

## A Birthday Charter

### A BIRTHDAY CHARTER

The DC-3 was a development of the DC-2, which first flew in 1934 for Transcontinental and Western Airlines (TWA). American Airlines, a competitor of TWA, had longer routes and needed a plane where passengers could stretch out and sleep. It had been using the Curtiss Condor because it was large enough for sleeping berths, but it was slow. The DC-2 was faster but it was too narrow for berths.



During the summer of 1934, American decided that it needed a plane that could fly non-stop between New York and Chicago with both the roominess of the Condor and the DC-2's performance. It approached Douglas about providing a plane to meet these requirements. Douglas was a little hesitant about accepting the project at first since he anticipated a limited production run and because American was low on cash. However, American's president, Cyrus R. Smith, promised an initial order of 20 aircraft, and Douglas decided to proceed. American also received a \$4.5-million loan from the Reconstruction Finance Corporation, so Douglas was confident that American could pay for the planes. A young engineer named Arthur Emmons Raymond<sup>1</sup> was named chief engineer at Douglas and led the team that built the DC-3.



This new plane would appear in two versions: a 14-berth sleeper version, the Douglas Sleeper Transport (DST), and a day version, called the DC-3. The DST, initially called a "wide-body DC-2," was wider and longer and

had more powerful engines than the DC-2. Its modified tail gave the plane better directional stability and reduced the tendency to fishtail found in the DC-2. Its original design used 85 percent of the parts used on the DC-2. Douglas realized, however, that reliance on the DC-2 limited use of the new plane in a wide variety of roles and the plane was substantially redesigned. Thus, the DC-3 would use only 15 percent of the parts and components from the DC-2. These design changes included rounder sides and nose, made possible by relocating the landing lights in the wing leading edge, and strengthened and longer wings with greater area that provided more space for fuel tanks. The undercarriage was also strengthened and its operation made softer on landing. These changes, while resulting in higher design costs, contributed to the DC-3 being produced in greater numbers than any other transport aircraft.

Construction began in December 1934, before a firm contract had even been written. On July 8, 1935, American's president confirmed the initial order of 10 Douglas Sleeper Transports at a cost of \$79,500 each.

On December 17, 1935 the DST made its first flight with pilot Carl Cover at the controls and Frank Collbohm as co-pilot. The aircraft lifted off from Clover field, Santa Monica and was airborne for an hour and a half. The flight was described as "very routine", so routine in fact, that no Douglas executives took the time to watch it and no photographs of the event were taken. Further test flights followed and apart from the addition of a small dorsal fin to the tail to improve directional stability, no major problems arose. An Approved Type Certificate, ATC No. 607, was issued on 21 May 1936 and the DC-3 was born.

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<sup>1</sup> Raymond died on Monday 22 March 1999, at St. John's Hospital in Santa Monica, California, just two days short of his 100th birthday.

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The flight is therefore totally fictitious, but it seems to me that it was likely that they would not want to stray to far from Santa Monica, and would also want to be within easy reach of an aerodrome in case of an emergency.

From - To	<b><u>Flight Description.</u> “Allocated runways and related information may change when flying online, or when using real weather.</b>				<b>Course (Leg) deg</b>	<b>Distance (Leg) nm</b>	<b>ETE (leg) HH+MM</b>
	<b>Dep. Rwy : 21</b>	<b>Init. Hdg: 154deg</b>	<b>Init. Alt: 3,500ft</b>	<b>Apt Elev: 173ft</b>			
Santa Monica (KSMO) USA  To  Santa Monica (KSMO) USA	<b>Preliminary settings.</b> Tune ADF to 253.0. Adjust all fuel tanks to read 80 gallons (480lbs) each, and for authenticity, set all passenger and baggage weights in the 'Aircraft / Fuel and Payload' section to zero.						
	<b>Departure.</b> <b>To Fix 01:</b> Turn left and follow the taxiway to runway 21. After take off maintain runway heading. Commence climb to 3,500ft MSL. Waypoint is reached immediately after the coast has been crossed.....				210	2.2	00+01
	<b>En Route.</b> <b>To Fix 02:</b> Turn left to 154° and maintain heading until you reach a headland after approximately seven minutes. Waypoint reached immediately after headland is passed.....				154	15.8	00+07
	<b>To Fix 03:</b> Turn left to 091° and follow the coastline. Monitor RMI. Waypoint reached when RMI indicates 337° bearing to station.....				091	6.7	00+02
	<b>To Fix 04:</b> Turn left to 045° and pay your respects to the RMS Queen Mary. Waypoint reached when directly overhead the ship.....				045	4.1	00+02
	<b>To Long Beach airport:</b> Turn left to 020°. Airport is directly ahead and approximately five miles distant. Waypoint reached when directly overhead Long Beach airport.....				020	5.5	00+02
	<b>To Santa Monica airport:</b> Turn left to 295°. Commence 500ft/min descent to 2,500ft MSL. Santa Monica airport is located close to the coast and before the mountains beyond. Waypoint reached when directly overhead Santa Monica airport.....				295	19.0	00+07

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	<b>To Fix 05:</b> Turn left to 251° and head towards a headland approximately eighteen miles distant. Monitor RMI. Waypoint reached when immediately past the headland and RMI indicates 046°.....		251	18.3	00+07
	<b>To Santa Barbara airport:</b> Turn right to 283° and follow the coast. Cross Point Magu NAS at approximately seventeen miles. Seven minutes. Cross the bay to find Santa Barbara airport located between the coast and the mountains. Waypoint reached when directly overhead Santa Barbara airport.....		283	57.1	00+22
	<b>To UR NDB, 253.0:</b> Turn right to 087° and commence 500ft/min climb to 3,500ft MSL maintain heading until UR NDB received. Intercept 087° bearing and fly direct to NDB.....		087	74.7	00+27
	<b>Approach.</b> <b>To Fix 07:</b> Start timer. Maintain heading and commence 500ft/min descent to 2,000ft MSL. Slow to 120kts. Waypoint reached after 1min 30secs after station passage UR NDB.....		087	6.1	00+02
	<b>To Runway:</b> Turn right to 211°, and you should see the white/green flashing beacon of Santa Monica directly in front of you. Maintain heading and height until runway is sighted. Straight in approach to runway.....		211	13.7	00+05
	Land Santa Monica Rwy21. Length – 4,989ft. Width – 150ft. Surface – Asphalt. Taxi to runway end, turn right and taxi to the tower. Shut down engines.  <b>Missed approach:</b> Climb on Rwy Hdg to 1,200ft MSL. Join circuit to land visually.				
<b>Flight 813-04</b>	<b>Arrival Airport Elev: 173ft</b>	<b>Estimated totals for this flight&gt;&gt;&gt;</b>		<b>223nm</b>	<b>01+23</b>