



2-SPEED TRANSMISSION UPGRADE KIT



Gen8 V2, 2-Speed Transmission Upgrade Kit





INCLUDED



Center Skid Plate



2-Speed
Transmission



Drive Shaft



Dust Cover



Side Guards



Servo Mount



Servo Horn &
Rubber Plug



Battery Tray



Pinion Gear



Screws &
Washer



REQUIRED

1.5mm Hex Driver

2mm Hex Driver

5.5mm Wrench

Double Sided Mounting Tape

Thread Locker Compound - Removable

Metric Ruler or Caliper

GEN8 V2 Vehicle

3+ Channel Radio and Receiver

Micro Servo

ATTENTION: Read this entire manual thoroughly before beginning.

SYMBOLS - Indicate the tool needed for a step.

1.5

Use a 1.5mm hex driver

2

Use a 2mm hex driver

5.5

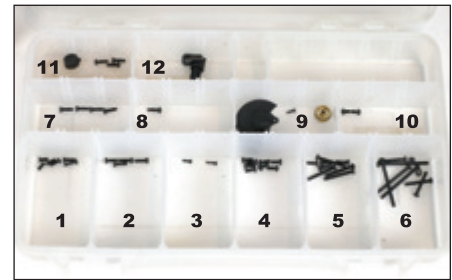
Use a 5.5mm wrench

Lock

Use medium strength thread locker (removable)

DISASSEMBLY

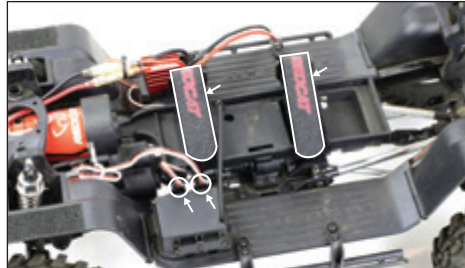
BEFORE BEGINNING: You will reuse many of the original screws from the Gen8 V2. Place the screws from each step into a container like the one shown or put them into sealable sandwich bags. Separate the screws per step of this manual and label each bag, or compartment, per step. Example: place all six screws from step 5 into a bag and label the bag with the #5. The assembly part of this manual will reference screws from specific steps of the disassembly stages. This will make it easy to locate the correct screws when needed.



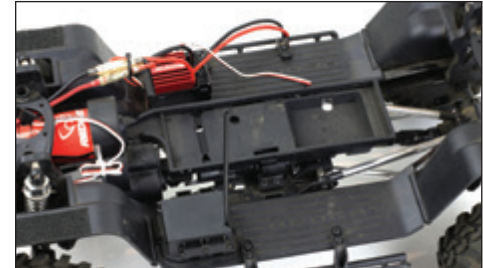
Begin with a complete Gen8 V2 vehicle and remove the body and battery.



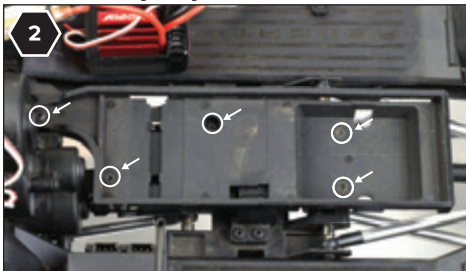
Step 1: Remove the battery straps and unplug the receiver wires.



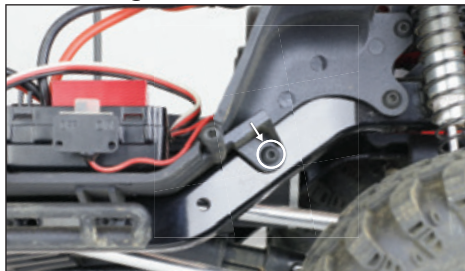
It should look like this.



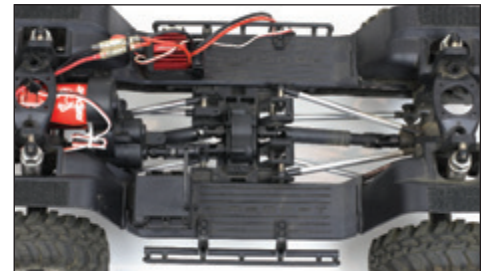
Step 2: Remove 5 screws from the top of the battery tray.



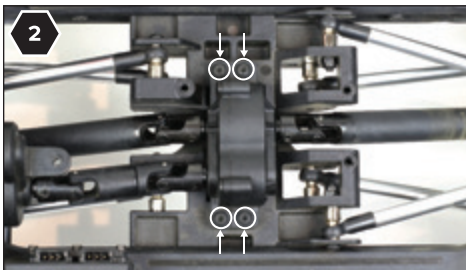
Remove the last battery tray screw from the right side wheel well.



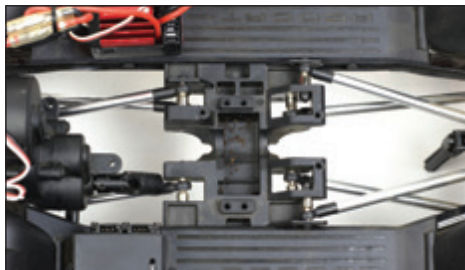
Remove battery tray. It should look like this once removed.



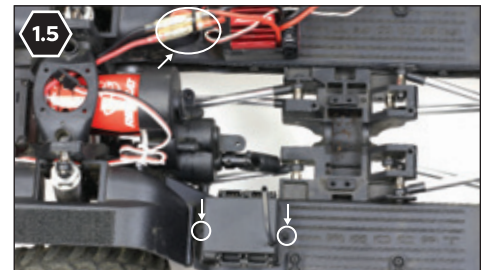
Step 3: Remove 4 screws that secure the transfer case.



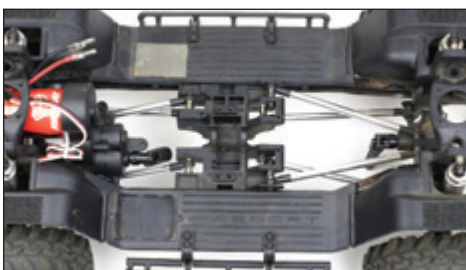
Remove the transfer case. It should look like this once removed.



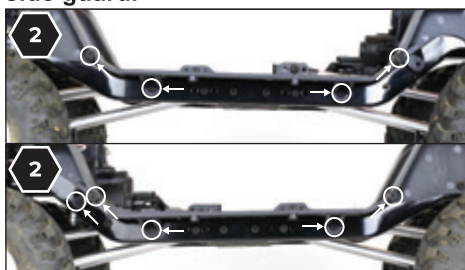
Step 4: Remove 2 screws that secure the top of the receiver box. Unplug the motor wires.



Remove the ESC and receiver. It should look like this once removed.



Step 5: Remove 4 screws from the left side guard and 5 screws from the right side guard.



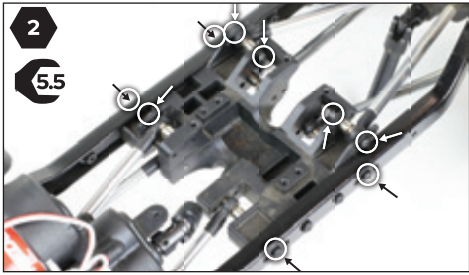
Remove both side guards. It should look like this once removed.



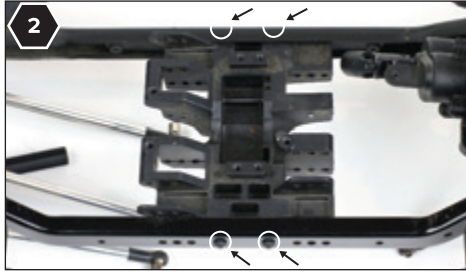
DISASSEMBLY

NOTE: Perform steps 6 & 7 only if your skid plate is damaged, or if you are installing this kit onto a Gen8 V1. The included skid plate is the same part that is included on the Gen8 V2 International Scout II.

Step 6: Remove the 7 screws and 2 nuts that secure the suspension links. Remove the suspension links.



Step 7: Remove the 4 screws that secure the center skid plate to the frame rails. There are 2 screws on each side.



Using just enough force, spread the frame rails to remove the center skid plate.



After the center skid plate is removed, it should look like this.



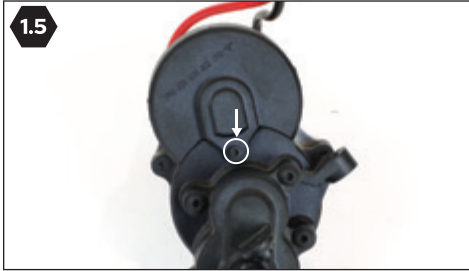
Step 8: Remove the remaining screw that secures the transmission to the chassis.



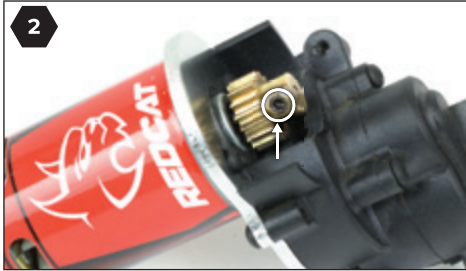
Remove the transmission. It should look like this once removed.



Step 9: Remove 1 screw to release the transmission case dust cover.



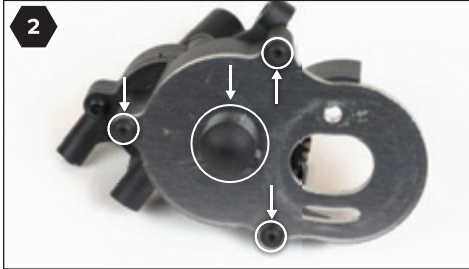
Step 10: Remove the pinion gear screw to remove the pinion gear.



Step 11: Remove 2 screws that secure the motor in place and remove the motor.



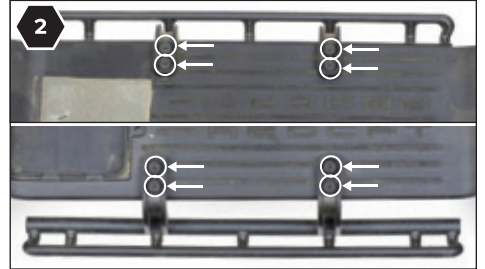
Step 12: Remove the rubber dust plug. Remove the 3 screws that secure the motor plate and remove it.



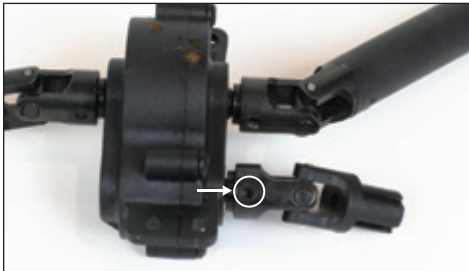
You will be left with a motor plate and motor.



Step 13: Remove 8 screws that secure both rock sliders to the side guards.



Step 14: Remove the set screw that secures the drive shaft to the transfer case. Remove the drive shaft.



It should look like this.



Place these old parts somewhere to store them. They will not be needed for reassembly.



ASSEMBLY

The 2-speed conversion kit includes all of the parts seen in the image. Follow steps 15-35 to install.



Step 15: Locate the motor plate, 2-speed transmission, and 3 screws from step 12.



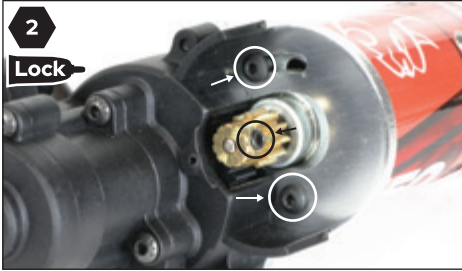
Install the new slipper nut cover. Install the motor plate to the transmission.



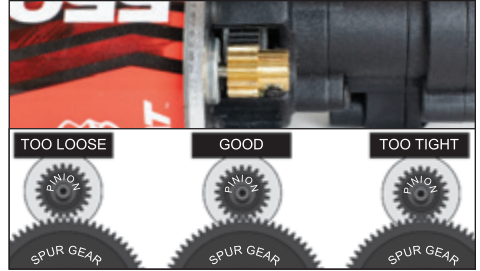
Step 16: Locate the motor, new pinion gear, and 2 screws from step 11.



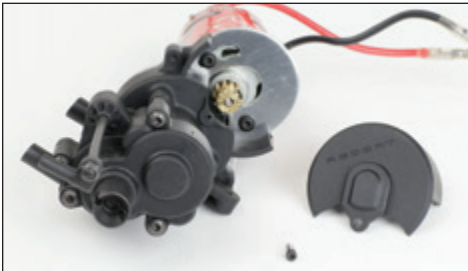
Install the motor and pinion gear. Use thread locker on all 3 screws.



Be sure to align the pinion gear so that it is centered in the spur gear and set the gear mesh as shown.



Step 17: Locate the pinion dust cover and new screw.



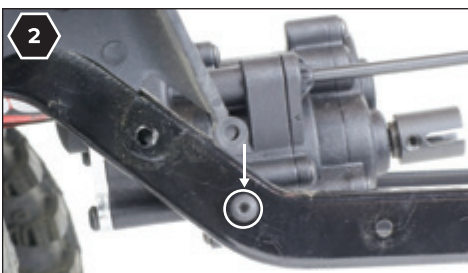
Install the pinion gear dust cover.



Step 18: Locate the new 2-speed transmission and motor assembly and the screw from step 8.



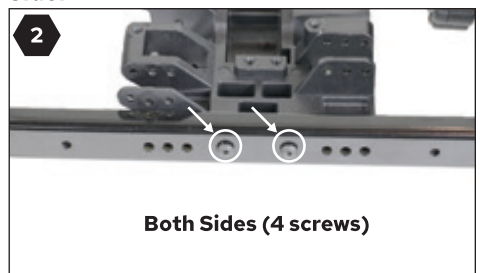
Fasten the transmission to the frame rail. The screw will go into the transmission's lower mounting hole.



Step 19: Locate the center skid plate and 4 screws from step 7.



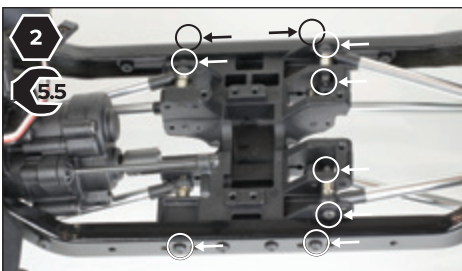
Fasten the center skid plate to the frame rails. There are 2 screws on each side.



Step 20: Locate the screws and nuts from step 6.



Reinstall the suspension links. The 4 long screws go through the frame rails.

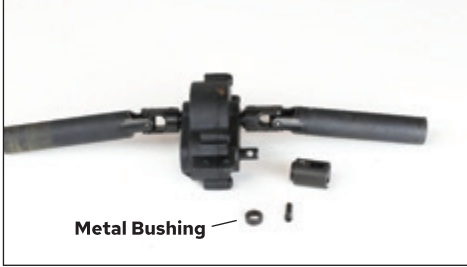


It should look like this with the suspension links installed.



ASSEMBLY

Step 21: Locate the transfer case and new axle cup and pin screw. Make sure to reinsert the metal bushing if it fell out.



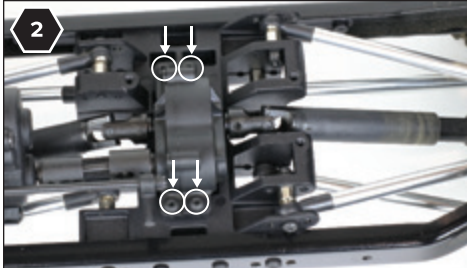
Install the axle cup. Use thread locker on the screw. It should look like this.



Step 22: Locate the transfer case, new dog-bone axle and 4 screws from step 3.



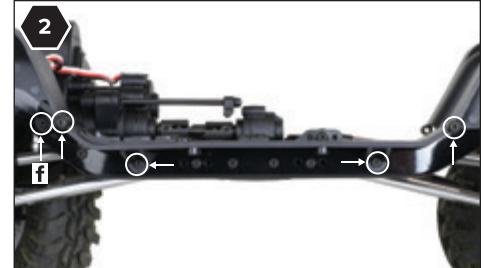
Line up the 2 plastic drive shafts and then align the dog-bone inside the axle cups. Install the transfer case.



Step 23: Locate the left side guard and the 5 screws shown below from step 5.



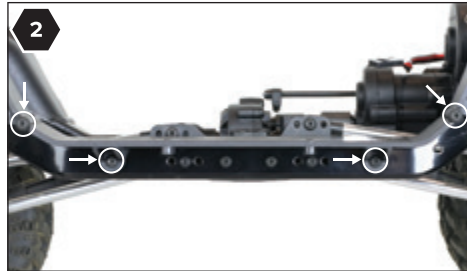
Install the left side guard. The forward screw (f) will screw into the remaining transmission mounting hole.



Step 24: Locate the right side guard and the remaining 5 screws shown below from step 5.



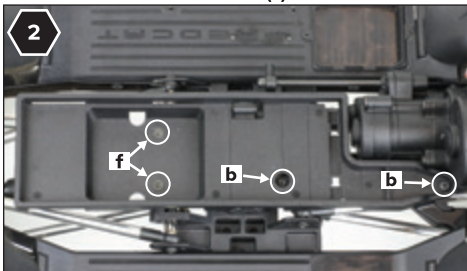
Install the right side guard.



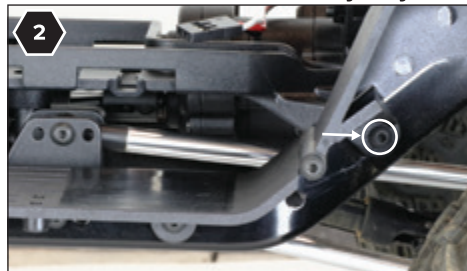
Step 25: Locate the battery tray and 5 screws from step 2. Note: One of the screws from step 2 will not be needed.



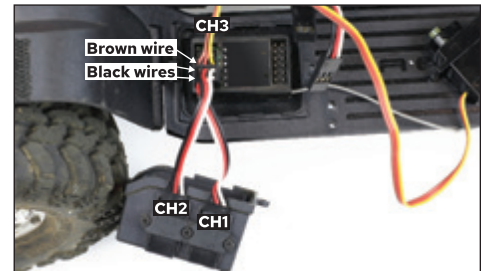
Install the 2 short button head screws (b) and 2 flat head screws (f) as shown.



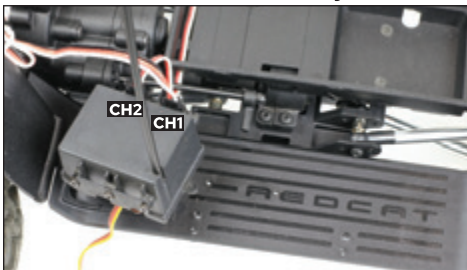
Install the last button head screw through the side guard, through the frame rail and into the battery tray.



Step 26: Plug the CH1 and CH2 extension wires into CH1 and CH2 on the receiver. Plug the shift servo into CH3 on the receiver.



Plug the steering servo into CH1 on the receiver cover and the ESC into CH2. Do not install the receiver cover yet.



Step 27: Install the battery straps as shown.

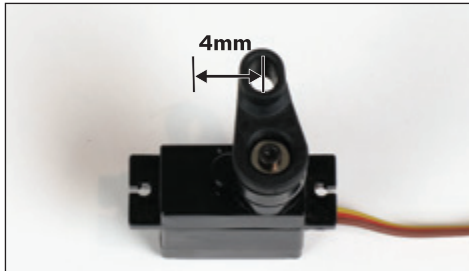


Step 28: Locate the new servo horn components and install them onto the micro servo in the order shown below.

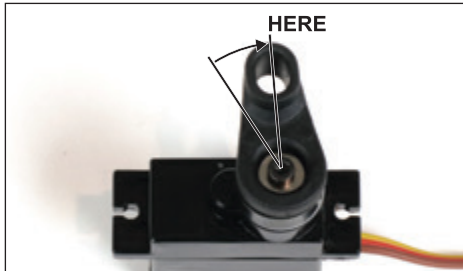


ASSEMBLY

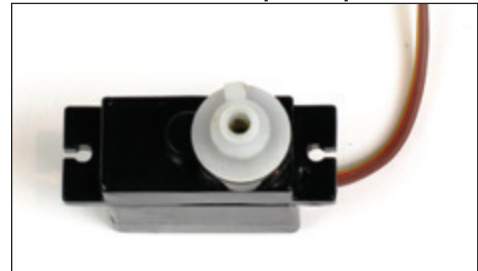
Step 29: Turn on your radio and receiver. Set your radio parameters to limit servo travel to 4mm at the center of the servo horn hole.



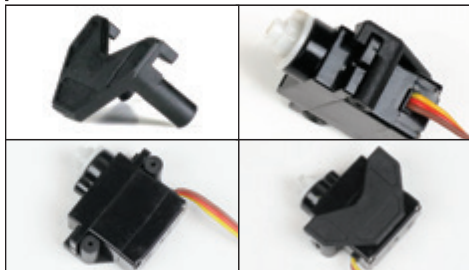
Be sure the servo remains in the clockwise most position when oriented as shown. Turn off the ESC and radio.



Once set to the clockwise position, remove the black parts of the servo horn. Leave the white part in place.



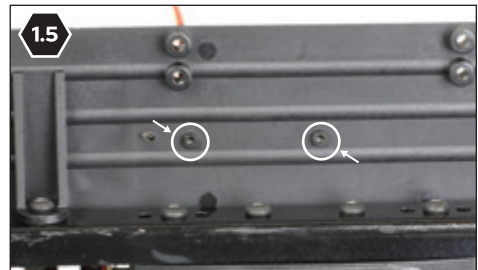
Step 30: Locate the servo mount and place it on the servo as shown.



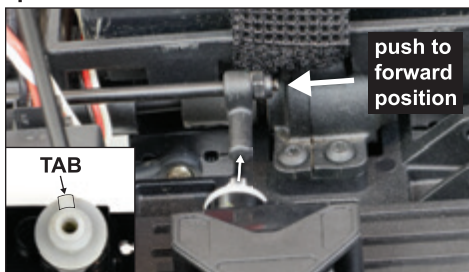
Step 31: Mount the servo onto the side guard. Be sure the servo's orientation is as shown.



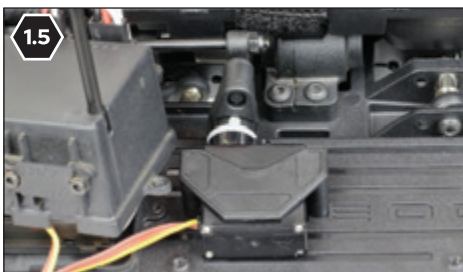
Secure the servo mount to the side guard using the 2 long screws that came with the kit.



Step 32: Push the shift rod to its forward most position. Be sure the servo saver tab lines up with the center of the shift post. If it doesn't line up, remove the white servo saver disc, align it correctly and reinstall it onto the servo spline. Do not rotate the servo itself.



Step 33: Remove the servo and reinstall the servo horn. Then reinstall the servo as shown.



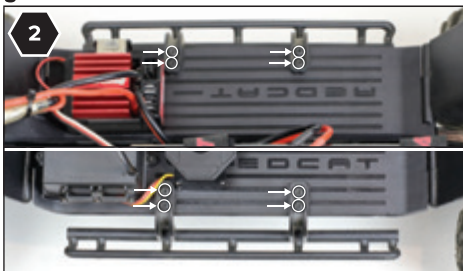
Step 34: Tuck the excess servo wire into the receiver box cover and fasten the cover using the 2 screws from step 4.



Step 35: Locate the two rock sliders and 8 screws from step 13.



Install the rock sliders onto the side guards.



It should look like this once completed.



NOTE: You may need to adjust the CH3 travel on the transmitter to fine tune shift accuracy. If the transmission doesn't fully engage each gear, increase the CH3 servo travel until it shifts smoothly and fully engages both gears. Be careful not to set the travel limits too high. Too much servo travel may over strain the servo causing it to fail. Set just enough travel for the transmission to fully engage 1st and 2nd gears. Refer to your radio's manual on how to set it's parameters. If using the same controller that comes with the Gen9, refer to the Gen9 manual here: <https://www.redcatracing.com/pages/manuals>

WARNING: Do not shift gears while driving. Shifting gears should only be done with the vehicle stopped. Applying a slight amount of throttle after shifting will be needed to allow the transmission to pop into gear.










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