

MAN ON A MISSION

Part 2

Steve Kember continues building his Mission M108 at Lambert Aircraft's builder-assist facility in Belgium



Members may recall from Part I of this saga (*Light Aviation*, March 2012) that I had decided to build a Lambert Mission M108 and make use of the factory build-assist programme at Filip Lambert's modern workshop facility at Wevelgem in Belgium.

Having completed the first part of the build, which included fabric covering, I returned to the UK until such times as the experts had painted the airframe, and my seemingly always busy working life allowed time to return to the factory for the second phase of the build. In late September, it all came together and I was back in the land of chips and mayonnaise, and keen to start work.

My aeroplane had returned from the paint shop and was waiting for me, sitting on props and stands at the Lambert Aircraft Engineering hangar. This second visit covers airframe assembly. Easy access to the factory jigs and measuring equipment meant that all critical dimensions could be checked and double-checked, and all crucial holes were pre-drilled in the correct places. The fitting of the wings and control surfaces was then simply a matter of bolting things together to await inspection. The attachment of the wings seemed to signal significant progress; there was still lots to do but my collection of tubes really does now look

like an aircraft. More importantly in fact, they look like *my* aircraft. I am also very conscious that now every time I look at it, a very large (and probably silly) grin bursts onto my face. I ignore the fact that the assembly, so far, looks as though the nose has been chopped off.

The all-important attachment of cables and final rigging will take place during phase three. So, I set to cutting and drilling my door skins whilst thinking about the layout of the panel. This was a mistake, as having just drilled my door frame, ready to receive the skins, the business of getting each hole in exactly the right place was not as easy as I had anticipated. More concentration was required together with a bit of technique. I should stop dreaming about the panel and concentrate on the job in hand. Steven Lambert advised me to drill holes in the middle of each side of the panel to be attached, secure said panel with Cleco clips and then work out to the edges, drilling and securing the panel with another clip before drilling the next hole; the result... perfection. This good advice given in a timely manner stopped me from spoiling one of my carefully cut panels.

I had always imagined the windscreen to be a rigid, specially moulded and hideously expensive component. Not so. I had to cut it from flat sheet with a diamond-edged cutter. I first stuck on a protective layer of sticky paper

to prevent scratching the tinted surface. I was expecting the cutter to produce a melted mess at the edges but no, a clean cut was the result. Another hour of drilling, Cleco clipping, pushing and shoving, and the elegantly curved windscreen was in place.

ALL UNDER CONTROL

The specification of the M108 has changed since my initial order, the UL Power engine has been changed for the new, fuel-injected Rotax 912iS, which offers a few advantages: the Rotax is water and air-cooled; the engine cooling (water and oil) will be thermostatically controlled, so I will not have to mask radiators with bits of gaffer tape in the winter; everything will come up to temperature more quickly; and the new cabin heater system receives heat from the water-cooling system so there is zero risk of carbon monoxide leaking into the cabin from the heater. Not only will the temperature of the cabin be controllable, but also the direction of the flow of air in the cabin will be at the command of the passenger and pilot. The instrumentation will be necessarily different, but more of that during phase three.

The upshot of the change is that the mount and cowling has had to be reformed to accommodate the new engine, and the cowling mould was being produced while I was at the



Looks like an aeroplane doesn't it – MY aeroplane!

Fitting the aluminium lower door panel. Note that the windscreen, cut from a flat panel, is also making good progress



Above: flying instructor Johan Janda, the M106 microlight version of the Mission and me (left) after enjoying a flight that convinced me once again that I have made the right choice of aircraft

hangar. A block of foam is hollowed out and slid over the engine installation, clearing all components. The exterior is then shaped to form the plug that will be used to produce the mould for my, and everybody else's M108 cowl. The injected Rotax offers about 10% more power than the UL unit and the TBO is 2,000 hours, which means less depreciation (not that I ever intend to sell my pride and joy, but you never know).

Other changes that the Lambert boys have introduced include fitting upgraded Matco brakes and rather chunkier-looking, heavy-duty wheels and tyres, which give the aircraft a more business-like look. My taxiing experience of the M108 has, so far, only been on the wide-open spaces of Wevelgem airport, but I am assured that the nosewheel steering lock is more than adequate for the small grass fields that I intend to fly in and out of in the UK. I was keen to fit toe-brakes, at extra cost, but Filip Lambert has talked me out of this, his opinion being that they were unnecessary on the nosewheel version of the M108. I have taken his advice.

Steven Lambert asked if I would like some tuition in an M106 (the Continental microlight version of the M108) used as a trainer at a nearby flying school. Yes please! So away I went with Johan Janda, the instructor, in his yellow M106 to play. It was very nice to get the reassurance from the flight that I still love to fly this particular type of machine. I had to concentrate on rudder more than I am used to as most of my flying has been in flying school C172s and PA-28s, but it was all so easy and responsive. I am no test pilot with vast experience but I know what I like. I had had trial flights in quite a few light sport aircraft before I made the decision to buy an M108, so I know it was a good choice.

My return for phase three will cover, amongst other things, installation of the engine and panel. More soon... ■



Cutting a transparent door window with a cutting disc – it worked better than I imagined it would