

COLD WEATHER OPERATIONS

PILOT SPECIALTY COURSE SERIES

SUMMARY

Covers operations in cold weather conditions including hazards and factors, ground operation considerations, ground deicing and anti-icing procedures and equipment, and airborne issues including aerodynamic effects of icing. Regulatory requirements are emphasized, including the use of current Hold-Over Tables (HOT) and associated inspections.



TARGET POPULATION

Experienced Airline Pilots

Great for pilots requiring initial or recurrent training.



REGULATORY COMPLIANCE*

- ICAO / EASA / FAA / Transport Canada
- Maintains compliance with IOSA standards



DELIVERY MODE

100% online, self-guided



COURSE LENGTH

1 hour, 45 minutes

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LESSON 1: Hazards and Factors

- Ground icing conditions
- Critical surface contamination
- Time and fuel savings
- Icing related accidents
- Aerodynamic effects of contamination
- Effects on stall speed, stall Angle of Attack and stall warning systems
- Effects on pitch and lateral stability
- Contamination effects on aircraft performance
- Increases in aircraft weight and drag
- Icing classification: snow, freezing rain, hail
- Rime, mixed, clear ice
- Ground contamination
- Quiz

LESSON 2: Ground Operations

- Certification requirements
- Ground handling
- Aircraft systems
- Flight controls
- Engine starting
- Pitot-static systems
- Ground maneuvering
- Take-off performance
- Derated / Flex thrust
- Contaminated runways
- Hydroplaning
- Wet runways
- Quiz

LESSON 3: Ground De-Icing

- Regulatory requirements
- Critical Surface Inspection (CSI)
- Allowable frost
- Inspection considerations
- Dry snow
- Tactile inspections
- Contamination removal
- Freezing point depressants
- Lowest Operational Usable Temperature (LOUT)
- Types and uses of de-icing & anti-icing fluids
- De-icing / anti-icing procedures
- Hold Over Times (HOT)
- HOT tables for composite surfaces
- Use of Hold Over Tables (HOT)
- Post De-icing Inspection (PDI)
- HOT range
- Pre-take-off Contamination Inspection (PCI)
- Lapsed HOT
- Quiz

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LESSON 4: Airborne Operations

- Engine run-up
- Gear retraction
- In-flight icing conditions
- Anti-icing systems
- Freezing precipitation
- Aerodynamic effects of icing
- Roll upset
- Tail plane stall
- Operational envelope
- Fuel freeze
- Landing distance
- Runway excursions
- Runway Condition Assessments
- Contaminated Runways
- Crosswind limitations
- Cold temperature altimetry
- Reduced visibility
- Use of reverse thrust
- Flap retraction
- Quiz

* Operator is responsible for obtaining approval from the regulatory authority.

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