• Lag Damper Program: The Arnprior Division is the principal manufacturer under license of the 107 type helicopter lag damper. The lag damper is a sophisticated hydraulic component which forms part of the helicopter rotor hub assembly. This product is distributed world-wide.

• Pedal Box Program: This program consists of the manufacture, assembly and modification of Chinook 47D Model pilot and copilot flight control pedal box.

• Search and Rescue Helicopter Program: The Arnprior Division carried out a major modification program to update fourteen CH113/113A Search and Rescue helicopters for the Canadian Forces. The program included changes to the utility hydraulic system, integrated rescue hoist system, auxiliary power unit, fuel capacity, cockpit instrumentation and flight display, radar communication/navigation systems and electrical systems.

• Depot Level Inspection and Repair Program: This program includes airframe repair and overhaul for CH113/113A/147 helicopters.

• Component Repair and Overhaul Program: A repair and overhaul program for dynamic and non-dynamic components for the CH113/113A/147 helicopters.

• Technical Publications: Provides revisions and updates for Technical Publications in support of CH113/113A/147 helicopters.

• General Helicopter Support Programs: Boeing of Canada Ltd, Arnprior Division, is extensively involved in Technical Investigations and Engineering Services, Manufacture of Airframe Parts, Tooling and Ground Support Equipment, Painting of Aircraft and Detail Parts, Flight Test Equipment and Logistics Support.

AVERAGE WORK FORCE: Production Workers – 373
Engineering & Technical Support – 46
Administration & Management – 97

GROSS SALES: 1986 – $38M
1987 – $42M

PLANT SIZE: 25,000 Sq Ft (Aircraft Overhaul Facility)
80,000 Sq Ft (Manufacturing Facility)
150,000 Sq Ft (Total Facility)

EQUIPMENT: Complete range of sheetmetal and machine shop capabilities including support facilities for Process, Heat Treat, NDT and Paint. Intergraph CAD/CAM System is now installed and a DEC based MRP system will be up and running in 1988 using PMS software.

EXPERIENCE: Present customers include Canadian Forces, Boeing Commercial Airplane Company, Boeing Vertol Company, US Navy, US Marine Corp, and Swedish Navy.

KEYWORDS: Electrical/Electronic Modification; Engineering Services; Flight Test Equipment; Ground Support Equipment; Heat Treating; Helicopters; ILS; Logistic Support; Machining; Modification (Helicopters); Painting (Aircraft); Precision Machining; Publication Service; R&O (Aircraft); R&O (Components); R&O (Helicopters); Sheet Metal Detailed Parts; Technical Investigations; Tooling.

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BOEING OF CANADA Ltd (de Havilland Division)

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M3K 1Y5

CONTACT: Mr John Wilson, Director, Government Sales – (416) 633-7310

HISTORY: The de Havilland Aircraft of Canada Ltd was established in 1928 as a sales outlet, assembly plant, and maintenance facility for aircraft of the British parent company's design and manufacture. Now owned by The Boeing Company, the de Havilland Division is located in Downsview, Ontario, with other offices in Ottawa.

CAPABILITY: Boeing Canada, de Havilland Division, is a leader worldwide in the design and manufacture of new-generation turboprop aircraft for civil and military applications. During the time period 1939 – 1945, the company built over 3,000 Mosquito bombers, Tiger Moths, and Anson trainers. In 1946, the British-designed Fox Moth was manufactured at Downsview, as the Canadian division prepared to launch its own design, the DHC-1 Chipmunk trainer. That was followed by the DHC-2 Beaver, which was designed for northern Canadian bush operations and found a home in civil and military roles worldwide. Nearly 1,700 of thistype were manufactured between 1947 – 67. The Beaver pioneered in short take-off and landing (STOL) technology, and played a vital role in developing regional air transport in more than 70 countries.

The Beaver was followed by a large version, the DHC-3 Otter, which inturn was followed by the large military STOL, twin-engine DHC-4 Caribou.

In the 1960s, de Havilland combined turbine technology with STOL experience and began to manufacture the remarkable twin-engined Buffalo and Twin Otter aircraft. Market interest in a larger capacity transport made it possible for de Havilland to develop a quiet four-engined STOL aircraft, the Dash 7. As a strong regional air transport market evolved, de Havilland utilized the advances in turbine technology to design and manufacture the Dash 8, a new generation twin-engined turboprop introduced to service in late 1984. In military applications, the Dash 8 provides multi-mission capability in transport, navigation training, maritime patrol/ASW/ASV (Triton), medevac, search and rescue and flight calibration versions.

de Havilland's R&D activity typically divides into powered lift, propeller refinements and advance composite structures. Powered lift focus has been upon ultra STOL capability and has been supported by an augmentor-wing flight test program and by extensive wind tunnel testing both in the National Aeronautical Establishment tunnels in Ottawa and the 40 ft x 80 ft tunnel at NASA Ames. This research program has extended progressively to STOL and VTOL research and currently concentrates upon an ejector lift/vectored thrust concept in a program sponsored by NASA and supported by General Dynamics.

Propeller development, motivated by company concentration upon smaller turboprop transports has investigated thin, rear-loaded blade sections. Wind tunnel test modelling techniques have been developed and have led to propeller/nacelle combinations testing in the National Aeronautical Establishment 30 ft x 30 ft tunnel at Ottawa at Reynolds Numbers close to full scale.

Advanced composite structural development has been directed to both Kevlar/Nomex sandwich design and manufacture, and more recently, to carbon structures for primary application.

AVERAGE WORK FORCE: 5,700

GROSS SALES: No Data

PLANT SIZE: 2,000 Sq Ft (Plant & Office)

EQUIPMENT: For many years the de Havilland plants have been engaged in the production of stressed skin aluminum alloy airframes, and in doing so, utilize equipment normally found in a well-equipped aircraft manufacturing complex. Their present shop equipment includes milling machines; engine, turret, and pre-programmed automatic lathes; drill presses; drop hammers; punch, hydro and stretch presses; magneform; shapers & rolls; jogglers; tube bending and swaging machines; precision grinders; planers; multi-spindle routers; spot and heli-arc welders; vertical and jig borers; and broaches and shears. In addition, heat treat, foundry, plating, painting, sandblasting, and other treatment equipment is available. Hydraulic, instrument, radio, plastic, and upholstery shops also form part of the complete facility. The plastic shop manufactures fiberglass and polycarbonate parts in a temperature and humidity-controlled environment. It is also fully equipped with autoclaves, ovens, bonding and decorative appli-