The Training Corner

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AIRBUS

Attachments

- AAVA Airbus A3XX Checklist
- Airbus QRH (Quick Reference Handbook)
- Fenix CFM QRH
- Fenix IAE QRH

AAVA Checklist FCOM

AIRBUS

A3XX Series Checklist

AAVA – AIRBUS A3XX FAMILY

NORMAL PROCEDURES

INTRODUCTION

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1. GENERAL

This section provides the procedural philosophy and standardized operating framework for the use of the **AAVA A3XX Normal Checklist**. The procedures contained herein reflect Airbus operational doctrine adapted for simulation use within **American Virtual Airlines (AAVA)**.
They are intended to support safe, consistent, and predictable aircraft operation across the A319/A320/A321 series.

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2. PURPOSE

The Normal Checklist ensures that all pilots adhere to a uniform set of actions and system verifications during the conduct of normal operations.
Its objectives are to:

- Confirm aircraft configuration is correct for each phase of flight.
- Reinforce Airbus "**NO BLUE**" ECAM philosophy.
- Support proper flight deck discipline, monitoring, and crew coordination.
- Maintain operational consistency across all AAVA Airbus flights.

The checklist is not a replacement for pilot flows or the pilot's knowledge of Airbus systems.
It is used **after flows**, serving as a verification tool.

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3. SCOPE

The checklist covers all phases of flight:

- **Pre-Flight**
- **Cockpit Preparation**
- **Before Start / After Start**
- **Taxi / Before Takeoff / Takeoff**

- **Climb / Cruise / Descent**
- **Before Landing / Landing / After Landing**
- **Parking / Securing the Aircraft**
- **Go-Around**

These procedures are based on Airbus methodology and may include simulation-adapted variations where appropriate.

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4. AAVA APPLICATION

The Normal Checklist shall be used by all AAVA Airbus pilots to ensure:

- Standardization across the fleet
- Alignment with AAVA operational expectations
- A common procedural baseline regardless of experience level
- Professionalism in cockpit management and system handling

Compliance is required for all flights conducted under AAVA policy.

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5. OPERATING PHILOSOPHY

Airbus procedures emphasize:

- **Automation Management** (Use the automation; monitor the automation)
- **Energy Awareness**
- **Flight Mode Awareness**
- **ECAM Discipline**
- **Task Sharing**
- **Workload Management**

The checklist reinforces these principles by ensuring aircraft configuration, annunciations, and system states match expected Airbus standards.

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6. CHECKLIST USE

The AAVA A3XX Normal Checklist is used in **challenge-and-response format** unless otherwise noted.
The checklist:

- Is performed at designated procedural gates (marked by phase-of-flight)
- Verifies completion of pilot flows
- Ensures essential items are set correctly
- Provides a consistent reference regardless of A3XX variant
- May be used by single-pilot simulation crews in a read-and-do manner where required

Abnormal or emergency conditions take precedence over the Normal Checklist.

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7. NOTES

- Items may be adapted for simulation practicality without altering Airbus intent.
- When in doubt, pilots should refer to the corresponding FCOM or QRH sections in AAVA manuals.
- The checklist may be revised by AAVA Operations as procedures, software, or aircraft packages evolve.

AIRBUS

Cold Weather Operations - AIRBUS

AAVA – FLIGHT OPERATIONS MANUAL

COLD WEATHER OPERATIONS

FOR FLIGHT SIMULATION USE ONLY

1.0 GENERAL

This section describes the operational standards for AAVA aircraft during cold weather operations. It includes ground deicing/anti-icing, in-flight icing protection, and contaminated-runway considerations.
Procedures are aligned with Airbus operational philosophy and tailored for simulation realism, safety, and standardization across the AAVA fleet.

Cold weather considerations include:
– OAT or TAT at or below 10°C
– Visible moisture (rain, snow, ice pellets, freezing fog)
– Frost, ice, or snow accumulation
– Operations on contaminated taxiways or runways

All cold-weather operations adhere to the **Clean Aircraft Concept**.

2.0 CLEAN AIRCRAFT CONCEPT

The aircraft **shall not depart** unless all critical surfaces are verified free of frost, ice, snow, or slush.
The **Captain** is responsible for confirming the aircraft is clean and safe for departure.

2.1 CRITICAL SURFACES

The following surfaces must be contamination-free:
– Wing leading edges and upper wing surfaces
– Horizontal stabilizer
– Vertical stabilizer
– Slats, flaps, and fairings
– Ailerons, elevators, and rudder
– Engine inlets, spinner, and fan blades
– Probes, ports, and sensors

2.2 CLEAN AIRCRAFT VERIFICATION

A Clean Aircraft Check is required when:
– Frozen precipitation continues after deicing/anti-icing
– Holdover time (HOT) is nearing expiration
– A delay occurs prior to takeoff
– Fluid effectiveness is uncertain

Verification methods:
– **Flight Deck Check** (within valid HOT)
– **Cabin Check** (HOT expired or heavy snowfall) via overwing windows, referencing the left wing root — the oldest application point

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3.0 GROUND DEICING / ANTI-ICING

3.1 OVERVIEW

Deicing removes contamination.
Anti-icing prevents new accumulation.
Both require clear coordination with Ground Deicing Personnel.

3.2 APPROVED FLUID TYPES

Type I Fluid
– Hot glycol mixture
– Used primarily for **deicing**
– Provides limited holdover time
– Smooth glossy film = effective
– Slush/roughness = fluid failure

Type IV Fluid
– Thickened, long-lasting anti-ice fluid
– Used after Type I for extended HOT
– Shears off naturally during takeoff roll
– No performance penalty for Airbus aircraft

3.3 HOLDOVER TIME (HOT)

HOT begins when the **final** anti-icing application starts.
HOT expires when the fluid can no longer prevent the accumulation of frost, ice, snow, or slush.

Precipitation **anticipated** at the time of application must be considered when determining HOT applicability.

3.4 ENGINE & FLAP CONFIGURATION

– Deicing with engines running requires a safe spray zone and coordination with Ground Personnel.
– Flaps should normally be set to the **planned takeoff configuration** prior to deicing.
– If flaps must remain in a contamination-removal configuration, ensure all contaminants are cleared before returning to a normal takeoff configuration.

CAUTION:
Do not retract flaps/slats if contamination remains in flap tracks or fairings.

4.0 IN-FLIGHT ICING OPERATIONS

4.1 WING ANTI-ICE (WAI)

Airbus WAI may be used in two ways:

Primary Method — Deicer Mode

Activate WAI when ice is visible on:
– Window frames
– Center windshield post
– Wiper arm areas
– Wing surfaces

Advantages:
– Produces cleanest airfoil
– Minimizes runback ice
– Reduces thrust and fuel penalties

Secondary Method — Anti-Icer Mode

Activate WAI **before** ice accumulation only during extended operations in **moderate to severe** icing.

General Notes

– WAI is normally not required below **–40°C SAT**
– At high altitudes, turn WAI **OFF** when no longer needed
– Prolonged icing operations with flaps extended is not recommended

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5.0 ENGINE ANTI-ICE (EAI)

Engine anti-ice shall be used when:
– OAT/TAT ≤ 10°C **and** visible moisture is present
– Ice is detected visually or by performance change
– Conditions conducive to icing exist (clouds, precipitation, fog, slush spray)

Indicators of possible engine icing:
– Fan vibration
– N1/N2 fluctuation
– Reduced thrust for given lever position
– Increased EGT

6.0 DESCENT IN ICING CONDITIONS

During descent or holding in **moderate to severe icing**, with thrust below stable parameters:

Every ~15 minutes:
– Increase one engine at a time to **at least the minimum required N1** to shed accumulated ice
– Maintain increased thrust for several seconds

This clears the spinner, fan blades, and inlet areas.

7.0 APPROACH, LANDING & CONTAMINATED RUNWAY OPERATIONS

7.1 FLAP RETRACTION AFTER LANDING (AIRBUS)

If ice accumulation is observed or suspected after landing:
– Do **not** retract directly from **CONF FULL** or **CONF 3** to **UP**
– Maintain at **CONF 1** until surfaces and tracks are confirmed clear of ice

When contamination is removed, the flaps may be retracted from **CONF 1 → UP**.

7.2 REVERSE THRUST USE

On contaminated or slippery runways:
– Apply reverse thrust as needed for a **safe stop**
– Below 60 kt, reduce reversers smoothly when conditions permit

7.3 TAKEOFF FROM CONTAMINATED RUNWAYS

– Use **maximum takeoff thrust**
– Within 5 minutes of takeoff (or combined with takeoff roll), conduct:
– Engine run-up to **at least the minimum N1 stabilization range** for several seconds
– Ensure engine stabilization prior to applying takeoff thrust
– During a rejected takeoff, rudder provides primary directional control to approximately 60 kt

7.4 SAFETY PRIORITY

During landing or a rejected takeoff on contaminated surfaces:
Stopping the aircraft is always the highest priority.

END OF SECTION

BOEING

Attachments

- AAVA BOEING 73x Checklist
- Boeing 73x QRH (Quick Reference Handbook)

AAVA Checklist FCOM

BOEING

Cold Weather Operations - Boeing

AAVA – FLIGHT OPERATIONS MANUAL

COLD WEATHER OPERATIONS – BOEING 737 SERIES (73x)

FOR FLIGHT SIMULATION USE ONLY

1.0 GENERAL

This section defines cold weather operational standards for all AAVA Boeing 737 series aircraft (including 737-700/800/900 variants). Procedures reflect Boeing FCOM/FCTM guidance and simulation-appropriate best practices.

Cold weather operations apply when any of the following exist:
– OAT/TAT at or below **10°C**
– Visible moisture (rain, snow, ice crystals, fog)
– Frost or ice present on aircraft surfaces
– Operations from **contaminated taxiways or runways**

The **Clean Aircraft Concept** applies at all times.

2.0 CLEAN AIRCRAFT CONCEPT

An aircraft **must not depart** unless all critical surfaces are free from contamination.

The **Captain** is responsible for confirming the aircraft is clean after deicing/anti-icing and prior to takeoff.

2.1 CRITICAL SURFACES

The following must be free of frost, ice, snow, or slush:

– Wing leading edges, upper wing surfaces
– Horizontal stabilizer, elevators
– Vertical stabilizer, rudder
– Slats, flaps, flap tracks
– Engine inlets, spinner, fan blades
– AoA vanes, pitot probes, static ports
– Flight controls and fairings

2.2 CLEAN AIRCRAFT VERIFICATION

A Clean Aircraft Check is required when:
– Frozen precipitation continues after deicing
– Holdover time is near expiration
– A delay occurs after deicing
– Fluid effectiveness is uncertain

Verification may be completed from:
– **Flight deck** (within HOT)
– **Cabin overwing windows** (HOT expired or heavy precipitation)

Left wing root is used as the reference point (first area sprayed, oldest fluid).

3.0 GROUND DEICING / ANTI-ICING

3.1 OVERVIEW

Deicing removes contamination.
Anti-icing protects against further accumulation.

Clear coordination between Flight Crew and Ground Deicing Personnel is required.

3.2 APPROVED FLUID TYPES

Type I Fluid

– Hot glycol mixture
– Used primarily for **deicing**
– Short holdover time
– Smooth glossy appearance indicates active protection

Type IV Fluid

– Thickened, long-lasting anti-ice fluid
– Applied after Type I
– Provides extended protection before takeoff
– Designed to shear off during takeoff roll

3.3 HOLDOVER TIME (HOT)

Holdover Time begins when the **final anti-icing** application starts.
HOT expires when the fluid can no longer prevent frozen contamination.

Precipitation **anticipated** at application time affects HOT selection.

3.4 ENGINE & AIRFRAME CONFIGURATION

Engines Running Deicing

– May be conducted only when the spray zone is safe
– Crew and Ground Team must coordinate carefully
– If APU is inoperative, crew may shut down the engine on the side being sprayed
– Perform crossbleed start after completion

Flaps During Deicing

The Boeing 737 uses **flap angles** (1°, 5°, 10°, 15°, 25°, 30°, 40°).

– For uniform protection, extend flaps to **15°** prior to deicing when contamination on flap areas exists
– If contamination is present on upper wing surfaces, extending to 15° does **not** risk damage
– If flaps remain at 15° for flap-area contamination removal, do **not** retract until contamination is removed

CAUTION:
Retracting flaps below **15°** with contamination present can cause flap track damage.

4.0 IN-FLIGHT ICING OPERATIONS

4.1 WING ANTI-ICE OPERATION

Boeing WAI may be used in two ways:

Primary Method — Deicer Mode

Activate WAI when ice is observed on:
– Window frames
– Wiper arms

– Side window posts
– Wing leading edges

This method:
– Produces clean leading edges
– Minimizes runback ice
– Reduces fuel and thrust penalties

Secondary Method — Anti-Icer Mode

Use WAI **before** ice accumulation during prolonged exposure in **moderate or severe icing**.

General Notes

– WAI is unnecessary below **–40°C SAT**
– Turn WAI **OFF** when clear of icing
– Avoid prolonged icing operation with flaps extended

5.0 ENGINE ANTI-ICE (EAI)

EAI must be used when:
– OAT/TAT ≤ 10°C **and** visible moisture exists
– Ice is detected or suspected
– Conditions conducive to icing exist

Indicators of engine icing:
– Fan vibration
– Increasing EGT at constant thrust
– N1/N2 instability
– Engine spool-up sluggishness

Use **ENGINE ANTI-ICE switches ON** as required.

6.0 DESCENT IN ICING CONDITIONS

When descending or holding in **moderate or severe icing** with low thrust:

Every ~15 minutes:
– Increase thrust on **each engine separately** to a minimum of **70–80% N1**
– Maintain increase for several seconds

This sheds ice from:
– Spinner
– Fan blades
– Inlet lips

7.0 APPROACH, LANDING & CONTAMINATED RUNWAY OPERATIONS

7.1 FLAP RETRACTION AFTER LANDING (BOEING 737)

If ice accumulation is present after landing:
– Do **not** retract flaps **below 15°**
– Maintain flaps at **15°** until ice is removed from:
– Flap surfaces
– Tracks
– Fairings

Once contamination is removed, flaps may be retracted to **UP**.

7.2 REVERSE THRUST USE

On slippery or contaminated runways:
– Use reverse thrust as required for a **safe stop**
– Reduce reverse thrust smoothly below **60 kt**, depending on deceleration rate

7.3 TAKEOFF FROM CONTAMINATED RUNWAYS

– Use **maximum takeoff thrust**
– Within 5 minutes of takeoff:
– Perform an **engine run-up to ~50% N1** for at least 5 seconds
– Confirm stable engine operation
– During a rejected takeoff, rudder provides primary directional control to approximately **60 kt**

7.4 SAFETY PRIORITY

During landing or a rejected takeoff in contamination:
Stopping the aircraft is always the highest priority.

Light Usage (All Equipment)

Please see the enclosed guidance and attachment for AAVA light usage.

Quick Reference Light Usage

AAVA – FLEET OPERATIONS MANUAL

NORMAL PROCEDURES

EXTERIOR LIGHT USAGE (ALL AIRCRAFT)

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1. GENERAL

This section provides the standard AAVA policy for the use of exterior aircraft lighting during all phases of ground and flight operations. These procedures ensure visibility, collision avoidance, and operational uniformity across the entire AAVA fleet.

The guidance in this section aligns with common airline industry practice and reflects the lighting logic illustrated in the AAVA *Light Usage Quick Reference* chart (Page 1)

LIGHT USAGE QUICK REF

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2. PURPOSE

The objectives of standardized AAVA light usage are to:

- Enhance situational awareness for crew, ground personnel, and other aircraft.
- Ensure a consistent, realistic operating standard across all AAVA aircraft types.
- Reduce the risk of glare or distraction to other crews.
- Optimize the use of lighting during low-visibility, night, and high-density operations.

These procedures apply to **all phases of ground and flight operations** unless safety considerations dictate otherwise.

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3. SCOPE

This procedure applies to the following exterior light groups:

- **Landing Lights** (fixed, retractable if equipped)

- **Runway Turnoff Lights**
- **Taxi Lights**
- **Logo Lights**
- **Strobe Lights**
- **Anti-Collision (Beacon) Lights**
- **Position (Navigation) Lights**
- **Wing Inspection Lights**
- **Wheel Well Lights** (when installed)

The Quick Reference chart should be used for detailed task-specific confirmation (Page 1)

LIGHT USAGE QUICK REF

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4. OPERATING PHILOSOPHY

AAVA lighting standards follow these principles:

- **Position Lights** ON at all times when aircraft is powered.
- **Anti-Collision (Beacon)** ON before engine start; OFF only after engine shutdown.
- **Strobes** ON when entering an active runway; OFF after clearing all runways.
- **Taxi/Turnoff/Landing Lights** used to enhance forward visibility or signal aircraft movement.
- **Logo Lights** ON during night operations or low visibility when aircraft is moving.
- **Wing & Wheel Well Lights** used for inspection or ground crew coordination only.

Lighting should not distract other crews or create unnecessary glare.

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5. LIGHT USAGE BY PHASE OF OPERATION

5.1 Pre-Taxi (Power On, At Stand)

- **Position Lights** … ON
- **Beacon** … ON prior to pushback/engine start
- **Logo Lights** … As required (typically ON at night)
- **Wing/Wheel Well Lights** … As needed for exterior checks or crew coordination

5.2 Taxi (Day)

(Based on the DAY row of the Quick Reference chart, Page 1)

- **Taxi Light** … ON
- **Turnoff Lights** … OFF
- **Landing Lights** … OFF
- **Strobe** … OFF
- **Beacon** … ON

- **Position Lights** … ON
- **Wing/Logo Lights** … As required

5.3 Taxi (Night)

(From NIGHT row in chart)

- **Taxi Light** … ON
- **Turnoff Lights** … AS REQUIRED
- **Landing Lights (fixed/retractable)** … AS REQUIRED to aid visibility
- **Logo Lights** … ON
- **Beacon** … ON
- **Position Lights** … ON
- **Wing/Wheel Well Lights** … ON after landing or for inspection only

5.4 Runway Crossing

(Per RWY CROSSING row)

- **Landing Lights** … ON
- **Turnoff Lights** … ON
- **Taxi Light** … ON
- **Strobes** … ON
- **Position/Beacon** … ON

5.5 Line-Up and Wait

- **Landing Lights** … OFF
- **Strobes** … ON
- **Taxi/Turnoff Lights** … ON
- **Beacon** … ON
- **Position Lights** … ON

5.6 Takeoff

(From TAKEOFF / LANDING row)

- **Landing Lights** … ON
- **Strobes** … ON
- **Turnoff Lights** … ON
- **Taxi Light** … OFF (per most aircraft SOPs)
- **Logo Lights** … ON as required
- **Anti-Collision** … ON
- **Position Lights** … ON

5.7 Climb (Flaps Retracted to FL100)

(From FLAPS UP TO FL100 row)

- **Landing Lights** … ON
- **Turnoff Lights** … ON
- **Logo Lights** … AS REQUIRED
- **Strobe/Beacon/Position** … ON
- **Wing Inspection Lights** … OFF

5.8 Above FL100

(From FL100 & ABOVE row)

- **Landing Lights** … OFF
- **Turnoff Lights** … OFF
- **Taxi Light** … OFF
- **Strobe** … ON
- **Beacon** … ON
- **Position Lights** … ON
- **Logo Lights** … OFF (unless required by visibility)

5.9 Approach / Landing

- **Landing Lights** … ON
- **Turnoff Lights** … ON
- **Strobe** … ON
- **Logo Lights** … ON (night/IMC)
- **Beacon/Position** … ON

5.10 After Landing

- **Landing Lights** … OFF
- **Turnoff Lights** … ON
- **Taxi Light** … ON
- **Strobes** … OFF after fully clear of all runways
- **Wing/Wheel Well Lights** … As required for walk-around or ground crew

5.11 Parking / Shutdown

- **Taxi/Turnoff Lights** … OFF
- **Logo Lights** … As required
- **Strobe** … OFF
- **Beacon** … OFF after engine shutdown
- **Position Lights** … OFF when aircraft is fully secured
- **Wing/Wheel Well Lights** … As required

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6. CAUTIONS & NOTES

(As shown in chart footnotes, Page 1)

LIGHT USAGE QUICK REF

C – Do not use landing or strobe lights on the ground if they are distracting to other pilots.
(NG) – Do not extend retractable landing lights when runway surfaces are contaminated or when clutter may cause damage.
N – If certain lights become distracting in adverse weather conditions, discontinue their use.
N’ – Wheel Well Lights ON for crew change or exterior inspection only.

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7. AAVA STANDARDIZATION NOTES

- Minor simulator variations between aircraft packages are acceptable as long as the above philosophy is followed.
- Any aircraft-specific differences should be aligned as closely as possible to this AAVA standard.
- Pilots should reference aircraft-specific FCOM/AFM sections for model-unique lighting panels or logic.