



Thank you for purchasing the Robart (#HANP51D & #HANP51D-E) landing gear for your Hangar 9 60cc P-51D Mustang.

For the Robart Retracts to be properly installed some slight modifications need to occur to the mounting plate inside of each wing. Robart has provided you with a template to grind out the retract mount so the Robart Landing Gear will properly fit.

Before you can mount the gear you will need to remove the blind nuts.

- 1) Thread in your landing gear mounting bolts about a  $\frac{1}{4}$ ".
- 2) Using a hammer lightly knock out the blind nut as seen in (photo 1).
- 3) Cut or grind the washer portion of the blind nut so that there is a flat edge just next to the tapped shoulder of the blind nut. This will keep the blind nut out of the opening you will make later. (photo 2).  
The nuts need to be ground to match the thickness of the mounting plate plywood.
- 4) Repeat steps 1-3 for each blind nut on each wing.
- 5) These will be reinstalled in the last step.

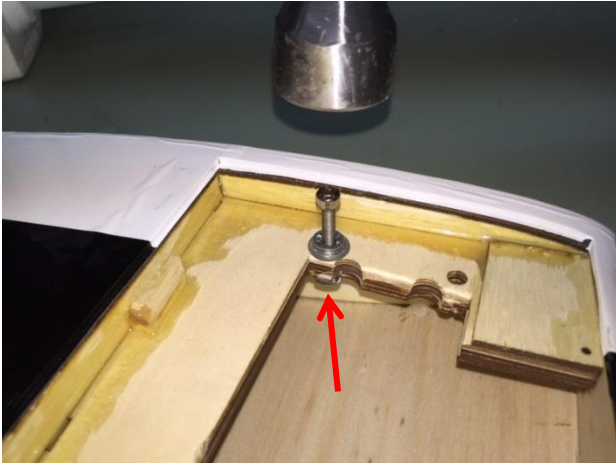


Photo 1

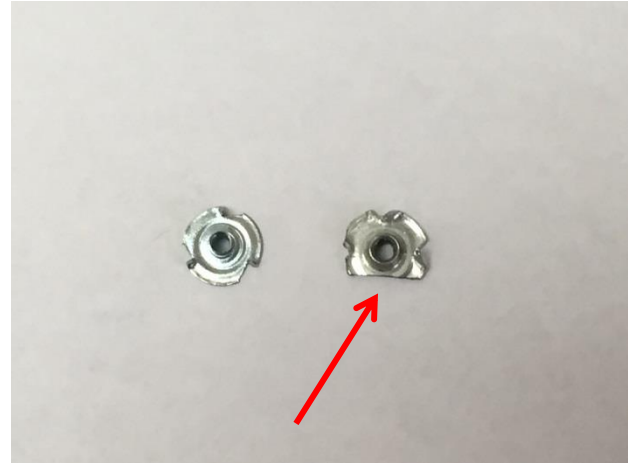


Photo 2

- 1) On the template page, cut out the template along the dashed line and tape the template onto retract mount as shown in photo 3. Additional templates are available at [www.robart.com](http://www.robart.com)
- 2) Following the solid black line on the template, carefully grind or cut the wood plate back to open the retract mount. Robart recommends the use of a rotary tool.
- 3) After you have fully opened the retract mount, the retract mount will resemble photo 4.

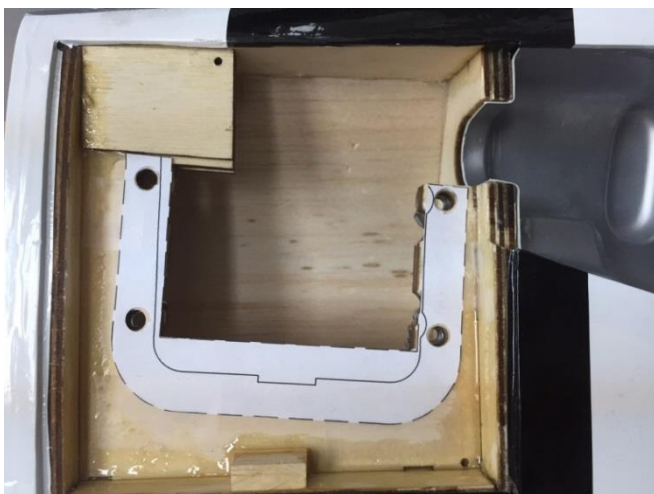


Photo 3



Photo 4

After the retract mount plate has been modified you will need to open up the retract air cylinder/electric actuator passage hole as seen in photo #5.

- 1) Mark a vertical guideline  $\frac{1}{2}$ " from the actuator passage on the leading edge side. This is a vertical line from the mounting plate to the top of the wing.
- 2) Extend a horizontal guideline along the top edge of the cylinder/actuator hole to the vertical guideline drawn in step 1.
- 3) Using a rotary tool (using a 90 degree attachment will make this easier) with a Robart Carbide Cutter ( $\frac{1}{4}$ " rod works the best, Robart part number 463C) grind away the plywood until you have opened the actuator hole to the  $\frac{1}{2}$ " guideline you marked in step 1 and not to extend beyond the horizontal guideline drawn in step 2. (Completed Opening Photo 6).



Photo 5

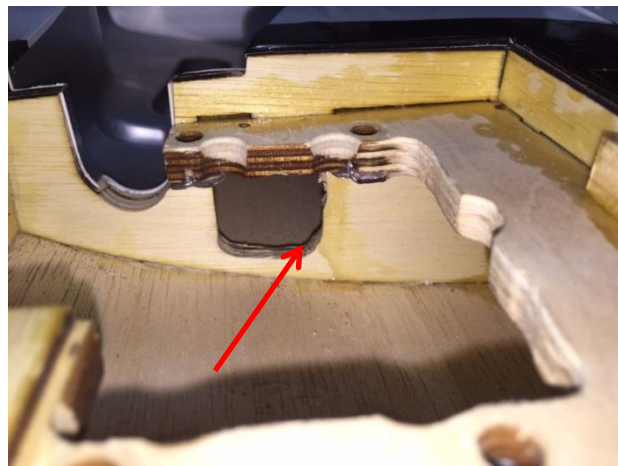


Photo 6

Once you have the blind nuts ground to the proper thickness you will need to reinstall them back into the retract mount.

- 1) First thing is to get some different size washers and stack them from large to small then put the landing gear mounting bolt through the smallest one first.
- 2) Insert the landing gear mounting bolt with the washers on the shaft through one of the mounting holes and thread into the ground down blind nut.
- 3) Tighten the landing gear mounting bolt until teeth of the blind nut are close to the bottom of the mounting plate.
- 4) Align blind nut so that there is no portion of the blind nut in the open space of the mounting plate (photo 8).
- 5) Continue to tighten the landing gear mounting bolt into the blind nut as to fully compress the blind nut teeth into the mounting plate and insure that ground edge is inline with the mounting plate.
- 6) Repeat this process for each of the blind nuts on each wing.

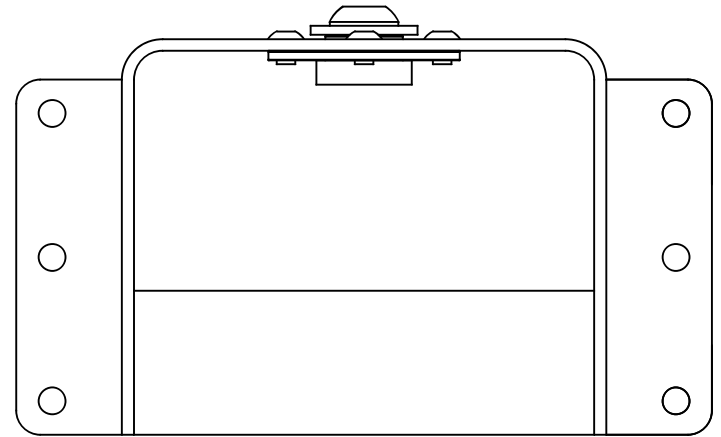
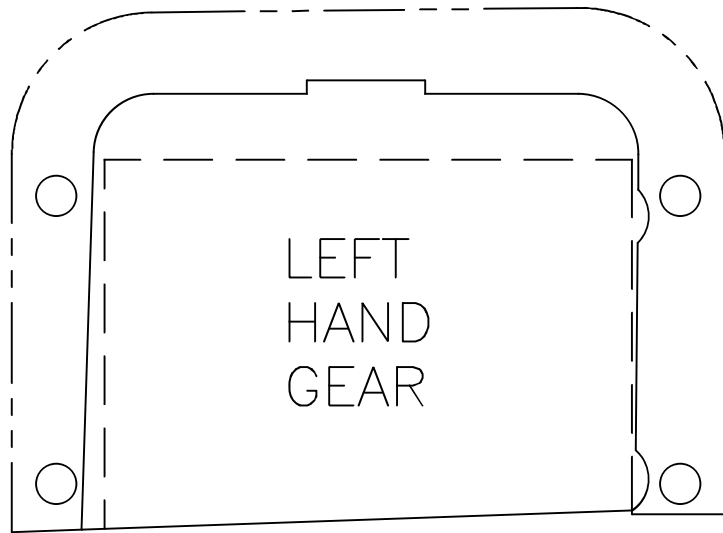


Photo 7

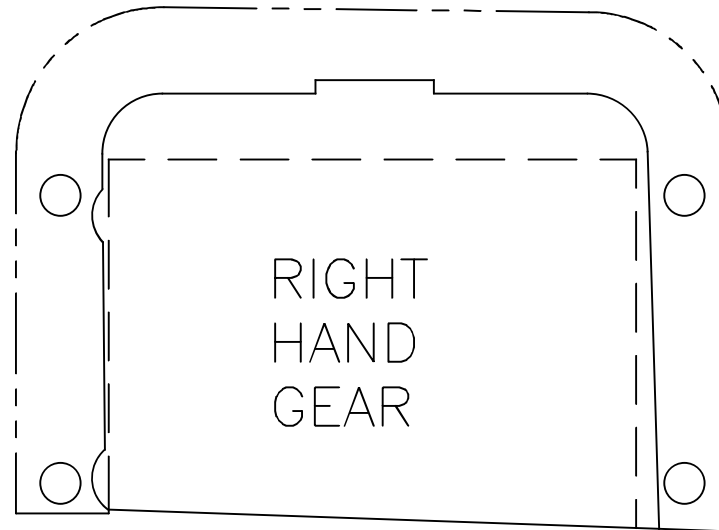


Photo 8

Once the blind nuts are ground and reinstalled you can now mount the retract unit into the wing. See the Hangar 9 P-51 60cc Instructions for remaining retract installation.



RETRACT FRAME



\*DASHED LINES  
ARE ORIGINAL  
\*SOLID LINES  
ARE TO FIT  
ROBART HANGAR  
9 P51



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