

Friday, April 2, 2004

Supertanker could bolster aerial firefighting

Plane is safer, faster, drops more retardant, Oregon company says

By JAMES WALLACE

SEATTLE POST-INTELLIGENCER AEROSPACE REPORTER

With the threat of another devastating forest-fire season approaching, an Oregon aviation company is pitching a huge new tool to help firefighters.

Evergreen International Aviation is testing a modified 747 Supertanker in Arizona to demonstrate that it can be used to drop as much as 24,000 gallons of fire retardant. That's about eight times more retardant than is typically carried by the biggest aerial firefighting tankers today.

The company will hold a news conference in Arizona soon, a spokesman said this week, and is reluctant to provide many details until low-level water-drop test flights now under way are completed.

But Evergreen recently made a presentation about the 747 Supertanker to a group in Alaska that included forestry officials, and it lists information about its plans on the Web (see www.evergreenaviation.com/supertanker/).

"We are not replacing anything in the market. We are just adding another tool to the tool belt," Christina Wallace, director of sales for Evergreen, told the Anchorage Air Cargo Association in late February.

Eventually, Evergreen would like to have a fleet of 747 Supertankers that could be dispatched to help with forest fires. For now, Evergreen has modified only one of its 747-200 freighters to demonstrate what it calls "proof of concept."

Evergreen has headquarters in McMinnville, Ore. Its airline division offers domestic and international cargo services with a fleet of 10 older 747-100/200 planes as well as DC-9s.

Evergreen is not new to the business of aerial firefighting. It has a fleet of helicopters that are used for fire suppression.

In 1975, Evergreen bought Montana-based Johnson's Flying Services, which in 1931 was awarded the first Forest Service contract for aerial firefighting and introduced the first "smoke jumper" aircraft, the Ford Tri-Motor.

Evergreen said it has received engineering support from Boeing for the 747 Supertanker project.

Because of its size, Boeing's 747 has been used for many different missions since it entered service more than three decades ago.

The distinctive jumbo jet may be most famous for transporting the president as Air Force One. It was modified to carry NASA's space shuttles piggy back across the country.

Boeing plans to use the 747 to transport the wings and fuselage sections of its planned 7E7 jetliner for final assembly in Everett. And a 747 is now being modified by the military with a laser to shoot down incoming enemy ballistic missiles.

As a firefighting tanker, the 747 would dwarf anything now available. The largest "class one" tankers used in the United States, such as the C-130, P3 and DC-7, can carry as much as 3,000 gallons of retardant. The Forest Service also has available smaller tankers, such as the DC-6 and P2V.

Most of these tankers are planes that were developed for the military. And they are old, which has led to several crashes.

After an especially costly 2002 forest-fire season, the Interior Department last year issued a request for information for a next generation aerial tanker.

Two tankers crashed that year. In one of the accidents, the tanker's wings broke off.

The 747 being used by Evergreen for its firefighting tests was modified to deliver fire retardant under pressure from four nozzles in the lower fuselage just aft of the wings.

On other tankers, belly doors open and gravity disperses the retardant to the fire. The tankers must get as low as 150 to 200 feet to be effective.

Because the 747 will use a pressurized system to deliver the retardant, the plane can fly at a safer altitude over the target from 400 to 800 feet, according to Evergreen.

And the system allows either one large drop of all the retardant, covering a path up to about 5 miles long, or the jet can make separate drops on different fires.

The drop speed for the 747 would be about 140 knots, which is 30 percent faster than its stall speed, according to Evergreen.

At the air cargo meeting in Anchorage, firefighting managers questioned the need for such a big tanker, as well as its ability to get to fires.

The 747 would require a runway of at least 8,000 feet. Most of the tankers used today can take off and land at smaller airports that may be closer to a fire than a major airport with long runways.

Evergreen says that even though the 747 might have to fly a longer distance to get to a fire, it is much faster than other tankers. The 747 is the fastest commercial jetliner or freighter, with a cruising speed of Mach .85, more than 600 mph.

Evergreen would operate the 747 tankers and contract its services.

"The plan is to have it ready for this year's fire season," said Justin Marchand, an Evergreen spokesman and its corporate writer.

But even if the current tests in Arizona prove the concept works as advertised, Evergreen still needs the Interior Department's approval before Boeing's venerable 747 is given yet another mission.

P-I aerospace reporter James Wallace can be reached at 206-448-8040 or jameswallace@seattlepi.com