Eamon Hamilton

INITIAL tanking trials between the Super Hornet and KC-30A have been completed.

A report on the trials, led by the Aircraft Research and Development Unit (ARDU), has recommended approval for the two aircraft types to conduct air-to-air refuelling (AAR) within an initial limited envelope.

The AAR trials were conducted in a range of conditions from February 4-19.

A total of 54 flying hours were completed by the Super Hornets and 33 flying hours by the KC-30A.

In an impressive tally, a total of 87 engagements were made between the two aircraft, with almost 76 tonnes of fuel transferred.

The Super Hornet deploys a refuelling probe in front of its cockpit and connects with a drogue deployed from the tanker.

FLTLT David Bell, a qualified test pilot at ARDU and graduate of the US Naval Test Pilot School, said the program provided an initial envelope for AAR operations between both aircraft.

“The flight test team does not just perform one ‘plug’ to prove the capability,” FLTLT Bell said.

“It looks to create an envelope to guarantee that future AAR operations can be conducted safely and efficiently at a range of predicted conditions.”

AAR testing is done at different airspeeds, altitudes and tanker and receiver loading configurations to assess the nature of the tanker’s wake. The stability of the drogue and the flying qualities of the Super Hornet when performing drogue engagements is also examined.

Night AAR testing was also conducted to assess the lighting compatibility between both the receiver and the tanker.

FLTLT Bell holds the unique distinction of being the only qualified test pilot in the world to have completed KC-30A AAR test programs with both the Australian F/A-18A/B and the F/A-18F.

“It has been an extremely rewarding opportunity to carry out these clearances with ARDU, which have helped bring capabilities such as KC-30A into service,” FLTLT Bell said.

The test program used the combined expertise of personnel from ARDU’s headquarters and its Amberley detachment, along with significant assistance from 82WG flight test personnel and 33Sqn.

The KC-30A’s crew were augmented with flight test engineers, while qualified test pilots and flight test engineers flew on receiver aircraft.

CO ARDU WGCDR Andrew Figg tree said AAR flying was the ultimate test of a pilot’s concentration and skill.

“The nature of the flight test environment amplified the intensity of refuelling with the Super Hornet,” WGCDR Figgtree said.

During the trials, results were immediately compiled for the test report, which would help clear the AAR capability for operations.

“There was significant involvement across the executive of ARDU to ensure that this report was released as soon as possible,” WGCDR Figgtree said.

“The speed and diligence displayed by the flight test team was exceptional, noting the small window available to complete this testing.

“ARDU has developed a considerable pedigree with AAR hose and drogue testing over the last two years and we must have some of the most qualified AAR test crews in the world.”

The flight test report from ARDU will be provided to the US Navy.

Once follow-on testing is done to enable a full clearance, the US Navy will provide clearance for the KC-30A to support world-wide AAR with the Super Hornet.