20/07/2024 - Landing light wiring (cntd) - 3h

Category: 5.5. Aircraft Lights
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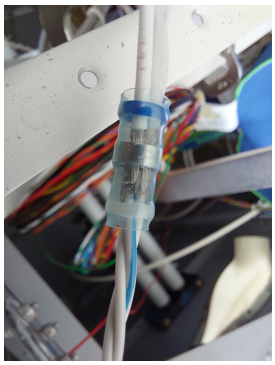
Having some more fun with the landing light wiring.

The Aerosun VX is landing/taxi light combo is produced by Aeroleds and is wired using 5 wires.
One 3 conductor shielded wire with 18AWG, the shielding operates as GND. 1 single 20 AWG wire which is a direct connection between the two lights for syncing the lights.

The shields of the multiconductor are merged and connected at the terminal side with an extra 18 AWG wire that routes directly to the GND firewall block.
The other side has the same setup where the GND then connects to the light. The lights are in my case not locally grounded to the frame to avoid radio interference. The shield serves as protection for the radiomagnetic interference.

In order to connect the end wires to the shield, I used solder sleeves which I purchased at Steinair.

These are very handy little tools which contain a heat shrinkable fabric, some low temperature melting solder inside and a glue on both sides.
The dark blue side goes on the main wire and holds both auxiliary wire and main multiconductor.
You strip away the insulation and leave some of the shielding exposed. Then you insert the crimped wire and make sure the insulations border of both match up.



The next step is to use a heat gun and evenly heat up the solder sleeve. It will start shrinking rapidly but takes some time before the solder inside actually melts and joins the wires.
It's quite important to evenly heat the solder all around so that it melts more or less at the some moment.

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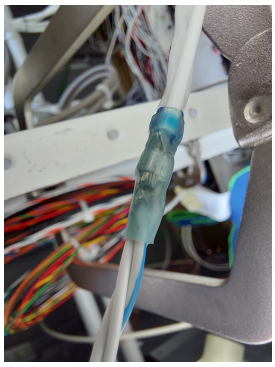
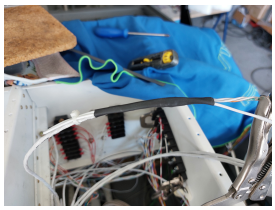


Finally colver the joint up with heat shrink and support the returning wire with a strip.
I overdid mine a bit by first adding a heatshrink for support over the solder joint, then returned the wire and put another wide heatshring over both the return wire and the multiconductor as for extra strength.



Same procedure on the wire for the other wing. The two GND wires run independently to the GND block.

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