

RC4WD Diablo V2 Instruction Manual

Thank you for your purchase. Welcome to the RC4WD family. This kit is a combination of many specially engineered and manufactured parts. Enjoy your build.

This is a complete instruction manual for the Diablo truck kit. We have tried to detail as many things in the build process as possible. Since the kit has so many options available it is hard to cover all of them. This manual covers the basic kit.

If for some reason you don't find enough detail here, or you are having issues with your build please visit RC4WD Diablo forum [here](#).

You will need to have a few things for this build.

Metric Hex Wrenches
Regular Wrenches, or Nut Drivers
Pliers
Monster Lube RC4WD #X-0317
Blue Thread locker

The first thing you will want to do is unpack your truck kit. Be careful with the parts when unpacking and make sure to inventory all your items.



Skid plate and axles not shown in photo. Some items may have changed, photo is for example only. This doesn't represent what you have received, as the kits are custom built.

When you build this kit you will want to use some Blue thread locker on the metal to metal parts. The included nuts have nylon inserts to prevent them from backing off, but all other metal to metal surfaces will stay in place better with the thread locker. Anytime you see an *, this notes the need for thread locker. *(please be sure to get blue thread locker, it is removable.)*

Hardware Listing

- | | | |
|------------------------|-------------------------|--------------------|
| (12) M3 Nylock nut | (4) M3 X 16mm SSS | (4) M3 X 25mm SHCS |
| (2) Black Motor Screws | (28) M3 conical washers | (12) M3 X 20mm SSS |
| (12) M3 X 16mm SHCS | (6) M3 X 12mm SHCS | (6) M3 X 10mm SHCS |
| (30) M3 X 8mm SHCS | | |

Miscellaneous parts listing

- | | | |
|------------------------|----------------------------|-------------------------------|
| (1) 89mm Steering Link | (4) 70mm long Silver links | (1) 33mm Steering link |
| (4) Body posts | (1) Bottom Skid | (12) Black straight Rod ends |
| (4) Curved rod ends | (4) Velcro Straps | (2) 3 link Y's |
| (4) 79mm Lower Links | (4) 60mm Upper Links | (2) Single point 3 link mount |

Additional Hardware Included with R2D II

Items included with the R2 Dig

- | | |
|-----------------------------|---------------------|
| (1) 8t 32 pitch pinion gear | (1) Optional spring |
| (1) Set screw for pinion | (2) Motor screws |

Items included for the Sideway Servo Mount

- | | | |
|--------------------------------|----------------------|------------------------|
| (1) 40mm Link | (1) Two stage collar | (1) M3 Long rod end |
| (1) M3 short rod ends | (5) M3 Nylock nuts | (1) M3 X 25mm SHCS |
| (1) M3 X 10 SSS | (5) M3 X 12mm SHCS | (1) M3 X 20 SSS |
| (3) Different size dig sliders | (7) M3 Flat washers | Misc. other set screws |

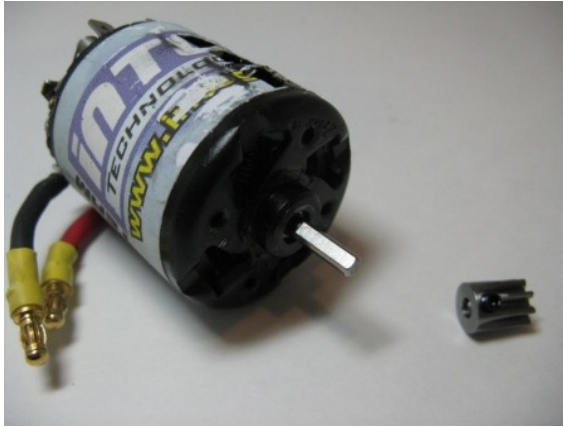
Assembly Steps

Step 1. Motor Installation

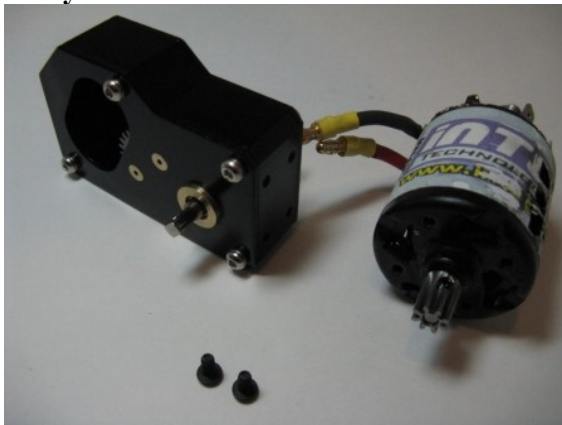
Items needed

- | | | |
|----------------------|------------------|-------------------------|
| R2 Transmission | (2) Motor screws | 8t 32 pitch pinion gear |
| (1) Pinion set screw | | |

Now you can install the motor into the R2 tranny. Use an Allen wrench to install the set screw into the Pinion gear supplied. Then install the Pinion gear onto the motor and tighten the set screw. If the motor has the flat on the shaft, make sure and align the set screw up with the flat of the motor shaft.



Next install the motor into the tranny on the side with the small hole. Using the black motor screws supplied insert the screws thru the holes in the tranny then into the motor. Make sure to tighten the screws only part way. You will want to align the pinion and R2 gear mesh, then tighten the screws all the way down.



Proper gear mesh can make the R2D gears last a long time, and will reduce gear noise. If you set the lash to tight it will wear the gears and be very loud. The mesh in the photo is just about right. You will want to use some Monster Lube to lubricate the gears. More lube is better.

At this point the shafts will be almost impossible to turn by hand.

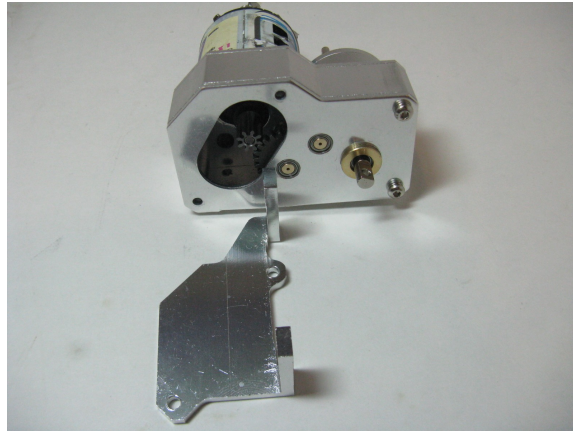
Step 2. Dig unit installation

Here we will add the servo and linkage to the R2D tranny. You will need to get your servo and R2D tranny for this assembly.

A. Sideway servo mount

Items needed

Sideway servo mount



Remove the two screws on the R2D that are above and below the front hole. With these screws removed you can install the servo mount like shown in this photo. Reinstall the screws to secure the servo mount. *



B. Servo installation

Items needed

(4) M3 x 12mm SHCS

(4) M3 flat washer

(4) M3 Nylock nuts

For this step you will need a servo with at least 60 oz of torque, or more. You will also want a servo arm that has some holes close to the center of the arm mount. Install the servo with the mounts to the back of the servo mount like shown in the photo below. Use the 4 screws, washers, and nuts to secure the servo.



C. Linkage assembly

Items needed

(1) short M3 rod end
(1) long M3 rod end

(1) M3 X 10mm SSS
(1) M3 X 20mm SSS

(1) Short link

Assemble like shown in the second photo. *



D. Link install onto servo and R2D

Items needed

M3 X 12mm SHSC
M3 X 25mm SHCS

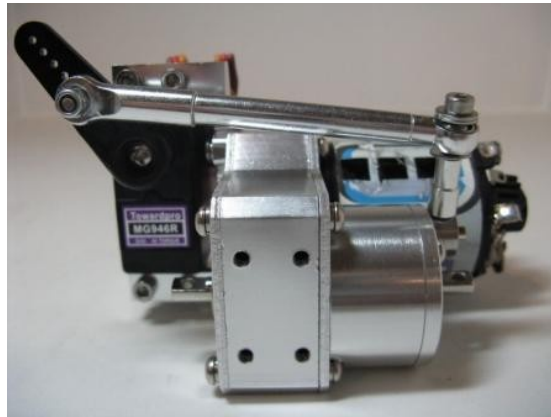
M3 Nylock nut
(3) M3 Flat washer

Special two stage collar
Large dig collar

In some cases your set-up might require you to change a few things. There are plenty of additional parts in the bag for extra set-ups.

You can see in the photo below that you need to insert (2) M3 Flat washers onto the M3 X 25mm SHCS then install into the short link. Install the end of the screw into the two stage collar and add another M3 flat washer. Now thread the screw into the large dig collar. Slide the dig collar onto the dig shaft coming out the back of the R2D and tighten. * Use the M3 X 12mm SHCS to install the

other end of the link onto the servo arm. Use the nut to secure the SHCS and link to the servo arm.
*



Additional tips

Be careful when using the dig collars provided that you don't tighten the screws to much, as they may strip.

Using a Dremel and a grinding bit you could apply a flat spot on the dig shaft. Check your alignment before performing any modifications.

Step 3. Link Assembly

A. Items needed

(4) Curved rod ends
(8) M3 Long rod ends
(2) 3 link Y's

(4) M3 X 16mm SSS
(8) M3 X 20mm SSS
(4) 60mm Upper Links

(4) 79mm Lower Links

A. You can now assemble the links. The lower links are first. Pull out (8) black long straight M3 rod ends, (8) M3 X 20mm SSS, and (4) 79mm long links. You can insert the set screws into the rod ends and then assemble into each end of the link. * They should look like the rod in the top of the first photo.

The upper links use the curved rod ends, and the 3 link Y's. Get (4) Black curved M3 Rod ends, (8) M3 X 16mm SSS, and (4) 60mm long links. You can insert the set screws into the straight rod ends, then into the curved rod ends. * Now install the links into the 3 link Y's. * They should look like the link in the third photo.



B. Items needed

(4) M3 Long rod ends
(4) M3 X 20mm SSS

(1) 89mm Steering Link
(1) 33mm Steering Link

B. Onto the steering links. These are just as easy to assemble. Use the Black Long straight M3 Rod ends, the M3 X 20mm SSS, and the Steering links. You can insert the set screws into the rod ends and then assemble into each end of the link. * They should look like the rods in the second photo.



Step 4. Shock Fluid

You can now fill your shocks with fluid. This is a simple thing. You can remove the shock cap and put your favorite shock fluid into the shock. Make sure that all the air and air bubbles are out of the shocks before you reinstall the cap. Make sure the shocks are not locked and then set them aside for final assembly.



Additional Tip. These shocks typically work best with a small amount of fluid to help them move. Most that use them do not fill them with fluid. This is up to the user.

Step 5. Axle Lubrication

Lubrication of the axle gears is a very important step in the assembly of your kit. Remove the screws holding the cover onto the axles (like in the second photo). Use some Monster Lube on the main gear, and reinstall the cover. Be careful not to tighten the screws to much, you can strip the plastic.



(There are washers included with the axles. Use these as shims if needed)

Step 6. Axle Servo 4 Link mount assembly

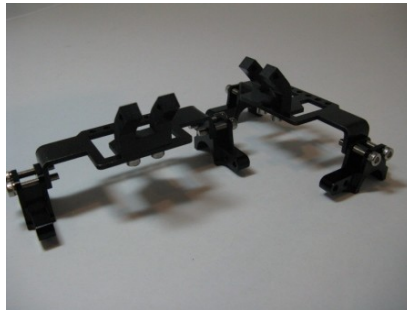
Items needed

- (4) M3 X 12mm SHCS
- (4) M3 X 16mm SHCS

- (4) upper part of the 4 link mounts

- (2) servo/link mounts
- (2) Single point 3 link mount

You can install each lower 4 link mount to the sides of the servo mounts. Use the M3 X 12mm SHCS in the back hole and the M3 X 16mm in the front hole. * Make sure that the link mounts are all facing the same way like in the second photo. Once these are installed on the axles they can't be changed unless removed from the axles.



Now you can remove the old 4 link mount and install the new Single point 3 link mount. Remove the screws holding the 4 link in. Install the 3 link in the same location with the same screws. *



Step 7. Chassis assembly

Items needed

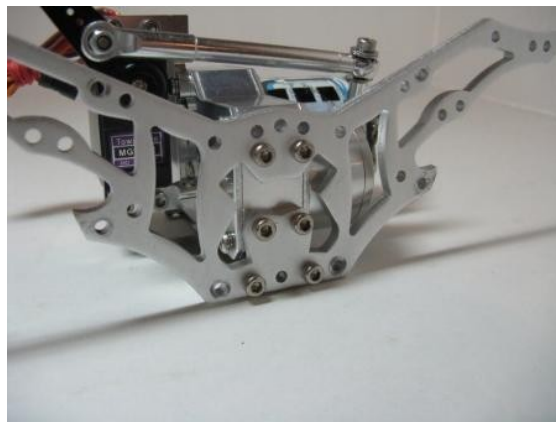
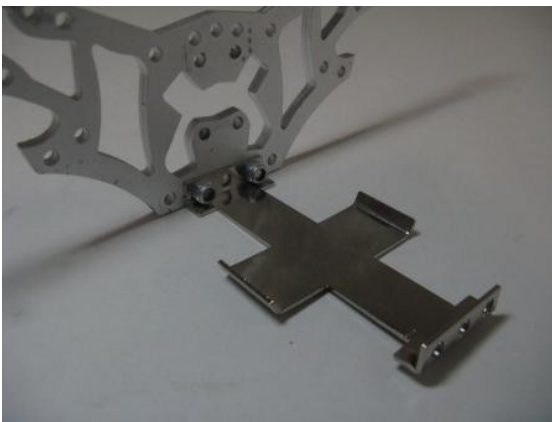
(12) M3 X 8mm SHCS
(4) M3 nylock nuts

R2D transmission
(2) Diablo side plates

Lower skid plate

You can install one side of the Diablo chassis at a time using (4) M3 X 8mm SHCS on each side. * It only lines up one way. Before installing the other chassis plate, install the lower skid with (2) M3 X 8mm SHCS and (2) M3 nylock nuts. Once again, the chassis only allows the skid in one spot for mounting.

Now you can install the other Diablo chassis plate the same way you did the first using the remaining screws. *



Step 8. 4 Link Placement onto the Diablo chassis

Here you can install the front and rear 4 links to the Diablo Chassis. This will require several pieces of hardware.



A. Items needed

(3) M3 X 16mm SHCS
(1) M3 X 12mm SHCS

(4) M3 conical washers
(4) M3 nylock nuts.

A. Install the upper links first. In this step it may be easiest to turn the chassis over on its top. We will be using the 3 link mounts. When sliding the curved rod ends onto the Diablo chassis you may find it hard to install. This will take a little time and patience, but it is meant to be tight.

Install the only M3 X 12mm SHCS into one of the curved rod ends. Then install a M3 conical washer with the beveled face toward the rod end. Then insert the screw into the first hole on the motor side like in the second photo. This will go on the outside of the chassis. Install the M3 nylock nut to secure the link. (Add a little thread locker to the nut before installing. This will help secure the bolt.)

Now use the M3 X 16mm SHCS and install the rest of the upper links. Use a conical washer on each one making sure the bevel is toward the rod end. Then use the M3 nylock nuts to secure the links.

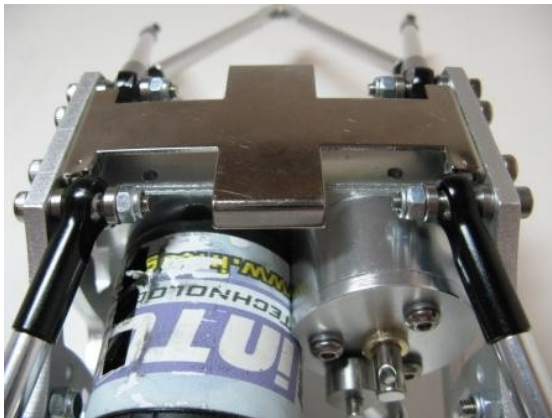
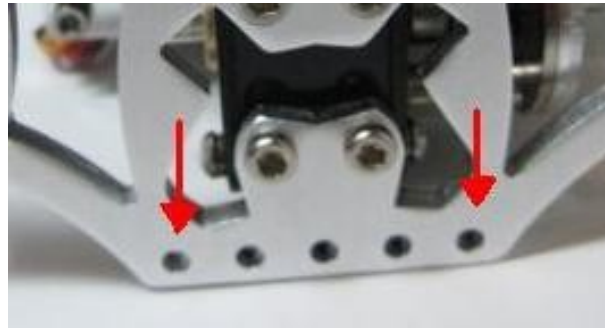


B. Items Needed

(4) M3 X 20mm SHCS

(8) M3 conical washers

A. Now install the lower links to the Diablo chassis. Use the remaining 4 long links for this step. Insert a M3 X 20mm SHCS into the chassis were marked in the first photo. Then insert a M3 conical washer with the bevel facing to the screws end. Slide the rod end onto the screw and then another conical washer with bevel facing the link end and then secure with a M3 nylock nut. Do the same for the other 3 links. (See the third photo)



Tip. If the links are too close to the skid plate, you may have to bend the plate a small amount.

Step 9. Shock mounting

Items Needed

- (2) 70mm links
- (4) M3 conical washers
- (4) M3 X 16mm SHCS
- (4) Dual stage shocks

Now you can install the shocks to the Diablo chassis. The 2 links will run in-between the chassis plates. Insert the M3 X 16mm SHCS into the top of the shock body, then install a M3 conical washer with the beveled edge toward the shock. Insert the screw into the second hole like shown in the photo below and tighten into the support shaft. * Repeat this step 3 more times using the same screws and into the same holes.



Step 10. 4 Link Placement/Shocks onto servo mounts

Now install the front and rear 4 links to the servo mounts.



A Items needed

(2) M3 X 10mm SHCS

A. Install the upper 3 link first. Insert a M3 X 10mm SHCS into the single point 3 link mount and then into the 3 link Y mount. * Repeat this step for the other end.

B. Items Needed

(4) M3 X 25mm SHCS

(12) M3 conical washers

B. The lower links and shocks can be mounted to the lower 4 link mounts.

Insert a M3 X 25mm SHCS into the end of the shock bottom. Then slide a M3 conical washer onto the screw with the beveled edge facing the shock end. Install another conical washer on the screw with the bevel facing the screw end. Now install the lower rod end onto the screw and slide another conical washer onto the screw with the beveled facing the rod end. Now insert the screw into the end hole of the lower link mount. *



You should have something that looks like this.



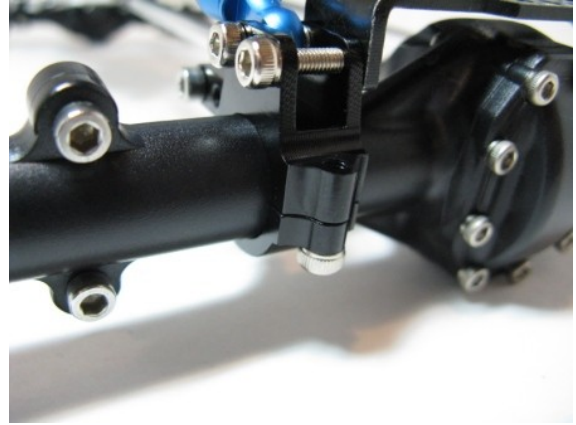
Step 11. Installation of the axles

Items Needed

(8) M3 X 8mm SHCS

(4) lower 4 link axle mount

The lower 4 link mounts have a small lip inside them shown in the first photo. The lip lines up with a groove on the bottom of the axles. Put the axle up to the servo mount making sure the grooves are facing down. Install the lower mount using the M3 X 8mm SHCS. * Repeat this step until you have all the screws secured for the lower link mounts and your axles are installed. *



Step 12. Servo and Servo Mount Install

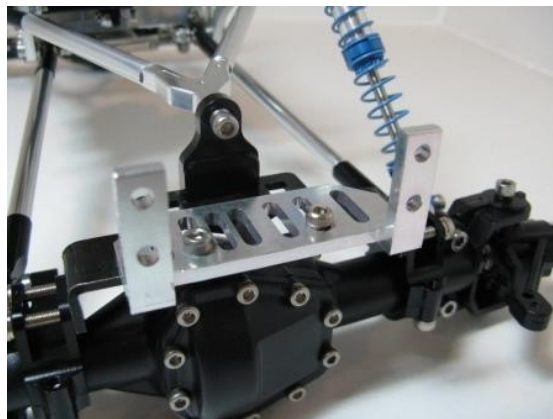
Items Needed

(2) M3 X 8mm SHCS

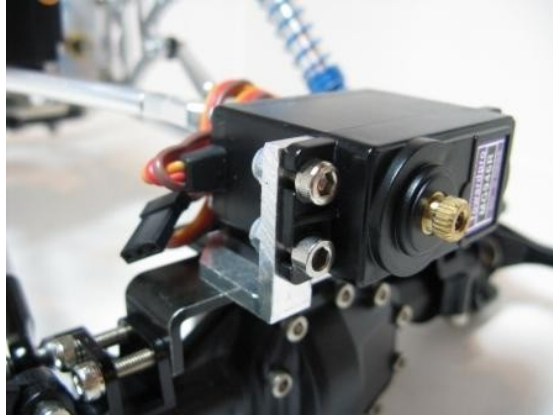
(4) M3 X 10mm SHCS

(4) M3 nylock nuts

Line the servo mounts up similar to the photo below. Use the M3 X 8mm SHCS to secure the mount. This may require some repositioning once you install the servo and steering links. You may want to add two small regular nuts too the screws (not included)



To install your servo you can use the M3 X 10mm SHCS, and nylock nuts like shown below. (you may choose to use some flat washers here, not provided in the kit)



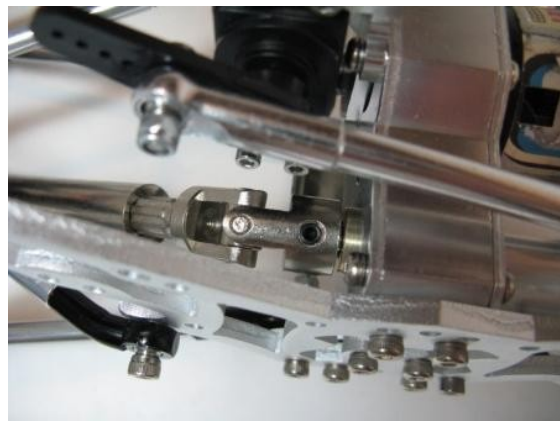
Step 13. Installation of the Punisher shaft

You can install the Punisher shafts that were included with your kit. These already have the set screws installed into them. You may want to use a small amount of thread locker on the set screws when installing the shafts.

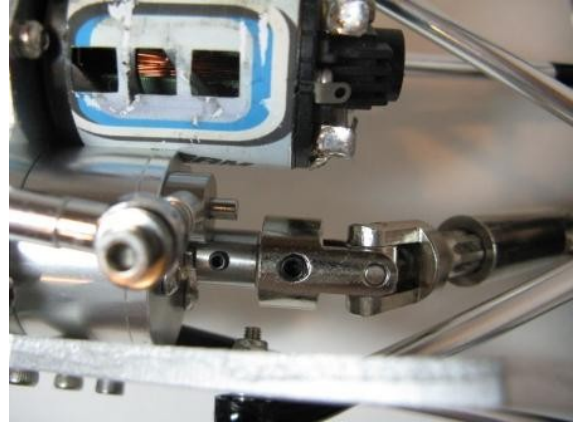
The female shaft needs to be installed to the axle. While the male side attaches to the transmission. Please be sure that the set screw is secured to the flat spot on the pinion shaft sticking out from both the axles and the transmission.

The rear shaft will need the Pinion extension installed. This allows the punisher shaft to fir when using the large dig collar.

Front



Rear



Step 14. Installing the Front Steering links

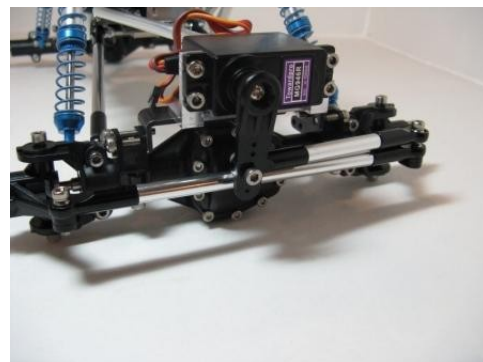
Items Needed

(1) M3 X 16mm SHCS

(1) M3 X 12mm SHCS

You can install the steering links you made earlier. Use the M3 X 16mm SHCS into one end of the short rod end and then into the long rod end. You can now install the screw into the steering knuckle like shown in the first photo below. Use the M3 X 12mm SHCS to secure the other end of the long link to the opposite steering knuckle.

(Use your own hardware to attach the short link to your servo arm)

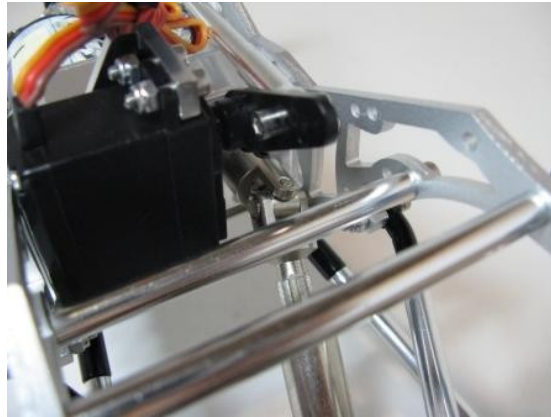


Step 15. Bracing and body mounts

Items Needed

(8) M3 X 8mm SHCS

You can use the additional 70mm links to support the Diablo chassis. Use the M3 X 8mm SHCS to secure the links. * You can see the additional link in the photo below. Where you place these are up to you.



The body mounts included in the kit uses the M3 X 8mm SHCS. * You may install them anywhere you like.



Step 17. Wheel and Tire Installation

Make sure when mounting the tires on any wheel that you look at the tread pattern and make sure that when the wheels are installed that each are facing the right direction.

It will take a little work to install your tires to the beadlock wheels. Remove all the screws on the front and back ring. Wrap the tire over the wheel and then insert the bead into the outer ring of the wheel. Carefully place the ring back on and reinstall the screws. I use a cross pattern and carefully tighten the screws slowly. Make sure not to tighten anyone screw all the way down until you have all screws installed, then slowly tighten them all in a star shape until they are completely secured. Tightening one screw farther than others can cause the bead to come out of its seat. Repeat for both the front and rear rings and the other 3 wheels and tires.

After you have your tires mounted, you can remove the nuts and washers from the axles and install the wheels to your Diablo. It should look something like this.



You will need to install your body and the rest of your electronics. Please understand that the steering servo will require some adjustment to work properly. When you install your Radio and ESC you will need to refer to there operating manuals for proper setup.

Enjoy your new kit and please post up photos of your finished build on our forum [here](#). Please also use the forum if you have questions about your build.

Thanks

Team RC4WD

Below are some additional photos of this Diablo build.



