

Buggies Unlimited-Tech Tips

Electric Drive Motor Removal



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Since 1989, golf cart and utility vehicle manufacturers have used a number of different motor/rear axle configurations. For the most part, the process of removal and installation is the same. Safety is a concern, so follow these instructions carefully.



CAUTION! The electric drive motors used in these vehicles are very heavy. Use great care when removing them, as this process could pose a danger for a sprained back, smashed fingers, broken toes, or other severe injuries!



CAUTION! If your cart is equipped with a TOW/RUN switch, always turn the switch to the TOW position first. ALWAYS disconnect the battery power before beginning this operation. The rule of thumb is to disconnect the battery negative cable first.

DRIVE MOTOR REMOVAL

1. Each motor terminal is marked with an ID, such as A1, S2, etc. Take a moment to make sure the heavy motor circuit cables are clearly marked regarding their original location. To remove the heavy motor circuit cables from the drive motor, you will need two wrenches: one to remove the nut securing each cable and one to hold the nut under each cable stationary. See Figure 1.

NOTE: ALWAYS hold the bottom terminal nut in place to prevent the terminal stud from turning in the motor housing. If the terminal stud turns, internal motor damage could result!

2. Some motors are also equipped with smaller gauge wires and a plug exiting the motor end cap. If your motor is so equipped, depress the lock tab and separate this plug.
3. Most drive motors are held in place using three (3) bolts through the rear axle gear case and into the drive motor. Locate and remove these three bolts. Most Club Car models are equipped with one additional bolt and an "L" bracket, which is found under the motor, but just above the axle tube. If you are working on a Club Car, locate and remove this bolt. See Figure 2.

NOTE: Before lifting the motor from the rear axle, be sure the motor is not oily or greasy, your hands are clean and dry, and use proper lifting posture. The motor is extremely heavy and you need to be careful when handling it. See the warnings at the top of this page.

4. Position yourself carefully over the motor, grasp it firmly, and wiggle it while pulling away from the rear axle housing. The motor should slip free from the rear axle input shaft and is now free from the cart. See Figure 3.

MOTOR INSTALLATION

1. Refer to the removal instructions above and follow in reverse order. Use care when tightening the motor terminal nuts. These nuts are soft brass and will strip or break easily.



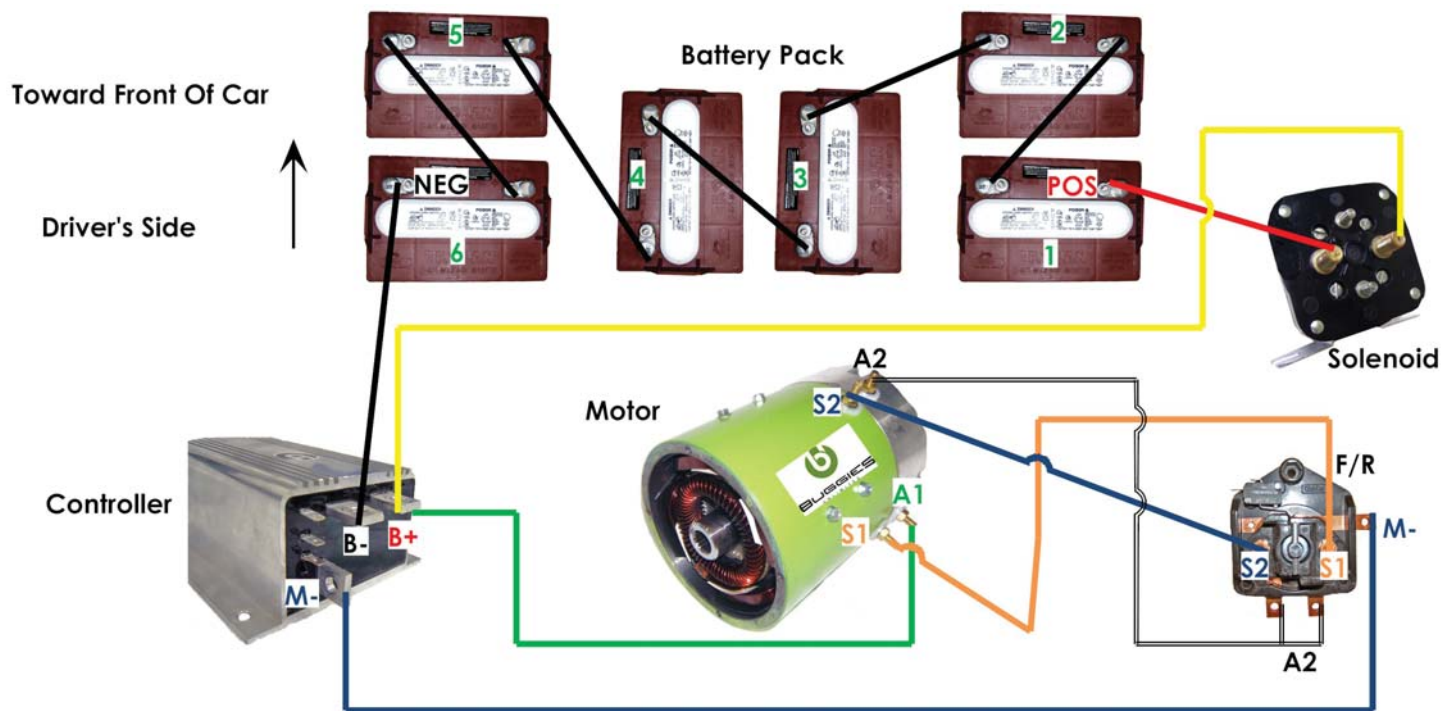
Figure 1 - Double Wrench Technique



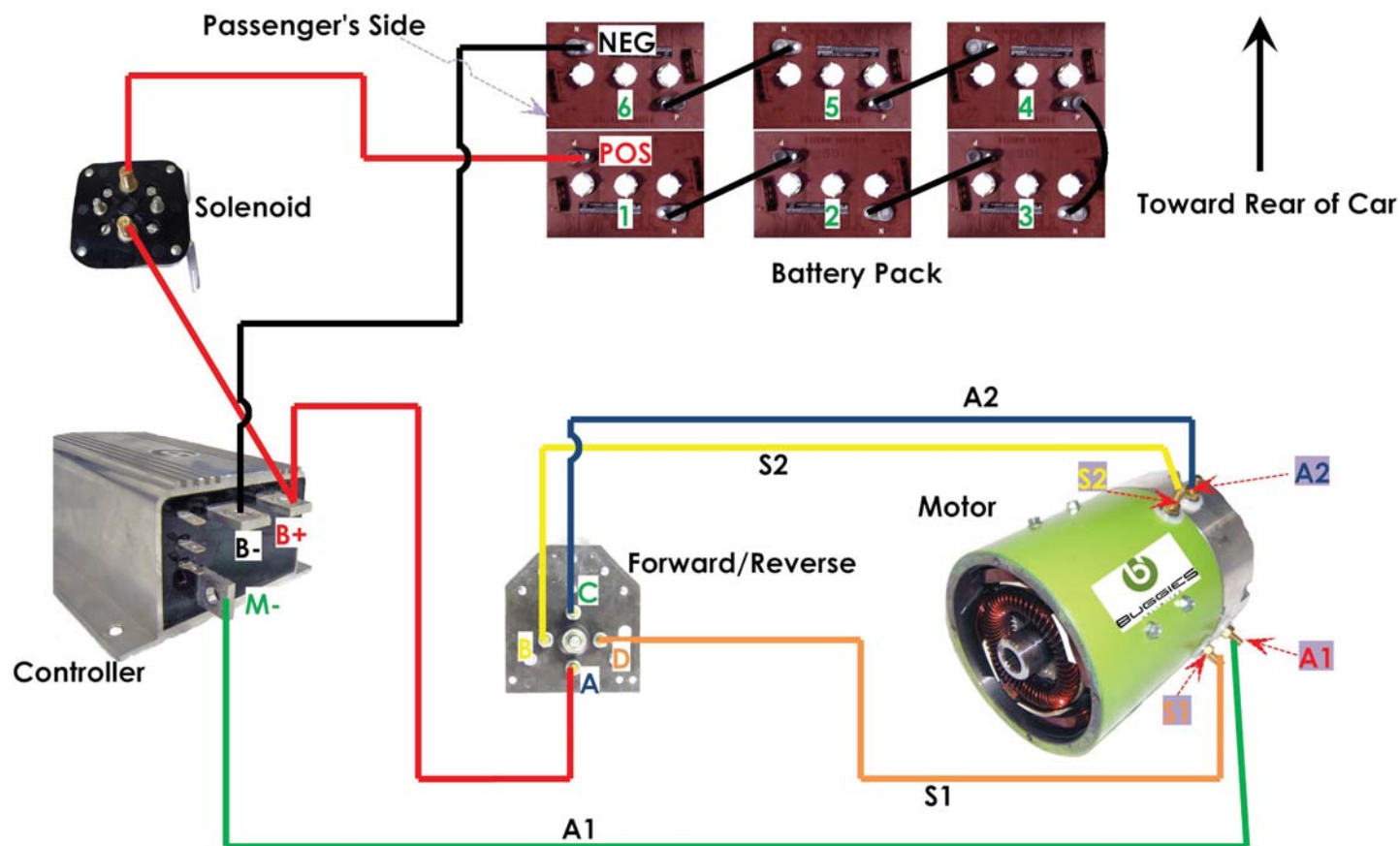
Figure 2 - Remove Mount Bolts



Figure 3 - Remove Motor CAREFULLY



1995 & Up Club Car DS (Series)



Typical NON-DCS (Series) Power Wiring for 1994.5 & Up E-Z-GO TXT/Medalist