



REPLACEMENT INSTRUCTIONS

CPS-4 SWITCH ASSEMBLY

REPLACEMENT KIT P/N 12-8061-06 & 12-8061-36

PURPOSE

The purpose of these instructions is to provide a step-by-step method for replacing the Beck Group 22 CPS-4 switch assembly. The switch assembly is a subassembly of the control end and the switches are preset; no adjustment of the switch arms is necessary. The assembly is not user-serviceable and should not be disassembled in the field. Components of the switch assembly are listed in Table 1.

The switch assembly is located in the control end on the rear face of the actuator beneath the Handswitch.

REQUIRED TOOLS

The following tools will be needed:

- 1/2" socket wrench
- Cross-tipped screwdriver
- Multimeter
- Torque wrenches appropriate for 12 lb-in (1.4 N•m) and 10 lb-ft (14 N•m)
- Scotch™ 847 gasket adhesive or equivalent
- Grounding strap
- 3/16" flat-tipped screwdriver



WARNING

Electrical shock hazard—disconnect power before proceeding. Remove the actuator from line voltage and shut off any external power sources feeding the auxiliary switches.

PROCEDURE

Refer to Figure 1 for component identification.

Remove the old switch assembly:

1. Remove power from the actuator.
2. Remove the control end cover.



CAUTION

To prevent Electro-Static Discharge damage to the electronics, wear a grounding strap during this procedure.

3. Disconnect the switch assembly by unplugging the two connectors leading to the actuator body. To unplug the connectors, use the 3/16" flat-tipped screwdriver to press the release tab straight back and slide the plug out of the socket (see Fig. 1).
4. Using the cross-tipped screwdriver, remove the (2) cross-recessed screws fastening the switch assembly to the stator (see Fig. 1).
5. Slide the assembly away from the actuator body until it clears the coupling. Ensure the switch arms do not catch on the cams or coupling while removing the assembly.

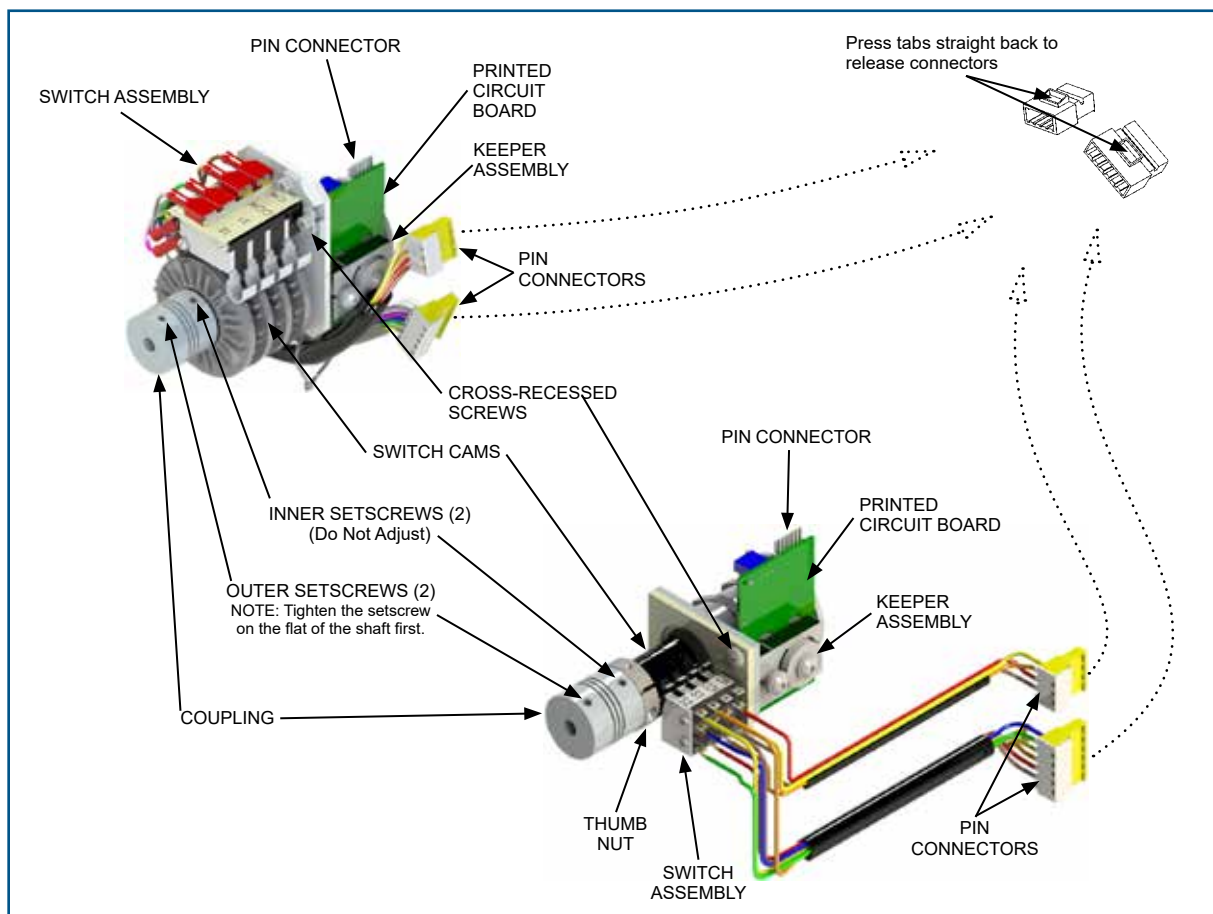
Install the new switch assembly:

6. Slide the new assembly onto the shaft, ensuring the switch arms do not catch on the coupling or cams. Ensure that the small alignment pin directly adjacent to the large opening in the switch assembly mounting plate slides into the alignment hole provided.
 7. Check the mounting of the switch assembly to ensure that it is flush and square to the rectangular flange on the CPS. Install the (2) provided screws (and washer, if applicable) and tighten to 12 lb-in (1.4 N•m) torque.
 8. Inspect the control end gasket; replace as necessary. If the gasket is in good condition, skip steps 9–10.
 9. Clean the mating face of the actuator body to remove any remaining gasket material and adhesive. Ensure that the mating surface is free of defects such as dents or gouges.
 10. Peel the backing off the replacement gasket and carefully apply to the actuator body.
- Test for proper operation—check switch operation:*
11. Plug the connectors into their respective sockets.
 12. Connect power to the actuator.
 13. Run the actuator through its full range of motion. Observe the actuator to verify the correct response. Note whether or not the actuator stopped at the correct position.

14. Using the Handwheel (with the Handswitch in "STOP"), test the over-travel limit and auxiliary switches for continuity at their pin connections. The over-travel limit switches should change state within half of a degree beyond the electronic stops. The auxiliary switches are factory set to change state about 2 degrees before the electronic stops unless otherwise noted in the actuator's specification.
15. If the switches do not operate automatically, the cams need to be adjusted. See Beck instruction manual 80-4280-02 or 80-4280-10.
16. When the switches have been tested and the actuator is operating correctly, replace the control end cover and tighten the cover bolts to 10 lb-ft (14 N•m) torque.
17. Return the actuator to service.

Table 1: CPS-4 Switch Assembly Replacement Kits

Description	Part Number
Kit No. 12-8061-06	
Switch Assembly	20-3200-20
Screw #8-32 x .375" (2)	30-0329-42
Gasket, Control End	10-8080-02
Kit No. 12-8061-36	
Switch Assembly	20-3200-28
Screw #6-32 x .312" (2)	30-0323-71
Washer (1)	14-9890-05
Gasket, Control End	10-8080-02



Please note: The printed circuit boards used with the CPS-4, 2-wire configurations have a pin connector oriented horizontally (rather than vertically as pictured above with the 4-wire configurations). Other differences include pot and switch locations, but they do not affect the procedures in this instruction.

Figure 1

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