

**No Welding
or Drilling**

Easy as Changing a Tire

**New and
Improved!**

Correct Track Third Generation™

Instruction Manual

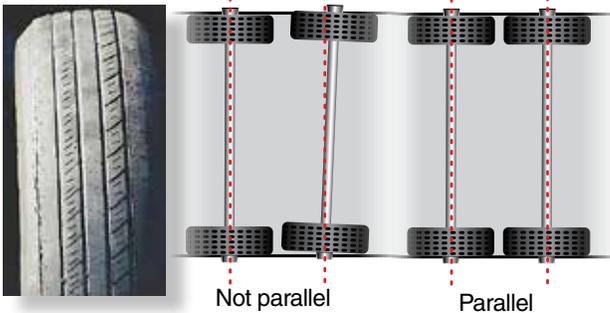
TOWABLE RV OWNERS - **ALERT!**

Are your RV axles cooperating in a safe, parallel operating position?

It's quick & easy to measure & important to know if your axles are parallel.

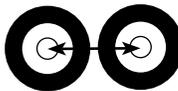
It's key for safe braking, optimum tire life & fuel consumption.

Axles that are not parallel causes uneven wear on your RV tires.



Quick Step One – While your trailer is level and attached to your tow vehicle, find a level paved surface and pull your rig straight forward for at least a few yards.

Quick Step Two – Using a tape measure, carefully measure and record the distance (hub to hub) between the front and rear tires on each side (curb vs. street). *Exact measurements are important.*



Step Three – Compare the measurements.

Conclusion – If the distances between the curb side (right) and the street side (left) are different, your axles are not parallel.

According to a large camp ground audit; 80% of RV trailer suspensions are operating in a dangerous miss-alignment, condition.

The main cause of RV suspension miss-alignment is unbalanced lateral weight.

Unbalanced RV trailer weight forces RV axles out of parallel. US Department of Transportation, has defined trailer miss-alignment, a safety issue.

This stat points out a widespread need to do the quick check.

IMPORTANT RECOMMENDATION:

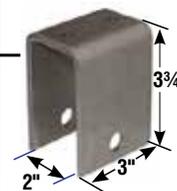
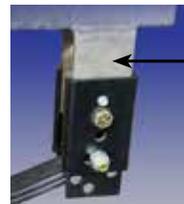
Use of zero maintenance, NEVER FAIL™ Lubrication Bushings is strongly recommended when installing Correct Track™. Never lubricate NEVER FAIL™ bushings.

Greatly Improved Alignment Correction Method, as easy as changing the tire.

One Correction Alignment Kit for Single Axle – Two Kits required for double axles – Three Kits for triple axles



1. Requires no drilling.
2. Reduces installation time by 50%.
3. Corrects 100% more precisely; Accurate to within 1/8 inch versus 1/4 inch.
4. Compensates for laterally unbalanced trailer weight.
5. The system can also correct a limited road hazard damage event.
6. Works with leaf springs up to 2 inches wide.
7. Improves tire life.
8. Reduces fuel consumption.
9. Decreases vibration damage to running gear, RV contents and systems.



Corrects All* RV & Trailer Suspension Alignments
(With Standard 3 inch Hangers - 3 inch by 5 inch Hangers will also work)

A PARALLEL OPERATING POSITION

- **IMPROVES** Braking Safety
- **STOPS** Vibration Damage
- **REDUCES** Fuel Consumption
- **PROLONGS** Tire Life

When installed as directed, this kit can correct your RV's suspension alignment to within 1/8 of an inch. This is the only alignment correction kit capable of meeting the axle manufacturer's specifications!

Will Raise RV 1.25" or 2.25"

RV Trailer Suspensions have Three Fundamental Operating Defects!

1. A Design Specification Conflict between Frame Construction and Axle Operating Location. This issue affects both new and used RVs.

Factory frame specs call/allow for spring hangers to be welded within $\frac{1}{2}$ inch of square (measured diagonal from bolt centerline).

Axle manufacturer's specs call for front axles to be mounted within to the ball center, and second axle within $\frac{1}{8}$ inch parallel from wheel center to wheel center.

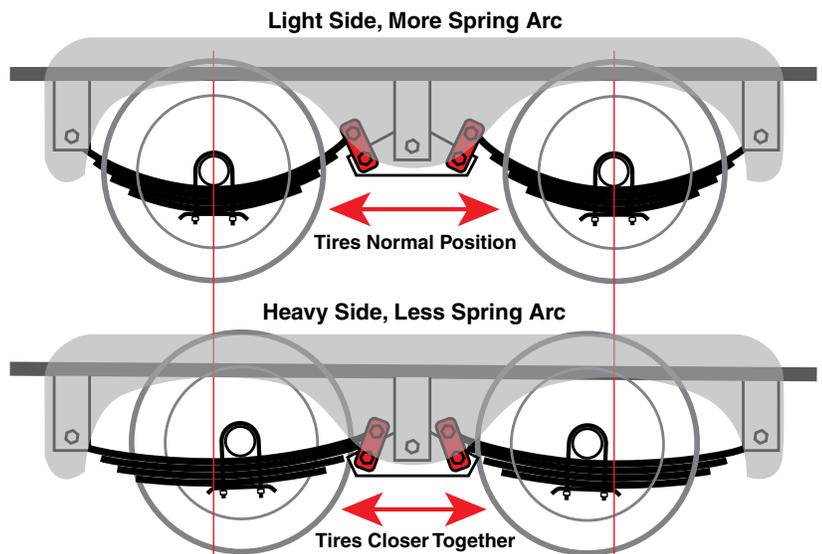
These specification conflicts, ($\frac{1}{2}$ " vs. $\frac{1}{8}$ "), can stack up to: Axles running $\frac{5}{8}$ ths of an inch out of parallel.

A trailer traveling $\frac{5}{8}$ ths of an inch out of parallel for 5,000 miles: Will drag your tires the equivalent of 312 miles sideways.

2. Un Balanced Lateral Weight that can Force Axles to Run Out of Parallel. This issue affects both new and used RVs.

The heavier side springs are flattened and thus longer while the lighter, less loaded springs have more arch. This imbalance forces the axles out of parallel compromising safety and durability and economy of operation.

Floor plan designs on towable RVs do not incorporate a balanced lateral weight objective. This would not be effective because up to 25% of total vehicle gross weight includes personal cargo loading that can add to lateral weight disparity. The most effective and convenient method to compensate for lateral unbalance weight is Correct Track™ alignment gear.



Axles Not Parallel, Tires Not Aligned
Graphic is not to scale, for illustration purposes only.

3. Poor Suspension Lubrication Promotes Early System Failures.

Worn and worn out bushings are serious problems for RV suspensions. As they wear, the connections they are intended to protect become increasingly sloppy permitting steel on steel friction and component self destruction!

Axle alignment is unfeasible. Chassis vibration becomes chaotic. Tires are ruined and traveling safety is seriously compromised.

A misaligned trailer is expensive to operate and maintain:

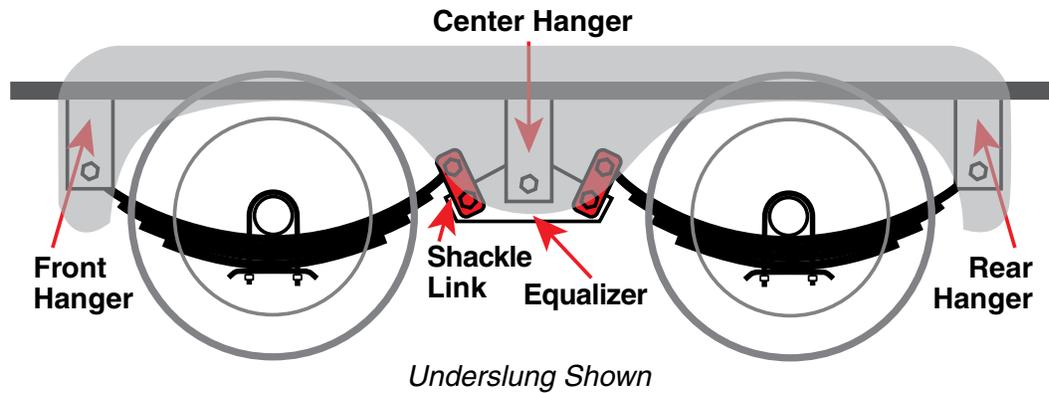
- Fuel economy and tire life are reduced.
- Blown out tires usually cause a lot of Expensive collateral damage to suspension parts, fender skirts, holding tanks, stabilizers and other under carriage components.
- Misaligned tire vibration causes premature wear to suspension components.
- Vibration also weakens propane and water connections, cabinet mounts and fastener connections throughout the RV and reduces the life and effectiveness of fire alarms, CO2 alarms and electrical systems.
- A rig, with a tow misalignment with the drive axle of just 0.25", traveling 5,000 miles, is the equivalent of dragging the tires sideways for 125 miles.

RV Trailer Suspension Inspection and Repair Service

Index:

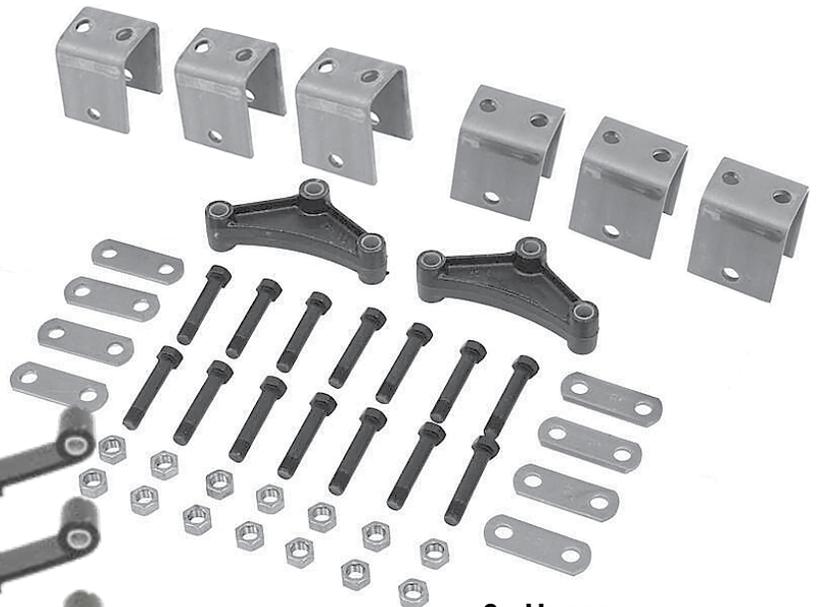
- The Most Common Suspension Design
- Major Suspension Components
- Discussion Regarding RV Trailer Suspension Inspection and Repair
- Inspecting Lubrication Bushings
- Inspecting Shackles
- Inspecting the Springs
- Inspecting the Equalizers
- Inspecting the Tires
- Checking Axle Alignment
- Instructions, Checking RV Axle, Parallel Operating Condition
- Alignment Correction Measurement and Correction Instructions

Common Suspension Design



Major Suspension Components [Tandem Axles]

14 - Lubrication Bushings



6 - Hangers
2 - Equalizers
8 - Shackles
14 - Bolts



4 - Leaf Springs

Discussion Regarding RV Trailer Suspension Inspection and Repair

Chances are that you or the customer has already found a reason to suspect that the suspension in question is not performing as usual. Determining the reason for this deficiency involves listening to the customer first.

- Repairs and or alignment corrections must begin with restoring the suspension components to their original design position and operating condition.
- Usually the first component failures involve the 14 shackles and the 8 bushings lubricating them.
- Soft white PVC or Nylon bushings usually fail in 1,000 to 2,000 miles. Their failure initiates a cascade of component failures if not caught quickly.

Continue the inspection of all major suspension components making notes about any questionable issues as you go. Cell phone pictures are often very useful communication aids when explaining repair recommendations to your customer.



Inspecting Lubrication Bushings

There are three major types of suspension lubrication bushings;

- White PVC or Nylon are the most prevalent materials used by Dexter and Lippert on suspensions installed at the Original Equipment Manufacturer's (OEM) factory. They wear the quickest and usually don't last more than a few thousand miles.
- Bronze material and colored suspension bushings are installed with Zerk equipped wet bolts. Bronze bushings must be lubricated every 2,500 miles for best performance and component life. The correct procedure for lubrication is to remove all weight from the suspension before adding grease through the Zerk. Frequently the Zerk/wet bolt will not accept grease. In this case the bolt must be cleaned or replaced.
- Grey suspension bushings are also branded Never Fail™ bushings. They are extremely durable and require no maintenance. If you find a worn or worn through Never Fail bushing, RV Ride Control LLC will replace them at no cost! Never lubricate a Never Fail bushing. They are formulated with lubricants built in. Further lubrication will void the warranty.

Inspection calls for removing two to three of the bushings to visually observe their condition.



Typical condition of failed white suspension bushings after 5,000 miles.

Worn and worn out bushings are serious problems for RV suspensions. As they wear, the connections they are intended to protect become increasingly sloppy permitting steel on steel friction and component self destruction!

Axle alignment is unfeasible. Chassis vibration becomes chaotic. Tires are ruined and traveling safety is seriously compromised.

Inspecting Shackles



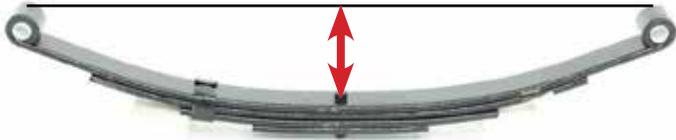
Shackle inspection is easy. Look for elongated bolt holes that usually occur when bushings fail.

Shackle replacement should usually be done on the entire suspension or at least the complete side of the failed component. Always replace bushings, unless they are Never Fails.

Inspecting the Leaf Springs

There are three major inspection items to examine with regard to RV trailer springs. Spring failure is primarily caused by overloading. Frequently you will find springs that have gone basically flat. Flat springs must be immediately replaced with adjustments to loading or increased capacity springs. Axle capacity must be evaluated when changing spring capability.

- Spring Arch. With the trailer sitting level, use a tape measure to measure the height of arc mid-point between the spring eyes.



Make sure each spring's mid-point arc is close to the same. If not close, look for worn components or unbalanced loading of owner's personal cargo.

- Leaf Spring Clamps. Inspect both leaf spring clamps for signs of cracking or stretching. Look for signs that the leaf stacks are not closely aligned. These clamps are easily replaced and vital for smooth and safe operation.
- Spring, Weak Point Inspection. The last point of connection between the top leaf of the spring and the first one under it, is the weak point. This is where the spring is most likely to break. Look for cracks or other anomalies in this area.

Inspecting the Equalizers



Equalizer inspection is limited to three connection ports. The unit at left was caught just before catastrophic failure.

Many RVs have upgraded equalizers that function as rubber cushioned bump stops. Three popular ones are, Equa Flex, EZ Flex and Mor/ryde.

RV suspensions are hard on their leaf springs because they rarely have a functioning ride control system. RVs equipped with rubber cushioned equalizers may have different diameter bushings. Rubber cushions do not constitute or function as a ride control system. See new equipment recommendation section.

Continue the inspection of all major suspension components making notes about any questionable issues as you go. Cell phone pictures are often very useful communication aids when explaining repair recommendations to your customer.

Inspecting the Tires

The four major inspection items for tires are: Tire Pressure, Tread Depth, Wear Patterns and Weathering.

Tire Pressure: Under-inflation or over-inflation can cause abnormal, excessive wear and tear, which in turn can cause tire overheating, fuel overuse or even such danger as a tire blow-out. Check the pressure after the tires have cooled.

Tire Pressure Wear Patterns:

When a tire is over-inflated, the center of the tread bears most of the load and wears out faster than the outside edges. When a tire is rapidly wearing on the outside, it may be under-inflated. Under-inflation reduces tread life.

Tire Pressure:

Under-inflation or over-inflation can cause abnormal, excessive wear and tear, which in turn can cause tire overheating, fuel overuse or even such danger as a tire blow-out. Check the pressure after the tires have cooled.

Tread Depth:

When a tire is over-inflated, the center of the tread bears most of the load and wears out faster than the outside edges. When a tire is rapidly wearing on the outside, it may be under-inflated. Under-inflation reduces tread life.

Rule of thumb on tread depth:

- 6/32" or more, Good
- 4/32" Becoming Borderline
- 3/32" Replace Tires Soon
- 2/32" or less, Replace Tires Now

Tread Depth Measurement Tips:



2/32" Remaining

US coins can be substituted for a tire tread depth gauge as tires wear to the critical final few 32nds of an inch of their remaining tread depth.



4/32" Remaining

Place a quarter into several tread grooves across the tire. If part of Washington's head is always covered by the tread, you have more than 4/32" of tread depth remaining.



6/32" Remaining

If the top of the Lincoln Memorial is always covered by the tread, you have more than 6/32" of tread depth remaining.

Wear Pattern Indications:

The wear patterns below can identify suspension problems.

- Cups or dips in the tire tread indicate worn or components. Cupping may also be a sign that your wheels are out of balance, or that your trailers suspension or system parts are worn out. Shock absorbers are key to controlling cupping.
- Saw tooth edges indicate axle misalignment. If the edges of the tread have a saw tooth or feathered appearance the solution toe in or out alignment correction.

A quick tire inspection method to identify axle misalignment:

- Run your hand across each tire forward (in) and backward (out). If the tire feels smooth one direction and rough in the opposite direction, the tire's axle is operating out of parallel and alignment.

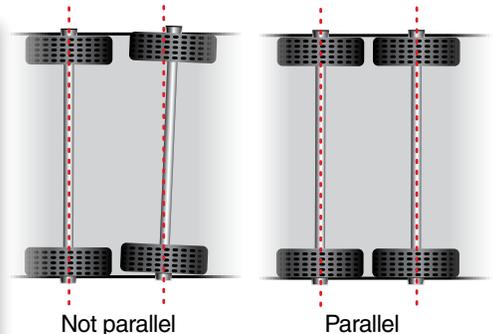
Weathering is a common tire problem, especially for RV tires from all manufacturers:

- Weathering appears as crazing and or cracking in the flex area of the sidewall.
- Tires 3 years or older should be frequently inspected for:
 - Δ Cracks greater than 2/32" deep.
 - Δ Internal components of tire (steel or fabric body plies) are visible.

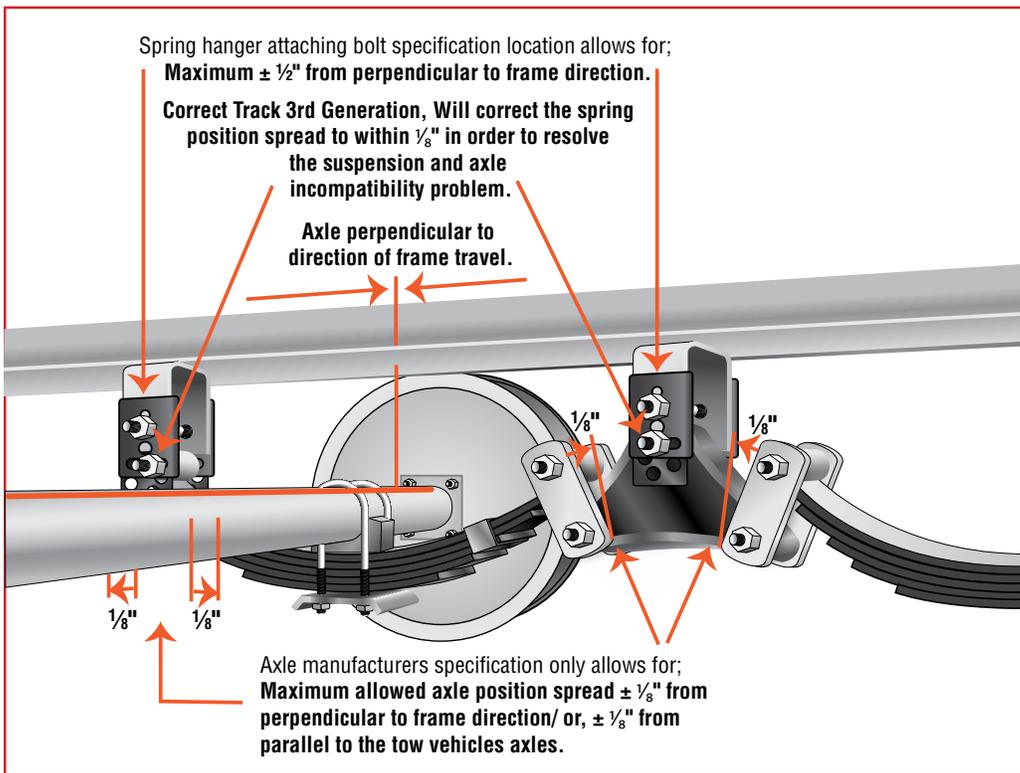
Checking Axle Alignment

Trailer multi-axle suspension alignment is essentially insuring that the axles are operating in parallel with the tow vehicles' axles.

RV axles very often are not operating in parallel because RV Frame manufacturer's quality tolerance specifications are in conflict with RV Axle manufacturer's requirements.



Axes that are not parallel causes uneven wear on your RV tires.



Axles should be aligned laterally to track one right behind the other and perpendicular to the direction of frame travel. Parallel axle operation is impossible to achieve consistently with hangers inconsistently positioned outside of 1/8 inch. Axle alignment correction can still be accomplished by installing Correct Track 3rd Generation, from RV Ride Control LLC.

Instructions for Checking RV Trailer Axle, Parallel Operating Condition

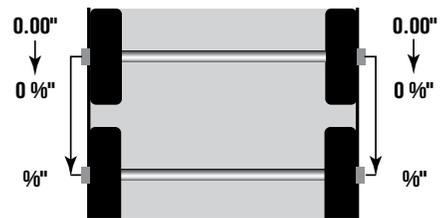
Sometimes tire wear is the major customer concern. The inspection procedure below is a good place to start. Remember though, all components must be sound to correct alignment.

If any repairs found during this initial component inspection affect the geometry of the suspension system, these repairs must be done first. Then begin the initial alignment assessment procedure below.

Initial Alignment Inspection:

Trailer must be pulled forward onto a flat surface and left in a level towing position.

1. First - Measure and record the distance between front and rear axle hub caps on both left and curb side.
2. Next - Compare the distance. If the space between is more than 1/8th inch different you have strong initial evidence of an alignment problem.
3. Next - Run your hand across each tire forward (in) and backward (out). If tires feel rough, this further indicates an alignment issue.
4. If alignment correction is necessary, you must restore the basic geometry of the suspension system, any repairs must be done first.



Alignment Correction Measurement and Correction Instructions:

Alignment correction measurements must be made with trailer coupler or pin box disconnected. If you need to move the trailer, make sure to pull the unit forward for, at least two tire revolutions before disconnecting so the suspension is in travel mode.

Front Axle Steps

1. Plum bob from center of the coupler to floor and place a mark.
2. Measure from plum bob mark to the center of each front tire and record.
3. Round your measurements to nearest 1/8th inch increment.
4. Calculate the difference between the street side and curb side distances.
5. Pick a side to move so the distance from the coupler each front tire is the same.

Continued on page 7

6. Install Correct Track the 3rd on the two front axle hangers.
7. Set adjustment plates to desired adjustment settings and remount front springs.

Rear Axle Steps

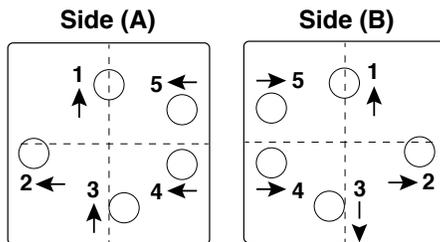
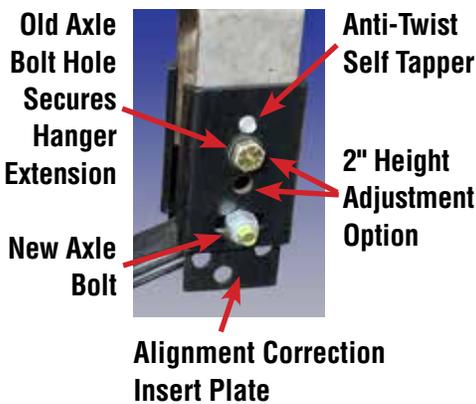
1. Measure the hub to hub distance to the now corrected front axles.
2. Round your measurements to the nearest 1/8th inch increment.
3. Pick a side to move so the distance from each rear tire to the tire is the same.
4. Install Correct Track the 3rd on the two rear axle hangers.
5. Set the adjustment plates to desired adjustment settings and remount rear springs.

CORRECT TRACK™, Third Generation

A Precision Retro-Fit Alignment System for RV Trailers

Tools Needed:

- Jack to raise trailer
- Tape Measure
- Plum Bob
- Wrench's, 3/8" socket with screw gun to attach screw to stock hanger. Deep well sockets 11/16", 13/16", 7/8", 15/16" Open end wrench's same sizes as sockets.



Alignment Correction Insert		
Setting Desired	Side 1	Side 2
Center / Neutral	1/A	1/B
1/8" Forward		2/B
1/8" Rearward	2/A	
1/4" Forward	3/A	
1/4" Rearward		3/B
3/8" Forward		4/B
3/8" Rearward	4/A	
1/2" Forward	5/A	
1/2" Rearward		5/B

Planning Work Sheet

Left (Street Side)
Step One

Record 1st Measurement Inches + To Tire Center

00' 0.00"

Round up or down too nearest 1/8"

00' 0 0/8"

Front Left Axle Adjustment

0 %"

Step Two

Record Hub to Hub Second Measurement

0.00"

Round up or down too nearest 1/8"

0 %"

Second Left Axle Adjustment

%"

Right (Curb Side)
Step One

Record 1st Measurement Inches + To Tire Center

00' 0.00"

Round up or down too nearest 1/8"

00' 0 0/8"

Front Right Axle Adjustment

0 %"

Step Two

Record Hub to Hub Second Measurement

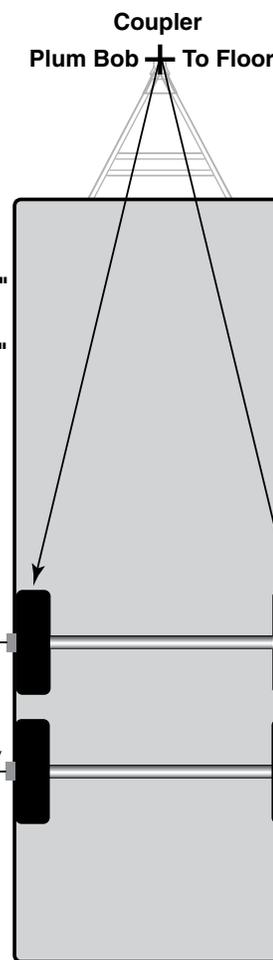
0.00"

Round up or down too nearest 1/8"

0 %"

Second Right Axle Adjustment

%"



*i.e. 1/8", 1/4", 3/8", 1/2", 5/8", 3/4"

IMPORTANT RECOMMENDATION:

Use of zero maintenance, NEVER FAIL™ Lubrication Bushings is strongly recommended when installing Correct Track™. Never lubricate NEVER FAIL™ bushings.

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Made in the USA

www.rvridecontrolproducts.com