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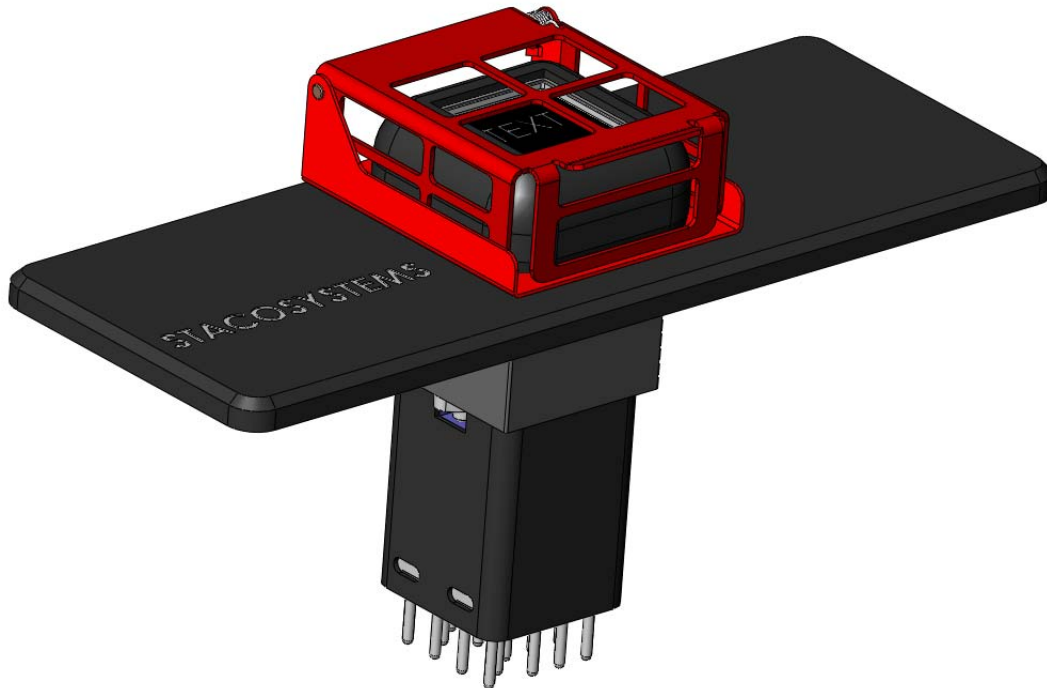
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APPROVED

TECHNICAL BULLETIN – TB-205

TECHNICAL BULLETIN, INSTALLATION PROCEDURE FOR SWITCHES USING WATERTIGHT METAL GUARDS



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Revision Log

Rev.	E. R. No.	Revised By	Checked By	Approved By	Rel. Date
1.0	41820	K.TAKEUCHI			

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PURPOSE:

THE PURPOSE OF THIS TECHNICAL BULLETIN IS TO PROVIDE NECESSARY INSTRUCTIONS TO THE CUSTOMER FOR PROPER INSTALLATION OF SERIES 100 AND SERIES 90 SWITCH ASSEMBLIES USING A WATERTIGHT SEAL AND METAL WATERTIGHT PUSHBUTTON GUARD.

****NOTE:** SWITCH ASSEMBLIES WILL BE PROVIDED AS A COMPLETED TEMPORARY ASSEMBLED UNIT FOR EASE OF SHIPPING. SOME PANEL SPACERS AND MOUNTING SLEEVES MAY NOT BE INSTALLED DUE TO PHYSICAL LIMITATIONS IN SWITCH STACKUP. PANEL SPACERS (QTY 2) AND MOUNTING SLEEVE (QTY. 1) ARE PROVIDED TO ACCOMMODATE VARIABLE PANEL THICKNESSES. THESE 3 PARTS SHALL BE USED IN VARIOUS COMBINATIONS IN ORDER TO OBTAIN PROPER SPACING ON THE BACK SIDE OF CUSTOMER PANELS. NOT ALL SPACERS AND SLEEVES WILL BE USED FOR INSTALLATION.

FIGURE 1 BELOW SHOWS A TYPICAL SWITCH ASSEMBLY THAT THE CUSTOMER WOULD RECEIVE. (SOME DISASSEMBLY IS REQUIRED FOR PROPER INSTALLATION INTO A PANEL.)

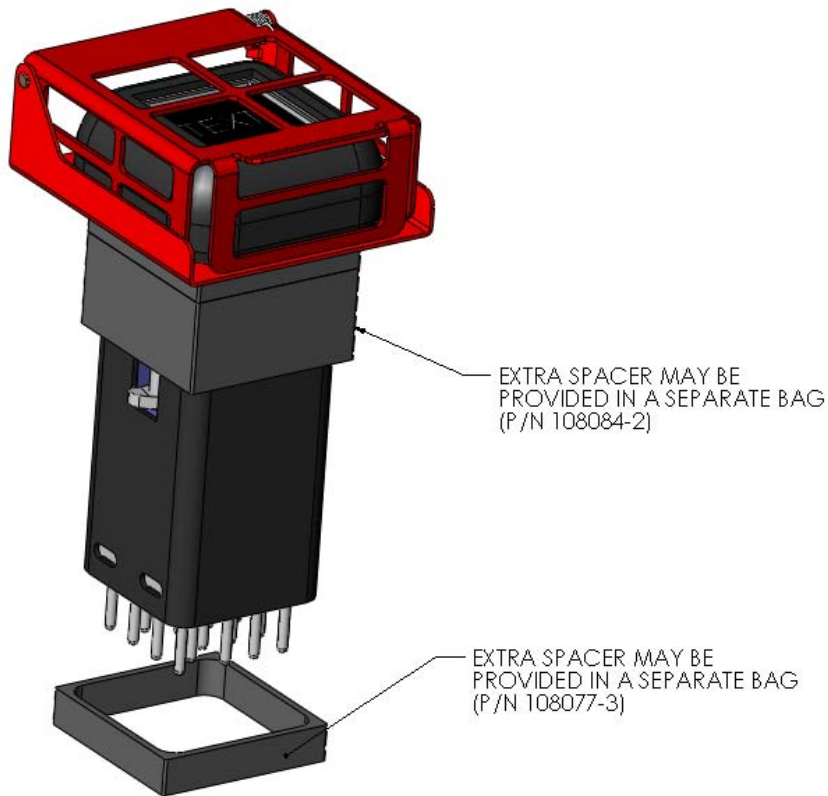


FIGURE 1 – EXAMPLE OF AS SHIPPED ASSEMBLY

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STEP BY STEP PROCEDURE (SHOWN WITH SERIES 100 SWITCH)

1. EXTRACT PUSHBUTTON AND WATERTIGHT SEAL FROM SWITCH ASSEMBLY. METAL GUARD MUST BE OPEN AT THIS TIME. THE PUSHBUTTON WILL “UNSNAP” FROM THE SWITCH ASSEMBLY. NOTE: PUSHBUTTON LANYARD/TETHER IS ATTACHED TO BACKSIDE OF PUSHBUTTON. DO NOT PULL PUSHBUTTON EXCESSIVELY AND BREAK LANYARD. SEE FIGURE 2.

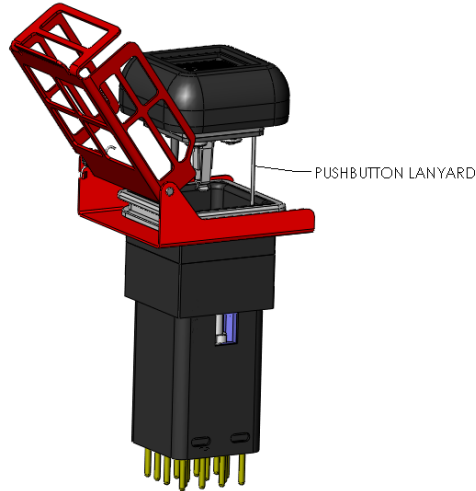
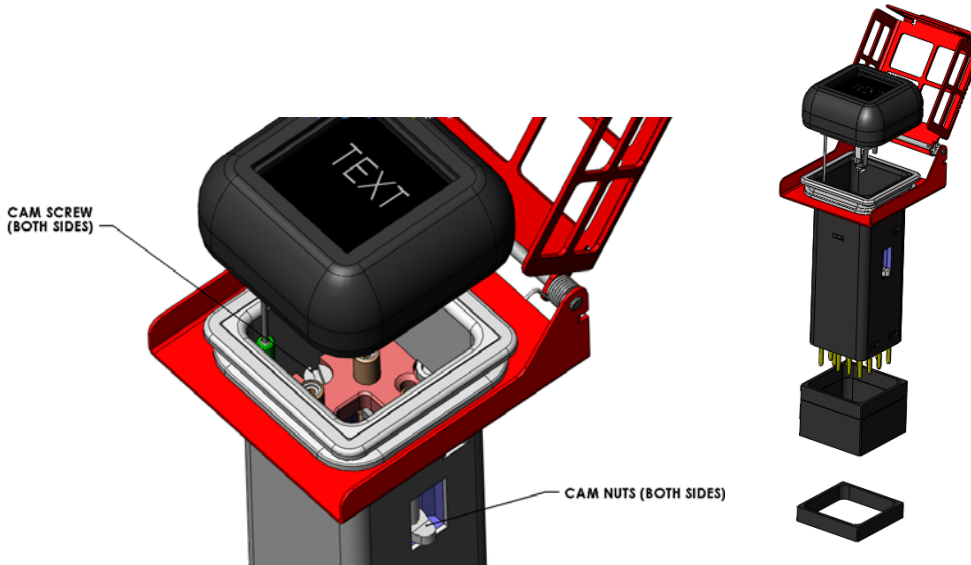


FIGURE 2 – REMOVAL OF PUSHBUTTON

2. REMOVE SPACERS BY TURNING CAM SCREWS WITHIN SWITCH ASSEMBLY COUNTERCLOCKWISE. CAM NUTS SHOULD RETRACT BACK INTO SWITCH CUTOUT AREAS. SLIDE SPACER AND SLEEVE DOWN. SEE FIGURES 3 AND 4.



FIGURES 3 AND 4 - REMOVAL OF SPACERS AND SLEEVES

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- WITH THE SPACERS DISASSEMBLED FROM THE SWITCH, NOTE WHERE THE FIRST PANEL SEAL IS. SEE FIGURE 5. THIS PANEL SEAL WILL INTERFACE TO THE TOP SIDE OF THE CUSTOMER'S PANEL DURING INSTALLATION. FIGURE 6 SHOWS THE COMPLETE PART STACK UP IF ALL COMPONENTS ARE REMOVED PRIOR TO INSTALLATION. THIS IS NOT RECOMMENDED, HOWEVER IF COMPONENT REMOVAL OCCURS, THIS FIGURE WILL BE USED TO CORRECTLY REASSEMBLE THE STACK UP AS NECESSARY. (EXAMPLE CUSTOMER PANEL SHOWN FOR CLARITY).

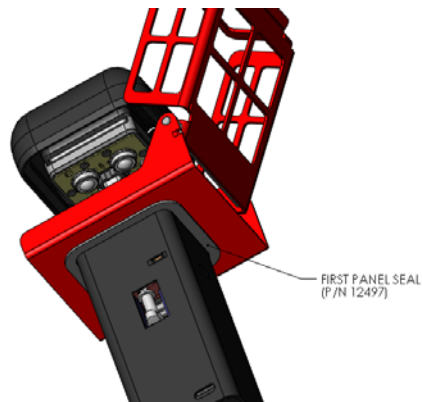


FIGURE 5 – VIEW OF FIRST PANEL SEAL

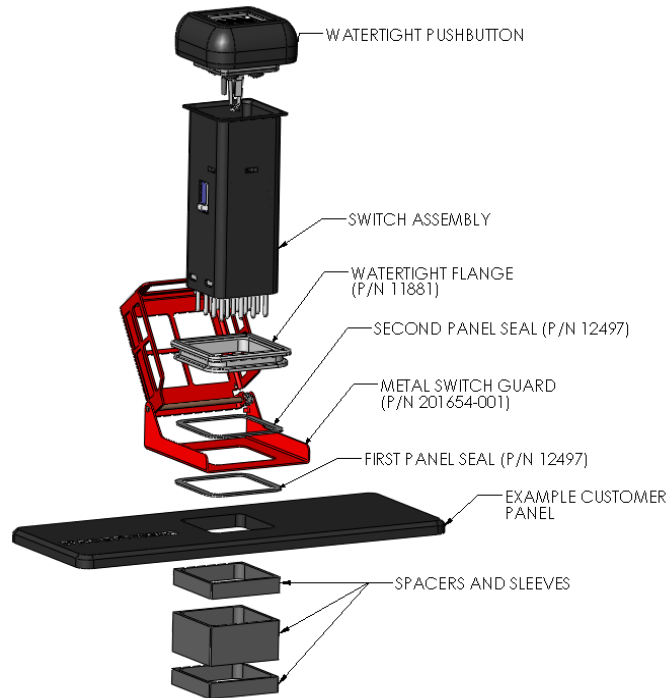


FIGURE 6 – COMPLETE STACKUP OF COMPONENTS TO AID IN REASSEMBLY IF NECESSARY

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4. INSTALL SWITCH AS SHOWN INTO PANEL. SEE FIGURES 7 AND 8. DO NOT INSTALL PUSHBUTTON ONTO SWITCH ASSEMBLY.

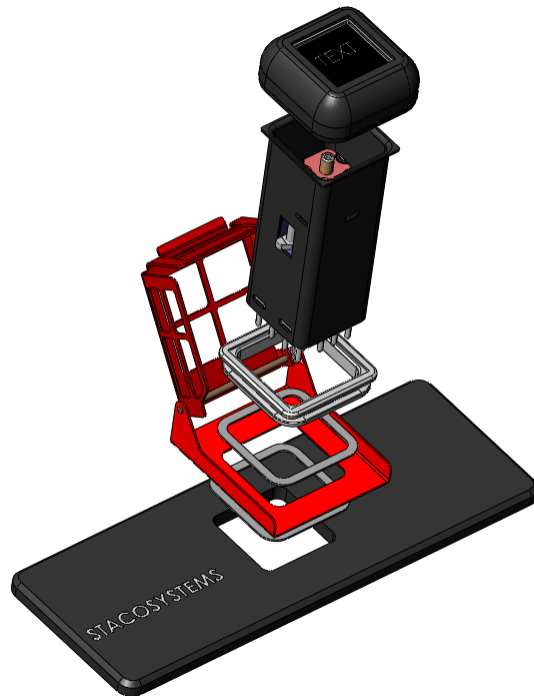


FIGURE 7 – EXPLODED PREASSEMBLED VIEW

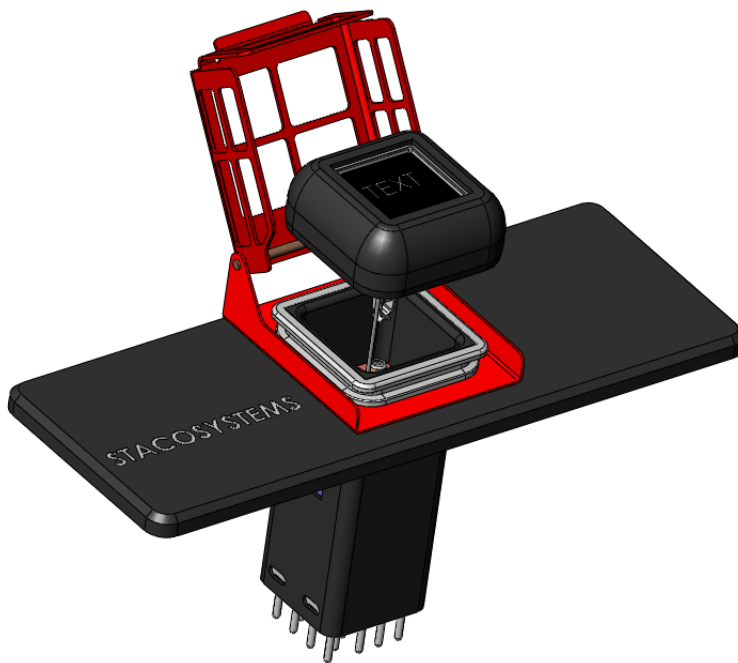


FIGURE 8 –ASSEMBLED VIEW INTO PANEL.

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5. AFTER INSTALLED INTO PANEL, ADD NECESSARY MOUNTING SLEEVES AND SPACERS ONTO BACK SIDE OF PANEL AROUND SWITCH BODY. SEE FIGURE 9 (ONE SLEEVE AND ONE SPACER ARE SHOWN AS AN EXAMPLE. VARIOUS COMBINATIONS ARE TO BE USED IN ORDER TO OBTAIN A PROPER FIT INTO CUSTOMER SPECIFIC PANELS). TO ENSURE PROPER COMBINATION OF SPACERS AND SLEEVES, TURN CAM SCREWS COUNERCLOCKWISE UNTIL BOTH CAM NUTS ARE FULLY BOTTOMED OUT IN SWITCH CUTOUTS. FIGURE 10 NOTES TEXT ORIENTATION.

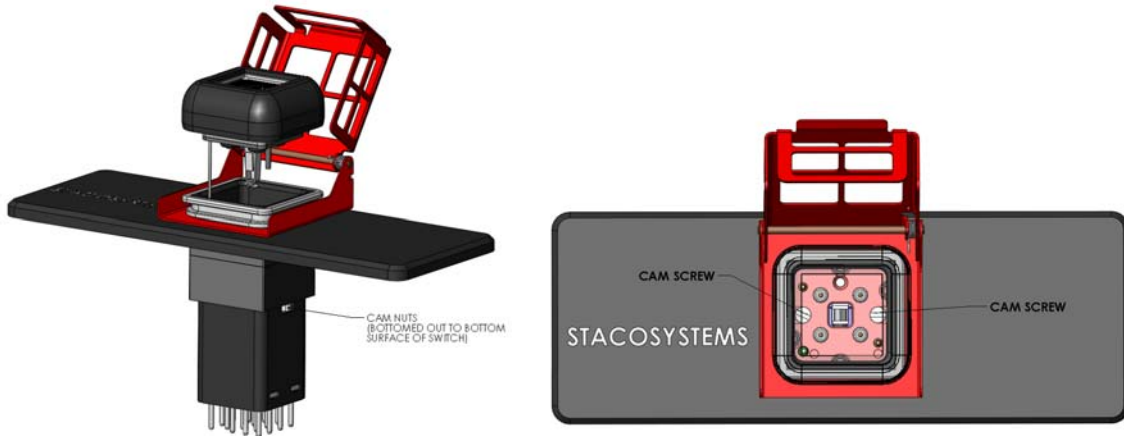


FIGURE 9 – SWITCH INSTALLED INTO PANEL (NOT TIGHTENED)

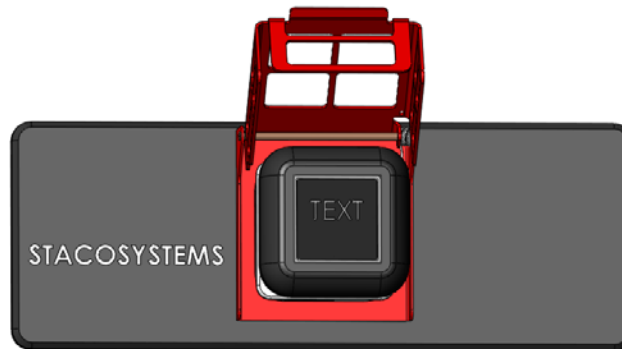


FIGURE 10 –TEXT ORIENTATION OF PUSHBUTTON.

6. USING A FLAT HEAD SCREW DRIVER WITH TORQUE SETTINGS, TURN SCREW CLOCKWISE SO THAT CAM NUTS OF SWITCH TIGHTEN AGAINST

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MOUNTING SLEEVE. TIGHTEN MOUNTING LUG SCREWS TO 16-18 IN-
OUNCES (0.113 TO 0.127 N-m). SEE FIGURES 11 AND 12.

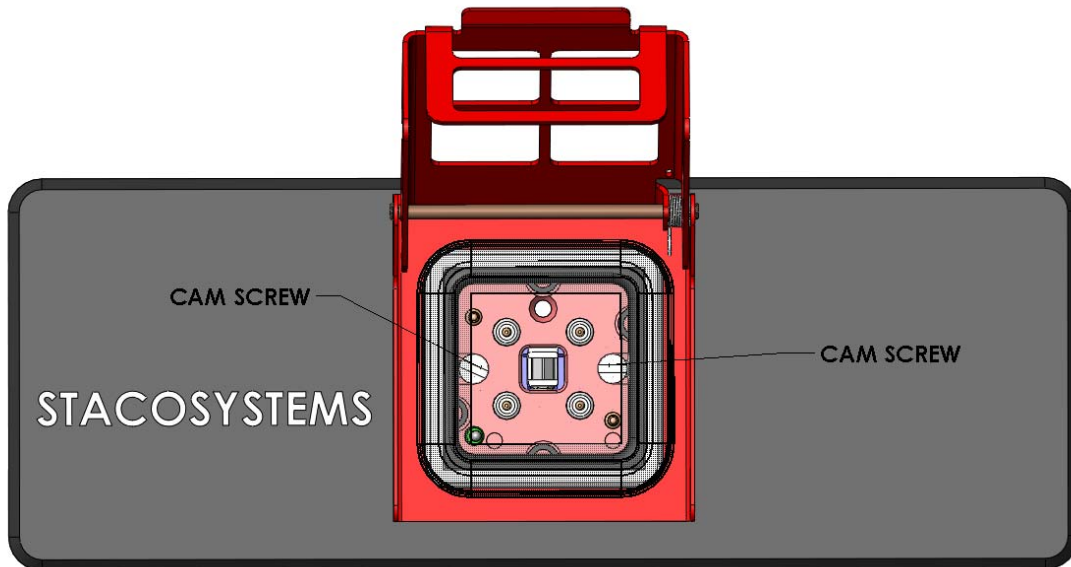


FIGURE 11 – CAM SCREW VIEW (PUSHBUTTON TRANSPARENT FOR CLARITY)

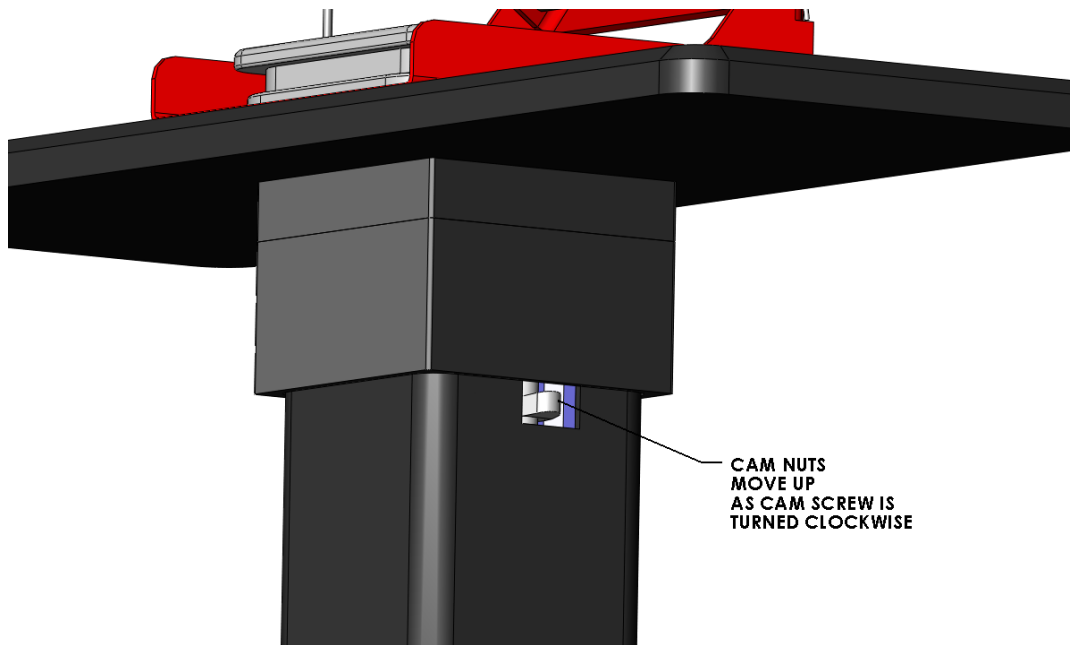


FIGURE 12 – CAM NUTS LOCKING SPACERS INTO PLACE. (AS CAM SCREW IS TURNED CLOCKWISE, CAM NUTS MOVE UP AND TIGHTEN TO SPACERS/SLEEVES).

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7. REINSTALL PUSHBUTTON BACK ONTO SWITCH ASSEMBLY. SEE FIGURE 13. ENSURE A PROPER FIT OF WATERTIGHT SEAL TO WATERTIGHT FLANGE AS SHOWN IN FIGURE 14.

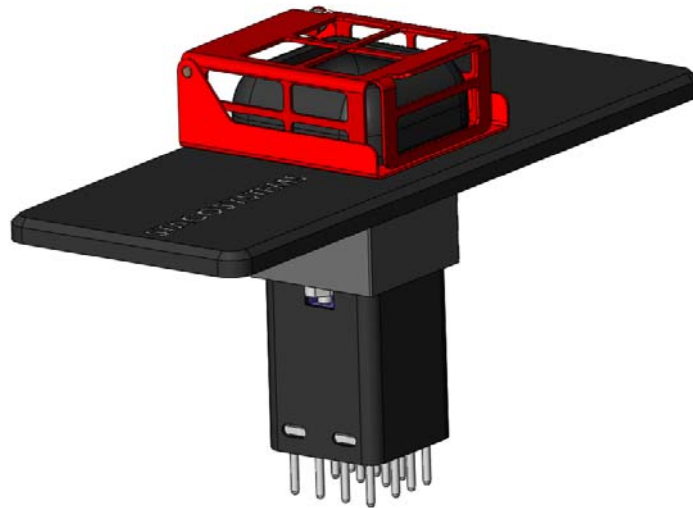


FIGURE 13 – ASSEMBLED UNIT

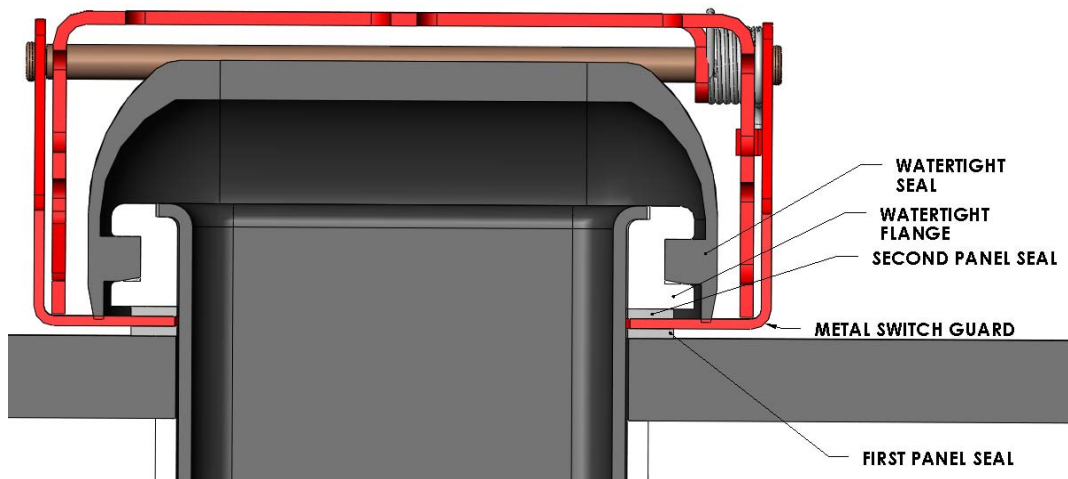


FIGURE 14 – SECTION VIEW OF WATERTIGHT SEAL INTERFACE

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