

June 30th, 2016

Mr. Gregory Janosik
Orville Wright Bldg (FOB10A)
FAA National Headquarters
800 Independence Ave SW
Washington, DC 20591

RE: Master Minimum Equipment List (MMEL) Policy Letter (PL)-98, Revision 1, Navigation Databases

Dear Mr. Janosik,

The National Business Aviation Association (NBAA) represents the interests of over 11,000 member companies that rely on aviation to support their business or service associated business aircraft. Member companies operate a variety of technologically advanced aircraft ranging from long range business jet aircraft to shorter range, mission focused single engine platforms. These airframes most often utilize internal navigation databases that interface with flight management systems (FMS) and flight guidance computers (autopilot) to maintain their high degree of navigational accuracy and safety while traveling the globe.

NBAA recognizes that today's technologically advanced business aircraft rely on autopilots, FMS, and navigation databases to operate in high volume, complex airspace. Ideally, operators always have an opportunity to update the database with the most recent aeronautical information; however, this is not always possible due to aircraft location and associated logistical requirements. It is not uncommon for business aircraft operators to travel to remote locations for three or four weeks at a time, such as Africa, Asia, South America, or the Middle East. These locations often do not have FAA certified maintenance facilities nor strong, reliable internet connections to facilitate downloading new aeronautical databases.

Current FAA Position

The revision to Policy Letter-98 proposes to remove relief for expired navigation databases from Minimum Equipment Lists (MELs). NBAA is concerned that the removal of this provision will conflict with FAA Chief Council Interpretation to Mr. Thomas Letts dated November 2012 (See Attachment A) which explicitly states that an aircraft may not be operated with an expired navigation database unless operated in compliance with an approved MEL ("any equipment required by Type Certificate, Supplemental Type Certificate, the Airplane Flight Manual or operating rule, except for an item operated in compliance with an approved MEL, must be operative."). Given this position from AGC-200 and the proposed revision to Policy Letter-98, any aircraft operator which is unable to update onboard installed flight management and/or guidance equipment with a new navigation database may not legally operate the aircraft, resulting in significant financial impacts and lost operational efficiency.

NBAA believes that aircraft operators should be able to operate with an expired navigation database to facilitate private and commercial air travel, with additional steps taken to ensure navigational accuracy and safety. These steps include complying with any published provisions in the Airplane Flight Manual (AFM) when operating with an expired navigation database, or if not specifically published, establish procedures to ensure navigational accuracy by verifying navigational waypoints with current aeronautical publications such as enroute and terminal charts.

Impact to the Operator

NBAA believes that not only is the proposed revision to Policy Letter-98 against current FAA legal interpretation, but it will also result in potentially unsafe operating behaviors.

The Aeronautical Information Manual (AIM) includes a provision in Chapter 1, Section 1, Paragraph 19 (3)(b)(1) that explains "databases must be maintained to the current update for IFR operation, but no such requirement exists for VFR use." Subparagraph (b)(3) recommends pilots verify waypoints with reference to current sources or charts. Additional limits are placed on commercial operations, such as Operations Specification (OpSpec) C077, Terminal Flight Rules Limitations and Provisions. OpSpec C077 restricts turbojet aircraft operated under Part 121 or 135 to flying no more than 50 nautical miles from the point of departure under VFR.

NBAA is concerned that the proposed revision to Policy Letter-98 will require operators to either seek a special flight permit from their local FSDO (requiring additional FAA resources) or to fly VFR when an aircraft's navigation database is expired. Aircraft operated under IFR have an increased safety net and take advantage of an enhanced margin of safety resulting from increased minimum separation standards provided by the Air Traffic Control system. FAA enacted regulations to encourage operators to fly under IFR for safety reasons and during periods of inclement or unfavorable weather conditions. Additionally, the FAA encourages flying IFR because it provides a greater level of safety for passengers compared to the alternative. NBAA is concerned the proposed change to Policy Letter-98 may cause operators to take increased risks and possibly revert to flying under VFR in unfavorable or marginal weather conditions if their aircraft navigation database is expired.

Operating VFR simply due to an expired navigation database in complex airspace certainly increases the risk profile for operators who would otherwise be able to navigate and fly IFR. Additionally, if operators were permitted to fly IFR with an expired navigation database but in doing so must verify all of the navigational waypoints and procedures to be used against current aeronautical charts, this would increase safety and navigational accuracy while preserving operational efficiency and mitigating financial implications.

Impact to the Public

Forcing aircraft to operate under VFR due to an expired navigation database will not only have negative consequences for operators, but will also have significant consequences for the general public. Aircraft operating under VFR are forced to fly below 18,000 feet which has many adverse effects on the public and the environment. Aircraft which fly at lower cruising altitudes will experience increased fuel consumption, higher emissions, and a greater noise output. For example, a business jet traveling from KTEB to KPBI may consume in excess of an additional 70% of fuel and may even require a fuel stop when making the trip under VFR at 17,500 feet compared to operating non-stop under IFR at FL450. The increased fuel burn and emissions from such a flight are detrimental to the public.

Consequence of the Proposed Change

Conversations between NBAA, operators, and OEMs have revealed that the exact consequences of the proposed policy change remain unclear. Unclear policy is detrimental for safety and harmful to the industry. While discussing the proposed policy change, it became clear that the industry does not agree on the many consequences of this policy letter revision. The proposed changes would leave operators to interpret when and how they can operate the aircraft once a navigation database expires should they not have the immediate opportunity to download new aeronautical data and load this information on board the aircraft.

While the AIM clearly indicates operators are permitted to fly VFR with an expired navigation database, other questions remain. The proposed revision to Policy Letter-98 leaves many questions in the minds of operators and how aircraft equipped with an FMS or GPS navigation system which utilizes a navigation database will be affected, including:

- If a pilot records an expired navigation database discrepancy, can the aircraft still depart under VFR in private operations?
- If a pilot records an expired navigation database discrepancy, can the aircraft still depart under VFR in commercial operations (FAR Part 91K, 121, 125, 135)?
- Will a special flight permit (ferry permit) be required to relocate an aircraft to a maintenance base where the navigation database can be updated?
- What would be the most appropriate method to coordinate this operation both domestically and also when traveling abroad in a foreign locale?

Conclusion

An expired navigation database should not require aircraft to fly VFR nor should it leave an aircraft grounded and unable to complete important missions, visit a maintenance facility, or return to base where the database can be updated. NBAA believes these operations can be conducted safely, even with an expired navigation database with additional operational provisions to ensure navigational accuracy.

NBAA believes the proposed change to Policy Letter-98 does nothing to increase safety and would, in fact, be a detriment to safety, encouraging operators to fly VFR or pursue other risk-prone behaviors. NBAA believes Policy Letter-98 Revision 0 is currently in alignment with FAA legal interpretations and definitions and that no revision is necessary.

Thank you for the opportunity to submit these comments on behalf of NBAA's members. Please contact me if NBAA can provide any additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Brian Koester", with a long horizontal flourish extending to the right.

Brian Koester
Manager, Operations



U.S. Department
of Transportation
**Federal Aviation
Administration**

Office of the Chief Counsel

800 Independence Ave., S.W.
Washington, D.C. 20591

NOV 15 2012
Mr. Thomas D. Letts
1233 W. Ford Drive
Lakewood, CO 80226

Dear Mr. Letts,

This letter responds to your email requesting a legal interpretation as to whether the navigational database used by a Flight Management System (FMS) must be kept up to date or whether an iPad could be used in lieu of an inoperative FMS.

14 C.F.R. § 91.213 addresses the operation of aircraft with inoperative instruments and equipment and states in pertinent part that no person may take off an aircraft with inoperative instruments or equipment installed unless an approved Minimum Equipment List (MEL) exists for that aircraft, the aircraft has within it a letter authorizing operation of the aircraft under the MEL, the aircraft records available to the pilot include an entry describing the inoperable instruments and equipment, and the aircraft is operated under all applicable conditions and limitations contained in the MEL and the letter authorizing the use of the list. Further, under § 91.213(c), a person authorized to use an approved MEL issued for a specific aircraft under subpart K of part 91, part 121, part 125 or part 135 must use the MEL developed under those parts to comply with the requirements of § 91.213.

Therefore, any equipment, including navigational databases, required by Type Certificate, Supplemental Type Certificate, the Airplane Flight Manual or operating rule, except for an item operated in compliance with an approved MEL, must be operative under § 91.213. An iPad cannot substitute for required installed equipment.

We appreciate your patience and trust that the above responds to your concerns. If you need further assistance, please contact my staff at (202) 267-3073. This letter has been prepared by Robert H. Frenzel, Manager, Operations Law Branch, Office of the Chief Counsel and coordinated with the Air Transportation and Aircraft Maintenance Divisions of Flight Standards Service.

Sincerely,

Rebecca B. MacPherson
Assistant Chief Counsel for International
Law, Legislation and Regulations, AGC-200