

AndyMark Toughbox Nano, 500 Hex Shaft Version (am-0482) Assembly Instructions

June 2012



Parts needed to make a Toughbox Nano:

Component	Qty.	Part #
Toughbox Large Cluster Gear	1	am-0149
Toughbox Small Cluster Gear	1	am-0151
Toughbox Large Output Gear	1	am-0150
Toughbox Nano Tube	1	am-0483
Toughbox Hex Output Shaft	1	am-0397
$\frac{3}{8}$ " id Flanged, Bearing (FR6ZZ)	1	am-0028
#10-32 x $\frac{3}{8}$ " BHPS	2	am-1177
$\frac{1}{2}$ " PVC Spacer	1	am-1151
External Klipring	1	am-0206
Toughbox Small Hex Shaft	1	am-0152
$\frac{1}{2}$ " id Flanged FR8ZZ Hex-Bore Bearing	1	am-0279
$\frac{3}{8}$ " id Flanged Bearing (FR6)	1	am-0027
$\frac{3}{8}$ " id bearing, shielded (R6ZZ)	1	am-0516

Tools needed:

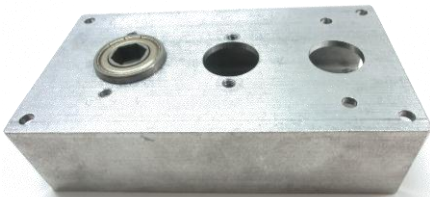
14mm Crescent Wrench

Phillips Screwdriver

***Note:** Shown are assembly instructions for a Toughbox Nano using a different shaft.

Toughbox Nano Assembly Instructions:

Step 1: Press an FR8ZZ bearing into the nano tube on the bottom side.



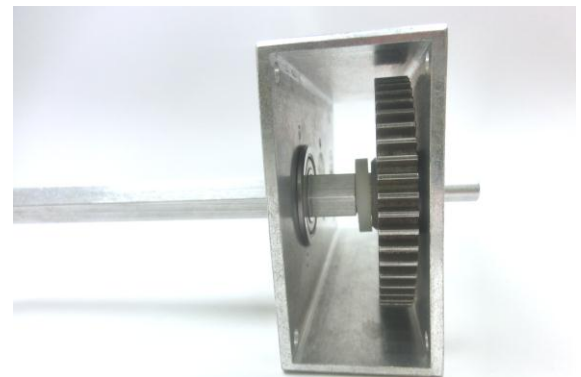
Step 2: Press in the FR6ZZ to the hole behind the FR8ZZ from the inside of the tube.



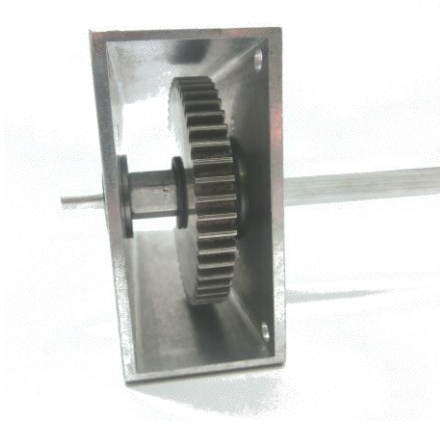
Step 3: Place the large output gear so that its flat side will face the FR6 bearing. Put the PVC washer above it.



Step 4: Push the Hex Output Shaft into the bearing.



Step 5: Slide the large output gear towards the FR8ZZ bearing. Then press the external klipring into the groove shaft. If you're having troubles, use a 14mm crescent wrench.



Step 6: Press an FR6 bearing into the middle hole of the motor side.



Step 7: Insert the large cluster gear with the raised portion facing the FR6 bearing.



Step 8: Insert the small cluster shaft.



Step 9: Insert the small cluster gear with the flat side facing towards the large cluster gear.



Step 10: Press the R6ZZ bearing into the middle hole of the output side. Right beside it, screw in the two #10-32 x $\frac{3}{8}$ " BHPS.

