



DFD INTERNAL CORRESPONDENCE

DATE: March 25, 2016
TO: All DFD Personnel
THROUGH: Charles Drennan III, Operations Division Chief
FROM: C.J. Haberkorn, Shift Commander, Operations
SUBJECT: **AFTER ACTION REVIEW-Engine 24 FF INJURY, Incident 16-21551**

At 1602 hours, Engine 18 was dispatched to a reported grass fire, located at Alameda Avenue and South Clinton St. Engine 18 arrived on scene at approximately 1605 hours, headed eastbound and reported an 8' X 8' grass fire about 200 yards away in a field, located on the North side of Alameda between Dayton Street and Clinton Street. While in route, Engine 18 was notified that Aurora Fire was also responding to this incident. Engine 18 headed east to secure a water supply in front of the business located at 9640 E. Alameda Avenue and then headed back west on Alameda Avenue to attack the fire. In the time that it took to secure the water supply at 9640 East Alameda, the fire had grown significantly and was being driven by excessive winds. At 1610 hours, Engine 18 requested a greater alarm assignment and Engine 24 was dispatched along with Truck 2 and the Wildland Rig.

Engine 24 arrived on scene at 1614 hours and proceeded to supply the Humat valve on the hydrant located at 9640 East Alameda Avenue. Engine 24 was staffed by a company officer and three firefighters, one of which was acting as the engineer this day. The crew of Engine 24 assisted the engineer with all of the relevant connections and initiated the supply from the hydrant. As the 35' LDH was charged (via the Humat valve), it violently shot underneath Engine 24, kinked and then shot directly back out and hit the acting engineer in the legs, trapping him and violently throwing him to the ground. Initial thoughts from the Engine 24 company officer was that the acting engineer's leg had been broken, possibly a broken Femur. The line was rapidly shut down and the crew of Engine 24 extricated the acting engineer from the entrapment. The acting engineer was transported to the Emergency Room for further evaluation, as he was visibly injured and having problems walking without limping. It is important to note that the acting engineer, once extricated, completed the water supply to Engine 18.

The fire was eventually brought under control with the assistance of Aurora Fire and no further injuries were noted. Denver companies on scene were Engine 18, Engine 24, Truck 2 with the Wildland Rig, Chief 4 and a full group assignment from Aurora Fire, including two Brush trucks. Total area that was burned was approximately 3 acres.

Following an After Action Review with the crew of Engine 24, Chief 3 and the Shift Commander, the following was determined:

Engine 24's mission was to sustain the water supply to Engine 18, which was accomplished by completing the connection at the hydrant located at 9640 East Alameda Avenue, which consisted of two 3" lines, the Humat valve and the 35' LDH. The issue that occurred was unique and provides valuable feedback in regard to safety on scene. In normal situations, the engineer or acting engineer in this case, is often left to complete all requisite connections by themselves. This is due to the fact that rest of the crew normally engages in the firefighting

operations. This was not the case. Engine 18 was operating their Deck Gun and the immediate need for an attack lines was not needed. The rest of the crew of Engine 24 stayed back to assist the acting engineer and this is where the safety issue occurred. The engineer was standing next to Engine 24 when the 35' LDH was charged by the junior firefighter. The resulting aggressive behavior of the 35' LDH, put the acting engineer in a poor protective position and the result was the acting engineer being trapped and thrown to the ground by the 35' LDH. The acting engineer was put off work Line of Duty for the remainder of the shift and treated for a sprained knee. He returned to full duty the following shift.

Lessons Learned:

The crew of Engine 24 identified three areas of improvement from this incident

1. Crew positioning. Maintain your situational awareness and where you position yourself during tactical operations. The acting engineer was positioned right at the intake valve and lost the protective position of being behind the hydrant, like he would during normal operations.
2. Minimize crew exposure during layouts of this nature. The crew, like any other crew, was trying to assist and support the operation by helping and expediting the layout process. By doing this, it put the crew in positions that would not normally occur. The officer stated he will insure that this won't happen again by going back to the basics and train.
3. Identify and define a safer layout process (see pictures). The crew worked with Safety and Training to recreate the incident and also identified safer ways to deploy the 35' LDH.

Engine 24 did a great job in every aspect of their mission, with the exception of crew positioning. The spotting of the apparatus, establishing a safety zone and overall communication in coordination with Engine 18 were seamless. The only issue they had was that the acting engineer found himself in a unique position of having three extra sets of hands to complete the water supply, thus creating the position where the engineer was standing once the Humat valve was opened. Engine 24 noted that human error and design of the equipment and layout contributed to this near-miss. The velocity in which the water charged the 35' LDH was uncontrollable and is a possible design flaw, in the opinion of this crew. They are not discounting the value of the Humat valve and will continue to use this tool for its intended use. However, a new, higher sense of situational awareness has been realized by the crew and they will continue to train to avert this situation from happening in the future.

The following pictures were created with the help of Engine 24 and are not the actual layout from February 29, 2016. The recreation is intended for training purposes only in an effort to provide insight and educational information to the membership of the Denver Fire Department. If you have any questions regarding the above mentioned event, please call Lt. Dave Feilmeir.

Special thanks to the crew of Engine 24 for sharing this incident open and honestly to enhance the safety and wellness of the Denver Fire Department.







