

 **SuperMaxx Super6**
Forward Only Conversion Kit



Warranty:

Lifetime for manufacturing defects.

Severe abuse policy: 40% off replacement. So if the replacement part is \$10 you pay \$6

Parts MUST be returned to Unlimited, Inc to be eligible for warranty or severe abuse replacement.

Warranty or severe abuse should be sent directly to Unlimited. Sending through point of purchase will only delay the process.

We make every effort for perfection, but there are always some machining marks in any CNC product. If something is unacceptable to you we will happily replace the part(s). You must return the part(s) new and unused to Unlimited, Inc before replacement is shipped.

I would appreciate it if you give me the opportunity to correct any problems before broadcasting them to the world. I am a small company and negative publicity can do a lot of harm. I will do all that is possible to make you happy. E-mail me at Warranty@UEusa.net

Take your time and be patient the rewards will be well worth it.

Thank you for choosing Unlimited Inc and congratulations on purchasing the most robust, finely engineered and highest performing upgrades available for your Maxx.

*Unlimited, Inc
500 Dunwoody Drive
Simpsonville, SC 29681*

Lubricants: Lubricant is not supplied and are needed for this kit. The best source we have found for this is your local auto parts store. Look for a tube of premium moly grease. This will cost \$3-\$5 and last a long time. There's a number of 'miracle lubes' on the market. We've tested several and found no difference - they don't appear to harm anything either. Use them if you choose.

□

5. Troubleshooting & setup

- 5.1. *The spur should free wheel when you rotate it clockwise and should turn the output shaft when rotated counter-clockwise. This is the one-way bearing behaving correctly.*
- 5.2. *If on your first run the truck goes backwards, don't doubt the transmission, it's virtually impossible for it to run backwards, what this means is that at some time in the past you have flipped your diffs over and they are operating backwards, flip them back and you'll be fine.*
- 5.3. *Setting the two speed. If you are going from a currently working Maxx trans no changes should be needed, but if this is a new hub or you've changed the diffs you'll need to start from scratch. Starting point for stock diff equipped trucks is ~7 turns out from lightly bottomed, w/ 7.5 diffs it's ~5 turns out.*
 - 5.3.1. *Many folks go out, throw down, clamp the throttle in an attempt to adjust the two speed - - this is probably the MOST painful method.*
 - 5.3.2. *Here's the easy way*
 - 5.3.2.1. *First get the truck shifting in the air. With tires OFF THE GROUND gradually squeeze the throttle while listening for the shift. The truck will lurch when it shifts, you'll hear it & feel it. DO NOT OVER REV THE MOTOR! Once it's shifting in the air put it on the ground.*
 - 5.3.2.2. *Again, accelerate gradually while listening for the shift. If you just 'clamp it' you'll never detect the shift unless you are already very close. Accelerate gradually listening for the shift to occur.*
 - 5.3.2.3. *Once it's shifting close to where you want it, go ahead and do some hard runs to fine tune it.*
 - 5.3.2.4. *If it shifts w/ tires in the air but when you put it down it seems to scream but not shift, your slipper is probably too loose.*
- 5.4. *It won't shift no matter what I do, what's wrong?*
 - 5.4.1. *Slipper too loose*
 - 5.4.2. *2spd hub on backwards or malfunctioning*
 - 5.4.3. *Brakes dragging.*
 - 5.4.4. *Engine too rich – not cleaning out.*
- 5.5. *Input gear & first gear aren't aligned. What's wrong?*
 - 5.5.1. *Be sure the plastic shim goes on the primary shaft before the one way bearing does.*

And that's about it folks. If I've missed anything e-mail your suggestions to MonsterMaxx@att.net and I'll add it to the next version of the instructions.

Now check everything over and go have some fun.
After your first run re-check everything carefully.

Thank you for your support,
Robin Oury, President
Unlimited, Inc
500 Dunwoody Drive
Simpsonville, SC 29681
www.UnlimitedEngineering.com
Sales@UEusa.net

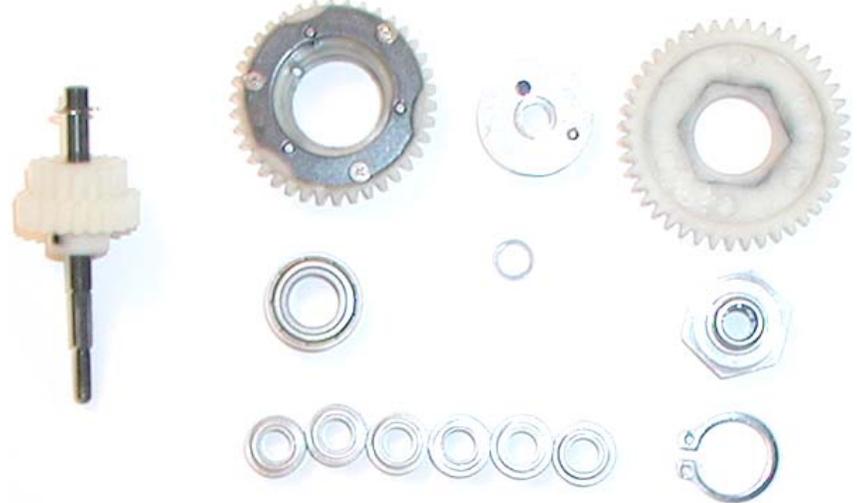
4. Wrap it up:

- 4.1. Lubricate each gear such that each tooth is well coated. Note this does not mean fill the case with grease, dip your finger in the grease tube and smear each tooth, then wipe off the excess.
- 4.2. Install the three gears in the case and close the case up and install the screws.
- 4.3. Now check again for free movement.
- 4.4. Reassemble your brakes, spur etc and you are all set to go.
- 4.5. If you've forgotten you can plug the open holes in the case with a little silicone. Don't skip this, crud entering the transmission will quickly destroy your investment. I also put a drop in the end of the primary shaft. While forgetting this won't hurt a thing, the lightening hole will eventually fill up with dirt.



1. Disassembly and cleaning

- 1.1. Remove transmission from truck
- 1.2. Disassemble. Be careful when disassembling the 2speed hub that you do not unscrew the 2speed adjustment screw. The 2speed adjustment screw is angled slightly and the other goes straight down into the shaft. The angled one is the one that adjusts the shift point – leave this one alone. If you do mess this up, from what I can tell you should begin somewhere around 7 turns out from gently bottomed for stock diff trucks & 5 for 7.5 diff equipped trucks.
- 1.3. Clean and inspect the parts in this picture, the rest may be set aside and will not be used.



- 1.4. Pay close attention to the one way, we've had reports of slipping. The cure to date has been to spray out the one way really well with a cleaner and re-grease with suitable one-way grease like Racer's Edge.
- 1.5. Replace any that show damage. It is normal for the hex between 1st gear and the one-way hub to have some play – this is not a sign of wear. Check the teeth on 2nd gear. If you've used too long a mounting screw you will have damaged these. You need not remove 1st gear from the one-way hub
- 1.6. Even with new parts check these things they may save you some grief
 - 1.6.1. 2nd gear has it's engagement pins
 - 1.6.2. the 2 speed hub has the ball between spring & flipper & the flipper moves freely.
- 1.7. Seal the reverse idler and shifter holes in the front case half with silicone.

1.8. Press the six of the 5x11x4 bearings into the case.



2. Primary shaft assembly

- 2.1. Assemble 1st gear (TRX4984) to the one-way hub (TRX4986) (if you've taken it apart.)
- 2.2. Lubricate one-way bearing with one-way bearing grease. Heavy greases will foul it, causing it not to grab. Best done by putting a little inside the bearing and wiping it around with a small Allen wrench. **DON'T SKIP** this. High horsepower engines are killing these and it appears to be a lubrication failure. Since the shaft is the inner race, the death of the one way takes the shaft with it.
- 2.3. Lubricate shaft for one-way bearing
- 2.4. Slide the plastic washer onto the shaft first, then one-way and gear onto the shaft. Wipe off the excess lube.
- 2.5. Install 2nd gear (TRX4985), the 19mm bearing.
- 2.6. Prepare the 2 speed hub (TRX4998). Remove the set screw and apply a little red Loctite and put the set screw back in, for best results replace this short set screw with a longer one – M4x8. Don't overdo it with the Loctite – it will bleed into the one way bearing and seize up the bearing.

The hub has a counterbore (washer sized depression) in one side and a shoulder (washer sized raised area) on the other. The counterbored side faces the one way (and the shoulder faces out. This is very important, if you put it on backwards the truck will NOT shift.



Pro Tip: Replace that short set screw with a longer one (M4x8.) There's a lot of force on these and they can strip out the aluminum hub.

- 2.7. Now align the flat on the shaft so it's facing the hole in 2nd gear, align the hub so the set screw will be accessible through the hole and slide it on the shaft. Begin tightening the set screw. As you get down close to being tight, wiggle the shaft back and forth to ensure you are on the flat. Prior to full tight, pull the

hub away from the gears, like you are trying to pull it off the shaft. Snug the set screw – but not fully tight yet.

- 2.8. Check that 1st gear spins freely, if it doesn't, loosen the set screw, hold the assembly in your hand such that the primary shaft & gear is between your fingers and your holding on first gear, lightly tap the end of the shaft with the plastic handle of a screwdriver (or something similar) and retighten the set screw.
 - 2.9. Check that everything moves freely.
- ## 3. Assemble transmission
- 3.1. Assemble **DRY** first. The lubricant is sticky and will fool you when feeling for free movement. Check that everything moves freely.
 - 3.2. Install the 3 gears/shafts in their locations. Note the long side of the output gear is the front.
 - 3.3. The stock Traxxas input gear & shaft often has a tiny amount of end play, a .010" shim on the spur gear side of this shaft will eliminate this.
 - 3.4. Close the cases up and check for free movement.

