

AllTrek

4000™

SUSPENSION SYSTEM

OWNER'S MANUAL



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ALLTREK 4000™ SUSPENSION SYSTEM

OWNER'S MANUAL

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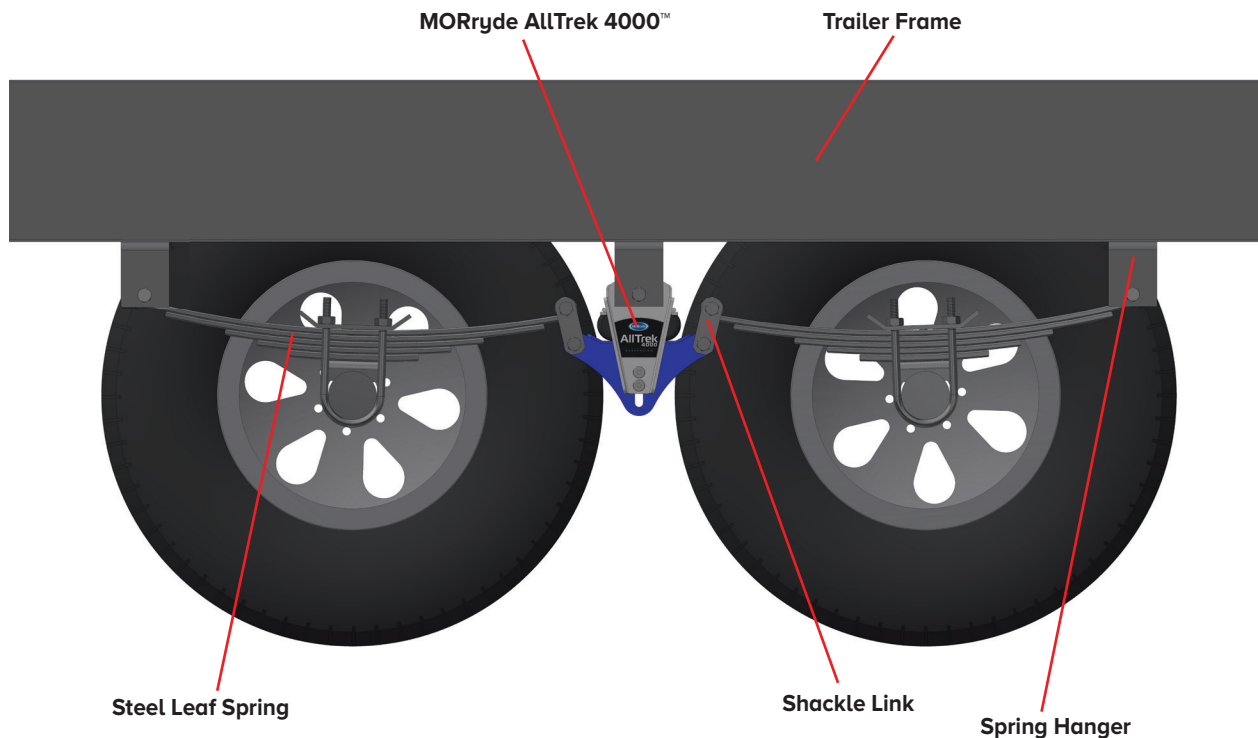


INTRODUCTION

Your recreational vehicle has been equipped with the MORryde **AllTrek 4000™** Suspension System. The MORryde system is located between the axles on your trailer, replacing the steel equalizer (see diagram below). This system is uniquely engineered to work in concert with your steel leaf spring suspension to improve overall suspension performance.

At the heart of your MORryde system are MORryde's rubber springs that have been a mainstay in the recreational vehicle market for over 50 years. This system has been rigorously tested and engineered specifically for your trailer using the rubber springs' ability to isolate and absorb road shock and increase your trailer's overall dynamic axle travel. The combination of the MORryde rubber equalizer working in concert with your trailer's leaf springs will greatly enhance your suspension system's ability to deal with today's rough roads. This means you will experience:

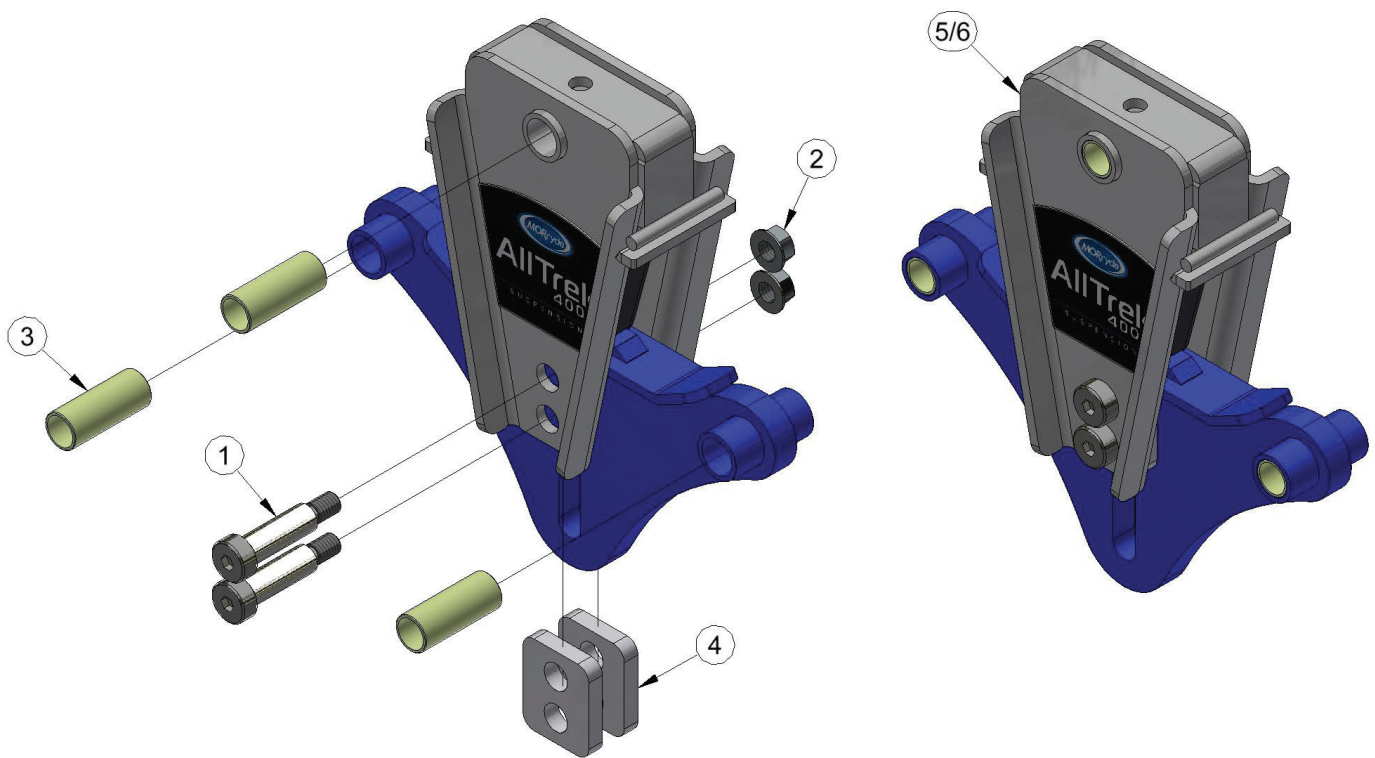
- **Smoother, more comfortable towing with over 40% more rubber than the CRE3000 to absorb road shock**
- **4" of suspension travel backed by warranty:**
 - **Parts | 2 year warranty**
 - **Labor | 1 year warranty**



PARTS LIST:

TANDEM REPLACEMENT

Item	Part Number	Description
1	UO115-1001	3/8-16 - 1/2 X 1.5 LONG SHOULDER BOLT
2	UO116-399	3/8-16 FLANGE LOCKNUT
3	UO136-592	BRONZE BUSHING
4	UO136-3348	GLIDE PAD
5	TG2-33-SINGLE	COMPLETE 33" WHEEL BASE EQUALIZER REPLACEMENT
6	TG2-35-SINGLE	COMPLETE 35" WHEEL BASE EQUALIZER REPLACEMENT



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TANDEM INSTALLATION INSTRUCTIONS



The MORryde **AllTrek 4000™** is the affordable way to upgrade your 5th wheel or travel trailer. By replacing the steel equalizers with shock-absorbing rubber compression springs, the **AllTrek 4000™** allows up to 4" of total suspension travel.

PARTS LIST:

- (2) **AllTrek 4000™** Equalizers

TOOLS REQUIRED:

- Torque Wrench • 11/16" or 3/4" Socket & 13/16" Wrench
- Floor Jacks • Safety Stands • Ratchet

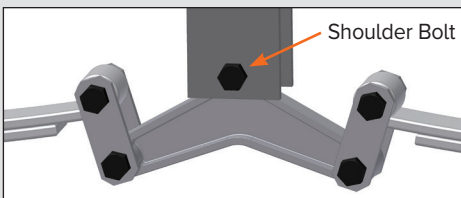
INSTALLATION:

Step 1

Loosen all lug nuts. Using appropriately rated jacks, raise the unit and support the frame with safety stands. Support the axles with floor jacks and remove all wheels.

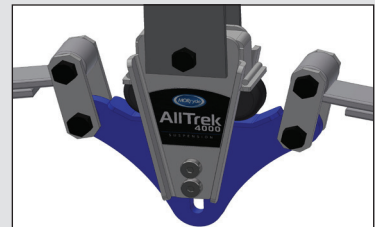
Step 2

Remove the shackle links from the equalizer, then remove the shoulder bolt from the frame hanger.



Step 3

Replace the stock equalizer with the **AllTrek 4000™**. Reinstall the shackle links and tighten all nuts to 40 ft-lbs. If a 3/4" socket is required, torque to 80 ft-lbs.



Step 4

Reinstall all wheels, then remove the jacks and supports from the frame and axles. Torque all lug nuts according to manufacturer specifications.

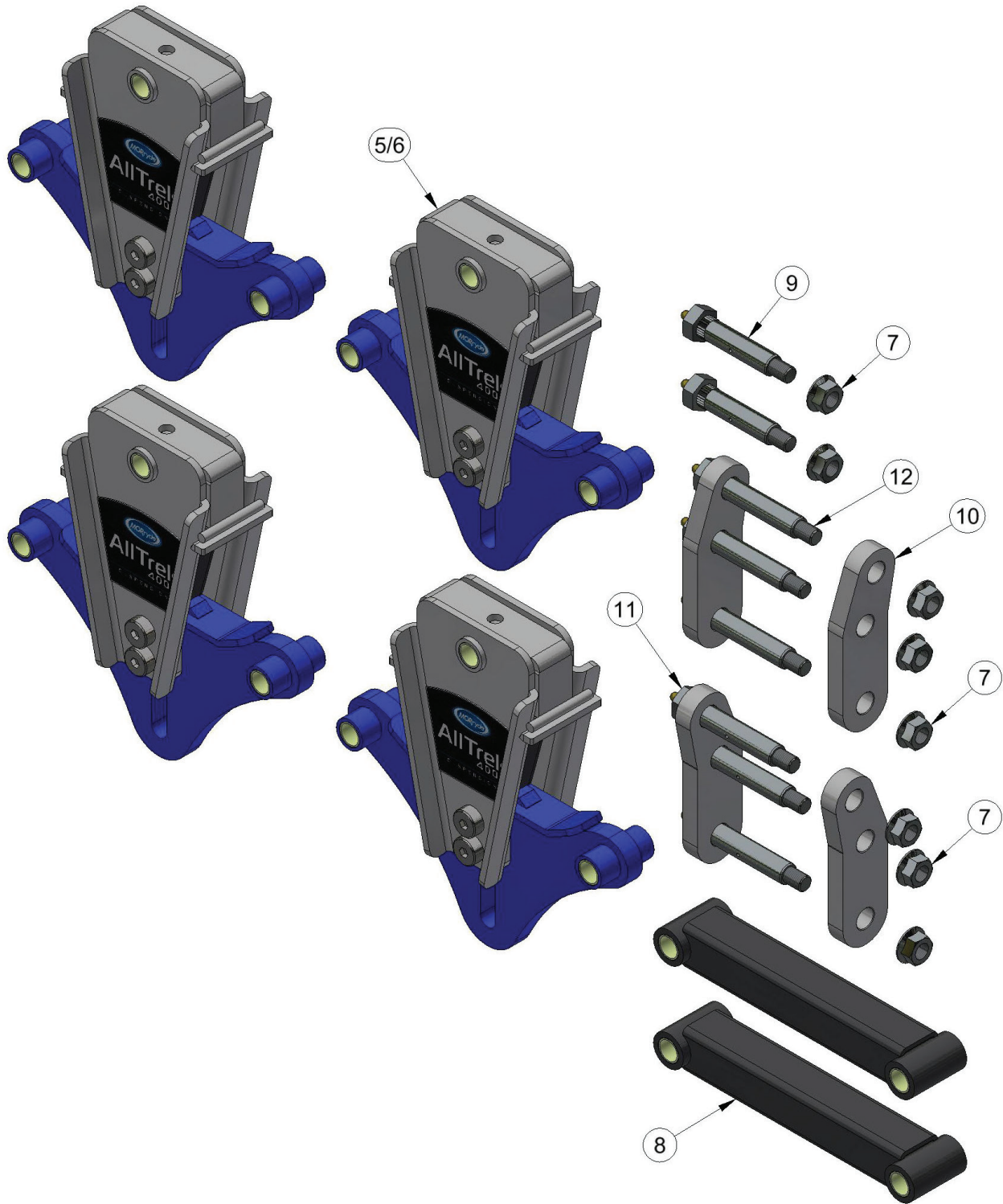
PARTS LIST CONTINUED:

TRIPLE OEM REPLACEMENT

Item	Part Number	Description
1	UO115-1001	3/8-16 - 1/2 X 1.5 LONG SHOULDER BOLT
2	UO116-399	3/8-16 FLANGE LOCKNUT
3	UO136-592	BRONZE BUSHING
4	UO136-3348	GLIDE PAD
5	TG2-33-SINGLE	COMPLETE 33" WHEEL BASE EQUALIZER REPLACEMENT
6	TG2-35-SINGLE	COMPLETE 35" WHEEL BASE EQUALIZER REPLACEMENT
7	006-092-01 UO116-421	7/16-20 FLANGE LOCKNUT OR 1/2-20 FLANGE LOCKNUT
8	TG30-001	TORQUE ARM ASSEMBLY
9	UO115-888 UO115-966	7/16-20 - 9/16 X 2.9 LONG WET BOLT OR 1/2-20, 9/16 X 2.9 LONG WET BOLT
10	UO150-007	3-HOLE SHACKLE LINK
11	UO43-003L	3-HOLE SHACKLE LINK ASSEMBLY
12	UO43-003R	3-HOLE SHACKLE LINK ASSEMBLY



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PARTS LIST CONTINUED:

AFTERMARKET TRIPLE REPLACEMENT

Item	Part Number	Description
1	UO115-1001	3/8-16 - 1/2 X 1.5 LONG SHOULDER BOLT
2	UO116-399	3/8-16 FLANGE LOCKNUT
3	UO136-592	BRONZE BUSHING
4	UO136-3348	GLIDE PAD
5	TG2-33-SINGLE	COMPLETE 33" WHEEL BASE EQUALIZER REPLACEMENT
6	TG2-35-SINGLE	COMPLETE 35" WHEEL BASE EQUALIZER REPLACEMENT
7	UO116-491 UO116-421	7/16-20 FLANGE LOCKNUT* 1/2-20 FLANGE LOCKNUT
8	RE43-004 RE43-008	SHACKLE LINK ASSEMBLY
9	RE150-004	SHACKLE LINK
10	TG20-001	AXLE TORQUE BRACKET O/S: LH (U/S: RH)
11	TG20-002	AXLE TORQUE BRACKET O/S: RH (U/S: LH)
12	TG21-001	INNER TORQUE CROSS MEMBER
13	TG21-002	OUTER TORQUE CROSS MEMBER
14	TG21-003	INNER CROSS MEMBER
15	TG21-004	OUTER CROSS MEMBER
16	TG21-005	INNER SUPPORT CROSS MEMBER
17	TG21-006	OUTER SUPPORT CROSS MEMBER
18	TG30-033	TORQUE ARM 33" WHEEL BASE
19	TG30-035	TORQUE ARM 35" WHEEL BASE
20	UO113-009	7/16-20 X 3-1/8 X 4-1/2 U-BOLT
21	UO115-033	3/8-16 X 3.75 HEX BOLT
22	UO115-400	3/8-16 X 1 FLANGE BOLT
23	UO115-607	1/2-13 X 4 HEX BOLT
24	UO115-888 UO115-966	7/16-20, 9/16 X 2.9 LONG WET BOLT OR 1/2-20, 9/16 X 2.9 LONG WET BOLT
25	UO115-889 UO115-967	7/16-20, 9/16 X 3.4 LONG WET BOLT OR 1/2-20, 9/16 X 3.4 LONG WET BOLT
26	UO115-951	5/16-18 X 3.5 FLANGE BOLT
27	UO116-054	1/2-13 SERRATED FLANGE NUT
28	UO116-189	5/16-18 FLANGE LOCKNUT
29	XF205-001	CROSS MEMBER BRACE
30	XF214-001	SPACER TUBE

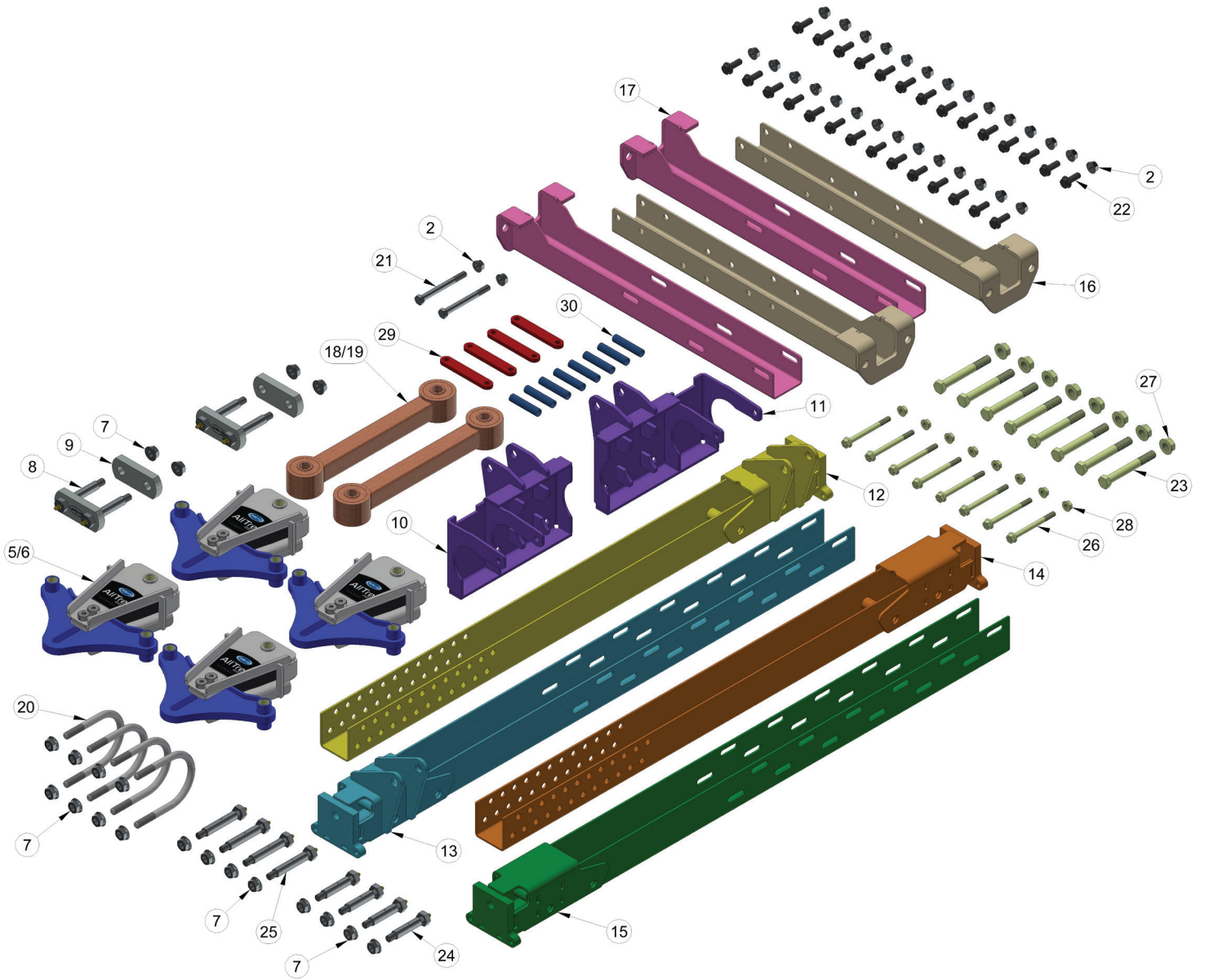
NOTE: 7/16-20 nuts will always need to be used with U-bolts*



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PARTS LIST CONTINUED:

TRIPLE AFTERMARKET REPLACEMENT



AFTERMARKET TRIPLE INSTALLATION INSTRUCTIONS

* Triple axle **AllTrek 4000™** cannot be used with Correct Track.

* Triple axle **AllTrek 4000™** cannot have items hanging down under the frame between the equalizer hangers.

PARTS LIST:

- See **Page 7**

TOOLS REQUIRED:

Torque Wrench • Floor Jacks • Safety Stands • 1/2" Socket • 1/2" Wrench • 9/16" Socket • 9/16" Wrench • 11/16" or 3/4" Socket • 13/16" Wrench • Hammer • Ratchet

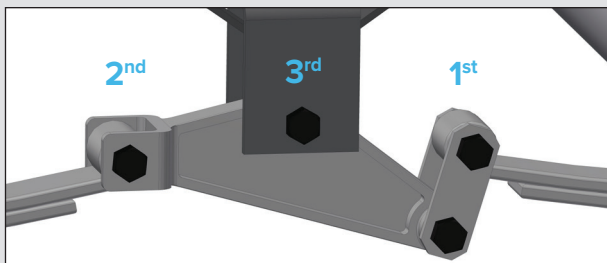
INSTALLATION:

Step 1

Loosen all lug nuts. Using appropriately rated jacks, raise the unit and support the frame with safety stands. Support the axles with floor jacks and remove all wheels.

Step 2

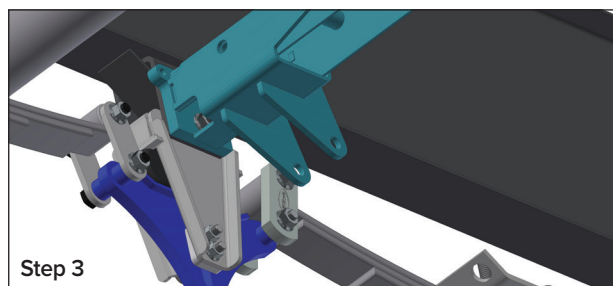
On the curbside of the unit, use an 11/16" or 3/4" socket and 13/16" wrench and remove the shackle links from the front leaf spring, remove the shoulder bolt from the center leaf spring, and then remove the shoulder bolt from the top of the equalizer.



Step 3

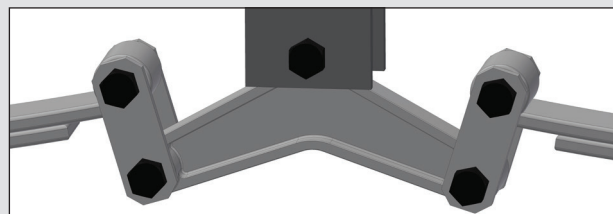
Replace the equalizer with the **AllTrek 4000™** using one of the 3.4" long wet bolts (shoulder bolt with grease zerk) included in the installation kit. The threaded end of the bolt will face the inside of the trailer. Slide the Outer Torque Cross Member (cross member with slots and ears) onto the end of the bolt, then install the 7/16-20 or 1/2-20 Flange Locknut. Reinstall the front shackle links and install a new Shackle Link Assembly and loose Shackle Link along with the 7/16-20 or 1/2-20 Flange Locknuts. Do not torque any of the nuts.

NOTE: Use a hammer to tap the wet bolts into the frame hangers. Use a small diameter socket to fit over the grease zerk and tap the bolt in place (it is important not to damage the grease zerk) or remove the zerk, tap the bolt in place, and reinstall the zerk. Make sure the grease exit hole in the shoulder of the bolt faces the 3 or 9 o'clock position for proper grease flow.



Step 4

Remove the floor jack from the front axle and use it to support the rear axle. Then, remove the shackle links from the rear equalizer, then remove the shoulder bolt.



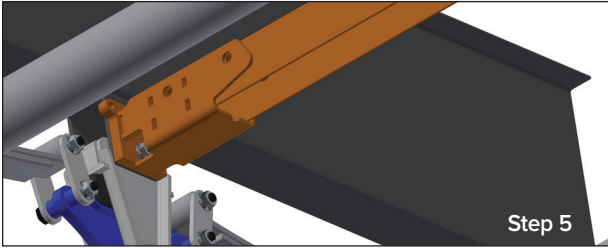
Step 5

Replace the stock equalizer with the **AllTrek 4000™** using one of the 3.4" long wet bolts. The threaded end of the bolt will face the inside of the trailer. Slide the Inner Cross Member (cross member with holes) onto the end of the bolt, then install the 7/16-20 or 1/2-20 Flange Locknut. Reinstall the shackle links.



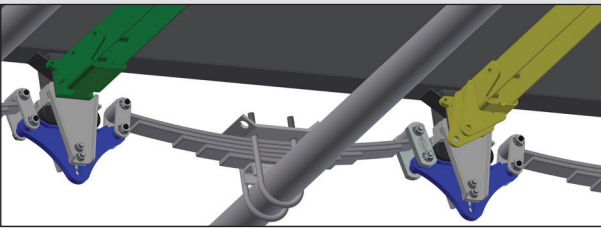
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AFTERMARKET TRIPLE INSTALLATION INSTRUCTIONS



Step 6

Starting at the front of the frame and moving rearward, repeat steps 2-5 on the opposite side of the frame using the mating cross member channels.

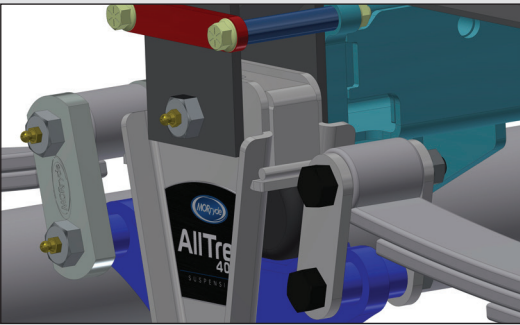


Step 7

Torque all the 7/16-20 Flange Locknuts (11/16" socket) on the wet bolts and shackle links to 40 ft-lbs. If 1/2-20 Locknuts (3/4" socket) are being used, torque to 80 ft-lbs.

Step 8

Install Cross Member Braces outside each equalizer hanger using Spacer Tubes, 5/16-18 x 3.5 Flange bolts, and 5/16-18 Flange Locknuts. Tighten the nuts down evenly on each side of the hanger being sure not to tighten a nut more than one full rotation more than the nut on the other side of the hanger. Torque to 20 ft-lbs. with a 1/2" socket and wrench.

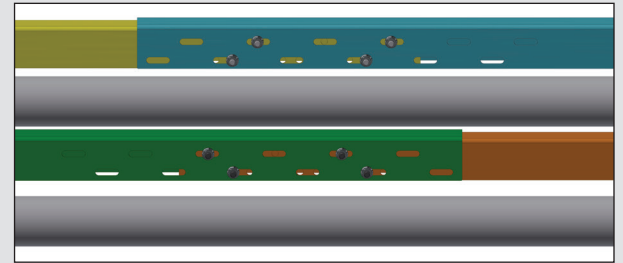


Step 9

Line up the holes on both front cross member channels, and insert (4) 3/8-16 x 1 Flange Bolts on each side, utilizing the holes farthest from the center in both the top and bottom rows. Install the 3/8-16 Flange Locknuts but do not torque.

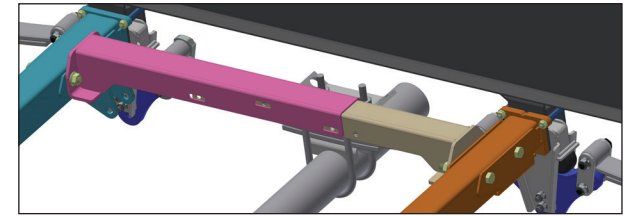
Step 10

Repeat Step 9 for the rear cross member channels. Then, use a 9/16" socket and wrench and torque all the 3/8-16 Flange Locknuts to 40 ft-lbs.



Step 11

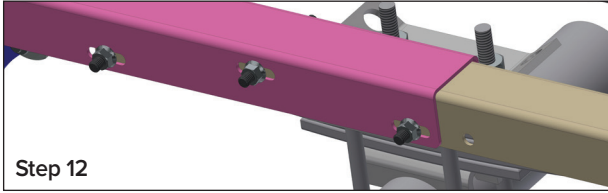
Using (2) 1/2-13 x 4 Hex Bolts and (2) 1/2-13 Serrated Flange Nuts, attach the Outer Support Cross Member to the front cross member on the curbside. The Serrated Flange Nuts should be against the Outer Support Cross Member. Then do the same thing with the Inner Support Cross Member to the rear cross member on the curbside.



Step 12

Line up the holes on both Support Cross Member channels, and insert (3) 3/8-16 x 1 Flange Bolts on each side. Install the 3/8-16 Flange Locknuts but do not torque.

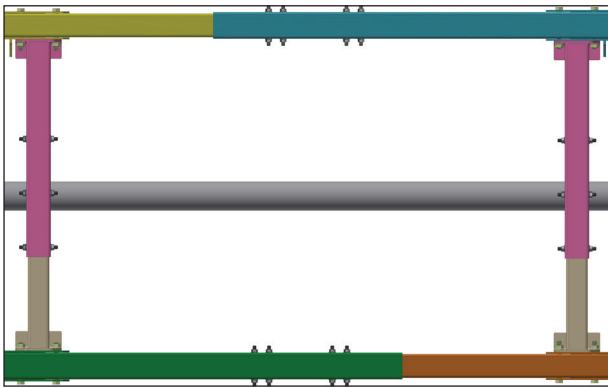
AFTERMARKET TRIPLE INSTALLATION INSTRUCTIONS



Step 12

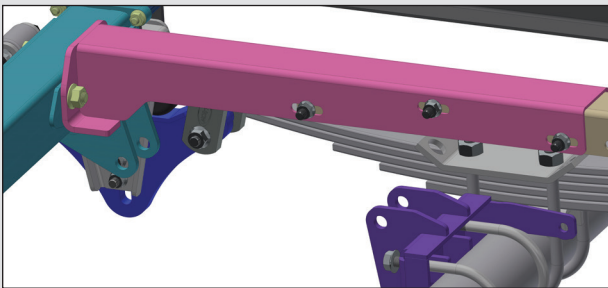
Step 13

Repeat Steps 11 and 12 for the roadside. Use a 3/4" socket and wrench and torque the 1/2-13 x 4 Hex Bolts to 95 ft-lbs. Then, use a 9/16" socket and wrench and torque the 3/8-16 Flange Locknuts to 40 ft-lbs.



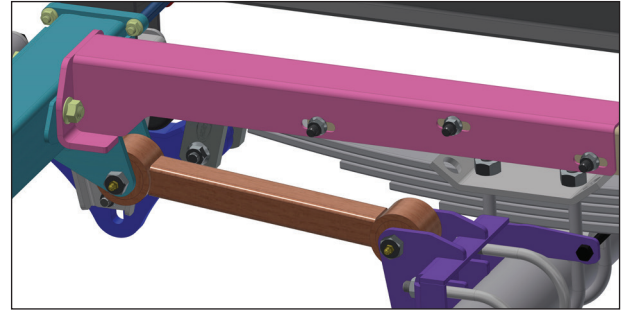
Step 14

Bolt the Axle Torque Brackets to the center axle. In the case of an overslung axle, install the Axle Torque Brackets as shown. In the case of an underslung axle, install the Brackets with the Torque Arm mounting hole at the bottom of the axle instead of the top. Only install the U-bolts for now and do not tighten the 7/16-20 Flange Locknuts.



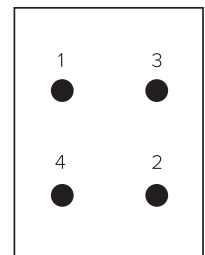
Step 15

Using the 2.9" Long Wet Bolts and 7/16-20 or 1/2-20 Flange Locknuts, bolt the Torque Arms between the Front Cross Member and the Axle Torque Brackets. Torque the nuts to 40 ft-lbs using an 11/16" socket and 13/16" wrench. If using a 3/4" socket to tighten, torque to 80 ft-lbs.



Tighten the 7/16-20 Flange Locknuts on the U-bolts to pull the Axle Torque Brackets up to the axle, then rotate the brackets and insert the 3/8-16 x 3.75 Hex Bolts through the back of the brackets behind the axle seat and hand tighten 3/8-16 Flange Locknuts onto the bolts. Now torque the U-bolts to 40 ft-lbs; these must be tightened using a cross-pattern sequence (see diagram) being sure not to tighten a nut more than one full rotation more than any of the other nuts. Now torque the 3/8-16 Flange Locknuts to 40 ft-lbs using a 9/16" socket and wrench.

U-Bolt Torque Pattern Visual Aid



U-Bolts must be tightened and torqued using a cross-pattern sequence.

Tighten #1 and #2 to partial torque, then #3 and #4 to partial torque.

Using the same sequence, fully torque the U-Bolt Nuts.

Step 16

Reinstall all wheels, then remove the jacks and supports from the frame and axles. Torque all lug nuts according to manufacturer specifications.



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RUBBER SPRING INSPECTION

Figure 1 shows a rubber spring in good condition. If the rubber is compressed like the one shown in Figure 2, measure the offset between the Beam Arm and the Spring Carrier. If the offset is $5/16$ " or less, the spring has worn out and needs to be replaced.

NOTE: It is normal to see rubber spring weather checking, which consists of small surface cracks in the rubber. It is also common to see minor tearing or fretting of the rubber around the edges. These conditions do not require the equalizer to be replaced.

Figure 1



ALLTREK 4000™ with rubber spring in good condition shown at design load

Figure 2



ALLTREK 4000™ with rubber spring worn out

BASIC TROUBLESHOOTING

PROBLEM	CAUSE	REMEDY
Excessive Tire Wear	<ul style="list-style-type: none">• Axle alignment• Improper tire pressure*• Tires out of balance• Improper brake adjustment	<ul style="list-style-type: none">• Align axles• Adjust air pressure*• Balance tires• Adjust brakes
Rough Ride	<ul style="list-style-type: none">• Pulverized rubber spring• Trailer is not level front to back	<ul style="list-style-type: none">• Replace the ALLTREK 4000™ equalizer• Adjust pin box height to level out trailer
Excessive Sway	<ul style="list-style-type: none">• Improper tire pressure*• Broken crossmembers in frame• Broken or fanned out leaf spring• Improper hitch weight • Loose U-bolts• Broken spring hanger or bolts	<ul style="list-style-type: none">• Adjust air pressure*• Contact frame manufacturer• Fix or replace leaf spring• Travel trailers should have 10% - 15% hitch weight• 5th wheel trailers should have 20% - 25% hitch weight• Repair/replace U-bolts• Repair/replace damaged parts

* According to tire manufacturer specifications, proper tire pressure means inflating tires according to individual wheel weights (as long as a wheel is not overloaded), not necessarily inflating to the maximum pressure as specified on the tire.

NOTE: If a problem occurs that is not addressed here, please give us a call at **574-293-1581** or send an email to parts@MORryde.com for further service information.

WARRANTY

Please visit www.MORryde.com for warranty information.



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At MORryde, we have a passion for solving problems. Whether we're fabricating custom solutions, modifying a commercial chassis, or creating our innovative products, we answer to a wide range of markets and deliver on a variety of needs. At MORryde, it's simply about doing MORE for our customers, and it doesn't stop at the sale. We stand behind our products, believing in quality first, service always. No matter the issue, we'll be the first to respond and the last to be satisfied. In short, we build better — together.



If you have any questions regarding the installation procedure or have difficulty with any of the steps, please give us a call at **574-293-1581** or email **parts@morryde.com**.

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