

4907, 4908 T-Maxx 3.3 Forward/Reverse Kit Instructions

Covers Part #4995X

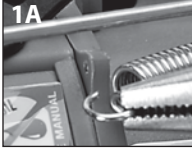
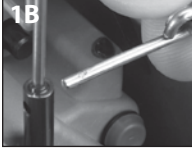

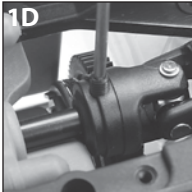
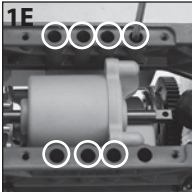
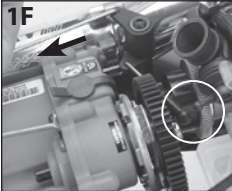
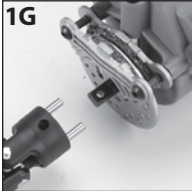
Important Note: This kit does NOT include the OptiDrive system. The truck must come to a complete stop before shifting gears. See below for shifting instructions and information about OptiDrive.



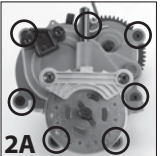



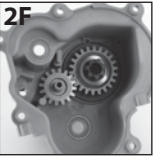

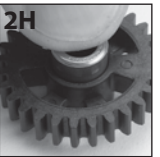

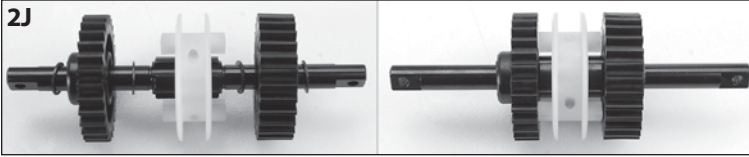
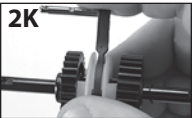
Tools Needed:

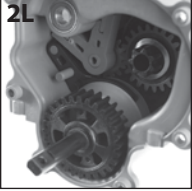

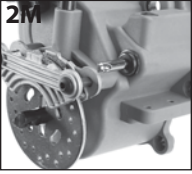
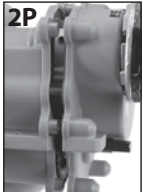
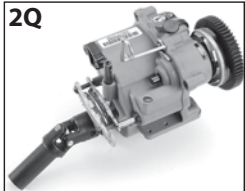
- 1.5mm hex wrench
- 2.0mm hex wrench
- 2.5mm hex wrench
- Needle-nose pliers
- Small flat-blade screwdriver

Transmission Removal

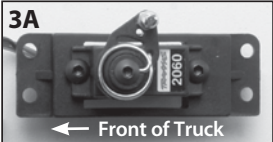
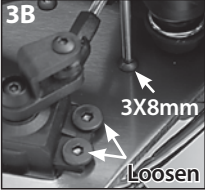


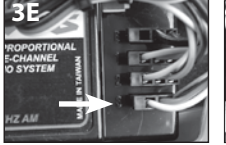

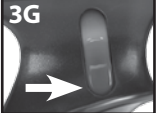


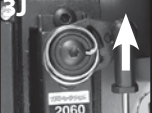
1. Remove the air filter from the carburetor, and then remove the throttle return spring from the transmission case with a pair of needle-nose pliers (1A). 
2. Loosen the set screw at the top of the brake cam to release the brake arm. Pull the arm from the brake cam (1B). 
3. Flip the truck over and remove the four 3x8mm countersunk screws that attach the center skid plate to the chassis braces (1C). 
4. Remove the screw pin from the rear transmission output yoke, and then pull the yoke off of the shaft, leaving the drive shaft assembly intact (1D). 
5. Next, remove the seven 3x15mm cap-head screws that secure the transmission case to the chassis, and then flip the truck back over onto its wheels (1E). 
6. Detach the throttle linkage ball cup from the throttle arm on the carburetor, and then swing the throttle bell crank around to where the long throttle rod provides enough space to pull the transmission out of the chassis (1F). The transmission should pull straight out of the chassis with the front drive shaft half still attached. 
7. Remove this drive shaft half by removing the setscrew pin from the output yoke (1G). 

Forward / Reverse Gear Installation

1. Remove the seven 3x12 countersunk screws (2A) from the transmission and separate the transmission halves (2B). 
2. Remove the forward-only gear shaft assembly, along with the brake disc, from the transmission (2C), and then pull the blue rubber plug from the front transmission half (2D). 

3. Next, place the steel primary gear into the front transmission half, followed by the disk spring (see image 2E for correct orientation). 
4. Slide the steel reverse idler gear (with bearing) over the molded plastic post next to the steel primary gear (2F), followed by the plastic idler shaft support (2G). 

5. Locate the two black forward and reverse gears and the two metal needle roller bearings. Press a roller bearing assembly into each gear, with the integral marking facing out and away from the gears (2H). Be sure to press the bearing assemblies all the way into each gear until it bottoms out inside the gear (2I). 

6. Locate the forward/reverse output shaft, dog slider, four 6x8 PTFE washers, and the two black forward/reverse gears with installed roller bearing assemblies. Install these items onto the output shaft using image 2J for correct sequence and orientation. **Note:** The forward/reverse gears must be installed onto the output shaft with the integral markings of the roller bearings facing toward the center of the shaft (2J). 
7. Next, locate the shift fork and shaft assembly. Position the shift fork inside and around the groove of the plastic dog slider on the output shaft (2K). **Note:** The shift fork shaft must face toward the black reverse gear (thin gear). 

8. Insert the entire assembly into the front transmission half (2L). The output shaft is located through the 6x12mm bearing at the bottom of the case, and the shift fork shaft should slide through the same hole where the blue rubber plug was removed (2M). Remember to position the front brake disc between the brake calipers before sliding the output shaft all the way into the transmission case. 
9. Remove the forward-only primary gear from the two-speed shaft by removing the primary pin retainer clip from the gear to access the cross pin (2N). Push the pin out of the gear and slide the gear off of the shaft. 
10. Replace the gear with the included forward/reverse primary gear in the same orientation and secure the gear with the pin and retaining clip (2O). 
11. Next, carefully join the two transmission halves together and secure them with the seven 3x12mm countersunk screws (2P). Reattach the front drive shaft half to the output shaft of the transmission and secure it with the same screw pin (2Q). 

12. Reinstall the transmission to the chassis in the reverse order of how it was removed. Remember to rejoin the front drive shaft halves together before securing the transmission case to the chassis.
13. Reattach the throttle ball cup to the carburetor, and then reconnect the throttle return spring to the transmission case. Secure the brake arm back into the brake cam, and then reattach the air filter assembly back onto the carburetor and secure it with the wire clip.

Channel 3 (CH3) / Shift Servo Installation

1. Locate the included #2060 shift servo and adapter plate assembly and the four included 3x8mm button-head screws (3A). 
2. Loosen the two front screws that fasten the steering servo to the servo mount approximately halfway. Remove the 3x8mm button-head screw that secures the front steering servo mount to the chassis (3B). 
3. Slide the shift servo wire under the steering servo mount and between the chassis, and then press the wire into the cutout molded into the mount (see 3C). After the wire is safely contained inside of the cutout, secure the servo mount back to the chassis with the removed 3x8mm button-head screw, then tighten the front steering servo screws. 
4. Secure the shift servo and adapter assembly to the servo mount next to the steering servo using the included four 3x8mm button-head screws. Note that the adapter needs to be mounted so that the servo is in an elevated position (see image 3D for correct orientation). 
5. Route the #2060 servo wire around the front of the throttle servo mount toward the radio box. Open the radio box, and then insert the shift servo plug into the CH3-port of the receiver (3E). Close the receiver box. 
6. Locate the shift linkage wire with the installed plastic ball cup at one end. Insert the bare bent end through the hole of the shift fork shaft (from the transmission; see image 3F), and then connect the ball cup to the pivot ball on the servo horn. 
7. Turn on the transmitter and the model. Press down on the red forward/reverse switch (3G). The shift servo horn should swing clockwise, pushing the shift fork shaft into the transmission (forward)(3H). 

8. Press the red forward/reverse switch back up (3I), and the servo horn should swing counterclockwise, pulling the shift fork shaft out of the transmission (reverse)(3J). **Important:** If the shift servo horn swings in the opposite direction than described above, then switch the CH3 servo reverse switch on the transmitter to the opposite position and refer to *Centering the Shift Servo*. 


Ensuring proper installation and engagement:

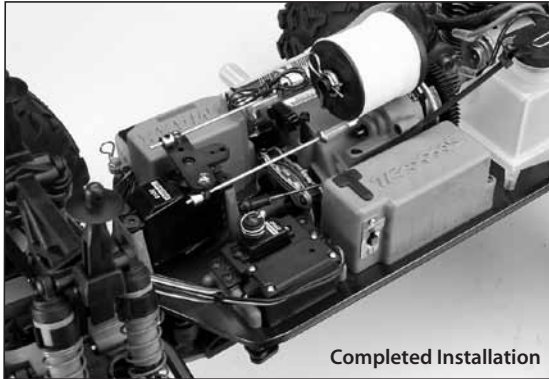
1. Shift to reverse gear on the transmitter. Roll the truck a few inches so that the shift mechanism can fully engage.
2. Check the "pre-load" on the shift spring. You should feel a light resistance on the servo horn.

3. Shift to forward gear on the transmitter. Again, roll the truck a few inches to fully engage the shift mechanism in the transmission.
4. Check the "pre-load" on the shift spring. It should be about the same as it was in second gear (but in the other direction).
5. If the spring pre-load does not feel similar in forward and reverse gear, remove the servo horn and reinstall. Start with Step I of *Centering the Shift Servo*, and make the following adjustment:
 - a. If the spring was tight in reverse gear, but loose in forward gear, install the notched servo saver sleeve one tooth clockwise from the original position (see Step II of *Centering the Shift Servo*).
 - b. If the spring was tight in forward gear, but loose in reverse gear, install the notched servo saver sleeve one position counterclockwise from the original position (see Step II of *Centering the Shift Servo*).

Forward/Reverse Shifting Tips

- This kit does not include the OptiDrive module. The truck must come to a complete stop before shifting.
- After the truck has come to a complete stop, press the red forward/reverse switch up to actuate Reverse or press down to actuate Forward.
- After shifting, allow the truck to roll slightly to ensure positive engagement of the transmission. Once the truck lurches forward or back, it is then ok to apply throttle.

CAUTION: Do not switch gears at high speeds. This can cause serious damage to the transmission gears.



OptiDrive System (optional)

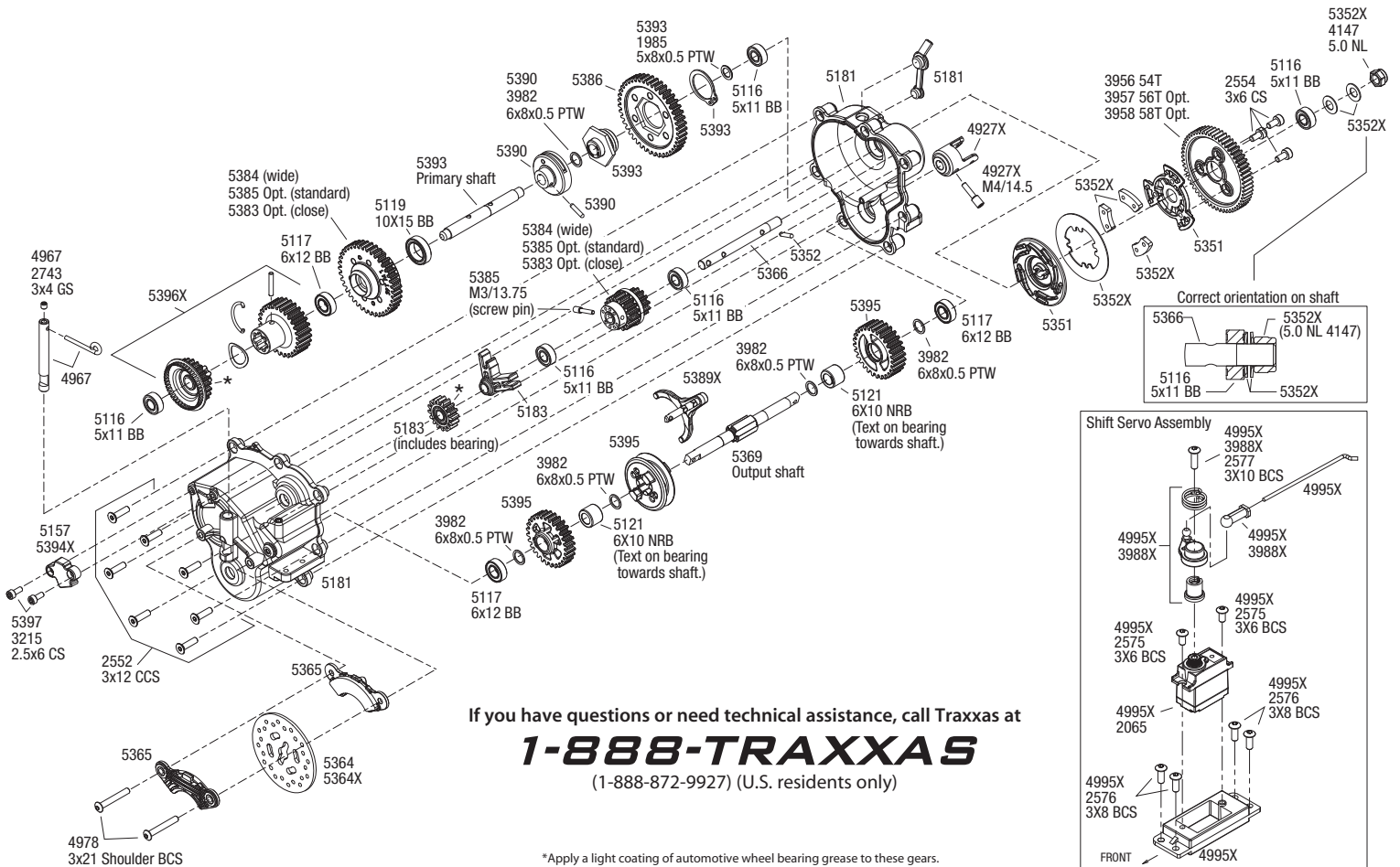
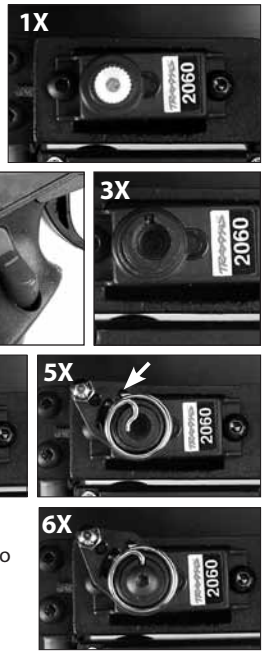
The Traxxas OptiDrive electronic shift module uses advanced microprocessor control to sense vehicle speed and optimize forward and reverse shifting. OptiDrive also includes low battery voltage protection. These parts are needed for installing the OptiDrive system into the 4908 T-Maxx:

- #5398 - OptiDrive shift module
- #5397 - OptiDrive sensor assembly

Centering the Shift Servo

The shift servo has been correctly centered from the factory. The following instructions have been included for your reference.

- I. Remove the 3x10mm button-head screw from the shift servo horn, and then remove the spring, servo horn, and the notched sleeve from the servo (1X).
- II. Turn on the transmitter and the ON/OFF switch on the model. Make sure that the red forward/reverse switch on the transmitter is positioned in the UP (reverse) position (2X). Install the sleeve back onto the splined output shaft of the servo with the notch in the "12 o'clock" position (3X), and then turn the radio system and truck off.
- III. Set the servo horn back on top of the adapter as shown (4X), and then place the spring onto the servo horn. Make sure to put the bottom end of the wire into the single hole (not the slot) located in the servo horn (5X).
- IV. Secure the assembly to the servo with the same 3x10mm button-head screw (6X).



*Apply a light coating of automotive wheel bearing grease to these gears.