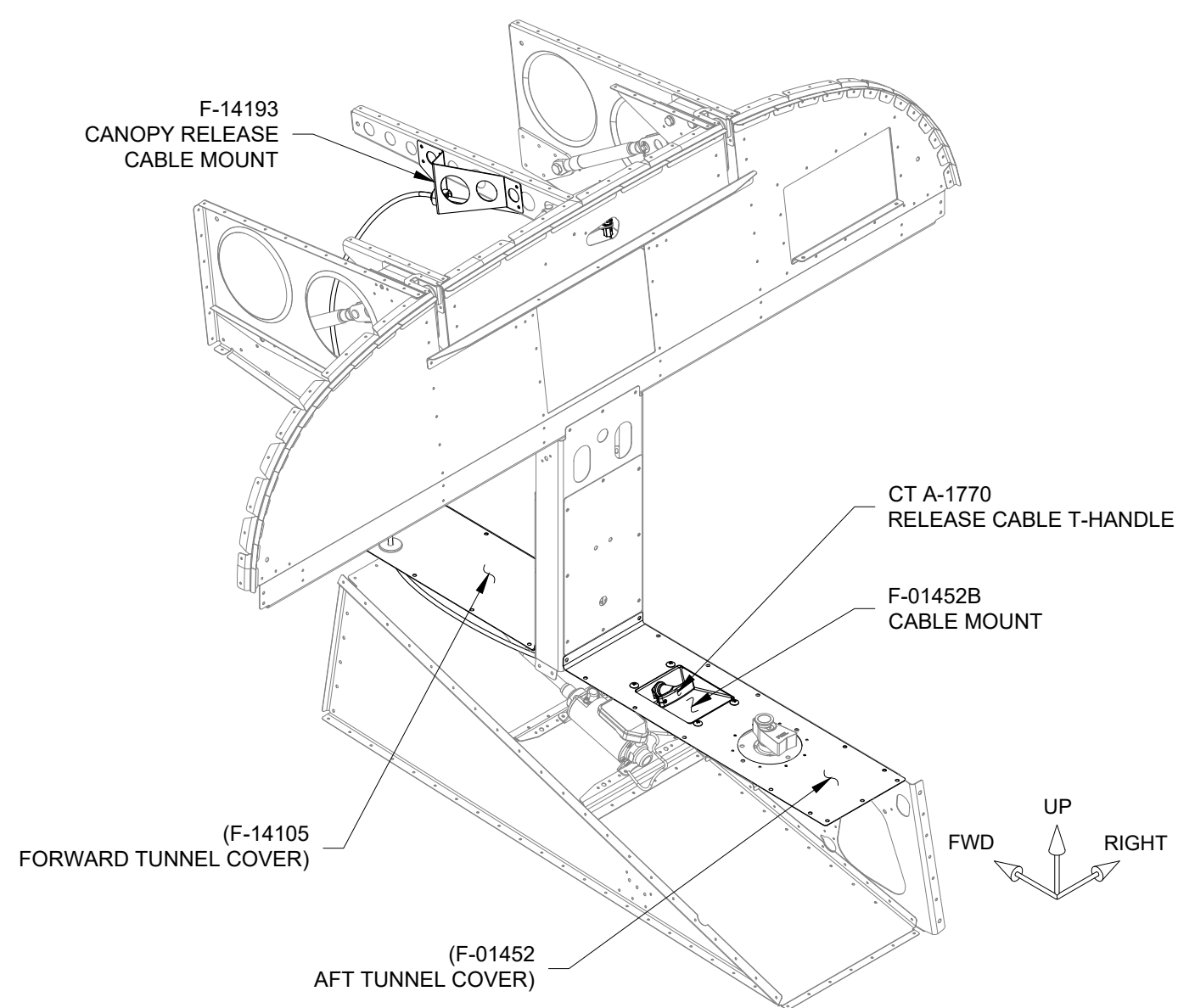
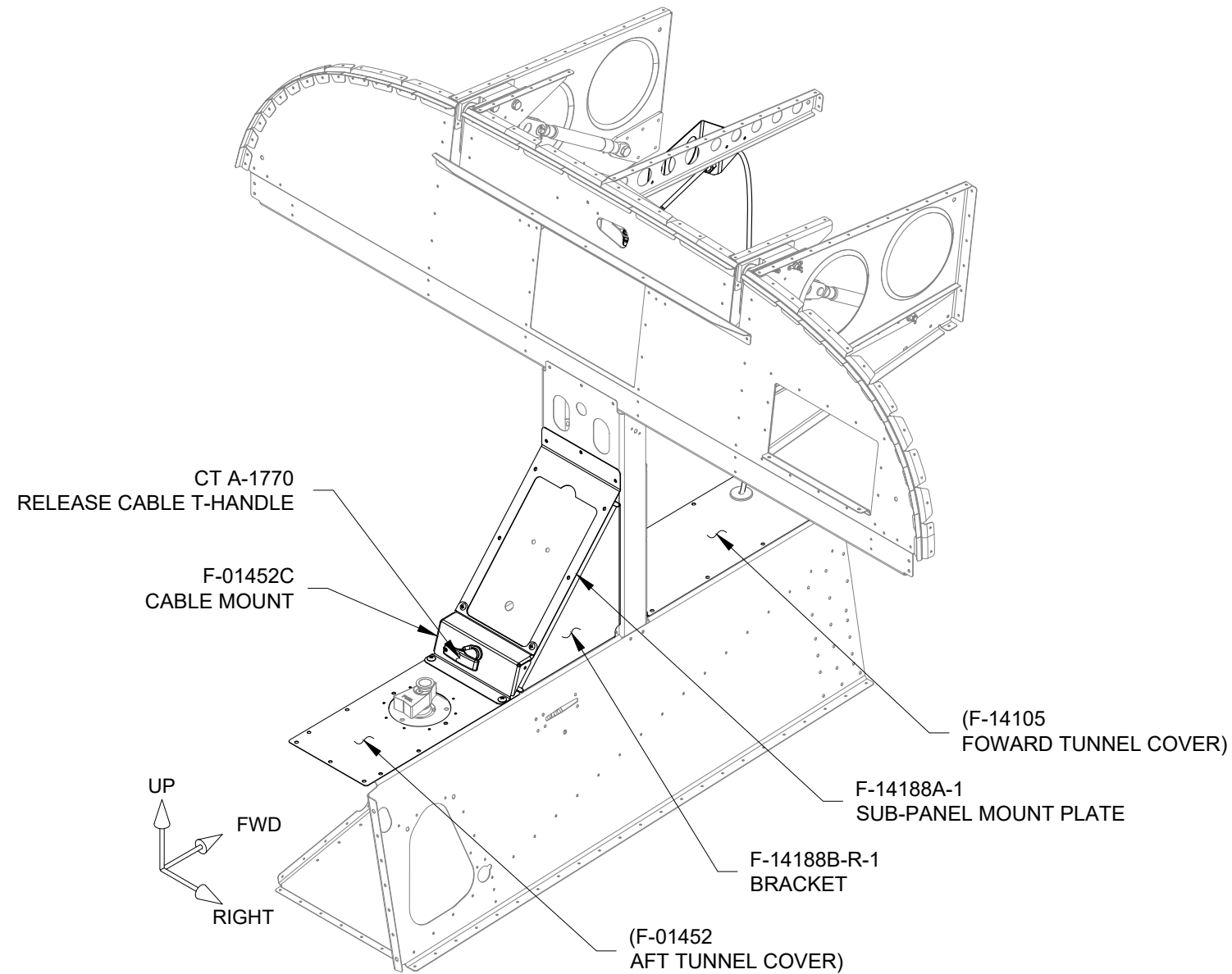


# SECTION OP-63:

## REMOTE CANOPY RELEASE



F-01452B CABLE MOUNT AND ROUTING  
(SOME PARTS NOT SHOWN FOR CLARITY)



F-01452C CABLE MOUNT AND ROUTING  
(SOME PARTS NOT SHOWN FOR CLARITY)

**NOTE:** Special tools required to complete this section include a **DIE GRINDER** and a **CARBIDE BURR**.

**NOTE:** This remote canopy release system reverses the direction of operation of the canopy release mechanism and will require removing material from existing structures. Please read this entire document and the referenced RV-14 KAI Sections 35 and 59 before starting.

**NOTE:** For all drilling operations, be aware of debris between parts as drilling progresses. Disassemble and clean every few holes or as necessary.

**Step 1:** Determine the mounting location of the CT A-1770 Release Cable T-Handle and the cable routing to the F-14193 Canopy Release Cable Mount:

If the 14 POWER MOD INSTALL KIT (RV-14 KAI 59) is not used, the suggested installation is using the F-01452B Cable Mount in the F-01452 Aft Tunnel Cover. See Figure 1.

If the 14 POWER MOD INSTALL KIT is used, the suggested installation is using the F-01452C Cable Mount at the base of the fuse panel. See Figure 2 and skip to the next page.

If mounting the CT A-1770 Release Cable T-Handle to the instrument panel, you must determine the best cable routing to the F-14193 Canopy Release Cable Mount and follow all applicable steps starting on Page 4.

**NOTE:** Perform Step 2 through Step 10 if installing the F-01452B. Skip to the next page if installing the F-01452C.

**Step 2:** Remove the F-01452 from the aircraft (if installed). Attach the TOOL-00092 Drill Template to the F-01452 as shown in Figure 3.

**Step 3:** Match-Drill #12 the four mounting hole corners as shown in Figure 3.

**Step 4:** Match-Drill #19 the four F-01452B mounting screw holes as shown in Figure 3.

**Step 5:** Mark the outer perimeter of the four slots as shown in Figure 3. Remove the TOOL-00092.

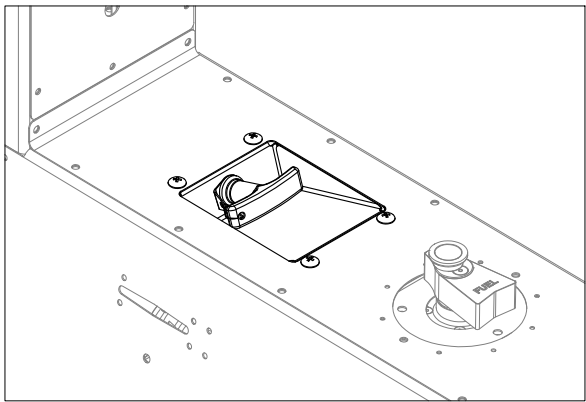
**Step 6:** Using a TOOL 3" CUTTING DISC (or similar) in a die grinder, cut along the lines marked in the previous step to create an opening in the F-01452 as shown in Figure 4. Deburr and paint as desired.

**Step 7:** Attach nutplates to the F-01452B. See Figure 5.

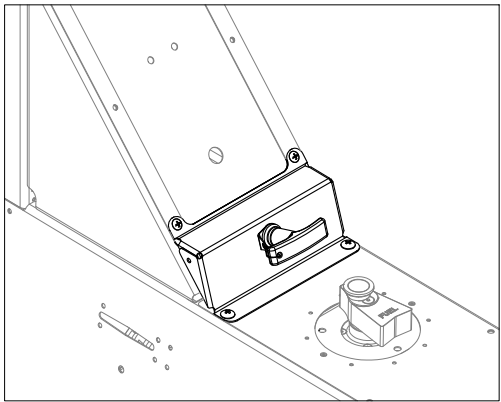
**Step 8:** Attach the TOOL-00092 to the F-01452B as shown in Figure 5.

**Step 9:** Match-Drill #30 the hole in each side of F-01452B. Remove the TOOL-00092. Deburr and rivet as shown in Figure 6. Paint as desired.

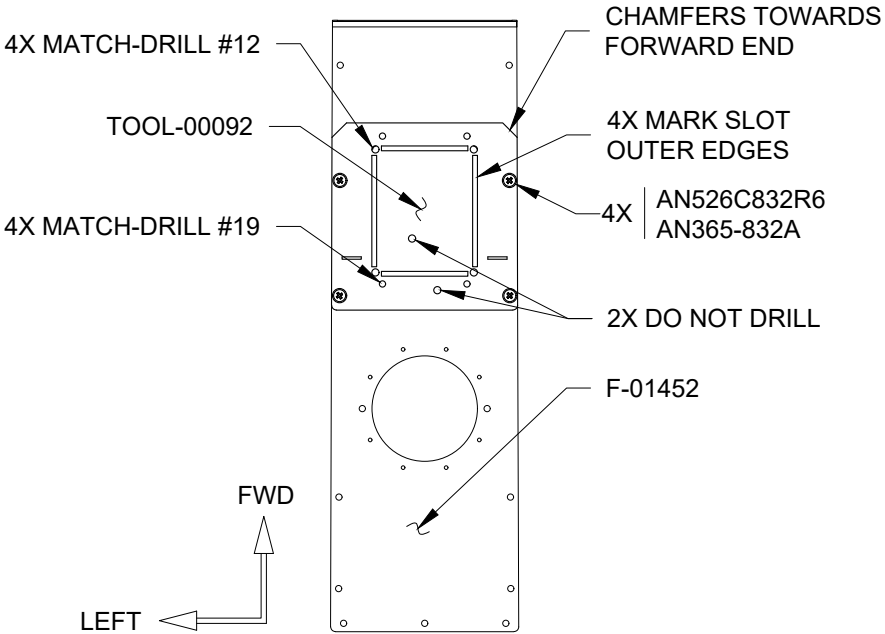
**Step 10:** Attach the F-01452B to the modified F-01452 as shown in Figure 7.



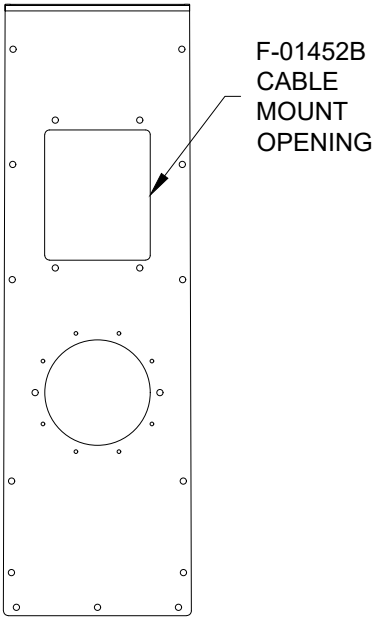
**FIGURE 1:** F-01452B CABLE MOUNT



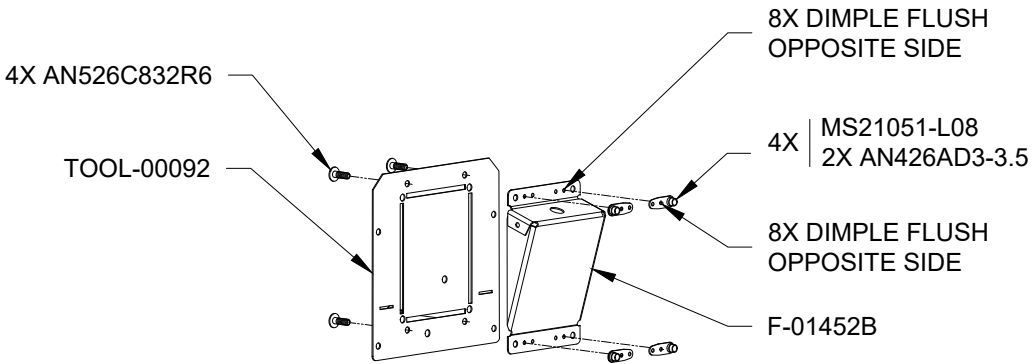
**FIGURE 2:** F-01452C CABLE MOUNT



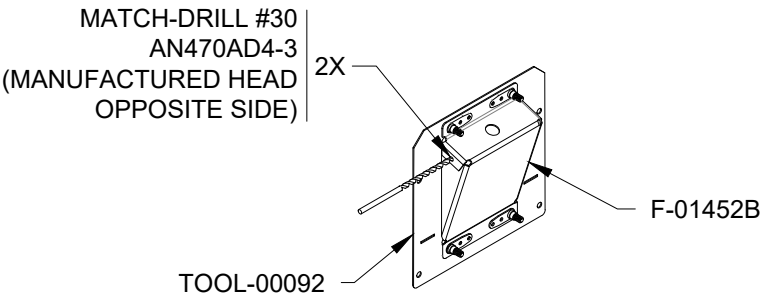
**FIGURE 3:** TOOL-00092 DRILL TEMPLATE INSTALLATION



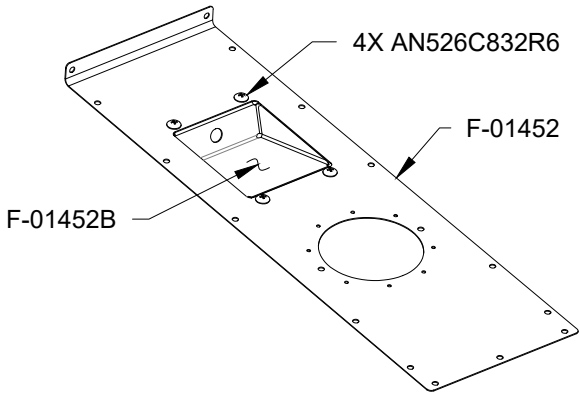
**FIGURE 4:** MODIFIED F-01452



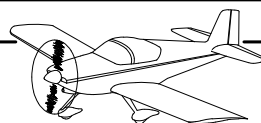
**FIGURE 5:** F-01452B NUTPLATE INSTALLATION



**FIGURE 6:** MATCH-DRILLING F-01452B



**FIGURE 7:** F-01452B INSTALLED IN F-01452



**NOTE: Perform Steps 1-6 on this page if installing the F-01452C.**

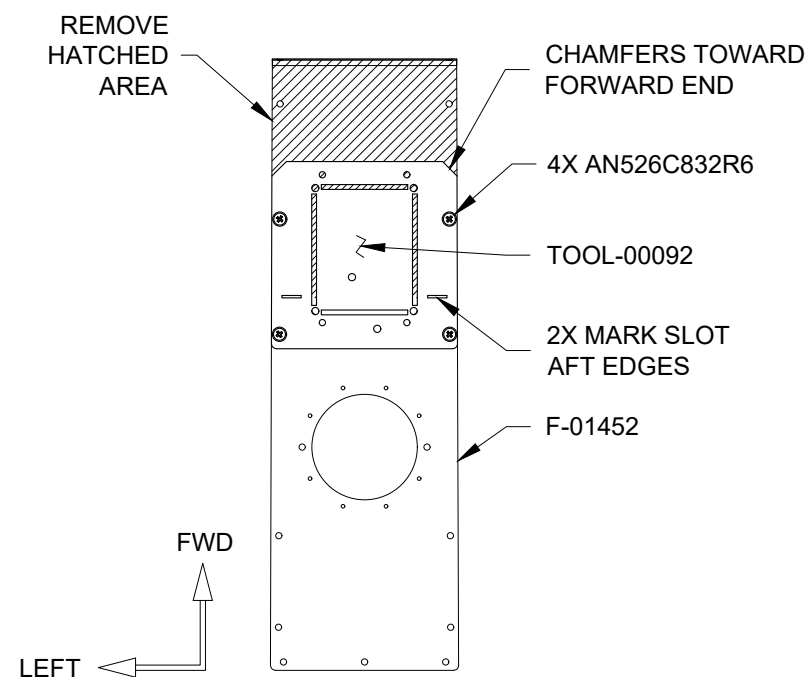
**NOTE: The F-14188A is replaced with F-14188A-1 Sub-Panel Mount Plate. The F-14188B-L & -R are replaced with F-14188B-L-1 & -R-1 Brackets. Prepare replacement parts as described in RV-14 KAI 59.**

Step 1: Remove the F-01452 Aft Tunnel Cover from the aircraft (if installed). Attach the TOOL-00092 Drill Template to the F-01452 as shown in Figure 1. Mark a trim line on the F-01452 using the aft edges of the two outboard narrow slots. Remove the TOOL-00092.

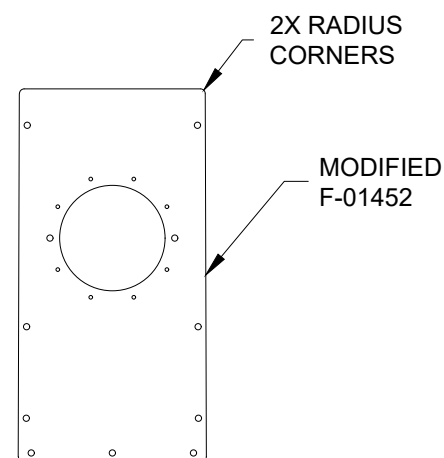
Step 2: Trim the F-01452 at the marks made in Step 1. Radius the corners. Deburr and paint as desired.

Step 3: Trim the F-14188A-1 as shown in Figure 3. Radius the corners. Deburr and paint as desired.

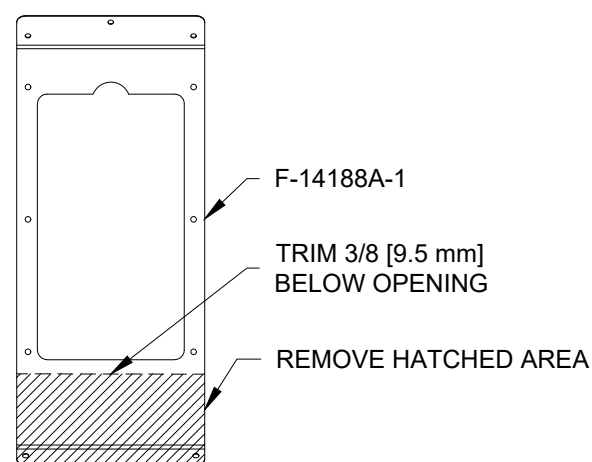
Step 4: Install the modified F-01452, F-14188B-L-1 & -R-1, modified F-14188A-1, and F-00038 Power Module Cover Plate on the aircraft as described in RV-14 KAI 59.



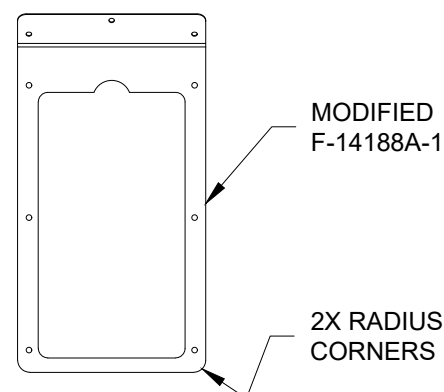
**FIGURE 1: TOOL-00092 DRILL TEMPLATE INSTALLATION**



**FIGURE 2: MODIFIED F-01452**



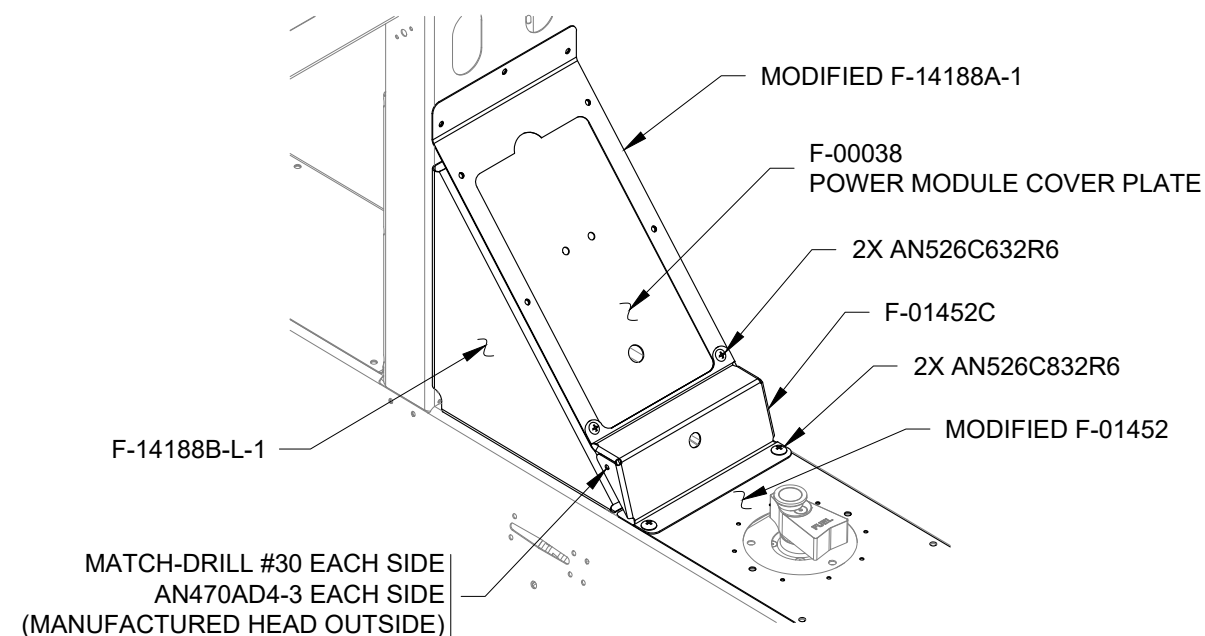
**FIGURE 3: TRIMMING THE F-14188A-1**



**FIGURE 4: MODIFIED F-14188A-1**

Step 5: Temporarily attach the F-01452C to the tops of the modified F-01452 and the modified F-14188A-1 using the hardware called out in Figure 5.

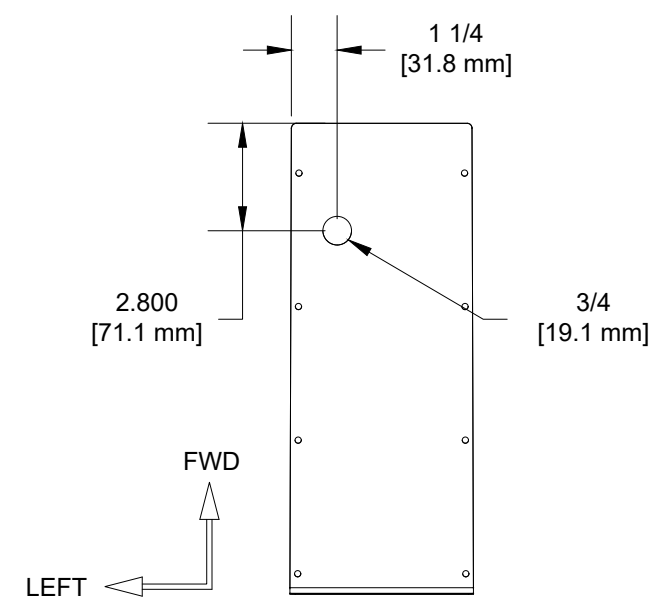
Step 6: Match-Drill one hole in each side of the F-01452C. Remove, deburr, and rivet the F-01452C as shown in Figure 5. Paint as desired.



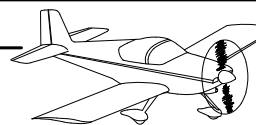
**FIGURE 5: F-01452C INSTALLED**

**NOTE: Perform Step 7 if installing the F-01452B or the F-01452C.**

Step 7: Remove the F-14105 Forward Tunnel Cover (if installed). Drill a hole in the F-14105 as depicted in Figure 6. Deburr the hole and install an AN931-4-12 grommet. Reinstall the F-14105.



**FIGURE 6: MODIFYING THE F-14105**



**NOTE: If the F-01493-1 Fwd Fuselage Channel is installed skip Steps 1 and 2.**

**Step 1:** Place the F-14193 on the left side of the F-01493 Fwd Fuselage Channel web as shown in the detail view of Figure 1. Align the upper edge of the F-14193 with the upper flange bend tangent line of the F-01493. Clamp the F-14193 in place.

**Step 2:** Match-Drill the F-01493, cleco as you go. See Figure 1. Remove the F-14193. Deburr and prime (if desired).

**Step 3:** Rivet the F-14193 to the F-01493 (or F-01493-1) as shown in the detail view of Figure 1.

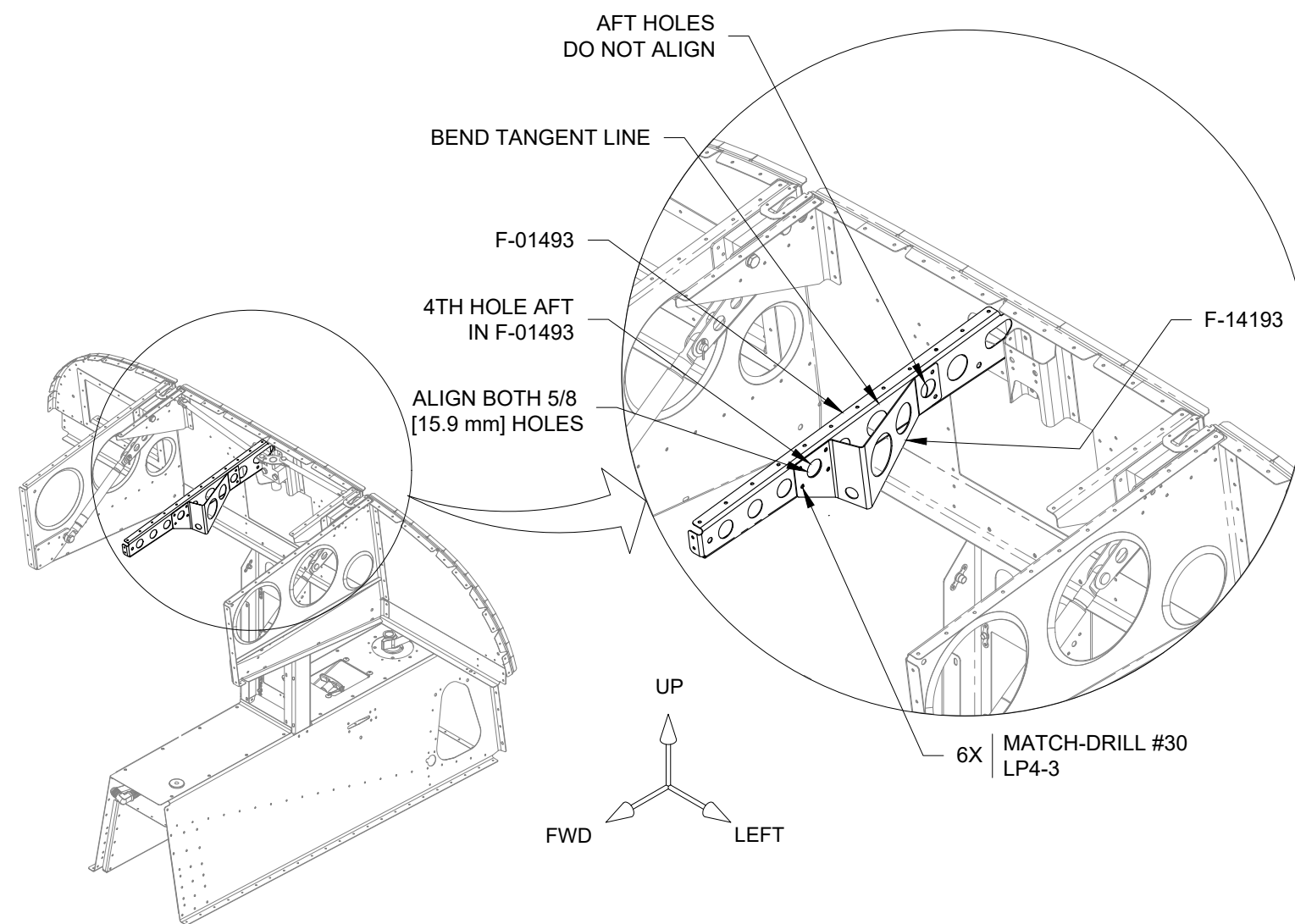
**Step 4:** Determine the cable housing length of the CT A-1770 for your installation as shown in Figure 2:

Route the CT A-1770 through the F-01452B or F-01452C cable mount (or your alternate mounting location), up through the AN931-4-12 in the F-14105 (if applicable) and through the CT A-740 Cable Clamp loosely installed in the F-14193. See Figure 2.

Extend the cable housing of the CT A-1770 beyond the CT A-740 Cable Clamp far enough to remove excess housing throughout the routing. Measure the cable housing cutoff distance shown in Figure 2. Mark the cutoff location on the cable housing.

**Step 5:** Remove the CT A-1770 from the aircraft.

**Step 6:** Pull the CT A-1770 T-handle out of the cable housing no less than the distance shown in Figure 3. Cut the cable housing and wire to final length using a cut-off wheel.

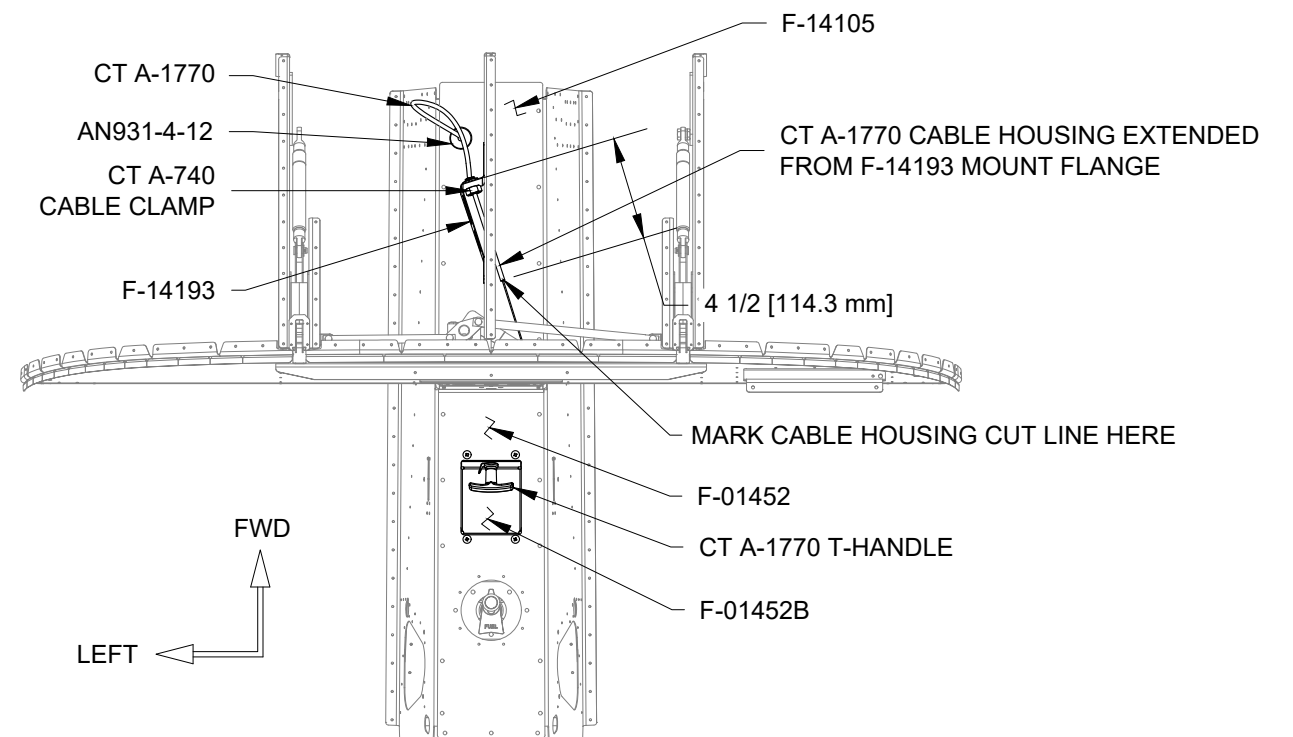


**FIGURE 1: F-14193 CANOPY RELEASE CABLE MOUNT INSTALLATION**  
(VIEW FROM LEFT FRONT)

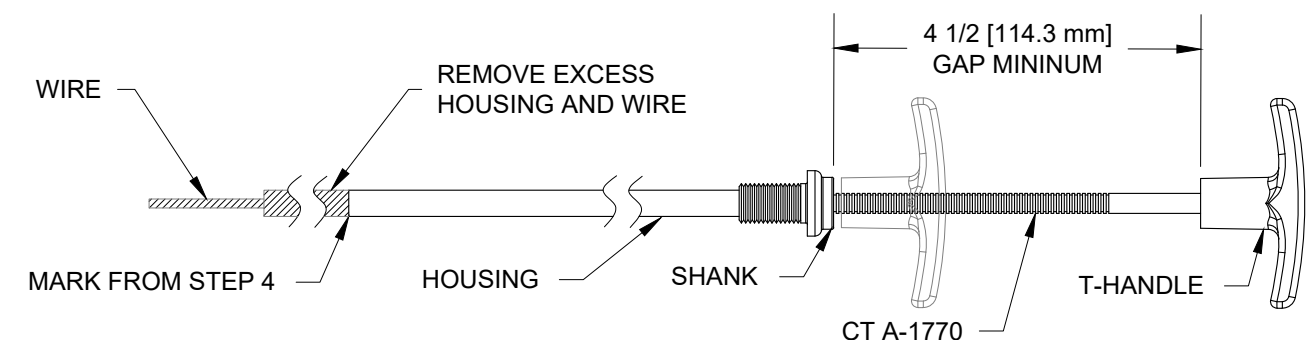
**Step 7:** Drill #30 a hole in one wing of the CT A-1770 T-handle. See Figure 4.

**Step 8:** Paint the CT A-1770 T-handle with diagonal yellow stripes, signifying it is an emergency use item. See Figure 4.

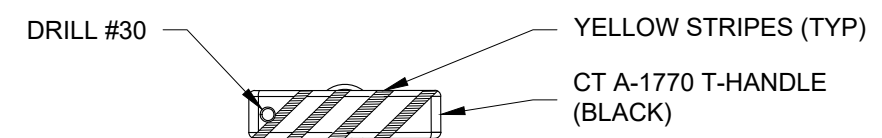
**Step 9:** Make and install a "CANOPY JETTISON" placard near the CT A-1770 T-handle mounting location.



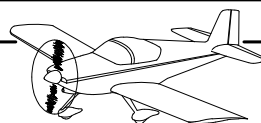
**FIGURE 2: TOP VIEW OF CT A-1770 RELEASE CABLE ROUTING**  
(ROUTING SIMILAR USING F-01452C)



**FIGURE 3: TRIMMING THE CT A-1770**



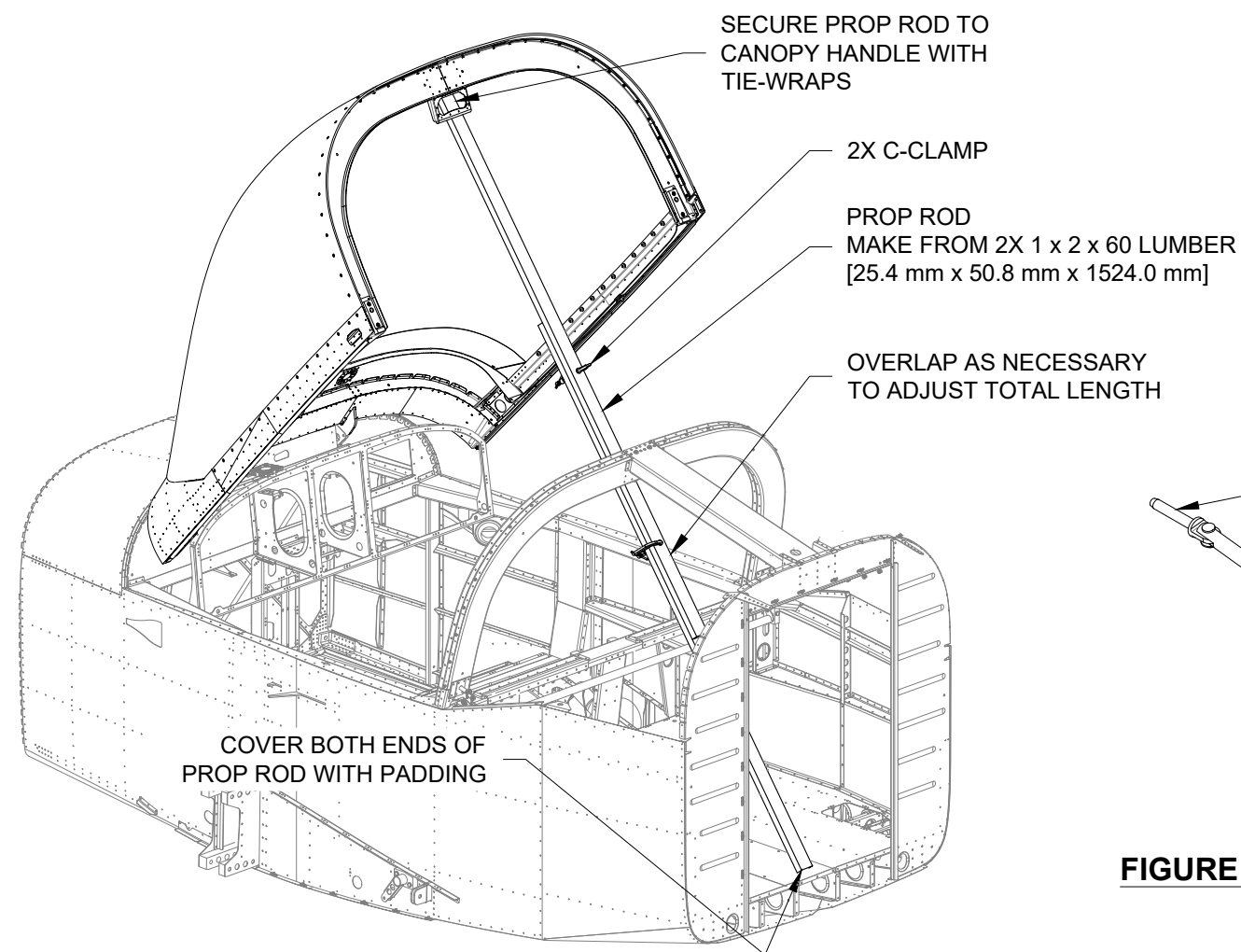
**FIGURE 4: STRIPING AND DRILLING THE T-HANDLE**



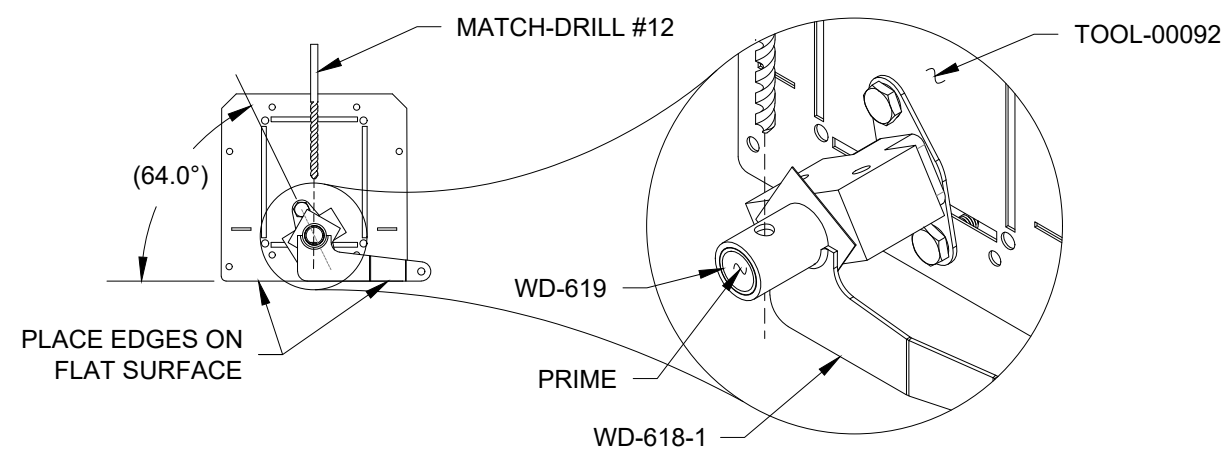
**Step 1:** Prop the canopy in the open position (if the canopy is installed) as described in Figure 1.

**NOTE:** The canopy is no longer attached to the fuselage once the canopy release mechanism is removed, the canopy may be damaged if the prop rod is removed.

**Step 2:** Remove the canopy release mechanism (if installed). Refer to Figure 2 and RV-14 KAI 35. The canopy will sit safely in this propped-open position as long as the prop rod stays in place.



**FIGURE 1: PROP CANOPY OPEN**



**FIGURE 4: RELEASE MECHANISM DRILLING**

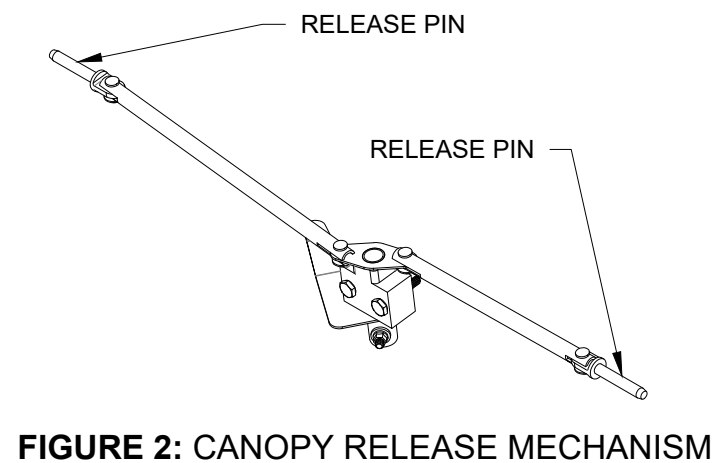
**Step 3:** Disassemble the canopy release mechanism and attach parts to the TOOL-00092 Drill Template as shown in Figure 3. Refer to RV-14 KAI 35.

**Step 4:** If retrofitting the remote canopy release, match-drill #12 a new hole in the WD-619 Canopy Release Assembly using the existing hole in the WD-618-1 Canopy Release Assembly (Arm). See Figure 4. Refer to RV-14 KAI 35 if using an undrilled WD-618-1.

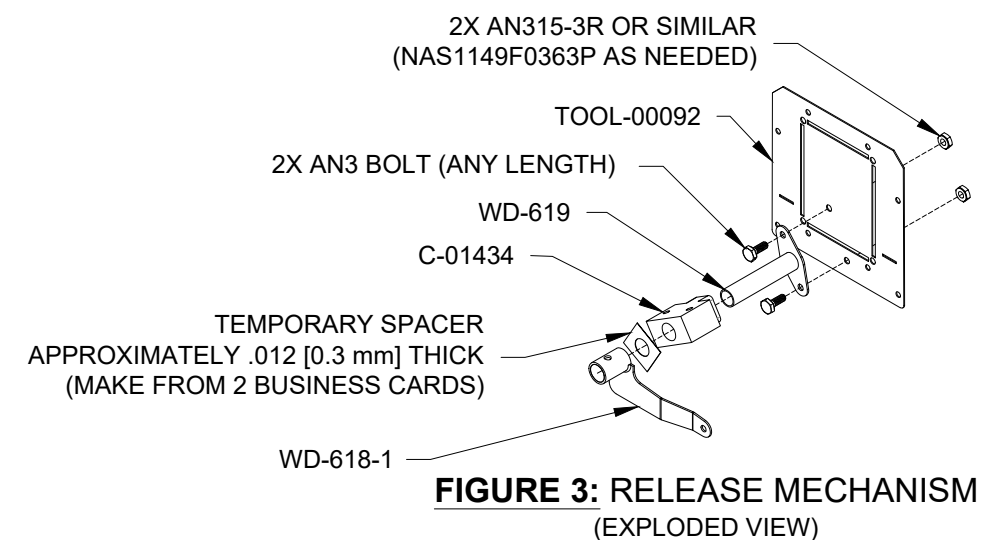
**Step 5:** Remove the release mechanism from the TOOL-00092. Discard the temporary spacer. Deburr as necessary. Prime the interior of the WD-619 tube.

**Step 6:** Attach the VA-181-1 Wire Nut to the WD-618-1 as shown in Figure 5. The VA-181-1 must rotate freely in the WD-618-1.

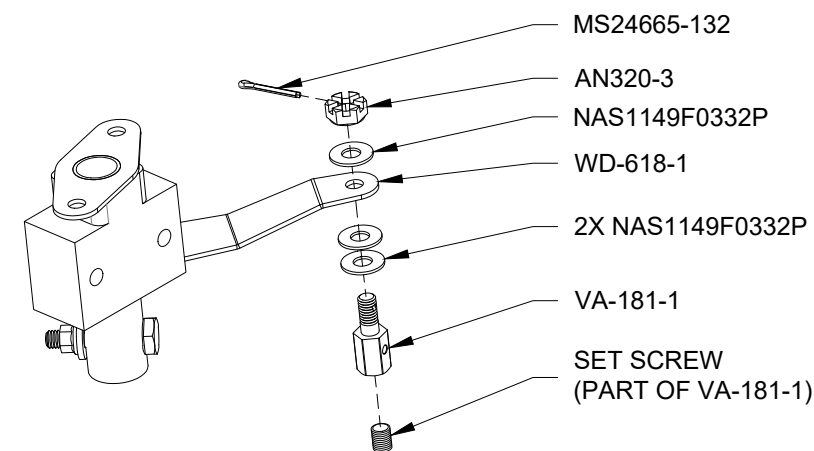
**Step 7:** Reassemble the canopy release mechanism as described in RV-14 KAI 35, except use the new alignment hole created in the WD-619 during Step 4.



**FIGURE 2: CANOPY RELEASE MECHANISM**



**FIGURE 3: RELEASE MECHANISM (EXPLODED VIEW)**



**FIGURE 5: VA-181-1 ATTACHMENT**



**NOTE: If using the F-01493-1 Fwd Fuselage Channel and the C-01436-1 Pivot Block Channel, skip Step 1.**

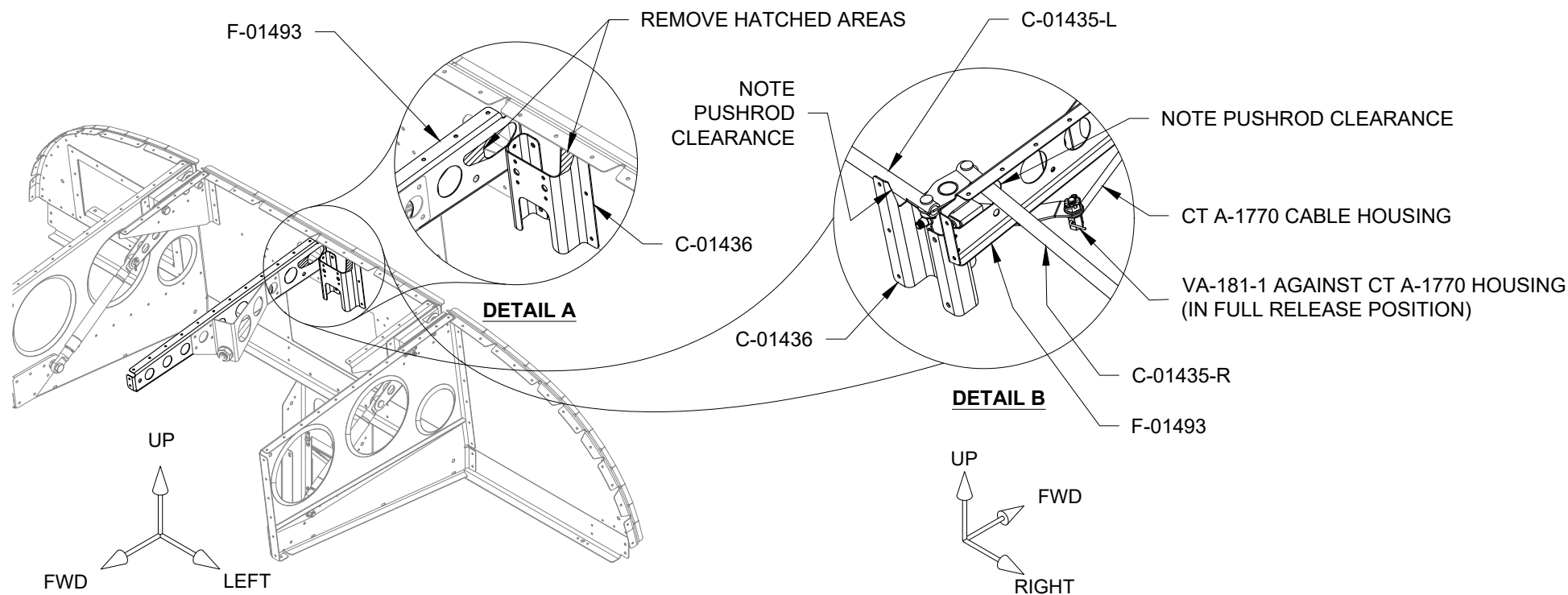
Step 1: Use a carbide burr in a die grinder (or similar) to remove the hatched areas shown in Detail A of Figure 1 to provide at least 1/8 in. [3.2 mm] of clearance for the C-01435-L & -R Canopy Release Pushrods through their full range of motion. Deburr and prime as desired.

Step 2: Install the canopy release mechanism. Refer to RV-14 KAI 35.

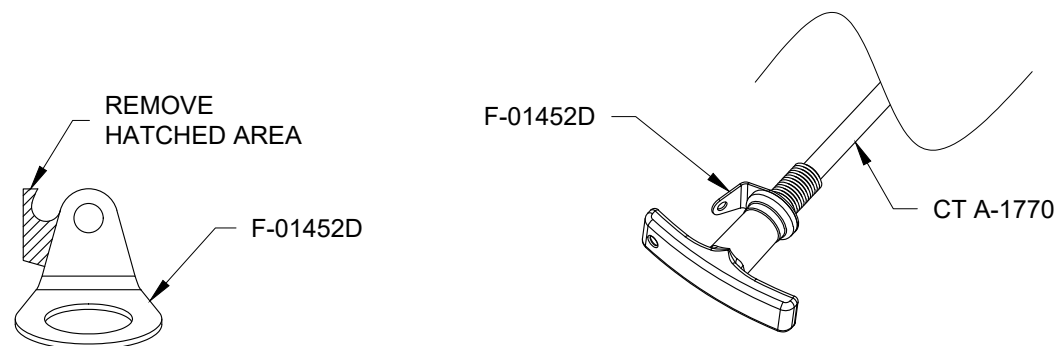
**WARNING: VERIFY PUSHROD CLEARANCE THROUGH THE FULL RANGE OF MOTION OF THE CANOPY RELEASE MECHANISM. REPEAT STEP 1 AS REQUIRED.**

Step 3: Remove the tab from the F-01452D Security Wire Anchor. See Figure 2.

Step 4: Place the F-01452D on the CT A-1770 as shown in Figure 3.



**FIGURE 1: TRIMMING F-01493 & C-01436**



**FIGURE 2: TRIM F-01452D**

**FIGURE 3: F-01452D ON CT A-1770**

Step 5: Install the CT A-1770 (with the F-01452D attached) in the F-01452B or F-01452C (or other chosen location). Secure the CT A-1770 with the included hardware. See Page 1.

Step 6: Route the CT A-1770 cable housing up through the AN931-4-12 in the F-14105 and through the CT A-740 cable clamp. Refer to Figure 2 on Page 4.

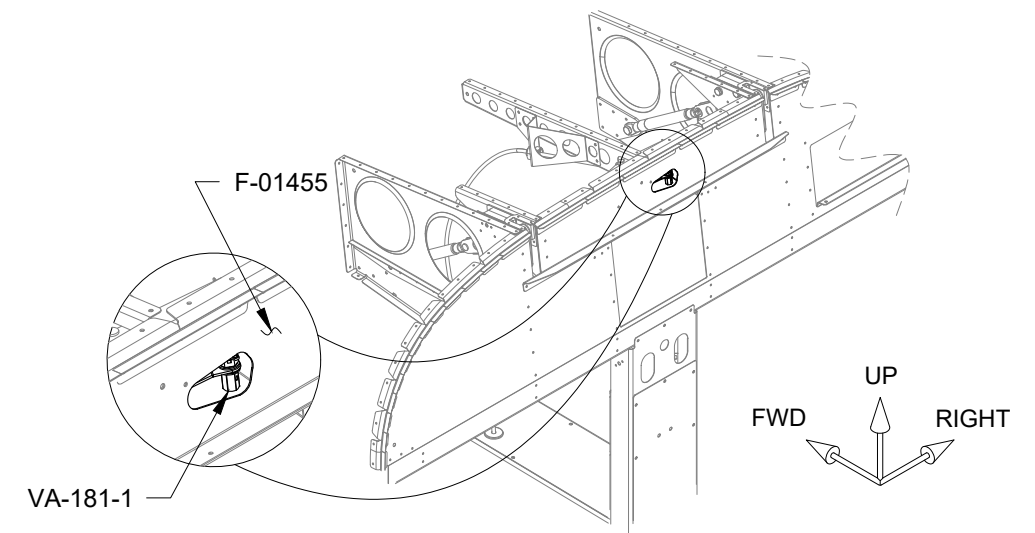
Step 7: Verify that 4 1/2 in. [114.3 mm] of the CT A-1770 cable housing extends beyond the CT A-740 cable clamp. Refer to Figure 2 on Page 4. Tighten the CT A-740 cable clamp.

Step 8: Secure the CT A-1770 cable housing to the adjacent structures using tie-wraps if/as necessary to prevent chaffing.

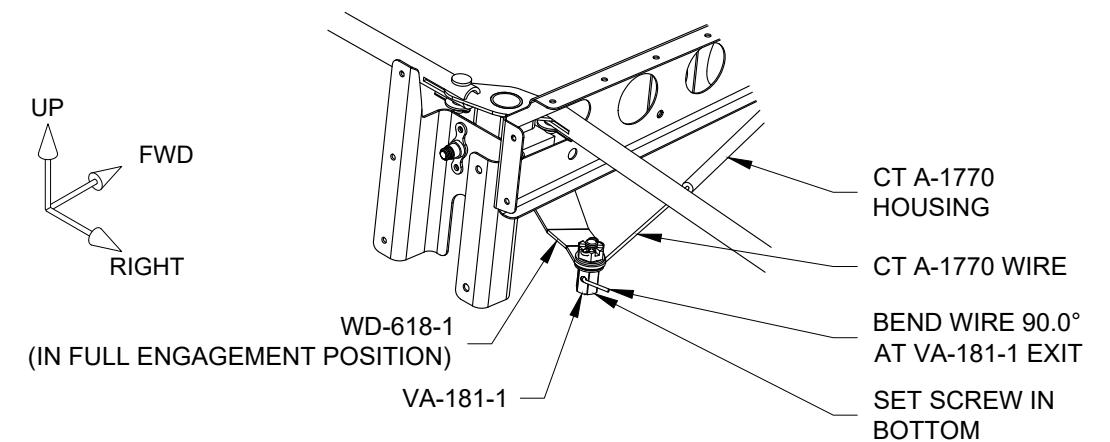
Step 9: Rotate the WD-618-1 Canopy Release Assembly (Arm) aft until the VA-181-1 Wire Nut is approximately 3/8 in. [9.5 mm] forward of the F-01455 Sub Panel. See the detail view in Figure 4. Verify the canopy release pins are engaged with the canopy hinges at this position.

**NOTE: Do not allow the VA-181-1 to move aft of the F-01455 when the CT A-1770 T-handle is fully inserted, this will prevent the release mechanism from fouling on the F-01455 opening.**

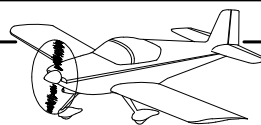
Step 10: Push the CT A-1770 T-handle fully in. Pass the CT A-1770 wire through the VA-181-1 and tighten the set screw while holding the VA-181-1 with a wrench. Bend the excess wire 90.0° (or more) around the VA-181-1. See Figure 5.



**FIGURE 4: VA-181-1 FORWARD OF F-01455**



**FIGURE 5: BENDING CT A-1770 WIRE  
(F-01455 NOT SHOWN)**



Step 1: Test the remote canopy release by pulling the CT A-1770 T-handle until the VA-181-1 Wire Nut stops against the CT A-1770 cable housing. See Page 6, Figure 1, Detail B.

Verify that the canopy release pins are retracted enough to release the canopy hinges.

If adjustment is necessary, loosen the CT A-740 cable clamp and move the CT A-1770 cable housing forward until the canopy release pins are disengaged from the canopy hinges. Tighten the CT A-740 cable clamp. Retest remote canopy release functionally.

**NOTE: Due to cable flex, the canopy release pins CANNOT be reengaged by pushing the CT A-1770 T-handle back in after the T-handle has been pulled.**

Step 2: Reengage the canopy release pins with the canopy hinges by manually rotating the WD-618-1 Canopy Release Assembly (Arm) aft until the CT A-1770 T-handle is fully inserted. This may be accomplished by using a hook-type tool and pulling on the VA-181-1 through the opening in the F-01455 Sub Panel.

Verify that the VA-181-1 does not travel aft of the F-01455 Sub Panel. Visually note the location of the VA-181-1 in relation to the F-01455 opening.

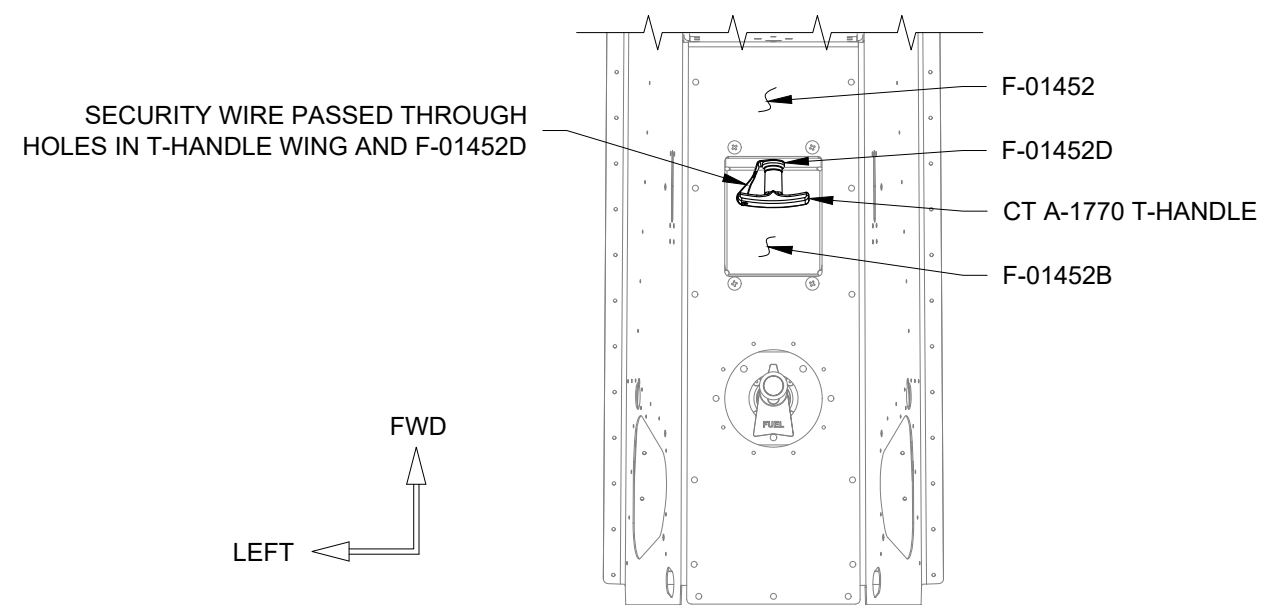
Step 3: Secure the CT A-1770 T-handle to the F-01452D Security Wire Anchor using a single strand of copper wire approximately 3 in. [76.2 mm] long. Twist the wire ends together. See Figure 1.

This security wire can be made by removing a single wire strand (approximately 0.016 in. [0.40 mm] diameter) from a piece of #10 AWG copper wire.

**NOTE: The security wire is intended to be a visual indicator. Do not use stainless steel safety wire or a tie-wrap. The security wire must be easily breakable in case of emergency canopy release operation.**

**WARNING: Verify the integrity of the security wire prior to each flight to ensure that the canopy release mechanism has not been activated. Also visually verify the location of the VA-181-1 through the opening in the F-01455 Sub Panel. These inspections should be on the pre-flight checklist.**

Step 4: Remove the tie-wraps and prop rod from the canopy. Verify proper canopy operation.



**FIGURE 1: CT A-1770 T-HANDLE  
SECURITY WIRE INSTALLATION**

(TOP VIEW OF F-01452B SHOWN, ALL OTHER INSTALLATIONS SIMILAR)