

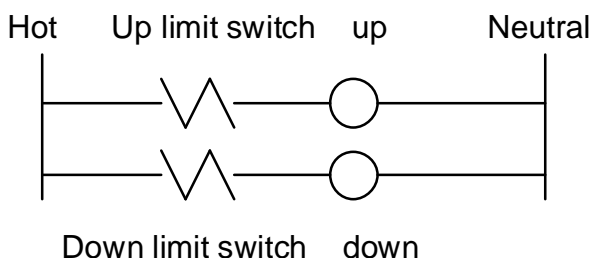


Directions for setting LS7-402 Limit Switch (FB0194)

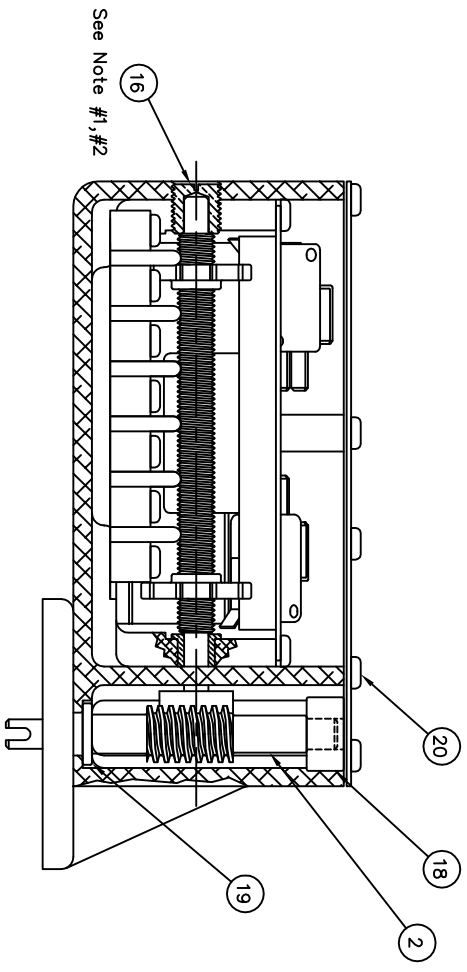
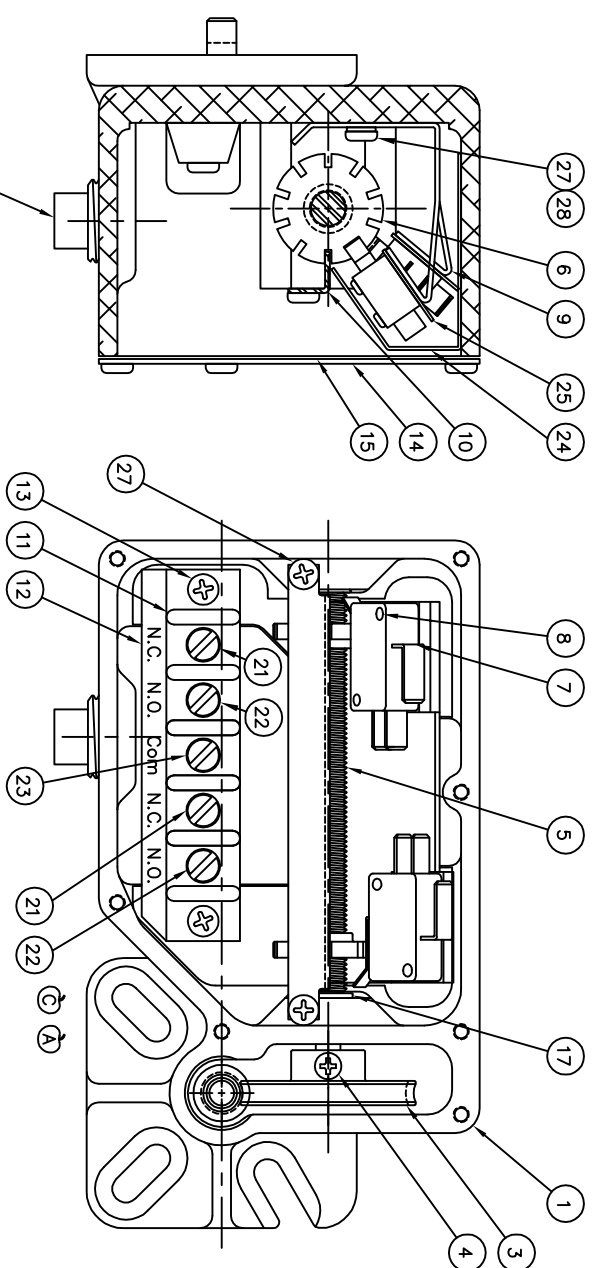
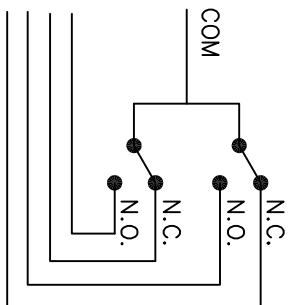
Refer to drawing 08040292

1. Remove Pan head screws (20).
2. Remove the cover and gasket (14,15).
3. Remove the Phillips head screws (27).
4. Remove the "L" bracket (10). It is inserted into slots in the limit switch cams (6)
5. Rotate the cams to the center of the cam drive screw (5).
6. Replace the "L" bracket and activate the jack to its retracted position. Observe the direction of the cams as the jack approaches the retracted limit. This will determine which cam/switch controls the retracted limit. (It varies depending on which side of the jack the limit switch is mounted.)
7. Remove the "L" bracket and rotate the cam that controls the retracted position, until it engages the snap switch. You will hear a "click" and observe the switch depress.
8. Replace the "L" bracket in the slot closest to the desired retracted switch setting. (Mark with a permanent marker to positively identify the slot.)
9. Activate the jack to the desired extended position.
10. Remove the "L" bracket and rotate the cam that controls the extended position, until it engages the snap switch. You will hear a "click" and observe the switch depress.
11. Replace the "L" bracket in the slot closest to the desired extended switch setting. (Mark with a permanent marker to positively identify the slot.)
12. Activate the jack to verify that the extended and retracted positions are accurately set for your application. Follow the steps above to make fine adjustments as needed.
13. Replace the cover and gasket.

General information about wiring limit switches into a central circuit. The limit switch contacts must be the first components on the power rail (hot) since they share a common.



| REV | BY | DESCRIPTION | DATE | BY |
|-----|-------|--|----------|-----|
| A | 04553 | CHANGED ITEMS 4, 8, & 13. ADDED ITEM 29. | 12/08/04 | BG |
| B | 06242 | REMOVED SPOT FACES | 08/24/08 | CMT |
| C | 10054 | ADDED LUBRICATION NOTE | 02/05/10 | CMT |
| D | 10282 | ADDED SPOTFACE, UPDATED WIRING INFORMATION | 08/06/10 | CMT |
| | | PERMATEX RTV BLUE WAS LOCITE 242 | | |



Note #1) DO NOT OVER TIGHTEN ITEM #16 (08040097), TIGHTEN TO MINIMIZE AXIAL ENDPLAY.
 #2) USE PERMATEX RTV BLUE ON THREADS, ITEM #16(08040097) AT ASSEMBLY.
 #3) LUBRICATE STANDARD ASSEMBLY WITH LUBRIPLATE GR-132 GREASE.

| ITEM NO | QTY | DESCRIPTION | PART NO. | NAME |
|---------|-----|-------------|-----------|---------------------------------|
| 28 | D4 | 2 | 62041 | WASHERLOCKSPRSL0008 |
| 27 | C4 | 4 | 08040445 | SCREWSL0008320025RNDHD |
| 26 | C4 | 1 | 20170 | PIPE PLUG (1/2-14 NPT SOC HD) |
| 25 | D4 | 2 | 08040148 | INSULATOR (LIMIT SWITCH) |
| 24 | D4 | 1 | 08040139 | INSULATOR (LIMIT SWITCH) |
| 23 | C3 | 1 | 08040138 | WHITE WIRE (LIM. SWITCH COMMON) |
| 22 | C3 | 2 | 08040137 | BLUE WIRE (LIMIT SWITCH N.O.) |
| 21 | C3 | 2 | 08040136 | RED WIRE (LIMIT SWITCH N.C.) |
| 20 | B2 | 7 | 82123 | SCREWSL0008320038P-ANHDP-LTD |
| 19 | B2 | 1 | 08040107 | BUSHING (BOSTON #FB57-4) |
| 18 | B2 | 1 | 08040106 | BUSHING (BOSTON #FB46-4) |
| 17 | D2 | 1 | 08040098 | BUSHING (BOSTON #FB46-4) |
| 16 | B4 | 1 | 08040097 | BUSHING |
| 15 | D4 | 1 | 08040135 | GASKET (LIMIT SWITCH COVER) |
| 14 | D4 | 1 | 08040096 | COVER (LIMIT SWITCH HSG) |
| 13 | C3 | 2 | 08040620 | SCREWSL0008320062RNDHDPHILLPS |
| 12 | C3 | 1 | 08040109 | TERMINAL STRIP MARKER (L/S) |
| 11 | C3 | 1 | 08040108 | TERMINAL BLOCK (LIMIT SWITCH) |
| 10 | D4 | 1 | 08040093 | BRACKET |
| 9 | D4 | 1 | 08040092 | SWITCH BRACKET |
| 8 | D3 | 4 | 18040004 | SCREWSL00040400063P-ANHDPHILLPS |
| 7 | D3 | 2 | E18030056 | ELSMCR071C17D844-429 |
| 6 | D4 | 2 | 08040110 | CAM (LIMIT SWITCH) |
| 5 | D3 | 1 | 08040099 | CAM (DRIVE SCREW) |
| 4 | D2 | 1 | 08040621 | SCREWS0006000078P-ANHDPSELFTAP |
| 3 | D2 | 1 | | See Chart |
| 2 | B2 | 1 | | See Chart |
| 1 | D2 | 1 | 08040095A | LIMIT SWITCH HSG. (MF08040094) |

PARTS LIST

JOYCE/ DAYTON CORP.
 Dayton, Ohio U.S.A. 45401

Assembly, Limit Switch

| ITEM NUMBER | RATIO | MAX. NUMBER OF TURNS | WORM NUMBER | GEAR NUMBER |
|-------------|-------|----------------------|-------------|-------------|
| E08040111 | 10:1 | 700 | 08040100 | 08040101 |
| E08040112 | 20:1 | 1400 | 08040102 | 08040103 |
| E08040113 | 40:1 | 2800 | 08040104 | 08040105 |

DIMENSIONS ARE IN INCHES
 UNLESS OTHERWISE SPECIFIED
 DEC. PLCS. TOLERANCE
 1 PLCS. .1
 2 PLCS. .05
 3 PLCS. .010
 4 PLCS. .005
 ANGULAR
 1
 MACHINED SURFACES
 BREAK CORNERS (RPTD.)
 DO NOT SCALE DRAWING

THIS DOCUMENT AND THE DATA DESCRIBED HEREIN OR HEREINTO IS NOT TO BE USED FOR ANY OTHER PURPOSES WITHOUT THE PERMISSION OF JOYCE/DAYTON CORPORATION.

SCALE FULL
 DRAWING NO. 4M149
 REV. C
 DATE 08/04/292
 SHEET 1 OF 1