

Ready to Strike



New Oshkosh rigs strengthen Long Beach Airport firefighting and rescue capabilities. Carroll McCormick reports

A year after taking delivery of two Oshkosh Striker 3000 Aircraft Rescue Firefighting (ARFF) vehicles, Station 16 firefighters at California's Long Beach Airport are pleased with their performance. The vehicles' capabilities and specifications allow them to comfortably meet the requirements that go with the airport's Index C ARFF rating.

The airport's Station 16, one of 23 fire stations owned and operated by the city of Long Beach, acquired the two Strikers after a competitive bidding process in which Oshkosh submitted the winning, and lowest bid. It met the FAA's Advisory Circular 150/5220-10C Guide Specification for Water/Foam Aircraft Rescue and Firefighting Vehicles, a stipulation the FAA makes for airports that want to qualify for Federal grant-in-aid assistance.

"The Strikers clearly have greatly enhanced our response capabilities, particularly in low-visibility conditions, or when response is required to any off-pavement incident. The off-road capabilities of the vehicles are amazing," says Assistant Airport Manager Christine Edwards.

The Strikers replace a 1985 E-One Titan 1500 and a 1992 Oshkosh T-3000, the latter having been retained as a reserve unit. Neither units met the 2002 AC 150/5220-10C specifications. "The FAA's grant funding priority to replace these vehicles was increased following an FAA Certification Inspector's recommendation that they be replaced," says Edwards, who noted that the grant paid for 95% of the acquisition cost of the new ARFFs.

Among the basic specifications of the 3000s, their 3,000 US gallon (11,356 litre) water tank puts them well ahead of the older units. "Now we have more gallonage than we used to and more gallons per minute [gpm]; the Titan could only put out 600 US gpm [2,271 litres per minute]," says Station 16 captain Steve Zahner. The roof and bumper turrets can each pump either 600 or 1,200 gpm (4,542 lpm), and the 1,950 gpm (7,381 lpm) fire pump allows a 3000's two turrets to simultaneously put out a total of 1,800 gpm (6,813 lpm) of water.

"We've had the bumper turret before, but in the past the roof

The two turrets on the Striker 3000 can deliver 1,800 US gpm.

(ALL - CHRIS TAVE)

turret was always the primary turret. But we selected the high-attack, low-angle bumper turret option for the 3000s as our primary turret. The manoeuvrability of the bumper turret allows us to attack a fuel fire low down. It does not obstruct the operator's view like the roof turret can," explains engineer James Bantly, who operates the 3000 designated as Crash 3.

The 3000s also carry 450lbs (204.5kg) of Purple-K dry chemical fire suppressant agent and 420 gallons (1,590 litres) of foam.

"One of the things we experienced before was that with one rig down we could not meet the index, but now, even with one 3000 down we can meet the index with the water and foam that a single 3000 can carry. If one of our larger planes had a catastrophic fuel leak, we would need the foam capacity of both of the older units," says battalion chief Mike Sarjeant.

Although Long Beach ranked 82 among North American airports in 2005 by passengers (3,000,000) it ranked 24 by operations (353,000). "Long Beach is a very unusual airport. It not only has the usual air carrier and cargo flights, but also manufacturing flights for Boeing's C-17 programme and Gulfstream business jets.



Front- and rear-axle steering reduce tyre wear, but take some getting used to.



Controls are all within easy reach.

Additionally, 90% of our traffic is general aviation, with a significant portion business jets (we are a reliever for LAX). We are also one of the few airports in the Los Angeles area that can accommodate the Antonov 124; it uses the airport on a regular basis delivering satellites for Boeing's Sea Launch programme. We are also one of the busiest fixed wing and helicopter flight training airports in the western US. So our ARFF crews train and respond to a full spectrum of aviation incidents," says Edwards.

Bantly notes: "We evaluated what our needs were specifically here at Long Beach and at the agency, as a fire department. As for operational needs, the AC calls for good gpm flow and dry chemical products, but what do we do if we had a medical aid at the terminal, or a rescue where we had to do some cutting?"

To that end the rigs are equipped with Hurst Jaws of Life tools such as cutters, spreaders, a pneumatic penetrating nozzle, telescopic ram, Partner Industrial USA saw, and first aid equipment, including an automated external defibrillator. "When we ordered the vehicle we listed which tools would best meet our needs here. It was designed to be a turnkey delivery," Sarjeant explains.

The airport purchased several options for the 3000s, including air conditioning, hydraulic generator and rear steering. Back-up cameras provide a 180-degree view behind the vehicles, viewable on a colour monitor in the cab. The joystick-operated forward-looking infra-red cameras have already proven themselves. "I like the fact that my rig has a camera on the back. I can use it to avoid objects when reversing. The thermal imaging camera mounted on top of the rig is a great tool. You can drive using the camera," says engineer Chris Tave, who operates the 3000 designated as Crash 5.

Zahner tells of responding to an incident when a small aircraft crashed. "There are no street lights at the airport and it is very dark. If an aircraft goes down, it can be a problem to locate. A couple of months ago this aircraft took off, and then came down again. We were given the approximate location, but the lead

The Antonov 124 is the Long Beach Airport's biggest customer.



Operating the Striker

"I equate using the Striker with sitting in your living room, putting six wheels under it and driving it away. The 3000 has independent suspension and takes bumps and curves very well. It is very sturdy and reliable," says Long Beach Airport Station 16 engineer and Crash 5 operator Chris Tave. Before being transferred to Station 16 in January 2006, Tave spent 17 years with the Long Beach Fire Department, most recently driving a platform truck for Station 7; Station 16 belongs to the Long Beach Fire Department.

Tave drives Crash 5 every day he is on duty. "The beauty of the rigs is that you can operate them while they go through their checks," he says. Having turned on the master switch to provide power to the rig, then the ignition switch to power the display panel and then the engine starter, he explains... "You can immediately start moving out of the fire station even while the computer is still calibrating the gauges."

After nearly a year of driving, Tave feels pretty comfortable with Crash 5. "You test yourself. You only need a half-inch between the rig and an obstruction." Outfitted with rear axle steering, which supplements the front-axle steering, he explains... "Pivot points are really important for this rig. If you turn too soon you hit the obstruction.

"At this stage, now that I am comfortable driving it, I practise hosing down things. When you are attacking a fire you get water right away and with these rigs you can pump on the move. If you find you are in the wrong place you can reposition the rig while you pump."

Battalion Chief Mike Sarjeant adds: "The ergonomics of the way the trucks are set up is a big improvement over the old rigs - the way all of the gauges and controls are laid out greatly reduces the amount of reaching and movement required of operators. Everything can be reached without moving around. "Boeing [which uses the airfield] was most impressed with the steering capability of these units. They give a big cost saving in not wearing down the tyres. We are also pleased with the high volume of the rig and the modern conveniences."

vehicle had difficulty finding it. Crash 5 quickly found it with the infra-red camera. The Will-Burt telescoping night scan lighting with four 1500-watt quartz halogen lights on top of Crash 5 lit up the scene like a football stadium." (Crash 3 has side-mounted floodlights.)

The airport also ordered 300ft (92m) of 1¼-inch (44mm) fire hose, assorted hand tools, and 1in (25.4mm) rubber-jacketed fire hose with hydrochem nozzle. An Icom A-110 in-dashboard airport radio, a Motorola MCS 2000 fire radio and Icom A-6 handheld radios provide communications.

Another nice touch is the accelerometer, which senses lateral g-force motion and alerts the operator if he is cornering too quickly. "Alarms go off if you are cornering too fast," says Zahner.

The 680 British horsepower (506kW) Caterpillar engine can accelerate the 3000 from 0 to 50mph (80km/h) in 35 seconds, and hold it at 70mph (112km/h). "We haven't done a timing comparison between the old units and the 3000's to the middle of the furthest runway, but we can tell you that their improved manoeuvrability and speed is quite an improvement," says Sarjeant. "With their wider footprint the engineers feel more comfortable responding with speed. The ride, speed and safety margins are much greater than with the older rigs."