

'World Class Emergency Services at a World Class Airport'



Jessie Gentry

*Division Commander of Fire Operations –
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Jessie Gentry is currently the Division Commander of Fire Operations for Dallas/Fort Worth International Airport Department of Public Safety. In this role, he oversees the supervision of 114 men and women, and is responsible for the strategic planning and development of the fire operations division. Chief Gentry has over 25 years experience in the fire service field, 16 of which have been served with DFW Airport Public Safety. He holds a degree in Fire Science from Keiser University, is a certified Master Firefighter/Paramedic and Master Airport Firefighter. Chief Gentry is a member of the Texas Fire Chiefs Association as well as the International Association of Fire Chiefs.

Dallas / Fort Worth International Airport is known as the economic engine for North Texas. It is strategically located between the cities of Dallas and Fort Worth and serves as the gateway to air travel around the world. At over 18,000 acres and with seven runways, DFW continues to be one of the busiest airports in the world.

Airfield operations and a growing market demand for commercial development are forming the big airport into what is becoming known as an 'Airport City.' As with any city, public safety is of the utmost importance in protecting the travelling public and the many tenants who call DFW their home.

World-class airports need world-class emergency services and DFW is no exception. The Department of Public Safety at DFW operates out of five stations, with the potential to add two more in the near future due to the introduction of natural gas exploration/production and commercial land development.



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With a staff of over 490 personnel, the department is responsible for Police, Fire, and Special Services such as security, access control, and a 911-dispatch centre. Within Fire Services, there are four Divisions; Fire Rescue, Fire Training, Fire Prevention and Planning, and Emergency Medical Services.

Today, the spotlight turns to the Public Safety - Fire Rescue Division; the largest division within Fire Services, responsible for aircraft rescue firefighting (ARFF), structural response, hazmat, and technical rescue. Fire Rescue is staffed with 115 personnel consisting of; 87 firefighters, 21 Company Officers, and 6 Shift Commanders. Even with these numbers; success is measured by how well the emergency responders, airport departments and mutual aid partners come together to exceed the expectations of the customers at DFW.

In the event of an emergency response to an incident, all fire personnel must be prepared to deliver the best service and as quickly as possible. As it pertains to aircraft, DFW Fire Rescue does so with a fleet of eight ARFF vehicles, totaling 64 tyres literally where the rubber meets the road. All eight-by-eight, the vehicles provide DFW with state of the art emergency response around the clock. The trucks measure 11 feet 4 inches to the top of the handrail and 45 feet 3 inches from

front to back. The drive engine delivers 950 BHP at 2100 RPM with over 2400 foot pounds of torque.

The trucks are required by the FAA to manoeuvre a 30 degree approach angle, 30 degree departure angle and a 30 degree side angle. The transmission can also manage some very difficult conditions if the weather becomes uncooperative.

Using an interlock system, the ARFF vehicles at DFW have the ability to 'walk' their way out of mud that is virtually up to the frame. Driver mobility is significantly enhanced through the use of Forward Looking Infrared Vision System (FLIR). The operator has the ability to navigate in almost any situation by using a FLIR, which has been hooked up to a monitor inside the cab of the truck. That same tool is also useful in full daylight operations to locate potential hotspots onboard and alert aircraft, thus speeding response time and reducing inconvenience to passengers.

All ARFF must have a complement of extinguishing agents. Our vehicles carry a complement of 4500 gallons of water, 530 gallons of AFFF, and 480 pounds of dry chemical. Each agent can be delivered through a combination of roof, hand-line or the primary low-attack turret, discharging an entire load of agent in less than 4 minutes. The primary turret is a front bumper mounted turret, which can

be adjusted to deliver 600 to 1200 gallons per minute (gpm) across an infinite range of settings and a sweep of 170 degrees. What makes this low attack turret unique is the ability to be lowered close to the ground and the agent stream directed upward, giving the operator high-flow access under a wing or fuselage from the protection of the vehicle. The roof turret can flow up to 750 gpm, while the hand lines are set to a manageable 100 gpm rate. The trucks are also equipped with five under-truck nozzles, which are designed primarily for protection of the apparatus.

Purple-K is the second agent carried on this truck and it weighs in at 480 pounds. The low attack nozzle and the 15 foot dual-agent hand-line can both flow foam and Purple-K at the same time. The trucks are also equipped with two 1.5 inch, 150 foot structural hand-lines.

The ARFF Fleet at DFW provides the airport and its community with a high level of service through a combined 36,000 gallons of water, 4,240 gallons of AFFF, and 3,840 pounds of dry chemical.

To support the trucks on a response, an Aircraft Interior Access Vehicle (AIAV) and a Mobile Ventilation Unit (MVU) responds to perform advanced operations such as interior access for fire attack and positive pressure ventilation. These two vehicles serve many roles and as you can

imagine are not limited to aircraft emergencies alone.

The AIAV is staffed to roll on all incidents involving aircraft and can reach heights up to 19 feet, which renders it capable of reaching the lower level of the new Airbus A380. Additionally, the new vehicle provides easy access to aircraft on the ramp should a passenger experience a medical emergency.

The Mobile Ventilation Unit has proved very effective for removal of smoke inside terminals and warehouses delivering 118,000 cfm of air to clear the way for fire attack crews. And, with the use of a misting ring, the ventilation fan can be utilised to conduct mass decontamination. In 2005, the Mobile Ventilation Unit was dispatched on a mutual aid call to a neighboring city and utilised for removal of smoke inside a shopping mall. A fire in one of the mall stores caused smoke throughout the entire 200,000ft² structure. Within 4.5 hours, all smoke was cleared from the shopping mall with little smoke damage. The mall opened as usual at 10 a.m.

In addition to the ARFF response, DFW Fire Rescue is responsible for all emergency calls for structural fire suppression. To deliver those services, 75 foot Quints and 100 foot platforms are the apparatus of choice. Each is staffed with one Company Officer and three Firefighters, responding to calls airside and landside anywhere on the property, which is larger than the island of

Manhattan. They also provide mutual aid to cities within the Dallas Fort Worth area. All structural apparatus have industrial rated pumps to provide sufficient protection for target structures commonly seen at an airport, such as high rises, 100,000+ ft² warehouses and airport terminals.

Now that we have responded to the incident, it is critical that the scene is managed effectively. Doing so requires a continuous effort to develop skills and expand knowledge in the use of the 'National Incident Management System.' One apparatus needed to facilitate the organised plan is a (MCP) Mobile Command Post. DFW invested in just that. The MCP has responded on several occasions to provide the resources needed to manage an incident, such as interoperability communications and computer aided software for accountability. One such incident involved the Shuttle Columbia in February 2003. On that date, DFW responded with the MCP to assist and support Command Operations in Nacogdoches, Texas. Once on scene, the MCP and staff coordinated the collection and dissemination of data as it pertained to the recovery effort; tracking debris locations.

World-class equipment plays a vital role in providing the tools needed when protecting the customers at DFW. World-class service is dependent upon the development and practical exposure each firefighter has, in preparation for the 'next

call.' To prepare for such a day, training must be consistent and as 'real life' as possible and DFW delivers the best through their on-airport 'Fire Training Facility.' The training facility and staff are known for delivering top notch instruction to internal and external customers around the world. Not only do all DFW firefighters receive training through the facility, but firefighters from regions like Latin America and countries including New Zealand, Singapore and Jamaica, to name a few, have attended various training courses at the facility.

A 150' diameter fuel spill trainer, a specialised aircraft trainer and a training tower all offer various training scenarios with extreme heat and smoke conditions. In addition to training involving fires, DFW Fire Training Facility offers classes in 'Emergency Vehicle Operations' to include an off-road driving course.

The course provides students with an opportunity to experience off road driving conditions, which greatly enhances their abilities when responding to an actual emergency. The time-spent training at DFW is valuable in firefighter development resulting in increased proficiency and confidence. This among many other facets of the business contributes to a better environment, which has positive impact on the entire airport community and airline industry resulting in an overall 'World Class Operation.' ✈

