

Aero-Flite, Inc. Q400 Hot Loading Risk Assessment Chart July 2022

Risk	Severity	Pre-Mitigation Probability	Potential Effect	Mitigation Technique	Post-Mitigation Outcome
Increased ramp congestion	Minor	Occasional	With an increase in activity around the airplane, increased potential for FOD damage, personnel tripping hazards.	Because the retardant loading and the engine running are on opposite sides of the aircraft, there should be no crossing of the centerline of the aircraft with any personnel. This procedure will eliminate congestion and help maximize situational awareness. The flight crew will request an agency ramp manager supervise the entire operation. The ramp manager has full authority to stop the operation at any time because of safety/training or insufficient personnel concerns. Minimum personnel should be in the Hot Loading area to minimize congestion and have better situational awareness.	Low
Increased need for proper choreography of ground parties and specific delineation of duties to account for dynamic nature of the operation	Minor	Occasional	Increased communication and coordination challenges that could break down hot loading procedure safety margins, effectiveness, and efficiency.	At the discretion of the Base Manager, airtankers may be required to shut down to train personnel unfamiliar with the aircraft or procedure of Hot Loading. Flight crews will review procedures and equipment specific to that aircraft with the retardant ramp personnel including the ramp manager. All Aero-Flite, Inc. flight crews and base personnel will be briefed and trained on Hot Loading the Q400 before any operations may proceed. The flight crew and associated AFI ground crew(s) will be briefed on this assessment before starting any Hot Loading operations. The flight crew will request an agency ramp manager supervise the entire operation. AFI flight crews will not proceed with any loading of retardant (hot load or with engines shut down) if there isn't a ramp manager present for the operation. Each airtanker crew will carry copies of written procedures and risk assessments for training purposes. No personnel are to be involved in activities on the side of the aircraft adjacent to the operating engine. This may require preplanning at bases with wing tip to wing tip loading pits. The ramp manager has full authority to stop the operation at any time because of safety/training or insufficient personnel concerns.	Low
Increased flight crew fatigue	Moderate	Occasional	An increased level of fatigue for the flight crew can result in degraded performance. Also, may have a potentially negative impact on CRM, ORM and decision-making.	Captain/PIC is final approval authority on whether to pursue hot loading if/when conditions make sense. All crew members have "knock it off authority" if hot loading will have a negative impact on crewmember's physiological state or mission readiness.	Low

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(Continued)**

Risk	Severity	Pre-Mitigation Probability	Potential Effect	Mitigation Technique	Post-Mitigation Outcome
Noise and heat from running engine	Minor	Occasional	Increased noise and potential for hearing loss and/or burns and lung damage from running engine at idle speed	Personal protective equipment (PPE)/hearing protection Because the retardant loading and the engine running are on opposite sides of the aircraft, there should be no crossing of the centerline of the aircraft with any personnel.	Low
Static Electricity while loading retardant	Minor	Remote	Shock, possible fire, and explosion	Retardant hose is already grounded by its own design	Low
Velocity of exhaust from running engine	Minor	Remote	FOD damage to personnel and/or other aircraft	SOP for clean ramp area and/or FOD walks to ensure free of debris	Low