

Procedure for Installing Stator Brackets for Sullivan Pancake Style Alternators

Step 1: Remove accessories such as hall effect sensor(s) or carburetor.

Notes:

- Be sure to mark the exact location of hall effect sensor relative to the crankcase by scribing or otherwise indexing to ensure OEM performance of the engine upon re-assembly.
- Mark adjustment range of the hall effect sensor(s) and avoid installing the brackets where they could interfere
- Cover open ports to keep debris from entering the engine (not shown in this demonstration)

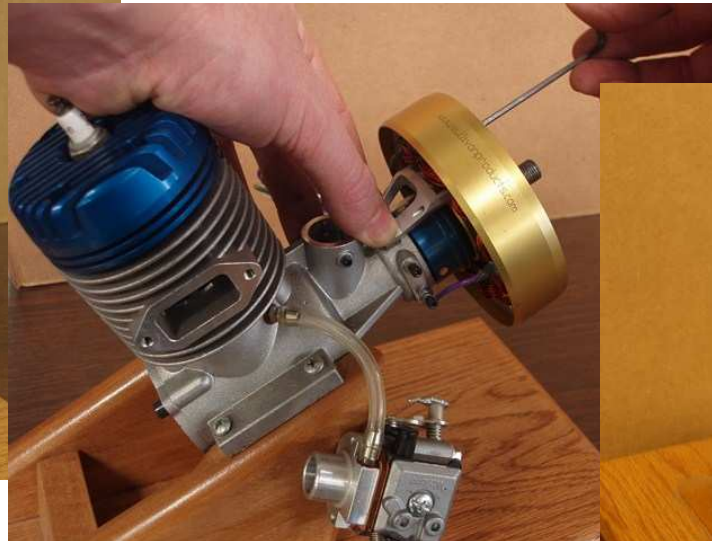


Procedure for Enlarging the Center Bore of Sullivan Pancake Style Alternators

Step 2: Install alternator and mount brackets



Temporarily install alternator



Attach stator bracket to stator



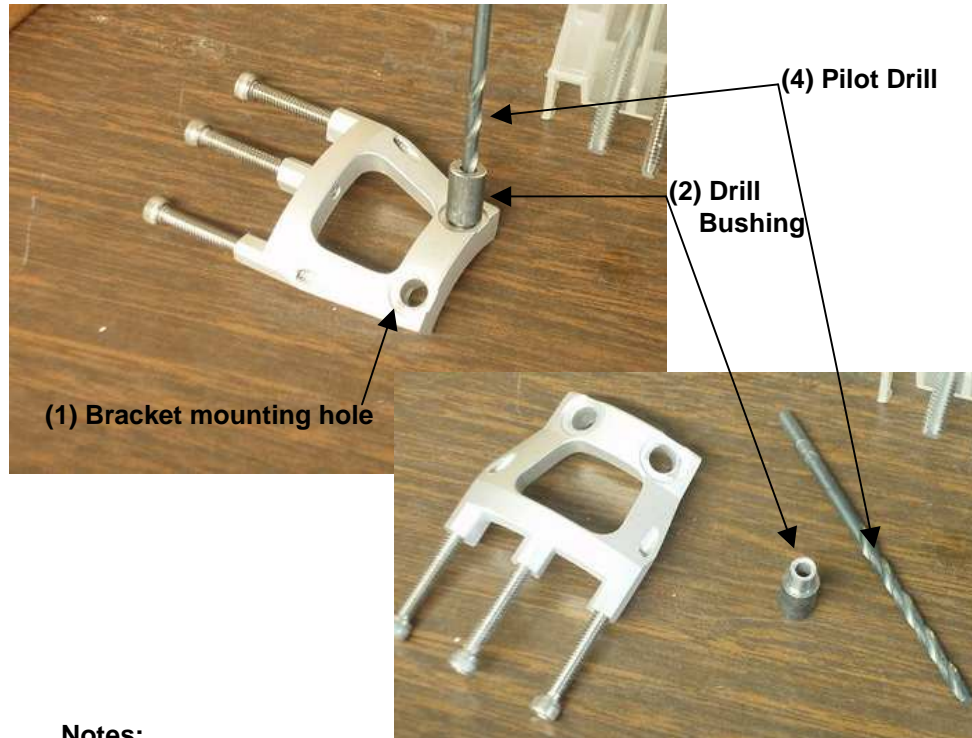
Install and tighten all stator bolts

Notes:

- Bracket bolts may fit inner or outer bolt circle. Match to stator before installing alternator onto engine
- Brackets do not need to be 180 deg. from each other. Asymmetric mounting may be desired to accommodate existing sensors.

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Step 3: Prepare tools

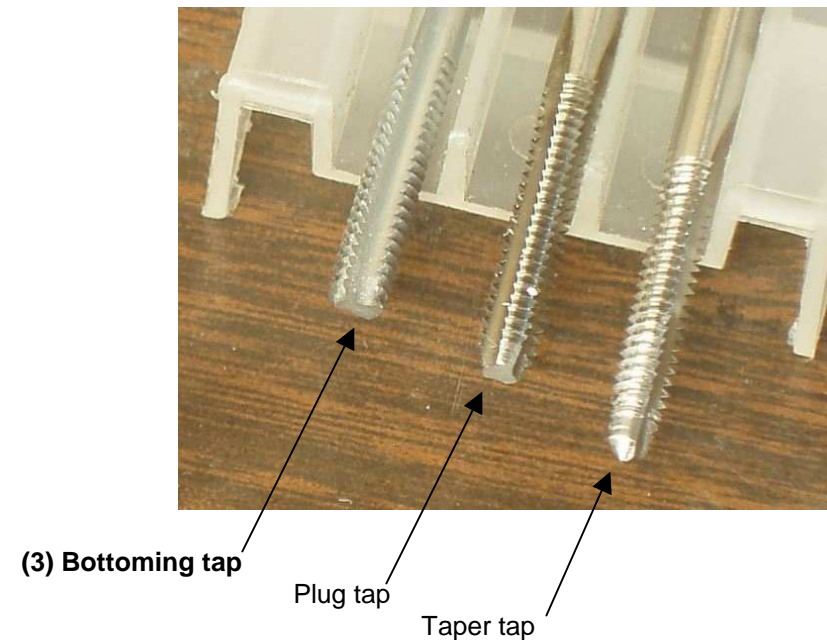


Notes:

- Choose the largest bolt that will clear the **mounting holes in the bracket (1)**
- Use a **drill bushing (2)** or centering punch to locate the pilot hole for the tap in the correct location during drilling.
- A drill bushing can be made from mild steel by drilling thru the center with the **pilot drill (4)** and turning the outside diameter to just fit within the bracket mounting hole

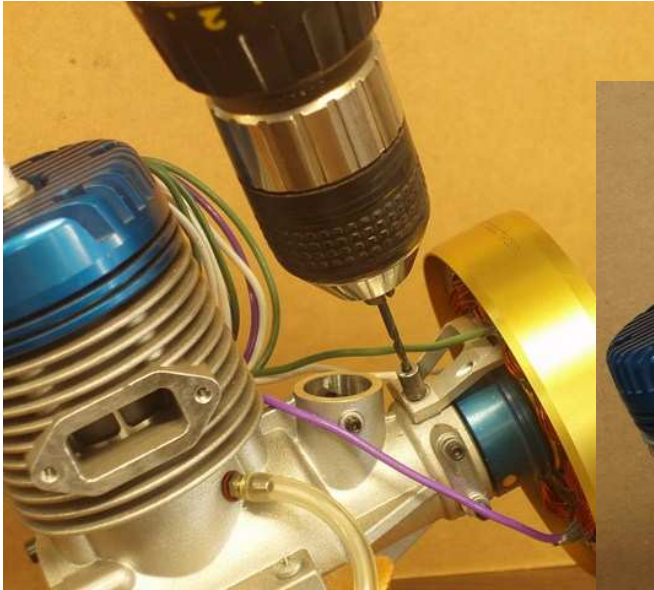
Notes:

- For some installations the engine bearing will be located where the pilot hole is to be drilled. In this case drill until the bearing race is encountered and STOP. The bearing race will be very hard and the drill will no longer penetrate. To avoid oversizing the hole do not attempt to drill any further.
- If bearing race or other feature prevents thru drilling the pilot hole a **bottoming tap (3)** should be used to ensure maximum thread engagement
- Use sharp tools. Dull tools will create weak threads



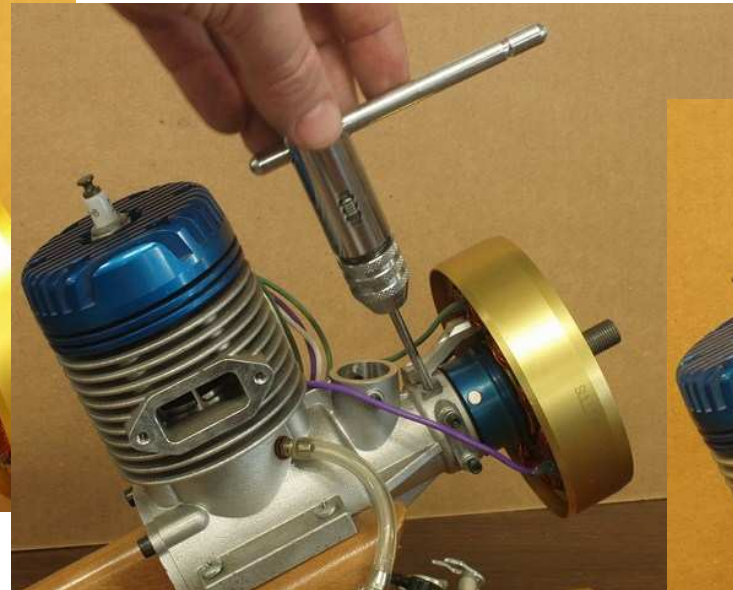
Procedure for Enlarging the Center Bore of Sullivan Pancake Style Alternators

Step 4: Drill and Tap first hole and install first mounting screw



Notes:

- Install the prop bolt(s) before drilling to ensure the alternator is seated fully against the prop hub and remains so during machining.
- Drill slowly noting chip load and drill load. If a bearing is preventing thru drilling chips will stop forming and drill will turn easier. **DO NOT ATTEMPT TO DRILL FURTHER.**



Notes:

- Use sharp tools and tapping fluid. Start threads with plug tap and finish with a bottoming tap if the hole is blind or shallow.
- Use Caution not to strip threads if hole is shallow
- Never attempt tapping a hole that is shallower than the width of the bolt or screw that goes into it.



Notes:

- Secure the first screw before drilling and tapping any others.
- For final installation use lock washers or thread locking compound to ensure hardware remains secure

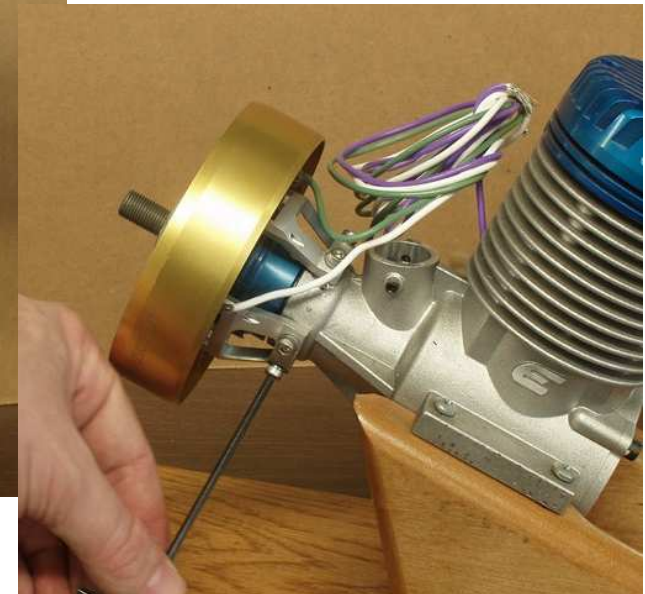
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Step 5: Repeat Step 4 for remaining mounting holes.



Notes:

- Leave first screws in place while drilling and tapping the remaining screws



Notes:

- Tighten all mounting screws before removing the alternator.

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Completed Installation.



Notes:

- Notice for this installation the brackets were mounted at 12:00 and 4:00 positions. The hole pattern in the stator allows the stator brackets to be positioned as needed to avoid engine features
- For final assembly be sure to use lock washers or a thread locking compound on all hardware to ensure it remains secure through heat and vibration created by the engine.
- Secure all lead wires away from moving parts. The PTFE insulation on the alternator lead out wires can operate at temperatures up to 300 deg. C