New Lease of Life for Long Range Jigs

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The engineer who worked on the design of the first A340-600 wing jig in Broughton’s East Factory has led a team to convert it for building A330 wings. Tool design engineer Alan Ellson worked as the project manager on the conversion of the A340-500/600 Jig 1, originally constructed in 1998.

It will now be used to support the rate increase in the long range programme to rate 10. The work to decommission and rebuild took 12 months to complete.

The Jig, now known as ‘Jig 9’ has been unused for more than two years since the production of the A340-600 stopped. Work to convert the old Jig 2 into Jig 10 is due to start shortly – this will be used to support a further rate increase to rate 11.

Alan explained that the converted jig can hold two A330 wings at any time. The first wings to go into it are MSN1356, and will eventually fly on an Aeroflot aircraft.

‘The modifications include a new improved sliding floor system, a new pylon locating system, access has been improved, there’s a new lighting system, we’ve also introduced a swipe access system and we have worked to make the jig a safer environment to work in’ said Alan.

‘The A330 wing is a different size and shape to the A340-600 wing. The wing is narrower, shorter and the root plug (where the wing joins the fuselage) is very different. We’ve modified the jig to take all this into account.’

Gareth Urquhart, from the Manufacturing Engineering Technical Support team said the process involved a great deal of teamwork, cooperation and collaboration.

‘The converted jig is now setting the new standard going forward. It’s a culture change. Its setting the benchmark for the new style long range jigs.’

Environmental Health and Safety controller Alan Amis said: ‘The conversion features a new, integrated barrier system that’s relieved many of the obstacles faced by operators previously. There are clearly defined working areas, and colours define where PPE (personal protection equipment) must be worn. ‘We’ve integrated numerous safety devices to make the jig better and safer for visitors and operators.’

Carl Murphy from the ALPS (Airbus Lean Production System) team said ‘We’re utilising existing assets by converting the jig and streamlining processes through the improvements.'
The conversions to the jig were carried out by engineering company James Fisher Aerospace. It is hoped that modifications will be retrofitted to the existing, working jigs over the coming months.