DCA23LA125

OPERATIONAL FACTORS/HUMAN PERFORMANCE

Group Chair's Factual Report – Attachment 8

American Airlines Flight Operations Manual [excerpts]

May 25, 2023

- a pilot of another certificate holder who meet **all** of the following requirements:
  — has the permission of the captain
  — is qualified on the aircraft
  — is authorized by American Airlines (see paragraph Technical or Training Evaluation)

Technical or Training Evaluation

On other than revenue flights, a qualified FAA, NTSB, or other airline pilot, may manipulate the controls for the purposes of technical or training evaluation. This authorization requires the captain's permission and approval from one of the following Company officials: Vice President, Flight Operations; or Managing Director, Flight Operations.

1g.5.4 Sterile Flightdeck Period

Source: 14 CFR 121.542; ISARP FLT 3.11.17 and 3.12.5

Definition. Critical phases of flight include all ground operations involving taxi (when the aircraft is in motion), takeoff and landing, and all other flight operations conducted below 10,000 feet AFL, except cruise flight.

Do <u>not</u> perform or engage in duties or activities during critical phases of flight that are <u>not</u> required for the safe operation of the aircraft or could distract other crewmembers from performing their duties.

Note: Do <u>not</u> vacate or switch flightdeck seats during the sterile periods.

Non-Essential Activities

Do <u>not</u> engage in non-essential activities such as Company communication for non-operational related purposes, passenger connections, pointing out sights of interest, completing paperwork, eating meals, and non-essential conversations between flightdeck or cabin crewmembers.

FMS/GFMS. For:

— critical phase of flight:

If an ATC clearance is received in a critical phase of flight, updating the FMS/ GFMS is <u>not</u> required if the heads-down data entry would distract from primary flight duties.

— input verification:

Both pilots will verify inputs to the FMS/GFMS which alter route, track, or altitude constraints prior to execution.

— crosschecking charted procedures:

Brief and compare charted procedures against FMS/GFMS data to ensure the aircraft will comply with the charted path and altitudes.

1g.5.7 Exterior Lights

Source: ISARP FLT 3.12.7

Operate aircraft exterior lights per the following guidelines *unless* otherwise noted in the aircraft manual.

Note: MEL requirements dictate light operations in the case of exterior light deferral.

At the captain's discretion, all exterior lights may be used for takeoff, approach, and crossing any runway. Ensure the aircraft is visible to other aircraft, particularly during low visibility conditions, when applying the following:

— red, green, and white **navigation** lights:

• night or dusk: on
• day: may be left off at the captain's discretion

— red **anti-collision** beacon/lights:

• ground operations: on when an engine is running or when the aircraft is about to be moved or is moving
• inflight: on at all times

1c.2.4   Clearance Readback

Acknowledge the following ATC clearances/instructions with the <u>full</u> flight number and a *verbatim* read back of the clearance:

— general:

  • initial IFR clearance and flight plan clearance limits/amendments
  • instructions to initiate contact on a specific radio frequency

— taxi:

  • taxi clearance and runway assignment
  • taxi clearance involving hold short clearances restricting runway/taxiway access
  • taxi clearance to cross any runway surface

— takeoff:

  • line up and wait clearance
  • takeoff clearance

— inflight:

  • clearances to change altitude
  • instructions to report out of or reaching a specific altitude
  • instructions and clearances specifying VOR radials, turns to headings, airspeeds, rates of descent, and runway information

— approach/landing:

  • clearance to land
  • instructions to reject a takeoff, abandon an approach, or execute a go-around

Advisory Information

ATC advisory information should be read back at the flightdeck crew's discretion.

1c.3 Dispatch

1c.3.1   General

Source: 14 CFR 121.99

The Company must be able to immediately communicate with the aircraft at all times. Flights will continuously monitor ACARS, SELCAL, and/or appropriate VHF/HF frequencies.

Note: VHF 121.5 does <u>not</u> transmit on SELCAL.

Listening Watch

Although ACARS is the primary means of maintaining the listening watch domestically, foreign ACARS coverage is limited. If ACARS is inoperative or in an area without ACARS coverage, establish a SELCAL or monitor the appropriate voice frequency.

1c.3.2   ACARS

Source: ISARP FLT 3.7.3

ACARS is the primary means of two-way communications between each aircraft and dispatch when ACARS coverage is available via either ACARS ground station or SATCOM. When away from the gate, ACARS reports:

- normal transmission of OOOI (Out, Off, On, In) times
- enroute position reports
- in-range reports
- aircraft systems performance data
- flight-to-IOC and IOC-to-flight communications
- SELCAL used to establish dispatcher-to-captain voice communication

ACARS is intended *only* for Company operational communication.

Note: Non-operational messages are <u>not</u> authorized.

Dispatch   **Home**

Verification

Inputs. Both the captain and first officer will verify the correct flight number, origin, and destination are entered *prior* to departure.

Received Messages. Verify all messages for the correct flight number, date, and aircraft nose number.

TPS and Load Closeout. Besides verifying these received messages (see above), compare the TPS and load closeout against documents obtained from operations for reasonableness (e.g., ZFW, TOGW, V speeds). In addition, compare all subsequent TPS and/or load closeout messages against previously received messages.

Inoperative ACARS. In the event of an inoperative ACARS, refer to the respective aircraft MEL and appropriate division information.

1c.3.3   Delay Report

Report delays in minutes, via ACARS or by voice when ACARS is <u>not</u> functioning. Refer to the aircraft operating manual for delay codes. Reporting the reason for a delay is essential for identifying delay problem areas. It is the captain's responsibility to judge the number of minutes to charge to each delay code.

1c.3.4   VHF Radio and Telephone Communications

VHF Radio

When contacting the controlling dispatcher via radio on the dispatch direct VHF network, state the dispatch desk number (listed on the flight plan), flight number, and VHF frequency.

Example: "American dispatch, desk 17, American one eight five on one three zero decimal two five."

Transmitting the dispatch desk number and frequency eliminates confusion and expedites a response. For further information regarding the dispatch direct VHF network, see paragraph 7c.1.6 Dispatch Direct VHF Network.

Company to Flight Crew

Flight Operations Bulletins (FOBs)

The flight operations bulletin is a communication avenue to consolidate general flight operations information and is located in Comply365 in the Flight Operations Bulletin (FOB) collection.

Fleet-Specific Bulletins

The fleet-specific bulletin is a communication avenue to consolidate fleet-specific information and is located in Comply365 in the fleet (e.g., A32F, B737)> Fleet Specific Ops> Fleet Bulletins collection.

1c.7.3   Operational Alert

When disruptive events (such as weather, security-related situations, etc.) affect the operations of the airline, operational messages may be sent via CCI.

Priorities/Authorization

CCI messages are categorized in three priorities: read & acknowledge, medium, and low. CCIs follow similar logic to warnings, cautions, and notes, respectively. Priority, action, content, and authorization to issue a CCI message are as follows:

Content:	Authorized By:
Read & Acknowledge Priority: Requires pilot acknowledgment – flight critical:	
— safety and/or security threat	SVP Flight Operations & IOC MD Flight Operations Technical MD Flight Line Operations
Medium Priority: Requires timely action – not flight critical:	
— may cause operational delays — procedural reminders	flight operations management
Low Priority: Requires routine action – not flight critical:	
— information only	flight operations administration
— End —	

Company to Flight Crew

Procedure

When a read & acknowledge message is issued, a pop-up window will appear in mobileCCI. The pop-up window will restrict the use of all other CCI functions (to include signing fit for duty) *until* the crewmember reads and acknowledges the message.

Note: Read & acknowledge messages do <u>not</u> prevent crewmembers from using alternate sign-in procedures or restrict access to DECS.

Connectivity. Cellular or WiFi connectivity is required to receive read & acknowledge messages in CCI.

During Ground Movement. If a read & acknowledge message is received during ground movement, stopping the aircraft to acknowledge the message may be necessary.

Dangerous Goods/Hazardous Materials

1d.1.1 Dangerous Goods Definition and Classification

Dangerous goods (DGs) are articles or substances capable of posing a potential risk to health, safety, or property when transported by air. The terms dangerous goods (DGs), hazardous materials (HAZMATs), and restricted articles (RAs) are synonymous and interchangeable.

1d.1.2 Responsibilities

Ground Personnel

Ground personnel are responsible for accepting, inspecting, loading, and notifying the captain/IATA of dangerous goods. Adherence to US DOT and ICAO restrictions by Company cargo handlers has been greatly enhanced by the AUTONOTOC system which uses computer-assisted safeguards, beginning with cargo acceptance, continuing through loading and culminating in notification of the captain with hard copy NOTOC print-outs.

Captain

The dangerous goods information in this manual is <u>not</u> intended to transfer any of the regulatory compliance responsibility to the captain. It is provided as quick reference material in the event that a captain questions the acceptability of a particular shipment.

Authority. The captain has the authority reject any dangerous goods shipment when safety of flight is in question due to incorrect or incomplete paperwork, improper packaging, limitations on the maximum quantity or weight, the shipment is a forbidden item or a shipment is damaged. Contact the following:

— Pilot Dangerous Goods Hotline: (817) 967-7378

— Cargo Operations Control (COC): (817) 967-7380 (option 2)

> **Note:** COC daily hours of operation are 0430-2359 CST. Contact the dispatcher between 0001-0429 CST or if immediate assistance is required.

Training

Source: 14 CFR Part 121

All pilots receive initial and recurrent hazardous materials training. See also paragraph Hazardous Materials Training Records.

3d.2 Notifications

3d.2.1 Notification to Captain (NOTOC)

Source: 49 CFR 175.33

The notification to captain (NOTOC) requirement is satisfied by presenting a computer-generated AUTONOTOC form or a preprinted OK-333 form. The NOTOC must be readily available to the captain *during flight* in the event of an incident or emergency where the dangerous goods shipment may become a safety factor.

See also paragraph 14d.1.1 Crew Change.

3d.2.2 General

See also paragraphs 26.4.3 NOTOC Forms for a detailed description of the AUTONOTOC form and 26.4.4 OK-333 Backup DG Notification for the preprinted backup form.

ACARS Message

No later than 30 minutes prior to departure, if dangerous goods are planned, flightdeck crewmembers *may* receive an ACARS message to expect a NOTOC.

> NOTOC NOTIFICATION
>
> FLIGHTNUMBER DEP-ARR
>
> CARGO DANGEROUS GOODS
>
> EXPECT NOTOC
>
> AUTONOTOC MSG
>
> END

This message is <u>not</u> mandatory for gate departure or takeoff; however, if this message is received but a NOTOC is <u>not</u> received, see paragraph Expect NOTOC Message in section 4d.1.1 Load Closeout.

4g.1 General

Airport surface operations require strict attention and constant situational awareness. Sound flightdeck operating discipline enables the flight crewmembers to properly plan taxi operations with the same level of attention given to planning other phases of flight. For specific phase-of-flight procedures, refer to the appropriate FOM phase of flight chapters and the aircraft operating manual.

4g.1.1 Planning

Anticipate airport surface movements by performing a pre-taxi review based on ATIS and previous experience at each airport. Review the expected taxi route on the airport diagram.

Aircraft Size Limits

See glossary term Airport/Aerodrome Aircraft Groups and Codes for airports that have ramp and taxiway aircraft size limits.

Bridges/Overpasses

Avoid stopping on bridges/overpasses. If a ground evacuation is required while stopped on a bridge/overpass, passengers may <u>not</u> be able to safely evacuate, and emergency vehicles may <u>not</u> be able to easily access the aircraft.

4g.1.2 Control

The captain will taxi the aircraft. The flight crew's primary task is to *safely* taxi the aircraft and the flight crew's attention should <u>not</u> be diverted from this task.

 <mark>**Caution:**</mark> Do <u>not</u> taxi so close behind other aircraft as to ingest foreign objects.

General   **Home**

4g.1.3   Communication

See paragraphs 1c.2.4 Clearance Readback for clearances requiring a read back and
4c.2.1 General for more information.

Coordination

Verbally coordinate all taxi instructions with other flightdeck crewmembers to ensure
common understanding. If in disagreement, seek clarification from ATC.

Do <u>not</u> taxi until a taxi clearance is received **and** *both* the captain and first officer
verbally coordinate and agree on the runway assigned, any restrictions, and taxi route.

Note: Ensure *received* (not expected/briefed) taxi route is followed.

4g.1.4   Monitoring

Source: ISARP FLT 3.12.7

Flight crewmembers should use a *continuous loop* process for actively monitoring and
updating their progress and location during taxi. This includes knowing the aircraft's
present location and mentally calculating the next location on the taxi route that will
require increased attention. Consider writing down the taxiing instructions and while
taxiing:

- do <u>not</u> allow other flightdeck duties and non-ATC communications to divert
  attention from the safe movement of the aircraft, especially at critical times, such
  as runway crossings and transitioning through complex taxiway intersections
- maintain sterile flightdeck when the aircraft is moving

Note: If uncertain as to location on the airport, taxi clear of any runway, stop the
aircraft, advise the tower.

General

Both pilots should:

— have the airport diagram readily available and reference it as necessary to ensure the taxi clearance is followed correctly (see paragraph Taxi-Out for iPad EFB guidance)

First officer: advise the captain when accomplishing non-monitoring tasks (e.g., FMS programming, ACARS, company radio calls, etc.)

— monitor the appropriate tower frequency when number one to cross an active runway

— be *heads up* to visually monitor the aircraft's progress at critical locations on the airport (hold short, crossing runways, etc.)

When approaching an entrance to an active runway, both pilots will ensure compliance with hold short or crossing clearance by discontinuing non-monitoring tasks (e.g., FMS programming, ACARS, company radio calls, etc.)

4g.1.5   Low Visibility

Source: ISARP FLT 3.12.7

See also sections 4g.2 SMGCS and 4g.5 Airport Markings/Lighting.

Exterior Lights

At night or during periods of reduced visibility, use exterior lights (except landing lights) as appropriate to enhance aircraft visibility. See also paragraph 1g.5.7 Exterior Lights.

Accomplishing Checklists

During low visibility taxi operations, conduct checklists *only* when the aircraft is stopped or taxiing straight ahead without complex intersections.

Runway Entrance Lights (RELs)

The REL system is composed of flush mounted, in-pavement, unidirectional fixtures that are parallel to and focused along the taxiway centerline and directed toward the pilot at the hold line. An array of REL lights include the first light at the hold line followed by a series of evenly spaced lights to the runway edge; one additional light at the runway centerline is in line with the last two lights before the runway edge.

When activated, the red lights indicate there is either high speed traffic on the runway or an aircraft on final approach within the activation area.
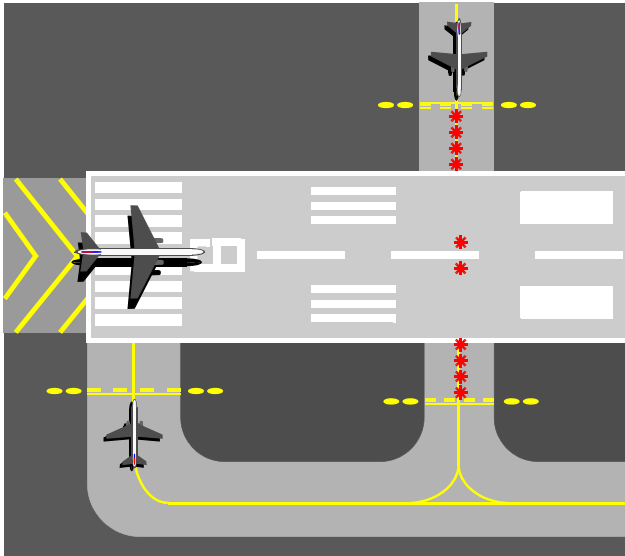
Operating Characteristics.

Departing Aircraft

When a departing aircraft reaches 30 knots, all taxiway intersections with REL arrays along the runway ahead of the aircraft will illuminate. As the aircraft approaches an REL equipped taxiway intersection, the lights at that intersection extinguish approximately 3 to 4 seconds before the aircraft reaches it. This allows controllers to apply *anticipated separation* to permit ATC to move traffic more expeditiously without compromising safety. After the aircraft is declared *airborne* by the system, all REL lights associated with this runway will extinguish.

Arriving Aircraft

When an aircraft on final approach is approximately 1 mile from the runway threshold, all sets of REL light arrays along the runway illuminate. The distance is adjustable and can be configured for specific operations at particular airports. Lights extinguish at each equipped taxiway intersection approximately 3 to 4 seconds before the aircraft reaches it to apply anticipated separation until the aircraft has slowed to approximately 80 knots (site adjustable parameter). Below 80 knots, all arrays that are not within 30 seconds of the aircraft's forward path are extinguished. Once the arriving aircraft slows to approximately 34 knots (site adjustable parameter), it is declared to be in a taxi state, and all lights extinguish.

Pilot Observations and Actions.

Observations

A pilot at or approaching the hold line to a runway will observe REL illumination and extinguishing in reaction to an aircraft or vehicle operating on the runway, or an arriving aircraft operating less than 1 mile from the runway threshold.

Actions

Whenever a pilot observes the red lights of the REL, the pilot will stop/remain stopped at the hold line and contact ATC for resolution if the clearance is in conflict with the lights. Should pilots note illuminated lights under circumstances when remaining clear of the runway is impractical for safety reasons (for example, aircraft is already on the runway), the crew should proceed according to their best judgment while understanding the illuminated lights indicate the runway is unsafe to enter or cross. Contact ATC at the earliest possible opportunity.

25.2.2 Authorized Securing Systems/Location

Securing Systems

Each fleet has a specified securing device and location.

Table 25.1   iPad EFB Securing Device

Aircraft[1]	Securing Device Names
Primary	
A319/321	Constant Friction Mount or Deck Mount
A320	Deck Mount
B737 and B787	FlyPad Tray
B777	Velcro Mount
Alternate	
B737	RAM Mount
— End —	

[1.]Refer to aircraft operating manual for more information.

Note: Modifications of approved iPad EFB mounts are not acceptable

Locations

The FAA-approved locations do not interfere with flight control movement, emergency egress, or oxygen deployment. Refer to the aircraft operating manual for installation locations and procedures.

Storage. If the securing device is removed, ensure the mount is not damaged during removal/re-installation.

When Not Installed. The securing device should be secured in the storage area designated in the aircraft operating manual.

25.5.2 Operations During Flight

General

iPad EFBs must have cellular function turned off while airborne. Cellular may be used during taxi. WiFi and bluetooth are allowed in all phases of flight.

Securing Device. The iPad EFB must be in the securing device; however, it may be temporarily held in hand by the PM (e.g., during briefings, etc.) during critical phases of flight.

Connectivity. iPad EFB connectivity usage is restricted to gathering operational flight data needed to supplement situational awareness.

Ownship. The use of ownship position display on electronic charts is authorized to supplement situational awareness in all phases of flight. The flightcrew's reference for maneuvering the aircraft in the air is the installed primary flight and navigational displays.

Preflight

Ensure sufficient battery power for the upcoming segment. An approved flightdeck power outlet or approved spare battery meet this requirement.

For fleets that do <u>not</u> have an approved outlet or if the approved power outlet is inoperable, ensure the iPad internal battery is sufficient for the upcoming flight segment (rounded up to the next hour), plus 1 hour. Each hour equals 10% of battery charge. For example: a flight for 3.5 hours would need a minimum battery charge of 50%. The captain or designated representative may check out a spare battery from base operations if the power requirement can<u>not</u> be met.

See paragraph 3f.2.1 Electronic Version.

Taxi-Out

Airport Info charts must be readily available to ensure the taxi clearance is followed correctly. Temporarily selecting another chart (e.g. ##-7, SID, etc.) is authorized providing:

— one pilot is displaying the airport diagram

— current position is known

— aircraft is <u>not</u> taxiing directly toward or across an active runway

Ownship.

> **Note:** Do <u>not</u> use JeppFD-Pro ownship position as a primary position source, especially during low visibility taxi operations.

Taxiway signs and markings outside the aircraft remain the primary reference for maneuvering the aircraft. The use of ownship position display on taxi charts is authorized to supplement situational awareness.

Cellular. Turn off the iPad EFB cellular antenna *prior* to takeoff.

Prior to Takeoff and Enroute

To ensure compliance:

- view the terminal charts and enroute map as necessary
- monitor battery power and recharge if necessary

Battery Life. To prolong battery life, if the iPad EFB is <u>not</u>:

— in use: place it in sleep mode by pressing the sleep/wake button once

— needed: turn it off

PEDs. At the captain's discretion, a flightdeck jumpseat occupant may use personal electronic devices during non-critical phases of flight by complying with the same policies and procedures as passengers seated in the cabin. Use of personal extension cords and/or charging personal PEDs using outlets on the flightdeck is **prohibited** due to risk of fire and/or thermal runaway. See also paragraph 1p.4.1 Personal Electronic Devices (PEDs)

Storing. The iPad EFB and/or RAM Mount may be stored in a secure location such as the aircraft storage bin or pilot's kitbag. If left in place, periodically check the securing device.

Prior to Top of Descent

If <u>not</u> previously accomplished, select the Jeppesen charts for arrival at the destination and alternate (if applicable). Ensure the securing device is secure and place the iPad EFB in the securing device.