

Gas Turbine Propelled Single-Seater Fighter Aircraft

1. The high standard of fighting efficiency of Canada's airmen can only be maintained by providing them with up-to-date aircraft whose performance will compare favourably with those produced in other countries.
2. It is desirable that such aircraft should be of Canadian design and production.
3. To do this, opportunity must be provided for the attraction and retention of skilled technical personnel presently available in Canada but who will inevitably disperse to other countries where they can ply their skill in the production of original designs to better advantage.
4. Fighter aircraft now in use with airframes of present design and powered with the current type of internal combustion engine are considered to be of obsolete or obsolescent design and will be out-moded completely two to five years hence.
5. Turbo Research Limited was formed to design and develop gas turbines. One of the most important applications upon which this Company is to concentrate, is the gas turbine for aircraft propulsion.
6. Judging by the experience in the development of a new prototype aircraft in other countries, notably the United Kingdom, 20 gas turbines is a reasonably conservative number to undertake experimentation and development of the gas turbine and the testing and proving of the aeroplane.
7. It is intended that the first of the 3 airframes produced to this Department's specifications will be for experimental purposes to prove both the design of the airframe and the gas turbine and the combination thereof, the other two aircraft to be prototype single-seater fighters - all three aircraft to be delivered successively as completed to the Royal Canadian Air Force for tests and service trials.
8. The fighter design is readily adaptable for photographic reconnaissance purposes, involving only the installation of cameras. It also can be adapted for use as a fighter bomber by the addition of bomb-carrying facilities.
9. One of the major difficulties in the way of establishing and maintaining an aircraft industry in peace time is the problem of making it economically self-sustaining by assuring for its product a market in sufficient volume to recoup the designing, engineering and production costs. However it should be borne in mind that Government financial assistance to an aircraft industry is not without precedent since it may be taken as an accepted fact that the aircraft industry in every nation to-day has been and is maintained with assistance from the Government of that nation to create actual and potential air power and in no country has the aircraft industry reached a position of being self-sustaining in the true sense of the term.

Minutes and Documents of the Cabinet War Committee,
Volume XVI, July - December 1944, (R.G. 2, 7c, Volume 16)

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