Canada's aerospace industry now fifth largest in world

Various aerospace companies displayed Canada's advanced state-of-the-art metal fabrication and integrated electronic circuitry at Farnborough.

Canada's aerospace industry — with annual sales of $5 billion (expected to double by the end of this decade) — is the fifth largest in the world. It is also truly international. With a small domestic market, the industry has been forced to look overseas for new markets that would allow it to maintain its rate of growth. The result: It now exports a higher percentage — more than 80% — of its output than any of its competitors.

In early September, the industry's expertise was on display at Farnborough in the international trade exhibition — Farnborough International 86 — which accompanied this year's air show.

Altogether, 17 Canadian aerospace companies, under the auspices of the Aerospace Industries Association of Canada, exhibited at the show, representing the most important sectors of the Canadian industry. They ranged from fixed wing airframe manufacturers to aircraft engine builders, and from avionic and electronic firms to specialised metal machining companies.

They covered both the civil and the defence markets, and they included the nation's top three aerospace concerns — de Havilland, Pratt & Whitney and Canadair.

Worldwide sales

De Havilland — recently taken over by Boeing of Canada Ltd — is a world leader in the field of short takeoff and landing (STOL) and other commuter aircraft. de Havilland planes now fly in more than 90 countries.

Its Dash 7 is the only aircraft that conforms to all the noise and landing requirements of the new STOL facilities being built in London's docklands.

De Havilland also manufactures the Dash 8. It too is aimed at the commuter market and has recorded worldwide sales.

At Farnborough, de Havilland announced that Hanson Aviation Inc of Salisbury, Maryland, has placed an order for six de Havilland Dash 8 aircraft and taken an option on 18 more. That order brings the total number of orders to 180, since the twin turbo prop commuter aircraft was introduced into service in 1984. If all options are turned into firm orders, the number of Dash 8 turboprops sold will reach 200.

In addition to the sale, de Havilland announced at Farnborough that it has signed an agreement with Short Brothers of Belfast, under which the two parties will jointly study the requirement for a new generation of transport aircraft by regional airlines and commercial operators around the world.

Leading producer of engines

The Dash 8 is powered by two PW100 turboprops designed and manufactured by Pratt & Whitney Canada. The Quebec-based company has developed a worldwide reputation as the leading producer of small gas turbine engines.

It has annual sales of close to $700 million; employs more than 7500 people; and its engines power a wide variety of aircraft in 144 countries (including the new BAE advanced turboprop airplane which was launched at Farnborough).

Pratt and Whitney used the Farnborough air show to unveil the PW300 for turbo fan business aircraft in the 1990s, as well as the PW901A which has been selected for the Boeing 747-400.

These PW300 series of engines will be used to power corporate aircraft in the medium-sized range.

Among the PW300 engines' selling points will be the absence of a gear box which greatly reduces the weight and complexity of the engine.

During the Farnborough International 86 air show the Duke of Edinburgh, Canadian High Commissioner Roy McMurtry, and officials inspect a model of the new London Docklands STOLport. The de Havilland Dash 7 is to date the only airliner meeting all of the landing requirements.

Dash 8 showing the livery of an airline in eastern Canada.

Canadair jets undergoing final assembly in Montreal just prior to delivery.

Role being extended

The medium-sized range of corporate aircraft for which the PW300 is designed is considered to be one of the most promising sectors of the market. Right in the centre of that sector is the long-range Challenger business jet, manufactured by Canadair.

More than 100 Challengers have been delivered to corporate customers, and the aircraft's role is now being extended to include such functions as flight inspection and calibration, air ambulance and electronic warfare training.

At Farnborough Canadair also launched an improved CL-215T multi-purpose amphibian, the rugged twin-engine aircraft designed for a variety of roles, including forest fire-fighting, spraying, maritime surveillance, and search and rescue. In addition it manufactures a number of remotely piloted vehicles, which have a surveillance and target-acquisition role.(see article on page 12).

Canadair was recently privatised by the Canadian government. In a deal announced in August and closed in October, the government sold Canadair to Bombardier Inc of Montreal.

Specialised expertise

Canada's aerospace expertise is not confined to frame manufacturing. The industry also includes dozens of companies that have developed state of the art, expertise in selected areas. Among those participating at Farnborough were: Atlantis Aerospace; Canadian Astronautics; Canadian Marconi; Cercast; Computing Devices Co; Diemaster Tool; Fell-Fab International; Field Aviation; Garrett Canada; Haley Industries; Indal Technologies; Litton Systems Canada; Micronav and Reed Stenhouse.

These companies work 'behind the scenes', producing high quality systems, sub-systems, components and accessories. Examples of their products include landing gear and actuators, flat panel displays, cabin heaters, fuel controls, radar tracking components and navaids. Support activities include precision machining, designing custom aircraft interiors and providing repair and overhaul capabilities.

At Farnborough, Micronav Ltd of Sydney, Nova Scotia, signed a licensing agreement with Ferranti plc to manufacture and market Micronav MLS equipment in the UK, European Community and certain other regions, (see article on page 10).

In addition CDC, Fathom Oceanology and Plessey Marine (UK) announced an agreement to produce a dipping sonar for Naval application.

About 60 000 people employed

Altogether, the industry employs about 60 000 people in communities across Canada. And about 20 per cent of all research and development in Canada's manufacturing sector is conducted by companies in the aerospace industry.

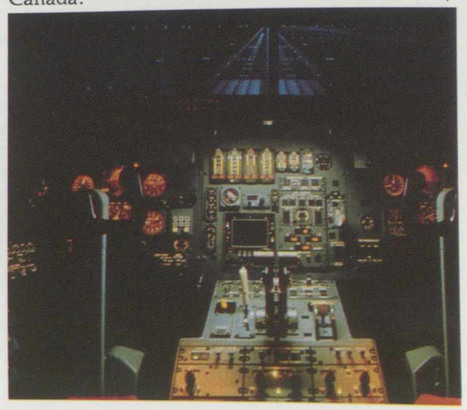
Canada is the leader in the production of small gas turbine aircraft engines with Pratt & Whitney Canada holding a majority of the world market.

From 1975 to 1985, the industry invested some $2 billion in research and development, with the Canadian government contributing (in the form of repayable loans and grants) about 30 per cent of that total.

In addition, Canadian aerospace companies frequently work in cooperation with their overseas counterparts. Pratt & Whitney, for example, has joined up with Motoren und Turbinen Union (MTU) of West Germany to help develop its PW300 engine. The partnership was set up to share some of the financial risk: Developing the PW300 will cost an estimated $500 million.

Pratt & Whitney is also working with Rolls Royce, and has signed an agreement to manufacture in Canada Rolls Royce's RTM 322 helicopter engines.

Canadian aerospace companies have also invested overseas. For example, Comdev and Leigh Instruments have both established themselves in the UK. In return, several UK companies — attracted by the Canadian market and by the direct access that Canada offers to all of North America — have crossed the Atlantic and invested in Canada. Among the subsidiaries they have established: Canadian Marconi, Dowty Canada and more recently MEL Canada.



Canada is a leader in the development and production of flight simulators for both commercial and military use.