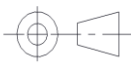


REVISION HISTORY				
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1.1	REVISED PER ER	ER-48254	07/11/19	A.LETISO
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 UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
TOLERANCES
 DECIMALS ANGLES FRACTIONS
 X ± .03 ± 1/2° ± 1/64
 XX ± .010
 XXX ± .005

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TITLE TECHNICAL BULLETIN, INSTALLATION OF SWITCH GUARD ON SERIES 90/100 SWITCH ASSEMBLIES			
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1.0 PURPOSE

The purpose of this technical bulletin is to provide necessary instructions for proper installation of a switch guard 15089 for a Series 90/100 Switch Assembly.

2.0 APPLICABLE DOCUMENTS

The following documents form a part of this document to the extent specified herein. Where specific paragraphs are called out, all subordinate paragraphs also apply. Where individual paragraphs are not specified, the document is applicable in its entirety.

2.1. Staco Systems Documents

Series 90 SCD	Specification Control Document for Series 90 Lighted Pushbutton Switches and Indicators
Series 100 SCD	Specification Control Document for Series 100 Lighted Pushbutton Switches and Indicators
TB-206	Installation Procedure for Pushbutton Switch Assembly
TB-207	Installation Procedure for Crimp Pin Receptacle

3.0 KEY COMPONENTS

- 3.1. Pushbutton removal tool P/N 15193
- 3.2. S90 or S100 switch with mounting spacers
- 3.3. Torque screw driver (capable of torqueing 10 inch ounces)
- 3.4. Magna lube
- 3.5. Isopropyl Alcohol

4.0 PROCEDURE

4.1. Receptacle Assembly Removal – For Crimp Termination Only

Prior to extracting pushbutton from switch or indicator housing, the receptacle assembly should be extracted from switch body. This can be accomplished by turning receptacle mounting screw counter-clockwise. It is important to note that the screw is captive and should not disengage itself from the receptacle completely.

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4.2. Mounting Procedure

4.2.1. Extract pushbutton from switch / indicator housing

Using pushbutton extraction tool (see Figure 1), position the tool's gripping tabs around the two indentations, located on the pushbutton's retainer as shown in Figure 2.

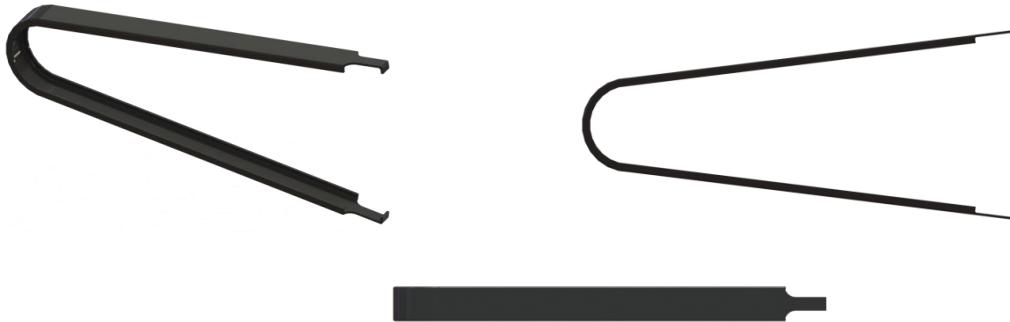


Figure 1: Pushbutton Extraction Tool (P/N 15193)



Figure 2: Pushbutton Extraction (S100 version shown)

Clamp/squeeze the tool gently, but firmly, and pull the pushbutton away from the switch / indicator housing. The removal force should be in the range of two (2) to five (5) pounds (See Figure 3). This gives access to the heads of the locking screws located inside the front portion of the switch / indicator as shown in Figure 4.

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Figure 3: Pushbutton Extraction (S100 version shown)



Figure 4: Locking Screw (S100 shown without pushbutton for clarity)

4.2.2. Remove Panel Spacer and Mounting Sleeve from Switch / Indicator Assembly

Rotate the two locking screws counter-clockwise $\frac{1}{2}$ a turn with a screwdriver. [WARNING: DO NOT BACK OUT MOUNTING CAM COMPLETELY OUT, THIS WILL CAUSE DAMAGE TO THE SWITCH.] This will release mounting cams. Slide mounting sleeves and panel spacer from the switch / indicator assembly (See Figure 5).

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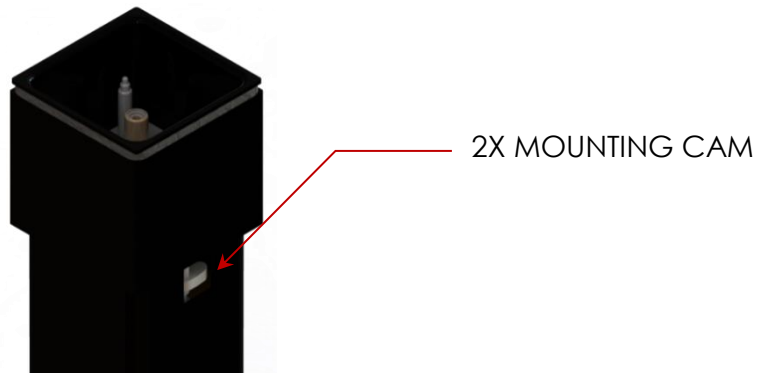


Figure 5: Mounting Cam (S100 shown without pushbutton for clarity)

4.2.3. Remove Panel Spacers, Mounting Sleeve and Panel Seal

Remove panel spacers, mounting sleeve and panel seal as shown in Figure 6.

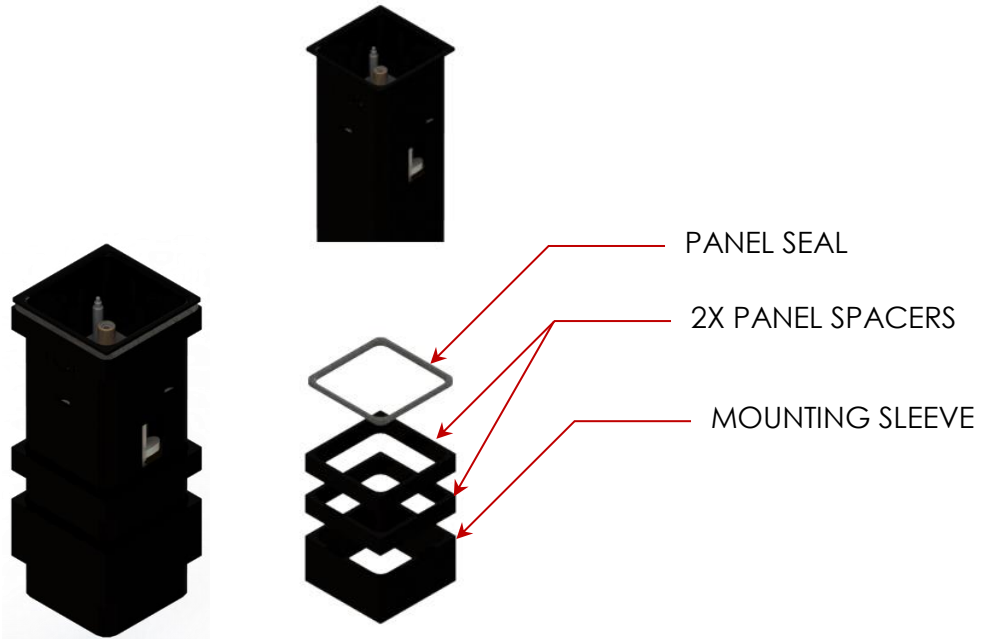


Figure 6: Panel Spacers, Mounting Sleeve and Panel Seal (S100 shown without pushbutton for clarity)

4.2.4. Install Switch Guard

Install pushbutton switch/indicator through switch guard cut-out from front of switch guard. The switch / indicator housing is marked "TOP" to help properly orient position of the assembly in the switch guard (See Figure 7).

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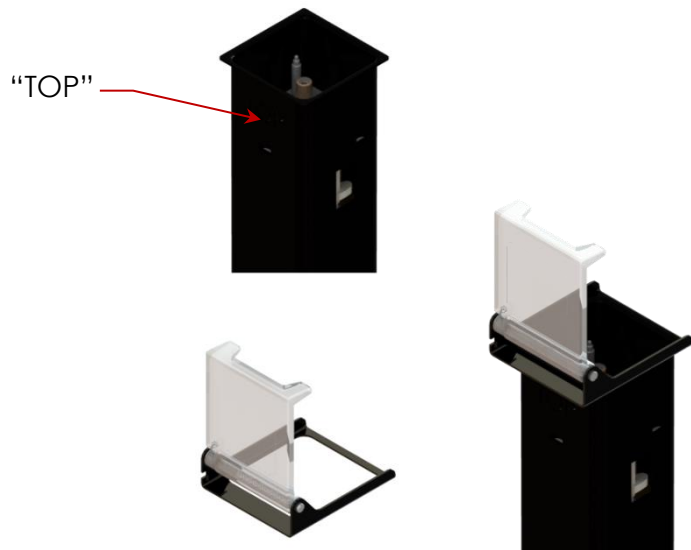


Figure 7: Switch Guard (shown without pushbutton for clarity)

4.2.5. Install Panel Seal

Install panel seal onto switch / indicator assembly as shown in Figure 8.



Figure 8: Panel Seal (S100 shown without pushbutton for clarity)

4.2.6. Install Switch / Indicator Assembly and Switch Guard onto Mounting Panel (reference TB-206 as required)

Install pushbutton switch/indicator through panel cut-out from front of panel. The switch / indicator housing is marked "TOP" to help properly orient position of the assembly in the panel (See Figure 9).

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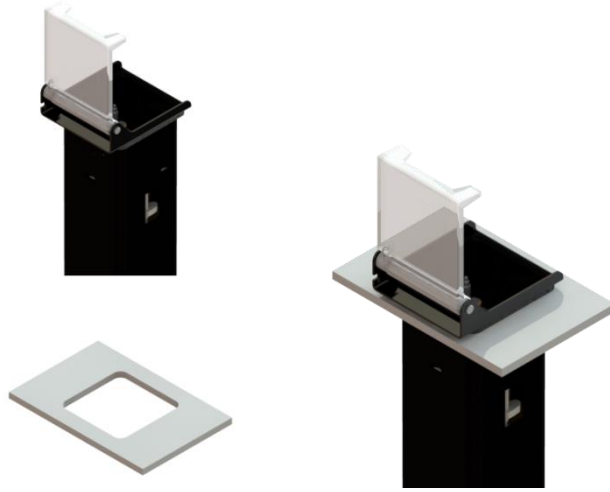


Figure 9: Switch Orientation (shown without pushbutton for clarity)

To determine the use of the panel seal panel spacer, mounting sleeves and the maximum panel thickness refer to the Series 90 or S100 SCD. In the application shown, the switch assembly and switch guard are installed in the flush mount condition.

The panel spacer, together with three different thickness mounting sleeves, 0.38", 0.15" and 0.04", this provides options for fitting the switch/indicator assembly to mounting panels with thicknesses up to a maximum of 0.57".

Replace panel spacer and mounting sleeves as appropriate for the panel thickness as shown in Figure 10.

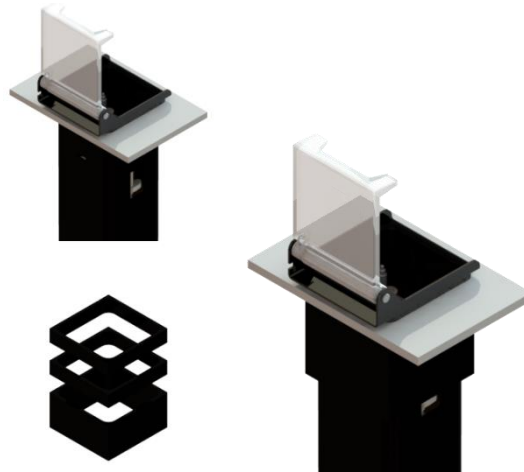


Figure 10: Panel Spacers, Mounting Sleeve and Panel Seal (shown without pushbutton for clarity)

Rotate locking screws clockwise to bring mounting cams to lock position. Recommended mounting torque is 10 ± 2 ounce inches (0.071 ± 0.014 Nm) (See Figure 11).

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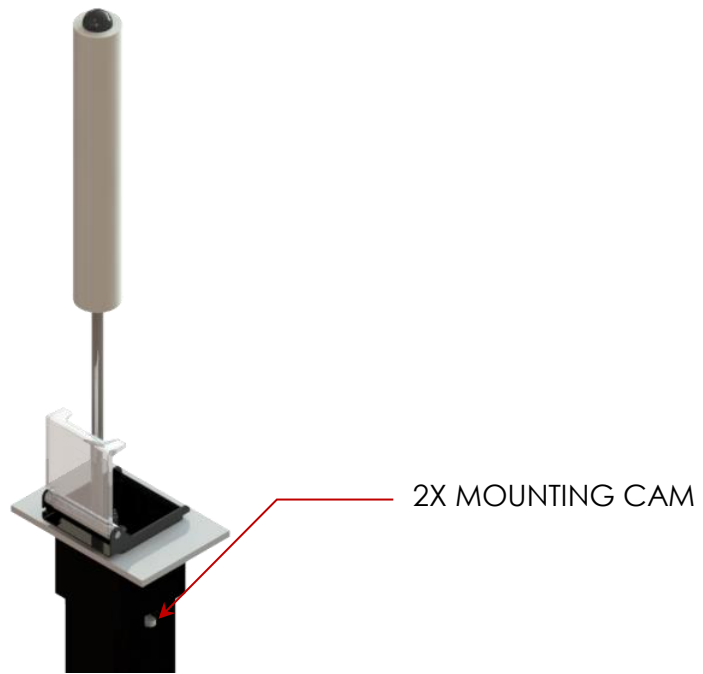


Figure 11: Mounting Cam in Locked Position (shown without pushbutton for clarity)

4.2.7. Pushbutton Installation

Align the pushbutton shaft and the anti-rotation shaft, located at center of the pushbutton and the bottom center, to the shaft cutout and the anti-rotation shaft hole. Push gently until the pushbutton is properly seated (See Figure 12).

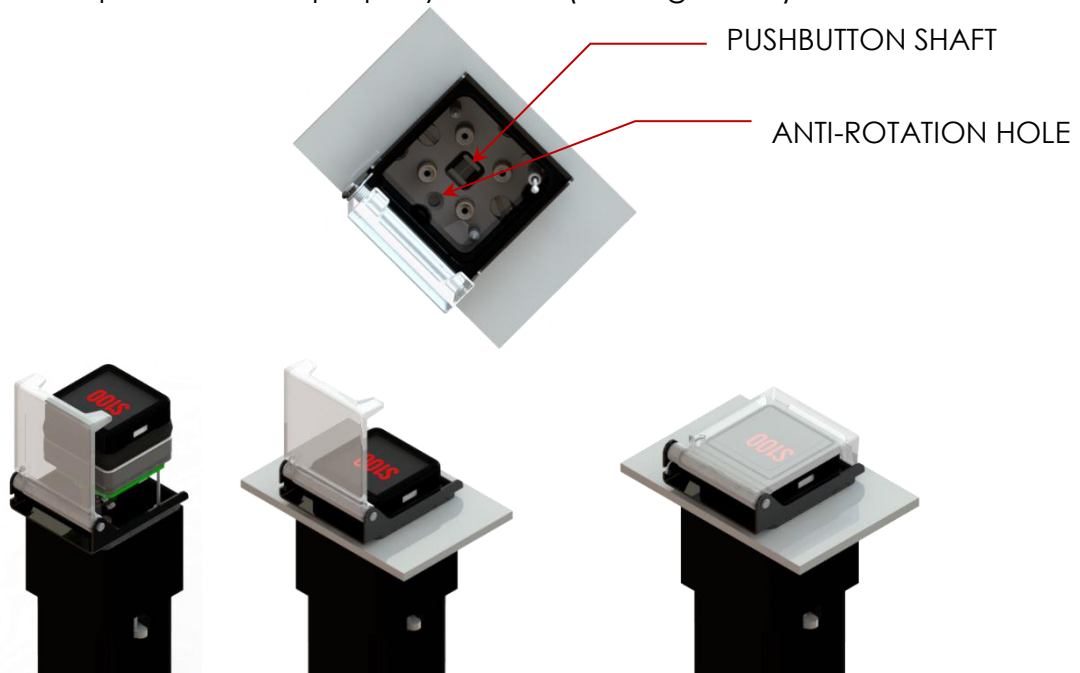


Figure 12: Pushbutton Installation (\$100 shown)

4.2.8. Receptacle Assembly Installation – For Crimp Pin Termination Only

Reference TB-207 - Once the switch/indicator has been properly installed, place receptacle assembly back onto switch/indicator. it

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is important that all crimp pins and mounting holes are properly aligned.

While holding receptacle in place on switch/indicator, tighten receptacle mounting screw clockwise. Recommended torque is 10 ± 2 inch-ounces (0.070 ± 0.014 Nm).

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