

Dennis Andreas

## Traxxas Slash Lowering Chassis

*Lowering the center of mass equals a dramatic change in handling.*

The common opinion amongst drivers is the primary requirement for a good handling radio control vehicle is to have a low center of mass. Ideally the center of mass should be at or below the axles. Why do we try to achieve this? Have you ever watched a full-scale box truck that's travelling down the highway try to make a turn? In many instances the wheels want to stay in place on the road, but the top of the truck has its own ideas. In some extreme cases when the speed is too great, the results are all too visible on the evening's news. It's basic physics, the higher the mass, the higher the likelihood of the vehicle rolling over in a turn.

As all dealers in radio control surface vehicles know, Traxxas produces a wide variety of cars and trucks to match all different types and styles of driving. One of its most popular lines is the TORC and Slash series style 1/10 stadium trucks. Out of the box, when equipped with the standard Titian Brushed motor, these are great performers, but add the Velineon Brushless motors that operate on a 3S 11.4V lithium battery and these trucks really move.

Traxxas saw a need for the everyday consumer to be able to control that much power and it now offers the Slash Lower Chassis Low-CG Conversion #5830. This kit will lower the heaviest mass, the battery, and the motor a full inch and bring them down to the axle level.

After a little searching, I was able to acquire a donor vehicle, one that had done battle with Hurricane Sandy and was in need of some major repair and upgrade. With the new chassis, a few hours of wrenching, and some tender loving care we will have the battered Slash not only racing again, but racing in style with performance to match. One of the nice things about Traxxas vehicles is the parts commonality across the various lines. Another important item is the waterproof ESC, steering servo, and sealed receiver box Traxxas incorporates in its vehicles intended for off-road use. Amazingly, all three of these components sur-



vived Hurricane Sandy's vicious attack. As expected, I did have to do some work on the ball links and tie rods to clean and polish those items before they were brought back to life.

Taking a minute before getting started, a quick measurement showed the donor chassis' battery and motor were a full three inches above the ground and an inch above the axles. Reviewing the instruction sheet revealed what was provided in the kit, and what would be salvaged for reuse. Unfortunately, an issue and only complaint with the conversion, arose and this was the size of the exploded drawing. In two words, it's **too small** for my aging eyes. I'm sure someone half my age would be fine, but a larger exploded view would have been greatly appreciated.

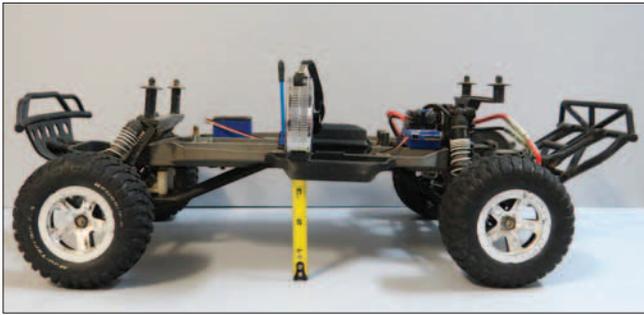
It's time to begin the conversion, but this is a conversion not a fresh build, so tell the purchaser that for the most part all of the stock parts will be reused and to save everything until he's finished with the kit. To start the transformation you carefully remove the front steering assembly, along with the steering servo, and the rear

assembly from the stock chassis. Stripping the ESC and radio box doesn't mean grab a handful of parts and yank until they are free. The end user needs to take his time and carefully disassemble the stock chassis. The only parts he isn't going to use in the conversion are the stock front skid plate, nerf bars, and of course the main frame. The kit contains a lowered chassis, new front skid plate, nerf bars, battery mount, hardware, and front springs, along with various screws and a spring clip.

Once the front and rear assemblies, and the radio components are disconnected, it is time to begin mounting components. As with the stock Slash, the conversion mounts the steering servo to the front skid plate, but the steering tie rod will need to be shortened. It's a bit tight, but there is room on the stock steering rod to shorten the distance so the ball sockets will fit the new mount. The last thing needed with the steering



*The Traxxas kit contains everything needed to lower the battery and motor in a Slash one inch.*

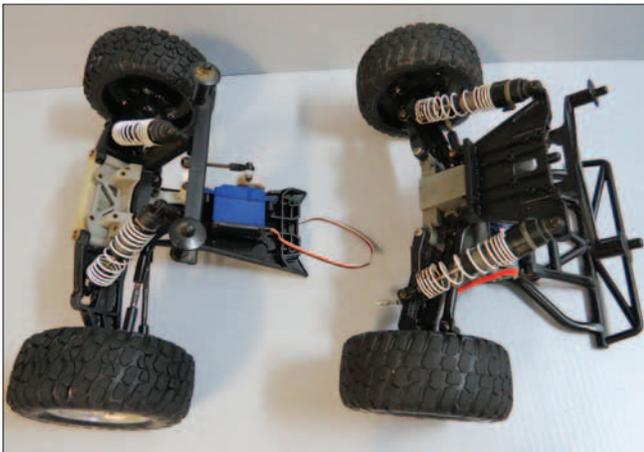


*The stock chassis has the heaviest components placed close to an inch higher than the axles.*

conversion is to change the transmitter's programming. Because the servo orientation was changed the servo needs to be reversed.

Next up is mounting the ESC and radio box to the chassis, and this is very easy. The conversion chassis includes mounting bosses for the stock ESC and a wider set are also provided for a brushless ESC should this be the direction chosen. There are also routing slots provided on the chassis for the throttle and the steering servo leads just to keep everything neat and orderly in appearance.

Before torquing all the screws to specifications, I like to be sure all of the parts fit properly, so a quick test fit is always in order. The front and rear assemblies slid into place without a single problem. Once it was verified everything fit properly, the final assembly is made using the screws, bolts and nuts salvaged when the donor car was stripped along with the hardware provided in the kit to secure all of the components. As final assembly was completed, the routing of wires and rotating assemblies were checked for pinched wires and free movement. The last items to do were to replace the stock front springs with the two lowering springs provided in the kit and reinstall the front bumper.



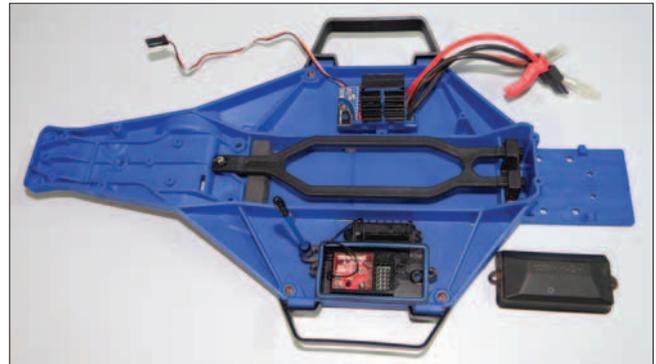
*The kits consists of a new front skid plate, but uses*

With the final assembly completed it's time to check out the new ride height. Even though the new chassis maintains the stock ride height, it is easy to see how much the kit lowers the motor and battery tray. Unquestionably, the battery by far is the heaviest item carried by a radio control vehicle and the motor is next. Before the conversion, the battery position was as high as the tops of the tires and now the battery is just above the axles.

There has been a lot of talk about theory, but the proof

is in the running, and the conversion provides a much lower center of mass which equates to far better high-speed cornering. And the chassis clearance height has not been compromised either. As with the stock chassis, the lowest points on the conversion are the front and rear skid plates and these stay the same height, providing identical-to-stock ground clearance.

I was hoping the original motor could be reused, but it did not survive the storm. It broke my heart, but the new lowered Slash now needed a new Titian motor. The result was worth the purchase. All cleaned up with a shiny new motor and the slick blue color of the lowering chassis pro-



*Mounts for the ESC, battery and receiver are all molded in place making the conversion effortless.*

vided a badly damaged Slash with a brand new look.

During the build I was very impressed how everything fit, especially the front of the chassis with its integrated steering servo. It seemed like everything, including the shortened and reversed linkage, just pops into place. But the acid test was how did it run and I could immediately feel the difference in the cornering. Not only could turns be taken at higher speeds, but there was more slide to the turn verses the inside tires of the stock chassis wanting to lift off the ground. With the lower battery and motor, the body could be lowered as well and the converted Slash now has the Southern California low rider look, too.

This kit is not just for looks, it is a true performance upgrade. Provided your customer has some basic mechanical skill and likes fixing his vehicle, a small challenge like the



*Ground clearance remains the same, but lowering the battery and motor definitely improves handling.*

Traxxas Slash lowering chassis can reap some big driving benefits. Plus, although I replaced the damaged motor with a stock item, dealers are always happy when a conversion like this results in add-on sales such as new tires and a brushless motor/ESC package. **HM**