

# SECTION OP-52: LANDING LIGHT

**NOTE:** Except where separate instructions and/or figures exist for both left and right sides of the aircraft, only the left side parts, assemblies, or installations will be shown.

It is the builder's choice as to whether to complete all steps for the left side before repeating those steps for the right side or to complete each step for both left and right sides before moving to the next step.

**Step 1:** Align the top half of the template supplied on Page OP52-05 with the corresponding top leading edge rib rivets on the W-1001-L Leading Edge Skin.

**CAUTION:** Do not use the template to mark all the holes at once!

**Step 2:** Use a center punch to mark the center of the six rivet holes and the four screw holes that will be added to the TOP of the leading edge skin.

**Step 3:** Mark the perimeter of the UPPER HALF of the landing light cutout.

**Step 4:** Align the bottom half of the template with the corresponding bottom leading edge rivets on the leading edge skin.

**Step 5:** Use a center punch to mark the center of the six rivet holes and the four screw holes that will be added to the BOTTOM of the leading edge skin.

**Step 6:** Mark the perimeter of the LOWER HALF of the landing light cutout.

**Step 7:** Drill #40 the holes marked in Step 2 and Step 5 into the leading edge skin.

**Step 8:** Final-Drill #30 the eight screw holes. See Figure 1 and Figure 2.

**Step 9:** Remove the material inside the perimeter of the landing light cutout and deburr the edges.

**Step 10:** Dimple the #40 holes in the W-00018 Backing Plates as called-out in Figure 3.

**Step 11:** Machine countersink the #40 holes in the W-00017 Mount Brackets as shown in Figure 4.

**Step 12:** Dimple the rivet holes in the leading edge skin. See Figure 1 and Figure 2.

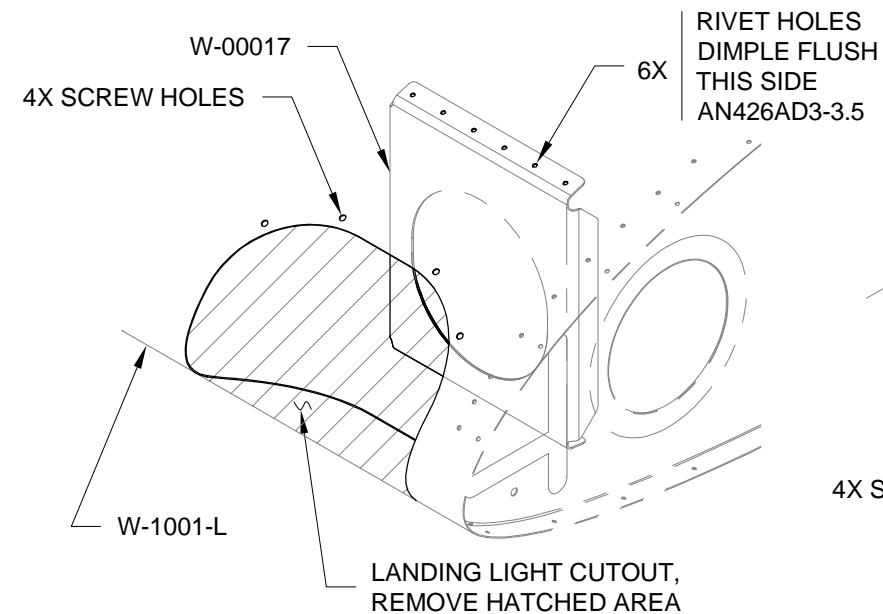
**Step 13:** Prime all parts as desired. Now is the recommended time to apply a finish coat of matte black or gloss white inside the landing light coves.

**Step 14:** Dimple the nutplates called out in Figure 3. See Section 5.16 for more information on dimpling nutplates.

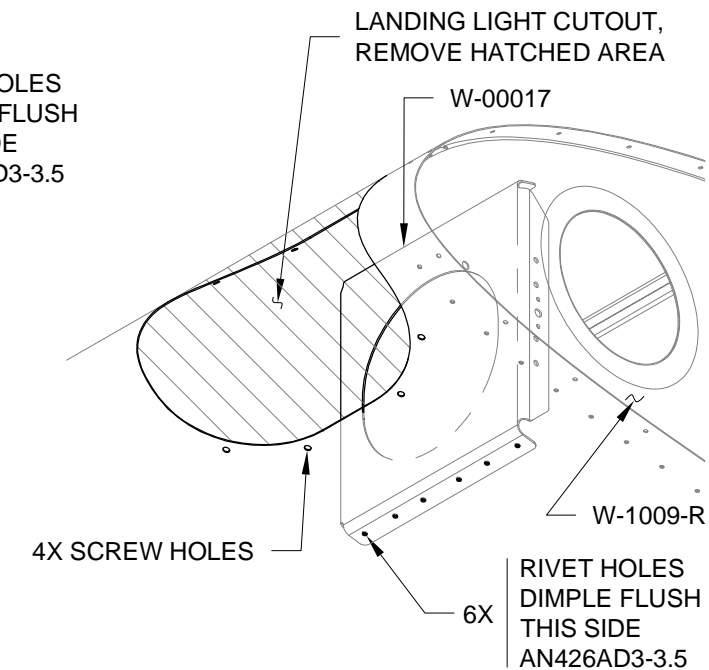
**Step 15:** Rivet the nutplates to all four W-00018 Backing Plates. See Figure 3.

**Step 16:** Rivet the nutplates to both W-00017 Mount Brackets. See Figure 4.

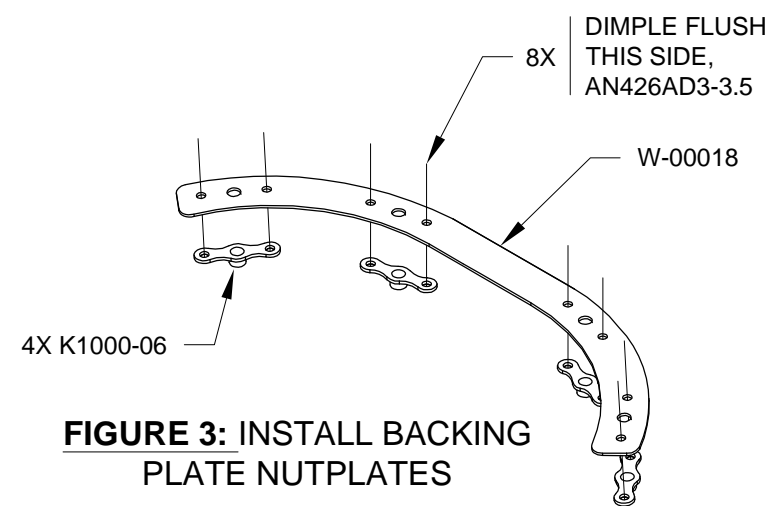
**Step 17:** Rivet the W-00017 Mount Bracket to the leading edge skin. See Figure 1 and Figure 2.



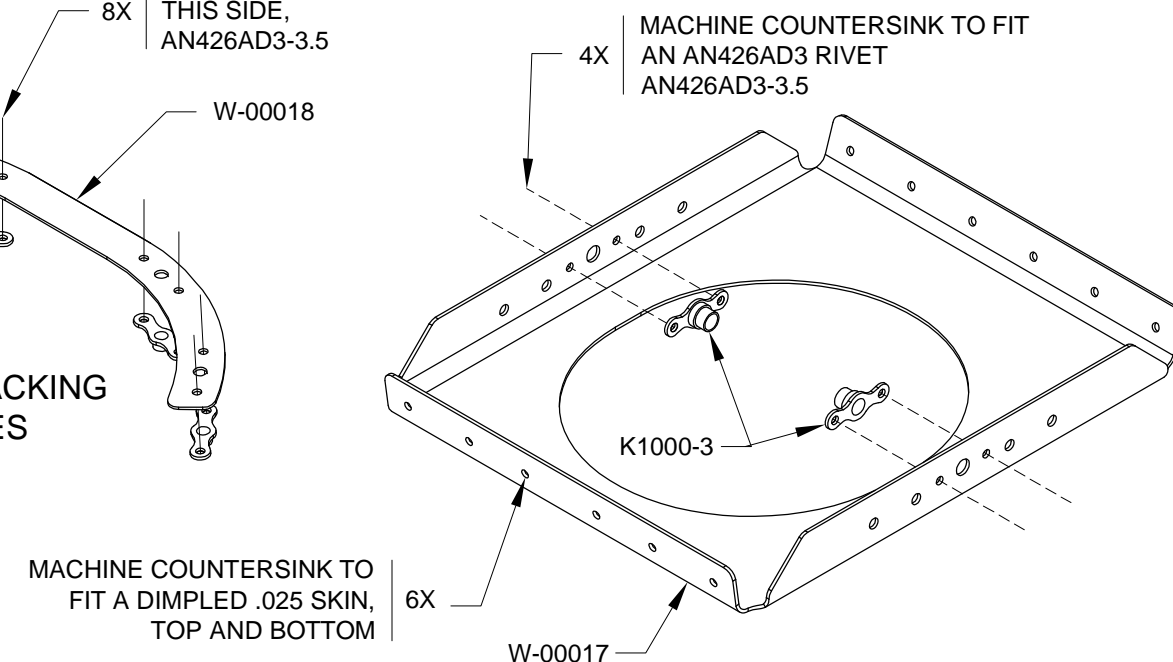
**FIGURE 1: LANDING LIGHT CUTOUT (UPPER)**



**FIGURE 2: LANDING LIGHT CUTOUT (LOWER)**



**FIGURE 3: INSTALL BACKING PLATE NUTPLATES**



**FIGURE 4: INSTALL MOUNT BRACKET NUTPLATES**



NOTE: See Section 5.19 for tips on working with Plexiglass.

NOTE: Be aware of "curled" edges on the lens.

Step 1: Place the W-00014 Lens over the outside of the wing as shown in Figure 1. Trace a line approximately 3/4 [19.0 mm] from the edge of the landing light cutout. Place the least "curled" part of the lens over the opening in the W-1001-L Leading Edge Skin.

Remove the lens from the wing and trim to the line just marked.

Step 2: Cover the W-00014 Lens with masking tape to protect it. Attach additional pieces of tape around the lens as shown in Figure 1.

Step 3: Insert the W-00014 Lens into the opening in the W-1001-L Leading Edge Skin. Place the outboard edge against the outboard most rib flange. Pull on the tape to keep the lens snug against the inside leading edge of the wing.

Use a sharpie pen to trace the shape of the landing light cutout onto the lens.

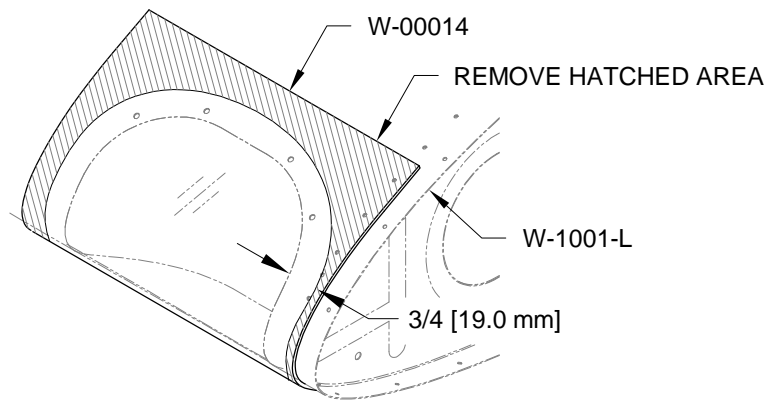


FIGURE 1: FITTING THE LENS

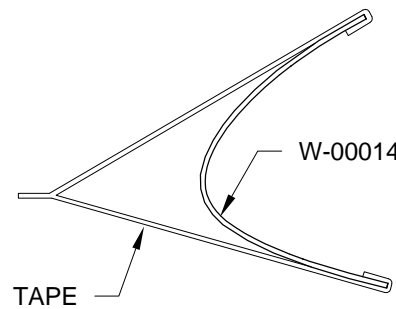


FIGURE 2: LENS TAPE

Step 4: Remove the W-00014 Lens from the wing.

Clamp the W-0018 Backing Plates onto the W-00014 Lens as shown in Figure 3.

Mark a line 1/4 [6.3 mm] from the aft edges of the backing plates, and 1/4 [6.3 mm] from the width of the landing light cutout line. See Figure 3.

Unclamp the backing plates.

Trim the lens to the line just marked. See Figure 3.

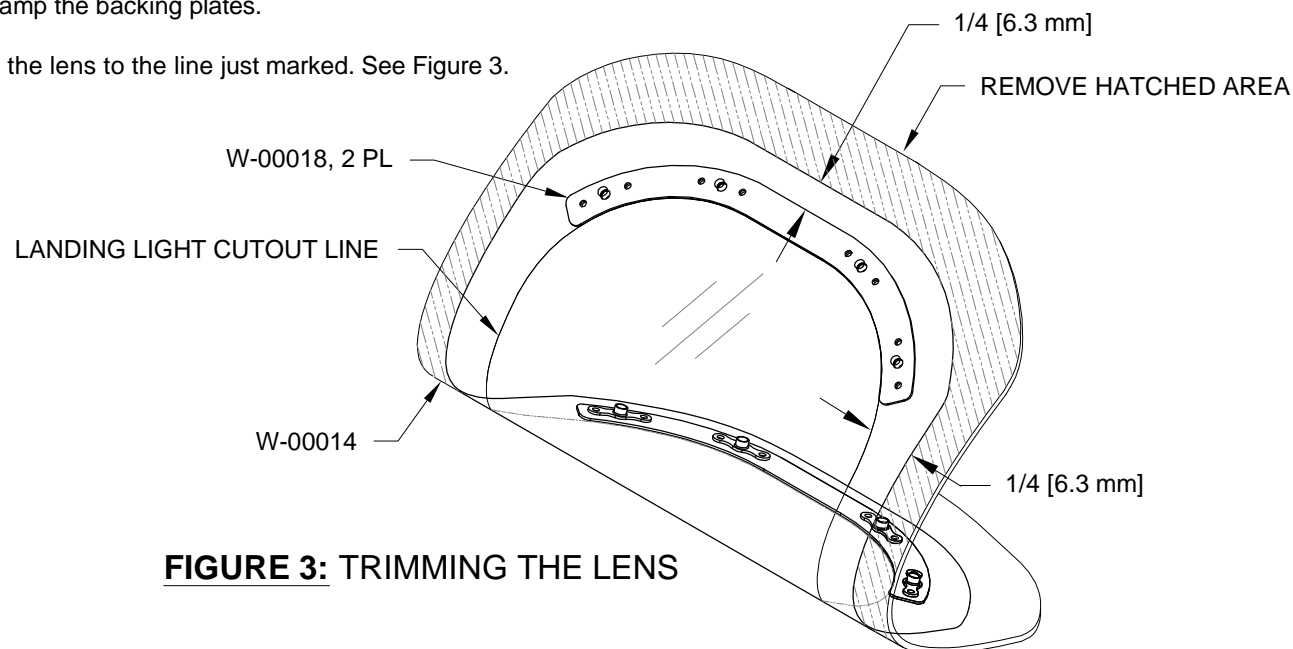


FIGURE 3: TRIMMING THE LENS

Step 5: Reinstall the W-00014 Lens into the W-1001-L Leading Edge Skin. Pull on the tape to keep the lens snug against the inside leading edge of the wing.

Match-Drill #30 using a plexi-bit then cleco the lens to the leading edge skin as shown in Figure 4.

Step 6: Remove the W-00014 Lens from the wing.

Final-Drill #27, deburr, then dimple the eights screw holes in the W-1001-L Leading Edge Skin to fit the head of a #6 screw.

Step 7: Final-Drill #27 the screw holes in the W-00014 Lens with a plexi-bit.

Machine countersink the screw holes in the lens for the corresponding dimples in the W-1001-L Leading Edge Skin.

Carefully deburr the interior edges of the screw holes as the sharp edges which result from countersinking are particularly susceptible to cracking.

Step 8: Radius any sharp edges of the W-00014 Lens. See Figure 5.

Smooth all trim marks with 220 grit sandpaper.

NOTE: Van's Aircraft recommends 3M tape (product number F9460PC VHB).

Step 9: Use double sided tape (not included in the kit) or equivalent adhesive to secure the W-00018 Backing Plates to the inside face of the W-00014 Lens as shown in Figure 5.

Step 10: Install the W-00014 Lens as shown in Figure 6.

Reach through the lightening hole in the W-1019-R Leading Edge Rib and push to provide leverage as the screws are tightened.

Someone with small hands works well here.

Use rubber gloves to avoid getting human skin oils on the clean lens for final installation.

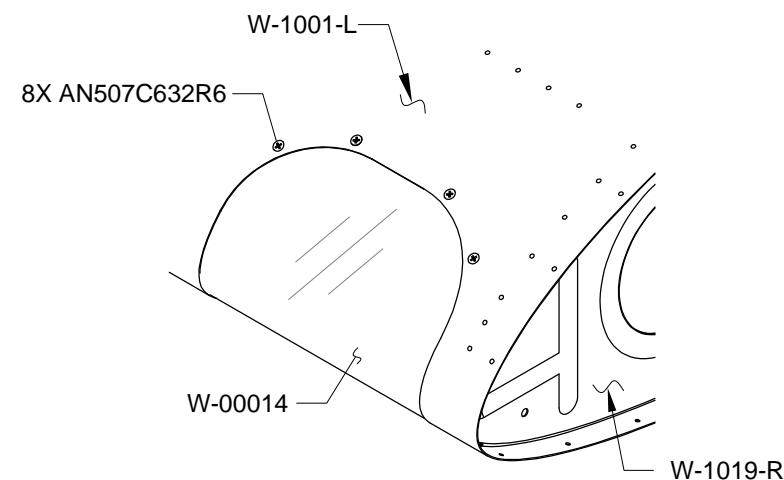


FIGURE 6: INSTALLING THE LENS

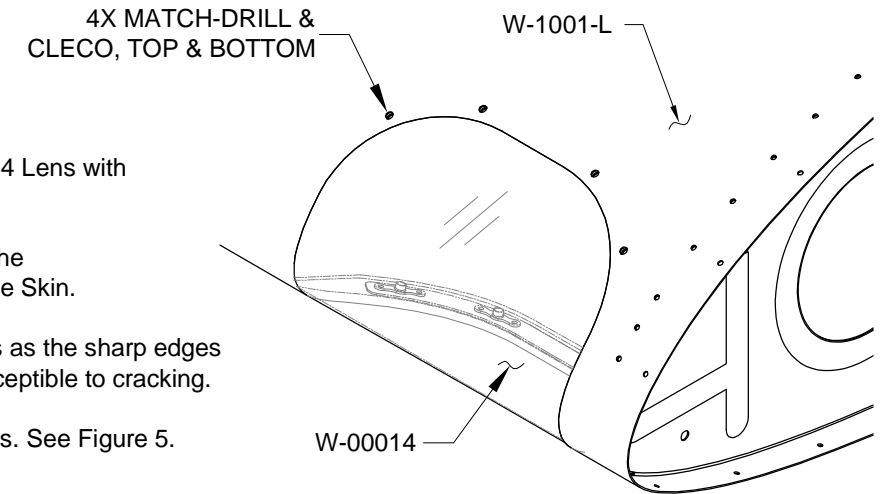


FIGURE 4: MATCH-DRILL THE LENS

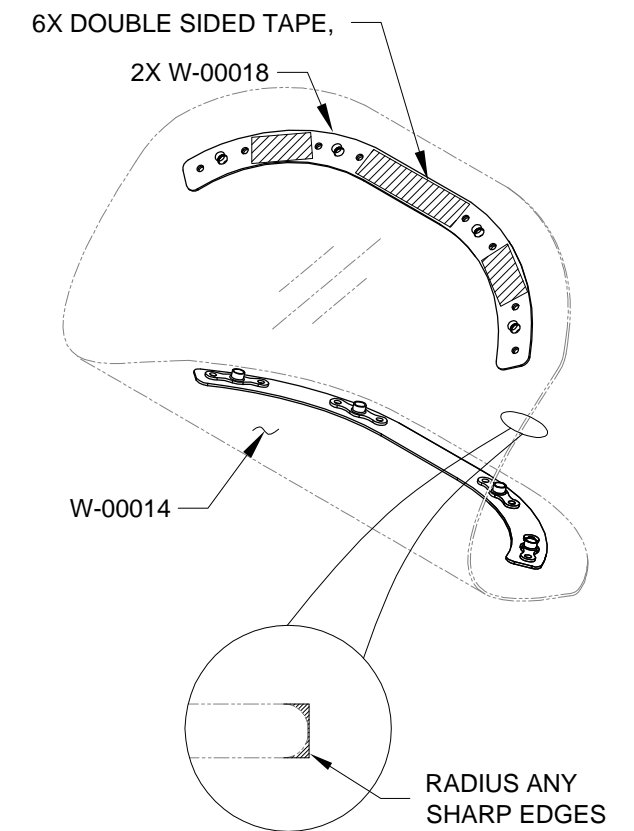
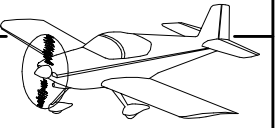


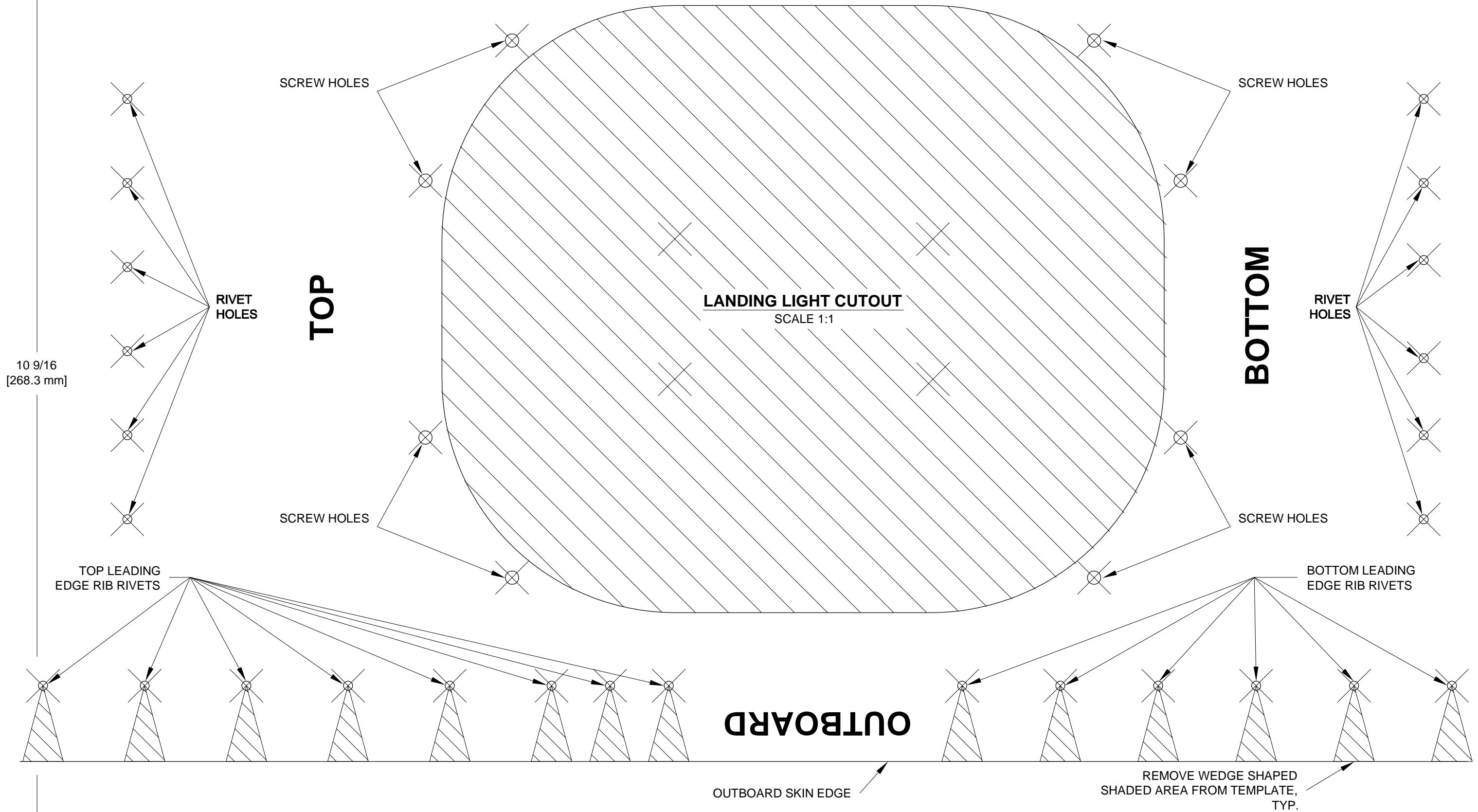
FIGURE 5: FINAL LENS SHAPE



# RIGHT WING TEMPLATE

NOTE: CHECK PRINTED SCALE 1:1 PER SECTION 3 BEFORE USING THE TEMPLATE!

# INBOARD



10 9/16  
[268.3 mm]

TOP LEADING  
EDGE RIB RIVETS

BOTTOM LEADING  
EDGE RIVETS

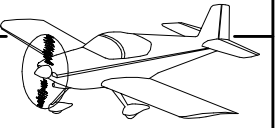
OUTBOARD

OUTBOARD SKIN EDGE

REMOVE WEDGE SHAPED  
SHADED AREA FROM TEMPLATE,  
TYP.



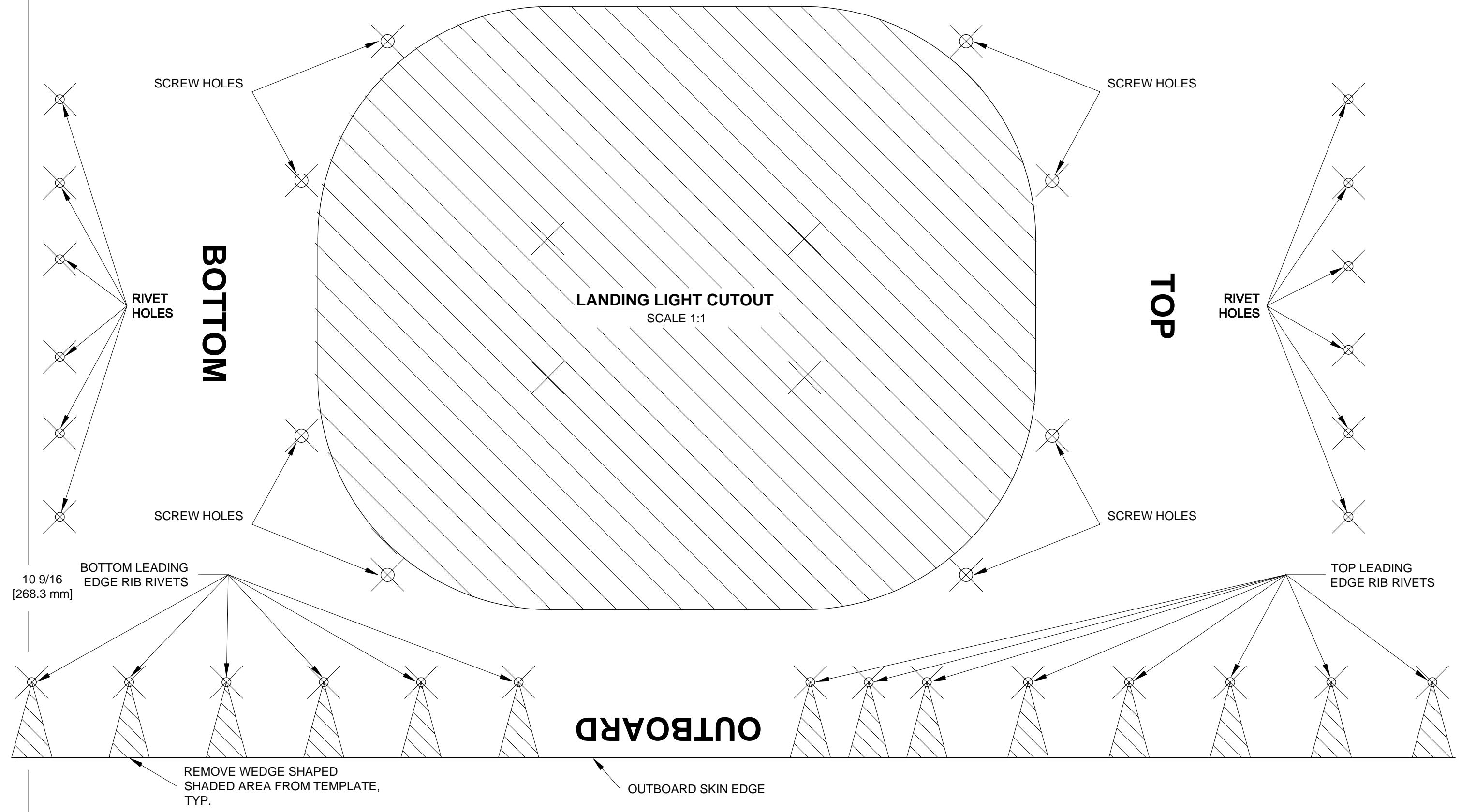
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# INBOARD

## LEFT WING TEMPLATE

NOTE: CHECK PRINTED SCALE 1:1 PER SECTION 3 BEFORE USING THE TEMPLATE!





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