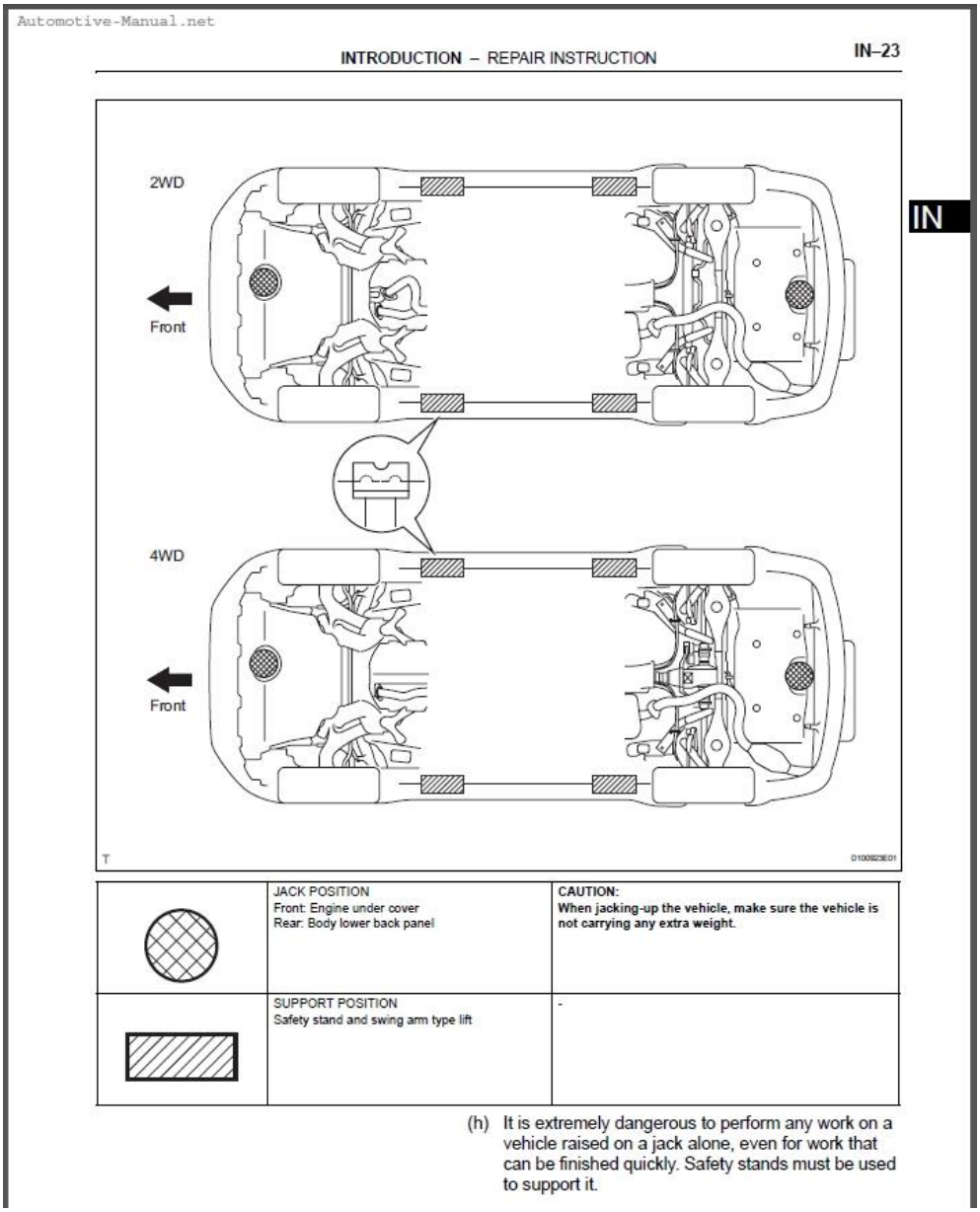
RAV4 Supplement

After reading through the main installation guide and all of the associated legal stuff about how you take responsibility for the consequences of your actions and so forth, you are now ready to install your 2” lift kit or .75” leveling kit on your RAV4. This kit installs using the same principles as our CRV kit, so please read that guide in its entirety before proceeding to this guide which is a car specific supplement.

Your kit will include two spacers with three bolts installed, these are for the front. The other blocks resemble a donut and have two 12mm lock washers, these are for the rear. For installation you will need the same tools as for the CRV, which again is basically strut spring spacers, your factory spare tire jack, lug nut wrench, wheel blocks, and a small socket set or flat wrench set ranging from 10-19mm. We also recommend you have penetrating catalyst handy if you live near a large body of water, and of course a torque wrench and jack stands. Never go under a car that is supported only by a jack! The strut spring spacers and torque wrench can be rented for free at many auto parts stores

On to the install. Apply the parking brake/ e-brake and jack up the front end (see below photo for the 6 jack points). If you have a floor jack lift the car by the front frame point and support

the two side points with jack stands. If you are using the spare tire jack only lift one side of the car at a time and support that side with a jack stand.



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IN

2WD

Front

4WD

Front

T

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	JACK POSITION Front: Engine under cover Rear: Body lower back panel	**CAUTION:** **When jacking-up the vehicle, make sure the vehicle is not carrying any extra weight.**
	SUPPORT POSITION Safety stand and swing arm type lift	-

(h) It is extremely dangerous to perform any work on a vehicle raised on a jack alone, even for work that can be finished quickly. Safety stands must be used to support it.

Once the tire is off the ground and you have the car safely supported on jack stands, remove the lug nuts that hold on the tire and remove the tire. It will look something like this (looking up into the chassis).

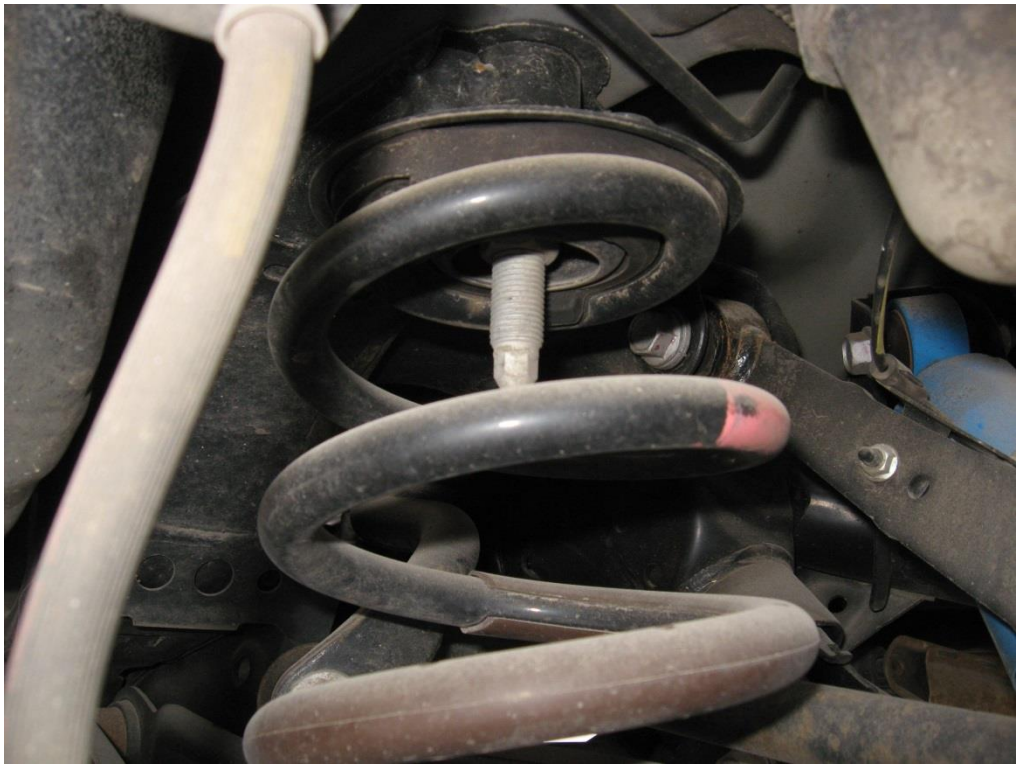
Get out those strut spring spacers and put them on the spring as was described in the installation guide. Follow the procedure outlined there as well as any special instructions for your strut spring spacers. Do this until the top of the spring is about an inch and a half (~40mm) lower than the upper spring seat. Now undo the three 14mm nuts that hold the top of the strut to the chassis. The strut should fall away from the chassis, if not you can compress the shock absorber until the upper spring seat touches the top of the coil spring again. You should also be able to freely rotate the upper spring seat now.

If there is enough room between the top of the strut and the chassis, align the three recessed holes in the front spacer with the three bolts on the upper spring seat. Once the bolts are in the holes torque them to spec. (If you are having difficulty with this you may remove the strut from the car by removing the two lower bolts that go through the top of the knuckle/ spindle.) Now rotate the upper spring seat until the integrated bolts align with the three holes in the chassis. If there is not enough room between the chassis and the upper spring seat you can remove the sway bar link nut, this will let the control arm drop a bit further away from the chassis. Just be sure to re torque everything you remove back to spec according to the list at the end of this manual. Once the strut with the spacer block mounted to the top is back in the rest of the install is the reverse of the removal.

Keep in mind you will get some positive camber on the front tires after this lift, so get it aligned afterward. Your other option is to align it yourself using the camber adjusting bolts on the control arms. These are the same two bolts that go through the top of the knuckle/ spindle. This works best when the tire is off the ground. Loosen the nuts but do not remove them then turn the top bolt in towards the center of the car and the bottom bolt away from the center of the car. This makes the camber more negative; to make it positive is the reverse. To reiterate, the direction you turn the bolt to make it negative will be in towards the engine. It is hard to measure camber accurately, though you can get a tool at a hardware store made for measuring the angle of boards that will do an good enough job. Keep in mind though a professional alignment is highly recommended.

Now it's time for the rear suspension. Secure your front wheels with wheel blocks, 2x4's, really anything to keep them from rolling forward or backward. If you have a floor jack then jack up the car by the rear differential and support with jack stands at the other two rear points. If you are using the factory spare tire jack only lift one side of the car at a time and support that side with a jack stand. (see the lift point illustration)

Remove the lug nuts and your tire. You will see something like this.



Get the strut spring compressors and apply them according to the protocol from the installation guide and according to any special instructions that came with your strut spring compressors. Tighten the compressors until the coil spring is about an inch and a half away from the upper spring seat (~40mm). Once there is enough room between the top of the coil spring and the upper spring seat, remove the existing upper spring seat. This is done by removing the nut on that long bolt that comes out from the top of the chassis into the center of the coil spring. After that is off you should be able to yank off the upper spring seat. The new spring seat is the shorter block from your kit with the one small center hole. Use this new block to replace the old upper spring seat.

The groove in the new spring seat (the block from your kit) can directly accept the spring. Alternatively, remove the rubber gasket from the factory spring seat and modify it to fit in the groove of the new spring seat. Once this nut is torqued to spec, rise the coil spring back up. Take care to align the top of the spring with the contours in the rubber gasket if you chose to include it with the new install (recommended). Remove the strut spring compressors and the lift it installed. **See the camber supplement for more suggestions on how to maintain a factory ride quality after installation.**

While you are in there, you can change out your sway bar end link bushings. This will help keep the car from getting too “boaty” in the back when driving around tight corners. First install the new Energy tire rod bushings in place of the old bushings. The new ones are red and the old ones will be black. The bushings are on the underside of the control arm.

Replacing the soft old bushings with new stiffer bushings will help reduce some of the wiggle in your rear sway bar. The sway bars resist side to side motion so this will help reduce that wiggle or “boaty” feel when going around tight turns, in low traction when the rear wheels slide, and under hard acceleration.

Once that is in the last piece we recommend to install is a rear damper securing washer. (Two 1” fender washers). To install remove the chassis securing nut from the top of the rear damper/ shock absorber. Put the new washers over the bolt and re-install the nut to the proper torque.

This gives the rear damper less room to wiggle by securing it against the chassis. In addition, as the car ages the rubber in that bushing will eventually begin to crack. Should that rubber insulation fail, with the new washers installed the damper will not spontaneously detach itself from the car, again something that otherwise would happen at the worst possible time.

Finish by reinstalling the wheel and torqueing your lug nuts to spec. Repeat for the other wheel. Don’t forget to keep up with your regular maintenance! Check back with coloradomountainrally.com for more walk troughs on changing your differential, transfer, and transmission fluids.

TORQUE SPECS:

- **Brake Line securing bolts: 75inch-pounds/ 8.5Nm**
- **Front Strut Through Knuckle Bolts: 177 ft-lb/ 240 Nm**
- **Tie Rod end castle nut: 36 ft-lb/ 49 Nm**
- **Lower Ball joint assembly to control arm bolts: 68 ft-lb/ 92 Nm**
- **Lower Ball joint castle nut: 98 ft-lb/**
- **Rear Upper control Arm Through Bolts: 66 ft-lb/ 90 Nm**
- **Rear Sway Bar Link to control arm nut: 22 ft-lb/ 30 Nm**
- **Rear Sway Bar Link to sway bar nut: 55 ft-lb/ 74 Nm**
- **Rear Shock absorber to Chassis bolt: 59 ft-lb/ 80 Nm**
- **Rear Shock absorber to lower mount**

133 Nm

- **Wheel lug nuts: 76 ft-lb/ 103 Nm**
- **Front Sway Bar link nuts: 55 ft-lb/ 74 Nm**
- **Front Sway Bar Member Brace (bracket) bolts: 64 ft-lb/ 87 Nm**

assembly: 59 ft-lb/ 80 Nm

- **Rear Sway bar to chassis mount bolts: 44 ft-lb/ 60 Nm**
- **Rear upper spring seat securing bolt: 59 ft-lb/ 80 Nm****

****Value not given in service manual**