

1/4 Scale P-39 Build.

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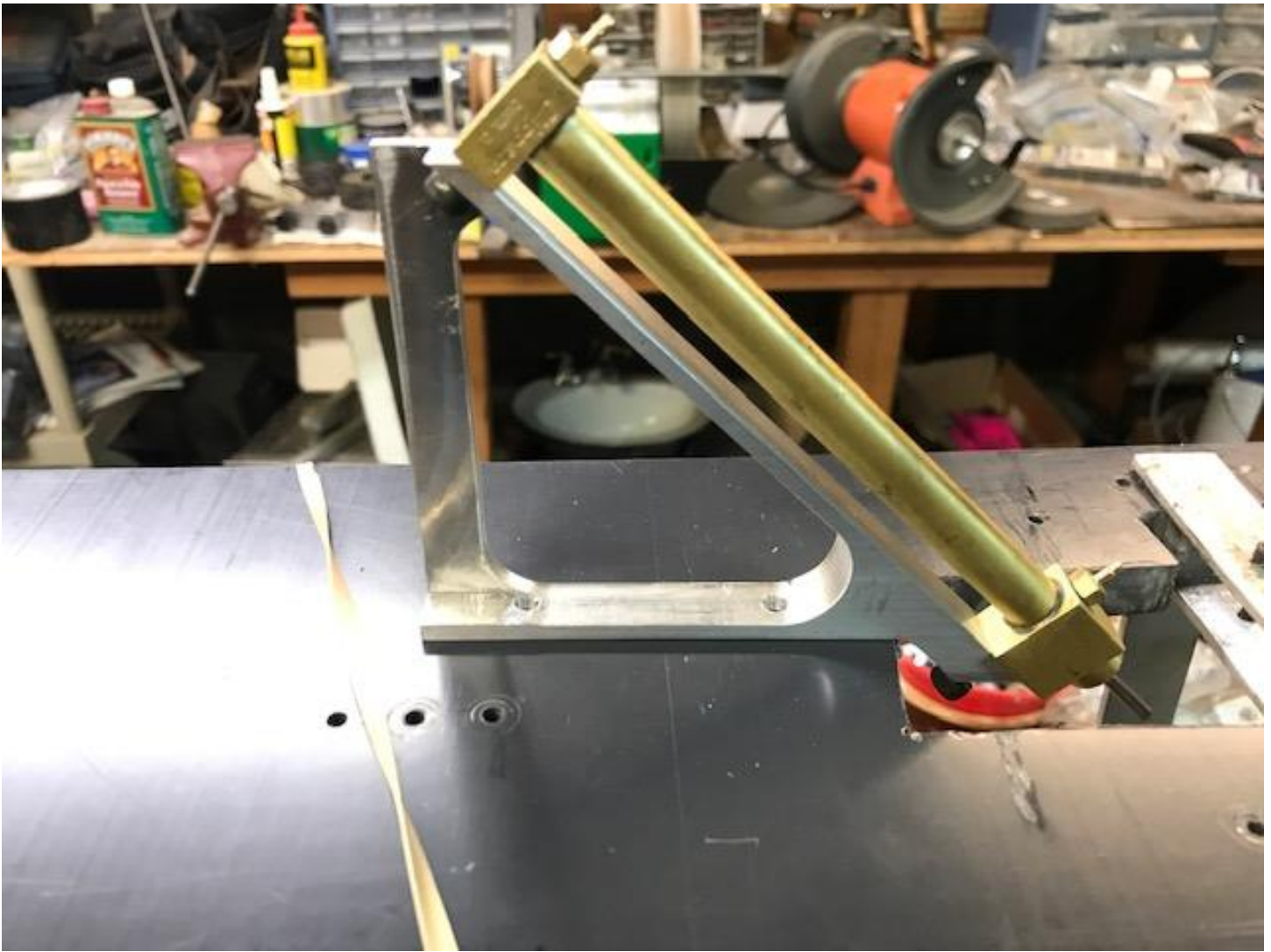
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3/10/2022

Two new nose bearing mounts arrived this week. It cost \$85, but well worth it. Jim talked the shop owner into cutting our part while he was cutting another job so we saved the set and the guy cut us a spare for free. Surprisingly he even bent the part for us, these things are perfect.



While waiting we finished the design of the nose gear. We had a couple of false starts on the actuator assembly. We first used a Clippard pneumatic cylinder thinking we needed about a four inch stroke. A problem was encountered while folding the For Link and the Drag Link swing in two conflicting arcs and as they pass through the

conflicting center point to over center lock something has to give. The Clippard cylinder was not strong enough to allow the passing.



It was replaced by a shorter and stronger cylinder which again resulted in a linkage design change. Now all the ugly temporary linkage with all the holes drilled in them is being replaced.

We have all the various mounting points identified. Its' time prepare the Torque Plate for mounting the components. Cut outs must be made for the nose gear strut clearance, steering servo mounting and motor mounting.

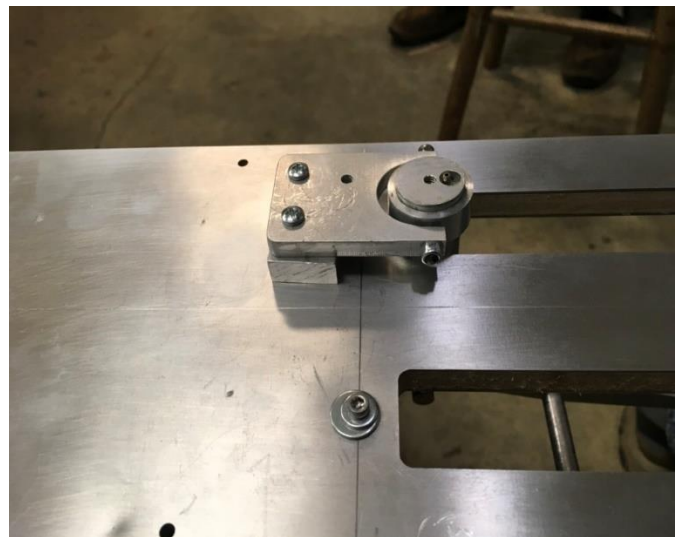
The Torque Plate is a laminate of .5" balsawood and two sheets of .032 7075 aluminum. We will use a 1/4" Carbide end mill running at 5500 rpm to cut our openings.

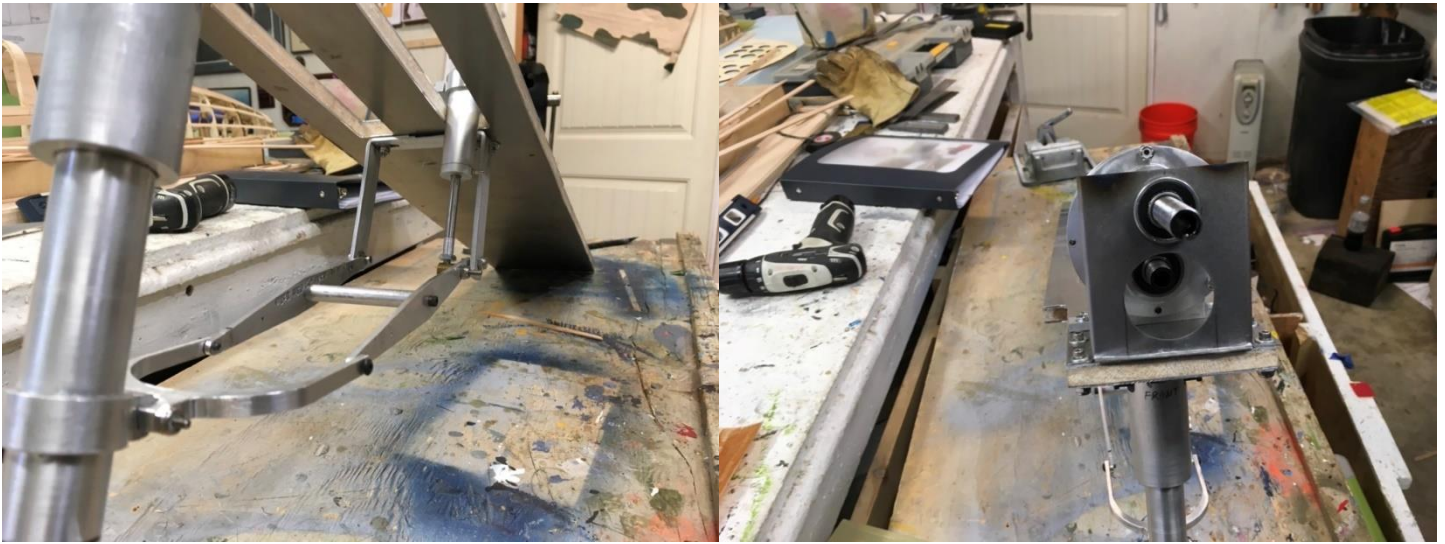
Here is a link to a video of the start of the milling process.

<https://www.youtube.com/watch?v=HXEWpMy2hXA>



With the machining complete the components have started to be installed on the Torque Plate. The new air cylinder has been mounted and works perfectly.





Our next step was to weigh the unit. Without the motor and drive shaft we are at 4 lb 14.5 oz.



Last entry 3/28/22