

DEPARTMENT OF TRANSPORT  
AIR SERVICES  
OTTAWA, CANADA

A-100 Issue 1  
Beech Aircraft  
3T, 3N  
3NM, 3TM  
April 1, 1970

AIRCRAFT TYPE APPROVAL

Manufacturer Beech Aircraft Corporation,  
Wichita, Kansas,  
U.S.A.

1. MODEL 3T (Normal Category) Approved March 16, 1970.

Engine 2 Pratt & Whitney R985-AN14B Engines  
with one 4-1/2N and 9N Damper.

Fuel 80/87 Octane Minimum Grade Aviation  
Gasoline.

Engine Limits Maximum Continuous  
(Sea Level) 34.5 in. Hg., 2200 rpm (400 H.P.)  
Straight line manifold pressure variation with  
altitude to 5,000 feet.

Take-off (One Minute)  
36.5 in. Hg., 2300 rpm (450 H.P.)

Propeller 2 Hamilton Standard Hydromatic Full Feathering  
22 D 30 Hub, 6533A-21S Blades.

Airspeed Limits  
(IAS)

Manoeuvring	153 mph	(133 kts.)
Cruising	205 mph	(178 kts.)
Never Exceed	257 mph	(223 kts.)
Flaps Extended	120 mph	(104 kts.)
Landing Gear Extended	125 mph	(109 kts.)

C.G. Range (+109.8) to (+117.7) Landing gear extended.  
Moment due to retraction of landing gear  
is +12,000 in./lb.

Maximum Weight 8,750 lbs.

Minimum Crew One Pilot (+87).



JEL 3T (Cont'd)

No. of Seats

Maximum of 10 (2 Crew at +87).

Maximum Baggage

Nose Compartment - 600 lbs. at (+28). When auxiliary fuel tanks are installed combined weight of fuel and baggage must not exceed 600 lbs.

Control Surface Movements

Wing Flaps	Up	0°	Down	44°
Elevator Trim Tab	Up	18°	Down	12°
Elevator	Up	33°	Down	25°
Aileron Trim Tab	Up	21°	Down	20°
Aileron	Up	40°	Down	23°
Rudder Trim Tab	Right	30°	Left	21°
Rudder	Right	21°	Left	21°

Serial Nos. Eligible

43-34450	43-35490	43-35630	43-35863
43-35455	43-35492	43-35632	43-35869
43-35457	43-35493	43-35634	43-35873
43-35465	43-35495	43-35635	43-35877
43-35466	43-35496	43-35639	43-35885
43-35468	43-35535	43-35645	43-45718
43-35469	43-35536	43-35651	44-47213
43-35470	43-35540	43-35653	44-47215
43-35476	43-35541	43-35668	44-47216
43-35477	43-35548	43-35671	44-47409
43-35478	43-35549	43-35683	44-47428
43-35479	43-35550	43-35690	44-47433
43-35480	43-35551	43-35691	44-47626
43-35481	43-35552	43-35693	44-47630
43-35482	43-35553	43-35707	44-47633
43-35483	43-35556	43-35741	44-47634
43-35484	43-35557	43-35745	44-47694
43-35485	43-35559	43-35768	44-86939
43-35486	43-35625	43-35824	44-86940
43-35487	43-35627	43-35850	
43-35488	43-35629	43-35861	

MODEL 3T (Cont'd)Airworthiness  
Approval Basis

Conversion of aircraft operated by the Canadian Military Forces to Civil Standards in accordance with Bristol Engineering Report #2227, or an equivalent conversion acceptable to the Chief Aeronautical Engineer, Department of Transport.

## Approved Equipment

The equipment items listed in F.A.A. Specification A-765 as applicable to D-18S aircraft.

II. MODELS 3N, 3NM AND 3TM (Normal Category) Approved March 16, 1970.

## Engine

2 Pratt & Whitney R985-AN14B engines with one 4-1/2N and 9N Damper.

## Fuel

80/87 Octane Minimum Grade Aviation Gasoline.

## Engine Limits

Maximum Continuous  
(Sea Level) 34.5 in. Hg., 2200 rpm (400 H.P.)  
Straight line manifold pressure variation with altitude to 5,000 feet.

## Take-off (One Minute)

36.5 in. Hg., 2300 rpm (450 H.P.)

## Propeller

2 Hamilton Standard Hydromatic Full Feathering 22 D 30 Hub, 6533A-21S Blades.

Airspeed Limits  
(IAS)

Manoeuvring	153 mph	(133 kts.)
Cruising	205 mph	(178 kts.)
Never Exceed	257 mph	(223 kts.)
Flaps Extended	120 mph	(104 kts.)
Landing Gear Extended	125 mph	(109 kts.)

## C.G. Range

(+109.8) to (+117.7) Landing Gear Extended.  
Moment due to retraction of landing gear is +12,000 in./lb.

MODELS 3N, 3NM, AND 3TM (Cont'd)

Maximum Weight 8,750 lbs.

Minimum Crew One Pilot (+87).

No. of Seats Maximum of 10 (2 Crew at +87).

Maximum Baggage Nose Compartment - 600 lbs. at (+28). When auxiliary fuel tanks are installed combined weight of fuel and baggage must not exceed 600 lbs.

Control Surface  
Movements

Wing Flaps	Up	0°	Down	45°
Elevator Trim Tabs	Up	18°	Down	13°
Elevator	Up	35°	Down	25°
Aileron Trim Tabs	Up	22°	Down	19°
Aileron	Up	38.5°	Down	21°
Rudder Trim Tabs	Right	28° to 33°	Left	28° to 33°
Rudder	Right	25°	Left	25°

Serial Nos. Eligible	CA-1 thru CA-100	-	3N
	CA-101	-	3TM
	CA-102 thru CA-115	-	3NM
	CA-116 thru CA-135	-	3TM
	CA-136 thru CA-155	-	3NM
	CA-156 thru CA-175	-	3TM
	CA-176 thru CA-194	-	3NM
	CA-195 thru CA-200	-	3TM
	CA-201 thru CA-261	-	3NM
	CA-262 thru CA-280	-	3NM
	CA-281	-	3TM

Airworthiness  
Approval Basis

Conversion of aircraft operated by the Canadian Military Forces to Civil Standards in accordance with Bristol Engineering Report #2227, Beech Drawing 18-5011, or an equivalent conversion acceptable to the Chief Aeronautical Engineer, Department of Transport.

Approved Equipment

The equipment items listed in F.A.A. Specification A-765 as applicable to D-18S aircraft, and to 3N, 3NM and 3TM aircraft.

SPECIFICATIONS PERTINENT TO ALL MODELS

Datum	102 in. forward of center line of main wing spar (Placard denoting datum installed on bottom of fuselage).
Levelling Means	Levelling lugs on top of fuselage forward of cabin.
Fuel Capacity	235 Imp. Gal. (282 U.S. Gal.) Usable (4 tanks in wing, 2 - 63 Imp. Gal. (76 U.S. Gal.) tanks at +126; 2 - 21 Imp. Gal. (25 U.S. Gal.) tanks at +155; 1 nose tank, 67 Imp. Gal. (80.5 U.S. Gal.).)
Oil Capacity	11.7 Imp. Gal. (14 U.S. Gal.) Usable at (+93).
Anti-Icer Fluid	(2 U.S. Gal.) 2.5 Imp. Gal. (20 lbs. at +97).

## NOTE 1.

A current weight and balance report including list of equipment included in certificated empty weight must be in each aircraft at the time of original certification and thereafter.

The certificated empty weight and corresponding centre of gravity location must include the following unusable fuel and oil:

Fuel: (Two 63 Imp. Gal., and  
Two 21 Imp. Gal. Wing Tanks) 6 lb. (+122)

Fuel: (One 67 Imp. Gal. Nose Tank) 4 lb. (+ 32)

Oil: (Including 9.5 lb. feathering  
oil in each tank) with  
Hamilton Standard  
22D30-6533A-21S Propellers 52 lb. (+ 68)

## NOTE 2.

On airplanes with nose compartment baggage provisions on the innerside of nose door:

"Maximum Structural Capacity of  
Nose Compartment - 600 lbs."

## NOTE 3.

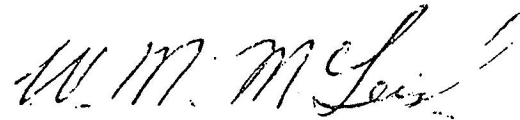
Models 3N, 3NM and 3TM aircraft were manufactured by Beech Aircraft Corporation as basic D18S Aircraft with equipment installations required for Military roles. The Model 3T aircraft was manufactured by Beech Aircraft Corporation as a basic C18S aircraft and later modified in accordance with R.C.A.F. Requirement RM 1-29 and Beech Aircraft Corporation Model Specification 139.

## NOTE 4.

Current D.O.T. and F.A.A. Airworthiness Directives applicable to Beech D18 Type Aircraft are mandatory for Beech 3N, 3NM, 3TM and 3T Aircraft.

## NOTE 5.

For modification purposes the design criteria is CAR 03 effective November 1, 1945; CAR 3 effective November 1, 1949, as amended by 3-14 (Paragraph 3.242).



(W.M. McLeish),  
Chief Aeronautical Engineer,  
Department of Transport.