
Subject: Automation Policy Changes

Introduction

In 2015, Flight Operations commissioned two self-assessment working groups to gauge the state of our operations. From these assessments, the Line Operational Safety Audit (LOSA) and the Flight Path Management Steering Committee (FPMSC), recommendations were provided to improve safety and update policy and procedures.

Flight Standards and Fleet Training discussed these recommendations and will implement the following policy change to the Volume 1. These changes will be incorporated in the next Volume 1 revision.

Automation Guidelines

Currently, the Automation Guidelines listed in Volume 1, NP.12 states the following: *All pilot-induced lateral and vertical mode changes should be verbalized by the PF and verified by both pilots on the FMA.*

The guidelines will be expanded to also include:

- pilot-induced speed mode changes, and
- a requirement for the PM to verbally confirm the FMA status.

Volume 1, Automation Guidelines (Revision bar denotes the change)

Automation Guidelines

The automation policy is described in the FOM. The following guidelines are used to achieve these policies:

- Briefing should include any uncommon levels of automation and related monitoring expectations.
- VNAV should be used when available and appropriate during climb, cruise, and initial descent.
- Both pilots are responsible for comparing the performance of the autoflight system with the desired flight path of the aircraft.
- All pilot-induced lateral, vertical, and speed mode changes should be verbalized by the PF and, after referencing the FMA, the PM should verbally confirm the appropriate FMA status.
- Both pilots are responsible for monitoring the FMA and/or MCP whenever any component of the autoflight system is engaged and a flight mode change occurs.

Approach Standard Callout and Landing Procedure Tables - The change to the Automation Guidelines eliminated the need for standard callouts listed in the tables below. When the PF selects and verbalizes LOC, the PM should verbally verify LOC ARMED, LOC ACTIVE, or whatever is actually displayed. The All Approaches table will be eliminated, including the callout “APPROACHING INBOUND COURSE”, as well as the callouts listed in the Landing procedure table.

777 Operations Manual

Normal Procedures -
Operational Procedures

ALL APPROACHES (ILS and Non-ILS)		
Condition	Crew Member	Callout
When cleared to intercept only the lateral path After verifying proper FMA indications	PM PF	“APPROACHING INBOUND COURSE” “___ ARMED” or “___ ACTIVE” (Respond with the appropriate lateral approach mode)
When subsequently cleared for the vertical path After verifying proper FMA indications	PM PF	“APPROACHING VERTICAL PATH” “___ ARMED” or “___ ACTIVE” (Respond with the appropriate vertical approach mode)
When cleared for both the lateral and vertical paths concurrently After verifying proper FMA indications	PM PF	“APPROACHING INBOUND COURSE” (Respond with the appropriate lateral and vertical approach modes concurrently) “(lateral mode)” “ARMED” or “ACTIVE” and “(vertical mode)” “ARMED” or “ACTIVE” OR “(lateral mode) and (vertical mode)” “ARMED” (or “ACTIVE”) (when both modes have the same status)

Normal Procedures -
Amplified Procedures**Landing Procedure**

Pilot Flying	Pilot Monitoring
When ready to configure the aircraft for landing:	
Call “FLAPS ____” according to the flap extension schedule.	Set the FLAP lever as directed.
When cleared for the approach:	
WARNING: When using LNAV to intercept the final approach course, LNAV might parallel the localizer without capturing it. The airplane can then descend on the glide slope with the localizer not captured.	
• Manage the approach in accordance with the appropriate Approach Guide and Automation Guidelines.	
When cleared to intercept only the lateral path, call: “APPROACHING INBOUND COURSE”	
After verifying proper FMA lateral mode indications, call: “ ____ ARMED” or “ ____ ACTIVE”	
When subsequently cleared for the vertical path: “APPROACHING VERTICAL PATH”	
After verifying proper FMA vertical mode indications, call: “ ____ ARMED” or “ ____ ACTIVE”	
Note: When cleared for both the lateral and vertical paths concurrently, the PF may respond with the appropriate lateral and vertical approach modes concurrently.	
Call “GEAR DOWN, FLAPS 20.”	Set the landing gear lever to DN. Set the FLAP lever as directed.
Set the speed brake lever to ARMED.	

Upcoming Normal Checklist Changes

Delta is making two significant changes to the Normal Checklist for all fleets. While most fleets with paper checklists will be revised in January, the 777 ECL will be revised in the April-May timeframe. The two changes described below will be effective when the ECL is revised.

Runway Position (to verify performance) - Accomplish when called for on the checklist. Runway position will become a stand-alone checklist item to help crews trap and correct a discrepancy between the actual aircraft position and the required runway position.

Checklist response: Using an outside visual reference, both pilots will state the actual runway position with the runway position displayed in the MCDU.

Takeoff Briefing (to verify flight path) - Accomplish when in the vicinity of the takeoff runway prior to the Before Takeoff checklist. The runway, departure, first fix and takeoff briefing items have been combined.

Procedure: The Pilot Flying (PF) will verbalize the runway, departure, first fix, which heading/lateral mode will be used and any altitude and /or speed constraints. The Pilot Monitoring (PM) will verify, but is not required to verbalize.

Summary

In addition to expanding and simplifying our automation policy, the changes incorporated in this bulletin are designed to address the following specific issues:

- a crewmember is unaware when a pilot induced automation/speed change occurs
- the desired change did not occur as expected
- crews initiating takeoff when flap position differs from performance data flap position
- crew initiating takeoff when performance data position differs from the actual runway position

Note: Performance data for a runway intersection is valid for any other position on that runway with greater length.

Threat and error management requires constant vigilance and attention. Both pilots must continuously assess the current state and intended flight path of the aircraft and verbalize concerns. Whenever an error is made, recognizing and recovering in a timely manner will mitigate an incident.

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