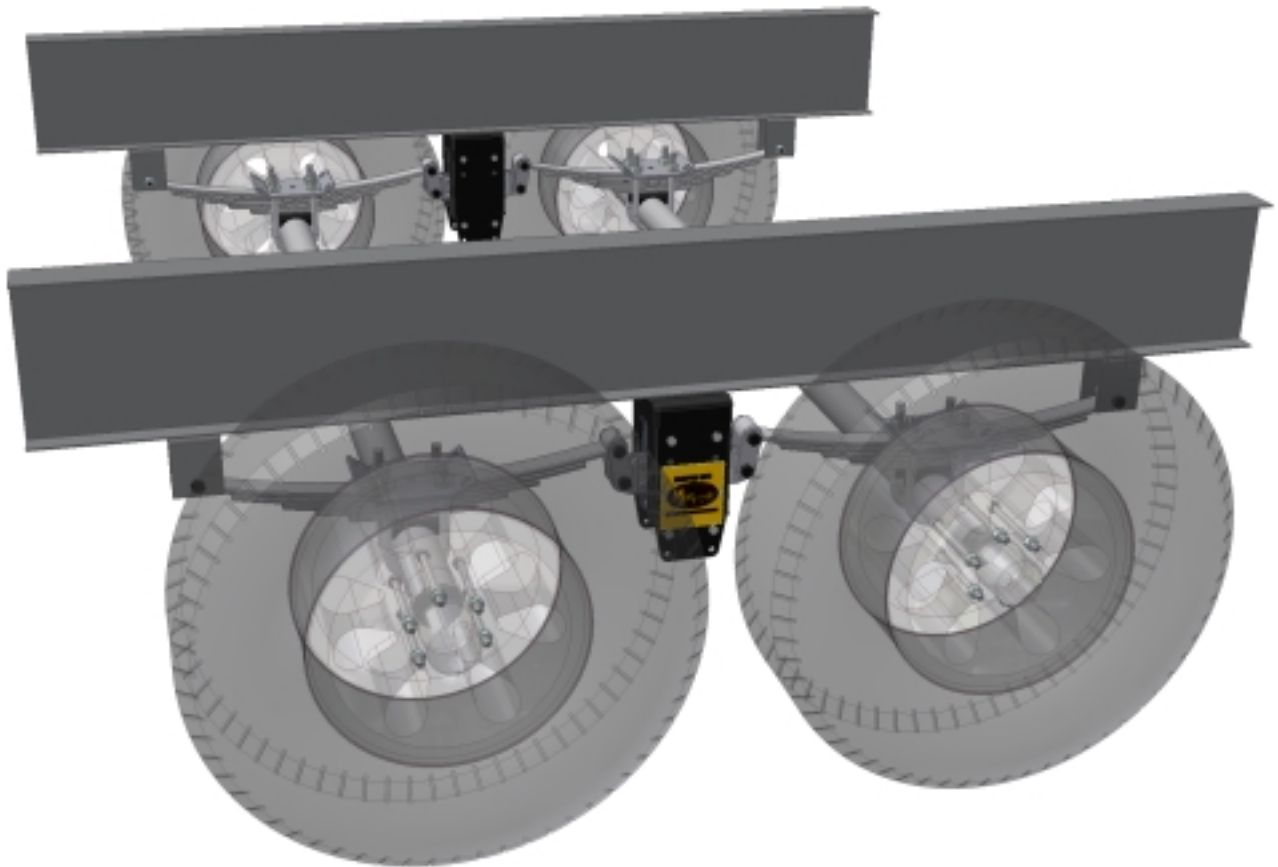




# **LRE SUSPENSION SYSTEM OWNER'S MANUAL**



# LRE SUSPENSION SYSTEM

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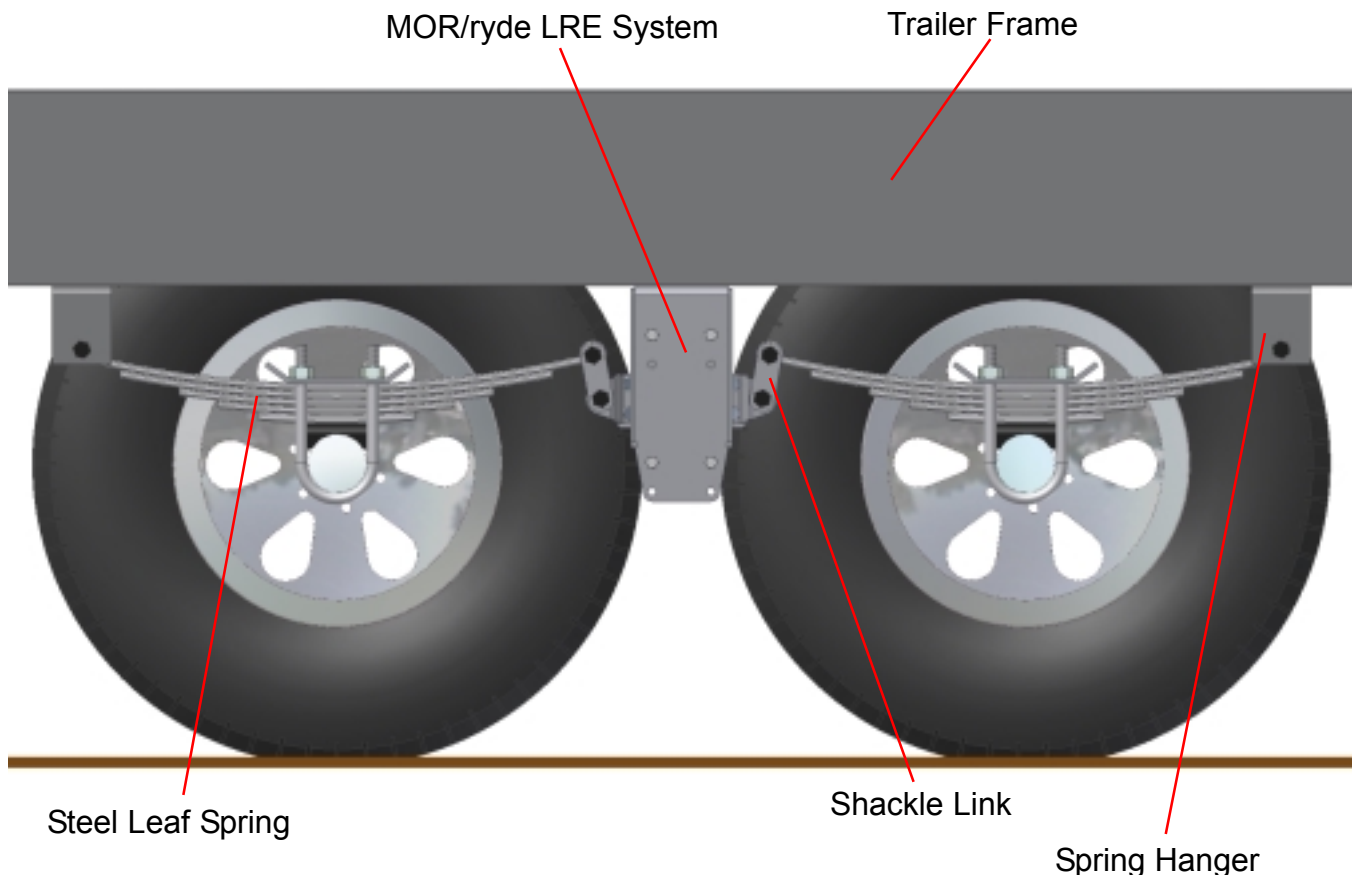
# INTRODUCTION

Your recreational vehicle has been equipped with the MOR/ryde Suspension System. The MOR/ryde system is located between the tandem 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 MOR/ryde system are MOR/ryde's time tested rubber shear springs that have been a mainstay in the recreational vehicle market for over 40 years. This new system has been engineered specifically for your trailer using the rubber shear spring's ability to isolate and absorb road shock and increase your trailer's overall dynamic axle travel. The combination of the MOR/ryde 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 towing than with conventional leaf springs**
- **Better protection of your trailer from damaging road shock**

This manual will outline basic troubleshooting and check procedures for your MOR/ryde Suspension System. Service manuals and instructions will be provided with replacement parts in the unlikely event that service is required.





## MEASURING SHEAR SPRING DEFLECTION

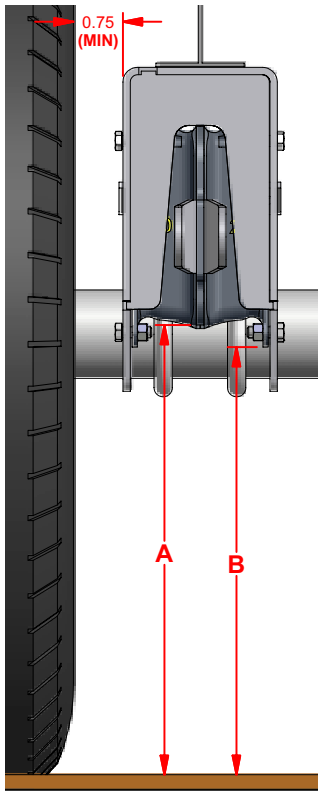


Fig. 1

Park the vehicle on level ground. Measure Dimension A, ground to bottom edge of the center rubber spring metal. Measure Dimension B, ground to bottom edge of the outer spring metal. Use the following formula to determine shear spring deflection:

$$\text{Defl} = A - B$$

\*Note: the Dimension A should always be greater than Dimension B if the unit is properly sprung.

\*\*Nominal rubber spring deflection should be 1/2" to 3/4".

## MINIMUM CLEARANCE REQUIREMENTS

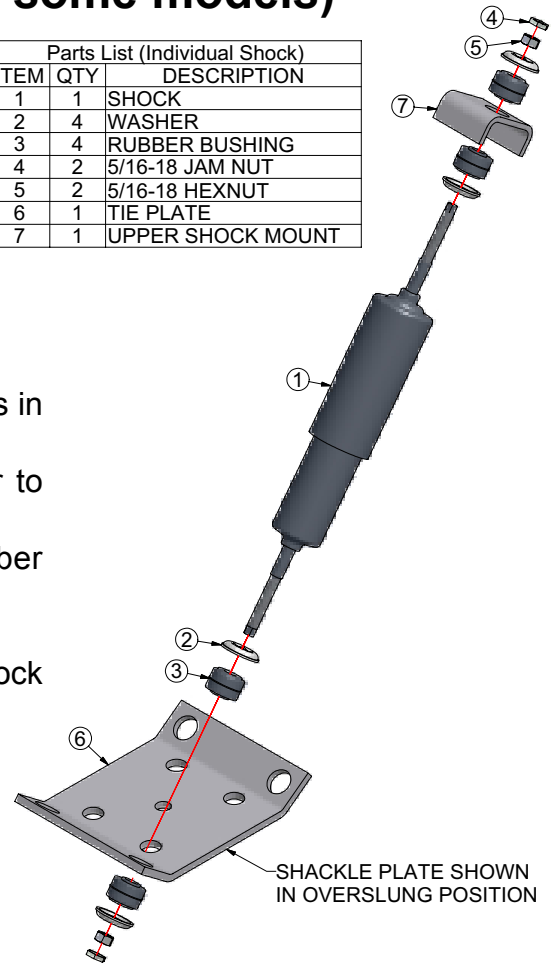
To ensure proper tire to frame clearance, MOR/ryde requires a minimum of 3/4" (0.75) between the inside wall of the tire and the MOR/ryde LRE hanger box (Fig. 1).

## RUBBER SHEAR SPRING INSPECTION

The shear springs (#4 in Parts Listing) should be periodically inspected for any tears or cracks. If a shear spring exhibits a 3" long and 3/4" deep crack or tear, the shear spring should be replaced. This can be checked by using a flat tool such as a putty knife. The putty knife can be used to probe the shear spring in the affected area. If the knife can be inserted 3/4" deep, by at least 3" long, the spring rate of the spring is affected and should be replaced. *Note: It is normal to see shear spring weather checking, which is small surface cracks in the rubber. Weather checking does not require a shear spring to be replaced.*

## SHOCK KIT (Standard on some models)\*

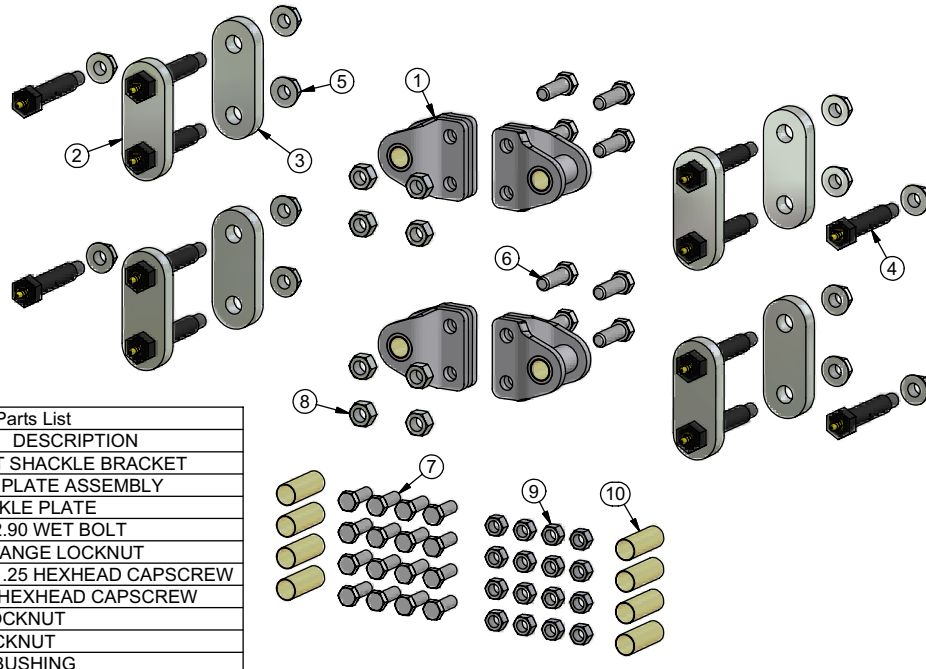
Parts List (Individual Shock)		
ITEM	QTY	DESCRIPTION
1	1	SHOCK
2	4	WASHER
3	4	RUBBER BUSHING
4	2	5/16-18 JAM NUT
5	2	5/16-18 HEXNUT
6	1	TIE PLATE
7	1	UPPER SHOCK MOUNT



## SHOCK BEST PRACTICES

- Shocks should be fully extended when suspension is in full rebound position.
- Shock centerline should be mounted perpendicular to shock mounts.
- Shock retaining nuts should be tightened so rubber bushing diameter is similar to washer diameter.
- Jam nuts should be used.
- Observe 3/4" (0.75) minimum clearance between shock and tire, brake lines, etc.

## WET BOLT KIT (Standard on some models)\*



Parts List		
ITE	QT	DESCRIPTION
1	4	WET BOLT SHACKLE BRACKET
2	4	SHACKLE PLATE ASSEMBLY
3	4	1/2" SHACKLE PLATE
4	4	7/16-20 x 2.90 WET BOLT
5	12	7/16-20 FLANGE LOCKNUT
6	8	7/16-14 x 1.25 HEXHEAD CAPSCREW
7	16	3/8-16 x 1 HEXHEAD CAPSCREW
8	8	7/16-14 LOCKNUT
9	16	3/8-16 LOCKNUT
10	8	BRONZE BUSHING

\*To order, call Customer Service at 1-866-990-7433

## BASIC TROUBLESHOOTING

PROBLEM/SYMPTOM	CAUSE	CORRECTION
Excessive Tire Wear	Axle alignment.	Align axles.
	Improper tire pressure.	Adjust air pressure.
	Worn OEM shock absorbers.	Replace OEM shock absorbers.
Side to Side Trailer Lean	Unbalanced load.	Balance load.
	Tire pressure.	Inflate tires to proper pressure.
	Leaf springs.	Install stiffer leaf spring on heavy side.
	Shear spring.	Install stiffer spring on heavy side or adjust spring to taller ride height.
Rough Ride	Torn shear spring.	Replace shear spring.
	Improper shear spring deflection.	Call MOR/ryde service department to select a different shear spring.
	Trailer is not level front to back.	Adjust pin box height to level out trailer.
	Worn OEM shock absorbers.	Replace OEM shock absorbers.
	Worn shackle link.	Replace shackle link.
Excessive Sway	Improper tire pressure.	Adjust air pressure.
	Torn shear spring.	Replace shear spring.
	Improper hitch weight.	Travel trailers should have 10%-12% hitch weight. 5th wheel trailers should have 20%-25% hitch weight.

\*If a problem occurs that is not addressed here, please contact MOR/ryde International direct for further service information at 574-293-1581.

## TORQUE SPECIFICATIONS

WHERE USED	BOLT	TORQUE
Attaches Shear Spring to Hanger Box	3/8-16 x 1 Gr. 8	40 ft-lbs
Attaches Shackle Brackets to Shear Spring	7/16-14 x 1-1/4 Gr. 5	40 ft-lbs

# **MOR/RYPDE LRE SUSPENSION SYSTEM LIMITED WARRANTY**

## **SUMMARY OF WARRANTY**

We, MOR/ryde, inc., 1966 Moyer avenue, P.O. box 579, Elkhart, Indiana 46515 (“MOR/ryde”), warrant to you, the original first purchaser of new MOR/ryde rubber suspension system (“Product”), for a period of three (3) years from the date of original first purchase (“Warranty Period”), that the Product is free of defects in material or workmanship under normal use and service and will meet or exceed all of our advertised written specifications, excepting items and uses excluded from this Warranty. For a copy of the complete MOR/ryde Warranty please call, write, or email us using the correspondence information listed below.

## **PLEASE DIRECT ALL CORRESPONDENCE TO:**

**MOR/ryde International  
1966 Moyer Ave  
Elkhart, IN 46516  
Phone: (574) 293-1581  
Fax: (574) 294-4936  
www.morryde.com  
Email: [service@morryde.com](mailto:service@morryde.com)**

