ARFF in the Big State

Striker vehicles protect the Ted Stevens Anchorage International Airport

By Bob Vaccaro

Alaska usually conjures up thoughts of glaciers, steep mountains and extremely cold weather. But perhaps it's best known for size. Alaska is enormous; it's so big that it has its own time zone.

It's only fitting, then, that the Ted Stevens Anchorage International Airport in Alaska operates a fleet of six of the largest Oshkosh Striker aircraft rescue and firefighting (ARFF) vehicles.

DOUBLE DUTY

Ted Stevens is the world's third-busiest airport by cargo traffic. In addition, the airport has an abundant supply of jet fuel refined at refineries at the North Pole and Kenai, Alaska. The fuel is transported by pipeline or by rail.

Ted Stevens is an FAA Index E airport, which means that the airport is able to handle aircraft more than 200 feet in length, such as Boeing 747, 777 and 767 and the larger Airbus. Of course, such planes carry larger passenger loads as well, enhancing the life safety risk.

You can see why the airport needs ARFF vehicles that are able to respond rapidly and supply high gpm for fire suppression, as well as large amounts of foam for aircraft fires and flammable liquid exposure.

"The planning for the current fleet of ARFF vehicles began approximately 5 years ago," says Deputy Chief Mike McGinnis of the airport fire and police department. "Our department is unique, as all of our personnel are dual-certified" in fire/EMS and police operations, McGinnis says. The department employs 60 people who are responsible for providing police, fire and first responder EMS at the ▶

The Ted Stevens Anchorage International Airport recently took delivery of six Oshkosh Striker 4500s, which provide extra foam and water capacity as well the latest in ARFF technology.

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The Oshkosh Stinger Q4 is a rapid-intervention vehicle equipped with the Pulse Delivery extinguishing system.

Oshkosh Striker 4500

Performance
- Acceleration: 0 to 50 mph (80 km/h) in 35 seconds
- Top Speed: 70 mph (112 km/h)
- Side Slope Stability (Static): >30°
- Gradeability: Ascend/descend a 60% grade

Chassis:
- Cab: Aluminum construction; seating for five; center steering position; wrap-around cockpit-style instrument panel
- Engine: 950-bhp four-cycle Caterpillar diesel
- Suspension: Oshkosh TAK-4 independent system with dual-control arms and single-coil spring

Firefighting System
- 600/1,200-gpm non-aspirating roof turret controlled with electric joystick
- 300-gpm non-aspirating bumper turret controlled with electric joystick
- Two 150-foot 1¾" pre-connect handlines and a 125-gpm pistol-grip nozzle
- 4,500-gallon water tank; 630-gallon foam tank
- Single-stage, centrifugal power, divider-driven Waterous CRQA pump; pump-and-roll capable
- Around-the-pump foam-proportioning system

airport, which covers 5,000 acres and employs more than 7,000 people. Therefore, the department's vehicles must also be able to operate in police, fire and EMS scenarios.

SETTING A STANDARD

"Since the 1980s, we've had a hodgepodge of equipment from several different manufacturers," McGinnis says. "This didn't really help us in the long run. Yes, the vehicles worked for us, but this time we wanted to be proactive in our approach to choosing a new series of ARFF vehicles for the foreseeable future."

Standardizing with one manufacturer provides the benefit of being able to use the same parts; it also cuts down on training time for personnel. "It will greatly help us in increased productivity and in keeping the maintenance hours down," McGinnis says.

Oshkosh won the bid with the Striker 4500. "The new Striker is a great design for us," McGinnis says. "It gives us the extra foam and water capacity we desperately needed, as well as new technology, such as FLIR and GPS." The airport took delivery of five 4500s over the last 2 years;

Anchorage airport firefighters train regularly for aircraft emergencies, as well as flammable liquids and cargo protection.

in 2010, it took delivery of a sixth 4500 as well as a new Stinger Rapid Intervention Vehicle (RIV).

Four of the vehicles are standard Strikers and two have a snozzle boom mounted on their roofs. "The smaller Stinger Q4 RIV gives us a powerful firefighting punch in a small, compact vehicle, with Oshkosh's Pulse Delivery system," McGinnis says. For more on the Pulse Delivery system, see the sidebar on p. 26.

"We developed an excellent relationship with the people at Oshkosh," McGinnis says. "They produce a great product, from design to manufacture. Their technical reps came up several times for training and maintenance classes for our firefighters/police officers. We had some problems ▶

Stinger Q4 Rapid Intervention Vehicle

Chassis
- Ford Super Duty F-550 4 x 4 with regular cab, super cab or crew cab
- 6.4-liter Power Stroke V8 turbo diesel
- TorqShift transmission

Selected Standard Features
- Two front and two rear tow eyes
- Front bumper with brush guard
- NFPA-compliant cab running boards, reflective stripping, LED emergency warning lights, cab and body LED perimeter lights, non-slip aluminum tread plate, and air-intake ember separator
- Pump-and-roll capability
- Aluminum body construction with roll-up compartment doors
- Rear lower storage compartment for long-handled tools
- Electronic load management system

Available Features
- Dual-agent handline nozzle with Pulse Delivery
- Pneumatic or centrifugal pump delivery
- Pre-mix foam, single- or dual-tank foam educator or piston-pump foam-injection
- Bumper turret capable of delivering all agents, including Pulse Delivery
- Compressed air foam system (CAFS)
- 120- or 300-gallon water tank
- Up to 150 feet of bundled hoseline
- Two crosslays with 200 feet of 1¾" hose
- Ground-level fill system for all agents

TECHFOCUS

The Latest ARFF Firefighting Technologies

The following fire suppression features are available on the Stinger Q4 RIV.

Quad Agent Delivery: Quad Agent technology allows firefighters to select the agent or combination of agents from the hoseline—dry-chemical agent for heat absorption, clean agent for chemical interruption of fire process, and water/foam/CAFS for creation of vapor barrier/cooling. This allows for attack on almost all types of fire with immediate fire suppression and ultimately, termination. Quad Agent technology deploys at a distance of 90 feet, which allows firefighters to stay further away from the fire, reducing their risk.

Pulse Delivery: Pulse Delivery produces small packets of dry-chemical powder within the nozzle and propels them forward at Mach 1, allowing firefighters to penetrate a commercial-size fire wall from as far as 90 feet from the fire. As each packet penetrates the fire wall, the dry chemical "blooms," exposing its surface area and causing it to react with the heat or energy of the fire. The result is almost instantaneous fire knockdown and suppression.

This high-pressure system offers three advantages: 1) trouble-free delivery from the storage tank, 2) none of the typical weekly/monthly fluffing of the dry-chemical powder, and 3) delivery through 150 feet of bundled hoseline or front-mounted bumper turret.

Clean Agent: Complete extinguishment of the fire is enhanced by combining small amounts of a clean agent within the dry-chemical stream delivered through the Pulse Delivery nozzle.

when we first took delivery, but all were fixed with great service after the sale. This is a great attribute of the company."

AN EYE ON THE BOTTOM LINE

The members of Ted Stevens Anchorage International Airport fire department were proactive in planning and designing their new fleet of ARFF vehicles. Commonality of parts, training and maintenance was the main ingredient in choosing these vehicles, which will create cost savings in the immediate future. And that's something everyone in the emergency services arena is concerned about right now.

Bob Vaccaro has more than 30 years of fire-service experience. He is a former chief of the Deer Park (N.Y.) Fire Department. Vaccaro has also worked for the Insurance Services Office, the New York Fire Patrol and several major commercial insurance companies as a senior loss-control consultant. Vaccaro is a life member of the International Association of Fire Chiefs.