D.O.S

DMC/SG P 531

FR 7/7.

7th, May 1962

AUSTRALIAN MISSION
S.N.E.C.M.A
70, bld Kellermann

PARIS 13e
France

COMMONWEALTH AIRCRAFT CORPORATION PTY.LTD.
BOX 779 H P.O.
Elizabeth st.

MELBOURNE
Australia

Attention : the MANAGER.

Subject : Approval tests for Australian forged compressor and turbine blades - ATAR engines.

Dear Sir,

cB

Referring to your M 220 we have now received SNECMA's reply to your several queries and enclose herewith copies of Note intérieure KL/6510, 5th, May 62.

This note was received just prior to Mr. FOSTER's departure, but he was not aware of the amendment to section 3.1 (iv) which limits the compressor rotating assembly vibration test to the stage 1 blades as indicated by my initialled note.

No doubt Mr. FOSTER will have some comments to make regarding these requirements particularly in respect of the various sub sections of section 3.

CIRCULATION / COPIES / /6	
E.F.MNGR	FCT.ADM.SUPT.
DSGN.ENGR ✓	MC.SHOP.SUPT.
DEV.ENGR ✓	PRODUCN.SUPT.
SERV.ENGR	ASSMLY.SUPT.
QUAL.ENGR ✓	FOUNDRY SUPT.
PROD.ENGR	METLGAL.SUPT. ✓
MATL.ENGR ✓	PROCESS SUPT. ✓
CH.TL.DSGR	TOOL.PROD.SUPT.
CH.INSP.E.F.	TOOL.ROOM.SUPT.
A/F MANAGER	SUPT.INSPECTION

Yours faithfully,

D.M. CARROLL

SNECMA - NOTE INTERIEURE - KL/6510

Kellermann AUSTRALIAN MISSION

KL 5th, May 1962

Objet : ATAR 9C engine

Approval tests for compressor and turbine blades forged in Australia.

Attention : Mr. G.H. FOSTER

Dear Sir,

In answer to your memo ref. GHF/SG dated 23rd, March 62, please find hereunder the reply of our Inspection Division.

The compressor and turbine blades, due to their function, are subjected in operation to a high degree of stress. Any blade damage would seriously bring into danger the safety of utilization. Consequently, SNECMA foresees the following procedure for the blades approval test :

1 - Blades should strictly meet SNECMA specification related to metallurgy, machining and inspection.

2 - A fatigue test should be carried out on the 1st, 3rd and 4th stage compressor rotor blades.

3 - An engine test should be carried out for all bladings, comprising :

3.1 - Preliminary tests during which the following will be registered :

(i) - a performance curve
(ii) - the compressor characteristics field.
(iii) - the temperature chart -radial repartition on the turbine blades, and circonferential repartition on the junction section).
(iv) - the compressor rotating assembly vibrations. (1st Stage only)

3.2 - A flight type endurance test on the test bed, of 100 hours duration.

3.3 - A further test of 5 hours duration carried out at the vibrations critical rate of the compressor rotor stage 1 blading.

3.4 - A "surging" test.

4 - Disassembling. Engine inspection. Test results survey.

Our Inspection Management points out that the foreseen schedule will permit the validation of other engine components made in Australia.

The details of these approval type tests will be shortly transmitted to the Australian Mission.

Yours faithfully,

Copy CD-KL

M. FABRE