Atlanta ups fire rating

Oshkosh is helping Atlanta to achieve Category 10 fire-fighting status

Atlanta's Hartsfield International Airport recently placed an order with US fire-tender manufacturer Oshkosh for 10 of its Striker ARFF trucks.

The contract will allow Hartsfield to renew its existing fleet of vehicles, which date back to 1996. According to Fire Chief Harold Miller, the airport's policy is to replace ARFF trucks after 10-12 years of frontline service, essentially because the older they become, the more expensive they are to maintain. "Not only does it make good business sense to replace them at this time, it is also a good opportunity to increase the overall amount of extinguishing agent available at the airport," says Miller.

Each Oshkosh Striker truck can carry 3,000 gal (11.34 m³) of water, 410 gal (1.5 m³) of foam concentrate and 1,000 lb (450 kg) of dry chemical agent. At present, each of Atlanta's five fire stations is equipped with one 1,500 gal (5.67 m³) and one 4,000 gal (15 m³) truck. By replacing these with two 3,000 gal units, a net overall gain is made of 500 gal (1.89 m³). The combined five fire stations will therefore have available 30,000 gal (113.56 m³) water, 4,100 gal (15 m³) of foam concentrate and 10,000 lb (4,545 kg) of dry chemical agent.

This increase in available extinguishing agent is key to Atlanta's ability to continue to attract the world's largest aircraft. For example, the Airbus A380 is classified as a category 10 aircraft, for which 14,260 gal of water/foam and 900 lb of complementary agent are required. "By replacing our existing fleet, we will be able to commit five trucks capable of delivering 15,000 gal water, 2,050 gal of foam and 5,000 lb of dry chemical agent to a major incident, whilst at the same time holding a further five trucks in reserve, thereby allowing the airport to continue to function as a Category 10 facility," explains Miller.

Atlanta has a number of criteria for its fire fighting vehicles. Miller says the vehicles have to be simple and straightforward to operate so that fire fighters can react quickly in life-threatening situations. "All of the controls should be well placed, easy to access and simple to read and understand." In addition, if the airport is going to spend USD750,000 per unit, the trucks have to get to the scene of the fire fast, whilst conveying sufficient quantities of extinguishing material. With four on board tanks, each truck can emit four streams of extinguishing agent without the need to refill either foam or dry chemical. Only the water tanks need refilling in the case of prolonged deployment at an incident.

Each truck is configured with a main high-flow bumper turret and a secondary roof turret, the latter being deployed if the main turret should fail. Crucially, the roof turret can be operated independently of the bumper turret and therefore used to attack another separate area of the fire.

Atlanta Hartsfield is taking delivery of 10 Oshkosh Striker fire-fighting trucks.

"Overall, when acquiring an ARFF truck, you have to weigh up the technology that the manufacturer has incorporated into the design and determine whether it will have any real benefit. Most often, the simpler the design, the better," observes Miller. The trucks rely on a proven Hydro-Chem system for discharging dry chemical agent. "We were also interested in acquiring a vehicle with a mechanical rear steering system, which is quite new in the crash truck industry. The result has been a significant reduction in tyre wear to such an extent that we are now interested in incorporating the system in other large vehicles also used by the airport's fire-fighting department."

Miller says price per unit was not the main factor, and manufacturers were asked to bid following three years of intense research. Miller argues that the layout of the cab, ease of operation, the overall truck configuration and function, the fire fighting ability and ease and lifetime cost of maintenance had been the main factors put under the microscope. After sales support had also been crucial in Oshkosh winning the order.

"Most of the manufacturers offered the same types of technology, although offering different engineering solutions in meeting the performance requirements. What impressed us about the Striker was its TAK-4 independent suspension, especially since it was combined with mechanical rear steering. These two features make the truck highly manoeuvrable and, even when travelling over rough terrain, the occupants of the vehicle still experience a very comfortable ride." Miller says Oshkosh was the only manufacturer willing to provide a truck equipped with an Allison transmission.

Atlanta, which is now the largest domestic airport in the US, has five fire stations, four of which are located around the perimeter and the other adjacent to Runway 10-28.

Currently, one Oshkosh Striker unit is deployed at each fire station, which will be increased to two once a second batch of trucks is delivered.

NFPA requirements are for fire fighting equipment to reach an incident within two minutes, although the FAA grants an extra 60 seconds. Miller says that the former standard is what they try to aim for, but that they can absolutely guarantee the latter. "Our present Colet Jaguar trucks are faster than the Oshkosh trucks that are replacing them. However, they cannot concentrate as much extinguishing agent," stresses Miller.

In addition to the upgrades in the ARFF vehicles, the airport is also investing in a Stair Truck and two rear-mounted bucket-equipped ladder trucks, which will speed up access into the body of the aircraft. The latter two, which have been specifically modified for aircraft operations, have a longer platform. "This will allow us to rapidly access the aircraft, get the doors open and ventilate the aircraft making it possible to make an interior attack," explains Miller.

A new fire training facility is also due to be inaugurated. It consists of an FAA-compliant, liquid-fuel pit and aircraft simulator. This will enable fire crews to practice a variety of scenarios including engine fires in high-wing, low-wing and tail configurations; wheel and wheel well fires; interior blazes; ruptured wing tank fires; high- and low-cascade flowing fuel fires; as well as both low- and large-spill fires.

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