



Two-Speed Transmission Installation Instructions

Covers Parts #8196

Kit contents:

- 24-T metal output gear
- 36-T metal output gear
- 18-T metal input gear
- 30-T metal input gear
- Output shaft
- Shift dog
- Drive hub
- Shift fork
- High/Low shift servo
- Servo mount
- Shift linkage
- 3x8mm BCS (4)
- 5x10x4 BB (1)
- 5x8x2.5 BB (2)
- 5x8x0.5 PTW (2)
- 2x10.3 pin (1)

- High performance grease
- 11-T pinion gear
- 45-T spur gear
- Slipper friction material
- 3x4mm GS

Tools required:

- 2.5mm hex wrench
- 1.5mm hex wrench
- 1.0mm hex wrench

Fig. 1

Remove the following parts from the single-speed transmission:

- 36-T metal output gear
- 18-T metal input gear
- Output shaft
- Input shaft spacer
- Output shaft spacer
- Shift shaft seal

The parts listed above will not be reused for the two-speed assembly.

Retain and reuse the 2x10.3 pins from the input shaft (A) and the output shaft (B).

Fig. 1

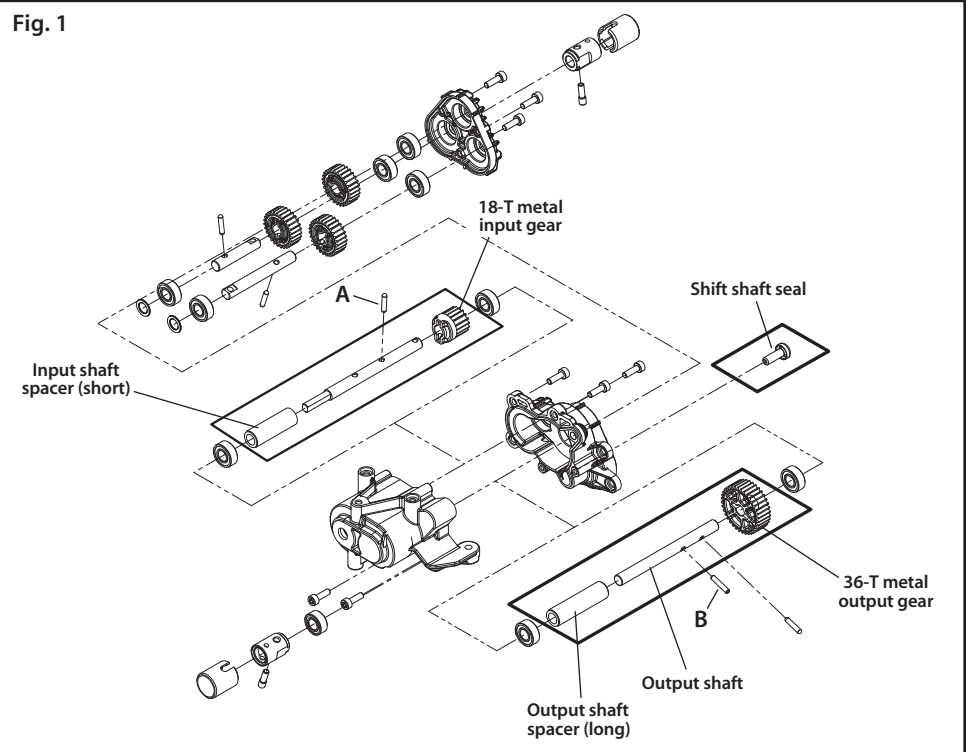


Fig. 2

Install the two-speed transmission parts:

- 1 Install the 18-T metal input gear, 30-T metal input gear, and 2x10.3 pins onto the input shaft.
- 2 Install the shift dog, shift fork, 5x8x2.5 BB (1), drive hub, 24-T metal output gear, 5x10x4 BB, and 5x8x0.5 PTW (1) onto the front of the output shaft (end without the hole). Install the 5x8x2.5 BB (2), 36-T metal output gear (note the orientation of the holes on the face of the gear), and 5x8x0.5 PTW (1) onto the opposite end of the output shaft (end with the hole for the 2x10.3 pin).
- 3 Install the input and output shafts into the transmission housing.
- 4 Install the transfer case gear and 2x10.3 pin onto the transmission output shaft.
- 5 Install the input and output transfer case shaft assemblies.
- 6 Install the transfer case cover.

- Apply included grease to part(s) indicated.
- DO NOT apply grease to part(s) indicated.

Fig. 2

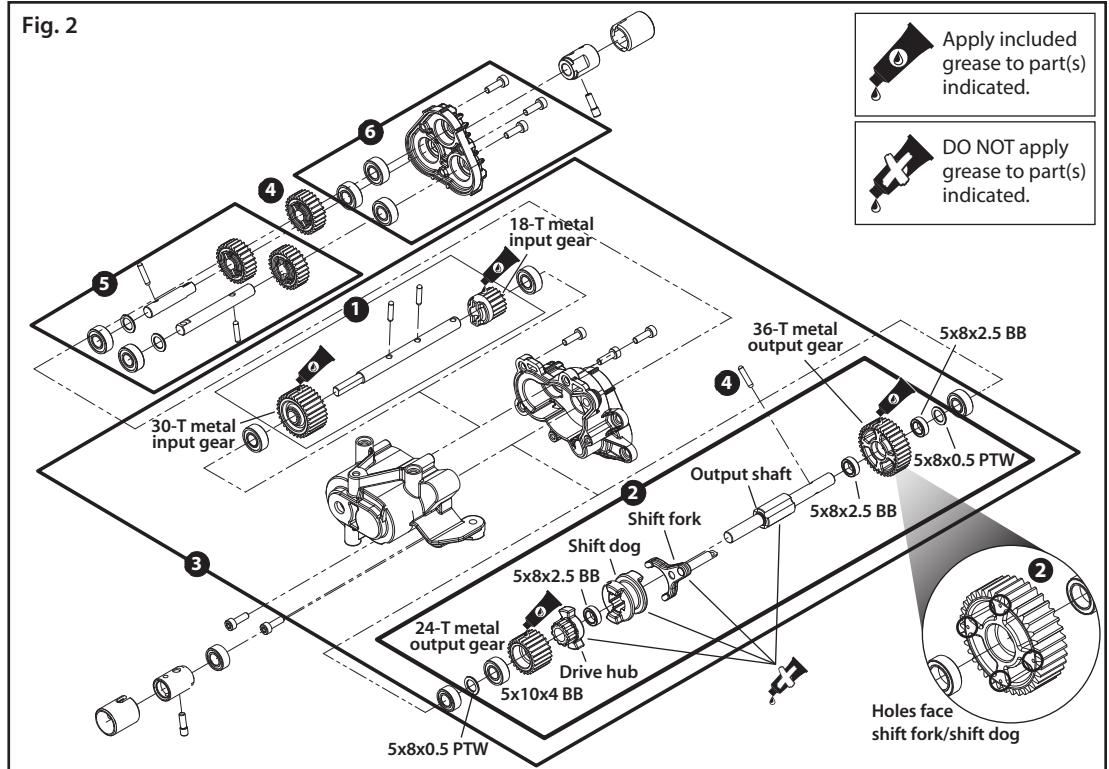


Fig. 3

Install the High/Low shift servo:

- 7 Install the High/Low shift servo onto the servo mount using the 3x8mm BCS (2).
- 8 Install the shift servo/servo mount onto the transmission case using the 3x8mm BCS (2).
- 9 Connect the shift linkage to the shift fork shaft; snap the other end on the servo horn.

Note: The servo horn is pre-installed and factory centered. DO NOT turn the servo shaft by hand or you could damage the servo.

Fig. 3

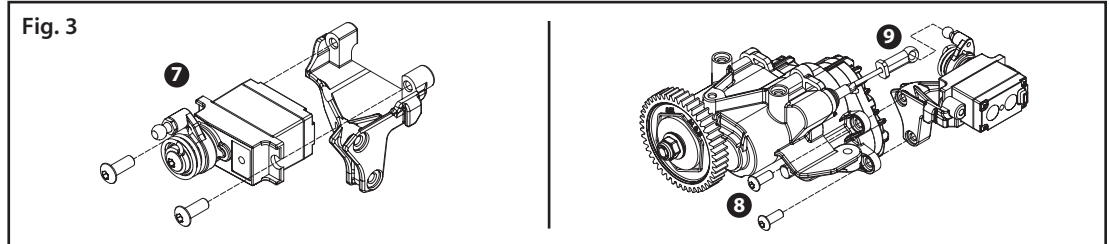


Fig. 4
Install the 11-T pinion gear:

- 10 Remove the pinion gear from the motor shaft. Install the new 11-T pinion gear onto the motor shaft using the included 3x4mm GS. The pinion gear should be 1-1.5mm from the end of the motor shaft.
- 11 Motor screws should remain in the "C" holes of the motor mount.

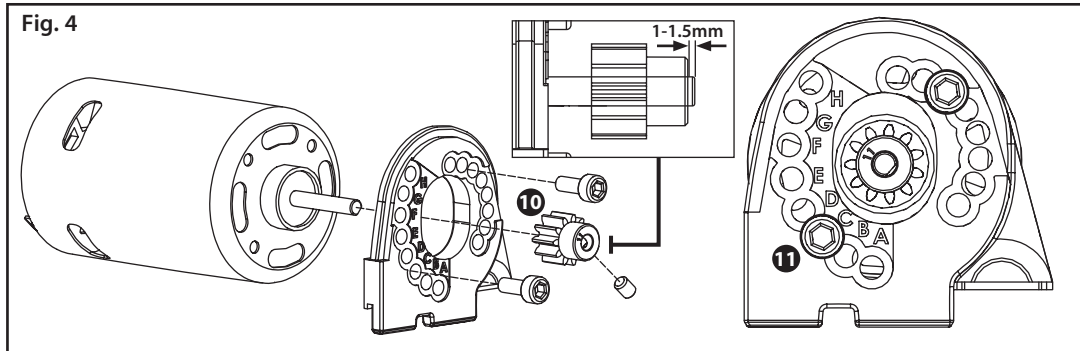


Fig. 5 and 6
Install the 45-T spur gear:

- 12 Remove the adjustment nut and washers to remove the existing spur gear from the transmission input shaft.
- 13 Remove the backing from the included slipper friction material and apply the material to the new 45-T spur gear.
- 14 Install the 45-T spur gear, washers, and the adjustment nut onto the input shaft.
- 15 Turn the adjustment nut until all four spring washers are flat; then, tighten the nut an additional 1/16 turn (or until the slipper nut does not allow the spur gear to slip during normal operation).

