

FOUR WHEELER

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A rear suspension swap for more lift on a Tacoma

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Not every 4x4 requires a level ride height to perform its best, but for our lifted '04 Tacoma daily driver that morphs into a trail rig on weekends, we wanted the rear a bit higher than it had been to better handle load-carrying duties. A while back we swapped in a three-link front suspension using a solid

axle housing and dual-rate coilovers to replace the IFS setup. We also replaced the rear suspension with 3-inch springs and a 1.5-inch-longer shackle setup, but the rear still fell short matching the front height. The front SAS (solid-axle swap) ended up about 6 inches higher than stock, so the

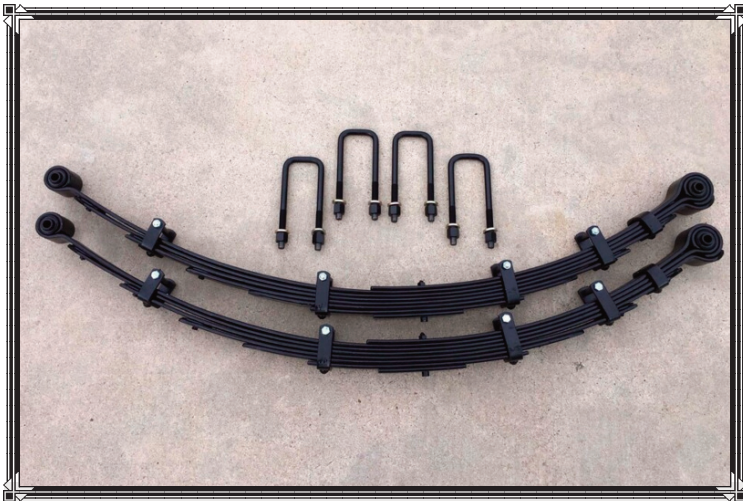
rear at 4-4.5 inches of lift was substantially lower after the leaf springs settled a bit with hard use. Although a bit saggy in the rear and a tad canted to the driver side due to a compromised leaf, the truck still performed extremely well on the trail, so we made do, but it was time for an upgrade.

Bringing UP THE REAR

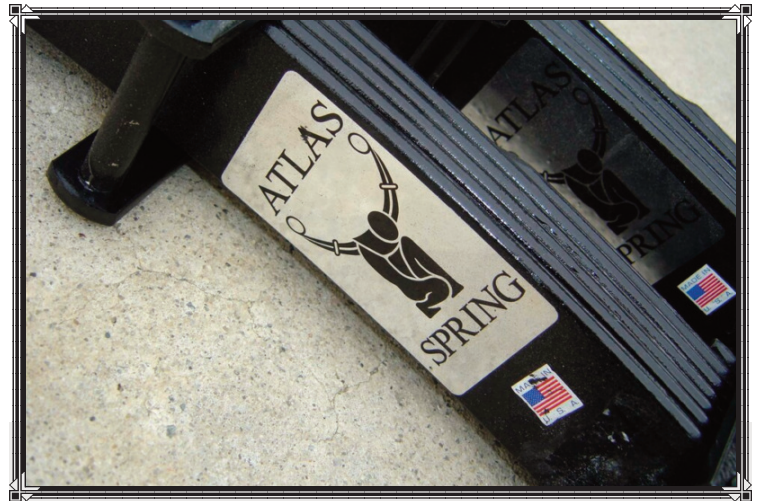


After doing some research on Tacoma rear leaf-spring options that best suit our desired lift and bed load-carrying needs, we were soon focused on Atlas Suspension and a set of 4-inch-lift rear expedition-type springs. Atlas has a great reputation for manufacturing excellent springs made in the USA, so it didn't surprise us when we found out the company could easily build a set of "hybrid" springs with about 4.5 inches of lift. The springs combine an expedition-type and progressive spring pack setup to give us the best of both worlds. We typically only carry necessities such as a spare 35-inch tire, Hi-Lift jack, Powertank, tools, camping gear, and some spare parts when hitting the trails. We usually don't bring expedition-type items such as a rooftop tent, gas cans, travel kitchen and all the other gadgets, so a hybrid spring would be a good call for flex and work well on the harder trails we tend to venture on. The new Atlas springs have alternating leaf thicknesses that help under serious compression and an added torque wrap leaf over the spring utilizing a clinch clip so that the spring does not store the energy at the front of the spring and aids with instant acceleration feel, as it's less prone to "S" wrap. Atlas Suspension also sells high-quality U-bolts and hardware to make gathering the necessary installation parts easy. It's also important to note that the company manufactures custom U-bolts on-site, so you can get any length you may need.

Atlas Suspension owner, Fernando Gutierrez, recommended we use off-the-shelf OE-type rubber bushings to not only improve ride quality but also make them easily replaceable with parts from any auto parts chain store when the time came. With stock-type bushings now in the rear of the springs using a 14mm metal sleeve, we needed to change out our rear lower hole 18mm shackle setup. We located a set of trick adjustable height shackles from Toytec. The Toytec SKL2 shackles come with an OE 14mm lower hole and three upper 18mm hole options, so you can select 1, 1.5, or 2 inches of additional lift. With more lift in the rear we also found it to be a great time to replace the well-used shocks with upgraded 5125 Bilstein units, which have a bit more travel and the extended length needed to accompany the taller springs. To help with the install we headed over to Duval Offroad Designs in Newbury Park, California, where Mike Duval made quick work of the rear spring, shackle, and shock replacement to bring up the rear of the Tacoma. Read on for the highlights.



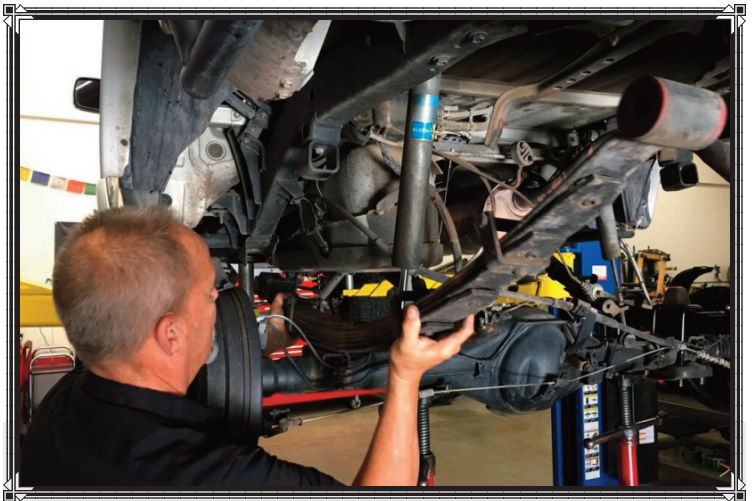
These Atlas 4.5-inch-lift "hybrid" rear springs for the first-gen Tacoma are equipped with factory-type rubber bushings, a military-style torque wrap leaf, and an alternating thickness leaf pack. We also ordered longer U-bolts from Atlas since the new spring pack now had an added lower leaf.



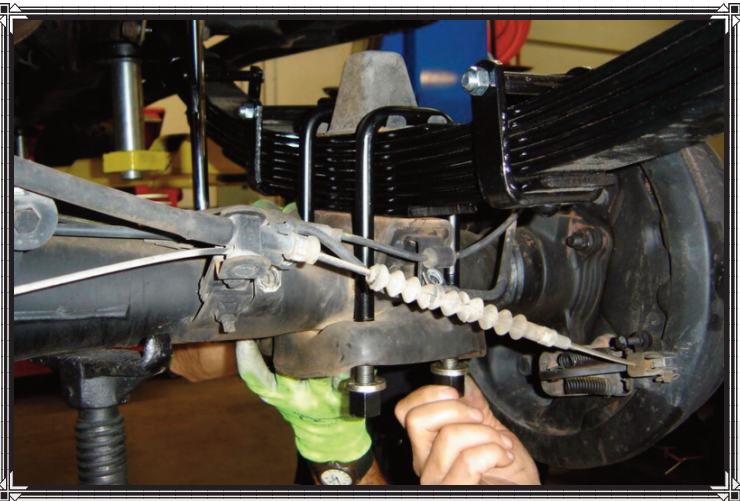
Atlas is proud to use steel made in the USA (in Pittsburgh, Pennsylvania) for all of its springs and wants to make sure those who purchase the products know the company stands behind them.



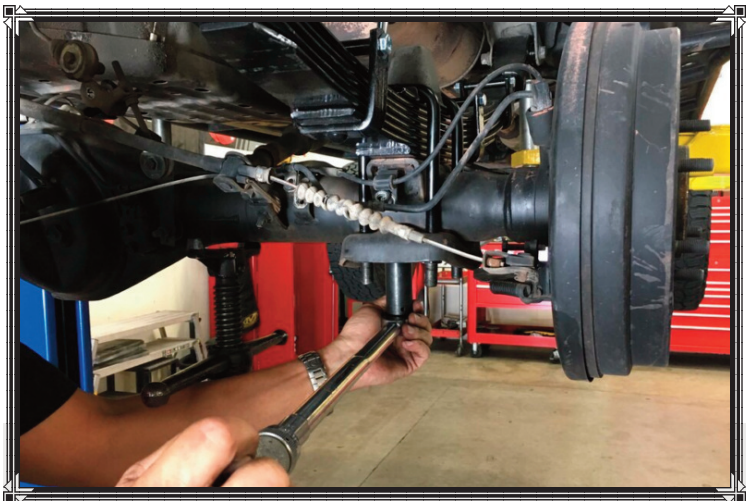
These adjustable-lift-height SKL2 shackles from Toytec were a perfect solution when going back to a factory 14mm spring bushing while still attaining 1, 1.5, or 2 inches of additional lift.



After getting the Tacoma situated on the lift, Duval removed the U-bolt assemblies, spring hangers, and shackle bolts in order to remove the old springs.



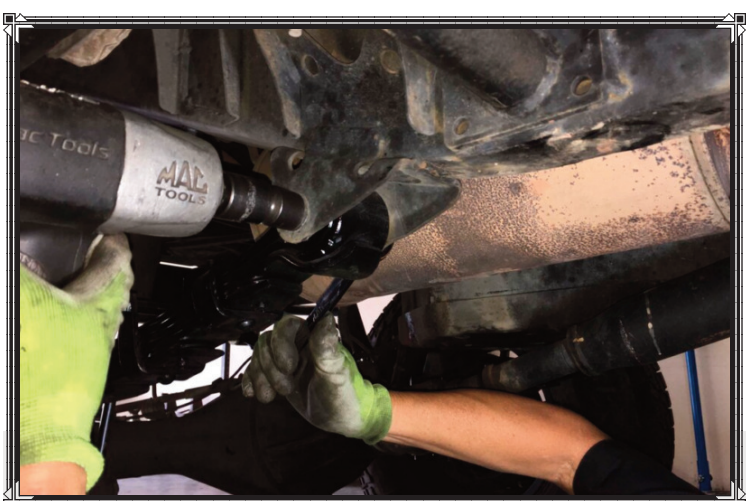
Once the new springs were set onto the spring perches, the U-bolts, lower shock mount assemblies, and bumpstops were installed using new hardware.



With both sides of the axle located properly under the springs, we were able to torque all of the U-bolts evenly to spec using an "X" pattern.



Before lowering the vehicle back on the ground, the rear shackles were installed snugly on both ends. Once the vehicle was on the ground and settled in position, we tightened the provided locking nuts (being careful not to overtighten).



Same as the shackles, before lowering the vehicle back on the ground, the front leaf spring bolts were installed snugly. Once the vehicle was on the ground and settled in position as shown, we tightened them to spec.



At full droop we noticed the rear brake proportioning valve are stretched to its limit. We simply loosened the adjusting nuts and raised the arm on the threads to where it would function properly at full droop before retightening the nuts.



Before: Here you can see the truck sitting low in the rear without any load, and if it was packed for the trail it would look even lower and really show the need for the new rear lift setup.



After: With the new Atlas rear springs and Toytec shackles installed, the rear came up nearly 2 inches, but it will likely settle to a preferred 1.5 inches, be level with the front, and be capable of handling a heavier bed load for and trail adventure.



As we pulled into Duval Offroad Designs it was very apparent the rear springs were not even side to side, and it was certainly time to give the Tacoma a little help bringing up the rear.



Once the rear springs were installed, our Tacoma sat level side to side and a tad higher in the rear. After some trail use, we anticipate the springs will settle and give us a little more shackle angle and the level height we were trying to achieve.



A trip to the desert confirmed that the Tacoma handles great on- and off-road and has the flex we need. Also, the rear shocks don't bottom out on compression or max out on extension. We also now have the bumpstops set up perfectly to avoid any future spring flatter, which should help with longevity.



This photo shows how the same 35-inch tire used to stuff into the wheel well and make significant contact with the fender flares. As you can tell the new Atlas springs, the rear tire does not even come close to rubbing on the fender flare.

Sources

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805-375-7551
dodoffroad.net

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626-315-1777
atlassuspension.com

Toytec
866-254-0076
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