



ALL-PRO MODULAR LONG TRAVEL KIT

INSTALL INSTRUCTIONS

FOR 2005-2023 TOYOTA TACOMA



PART 12 - SUSPENSION FINAL ASSEMBLY

PART 13 - TESTING AND TUNING



PART 12 - SUSPENSION FINAL ASSEMBLY:

STEP 150

Install the LCAs as we did for the test fit of the bump stops, using a large washer on each side of the polyurethane inserts and using our centered alignment tabs (or as close as possible). Leave the bolts snug but not torqued down. This will allow easy movement of the LCA for the install of our other components.



PART 11 - DIFFERENTIAL AND DRIVESHAFT:

STEP 151

Install the UCAs in the same way, with the corresponding washers on each side of the UCA polyurethane inserts. As with the LCAs, snug down the bolts, but do not torque them down.

- a. A small pry bar might be necessary to work the UCA into place and get the washers installed. The bolts should not take much force to install, working the UCAs from side to side should allow easy installation of both sides.
- b. The UCAs will install with the large curved arm forward and the small rear section pointing down (as seen in the pictures)



STEP 152 Install the UCAs in the same way, with the corresponding washers on each side of the UCA polyurethane inserts. As with the LCAs, snug down the bolts, but do not torque them down.

- a. Bypass shocks will install with a machined spacer on each side of the top mount and no spacers in the bottom mount.
- b. The limit strap is designed to be mounted on the top mount of the bypass, so please keep in mind that you will need to bolt through the bypass mounts as if the bypass was installed for mounting of the limit strap.
You cannot bolt the limit strap to only one side of the bypass mount



PART 11 - DIFFERENTIAL AND DRIVESHAFT:

STEP 153

Lifting the UCAs up, lean the coilovers into the bottom mounts and then into the top mounts.

STEP 154

Use your jack to slowly press up on the LCA until you can thread in the 3 top bolts on the coilover. Be careful not to put too much pressure on the LCA with the jack to damage the bolts before they are fully threaded in.



STEP 154

STEP 155

Bolt the coilovers into the bottom mounts, using washers on each side of the mount for the Kings.

- a. Bypass shocks will install with a machined spacer on each side of the top mount and no spacers in the bottom mount.



STEP 155

STEP 156

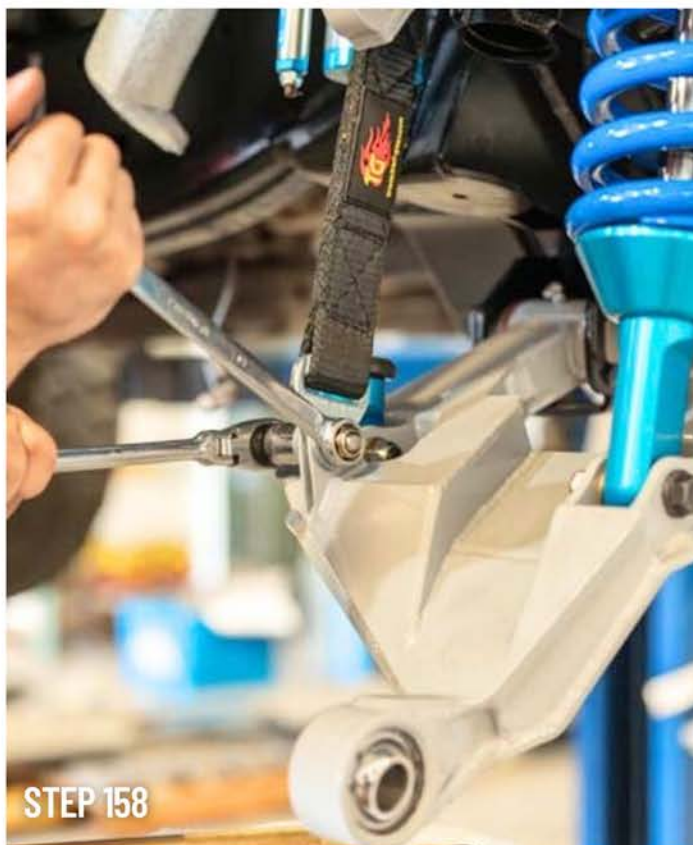
Tighten all bolts on the coilover and bypass except for the top bolt on the bypass (leaving it loose for the limit strap).

STEP 157

Using one spacer included in the limit strap pack, slide the top of the limit strap onto the top bypass bolt and tighten down.

STEP 158

Applying more upward pressure on the LCA, jack the suspension up until the lower limit strap bolt is able to be installed. A large washer goes on either side of the mount to ensure that the limit strap is on the shoulder of the bolt, not on the threads.



STEP 158



PART 11 - DIFFERENTIAL AND DRIVESHAFT:

STEP 159

Tighten all large suspension bolts to 65 ft lbs and the coilover top bolts to manufacturer spec.

STEP 160

Prepare the new Spindles for installation by installing hubs and seals.

- a. Please remember the rubber o-ring that goes on the external edge of the bearing as the hub is inserted, this can cause hub sealing issues if left off.
- b. Seals from old spindles should not be reused under any circumstances.
- c. New hubs are recommended, but your old hubs (in good condition) are acceptable.
- d. Inside seals must sit even for interface with the CV axle.



STEP 161

Using a misalignment spacer on each side, install the Spindles onto the uniball at the end of the LCAs. Snug the bolts down, but leave them loose for axle installation.



STEP 162

With the Spindles hanging from the LCAs, torque the LCA pivot bolts and UCA pivot bolts to 75 ft lbs.

STEP 163

Install the axles into the differential, tilting the outer joint down to allow them to slip into the Spindles.



PART II - DIFFERENTIAL AND DRIVESHAFT:

STEP 164

Rotate the Spindles up, installing the axle nut on the outside of the hub when the threads are visible.



STEP 165

Tilt the Spindles up to meet the UCAs, installing the misalignments just like the lower bolt. The other 2 spacers are our caster adjustment spacers. Adjust them as below:

- a. If running a stock tire up to approximately a 33" tire, install both spacers on the back side of the spindle (tilting spindle towards the front of the vehicle).
- b. If running 35" tires to 38" tires, install one spacer on each side, leaving the spindle in the centered position.
- c. If running over 38" tires, install both spacers in front of the spindle (tilting the spindle towards the rear of the vehicle)
- d. Each spacer accounts for a little over a degree of adjustment. If your vehicle is not returning to center at the recommended setting, please go up to the next recommended tire size setting. Please ensure your toe settings are correct before taking this step.



PART 11 - DIFFERENTIAL AND DRIVESHAFT:**STEP 166**

Torque both Spindle bolts to spec, 75 ft lbs.

STEP 167

Torque axle nut to spec per manufacturer recommendations and install the keeper and cotter pin

**STEP 168**

You can now let all force from the jack off the suspension system.

**STEP 169**

Install bump stops and adjust as desired.



PART 11 - DIFFERENTIAL AND DRIVESHAFT:**STEP 170**

Assemble the tie rods and install the misalignment spacers into the ends. Threads will need to be approximately equal, but keep in mind that the LC200 rack has finer threads than the rack end, so it will travel slightly more on the end than the rack.

STEP 171

Measure and adjust so both tie rods are equal lengths. Failure to make the tie rods even will result in the steering traveling farther in one direction than the other.

STEP 172

Rotate the tie rod ends into place and install the bolts through them. Please install the bolts as shown from the top down. This will allow them to be retained in their mount even if they take an impact and the nut comes loose.

**STEP 170****STEP 172.1****STEP 172.2**

PART 11 - DIFFERENTIAL AND DRIVESHAFT:**STEP 173**

Tighten tie rod nut and bolt to 75 ft lbs and snug down lock nuts on the tie rods.

STEP 174

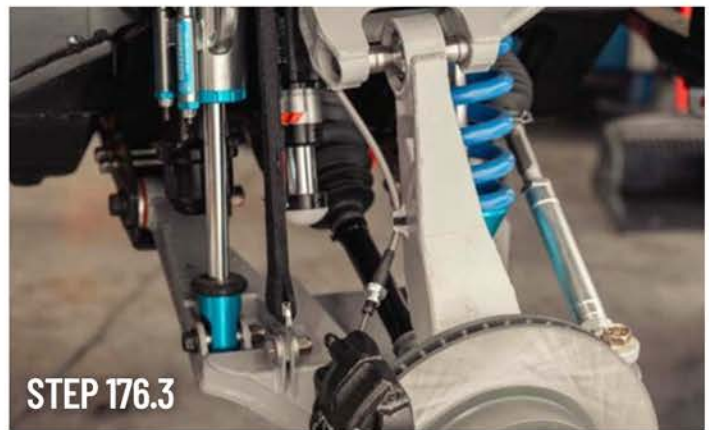
Fill differential with fluid and check fluid level of steering before reinstalling the skid plate.

STEP 175

Install the skid plate with new hardware as before and tighten to 60 ft lbs

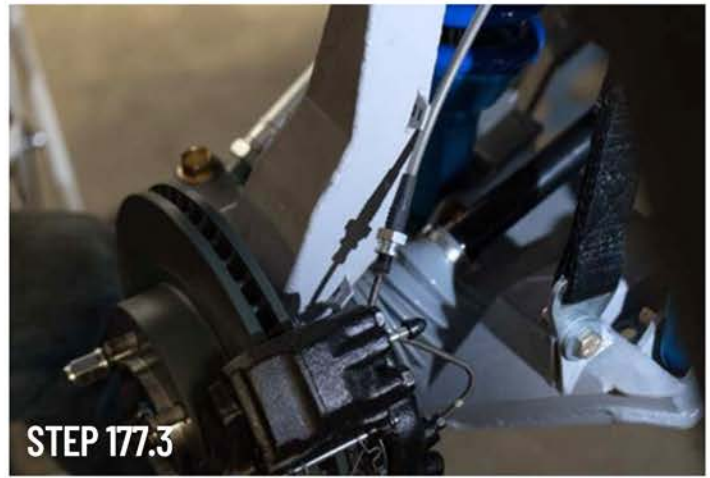
STEP 176

Install new brake lines as shown below and reinstall wheel speed sensor wiring along the same path. We have provided zip tie tabs on the bottom side of the UCA and the back side of the Spindle so these lines can be securely mounted.



PART 11 - DIFFERENTIAL AND DRIVESHAFT:**STEP 177**

Reinstall brake rotors and calipers, tightening the new brake line into the hard line connected to the caliper.

**STEP 178**

Snugly bolt the coilover reservoir to the new reservoir mounts provided in the kit (if applicable).



PART II - DIFFERENTIAL AND DRIVESHAFT:**STEP 179**

Mark where they will land on the frame, keeping clearance to the bypass and allowing for neat hose routing.

STEP 180

Grind or otherwise remove paint from that section of the frame

STEP 181

Tack the mounts into place, making sure that the position and orientation is where you prefer.

STEP 182

Remove the reservoirs and finish weld the mounts into place, taking care to shield the rest of the components from heat.

STEP 183

Paint over the bare section, taping or otherwise covering the other components.

STEP 184

Once the paint is dry, install the reservoirs and tighten clamps



PART II - DIFFERENTIAL AND DRIVESHAFT:**STEP 185**

Install the limit strap retaining straps, wrapping around the coilover in two places per side to ensure that the limit strap stays clear of the UCA. A small amount of adhesive can be used with the Velcro to get a more permanent installation.

**STEP 186**

Apply decals to the LCAs and UCAs and check over suspension components for any missed bolts or issues.

STEP 187

Reinstall wheels and tires.

STEP 188

Lower the vehicle to the ground.



PART 13 - TESTING AND TUNING:

STEP 189

With the new brake components, the braking system will need to be bled per factory procedure.

STEP 190

Grease UCAs and LCAs immediately after installation and periodically thereafter using polyurethane-safe grease in the installed fittings.

STEP 191

The steering wheel can be centered by sliding the U-joint off the steering column underneath the wheel and adjusting it in the splines. This may take several tries, but once it is aligned it should be permanent.

STEP 192

Camber alignment is adjusted based on the camber pucks that are included in the kit. We recommend adjusting them slightly out from center, resulting in slight negative camber at ride height.

STEP 193

Toe can be set to your preference, although we find that approximately 1/8" in from the inside front of the rims to the inside of the rear of the rims seems to do well. Once aligned, tighten locknuts on tie rods.

STEP 194

Shock tuning is highly recommended for optimal performance. Please refer to the stock manufacturer for the best contact for tuning in your area.

STEP 195

Caster changes are done by removing the top bolt of the spindle. They can be done with the wheel and tire on if the vehicle is jacked up off the ground and the wheel is supported.

STEP 196

Bolts should be checked periodically after first installation. We recommend checking torque after first drive, after 5 miles, 50, and 500.

