

* REFER TO FORWARD WING SPAR. OPENING MUST BE CUT BY BUILDER.

DUE TO THE WIDE SELECTION OF SWITCHES, CIRCUIT BREAKERS, CONNECTORS AND WIRE WHICH MAY BE USED TO CUSTOMIZE YOUR AIRCRAFT, THESE ITEMS ARE "BUILDER SUPPLIED". REFER TO LANDING LIGHT INSTALLATION MANUAL FOR WIRING DETAILS.

RIGHT HAND FORWARD WING SPAR SHOWN

RRR S-21 OUTBOUND 141 WING - OPTIONS LANDING LIGHTS INSTALLATION

MD5498
REV. - ORIG

RANS S-21 OUTBOUND

PAGE

006H-06

141 WING - OPTIONS - LANDING LIGHTS INSTALLATION

KAAC0109

<u>#</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>QUANTITY</u>
1.	Landing Light	KSES0077	2
2.	Landing Light Mount - LH	KPWI0704-L	2
3.	Landing Light Mount - RH	KPWI0704-R	2
4.	Landing Light Lens	KPWI0705	2
5.	1/8" Aluminum Rivet - Cherry Q	AAPQ-43	16
6.	3/16" Bolt	AN3-3A	4
7.	3/16" Thick Washer	AN960-10	8
8.	3/16" Star Lock Washer	MS35333-39	4
9.	Silicone Seal *	----	0
10.	Loctite Blue *	----	0
11.	Landing Light Cut-Out Template	KPWI0708	1

* Builder Supplied

9/11/2018
REV. - ORIG

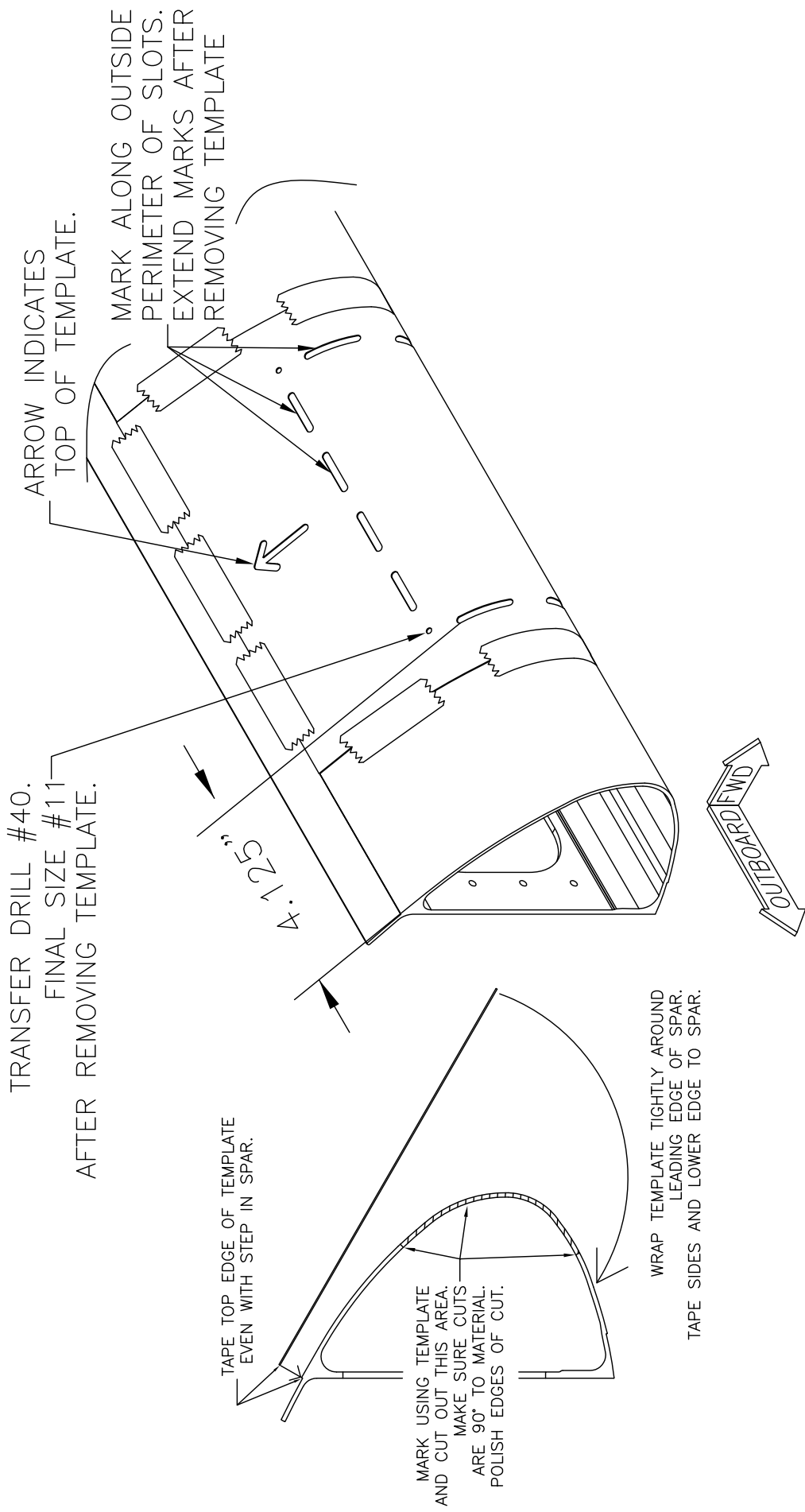
OPTIONAL LANDING LIGHTS INSTALLATION

- Optional landing lights may be installed during or after Wing Assembly is complete.
- 1. Refer to **SECTION 006H** and collect all the parts shown on the part pages for the Landing Lights. Extra care should be taken when working with the Lexan Light Lens as they may scratch easily.
- 2. Cut an opening in each Forward Wing Spar per **FIGURE 06-01A**. Polish all cut edges with fine sand paper. Also polish the tip end of each spar to help prevent scratching the Landing Light Lens when fitting up. Refer to **FIGURE 06-01B** for final cutout dimensions.
- 3. Cut Landing Light Lens about 1/8" outside of the formed trim lines. This will allow final trimming during fit up.
- 4. Slip Lens into Spar. Center raised area within cut-out in spar. The top edge will rest against the spar radius.
- 5. The lower edge will need to be trimmed after riveting the Bottom Wing Skin in place. The lower edge will set against the rivets and will allow the Lens to snap into place. Remove Lens from spar.
- 6. Assemble Landing Light to Landing Light Mounts.
- 7. Position assembly in spar, centered on opening. Refer to **FIGURE 06-01C**. Tape in place and view from the front. Adjust as needed. Transfer drill #30 through Mount holes. Remove and proceed with assembly of wing.

NOTE: Remember to route Landing Light wires during Wing assembly. Route wires in wing and out to the Landing Light through the grommets in the wing ribs. Leave extra length to reach through the fuselage. If wings are assembled the wire may be ran inside the leading edge spar, then routed to the aft closer to the root. Be sure wire does not interfere with any controls.

(AFTER PAINTING OF WING)

8. With Wing Tip removed, slip Landing Light Lens into position. Trim the Lower edge to be tight against the row of rivets. The pressure will keep the Lens pressed against the inside of the spar.
9. Apply painters tape flush to cut opening in spar. Apply tape, on the Lens, flush with the outside edge of the raised area.
10. Apply a small bead of clear silicone seal between the tapes and smoothen with your finger to form a fillet. Remove masking tape before the silicone hardens. This will aid in preventing the penetration of water and dirt.
11. Access Landing Light mounting area through lower inspection opening. Rivet Landing Light with mounts to back side of wing spar using previously drilled holes. Note that the mounts have slots which allow the light to be angled as necessary for proper light beam convergence. After adjusting, tighten bolts.



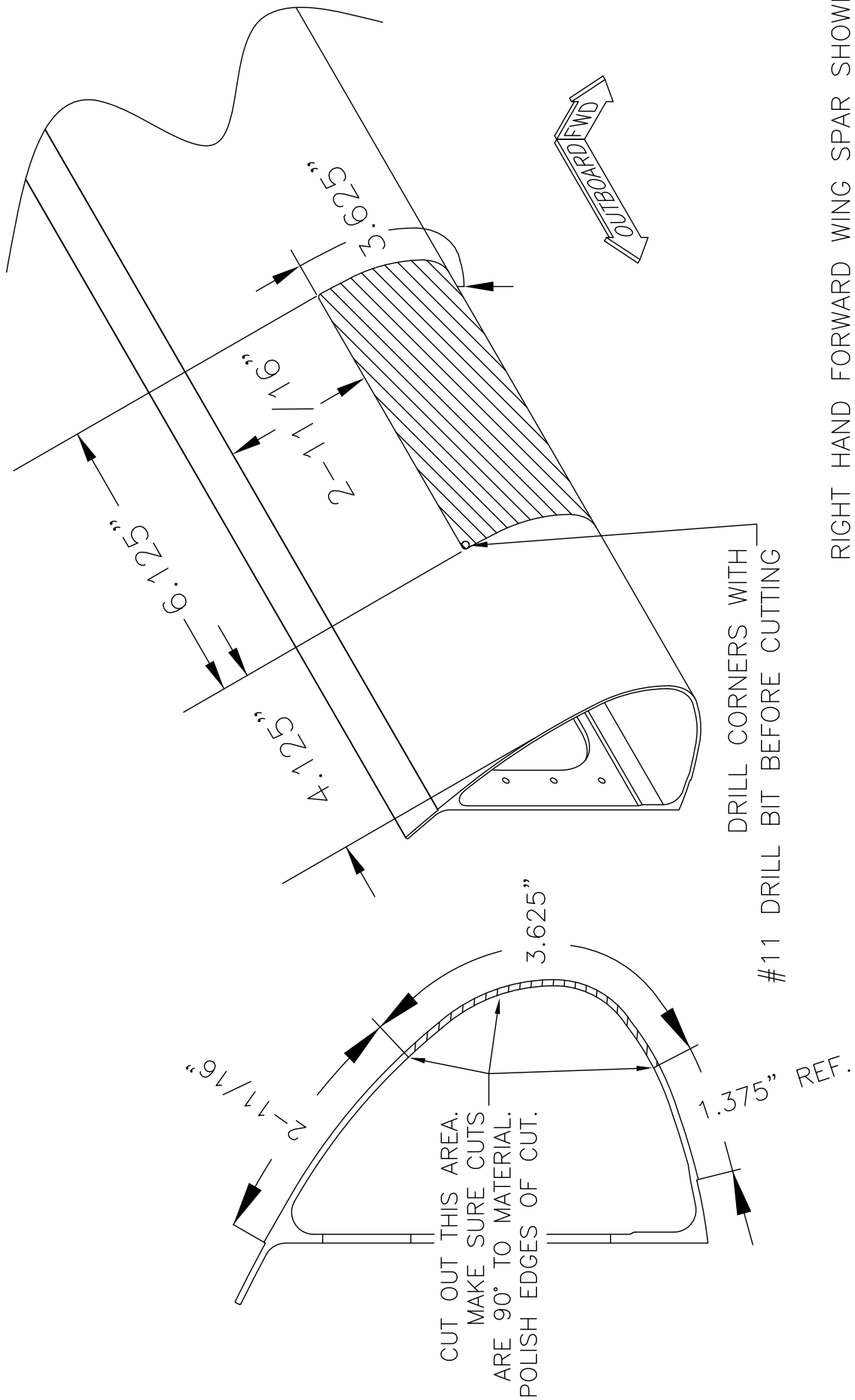
RIGHT HAND FORWARD WING SPAR SHOWN

RRANES S-21 OUTBOUND
141 WING - LANDING LIGHT - SPAR MODIFICATION
FIGURE 06-01A

MARK USING TEMPLATE
AND CUT OUT THIS AREA.
MAKE SURE CUTS
ARE 90° TO MATERIAL.
POLISH EDGES OF CUT.

WRAP TEMPLATE TIGHTLY AROUND
LEADING EDGE OF SPAR.
TAPE SIDES AND LOWER EDGE TO SPAR.

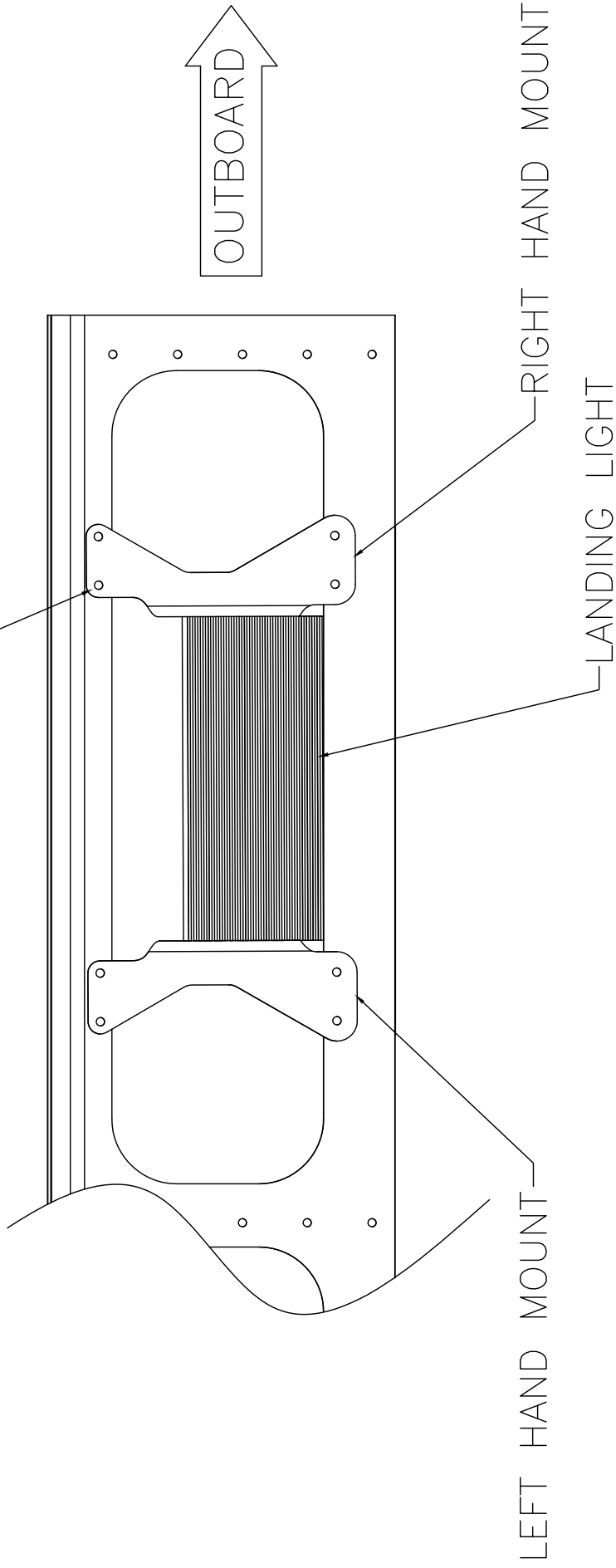
TAPE TOP EDGE OF TEMPLATE
EVEN WITH STEP IN SPAR.



RIGHT HAND FORWARD WING SPAR SHOWN

RAYTHEON S-21 OUTBOUND
141 WING - LANDING LIGHT - SPAR MODIFICATION
FIGURE 06-01B

ASSEMBLE LANDING LIGHT TO MOUNTS.
CENTER LANDING LIGHT IN SPAR OPENING.
TRANSFER DRILL #30 (8 PLACES)
THROUGH MOUNTS.



AFT SIDE OF RIGHT HAND FWD SPAR SHOWN

RRAMES S-21 OUTBOUND
141 WING - LANDING LIGHT MOUNTING
FIGURE 06-01C