

HP and HP-L Hub Assembly Instructions

Warp Drive Incorporated
1207 Highway 18 East
Ventura, IA 50482 USA
Phone: (641) 357-6000
Fax: (641) 357-7592
USA & Canada: 1-800-833-9357
www.WarpDriveInc.com

Instructions for 2 Blade and 3 Blade Configurations

Component Inventory

Quantity	Component	Specs
2	Hub Halves	CNC Alum.
1	Warp Drive Protractor	-
# ordered	Warp Drive Propeller	-
4 per bld	1/4" Clamping Bolts	1/4" - 24 3/4"
4 per bld	1/4" Nylock Nuts	-
8 per bld	1/4" Washers	-

Bolt Torque Values

Component	Torque (ft-lb)	Torque (in-lb)
1/4" Clamping Bolts	10	120
5/16" or 8mm Mounting Bolts	15	180
3/8" Mounting Bolts	30	360

Mounting Bolts NOT INCLUDED

Re-torque all bolts after the first hour of operation, then every 5-10 hours as part of routine maintenance.

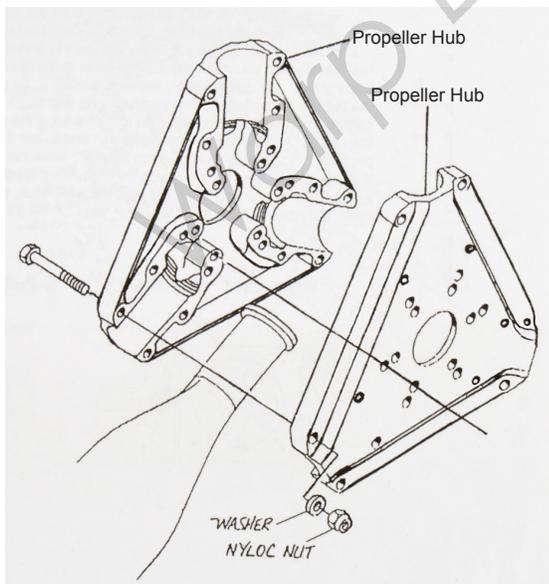
Assembly:

- Put one 1/4" washer on each of the 1/4" clamping bolts and insert them into one half of the hub.
HP Hubs ONLY: only use a washer under the head of the outer two 1/4" clamping bolts. The inner two 1/4" bolts are AN4-23A and only require a washer under the nylock nut.
- Place this hub half upside down on a flat surface with the bolt threads facing up.
- Set the blade collars in the hub making sure the leading edges are all facing in the same direction.
- Place the remaining hub half on top of the blades making sure the alignment marks come together on the same blade.
- Install the remaining 1/4" washers followed by the 1/4" nylock nuts. You may tighten the nylocks slightly. Be sure to leave them loose enough to allow the blade to turn inside for setting the pitch.

Note: Some SAE #1 and #2 bolt patterns will not allow the inner two 1/4" clamping bolts to be used. If your flange interferes with these two inner clamping bolts, simply leave them out. There is sufficient torque from the outer two 1/4" clamping bolts along with your six mounting bolts.

Mounting Your Propeller:

- Mount the propeller to the engine flange using the six mounting bolts.
IMPORTANT: ALL Warp Drive propellers must have a faceplate mounted on the outside of the hub. These plates are normally 1/4" or 3/8" thick aluminum and are supplied with the engine.
- Adjust the blade pitch following the protractor instructions on the other side of this page.
- Tighten the clamping bolts in 20 in-lb increments. DO NOT tighten the bolts in one step. Tightening too much on one side can change the blade pitch. Torque the clamping bolts evenly in a criss-cross pattern.



Warp Drive inc.