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Pilot Loading of Navigation and Terrain Awareness Database Updates (Docket No. FAA-2011-0763)

The Aircraft Electronics Association appreciates the opportunity to comment on the recent Notice of Proposed Rulemaking on Pilot Loading of Navigation and Terrain Awareness Database Updates.

The Association represents more than 1,300 aviation businesses worldwide, including repair stations that specialize in maintenance, repair and installation of avionics and electronic systems in general aviation aircraft. AEA membership also includes instrument facilities, manufacturers of avionics equipment, instrument manufacturers, airframe manufacturers, test equipment manufacturers, major distributors and educational institutions.

In general, the AEA supports the concept that commercial pilots should be able to load navigation and terrain awareness database updates. However, the AEA does not agree with the Federal Aviation Administration's proposed rule change. The proposal does not reach its intended audience and compromises the maintenance regulations in the process.

In the NPRM summary, the FAA claims it is proposing to "amend the maintenance regulation by removing from preventive maintenance category the task of updating databases used in self-contained, front-panel or pedestal-mounted navigation equipment." The proposal continues by stating, "This change would allow pilots who operate certificated aircraft to update the specified databases and eliminate the requirement for certificated mechanics or repair stations to perform the update." However, the FAA changes the task from a "preventive maintenance task" and makes the task a full maintenance task.

In the background, the FAA states:

Currently, § 43.3(g) and Appendix A, paragraph (c)(32) require that updates to databases for nav-systems installed on aircraft operated under Parts 121, 125, 129, 133, 135 and 137 ("certificated operations") must be performed by qualified personnel.

Unlike the older systems, the FAA allowed pilots of smaller general aviation aircraft to perform updates to nav-system databases because the systems were not similar to those installed on aircraft operated under Parts 121, 129 and 135. Newer nav-systems were self-contained, easily accessible and updated, compact devices. Conversely, navigational systems installed on aircraft operating under Parts 121, 129 and 135 were more complex. Those nav-systems were frequently composed of two hardware components. One was a central data storage/processing unit, which was installed in a location remote from the second piece of hardware. The other was the control display unit, which was installed in the cockpit.

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Updating the more complex systems requires that qualified personnel use specialized equipment to upload the new data into the CPU. Since then, the number of newer self-contained nav-systems installed on most non-transport category aircraft has increased. Updating a nav-system database is as simple as inserting a memory card into a digital camera, with automatic verification to the pilot that the update has been successful occurring via display of the update's revision number on the CDU.

However, the majority of aircraft operated in Part 121, 129 and 135 operations are transport category aircraft, which this proposal will not apply, since the database upload portals are not "self-contained, front instrument panel-mounted air traffic control navigational software databases," as the current Part 43 Appendix A, paragraph (c)(32) states.

The FAA proposes to amend § 43.3 to allow pilots of aircraft operated under Parts 121, 125, 133, 135 and 137 ("certificated operations") to update nav-system databases. We are proposing to remove paragraph (c)(32) from Part 43, Appendix A. The effect of removing paragraph (c)(32) will be to allow pilots to update nav-system databases. The FAA proposes to amend § 43.3 by adding paragraph (k).

Part 43 applies to the maintenance, preventive maintenance, rebuilding and alteration of any aircraft having a U.S. airworthiness certificate. Therefore, since this task is being declassified from preventive maintenance and clearly does not meet the § 43.2 definitions of rebuilding or alteration, it can only be surmised that this task is being reclassified as a full maintenance task.

The FAA has considered two alternatives to this proposed rulemaking. One alternative was to continue to require qualified personnel perform updates to nav-system databases installed on certificated operations. The second alternative considered was continuing to use the exemption process as need is demonstrated by operators to enable pilots of aircraft not operated under Part 91 to update nav-system databases.

The exemptions issued by the FAA are being misapplied to allow the Part 135 operators to perform preventive maintenance (Part 43 Appendix A, paragraph (c)(32)). However, the aircraft these operators operate do not have "self-contained, front instrument panel-mounted" portals, as the limitation of preventive maintenance requires.

There are, however, two additional alternatives that the agency should consider. First, § 43.3 could be amended similar to § 43.3(h) or (i) which could provide pilots operating under Parts 121, 129 or 135 the authority to perform preventive maintenance limited to Part 43 Appendix A, paragraph (c)(32).

The other option not considered is removal of Part 43 Appendix A paragraph (c)(32) and move the database updating responsibility to Part 91 under the general operating and flight rules. Should the responsibility and authority be moved to Part 91, the instructions and limitation could, therefore, be included in the aeronautical information manual.

So, to fully support aircraft operations regardless of the type of operations, the AEA suggests the agency adopt the latter option and expand the authority to include all air traffic control navigational software databases, regardless of the location of the portal, provided:

1. No disassembly of the unit is required.

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2. The pilot has written procedures available to perform and evaluate the accomplishment of the task.
3. The database is contained in a field-loadable configuration and imaged on a medium, such as a compact disc read-only memory, synchronous dynamic random-access memory, or other nonvolatile memory that contains database files which are non-corruptible upon loading, and where integrity of the load can be assured and verified by the pilot upon completing the loading sequences.

The agency needs to define what it means by air traffic control navigational software databases. When the original regulations were written, the navigation databases were limited to charts and frequency databases; however, today many databases include active terrain and obstacle information.

The AEA supports the agency's proposal that the data to be uploaded must not contain system operating software revisions.

In closing, the AEA generally supports the intent to allow pilots to install air traffic control navigational software databases, regardless of the type of aircraft operations. However, we do not support this proposed regulation as written.

The AEA appreciates the opportunity to comment on this proposed regulation and the opportunity to propose these safety-enhancing additional changes. Should you have any questions, please do not hesitate to contact us at 202-589-1144 or email at ricp@aea.net.

Sincerely,



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