DCA22MA193

OPERATIONAL FACTORS

Group Chair's Factual Report – Attachment 5

De Havilland DHC-3 Otter Flight Manual [Excerpts]

October 26, 2022

PSM 1-3-1

DHC-3

OTTER

FLIGHT MANUAL

THE DE HAVILLAND AIRCRAFT OF CANADA LIMITED

Downsview Ontario

JULY 1953

CHAPTER I

DESCRIPTION OF AIRCRAFT

1.1 GENERAL

The DHC-3 "OTTER" airplane is an all-metal, high wing monoplane powered by a single Pratt and Whitney "Wasp" engine driving a Hamilton Standard constant-speed propeller. The aircraft has been designed to carry a pilot and from six to eleven passengers. It may also be used for liaison duties, ambulance and rescue operations, for forestry, border and coast patrols, for spraying, dusting, aerial surveying and for photographic operations or cargo transportation. The non retractable landing gear may be replaced by a twin floats installation, an amphibious floats installation, a ski installation or by a combination wheel-ski installation.

Through partitions the aircraft is divided into a cockpit, a cabin and a baggage compartment.

1.2 DIMENSIONS. General over-all dimensions of the airplane are:

Length	41 feet, 10 inches
Wing Span	58 feet, 0 inches
Height (to top of rudder-tailwheel on ground)	12 feet, 6.6 inches

1.3 GROSS WEIGHT. The maximum gross weight of the aircraft is 8000 pounds for the landplane and amphibian, 7967 lb for the seaplane.

1.4 ENGINE

The airplane is powered by a Pratt and Whitney "Wasp" R-1340, model S1H1-G or S3H1-G geared nine cylinder, air-cooled, radial, supercharged engine rated at 600 BHP. The two engine models are similar in every respect with the exception of the super-charger ratio which is 12:1 for the S1H1 engine, 10:1 for the S3H1 engine, resulting in rated altitudes of 6,200 feet and 3,000 feet respectively.

The supercharger is of the direct-connected, engine driven centrifugal type and is not under the control of the pilot.

1.4.1 EXHAUST AUGMENTOR TUBES. The two exhaust augmentor tubes on both sides of the fuselage, just below the cockpit doors, (marked "NO STEP") are a special design feature of the aircraft.

In these four exhaust augmentor tubes, the exhaust gases produce suction strong enough to pull cooling air around the engine and from behind the engine accessories compartment while at the same time providing a measurable amount of thrust in cruising flight. The engine is thus effectively cooled during steep climbs when the forward air speed is low and engine out put near its maximum.

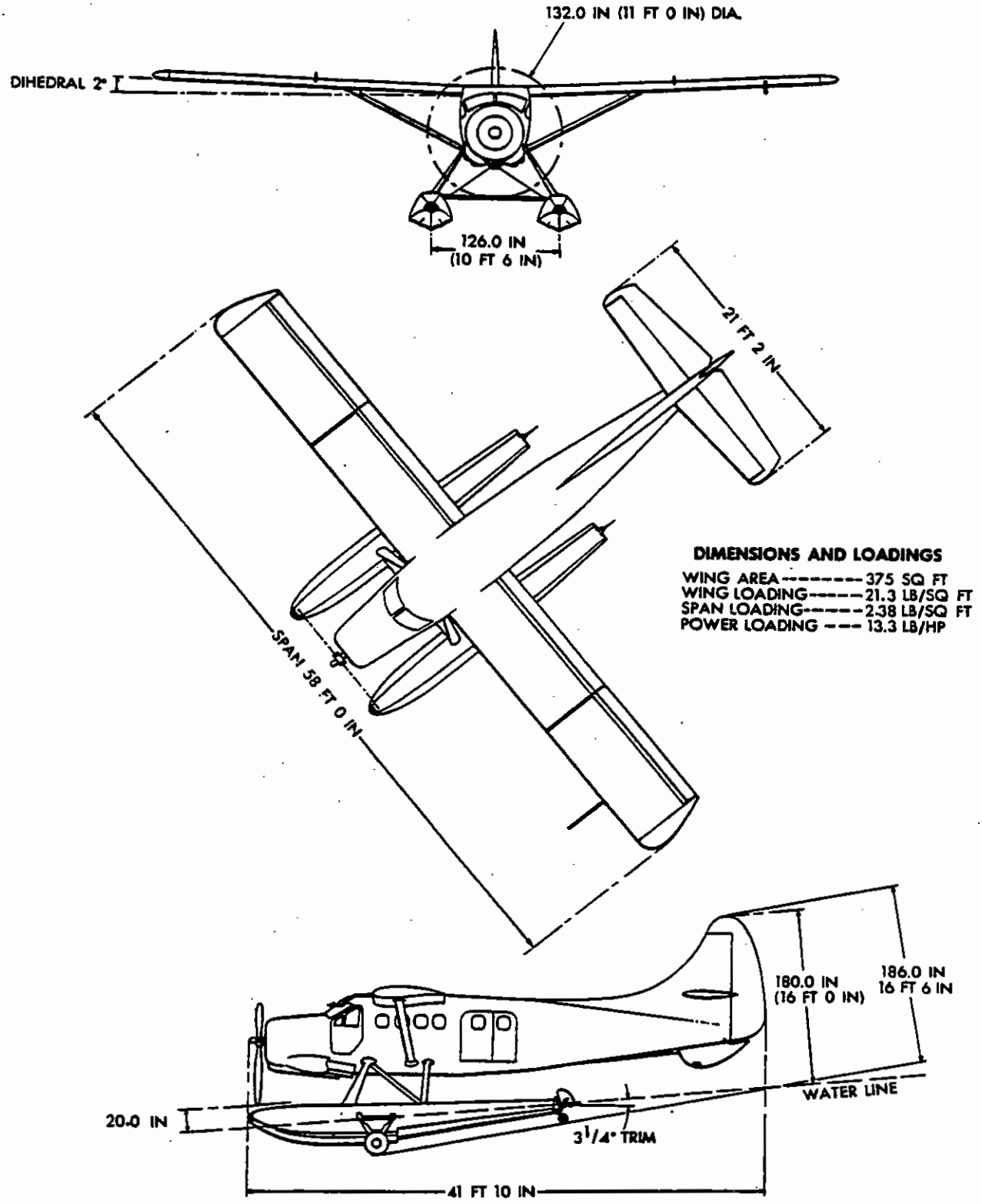

FIG. 1-1 THREE VIEW DIMENSIONAL DIAGRAM: SEAPLANE