NEWS

The Globe and Mail

Arrow dispute

Tuesday, March 6, 1979

As I was chief engineer of Orenda in charge of the development of the Iroquois engine, I feel that I am more qualified to comment on the Arrow program than Dave McIntosh, whose letter you published on Feb. 24 (Down With Arrow 'Claptrap').

The first Arrow flight was on March 25, 1958. At the time of cancellation, Feb. 20, 1959, five aircraft had flown a total of 68 hours and 95 per cent of the flight envelope had been tested. All flights were with the Pratt and Whitney J-75 engine and reached 1,300 mph. The much more powerful and much lighter Iroquois engines were installed in the sixth aircraft ready for flight at the time of cancellation. They operated successfully in the B-47 flying test bed but never flew in the Arrow. The aircraft never caught fire! The turbine blades of the Iroquois never melted! The range of the Arrow was 1,000 miles, cetainly more than Mr. McIntosh's Toronto to Montreal.

The truth is that both Arrow and Iroquois were years ahead of the world in technology. I made many visits to the United States technical teams during the development period. I can only describe their reaction as amazed admiration of our achievements. It was unbelievable to them that we had advanced the technology of titanium fabrication, the aerodynamics of transonic compressors and fibreglass reinforced blades, far beyond their abilities.

In the huge U.S. wind tunnel, at high speed, the Iroquois survived unscathed in tests that had destroyed most, if not all, U.S. engines. It achieved ignition in the tunnels at conditions of 63,000 feet, far higher than any existing engine. Compared to the J-75, the Iroquois

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had over 43 per cent greater thrust dry rating. With afterburner lit, the thrust was 30 per cent more than the J-75 afterburner. At the same time, the Iroquois was 35 per cent ligher than the J-75. The cost of developing the Iroquois to flight test was one-third of that spent on the J-75 to the same stage.

Mr. McIntosh's remarks on the **CF-100** and Jetliner are equally erroneous. The Jetliner did not need sand in the tail to make it fly. How stupid! Sandbags and other weights are normally used to test civil aircraft for different loading arrangements during develoment.

After the cancellation of the Arrow, I went begging to the U.S. for a share in Canadian production of their inferior aircraft and engines without even a manufacturing base left to do such menial chores.

So, Mr. McIntosh, you may pay your billions to the U.S. for F-14s or F-16s in inflated dollars, but do not denigrate the magnificent effort that Canada made.

F. H. Keast Brampton