

# Cessna, Navion (no wheel pants) Aircraft Tug Assembly Instructions



1. Carefully unpack contents of shipping carton and locate the drill, charger and battery. The battery may or may not be installed in the drill. Plug in the charger and charge the battery for at least one hour. You will need a 7/16" boxed in wrench to assemble your tug.
2. **DEWALT DRILL:** Locate the 1/2" drive shaft and chuck the end with three machined flats into the Dewalt drill chuck. Be sure the flats align with the jaws in the chuck and are seated on the jaw tips. Tighten by hand as hard as you can with the drill clutch in the **drill bit image** position, and in speed selector switch setting **1**. See Dewalt drill operation instructions.
3. Visually check to see the foam drive shaft alignment insert installed 8" inside the handle tube end which inserts into the tug receiver. With the drive shaft installed in the drill, insert it into the expanded handle tube end and see that it slips through the foam alignment insert (A light source at the end of handle tube is helpful) and push the drill into the handle as far as it will go noting that it fits squarely to the drill collar and that drive shaft is centered in foam alignment insert. (Visually check inside handle tube end) Rotate drill per image above with Minimax label facing up. Tighten compression clamp to prevent drill from rotating in handle. Install charged drill battery.
4. Be sure the stainless steel compression clamp [Fig.1] is loosely fit onto the tug handle receiver 1/8" from the top. Install the handle tube into the tug receiver fully to mark, rotating if necessary or lightly "bumping" the drill trigger to engage the square drive socket. After engaging the square drive socket position drill per image above. Tighten compression clamp snugly. **It is critical that this connection is always tight when the tug is in use!** Familiarize yourself with the drill operation and assure that the drive roller rotates in both directions, trigger rheostat functions and speed changer (If equipped) function properly.
5. The aircraft attachment device comes pre-installed on your tug. (You may or may not need the free hubs parts installed in the yoke of your nose gear. See included assembly instructions.) Open the attach assembly by pulling UP on the spring loaded locking knob and turn CCW as far as it will move. Attach opened RIGHT fork onto right aircraft tow pin and turn locking knob CW so that LEFT fork engages left aircraft tow pin fully. Be sure that locking knob has sprung into locked position. (Reverse to remove)
6. Push down on the tug handle and slowly pull the drill trigger all the way in to move your plane. When stopping, slowly let off on the drill trigger until plane stops. Avoid sudden starts and stops as this can damage the chain and transmission gears in your tug. Keep chain and axel bushings lubricated per ["Use and Care Guide"](#).

**NEVER LEAVE TUG ATTACHED TO AIRCRAFT WHILE NOT IN USE!**

Practice makes perfect! Thank you for buying a Minimax Aircraft Tug!

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