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
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
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

CAUTION

REQUEST LOADING INFORMATION FROM FLIGHT CREW PRIOR TO LOADING.
FLIGHT CREW DETERMINES THE WEIGHT AND VOLUME FOR EACH LOAD.
DO NOT EXCEED THE FULL PAYLOAD IN POUNDS.
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
- 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?

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