


AVRO AIRCRAFT LIMITED
Inter-Departmental Memorandum

Ref 7659/05/J
Date March 28, 1958
To S. E. Harper
From J. D. Hodge
Subject ARROW 1 - FUEL SYSTEM TESTS

Herewith R.F.T. No. 5040, Fuel System Engineering Tests which lists the testing required to prove the functioning of the Arrow 1 Fuel System.

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AVRO AIRCRAFT LIMITED

MALTON, ONTARIO

REQUISITION FOR FLIGHT TEST

R.F.T. NO. 5040

SHEET NO. 1 OF

DATE: March 28, 1958

AIRCRAFT 25201
and/or 25202
25203

ASSIGNMENT NO. X73-384

WORK ORDER NO.

FUEL SYSTEM ENGINEERING TESTS

1. OBJECT

To prove the Arrow 1 fuel system on a complete aircraft.

2. INSTRUMENTATION REQUIRED

The instrumentation required is as in section 4 of FAR/C105/1 and for convenience a copy of this section is attached.

3. PROCEDURE

It is required to record all fuel system parameters as listed in section 2 during the following manoeuvres

3.1 Take off and acceleration to climb speed.

3.1.1 at military rating

3.1.2 with afterburner.

3.2 Climb from sea level, without the afterburner at M .92 to 35,000 ft and then at best climb speed to ceiling (without afterburner).

3.3 With the afterburner, climb at M .92 to 35,000 ft. and then at M 1.5 to 50,000 ft.

3.4 Climb to 50,000 ft, with the afterburner on and at the maximum rate of climb

3.5 Level flight at the aircraft operational ceiling.

3.6 Dive from 50,000 ft to 15,000 ft with the following starting conditions

3.6.1 Starting at M 1.5 with the power on.

3.6.2 Starting at M 1.5 with the engines idling.

R.F.T. PREPARED BY:

APPROVED BY:

AUTHORIZED BY:

DATE FOR COMPLETION

PRIORITY

ESTIMATED COMPLETION

DATE:



AVRO AIRCRAFT LIMITED

MALTON, ONTARIO

REQUISITION FOR FLIGHT TEST

R.F.T. NO. 5040

SHEET NO. 2 OF

DATE: March 28, 1958

AIRCRAFT
and/or

25201
25202
25203

ASSIGNMENT NO. X73-384

WORK ORDER NO.

3.7 To establish inverted flight endurance under the following conditions.

- 3.7.1 At 10,000 ft. with throttle set for cruise at M .92.
- 3.7.2 At 35,000 ft. with throttle set for cruise at M .92.
- 3.7.3 At 35,000 ft. with throttle set for cruise at M 1.5.
- 3.7.4 At 50,000 ft. with throttle set for cruise at M 1.5.

NOTE:- The estimated inverted flight endurance is 15 seconds at S.L. and 45 seconds at 50,000 ft. and it is required to establish these times more accurately.

It is expected that achieving inverted flight by roll and by pitch may give different results, therefore it is requested that the pilot completes these tests by rolling into inverted flight and wherever possible to achieve the attitude by a half-loop as well.

4. DATA REQUIRED

Recordings from all the instrumentation are required throughout the specified manoeuvres. Also required are the pilots comments on the adequacy of the fuel quantity indicating system and the frequency and validity of all warning lights.

R.F.T. PREPARED BY:

APPROVED BY:

AUTHORIZED BY:

DATE FOR COMPLETION

PRIORITY

ESTIMATED COMPLETION
DATE: