

ROADMASTER ACTIVE SUSPENSION

These Fitting Instructions must be read and followed step by step for the following kits.

Item: 4521-T, 4521-ST, 4524-SAT

Patent No 94/5738. Patents Worldwide. USA 5,540,417 Canada 2129275
Patents Worldwide. USA 5540417 Canada 2129275

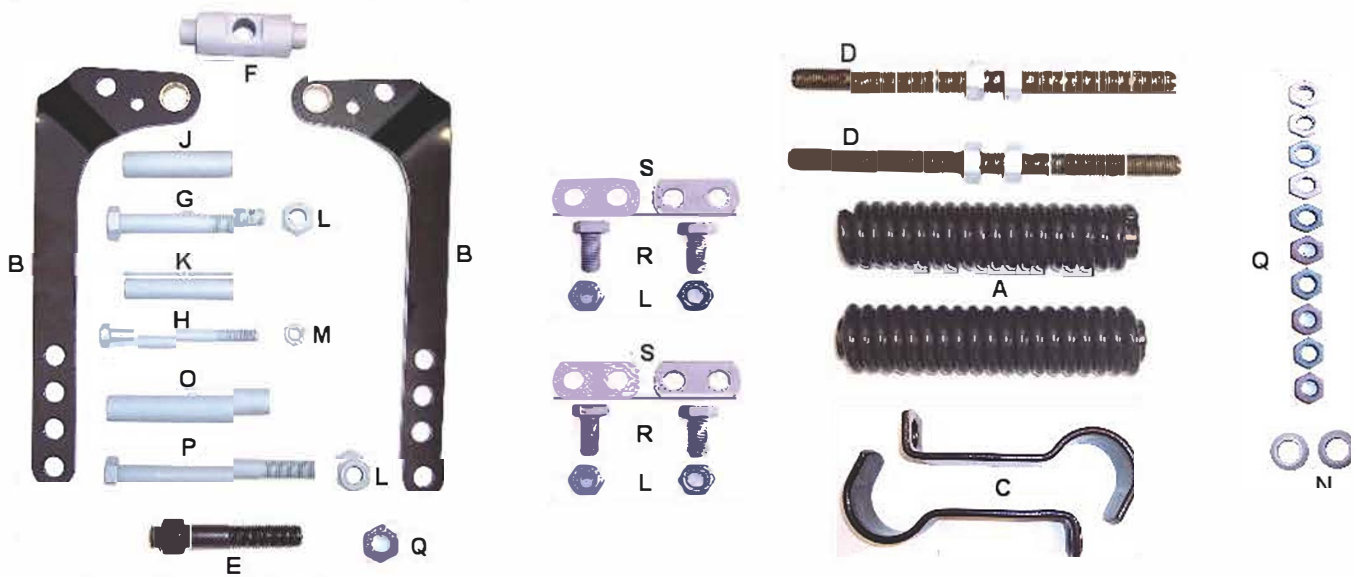
-----**IMPORTANT**-----

The Roadmaster Active Suspension kit 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 cannot be achieved, resulting in the Roadmaster not working correctly. Always install with the rear axle and leaf springs hanging free.

ALWAYS CHECK THE LEAF SPRINGS FOR ANY EXCESS WEAR, FATIGUE, CRACKED OR BROKEN BLADES OR WORN BUSHINGS -ESPECIALLY OLDER SPRINGS, THESE MUST BE REPLACED WHERE NECESSARY.

ANY DEVIATION FROM THESE INSTRUCTIONS WILL VOID THE WARRANTY. THIS 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.

ALL COMPONENTS FOR THIS KIT



E	Cap Screw 14mm X 70mm	2	J	Tube 12mm x 65mm	2
F	Roller	2	K	Tube 8mm x 65mm	2
B	Axle Brackets	2	O	Tube 12mm x90mm	2
D	Threaded Rod	2	G	Bolt 12mm x 90mm	2
Q	14mm nut	10	H	Bolt 8mm x 90m	2
C	Eye Bracket	2	P	Bolt 12mm x 120mm	2
N	Cup Bearing	2	L	Nuts 12mm nyloc	8
A	Coil Spring	2	M	Nuts 8mm nyloc	2
S	Extension Brackets two hole	4	R	Bolts 12mm X 25mm	4

1



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

2



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

3



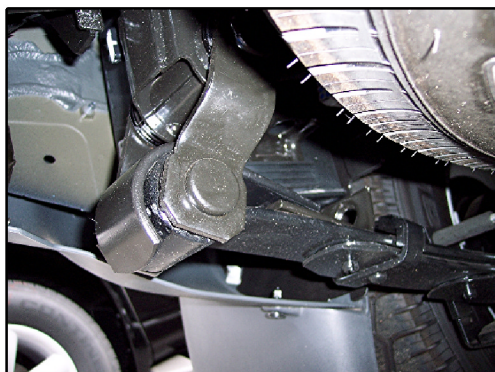
3) Position the floor jack (of the correct capacity for your vehicle) under the differential housing.

4



4) Next raise the rear of the vehicle with a jack sufficiently to place jack stands on both sides of the rear of the vehicle. The stands can be positioned either, under the frame or under the front eye of the leaf spring, connected to the fixed shackles, as illustrated. With the floor jack still under the differential, remove the rear wheels, both jack stands must now be correctly positioned to safely support the rear of the vehicle. Next **very slowly** lower the floor jack checking that the pads of the jack stands are still in the correct positions at all times. Continue lowering the jack until the jack just makes contact with the differential, then raise the jack about 1/2 inch and lock, The jack will be an extra safety device.

5



5) The kit comes fully assembled out of the box and contains, both the driver and passenger side kits. . Start the installation by placing one side assembly on top of the pack of leaf springs, The rear eye bracket (C) is a two part bracket and comes with the hook and tail connected with three flat head cap screws and three 6mm nyloc nuts. The nuts that have only been hand tightened. Remove the three nuts and then slide the hook section through the opening at the rear of the rear shackle. As shown in illustration (5)

6



6) Next position the tail section onto the three threaded bolts protruding and securely tighten the three nuts.



7) Illustration showing the eye bracket in place now connected to the rear eye of the leaf spring and with the complete assembly still attached.



8) With the assembly still on top of the pack of leaf springs, remove the long bolt, the tube spacer and also the two extension brackets and two 12mm X 25mm bolts and nuts



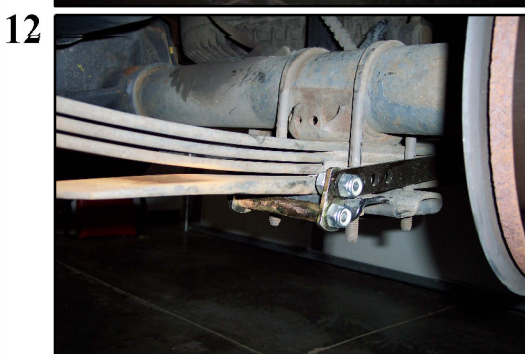
9) Next position the two ends of the Axle brackets under the axle and astride the leaf springs as illustrated. In order to do this, you will have to lengthen the assembly by screwing the threaded rod (D) out of the coil spring (A)



10) The end of the Axle bracket must now be located as illustrated.



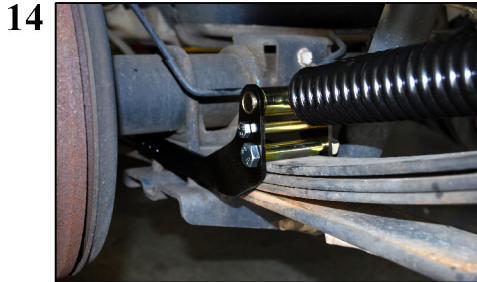
11) Next re locate the extension brackets to the Axle bracket using two short bolts and nuts. At this stage screw on the nuts **but do not tighten.**



12) Next relocate the long bolt and spacer through the other hole in the extension bracket. Once again screw on the nut **but do not tighten.**



13) With the extension bracket now located, before securely tightening the nyloc nut, pull the front portion of the axle bracket connected to the coil spring, towards the rear of the leaf spring. This will locate the tube and spacer in the correct position against the U bolt hold down bracket at the bottom of the leaf spring. Now securely tighten the three nyloc nuts.



14) Illustration shows how the axle bracket assembly should now look once installed.

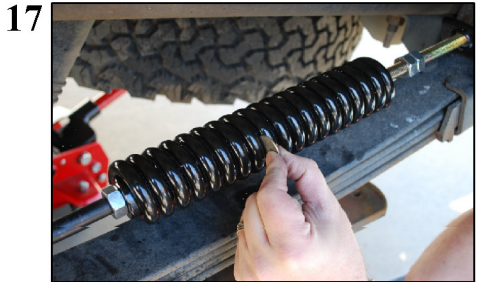
HOW TO TENSION THE COIL SPRING



15) Then use a 22mm wrench on the two lock nuts at the end of the threaded rod, these nuts come securely locked together when the kits are assembled at our factory. The wrench is used to hold the threaded rod stationary.



16) On some vehicles there is not enough clearance between the head of the cap screw and the axle for a ratchet fitted with 12mm socket to fit. If this is so on your vehicle, then use a 12mm wrench on the hexagon insert located in the head of the cap screw. As you may require to use both hands to adjust the tension on the coil spring, wedge the 22mm wrench holding the lock nuts at the end of the threaded rod, against the under side of the rear of the vehicle. To achieve the correct tension, start turning the cap screw attached to the coil spring with a 12mm wrench with one hand and use the other hand as shown in the illustration to assist turning the coil spring.



17) 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 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 between the coils 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.



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



19) With the one side installed, check all the fasteners to see that they are all secure. Then continue the installation on the other side.

Should you require support call us at 800-398-5036

Roadmaster Active Suspension

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ADDITIONAL FITTING INSTRUCTIONS

WHEN FITTING TO A TOYOTA TACOMA 4x4 OR PRE-RUNNER PICKUP WHERE THE EYE BRACKET (C) WILL NOT FIT OVER THE REAR EYE OF THE LEAF SPRING, FOLLOW THE MAIN FITTING INSTRUCTIONS UP TO (#5) THEN CONTINUE WITH (A) ON THIS INSTRUCTION SHEET

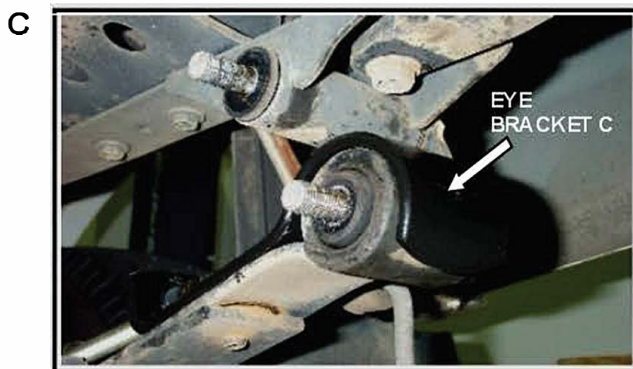


WHEN FITTING TO A VEHICLE ON THE GROUND WITH THE VEHICLE NOW WELL SUPPORTED WITH JACK STANDS UNDER THE FRAME AND THE LEAF SPRINGS HANGING FREE, REMOVE THE TWO NUTS ON THE REAR SHACKLES AS IN ILLUSTRATION (7a) DO NOT REMOVE THE TWO BOLTS.

WHEN FITTING TO A VEHICLE USING A LIFT THAT WILL ALLOW THE REAR AXLE TO HANG FREE WITHOUT RESTRICTION. WITH THE VEHICLE NOW WELL SUPPORTED UNDER THE FRAME AND THE LEAF SPRINGS HANGING FREE, REMOVE THE TWO NUTS ON THE REAR SHACKLES AS IN ILLUSTRATION (A) DO NOT REMOVE THE TWO BOLTS.



NEXT REMOVE THE ONE SIDE OF THE SHACKLE



NOW POSITION THE EYE BRACKET (C) OVER THE EYE OF THE LEAF SPRING AND REPLACE THE SIDE OF THE SHACKLE THAT WAS REMOVED, AND SECURE THE TWO NUTS. REPEAT ON THE OTHER SIDE LEAF SPRING.

NOW CONTINUE WITH THE MAIN FITTING INSTRUCTIONS FROM (#6) ONWARDS