

By Steve Temple

THE DAYSTAR DIFFERENCE



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Where would we all be without advances in suspension technology? Probably in the hospital or tethered to paved roads, both alternatives are pretty grim prospects. The only access to the backcountry would be by tank, horseback or on foot; our world, as we know it, would not exist.

Thankfully, engineering wizards, like those at Daystar, have developed designs, materials and quality manufacturing processes that help give us the clearance and traction we need and smooth out the bump and grind of off-roading. The Arizona company's product line runs from leveling kits with over 350 model applications to bump stops, shackles, performance shock

absorbers, and interior accessories, all made in the U.S.A.

Dick Goodman founded the company in 1977 with a line of motorcycle hand grips, eventually transitioning into the auto arena with injection molded polyurethane light truck components. The company may have focused on 4x4 trucks, but the off-road passion of Goodman's sons, Doug and Chris, stayed with two-wheelers. Both were active in motocross; Doug still races in the veterans' class. With Daystar's location in an off-road heaven of mountains, desert and wide-open country, it's no surprise that the facility parking lot is full of 4x4 rigs with hands-on product testing just a stone's throw away. Who

best to assess the needs of off-roaders than, well, off-roaders.

One of the keys to Daystar's high quality is the corresponding quality of the materials, according to Trent McGee, director of marketing. "With polyurethanes, you have to stay on top of the chemistry," he said. "If not, the products may test out okay, but what you've really got is junk. The chemistry is critical." Daystar's commitment to quality has gained it the internationally recognized ISO certification for quality control for over 10 years. "We don't outsource anything," said McGee. "We do our own tooling (on the molds); we have our own machine shop, we do everything in house."

The product that put Daystar on the 4x4 map, according to McGee, was the shock boot to keep grit and sand from damaging a shock's piston rod, and generally gumming up the shock absorber. "The engineers figured out a way to get the boot off the mold more efficiently," said McGee. "We were able to deliver a high quality product at a lower cost." Daystar is still the largest shock boot manufacturer in the world with both original equipment manufacturers and aftermarket customers.

Daystar introduced the industry's first leveling kit in 1995 and still, 15 years later, offers clear, and quiet, advantages over the competition. We all know the value of leveling kits in terms of both aesthetics and function. A stock truck's rear suspension anticipates a heavy load in the truck bed. Empty, that truck's rear end sits higher than the front end, conjuring up images of a cat in heat. For off-roaders, whose mud-spattered and rock dinged rigs belie any concern for aesthetics, a leveling kit allows for larger wheels and tires, extra clearance and more fun on the trail. Other leveling kits, however, improve the stance of your pickup but achieve the "look" with metal-on-metal contact, increasing the dreaded Noise, Vibration and Harmonics (NVH) levels. The rig may look better, but you pay a fairly high price inside the cab. Daystar, on the other hand, uses polyurethane material to achieve the front-end lift; the material absorbs the rattle and vibrations for a truck that looks cool while its passengers can actually hear themselves think. It's what we'd call the best of both worlds. The OEs use absorbent materials, rubber or polyurethane, for stock suspension; Daystar simply builds on what the factory already does.

We also know that leveling kits don't skew the steering geometry or vehicle handling characteristics. "The factory designs the vehicle with variances built in," said McGee. "Our leveling kits work within those variances" so nothing

changes but the front end height, and the ability to roll with 20-inch rims or high-traction off-road tires." Another advantage to Daystar leveling kits is the top-mount, easy-install design. With most late-model trucks moving to strut type front suspensions, Daystar's goal was to maintain the ride quality advantages of the design. The leveling components bolt directly to the top of the strut assembly so as not to preload the coil spring. The result is a light truck with no change in the built-in ride quality and load-carrying capacity, plus the fact you can do the install with simple hand tools.

As long as you're adding a lift or leveling kit, take a look at Daystar's Scorpion performance shocks. The shocks feature twin-tube design for increased oil capacity and reduced shock fade. The guts of the Scorpion include a durable piston seal, velocity-sensitive valving stack and chrome-hardened piston shaft. Throw in Daystar shock bushings and shock boots and you're good to go. Scorpion shocks are included in the leveling kits requiring longer than stock shocks or are available as stand-alone upgrades.

Front leveling kits and shocks to bump stops — okay, maybe bump stops aren't the sexiest off-road suspension component, or they weren't before Daystar rethought the concept. In street machines, these humblest of little rubber nubs keep metal suspension parts from rubbing other metal parts. In the wonderful and high-dollar world of off-road racing, the nubs have been replaced by adjustable, tunable air bumps, pricey little units that play a much more active role in the suspension dynamics. Air bumps are nitrogen-charged and incorporate hydraulics and valving. In other words, they're pretty tricky little nubs. Daystar's Stinger bump stops are half the cost and twice the durability of these exotic bump stops. And, since they're the same diameter as air bumps with the same kinds of mounts,

you can buy up fairly effortlessly once you've made a few podium visits on the racing circuits.

The adjustability of the Stinger bumps comes in the form of EVS inserts, allowing for fine-tuned suspension travel control. EVS, a microcellular foam material available in two different densities, has a true progressive spring rate and can be cycled thousands of times without degrading. Each Stinger comes with one to three EVS inserts. When combined with the adjustability of the piston shaft, the Stinger can be tuned precisely to your immediate needs. The outer shell is made from heavy gauge tubing. The bronze guide for the piston shaft guarantees durability.

Other Daystar products include Dash Panels for increased storage, so your iPod and sunglasses don't end up under the gas pedal, Switch Panels for auxiliary lights, air lockers or air compressors, as well as a legion of bushings and mounts. Daystar application-specific Super Kits include everything you'll need to upgrade or rebuild a rig's suspension and body mounts, all made with high quality cast polyurethane.

There's more in the Daystar catalog, more than space here allows. Chances are, if the product has something to do with improving a 4x4's ride, it'll be in their catalog. ▲



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