

**Slee 4" and 6" Lift kit for
 1991-1997 Toyota Land Cruiser**



Qty	6" Kit	Qty	4" Kit
2	SOF5FM Front Springs	2	SOF4FM Front Springs
2	SOF5RM Rear Springs (or SOF5RH)	2	SOF4RM Rear Springs
2	OME N73L Shocks	2	OME N73L Shocks
2	OME N74L Shocks	2	OME N74L Shocks
1	OME SD24 Steering Damper	1	OME SD24 Steering Damper
1	Slee Front Control Arms with bushings	1	Caster Correction Kit
1	Front Double Cardan Drive Shaft	1	Front Double Cardan Drive Shaft
2	Front swaybar drop blocks	2	Front swaybar drop blocks
2	Rear swaybar drop brackets	2	Rear swaybar drop brackets
2	Front bump stop pucks	2	Front bump stop pucks
2	Rear bump stop blocks	2	Rear bump stop blocks
1	Set stainless steel brake lines	1	Set stainless steel brake lines
1	Adjustable front panhard rod	1	Adjustable front panhard rod
1	Adjustable rear panhard rod	1	Adjustable rear panhard rod
2	Rear adjustable upper control arms	2	Rear adjustable upper control arms
2	Breather extensions	2	Breather extensions
1	Emergency brake cable drop	1	Emergency brake cable drop
10	8" Zip Ties	10	8" Zip Ties

Thank you for purchasing Slee Off-Road lift Kit for your Land Cruiser. The above list and instructions assume the purchase of a bolt-in kit. If you received a DIY kit, please refer to the instructions for the individual DIY parts on assembly of the various pieces

All attempts have been made to supply the bracket and related parts in perfect condition with complete installation hardware. However should you have any problems with the condition of the parts or find any parts missing, please do not hesitate to contact us at 1888 4X4 SLEE or sales@sleeoffroad.com

Your Slee Off-Road parts are guaranteed free of defect in material and workmanship for a period of one year from date of purchase. Should you experience any problems, please contact us directly to resolve any issues. We have attempted to provide complete installation instructions provided below. However from time to time changes might be made to parts and associated hardware and you might notice small inconsistencies with the instructions. Please notify us of such occurrences so we can correct them.

Installation Instructions:

The following is a short description of installing the Slee 6" or 4" lift kit on a 80 Series Land Cruiser. We will point out steps that will make it easier and some "gotcha's" that you have to look out for. Although this was done in the works shop with the aid of a vehicle lift, the same procedure will work for the home mechanic.

These instructions assume that the installer has a basic mechanical expertise and have access to the factory service manuals for torque specs and related information. Do not attempt this installation if you are not comfortable with your mechanical capabilities.

Notes:

1. These instructions are written for the 6" lift kit. All items are the same, except that the 4" kit is supplied with caster plates and not control arms. Please disregard the section on control arm installation and refer to the separate caster plate installation instructions.
2. If you live in the rust belt, or you suspect that the underside of your vehicle has seen some corrosion, apply a penetrating fluid to all the bolts and fasteners that will be loosened during the install. Do this daily for the week leading up to the install. This will save your knuckles and sanity by avoiding broken bolts. Read the instructions to familiarize yourself with the location of the bolts.
3. Round up a friend to help with the install.
4. Make sure you have decent jack stands to support the vehicle. They need to be sturdy, have a big footprint and extend high enough. The \$20 cheapo variety is not going to help.
5. You need an assortment of metric sockets, large wrenches, breaker bar, pipe wrench and possibly a nut splitter.
6. Make sure you have all the items as ordered. Check the item list against your parts received.
7. The springs have white tabs on them with the spring identification, for example OME850 DS. Make sure that you have the both DS and PS springs for both the front and the rear.
8. The springs are labeled for a US Spec vehicle: L/H assumes driver side and R/H assumes passenger side.
9. Where we re-install bolts into the frame, re-attach brackets etc. we always use anti-seize. This helps in the future when the bolts have to be removed again.
10. All bolts that go through a bushing should only be torqued with the vehicle sitting on it's wheels, unsupported by jack stands. If you torque any of these bushing bolts with the suspension drooped out, the bushings will be pre-loaded and can cause premature wear and/ or squeaking.
11. As always, suggestions and additions are welcome.

STAINLESS STEEL BRAKE LINES

To avoid overstretching the existing brake lines, install the stainless steel brake lines first. Remove the existing frame to axle brake lines one at a time and replace with the matching stainless steel line. The lines are supplied with a small thin washer. The purpose of this washer is to stop the fitting from pulling through the hard line brackets. Install these washers on the stainless steel fittings before inserting the fitting into the hard line bracket.

If you have trouble inserting the hard line threaded nuts into the brake line female fittings, inspect the nut on the hard line. In some cases they were over compressed against the seat in the original fitting. If this is the case, you might have to use a small file to remove some of the material on the end to ensure that it inserts easily.

On '93-'97 vehicles there are two front and one rear line. On '91-'92' vehicles there are 1 rear and 1 front line.

Once all the lines have been replaces, bleed the brakes and check for leaks and proper operation of the brakes.

FRONT SUSPENSION

Step 1:

Make sure the vehicle is parked on a flat paved area. If doing the front suspension first, block the rear wheels. Jack the truck up using a floor jack placed under the front axle. Now insert the jack stands to support the frame on each side, right behind the front control arm mounting point. Do the driver side (DS) then the passenger side (PS).

Do not remove the wheels at this point. Unless you have really big jack stands the wheels will settle back on the ground.

Step 2:

Now place the floor jack under the PS side of the front axle. Jack the axle just enough to get the wheel off the ground but not so much as to unload the frame from the jack stands. Remove the PS wheel. After removing the wheel lower the axle down slowly. Make sure you have enough clearance between the rotor and the floor so that you can push the axle down all the way to unseat the spring.

If you have enough clearance. repeat the above procedure for the DS. Once you have both wheels removed, reposition the jack to the center of the axle and raise the axle just enough to start compressing the shocks.

Step 3:

Remove the bolts holding the swaybar to the brackets just behind the axle. This will stop the driveshaft from pressing into the swaybar when the axle is lowered. The swaybar can be left loose at the back. On '95-'97 vehicles the ABS wires are attached to the DS of the swaybar. Make sure that you do not drop the swaybar to fast and break these wires. The wires are shielded and it is easy to break the internal strand of the shielded wire.



Removing the front swaybar bracket bolts.



Passenger side brake line bolts removed.

Step 4:

Remove the two 8 mm bolts (12 mm heads) holding the PS brake line to the frame. This will allow the brake line to move and you will not overstretch the line when the axle is pushed down to install the springs.

Step 5:

Remove the top shocks nuts. These are 17mm nuts. The DS one, located under the brake master cylinder is by far the most difficult to remove.



Driver Side Top Shock Nut and the Snap-On Socket

In the shop, we use a Snap On Flexi socket that is a flex joint and semi-deep socket in one. This fits under the master cylinder and allows us to use the impact wrench. If you do not have one of these sockets, the alternative is to use a 17mm box wrench and slip it over the nut. Then use the pipe wrench to rotate the shock body (by gaining access to it from the wheel well). If the nut is frozen solid, the simplest and fastest way is to split the nut with a nut splitter. The nuts will not be re-used.

If you placed the jack properly, the axle should not drop at this stage.

Remove the PS top shock nut. This one is easily accessible with a deep socket. Hold the shock body (or get the friend to do it) and remove the nut.

Step 6:

Now remove the bottom shock nuts.

Step 7:

Now that the shock nuts are removed, you can remove the shocks by compressing them.

Step 8:

Now it is time to remove the springs. Lower the floor jack supporting the center of the axle slowly until the axle does not move any further. Now have the friend push down on the DS hub. This will unload the spring and you can remove it. Do the same with the passenger side spring.

NOTE: When doing this, keep an eye on the brake line in the center of the axle and be sure not to overstretch this hose.

If you are installing the suspension alone, and it is not possible to push the axle down enough, use a bottle jack between the frame and the axle housing. Be careful not to crush hoses, brake lines or electrical connectors. Also make sure it is properly positioned and does not slip out when under pressure.



Driver side spring unloaded. Not the position of the end of the coil. Make sure the new springs are installed with the end of the coils in the proper location.



Installing the front bump stop puck



Front spring seated into spring pad

Step 9: - Front Bump Stop Pucks

Install the front bump stop pucks by removing the center bolt that attaches the rubber cone to the spring follower cone. Install the bumper stop puck between the rubber cone and the spring follower using the supplied hardware. Do this for both sides.

Step 10:

Now install the new springs and make sure that the springs are seated properly. The bottom leading wrap of the spring should be seated in the indent on the spring seat.

Step 11:

The next step is to install the new shocks. Remove the shocks from the packaging and locate the plastic bags with the bushings, washers and nuts. The plastic bag has a drawing on it, showing the order of the bushings and washers. Remove the wire retainer that keeps the shocks compressed.

Below is a photo of how we install it. We follow the same order as the factory shocks. We leave out one of the washers that is used between the bushings. The open gap is where the mount on the truck will be positioned.



Bushings and washers installed on shock stem. The order is important. Note the indexing washer that is installed in the middle. This is the washer with the lip on it. This lip is to locate the stem in the shock mount hole. Note: the bushings are installed on the pin for illustration purposes only. The nut, first washer and first bushing will not be in position when the shock is installed.

Install both front shocks. Push the shocks upwards and install the bushing, washer and nut from the top. Tighten the nut by hand at this point.

Now raise the axle using the floor jack, to the point where the shocks just start compressing. Make sure not to lift the truck from the jack stands. Now install the bottom bushings, washers and nuts.

After all the bushings are installed, the shock nuts can be tightened to speck. This should be done until the bushings start to bulge but do not over tighten.

When tightening the nuts, be sure the washer with the index lip is properly located in the holes. If not, back off the nut and move it until it is properly seated.

Step 12:

Re-attach the brake line brackets.

Step 13: - Swaybar Blocks

Re-install the swaybar at this point. Install the front swaybar drop blocks at this time. Use the supplied blocks and new hardware and install the blocks between the frame side link and the swaybar bushing bracket. Use the new 8mm hardware supplied.



Swaybar block installed on front swaybar.

Step 14:

Install the front breather extension between the existing breather and the nipple on the axle.

Step 15: - Remount wheels

Mount the wheels, torque the lug nuts and remove the jack stands.

Step 15: - Panhard Rod

Remove the front panhard rod by loosening the PS axle side bolt and the bolt and nut on the top at the frame side. Be careful with the bottom PS bolt. This bolt attaches to a nut that is welded to the axle inside a bracket. If you break the bolt or strip the threads you will have to cut the bracket open and weld in a new nut. If this bolt is stuck, spray with penetrating fluid and try again.

Set the new adjustable panhard bar to be 3/8" longer than the one that was removed. Install the new panhard bar but do not tighten the bolts all the way. We will check the adjustment of the panhard bar later as well as torque the bolts.

NOTE: If you purchased Slee Caster Plates instead of front control arms proceed to the installation of the rear arms. Once the complete suspension has been installed follow the instructions that was supplied with the Caster Plates to install the kit.

Step 16: - Front Control Arms

Place a ratchet strap through your front tow points and around the axle on each side. Tighten them until snug. This will stop the axle from moving.

NOTE: On '93-'94 vehicles the ABS lines were attached to the DS control arm. Remove the lines from the arms before removing the arms themselves. When installing the Slee Arms, the ABS lines need to be modified and attached to the swaybar.

Now loosen the front four bolts that attach the arms to the axle housing. *The bolts should be loosened and not the nuts.* The nuts are locked with serrations on the face of the nut. If you use an air impact wrench to do this, it will help to turn the wheels to either side to gain access to the bolts. Also note the direction of the bolts as they are removed. They should be re-installed from the same side of the bracket.

Once the front bolts are loosened they will have to be pounded out using a drift. Be careful to not drop the arms on you when you do this. They are heavy and will hurt you. To prevent them from dropping on your, remove the first bolt, then put thinner bolt or screwdriver in its place. Then remove the seconds bolt.

After removing the front bolts, remove the rear bolt, *by removing the nut.* In this case the bolt is locked in place with serrations.

Once the arms are removed, you can install the newly supplied arms. The passenger side arm has the cut-out between the two front bushings. Install the arms by installing the front two bolts first and then install the rear bolt by rotating and/or pulling the axle forward. Once the arms are installed torque the bolts to spec.



Front control arm mounting bolts. These bolts are removed by loosening the bolt and not the nut. The nuts have serrations on the face and it locks in place.

Rear bolt on the front control arm. These bolts are removed by loosening the nut.

NOTE: To modify the ABS lines, cut as much of the sheet metal that connects the two lines together off. Be careful not to cut the lines themselves since you would have to replace the whole harness and sensors. You can remove the harness from the vehicle to do this. Unplug at the frame end and the sensor end at the knuckle to do this.

Once you have removed the connecting metal, the harness can be re-installed upside down and attached to the swaybar as shown in the photo below.



Front control arms installed. This photo shows the ABS lines modified and attached to the swaybar.

REAR SUSPENSION

Step 1:

Repeat the same procedure as in step 1 &2 for the front axle by jacking the vehicle up and supporting the frame on jack stands. In this case the jack stands can be used on the frame, right in front of the rear control arm mounts or on the rear cross member. The same safety issues apply.

Step 2:

Remove the swaybar to frame bracket on both sides of the frame.



Photos showing the two different swaybar mounts that were used on the '91-'97 Land Cruiser

Step 3:

Remove the 8mm bolt (12mm head) that holds the rear brake line to the frame. Also remove the 8mm bolt that attaches the emergency cable guide bracket to the frame.



Rear brake line bracket and emergency brake cable guide still attached to the frame.

Step 4:

Now remove the bottom shock mount bolts.

Be extremely careful with this bolt. If it does not come out easily, re-apply penetrating fluid or heat the mount with a gas torch. This bolt breaks very easily and is most often rusted. If this bolt breaks, you are in for a long day of drilling and tapping. Resist the temptation to turn up the air impact. This might just snap it off. Most often it is best to use a long extension pipe on a breaker bar and put gentle pressure on the bolt until it loosens up.



Bottom Rear Shock bolt

Once the bolt is removed the bottom of the shock can be released from the pin. You might need to use a screwdriver or pry-bar to push the shock off the mount.

After removing the bolt, it is good practice to run a 12mm x1.25mm tap into the shock mount hole to clean the taps. Make sure to use anti-seize on this bolt when it is re-installed.

Step 5:

Once the bottom shock mounts are removed, remove the plates that hold the top of the shocks to the frame. Again be careful not to break these bolts. If they are rusted, re-apply penetrating fluid or heat.



Top shock mount plate showing one bolt. There are two bolts. One each side. The heads are 14mm. These bolts are removed and then the shock is removed with the plate still attached. Do not mix the PS and DS plates. They are side specific.

After the plate with shock is removed, remove the shock nut and separate the plate and shock.



Removing shock from mounting plate



Pressing the bushing into the eye on the rear shocks using a vice.



Rear shock installed on mounting plate prior to tightening the shock nut.

Step 6:

Before installing the shocks on the plates, use a vice or C clamp to push the bushing into the eyelet on the shock. Use a little lithium grease or silicone to make it install easier.

Step 7:

Now install the shocks on the plates. use the same order of the bushings and washers as on the front shocks. Do not remove the wire retainer that keeps the shocks compressed. But do make sure it does not get pinched when you tighten the shock nuts. Tighten the nuts to achieve a good compression on the bushings but do not over tighten. Also make sure the index washer is located properly in the hole of the mounting plate.

Keep the assemblies until after we have installed the springs. Make sure to keep the PS side mount on the PS and visa versa. The plates should be marked if you mixed them up.

Step 8:

Lower the floor jack (that should still be supporting the center of the axle) and remove the rear springs by pressing down on the axle hubs, or use the same bottle jack technique as discussed with the front axle. The rear springs have a rubber packer "washer" that sits on top of the rear spring. This may or may not come out when you remove the spring. In certain cases they are stuck to the spring mount at the top and does not come out. If it does, re-use it on the new springs. If you have trouble keeping it located on the spring, use a small piece of masking tape to stick it down.

Install both rear springs and make sure that the bottom of the springs are seated properly.



Rear spring installed and end of coil seated properly.

Step 9:

Now install the rear shocks by bolting the plates into position on the frame. This is a tricky procedure, and if the wheels are removed, it is possible to start the outside bolt in the hole, then slip the bracket in with the slotted end under this bolt. Once in position, the other bolt can be started in the hole. The shock will dangle at an angle. Do not worry about this yet.

Once both bolts are started, tighten to specs. Remember the anti-seize. Be very careful to not cross tread these bolts. Once the top plate is attached, remove the wire retainer that keeps the shock compressed.

Now move the floor jack to the PS side and jack the axle up until the bottom shock eye can be slipped over the mount. Re-install the bolt. Again, use anti-seize. Once this is done, repeat on the other side.

Do not be tempted to just raise the whole axle from the center. With the newer stiffer springs, you run the risk of unloading the frame from the jack stands.

Step 10: - Rear Swaybar Brackets

Install the supplied swaybar drop brackets using the supplied hardware.

Step 11:

Remove the frame mounted bump stop above the axle and install the supplied 2" spacer blocks between the bump stop and the frame using the supplied hardware.

Step 12:

Re-install the brake line bracket bolt. Use the supplied spacer and longer bolt to re-attach the emergency brake cable guide. Install the supplied breather extension between the existing breather and the breather axle side nipple.

Re-install the wheels, and remove the jack stands. Torque wheels to spec.

Step 12:

Adjust the rear brake proportioning valve as per the factory manual.

Step 13: - Panhard Rod

Remove the rear panhard rod. Set the new adjustable panhard bar to be 1/2" longer than the one that was removed. Install the new panhard rod but do not tighten the bolts all the way.

SETTING PANHARD RODS

To set the panhard rods, it is necessary to measure from a common point on each side of the axle to the frame. Choose a point like the inside of the break backing plate or the edge of the rotor. Measure the distance to the frame. If the side to side measurements are not the same, the panhard rods need to be shortened or lengthened to adjust this measurement. To adjust the panhard rod, remove the bolt at the adjuster side and turn the coupler to lengthen or shorten the rod. Re-install the bolt.

After each adjustment, rock the vehicle to make sure that the suspension is not binding. Once the adjustments are correct, torque the panhard attachment bolts to spec and tighten the jamb nuts on the adjusters.

FRONT DRIVESHAFT

To remove the existing drive shaft, ensure that you have the vehicle secured with wheel chocks. Put the transfer case in neutral and jack up one of the front wheels. This will help you to turn the shaft and remove the nuts and bolts.

Remove existing front drive shaft. *Pay careful attention to the order of the bolts, nuts and washer and how they are installed with reference to the flanges.* Install the supplied double cardan shaft using the existing hardware in the same order as removed. Torque the bolts to spec. The shaft is installed with the double cardan joint at the transfer case end.

REAR UPPER CONTROL ARMS



Rear Upper Arms set at 1/2" shorter than stock

Remove the rear upper arms. On certain models, the ABS lines are bolted to the arms, and on the later models the ABS lines were zip-tied to the arms. Loosen the lines from the arms by unbolting or cutting the zip ties.

Set the supplied adjustable rear arms at 1/2" shorter than stock and reinstall. Torque the mounting bolts to spec. Loosely secure the ABS lines to the control arms using the supplied zip ties. Do not tighten the zip ties. Tighten the jamb nuts on both sides of the adjuster.

The rear upper arms can be adjusted while on the vehicle. Loosen the jam nuts and turn the center part of the adjuster. Shortening the arms will push the rear differential pinion down and lengthening the arms will turn the pinion up. Always tighten the jam nuts after adjusting the arms. Once the arms are dialed in, secure the ABS lines by tightening the zip ties.

In certain cases, the rear driveshaft needs to be replaced with a double cardan shaft as well. If you have problems eliminating any vibrations please contact our technical staff to discuss your setup and the issues you might be experiencing.

FINAL CHECK

Before driving the vehicle, make sure all bolts and wheels are torqued to specifications. Check brake system for leaks and proper operation. Check for any loose parts and any wires, harnesses or any other part of the vehicle that was removed, loosened or disturbed during the installation of the suspension.

ALIGNMENT

Installing the suspension causes the draglink (rod that goes from steering box to steering arm on the axle) to effectively become shorter. This will cause the steering wheel to become off-set. This can be adjusted by adjusting the drag link (also called relay rod). Please refer to your factory manual for instructions on doing this.

We also recommend that you take your vehicle to an alignment shop to have the alignment checked.

Disclaimer and Warrantee

Slee Off-Road stands behind the products we sell and manufacture. However we can not be responsible nor do we accept liability for breakage or failure of parts as a result of rugged off-road use, reckless highway driving or incorrect installation. Modification of your vehicle are done at your own risk and Slee Off-Road does not accept liability or responsibility arising from damage caused by installing parts or doing modifications. You should be aware that certain modifications and installation of certain aftermarket parts may under certain circumstances void your original dealer warrantee. Information supplied on this web site, in person or in any document obtained from Slee Off-Road should be verified by the user and Slee Off-Road does not accept any responsibility for erroneous information.

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