

TRAILER AIR SUSPENSION SYSTEMS — MODELS RFS23T, RFS25T & RFS30T



MERITOR

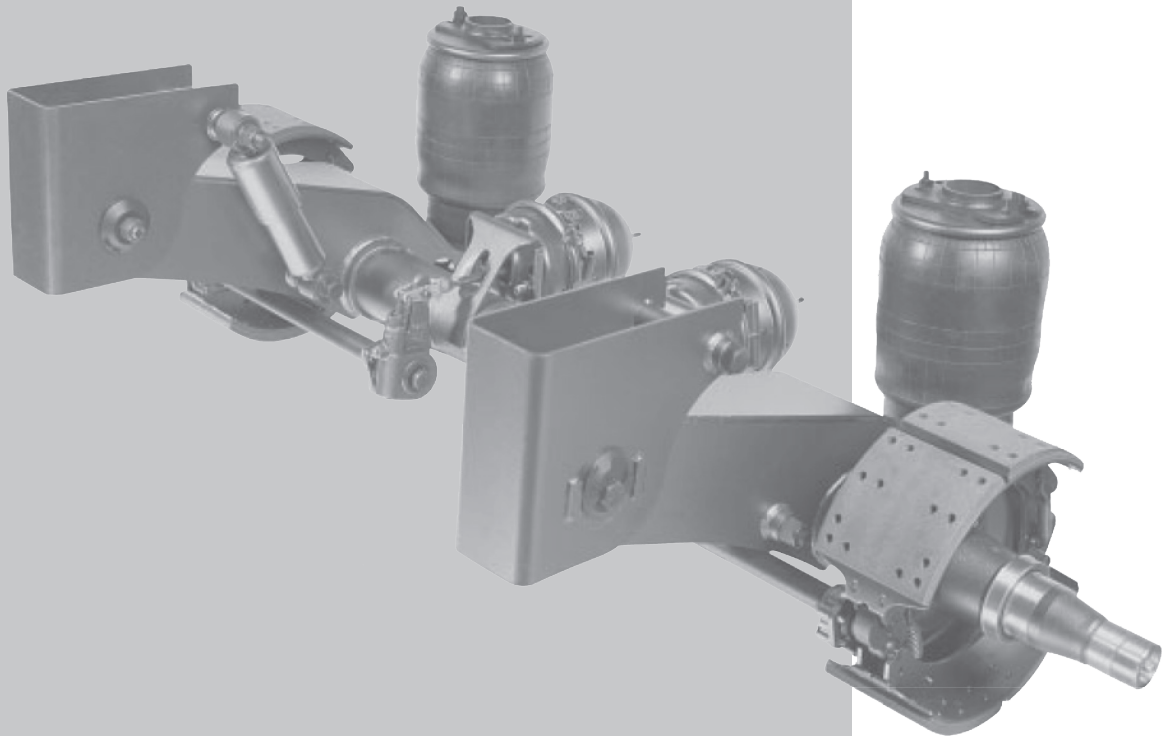


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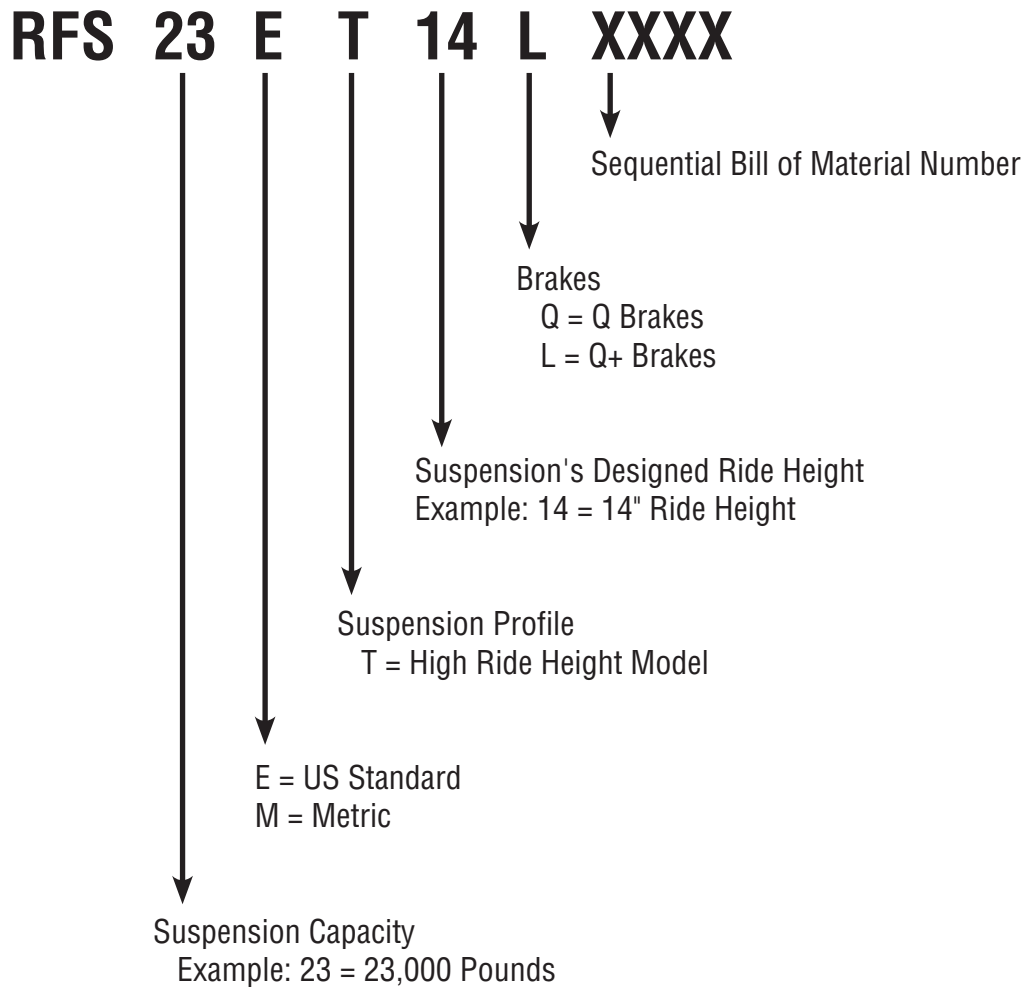
This catalog contains information that is unique to the “RFS” Series Trailer Air Suspension Systems. Use the illustrations on Page 6, 8 & 10 to help determine the name of the item to be ordered.

Model Nomenclature

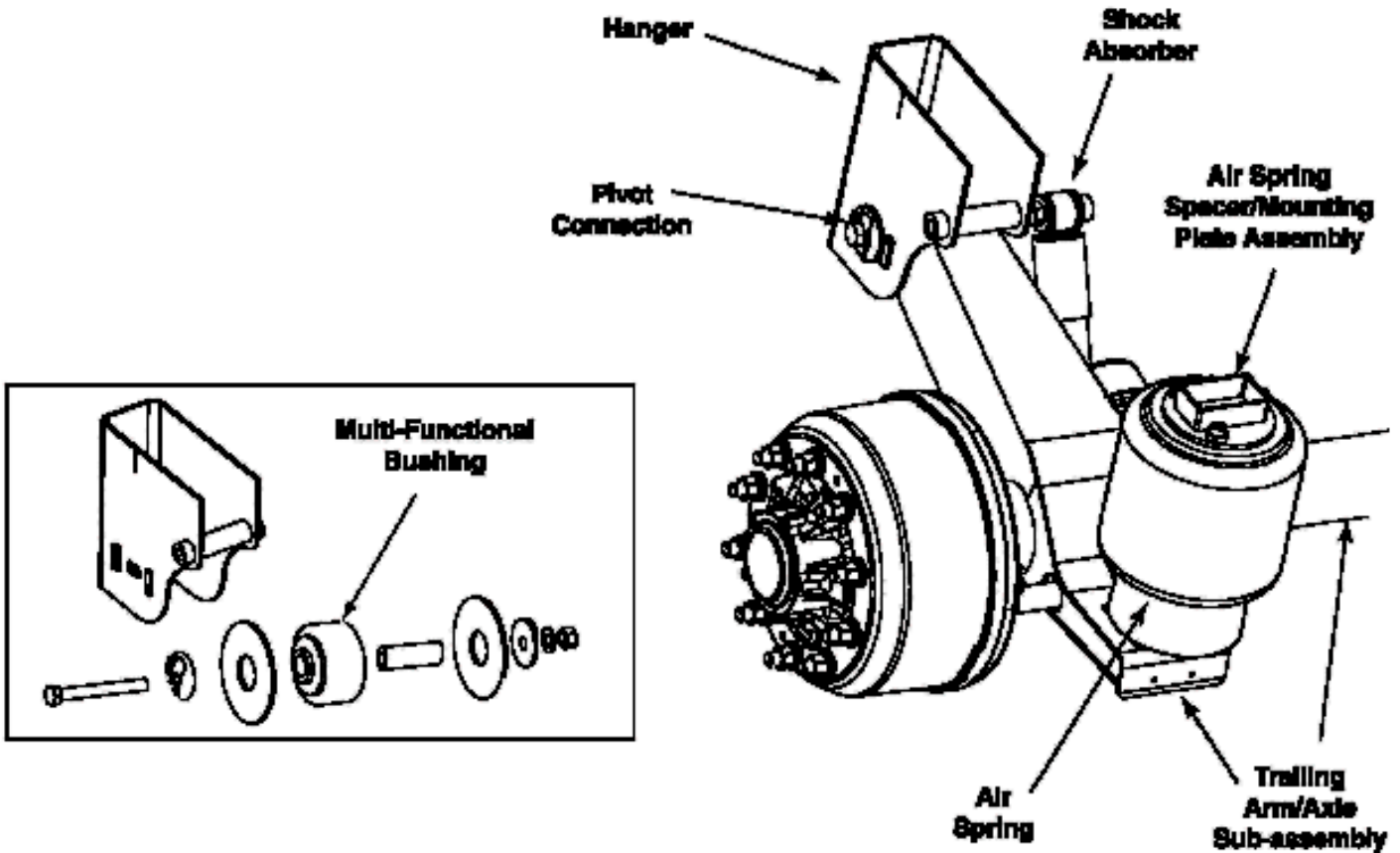
RFS Descriptive Model Number

Each suspension model number will be distinct and unique. This number will consist of 14 characters and can be found on the suspension identification tag located on the rear of the roadside trailing arm.

The model nomenclature is defined as follows:



Parts of Suspension



Standard Terminology

Hanger Terminology

Hanger: Sometimes referred to as frame brackets, towers, or pivot brackets. Load carrying structure that interfaces with the trailer frame and attaches to the trailing arm assembly at the pivot connection.

Weld-on Hanger: A hanger that welds to a steel trailer frame.

Bolt-On Hanger: A hanger assembly with holes in the top plate that allows for bolting to an aluminum trailer frame.

Air Spring Terminology

Air Spring: Sometimes referred to as an air bag, air cell, balloon, or spring. It is an inflatable bag designed to hold a volume of air. The air spring supports the trailer and its imposed load with air pressure.

Flexmember: The inflatable rubber portion of the air spring.

Piston: The bottom portion of the air spring which is used to attach the air spring to the trailing arm.

Bead Plate: Top mounting surface of the air spring that is attached to the flexmember.

Parts of Suspension (continued)

Trailing Arm/Axle Terminology

Trailing Arm: Sometimes referred to as Equalizing Beam, Beam, or Pontoon. The Trailing Arm is a load carrying structure that interfaces at the pivot connection, connects to the axle tube, and supports the air spring.

Axle Track: The side-to-side distance from the center of the dual tires on roadside to the center of dual tires on the curbside.

Trailing Arm Centers: The side-to-side distance from the center of the roadside trailing arm to the center of the curbside trailing arm.

Trailing Arm/Axle Subassembly: An integrated axle and trailing arm assembly, whereas the axle and trailing arms are of one piece.

Shock Absorber Terminology

Shock Absorber: Sometimes referred to as dampers. The shock absorbers damp excessive axle vibration and protect the air springs from over-extending at full rebound position.

Integral Check Strap: A hydraulic cushion as the shock absorber approaches the fully extended position to aid in shock absorber durability and to eliminate the need for external restraint devices such as cables or nylon straps.

Glossary of Terms

Trailer Frame: Commonly referred to as the trailer subframe, trailer beam, “C”- channel frame, or “I”-beam frame. The Trailer Frame is the structure that the air suspension mounts to.

Ride Height: The ride height of the suspension is determined from the center line of the axle to the underside of the trailer frame.

Jounce: Amount of axle upward travel from the designed ride height position.

Rebound: Amount of downward axle travel from the designed ride height position.

Multi-Functional Pivot Bushing: Rubber bushing that is located at the pivot connection end of the trailing arms.

Pivot Connection: Sometimes referred to as the pivot bolt. This is the connection that attaches the trailing arm to the hanger with the pivot bolt and the location where axle alignment adjustment is made.

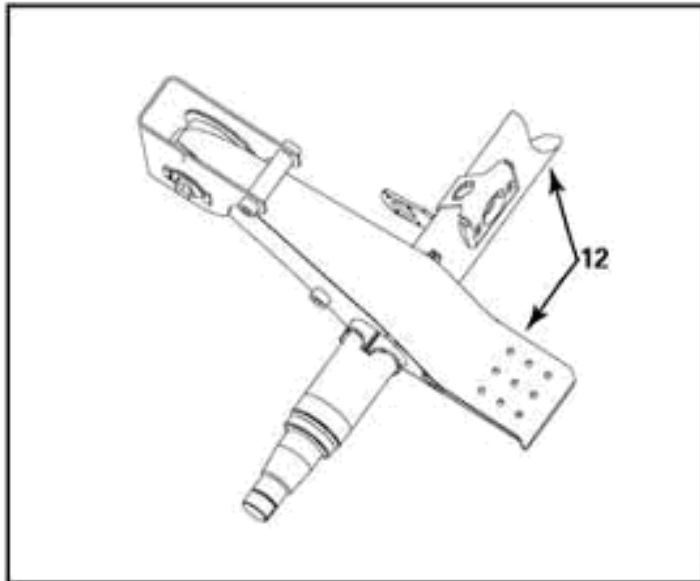
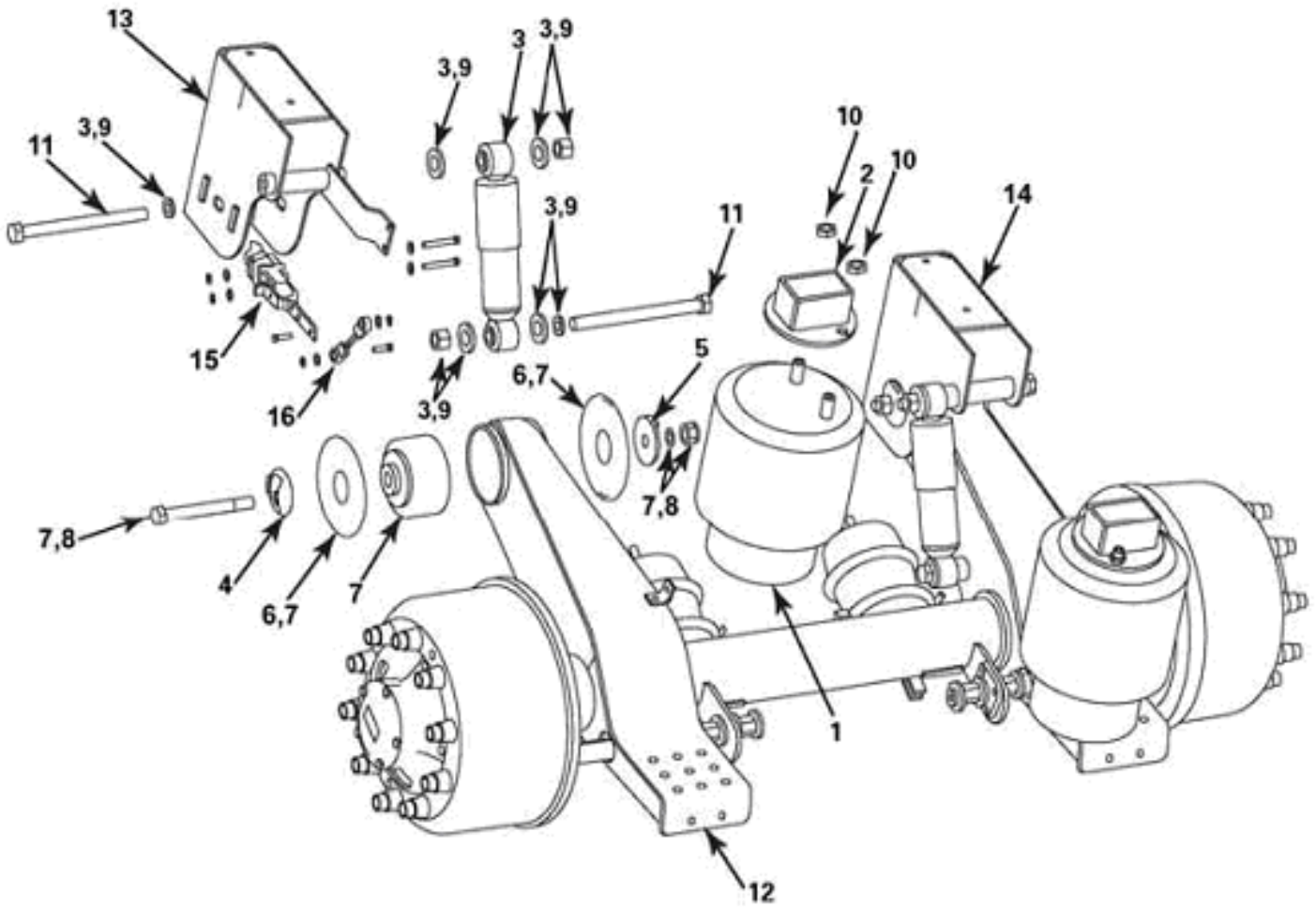
Axle Connection: The interface where the trailing arms are rigidly connected to the axle beam.

Axle: The “RFS” air suspension is integrated with Meritor axles and brakes. Parts book for Brake, Trailer Axle and Wheel Attaching Parts (PB-8857).

Eccentric Alignment Collar: This collar is located toward the outside of the vehicle and has the pivot bolt hole not located at the geometric center. When rotated within the alignment blocks located on the outside of each hanger, it forces the pivot bolt to move fore and aft for axle alignment.

Concentric Alignment Collar: This collar is located toward the center of the vehicle and has the pivot bolt hole located at the geometric center.

Exploded View for RFS23T

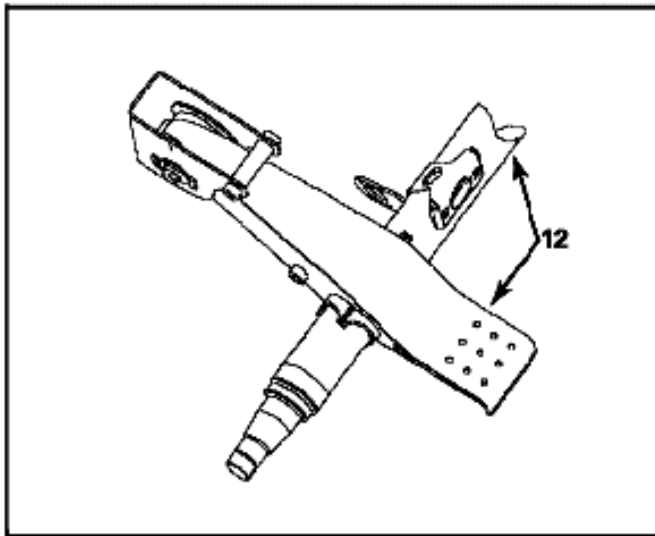
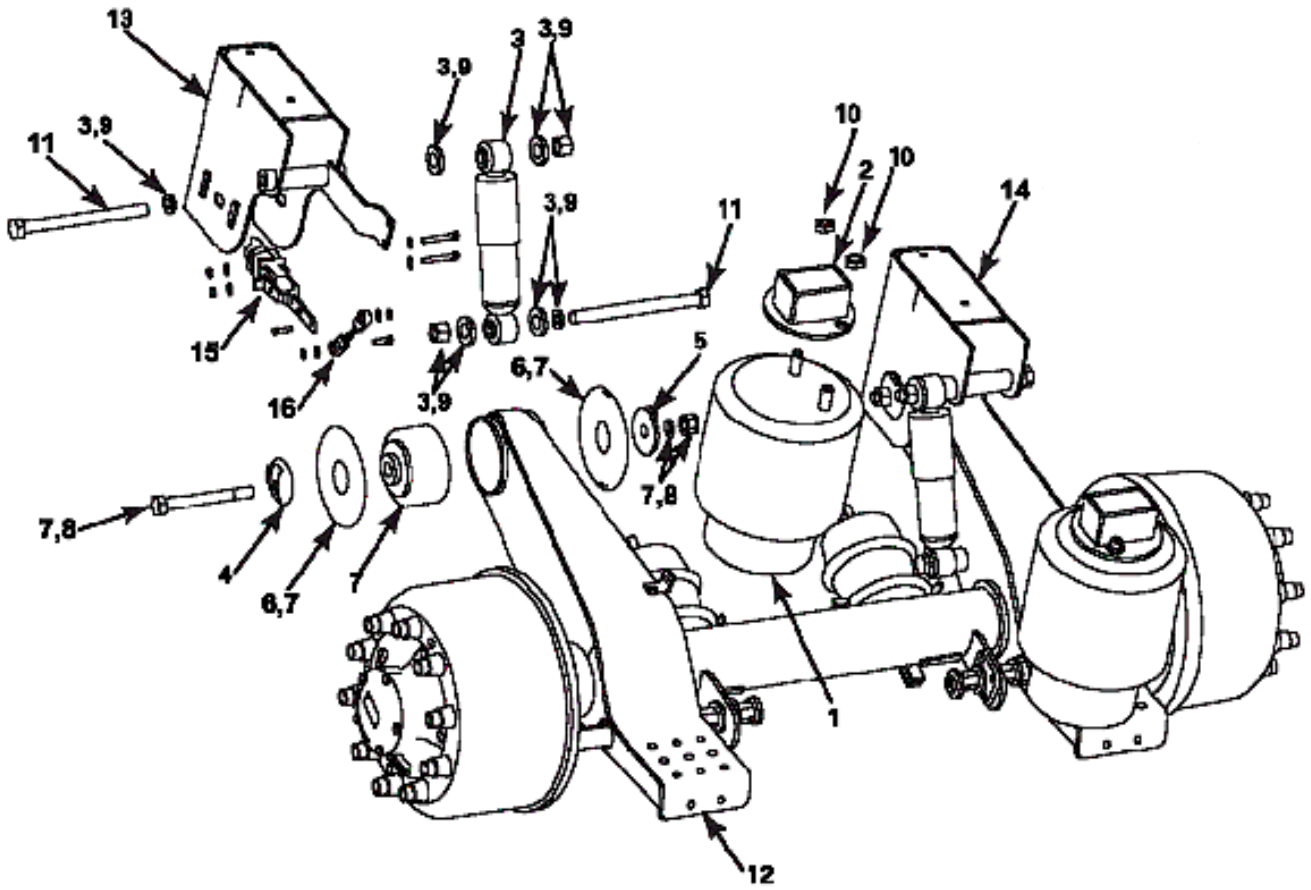


For service and Maintenance information refer to Maintenance Manual 14F available at meritor.com under Literature on Demand.

Parts List for RFS23T

Key	Description	Part Number	Qty.	Comments
1	Air Spring	21227742	2	
2	Air Spring Pedestal (Std. Ride Heights)			
	14" Ride Height	21227629	2	
	15" Ride Height	21227667	2	
	16" Ride Height	21227668	2	
	17" Ride Height	21227630	2	
	14" Ride Height (Bolt-On 9/16" Dia. Holes)	3305-M-1651	2	
	15" Ride Height (Bolt-On 9/16" Dia. Holes)	A-3150-V-2674	2	
	16" Ride Height (Bolt-On 9/16" Dia. Holes)	A-3150-W-2675	2	
	17" Ride Height (Bolt-On 9/16" Dia. Holes)	A-3150-X-2676	2	
3, 9	Shock Absorber Kit	KIT 11210	2	
4	Eccentric Alignment Collar	21226276	2	
5	Concentric Alignment Collar	21226275	2	
6	Wear Washer	21226663	4	
7	Pivot Bolt and Bushing Kit	KIT 11201	2	
8	Pivot Bolt Kit	KIT 11202	2	
10	Air Spring Bolt Kit	KIT 11203	2	
11	Capscrew (7/8"-9 x 11", Grade 8)	S-21488-M-2	2	
12	Trailing Arm/Axle Subassembly	—	1	See Page 12.
13	Roadside Hanger (Standard Models)			Contact Meritor for assistance.
	14" Ride Height (Weld-On)	A-3152-N-1158	1	
	15" Ride Height (Weld-On)	A1-3152-N-1158	1	
	16" Ride Height (Weld-On)	A2-3152-N-1158	1	
	17" Ride Height (Weld-On)	A3-3152-N-1158	1	
	14" Ride Height (Bolt-On 9/16" Dia. Holes)	A-3152-Y-1169	1	
	15" Ride Height (Bolt-On 9/16" Dia. Holes)	A1-3152-Y-1169	1	
	16" Ride Height (Bolt-On 9/16" Dia. Holes)	A2-3152-Y-1169	1	
	17" Ride Height (Bolt-On 9/16" Dia. Holes)	A3-3152-Y-1169	1	
	14" Ride Height (Bolt-On 11/16" Dia. Holes)	A-3152-K-1155	1	
	15" Ride Height (Bolt-On 11/16" Dia. Holes)	A1-3152-K-1155	1	
	16" Ride Height (Bolt-On 11/16" Dia. Holes)	A2-3152-K-1155	1	
	17" Ride Height (Bolt-On 11/16" Dia. Holes)	A3-3152-K-1155	1	
14	Curbside Hanger (Standard Models)			Contact Meritor for assistance.
	14" Ride Height (Weld-On)	A-3152-P-1160	1	
	15" Ride Height (Weld-On)	A1-3152-P-1160	1	
	16" Ride Height (Weld-On)	A2-3152-P-1160	1	
	17" Ride Height (Weld-On)	A3-3152-P-1160	1	
	14" Ride Height (Bolt-On 9/16" Dia. Holes)	A-3152-X-1168	1	
	15" Ride Height (Bolt-On 9/16" Dia. Holes)	A1-3152-X-1168	1	
	16" Ride Height (Bolt-On 9/16" Dia. Holes)	A2-3152-X-1168	1	
	17" Ride Height (Bolt-On 9/16" Dia. Holes)	A3-3152-X-1168	1	
	14" Ride Height (Bolt-On 11/16" Dia. Holes)	A-3152-J-1154	1	
	15" Ride Height (Bolt-On 11/16" Dia. Holes)	A1-3152-J-1154	1	
	16" Ride Height (Bolt-On 11/16" Dia. Holes)	A2-3152-J-1154	1	
	17" Ride Height (Bolt-On 11/16" Dia. Holes)	A3-3152-J-1154	1	
15	Valve Assemblies			
	With Auto Dump	A-7806-Z-1014	1	
	Without Auto Dump	A-7806-Y-1013	1	
16	Linkage Assembly	M306538	1	

Exploded View for RFS25T

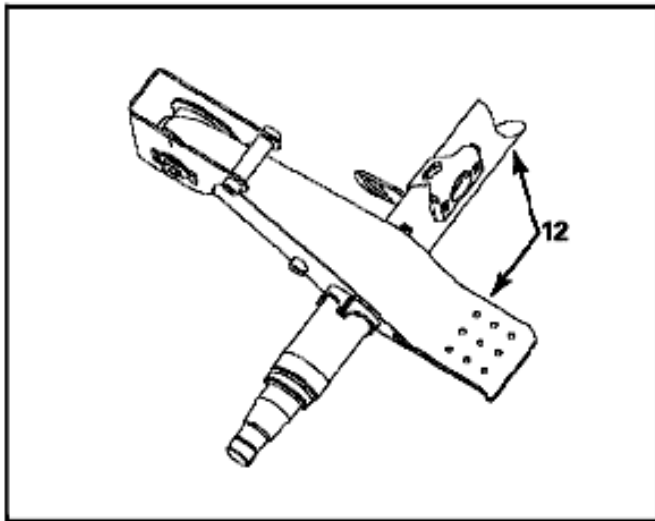
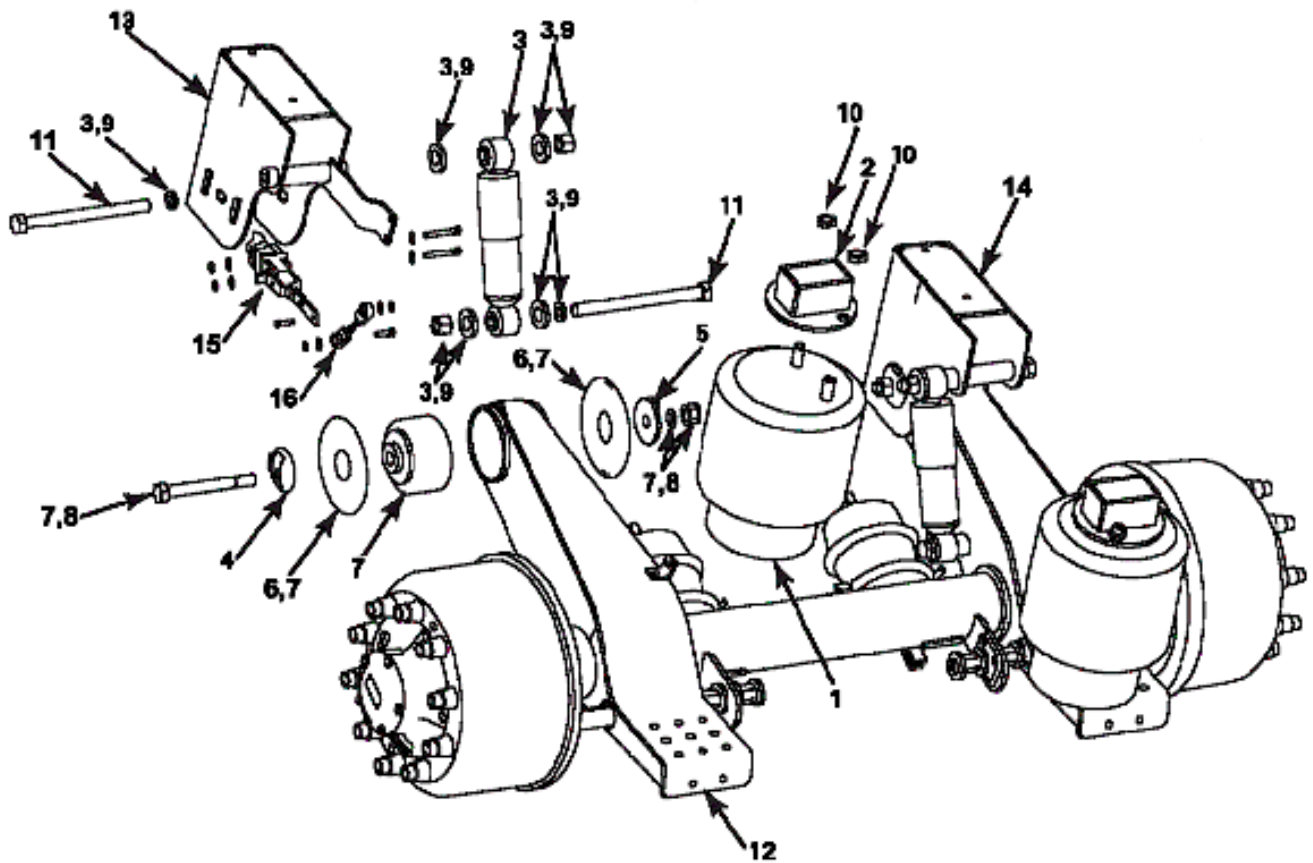


For service and Maintenance information refer to Maintenance Manual 14F available at meritor.com under Literature on Demand.

Parts List for RFS25T

Key	Description	Part Number	Qty.	Comments
1	Air Spring	21227892	2	
2	Air Spring Pedestal (Std. Ride Heights)			
	14" Ride Height	21227629	2	
	15" Ride Height	21227667	2	
	16" Ride Height	21227668	2	
	17" Ride Height	21227630	2	
	14" Ride Height (Bolt-On 9/16" Dia. Holes)	3305-M-1651	2	
	15" Ride Height (Bolt-On 9/16" Dia. Holes)	A-3150-V-2674	2	
	16" Ride Height (Bolt-On 9/16" Dia. Holes)	A-3150-W-2675	2	
	17" Ride Height (Bolt-On 9/16" Dia. Holes)	A-3150-X-2676	2	
3, 9	Shock Absorber Kit	KIT 11210	2	
4	Eccentric Alignment Collar	21226276	2	
5	Concentric Alignment Collar	21226275	2	
6	Wear Washer	21226663	4	
7	Pivot Bolt and Bushing Kit	KIT 11205	2	
8	Pivot Bolt Kit	KIT 11204	2	
10	Air Spring Bolt Kit	KIT 11203	2	
11	Capscrew (7/8"-9 x 11", Grade 8)	S-21488-M-2	2	
12	Trailing Arm/Axle Subassembly	—	1	See page 12.
13	Roadside Hanger (Standard Models)			Contact Meritor for assistance.
	14" Ride Height (Weld-On)	A-3152-T-1164	1	
	15" Ride Height (Weld-On)	A1-3152-T-1164	1	
	16" Ride Height (Weld-On)	A2-3152-T-1164	1	
	17" Ride Height (Weld-On)	A3-3152-T-1164	1	
	14" Ride Height (Bolt-On 9/16" Dia. Holes)	A-3152-V-1166	1	
	15" Ride Height (Bolt-On 9/16" Dia. Holes)	A1-3152-V-1166	1	
	16" Ride Height (Bolt-On 9/16" Dia. Holes)	A2-3152-V-1166	1	
	17" Ride Height (Bolt-On 9/16" Dia. Holes)	A3-3152-V-1166	1	
	14" Ride Height (Bolt-On 11/16" Dia. Holes)	A-3152-R-1162	1	
	15" Ride Height (Bolt-On 11/16" Dia. Holes)	A1-3152-R-1162	1	
	16" Ride Height (Bolt-On 11/16" Dia. Holes)	A2-3152-R-1162	1	
	17" Ride Height (Bolt-On 11/16" Dia. Holes)	A3-3152-R-1162	1	
14	Curbside Hanger (Standard Models)			Contact Meritor for assistance.
	14" Ride Height (Weld-On)	A-3152-U-1165	1	
	15" Ride Height (Weld-On)	A1-3152-U-1165	1	
	16" Ride Height (Weld-On)	A2-3152-U-1165	1	
	17" Ride Height (Weld-On)	A3-3152-U-1165	1	
	14" Ride Height (Bolt-On 9/16" Dia. Holes)	A-3152-W-1167	1	
	15" Ride Height (Bolt-On 9/16" Dia. Holes)	A1-3152-W-1167	1	
	16" Ride Height (Bolt-On 9/16" Dia. Holes)	A2-3152-W-1167	1	
	17" Ride Height (Bolt-On 9/16" Dia. Holes)	A3-3152-W-1167	1	
	14" Ride Height (Bolt-On 11/16" Dia. Holes)	A-3152-S-1163	1	
	15" Ride Height (Bolt-On 11/16" Dia. Holes)	A1-3152-S-1163	1	
	16" Ride Height (Bolt-On 11/16" Dia. Holes)	A2-3152-S-1163	1	
	17" Ride Height (Bolt-On 11/16" Dia. Holes)	A3-3152-S-1163	1	
15	Valve Assemblies			
	With Auto Dump	A-7806-Z-1014	1	
	Without Auto Dump	A-7806-Y-1013	1	
16	Linkage Assembly	M306538	1	

Exploded View for RFS30T

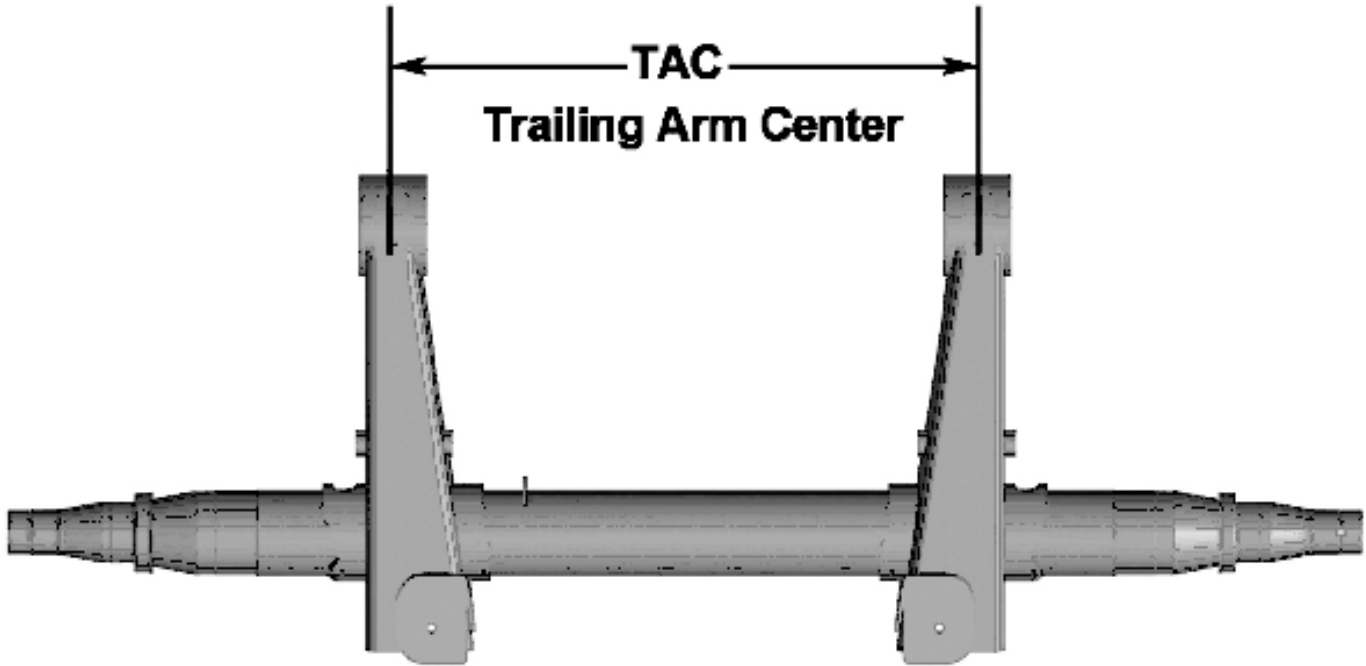


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Parts List for RFS30T

Key	Description	Part Number	Qty.	Comments
1	Air Spring	A-2258-Q-1499	2	
2	Air Spring Pedestal (Std. Ride Heights)			
	14" Ride Height	3305-C-1797	2	
	15" Ride Height	3305-C1-797	2	
	16" Ride Height	A3-3305-C-1797	2	
	17" Ride Height	A4-3305-C-1797	2	
3	Shock Absorber Kit	KIT 11210	2	
4	Eccentric Alignment Collar	21226276	2	
5	Concentric Alignment Collar	21226275	2	
6	Wear Washer	21226663	4	
7	Pivot Bolt and Bushing Kit	KIT 11205	2	
8	Pivot Bolt Kit	KIT 11204	2	
9	Air Spring Spacer	3305-S-1787	2	
10	Air Spring Bolt Kit	KIT 11203	2	
11	Capscrew (7/8"-9 x 11", Grade 8)	S-21488-M-2	2	
12	Trailing Arm/Axle Subassembly	—	1	See page 12.
13	Roadside Hanger (Standard Models)			Contact Meritor for assistance.
	14" Ride Height (Weld-On)	A1-3152Y1195	1	
	15" Ride Height (Weld-On)	A1-3152Z1196	1	
	16" Ride Height (Weld-On)	A1-3152A1197	1	
	17" Ride Height (Weld-On)	A1-3152B1198	1	
14	Curbside Hanger (Standard Models)			Contact Meritor for assistance.
	14" Ride Height (Weld-On)	A-3152Y1195	1	
	15" Ride Height (Weld-On)	A-3152Z1196	1	
	16" Ride Height (Weld-On)	A-3152A1197	1	
	17" Ride Height (Weld-On)	A-3152B1198	1	
15	Valve Assemblies			
	With Auto Dump		1	
	Without Auto Dump	A-7806-Z-1014	1	
16	Linkage Assembly	A-7806-Y-1013	1	
17	Flat Washer	M306538	2	
18	Lock Nut	330551787	2	

RFS Service Beams



- RFS Service Beams include axle and trailing arms with pivot bushings installed.
- Beams are provided without shoes or cams.
- Other specs include 16-1/2" brake spider, ABS sensor blocks, cam support bracket for long cams and brake angle rear.

RFS Series	Axle Model	Wall Thickness	Axle Track Length	Trailing Arm Centers	Notes	Part Number
RFS23	TP	5/8"	77.5"	41"	MTIS prepped	C53-3273-Q-199 SB
RFS23	TQ	5/8"	71.5"	35"		C8-3273-C-107 SB
RFS23	TQ	5/8"	77.5"	41"		C81-3273-J-140 SB
RFS25	TP	5/8"	77.5"	41"		C54-3273-Q-199 SB
RFS25	TQ	5/8"	71.5"	35"		C13-3273-C-107 SB
RFS25	TQ	5/8"	77.5"	41"		C70-3273-J-140 SB
RFS25	TP	3/4"	71.5"	35"		C-3273-Q-1213 SB
RFS25	TP	3/4"	77.5"	41"		C-3273-K-1155 SB
RFS25	TQ	3/4"	77.5"	41"		C-3273-R-1162 SB

Repair Kits and Components

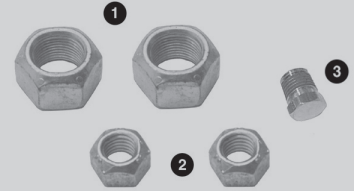
Air Spring (RFS23T, RFS25T & RFS30T)

Part Number	Service Number	Model
21227742	FS6231	RFS23T
21227892	FS6258	RFS25T
A-2258-Q-1499		RFS30T



KIT 11203 Air Spring Bolt Kit (RFS23T & RFS25T)

Item	Quantity	Part Number	Description
1	2	1227-M-1573	Lock Nut - 3/4"-16, Grade C
2	2	1227-B-1614	Lock Nut - 1/2"-13, Grade B
3	1	1250-H-1308	Plug - 1/4" NPT



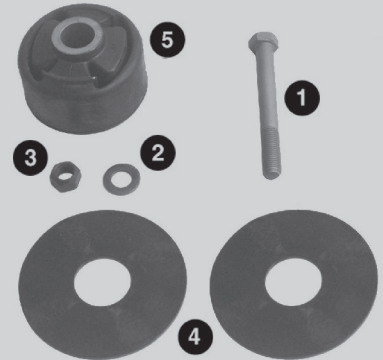
KIT 11216 Air Spring Bolt Kit (RFS30T)

Item	Quantity	Part Number	Description
1	2	1227-M-1573	Lock Nut - 3/4"-16, Grade 8
2	2	1227-B-1614	Lock Nut - 1/2"-13, Grade C
3	1	1250-H-1308	Plug - 1/4" NPT
4	2	10-X-1763	Capscrew
5	4	S-2814Z-2	Capscrew



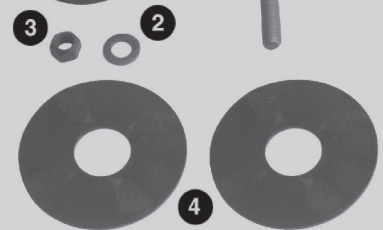
KIT 11201 Pivot Bolt and Bushing Kit (RFS23T)

Item	Quantity	Part Number	Description
1	1	S-21464-M-2	Capscrew 7/8"-9 x 8", Grade 8
2	1	M301530	Hardened Flat Washer - 1-3/4" OD, 15/16" ID
3	1	1227-R-1604	Lock Nut - 7/8"-9, Grade C
4	2	21226663	Wear Washer
5	1	A-1225-N-1522	Multi-Function Bushing



KIT 11205 Pivot Bolt and Bushing Kit (RFS25T)

Item	Quantity	Part Number	Description
1	1	S-21472-M-2	Capscrew 7/8"-9 x 9", Grade 8
2	1	M301530	Hardened Flat Washer - 1-3/4" OD, 15/16" ID
3	1	1227-R-1604	Lock Nut - 7/8"-9, Grade C
4	2	21226663	Wear Washer
5	1	21230539	Multi-Function Bushing



Repair Kits and Components

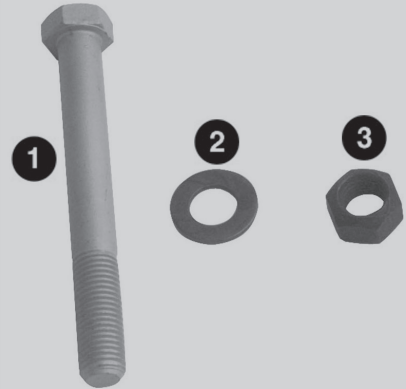
KIT 11214 Pivot Bolt and Bushing Kit (RFS30T)

Item	Quantity	Part Number	Description
1	1	S-21472-M-2	Capscrew 7/8"-9 x 9", Grade 8
2	1	WA-314K-1	Hardened Flat Washer - 1-3/4" OD, 15/16" ID
3	1	1227-R-1604	Lock Nut - 7/8"-9, Grade C
4	2	21226663	Wear Washer
5	1	21230539	Multi-Function Bushing



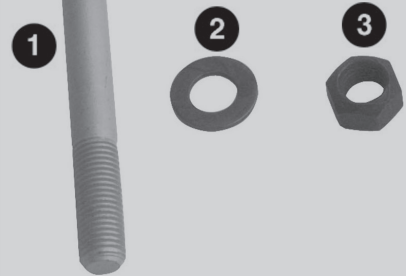
KIT 11202 Pivot Bolt Kit (RFS23T)

Item	Quantity	Part Number	Description
1	1	S-21464-M-2	Capscrew 7/8"-9 x 8", Grade 8
2	1	M301530	Hardened Flat Washer - 1-3/4" OD, 15/16" ID
3	1	1227-R-1604	Lock Nut - 7/8"-9, Grade C



KIT 11204 Pivot Bolt Kit (RFS25T)

Item	Quantity	Part Number	Description
1	1	S-21472-M-2	Capscrew 7/8"-9 x 9", Grade 8
2	1	M301530	Hardened Flat Washer - 1-3/4" OD, 15/16" ID
3	1	1227-R-1604	Lock Nut - 7/8"-9, Grade C

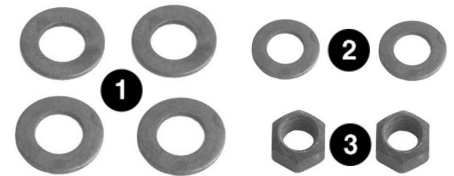


KIT 11215 Pivot Bolt Kit (RFS30T)

Item	Quantity	Part Number	Description
1	1	S-21472-M-2	Capscrew 7/8"-9 x 9", Grade 8
2	1	WA-314K-1	Hardened Flat Washer - 1-3/4" OD, 15/16" ID
3	1	1227-R-1604	Lock Nut - 7/8"-9, Grade C

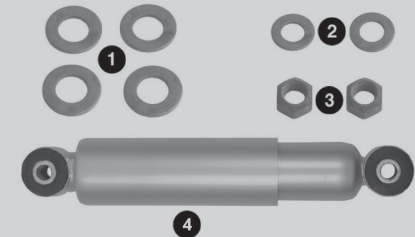
KIT 11200 Shock Absorber Hardware Kit (RFS23T,RFS25T & RFS30T)

Item	Quantity	Part Number	Description
1	4	1229-M-4979	Washer - 2-1/4" OD, 15/16" ID
2	2	M301530	Hardened Flat Washer - 1-3/4" OD, 15/16" ID
3	2	1227-R-1604	Lock Nut - 7/8"-9, Grade C



KIT 11210 Shock Absorber Kit (RFS23T,RFS25T & RFS30T)

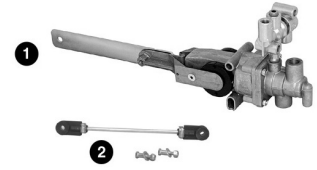
Item	Quantity	Part Number	Description
1	4	1229-M-4979	Washer - 2-1/4" OD, 15/16" ID
2	2	M301530	Hardened Flat Washer - 1-3/4" OD, 15/16" ID
3	2	1227-R-1604	Lock Nut - 7/8"-9, Grade C
4	1	A-7805-L-1026	Shock Absorber



Repair Kits and Components

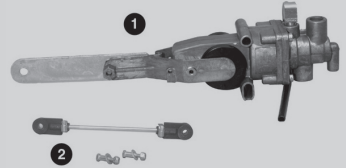
KIT 11206 Valve Kit With Auto Dump (RFS23T & RFS25T)

Item	Quantity	Part Number	Description
1	1	A-7806-Z-1014	Height Control Valve
2	1	M306538	Linkage Assembly



KIT 11207 Valve Kit Without Auto Dump (RFS23T & RFS25T)

Item	Quantity	Part Number	Description
1	1	A-7806-Y-1013	Height Control Valve
2	1	M306538	Linkage Assembly



Busing Installation Tool (RFS23T, RFS25T & RFS30T)

Part Number

A-3256-R-1188



MERITOR AFTERMARKET PARTS WARRANTY

We warrant all new parts for one year from date of shipment to the buyer against defective material or workmanship (but not against damage caused by accident, abuse or improper installation, maintenance or repair) when such parts are used on vehicles the specifications of which have been approved by our Engineering Department.

As the exclusive remedy under this warranty, we will, at our option, repair or replace such parts free of charge, or take back the nonconforming parts and refund the monies paid by buyer for such parts, if found on examination by us to be nonconforming and if any necessary return charges are prepaid.

If it is necessary to return any parts under this warranty, buyer agrees not to make any deduction on account thereof from remittances on current accounts while claims are in the process of disposition. Any expense incurred without our consent for repairs or replacement will not be allowed.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. IN NO EVENT SHALL SELLER BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE.

Only genuine Meritor replacement parts are covered by this aftermarket parts warranty.

Vehicle models, brands and names depicted herein are the property of their respective owners, and are not in any way associated with Meritor, Inc., or its affiliates.



Meritor Heavy Vehicle Systems, LLC
7975 Dixie Highway
Florence, KY 41042 USA

888-725-9355 U.S.
800-387-3889 Canada
MeritorPartsOnline.com
meritor.com

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