

DC-3 Airways – DC-4 Charter Flight: 324-12

For FS9 (FS2004) and FS2000

Congratulations. You've been selected to fly our first charter group in the DC-4. DC-3 Airways was chartered to fly a group to Dawson AAF base for a weekend retreat in the scenic mountains of West Virginia, USA. There is no instrument approach to this airfield. You can locate it tracking outbound on the 135 deg radial of Morgantown VOR (MGW, 111.6). **Don't land at the wrong runway.** You will cross Moore Field (Rwy 18 / 36), which is on a bluff, first. Dawson AAF is set in a valley. Dawson AAF will be a challenging landing, but the 3,500 foot runway is enough for an Ace like you ☺

Abbreviations:

AGL	Above Ground Level	Length	Length of runway
Approx	Approximately	METO	Max (power) Except Take Off
BOD	Beginning Of Descent	MSL	Mean Sea Level
DIR	Direct	NDB	Non Directional Beacon
DR	Dead Reckoning	OB	Out Bound
Elev	Runway Elevation	Rwy	Runway
HDG	Heading	VOR	VHF Omni Range

NOTAMS

There is an FSNavigator (Ver 3) flight plan for the trip to Dawson AAF and the return flight to Boston.
See DC4-Charter-324-12-01.fsn and DC4-Charter-324-12-02.fsn

GENERAL

You must have completed the DC-4 transition flights to qualify you in the DC-4 before attempting this charter.

DC-3 Airways – DC-4 Charter Flight: 324-12-02

GENERAL

Unfortunately, after touchdown at Dawson AAF, number 4 engine blew a jug (cracked a cylinder head). On the plus side, the company was able to fly the charter group out in a couple of DC-3s leaving you on the ground with your “broke” airplane. Your job is to get the old girl airborne, fly it back to your Boston, USA home base so the engine can be repaired.

FLIGHT PLANNING

Use the included takeoff distance chart (DC4-takeoff.PDF) and determine your max gross weight for takeoff on this 3,500 foot runway with an elevation of 1,266 feet. Compute your max gross weight (DON'T PEEK AT THE LAST PAGE IN THIS DOCUMENT).

No passengers or cargo will be allowed for the flight. Determine fuel load to stay below computed max gross weight and distribute that fuel evenly among all four (4) tanks.

Use **ALL** the runway. Don't accept the flight sim's placement at the “end of the runway.” They waste at least 100 feet.

This is a simple flight. The procedures and aircraft control are the real challenge. Have fun

John Achor, DC3-324

DC-4

3-ENGINE TAKEOFF CHECKLIST

1. Inoperative Engine

Propeller	– Feathered or Removed
Fuel tank selector valve	– OFF (Down)
Fuel Cross feed valves	– OFF (Center)
Ignition Switch	– OFF
Cowl Flap	– CLOSED
Fuel Boost Pump	– OFF
Generator Switch	– OFF

2. Rudder Trim Tab Setting

Inboard Engine Inop – Zero, Adjust as needed
Outboard Engine Inop – Set 3 1/2 to 5 degrees away from
failed engine (Ex: #4 failed, add left rudder trim)

3. Takeoff Procedure

Brakes	– HOLD
Symmetrical Engines	– APPLY FULL POWER *
Third Engine	– Set Approx 30" MAP **
Brakes	– RELEASE
Hold nose wheel on the ground and use nose steering / rudders for directional control	
Third Engine	– Slowly advance power so as to reach full power on the engine at 60 kts.***
Landing Gear	– UP (with positive climb indication)
Flaps	– NORMAL 4-ENGINE RETRACTION

Takeoff Procedures (Flight Simulator)

Example: Number 4 Engine failed

* Hit (keyboard) E, then 2, 3. (throttle control to symmetrical
engines, 2 & 3)

Advance Throttle to 50" MAP (engines 3 & 4)

** Use Mouse to advance throttle #1 to 30" MAP

Start Takeoff roll

*** Use Mouse to advance throttle #1 to 50" MAP

Maintain directional control!

Hit E, then 1, 2, 3 (gives throttle control to the three
operating engines)

Maintain directional control!

NOTE: If you have difficulty getting the "E" commands above
to control engines, reload the aircraft (same plane to same
place): **ALT** + **A**(ircraft), (select) **A**(ircraft), **ENTER**, **ENTER**
(the ENTER commands are the same as clicking OK twice).

FUEL MANAGEMENT

As previously mentioned, determine your fuel load so you do not exceed the maximum takeoff gross weight. Distribute the total fuel load among all four (4) fuel tanks.

FS2002 – This version has a easier fuel system. Set the fuel selector to ALL and operating engines will be fed from all tanks and maintain even fuel distribution.

FS2004 (FS9) Setting for Takeoff – Both Fuel Cross Feed Switches OFF (Center)
 – Set Main Fuel Switch for failed engine OFF (Down)
 – Set Main Fuel Switches for 3 operating engines ON (Up)

During cruise, fuel will burn from the tanks for the operating engines to those engines. The fuel in the tank for the inoperative engine will not be used. Fuel usage needs to be balanced. Here is an example for balancing the fuel when #4 engine is shut down.

For take off – Both Fuel Cross Feed Switches OFF (Center)
 – Set Main Fuel Switch for #4 engine OFF (Down)
 – Set Main Fuel Switches for engines 1, 2, & 3 - ON (Up)

Approximately every 45 minutes after take off; burn fuel from the inoperative engine tank:
If this sequence is not followed, the operating engines may be starved of fuel and shut down.

Both Cross Feed Switches – ON ALL (Up)
Main Fuel Switch, #4 Engine – ON (Up)
Main Fuel Switches, #1, 2, & 3 Engines – OFF (Down)

Monitor fuel consumption. When fuel in #4 engine tank is below the other three tanks, reverse the settings:
Again, use care in the sequence of changes:

- Main Fuel Switches, #1, 2, & 3 Engines – ON (Up)
- Main Fuel Switch, #4 Engine – OFF (Down)
- Both Cross Feed Switches – OFF (Center)

From / To	DC-4 Charter 324-12-02 Flight Description	Course (Leg)	Dist. (Leg)	ETE (Leg)
3G5 Dawson AAF West Virginia USA to KBOS Logan Intl Boston, MA USA	Charter Leg 01 Initial Altitude – 7500 MSL = Dpt Rwy 06 , (Elev 1266, Length 3500 x 50) = After takeoff, climb on course to 7,500 MSL dir to Grantsville VOR (GRV 112.3) -----			
	= Dir Saint Thomas VOR (THS, 115.0) -----	077	31	0+11
	= Dir Harrisburg VOR (HAR, 112.5) -----	079	54	0+17
	= Dir Sparta VOR (SAX, 115.7) -----	071	46	0+15
	= Dir Putnam VOR (PUT, 117.4) -----	080	124	0+40
	= BOD to 2600 MSL, Dir Stoge (Norwood) NDB (OW, 397.0) -----	080	132	0+43
	= KBOS, ILS Rwy 04R (110.3, Hdg 035) -----	088	34	0+11
	= Land Rwy 04R, (Elev 20, Length 10006)	035	15	0+07
	Approximate Totals		436	2+24

I TOLD YOU NOT TO PEEK! ☺

I computed that I could get airborne from this runway with a maximum gross weight of 51,000 pounds. I deducted 1,000 pounds for the wife and kids and loaded the DC-4 to 50,000 pounds – no cargo or passengers, 800 lbs for crew and about 1450 lbs (242 USG) per fuel tank for a total of 5,800 pounds (966 USG).