

June 3, 2010

██████████ P3A, ██████████
ICL, P100F
Overflow/Overload
Albuquerque Air Tanker Base
R3, Cibola National Forest
Rio Fire, Santa Fe National Forest

June 1st, 2010 T-XX (a P-3) was ordered for Initial Attack on the Rio Fire on the Santa Fe National Forest. T-XX carried 2 loads of ICL's P100F to the fire, one from Fort Huachuca (FHU ATB) and one from Albuquerque (ABQ ATB) with no reported issues. Ops were terminated at civil twilight, 2045hrs and T-XX was released at 2100 hrs without any cleaning of the aircraft, drop tank and floats, or the exterior of the aircraft as well as the Micro Motion Meter (MMM) due to anticipated early operations for all aircraft and crews the following day.

Additionally, while in FHU, T-XX had experienced some internal retardant tank float issues prior to its assignment to the Rio Fire and using P100F working the Horseshoe Fire. The floats are the main input source for tank level indications both in the cockpit for the bar graph load level indicators and for the external loading port indicator lights. It should also be noted that this is the data source for the drop computers as well. The pilot informed me in a later conversation that even though the floats/indicators were experiencing intermittent operation while on the ground, once launched the agitation created in flight was adequate to allow the floats to operate enough to provide the needed data to both the cockpit indicators and drop computer. Not an ideal situation but workable according to the flight crew and accomplished by cycling the doors and using the lead pilot for confirmation ensuring the entire load was gone. The base manager was also advised by the pilot in that later conversation that at FHU ATB they had success

using water loaded on to the aircraft at the end of shift and left sitting overnight as mitigation for the float issue.

The Albuquerque ATB underwent the swap from D75F to P100F while working the Rio Fire initial attack. 15,048 gallons of D75R was pumped prior to 8633 gallons of P100F. No issues were experienced or reported with either the ICL loading equipment or the USFS Micro Motion Meter on June 1st.

June 2nd, flight ops for the Rio Fire began at 1037 with the first load of the day going into T-YY, a P2V with no issues with the Micro Motion or the aircraft.

This changed on the second load of the day and was first noticed by the base radio operator/time keeper as she was resetting the MMM for that second load. It was discovered that the MMM would continue to show a 1lb per second flow rate after the pumps had been turned off and the loading hose valve closed. It was also discovered that the external loading lights on T-XX had stopped becoming illuminated as the aircraft was being loaded. The base mgr was notified and a procedure to accurately capture the load information from the MMM was discussed and decided upon that entailed zeroing the MMM prior to loading with a radio call and a radio call at completion to capture and record the data. This was particularly important for T-XX as the redundancy of the loading lights and the MMM was an added safety cross reference that had been lost. This procedure worked as discussed for the next five loads. During the time those five loads were provided the loading time per aircraft continued to climb from the normal 6-7 minutes upwards to 11 minutes at the seventh load of the day. This “anomaly” is still unexplained.

All aircraft were load and return until otherwise advised per the Air Attack at around 1130 hrs or prior to the forth aircraft loaded at ABQ ATB.

At 1329hrs T-XX was taxied into Pit #1 for its third load and the bases eighth load of the day. Approximately 100 gallons into the loading process the flow of retardant into T-XX stopped completely. The base manager discussed with the ICL personnel starting the internal combustion back-up motor and verifying whether the electric motor wasn't the reason for the inability to push the load to the

aircraft. This was accomplished and in fact verified the inability of either pump to move retardant. All system valves were checked and verified open where needed.

The base manager, the ICL mgr and the pilot of T-XX discussed trying removing the MMM from the system. This was agreed upon and done. During the time it took to remove the MMM from the system the pilot of T-XX and the base manager discussed the necessity of cleaning the floats in the tank in order to verify loading and ensuring the aircraft was not overloaded beyond the contracted 15% download total of 2550 gallons. The drop doors of the aircraft were opened and the mechanic went to work cleaning the floats with the wash down hose on the ramp.

During this time T-ZZ returned for another load and return and was bumped ahead of T-XX in the rotation in order to verify whether or not the removal of the MMM had temporarily solved the no-flow situation. T-ZZ was loaded with no issues in Pit #2. In fact the loading was accomplished in just over 4 minutes, which verified the system capability of 500 gallons a minute, and subsequently becomes an important factor in this event.

Following the loading of T-ZZ and then T-YY, the captain and mechanic of T-XX confirmed the drop doors were closed and they were ready to take a contract load. With the pilot in the aircraft monitoring the cockpit bar graph and the captain standing with the retardant loader and ramp manager the hose was connected and the pumps started. 6 minutes later the retardant spilled from the three starboard overflow vent and the pumps were immediately shut down. No external indicator lights were observed at any time during the loading. The tank was visually inspected externally and no damage of any kind was observed. The mechanic and flight crew confirmed the tank overflow system had operated as designed.

Discussion at the aircraft between the base manager, the ICL manager and the pilot turned to the tanks ability to be off-loaded from 3000 gallons back down to 2550 gallons. The ICL manager confirmed they had the ability to off-load the aircraft. The flight crew stated that they could provide the retardant crew the connection for offloading by threading the offload fittings in place if desired. This would have tied up one pit and several of the retardant crew for an unknown

amount of time. Opening the drop doors was briefly discussed and discarded as an option. This wasn't a desirable solution even in the short term as the result would put the loading of T-XX back at square one due to the MMM still being off line, the floats still needing cleaning, the ramp clean up involved prior to the aircraft taxiing through what would certainly be the extremely large retardant lake, potential for the neighboring aircraft not affiliated with the Tanker base taxiing through the lake as well as the Rio Fire shouldering the cost of the retardant (\$9,165) without any benefit and the added delay in returning the aircraft to the incident where it was still very much needed.

Ultimately as there was no easy way of knowing for certain how much retardant had been offloaded would have left uncertainty as to the actual weight or amount of retardant still remaining on the aircraft.

All these factors plus the knowledge that this aircraft and tank system was designed for and fully capable of launching with the load on board to do just that and return to the fire where it was needed and then recover at Durango tanker base (DRO ATB), roughly 50nm farther, where it was hoped that it could continue working the fire with the LC95A retardant stocked there.

The R3 Fixed wing specialist, and T-XX contract COR was informed of the situation by the base manager and approval given to contact the Airtanker Program Manager for the permission to launch.

At 1525, the base manager was contacted by an Aviation Management Specialist at Boise and after a discussion of the events permission was granted for T-XX to launch.

Following the departure of T-XX the ICL manager and base staff connected the MMM to the fire hydrant adjacent to the retardant containment pit and flushed the MMM until the residual color of the retardant ceased and returned the MMM to the system.

At approximately 1630 hrs T-ZZ was loaded with 18,206lbs/2071gals of P100F as measured by the MMM with no issues. The next three loads of retardant were loaded with absolutely no issues or the re-occurrence of the anomaly.

