HUB OPERATIONS / AIRCRAFT OPERATING PROCEDURES

COLD WEATHER OPERATIONS — BOEING 777 / 787

Boeing 777-200/300 variants and Boeing 787-8/9/10. Aircraft and engine-specific procedures must be verified against the installed simulation model.

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1.0 GENERAL & FLEETWIDE APPLICABILITY

This supplement establishes AAVA Hub Operations expectations for Boeing 777 and 787 cold-weather operations. It applies to all AAVA divisions and operations regardless of flight number, callsign, airline livery or codeshare designation. Cold-weather precautions are condition-driven and apply year-round.

Authority hierarchy: the applicable aircraft variant, engine and installed add-on FCOM/QRH/AFM and performance limitations govern aircraft operation; the current FAA ground deicing/anti-icing guidance supplies the fluid/HOT reference framework; AAVA Ground Deice/Anti-Ice Procedures (HO-GD-001) and this supplement establish common simulation operating expectations. Never transfer a checklist setting or performance value between 737, 777 and 787 aircraft.

Review forecast and actual precipitation, temperature, frost potential, taxi delays, aircraft condition, runway contaminants, available deicing and the accuracy/limitations of the simulation add-on.

2.0 CLEAN AIRCRAFT CONCEPT & PRE-FLIGHT

Do not begin a takeoff with frost, snow, ice or slush on designated critical surfaces unless an aircraft-approved exception expressly permits it. The captain is responsible for confirming the aircraft is suitable for departure through the applicable inspection and ground-crew process.

- Inspect aircraft-defined critical surfaces: wings and leading edges, stabilizers, control surfaces, flap/slat areas, engine inlets/fans, probes, sensors and ports. Include landing-gear doors and APU inlets where applicable.
- Frost and clear ice may be difficult to see from the flight deck or cabin. Do not treat a window view as a universal substitute for an authorized external contamination check.
- After prolonged snowfall, treatment delays, changing precipitation or uncertain fluid condition, reassess clean-aircraft status and arrange inspection/re-treatment when required.

3.0 GROUND DEICING / ANTI-ICING & CREW COORDINATION

Use the published AAVA Ground Deice/Anti-Ice Procedures (HO-GD-001) and accompanying Crew Card (HO-CARD-001). Deicing removes contamination; anti-icing provides limited protection against renewed accumulation. Treatment must be compatible with the aircraft and fluid specifications.

- Before treatment: advise ground personnel of the aircraft type, contamination, expected departure delay and applicable deicing configuration; follow the precise FCOM for engines/APU, packs, slats/flaps and anti-ice selections.
- After treatment: obtain confirmation of the completed ground check, fluid type and product where known, concentration, the start time of the final application step, and vehicle/personnel clearance.
- Do not assume thickened Type II/III/IV fluids suit every aircraft or operating speed; fluid use, aerodynamic acceptance and lowest operational use temperature must be supported by the applicable guidance.

4.0 HOLDOVER TIME & PRE-TAKEOFF DECISIONS

Use the separately issued FAA Holdover Time Guidelines for Winter 2026–2027, including all applicable footnotes, fluid brand/concentration eligibility, outside air temperature and precipitation type/intensity. The HOT generally

begins at the start of the final anti-icing step, or the applicable one-step treatment. HOT is an estimate, not a guarantee of clean surfaces. Select the applicable FAA Type I surface-material table and all footnotes for the actual aircraft; do not assume 777 and 787 surfaces have identical HOT applicability.

If conditions change, a HOT or allowance limit is exceeded, contamination is suspected or an applicable table is unavailable, use the authorized pre-takeoff contamination inspection/re-treatment decision process in HO-GD-001 and current FAA guidance. Never use an expired time alone as clearance to depart; never assume an interior visual check meets the inspection standard.

Ice-pellet and other allowance-time provisions are separate from standard HOT and may be used only when the precise published eligibility criteria are met. Crews must not invent substitute values.

5.0 BOEING 777 — AIRCRAFT-SPECIFIC ICING CONSIDERATIONS

5.1 Engine anti-ice and prolonged icing

The 777 uses engine anti-ice to protect engine components as configured for its engine installation. Assess ground and in-flight icing based on the applicable FCOM temperature, moisture and ice-detection criteria; do not rely solely on visible airframe ice before applying engine protection. Engine anti-ice selection and AUTO capability vary by model/equipment.

Prolonged ground taxi in freezing conditions or prolonged low-thrust flight in icing may require specified ice-shedding engine run-ups. Use the actual 777 engine/FCOM triggers, thrust setting, duration and sequence. This AAVA document does not establish a universal 15-minute interval or N1 target.

5.2 Wing ice protection

On the 777, the wing anti-ice system is based on heated wing-leading-edge surfaces using bleed air. Automatic ice detection/anti-ice features and manual selections depend on aircraft configuration. Follow the model-specific FCOM for the flight phase and icing conditions. Account for anti-ice effects on engine thrust and performance when published.

6.0 BOEING 787 — AIRCRAFT-SPECIFIC ICING CONSIDERATIONS

6.1 Electric wing ice protection

The Boeing 787 uses electrically powered wing ice-protection heating elements, not a 777-style bleed-air wing anti-ice arrangement. Depending on installed configuration, automatic ice detection controls wing protection, with manual selection available under specified conditions. Follow the aircraft/add-on FCOM; do not copy 777 wing anti-ice switch logic or ground operation assumptions.

6.2 Engine and other anti-ice systems

787 engine anti-ice and wing anti-ice are separate systems. Engine protection may use engine bleed air while wing protection is electrical. Ground AUTO ice-detection behavior and system availability differ from in-flight behavior. Check the actual 787 procedure for conditions requiring manual engine anti-ice on the ground and for system limitations.

Automatic ice-protection logic and electrical load management depend on aircraft configuration and the installed simulator. Verify the displayed system status and use the 787 aircraft-specific operating instructions for ground and flight conditions; AUTO selection alone is not a substitute for required checks.

7.0 CONTAMINATED TAXIWAYS, RUNWAYS & FLIGHT PLANNING

Review runway condition codes, braking action and reported deposits; consider water/slush depth, wind, temperature, visibility, runway length, anti-skid/autobrake settings and any dispatch/landing performance changes. Use the correct 777 or 787 contaminated-runway performance data for takeoff and landing.

- Reduce taxi speed and use smooth steering/braking on slippery pavement. Avoid excessive nosewheel steering angles and high thrust where jet blast can contaminate other surfaces.
- Allow for changes in descent planning, required thrust, fuel use and maneuver margins when anti-ice is operating. Apply the flight-management/performance instructions for the selected aircraft.
- Do not adopt a blanket maximum-takeoff-thrust requirement, fixed reverse-thrust reduction speed, or universal rejected-takeoff technique for both families; apply the aircraft-specific procedures.

8.0 FLAPS, SLATS, ARRIVAL & POST-LANDING

The configuration for ground treatment and low-temperature taxi must follow the applicable 777 or 787 cold-weather supplementary procedure. Flap/slat positioning is not interchangeable between aircraft or treatment methods.

Following landing in snow, freezing rain, slush or contaminated taxiway conditions, do not retract potentially contaminated flaps/slats contrary to the aircraft-specific procedure. Where contamination is suspected, have the affected areas checked/cleared in accordance with the appropriate maintenance or simulation procedure before normal reconfiguration.

9.0 SIMULATION USE, LIMITATIONS & RELEASE CONTROL

This is a standardization document for AAVA flight simulation, not a substitute for current real-world aircraft operating manuals. If the installed simulator aircraft does not model ice accretion, deicing fluid, ice detectors or runway friction, crews must still apply AAVA flight-planning and decision-making expectations as realistically as the platform allows.

Aircraft and engine-specific checklist details are controlled by the applicable aircraft/add-on FCOM/QRH and are intentionally not reproduced here. Crew members must verify their installed variant and follow its published ice-protection configuration, deicing restrictions, engine ice-shedding procedures, and takeoff/landing performance calculations. If the requisite guidance or simulation support is unavailable, do not invent settings or performance allowances.

10.0 REFERENCE CONTROL

AAVA Hub Operations: Ground Deice/Anti-Ice Procedures (HO-GD-001); Deice/Anti-Ice Crew Card (HO-CARD-001); Winter Operations Reference Card (HO-CARD-002); FAA Holdover Time Guidelines, Winter 2026–2027 (distributed in The Training Corner).

FAA Notice 8900.784, Deicing Program for Winter 2026–2027:
https://www.faa.gov/regulations_policies/orders_notices/index.cfm/go/document.information/documentID/1045444

FAA Ground Deicing / Anti-Icing and HOT guidance:
https://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/deicing

Aircraft-specific Boeing 777 and 787 FCOM/QRH/FCTM, and installed simulator add-on documentation (crews must use the appropriate revision and configuration).