TOTAL PERFORMANCE
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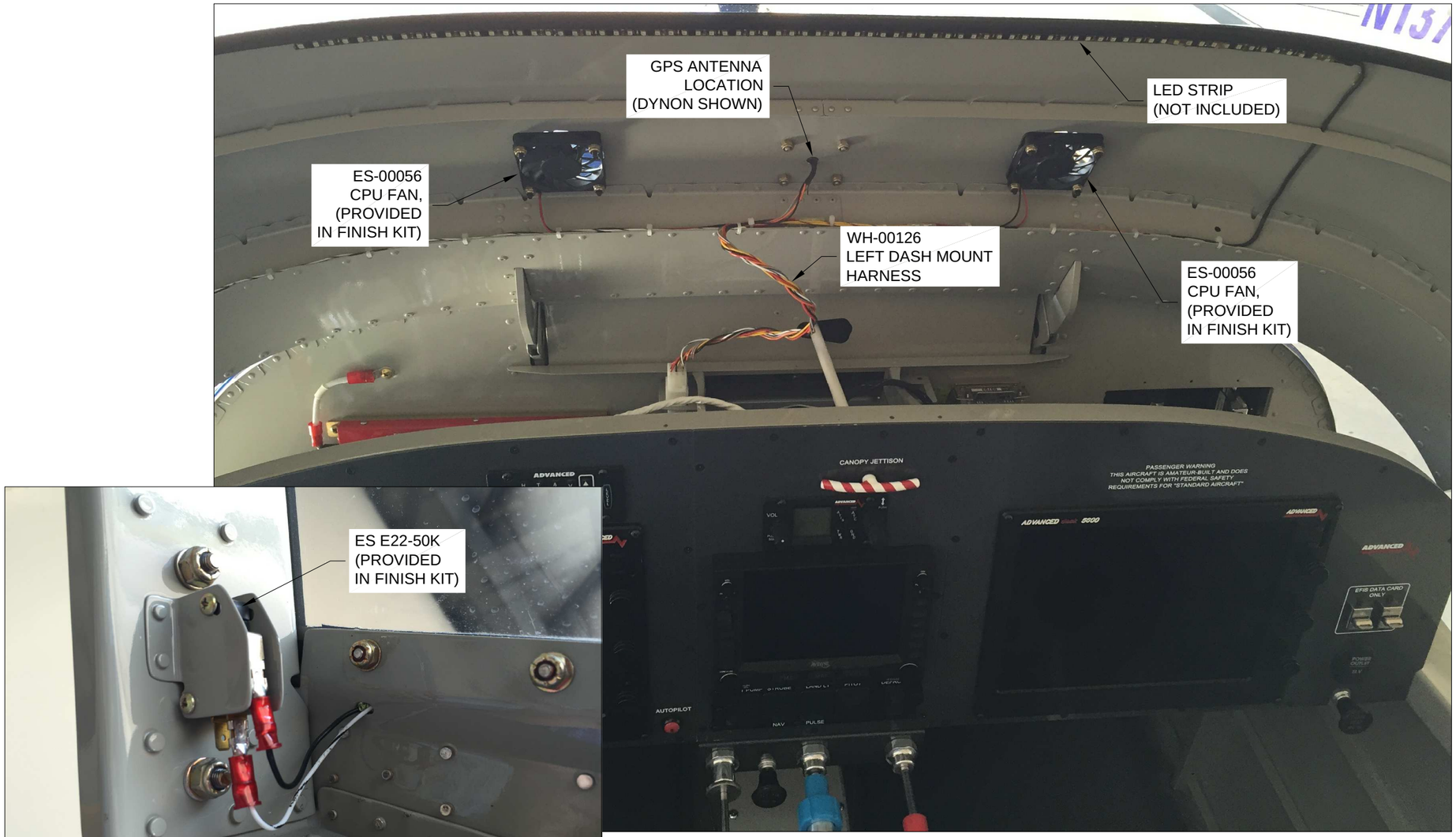
PRODUCT/KIT NAME:

Canopy Harness

PRODUCT/KIT DESCRIPTION: WH-00126 Left Dash Mount Harness and installation instructions. Instructions included for optional LC LED Strip RED, WHITE, or RED/WHITE LED panel lighting strip installation.

SECTION 61:
CANOPY HARNESS



DATE OF COMPLETION: _____
PARTICIPANTS: _____

Step 1: Remove the plug-on connector from the end of the wires on the two ES-00056 CPU Fans by cutting the wires directly adjacent to the connector.

Only the red and black wires are used to power the fan. Cut the third wire (if present) where it exits each fan housing and discard. See Figure 1.

Step 2: Route the red and black wires of each fan inboard along the C-01403-L & -R Mid Canopy Frame and the C-01417 Canopy Frame Close-Out and tie in place with temporary ties (plastic coated twist ties work well for this). See Figure 2.

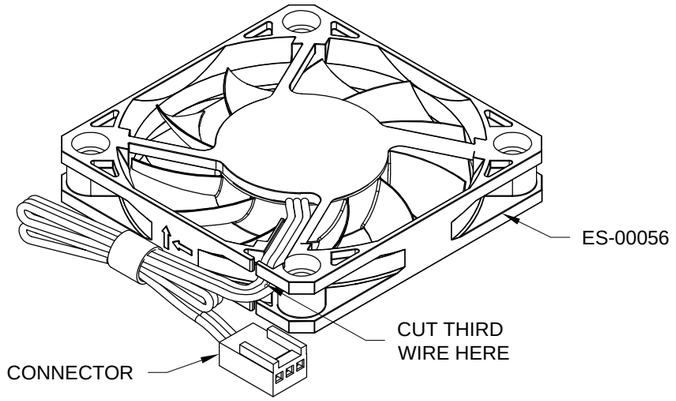


FIGURE 1: FAN WIRING

NOTE: The remaining steps on this page deal with installation of the optional LED panel lighting strip (accessory catalog part number LC LED Strip RED, WHITE, or RED/WHITE). Go to Page 61-03 if not installing the panel lighting strip.

Step 3: Refer to the manufacturer's supplied instructions and or web site to shorten the LED panel lighting strip (**not** the strip wires) to approximately 25 1/2 in. [64.8 cm]. This prevents excess length from wrapping downward on each side and being directly visible.

Step 4: Install ES HST-3/16X1 Heat Shrink Tubing over the LED panel lighting wires as shown in Figure 2.

Step 5: Lightly scuff the bottom of the C-01418 Canopy Skin with a Scotchbrite™pad where the LED strip will be attached.

Clean the scuffed area with denatured alcohol. See Figure 2.

Step 6: Remove the protective backing from the LED strip and press it into place on the scuffed surface of the canopy skin with the wires oriented towards the right and routed forward as shown in Figures 2 & 3.

Step 7: Route the LED strip wires through one of the notch gaps in the C-01404 Support Flange and then forward to the C-01403 Mid Canopy Frame.

Route the wires inboard towards the center and use temporary ties to attach the wires along the flange of the Mid Canopy Frame.

Use small drops of clear silicone sealant/adhesive as needed to adhere the wires to the bottom surface of the C-01418 Canopy Skin. See Figure 3.

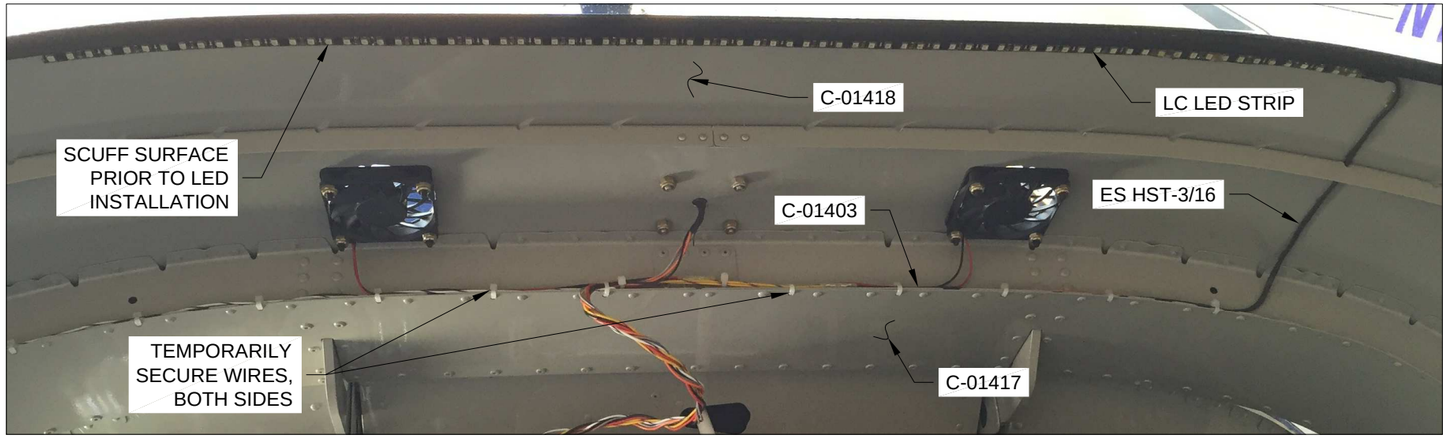


FIGURE 2: WIRE ROUTING AND LED LOCATION

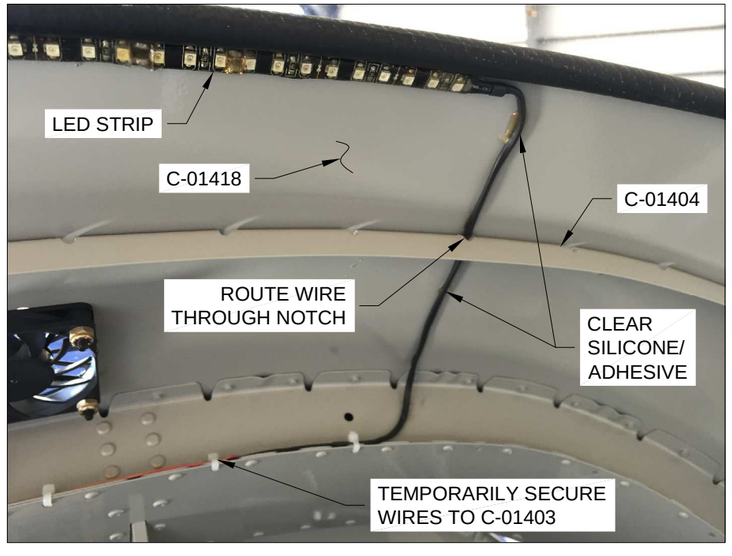


FIGURE 3: LED WIRE ROUTING

CAUTION: It is important that the Canopy Latch Micro Switch is connected to an indicator/warning system. The WH-00126 Left Dash Mount Harness connects to the EFIS via a harness supplied by the EFIS manufacturer.

The ES-00012 12 Position Molex Receptacle is supplied to temporarily retain the WH-00126 Left Dash Mount Harness to the F-01477-L Connector Bracket.

Step 1: Insert the ES-00012 12 Position Molex Receptacle into the F-01477-L Connector Bracket.

Step 2: Twist the wires on the Left Dash Mount Harness together so that the first 12 in. [30.5 cm] moving away from the molex connector are wound into a single cable of wires as shown in Figure 1.

Temporarily secure the wires so they do not unravel.

Step 3: Insert the ES-00013 12 Position Molex Plug of the canopy harness into the ES-00012 12 Position Molex Receptacle located in the connector bracket as shown in Figure 1.

Step 4: Use a temporary tie to anchor the 12 in. [30.5 cm] point of the harness at the first open tie hole left of center in the C-01417 Canopy Frame Close-Out with the wires routing towards the right as shown in Figure 1.

Step 5: Fabricate a tight "U" shaped bend at the end of a 40 in. [101.6 cm] length of safety wire.

Insert the bent end of the wire through the forward wire routing hole in the C-01404-L Support flange, then push the wire aft as shown in Figure 2.

Maneuver the wire to exit out of the oval wire routing hole at the aft end of the C-01407-L Aft Canopy Rail. See Figure 2.

Bend another "U" shape in the safety wire at the forward end as was done on the aft end.

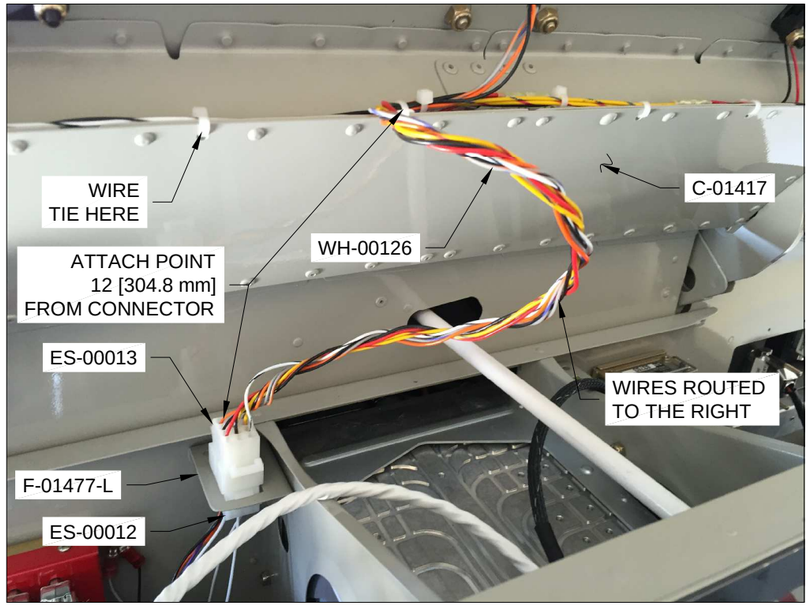


FIGURE 1: CANOPY WIRE HARNESS CONNECT

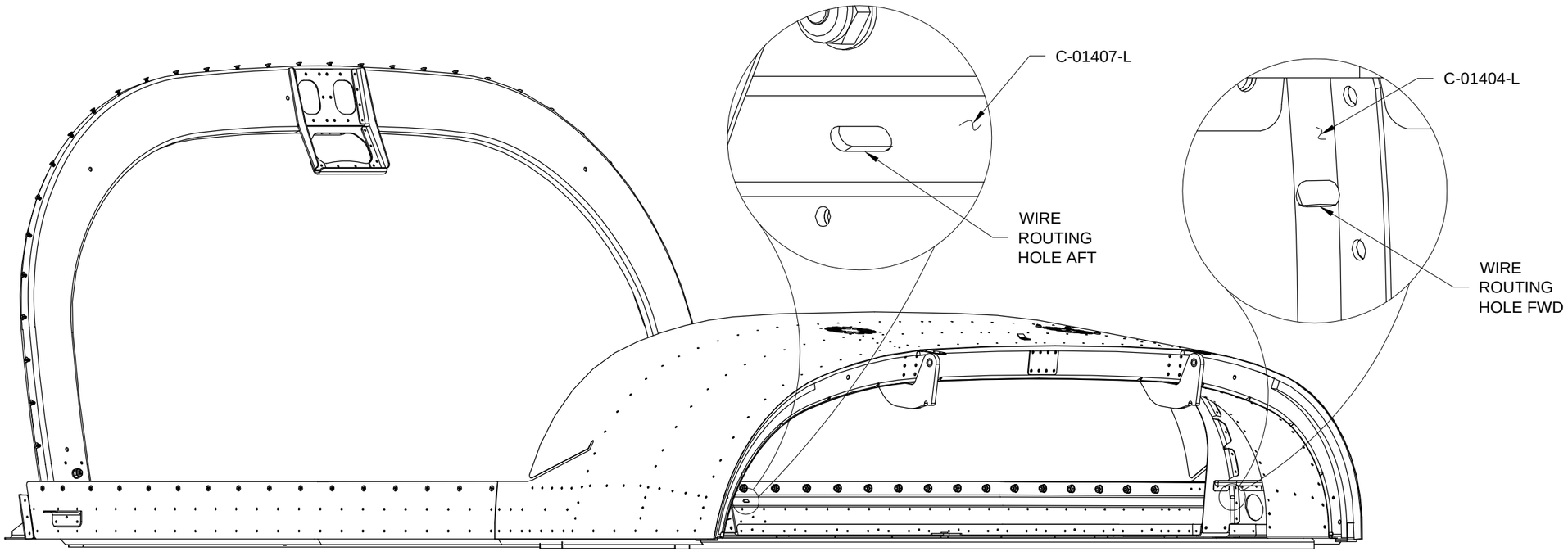


FIGURE 2: CANOPY WIRE HARNESS ROUTE

Step 1: Insert a snap bushing in the C-01416-L Aft Intercostal as shown in Figure 1.

Step 2: Route the free end of the W2128 (WHT/BLK) and W2129 (BLK) wires aft along the canopy frame and down through the snap bushing in the aft intercostal as shown in Figure 1.

Loop the end of the wires through the loop in the safety wire and wrap with a small amount of tape to keep the total diameter as small as possible.

Step 3: Gently pull the safety wire from the aft end while feeding the wires through the fwd wire routing hole in the canopy frame, until they exit out of the oval wire routing hole at the back of the canopy frame. See Page 61-03 Figure 2.

Use temporary ties to anchor the wires along the flange of the canopy frame.

Step 4: Adjust all wires to remove slack and install a few permanent plastic tie wraps to prevent the wires from sliding side to side.

Step 5: Cut the two black fan wires, the W 2017 (BLK), and the W2129 (BLK) to length so that the two wires traveling from each side can be twisted together and then all 4 joined with a single butt splice connector as shown in Figure 2.

Step 6: Trim the excess length from the L2131 (YEL/GRN) and L2132 (YEL/PRP) Lighting wires and connect each to the appropriate wire for the LED lighting strip as shown in Figure 2.

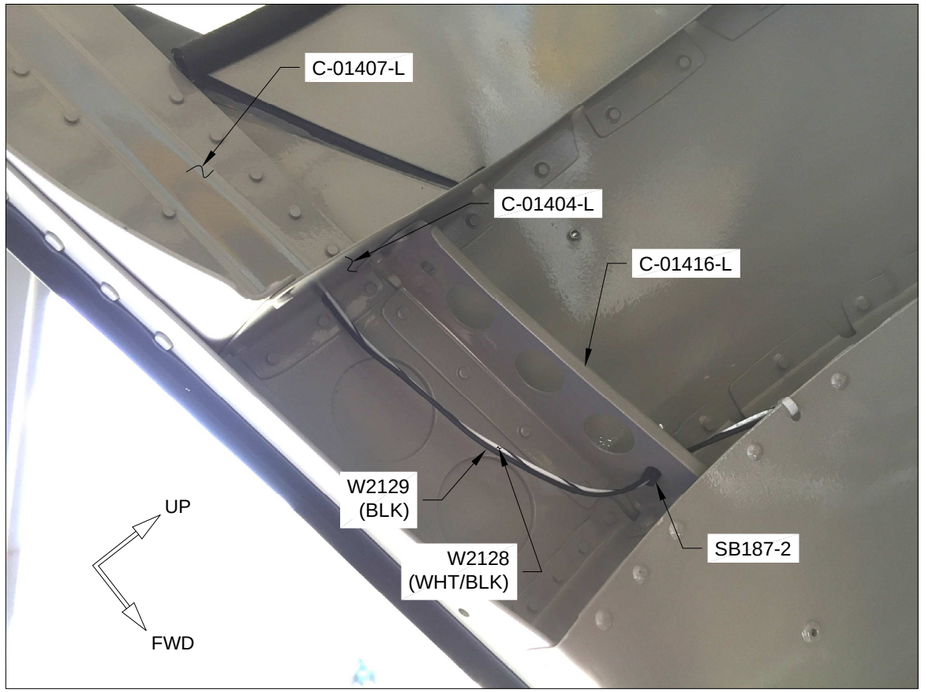
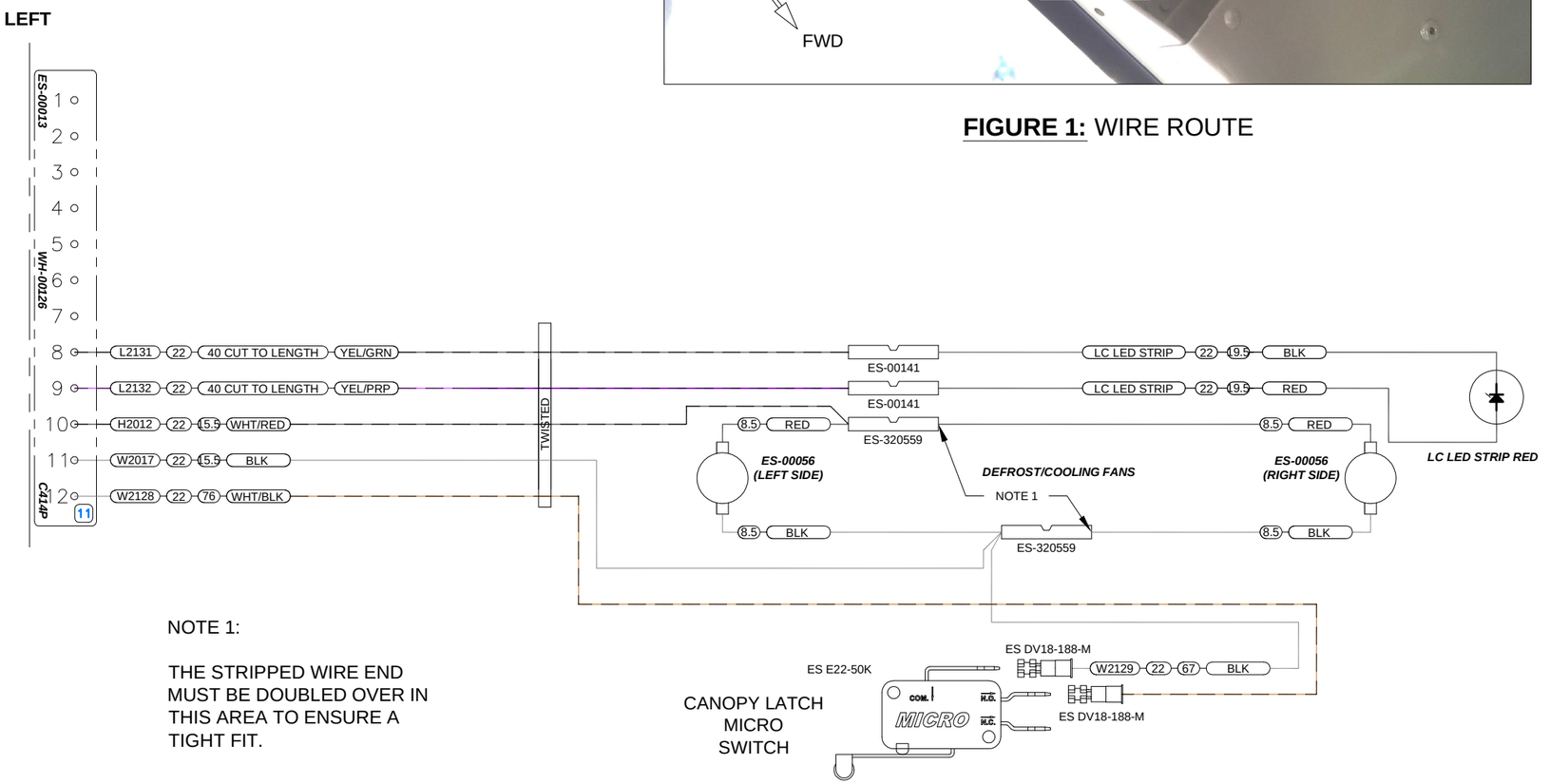


FIGURE 1: WIRE ROUTE



NOTE 1:

THE STRIPPED WIRE END MUST BE DOUBLED OVER IN THIS AREA TO ENSURE A TIGHT FIT.

FIGURE 2: GENERIC CANOPY WIRE DIAGRAM

Step 1: Close and latch the canopy from the inside.

Move the top of the ES E22-50K Switch aft against the latch pin using light pressure and tighten the screws to lock it in position.

Use an ohm meter or continuity tester to check between the two forward terminals. Confirm that the switch changes state from continuity/zero ohms when latched to no continuity/infinite resistance when the canopy latch handle is moved to the open position.

Step 2: Trim the excess length from the W2128 (WHT/BLK) and W2129 (BLK) Canopy Latch Switch wires so that 2 3/4 in. [69.9 mm] protrudes out of the hole beside the switch.

NOTE: See Section 5.21 for information on electrical connections.

Step 3: Install the spade connectors on the canopy latch switch wires as shown in Figure 1. Connect the wires to the canopy latch switch as depicted.

Step 4: Apply a small amount of clear silicone sealant to the wire routing holes in the canopy frame at each end of the wire run to prevent wire movement/chaffing. See Figure 1.

Step 5: After completing all wire installation, install a plastic tie wrap at each tie hole location. Trim the excess "tails" off of the plastic tie wraps and rotate so that the stub is less visible as shown in Figure 2.

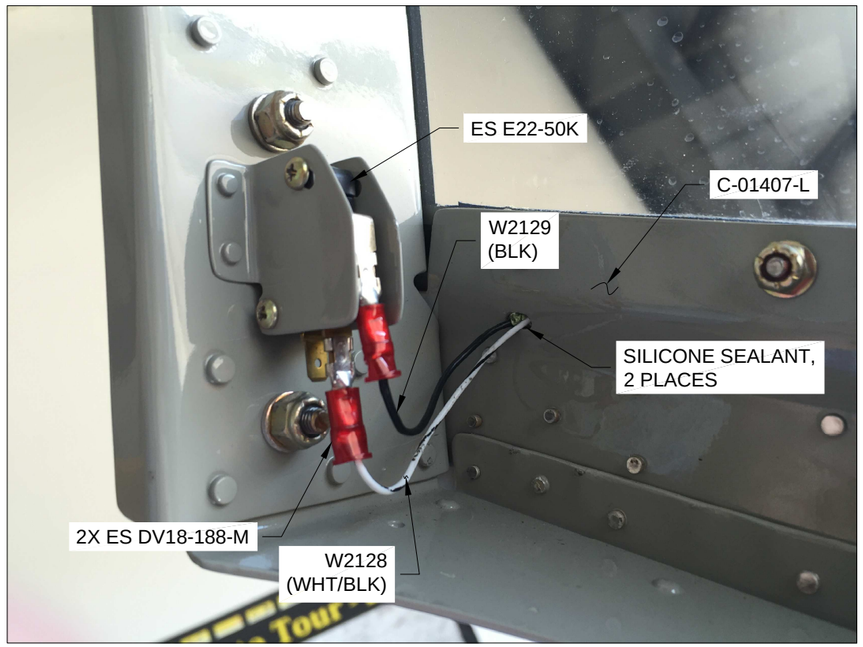


FIGURE 1: CONNECTING TO SWITCH

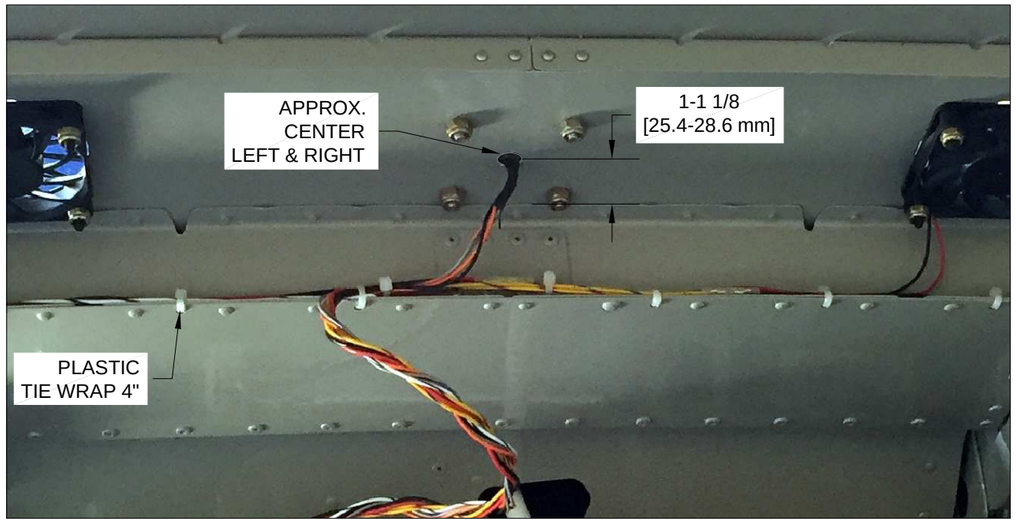


FIGURE 2: GPS ANTENNA LOCATION
DYNON SHOWN

NOTE: Antennas mounted on the glare shield are for VFR use only.

NOTE: The following steps in this section are marked (Dynon) or (Garmin). Follow those steps that apply to your installation.

Step 6 (Dynon): Use the manufacturers instructions, recommended hardware, and mounting dimensions to mount the antenna on the center right of the upper surface of the canopy skin. Take care not to locate any fasteners or protrusions so far aft that they interfere with the F-01467B Instrument Panel Flange Doubler. See Figure 2 and Page 61-06 Figure 2 for approximate location.

Optional - The antenna can be painted flat black after light scuffing with a Scotchbrite ™ pad to reduce reflection in the canopy with no degradation in reception. Avoid paints that contain any materials (such as metal flakes) that may inhibit the GPS signal.

NOTE: See Section 5.21 Electrical for detailed information on pin installation.

Step 7 (Dynon): Unplug the ES-00013 harness connector of the WH-00126 Canopy Wiring Harness from the ES-00012 connector. Wrap the four wires of the Dynon GPS Antenna individually around the twisted portion of the harness.

Trim the GPS wires with 1/2 in. [12.7 mm] extra length to attach pins for insertion into the connector.

Install an ES-00005 Molex Pin on each wire and insert into the appropriate socket positions as shown on the RV-14 Common Fuselage Harness drawing (available for download on the Van's Aircraft page).

Reconnect the harness.

NOTE: Antennas mounted on the glare shield are for VFR use only.

Step 1 (Garmin): Use the manufacturers instructions and mounting dimensions to mount the GI260 Garmin AOA Indicator on the C-01418 Canopy Skin. The indicator should be visible from both seats and clear of the canopy and instrument panel as shown in Figure 1.

Step 2 (Garmin): Use the manufacturers instructions and mounting dimensions to mount the GPS Receiver Antenna on the center right of the upper surface of the canopy skin. Take care to locate any fasteners or protrusions to avoid interference with the F-01467B Instrument Panel Flange Doubler. See Figure 2 & 3 for approximate location.

Optional - The antenna can be painted flat black after light scuffing with a Scotchbrite™ pad to reduce reflection in the canopy with no degradation in reception. Avoid paints that contain any materials (such as metal flakes) that may inhibit the GPS signal.

NOTE: See Section 5.21 Electrical for detailed information on pin installation.

Step 3 (Garmin): Unplug the ES-00013 Connector of the WH-00126 Canopy Wiring Harness from the ES-00012 Connector.

Wrap the wires of the GPS Antenna and AOA Indicator individually around the twisted portion of the harness.

Trim the wires to length with an extra 1/2 in. [12.7 mm] to allow attaching pins and inserting into the connector.

Install an ES-00005 Molex Pin on each wire and insert into the appropriate socket positions as shown on the RV-14 Common Fuselage Harness drawing (available for download on the Van's Aircraft page).

Reconnect the harness plug.

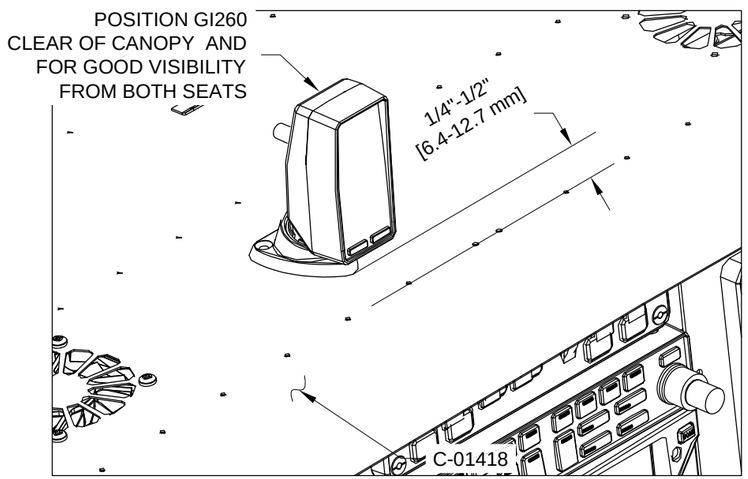


FIGURE 1: AOA POSITION
GARMIN TOP VIEW

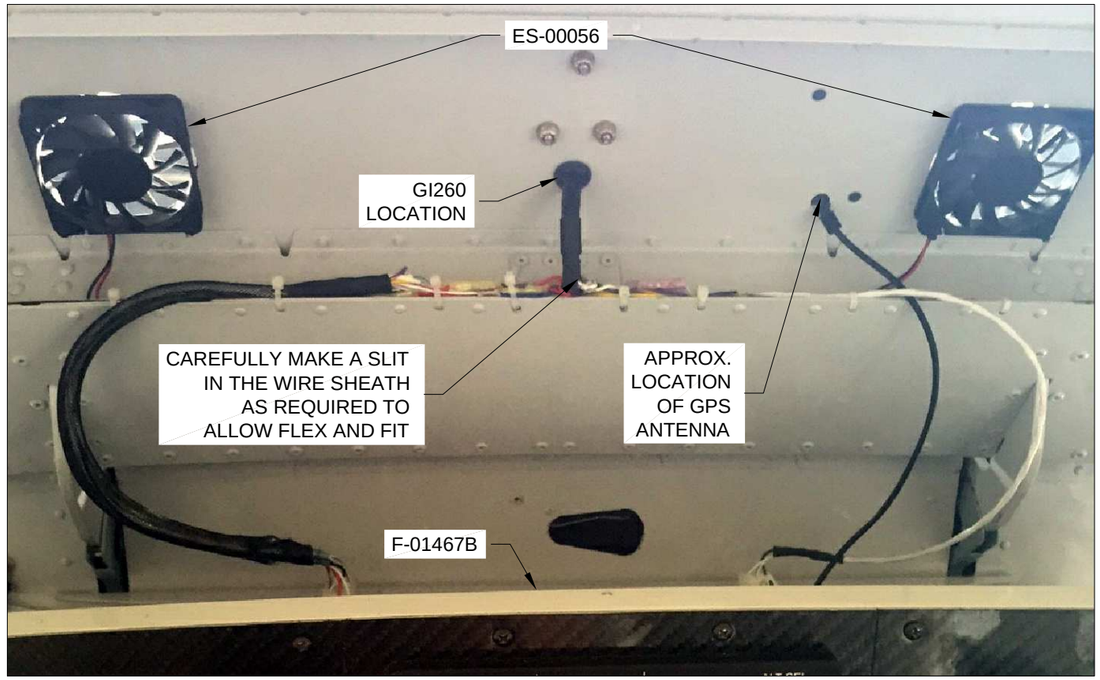


FIGURE 2: AOA/GPS ANTENNA INSTALLATION
GARMIN BOTTOM VIEW

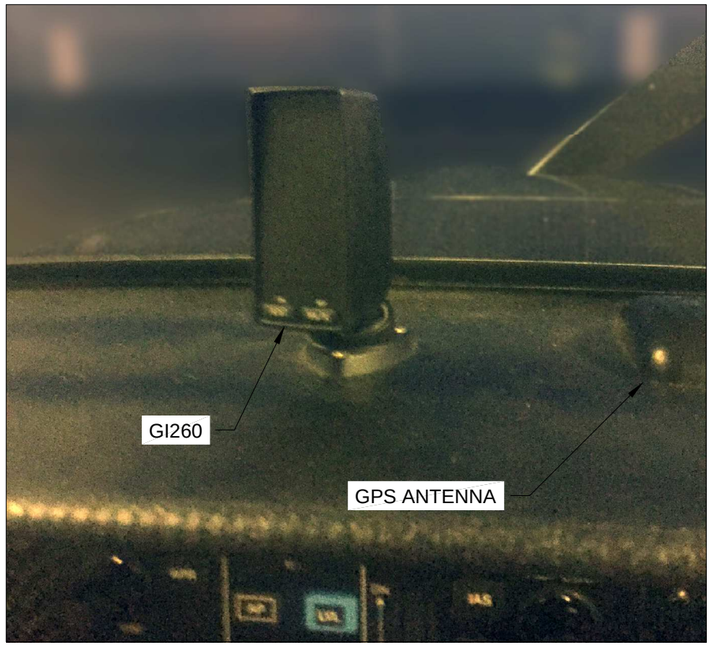


FIGURE 3: AOA/GPS ANTENNA LOCATION
GARMIN TOP VIEW