

QCX
Avro
CF105
72 GEQ
11

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ANALYZED

ARROW 2

PROPOSAL FOR THE GROUND SUPPORT EQUIPMENT
DEMONSTRATION AND EVALUATION CONFERENCE

REPORT NO. 72/GEQ/11

APRIL 1958

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1. INTRODUCTION

- 1.1 The purpose of this report is to present a revised plan for the Arrow Aircraft ground support equipment demonstration and evaluation conference. This revised plan is a result of an initial proposal contained in Report No. 71/GEQ/1, dated 15 July 1957 and the subsequent instructions contained in R.C.A.F. TSD letter S36-38-105-13 (ACE-1) dated 20 November 1957 and 5 December 1957.
- 1.2 At the request of the RCAF, as many Arrow 2 G.S.E. items as possible will be demonstrated. However, a number of items do not lend themselves to active demonstrations at this time and these will be displayed statistically.
- 1.3 Demonstration and evaluation of the engine ground support equipment will be carried out at a later date.
- 1.4 This proposal is based upon the availability of the G.S.E. items listed in the appendices to this report. Any changes to these lists may effect the date of the conference.

2. CONFERENCE TIMING

It is impossible to predict the availability of the aircraft at this time and, therefore, it is not possible to set a firm date for the G.S.E. evaluation conference. However, the week commencing 7 July 1958 has been selected as the tentative date of the conference. The exact date will be confirmed by the Company a maximum of two weeks and a minimum of one week prior to the conference.

3. DEMONSTRATION DETAILS

3.1 Display Items

Appendices "A" and "B" list the items of equipment to be evaluated. These lists were compiled by mutual agreement between Company and RCAF/TSD representatives. However, those items which are asterisked (*) may not be available for the proposed conference date.

3.2 Active Displays

All equipment lending itself to informative demonstration will be functionally demonstrated with the aircraft in an outdoor area. (See Appendix "A").

3.3 Static Display

All equipment not lending itself to informative demonstration will be suitably placarded and arranged in an indoor area for review during the third day of the conference. (See Appendix "B").

3.4 Repeat Demonstrations

Provision will be made on the third day of the conference for any repeat demonstration which may be required.



3.5 Evaluation Meeting

The last day of the proposed 4 day period will be devoted to a combined AVRO/RCAF meeting for discussion of equipment changes desired and finalization of change requests.

3.6 Accommodation

3.6.1 The tarmac area in front of Production Hangar D2 will be the site of the active displays, except for engine starting which will take place at the run up facility adjacent to Production Flight Test flight area.

3.6.2 Static displays will be located inside D2 hangar.

3.6.3 Conference tables, seating, publications etc., also will be provided in Hangar D2. The briefing and official welcome will be held in the new cafeteria.

3.6.4 The general physical arrangements, such as car parking, will be the same as those used during the Arrow 2 mock-up evaluation conference.

3.7 Personnel Participating

3.7.1 The R.C.A.F. will inform the Company of the number of observers who will be attending the conference, in sufficient time to enable adequate domestic arrangements to be made.

3.7.2 The Company will inform Avro personnel who will be required in attendance during the conference.

3.8 Change Request Form

The change request form shown in Appendix "C" is recommended for the use of R.C.A.F. conference observers.

3.9 Furnishings Required

The following domestic equipment will be provided:

Seating, stenographic assistance, telephone, P.A. system etc., as for the Arrow 2 mock-up conference.

3.10 Publications

Publications will consist of one complete set of preliminary Maintenance Instructions and Service Data Books.



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4. CONFERENCE OUTLINE

MONDAY A.M.

R.C.A.F. Staff Briefing (by R.C.A.F.)
Official Welcome (Avro Representative)
External Aircraft Inspection
Replacement of Liquid Oxygen Converter
Recharging Emergency Oxygen
★ Armament Pack Hoisting

MONDAY P.M.

Towing
Re-Oiling
Refueling
Engine Start and Brief Run
Air Conditioning System Test

TUESDAY A.M.

Defueling and Fuel Quantity Test
Jacking (Airframe)
Operation of Hydraulic Systems
Topping Up the Hydraulic Systems
Nitrogen Charging of the Accumulators

TUESDAY P.M.

Jacking (Nose Gear)
★ Canopy and Windscreen De-Icing Test
★ Engine De-Icing System Test
★ Cockpit Pressurization Test
★ Electrical Power System Test

WEDNESDAY A.M.

Damper System Test
Pitot Static System Test
★ Fire Extinguisher System Test

WEDNESDAY P.M.

Repeat of Demonstrations (As Required)
Static Displays

THURSDAY A.M. & P.M.

General Meeting
★ Indicates demonstrations will be carried out if equipment is available for the proposed conference date.



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APPENDIX "A" to
72/GEQ/11LIST OF ACTIVE DISPLAY ITEMS

<u>Ref. No.</u>	<u>Item</u>
101A	. Starter, Engine, Air Turbine
102A	. Air Conditioner and Generator AC and DC
103A	. Compressor, Air or Nitrogen (Electric)
105	. Filler and Bleeder, Hydraulic System
107	. Stairs, Cockpit Entry
108	. Truck, Tank (Refueling)
109	. Tractor, Aircraft Towing
110	. Towing Equipment - Bar
111	. Towing Equipment - Bridle
112	. Hoist, Missile Pack
121	. Sling, Missile Pack
122	. Trailer, Liquid Oxygen Converter
128	. Jack, Tripod, 20 Ton
129A	. Jack, Flat Base (Main Gear)
129B	. Jack, Flat Base (Nose Gear)
130	. Strap Retaining, Main Landing Gear Bogey
131A	. Adaptor, Jacking Nose
131B	. Adaptor, Jacking Wing
132	. Adaptor, Jacking, Nose L/G
143	. Dispensing Pump, Oil
144	. Chocks, Wheel
145A	. Lock, Aircraft, Nose L/G
145B	. Lock, Aircraft, Main L/G
146	. Maintenance Platform (4G/1596)
147	. Maintenance Platform (4G/2614)
148	. Maintenance Platform (4G/1230)
149	. Mat, Duct Walkway
150	. Mat, Wing
152A	. Cover, Engine Intake
153A	. Cover, Engine Exhaust
154A	. Cover, Air Conditioning Inlet
155A	. Cover, Air Conditioning Outlet
156	. Cover, Canopy
166	. Fuel Quantity Indicating Test Set
168	. Stand, Test Hydraulic System
169	. Trailer, Gaseous Oxygen Supply
172	. Cushion Set, Ear, Anti-Noise
173	. Tie Down Bar, Engine Run-Up
174	. Air, H/P Gauging Device
A 175A	. Cover Pitot Head
* 175B	. Handling Pole, Pitot Cover
176	. Adaptor, Emergency Oxygen Charging
181	. Developmental Test Equipment for Damping System
185	. Discharger, Electro Static
* 187	. Maintenance Platform, Fuselage
195	. Support, Aileron and Elevator



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APPENDIX "A" to
72/GEQ/11
(continued)

Ref. No.

Items

229	· Pressure Tester, Aircraft Cabin
232	· Panel, Air Conditioning Test
233	· Tool, Canopy Locking
235	· Test Equipment, Pitot Static
* 244	· Panel, De-Icing Test
* 245A	· Panel, Electrical Power Test
* 247	· Panel, Fire Extinguisher Test
* 256	· Panel, Canopy and Windscreen De-Icing Test
260 & 261	· HT 109, Fuel Cap. Test Set and Leads

* Item may not be available for proposed conference data.



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APPENDIX "B" to
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LIST OF STATIC DISPLAY ITEMS

<u>Ref. No.</u>	<u>Item</u>
Z 123	· Trailer, Liquid Oxygen Storage
124	· Rotary Vacuum Pump for above trailer
* 127	· Sling, Complete Aircraft
158A	· Cover and Sling, Radome, Arrow 1
178	· Air, Medium Pressure Gauging Device (0-400 psi)
211	· Sling A/C Maintenance (as many as possible)
212	· Trailer, Main Gear Lift
213	· Trailer, Nose Gear Lift
223	· Sling, Elevator Jack
224	· Handles, Shroud Removal and Installation
225	· Electrical Sealant Gun
226	· Portable Curing Tool
227	· Thermolug Installation Tools
228	· Cage, Protection, A/C Tire Inflation
230	· Strap, Retaining Main L/G Door
231	· Strap, Retaining Main L/G Leg
236	· Rate Table, Damping System
238	· Developmental Second Line Test Equipment, Damper
248	· Mat, Protection, Engine Bay
249	· Mat, Protection, Fuselage Fuel Cell
254	· Oscilloscope, Damping System Test
255	· Recorder, Damping System Test

Z Filling of liquid oxygen converter to be demonstrated in the static display area.

* Item may not be available for proposed conference date.



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APPENDIX "C" to
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ARROW

GROUND SUPPORT EQUIPMENT DEMONSTRATION

CHANGE REQUEST

			CODE:
SUBJECT:	DESIGN	MAINTENANCE	PROCEDURE
ITEM:			
COMMENTS:			
REQUEST:			
			ORIGINATOR _____ APPOINTMENT _____

PROGRESS SUMMARY

STUDY INITIATED	CHANGE INCORPORATED	RCAF APPROVAL	PRODUCTION ALLOCATION

PROGRESS DETAIL

DATE	REMARKS

SHAW
1953
GLASS
100 T-10