

# M.L.Toys Performance Motors & Motor/ Gearbox Assemblies

## Installation & Use on Power Wheels Brand Vehicles

Just like when modifying a real car, modifying a ride-on car requires a mechanic who understands the job and a driver who understands the responsibility of driving a modified vehicle without damaging it. Following the instructions below will cause your child to have a lot of enjoyment and make the neighbor's kid jealous:

### Installation:

1. Remove the rear tires and axle. If your wheels are held on with cap nuts, just remove one. Slide the axle out of the vehicle. Unscrew the necessary body panel to access the gearboxes.
2. Cut the motor wires as close to the motors as possible. Don't mix up the driver's side wires with the passenger's side wires. Strip back  $\frac{1}{4}$ " of the insulation on each wire. Lock the wires into one end of the orange/gray Power Distribution Clips (PDC), one in each tab.
3. MOTOR/GEARBOX ASSEMBLIES: Set the motor/gearboxes in place. Move to Step 5.
4. Unscrew the old motors and remove the motor mounting screws. If installing Steel First Gears and/or Race Grease see the videos below. 550 MOTORS: Attach the pinion gear to the motor so it lines up with the first gear in the gearbox (if not already done). Screw the new motors into the same holes using threadlock. Set the motor/gearboxes in place. 775 MOTORS: Put a 7R Motor Mount on each motor and then install pinion gear with the set screw at the bottom of the flat spot on the motor (see video link). Install the 4mm screws into the larger mounting holes on the gearbox, through smaller holes on the motor mount, and into the motors. (see video link). Set the motor/gearboxes in place.
5. Attach the motor wires to the motors. Then insert them into the other side of the PDC. Test in low forward. If a motor spins backwards just swap the wires in the PDC.
6. Be sure the wires are secured to the car 4 to 7 inches from the motors. If the wires bounce around in the compartment the metal tabs will break off of the motors which is fatal and not warrantied.
7. Put the car back together. If you are using our reusable wheel collars we recommend filing a flat spot on the axle where the set screw will contact.

### Break-In Procedure:

It is critical to the durability of the motors to break them in properly. It will also give them a bit more speed! And it's simple: Prop up the rear end, put the vehicle in low speed forward, and let it run for at least 15 minutes for 550's, 25 minutes for 775's (time it). This will seat the motor brushes which keeps them from snapping or burning up. **It is not unusual for one side to run slower than the other or even stop during this process.** If this happens then have your child drive the vehicle in low forward for the designated time, avoiding stopping as much as safely possible.

### Driving Procedure:

While our gearboxes are the most durable designs out there, they're also way more powerful motors. And just like driving a 500 horsepower automobile, if you don't drive it properly you can break it even when brand new.

**DO NOT:** Do not use Lithium Batteries or modify your tires. Do not shift From Forward to Reverse or Reverse to Forward without stopping first. Exceed the weight limit of your vehicle. Drive in thick sod, long grass, off of curbs, down stairs, or hit immovable objects.

**DO:** Challenge the neighbor's kids to a race.

**Troubleshooting:** For common problems such as blowing fuses see the troubleshooting guide on the website.



775 Motor Mount Installation



Steel Gear Installation



Greasing Instructions



Gearbox Installation & Break-in