SUPERIOR PANEL TECHNOLOGY

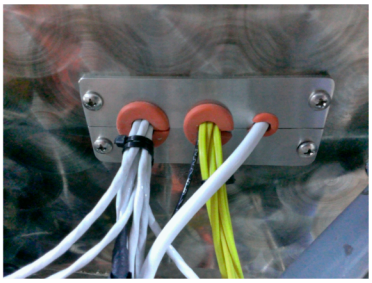
Firewall Cable Grommet Mount
Stainless steel 1/8" #SPTFCGM-1

High-Temp Silicon Grommets

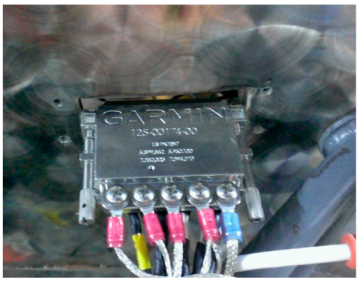
ID	OD	Panel Hole	
3/16"	7/16"	5/16"	#GROM-3/16
5/16"	13/16"	9/16"	#GROM-5/16"
3/8"	7/8"	5/8"	#GROM-3/8"

SPT's Firewall Penetration Kit

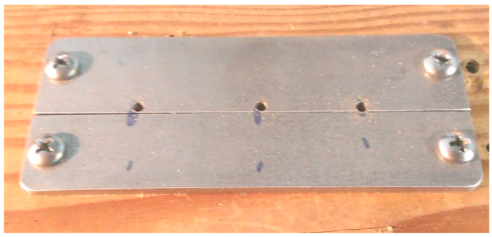
(Cable Grommet Mount Installation)



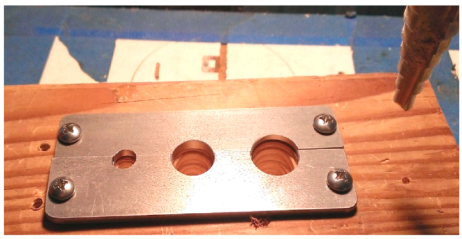
Picture #1



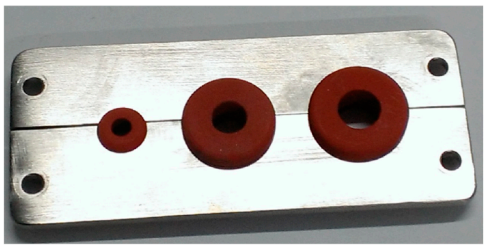
Picture #2



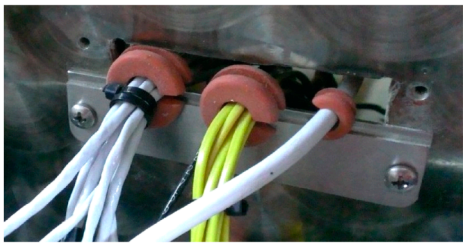
Picture #3



Picture #4



Picture #5



Picture #6

The Superior Panel Technology's 1/8" stainless steel, center-stepped Firewall Penetration Kit (Cable Grommet Mount) gives you the flexibility to make up to three variable-sized, pass-thru holes for wire bundles and to also make rectangular openings large enough to pass plugs through for most of the various current avionics panels on the market today (such as those for the Garmin G3X's GEA 24 LRU). This enables you to wire the plugs on the outside of the plane and then pass them through the hole in the panel. You no longer need to hang upside down under your panel trying to crimp pins and sockets. Now you can wire the plugs outside of the plane where it is much easier to accurately crimp and insert the pins and sockets into the plugs.

Step 1: Determine from the kit manufacturer that it is acceptable to make the size of hole in the firewall that you need without weakening the structure.
Step 2: Hold the Firewall Shields on the panel and use a Sharpie and trace around the outside perimeter.
Step 3: Center the size of opening(s) that you wish to make within this drawing. A rectangular opening should be no greater than 1.25" x 2.9".
Step 4: Cut the opening on the firewall. If your opening is a rectangle, you can drill holes in the corner and then use a Dremel to cut the straight lines through the metal. An oscillating tool works

great in cutting through composite and wood. A step-drill works great if you are just drilling round holes. Make the holes slightly larger than the OD of the grommets (see grommet dimensions in the upper right hand corner of page 1) to allow for clearance of the backside of the grommet. Space the holes apart so that the grommets will not be touching.

Step 5: Screw both shields together to a block of wood with #8 screws as shown in picture #3. Make sure that they are pressed tightly together. Use a drill press and a 1/16" bit to drill pilot holes for the center points of your grommet holes. The holes will be centered in the small overlapping step slightly off the edge. Again, make sure that the final placement of the holes will allow for clearance of the OD of the grommets.

Step 6: Zip tie your wire bundles together and use a caliber to take the measurement of the diameter of the bundle.

Step 7: Determine the size of grommet needed by matching the grommet ID with your wire bundle diameter. Use a step bit to drill the hole to size on the shields (picture #4). The diameter of the hole will be the "Panel Hole" dimension (see upper right corner of page 1) for the grommet that you will be using. After drilling the front side you can flip them over and screw them down and carefully lower the step-bit down just enough to deburr the backside.

Step 8: Test grommets for fit (picture #5).

Step 9: Position the bottom half of the shield into place. Use a punch to mark the center point on the panel for the screws and drill the holes. Drill for a #8 screw if you are using a machine screw (undersize the hole for a sheet metal screw). Screw the bottom half of the shield with the step facing out. Slice each grommet so that you can position it around the wire bundles and position into place (see picture #6).

Step 10: Place the top half tightly into position over the bottom half. Use a punch to mark the screw hole centers for the top half. Drill screw holes and screw into position. The final product should look like picture #1.

Step 11: Remove the shields after you are satisfied with final placement. Use a small bead of high-temp RTV around the perimeter of the bottom shield and then put it back into place. Apply a small bead of the silicone on the center step of the bottom half and the perimeter of the backside of the top half. Screw the top half back into position and wipe up excess silicone. You can also apply the high-temp silicone around the wires to reduce the risk of carbon monoxide infiltration.

Other tips:

1. You can wrap the wire bundle with fusion tape so that it will have a tighter fit if your grommet does not fit tightly around your wire bundles
2. Always size your opening to clear your largest size plug. Insert that largest one through the panel first, otherwise the wires from another plugs will prevent your being able to insert the largest plug into the opening.

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