

# Tippmann F6 Tornado & NDZ Hot Rod Install

**NEW DeSIGNZ** and its staff would like to Thank you for choosing NDZ accessories. Providing performance aftermarket upgrades for Tippmann's and many other markers. Look to NDZ for quality upgrades Made in the U.S.A.

**Tools Needed:** Small hammer, punch, philips screw driver, 1/16" & .050" allen keys (included), 5/64 allen key, lube and adjustable wrench.

Ok, before we start. **CAUTION:** Disconnect any air source on your marker and shoot any residual air from within the marker.

1. Fig. 1, item 5. Disconnect air fitting from side of piston housing, then remove the 4 cover screws as indicated and 1 screw from the hopper side or top, and remove upper sprocket or paddle
2. Fig. 2, remove the ratchet spring. If you have the F6 Tornado mod, please skip to step 6
3. If changing piston housing, slightly lift up on the piston housing to remove it from its groove in the Cyclone feed, and slide rearward to remove it completely, leave the axle and ratchet in the cyclone feed
4. The feeder reset rod is still on your old housing. Using leather or something around the shaft as not to damage it, on top of that grip it with pliers, and using an adjustable remove the reset button
5. Once removed, transfer these 2 parts to your new EVT housing and skip to step #17

Fig. 1

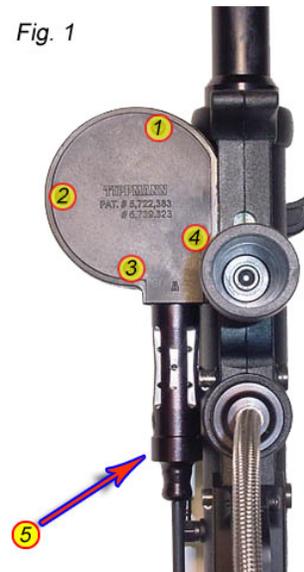


Fig. 2

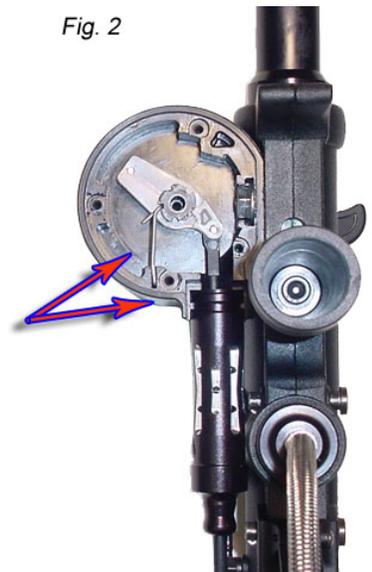
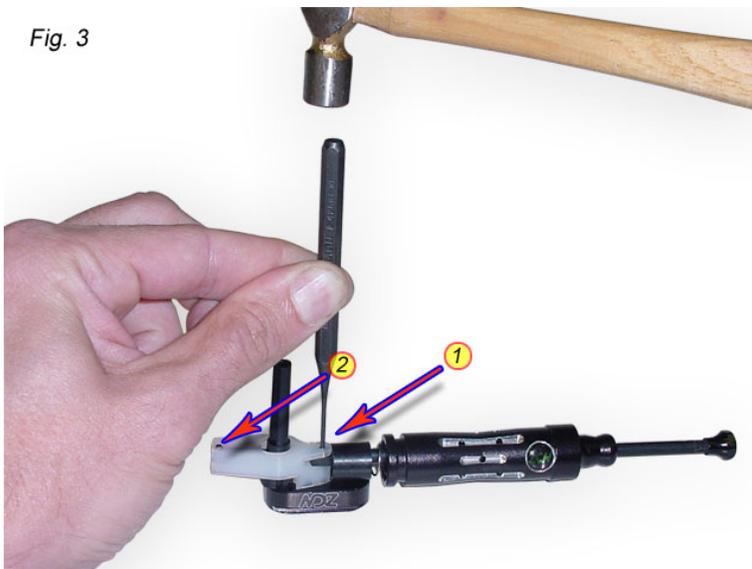
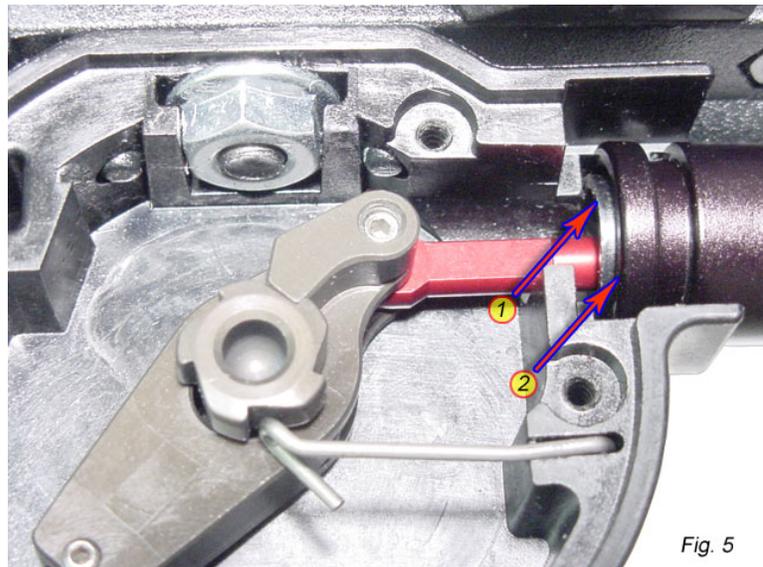
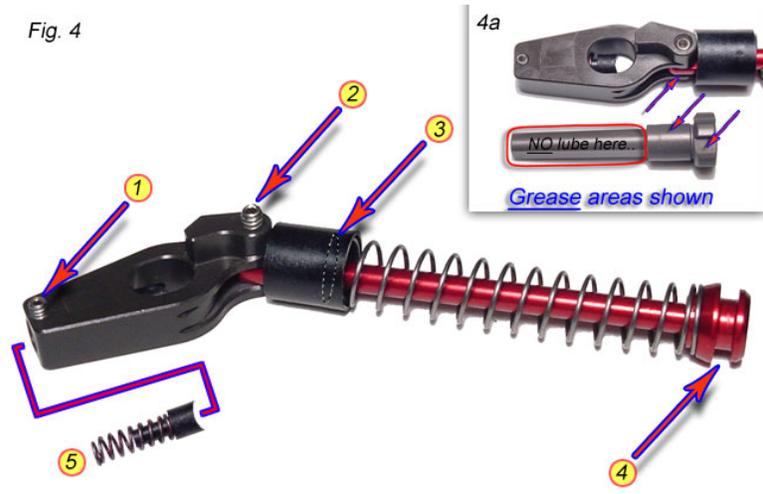


Fig. 3



6. In fig. 3, its time to press out the pins.
7. You will need to support the ratchet as shown with a clearance hole so the pin has somewhere to go. Here we use a micro rail for this.
8. Using a punch and hammer, lightly tap out both pins shown as items 1 & 2
9. remove the spring and ratchet guide from the stock ratchet

10. Fig. 4 Backout item #2 1/16" allen key (set screw) until the slot is clear for the hot rod or stock shaft can be installed.
11. Install the cylinder spring and cylinder plug item #3, in the proper location. Item #3 also has a counter bore which needs to accept the spring
12. Lube the brass bearing with Dow 33 or other grease. Align screw item #2 with hole in the shaft, and tighten down. No real need to crank down, as you could strip the screw head.
13. Backout screw item #1 .050 allen key (set screw) just enough so you can install item #5 as shown.
14. Tighten screw item #1 snug only, again no need to torque this down. Just snug this up and you will be just fine.
15. **\* IMPORTANT \*** In Fig 4a, you need to lube the areas shown with the arrows. We like use Dow 33 or the Sleek 33 which are the same. **DO NOT** lube in the area circled in **red**.
16. Take your stock seal and place in area or item #4. Make sure you install it in the same direction as stock. How would you know? Make sure the open part of the U cup seal faces away from the spring.
17. Apply a few drops of light marker oil to the U cup seal item #4 and also apply a small amount to the inside of the piston housing



18. Reinstall the greased up F6 axle to the ratchet assembly.
19. Slide the piston housing w/ feeder reset rod over the piston shaft.
20. Fig. 5, as shown on the left, you will need to put the assembly back into the cyclone housing.
21. Make sure that item #1 the sleeve is flush with item #2 the housing. Holding the sleeve in with your finger tip, you can drop it into place.
22. Make sure the axle teeth and the tip of the spring have a coating of grease or these will wear out rather quickly. We have made a best effort to minimize wear on these parts.
23. Make sure everything looks something like this, then you can close it up
24. Replace the cover, it should sit nice and flush, if not then check all the components to see what is causing the cover to sit high
25. replace the 4 screws as originally explained in fig. 1
26. Turn the marker over, now replace the Cyclone impeller, and use the supplied screw using 5/64" allen key to retain it. Do not over tighten, just snug it up though.
27. Now either at a field or store, properly set your velocity to under 300fps, or per your field requirements.

Now, go out and have some safe fun. Thanks again from all of us at NDZ..