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CAGE CODE: **12522**

APPROVED

## TECHNICAL BULLETIN – TB-146

# RECEPTACLE ASSEMBLY INSTALLATION PROCEDURE

## Series 90 Switches, Indicators, and Matrices

TB-146

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**TB-146**

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SHEET 1 OF 5

### Revision Log

Rev.	E. R. No.	Revised By	Checked By	Approved By	Rel. Date
1.0	41799	K.TAKEUCHI			

CAGE CODE:	DRAWING NO.	REV.	SHT.
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For crimp-pin terminated Series 98 and 99 switches/indicators and Series 95. and 97 matrix assemblies, the installation of the receptacle assembly is an extremely important operation. If improperly performed, the receptacle possibly could become disengaged from the switch housing. The locking cam nuts used to retain the receptacle must be fully engaged in the "window" area of the housing and tightened to the specified torque. The recommended procedure for receptacle assembly installation is as follows:

1. Before inserting the receptacle assembly into a switch, be sure that both cam nuts (item 1 of Figure 1-a) on the two opposite sides of a receptacle are positioned at the end of the mounting screw threads, next to the wall of the retainer plate (2), a position that is furthest from the wiring end. If any cam nut is not at the required position, turn screws (3) counter clockwise until each cam nut reaches the position shown.
2. Be sure that the sidewall of every cam nut is parallel to the corresponding adjacent surface of the retainer plate (2) so that no part of cam nuts (1) protrudes beyond the outside of this surface.
3. If it is possible, inspect both walls (that have rectangular holes) of the switch or matrix housing (4) to make sure that their walls near the ends on the receptacle side are straight and not bowed outward as a result of improper handling or because of previous unsuccessful attempts to install a receptacle. Walls could be slightly bowed inward to assure a good fit with retainer plate (2).
4. If rubber gasket is supplied (p/n 124010, for short crimp pin termination types only), insert it into switch terminal area for the additional protection of the receptacle contacts from contamination. See figures 2a and 2b.
5. Put the receptacle in its proper position in relation to the switch contact pins and carefully, but firmly, insert pre-wired receptacle assembly into the switch housing until it is fully engaged with switch pins (there shall be no sizable gaps between edges of the housing and stopping surface of the retainer plate). See Figure 1-b for reference.
6. While holding receptacle in the position described above, use torque-limiting screw-driver to tighten one of the retaining screws (3) clockwise to the torque value of  $10 \pm 2$  ounce-inches ( $.071 \pm .014$  Nm). Then tighten the second screw with the same torque.
7. If it is possible, inspect positions of cam nuts (1) to assure that all nuts are visible in their rectangular windows, that they are turned approximately 90 degrees from their initial position, and that they have moved to the ends of these windows closest to the wiring side, as shown in Figure 1-b.
8. Repeat this installation procedure for all of the remaining switches.

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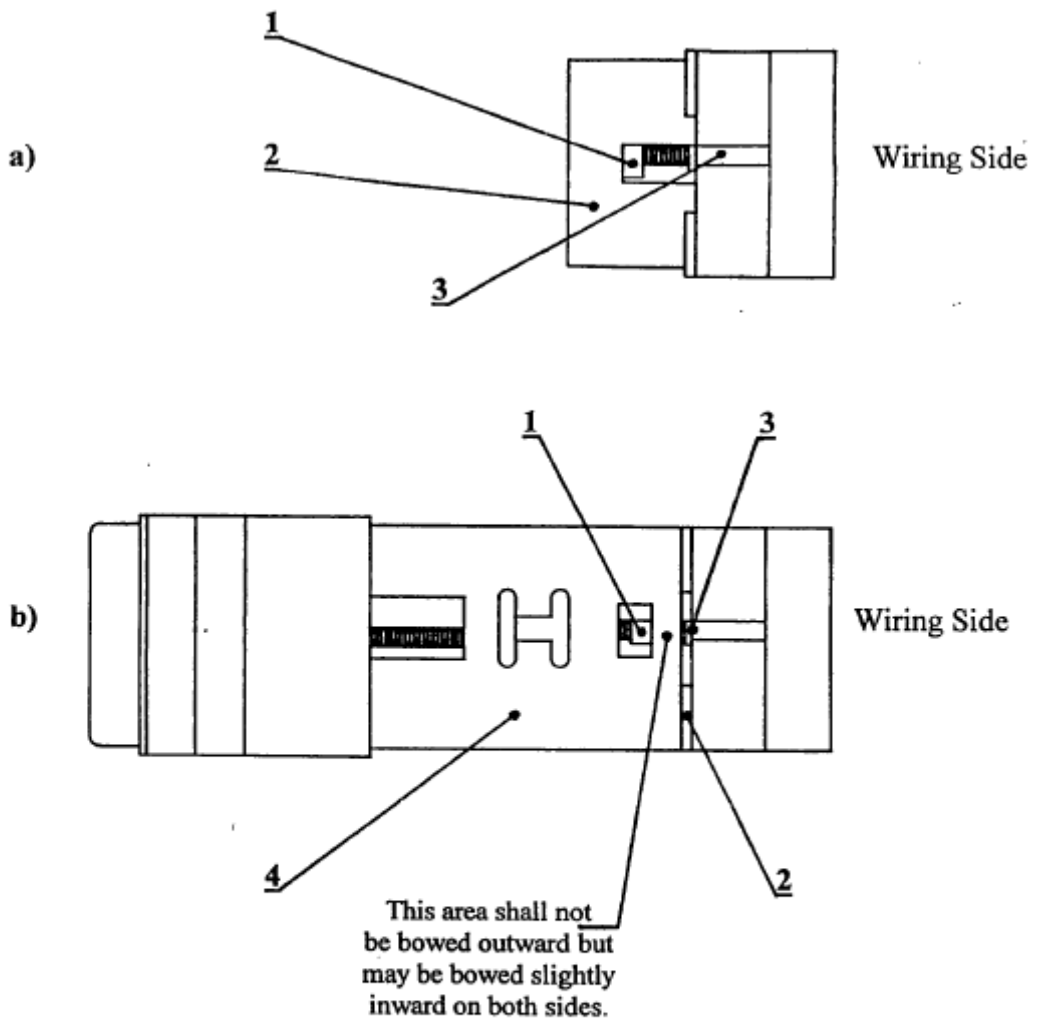
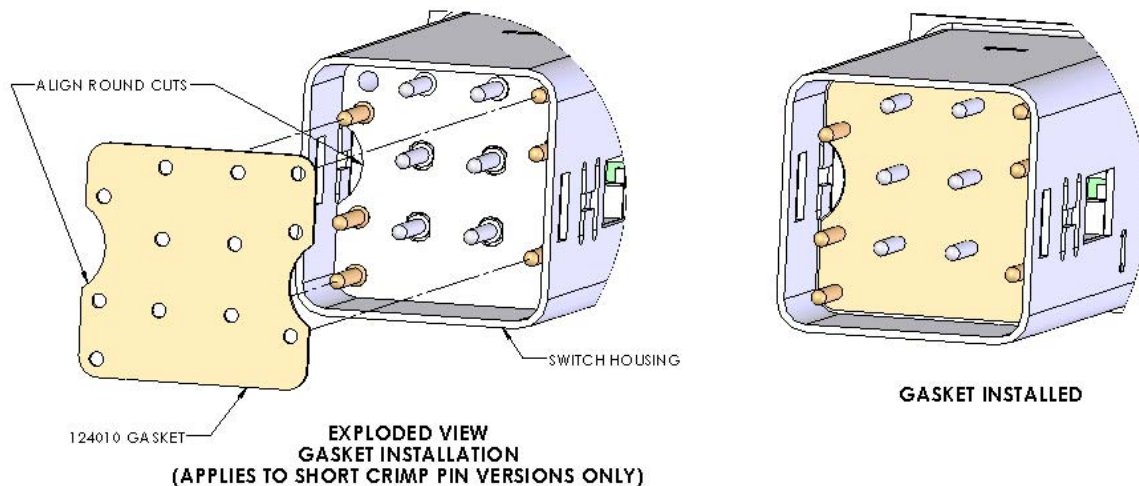


Fig. 1.

a) - Receptacle Assembly. b) - Switch Assembly.

1 - Cam Nut, 2 - Retainer Plate, 3 - Receptacle Mounting Screw, 4 - Switch Housing.

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**Fig. 2a and 2b – Gasket installation details. (receptacle not shown for clarity)**

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