THE DE HAVILLAND

Caribou

Leading Particulars –

GENERAL		
Wing span	96 ft	29.26 m
Wing Area	912 sq ft	84.72 sq.m
Wing Aspect Ratio	9.9	
Length Overall	72.6 ft	22.1 m
Height, Over fin	31.8 ft	9.7 m
Propeller Diameter	13.1 ft	4.0 m
Track of Main Wheels	23.1 ft	7.04 m
CABIN DIMENSIONS		
Length (forward edge of ramp)	28.7 ft	8.7 m
Width (max.)	87 in	221.0 cm
Width at floor	73.5 in	186.7 cm
Height (on centreline)	75 in	190 cm
Volume	1150 cu ft	32.5 cu. m
DOOR DIMENSIONS		
Rear Loading Door – Width	73.5 in	186.7 cm
Height (effective)	75.0 in	190.5 cm
Side Doors – Width effective	30 in	76 cm
(both sides) Height	55 in	140 cm
Crew Hatch – Width	25 in	63.5 cm
Length	29 in	73.6 cm
GROSS WEIGHT (Take-off & Landing)	26,000 lb	11793 kg
EMPTY WEIGHT	16,850 lb	7,643 kg

ENGINES

Pratt & Whitney R.2000-7M2
Take-off Rating Sea level (I.S.A.) 2700 RPM 1450 bhp
Normal Rating Sea level (I.S.A.) 2550 RPM 1200 bhp
Fuel Grade 100/130 Octane

PROPELLERS

Hamilton Standard	3 Bladed	43D50-7059A-0

PROPELLER CLEARANCES

Ground (static at A.U.W.)	21.9 in	55.6 cms
Fuselage	14.6 in	37 cms

TANK CAPACITIES

Oil (per engine)	17.5 Imp Gal	21.0 U.S. Gal	80 litres
Fuel	700 Imp Gal	840 U.S. Gal	3175 litres
Hydraulic	1.5 Imp Gal	1.8 U.S. Gal	6.8 litres
De-Icing (Props)	18 Imp Gal	21.6 U.S. Gal	81.6 litres

LOADINGS

Wing Loading	28.5 lb/sq ft	139.0 kg/sq m
Power Loading	8.97 lb/bhp	4.11 kg/hp
Tire Loading	38 psi	2.67 kg/sq/cm
Floor Loading	200 lb/sq ft	976.4 kg/sq m

FACTORS

Positive, limit	2.78	
Negative, limit	-1.5	
Design Diving Speed, E.A.S.	280 mph	450 kmh

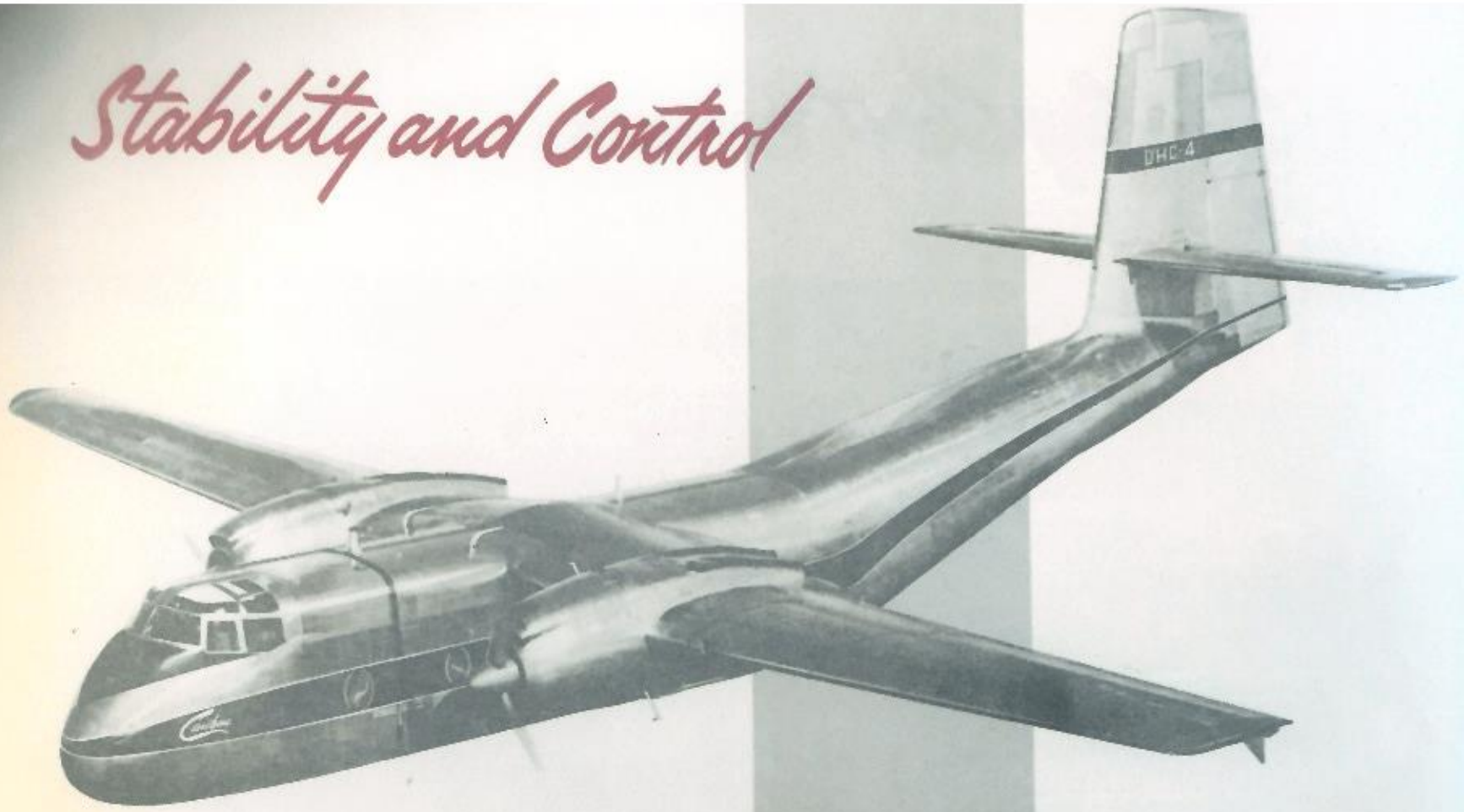
AIRWORTHINESS STANDARD CAR-4b-Transport Category

CENTRE OF GRAVITY

Forward limit	30% M.A.C.
Aft limit	42% M.A.C.

DH CANADA

Stability and Control



DHC-4

The Caribou is designed for superior controllability and maneuverability at all flying speeds – particularly with regard to low-level low-speed operations. The Caribou is capable of flying at speeds ranging from 62 mph to 215 mph.

Power Plant—

Chosen to complement the de Havilland Caribou airframe, the Pratt & Whitney R-2000 is an engine of proven reliability.

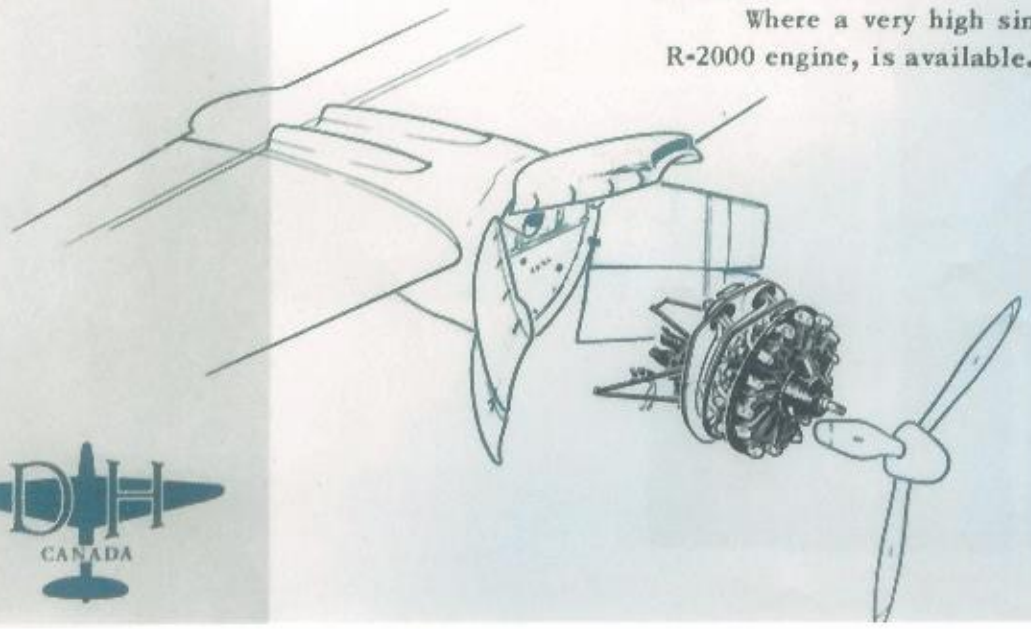
Operating over the World's air routes in many countries, the unmatched servicing and spares facilities which have been established for the R-2000 engines are now available to Caribou operators.

First flown in 1939, in the Douglas DC4, the R-2000 went into mass production during and after the war years to power this popular and highly utilized aircraft. To date the engine has amassed an incalculable number of operating hours and is adding to this already impressive total at the rate of 10,000 operating hours per day – this in all areas and climates of the world.

The R-2000 bears the reputation of being one of the World's most highly developed engines. The fact that only one engine per 20,000 operating hours needs to be removed prematurely for servicing, highlights this claim. Engine life between overhaul has now reached a high of 1800 hours.

The de Havilland design team, with the cost-conscious operator in mind, have mated this highly successful engine to the DHC 4 Caribou airframe. Its ruggedness and reliability under all operating conditions are in keeping with the STOL, rough field, high utilization concept of the Caribou.

Where a very high single engine ceiling is desired a two speed blower version of the R-2000 engine, is available.



CANADA

Special Features

a loading crew's airplane

✓ FLOOR STABILITY

As a design feature the Caribou main and nose shock struts are two stage struts. This gives a very small deflection from the normal ground attitude and a near level cabin floor during all stages of loading and unloading. Uncomfortable nose dipping during taxiing and braking are reduced by this feature.

The short stroke features for ground handling do not interfere with the long stroke characteristics required for the high energy absorption of short rough field landings.

✓ RAPID, PASSENGER--CARGO CONFIGURATION CHANGE

Transition from the 30 folding seat passenger version, to the cargo carrying version and back again can be accomplished in a matter of minutes by one man.

✓ OVERHEAD MONORAIL

Structural provision has been made for installation of an overhead cabin monorail, capable of taking a load of 2,000 lbs. to facilitate manhandling heavy loads along the cabin length.

Structural provision has also been made in the forward cabin for a winch to be used in conjunction with the monorail.

✓ SEPARATE CREW ENTRANCE

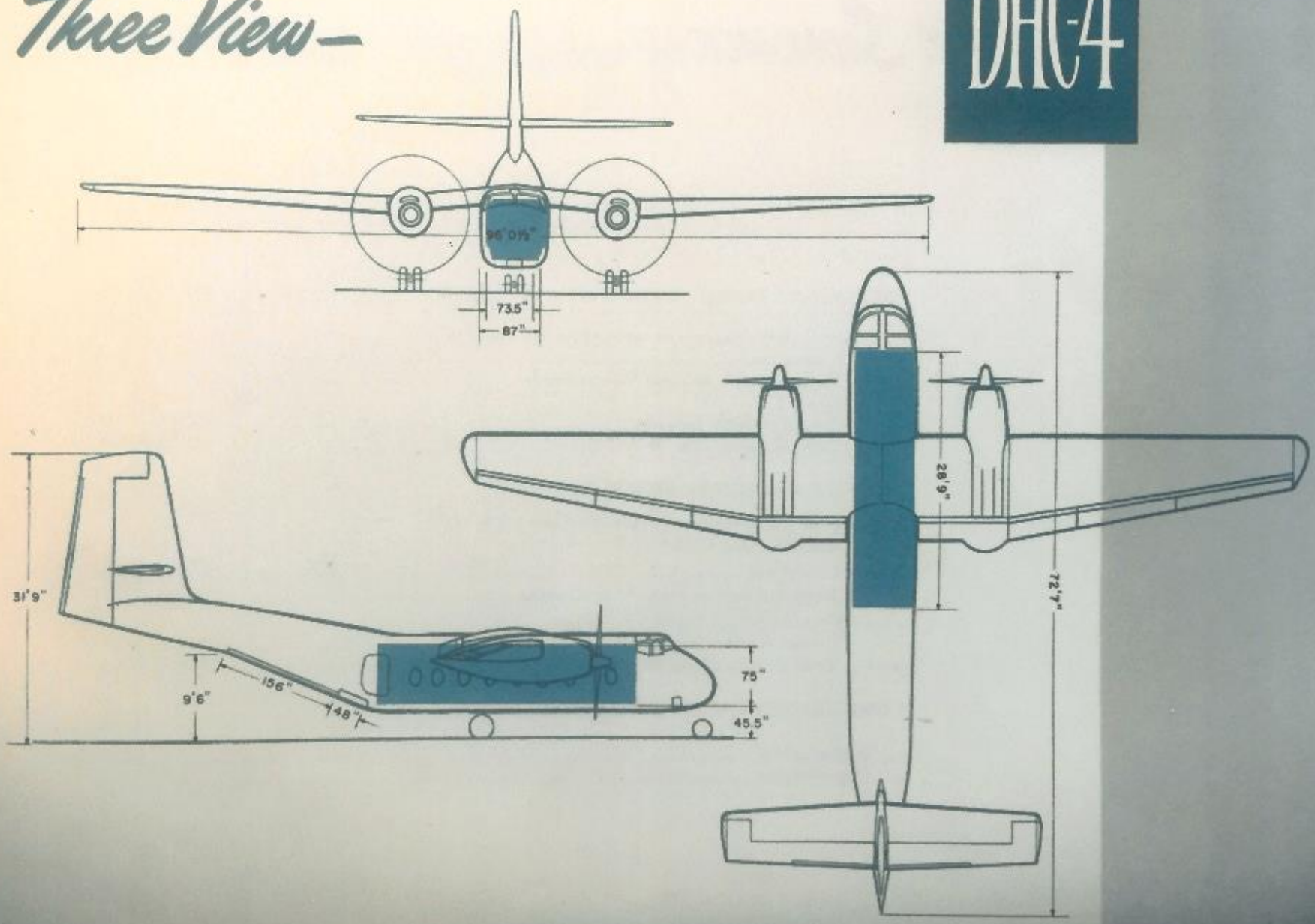
Permits loading cabin to capacity with cargo.

✓ REAR LOADING DOORS

Full floor width. 73.5" wide x 75" high.

DHC-4

Three View—



Weight Summary –

The aircraft standard empty weight is 16,850 lb (7643 kg). This is common to all DHC-4 aircraft and includes essential structure, services, trapped fuel and oil; it also includes all equipment, except radio, mandatory for Type Approval.

To assist in calculating payload the basic weights of the typical freighter and utility passenger type aircraft are shown below. The basic weight is the standard empty weight of the aircraft plus the weight of selected optional equipment.

Standard Specification Aircraft (as per pricelist).		
Empty weight	16,850 lb.	7643 kg.
Cockpit heating	85 lb.	39 kg.
Utility type folding seats (30)	270 lb.	122 kg.
Overhead baggage racks	75 lb.	34 kg.
Cabin furnishings including cold air vents, heavy duty battery and flight stripe	65 lb.	29 kg.
Basic standard weight (less radio)	17,345 lb.	7868 kg.
Typical Utility Aircraft (V.F.R. Flight)		
Basic weight	17,345 lb.	7868 kg.
Radio equipment	150 lb.	68 kg.
Cabin air conditioning	150 lb.	68 kg.
	17,645 lb.	7904 kg.
Typical Utility Aircraft (I.F.R. Flight)		
Basic V.F.R. aircraft	17,645 lb.	7904 kg.
De-icing (wings, tail and propeller)	265 lb.	120 kg.
Additional Radio	50 lb.	23 kg.
Toilet with wash-basin and fluid.	100 lb.	45 kg.
	18,060 lb.	8192 kg.
Typical Operational Weight (I.F.R. Flight)		
Basic I.F.R. aircraft	18,060 lb.	8192 kg.
Crew (2)	340 lb.	154 kg.
Full oil	270 lb.	122 kg.
De-icing fluid – full	130 lb.	59 kg.
	18,800 lb.	8528 kg.

CANADA

THE Caribou IN A NUTSHELL

DIMENSIONS

Span	96' 0"
Overall Length	72' 7"
Overall Height	31' 10"
Wing Loading	28.5 PSF
Power Loading	8.97 LB/BHP

CABIN DIMENSIONS

Length	28' 9"
Width (max.)	87 in.
Width (at floor)	73.5 in.
Height (on centre line)	75 in.
Cabin Capacity	1150 cu.ft.
Max. floor loading	200 LBS/sq.ft.

Loading Door

Width	73.5 in.
Height	75 in.

Side Door

Width	30 in.
Height	55 in.

ELECTRICAL SYSTEM

24 volt D.C.
(2) 300 amp. generators

ENGINE

Pratt and Whitney R2000-7M2 1450 BHP (For Take-Off)
Impeller ratio: 5.17.1
Propeller drive ratio: 2:1

PROPELLER

Hamilton Standard Constant Speed Full Feathering, 3 Blade 43D50-7059A-0

FUEL SYSTEM

10 cells in each wing. Total capacity approximately 700 Imp./840 U.S. gal 3175 Litres

FUEL SPECIFICATION

AMS 3032 or equivalent of grade 100/130

OIL SYSTEM

One oil tank per engine located in each nacelle. Capacity 35 Imp. gals. total.

OIL SPECIFICATION

MIL-L-6082A-Grade 1100

MAIN WHEEL TIRES AND BRAKES

Goodyear
Size: 11.00 x 12 Pressure: 39 p.s.i.

NOSE WHEEL TIRES

Size: 7.50 x 10 Pressure: 39 p.s.i.

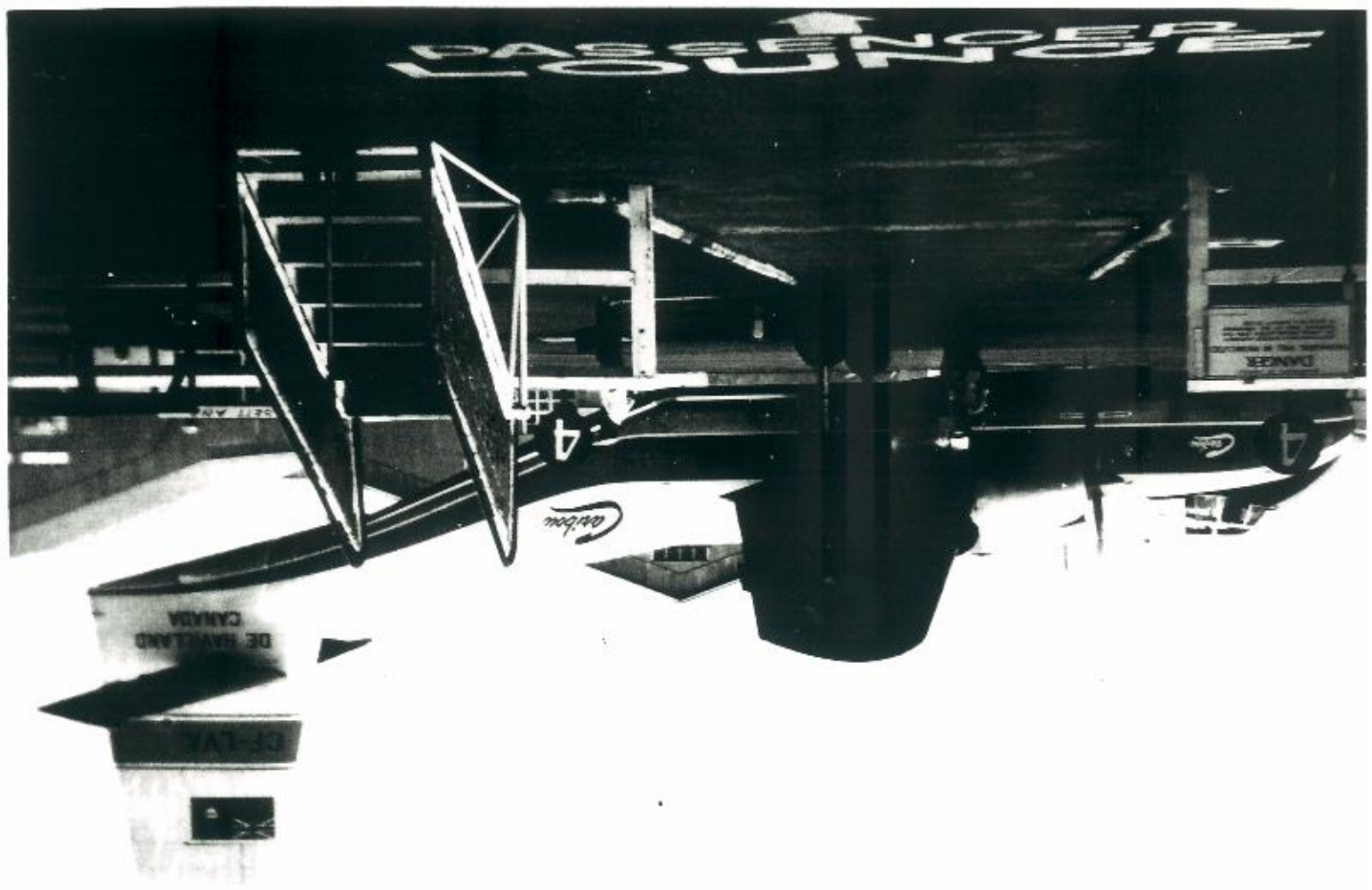
Center of Gravity

Forward limit 30% M.A.C.
Aft limit 42% M.A.C.

Loading –

Quick loading and turn around time are primary considerations. Rear loading doors – 73" x 75" retract into roof structure – permit truck to back into opening. Ramp adjusts to truck bed height. Portable ramps carried in aircraft permit wheeled vehicles, such as jeeps, to drive in under own power. Rapid access for up to 32 army troops is by either side doors, 30" x 55" or rear loading door.

First Caribou to land in Australia 1959/60


PASSENGER
DE HAVILLAND
CANADA
CF-LVA


CF-LVA
DE HAVILLAND
CANADA
Caribou

AIR FORCE
The official newspaper of the Royal Australian Air Force

History

In for the long haul

40th ANNIVERSARY OF THE FIRST AIR FORCE DEP VIETNAM.

RAAF Transport Flight Vietnam – later No. 35 Squadron – was the first Vietnam in August 1964 and the last out in February 1972. During alm service, the Squadron developed special tactics to beat enemy fire, its recognised with awards and, most remarkably, no members were kille recalled here in the lead up to the 40th anniversary of the deployment

Story links: | Ingenuity under fire | Award

Caribou (MPEG video 4.60 MB)

Air Force A4 I Vung Ta Photo fr

VIETNAM in 1964 was an unknown land to the average, insular Australian for whom beef and black bean was the sum of his Asian experience. This was about to change.

On July 19, 34 No. 38 Squadron members boarded in Sydney a Qantas flight to Butterworth. There, they were united with three Caribous on their delivery flight to Australia from Canada and in early August, as the RAAF Transport Flight Vietnam (RTFV), headed east.

Their boss was Squadron Leader Chris Sugden. About 20 years older than his subordinates, SQNLDR Sugden was a seasoned air combat veteran of World War II and Korea. He had been awarded a DFC for his determination, leadership and cou North Korean convoys.

He would be awarded a Bar for his outstanding leadership in Vietnam. later received another DFC and three Mentions in Dispatches.

The flight was based at Vung Tau. It arrived on August 8, 1964, in the pouring rain that characterised the monsoonal weather.

Operations began on August 16 when the aircraft transported troops a various airfields (often little more than short and rough runways hastil from lengths of steel planking left over from World War II).

RTFV – which later became No. 35 Squadron – over the next seven-an increased to six and then seven aircraft with about 100 personnel. It w can-do attitude, hard work and innovation. It also quickly became kno Airlines, maintaining such a high rate of effort that many US observers was operating 25 aircraft.

Bauni

It carried anything, including livestock, evacuees, battlefield medivacs The Squadron conducted a minimum of four flights each day, often as hours a day. Pilots were logging 80 to 90 hours a month, twice the Aus standards. Each day five of the six aircraft would be airborne. The grou round the clock, if necessary, to restore and pre-flight it for service ne

The authorised rate of effort for the aircraft was 50 hours per aircraft p RTFV was achieving 450 to 500 hours. It is a tribute to the outstandin crew that this was maintained throughout the entire deployment. Two tasked specifically to support Special Forces encampments at Nha Trar The camps frequently relied solely on air supply and after October 196 became increasingly dangerous because of enemy ground fire.

As well as the threat from the enemy and weather, many flights were hazardous terrain, particularly in the swampy Mekong Delta and the ru mountainous terrain near the "Zee". In these conditions the short take characteristics of the Caribous were ideal. However, the Australians ca techniques to make the deliveries safer. They developed a technique o approaches and departures, which meant they spiralled virtually over t and away from possible enemy fire until the last possible moment.

Demand for tactical support became so critical to the forward areas ne Minh trails that Wallaby Airlines came up with a novel drop system – th Parachute Deployment System using the Caribou's very low and slow f They would fly a few feet over the drop zone and then deploy the carg drogue parachute.

By the end of 1964, the Caribous had another, far more dangerous mi and NVA Main Army regulars launched night attacks on towns and villa country. Acting as Pathfinders, the Wallabies would fly over the area, d illuminate the attackers for American Skyraider Ground Attack aircraft effective but increasingly dangerous as the enemy brought in anti-airc engage the vulnerable Caribous. By January 1965, this mission ceased Sugden indicated Vietnamese DC-3 Dakotas could do the mission effec safely.

In March 1971, the Australian Government decided as part of the draw personnel that 35SQN would be reduced to four aircraft. The other thr that July. The final four returned on February 26, 1972, the last Air Fo home.

Ingenuity under fire

THE Wallabies could never have achieved their outstanding results without the ingenuity, hard work and dedication under often dangerous and invariably difficult conditions by the maintainers and other ground crew.

The RTFV was based at Vung Tau because this was the base of the US Air Force's Caribou fleet. The US agreed to support the Australian flight with accommodation, logistics and weapons until the Australian Caribou support train was established.

The first accommodation comprised an open hangar and a series of wooden open-sided huts for personnel by an

open sewer. Undaunted, the "groundies" set up offices and an operations area beside the hangar while everyone skirmished the town, eventually turning up two villa-style "motels".

The "groundies" also initiated the tradition of scrounging from US-damaged aircraft and scrapped parts dumps and, among other items, eventually put together a replacement engine.

In Air Force hands, the Caribou proved a formidable transport aircraft, however two of the first three never made it. One crashed during a mission and the other was destroyed on the ground by enemy mortar fire.

TOP

Squadron L
presented witl
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Photo fr

Awards for actions

THE first awards for operational service in Vietnam were three Mentions in Dispatches in August 1965 for courage under fire or the threat of fire in support of operational forces.

The awards went to:

Landing at an
Photo fr

- Flight Lieutenant Ronald Raymond, a pilot who participated in night flare dropping missions;
- Leading Aircraftman Daniel Gwin, a loadmaster, for accurate return fire on a mission; and
- Corporal Robert Wark, a member of the repair party that retrieved a d November 1964 when under nightly ground fire and attack by Viet Cor

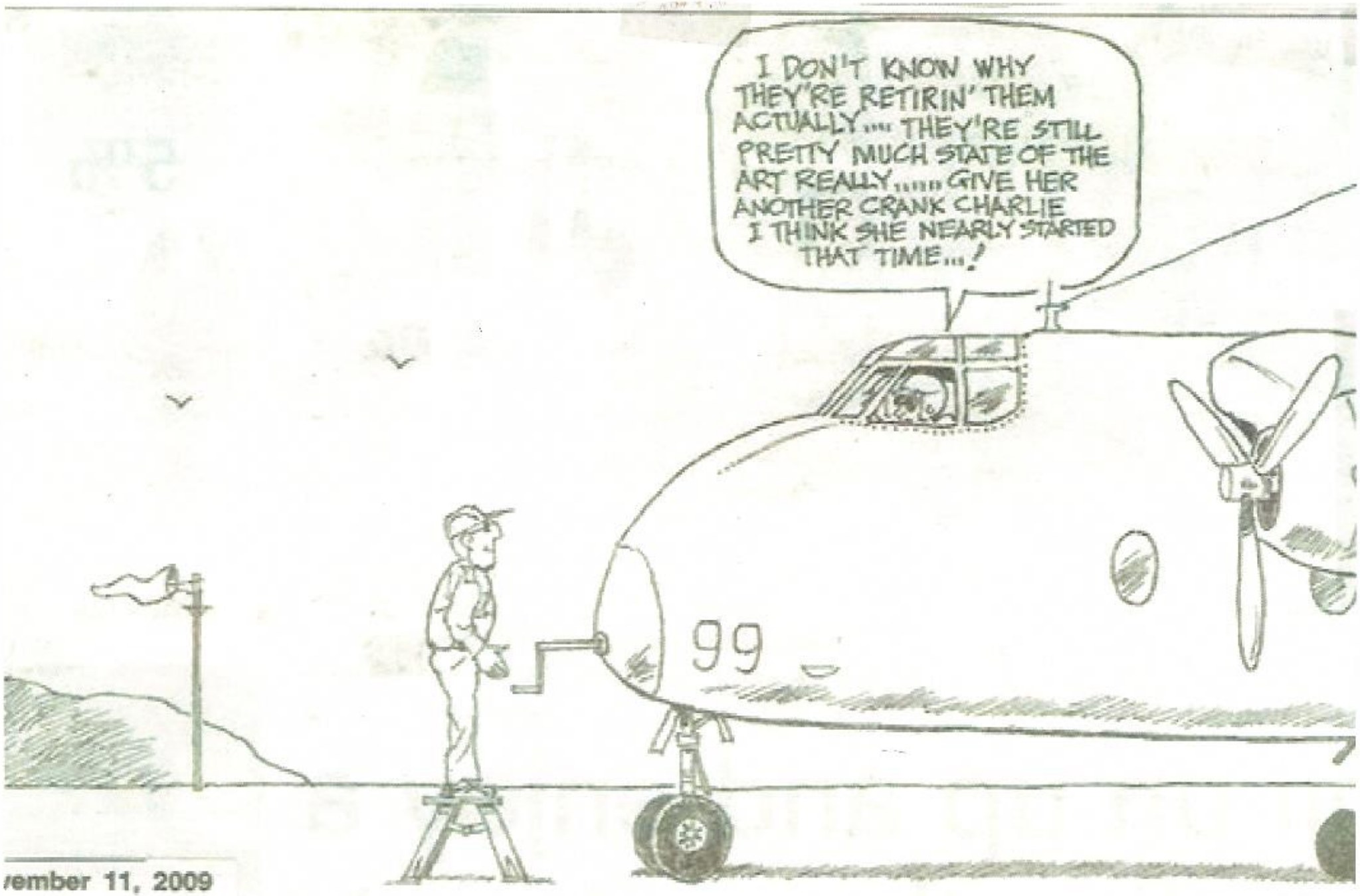
Squadron Leader Christopher Sugden was awarded a Bar to go with hi December 1965. And in 1972, Squadron Leader Stanley Clark, CO of 3 November 1970 to November 1971, received a DFC.

Another possible record for RTFV/35SQN – during the deployment, not killed.

TOP

Information in these articles was largely provided by Kevin Henderson research and stories written by Andrew Stackpool.

Length 60cm
Wing Span 82cm
Height 30cm


I DON'T KNOW WHY THEY'RE RETIRIN' THEM ACTUALLY.... THEY'RE STILL PRETTY MUCH STATE OF THE ART REALLY..... GIVE HER ANOTHER CRANK CHARLIE I THINK SHE NEARLY STARTED THAT TIME...!
99

With 2009 upon us I have now learnt the true meaning of old age. Last week, as I lay basking on my verandah, my wife, who had been engaged in some domestic maintenance, came to me and said: "Darling, what I need is a really long screw." Without a thought I went out to my shed to look for one.

John Harper-Nelson,
Bassendean.