

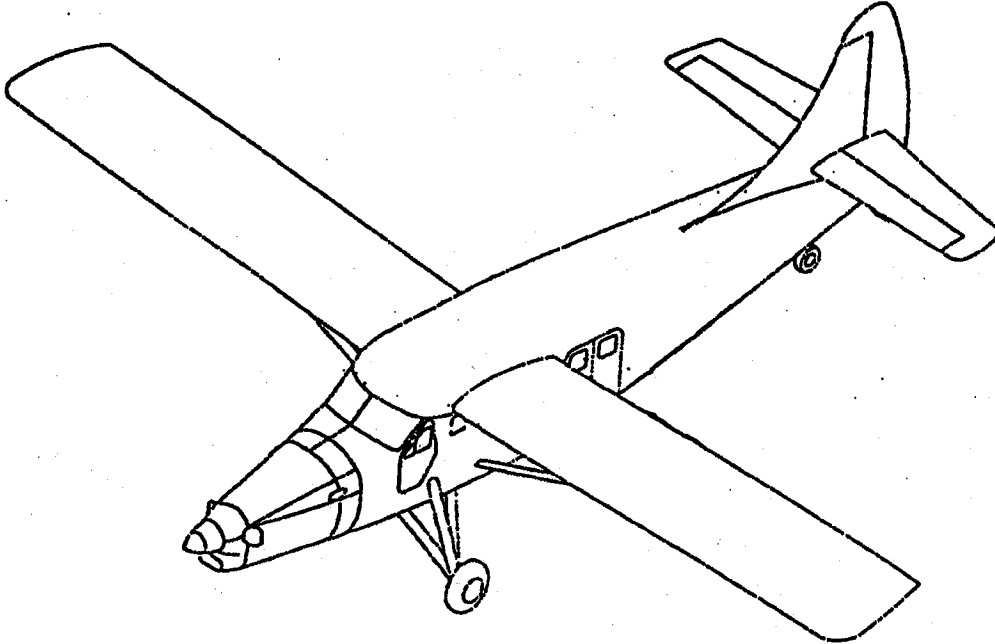
DCA22MA193

OPERATIONAL FACTORS

Group Chair's Factual Report - Attachment 6
DHC-3 Otter Flight Manual Supplement (FMS#10) [Excerpts]
September 8, 2022

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Viking Air Limited DHC-3 Otter
GE Aviation Czech s.r.o. Engines
Flight Manual Supplement (FMS #10)
Revision F dated April 16, 2018



AIRPLANE FLIGHT MANUAL SUPPLEMENT
FOR
VIKING AIR LIMITED (DE HAVILLAND) DHC-3 OTTER
WITH THE GE AVIATION CZECH S.R.O. (M601E-11 & H75-200) TURBOPROP ENGINES

REGISTRATION NUMBER _____

SERIAL NUMBER _____

This supplement must be attached to the TC approved Airplane Flight Manual when the GE Aviation Czech s.r.o. M601E-11 OR H75-200 turboprop engine has been installed in accordance with STC SA01-111. The information contained herein supplements or supersedes the information of the basic Airplane Flight Manual only in those areas listed herein. For limitations procedures, and performance information not contained in this supplement, consult the basic Airplane Flight Manual.

APPROVAL

| | |
|---|---------------|
| CANADA DEPARTMENT OF TRANSPORT AIRCRAFT CERTIFICATION BRANCH | |
| MAY 09 2018 | |
| APPROVED | |
| BY | W.G. MARIOTTI |
| CERTIFICATE NO. | SA01-111 |
| ISSUE NO. | -6- |

Original Issue Date: May 31, 2001

SECTION 1 - DESCRIPTION OF THE AIRCRAFT

GENERAL

This section is a description of the items that have been changed by this Supplemental Type Certificate. When operating a Turbine powered Otter modified by this STC and using the Flight Manual Supplement DHC-3-001 with the original de Havilland DHC-3 Flight Manual PSM 1-3-1, all references in the original DHC-3 Flight Manual to the Pratt and Whitney Wasp R1340 (S3H1-G) engine and associated controls and systems must be ignored.

This Supplemental Type Certificate is valid for the Landplane and Floatplane.

The information contained herein supplements or supercedes the basic Flight Manual only in those, which are listed herein. For limitations and procedures information not contained in this Flight Manual Supplement consult the basic de Havilland DHC-3 Otter Flight Manual PSM1-3-1.

DIMENSIONS

The length of the aircraft has changed from 41 feet 10 inches to 45 feet 6 inches. The power loading has changed from 13.3 pounds / HP to 10.67 pounds / HP.

GROSS WEIGHT

The maximum gross weight remains at 8000 pounds for the landplane.

Gross weight limit for the seaplane is appropriate to the installed items as per Canadian Type Certificate A-27 (USA TCDS A-815) for the de Havilland DHC-3 Otter aircraft, 7200 lbs with item 100; 7967 lbs with items 100,101,102 and 103; and 8000 lbs with items 104 and 105. (Compatible with STOL Kit DOT STC SA94-114 and FAA STC SA00287NY); and 8367 lbs with Gross Weight Increase DOT STC SA95-32 and FAA STC SA00438NY.

POWERPLANT

The powerplant is a GE Aviation Czech s.r.o. M601E-11 or H75-200 free turbine turboprop engine.

The engine features two independent parts: The gas generator and the propulsor.

The gas generator and free turbine shafts are arranged in a tandem layout. The air enters the engine in the rear part, flows forward through the compressor, combustion chamber and turbines and exits through exhaust nozzles near the front of the engine.

GAS GENERATOR

Air enters the compressor in a radial direction via a protective screen and annular plenum. The air is axially directed in front of the compressor. The compressor consists of two axial stages followed by one centrifugal stage. The combustion chamber is of an annular configuration. Part of the primary air enters the flame tube through the perforations in the walls; the remainder passes through the hollow nozzle guide vanes of the gas generator turbine. A special ring rotating with the gas generator shaft atomizes the fuel. The one stage gas generator turbine drives the compressor via the compressor shaft. The interturbine temperature is measured by nine (9) thermocouples installed in the flow path at the gas generator turbine outlet.

GENERAL:

Operations in compliance with the limitations presented in this section are required by the Department of Transport & Federal Aviation Regulations.

AIRSPEED LIMITATIONS:

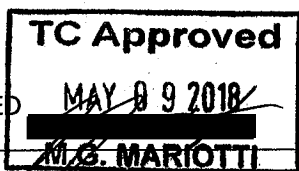
| SPEED (MPH) | CAS | IAS | REMARKS |
|-----------------------------------|------------|------------|---|
| Maneuver (Va) | 127 | 126 | No full or abrupt control movements above this speed. |
| Maximum Flap Extended (Vfe) | 95 | 94 | Do not exceed with fully extended flaps. |
| Maximum Structural Cruising (Vmo) | 145 135 | 144 134 | Land Plane & Ski Plane. Seaplane |

AIRSPEED INDICATOR MARKINGS (MPH):

Do not exceed in any operation

| MARKING | CAS VALUE OR RANGE | SIGNIFICANCE |
|-----------|--------------------|---|
| White Arc | 56 to 94 MPH | Full flap operation range. Lower limit is maximum weight stalling speed and upper limit is maximum permissible speed with flaps extended. |
| Green Arc | DELETED | DELETED |
| Yellow | DELETED | DELETED |
| Red Line | 144 | Maximum speed for all operations. |

TC APPROVED
 ISSUED:



REV: F
 PAGE 2-2

CENTER OF GRAVITY LIMITS:

SEAPLANE

- +131.9 to +148.3 Inches at 6,600 lbs or less
- +135.8 to +148.3 Inches at 7,600 lbs or less
- +138.1 to +148.3 Inches at 8,000 lbs or less
- +140.3 to +148.3 Inches at 8367 lbs or less

LANDPLANE

- +131.9 to +152.2 Inches at 6,600 lbs or less
 - +135.8 to +152.2 Inches at 7,600 lbs or less
 - +135.8 to +152.2 Inches at 8,000 lbs or less
 - +140.3 to +152.2 Inches at 8367 lbs or less
- Straight line variation between points.

MANEUVER LIMITS:

No acrobatic maneuvers, including spins, are approved.

FLIGHT LOAD FACTOR LIMITS:

| | Flaps Retracted | Flaps Extended |
|------------------|-----------------|----------------|
| Maximum Positive | +3.5 | +2.0 |
| Maximum Negative | -1.0 | 0.0 |

FLIGHT CREW LIMITS:

One (+98.0 in.)

KINDS OF OPERATION:

This airplane is certificated in the NORMAL CATEGORY and is eligible for the following kinds of operations when the appropriate instruments and equipment required by the airworthiness and/or operating regulations are installed, approved, and are in operable condition.

- a. DAY VFR
- b. Flight into known icing is prohibited.
- c. The following equipment must be installed;
 - (1) Stall warning system
 - (2) 24-volt electrical system
 - (3) Slip indicator
- d. The following equipment is optional:
 - (1) Nav/Com Radio (or Com only)
 - (2) Light package of strobe, instrument, dome, flap lights
 - (3) Attitude and directional gyros

