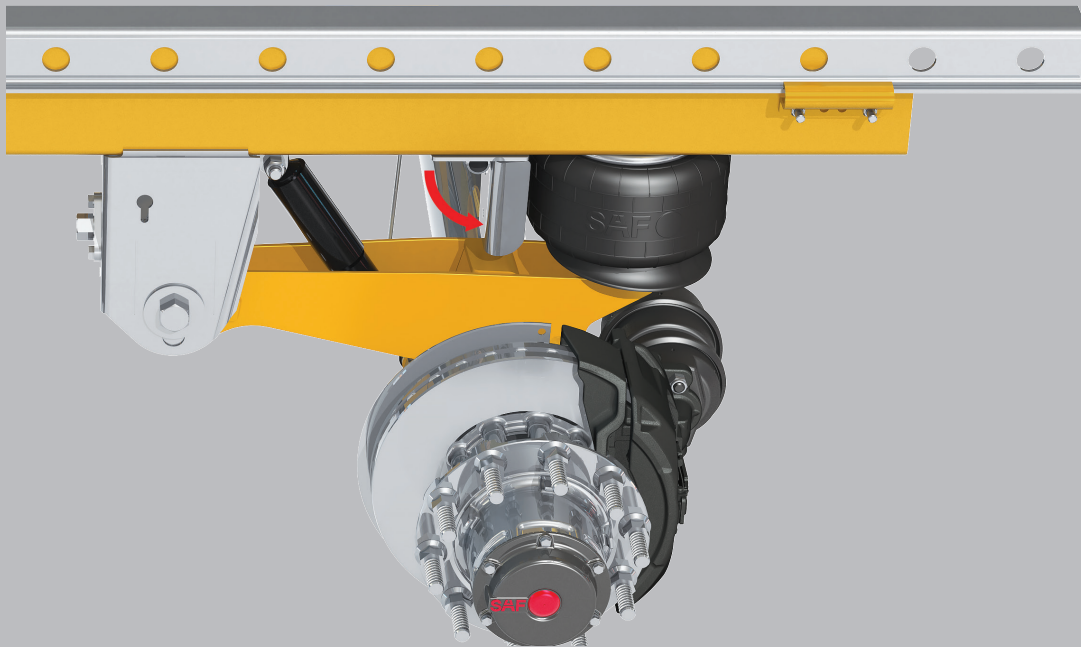


Installation and Operation Manual

PosiLok™

Suspension Docking Feature for Trailer Air-Ride Suspensions

- CBXA40
- CBX40
- CBX46
- CBX50
- CBX69
- CB-4000



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Introduction

This manual provides information necessary for the installation, and operation of the SAF-HOLLAND® PosiLok™ suspension feature for CBXA40, CBX40/46/50/69 and CB-4000 Trailer Air-Ride Suspensions.

The PosiLok™ docking assembly was designed to provide additional stability to the air ride suspension during loading or unloading of a trailer. The proper functional use of the system is dependent on proper installation of the hardware.

The PosiLok™ uses air drawn from the truck-tractor air system to operate the PosiLok™ actuator. The PosiLok™ feature automatically engages when the parking brakes are set. This feature automatically disengages when the trailer brakes are released and allows the height control valve to regulate the air pressure and return the suspension to ride height.

Warranty

Refer to the complete warranty for the country in which the product will be used. A copy of the written warranty is included with the product and can be found on the SAF-HOLLAND® website (www.safholland.com).

Notes, Cautions, and Warnings

You MUST read and understand all of the safety procedures presented in this manual before starting any work on the suspension.

Proper tools MUST be used to perform the maintenance and repair procedures described in this manual. Many of these procedures require special tools.

NOTE: In the United States, workshop 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.

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

WARNING Failure to follow the instructions and safety precautions in this manual can result in death or serious injury.

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, could result in property damage.

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

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

1. General Safety Instructions

Read and observe all Warning and Caution hazard alert messages in this publication. They provide information that can help prevent serious personal injury, damage to components, or both.

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

⚠ WARNING Failure to follow manufacturer's instructions regarding spring pressure or air pressure control may allow uncontrolled release of energy which, if not avoided, could result in death or serious injury.

Please observe the following safety instructions in order to maintain the operational and road safety of the suspension system.

1. Before operating vehicle, ensure that the maximum permissible axle load is NOT exceeded and that the load is distributed equally and uniformly.
2. The PosiLok™ feature is intended for on-highway use only. In the event the PosiLok™ is utilized in an off-road application, observe the operating recommendation of the trailer manufacturer for off-road operation of the installed axles.

IMPORTANT: The definition of OFF-ROAD means driving on non-asphalt/non-concrete routes, e.g. gravel roads, agricultural and forestry tracks, on construction sites and in gravel pits.

IMPORTANT: Off-road operation of axles beyond the approved application design could result in damage and impair suspension system performance.

3. All suspension and axles systems require routine service, inspection and maintenance in order to maintain optimum performance and operational safety as well as an opportunity to recognize wear.
4. In the event of suspension air pressure loss, quickly reduce speed as safely as possible and remove the vehicle from traffic. If unable to remove vehicle from traffic, follow DOT safety requirements regarding emergency situations.
5. Contact a qualified towing and/or service company to assist in repairing vehicle or to move it to a qualified repair facility. DO NOT operate the vehicle in the absence of suspension air pressure.

⚠ WARNING Operating the vehicle without proper air pressure can cause tire failure, fire, or loss of vehicle control which, if not avoided could result in death or serious injury.

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

A list of SAF-HOLLAND® technical support locations to supply SAF-HOLLAND® Original Parts can be found at www.safholland.us or contact SAF-HOLLAND® Customer Service at 888-396-6501.

Updates to this manual will be published as necessary online at www.safholland.us.

2. PosiLok™ Decal Requirements

The following decals MUST be installed on the trailer and MUST be in plain sight of the operator:

- PosiLok™ Misuse Caution Decal: XL-AR437 (**Figure 1**).
- Air Up Caution Decal: XL-AR439 (**Figure 2**).

It is the responsibility of the end user to periodically inspect all decals and ensure that they are clean and completely legible. If any labels are missing, loose, damaged or difficult to read, contact SAF-HOLLAND® Customer Service at 888-396-6501 to order replacements immediately.

Figure 1

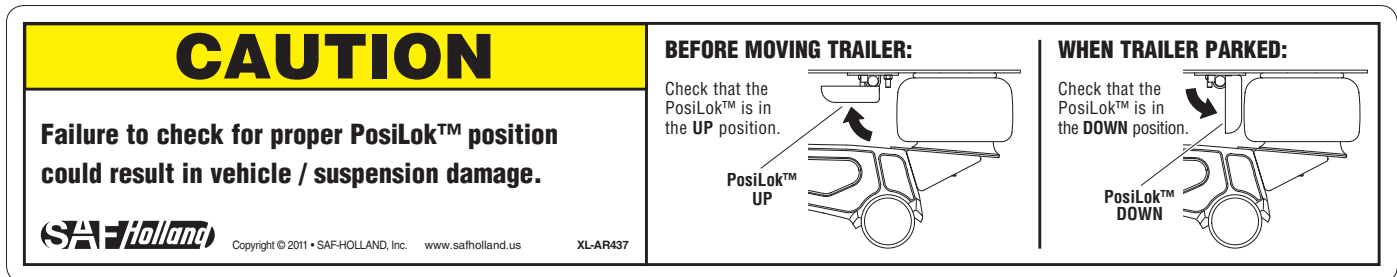


Figure 2



3. CBXA40 Model Identification

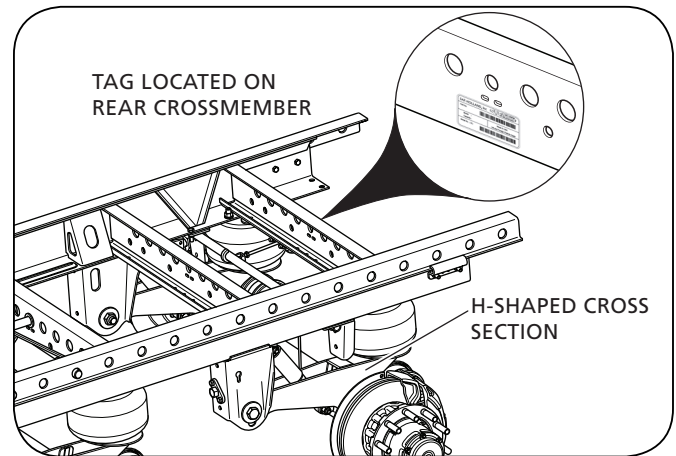
The CBXA40 suspension serial tag is located on the rear crossmember (**Figure 3**).

NOTE: Refer to the serial number tag attached to the slider rear crossmember for information (**Figure 3**).

NOTE: If the suspension serial tag is not legible or is not available, you can identify your suspension model by the appearance of the equalizing beam. The CBXA40 model will have a H-shaped cast beam, 5.75" axle, and a lower air spring mounting plate welded to the beam (**Figure 3**).

NOTE: This manual applies to the suspension models listed on the front cover. However, we urge you to determine your specific model number, write that information below and refer to it when obtaining information or replacement parts (**Figure 4**).

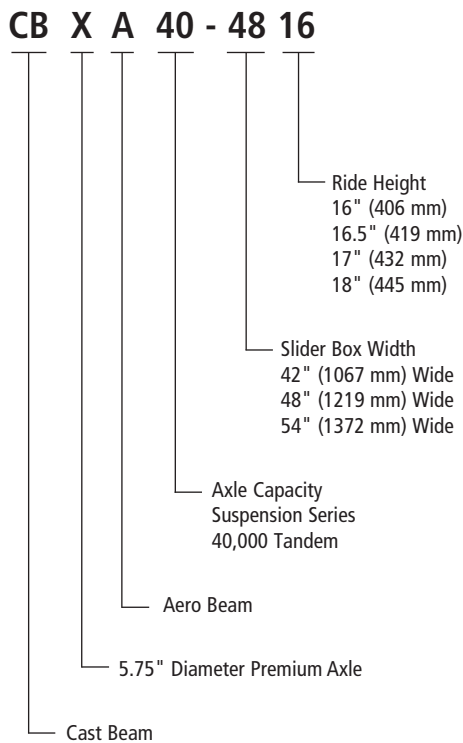
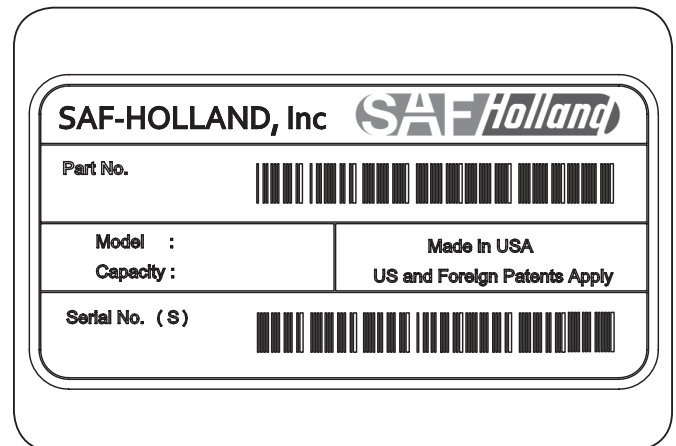
Figure 3



4. CBXA40 Model Nomenclature

The sample tag illustrated will help you interpret the information on the SAF-HOLLAND®, Inc. serial number tag. The model number is on the first line along with the suspension capacity. The second line contains the part number and the serial number (**Figure 4**).

Figure 4



5. CBX40/46 Model Identification

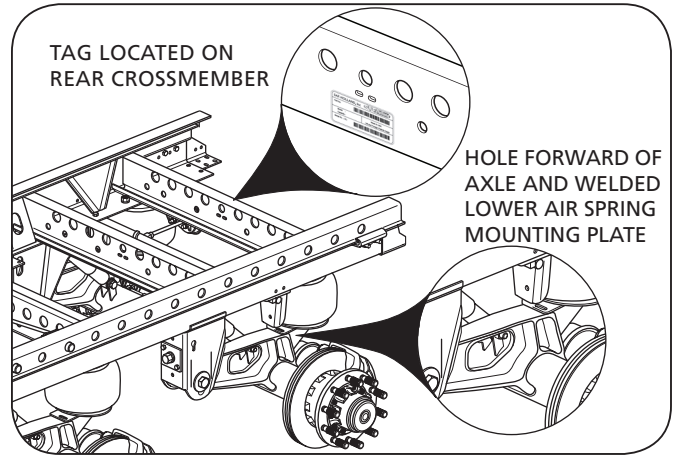
The CBX40/46 suspension serial tag is located on the rear crossmember (**Figure 5**).

NOTE: Refer to the serial number tag attached to the slider rear crossmember for information (**Figure 5**).

NOTE: If the suspension serial tag is NOT legible or is NOT available, you can identify your suspension model by the appearance of the equalizing beam. The CBX40/46 model will have a cast beam with a hole forward of the axle, a lower air spring mounting plate welded to it (**Figure 5**), and a single crossmember forward of the front axle (**Figure 6**).

NOTE: This manual applies to the suspension models listed on the front cover. However, we urge you to determine your specific model number, write that information below and refer to it when obtaining information or replacement parts (**Figure 7**).

Figure 5



6. CBX40/46 Model Nomenclature

The sample tag illustrated will help you interpret the information on the SAF-HOLLAND®, Inc. serial number tag. The part number is on the first line. The model number along with the suspension capacity are on the second line. The third line contains the serial number (**Figure 6**).

CB X 40 - 48 16

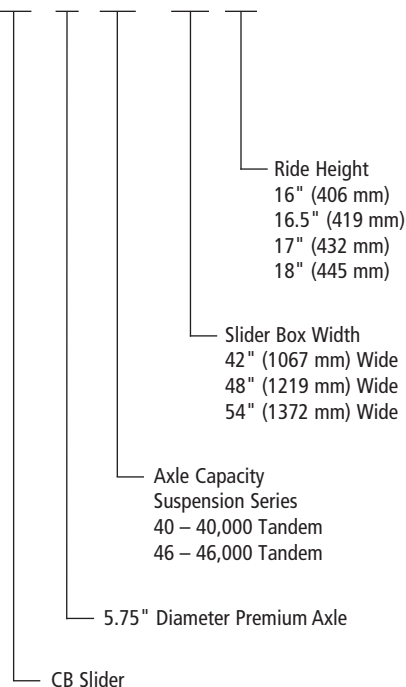


Figure 6

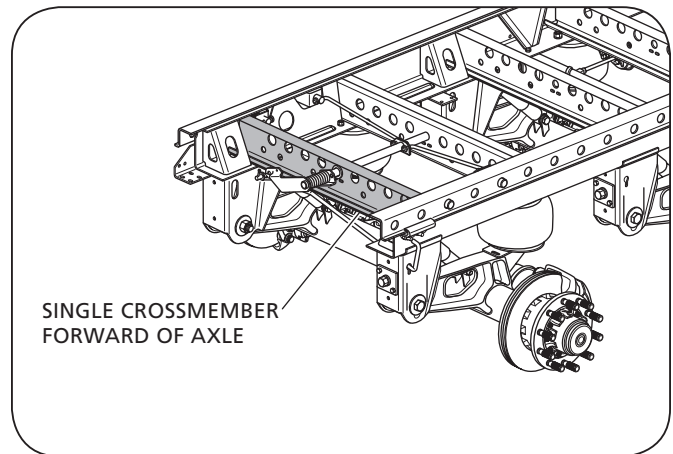
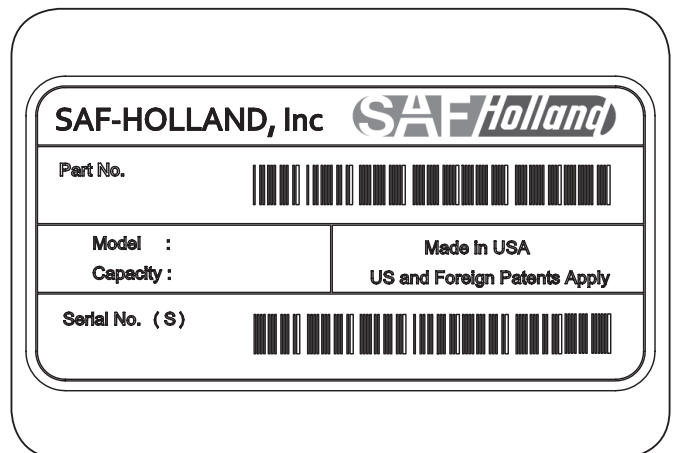


Figure 7



7. CBX40 Model Identification

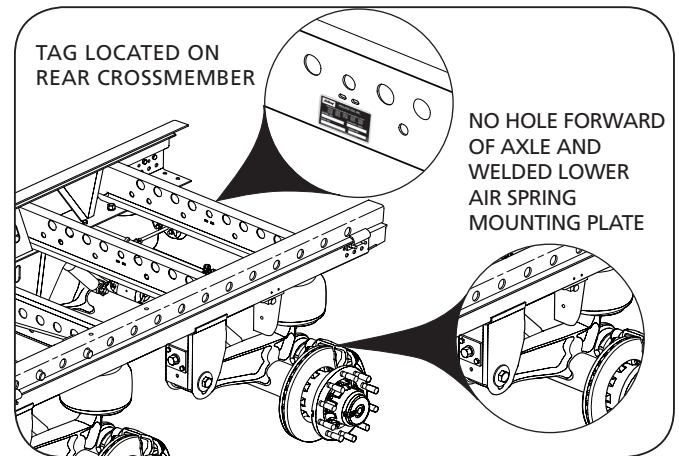
The CBX40 suspension serial tag is located on the rear crossmember (**Figure 8**).

NOTE: Refer to the serial number tag attached to the slider rear crossmember for information (**Figure 8**).

NOTE: If the suspension serial tag is NOT legible or is NOT available, you can identify your suspension model by the appearance of the equalizing beam. The CBX40 model will have a full cast beam with no hole forward of the axle and a 5.75" round axle (**Figure 8**).

NOTE: This manual applies to the suspension models listed on the front cover. However, we urge you to determine your specific model number, write that information below and refer to it when obtaining information or replacement parts (**Figure 9**).

Figure 8



8. CBX40 Model Nomenclature

The sample tag illustrated will help you interpret the information on the SAF-HOLLAND®, Inc. serial number tag. The model number is on the first line along with the suspension capacity. The second line contains the part number and the serial number (**Figure 9**).

CB X 40 - 48 16

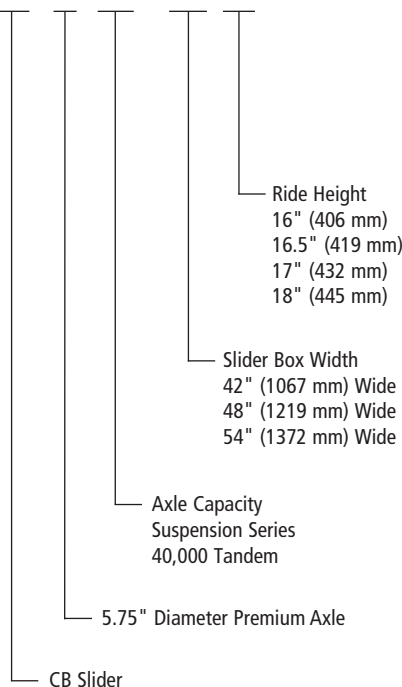
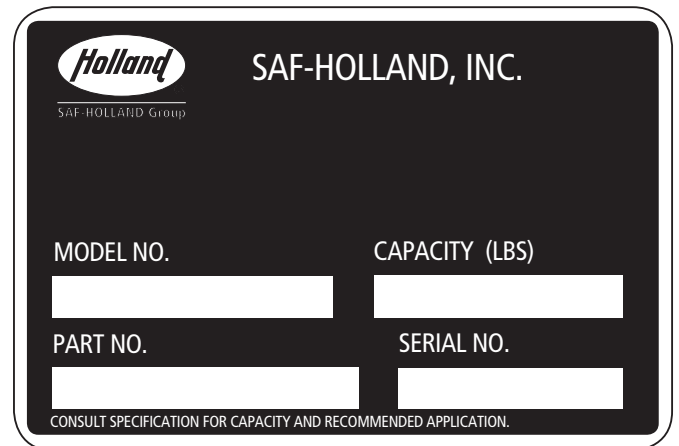


Figure 9



9. CBX50 Model Identification

The CBX50 suspension serial tag is located on the rear crossmember (**Figure 10**).

NOTE: Refer to the serial number tag attached to the slider rear crossmember for information (**Figure 10**).

NOTE: If the suspension serial tag is NOT legible or is NOT available, the suspension model can be identified by the appearance of the equalizing beam. The CBX50 model will be installed on a tandem sliding sub frame, has a lower air spring mounting plate welded to it with a 5.75" round axle (**Figure 10**), and a double crossmember forward of the front axle (**Figure 11**).

NOTE: This manual applies to the suspension models listed on the front cover. It is Recommended that the specific model number is recorded below and referred to when obtaining information or replacement parts (**Figure 12**).

Figure 10

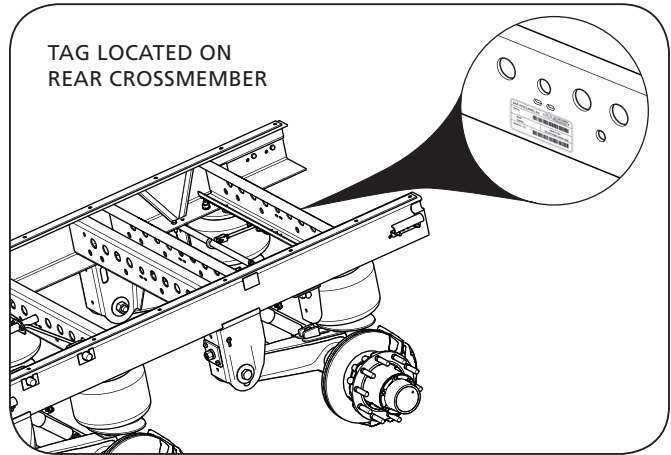
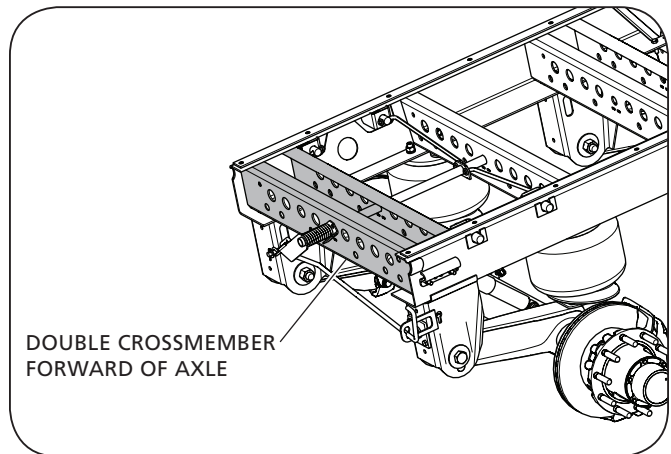


Figure 11



10. CBX50 Model Nomenclature

The sample tag illustrated will help interpret the information on the SAF-HOLLAND®, Inc. serial number tag. The model number is on the first line along with the suspension capacity. The second line contains the part number and the serial number (**Figure 12**).

CB X 50 - 48 16

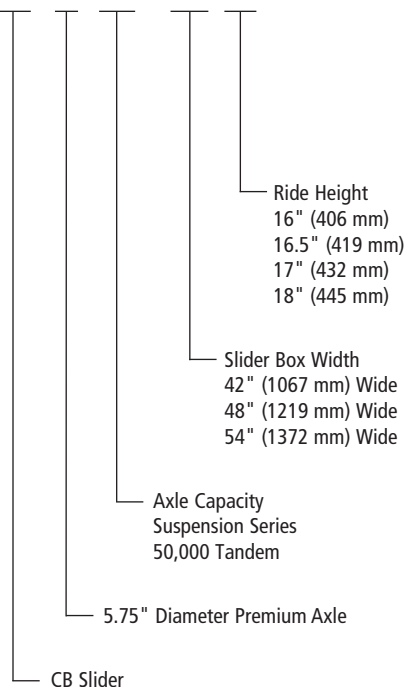
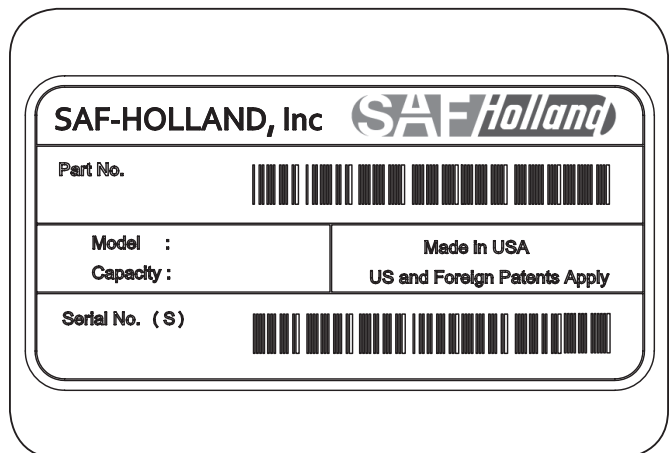


Figure 12



11. CBX69 Model Identification

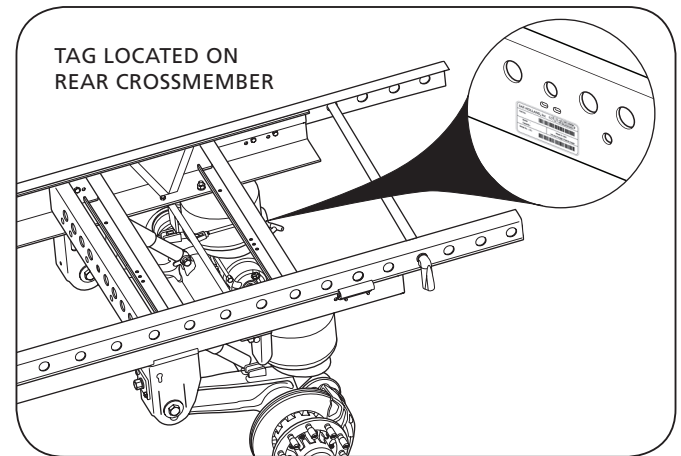
The CBX69 suspension serial tag is located on the rear crossmember (**Figure 13**).

NOTE: Refer to the serial number tag attached to the slider rear crossmember for information (**Figure 13**).

NOTE: If the suspension serial tag is NOT legible or is NOT available, the suspension model can be identified by appearance. The CBX69 will be installed on a tri-axle sliding sub-frame and have a 5.75" round axle (**Figure 13**).

NOTE: This manual applies to the suspension models listed on the front cover. It is Recommended that the specific model number is recorded below and referred to when obtaining information or replacement parts (**Figure 14**).

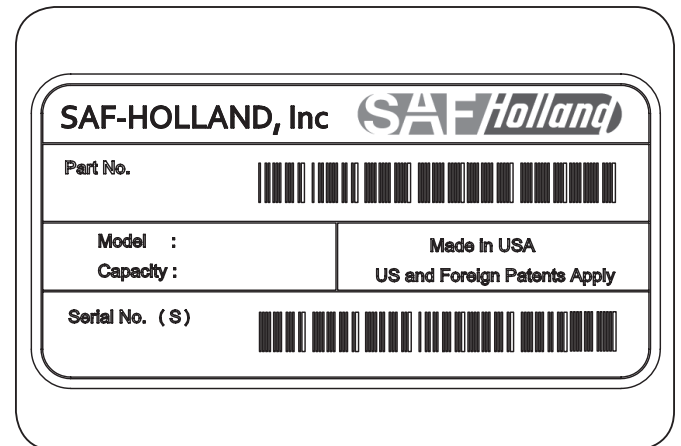
Figure 13



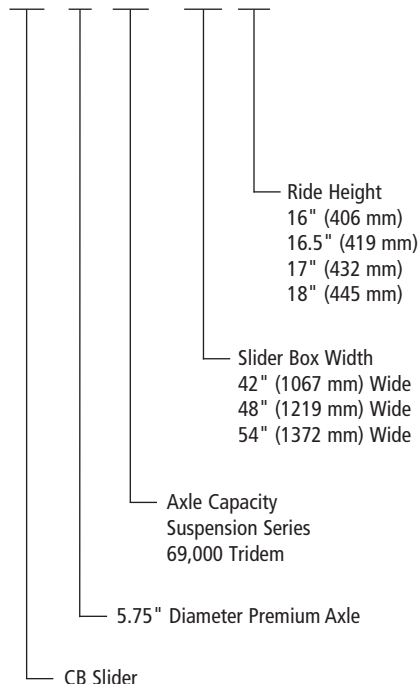
12. CBX69 Model Nomenclature

The sample tag shown will help interpret the information on the SAF-HOLLAND®, Inc. serial number tag. The part number is on the first line. The model number along with the suspension capacity are on the second line. The third line contains the serial number (**Figure 14**).

Figure 14



CB X 69 - 48 16



13. CB-4000 Model Identification

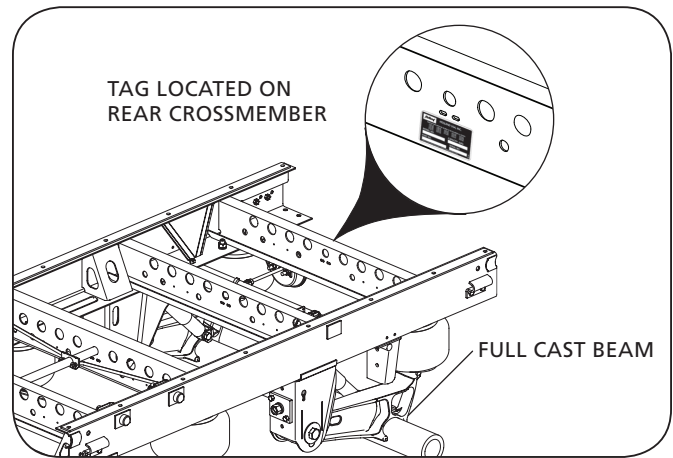
The CB-4000 suspension serial tag is located on the rear crossmember (**Figure 15**).

NOTE: Refer to the serial number tag attached to the slider rear crossmember for information (**Figure 15**).

NOTE: If the suspension serial tag is NOT legible or is NOT available, the suspension model can be identified by the appearance of the equalizing beam. The CB-4000 model will have a full cast beam with a 5" round axle (**Figure 15**).

NOTE: This manual applies to the suspension models listed on the front cover. It is Recommended that the specific model number is recorded below and referred to when obtaining information or replacement parts (**Figure 16**).

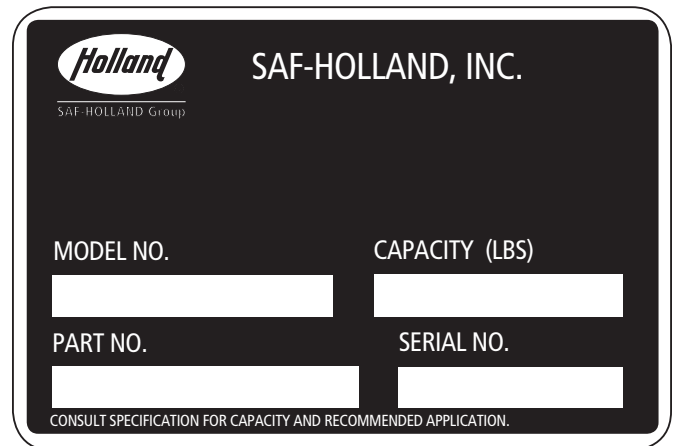
Figure 15



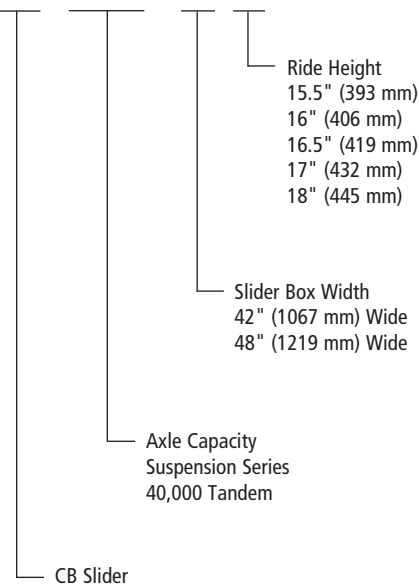
14. CB-4000 Model Nomenclature

The sample tag illustrated will help interpret the information on the SAF-HOLLAND®, Inc. serial number tag. The model number is on the first line along with the suspension capacity. The second line contains the part number and the serial number (**Figure 16**).

Figure 16



CB - 4000 - 48 16



15. Welding Standards

13.1 Scope

This SAF® suspension has been designed to be installed on a trailer with no welding required. When welding is required for suspension repairs, observe the requirements below. Customers may NOT weld on an SAF® suspension without our prior approval, including the application of the American Welding Society standards by SAF-HOLLAND® engineering. This specification applies to all components supplied by SAF-HOLLAND®, and its products. The customer assumes all responsibility for weld integrity if weld material and procedure differ from those listed below.

15.2 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.

15.3 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 shown (**Figure 17**). Where the installation drawing specifies different than above, the drawing shall prevail.

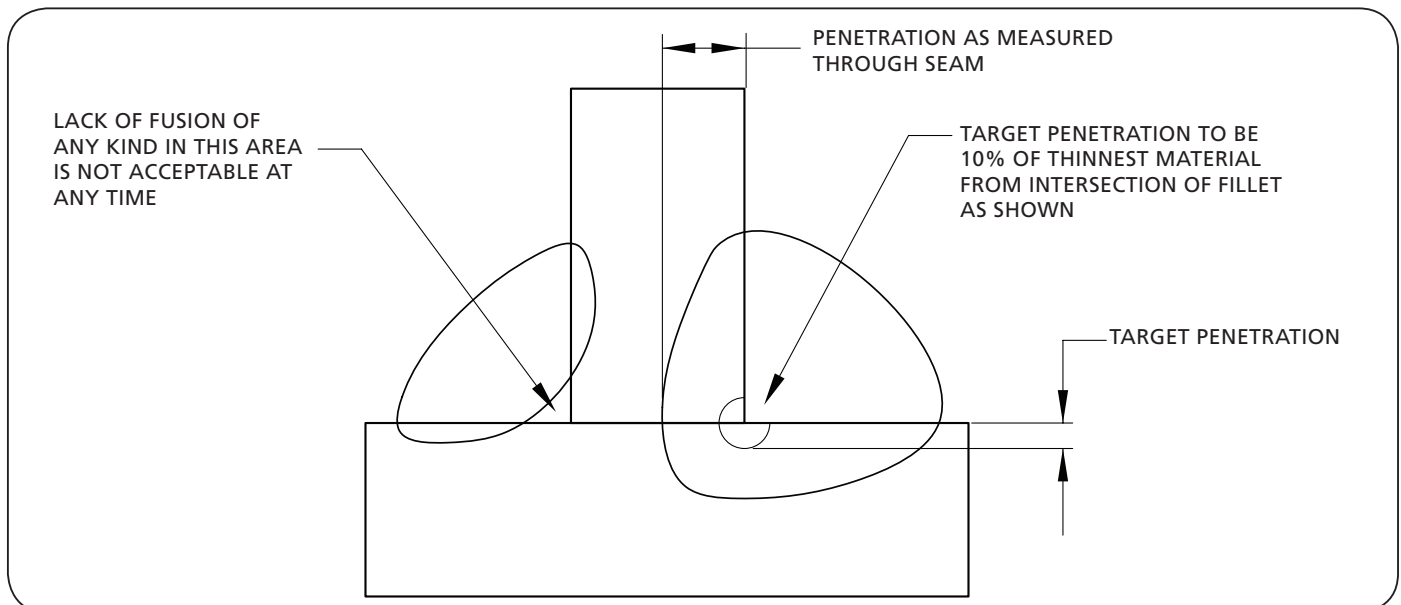
15.4 Procedures

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.

15.5 Weld Size

If weld size is NOT specified, the effective throat of the weld MUST NOT be smaller than the thinnest material being welded (**Figure 17**).

Figure 17



16. Suspension Model Verification

IMPORTANT: The correct PosiLok™ assembly for the suspension ride height **MUST** be installed. Various suspension ride heights require different assemblies with different flipper plate heights. Verify ride height before installation (**Figure 18**). Refer to **Table 1** below or call SAF-HOLLAND® Customer Service at 888-396-6501.

1. If the serial tag is NOT legible or is NOT available, verify the ride height by measuring the PosiLok™ flipper plate height (**Figure 18**) and compare it to the ride height (**Table 1**).

NOTE: "A" dimension DOES NOT include mounting plate.

Figure 18

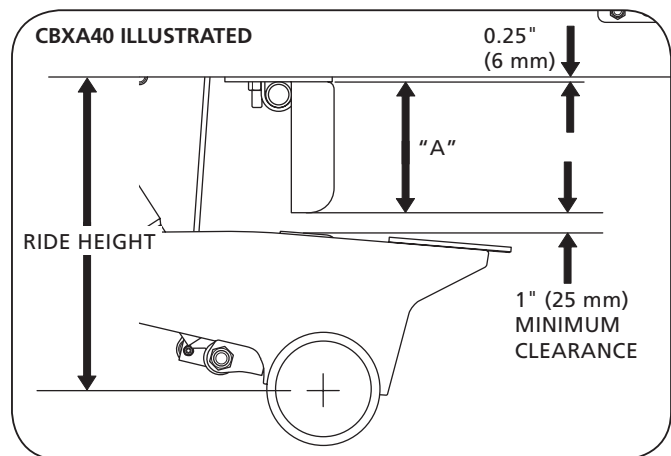
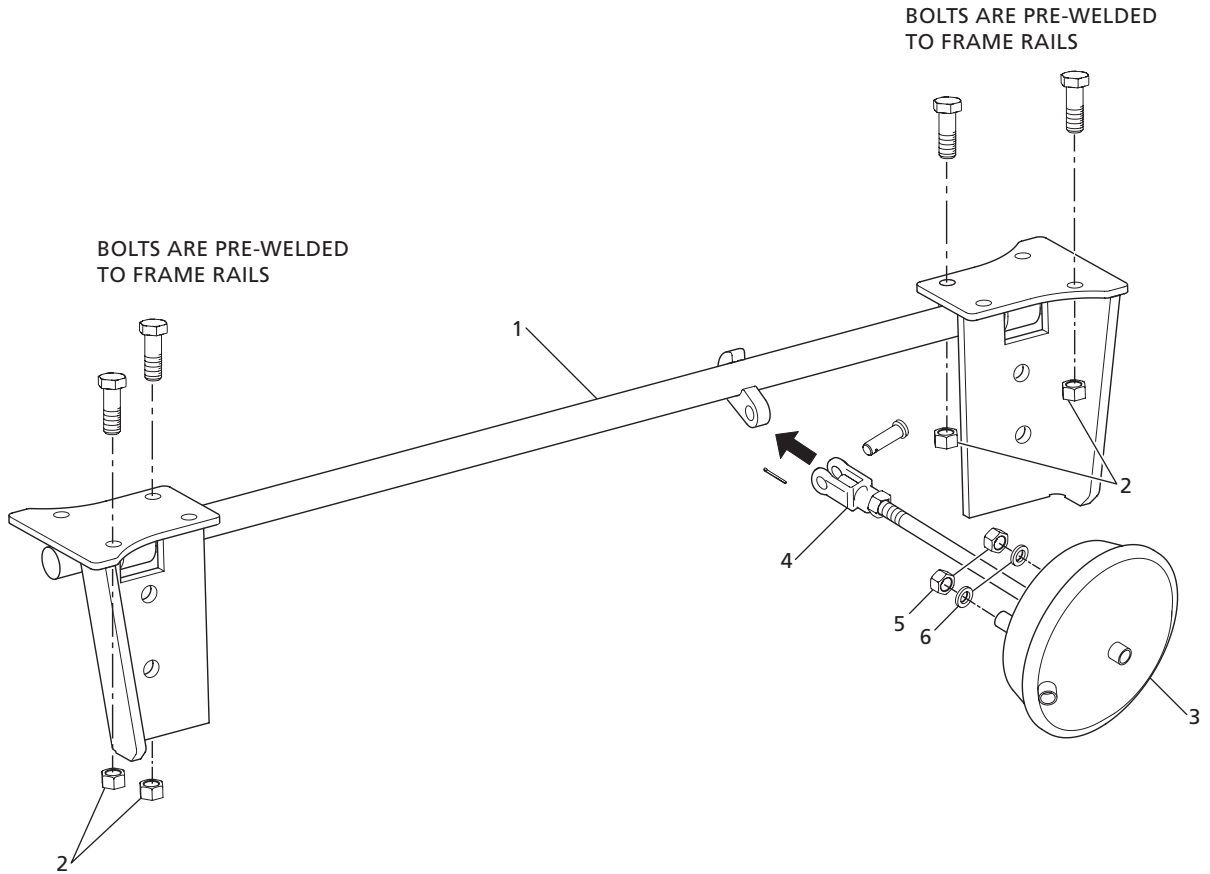


Table 1

MODEL	RIDE HEIGHT	CBXA40 "A" FLIPPER PLATE HEIGHT	CBX40**, CB4000 "A" FLIPPER PLATE HEIGHT	CBX40**/46 "A" FLIPPER PLATE HEIGHT	CBX50/69 "A" FLIPPER PLATE HEIGHT
4215.5 / 4815.5 / 5415.5*	15.5" (394 mm)	Not Applicable	7.5" (191 mm)	6.31" (160 mm)	6.75" (171 mm)
4216 / 4816 / 5416*	16" (406 mm)	6.75" (171 mm)	8.0" (203 mm)	6.75" (171 mm)	7.25" (184 mm)
4216.5 / 4816.5 / 5416.5*	16.5" (419 mm)	7.25" (184 mm)	8.5" (216 mm)	7.25" (184 mm)	7.75" (197 mm)
4217 / 4817 / 5417*	17" (432 mm)	7.75" (197 mm)	8.9" (229 mm)	7.75" (197 mm)	8.42" (214 mm)
4218 / 4818 / 5418*	18" (457 mm)	7.75" (221 mm)	9.75" (247 mm)	8.69" (221 mm)	9.42" (239 mm)

* These numbers refer to the last digits of the model number.

** For CBX40 model identification, refer to pages 6 and 7.



POSILOK™ PARTS LIST		
ITEM	DESCRIPTION	QTY.
1	PosiLok™ Flipper Plate Assembly	1
2	Lock Nut 1/2"-13	4
3	Actuator Chamber	1
4	1/2" Clevis-Assembly with 1/2" Pin	1
5	Lock Nut 1/2"-20	2
6	Lock Washer 1/2"	2

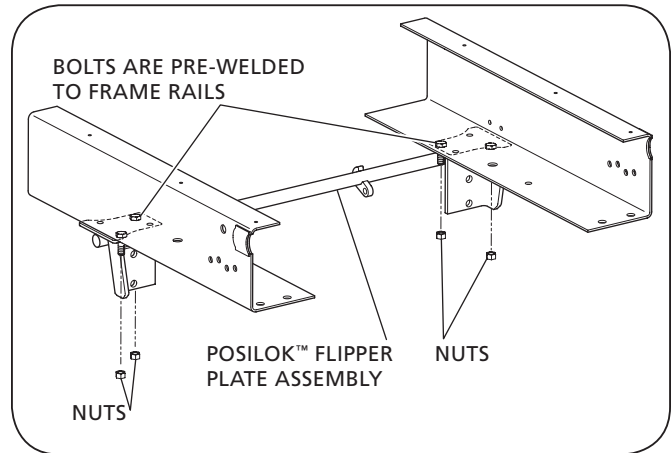
17. Flipper Plate Installation

NOTE: Prior to installing a PosiLok™ system, make sure all mounting surfaces and bolts are clean and free of obstructions.

1. Locate the pre-welded bolts in the bottom of the frame rail above the rear axle. Install the flipper plate assembly so bolts protrude through the end plate holes of the flipper plate assembly. Tighten nuts evenly and apply a final torque of 75-90 ft.-lbs. (102-122 N•m) on clean and lubricated threads (**Figure 19**).

IMPORTANT: PosiLok™ flipper plate assembly should rotate freely without binding (**Figure 21**).

Figure 19



18. Actuator Chamber Installation

1. Attach actuator chamber to mounting bracket on slider box rear crossmember (**Figure 20**) with the two (2) lock washers and nuts. Torque nuts to 50-60 ft.-lbs. (68-81 N•m).

IMPORTANT: Flipper plate **MUST** be completely down when attaching actuator push rod (**Figure 21**).

2. Adjust clevis and jam nut on push rod so clevis mounting hole is 1/4" (6 mm) to 1/3" (8 mm) short of cam mounting hole to cause tension on actuator return spring (**Figure 22**).
3. Pull the actuator push rod out (Arrow A) so that the hole in the cam mounting hole aligns with the clevis mounting hole. Install the clevis pin and secure it with cotter pin (**Figure 22**).

IMPORTANT: Flipper plate **MUST** be completely down when attaching actuator push rod.

IMPORTANT: Adjust the actuator push rod length so that the flipper plate is completely down (engaged position) (**Figure 21**).

IMPORTANT: The PosiLok™ flipper plate assembly should rotate freely without binding after attaching the actuator push rod (**Figure 21**).

Figure 20

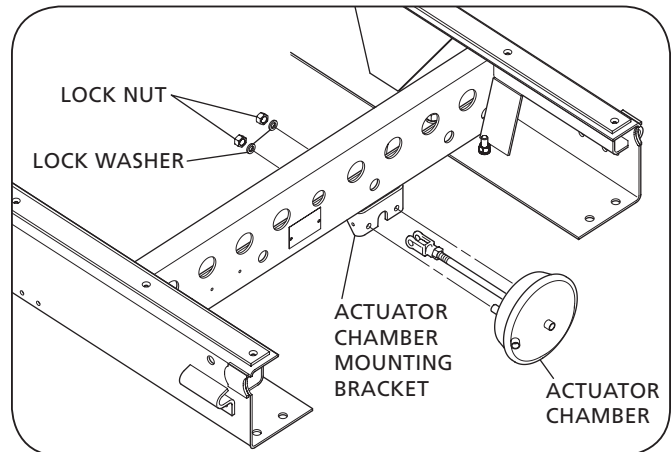
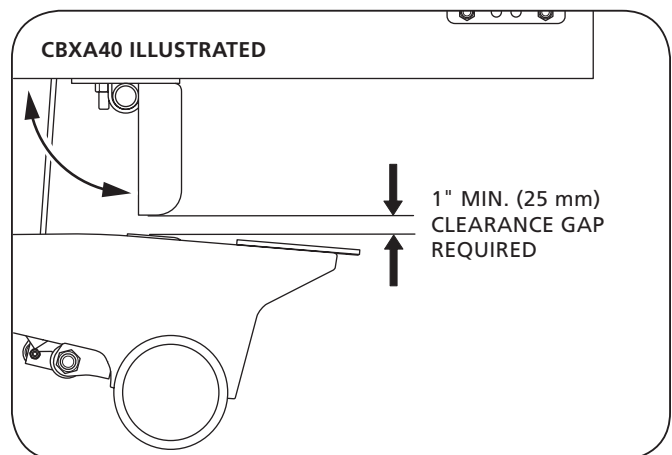


Figure 21



19. Air System Connection Overview

1. The PosiLok™ is activated through the trailer's emergency brake system. To connect the PosiLok™ to the air system, locate the trailer emergency air supply line.
2. Attach the emergency supply line to PosiLok™ actuator inlet port (**Figure 23**).

IMPORTANT: It is the responsibility of the air system installer to secure all air lines and check for any air leaks. If air leaks are detected, repair is required.

CAUTION

Failure to eliminate air leaks could compromise suspension's performance which, if not avoided, could result in component or property damage.

Figure 22

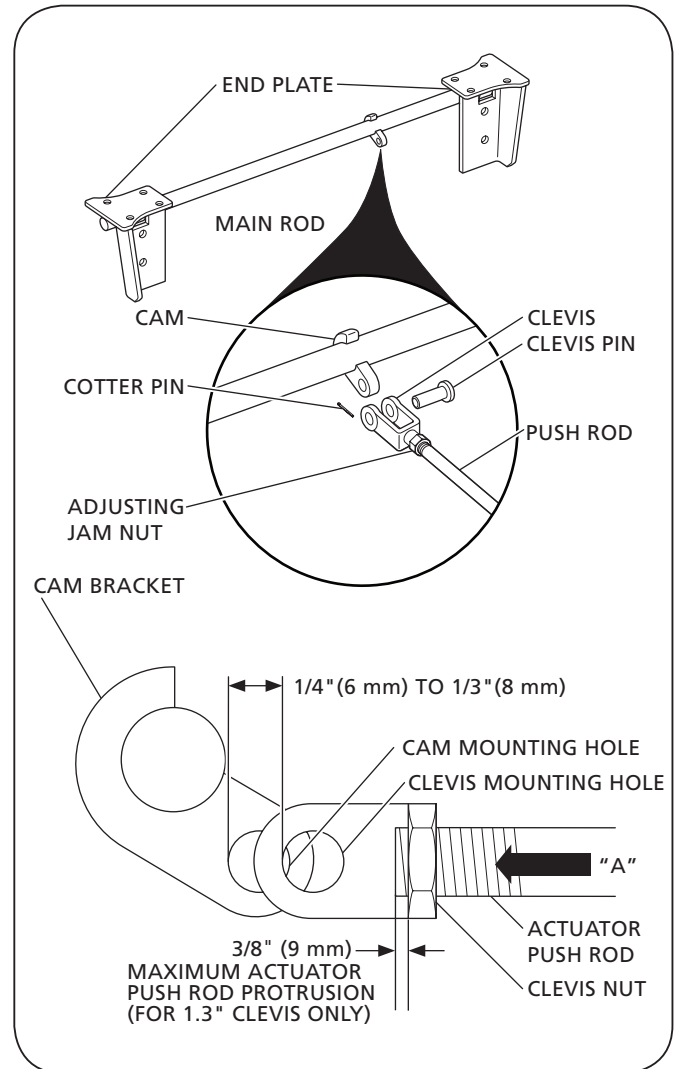
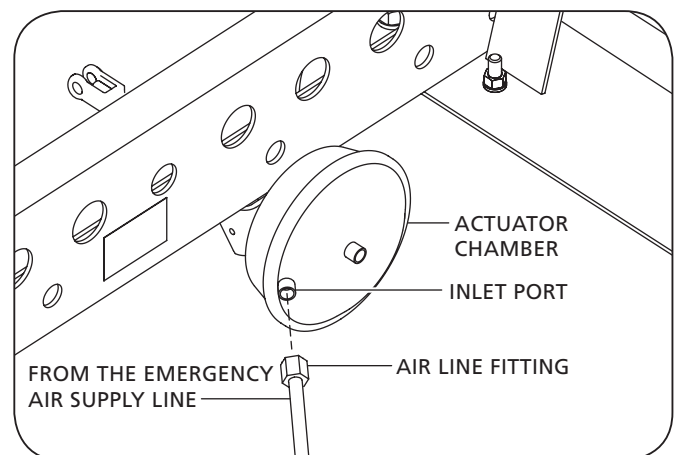


Figure 23



Air Control Kit

The PosiLok™ flipper plates are activated by the vehicle's emergency parking brakes. When the parking brakes are engaged, the flipper plates rotate down to the engaged position. When the parking brakes are released, the flipper plates rotate up to the disengaged position.

1. If NOT already present, install air reservoir, mud flap and stinger brackets. Grind off paint and prepare all surfaces for welding. Refer to welding standards detailed in Section 15 of this manual.
2. Install the air reservoir to the air reservoir brackets.
3. Plumb the air control system as illustrated (**Figure 24**).

The air control system of the CBXA40/CBX40/46/50/69 and CB-4000 suspension uses air drawn from the tractor air system to pressurize the suspension's air springs. The suspension, working with the air control system, provides optimum suspension performance only when all air control system components are installed and operating properly.

IMPORTANT: Ensure that all air lines and valves are free from obstruction through the full operational range of the suspension.

IMPORTANT: A pressure protection valve (PPV) MUST be attached to the air reservoir in order to maintain proper air pressure (**Figure 24**).

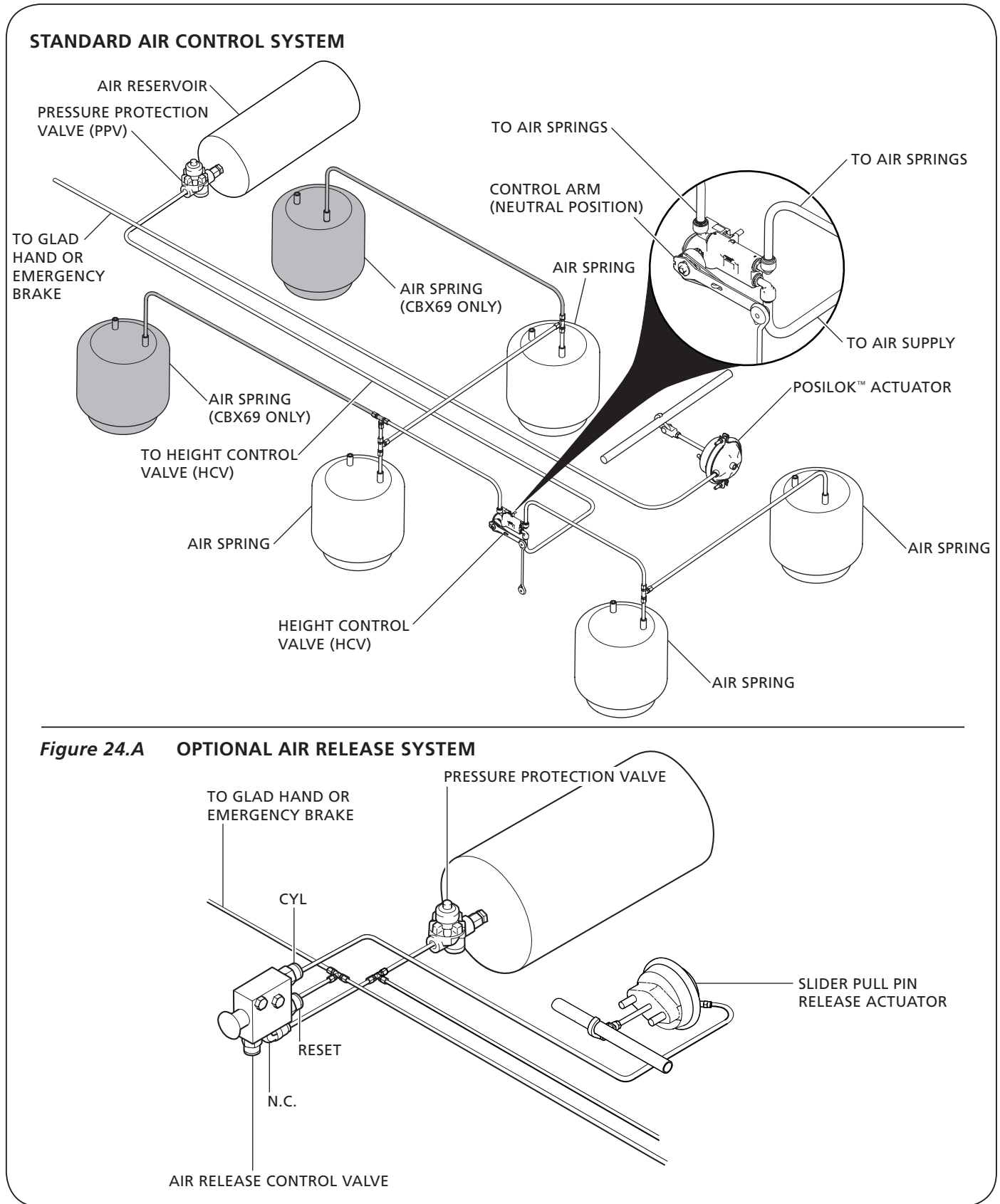
IMPORTANT: The pressure protection valve maintains safe brake pressure. Approximately 85 psig (5.9 bars) opens the valve, and 65 psig (4.5 bars) closes the valve.

NOTE: When installing pressure protection valve, use a drop of oil or Loctite® to lubricate threaded connections. DO NOT use a pipe compound or teflon tape as they may clog the valve.

5. When the emergency brakes are released, air is supplied to the air springs, raising the trailer to ride height. This frees the flipper plates and allows them to rotate up and out of the way.
6. After installing the PosiLok™, verify proper ride height and adjust per Section 22, if needed.
7. If proper ride height cannot be achieved, troubleshoot height control valve operation in accordance with Section 24.
8. The system could contain a dump or exhaust feature. For information and schematics of this option, contact SAF-HOLLAND® Customer Service at 888-396-6501. Optional Air Release System

If the slider suspension was ordered with a pull pin air release mechanism, the air release control valve and the actuator will need to be plumbed as illustrated (**Figure 24.A**).

Figure 24



20. PosiLok™ Engage Procedures

Release air pressure from the trailer brake system or disconnect the glad hand. This engages the parking brakes and causes the PosiLok™ actuator to engage, which rotates the rod so the flipper plates swing down into an engaged position (*Figure 25*).

21. PosiLok™ Disengage Procedures

When the parking brakes are disengaged, the primary height control valve (HCV) takes full function. When the system has sufficient air pressure in the suspension air springs, the actuator extends, rotating the rod so the flipper plates swing up away from the load pads into a disengaged position (*Figure 26*). The vehicle is now ready for movement.

IMPORTANT: DO NOT operate vehicle (put in motion) if flipper plates are trapped in the down position (*Figure 27*). Refer to the Troubleshooting Section 24.

CAUTION

Failure to adequately raise flipper plates could result in trailer, suspension component, and cargo damage.

Figure 25

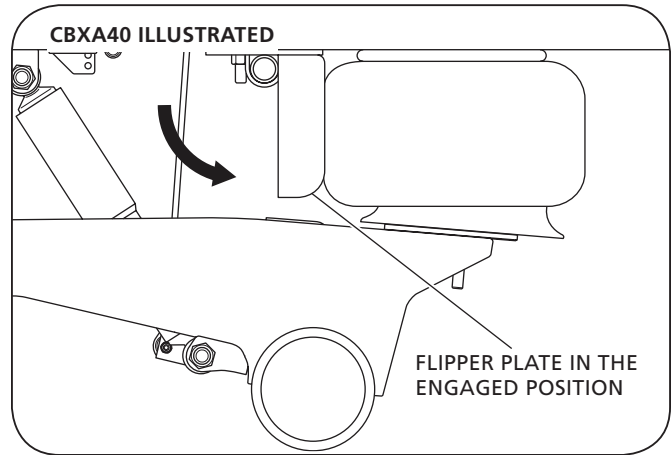


Figure 26

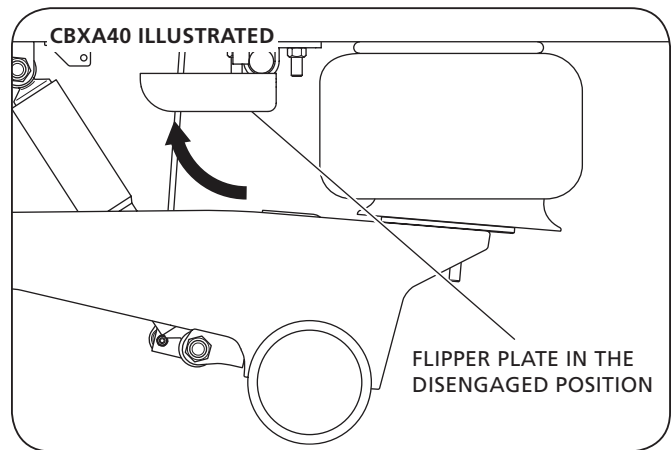
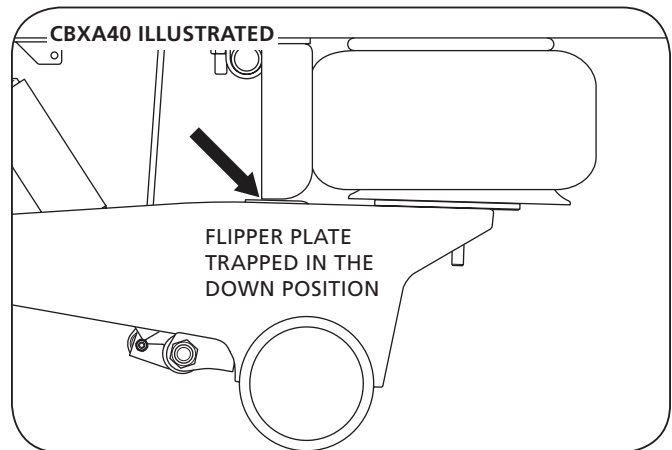


Figure 27



22. Ride Height Adjustment

1. Ensure that the linkage assembled to the height control valve (HCV) and suspension is the appropriate length (**Figure 28**).

IMPORTANT: A 15" linkage is used for ride heights of 15.5", 16", 16.5"-17". A 16" linkage is required for 18" ride heights (**Figure 28**).

CAUTION

Failure to match the linkage length to the design ride height could result in improper suspension height which, if not avoided, could result in damage to trailer components.

2. Install service and emergency lines to the slider and allow the suspension to air up.
3. Measure the ride height of the suspension (**Figure 29**) with a tape measure.
4. Compare the measured suspension ride height value to the appropriate value (**Table 3**). Make sure your measured ride height value is within $\pm 1/4"$ (6 mm).

Table 3

CBXA / CBX / CB	"A" RIDE HEIGHT
4215.5 / 4815.5 / 5415.5*	15.5" **
4216 / 4816 / 5416*	16"
4216.5 / 4816.5 / 5416.5*	16.5"
4217 / 4817 / 5417*	17"
4218 / 4818 / 5418*	18"

*These numbers refer to the last digits of the model number.

** Not applicable to CBA40.

IMPORTANT: If the measured ride height value is NOT within $\pm 1/4"$ (6 mm); verify the linkage length (**Table 4 and Figure 28**), and the hole location where the top mounting stud of the height control valve (HCV) is bolted to the mounting bracket (**Figure 30**).

Table 4

RIDE HEIGHT	HOLE LOCATION	LINKAGE LENGTH
15.5"	TOP HOLE	15"
16"	2ND HOLE	15"
16.5"	3RD HOLE	15"
17"	4TH HOLE	15"
18"	4TH HOLE	16"

5. Once proper ride height is achieved, visually check all air control system fittings for air leaks by applying a soapy water solution and checking for bubbles at all air connections and fittings.

Figure 28

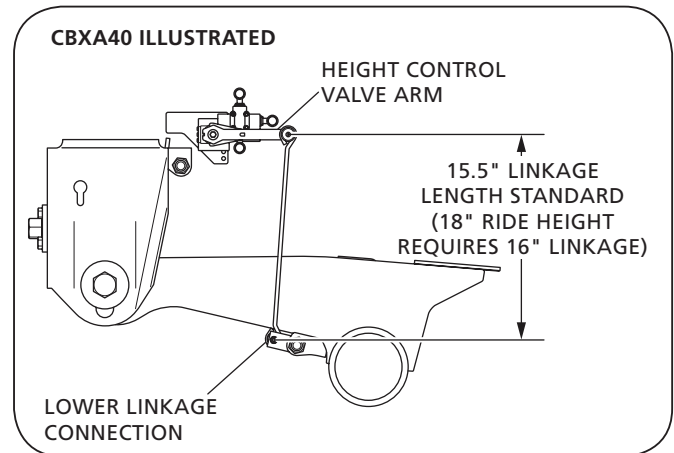


Figure 29

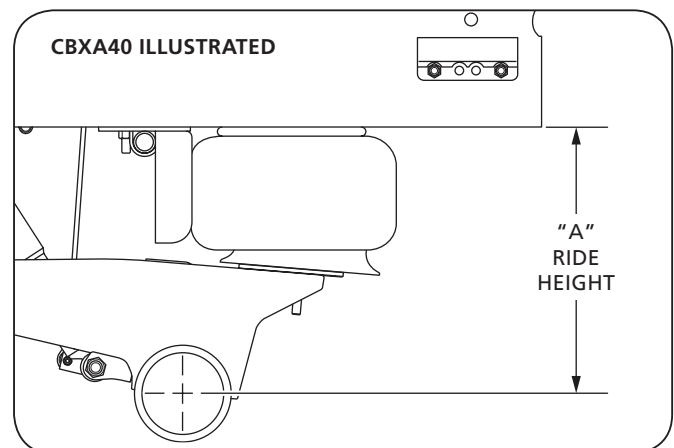
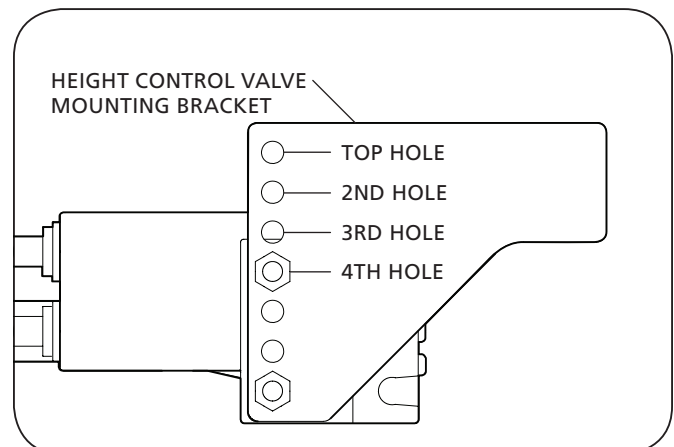


Figure 30



23. Height Control Valve Performance Check

IMPORTANT: Proper inspection can eliminate unnecessary replacement of height control valve.

1. Apply air system pressure above 85 psig (5.9 bars).
2. Using multiple jack stands support the vehicle frame approximately 2" (51 mm) below ride height per OEM specified locations.

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

3. Detach the lower connection of the link assembly from mounting bracket.
4. Move control arm up 45° for 10 - 15 seconds – air should flow to air spring(s) (**Figure 32**).
5. Move control arm to center (neutral) position – valve should shut off air flow (**Figure 32**).
6. Move control arm down 45° for 10 - 15 seconds – air should exhaust (**Figure 32**).
7. Move control arm to center (neutral) position – valve should shut off air flow.
8. The valve is operating correctly if it performs as described in Steps 4 - 7 above.

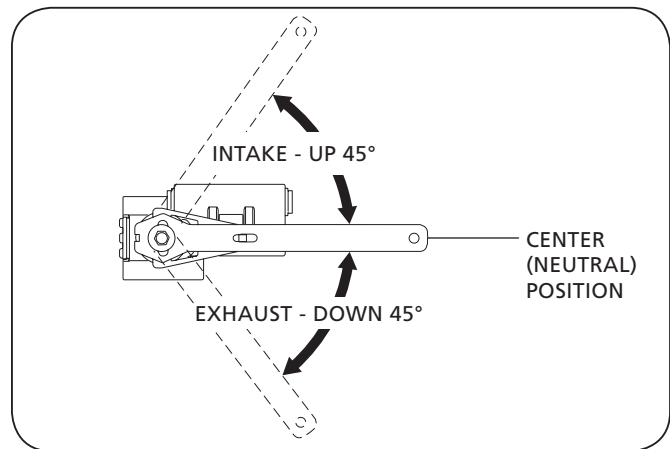
NOTE: If the valve DOES NOT perform correctly, replace the valve.

9. Re-attach the lower link assembly to mounting bracket, and torque to 30 - 40 in.-lbs. (3.75 - 5 N•m).

IMPORTANT: If 85 psig (5.9 bars) of air system pressure cannot be achieved, check pressure protection valve and vehicle air compressor to see if they are operating properly. Also, check the air lines for obstructions caused by dirt particles, foreign debris, ice, etc.

10. Remove jack stands.

Figure 32



24. Troubleshooting

PROBLEM	POSSIBLE CAUSE	SOLUTION
Trailer is at full extension and suspension is pulling on shock absorber.	No air flow out of pressure protection valve from the air reservoir.	Check specified air pressure. Minimum 85 psig (5.9 bars) required in air reservoir. Repair or replace as required, refer to Section 19.
	Actuator or HVC valve mis-adjusted or malfunctioning	Check and adjust or replace as required, refer to Section 21.
	HVC valve malfunctioning.	Check HVC valve installation and function. Repair or replace as required, refer to Section 22 and 23.
	Actuator push rod is bent.	Replace as required, refer to Section 18.
	Cam bracket that connects to actuator is damaged or weld is broken.	Repair or replace as required.
	Actuator diaphragm is ruptured.	Replace as required, refer to Section 18.
Flipper plates are trapped in the down position.	No air flow out of pressure protection valve from the air reservoir.	Check specified air pressure. Minimum 85 psig (5.9 bars) required in air reservoir, refer to Section 19.
	Air flow to either the pilot valve or to the HVC valve DOES NOT exhaust.	Check for breach in air supply line and repair or replace as required, refer to Section 19.
	Vehicle overloaded or unevenly loaded.	Check loads and correct as needed.
	HCV mis-adjusted or malfunctioning.	Check and repair or replace as required (Refer to manufacturer's HCV manual), refer to Section 22 and 23.
	Trailer NOT at proper ride height.	Check and adjust HCV if needed, refer to Section 22.
Flipper plates will NOT swing down completely	Cam bracket that connects to actuator is damaged.	Repair or replace as required.
	Ride height set improperly (too low).	Adjust ride height, refer to Section 22.
	Less than 1" (25 mm) gap between top of the equalizing beam and the bottom of the flipper plate.	Adjust ride height, refer to Section 22.
	Actuator push rod need adjustment.	Check and adjust, refer to Section 18.
Flipper plates are bent or buckled	Moving trailer through rough yard without waiting for the suspension to air up.	Replace bent or buckled flipper plates, refer to Section 17.
	Trailer loaded with heavy fork/load combination with slider in forward position.	
	Improper ride height setting due to load or lowering trailer for bridge height.	
	Overload of rear suspension caused by yard horse raising front of trailer too high and moving trailer to and from dock.	
	Temporary loss of ride height when slider is moved at a high rate of speed and engaging emergency brakes.	





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