

of the company, while the ground floor is occupied mainly by the cafeteria, personnel and employment offices.

One of Canada's oldest aircraft companies, Canadian Pratt & Whitney, was formed in 1928. A subsidiary of United Aircraft Corporation of East Hartford, Conn., the company sells and services Pratt & Whitney engines, Hamilton Standard propellers and Sikorsky helicopters, which are produced by various divisions of United Aircraft. The company also sells and services Pesco aircraft accessories.

A tour of the Canadian Pratt & Whitney plant impresses the visitor with the extreme complexity and precision of engine production. The crankshaft, for example, requires some 180 successive operations including 12 inspections, and must achieve remarkable tolerances of dimension and balance.

As might be expected, the inspection and checking equipment and methods are of the finest. Precision air gauges, shadowgraphs and Kodak comparators are used to ensure the necessary degree of accuracy.

It is surprising to discover that the personnel in this new engine plant are all-Canadian. One would have expected that at least a few key personnel would have been drawn from the parent company. The procedure has been to train all foremen and lead men in six-week courses at the parent plant in Hartford.

Full advantage has been taken of the 300-mile pipe line feeding information and experience from the Hartford plant to the new Canadian venture. Special skills have had to be acquired, such as the tumbling of precision gears.

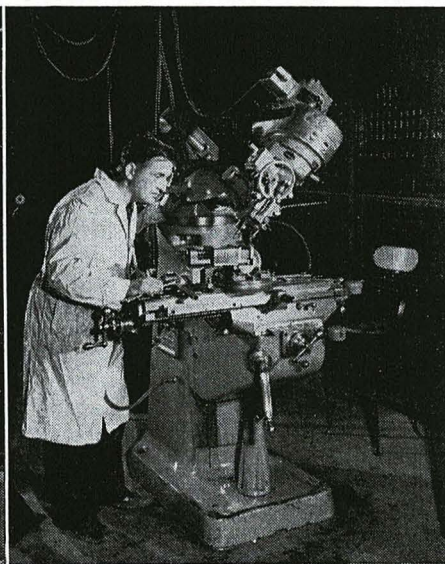
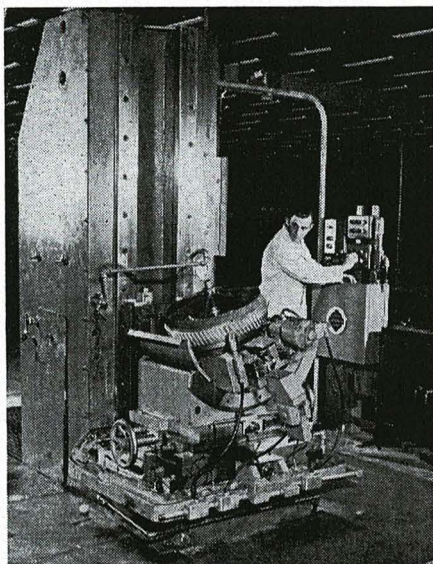
Another device which has made

possible the rapid staff expansion has been the preparation and use of Standard Procedure Manuals for each department and to cover the over-all operation.

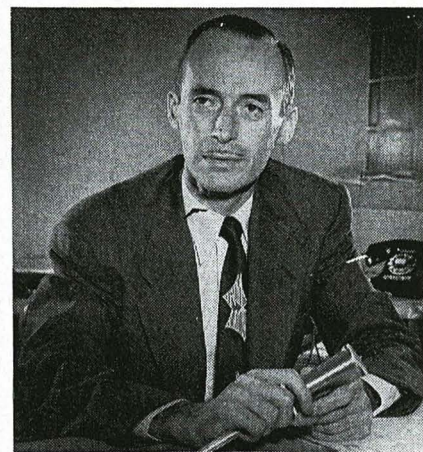
The present staff has been built on a nucleus of highly skilled process engineers, tool designers, inspectors and supervisors. Most of the others, however, are only moderately skilled personnel, machine operators rather than qualified machinists.

Layout of the plant has provided for a number of subproduction lines flowing to finished-part stores. Final assembly utilizes engine turnover stands.

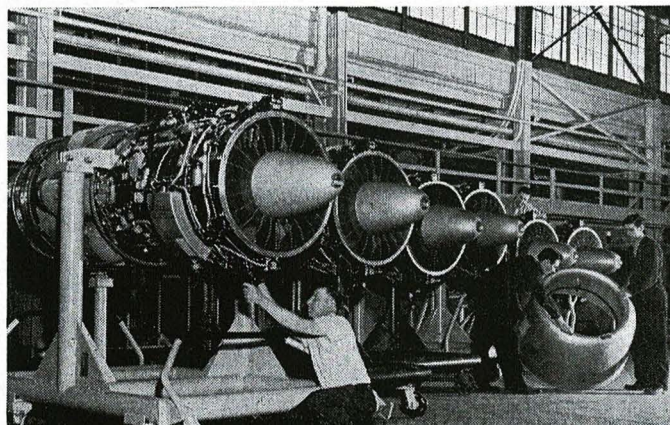
An important element in the achievement of high quality is the laboratory in which metal samples are examined. For example, the depth of case hardening on a crankshaft is examined. The steel in each critical forging is identified by a heat code and complete records are kept



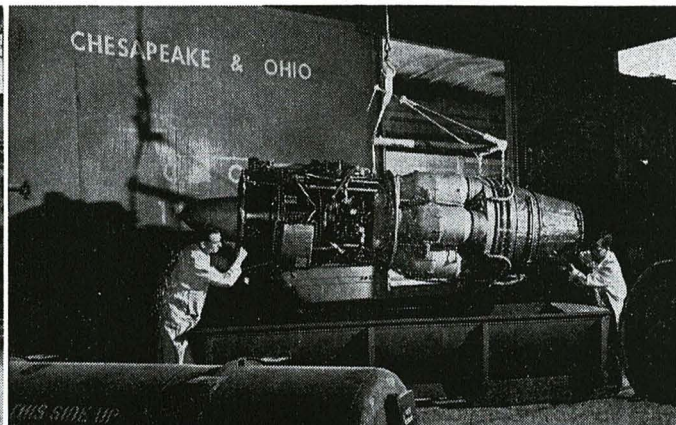
ORENDA PROGRAM



Thomas S. McCrae, general manager, Gas Turbine Division, A. V. Roe Canada Ltd.



Completed Orendas at the end of the final assembly line in the new plant at Malton.



Ready for delivery, a new Orenda is lowered into its special container at Malton.