

RV-10 Throttle Quadrant Insert

Important Notice: This manual contains important information that may affect the safety of your aircraft. Read the Warranty / Agreement below. There is information in the Warranty / Agreement that may alter your decision to install this product. **If you do not accept the terms of the Warranty / Agreement, do not install this product.** The product may be returned for a refund if you do not accept the terms of the Limited Warranty / Agreement.

Aerosport Products is not liable or responsible for a builder's action or any situation that results in personal injury, property damage, missed commitments, lack of use of an aircraft or any expenses incurred due to: product failure, installation issues (leaks, obstructions, damage to aircraft or components, incorrect installation of any parts, wrong parts, parts that don't fit, etc.) or any other issues related to the installation or operation of this product. All of the above are solely the builder's and/or installer's responsibility. By installing this product, the aircraft owner/pilot and installer agree to hold Aerosport Products harmless and in no way responsible for monetary compensation, including punitive damages for any incident, harm and/or damage associated with this product (including but not limited to the ones listed above). If you do not agree to the above, **DO NOT INSTALL THIS PRODUCT.**

If you do not have the skills, knowledge, tools, equipment or facility, to perform and determine the installation of this product is safe, reliable and accurate and to determine this product is operating properly after installation, **DO NOT INSTALL THIS PRODUCT.** If the owner/pilot and/or installer are unwilling to take the responsibility for the installation and operation of this product, **DO NOT INSTALL THIS PRODUCT.** This product may be returned for a refund by contacting Aerosport Products. Shipping charges are not refundable.

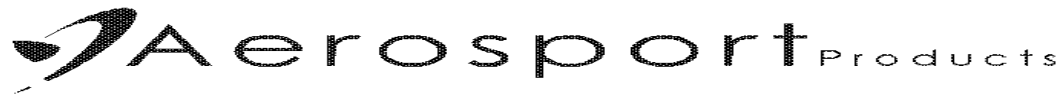
Before starting the installation, make sure that your planned installation will not interfere with the proper operation of any controls. The installer should use current aircraft standards and practices to install this product. Refer to AC 43.13-2A, Acceptable Methods, Techniques, and Practices - Aircraft Alterations and AC 43.13-1B, Acceptable Methods, Techniques, and Practices--Aircraft Inspection and Repair. The RV-10 Cowl Pin Covers are limited to use in experimental aircraft. Not approved for use in aircraft with FAA or foreign type certificates.

LIMITED WARRANTY / AGREEMENT Aerosport Products warrants its products to be free from defects in materials and workmanship for a period of one year after the retail invoice date. Aerosport Products will repair or replace any components under the terms of this Warranty provided the item is returned to Aerosport Products prepaid. This Warranty shall not apply to any unit or component that has been repaired or altered by any person other than Aerosport Products or that has been subjected to misuse, abuse, accident, , or improper or unprofessional installation by any person. THIS WARRANTY DOES NOT COVER ANY REIMBURSEMENT FOR ANYONE'S TIME FOR INSTALLATION, REMOVAL, ASSEMBLY OR REPAIR. Aerosport Products reserves the right to determine the reason or cause for warranty repair.

1. This Warranty does not extend to any aircraft or any other device to which the Aerosport Products system may be connected, attached, or used with in any way.

2. THE REMEDIES AVAILABLE TO THE PURCHASER ARE LIMITED TO REPAIR, REPLACEMENT, OR REFUND OF THE PURCHASE PRICE OF THE PRODUCT, AT THE SOLE DISCRETION OF AEROSPORT PRODUCTS. CONSEQUENTIAL DAMAGES, SUCH AS DAMAGE TO THE AIRCRAFT, ARE NOT COVERED, AND ARE EXCLUDED. DAMAGES FOR PHYSICAL INJURY TO PERSON OR PROPERTY ARE NOT COVERED, AND ARE EXCLUDED.

3. Aerosport Products is not liable for expenses incurred by the purchaser or installer due to Aerosport Products updates, modifications, improvements, upgrades, changes, notices or alterations to the product.



4. Aerosport Products is not responsible for shipping charges or damages incurred during Shipment, except for situations where the system fails away from the aircraft's home base and the pilot is unable to safely fly the aircraft, at which time Aerosport Products shall, at Aerosport Products' sole discretion, pay only one-way shipping charges to the purchaser (US 48 states only).

5. No one is authorized to assume any other or additional liability for Aerosport Products in connection with the sale of Aerosport Products units.

6. By purchasing these products from Aerosport Products, the Purchaser agrees that he/she will not copy, reverse engineer, modify use to make molds or otherwise attempt to use the purchased products design / functionality to develop a competing product

7. IF YOU DO NOT AGREE TO ACCEPT THE TERMS OF THIS AGREEMENT, YOU MAY RETURN THE PRODUCT FOR A FULL REFUND. IF YOU DO NOT AGREE TO ACCEPT THE TERMS OF THIS WARRANTY, **DO NOT INSTALL THE PRODUCT.**

8. This warranty is made only to the original purchaser and is not transferable. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OR OBLIGATIONS, EXPRESS OR IMPLIED, ORAL OR WRITTEN. AEROSPORT PRODUCTS EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE PURCHASER AGREES THAT IN NO EVENT SHALL AEROSPORT PRODUCTS BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING DAMAGES TO THE ENGINE OR AIRCRAFT, LOST PROFITS, LOSS OF USE, OR OTHER ECONOMIC LOSS. EXCEPT AS EXPRESSLY PROVIDED HEREIN, AEROSPORT PRODUCTS DISCLAIMS ALL OTHER LIABILITY TO THE PURCHASER OR ANY OTHER PERSON IN CONNECTION WITH THE USE OR PERFORMANCE OF AEROSPORT PRODUCTS UNITS, INCLUDING BUT NOT LIMITED TO STRICT PRODUCTS LIABILITY IN TORT.

What's included:

The carbon fiber throttle quadrant insert. No mounting hardware is included.

What you need to supply:

Nutplates, screws, and rivets are not included because they may vary with each builder's installation and preferences. We will provide suggestions in the instructions, but each builder will need to determine the appropriate hardware for their installation per AC 43.13.

Note: The throttle quadrant insert used for the photos in this document has some defects on its surface. This particular part is not representative of the quality sold to customers.

Note: Because the instrument panel is lower than the standard Van's instrument panel, longer control cables will be needed. It is estimated that you will need cables 3" longer than the original ones supplied by Van's. However, since routing of the cables impacts the precise length, you will need to determine the exact length needed for your installation.

Installation Instructions

Step #1



The lower console of the instrument panel must be installed first before the carbon fiber throttle quadrant insert can be installed. If you are also planning on installing the center arm rest console, that should also be installed, since that may impact the precise location of the lower console.

Do not be tempted to remove the upper fuselage assembly to ease installation by working with the upper fuselage assembly on a work bench. The rear subpanel and the lower console panel are flexible and need to be rigid to install the throttle quadrant.

The carbon fiber throttle quadrant may need some additional prep work before installing. There are trim lines in the carbon fiber for both the exterior of the insert and the quadrant opening area. Using a sanding block, slowly remove material (if any is required) until the trim lines are no longer visible. Do NOT use a power sander, since that would be too aggressive and remove material too quickly. Test fit the insert into the open on the lower console panel to ensure a good fit.

Another area that may need some additional prep work is the area of the quadrant insert which will be flush with the throttle quadrant. (i.e. the backside of the quadrant insert) Make sure that the area where the throttle quadrant will come in contact with the insert that the backside is perfectly smooth. Any small bumps will cause the throttle quadrant to not fit well.

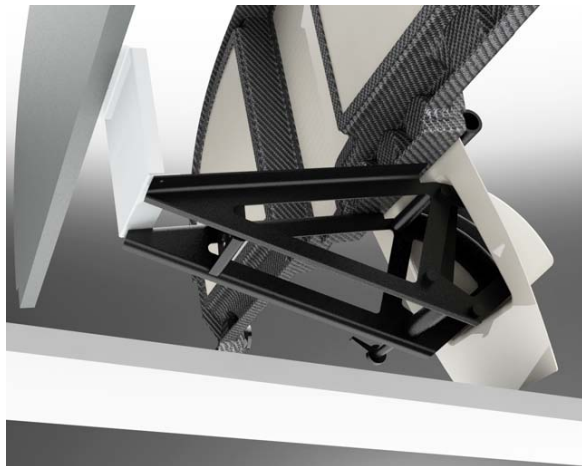
Step #2

Determine the location for the mounting screws to attach the quadrant insert to the lower console. It is recommended that you use three locations across the top of the insert, one on each side of the insert in the middle near where the angle changes, and two on the bottom on the insert. The three along the top of the insert will also be the three screws that hold the lower console to the instrument panel.

Drill each location with a #19 drill bit. Attach K-1000-06 nut plates at each location. The top three nut plates will be installed on the instrument panel, while the side and bottom nut plates will be installed on the lower console. It is recommended to use a brass 6-32 pan head screw. The carbon fiber on the insert may not be thick enough to countersink to use a countersunk head screw.



Step #3



Although it isn't required, you will most likely want to remove the F-1083 Control Cable bracket. Adel clamps can be placed on the bottom of the space panel to hold control cables.

Note the orientation of the spacer panel. The top flange will face forward and the bottom flange will face aft. (Forward and Aft are referenced in orientation to the aircraft)

Using a #30 drill bit, drill five evenly spaced holes on the upper flange of the spacer panel.

Attach the rear spacer panel to the bottom of the rear instrument sub panel via clamps. Center the spacer panel on the center of the instrument sub panel. Note the orientation of the spacer panel. The top flange will face forward and the bottom flange will face aft.



Step #4

You will need the assistance of another person to help you with this step.

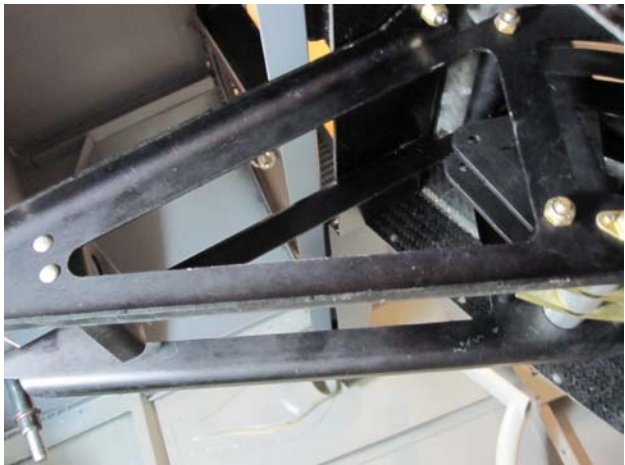
Have the other person hold the throttle quadrant in place. It is extremely critical that the person holds the throttle quadrant so that all axis of the throttle faceplate are flush with the throttle quadrant insert.

Using a #19 drill bit in a right angle drill, match drill the aft two mounting holes through the bottom of the throttle quadrant and the bottom of the instrument panel. There will be a small angular gap on the aft portion of the throttle quadrant mount and the bottom of the instrument panel. The two surfaces are not parallel. This is normal. Using a 8-32 large pan head screw, a AN960-8 washer, and an AN364-832A nut, attach the throttle quadrant to the instrument panel. A nut and bolt may be preferable in this application because of the small angle difference a nut plate may not work well. Double check that the throttle quadrant faceplate is still flush with the throttle quadrant insert.



Step #5

Clamp the forward end of the throttle quadrant mount to the panel spacer hanging down from the rear instrument sub panel. Check for alignment on the throttle faceplate and on the rear spacer. Depending on many potential variations, you may have to adjust the rear spacer by left or right slightly. Once you are satisfied with the alignment, match drill the two forward holes on the throttle quadrant through the bottom of the spacer panel. Using a #30 drill bit match drill the five equally spaced holes through the top flange of the space panel and the rear instrument sub panel.



Step #6

Prime and or paint the spacer panel as desired. Rivet the spacer panel to the rear instrument sub panel using AN470AD4-3 rivet. For the forward attachment of the throttle quadrant, you can use either K1000-08 or MK2000-08 nut plates (depending on how close to the outside edge your holes are) or just use the same 8-32 bolt, washer, and nut that was used on the aft connection to the instrument panel.



If you have any questions about your installation, please give us a call or send an email.