

**Grimes Swing-Down Landing Light
for the 140 and 120 planes, with mention of the 140A's alternative**

lights and both were supplied power from a shared 10 amp fuse. Three wires are routed to each light from the wing/fuselage shoulder, two of small gauge and one of a significantly larger gauge. Like wires run from the wing shoulder to the switch to supply the Retract and Down power for the light motor, and the one of a more significant gauge was to supply power to the 250 watt 4522 type lamp. There were a few changes the next year when the dome light

in the light assembly. As soon as the relay is made, it applies power to the lamp and the lamp lights. Voila!

Once the function has been completed, moving the switch to Retract will start the motor moving such that the light retracts; at the first movement, the limit switch unmakes and the relay opens and the lamp is turned off. The original circuit will not allow the lamp to be on in any position except full Down. There are variations and many planes have been modified to allow the lamp to be lighted in other than the full down position. An Up limit switch stops the upward movement and resets the Down limit switch ready for

from the relay coil to a switch (maybe the unused right landing light switch?) on the instrument panel

Note that, for the 140's at least, the unused right wing landing light switch and power can be used for other things, such as the relay control mentioned in the text.

Capacitor Noise Filter:

I cannot find an independent callout in the '47/'48 circuit diagram but it is the low frequency radios became an Cessna diagram would have been to the posts 058the up and down limit that, when one switch is connected to the motor winding, the other is not, so the capacitor as they show it is never really connected to complete a circuit, as it must be to doi605/1'48 iing. It isreasonable that a mechanical draftsman in that era would not



parts list for the capacitor added to the Grimes in the reasonable that it would have been added at the time option. The capacitor connected as shown in the incapai 26058ould3d39ythingIt is shown connected switches inside8the assembly; the shortcomld3dis

mis-installed by reversing the orientation of the lamp such that the unshielded side can shoot lots and lots of bright light at the cockpit and the prop. Why they prefer to be blinded is a mystery. From one who just acquired two never-used Grimes lights, this message via email:

There are still tags glued to the lamp face that say;

LEFT WING

"This light is supplied for installation in the left wing. The filament shield of the lamp is toward the pilot."

Caution:

For those who would troubleshoot the light in the wing, keep in mind that the 25 amp fuse supplies power all the time to the lamp wire in the wing anytime the electrical bus is energized. There is no way to switch

Incandescent lamps are rated “average lab lifetime” and for the 4509 and the 4522, the lab average lifetime is