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 From the Los Angeles Times

Continental Airlines uses biofuel on test flight

The carrier uses an algae-and-weed mix to help power one of two engines during a two-hour flight.
 By Peter Pae

January 8, 2009

Continental Airlines Inc. ratcheted up the race to develop alternate fuel for passenger planes Wednesday as it successfully flew a Boeing 737 twin-engine jet powered partly by algae and weed.

The two-hour test flight over Houston, where the carrier's headquarters is located, involved powering one of the two engines with a mix of 50% kerosene and a blend of fuel derived from algae and jatropha, a weed that bears oil-producing seeds. No passengers were on board.

The demonstration flight was the first by a U.S. carrier. It was the latest among a handful of airlines that are testing a new generation of so-called sustainable biofuels that could help airlines cut fuel costs and reduce carbon emissions.

Last week, Air New Zealand Ltd. became the world's first airline to fly a plane powered partly by jatropha-based fuel. This month, Japan Airlines Corp. is planning a test flight using fuel refined from camelina, a flowering plant that wheat farmers grow in the high plains of the U.S.

"It's another major step forward," said Billy Glover, managing director of environmental strategy for Boeing Co., the aircraft maker that has been working with the airlines and jet engine makers to develop biofuel for passenger planes.

With the latest milestone, a regularly scheduled passenger flight could be powered by biofuel in three years, pending further tests and Federal Aviation Administration certification, he said. "We've been pleasantly surprised by how smoothly these tests are going."

Airlines began seriously looking at potential new fuel sources as oil prices skyrocketed last year and led several carriers to file for bankruptcy. But despite oil prices slumping sharply since then, industry officials said airlines didn't want to be burned again by being too dependent on a single source of fuel.

Algae and jatropha are among some of the more promising biofuel sources because they don't compete with food production or contribute to deforestation, industry officials said.

But airline officials and jet makers cautioned that although tests have been promising, it may take a decade or more before biofuels become a significant source of fuel for airlines. In addition to expanding production sharply, many new refineries would have to be built to produce fuel needed by the carriers.

Air New Zealand, which has been one of the more ambitious in developing alternative fuels, hopes to use biofuel for 10% of its needs by 2013.

Continental's test flight Wednesday was considered a bit more risky because it involved a plane with two engines compared with four engines for other test flights. Wednesday's test included powering the right engine with the biofuel mix, turning it off and on as well as abruptly accelerating and slowing down the plane.

The airline is the nation's fifth-largest and the seventh-busiest at Los Angeles International Airport.

Continental and its partners in the project -- Boeing, engine maker CFM International and a refining subsidiary of Honeywell International Inc -- will be analyzing post-flight data to see whether biofuel can be a suitable substitute for traditional fossil fuel "without any degradation of performance or safety," the airline said.

The pilot of Wednesday's flight reported that the test engine seemed to have burned less fuel than the engine that was being powered by traditional jet fuel.

"That's icing on the cake," Glover said. "We weren't sure we would be able to measure that."

peter.pae@latimes.com

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