

# Piper Comanche Aircraft Tug Assembly Instructions



[Fig.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.

1. **DEWALT DRILL:** Locate the 1/2" drive shaft and chuck the end with three machined flats into the Dewalt drill. 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 in the **drill bit image** position, and in speed selector switch setting **1**.
2. Visually check to see the foam drive shaft alignment insert installed 8" inside the handle end which inserts into the tug receiver. With the drive shaft installed in the drill, insert it into the expanded handle end and see that it slips through the foam alignment insert (A light source at the end of handle 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. Rotate drill per image above with Minimax label facing up. Tighten compression clamp to prevent drill from rotating in handle. Install charged drill battery.
3. 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 to the depth mark rotating as 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.**
4. The attach pins are not adjusted for fit to aircraft. This procedure is best accomplished with a helper. Remove the locking pins by pulling out of aircraft attach pins. Loosen four set screws holding the attach pins. Slide the pins out until there is +/- 2" of pin exposed at the rear of pin collars. Loosely tighten the set screws. Attach tug to aircraft by sliding tug pins vertically into tow lugs on gear yoke. Have helper hold tug handle at approx. 36" above surface. Loosen set screws. Slide tug forward or back until drive roller is in contact with aircraft tire and handle is at a comfortable height and pins are evenly aligned. Tighten set screws securely. Remove tug from aircraft.
5. Insert the battery into the drill and be sure it "snaps" into place. Familiarize yourself with the drill operation and assure that the drive wheel rotates in both directions, the trigger rheostat functions properly and the speed change selector switch (if equipped) functions.
6. With locking pins removed, attach tug to aircraft per section 5. Install locking pins. 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. You can control speed with the trigger rheostat or drill speed selector switch. (if equipped) Handle height can be re-adjusted at any time. 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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