

Replacement Instructions ULX40, UltraLite and DuraSystem® Trailer Suspension

QWIK RELEASE® Torsion Spring

Introduction

These instructions provide the information necessary to properly replace the QWIK RELEASE® torsion spring and cam on your Suspension.

We recommend only the use of SAF-HOLLAND® Original Parts.

NOTE: A list of SAF-HOLLAND® technical support locations that supply SAF-HOLLAND® Original Parts can be found at www.safholland.us or contact our customer service group at 888-396-6501.

Notes, Cautions, and Warnings

IMPORTANT: You MUST read and understand all of the procedures presented in these instructions before starting work on your UltraLite® or DuraSystem Suspension.

⚠ WARNING Failure to follow all the replacement instructions contained in this document could cause a hazardous condition to develop which, if not avoided, could result in death or serious injury.

Proper tools MUST be used to perform the replacement procedures described in these instructions.

Throughout these instructions, you will notice the terms "NOTE", "IMPORTANT", "CAUTION", and "WARNING", followed by useful product information. So that you may better understand these instructions, 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, could result in property damage.

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

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

1. Safety Instructions

General and Servicing 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 maintenance should be performed by a properly trained technician using proper/special tools, and safe procedures.

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

- Properly support and secure the vehicle from unexpected movement when servicing the unit.

⚠ WARNING Failure to properly support and secure the vehicle and axles prior to commencing work could create a crush hazard which, if not avoided, could result in death or serious injury.

- If possible, unload the trailer before performing any service procedures.
- Service both roadside and curbside of an axle. Worn parts should be replaced in sets. Key components on each axle's braking system, such as friction material, rotors and drums will normally wear over time.
- Follow the recommended routine maintenance and inspections described in this manual. These procedures are designed so that optimum performance and operational safety are achieved.

2. Welding Standards

2.1 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.

2.2 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.

2.3 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 0°F (-17.7°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 illustrated (**Figure 1**). Where the installation drawing specifies different than above, the drawing shall prevail.

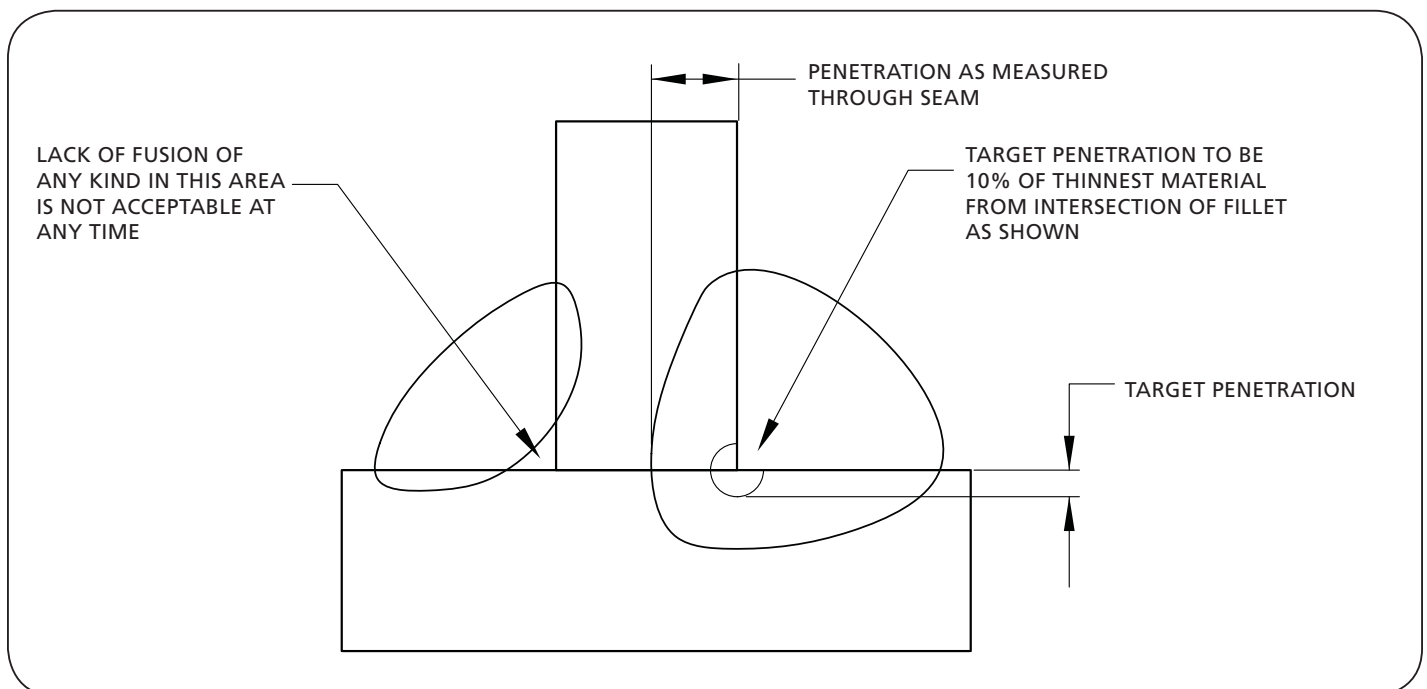
2.4 Procedures

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.

2.5 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 1**).

Figure 1



3. Kit Contents

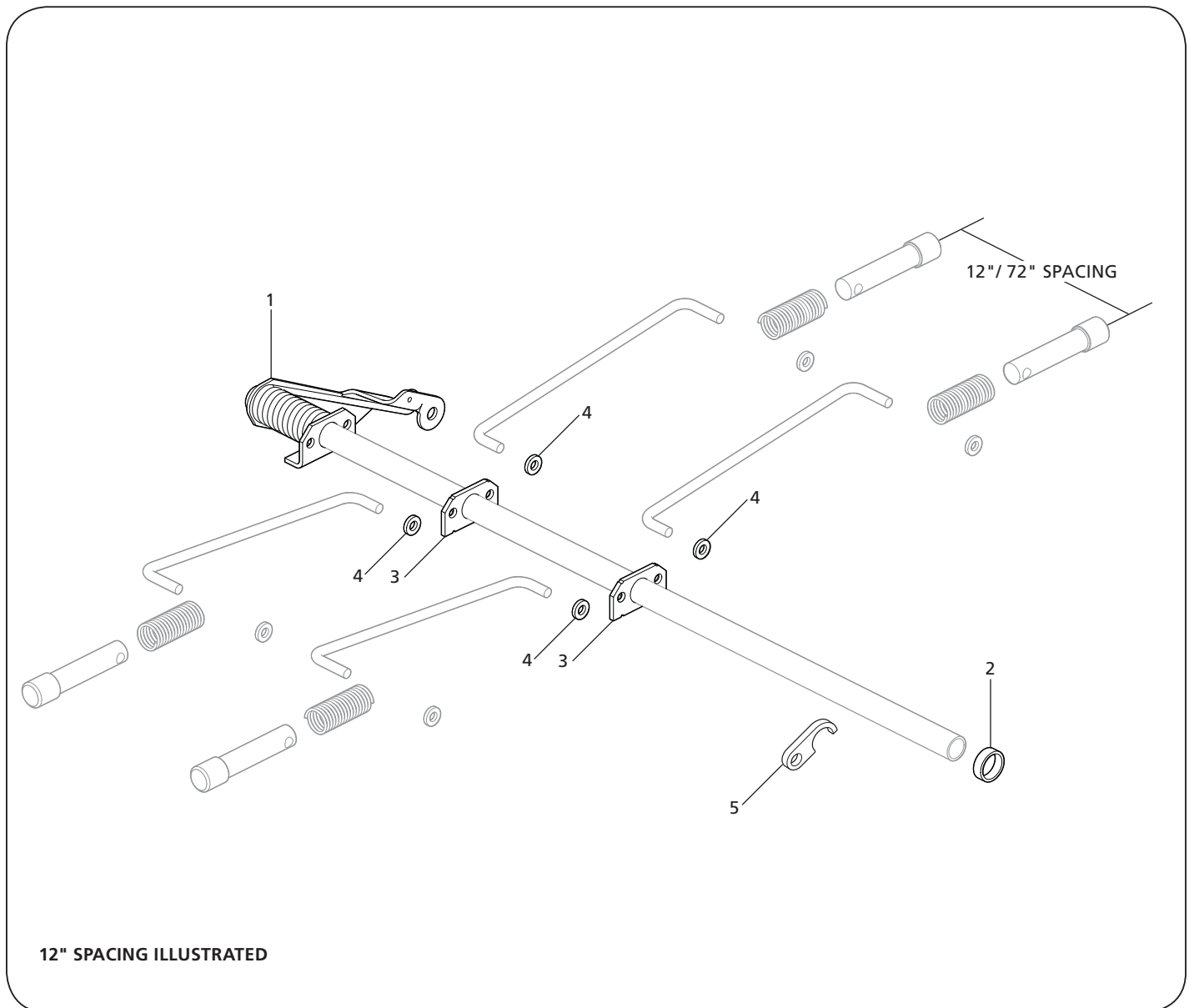
Part Number: 48100610 (Figure 2) SRK 744

12" PIN SPACING			
ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Center Pin Pull Assembly	SL0A1313-01	1
2	Spacer	SL0523-07	1
3	Torsion Cam	SL0A1274	2
4	Washer, .5" (Pin Pull Rod)	XB-PW-016-85	4
5	Cam, Spring Brake	90045547	1
6	Replacement Instructions	XL-MS20032RM-en-US	1

Part Number: 48100611 (Figure 2) SRK 745

72" PIN SPACING			
ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Center Pin Pull Assembly	SL0A1318	1
2	Spacer	SL0523-07	1
3	Torsion Cam	SL0A1274	2
4	Washer, .5" (Pin Pull Rod)	XB-PW-016-85	4
5	Cam, Spring Brake	90045547	1
6	Replacement Instructions	XL-MS20032RM-en-US	1

Figure 2



4. Installation

IMPORTANT: The trailer MUST be unloaded and on a level surface before beginning installation procedures.

NOTE: The slider/suspension MUST be removed from under the trailer for installation of the air release pin pull mechanism.

1. Support the front of the trailer on a tractor or with the landing gear. **(Figure 4).**
2. Set parking brakes, and chock the wheels. Disconnect the tractor from the trailer.
3. Remove the hold down clips on all four (4) corners of the slider **(Figure 5).**
4. Retract the slider lock pins **(Figure 5).**
5. Place multiple jack stands under the vehicle's frame per OEM specified locations, then raise the trailer to a height that allows easy removal of the bogie from under the trailer.

⚠ WARNING Failure to properly support the trailer during installation could create a crush hazard which, if not avoided, could result in death or serious injury.

6. Remove the tire chocks, and remove the slider by rolling it out from underneath the trailer.
7. Remove cotter key and clevis pin from air release brake chamber clevis **(Figure 6).**
8. Cut off and remove washers from the linkages at the center pipe cams. DO NOT damage linkages for later use **(Figure 9).**

IMPORTANT: If Linkages are damaged, they MUST be replaced.

NOTE: Failure to replace damaged linkage can result in improper pin pull operation.

9. Rotate pin pull linkages out of the way for future use **(Figure 5).**
10. Cut and remove existing center pipe **(Figure 5).**
11. Install new center pipe and Qwik release/cam assembly through the front cross member.

Figure 4

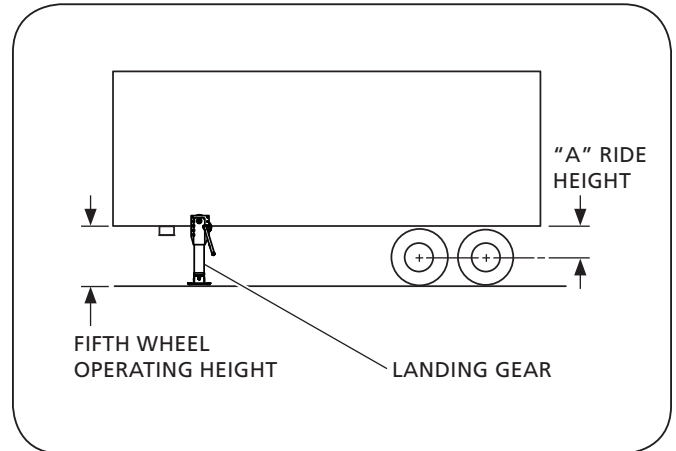


Figure 5

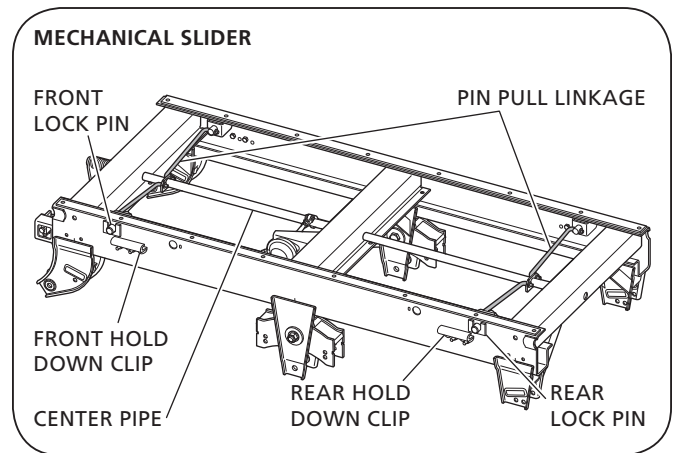
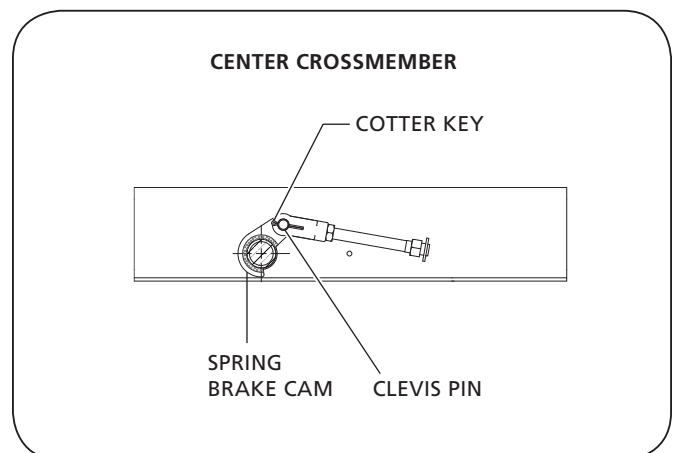


Figure 6



12. Once through the front crossmember, slide two (2) cams over the center pipe for 12" pin spacing or one (1) cam for 72" pin spacing (**Figure 7**).
13. Push center pipe through the center cross member. Add the second cam for 72" pin spacing and continue to push the center pipe through to the rear crossmember.
14. Weld the washer on the rear of the center pipe behind the cross member (**Figure 7**).

IMPORTANT: Weld washer to center pipe only.

15. Rotate lever arm/torsion spring assembly into position as illustrated (**Figure 8**).
16. Loosely re-attach all four (4) linkages to the cams. Locate and tack weld front and then rear linkage cams (**Figure 9**).

IMPORTANT: From the front of the trailer, and prior to tack welding, rotate the cams counter clockwise to take up any excess slack.

17. Carefully rotate center pipe and ensure proper pin engagement, once achieved, weld cams as illustrated (**Figure 9**).
18. Install new washers onto the linkages and weld to linkages 360° (**Figure 9**).

IMPORTANT: Ensure that the washers are NOT welded to the cam.

Figure 7

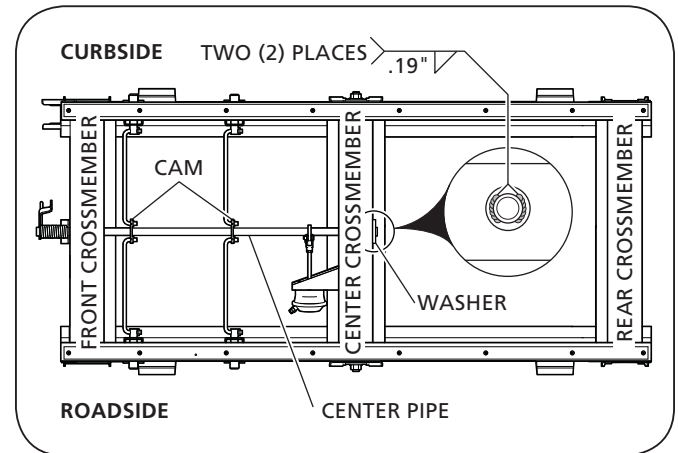


Figure 8

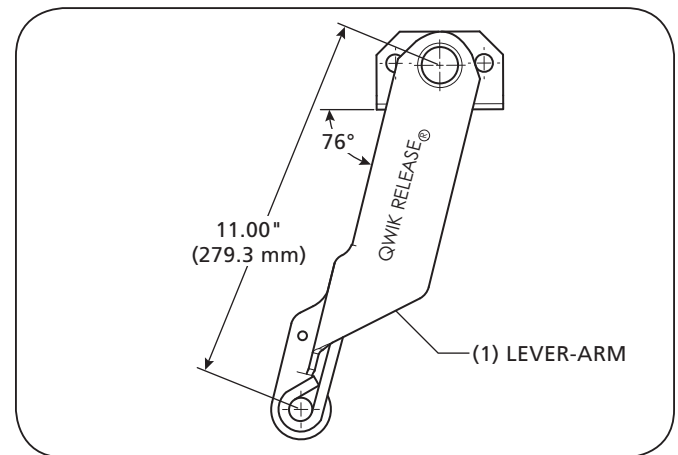
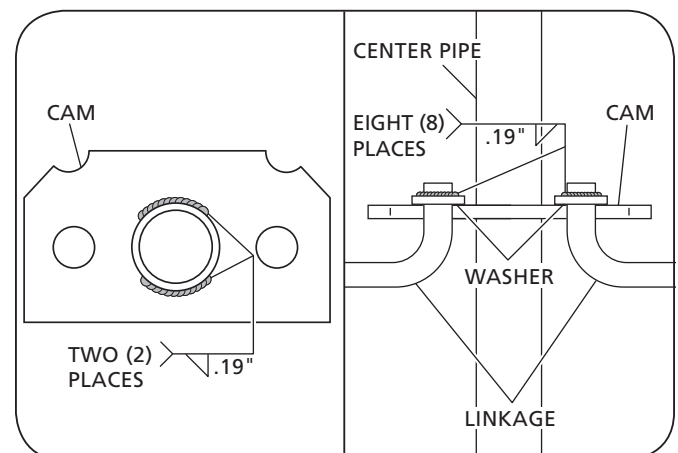


Figure 9



5. Spring Brake Cam Installation

1. Position the spring brake cam on the center pipe to the front side of the middle crossmember and weld in place as illustrated (**Figure 10 and 11**).
2. Reattach the air release brake chamber, clevis pin, and cotter key (**Figure 10**).

6. Slider Installation Instructions

1. Retract the slider lock pins.
2. Locate the slider between the body rails of the trailer.
3. Move slider to the desired position in the body rails and engage the lock pins.
4. Once the slider is correctly positioned in the body rails, re-install the hold down clips to the slider and body rails and torque all 1/2" hold down clip nuts to 75-90 ft. lbs. (102-122 N•m) (**Figure 12**).
5. Install service and emergency lines to the slider, and return unit to service.

Figure 10

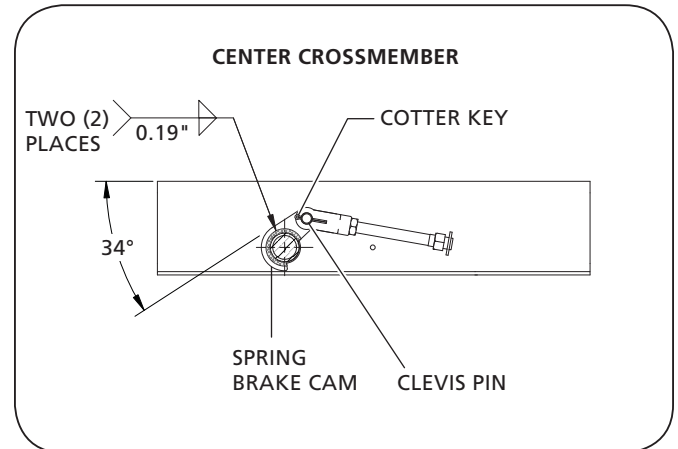


Figure 11

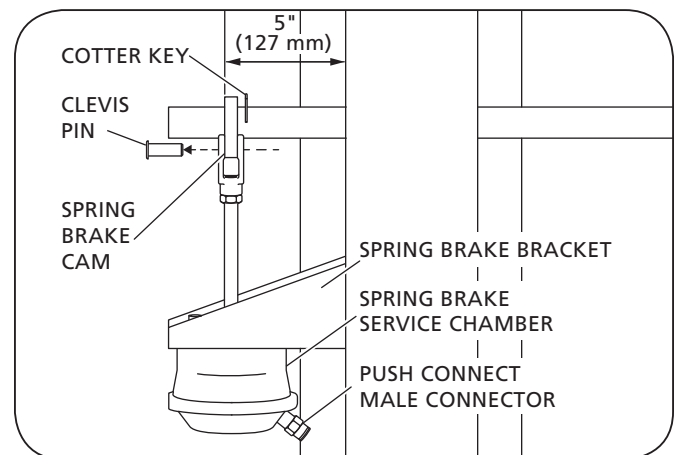
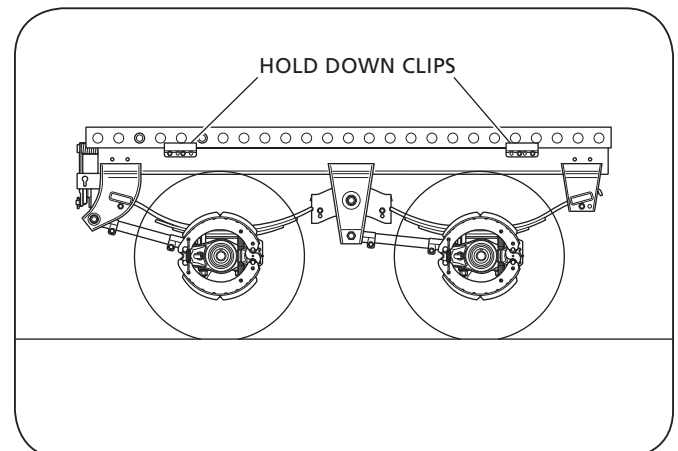


Figure 12





From fifth wheel rebuild kits to suspension bushing repair kits, SAF-HOLLAND Original Parts are the same quality components used in the original component assembly.

SAF-HOLLAND Original Parts are tested and designed to provide maximum performance and durability. Will-fits, look-alikes or, worse yet, counterfeit parts will only limit the performance potential and could possibly void SAF-HOLLAND's warranty. Always be sure to spec

SAF-HOLLAND Original Parts when servicing your SAF-HOLLAND product.

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