

# PREMIER AIRCRAFT DESIGN

## De Havilland DHC3 Turbo Otter

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Turbo Otter with Garrett TPE331-10 engine and 4 blade propeller

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Panel diagrams are included with the download.

Check lists and performance reference lists are html documents accessed from the kneepad

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### COMPATIBILITY

\* The FSX version is compatible with Acceleration/SP2

\* None of our models are compatible with DX10 graphics

\* The FS2004 version is not backward compatible to FS2002 or earlier

Install ZIP files per the Instructions on page 3

### The De Havilland Otter

Type STOL utility transport

Manufacturer de Havilland Canada, Toronto

Designed by Richard D. Hiscocks and Frederick H. Buller

Maiden flight 12 December 1951

Introduced 1953

Status Still active worldwide

Primary user regional and remote air carriers

Produced 1951-1967

Number built 466

## Design and development

When de Havilland Canada began design work on the King Beaver (the Otter's original name) in January 1951, it was trying to extend the company's line of rugged STOL utility transports that had begun with the earlier and highly successful Beaver. The single engined, high wing, propeller driven DHC-3 Otter was designed to be capable of performing the same roles as the Beaver, but was considerably larger, the veritable "one-ton truck", in company parlance the Beaver was the "half-ton truck".

Using the same overall configuration of the earlier and highly successful DHC2 Beaver, the new design incorporated a longer fuselage, greater span wings and was much heavier. Seating in the main cabin is for 10 or 11, whereas the Beaver could seat six. Power is supplied by a 450kW (600 hp) Pratt & Whitney R1340 Wasp radial. Like the Beaver, the Otter can be fitted with skis and floats. The amphibious floatplane Otter features a unique four unit retractable undercarriage, with the wheels retracting into the floats. The Otter later served as the basis for the very successful DHC6 Twin Otter which features two wing mounted Pratt and Whitney PT-6 turboprops.

The Otter received Canadian certification in November 1952 and entered production shortly after.

### Operational use

Although the Otter found ready acceptance in bush airlines, as in a similar scenario to the DHC-2 Beaver, the US Army soon became the largest operator of the aircraft (184 delivered with the designation U-1A Otter). Other military users included Australia, Canada and India but the primary role of the aircraft as a rugged bush plane continues to this day.

### Turbo Otter

Some aircraft were converted to turbine power using a Pratt & Whitney Canada PT6A turboprop. The Walter 601 Turboprop engine, manufactured in the Czech Republic, or the Garrett/Honeywell TPE331-10 engine by Texas Turbine Conversions. Turbine conversions give increased speed and rate of climb and a considerable increase in useful load.



**Turbo Otter fitted with P&W PT6A engine**

## INSTALLATION

**Installation is basically the same for FS9 and FSX  
All files are extracted from the zip to the main FS folder**

Extract ALL ( repeat **ALL**) files from the zip into the FS9/FSX MAIN Folder using WINZIP...

Make sure the " Use Folder Names " BOX is checked IN WINZIP.  
New folders will be created and all files installed.

**Vista users may have to disable the 'User Account Control' in the Vista security centre**

1. Navigate to the ZIP file, use the "My Computer Icon" on the desk top.
2. Double click on the ZIP file.
3. WINZIP should open and show all the files inside the zip.
4. Press **CTRL A** and this will select all the files.
5. Click on 'Extract' in the main tool bar above.  
( Make sure the "Use folder names" box is checked)
6. Type in your path in the dialog box, the default location is C:\program files\microsoft games\flight simulator 9 or C:\program files\microsoft games\microsoft flight simulator X  
Or, if you have moved FS9/FSX from the default location, browse to your own location...
7. Now Click on the 'Extract' button in the upper right  
(If it asks to overwrite say YES to all).....you're done, it's ready to fly.

**If you follow this procedure all necessary sub folders will be automatically created and all files will be placed correctly.**

## NOTES

- Open the kneepad in flight (or better still before flight) for reference lists.
- Use Shift E to open the passenger doors
- Use Shift E +2 to open the pilot doors & cargo / Alaska doors, depending on the model
- To hear the exit door sounds, it has to be quiet in the cockpit
- Do it before starting engine or after engine shutdown.
- The spinning propeller displays best when the prop pitch is reduced a little (CTRL F2 - 4 times)
- To raise your seat higher press SHIFT-ENTER
- To move VC view point back into the virtual cabin press and hold Ctrl-Enter
- To restore VC viewpoint press space bar
- A few clicks of nose up elevator trim is recommended for take-off
- **Important...** If using AUTOSTART (CTRL E) .... check after start to make sure the generators are switched ON

## Flying tips for the DHC3 Turbo Otter model

**This is not a Piper Cub, you cannot just jump in the cockpit and fly the Otter well, it takes practise**

- \* On land plane versions , if the parking brake is not on when the model initializes (FSX) set the brake immediately. ( Ctrl + . )
  - \* On seaplane and amphibian versions when starting on water pull the prop pitch lever fully down to the feather position as soon as the model initializes. This has to be done in the 2D cockpit with your mouse. Keyboard and joystick commands do not fully feather the prop.
  - \* Feathering the prop will prevent “creep” on the ground and in the water.
  - \* Before take-off move the prop pitch lever to full up.
  - \* In the FSX land plane model there is a **taxi speed control** available from the 2D cockpit, setting the parking brake cancels the taxi speed. (The push back function is disabled)
  - \* After landing on water use reverse thrust (F2) to stop, then feather the prop.
  - \* Taxiing on water is not easy in FS9 or FSX, this is inherent in all FS seaplanes. water rudders are activated by Shift-W in FS9 and Ctrl-W in FSX
  - \* For short take-off use one or two notches of flap. Set prop pitch lever fully up and throttle full. Hold the plane on the brakes until the engine has fully spooled up, then release the brakes. You may find that a few clicks of nose up trim before take-off helps, especially on water take-offs
  - \* Raise the flaps when about 500 ft agl ( above ground level) and adjust the elevator trim for climb. At cruising altitude reduce power and trim for level flight, allow time for the plane to settle after each trim change. The trim will change during flight as fuel is used up also with any changes in power settings or flap settings. Trim will also be upset by changes in wind strength and direction.
  - \* For most landings one notch of flap is enough.
  - \* Remember this is a big, heavy, airplane. It accelerates and climbs slowly but gains speed rapidly when descending.
  - \* **The turbo prop engine does not respond like a piston engine**, it takes 6-7 seconds to respond fully to opening the throttle and takes the same amount of time to power down on closing the throttle. Plan your approaches from at least one mile out from the runway and adjust the power and flaps in good time. With one notch of flap you should aim to cross The runway threshold at about 55 kts IAS
  - \* **SHORT LANDINGS** When landing on a very short runway try not to come in too steeply or you may gain too much speed to land. This may be tricky if there are trees around the landing strip, flight sim airstrips are notorious for having tall trees on the approach path. You can use reverse thrust as soon as the wheels/floats touch down, press and hold ( for a few seconds) key F2 and apply brakes.
- It takes practise but you can achieve very short landings.

