

LSZ13/20 Repair Manual

Control Arm and Bushing



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Introduction

This manual provides the necessary information for the maintenance, inspection, and safe operation of the NEWAY® LSZ Series Auxiliary Air Suspension.

NOTE: To assist with installation, customer inspection drawing LSZ13_TAB_CI is required and is included in the literature kit.

Read this manual before using or servicing this product and keep it in a safe location for future reference. Updates to this manual, which are published as necessary, are available on the internet at www.safholland.us.

When replacement parts are required, SAF-HOLLAND® highly recommends 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.

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 or available on the internet at www.safholland.com.

Notes, Cautions, and Warnings

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

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

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

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

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

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

1. 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 installations 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 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.

- 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.

- 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 all manufacturer's instructions on spring pressure and air pressure controls.

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

- The wheel contact surfaces between the wheel and hub/drum MUST NOT be additionally painted.

IMPORTANT: The wheel contact surfaces MUST be clean, smooth and free from grease.

⚠ WARNING Failure to keep wheel and hub contact surfaces clean and clear of foreign material could allow wheel/hub separations which, if not avoided, could result in death or serious injury.

- Only the wheel and tire sizes approved by SAF-HOLLAND can be used.
- Tire clearance between tires and the suspension MUST be regularly monitored and maintained.

⚠ WARNING Failure to maintain tire clearance between tires and the nearest point of contact on the suspension or vehicle could cause fire or loss of vehicle control which, if not avoided, could result in death or serious injury.

Operational and Road Safety Instructions

- Before operating vehicle, ensure that the maximum permissible axle load is NOT exceeded and that the load is distributed equally and uniformly and in accordance with state and federal bridge laws.

- Make sure that the brakes are NOT overheated from continuous operation.

⚠ WARNING Failure to minimize the use of brakes during overheating conditions could result in deterioration of brake efficiency which, if not avoided could result in death or serious injury.

- Observe the operating recommendation of the truck 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.

- Follow the recommended routine maintenance and inspections described in this manual. These procedures are designed so that optimum performance and operational safety are achieved.
- The suspension springs should ALWAYS be operated with a static operating pressure between 20 psi (1.38 bar) and 107 psi (7.38 bar).

⚠ WARNING Failure to operate the air springs with a proper static operating pressure could cause premature component failure and loss of vehicle control which, if not avoided, could result in death or serious injury.

- 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.
- Contact a qualified towing and/or service company to assist in repairing the vehicle or to move it to a qualified repair facility. DO NOT operate the vehicle in the absence of suspension air pressure; however in the event of an air system failure while in service, an internal rubber bumper built into the air spring will make it possible to temporarily operate the vehicle at reduced speed determined by road conditions.

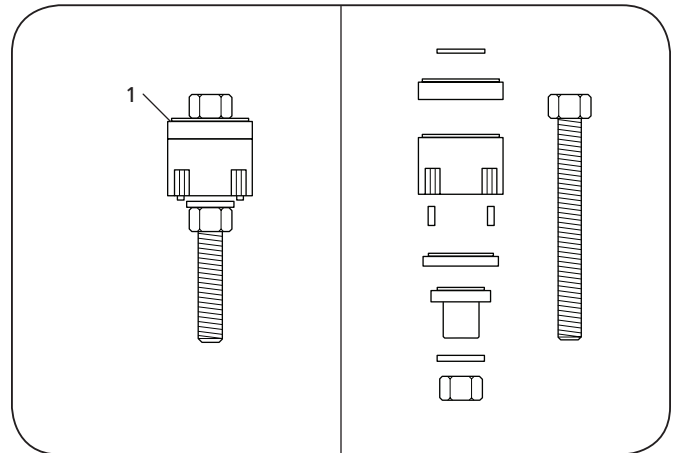
⚠ WARNING Operating the vehicle without proper air pressure can cause tire failure, fire, or loss of vehicle control which, if not avoided could result in death or serious injury.

- The suspension MUST be lifted when the vehicle is moving in reverse.

CAUTION Failure to lift axle when in reverse could result in tire or axle damage.

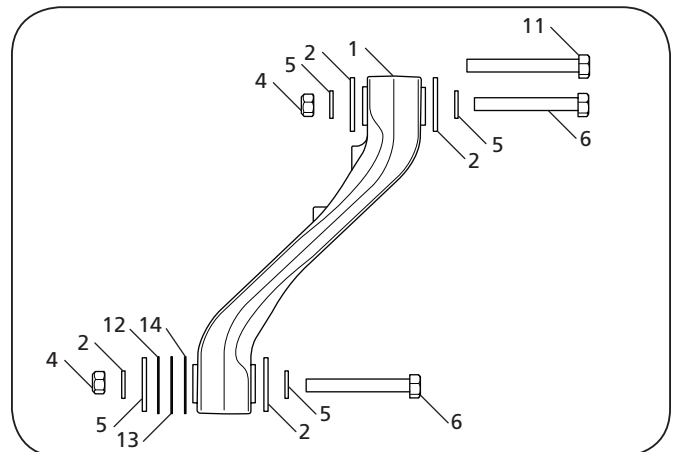
SRK 48100558: UPPER CONTROL ARM KIT 13K			
ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Bearing/Bushing Tool	50544017	1
2	LSZ13/20 Repair Manual, Control Arm and Bushing (not shown)	XL-PS20053RM-en-US	1
3	Crossmember Service Bulletin (not shown)	XL-PS20037SB-en-US	1

SRK 48100558



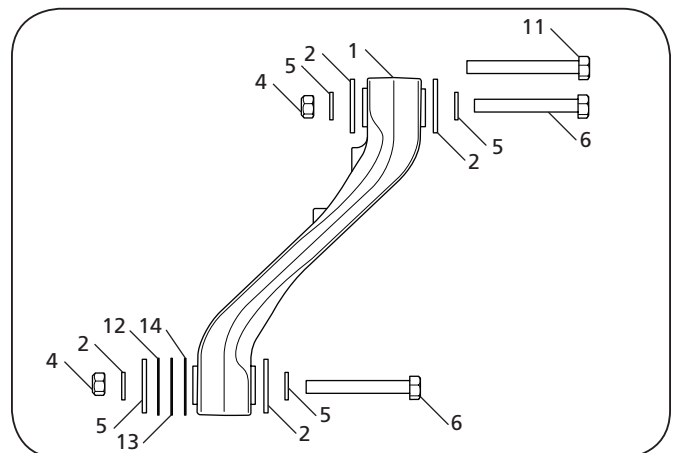
SRK 48100557: LOWER CONTROL ARM KIT 13K			
ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Control Arm Assembly	90517255	1
2	Flat Washer, Lock-Out	93600566	4
4	Nut, Hex, Lock .75"-10 GR C	93400494	2
5	Washer, Flat, Narrow, .75"	93600156	4
6	Cap Screw, Hex .75"-10 x 6" GR 8	93003659	2
9	LSZ13/20 Repair Manual, Control Arm and Bushing (not shown)	XL-PS20053RM-en-US	1
10	Crossmember Service Bulletin (not shown)	XL-PS20037SB-en-US	1
11	Cap Screw, Hex .75"-10 x 6.5" GR 8	93003671	1
12	Shim, .005" Thick	90036302	2
13	Shim, .010" Thick	90036303	2
14	Shim, .020" Thick	90036304	2

SRK 48100557



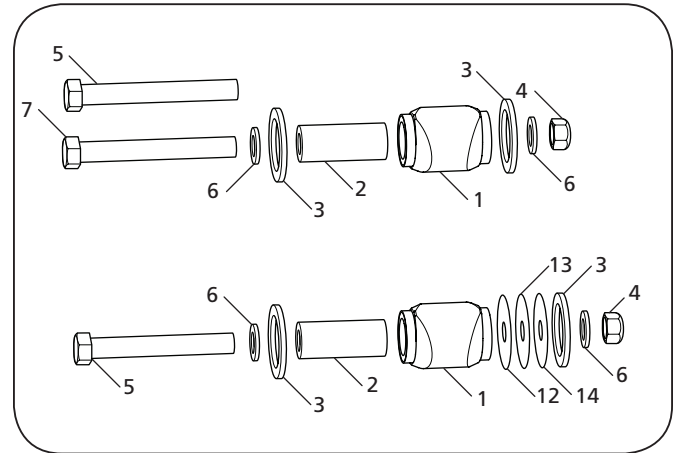
SRK 48100608: UPPER CONTROL ARM KIT 13K			
ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Control Arm Assembly	90517255	1
2	Flat Washer, Lock-Out	93600566	4
3	Cap Screw, Hex, .75"-10 x 6.75" GR 8	93003677	1
4	Nut, Hex, Lock .75" - 10 GR C	93400494	2
5	Washer, Flat, Narrow, .75"	93600156	4
6	Cap Screw, Hex .75" - 10 x 6" GR 8	93003659	1
9	Cap Screw, Hex, .75"-10 x 7" GR 8	93003683	1
10	LSZ13/20 Repair Manual, Control Arm and Bushing (not shown)	XL-PS20053RM-en-US	1
11	Crossmember Service Bulletin (not shown)	XL-PS20037SB-en-US	1
12	Shim, .005" Thick	90036302	2
13	Shim, .010" Thick	90036303	2
14	Shim, .020" Thick	90036304	2

SRK 48100608

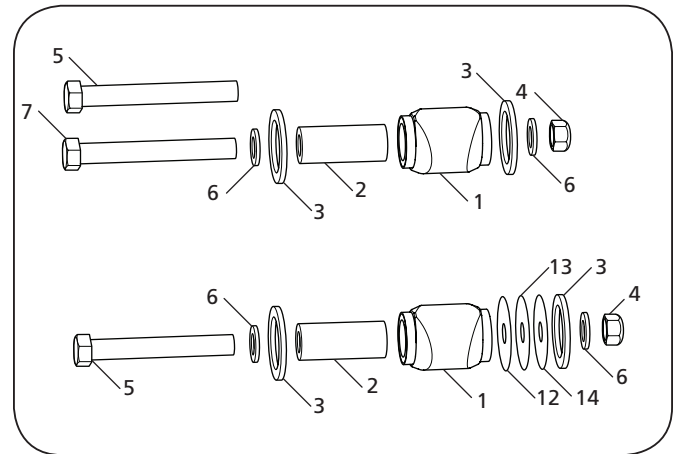


SRK 48100553: LOWER BUSHING KIT 13K

ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Bushing	90008280	4
2	Core Pin-Coated	90038544	4
3	Flat Washer, Lock-Out	93600566	8
4	Nut, Hex, Lock .75" -10 GR C	93400494	4
5	Cap Screw, Hex .75" - 10 x 6" GR 8	93003659	4
6	Washer, Flat, Narrow, .75"	93600156	8
7	Cap Screw, Hex .75" - 10 x 6.5" GR 8	93003671	2
8	LSZ13/20 Repair Manual, Control Arm and Bushing (not shown)	XL-PS20053RM-en-US	1
11	Crossmember Service Bulletin (not shown)	XL-PS20037SB-en-US	1
12	Shim, .005" Thick	90036302	2
13	Shim, .010" Thick	90036303	4
14	Shim, .020" Thick	90036304	4

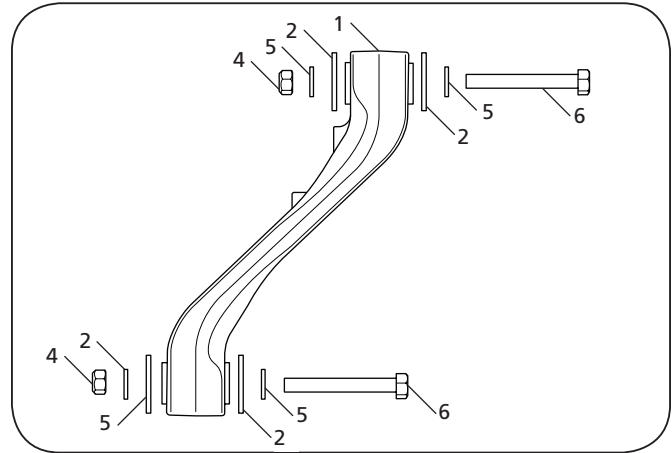
SRK 48100553

SRK 48100607: UPPER BUSHING KIT 13K

ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Bushing	90008280	4
2	Core Pin-Coated	90038544	4
3	Flat Washer, Lock-Out	93600566	8
4	Nut, Hex, Lock .75" -10 GR C	93400494	4
5	Cap Screw, Hex .75" - 10 x 6" GR 8	93003659	2
6	Washer, Flat, Narrow, .75"	93600156	8
7	Cap Screw, Hex .75" - 10 x 6.75" GR 8	93003677	2
9	LSZ13/20 Repair Manual, Control Arm and Bushing (not shown)	XL-PS20053RM-en-US	1
11	Crossmember Service Bulletin (not shown)	XL-PS20037SB-en-US	1
12	Cap Screw, Hex, .75"-10 x 7" GR 8	93003683	1
13	Shim, .005" Thick	90036302	4
14	Shim, .010" Thick	90036303	4
15	Shim, .020" Thick	90036304	4

SRK 48100607


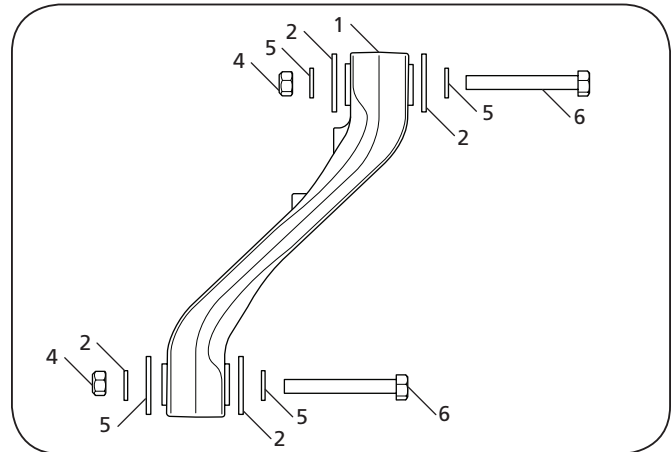
SRK 48100618: LOWER CONTROL ARM KIT 20K			
ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Control Arm Assembly, Lower	90517309	1
2	Washer, Lock-Out	93600566	4
3	Cap Screw, Hex .875 - 9 x 6.5 GR C	93003892	1
4	Nut, Hex Lock .875 - 14 GR C	93400499	2
5	Washer, Flat, Narrow, .88"	93600160	4
6	Cap Screw Hex, .875 - 14 x 6 GR 8	93003870	1
7	LSZ13/20 Repair Manual, Control Arm and Bushing (not shown)	XL-PS20053RM-en-US	1

SRK 48100618



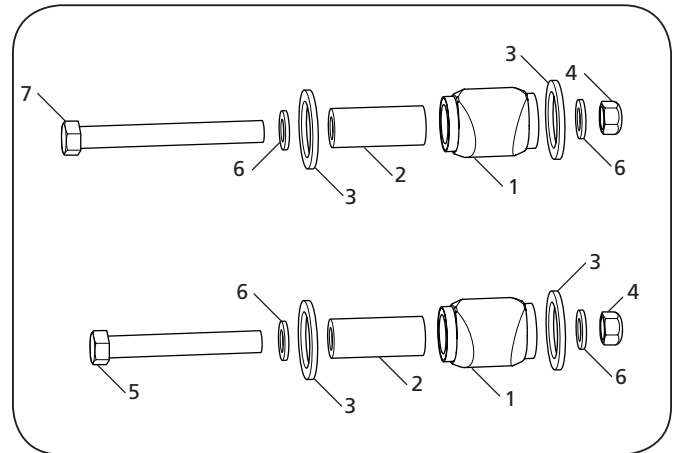
SRK 48100631: UPPER CONTROL ARM KIT 20K			
ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Control Arm Assembly	90517308	1
2	Washer, Lock-Out	93600566	4
3	Cap Screw, Hex .875 - 9 x 6.5 GR C	93003894	1
4	Nut, Hex Lock .875 - 14 GR C	93400499	2
5	Washer, Flat, Narrow, .88"	93600160	4
6	Cap Screw Hex, .875 - 14 x 6 GR 8	93003870	1
7	LSZ13/20 Repair Manual, Control Arm and Bushing (not shown)	XL-PS20053RM-en-US	1

SRK 48100631

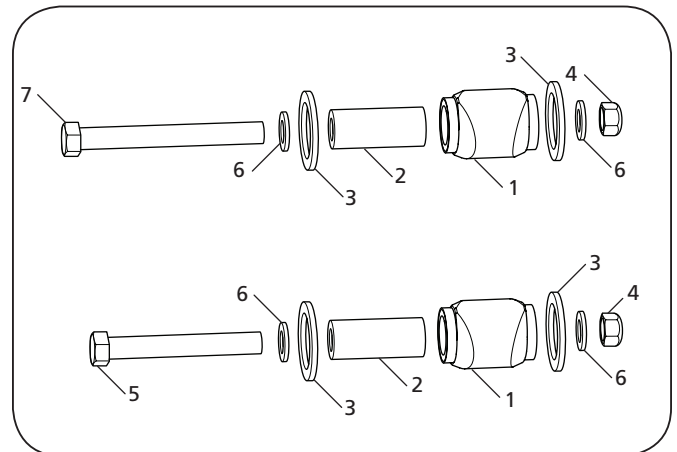


SRK 48100615: LOWER BUSHING KIT 20K

ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Bushing	90008280	4
2	Core Pin-Coated-7/8" Fastners Coated	90038584	4
3	Flat Washer, Lock-Out	93600566	8
4	Nut, Hex, Lock .875 - 14 GR C	93400499	4
5	Cap Screw, Hex .875 - 14 x 6" GR 8	93003870	2
6	Washer, Flat, Narrow, .88"	93600160	8
7	Cap Screw, Hex .875 - 14 x 6.5" GR 8	93003882	2
8	LSZ13/20 Repair Manual, Control Arm and Bushing (not shown)	XL-PS20053RM-en-US	1

SRK 48100615

SRK 48100630: UPPER BUSHING KIT 20K

ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Bushing	90008280	4
2	Core Pin-Coated-7/8" Fastners Coated	90038584	4
3	Flat Washer, Lock-Out	93600566	8
4	Nut, Hex, Lock .875 - 14 GR C	93400499	4
5	Cap Screw, Hex .875 - 14 x 6" GR 8	93003870	2
6	Washer, Flat, Narrow, .88"	93600160	8
7	Cap Screw, Hex .875 - 14 x 7" GR 8	93003894	2
8	LSZ13/20 Repair Manual, Control Arm and Bushing (not shown)	XL-PS20053RM-en-US	1

SRK 48100630


LSZ13/20 Control Arm and Bushing

The instructions below pertain to all procedures and must be performed prior to replacing bushings or control arms.

1. With the vehicle unloaded and/or trailer disconnected on a level surface, set parking brakes and chock drive tires to prevent the vehicle from rolling forward or backward.
2. Place suspension in the in-service position. Exhaust air pressure in the suspension air springs. Remove the air pressure using the air pressure regulator or control valve.

2. LSZ13 Remove Lower Control Arm

Required Tools:

- 1-1/8" socket and wrench
- Small pry bar
- 3/8" open-end wrench
- 3/4" wrench and socket
- 1/2" socket
- Small hydraulic press or NEWAY bushing/bearing tool
- Torque wrench capable of 250 ft.-lbs.
- Roll of masing tape (optional)

NOTE: DO NOT remove and replace control arms on both sides at the same time. Remove one side at a time.

1. Remove and discard two (2) 3/4" lock nuts and two (2) 3/4" washers from both lower 3/4" pivot bolts.
2. Remove and discard lower two (2) 3/4" pivot bolts and two (2) 3/4" washers.
3. Remove the lower control arm, retain if NOT replacing. Discard four (4) wear washers.

Servicing the upper control arm, go to Section 3

Replacing bushings in lower control arm, go to Section 6

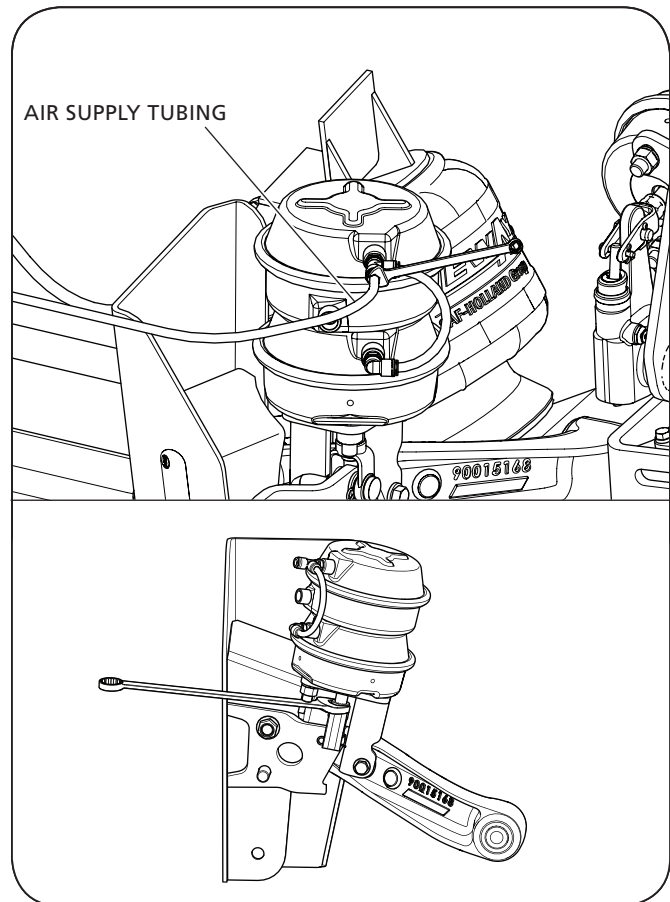
Installing new lower control arm, go to Section 8

3. LSZ13 Remove Upper Control Arm

NOTE: DO NOT remove and replace control arms on both sides at the same time. Remove and replace one side at a time.

1. Record the position of all four (4) crossmember spacers (if equipped).
2. Disconnect supply tubing to SuperChamber by depressing release collar with 3/8" open-end wrench on fitting at same time pulling on supply tubing (**Figure 1**).
3. Remove and retain two (2) 1/2" bolts, two (2) 1/2" lock washers, and lower air spring support plate (if equipped) that attach air spring piston to axle.

Figure 1



4. Remove and discard the two (2) 3/4" lock nuts and two (2) 3/4" washers from both upper pivot bolts.
5. Extend SuperChamber™ clevis to allow removal of clevis pin and hardware. Retain the clevis pin and hardware (**Figure 1**).
6. Remove and discard (2) 3/4" pivot bolts and two (2) 3/4" washers from both upper pivots.
7. Remove and retain one (1) 3/4" bolt and one (1) 3/4" washer from lower lift bracket.
8. Remove and retain two (2) 1/2" bolts, two (2) 1/2" lock nuts and four (4) 1/2" washers that attach lift assembly to upper control arm.
9. Remove and discard two (2) 3/4" pivot bolts two (2) 3/4" washers from both upper pivots.
10. Remove and retain two (2) crossmember spacers (if equipped).
11. Remove upper control arm, retain if NOT replacing. Discard four (4) wear washers.

Installing new bushings, go to Section 6.

Replacing upper control arm, go to Section 7 discard upper control arm.

4. LSZ20 Remove Lower Control Arm

Required Tools:

- 1-5/16" combination wrench
- 1-5/16" socket
- 3/4" socket
- 3/4" wrench
- 3/8" open-end wrench
- Small hydraulic press
- Roll of masking tape (optional)
- Torque wrench capable of 400 ft.-lbs.

NOTE: DO NOT remove and replace control arms on both sides at the same time. Remove and replace one side at a time.

1. Remove and discard two (2) 7/8" lock nuts and two (2) 7/8" washers from both lower 7/8" pivot bolts.
2. Remove and discard lower two (2) 7/8" pivot bolts and two (2) 7/8" washers.
3. Remove the lower control arm, retain if NOT replacing. Discard four (4) wear washers.

Servicing upper control arm, go to Section 5.

Replacing bushings in lower control arm, go to Section 6.

Replacing lower control arm, go to Section 10.

5. LSZ20 Remove Upper Control Arm

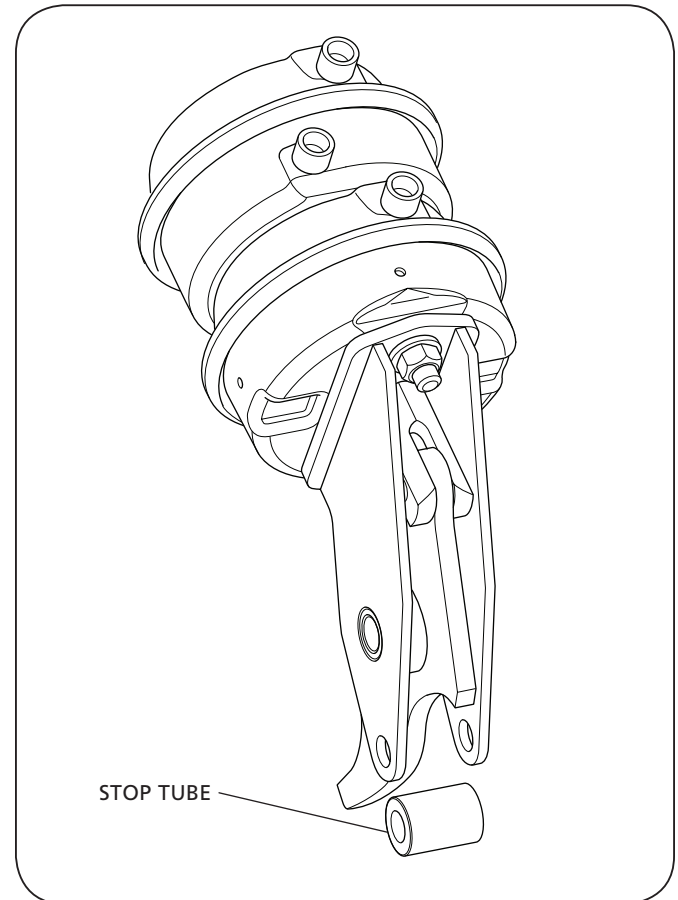
NOTE: DO NOT remove both upper and lower control arms on both sides. Remove one side at a time.

1. Remove and retain two (2) 1/2" bolts and two (2) 1/2" lock washers that attach the air spring piston to the axle.
2. Disconnect supply tubing to SuperChamber by depressing release collar with 3/8" open-end wrench on fitting at same time pulling on supply tubing (**Figure 1**).
3. Remove and discard two (2) 7/8" lock nuts and two (2) 7/8" washers from both upper 7/8" pivot bolts.
4. Remove and retain one (1) 3/4" bolt, (1) 3/4" lock nut and two (2) 3/4" washers from lift assembly.
5. Remove and retain lift assembly and stop tube (**Figure 2**)
6. Remove and discard upper two (2) 7/8" pivot bolts and two (2) 7/8" washers from both upper pivots.
7. Remove upper control arm, retain if NOT replacing. Discard four (4) wear washers.

Replacing bushings in control arms, go to Section 6.

Replacing control arms, go to Section 9.

Figure 2



6. LSZ13/LSZ20 Replacing Bushings

Required Tools:

- Small hydraulic press or NEWAY bushing/bearing tool

1. Remove four (4) wear washers from both the bushings within lower control arm.
2. Using a small hydraulic press or a NEWAY bushing/bearing tool, remove both bushings from control arm (**Figure 3**).
3. Clean control arm bushing bores using a piece of emery cloth or a wire brush to remove any rust or attached rubber.

IMPORTANT: DO NOT use any type of petroleum-based product such as oil or grease for pressing in bushings.

4. Using an approved lubricant such as P-80 rubber lube, press in two (2) new bushings into control arms. Use **Figure 4** to properly clock the bushing.

NOTE: Make sure the bushing is centered in the control arm

7. LSZ13 Install New or Re-bushed Upper Control Arm

1. Position new or re-bushed upper control arm assembly with four (4) wear washers with lift bracket mounting holes towards frame bracket (**Figure 5**).
2. If equipped with spacers install one (1) 3/4" bolt, one (1) 3/4" washer, crossmember with two (2) crossmember spacers and shelf bracket. Ensure spacers are re-installed as recorded in Section 3 Step 1.
3. If equipped with wrapper and shelf bracket install one (1) 3/4" pivot bolt and one (1) 3/4" washer into wrapper and shelf bracket.
4. Install one (1) new 3/4" upper pivot bolt and 3/4" washer at axle enough to be flush with the outboard face of the bushing core pin (**Figure 6**). Install shims to fill the gap using the three (3) thicknesses of shims, .020", .010" and .005" between the bushing core pin and the clevis face (**figure 6**). Once gap is reduced as much as possible, push pivot bolt all the way to allow installation of one (1) 3/4" nut and one (1) 3/4" washer.

NOTE: To install new 3/4" lock nut and new 3/4" flat washer at upper axle pivot connection, the thread portion of bolt can be reached from bottom of axle knuckle. If successful installing one (1) 3/4" lock nut and one (1) 3/4" washer skip optional procedures below.

Figure 3

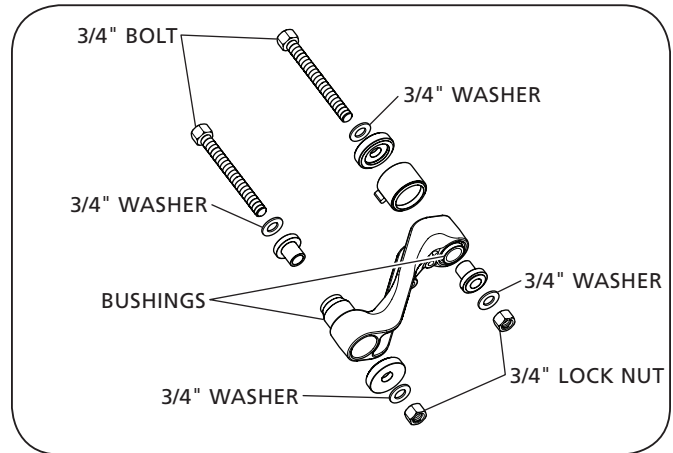


Figure 4

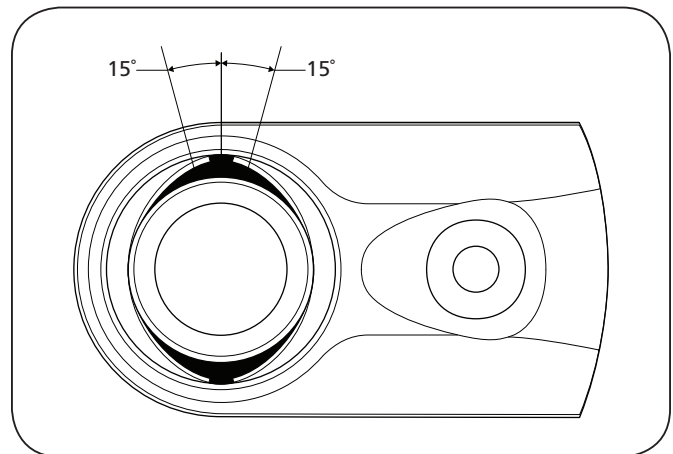
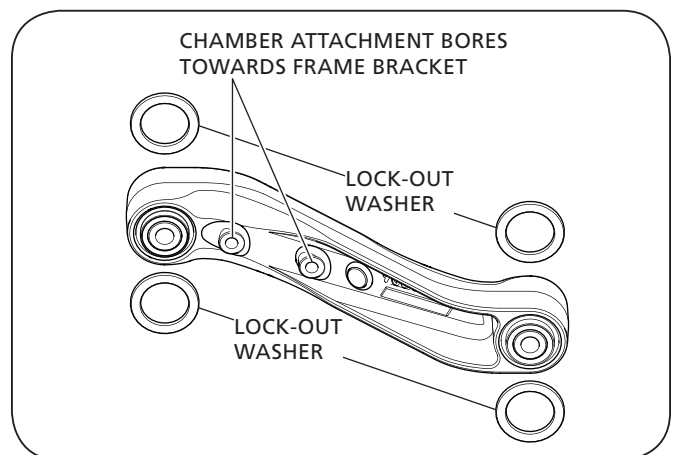
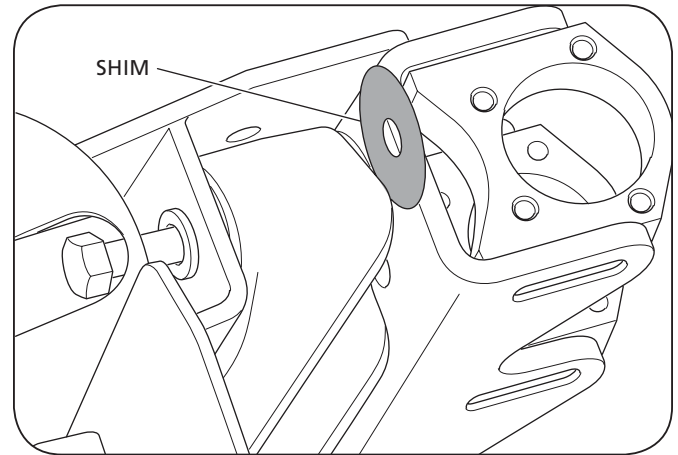


Figure 5



- **Optional procedure to install 3/4" nut and washer:**
 Using a pair of needle nose pliers install the 3/4" flat washer onto the 3/4" bolt at the upper control rod pivot on the axle. Install the nut by rotating the bolt and using the pair of needle nose to start the 3/4" lock nut onto the 3/4" pivot bolt.
 - **Optional procedure to install 3/4" nut and washer:**
 Using a 1-1/8" box end wrench with tape to retain the lock nut, rotate the 3/4" upper pivot bolt to install the 3/4" lock nut onto the upper 3/4" bolt at the axle.
5. Install lift assembly on control arm with two (2) 1/2" bolts and two (2) 1/2" washers into lift bracket mounting holes on upper control arm. Install two (2) 1/2" lock nuts and two (2) 1/2" washers. Torque two (2) 1/2" bolts according to specifications in Section 11.
 6. Plug in supply tubing into fitting on SuperChamber.
 7. Re-install two (2) 1/2" bolts, two (2) 1/2" lock washers, and lower air spring support plate (if equipped) that attach air spring piston to axle. Torque the 1/2" bolts according to specifications in Section 11.
 8. Install lower lift bracket onto the upper one (1) 3/4" pivot bolt at the frame bracket. Rotate the lower lift bracket to allow the installation of the clevis pin. Secure clevis pin using one (1) 5/16" bolt and one (1) 5/16" lock washer. Torque 5/16" bolt according to specifications in Section 11.
 9. Extend chamber clevis to allow installation of the lower one (1) 3/4" lower lift bracket bolt and 3/4" washer into frame bracket and lower lift bracket (**Figure 1**).
 10. Install one (1) 3/4" lock nut and one (1) 3/4" flat washer onto the lower one (1) 3/4" lower lift bracket bolt with one (1) 3/4" lock nut and one (1) 3/4" flat washer onto upper one (1) 3/4" pivot bolt. Torque all 3/4" hardware according to specifications in Section 11

Figure 6


8. LSZ13 Install New or Rebushed Lower Control Arm

NOTE: Make sure all four (4) wear washers are installed onto bushings prior to lower control arm installation (**Figure 7**).

IMPORTANT: The lift bracket mounting holes in lower control arm **MUST** be installed towards the frame bracket (**Figure 7**).

1. Position new or re-bushed upper control arm assembly with four (4) wear washers with chamber attachment bores towards frame bracket (**Figure 7**).
2. If equipped with spacers install one (1) 3/4" bolt, one (1) 3/4" washer, crossmember, two (2) crossmember spacers and shelf bracket.
3. If equipped with wrapper and shelf bracket install one (1) 3/4" pivot bolt and one (1) 3/4" washer into wrapper and shelf bracket.
4. Install new one (1) 3/4" lock nut and one (1) 3/4" washer at lower pivot at frame bracket.
5. At axle using one (1) new 3/4" lower pivot bolt and one (1) new 3/4" washer, install pivot bolt enough to be flush with the outboard face of the bushing core pin (**Figure 8**). Install shims to fill the gap using the three (3) thicknesses of shims, .020", .010" and .005" between the bushing core pin and the inside clevis face. Once the gap is reduced as much as possible, push pivot bolt all the way to allow installation of one (1) new 3/4" nut and one (1) new 3/4" washer. Torque the 3/4" pivot bolts according to specifications in Section 11.
- 5 Repeat on opposite side if needed, if not go to step 6.
6. Remove wheel chocks from drive tires.

Figure 7

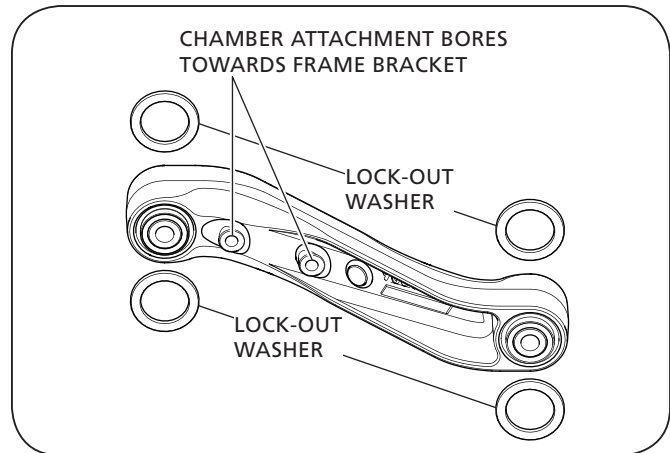
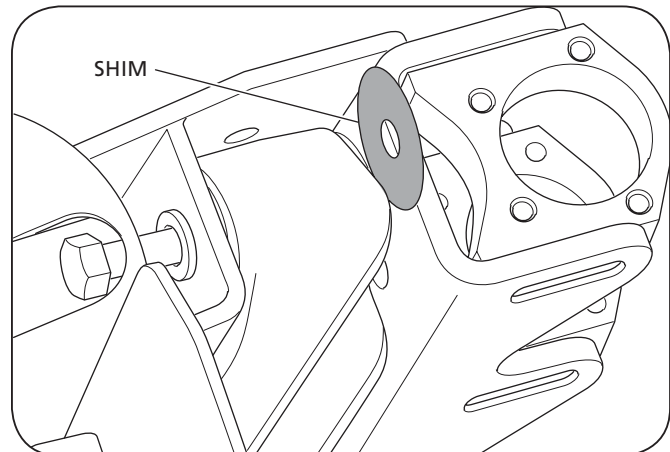


Figure 8



9. LSZ20 Install New or Rebushed Upper Control Arm

1. Position new or re-bushed upper control arm assembly with four (4) wear washers with lift bracket mounting holes towards frame bracket (**Figure 7**).
2. Install new one (1) 7/8" pivot bolt and one (1) new 7/8" washer at upper frame bracket pivot, spacer wrapper, shelf bracket and crossmember.
3. Re-install lift assembly onto one (1) 7/8" upper pivot bolt at frame bracket. Install lower lift assembly one (1) 3/4" bolt, one (1) 3/4" lock nut and one (1) 3/4" washers. Torque the one (1) 3/4" bolt according to specifications in Section 11.
4. Plug in supply tubing into fitting on lift assembly.
5. Install at axle one (1) 7/8" upper pivot bolt and one (1) 7/8" washer.
6. Using your hand thru window within front face of knuckle, install one (1) 7/8" nut and one (1) 7/8" washer (see optional procedure below). Torque 7/8" pivot bolts according to specifications in Section 11.
 - Optional procedure to install 7/8" nut and 7/8" washer: Using a 1-5/16" box end wrench with tape to retain the lock nut, rotate the one (1) 7/8" upper axle pivot bolt to install the one (1) 7/8" lock nut. Torque 7/8" pivot bolts according to specifications in Section 11.
7. Re-attach air spring to axle using two (2) 1/2" bolts with two (2) 1/2" lock washers to air spring mounting plate on axle. Torque two (2) 1/2" bolts according to specifications in Section 11.

10. LSZ20 Install New or Rebushed Lower Control Arm

1. Position new or re-bushed lower control arm assembly with four (4) wear washers into axle and frame bracket.

NOTE: Make sure all four (4) wear washers are installed onto bushings prior to lower control arm installation.

2. Install one (1) new 7/8" lower pivot bolt, one (1) new 7/8" washer, shelf bracket and spacer wrapper at frame bracket.
3. Install one (1) 7/8" lower pivot bolt and one (1) 7/8" washer at axle.
4. Install two (2) 7/8" lock nuts and two (2) 7/8" washers onto two (2) lower 7/8" pivot bolts. Torque two (2) lower 7/8" pivot lock nuts to torque specified in Section 11.
5. Repeat on opposite side if needed.
6. Remove the wheel chocks from drive tires.

11. Torque Specifications

NOTE: Torque specifications listed in this section are with clean lubricated/coated threads, supplied by SAF-HOLLAND.

IMPORTANT: The use of special lubricants with friction modifiers, such as Anti-Seize or Never-Seez®, without written approval from SAF-HOLLAND Engineering, will void warranty and could lead to over torquing of fasteners or other component issues.

General Information

- The torque specifications listed throughout the manual are applied to the lock nut and NOT the bolt.

IMPORTANT: Most of the fasteners used in this suspension are Grade 8 bolts and Grade C lock nuts. These fasteners have the strength and hardness properties required for their particular function. They **MUST** be replaced with fasteners of the same grade, size and form as the original in order to prevent failure (**Figure 10**).

⚠ WARNING Failure to use the proper fasteners when servicing the suspension could cause component failure which, if NOT avoided, could result in death or serious injury.

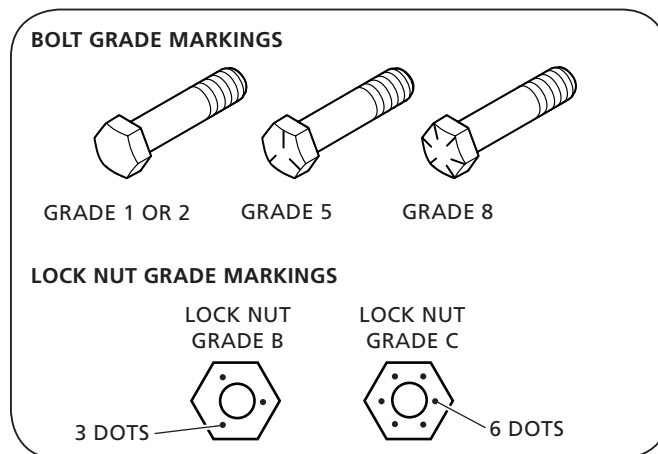
⚠ WARNING Failure to properly torque all fasteners will result in component failure which, if NOT avoided, could result in death or serious injury.

- All fasteners **MUST** be re-torqued after the first 100 hours of service or 5,000 miles (8,000 km).
- Refer to vehicle OEM for torque specifications for vehicle frame fastener hardware.

Table 1

COMPONENT	TORQUE RANGE	SIZE
Clevis Pin Assembly	18-24 ft-lb 24-33 N•m	5/16"-18
Chamber Bracket	37-50 ft-lb 50-68 N•m	1/2"-13
LSZ13 Pivot Connections	200-250 ft-lb 271-339 N•m	3/4"-10
LSZ20 Pivot Connections	330-370 ft-lb 447-502 N•m	7/8"-14

Figure 10





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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