CONCORDE DROOPS ITS NOSE
AT A SPECIAL CELEBRATORY EVENT

On 24 October, Duxford Aviation Society (Cambridgeshire, eastern England) revealed newly-restored features on its Concorde, to an audience of invited guests, at the Imperial War Museum, Duxford on the eleventh anniversary of the last commercial Concorde flight.

Following eighteen months of painstaking restoration work, this Concorde now features fully-functional cockpit lighting and the operation of the aircraft’s famous droop nose. This is the only Concorde in the UK with the ability to operate the nose mechanism.

David Garside, Chairman, Duxford Aviation Society commented of the event: “It is thirty-seven years since Concorde G-AXDN was flown to IWM Duxford and since the hydraulic and electrical systems were last in operation. The restoration projects have required the servicing and overhaul of many intricate components and considerable patience and determination has been required over a two-year period to ensure their successful completion.”

Duxford Aviation Society has been fortunate to benefit from the help of Heritage Concorde, a group of former-Concorde engineers and enthusiasts who generously gave their time and expertise to help complete this ambitious restoration project.

Graham Cahill, Projects Co-ordinator and Head of Heritage Concorde added: “G-AXDN at IWM Duxford is one of the most important Concorde development aircraft; it was the fastest and was the first to be fitted with the clear glass visor that we see on all the following Concordes. It was a pioneer of the digital age, having the first digital computers ever fitted to a commercial aircraft, to control her intakes – one of the most important features of Concorde. We thought it was appropriate that it should therefore also be the first British Concorde to have a fully-operational nose since Concorde’s retirement in 2003. Our team of ex-British Airways engineers have been working for many months with Duxford Aviation Society and Hydraulics Online Ltd to bring this project to a successful close.”

Activation of the nose also required the installation of a pump to supply the hydraulic power. One was generously donated by Hydraulics Online, from Cheshire. Mark Tonks, Managing Director, Hydraulics Online concluded by saying: “We were absolutely thrilled when the Heritage Concorde team approached us for our help. Our customer-base is truly global, the projects we are involved with are incredibly varied and we deal with some big household
names...but Concorde is in a different league; one of the most iconic brands of all time. To see G-AXDN’s nose and visor moving again, knowing that we were part of the team that made it happen, is very special indeed.”

Concorde came into land at a steep nose-up angle and the droop nose was developed to enable the pilot to see where he was going. Early models like G-AXDN could lower the nose to 17.5° or 5° for take-off. The former was found to be too steep, as pilots could not see the nose at all, and this aircraft was therefore fitted with an experimental system to test an intermediate 12.5°, which was later adopted on all production aircraft for landing. Duxford Aviation Society’s Concorde is unique as the only aircraft of the class capable of all three angles.

Duxford Aviation Society’s Concorde will be exhibited by a spectacular six-metre-long model of a production Concorde, in British Airways service livery, which has been generously loaned by the British Airways Heritage Collection. This superb model is cutaway so that visitors can see the minute detail of the interior, including the seating. It is the perfect partner to Duxford Aviation Society’s developmental Concorde.

Paul Jarvis, Curator, British Airways Heritage Collection said: “This splendid model graced the foyer of British Airways’ Waterside headquarters building for many years, but following Concorde’s retirement, it needed a more appropriate home where its place in history could be more widely acknowledged by the general public. IWM Duxford, with its collection of iconic aircraft, was the obvious choice, not least because the developmental Concorde maintained by Duxford Aviation Society and the model complement each other.”

John Hutchinson, a veteran Concorde pilot commented, of flying the Concorde: “It was quite an extraordinary feeling. You had no sensation of speed at all. Other aircraft looked as if they were going backwards. You were hanging motionless, suspended in space, it was Mother Earth doing all of the work. It was totally different to the normal subsonic experience. It was magical, beyond any words I can use.”

A programme of public Concorde droop nose demonstrations will be undertaken at IWM Duxford in due course.
Picture captions

Duxford Concorde 1

Concorde’s droop nose mechanism is demonstrated to an appreciative audience at Imperial War Museum, Duxford on 24 October 2014.

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Duxford Concorde 2

Duxford’s Concorde’s newly restored cockpit lighting.

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