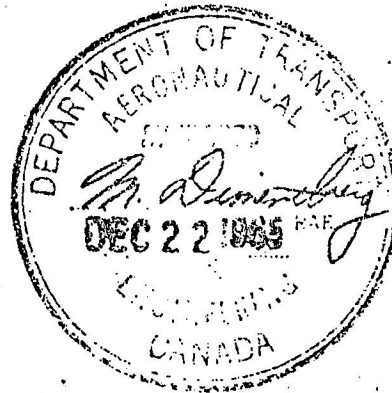


BRISTOL AEROSPACE LIMITED

E. R. 2227

SPECIFICATION: - AIRWORTHINESS CERTIFICATION
OF EX-RCAF BEECHCRAFT EXPEDITOR AIRCRAFT 3N,
3NM, 3TM, & 3T IN CANADA



Prepared by: *A. Atyand*.....

Date 20 Dec '65

Checked by: *H. H. Kristiansen*.....

Date DEC 21 '65

Approved by: *C.M. Hovey*.....
C.M. Hovey

Date DEC 21 '65

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APPROVED BY.....	AIRWORTHINESS CERTIFICATION OF EX-RCAF EXPEDITION AIRCRAFT	DATE... Dec. 15. '65

REVISION SHEET

ISSUE		PREPARED BY	APPROVED BY	DATE
A	Original Issue	<i>[Signature]</i>	<i>[Signature]</i>	7 June '65
B	Appendix "B" added	<i>[Signature]</i>	<i>[Signature]</i>	29 Sept. '65
C	Para 3.1.2 read "A-765 Item 2 or 5. Para 3.4 read "Beechcraft Drawing 404-184000. Para 3.7.3, 3.7.4, 3.7.5, 5.2.1, 5.3., 5.3.1, 5.3.2 & 5.3.3. added. Appendix "A" Drawing Issues revised.	<i>[Signature]</i>	<i>[Signature]</i>	21 Dec. 65
D	Para 3.9.3 was Propeller Thrust Nuts with reference to FAA AD 52-26-3.	<i>[Signature]</i>	<i>[Signature]</i>	20 Jan. 66

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**AIRWORTHINESS CERTIFICATION
OF EX-RCAF EXPEDITOR AIRCRAFT**

1.0 PURPOSE

The purpose of this specification is to define the basic changes, inspections and repair work required for civil airworthiness certification of ex-RCAF Beechcraft Expeditor 3N, 3NM, 3TM and 3T aircraft by the Canadian Department of Transport. (See Appendix 'B')

2.0 APPLICABLE DRAWINGS AND OTHER DOCUMENTS

- 2.1 U.S. Government Publications
FAA Aircraft Type Specification A-765
Civil Aeronautics Manual 3
- 2.2 Canadian Government Publications
The Air Regulations (latest issue)
DOT Engineering and Inspection Manual Parts 1, 11 & 111
- 2.3 Bristol Aerospace Limited modification drawings as listed in Appendix A to this specification.
- 2.4 Applicable RCAF Handbooks.

The following RCAF Engineering Orders are applicable to these surplus aircraft as reference information.

- E.O. 05-45B-1 Pilots Handbook & Operating Instructions
- E.O. 05-45B-2 Handbook Maintenance Instructions
- E.O. 05-45B-4 Illustrated Parts Breakdown
- 2.5 Flight Manual
FAA or DOT Approved Flight Manual.

3.0 MODIFICATION REQUIREMENTS

3.1 General

- 3.1.1 These aircraft basically conform to FAA Specification A-765 for Beechcraft D-18S aircraft and are to be designated as such.
- 3.1.2 Gross weight limitations: These aircraft as received have fully feathering propellers installed as per FAA specification A-765 item 2. Upon civil certification the aircraft will be approved for a landplane gross weight of 8750 Lbs.

3.2 Empennage and Controls

3.2.1 Rudder Installation

The original rudders on 3N, 3NM and 3TM aircraft conform to civil airworthiness requirements and do not require modification.

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3.2.2 Rudder Trim Tab Modification

The right hand rudder on 3T aircraft will not require modification but the left hand rudder trim tab must be increased in chord about 20% in order to exert sufficient force to trim the aircraft in asymmetric power conditions (Bristol drawing 112-16001).

3.2.3 Rudder Return Spring (Item 604 of FAA Specification A-765)

The spring is installed on these aircraft so that no modification is required.

3.3 Furnishings & Equipment

3.3.1 The existing military type harness and lap safety belts are acceptable if in good condition and conform to civil airworthiness requirements.

3.3.2 Seat Installations

The cockpit and cabin chair installations are acceptable if the supporting structure is in good condition. The seat adjacent to the emergency exit must not obstruct the opening (as required by CAM 3.387). Seats having reclining backs which can be rotated to give unrestricted access, are acceptable. Seats having fixed backs must be modified to comply with this requirement (Bristol drawing 112-84012).

3.3.3 Navigational Equipment (3N, 3NM & 3TM)

All navigational training equipment is to be removed from the aircraft and approved structural coverings installed over all redundant fuselage openings.

3.4 Emergency Exit

The cabin emergency exit on the starboard side of 3T Aircraft has been enlarged to meet the requirements of CAM 3 (Beechcraft drawings 644-185650 & 694-184452). The emergency exits on 3N, 3NM and 3TM aircraft conform to CAM 3.387.

3.5 Change of Instrument Range Markings

Remove the military operating range markings from the glass

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- 3.5 covers of the affected instruments and apply new approved range marking (Bristol drawing 112-63006).
- 3.6 Removal of Radio Call Plate
Remove the military radio call plate located on the instrument panel.
- 3.7 Addition of DOT Placards
 - 3.7.1 Install a placard designating the approved operating category of the aircraft on the instrument panel in full view of the pilot (Bristol drawing 112-00009).
 - 3.7.2 Install an aircraft fireproof identification placard (Bristol drawing 990-00008) near the main entrance door on the internal fuselage structure.
 - 3.7.3 Install weight limitation placards in a conspicuous position on the door of the nose baggage compartment and in the aft baggage compartment (Bristol drawing 112-00009).
 - 3.7.4 When Hamilton Standard hydromatic full feathering propellers with hubs 22D30 and blades 6597-21 with diameter over 8' are installed, a propeller RPM limitation placard must be installed on the instrument panel in full view of the pilot. (Bristol drawing 112-00009).
 - 3.7.5 Ensure that all emergency exits are properly marked and that fuel and oil tanks are clearly marked as to contents, capacity and rating.
- 3.8 Electrical and Radio
 - 3.8.1 Radio Equipment
All retained and new radio equipment installed must have DOT approval.
 - 3.8.2 Electrical System
The existing electrical system in the aircraft complies with the Department of Transport's regulations. Maintenance instructions and applicable wiring diagrams are given in the RCAF Engineering Order 05-45B-2. Any modifications or additions to the basic system must be separately approved. Two Willard AR-12-36 batteries are installed and may be retained if in serviceable condition.

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3.8.3 Removal of Redundant Equipment Wiring

All wiring for equipment removed from the aircraft must be disconnected and taken out of the harnesses or properly dead ended.

3.9 Power Plant and Associated Systems

3.9.1 Auxilliary Nose Tank

All aircraft have the bladder type nose tank installed, which comply with the civil airworthiness requirements and may be retained. The capacity of these tanks is 67 imp. gallons.

3.9.2 Oil System

On JT aircraft a manually operated shut-off valve is to be added behind the fire wall at the oil tank outlet in each nacelle. The controls to operate these valves are to be mounted in the lower part of the engine control pedestal (Bristol drawing 112-66001). On 3N, 3NM and 3TM aircraft an approved type oil shut-off valve system is existing and no modification is required.

3.9.3 Propeller Thrust-Nut Threads

The propeller thrust-nut threads are to be checked to ensure compliance with FAA AD57-5-4.

3.10 Airworthiness Directives

All current DOT and FAA Airworthiness Directives must be complied with.

3.11 Fire Extinguisher and Fire Warning Systems

3.11.1 All aircraft are equipped with engine fire extinguisher and fire warning systems. The engine fire extinguisher system is mandatory and must be retained. The fire warning system is not mandatory but preferably should be retained. Portable fire extinguishers must be checked for compliance with DOT inspection manual part 11 para 3.5.

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4.0 WEIGHT AND BALANCE

The aircraft is to be weighed and a new weight and balance record compiled.

5.0 INSPECTION REQUIREMENTS

5.1 The aircraft is to undergo a minimum of one-hundred hours inspection.

5.2 If the total airframe hours since the last overhaul are, or exceed, five thousand hours, then a five thousand hour inspection in accordance with the Beechcraft standard procedure is to be carried out.

5.2.1 Those items which must be carried out at five thousand hour intervals in accordance with the Beech five thousand hour inspection, and which have been complied with under the RCAF CAIR and/or SPIC programs within the five thousand hours preceding civil certification, may be accepted. When such items are accepted on this basis, documentary evidence of the preceding overhaul or inspection is required. In addition, such items must be listed in the conversion work report and complied with on expiration of their respective life times.

5.3 Modifications and Repairs

5.3.1 RCAF modifications embodied in accordance with RCAF EO 05-45B-6A series on the applicable marks of aircraft may be accepted providing documentary proof can be exhibited.

5.3.2 Structural repairs carried out during RCAF service in accordance with RCAF EO 05-45B-3 may be accepted.

5.3.3. In the event of any doubt arising as to the acceptability of any modification or repair the Engineering Department of Bristol Aerospace Ltd. are to be consulted.

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APPENDIX "A"

MODIFICATION DRAWINGS

<u>Drawing Number</u>	<u>Issue</u>	<u>Title</u>
112-00008	A	Modification - Ex-ROAF Expeditor 3N, 3NM, 3TM & 3T.
112-00009	A	Placards - Instructional
112-16001	A	Modification - Empennage
112-63006	D	Modification - Instrument Range Markings.
112-66001	A	Modification - Oil System
112-84012	B	Seat Assy. - Tilting Emergency Exit Position
990-00008	A	Plate - Identification Aircraft Fireproof

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APPENDIX "B"

APPLICABLE AIRCRAFT SERIAL NUMBERS

Appendix "B" contains the manufacturers serial numbers of aircraft eligible for civil certification to this specification. The serial numbers listed appear on the name plate in the aircraft.

1. EXPEDITOR 3N, 3NM AND 3TM

CA-1 through CA-100	Expeditor 3N
CA-101	Expeditor 3TM
CA-102 through CA-115	Expeditor 3NM
CA-116 through CA-135	Expeditor 3TM
CA-136 through CA-155	Expeditor 3NM
CA-156 through CA-175	Expeditor 3TM
CA-176 through CA-194	Expeditor 3NM
CA-195 through CA-200	Expeditor 3TM
CA-201 through CA-261	Expeditor 3NM
CA-262 through CA-280	Expeditor 3NM
CA-281 - Department of Transport	Expeditor 3TM

2. EXPEDITOR 3T

43-35450	43-35488	43-35627	43-35824
43-35455	43-35490	43-35629	43-35850
43-35457	43-35492	43-35630	43-35861
43-35465	43-35493	43-35632	43-35863
43-35466	43-35495	43-35634	43-35869
43-35468	43-35496	43-35635	43-35873
43-35469	43-35535	43-35639	43-35877
43-35470	43-35536	43-35645	43-35885
43-35476	43-35540	43-35651	43-45718
43-35477	43-35541	43-35653	44-47213
43-35478	43-35548	43-35668	44-47215
43-35479	43-35549	43-35671	44-47216
43-35480	43-35550	43-35683	44-47409
43-35481	43-35551	43-35690	44-47428
43-35482	43-35552	43-35691	44-47433
43-35483	43-35553	43-35693	44-47626
43-35484	43-35556	43-35707	44-47630
43-35485	43-35557	43-35741	44-47633
43-35486	43-35559	43-35745	44-47634
43-35487	43-35625	43-35768	44-47694
			44-86939
			44-86940

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3. The following RCAF registration numbers are shown for reference and convenience only.

<u>SERIAL NUMBER</u>		<u>TYPE</u>
<u>From</u>	<u>To Incl.</u>	
1381		3T
1383	1384	3T
1386	1388	3T
1390	1392	3T
1396	1399	3T
1401	1402	3T
1404	1405	3T
1408	1409	3T
1411	1414	3T
1416	1424	3T
1426	1500	3N
1501		3TM
1502	1515	3NM
1516	5135	3TM
1536	1555	3NM
1556	1575	3TM
1579	1594	3NM
1595	1600	3TM
2278	2302	3N
2303	2382	3NM
FR940	FR945	3T
FR947	FR948	3T
HB101	HB102	3T
HB104	HB105	3T
HB107	HB109	3T
HB111	HB117	3T
HB119	HB120	3T
HB122	HB123	3T
HB125	HB126	3T
HB130	HB131	3T
HB135	HB144	3T
HB148		3T
HB207		3T
HB210		3T
HB212		3T
HB266	HB267	3T
HB269		3T