

Syssa Aircraft Performance

SAP-180HP / Syssa 30 Drill Jig Instructions

Overview:

The Syssa 30 Drill Jig will allow you to drill the special 4 hole pattern in your prop and spinner back plate quickly and accurately. This ensures a match to the drive pin/drive screw pattern on your Syssa 30/SAP-180HP engine's hub. Most modelers will only use the 2 M3 pins supplied.

It will work with carbon fiber, composite plastic or wood props and carbon fiber, composite plastic or aluminum spinner back plates. You can use the Syssa 30 Drill Jig with a hand held drill or in a drill press. In either case, take care not to side load the drill. You may also use the drill jig with a vise and hand drill by holding the top nut securely in the vise as shown in the photos. This is recommended as you should never use your hand to hold anything that could spin during drilling. When using a drill press, be sure the drill spindle is setup exactly perpendicular to the table and fix the prop and drill jig squarely to the table.

Although the tool is manufactured out of steel, side loading it will wear the tool more quickly.

Note: Always make sure your propeller orientation matches the orientation of the prop on the face of the Syssa 30 Drill Jig. This will insure the propeller is in the correct orientation for manual starting.

Safety Notes:

- ✓ *Always wear safety glasses when using any cutting or drilling device. Hardened steel tools can chip/crack.*
- ✓ *Always use something other than your hand for manual starting or "flipping" of any engine.*
- ✓ *When drilling carbon fiber, use extra caution not to get the drillings or dust on your skin. The use of disposable gloves is strongly recommended when working with any materials, but especially carbon fiber.*

Contents:

Qty 1: 8mm Threaded Stud

Qty 2: M8 Nuts

Qty 1: Drill Jig Body

Qty 1: .125" Drill



Other tools required:

- 13mm open end or box type wrench
- Compressed air gun (not required)
- Aluminum SAP-180 / Syssa 30 prop washer

Installation Notes:

- If your spinner and backplate **DO** have to match, please be sure to assemble your Syssa 30 Drill Jig with the spinner backplate, prop and spinner nose cone.
- If your spinner and backplate **DO NOT** have to match, you will not have to assemble the nose cone with the Syssa 30 Drill Jig.
- The drive pin holes **DO NOT** have to go all the way through the propeller, however they do have to go in far enough as to not bottom out on the drive pins.
- The drive screw holes **DO** have to go all the way through the propeller.

Instructions for Drill Jig:

- 1. Assemble M8 nut, M8 stud, and prop washer (from engine) to propeller as shown. (Note: front of airplane is to the left)**
- 2. Assemble Drill Jig Body to rear side of prop as shown and fix one M8 Nut hand-tight. Be sure to match orientation of propeller with drill jig engraved propeller.**
- 3. Tighten the assembly with a 13mm wrench. If using a hand held drill, a vise is recommended and shown gripping the opposing nut. Tighten snugly only.**
- 4. Using the .125" supplied, drill through the locating holes in the body and through the prop (and spinner backplate if attached.)**

Note 1: Take care not to side load the drill

Note 2: The first time you drill through the locating holes in the drill jig body the plating will give a slight resistance during drilling.



- 5. Wearing eye protection and using compressed air, blow off the chips and dust. If no compressed air is available, wipe off with a rag.**



- 6. Remove Drill Jig components, clean or blow off any dust or chips leftover and your prop is ready to be installed.**

