REVISION LIST

CHAPTER 20: INSTRUMENT PANEL

The following list of revisions will allow you to update the Legacy construction manual chapter listed above.

Under the "Action" column, "R&R" directs you to remove and replace the pages affected by the revision. "Add" directs you to insert the pages shows and "R" to remove the pages.

PAGE(S) AFFECTED	REVISION # & DATE	ACTION	DESCRIPTION
20-1 through 20-8	0/02-15-02	None	Current revision is correct
20-9	1/09-18-02	R&R	Text Correction
20-1	3/12-15-04	R&R	Updated table of contents with page numbers.
20-1, 20-5	5/05-15-07	R&R	Changed part numbers.
20-1, 20-5	6/08-10-07	R&R	Changed part numbers only.

Chapter 20: Instrument Panel

Contents

1. INTRODUCTION

The instrument panel is a relatively simple installation. The placement is largely dictated by the center console. The instrument panel is a pre-molded fiberglass piece. The instruments are usually mounted on a removable piece of aluminum (not part of the kit). If you are interested in purchasing the inserts, they are available through Lancair Avionics. You will notice a raised area in the center of the panel typically used to mount the radio stack. A dust cover installs on top of the panel.

In this chapter we will not go into detail about avionics. However, the last section of the chapter offers a few panel layouts. Please contact Lancair Avionics for more information.

2. PARTS LIST

#	PART NO. (P/N)	QTY	DESCRIPTION	OPTIONAL ITEM *(not included with kit)*
iNSTRUMENT PANEL INSTALLATION				
1)	4028	1	Instrument Panel	
2)	AN3-3A	2	Bolt	
3)	**101-0066** ~~35157~~	2	Bolt, Allen	
4)	K1000-3	4	Nutplate	
5)	AN426A3-5	8	Rivets	
6)	AN960-10	4	Washer	
DUST COVER				
1)	4028-01	1	Instrument Panel Dust Cover	
AVIONICS MOUNTING SHELF				
1)	4943	1	Avionics Mounting Shelf	*Yes,
TYPICAL PANELS	**Contact Lancair Avionics**			

Note:

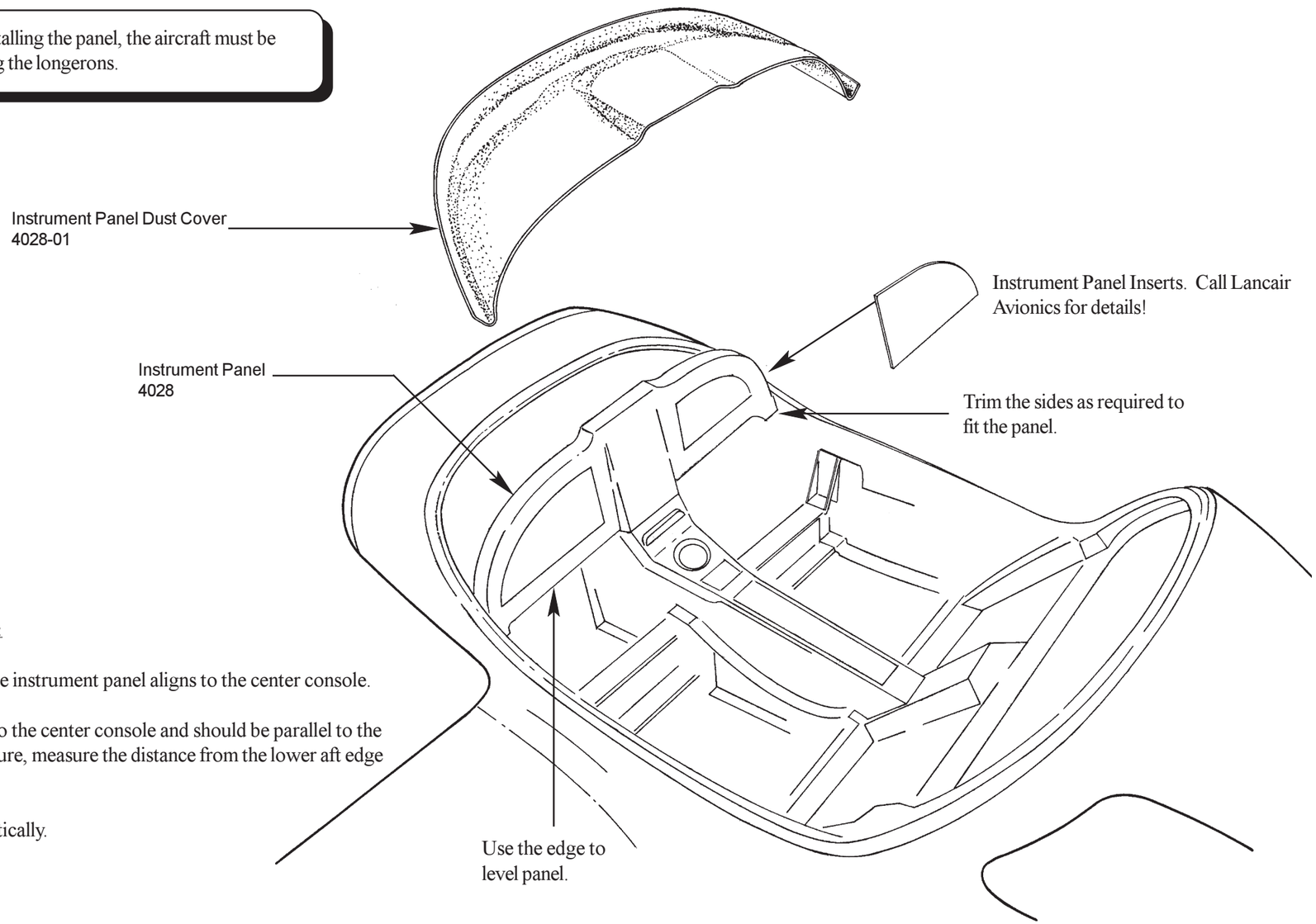
Optional Parts available through :
(*) Lancair Avionics
(**) Kit Components, Inc.

3. CONSTRUCTION PROCEDURES

A. Instrument Panel Installation

Prior to installing the panel, the aircraft must be leveled. Level using the longerons.

Instrument Panel Installation (General Overview)
Fig. 20:A:1



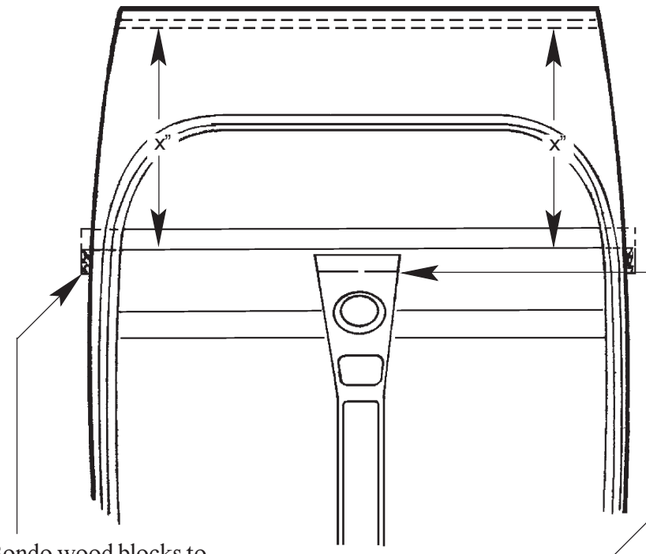
Basic Alignment Criteria:

Left-Right Placement - The instrument panel aligns to the center console.

For-aft - The panel aligns to the center console and should be parallel to the firewall. Using a tape measure, measure the distance from the lower aft edge of the panel to the firewall.

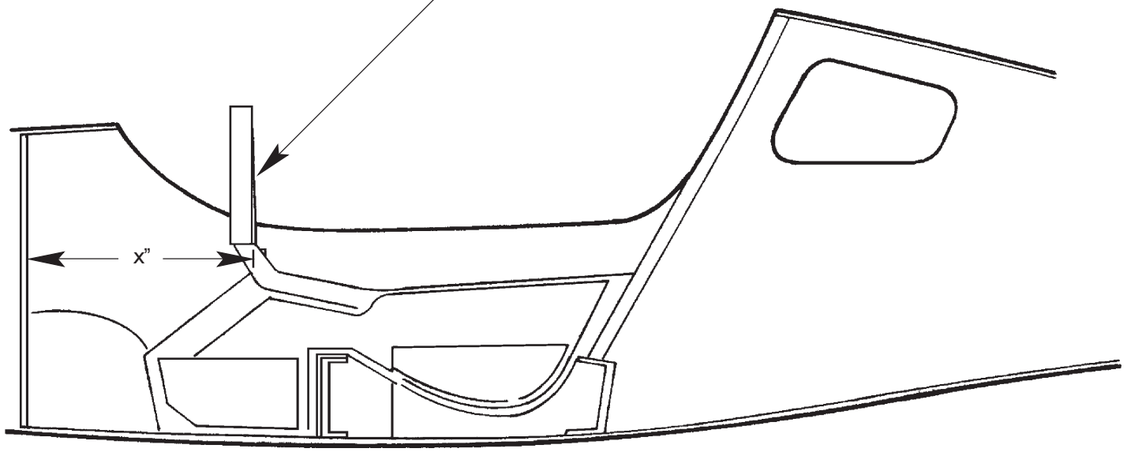
Tilt - The panel mounts vertically.

Aligning Instrument Panel
Fig. 20:A:2



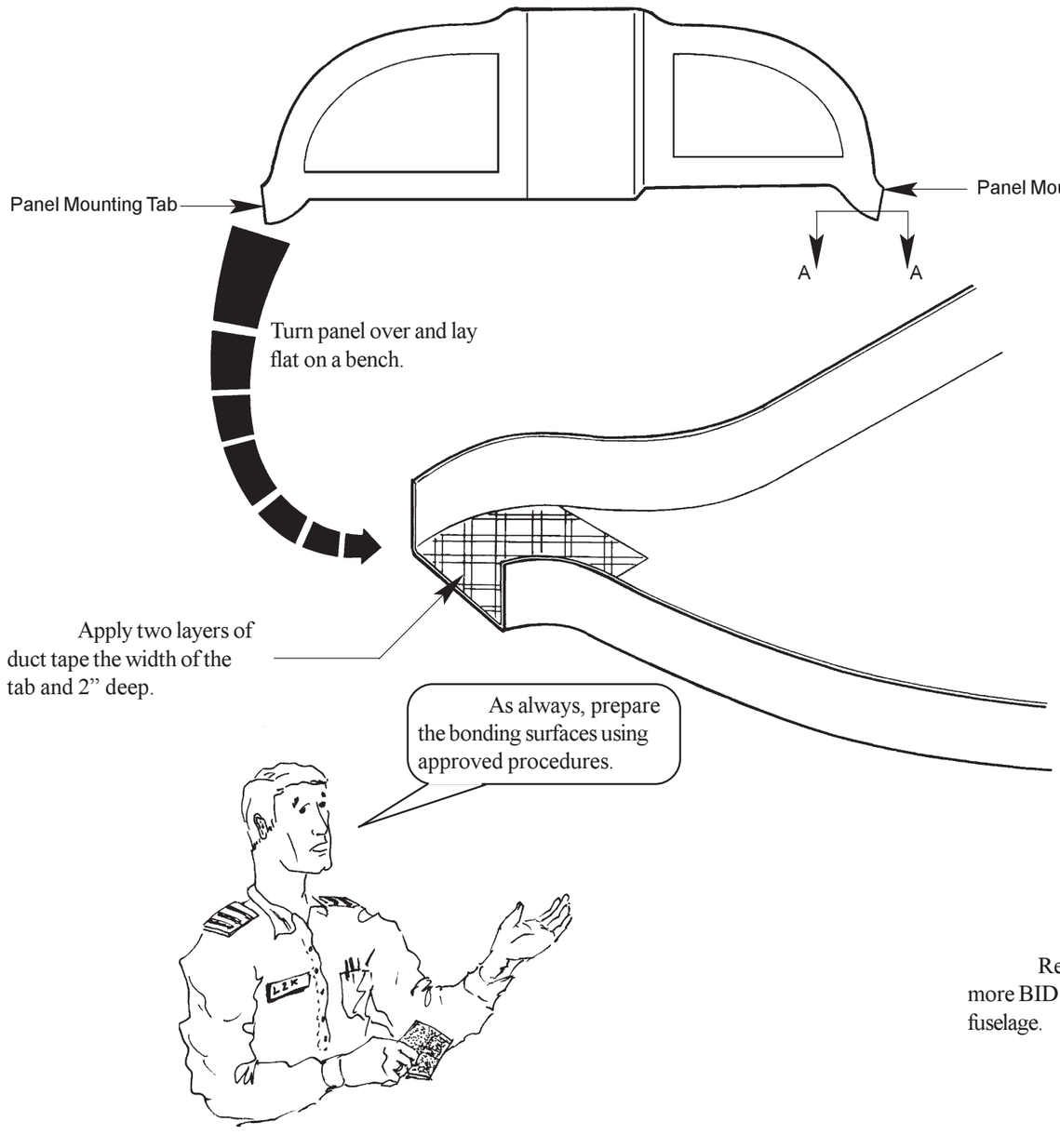
Bondo wood blocks to the side of the fuselage right aft of the panel to support.

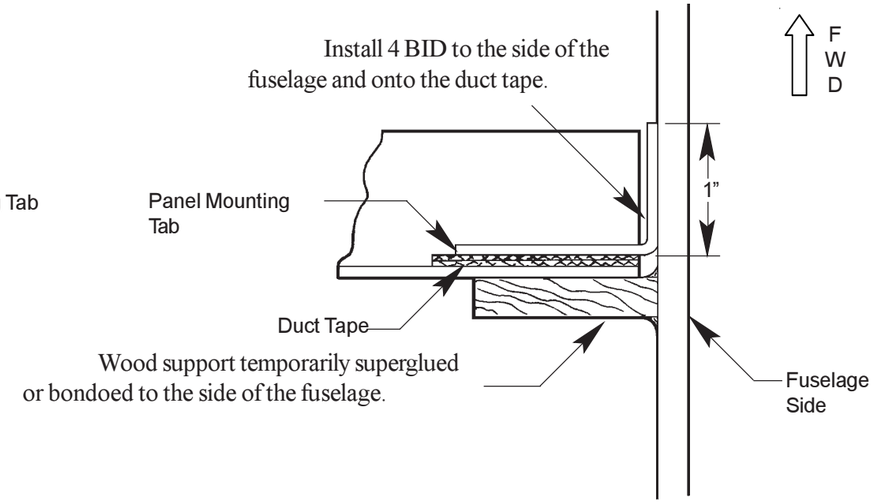
1. Align the panel parallel to the firewall. Measure the distance from the firewall to the panel.
2. Align the panel to the center console.
3. The panel must be vertical.
4. Level the instrument panel. The lower left edge of panel must be horizontal (see Fig. 20:A:1). Once aligned, bondo wood blocks to the sides of the fuselage so you can remove the panel and easily realign the panel.

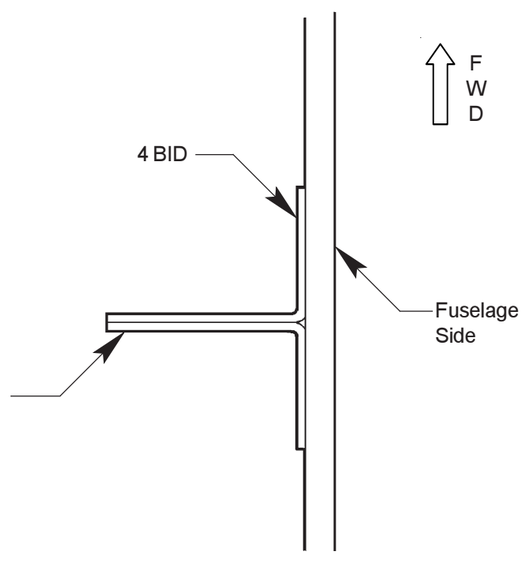


It is very important to level the panel to the aircraft--or your instruments will be off!

Securing Panel Side Supports
Fig. 20:A:3





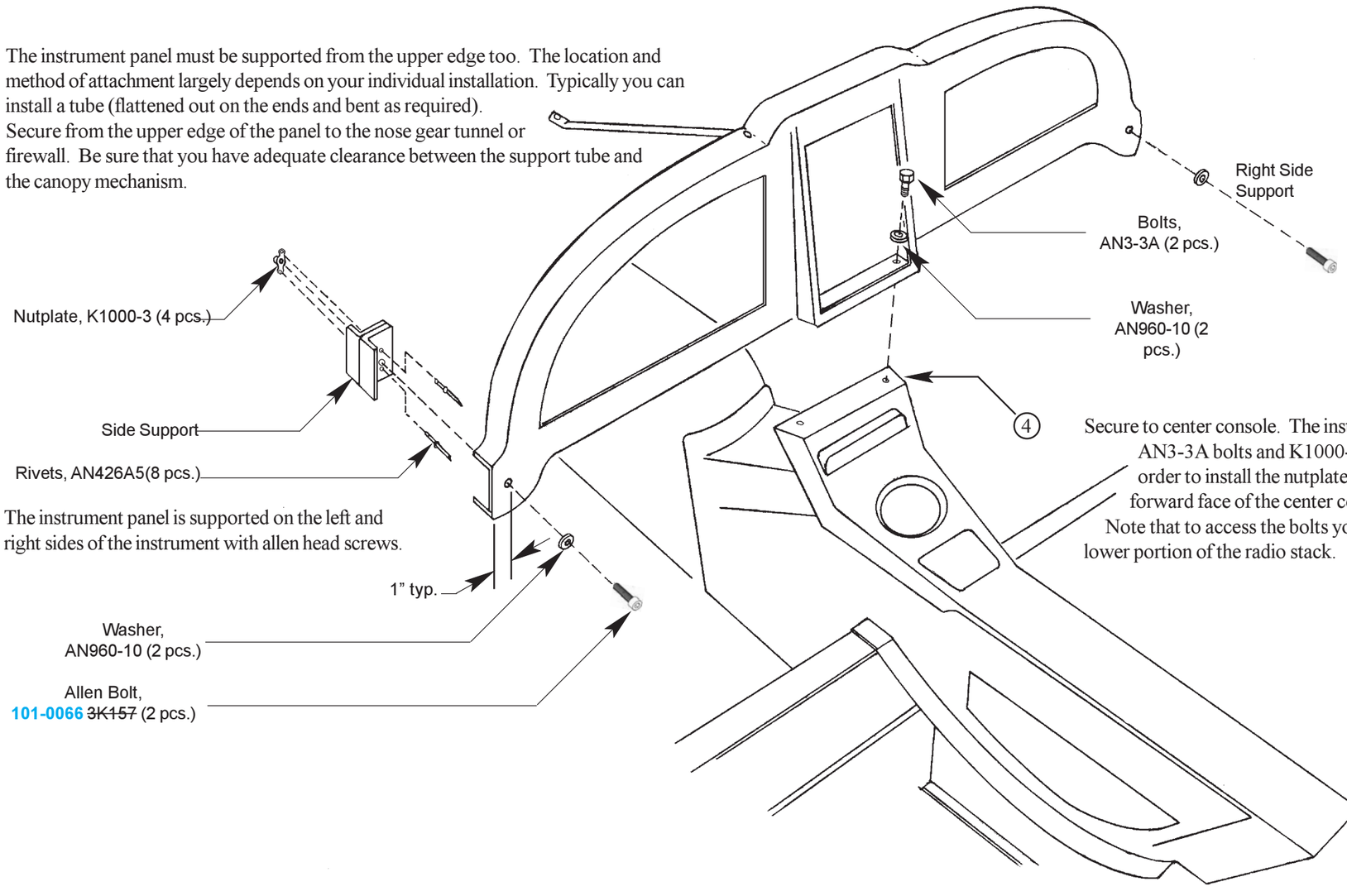


Remove duct tape, panel, wood and apply 3 more BID to the initial 4 BID and the side of the fuselage.

Securing The Instrument Panel
Fig. 20:A:4

The instrument panel is typically secured in four places, from the top of the panel, left and right sides of the panel and to the center console.

(1) The instrument panel must be supported from the upper edge too. The location and method of attachment largely depends on your individual installation. Typically you can install a tube (flattened out on the ends and bent as required). Secure from the upper edge of the panel to the nose gear tunnel or firewall. Be sure that you have adequate clearance between the support tube and the canopy mechanism.



(2 & 3) The instrument panel is supported on the left and right sides of the instrument with allen head screws.

(4) Secure to center console. The instrument panel is typically secured through with AN3-3A bolts and K1000-3 nutplates installed in the center console. In order to install the nutplates, we suggest creating an access hole in the forward face of the center console (where the engine control cables exit). Note that to access the bolts you must remove a couple of the radios out of the lower portion of the radio stack.

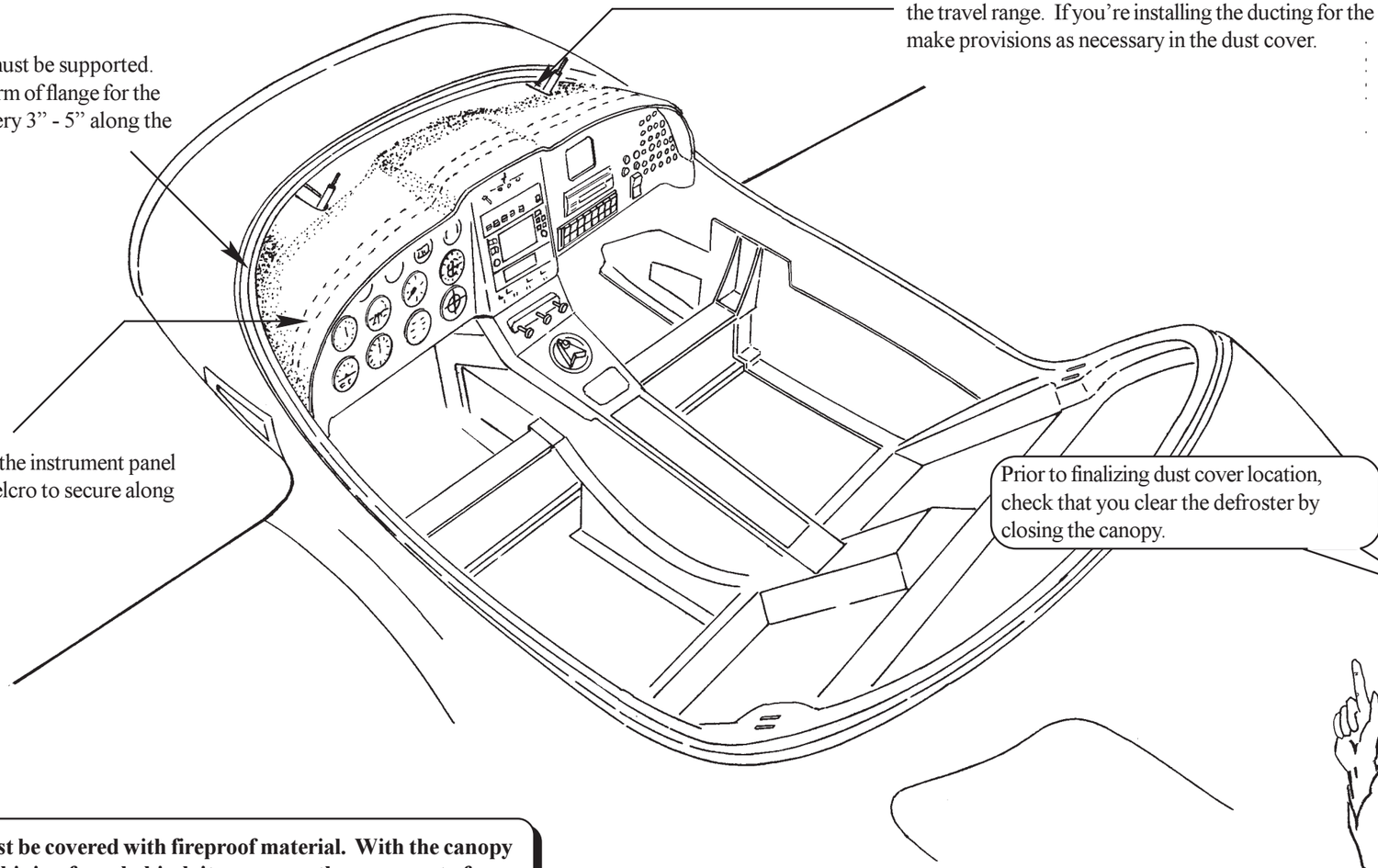
B. Dust Cover

The instrument panel dust cover is often also called a glare shield. By leaving a lip of approximately 4" over hang, it helps block some of the outside light from reflecting on the instruments. Trim to desired length.

Installing The Dust Cover
Fig. 20:B:1

Make slots for the gas struts large enough to accommodate the travel range. If you're installing the ducting for the defroster, make provisions as necessary in the dust cover.

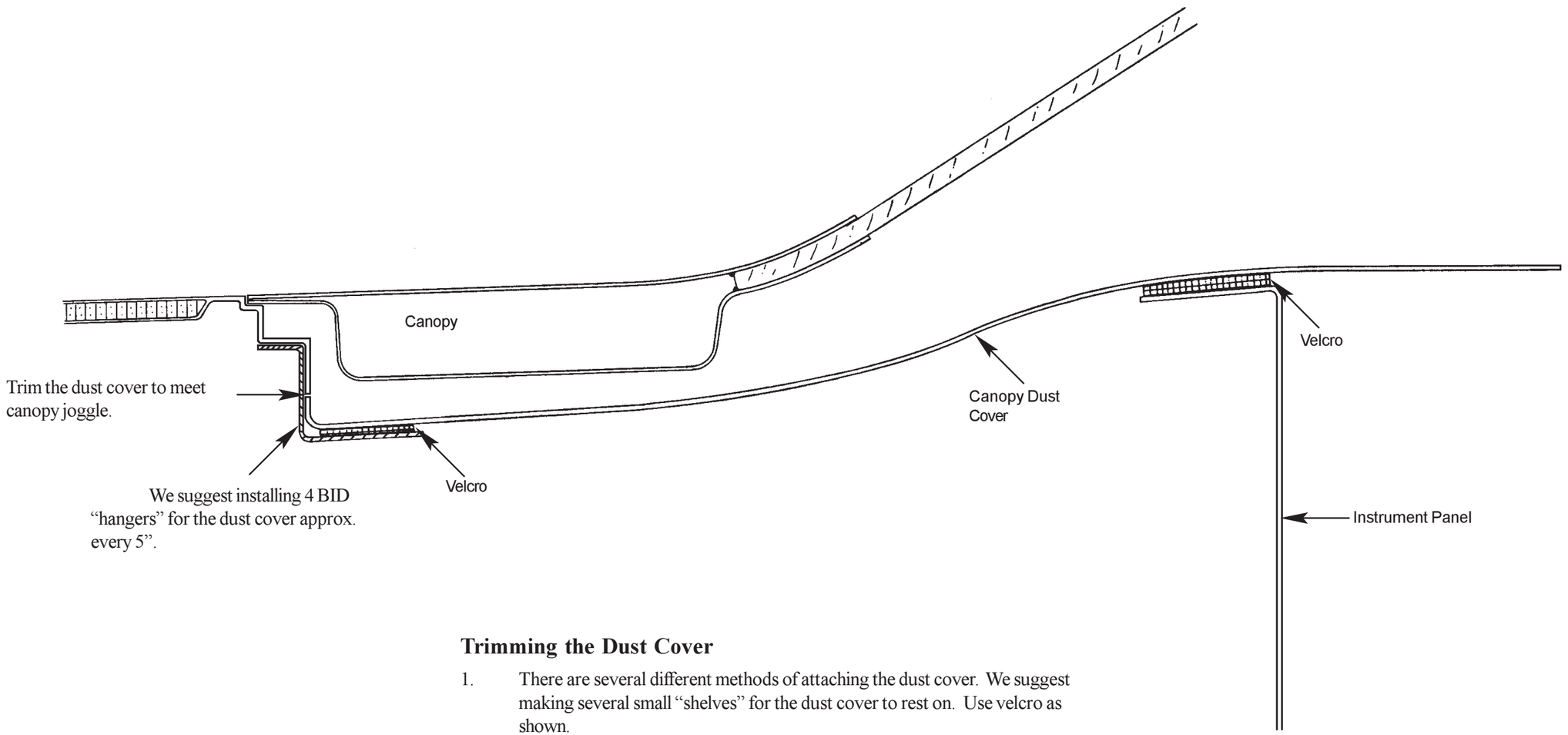
Somehow the sides must be supported. We suggest installing some form of flange for the cover to rest on. Support every 3" - 5" along the front edge.



The dust cover is supported by the instrument panel along the aft edge. We suggest using velcro to secure along this edge.

WARNING: The dust cover must be covered with fireproof material. With the canopy open and the sun shining from behind, it can cause the sun rays to focus producing the same effect as a magnifying glass and burn holes.

Trimming The Dust Cover
Fig. 20:B:2



Trimming the Dust Cover

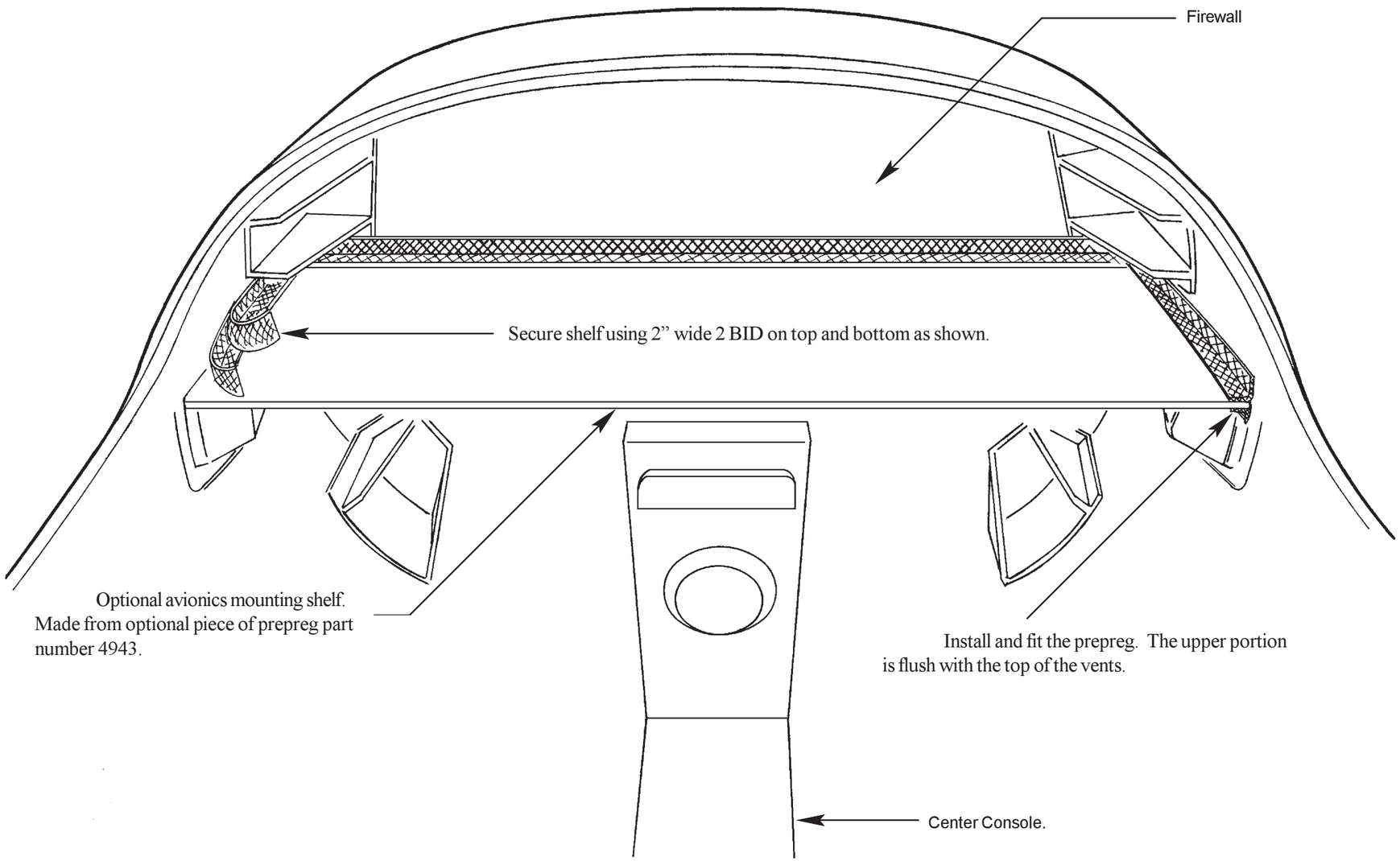
1. There are several different methods of attaching the dust cover. We suggest making several small "shelves" for the dust cover to rest on. Use velcro as shown.

2. Trim the aft edge of the dust cover to preference we like to have at least 4" aft of the panel.

C. Avionics Mounting Shelf

We suggest installing the optional mounting miscellaneous equipment such as VMS DPV, vacuum system filter, backup battery or anything else.

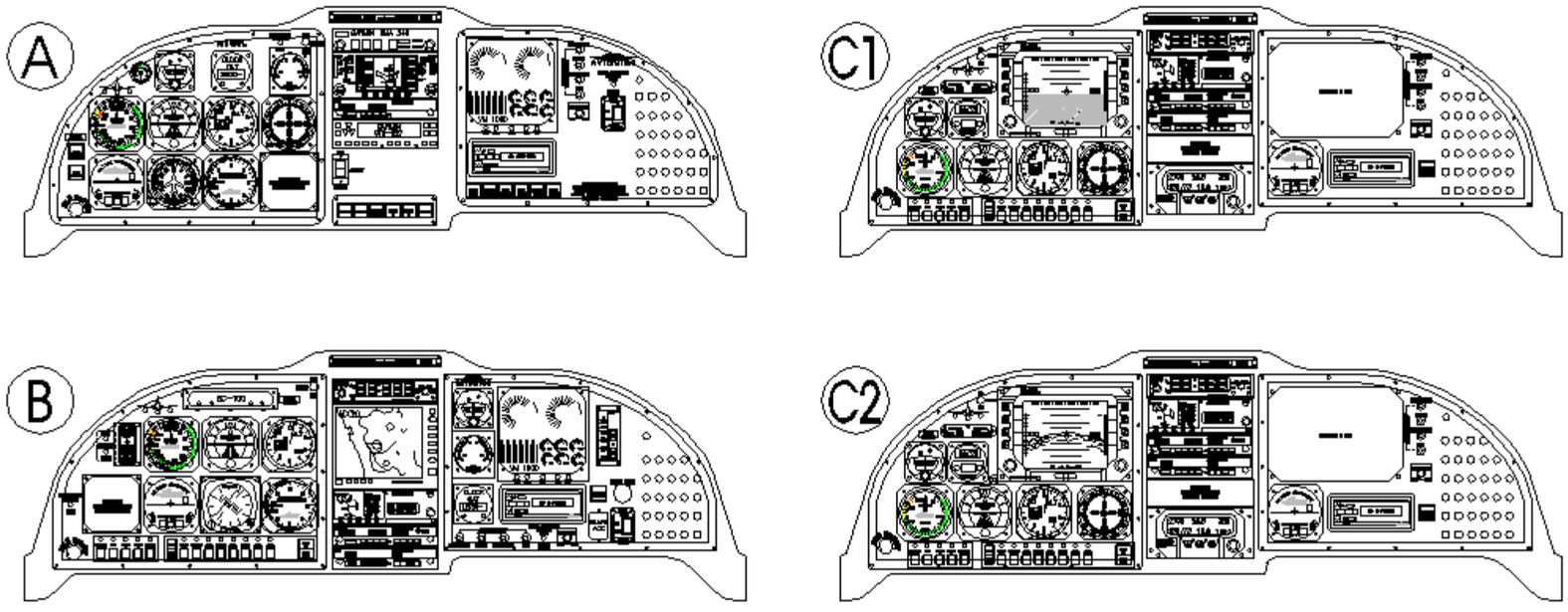
Avionics Mounting Shelf
Fig. 20:C:1



D. Typical Panels

For further information on Lancair Avionics instrument panels please see our website at www.lancairavionics.com or call Lancair Avionics for details.

Typical Panels
Fig. 20:D:1



Note: The inserts for mounting the instruments are typically 0.09” aluminum. The inserts are not included with the kit. They are typically cut by laser. Custom cut inserts are available through Lancair avionics.