

# Instruction Sheet for the P-61 BLACK WIDOW ENGINES, COWLS & PROPELLERS UPDATE SET

for use with the Monogram or Great Wall/Lion Roar 1:48 scale kits



**To facilitate easiest installation possible, please read and understand all directions before assembly.**

1. Wash all parts in a mild dish detergent solution to remove any residual mold release agent. **DO NOT USE HOT WATER**, as the parts might warp! (Conversely, warped parts can be corrected by briefly placing them in hot water to soften, then bending them back to straight.) Allow to dry thoroughly. Use either CA (cyanoacrylate) glue or 5-minute epoxy to attach resin parts.

2. With a sharp X-Acto knife and fine sandpaper, clean any casting flash from all parts. Minor bubbles or pinholes are common with resin parts and can be filled with a good quality modeler's putty.

3. Cut cylinders from sprue as shown in Fig. 1. Glue cylinders and distributors to crankcase as shown in Fig. 2.

4. Glue backer plate to engine assembly as shown in Fig. 3.

5. If desired, simulate pushrod tubes by adding .020" styrene rod (not included) to engine as shown in Fig. 4.

6. Glue completed engine assembly into cowl. Note that backer plate is notched to fit into cowl one way only for proper alignment.

7. Assemble propellers using jig for proper alignment/blade pitch as shown in Fig. 5. Note that trailing edge of blades bulge outward slightly. Prop shafts should be trimmed short so prop cuff nearly touches spinner.

8. It is recommended to glue cowl/engine assemblies to booms after major airframe assembly is completed. This will assist you in visual alignment of cowls. Although CA glue can be used, it is recommended to use 5-minute epoxy (found at most hardware stores), as it will give you time for alignment adjustments as it sets. CA glue is instant and will not afford you this luxury. **The Great Wall/Lion Roar kit booms require no modification.** Simply use the provided spacers to attach cowl/engine assemblies to booms (see Fig 6 & 7). Cowl/engine assemblies glue directly to spacers. For Monogram kit, see next steps.

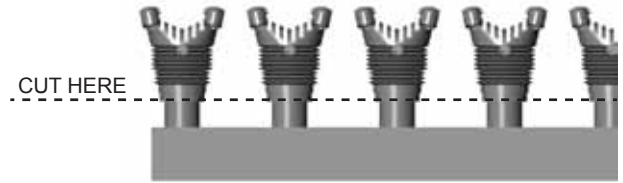
### For Monogram Kits:

1. Prepare left boom halves to accommodate new cowl. Cut both halves just forward of cowl flaps (Fig. 8). Grind/sand cowl flaps smooth (Fig. 9). **The right-side boom requires no modifications.**

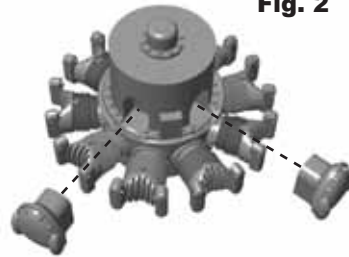
2. Test fit cowl to boom, making minor sanding adjustments to boom as necessary for a positive fit (Fig. 8).

A more positive and trouble-free attachment point can be had by fabricating a bulkhead from sheet styrene and glueing onto front of boom. A wide styrene rod of appropriate length can then extend into cowl, for attaching to back of engine.

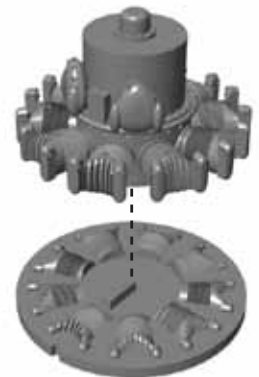
**Fig. 1**



**Fig. 2**



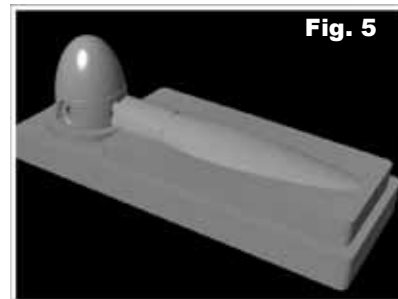
**Fig. 3**



**Fig. 4**



**Fig. 5**



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### GREAT WALL / LION ROAR KIT:



### MONOGRAM KIT:

