

# ROADMASTER

## ACTIVE SUSPENSION

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**These Fitting Instructions must be read and followed step by step**

**Item # 4618-AT, Toyota Tundra 2007 - PRESENT**

The ROADMASTER is a load absorber and will assist with the load carrying ability as stated by the manufacturer with enhanced stability, provided the fitting instructions are followed correctly.

-----**IMPORTANT**-----

**The Roadmaster must never be fitted while the vehicle is standing with the rear wheels on the ground.**

**In this position the rear leaf springs will be under load and the Roadmaster coil spring settings can not be achieved, resulting in the Roadmaster not working correctly.**

- A. THE ROADMASTER MUST ONLY BE FITTED WHEN THE AXLE AND LEAF SPRINGS ARE HANGING FREE.
- B. ALWAYS CHECK THE LEAF SPRINGS FOR ANY EXCESS WEAR, FATIGUE, CRACKED OR BROKEN BLADES OR WORN BUSHES - ESPECIALLY OLDER SPRINGS, THESE MUST BE REPLACED WHERE NECESSARY.
- C. ENSURE ALL EXISTING U/BOLTS NUTS AND SHACKLE BOLTS AND NUTS ARE SECURE AFTER FITTING.

ANY DEVIATION FROM THESE FITTING INSTRUCTIONS WILL VOID THE WARRANTY ON THIS KIT. THE KIT WILL NOT BE WARRANTIED IF INSTALLED ON ANY VEHICLE USED FOR RACING, SIMILAR ACTIVITIES OR FITTED TO VEHICLES WHERE THE REAR SUSPENSION HAS BEEN MODIFIED IN ANY WAY.

#### ROADMASTER ACTIVE SUSPENSION ASSEMBLY COMPONENTS



**QTY. PER KIT FOR BOTH REAR LEAF SPRINGS**

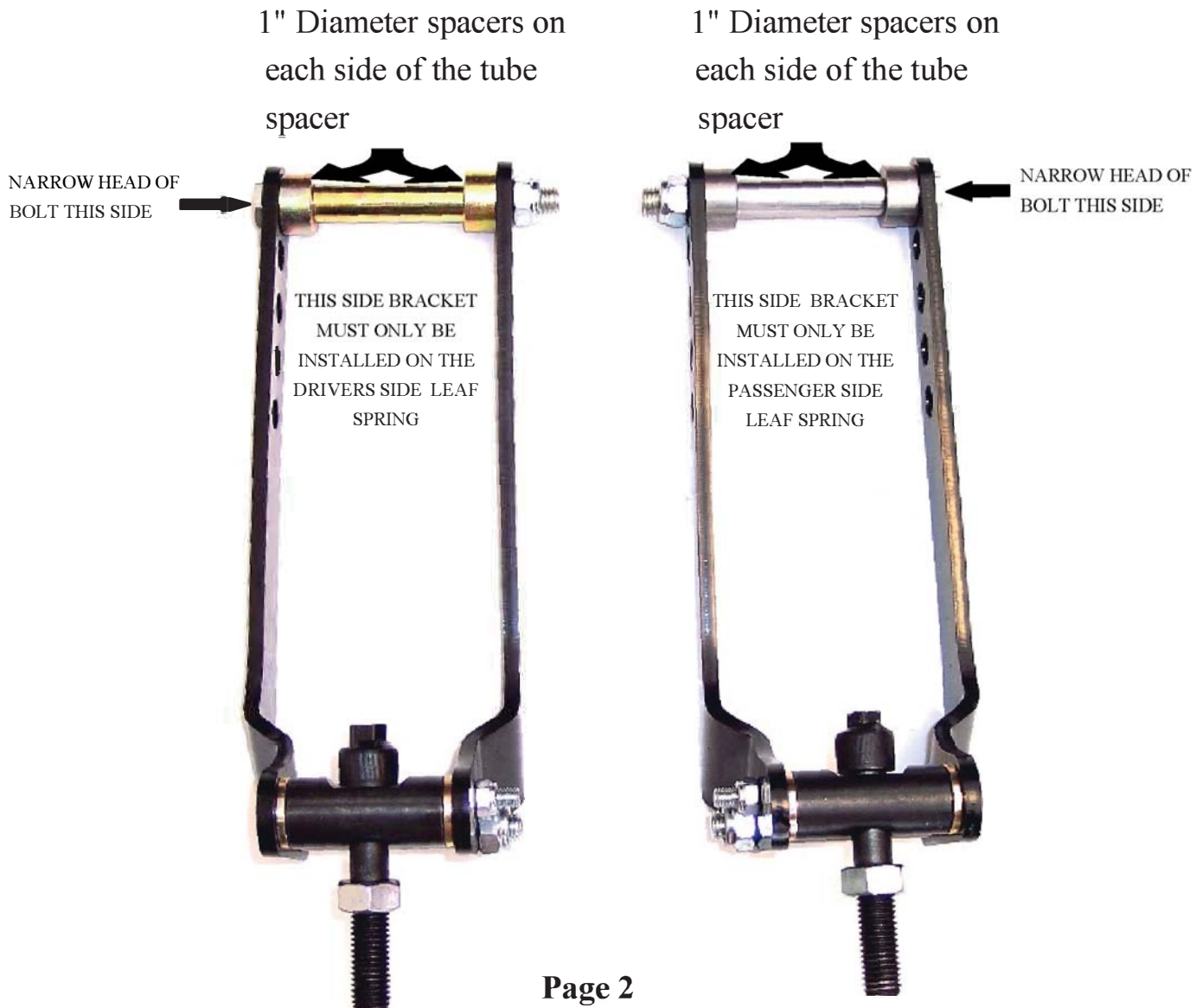
A CAP SCREW 14mm	2
B EYE BRACKET ASSEMBLY	2
C NUTS 14mm	10
D TENSION SPRING	2
E THREADED ROD	2
F AXLE ANCHOR ASSEMBLY	2

The two coil springs for the Toyota Tundra 2007 - PRESENT only, come with a rubber ring bump stop at the one end of the coil spring. When the Roadmaster Active Suspension, is installed it is located directly under the Chassis, should the vehicle be over loaded and go over a bump, the bump stop is there purely as an extra precaution.

## PLEASE NOTE

**When installing this kit on a 2007 to PRESENT Toyota Tundra, Toyota Tacoma or Pre-Runner all with axle under the pack of leaf springs**

On all these vehicles the rear shocks are located very close to the leaf springs, the two axel connecting bracket assemblies as shown below, must be installed so that the brackets do not interfere with the shocks or other brackets on this pickup.





1) Before starting the installation make sure the vehicle is on a level surface, then place wheel chocks on both sides of the front wheels.



2) Loosen all the rear wheel lug nuts just one turn, but don't remove at this stage.



3) Position a floor jack (of the correct capacity for the vehicle) under the differential housing.



4) Next raise the rear of the vehicle with a trolley jack of the correct capacity sufficiently to place jack stands on both sides of the vehicle. As the vehicle has rear leaf spring suspension, the ideal place to position the stands is under the front eye of the leaf springs, connected to the fixed shackles, as illustrated in (4).



5) With both jack stands now correctly positioned, **very slowly lower the jack** checking that the pads on the stands are still in the correct position to safely support the rear of the vehicle. As a safety precaution continue lowering the jack until the jack just makes contact with the differential housing, then raise the pad of the jack about 1/2 inch only, as shown in the illustration. The trolley jack will be used as an extra safety device.



6) **Before starting the installation of the Roadmaster, once again check that the rear of the vehicle is still well supported.**

Start by removing both rear wheels, this will provide better access to the leaf springs. The kit comes assembled out of the box with two units, one for each side rear leaf spring. ATTACHED IS AN ILLUSTRATION SHOWING THE CORRECT SIDE FOR EACH BRACKET. This will avoid interference with the shocks or any brake lines or wiring (this should not be applicable on the majority of vehicles). Next place the one side kit as shown in (6) directly on top of the leaf springs, with the two arms of the bracket astride the leaf springs and two U bolts.





7) Next remove from the end hole in the Axle Connecting Bracket the nylon insert nut, tube spacer, bolt and two spacer washers (not shown in illustration (7)).  
 With the nylon insert nut and spacer washers set aside.



**NOTE THIS KIT HAS TWO 1" DIAMETER SPACER WASHERS AS ILLUSTRATED NOT SHOWN IN (7)**



8) With the axle bracket now astride the leaf spring, re locate the tube spacer long bolt and two spacer washers.

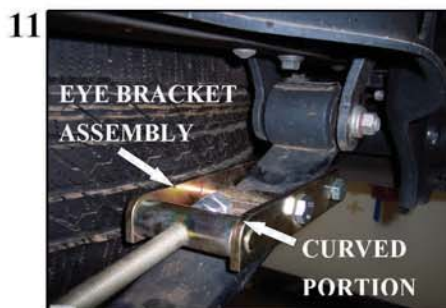


9) Next attach the nyloc nut and tighten.

**VERY IMPORTANT** The bolt with spacer must be located directly under the leaf spring as shown.



10) Next locate the eye bracket hook under and around the **rear portion** of the leaf spring eye.



11) At this stage the unit can be adjusted to the correct length, by either screwing the threaded rod in or out of the coil spring. The eye bracket assembly comes with the components factory assembled, with the center bolt, tubular spacer and nylon insert nut, all in place and tightened, except for the bolt and spacer located at the end of the assembly bracket. This has the nylon insert nut only screwed on only hand tight. Remove the nut, bolt and tube spacer and then position the assembly, as shown, astride the rear of the leaf spring. **NOTE THE CURVED PORTION OF THE PLATES MUST BE FACING ON TOP AS SHOWN.**  
 curved portion of the side plates must be as shown.



12) Next re-install the rear bolt and tubular spacer under the leaf spring and then secure the nylon insert nut. With the eye bracket assembly now located, check that the other nut is also secure. Next locate the larger side of the hook bracket (G) as shown over the under side of the leaf spring eye as in (12). Then hook the smaller side of the bracket on to the bolt with spacer. Before tensioning the coil spring the hook bracket must be positioned in the center of the leaf spring eye.



13) With both the axle connecting bracket and the eye bracket in place, turn the spring with one hand and hold the threaded rod with the other until the coil spring is supported.

### **HOW TO TENSION THE COIL SPRING**



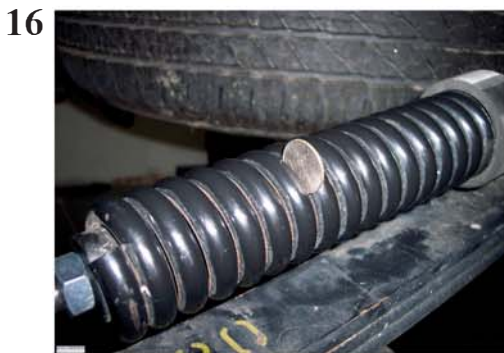
14) Position the two nuts on the threaded rod in the center of the rod, then use a ratchet fitted with a 12mm socket on the head of the cap screw and a 22mm wrench on the lock nuts at the end of the threaded rod (as illustrated in # 14 below). These two nuts come locked together when the kit is assembled at the factory. By holding the threaded rod stationary with the wrench and turning the cap screw attached to the coil spring with the ratchet, the gap between the coils will start to open.



15) Illustration showing the two nuts locked together at the end of the threaded rod held with a 22mm wrench on the nuts.

### **HOW TO TENSION THE COIL SPRING.**

**WITH THE REAR OF THE VEHICLE STILL SUPPORTED, THE LEAF SPRINGS STILL IN THEIR MAXIMUM ARCHED POSITION AND THE AXLE HANGING FREE**



16) We have included with this kit two small discs that are to be used as a gauge to adjust the tension setting of the variable rated tension coil springs. These can be adjusted to two different settings depending on the vehicle's requirement. For improved handling and 25% additional load carrying the correct adjustment between the coils is reached when the white disc (1mm thick) is used as a gauge and can just pass between the coils.

For improved handling and 40% additional load carrying the correct adjustment is reached when the black disc (2mm thick) is used as a gauge and can just pass between the coils. the additional load carrying as stated above can vary depending on the vehicle.



17) Finally, jam one of the two nuts located in the center of the threaded rod hard against the coil spring, **then follow with the second nut and jam against the first.**



18) With the installation on the one side now completed, repeat on the other side.