



Q400-AT Loader Training



Training Summary

- Aircraft General
- Advanced Retardant Delivery System (A-RDS)
- Safe Zones and Danger Areas
- Loading Procedures
 - Cold Loading (APU On – Engines Off)
 - Hot Loading (Engines Running)
 - Loading While Fueling (APU On)
- Responsibilities
 - Loader Responsibilities
 - Flight Crew Responsibilities



Aircraft General

- Length – 108
- Wingspan – 97
- Height – 27





Advanced Retardant Delivery System

- Designed and built by Conair
- Capacity of 2640 US gallons
- Two compartments
 - Internal Manifold Ensures Simultaneous and Balanced Loading
- “Advanced” elements include:
 - Specific Gravity (Water vs Retardant)
 - Volume Loaded Selector (Reduced Tank Load)
- Able to Offload For Delivery of Water or Liquid Concentrate to Remote Stations



Advanced Retardant Delivery System

- 18 feet Long
- Two full-length doors
- FWD and AFT Floats for quantity indication and drop management
- Computer controlled
 - DC Powered
- Hydraulically actuated
 - Self-contained AC Hydraulic Pump (Not connected to AC Hyd System)





Tank Design





Loading Valve Location



Tank Loading Location





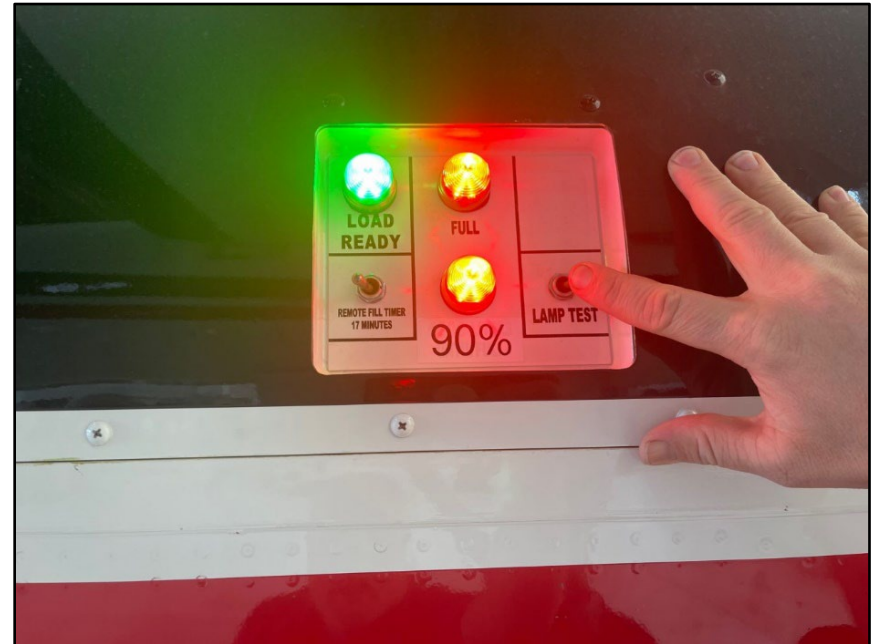
Loading Valve

- One on each side
- 3 inch Cam-Lock
- Located aft of tank centerline
- Tank is vented to allow air escape during loading, overload protection, and negative pressure during drops



Loading Panel

- One each side (6 feet above ground)
- TEST LAMPS to check proper bulb operation
- **264 GALLONS OR 90% UNTIL FULL** and **FULL** lights are controlled by Volume Loaded selector and float position, not by absolute tank volume.





Advanced Retardant Delivery System

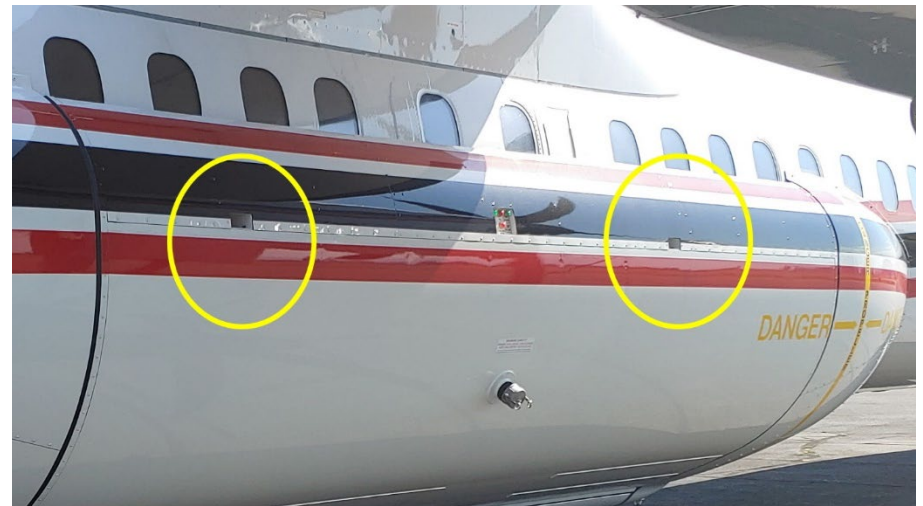
- **Flight Crew May Reduce Load of Tank:**
 - Operational Considerations
 - Pavement Bearing Limits
 - Performance Requirements
 - Engine-Out Performance
 - Obstacle Clearance
 - Customer Request
 - Reduced Loads for Liquid Concentrate Delivery





Tank Overflow Protection

- Two Each Side
- Remain Clear
- Overfill Protection and Tank Ventilation
- Based on Physical Volume of Tank – Not Nominal Load



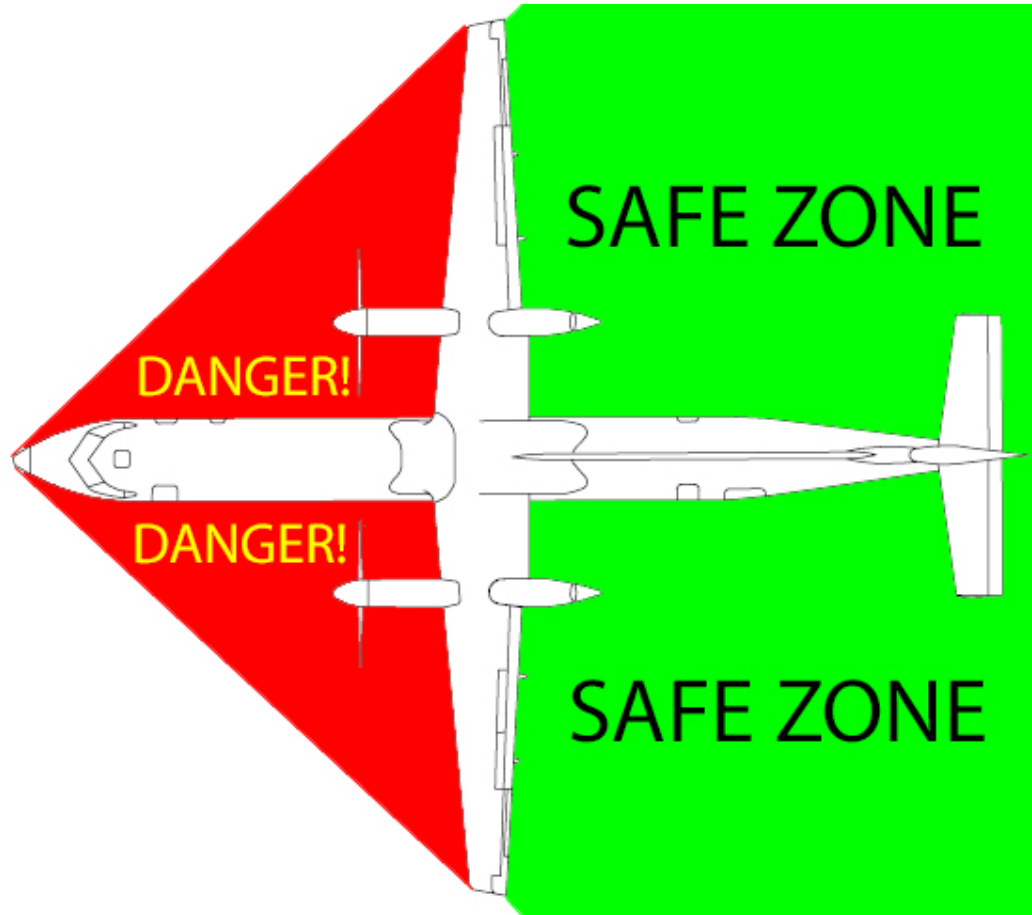
Safe Zones and Danger Areas



Safe Zones and Danger Areas



Hot Loading Zones



Danger Areas



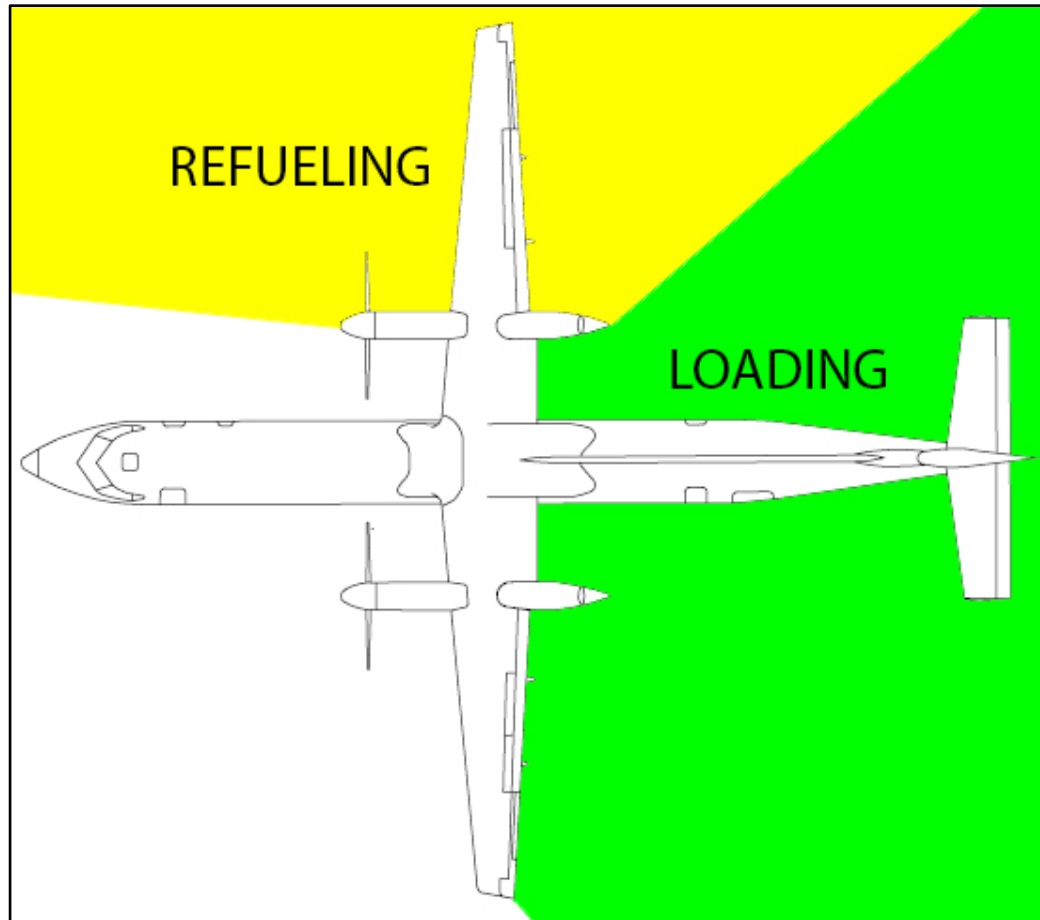
Danger Areas



Danger Areas



Loading While Fueling Zones



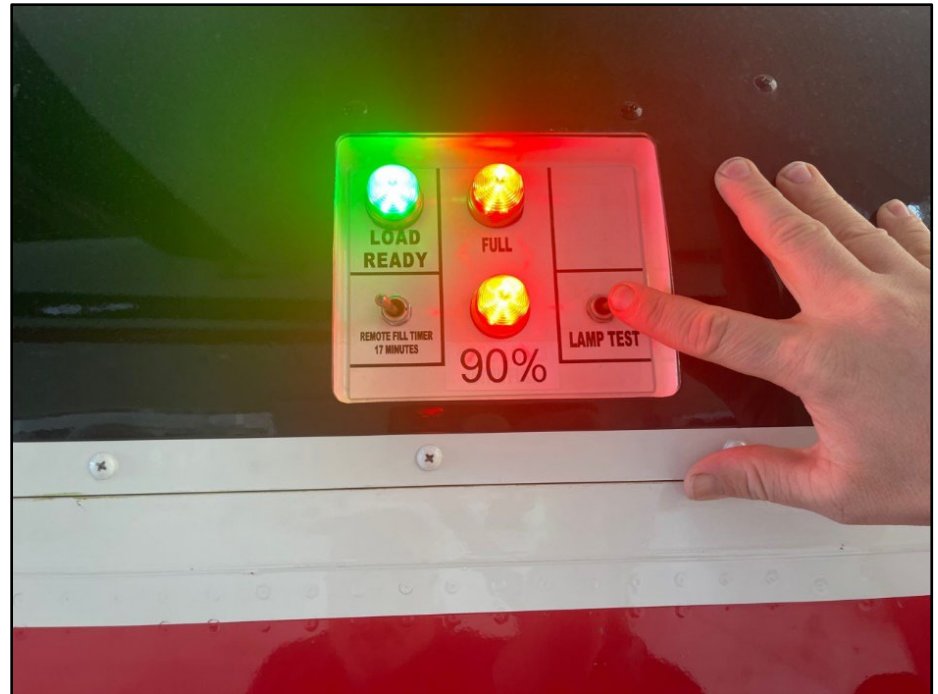
Danger Areas

- Do Not Approach Aircraft Until Propellers have Feathered
- Never Proceed Forward of Loading Valve and Panel
- Loading Panel to Propeller – 10 feet
- Remain Clear of Landing Gear Doors



Loading Procedures

1. Ensure Propellers have Feathered, and Aircraft is Stationary
2. Approach Via Safe Zone
 - Hose Behind Main Landing Gear
3. Ensure Proper Loading Light is Illuminated
4. Depress LAMP Test – All Lights MUST Illuminate



Loading Procedures

NOTE:

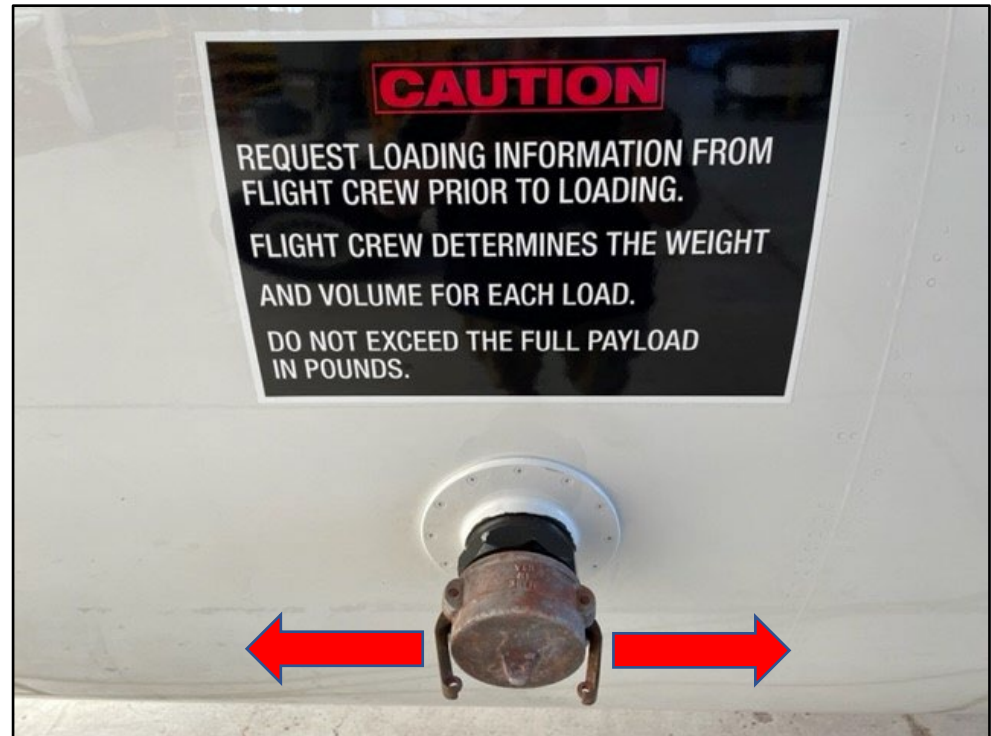
During Engine Starts, Loading Lights May Extinguish for 20 to 30 Seconds While Starting Engines.

Loader May Elect to Pause Loading Until Engines Are Started, Especially if Nearing Full Load.



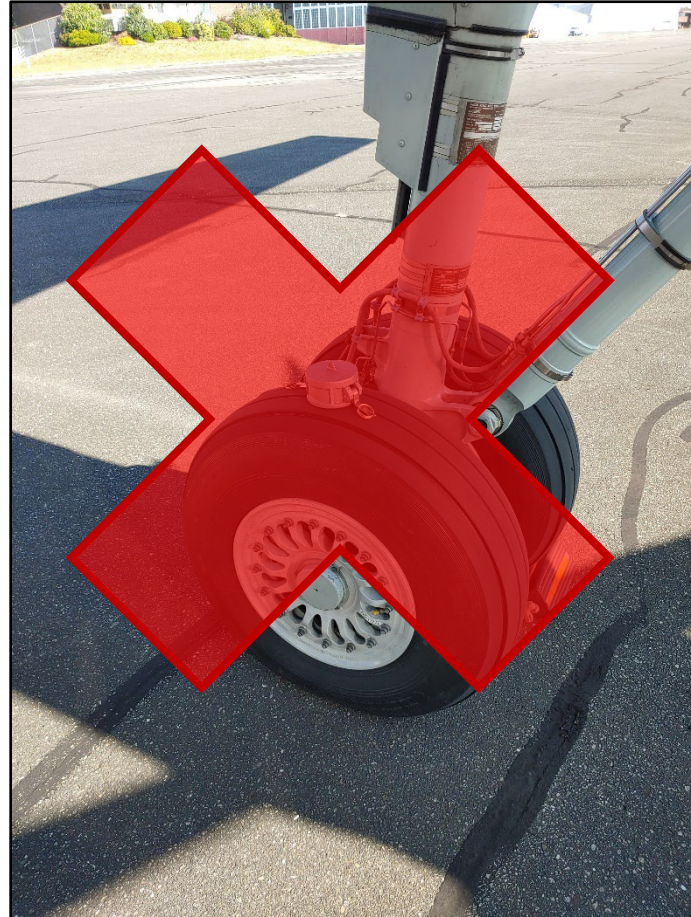
Loading Procedures

5. Remove Loading Cap



Loading Procedures

5. Remove Loading Cap
 - DO NOT Place Cap on Landing Gear Assembly or Tires



Loading Procedures

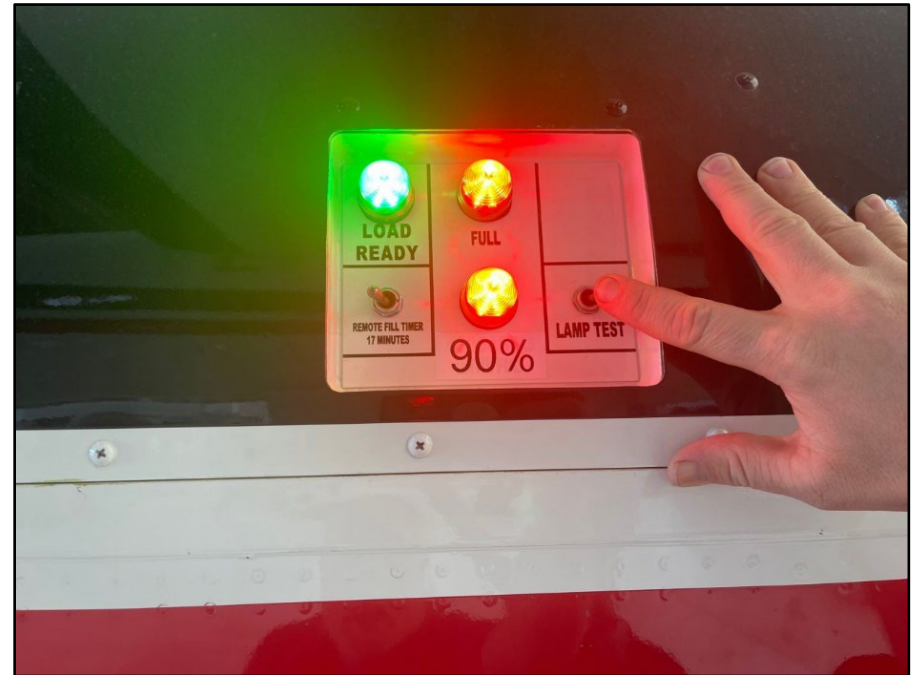
5. Remove Loading Cap
 - DO NOT Place Cap on Landing Gear Assembly or Tires
 - Place Cap on Ground in a Conspicuous Location Near Loading Port
6. Connect Hose and Commence Loading
7. Perform QA Checks (Refractometer Readings) as per Local Requirements



Loading Procedures

9. At **FULL** Light – Close Hose-Line Valve to Stop Loading

10. Disconnect Hose – Leave on Ground
 - Flight Crew Must Perform RDS Checks After Loading
 - May Cause Brief Erroneous Readings on Loading Panel
 - Full Light May Extinguish Temporarily
 - Retardant Lights May Cycle Back and Forth



Loading Procedures

9. At **FULL** Light – Close Hose-Line Valve to Stop Loading
10. Disconnect Hose – Leave on Ground
12. Replace Cap
13. Depart Via Safe Zone
 - Ensure Clear of Wingtip Remaining Behind Wing



CAP NOT SECURED

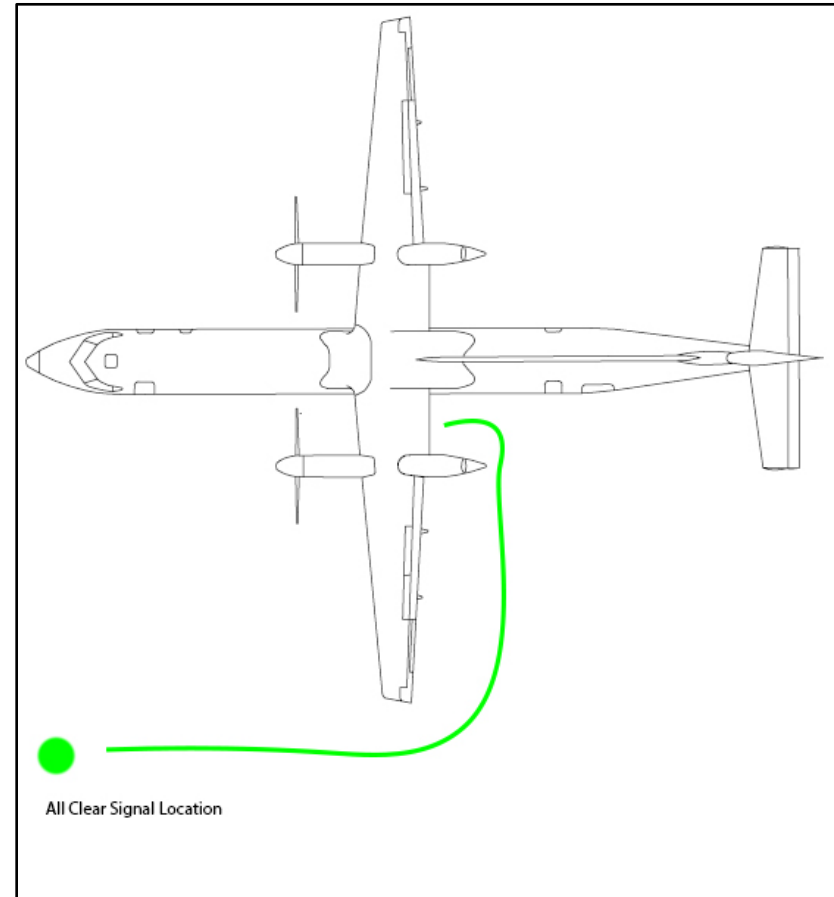


CAP SECURED



Loading Procedures

14. Move to Location Visible to Crew
 - Outboard of Wingtip
 - Parallel with Cockpit Windows
15. Signal “All Clear” to Flight Crew
 - Windows Do Not Open
 - Ensure Crew Acknowledges
16. Prepare Pit for Next Load After Aircraft Departs

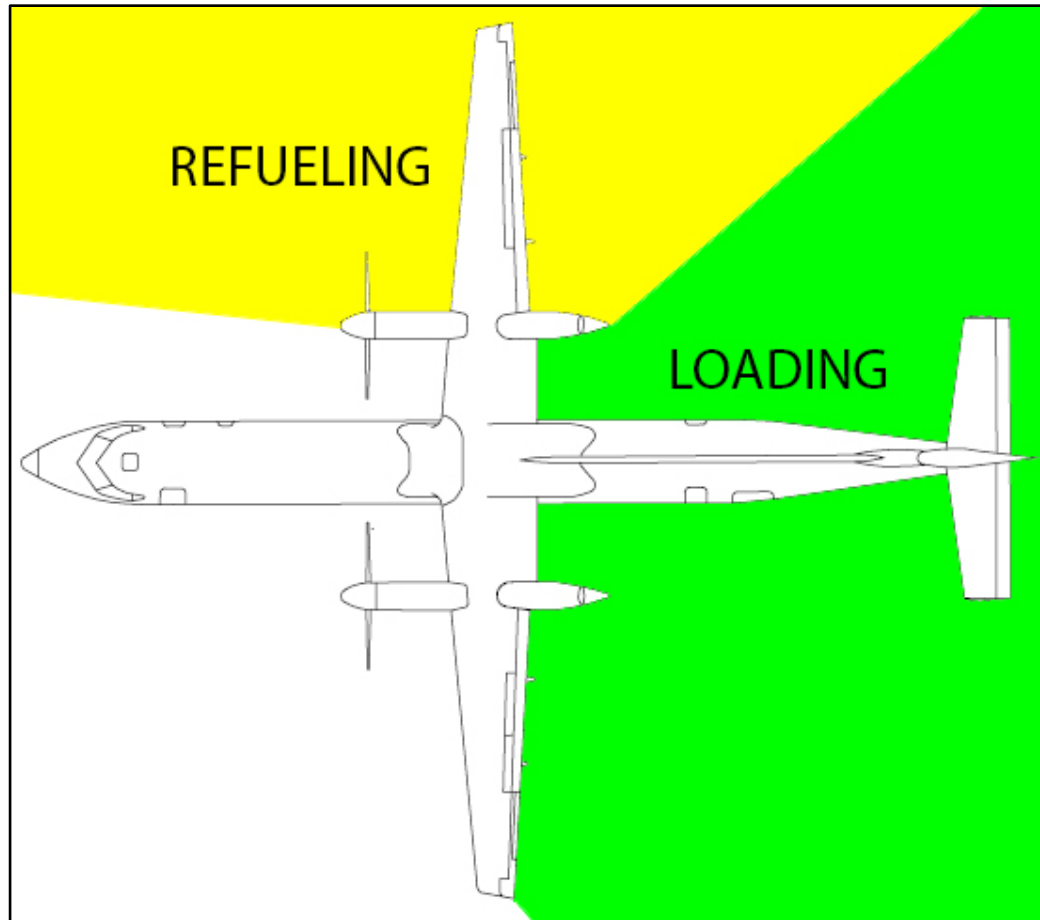


Loading While Refueling

- Crew Briefing and Supervision Required
- All Engines Shutdown – Aircraft Chocked
- Loading Hose Must Remain Behind Engine Nacelle At All Times
- If Loading and Fueling on Right Side
 - Fuel Truck Ahead of Wing
 - Hoses Clearly Separated
- Aircraft Must be Bonded to Fuel Truck
- Crew Member in Flight Deck with APU Running
- Accidental Spill of Fuel OR Retardant
 - Stop Fueling
 - Stop Loading
 - Remove to Safety
 - Follow HAZMAT Procedures
 - APU OFF



Loading While Refueling Safe Zones





WHEN IN DOUBT, STOP LOADING!

Should Any Individual Observe Any Abnormal or Questionable Situation
– Immediately Stop Loading to Investigate Cause and Resolve Prior to
Continuing



Crew Responsibilities

Loader Responsibilities

- Receive Proper Training
 - Static Load Training Before Hot Loading
- Utilize Proper PPE
- Remain In Safe Zones and Clear of Danger Areas At All Times
- Visual or Verbal Communication With Flight Crew Before and After Loading
- Request Clarification of Any Abnormalities or Unknown Issues

Flight Crew Responsibilities

- Conduct Loader Training Briefing
 - Carry Out and Supervise Static Load Training
- Advise Air Tanker Base if “Reduced Load” For Load Time and Volume Awareness
- Ensure Aircraft Is Properly Configured for Safe Loading
- Do Not Depart Loading Area Until “All Clear” is Received





Questions?

Contact

Bill Thomas	Director of Flight Operations	509-847-8374
Brian Yates	Asst. Director of Flight Operations	215-416-5598
Brock Hindman	Chief Pilot RJ85 program	406-698-0134

