



<b>Document Title</b>	Landing Gear Switch Identification and Replacement
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**Subject:**

A small number of Evolution aircraft may be equipped with a landing gear switch that has proven to be unreliable in at least one aircraft. Lancair has selected a robust replacement for this switch. The following procedure will identify the affected switch and give instructions for replacing it with the new switch assembly.

**Affected Aircraft:**

Evolution serial numbers 44 and previous.

**Action:**

To identify if your aircraft has the switch in question, remove the glare shield and view the landing gear switch assembly from the backside of the instruments brow panel. If the switch is brown/black in color no action is required. If the switch is blue with a threaded shaft, ref. OTTO part number T-30020, a replacement package is available.

**Procedure for Switch Replacement:**

**ENSURE AIRCRAFT POWER IS OFF**

1. Remove the glare shield.
2. Remove the landing gear knob on the front side of the instruments brow panel. This knob is held in place with a small set screw. Remove the set screw and the knob should unscrew from the threaded switch assembly. Discard knob.
3. Remove the left side brow cover panel screws and rotate the cover slightly to access the switch.
4. Remove the hex nut and lock-washer holding the switch to the brow backing plate and gently push the switch assembly through the brow backing plate. (Ref. Figure 1)
5. Note the notch position of the switch and mark the wires 1, 2, & 3 as shown in the diagram. (Ref. Figure 2)
6. Cut the wires as close to the switch body as possible. Discard the switch.
7. Strip the insulation from the newly cut wires and crimp the supplied three (3) ring terminals to the wires.

8. Attach the wires to the new switch noting the position of the locking notch on the switch. (Ref. Wiring Diagram)
9. Install the new switch in the brow backing plate as shown in the diagram. One hex nut and the tabbed washer are placed behind the backing plate. The star washer and the second hex nut are placed on the front of the backing plate. (Ref. Figure 1)
10. Re-install the cover plate taking care to not over tighten the fasteners.
11. Install the new landing gear knob to the switch. (Ref. Figures 3 & 4)

### **Functional Test of New Switch:**

12. Place the aircraft on jack stands and secure with wheels off the ground. Ensure aircraft is level.
13. Place the gear switch in the "DOWN" position.

**Ensure equipment and personnel are clear of the landing gear prior to applying aircraft power**

14. Apply power to the aircraft. . The hydraulic pump may cycle to retain pressure.
15. Ensure gear does not retract. If the gear retracts refer to step 16. If the gear does not retract proceed to step 18.
16. If the gear retracts during step 15, remove power from the aircraft. Locate the wires to the back of the new gear switch and swap wire positions 1 and 3. (Ref. Figure 2 and Wiring Diagram)
17. Repeat steps 13 to 15.
18. Place the gear switch in the "UP" position. The gear should NOT retract.
19. With the gear switch in the "UP" position apply low pressure to the pitot tube sufficient to simulate an airspeed indication above 90 kts. The landing gear should retract.
20. Move the gear switch to the "DOWN" position and the landing gear should extend.
21. This completes the functional testing and the aircraft can be readied for flight.
22. Remove the applied pressure, lower the aircraft from the jack stands back onto its wheels and replace the glare shield.

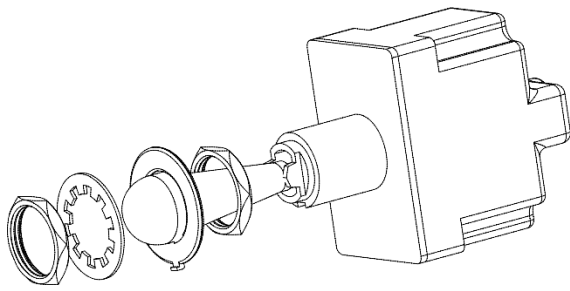
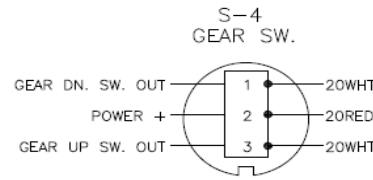


Figure 1



**WIRING DIAGRAM, REF.**

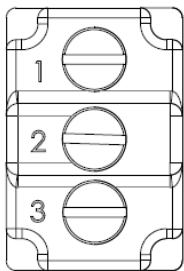


Figure 2

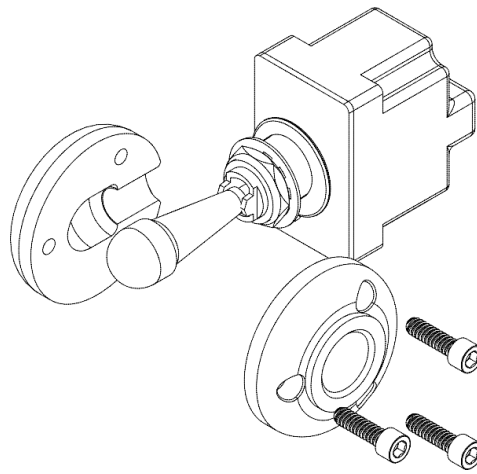


Figure 3

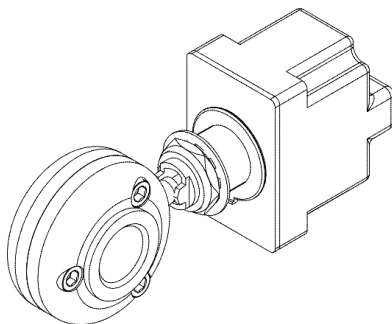


Figure 4