam plate ***(Figure 24)***.

NOTE: When installing the 1-3/4" O.D. washers, the rounded edge of the washers MUST always face the cam plate.

6. Install the 1/2" I.D. roller into the cam plate attachment hole and place the second 1-3/4" O.D. x 9/16" I.D. washer on top of the roller with the rounded side of the washer facing the cam plate ***(Figure 25)***.
7. Install the 1/2"-20 x 1-3/4" hex head cap screw through the washers, roller, cam plate attachment hole and lug hole, and secure with the 1/2"-20 lock nut ***(Figure 25)***. Torque to 65 ft.-lbs. (88 N•m). Check for free movement of the cam plate.
8. Align the cam plate track over the threaded hole in the yoke ***(Figure 26)***.
9. Place one of the 2-5/8" O.D. x 5/8" I.D. washers between the yoke and the cam plate, with the rounded side of the washer facing the cam plate ***(Figure 26)***.
10. Place the 5/8" I.D. roller into the cam plate track and place the second 2-5/8" O.D. x 5/8" I.D. washer on top of the roller with the rounded side of washer facing the cam plate ***(Figure 26)***.
11. Check for alignment with the threaded hole in the yoke and the recessed hole in the yoke shaft.
12. Install the 5/8"-18 x 1-3/4" hex head cap screw through the washers, roller, cam plate track and into the threaded hole in the yoke ***(Figure 26)***.

Figure 24

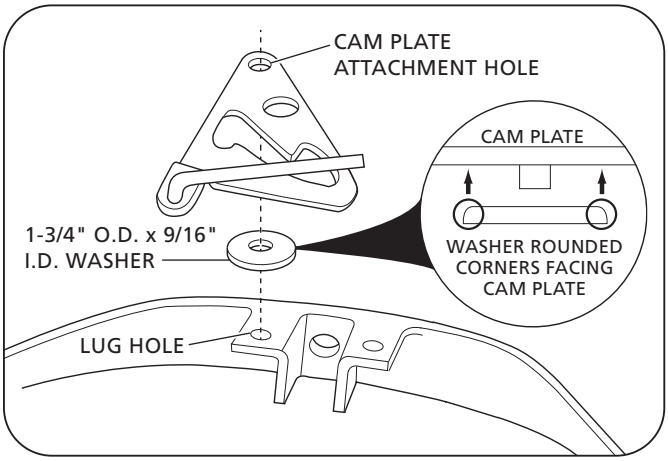


Figure 25

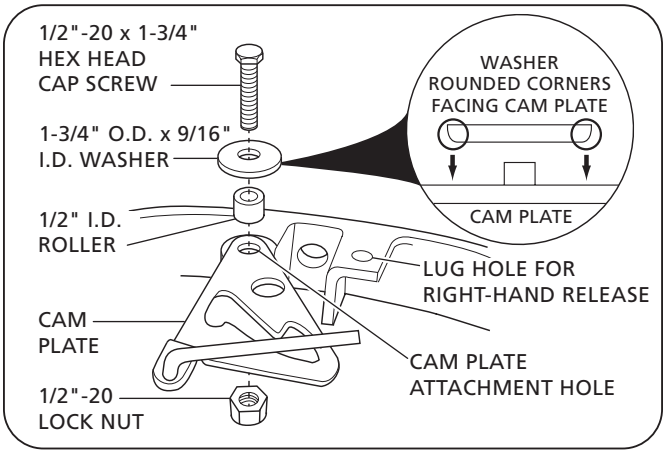
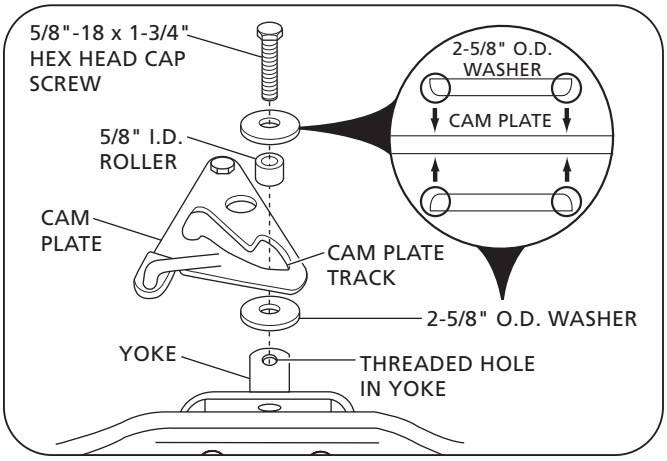


Figure 26



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13. Ensure the hex head cap screw enters the recessed hole in the yoke shaft ***(Figure 27)***.
14. Tighten the hex head cap screw securely. Ensure the gap between the washer and the cam plate is no more than .120" (3.04 mm) and no less than .06" (1.52 mm). Then check for free movement of the cam plate ***(Figure 27)***.

10. Secondary Lock Installation (Automatic Version)

1. Start the roll pin into the hole in the top plate casting, opposite of the cam attachment bolt ***(Figure 28)***.
2. Assemble the secondary lock and torsion spring ***(Figure 28)***.
3. Drive the roll pin through the spring and secondary lock until flush with the top plate casting ***(Figure 28)***.
4. Check the lock spring for tension and the lock for free movement.

11. Secondary Lock Installation (Left-Hand and Right-Hand Manual Secondary Locks)

1. Slide the "S" bend of the manual secondary lock handle through the hole indicated in ***Figure 29***.
   - Left-Hand Release – Use Hole C
   - Right-Hand Release – Use Hole D
2. Slide the "S" bend of the manual secondary lock handle through the small hole in the secondary lock ***(Figure 29)***.
3. Start the roll pin into the hole in top plate casting, opposite of the cam attachment bolt ***(Figure 28)***.
4. Assemble the secondary lock and torsion spring ***(Figure 28)***.
5. Drive the roll pin through the spring and secondary lock until flush with the top plate casting ***(Figure 28)***.
6. Check for proper spring tension and operation by pulling the secondary release handle and hooking it on the top plate casting. Then unhook the secondary release handle and allow the torsion spring to snap it closed.

Figure 27

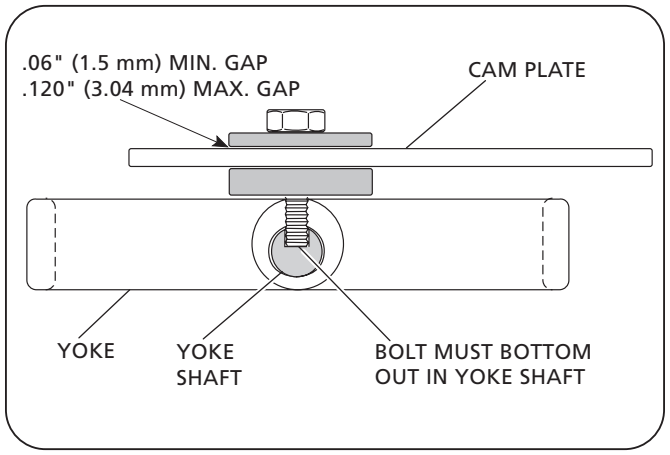


Figure 28

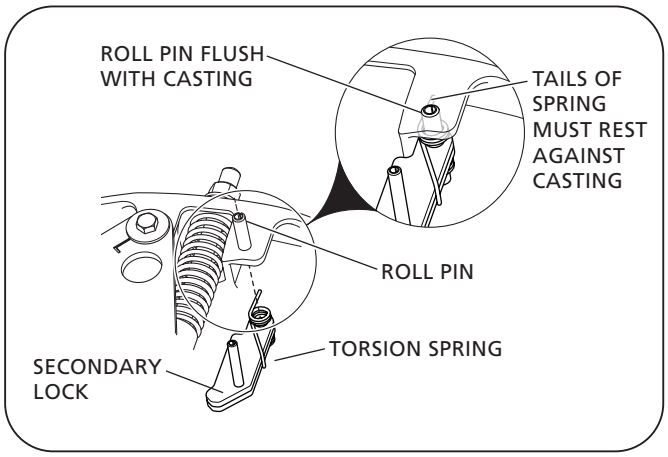
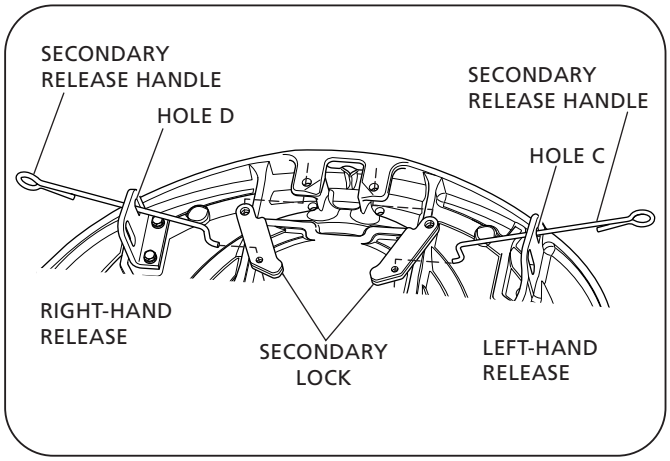


Figure 29



12. Lube Tube Installation (For FW33/XA-331 Fifth Wheels Only)

1. With the lube tube positioned vertically, insert the tube under the yoke and handle as illustrated ***(Figure 30)***. Slide the open end of the tube past the yoke and into the throat area of the fifth wheel.
2. Rotate the lube tube down toward the side of the fifth wheel so that the bend in the tube fits over the top plate casting rib ***(Figure 31).***
3. Position the lube tube so that the end of the tube and the hole in the rib line up ***(Figure 32)***.

Figure 30

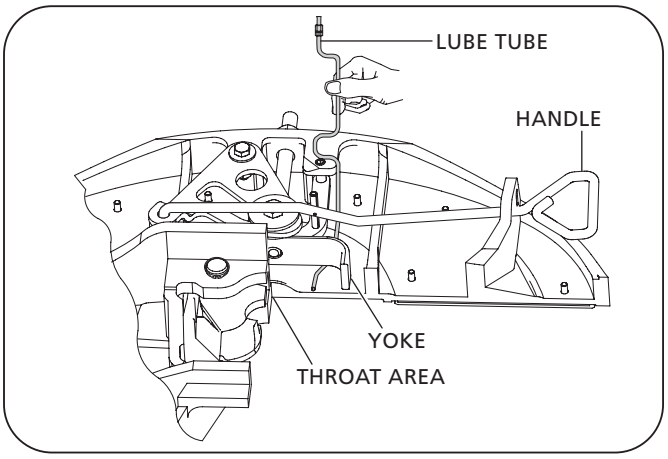


Figure 31

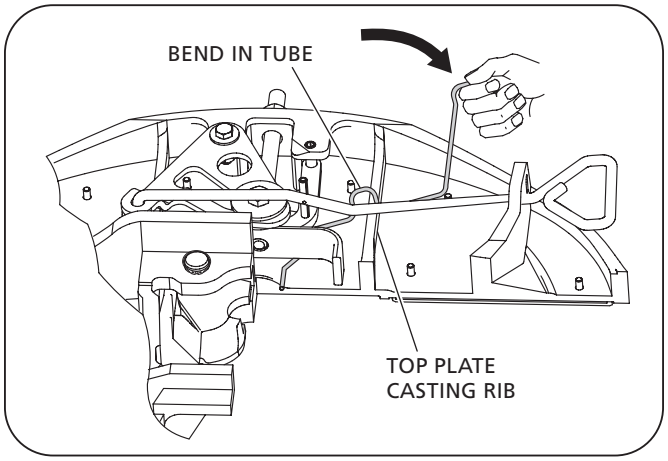
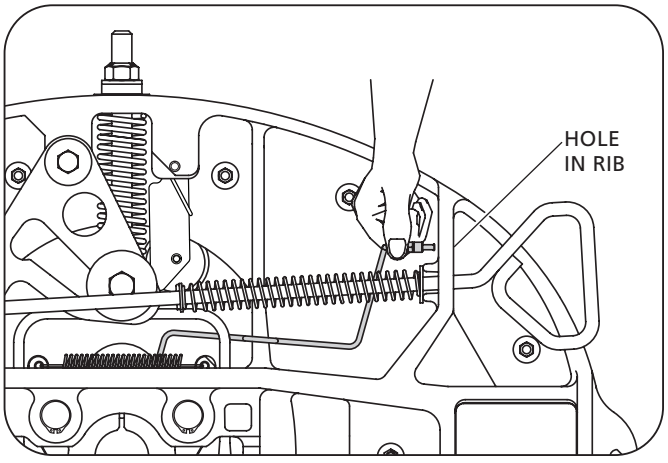


Figure 32



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4. Attach the fittings to the lube tube so that the rib is trapped between the two (2) washers as illustrated ***(Figure 33)***.

5. Place the end of the lube tube into the lock area with clearance between the locks and the tube. The tube MUST be flush with the top plate and positioned as illustrated ***(Figure 34)***.

6. Clamp the lube tube down with the 5/16"-18 x 1/2" thread-cutting screw, 5/16"-18 lock nut, and tube clips as illustrated ***(Figure 35)***. Torque to 12 ft.-lb. (16 N•m) maximum.

Figure 33

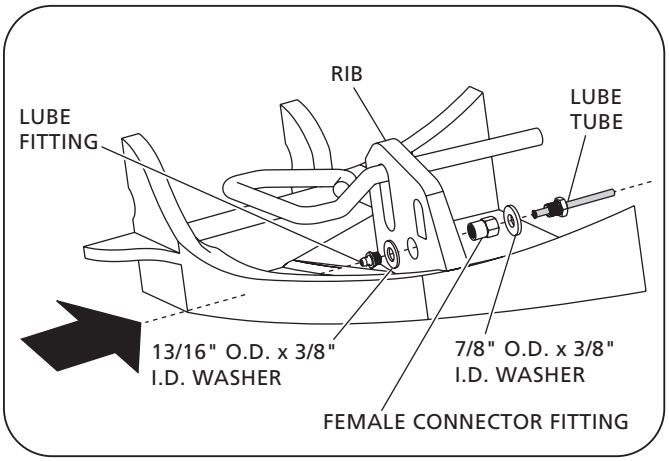


Figure 34

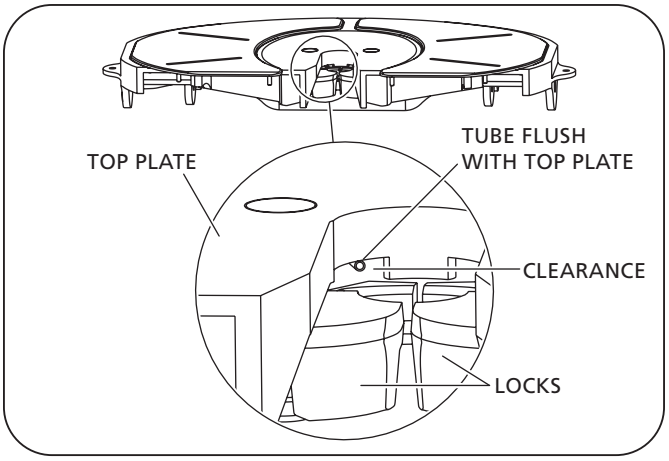
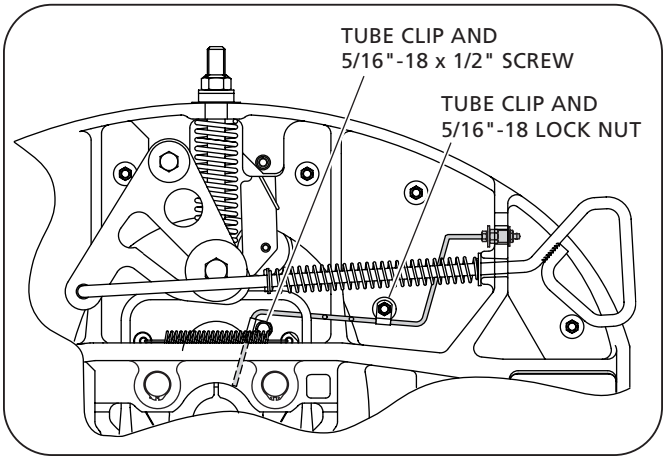


Figure 35



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13. Upshock Cushions, Pocket Inserts and Brackets Inspection

To determine if upshock cushions, pocket inserts and/or brackets require replacement, pry up on the fifth wheel top plate pivot ear using a small bar ***(Figure 36)***. If there is more than 1/4" (6.4 mm) free vertical movement, the top plate should be removed for further inspection. (Refer to Section 4 for top plate removal instructions.)

Upshock Cushions:

1. Standard Cushion ***(Figure 37)***:

   Replace if:

   - The hole is elongated to more than 1-3/8" (34.9 mm).
   - The upshock cushions are cracked, cut or otherwise severely damaged.

2. ILS-Style Cushion ***(Figure 38)***:

   Replace if:

   - The hole is elongated to more than 1-1/2" (38.1 mm).
   - The upshock cushions are cracked, cut or otherwise severely damaged.

Figure 36

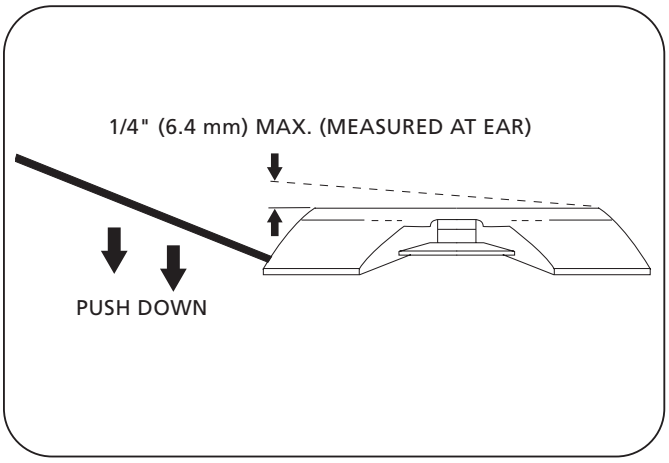


Figure 37

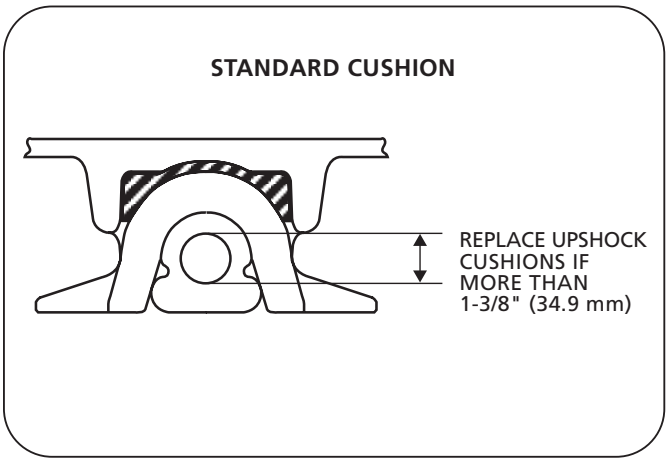
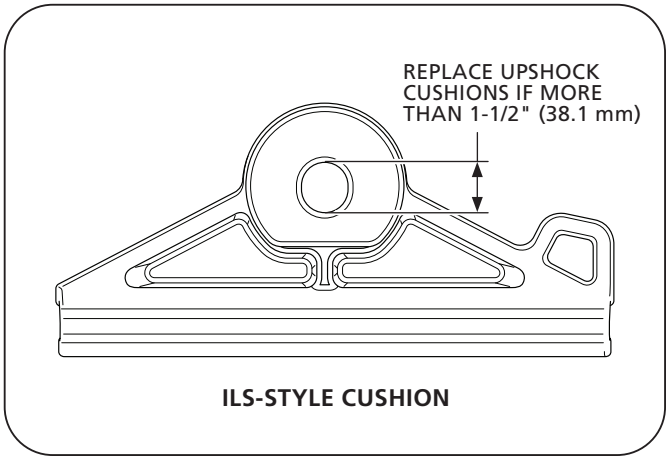


Figure 38



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Pocket Inserts *(Figure 39)*:

Replace if:

- The thickness of the pocket insert is 1/16" (1.6 mm) or less.
- The pocket inserts are severely chipped, cracked or gouged.

Brackets:

1. Standard Bracket ***(Figure 40)*** and ILS-Style Bracket ***(Figure 41)***:

   Replace if:

   - The thickness of the bracket cap at the top, measured approximately 1/4" (6.4 mm) in from the edge, is less than 3/8" (9.5 mm).
   - The brackets are gouged, cracked or otherwise severely damaged.

Figure 39

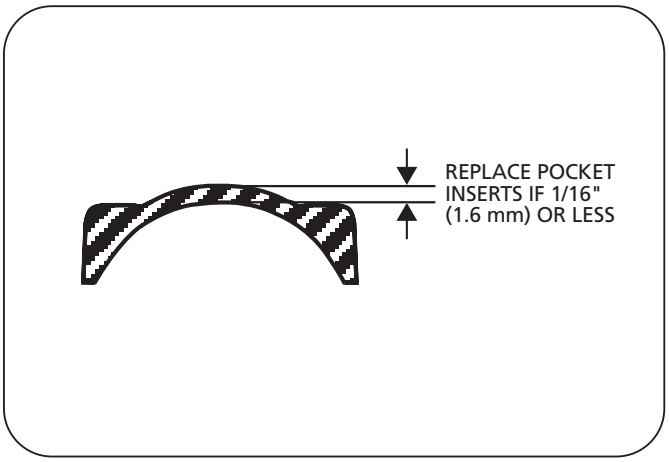


Figure 40

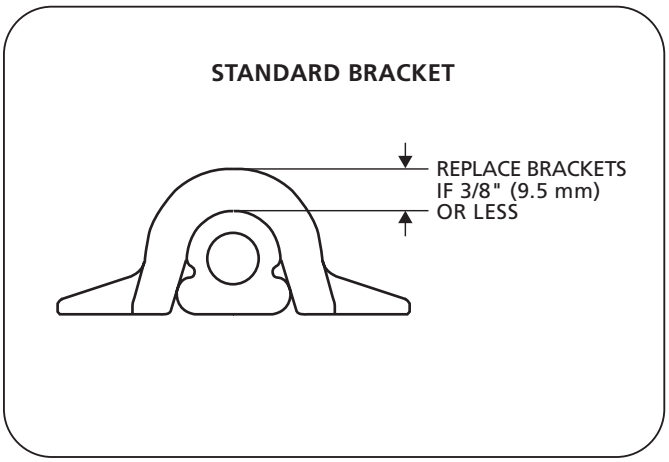
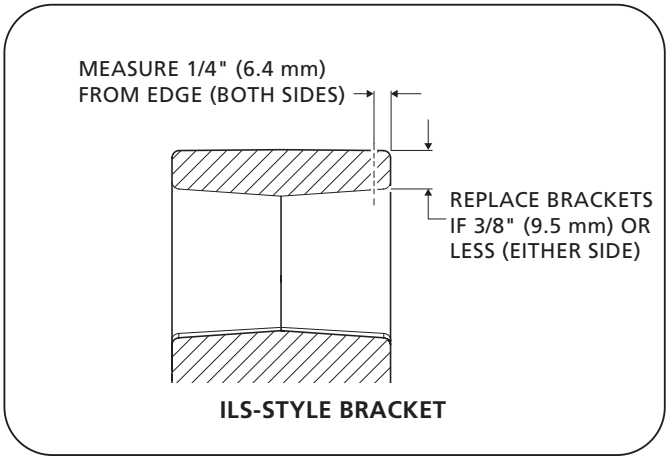


Figure 41



14. Top Plate Installation

1. If the pocket inserts are dislodged from the fifth wheel casting, clean the pocket areas of the casting and apply a strip of double-face tape into the bottom of each pocket. Install the pocket inserts by pressing them down firmly into the pocket areas ***(Figure 42).***
2. Using a lifting device capable of lifting 500 lbs. (227 kg), install the fifth wheel top plate onto its mounting base.

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

3. Install the bracket pins through the fifth wheel casting and mounting base and secure by installing the bracket pin retention hardware (1/2"-20 x 1-1/4" hex head cap screws and 1/2"-20 lock nuts) ***(Figure 43)***. Torque the hex head cap screws, NOT to exceed 50-60 ft.-lbs. (68-81 N•m).

14.1 No-Tilt Fifth Wheels:

After installing the top plate onto the mounting base, re-install the no-tilt shaft assembly by orienting the top plate so the top plate and mounting base no-tilt brackets are aligned. Insert the no-tilt shaft assembly from the left side of the fifth wheel, ensuring the chain assembly is positioned on the outside of the right-hand bracket. Attach the chain assembly to the bracket.

NOTE: Always remove the no-tilt shaft assembly for on-road use. For Severe-Duty slider fifth wheels, there is a built-in location at the front of the slide base where the no-tilt shaft may be stored.

Figure 42

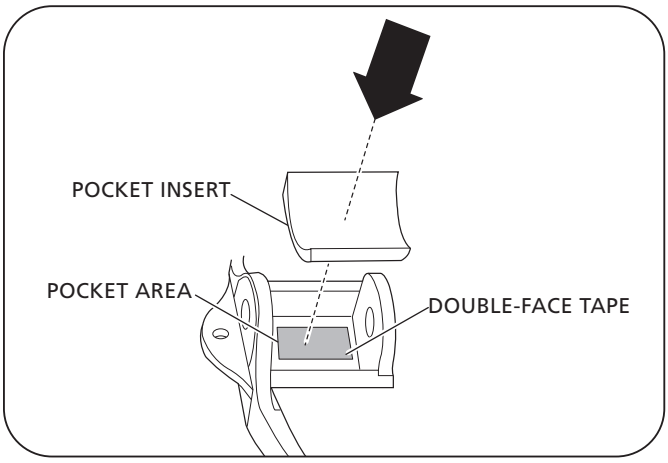
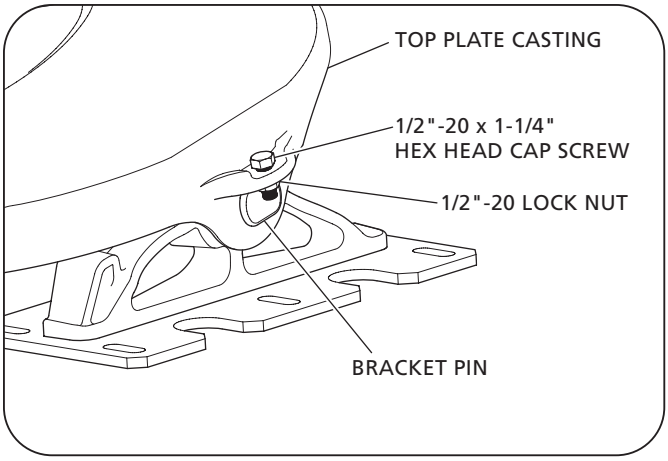


Figure 43



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15. Fifth Wheel Adjustment

Fifth wheel adjustments should be performed at a minimum of every 60,000 miles or if excessive movement between the kingpin and fifth wheel is noticed while driving the vehicle.

IMPORTANT: Excessive movement between the tractor and trailer can affect vehicle handling.

⚠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 HOLLAND lock tester Part No. TF-TLN-5001, available from a local HOLLAND distributor.

1. Back off the adjustment nut five to six (5-6) turns ***(Figure 44)***.
2. If the fifth wheel is locked, pull the release handle to unlock the fifth wheel. If equipped with a manual secondary lock, first pull the secondary release handle and hook on the top plate casting.
3. Use the lock tester to couple and uncouple the fifth wheel two to three (2-3) times to help "seat" the yoke. (Refer to Document No. XL-FW10082ST-en-US, available on the internet at www.safholland.us, which contains specific lock tester instructions).
4. With the locks closed around the lock tester, position the adjustment nut on the yoke shaft so that it is slightly compressing the rubber washer, making it difficult to turn by hand ***(Figure 45)***.
5. Turn the adjustment nut one (1) additional turn clockwise to further compress the rubber washer ***(Figure 46)***.

IMPORTANT: Over-compressing the rubber washer with additional turns will take the fifth wheel out of proper adjustment and degrade the performance of the fifth wheel.

6. Repeat the coupling and uncoupling process with the lock tester at least twice to help "seat" the yoke.
7. Confirm that the rubber washer cannot be turned by hand. If it can, repeat the adjustment procedures.
8. Remove the lock tester from the fifth wheel.

IMPORTANT: Before using the fifth wheel, visually inspect all components of the fifth wheel for proper operation while coupling and uncoupling the fifth wheel with the lock tester.

⚠WARNING Failure to repair an improperly operating fifth wheel could result in tractor-trailer separation which, if not avoided, could result in death or serious injury.

Figure 44

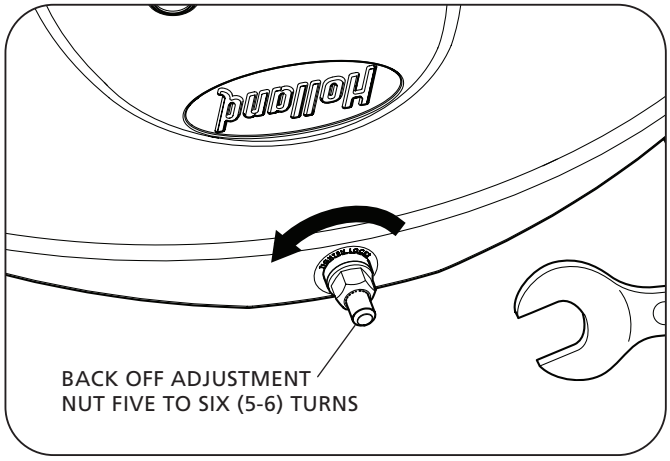


Figure 45

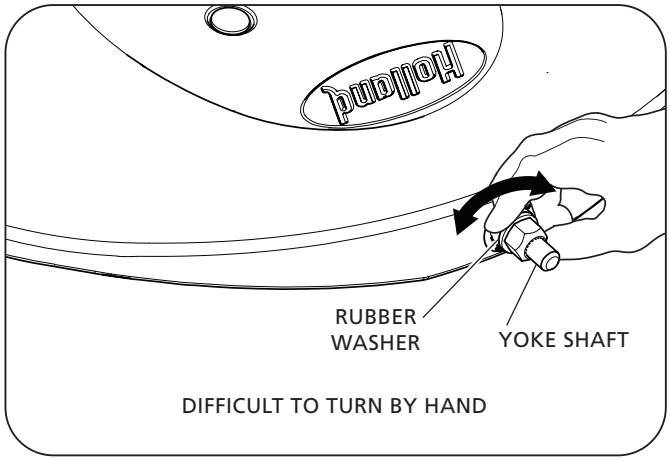
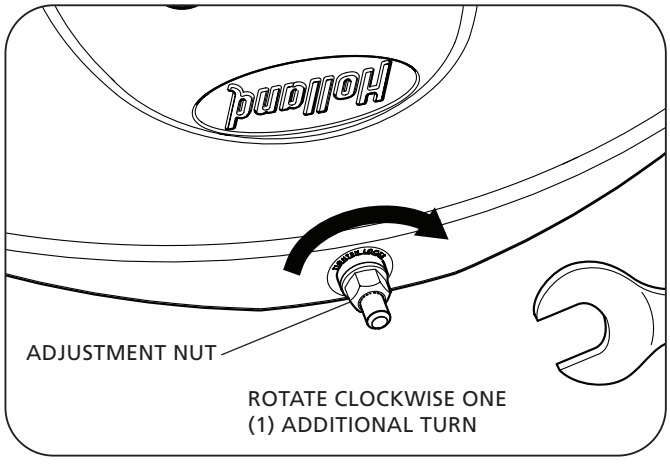


Figure 46



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