

233-232-236 AUXILIARY AXLE SUSPENSION PIVOT BUSHING REPLACEMENT GUIDE

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PART NO:

SUSP. NO:

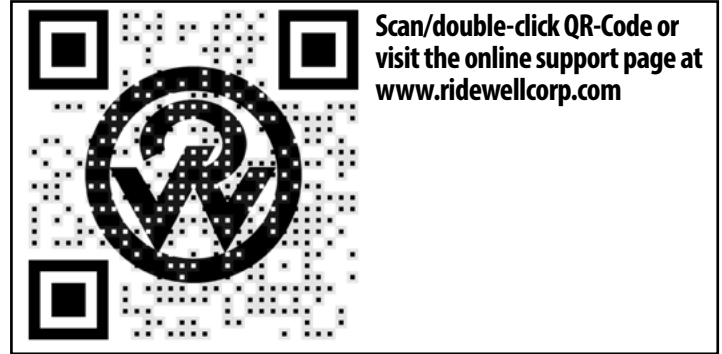
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GROSS AXLE WEIGHT RATING CERTIFICATION IS PER THE FINAL STAGE MANUFACTURER OR ALTERER.

THIS PRODUCT MAY BE COVERED UNDER ONE OR MORE PATENTS, ADDITIONAL PATENTS MAY BE PENDING.

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Notes and Cautions

All work should be completed by a trained technician using the proper tools and safe work procedures.

This guide uses two types of service notes defined as:

“NOTE:” Provides instructions and-or procedures to complete tasks and ensure the suspension and components function properly.

 **CAUTION** Indicates a hazardous situation or unsafe practice that, if not avoided, could result in equipment damage and serious injury.

Suspension Identification Tag

A (606-) **Installation/Assembly Number** is listed as the **Part Number** when other components are factory installed onto the suspension.

The **Suspension Number** and **Serial Number** refer to the model and the date of manufacture of an individual suspension system.

Please refer to suspension number/part number and serial number when contacting the Ridewell Customer Service Department for replacement parts/warranty information.


Auxiliary Axle – Self-Steering Option

Self-steering auxiliary axle suspensions are designed to steer only in the forward direction. The suspension must be raised off the ground or locked into a non-steering mode during reverse travel to avoid damage.

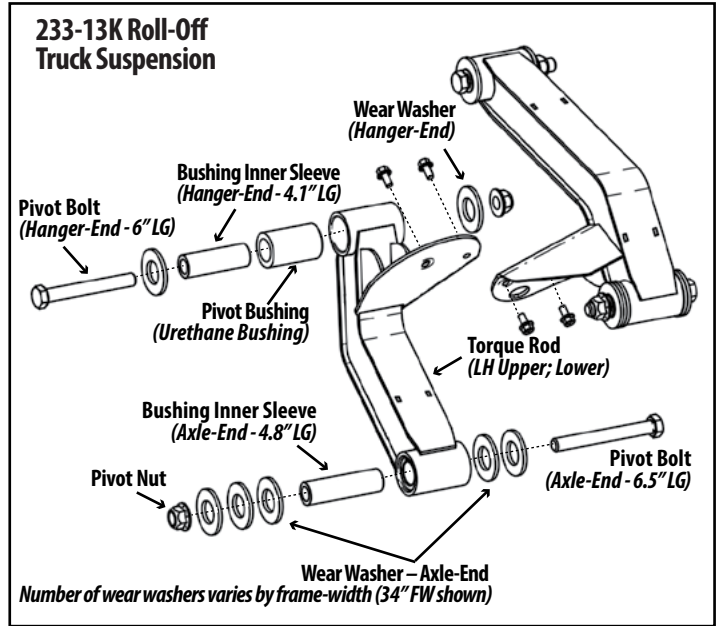
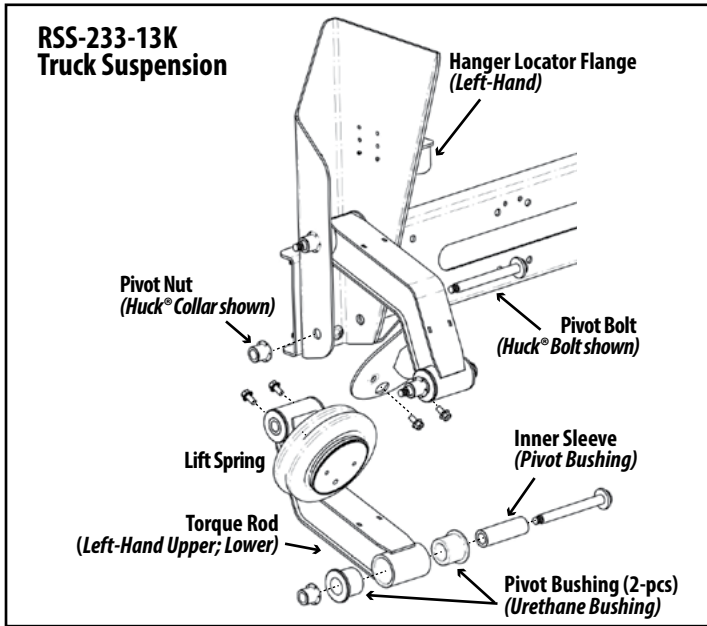
Ridewell Suspensions strongly recommends the use of automated systems that raise/lock the liftable axle during reverse travel.

If there is no automated system, the installation of a visual/audible indicator to assist with manual operation of the lift-in-reverse system is strongly recommended.

The driver should maintain slow speeds and avoid extreme turns when maneuvering in reverse with the steering lock engaged.

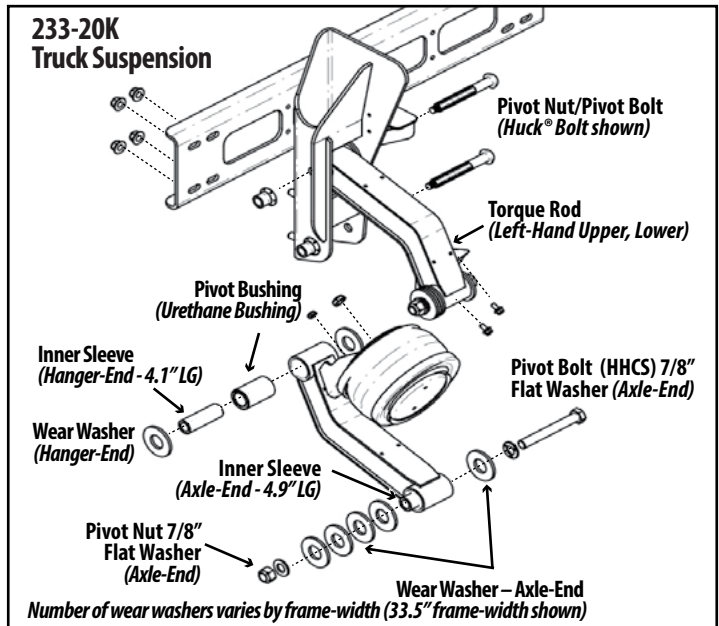
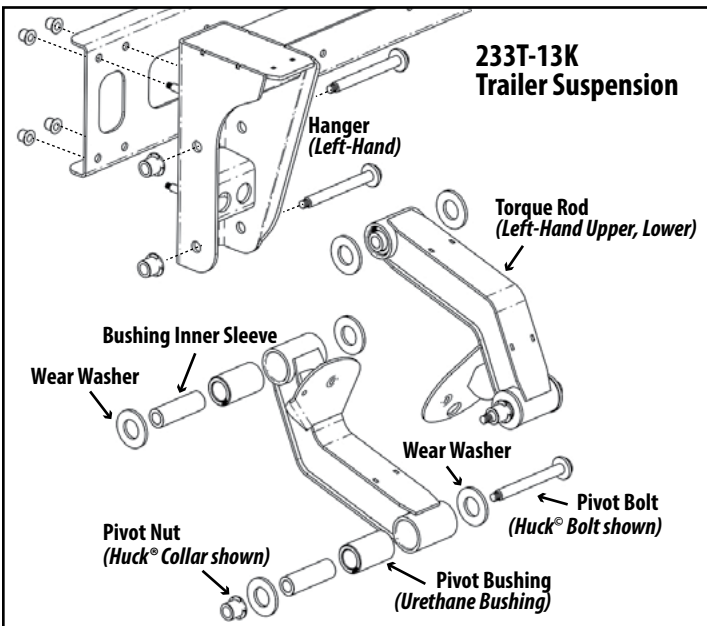
 **CAUTION** Failure to lift the suspension and-or engage the steering-lock during reverse travel can cause component damage and void the warranty.

RSS-233 Auxiliary Axle Suspension – Pivot (Bushing) Connection



233-8K-10K-13K Truck Suspensions bushing replacement kits include traditional hardware components, two-piece pivot bushings and wear washers to replace eight pivot connections.

233-13K Roll-Off Truck Suspensions bushing replacement kits include traditional hardware, two different lengths of one-piece bushings, and enough wear washers for different frame-widths.



233T-13K/20K Trailer Suspensions bushing replacement kits include traditional hardware, a one-piece pivot bushing and wear washers for the eight pivot connections.

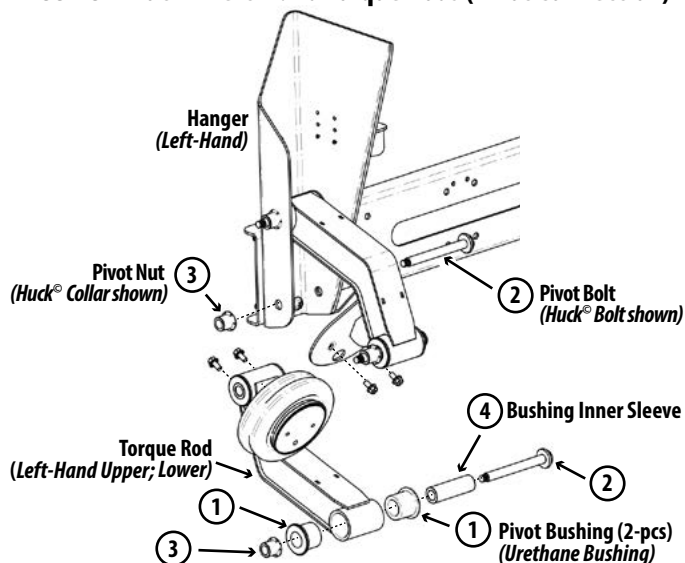
233-20K Truck Suspensions bushing replacement kits include traditional hardware components, two different lengths of one-piece bushings, and enough wear washers for different frame-widths.

233 8K-10K-13K TRUCK SUSPENSION (BUSHING REPLACEMENT KITS)

DIAG No.	QTY/Axle	Part No.	Item Description	Torque (foot-pound/Newton-meter)	
—	(1)	6040134	Bushing Replacement Kit (Traditional Hardware)	310 ft-lb	420 N-m
Included in Kit	1	16	1120023	BUSH URE 2X1.31X1.80L 95 DURO	
	2	8	1140049	HHCS 3/4" 16NF 6"L GR8 P&O	
	3	8	1150016	L'NUT 3/4" 16NF FL-TL GR8 ZN	
	4	8	9090079	BUSHING SLEEVE 1.31"ODX.813"ID X 4.111"LG	
	—	—	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5	
—	(1)	6040133	(No Hardware) Bushing Replacement Kit	310 ft-lb	420 N-m
Included in Kit	1	16	1120023	BUSH URE 2X1.31X1.80L 95 DURO	
	4	8	9090079	BUSHING SLEEVE 1.31"ODX.813"ID X 4.111"LG	
	—	—	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5	
—	(1)	6040215	(Huck® Hardware) Bushing Replacement Kit	N/A	
Included in Kit	1	16	1120023	BUSH URE 2X1.31X1.80L 95 DURO	
	2	8	1130053	HUCK BOLT 3/4" 4.5x4.87 GL GR8 (BOBTAIL)	
	3	8	1150059	HUCK COLLAR 3/4" (BOBTAIL)	
	4	8	9090079	BUSHING SLEEVE 1.31"OD X .813"ID X 4.111"LG	
	—	—	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5	
Fasteners			Locknut (Air Spring, Upper)	3/4"-16NF	50 ft-lb 68 N-m
			Locknut (Dual-Stud Air Spring, Upper)	1/2"-13NC	25 ft-lb 35 N-m
			FLGD Lock Screw (Air Spring, Lower; Lift Spring)	3/8"-16NC	25 ft-lb 35 N-m
			Locknut(Steering Damper)	3/4"-10NC	160 ft-lb 217 N-m

CAUTION Torque values reflect a lubricated thread condition (Nuts are pre-lubed). Do not overtorque. Failure to install and maintain fasteners at torque specifications could result in suspension failure and void the warranty.

233-13K Truck – Left-Hand Torque Rods (Pivot Connection)



Vehicle Preparation

Park the vehicle on a level surface. Chock wheels to keep vehicle from moving.

Exhaust all air from the air system.

Disassemble suspension, if necessary, to reach the pivot connection.

CAUTION Failure to properly chock the wheels/exhaust all air from the air system could allow vehicle movement that could result in serious injury.

Re-bushing procedure continued on next page

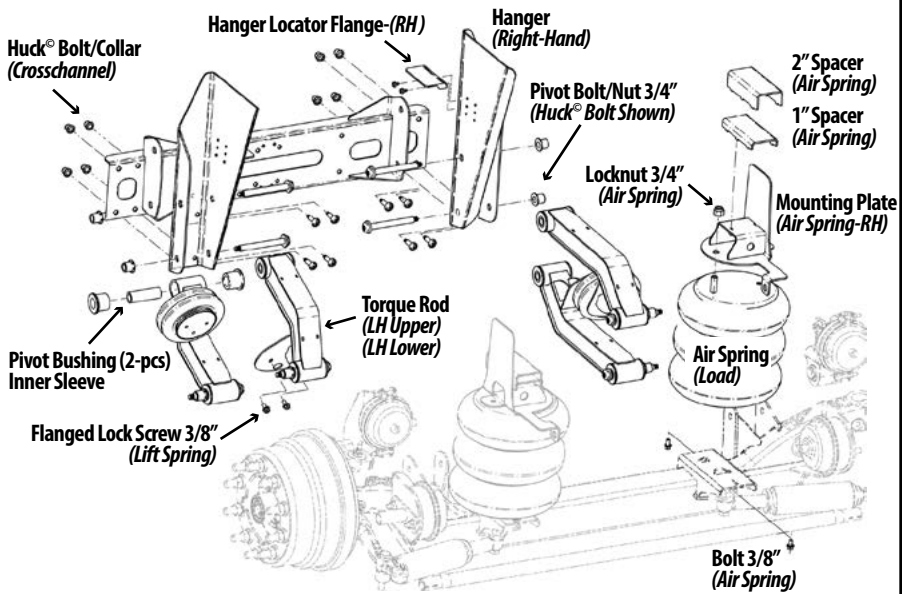
233 8K-10K-13K Truck Bushing Replacement Procedure (Continued from previous page)

Bushing replacement kits include wear washers and traditional hardware components to replace the Huck® fasteners used in factory assembly.

1. Remove pivot hardware by cutting/grinding away Huck® Collar. Discard pivot hardware (Figure 1).
2. Remove bushing assembly from rod eye. Clean the torque rod eye of debris/corrosion.
3. Apply Energy Suspensions® Formula 5 Prelube to the bore (inside) of each bushing half.
NOTE: Do not substitute - Urethane bushing lubricant supplied with kit.
4. Press bushing halves into torque rod eye until bushing half is snug against the eye.
NOTE: Mallet may be needed to install bushing halves.
5. Press inner sleeve into the installed bushing opening. Check that inner sleeve is flush with both sides of installed bushing.
NOTE: Mallet/bushing press needed to insert the inner bushing sleeve.
6. Install traditional pivot hardware (HHCS/Locknut). Torque to specifications (Chart/ENG Drawing).
7. Reassemble suspension, if necessary. Torque to specifications (Chart/Engineering Drawing).
8. Check that wheel toe-in setting is between 1/32" and 3/32". Adjust wheel-toe if necessary (Page 23).

CAUTION Failure to torque pivot hardware can result in suspension failure and void the warranty.

233-13K Truck Components – Single air spring mounting stud NOTE: Suspension manufactured before April, 2022



233-13K Truck Components – Dual air spring mounting stud NOTE: Suspension manufactured after May 1, 2022

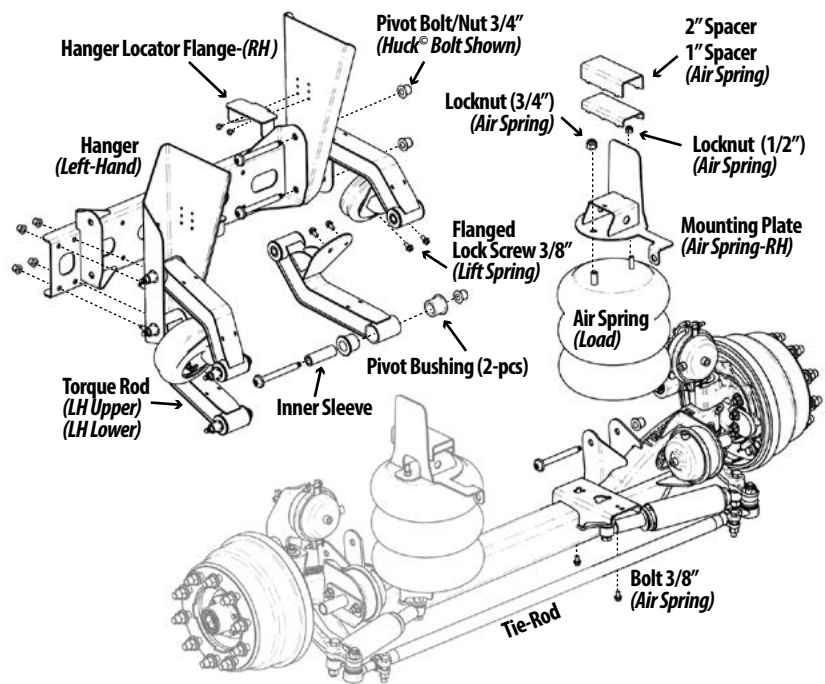


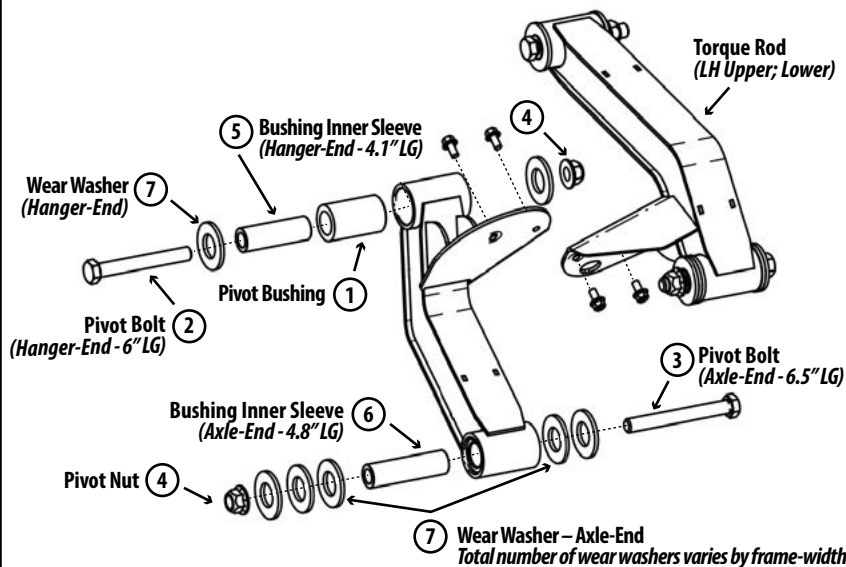
Figure 1.
233-13K Truck Suspension bushing replacement kits include two-piece pivot bushings and traditional hardware components to replace eight pivot connections.

233 13K ROLL-OFF TRUCK SUSPENSION (BUSHING REPLACEMENT KITS)

DIAG No.	QTY/Axle	Part No.	Item Description	Torque (foot-pound/Newton-meter)	
—	(1)	6040218	Bushing Replacement Kit (Traditional Hardware)	310 ft-lb	420 N-m
Included in Kit	1	8	1120047	BUSH 2.020x1.314x3.325L 88D	
	2	4	1140049	HHCS 3/4" 16NF 6" L GR8 P&O	
	3	4	1140050	HHCS 3/4" 16NF 6.5" L GR8 P&O (Axle-End)	
	4	8	1150016	L'NUT 3/4" 16NF FL-TL GR8 ZN	
	5	4	9090079	SLV 1.31"ODx.813"ID X 4.111"LG	
	6	4	9090103	SLV 1.31"ODx.813"IDx4.861" (Axle-End)	
	7	28	1160033	WASH 215x2.625x1.35 233 13K	
	—	—	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5	
—	(1)	6040217	(No Hardware) Bushing Replacement Kit-	310 ft-lb	420 N-m
Included in Kit	1	8	1120047	BUSH 2.020x1.314x3.325L 88D	
	5	4	9090079	SLV 1.31"ODx.813"ID X 4.111"LG	
	6	4	9090103	SLV 1.31"ODx.813"IDx4.861" (Axle-End)	
	7	28	1160033	WASH 215x2.625x1.35 233 13K	
	—	—	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5	
Fasteners			Locknut (Air Spring, Upper)	3/4"-16NF	50 ft-lb 68 N-m
			FLGD Lock Screw (Air Spring, Lower; Lift Spring)	3/8"-16NC	25 ft-lb 35 N-m
			Locknut - (Crosschannel)	1/2"-13NC	25 ft-lb 35 N-m
			Locknut - (Steering Damper)	3/4"-10NC	160 ft-lb 217 N-m

CAUTION Torque values reflect a lubricated thread condition (Nuts are pre-lubed). Do not overtorque. Failure to install and maintain fasteners at torque specifications could result in suspension failure and void the warranty.

233-13K Roll-Off Truck – Left-Hand Torque Rods; 34" Frame-Width Shown



Vehicle Preparation

Park the vehicle on a level surface. Chock wheels to keep vehicle from moving.

Exhaust all air from the air system.

Disassemble suspension, if necessary, to reach the pivot connection.

CAUTION Failure to properly chock the wheels/exhaust all air from the air system could allow vehicle movement that could result in serious injury.

Re-bushing procedure continued on next page

233-13K Roll-Off Truck Bushing Replacement Procedure (continued from previous page)

Bushing kits include traditional hardware for eight pivot connections.

- Count the number of wear washers installed on the Axle-End of both the Left- and Right-Hand Torque Rods (Figure 2).
- Remove pivot hardware and discard. Remove pivot bushing and wear washers and discard.
- Clean rod eye. Apply Energy Suspensions® Formula 5 Prelube to bore (inside) of new bushing. NOTE: Do not substitute. Special urethane lubricant included with all Bushing Replacement Kits.
- Install the new bushing into the eye of the torque rod.
NOTE: Mallet /Bushng Press is needed to install the bushing.
- Wear Washer - Hanger-End Install (Bushing Inner Sleeve - 4.1")
Press the bushing inner sleeve into the installed bushing. Center sleeve so that both ends extend past the sides of the bushing. Inner sleeve must be flush with or extend past the outside of wear washer on both ends. Assemble pivot connection with one wear washer on each side of torque rod.
- Wear Washer Axle-End Install (Bushing Inner Sleeve - 4.8")
Press the bushing inner sleeve into the installed bushing. Position the inner sleeve so that one end extends further past the bushing on the appropriate side as determined by the frame width. Assemble pivot connection with correct number of wear washers on either end of the inner sleeve on the axle-end of the torque rod (233-13K Chart/Engineering Drawing).
NOTE: Bushing inner sleeve must be flush with or slightly past the outside of the installed wear washers on both sides of torque rods. Adjust the inner sleeve if necessary.
- Torque pivot nut to 500 ft-lb (678 N-m).
- Reassemble suspension. Torque to specifications (233-13K Chart/Engineering Drawing).
- Check wheel toe-in setting (between 1/32" and 3/32"). Adjust if necessary (Page 23).

CAUTION Failure to torque pivot hardware can result in suspension failure and void the warranty.

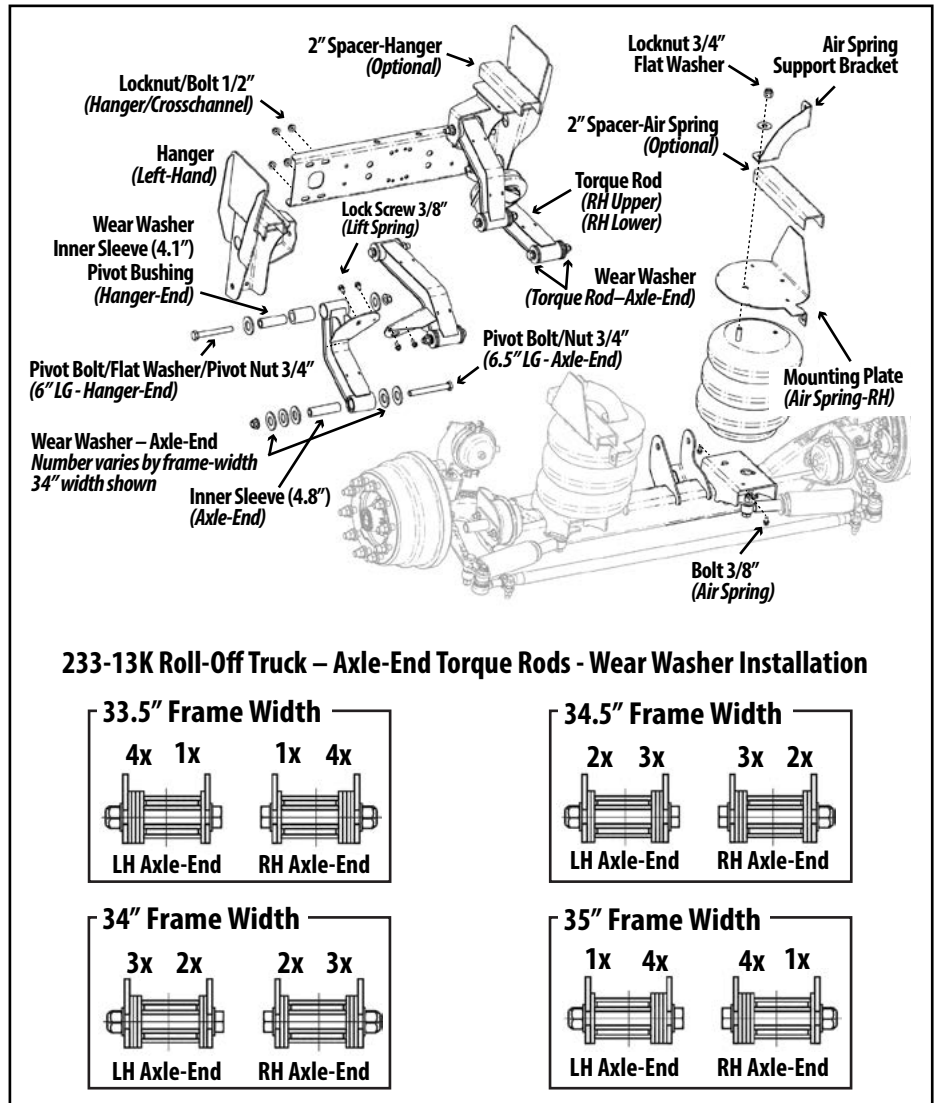
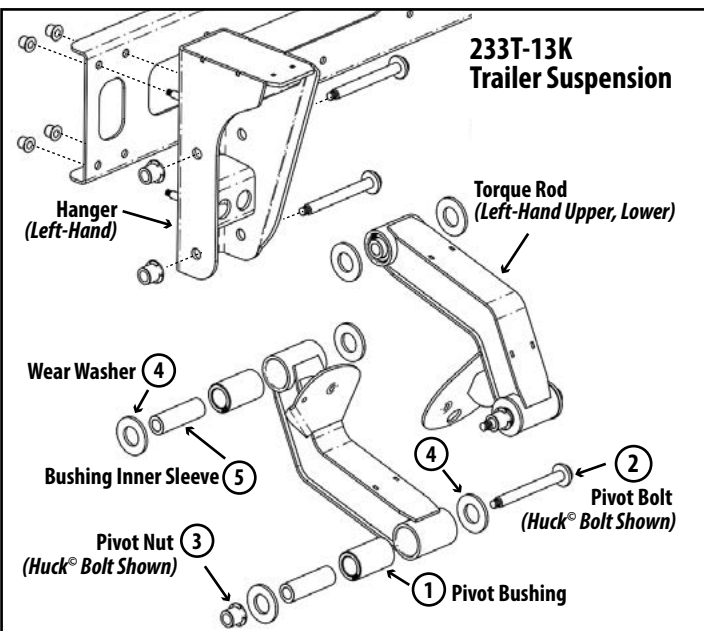


Figure 2.
Refer to the engineering drawing for the appropriate number of wear washers to install on the Left-Hand and Right-Hand torque rods.

233T 8K-10K-13K HD TRAILER (BUSHING REPLACEMENT KITS)

DIAG No.	QTY/Axle	Part No.	Item Description	Torque (foot-pound/Newton-meter)	
—	(1)	6040188	Bushing Replacement Kit (Traditional Hardware)	310 ft-lb	420 N-m
Included in Kit	1	8	1120047	BUSH 2.020 x 1.314 x 3.325 L 88D (H-D RED)	
	2	8	1140049	HHCS 3/4" 16NF 6"L GR8 P&O	
	3	8	1150016	L'NUT 3/4" 16NF FL-TL GR8 ZN	
	4	16	1160033	WASH 215x2.625x1.35 233 13K	
	5	8	9090079	BUSHING SLEEVE 1.31"ODX.813"ID X 4.111"LG	
	—	—	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5	
—	(1)	6040187	(No Hardware) Bushing Replacement Kit	310 ft-lb	420 N-m
Included in Kit	1	8	1120047	BUSH 2.020 x 1.314 x 3.325 L 88D (H-D RED)	
	4	16	1160033	WASH 215x2.625x1.35 233 13K	
	5	8	9090079	BUSHING SLEEVE 1.31"ODX.813"ID X 4.111"LG	
	—	—	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5	
—	(1)	6040216	(Huck® Hardware) Bushing Replacement Kit	N/A	
Included in Kit	1	8	1120047	BUSH 2.020 x 1.314 x 3.325 L 88D (H-D RED)	
	2	8	1130053	HUCK BOLT 3/4" 4.5X4.87 GL GR8 (BOBTAIL)	
	3	8	1150059	HUCK COLLAR 3/4" (BOBTAIL)	
	4	16	1160033	WASH 215 X 2.625 X 1.35 233 13K	
	5	8	9090079	BUSHING SLEEVE 1.31"ODX.813"ID X 4.111"LG	
	—	—	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5	
Fasteners			Locknut (Single-Fastener-Mounted A/SPG)	3/4"-16NF	50 ft-lb 68 N-m
			FLG Lock Screw (Dual-Fastener-Mounted A/SPG)	3/8"-16NC	25 ft-lb 35 N-m
			Hex Head Cap Screw (Air Spring; Lower)	1/2"-13NC	50 ft-lb 68 N-m
			Flanged Lock Screw (Lift Spring; Upper, Lower)	3/8"-16NC	25 ft-lb 35 N-m
			Locknut - (Steering Damper)	3/4"-10NC	160 ft-lb 217 N-m

CAUTION Torque values reflect a lubricated thread condition (Nuts are pre-lubed). Do not overtorque. Failure to install and maintain fasteners at torque specifications could result in suspension failure and void the warranty.



Vehicle Preparation – 233T-13K Trailer Bushing Replacement

Park the vehicle on a level surface. Chock wheels to keep vehicle from moving.

Exhaust all air from the air system.

Take suspension apart, if necessary, to reach the pivot connections.

CAUTION Failure to properly chock wheels and exhaust the air system could allow vehicle movement that could result in serious injury.

Re-bushing procedure continued on next page

Bushing Replacement Procedure

(continued from previous page)

Bushing replacement kits include wear washers and traditional hardware to replace the Huck® fasteners used in factory assembly.

1. Cut/Grind away Huck® Collars. Take pivot connection apart. Discard the pivot hardware and wear washers (Figure 3).
2. Remove pivot bushing assembly and discard.
NOTE: Bushing assembly before October 2018 consists of two-piece bushing and inner sleeve.
3. Clean torque rod eye of foreign debris/corrosion with wire brush before installing new bushing.
4. Apply Energy Suspensions® Formula 5 PreLube to the bore (inside) of the new bushing.
NOTE: Do not substitute - polyurethane lubricant included with bushing replacement kits.
5. Install (press) bushing into the torque rod eye.
NOTE: Mallet/Bushing Press needed to install bushing.
6. Press the inner sleeve into the installed bushing. Center sleeve inside bushing so that ends extend slightly past bushing sides.
7. Assemble the pivot connection with one wear washer on each side of torque rod. Inner sleeve must be flush with or extend slightly past the outside of the wear washers after pivot connection assembly.
8. Torque pivot hardware to specifications (Chart/ENG Drawing).
9. Reassemble suspension. Torque to specifications. Check wheel toe-in setting (between 1/32" and 3/32") and adjust if necessary (Page 23).

⚠ CAUTION Failure to torque pivot hardware can result in suspension failure and void the warranty.

13K Trailer Suspension- Drum Brake FAXL Components – Single-fastener-mounted air spring

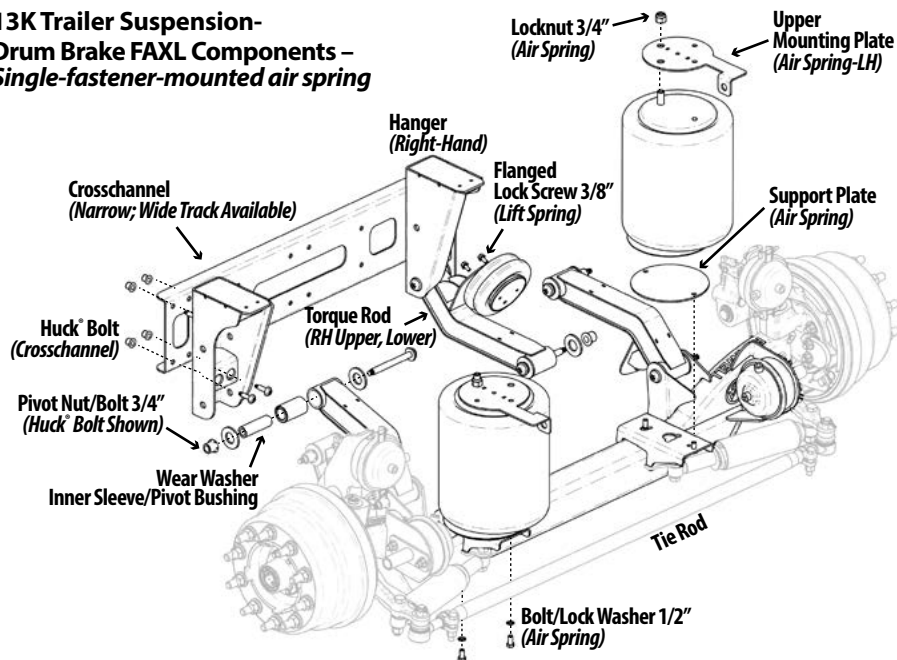
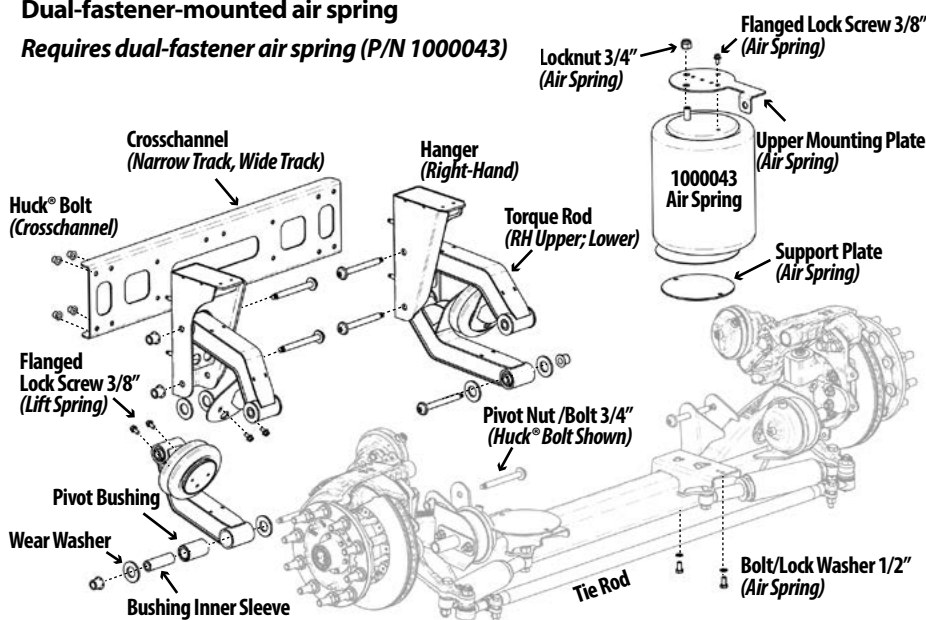
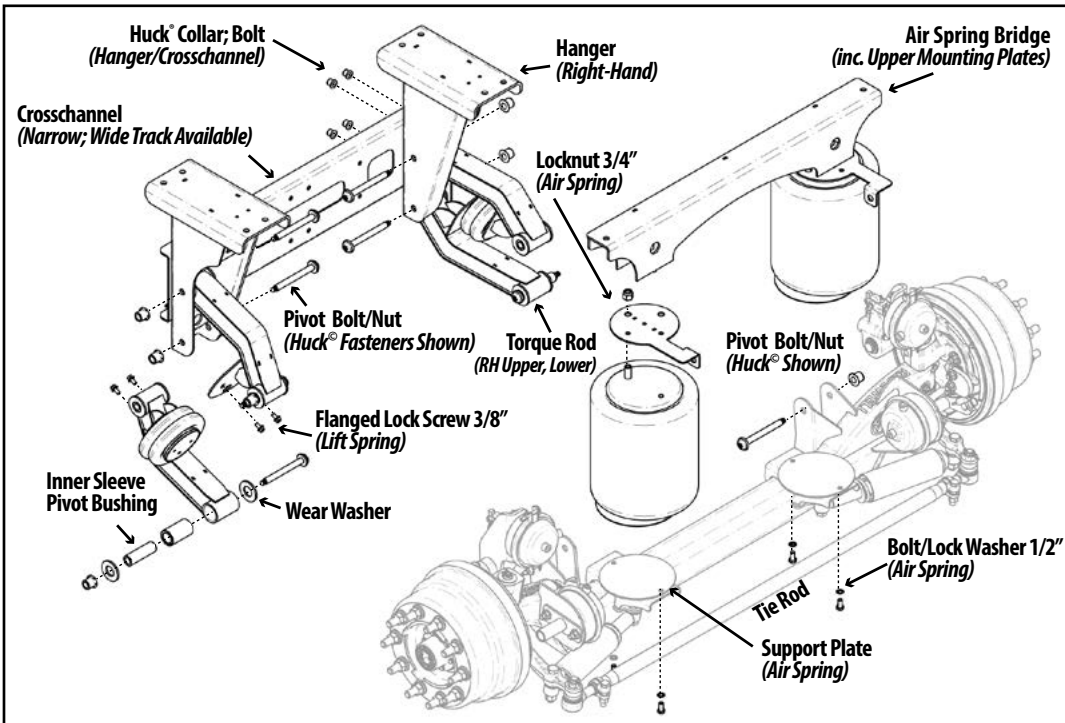


Figure 3.

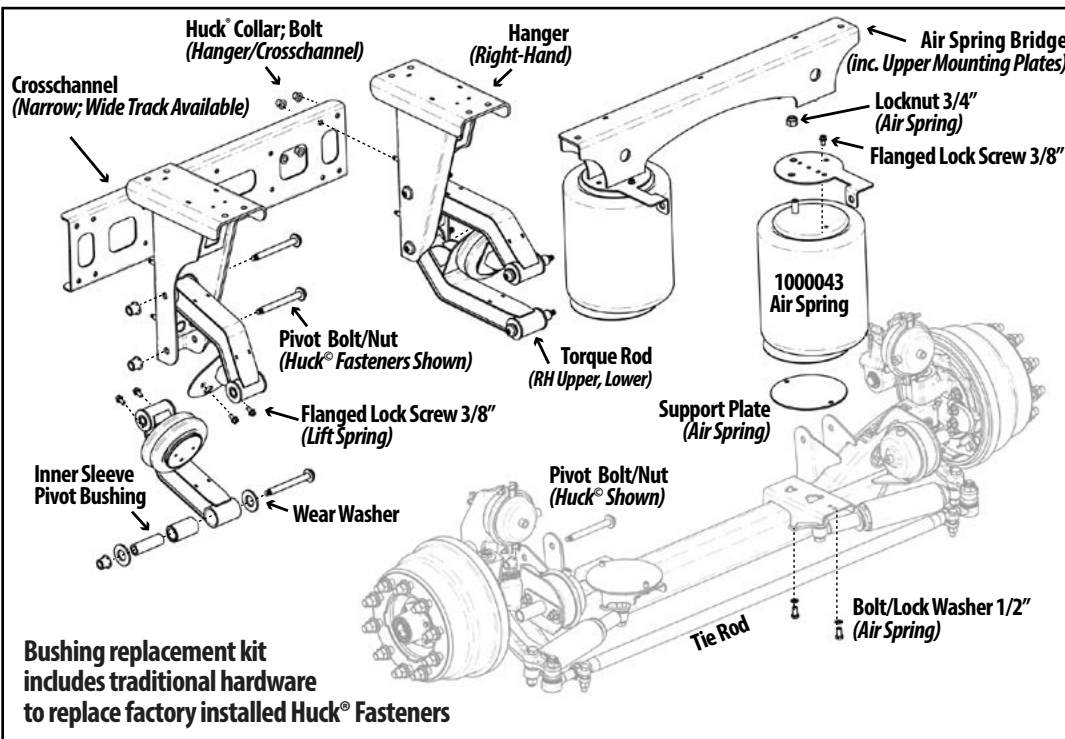
13K Trailer Suspension- Disc Brake FAXL Components – Dual-fastener-mounted air spring

Requires dual-fastener air spring (P/N 1000043)





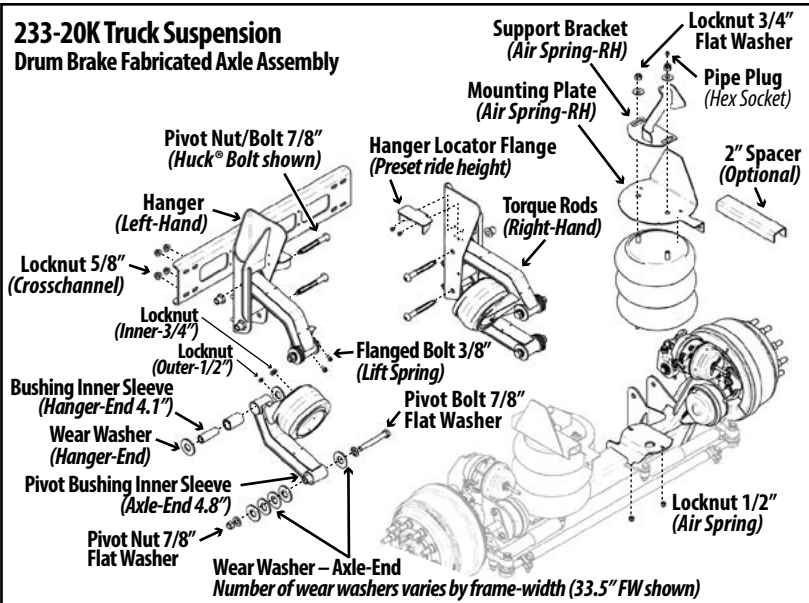
233-13K Trailer Suspension Drum Brake FAXL Components with Air Spring Bridge – Single-fastener-mounted air spring



233-13K Trailer Suspension Drum Brake FAXL Components with Air Spring Bridge – Dual-fastener-mounted air spring
Requires dual-fastener air spring (P/N 1000043)

Bushing replacement kit includes traditional hardware to replace factory installed Huck® Fasteners

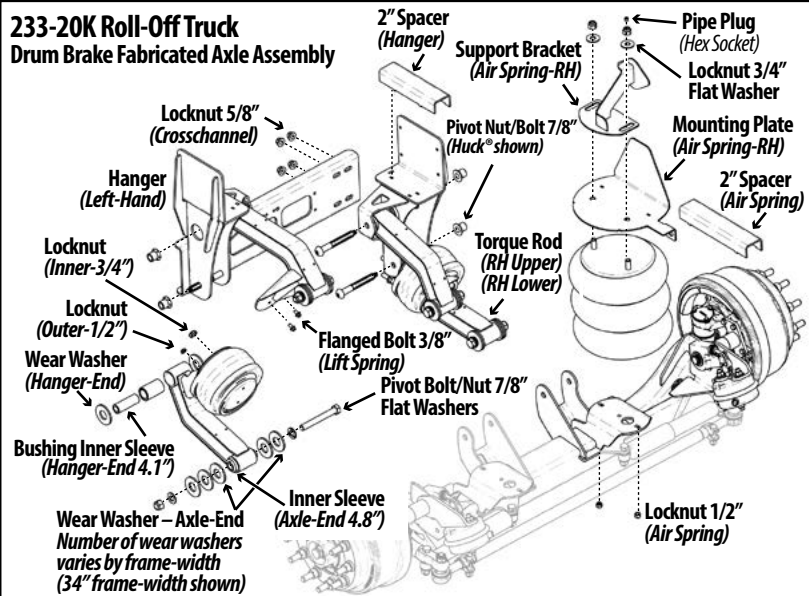
**233-20K Truck Suspension
Drum Brake Fabricated Axle Assembly**



**233-20K Truck Components-
Drum Brake Fabricated Axle (FAXL)**

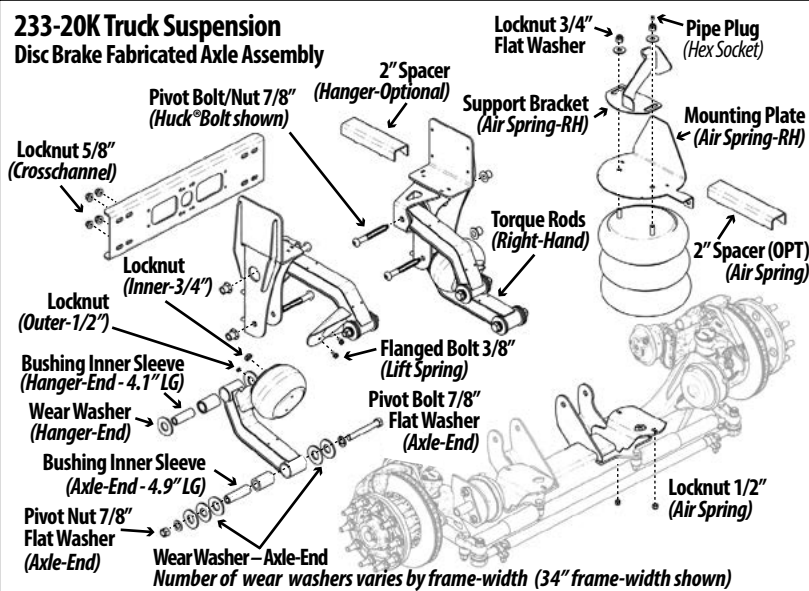
Bushing Replacement Kits include enough wear washers and traditional hardware components to replace the Huck® fasteners used in the factory assembly. Refer to the engineering drawing to install the correct number of wear washers on each side of the axle-end pivot connection as determined by the frame width.

**233-20K Roll-Off Truck
Drum Brake Fabricated Axle Assembly**



**233-20K Roll-Off Truck Components -
Drum Brake Fabricated Axle (FAXL)**

**233-20K Truck Suspension
Disc Brake Fabricated Axle Assembly**

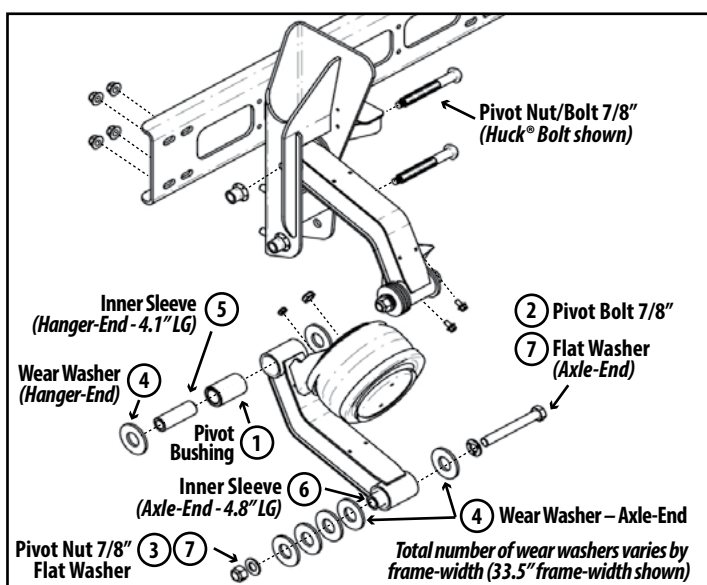


**233-20K Truck Components -
Air Disc Brake (ADB) Fabricated Axle**

233 20K TRUCK/ROLL-OFF TRUCK (BUSHING REPLACEMENT KITS)

Diagram No.	QTY/Axle	Part Number	Item Description	Torque (foot-pound/Newton-meter)	
—	(1)	6040145	Bushing Replacement Kit (Traditional Hardware)	500 ft-lb	678 N-m
Included in Kit	1	8	1120043	BUSH 2.140X1.428X3.300L 90A	
	2	8	1140056	HHCS 7/8" 14NF 7" LG GR8	
	3	8	1150052	L'NUT 7/8" 14NF TP-LK GR C PO	
	4	28	1160026	WEAR WASHER .25X3.25X1.50	
	5	4	9090082	BUSHING SLEEVE 1.44" ODX.938" ID X 4.111" LG	
	6	4	9090083	BUSH SLEEVE 1.44" OD x .938" ID x 4.861" LG (Axle-End)	
	7	16	1160868B100	FLAT WASHER 7/8" A-325	
	—	—	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5	
—	(1)	6040142	(No Hardware) Bushing Replacement Kit-	500 ft-lb	678 N-m
Included in Kit	1	8	1120043	BUSH 2.140X1.428X3.300L 90A	
	4	28	1160026	WEAR WASHER .25X3.25X1.50 233	
	5	4	9090082	BUSHING SLEEVE 1.44" ODX.938" ID X 4.111" LG	
	6	4	9090083	SLEEVE 1.44" OD x .938" ID x 4.861" LG (Axle-End)	
	—	—	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5	
Fasteners			Locknut - (Air Spring; Upper)	3/4"-16NF	50 ft-lb 68 N-m
			Locknut - (Air Spring; Lower)	1/2"-13NC	25 ft-lb 35 N-m
			Locknut - (Lift Spring; Outer)	1/2"-20NF	25 ft-lb 35 N-m
			Locknut - (Lift Spring; Inner)	3/4"-16NF	50 ft-lb 68 N-m
			Flanged Lock Screw - (Lift Spring)	3/8"-16NC	25 ft-lb 35 N-m
			Bolt/Locknut - (Crosschannel)	5/8"-11NC	160 ft-lb 217 N-m
			Locknut - (Tie-Rod/Steering Damper)	3/4"-10NC	160 ft-lb 217 N-m

CAUTION Torque values reflect a lubricated thread condition (Nuts are pre-lubed). Do not overtorque. Failure to install/maintain fasteners at torque specifications could result in suspension failure and void the warranty.



Vehicle Preparation – 233-20K Truck Bushing Replacement

Park the vehicle on a level surface. Chock wheels to keep vehicle from moving.

Exhaust all air from the air system.

Take suspension apart, if necessary, to reach the pivot connections.

CAUTION Failure to properly chock wheels and exhaust the air system could allow vehicle movement that could result in serious injury.

Re-bushing procedure continued on next page

Bushing Replacement Procedure (continued from previous page)

Bushing replacement kits include wear washers and traditional hardware components to replace the Huck® fasteners at the hanger-end pivot connection.

- Count the wear washers on each side of the bushing on the Axle-End Torque Rod Assembly. The wear washer number varies according to the frame-width set by the hangers (Figure 4).
- Cut/grind away Huck® Collars at the hanger-end pivot connection. Take pivot connection apart. Discard pivot hardware. Discard wear washers.
- Remove bushing assembly from torque rod and discard. Clean rod eye of debris/corrosion.
- Remove traditional hardware at the axle-end pivot connection. Take pivot connection apart. Discard pivot hardware. Discard wear washers.
- Remove bushing assembly from torque rod and discard. Clean rod eye of debris/corrosion.
- Apply Energy Suspensions® Formula 5 Prelube to the bore (inside) of replacement bushings. NOTE: Do not substitute - special urethane bushing lubricant included with bushing kit.
- Install new bushing into the eye of the torque rod. NOTE: Mallet /press needed to install bushing.
- Hanger-End–Wear Washer Installation – (Bushing Sleeve - 4.1")
Press the inner sleeve into the installed bushing. Center sleeve so that both ends extend slightly past the sides of the bushing. Assemble the pivot connection with one wear washer on each side of bushing (Figure 4). Inner sleeve must be flush with or extend slightly past the outside of wear washers on both sides.
- Axle-End–Wear Washer Installation – (Bushing Sleeve - 4.8")
Press the inner sleeve into the installed bushing. Position inner sleeve so that one end extends further past the bushing than the other end. Assemble pivot connection with the appropriate number of wear washers installed on both sides of the inner sleeve (Figure 6). Inner sleeve must be flush with or slightly past the outside of the wear washers on both sides.
- Torque pivot nut to spec. (500 ft-lb - 678 N-m).
- Reassemble suspension, if necessary. Torque components to specifications.
- Verify wheel toe-in setting between 1/32" and 3/32." Adjust if necessary (Page 23).

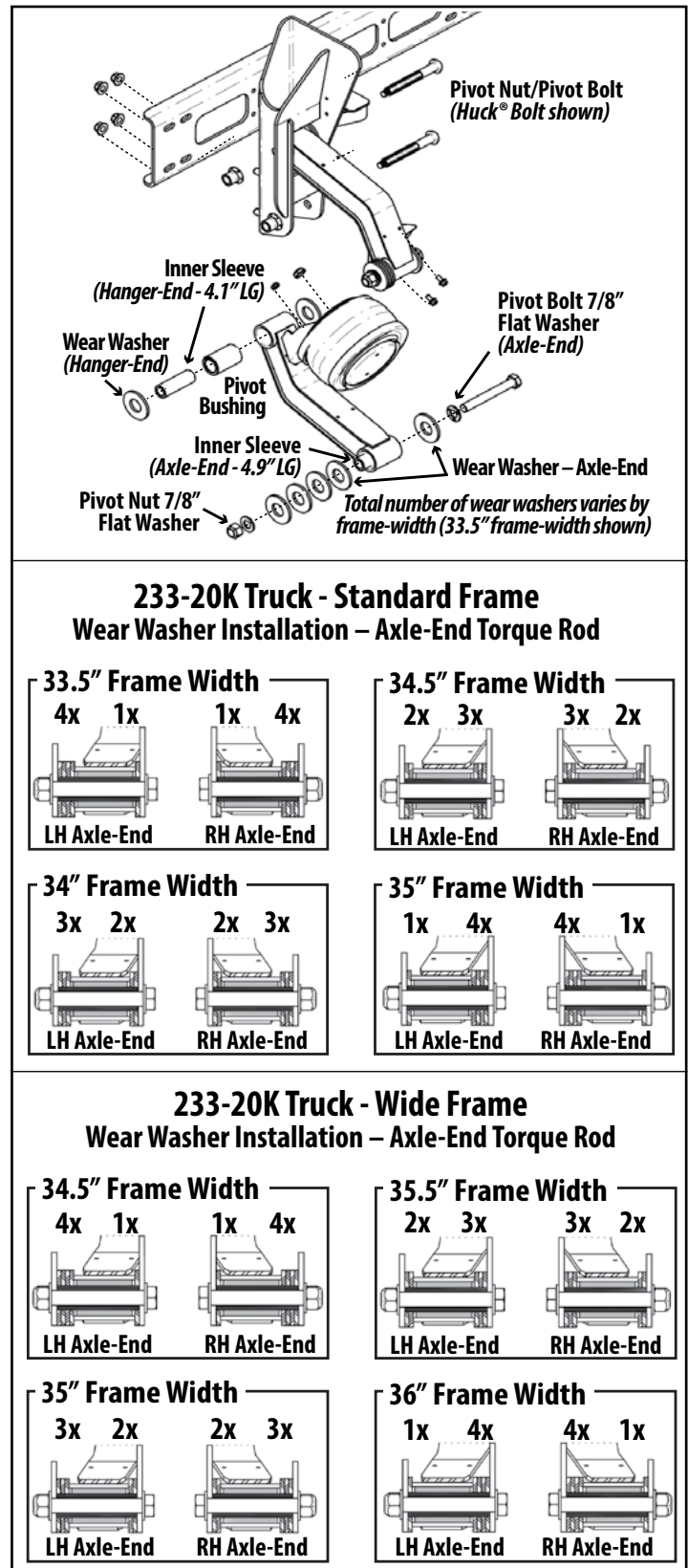


Figure 4. Replace Huck™ fasteners at the hanger-end pivot connection with traditional hardware.

Refer to the engineering drawing to install the correct number of wear washers on the axle-end pivot connection of left-hand and right-hand torque rods.

233T – 20K TRAILER (BUSHING REPLACEMENT KITS)

Diagram No.	QTY/Axle	Part Number	Item Description	TORQUE (foot-pound Newton-meter)	
—	(1)	6040161	Bushing Replacement Kit-Traditional Hardware	310 ft-lb	420 N-m
Included in Kit	1	8	1120043	BUSH 2.140 x 1.428 x 3.300L 90A	
	2	8	1140056	HHCS 7/8" 14NF 7"LG GR8	
	3	8	1150052	L'NUT 7/8" 14NF TP-LK Gr C PO	
	4	16	1160026	WEAR WASHER .25 x 3.25 x 1.50	
	5	8	9090082	BUSHING SLEEVE 1.44"ODx.938"IDx4.111"LG	
	—	16	1160868B100	FLAT WASHER 7/8" A-325	
	—	—	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5	
—	(1)	6040160	(No Hardware) Bushing Replacement Kit	310 ft-lb	420 N-m
Included in Kit	1	8	1120043	BUSH 2.140 x 1.428 x 3.300L 90A	
	4	16	1160026	WEAR WASHER .25 x 3.25 x 1.50	
	5	8	9090082	BUSHING SLEEVE 1.44"ODX.938"IDX4.111"LG	
	—	—	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5	
Fasteners			Locknut - (Air Spring, Upper)	3/4"-16NF	50 ft-lb 68 N-m
			Bolt/Lock Washer (Air Spring, Lower)	1/2"-13NC	50 ft-lb 68 N-m
			Locknut - (Lift Spring, Inner)	3/4"-16NF	50 ft-lb 68 N-m
			Locknut - (Lift Spring, Outer)	1/2"-20NF	25 ft-lb 35 N-m
			Flanged Lock Screw (Lift Spring)	3/8"-16NC	25 ft-lb 35 N-m
			Locknut - (Tie-Rod; Steering Damper)	3/4"-10NC	160 ft-lb 217 N-m
			Locknut - (Crosschannel)	5/8"-11NC	160 ft-lb 217 N-m

CAUTION Torque values reflect a lubricated thread condition (Nuts are pre-lubed). Do not overtorque. Failure to install and maintain fasteners at torque specifications could result in suspension failure and void the warranty.

Vehicle Preparation – Bushing Replacement Procedure

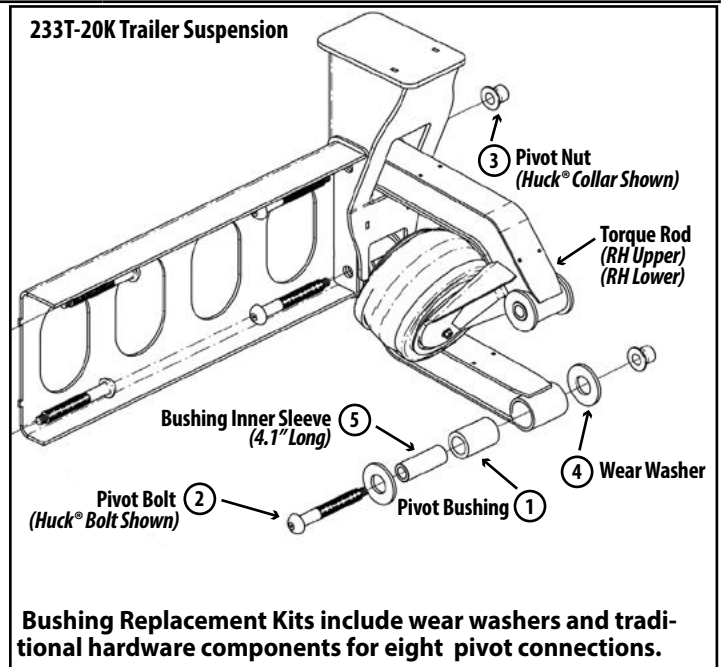
Park the vehicle on a level surface. Chock wheels to keep vehicle from moving.

Exhaust all air from the air system.

Take suspension apart, if necessary, to reach the pivot connections.

CAUTION Failure to properly chock wheels and exhaust the air system could allow vehicle movement that could result in serious injury.

Re-bushing procedure continued on next page



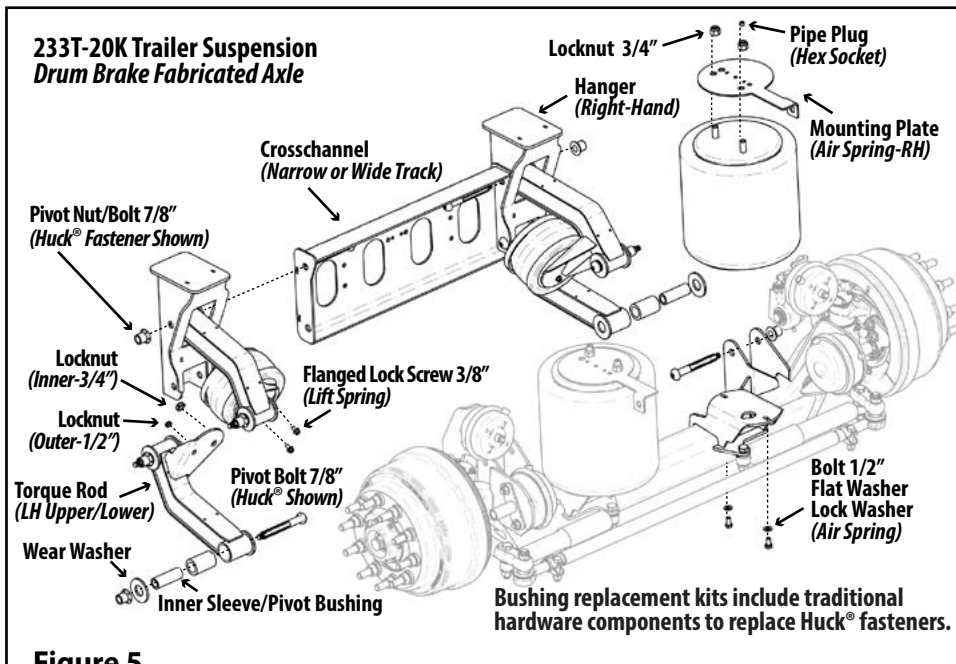
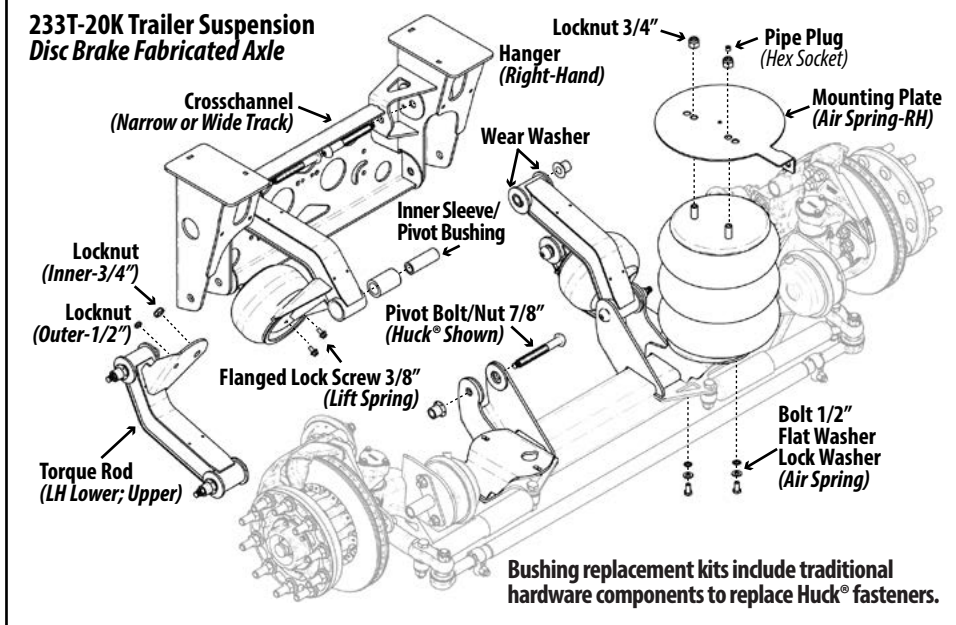


Figure 5.



Bushing Replacement Procedure (continued)

1. Cut/Grind away the Huck® Collars. Take pivot connection apart. Discard pivot hardware and wear washers (Figure 5).
2. Remove bushing assembly from the torque rod and discard. Clean rod eye of any foreign debris or corrosion.
3. Apply Energy Suspensions® Formula 5 Prelube to the bore (inside) of new bushings. NOTE: Do not substitute - urethane bushing lubricant included with all kits.
4. Install bushing into the eye of the torque rod. NOTE: Mallet/press needed to install bushing.
5. Press inner sleeve into the installed bushing. Center the sleeve inside the bushing so that both ends extend slightly past the sides of the bushing.
6. Assemble pivot connection with one wear washer on each side of the bushing. Bushing inner sleeve should be flush with or extend slightly past the outside of the wear washers.
7. Torque pivot nut to specifications (500 ft-lb).
8. Reassemble suspension. Torque to specifications.
9. Check wheel toe-in setting (between 1/32" and 3/32"). Adjust if necessary (Page 23).

⚠ CAUTION Failure to torque pivot hardware can result in suspension failure and void the warranty.

2361000 TRUCK (BUSHING REPLACEMENT KITS)

DIAG No.	QTY/Axle	Part Number	Item Description	Torque (foot-pound/Newton-meter)	
—	(1)	6040161	Bushing Replacement Kit-Traditional Hardware	500 ft-lb	678 N-m
Included in Kit	1	8	1120043	BUSH 2.140X1.428X3.300L 90A	
	2	8	1140056	HHCS 7/8" 14NF 7"LG GR8	
	3	8	1150052	L'NUT 7/8" 14NF TP-LK GR C PO	
	4	16	1160868B100	FLAT WASHER 7/8" A-325	
	5	16	1160026	WEAR WASHER .25 X 3.25 X 1.50	
	6	8	9090082	BUSHING SLEEVE 1.44"ODX.938"IDX4.111"LG	
	—	—	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5	
—	(1)	6040160	(No Hardware) Bushing Replacement Kit	500 ft-lb	678 N-m
Included in Kit	1	8	1120043	BUSH 2.140 X 1.428 X 3.300L 90A	
	5	16	1160026	WEAR WASHER .25 X 3.25 X 1.50	
	6	8	9090082	BUSHING SLEEVE 1.44"ODX.938"IDX4.111"LG	
	—	—	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5	
Fasteners			Locknut - (Air Spring, Upper)	3/4"-16NF	50 ft-lb 68 N-m
			Locknut - (Air Spring, Upper)	1/2"-13NC	25 ft-lb 35 N-m
			Flanged Lock Screw - (Air Spring, Lower)	3/8"-16NC	25 ft-lb 35 N-m
			Locknut - (Lift Spring, Inner)	3/4"-16NF	50 ft-lb 68 N-m
			Locknut - (Lift Spring, Outer)	1/2"-20NF	25 ft-lb 35 N-m
			HHCS/Locknut - (Crosschannel)	5/8"-11NC	160 ft-lb 217 N-m
			Locknut - (Load Beam Axle Assembly)	3/4"-16NF	310 ft-lb 420 N-m
			Locknut - (Tie-Rod; Steering Damper)	3/4"-10NC	160 ft-lb 217 N-m
			Locknut - (U-Bolt Steering Damper Mount)	3/8"-16NC	30 ft-lb 41 N-m

Torque values reflect a lubricated thread condition (Nuts are pre-lubed). Do not overtorque.

CAUTION Suspension is shipped with minimal torque applied to fasteners. All fasteners must be re-torqued after first 6,000 miles of operation. Failure to install and maintain fasteners at torque specifications could result in suspension failure and void the warranty.

Vehicle Preparation – Bushing Replacement Procedure

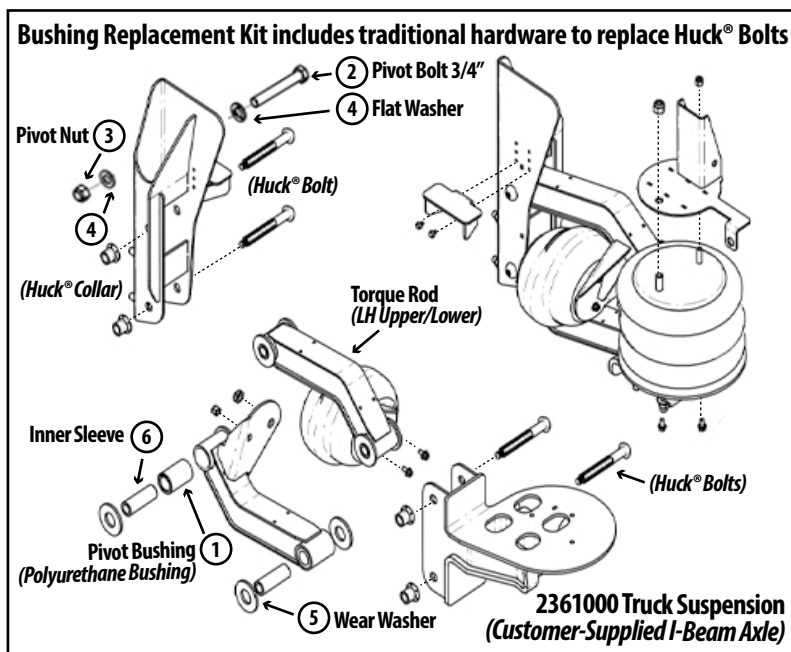
Park the vehicle on a level surface. Chock wheels to keep vehicle from moving.

Exhaust all air from the air system.

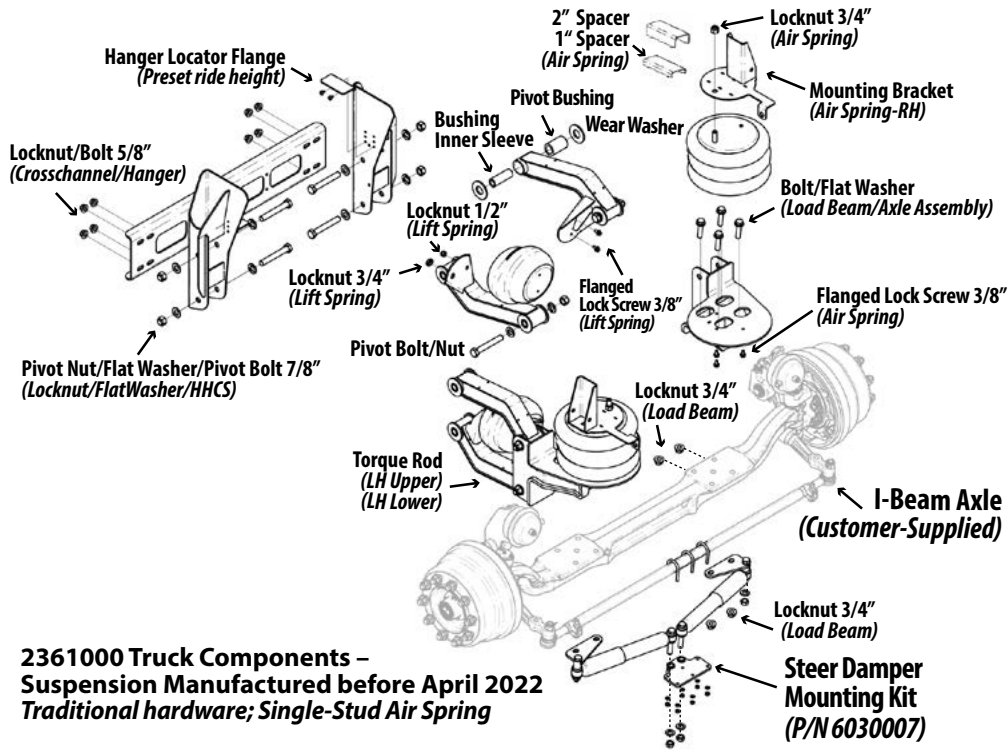
Take suspension apart, if necessary, to reach the pivot connections.

CAUTION Failure to properly chock wheels and exhaust the air system could allow vehicle movement that could result in serious injury.

Re-bushing procedure continued on next page



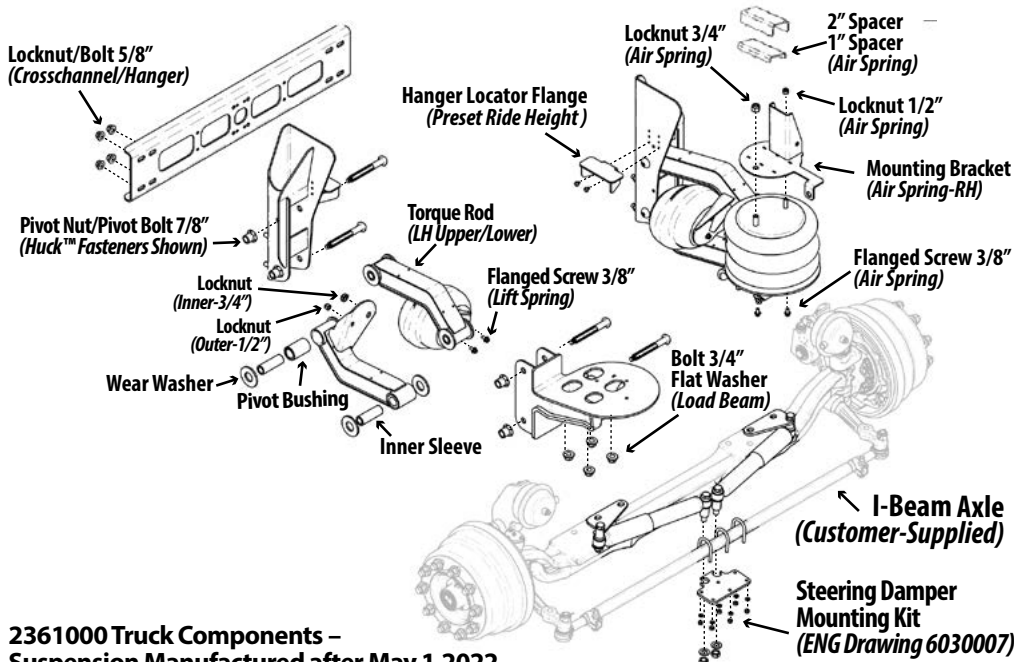
Suspension ride height is adjusted by installing 1" or 2" Air Springs Spacer.
 NOTE: The hanger locator flange must be reset to the ride height set by air spring spacer installation.



2361000 Truck Components –
 Suspension Manufactured before April 2022
 Traditional hardware; Single-Stud Air Spring

Figure 6.

Suspension ride height is adjusted by installing 1" or 2" Air Springs Spacer.
 NOTE: The hanger locator flange must be reset to the ride height set by air spring spacer installation.



2361000 Truck Components –
 Suspension Manufactured after May 1, 2022
 Huck® Bolts; Dual-Stud Air Spring

2361000 Truck Bushing Replacement (continued from prev. pg)

1. Remove pivot hardware by cutting/grinding away the Huck® Collar. Discard pivot hardware (Figure 6).
2. Inspect wear washers for damage. Replace if necessary.
3. Use wire brush to clean rod eye of debris/corrosion. Apply Energy Suspensions® Formula 5 Prelube to inside of new bushings.
 NOTE: Do not substitute - special urethane lubricant included in bushing kit.
4. Install bushing.
 NOTE: Mallet/press may be needed for install.
5. Press inner sleeve into the installed bushing. Center sleeve inside the bushing so that both ends of bushing extend slightly past the sides of the bushing equally.
6. Assemble pivot connection with one wear washer on each side of the bushing. The inner sleeve of the bushing must be flush with or extend slightly past the outside of the wear washers (Figure 6).
7. Torque pivot nut to specs (500 ft-lb - 678 N-m).
8. Reassemble suspension, if necessary. Torque components to specifications (Chart/ENG Drawing).
9. Check wheel toe-in setting (between 1/32" and 3/32"). Adjust if necessary (Pg 23).

CAUTION Failure to torque pivot hardware can result in suspension failure and void the warranty.

232/232T 8K-10K-13K TRUCK/TRAILER BUSHING REPLACEMENT KITS

QTY/Axle	Part No.	Item Description	TORQUE (foot-pound Newton-meter)	
(1)	6040132	8/10/13K TRUCK – Bushing Replacement Kit (Traditional Hardware)	350 ft-lb	475 N-m
Included in Kit	16	1120023 BUSH URE 2X1.31X1.80L 95 DURO		
	8	1160009 SHIM WASH .25 X 3.13 X 1.35		
	8	9090041 SLV 1.31"OD X.75"ID 4.366" LG		
	8	1140049 HHCS 3/4" 16NF 6"L GR8 P&O		
	8	1150016 L'NUT 3/4" 16NF FL-TL GR8 ZN		
		1980013 URETHANE BUSHING SERVICE LUBE FORMULA 5		
(1)	6040084	8/10/13K TRUCK – (No Hardware) Bushing Replacement Kit	350 ft-lb	475 N-m
Included in Kit	16	1120023 BUSH URE 2X1.31X1.80L 95 DURO		
	8	1160009 SHIM WASH .25 X 3.13 X 1.35		
	8	9090041 SLV 1.31"OD X.75"ID 4.366" LG		
		1980013 URETHANE BUSHING SERVICE LUBE FORMULA 5		
(1)	6040152	8/10/13K TRAILER – Bushing Replacement Kit (Traditional Hardware)	350 ft-lb	475 N-m
Included in Kit	16	1120023 BUSH URE 2X1.31X1.80L 95 DURO		
	8	1140049 HHCS 3/4" 16NF 6"L GR8 P&O		
	8	1150016 L'NUT 3/4" 16NF FL-TL GR8 ZN		
	8	9090041 SLV 1.31"OD X.75"ID 4.366" LG		
		1980013 URETHANE BUSHING SERVICE LUBE FORMULA 5		
(1)	6040151	8/10/13K TRAILER – (No Hardware) Bushing Replacement Kit	350 ft-lb	475 N-m
Included	16	1120023 BUSH URE 2X1.31X1.80L 95 DURO		
	8	9090041 SLV 1.31"OD X.75"ID 4.366" LG		
		1980013 URETHANE BUSHING SERVICE LUBE FORMULA 5		
Fasteners		Bolt/Lock Washer/Nut (Air Spring)	1/2"-13NC	25 ft-lb 35 N-m
		Locknut - (Air Spring)	3/8"-16NC	25 ft-lb 35 N-m
		Locknut - (Air Spring)	3/4"-16NF	50 ft-lb 68 N-m
		Bolt/Locknut - (Crosschannel)	5/8"-11NC	50 ft-lb 68 N-m
		Locknut - (Steering Damper)	3/4"-10NC	160 ft-lb 217 N-m

CAUTION Torque values reflect a lubricated thread condition (Nuts are pre-lubed). Do not overtorque. Failure to install and maintain fasteners at torque specifications could result in suspension failure and void the warranty.

232 8K-10K-13K Truck /Trailer– Bushing Replacement Procedure

Vehicle Preparation

Park the vehicle on a level surface. Chock wheels to keep vehicle from moving.

Exhaust all air from the air system.

Disassemble suspension, if necessary, to reach the pivot connections.

CAUTION Failure to properly chock wheels/exhaust air system could allow movement resulting in serious injury.

Bushing Replacement Procedure

- Count the number of wear washers on each side of the torque rod assemblies. The total number of wear washers on each side varies according to the preset frame-width (Figure 7).
- Remove pivot hardware and discard.
- Remove the pivot bushing assembly and wear washers and discard.
- Clean the torque rod eye with a wire brush to remove foreign debris/corrosion.
- Apply Energy Suspensions® Formula 5 Prelube to the bore (inside) of the replacement bushings. NOTE: Do not substitute - special urethane lubricant included with all Bushing Replacement Kits.
- Install new bushing into the eye of the torque rod. NOTE: Mallet/bushing press needed to install.
- Wear Washer Install - Hanger-End Torque Rods**
Press the inner sleeve into the installed bushing. Center the sleeve so both ends extend slightly past the sides of the bushing/wear washer assembly. Assemble the pivot connection with wear washer(s) on the appropriate side of the bushing.
- Wear Washer Install - Axle-End Torque Rods**
Press the inner sleeve into the installed bushing. Center the sleeve so both ends extend slightly past the sides of the bushing/wear washer assembly. Assemble the pivot connection with wear washer(s) on the appropriate side of the bushing.
- Torque pivot hardware to 350 ft-lb (475 N-m).
- Reassemble suspension, if necessary. Torque all components to specifications.
- Check wheel toe-in setting (between 1/32" and 3/32"). Adjust if necessary (Page 23).

CAUTION Failure to torque pivot hardware can result in suspension failure and void the warranty.

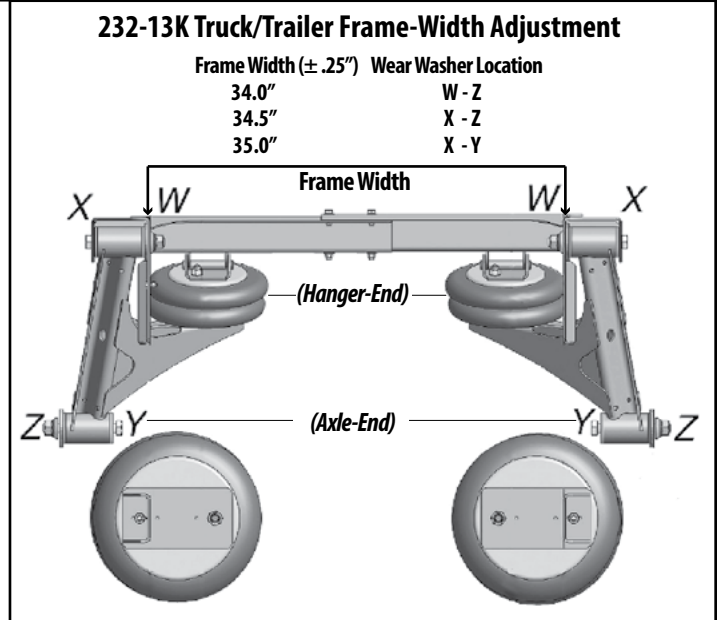
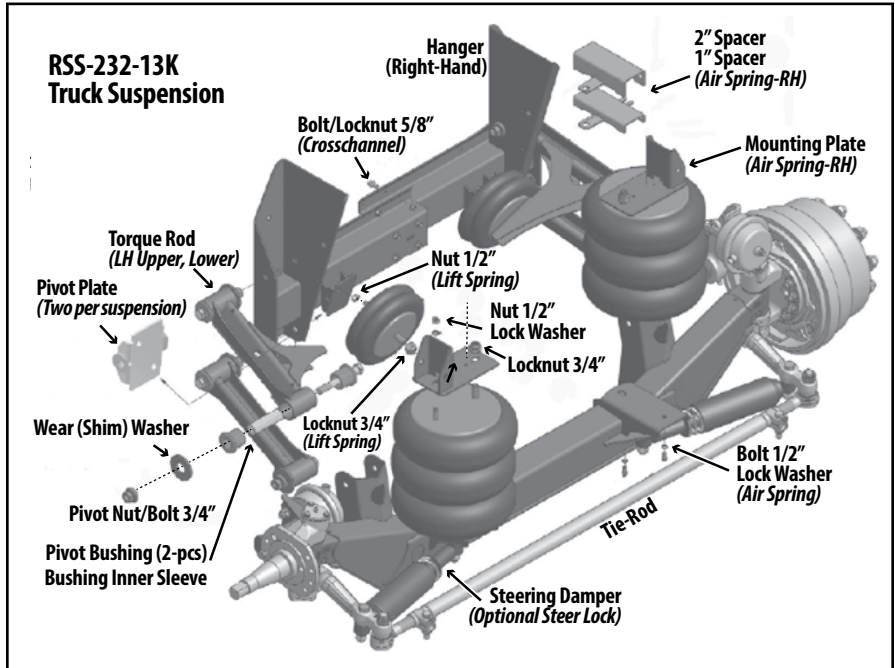


Figure 7.
232-8K-10K-13K Truck/Trailer Suspension

Frame Width Adjustment

- Adjust suspension frame width by securing crosschannel at the desired width.
- Install wear washers at marked locations to obtain proper suspension alignment.

232 – 20K TRUCK (BUSHING REPLACEMENT KITS)

QTY/Axle	Part No.	Item Description	Torque (foot-pound Newton-meter)	
(1)	6040112	Bushing Replacement Kit-Traditional Hardware	500 ft-lb	678 N-m
Included in Kit	12	1120030	BUSH URE 1.29ID 2.18"L	
	2	1120031	BUSH URE CTR HRD 3.12	
	24	1160009	SHIM WASH .25 X 3.13 X 1.35	
	2	9090056	SLV,1-5/16 X .937OD. X 5.23lg	
	2	9090057	SLV,1-5/16 X .937OD. X 2.88LG	
	2	9090058	SLV,1-5/16 X .937OD. X 8.84LG	
	2	9090059	SLV,1-5/16OD X .937ID. X 3.36LG	
	8	1150052	L'NUT 7/8" 14NF TP-LK Gr C PO	
	2	1140023	HHCS 7/8" 14NF 11"L 2.25"THD	
	2	1140060	HHCS 7/8" 14NF 7.5L GR8 Zn/YEL	
	2	1140062	HHCS 7/8" 14NF 5.5L GR8 ZN/YEL	
	2	1140063	HHCS 7/8" 14NF 5"L GR8 Zn/YEL	
	16	1160868B100	WASH 7/8" FLAT ASTM F436 ZINC PLATE	
	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5		
(1)	6040086	(No Hardware) Bushing Replacement Kit	500 ft-lb	678 N-m
Included in Kit	12	1120030	BUSH URE 1.29ID 2.18"L	
	2	1120031	BUSH URE CTR HRD 3.12	
	24	1160009	SHIM WASH .25 X 3.13 X 1.35	
	2	9090056	SLV,1-5/16 X .937OD. X 5.23lg	
	2	9090057	SLV,1-5/16 X .937OD. X 2.88LG	
	2	9090058	SLV,1-5/16 X .937OD. X 8.84LG	
	2	9090059	SLV,1-5/16OD X .937ID. X 3.36LG	
	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5		
Fasteners		Bolt/Lock Washer/Nut (Air Spring)	1/2"-13NC	25 ft-lb 35 N-m
		Locknut - (Air Spring)	3/4"-16NF	50 ft-lb 68 N-m
		Bolt/Locknut - (Crosschannel)	1/2"-13NC	50 ft-lb 68 N-m
		Locknut - (Steering Damper)	3/4"-10NC	160 ft-lb 217 N-m

⚠ CAUTION Torque values reflect a lubricated thread condition (Nuts are pre-lubed). Do not overtorque. Failure to install and maintain fasteners at torque specifications could result in suspension failure and void the warranty.

232-20K Truck/Trailer Suspension – Bushing Replacement Procedure

Vehicle Preparation

Park the vehicle on a level surface. Chock wheels to keep vehicle from moving. Exhaust all air from the air system.

Disassemble suspension, if necessary, to reach pivot connections.

CAUTION Failure to properly chock wheels and exhaust air system could allow movement resulting in serious injury.

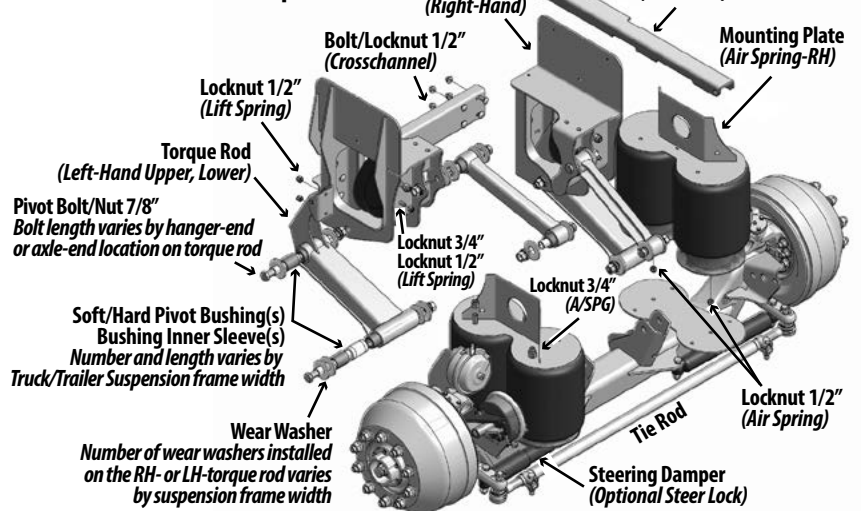
Bushing Replacement Procedure

Bushing Replacement Kits include both soft and hard urethane bushings and wear washers.

- Count and note the number of wear washers on each side of the Hanger-End of the upper torque rod and the Axle-End of the lower torque rod (Figure 8).
- Remove and discard pivot hardware; bushing assemblies; wear washers.
- Use a wire brush to clean the torque rod eye of foreign debris/corrosion.
- Apply Energy Suspensions® Formula 5 Prelube to the bore (inside) of new bushings.
NOTE: Do not substitute - special urethane lubricant included with all Bushing Replacement Kits.
- Lower Torque Rod – Axle-End
 - Press the replacement hard/soft bushings into the axle-end of the lower torque rod.
 - Press inner sleeve into the installed bushings. Check that bushing ends are flush with torque rod eye.
 - Verify number of wear washers needed on each side of the torque rod.
Reposition inner sleeve to extend slightly past the right or left side of the torque rod eye.
NOTE: Trim bushing ends flush to torque rod eye after wear washer installation.
 - Assemble pivot connection with the correct number of wear washers on either side of the torque rod.
Torque pivot hardware to specifications.

Figure 8.

232-20K Truck/Trailer Suspension



RSS-232-20K Truck Suspension – Total number of soft/hard pivot bushings; length of bushing sleeves and number of wear washers varies by Truck/Trailer Suspension Model and Frame Width.

- Lower Torque Rod –Hanger-End
 - Install soft bushings into the hanger end of the lower torque rod. Check to make sure that bushing ends are flush with torque rod eye.
 - Press inner sleeve into the installed bushing. Center inner sleeve so that both ends extend past the sides of the torque rod eye. Assemble the pivot connection with one wear washer on either side of the bushing. Torque pivot hardware to specifications.
NOTE: Trim the ends of the bushing flush to the rod eye, if necessary.
 - Upper Torque Rod –Hanger-End
 - Install soft bushing into the upper torque rod eye.
 - Press inner sleeve into installed bushing. Position sleeve to extend past the right or left side of the torque rod eye, depending on the number of wear washers needed.
NOTE: Check that bushing ends are flush with the torque-rod eye.
 - Assemble pivot connection with correct number of wear washers. Torque pivot hardware to specs.
 - Upper Torque Rod –Axle-End
 - Install soft bushing into the hanger end of the lower torque rod. Check that bushing ends are flush with torque rod eye. Trim bushing ends flush to eye.
 - Press inner sleeve into the installed bushing. Center inner sleeve so that both ends extend slightly past sides of torque rod eye. Assemble pivot connection with one wear washer on either side of the bushing. Torque pivot hardware to specifications.
- Reassemble suspension if necessary. Torque components to specifications.
 - Check wheel toe-in setting (between 1/32" and 3/32"). Adjust if necessary (Page 23).

CAUTION Failure to torque pivot hardware can result in suspension failure and void the warranty.

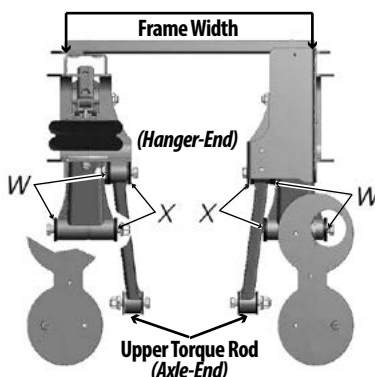
232/232T-20K Suspension Frame Width Adjustment

1) Adjust suspension frame width by securing cross-channel at desired width.

2) Install wear washers at marked locations to obtain suspension alignment.

232-20K Truck/Trailer Frame-Width ADJ

Frame Width	Wear Washer Qty
W	X
33.5" - 34"	1 3
34" - 34.5"	2 2
34.5" - 35"	3 1



232T – 20K TRAILER (BUSHING REPLACEMENT KITS)

QTY/Axle	Part No.	Item Description	Torque (foot-pound Newton-meter)	
(1)	6040111	Bushing Replacement Kit-Traditional Hardware	500 ft-lb	678 N-m
Included in Kit	12	1120030	BUSH URE 1.29ID 2.18"L	
	2	1120031	BUSH URE CTR HRD 3.12	
	20	1160009	SHIM WASH .25 X 3.13 X 1.35	
	2	9090056	SLV,1-5/16X.937OD.X5.23lg	
	4	9090057	SLV,1-5/16X.937OD.X2.88LG	
	2	9090058	SLV,1-5/16X.937OD.X8.84LG	
	8	1150052	L'NUT 7/8" 14NF TP-LK Gr C PO	
	4	1140063	HHCS 7/8" 14NF 5"L GR8 Zn/YEL	
	2	1140060	HHCS 7/8" 14NF 7.5L GR8 Zn/YEL	
	2	1140023	HHCS 7/8" 14NF 11"L 2.25"THD	
	16	1160868B100	WASH 7/8" FLAT ASTM F436 ZINC PLATE	
	1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5		
(1)	6040085	(No Hardware) Bushing Replacement Kit	500 ft-lb	678 N-m
Included in Kit	12	1120030	BUSH URE 1.29ID 2.18"L	
	2	1120031	BUSH URE CTR HRD 3.12	
	20	1160009	SHIM WASH .25 X 3.13 X 1.35	
	2	9090056	SLV,1-5/16X.937OD.X5.23lg	
	4	9090057	SLV,1-5/16X.937OD.X2.88LG	
	2	9090058	SLV,1-5/16X.937OD.X8.84LG	
		1980013	URETHANE BUSHING SERVICE LUBE FORMULA 5	
Fasteners		Bolt/Lock Washer/Nut (Air Spring)	1/2"-13NC	25 ft-lb 35 N-m
		Locknut - (Air Spring)	3/4"-16NF	50 ft-lb 68 N-m
		Bolt/Locknut - (Crosschannel)	1/2"-13NC	50 ft-lb 68 N-m
		Locknut - (Steering Damper)	3/4"-10NC	160 ft-lb 217 N-m

CAUTION Torque values reflect a lubricated thread condition (Nuts are pre-lubed). Do not overtorque. Failure to install and maintain fasteners at torque specifications could result in suspension failure and void the warranty.

232/232T-20K Suspension Frame Width Adjustment

1) Adjust suspension frame width by securing cross-channel at desired width.

2) Install wear washers at marked locations to obtain suspension alignment.

232-20K Truck/Trailer Frame-Width ADJ

Frame Width	Wear Washer Qty
W X	W X
33.5"- 34"	1 3
34"- 34.5"	2 2
34.5"- 35"	3 1

Recommended Service Intervals

Ridewell Suspensions recommends minimum service intervals for standard duty, on-highway usage suspension applications. More frequent service intervals are recommended for off-highway/heavier duty applications.

Daily/Pre-Trip Inspections

- ___ Visually inspect suspension for damage/excessive wear.
- ___ Check for loose/missing fasteners. Check for irregular movement in suspension system components.
- ___ Check tires for proper inflation, damage or excessive wear.
- ___ Check wheel-ends for obvious signs of lubricant leakage. Check for missing components.
- ___ Make sure air controls are operating properly. Drain all moisture from air reservoirs.

First 6,000 miles of use

- ___ Torque all fasteners to specifications (ENG Drawing).

Every 12,000 miles of use

- ___ Lubricate Brake Cam and Slack Adjuster.
- ___ Grease kingpin thrust bearings. Apply grease in upper and lower grease fittings until new grease is visible at the purge location. Wipe excess grease from purge areas.
- ___ Inspect steering damper for damage/wear.
- ___ Inspect air springs for damage/excessive wear. Torque bolts/nuts to specifications. (ENG Drawing).
- ___ Check air system for leaks.

First 50,000 miles of use

- ___ Check wheel-end/knuckle for excessive play.
- ___ Inspect tie-rod and tie-rod ends for excessive damage/wear. Lubricate tie-rod ends. Verify tie-rod boot is in place and completely over end of tie-rod. Replace entire tie-rod end if boot is damaged.
- ___ Check pivot bushings for wear.
- ___ Torque all suspension bolts/nuts to spec. (ENG Drawing).
- ___ Check (reverse) steer lock operation (if equipped).
- ___ Verify operation of manual/automatic lift-in-reverse control system (if equipped).

Annual/100,000 Miles Inspection

- ___ Inspect pivot connections for worn bushings/wear washers. Replace if necessary. Torque pivot hardware to specifications (ENG Drawing).
- ___ Check lubrication level in wheel-ends. Refill/Replace as needed. (TMC RP 631-Wheel End Lubrication Procedure)
- ___ Check hanger and A/SPG mounting plate connections.
- ___ Check air system for leaks.
- ___ Test air tank pressure protection valve if equipped.
- ___ Check brakes/brake chambers for damage/function.

CAUTION Failure to exhaust all pressure from the air system before vehicle work can cause serious injury.

CAUTION Failure to torque suspension components to specifications can result in suspension failure and void the warranty.

Wheel-Toe Setting

Wheel-toe is the relationship of the distance between the front of the tires and the distance between the rear of the tires on the same axle. When front distance is less than the rear distance, the wheels are in a “toe-in” (positive toe) condition.

Check Wheel Toe Setting

The correct setting for the RSS-233 suspension should be a positive toe-in between 1/32” and 3/32”.

1. Deflate the air springs.
2. Lift axle enough for tires to rotate freely. Support with jack stands to ensure axle is level.
3. Position tires to point straight ahead. Spin each tire. Use a piece of chalk to mark a line on the center tread all the way around each tire.
4. Use a tape measure to measure the distance between the center mark at the front and the rear of the tires.
5. Subtract the distance measured at the front of the tires from the distance measured at the rear of the tires to obtain the wheel toe setting (between 1/32” and 3/32”).

Adjust Wheel Toe

1. Loosen the clamps on both ends of the tie rod. Twist the tie rod forward/backward to move the front of the tires towards or away from each other (increase/decrease toe-in setting).
2. Continue rotating the tie rod until the proper toe-in setting is achieved.
3. Torque tie-rod clamps to 60-80 ft-lb (81-108 N-m).

Refer to these Technology & Maintenance Council (TMC) Recommended Procedures for additional information:

RP 609	Self-Adjusting/Manual Brake Adjuster Removal, Installation and Maintenance
RP 618	Wheel Bearing Adjustment Procedure
RP 619	Air System Inspection Procedure
RP 622	Wheel Seal and Bearing Maintenance
RP 631	Wheel End Lubrication Procedures
RP 643	Air Ride Suspension Maintenance Guidelines
RP 645	Tie-Rod End Inspection/Maintenance
RP 651	Steer Axle Maintenance Guidelines

Available Wheel-End Lubricants

Lubricant Type	Part No.	Item Description
Mineral Oil	380008G	(CITGO) MP GearOil 631310001-80W-90
Synthetic Oil	1980006	(SHELL) Synthetic API GL-5 75W-90 Oil
Synthetic Hard-Pack Grease	1980007	(CITGO) Synthetic Grease

Terms and coverage in this warranty apply only to the United States and Canada.

Ridewell Suspensions warrants the suspension systems manufactured by it to be free of defects in material and workmanship. Warranty coverage applies only to suspensions that have been properly installed, maintained and operated within the rated capacity and recommended application of the suspension. The responsibility for warranty coverage is limited to the repair/replacement of suspension parts. The liability for coverage of purchased components for suspensions is limited to the original warranty coverage extended by the manufacturer of the purchased part.

All work performed under warranty must have prior written approval from the Ridewell warranty department. Ridewell has the sole discretion and authority to approve or deny a claim and authorize the repair or replacement of suspension parts. All parts must be held until the warranty claim is closed.

Parts that need to be returned for warranty evaluation will be issued a Returned Materials Authorization (RMA). Parts must be returned to Ridewell with the transportation charges prepaid. The charges for parts transportation will be reimbursed if the warranty claim is approved.

This non-transferable warranty is in lieu of all other expressed or implied warranties or representations, including any implied warranties of merchantability or fitness or any obligations on the part of Ridewell.

Ridewell will not be liable for any business interruptions, loss of profits, personal injury, any costs of travel delays or for any other special, indirect, incidental or consequential losses, costs or damages.

Contact the Warranty Dept. (417.833.4565 - Ext. 135) for complete warranty information.

