

**MMEL IG Meeting 79 Minutes
August 18-19, 2010
Washington, DC**

Time	Agenda Item Number	DAY 1 Wednesday, August 18, 2010	Lead
0830-0845	79-01	Introduction / Administrative Remarks Hold Elections	Tom Atzert
0845-0900	79-02	MMEL IG / FOEB Calendar	Chairman
0900-0915	79-03	2009 Final Policy Letters	John Melotte
	79-04	MMEL Policy Letter Status Summary	
0915-0930	79-05	Agenda Item 79-05: Opspecs.com Status (FSIMS notification of PLs?)	Steve Kane
0930-0945	79-06	Agenda Item 79-06: Policy Letter Analysis	George Ceffalo
0945-0950	79-07	Agenda Item 75-07: FOPB Process Discussion	Steve Kane
0950-1000	79-08	Agenda Item 66-07: ATA – MMEL / MEL Value to Industry Survey	Mark Lopez
1000-1030		BREAK	
1030-1045	79-09	Agenda Item 64-10a: PL-98, Navigation Databases	NDB WG / ALPA
1045-1100	79-10	Agenda Item 78-10: Nitrogen Gas Generation / Fuel Inerting – Repair Category Discussion	AFS-260 Mark Lopez
1100-1115	79-11	Agenda Item 79-11: PL-25, Definitions	Steve Kane Paul Nordstrom
1115-1130	79-12	Agenda Item 79-12: PL-70, Definitions Required in MELs	Steve Kane
1130-1145	79-13	Agenda Item 78-15: PL-31, MMEL Format Specifications – (Spec #12; Identification of FARs)	Paul Nordstrom Darrel Sheets Pete Neff
1145-1200	79-14	Agenda Item 75-24: PL-31, MMEL Format Specification – ‘Next-Gen’ MMEL Specs	Walt Hutchings
1200-1315		LUNCH	

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Time	Agenda Item Number	DAY 1 (Cont'd) Wednesday, August 18, 2010	Lead
1315-1330	79-15	Agenda Item 2003-04: Conversion of FAA MMEL Documents To XML (MMEL Transformation)	AFS-260
1330-1340	79-16	Agenda Item 70-18: Policy Letter Rewrite: New Format, FAA Branding and incorporate new GC Header	Mark Lopez George Ceffalo
1340-1350	79-17	Agenda Item 75-25: Clarify Use of “-“ in “Number Installed” Column in Operator MELs	Tom Atzert
1350-1400	79-18	Agenda Item 77-25: PL-119, Two-Section MMELs	JP Dargis
1400-1410	79-19	Agenda Item 78-22: PL-116 & NEF Universal List Discussion	Tom Atzert
1410-1420	79-20	Agenda Item 78-23: Airbus EASA MMEL Section 3 Discussion	Tim Kane Tom Atzert
1420-1430	79-21	Agenda Item 39-01: FAA / EASA MMEL Harmonization	FAA
1430-1445	79-22	Agenda Item 71-15: PL-58, Boom Microphone	David Burk
1445-1500	79-23	Agenda Item 60-14: PL-85, Lavatory Door Ashtrays	Mark Lopez
1500-1530		BREAK	
1530-1545	79-24	Agenda Item 71-29: ASAWG Update	Dennis Landry
1545-1600	79-25	Agenda Item 78-30: FSIMS 8900.1 Rewrite Project: Volume 4, Chapter 4 (MEL)	Steve Kane
1600-1615	79-26	Agenda Item 78-32: TCAS: Required to be Operative in Certain Foreign Airspace?	Tom Atzert

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Time	Agenda Item Number	DAY 2 Thursday, August 19, 2010	Lead
0800-0810	79-27	Agenda Item 78-33: Night Vision Goggles (Helicopter Instrument Lights)	Steve Kane
0810-0820	79-28	Agenda Item 78-34: Capstone Equipment	Steve Kane
0820-0830	79-29	New Agenda Item: PL-15, Policy Regarding Continued Operations with Inoperative or Missing Equipment: No mention of 14 CFR 121.628	Paul Nordstrom
0830-0845	79-30	New Agenda Item: PL-29 CVR	Paul Nordstrom
0845-0900	79-31	New Agenda Item: Category A for Part 91 operations	Dave Burk
0900-0930	BREAK		
0930-0945	79-32	New Agenda Item: PL-87 FDR	Paul Nordstrom
0945-1015	79-33	New Agenda Item: PL-72-Wing Illumination / Ice Detection Lights	Steve Kane
1015-1030	79-34	New Agenda Item: PL-83 Water / Waste	Tom Atzert
1030-1045	79-35	New Agenda Item: PL-128 Lavatory Call System	Steve Kane
1045-1130	79-36	New Agenda Item: Helicopter Operations Monitoring System (HOMP)	Ed Hinch (FTWAEG)
1130-1200	79-37	New Business 1. PL-104, Storage Bins / Compartments 2. PL-47, Megaphones 3. MMEL Agenda Proposal & Coordination Process document	Chairman Paul Nordstrom Paul Nordstrom Mark Lopez Fred Perko
IG 79 ADJOURN			
1245-1500		Special Session: PL-98, Navigation Databases Team Members: Steve Kane / FAA; Mark Lopez; Tom Atzert; Dave Stewart; Dennis Landry; Darrel Sheets; Todd Schooler; Dave Abbott; John McCormick; Bob Wagner; John Melotte	---

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AGENDA ITEM DETAILS

Prior to MMEL IG 51, agendas contained all of the minutes on each open agenda item, starting from the inception of that item. This made the agenda package very large and not “user friendly”. The agendas now contain what happened only at the last meeting to include action items.

We attempt to include the latest draft policy letters with this package. Every policy letter draft will have a lead assigned and will reflect the next policy letter revision. and draft number on top of the of policy draft.

In most cases, the person introducing an agenda item resulting in a proposed change to a policy letter will assume the lead for purposes of coordination and updates for the proposal.

Any lead that has not posted the latest draft is requested to bring it electronically along with 50 hard copies for handouts.

NOTE: We will no longer divide the agenda into “old” and “new” agenda items. New agenda items may be introduced on the first or second day of the meeting, as the Chairman deems to be appropriate. The idea is to make sure we cover the most important items during the first day.

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79-01. Introduction / Administrative Remarks

IG-79:

Steve Kane is turning over Co-chair in the MMEL IG to Mr. Pete Neff of AFS 202.

Tom Hendricks from ATA greeted the MMEL IG and presented Mr. Tom Atzert an award for the dedication he has given to the success of the MMEL IG over the last 7 years as Chairman. Mr. Bob Davis from AFS also complimented Tom for his contribution to the group.

Tom Atzert conducted MMEL IG Leadership Elections, Mr. Jim Perella from UPS was no longer able to attend IG meetings and thus assume Chairman duties due to his job change by his company. As result, the following positions were filled:

Chairman – Mr. Bob Wagner – Delta Airlines.

Vice Chairman – Mr. Bob Taylor – US Airways.

Corresponding Secretary – Mr. John Melotte.

Recording Secretary – Mr. Tom Atzert.

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79-02. MMEL IG / FOEB Calendar

Standing Action: Members are to review the calendar and advise the IG Recording Secretary of any changes or updates.

IG-79

World Airways will not assume lead for the DC-10 since they will stop flying it at end of year.

Refer to updated MMEL IG calendar for 2010 and 2011.

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79-03. 2010 Final Policy Letters

IG-79:

Refer to FINAL FAA Policy Letters Issued in 2010 .

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79-04. MMEL Policy Letter Status Summary

Standing Action: Members are to review the PL Status Matrix and advise John Melotte of any changes – john.melotte@delta.com, or 404-714-6753

IG-79:

Refer to POLICY LETTER STATUS SUMMARY.

NOTE: No update to this file since IG78.

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79-05. Agenda Item 79-05: Opspecs.com Status

Objective: Complete migration away from Opspecs.com.

Item Lead: Steve Kane

Discussion: Opspecs.com will be “turned off” in August. FSIMS is replacement.

IG-79:

Steve Kane briefed group about draft documents now being separate website from the FSMIMS web site. New site will contain all drafts for MMELs, PLs, and FSB documents.

www.faa.gov/aircraft/draft_docs

Note FSIMS will be changed to AVSIMS in the future (6 mos.).

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79-06. Agenda Item 79-06: Policy Letter Analysis - See Agenda 78-06

Objective: Track PL activity.

Item Lead: George Ceffalo

Discussion: Review PL activity spreadsheet.

IG-79:

George briefed the following:

1999 to 2007 – IG group averaged 7.4 PLs per year.

2008 to 2010 – IG group averaged 14 PLs per year.

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79-07. Agenda Item 75-07: FOPB Process Discussion

Objective: Discuss history of FOPB (Flight Operations Policy Board) and the process moving forward.

Item Lead: Steve Kane

Discussion: MMEL IG participation in the FOPB process is vital to its success.

IG-78:

Steve Kane reported to the Group that the FOPB will not be reinstated at this time. A variant of the FOPB may be assembled in the future at a later date TBD.

IG-79:

Item closed. Delete from IG 80 agenda.

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79-08. Agenda Item 66-07: ATA MMEL / MEL Value to Industry Survey

Objective: To determine overall \$\$ value of MMEL / MEL to industry. Once the value is determined, provide the numbers to upper management via ATA EMMC. The financial contribution the MMEL IG makes to industry is significant and this needs to be communicated properly to upper management.

Item Lead: Mark Lopez

Discussion: Task ATA to provide updated numbers on the value of MELs to our industry. ATA (Mark Lopez) will work with UA (Tom Atzert) to develop survey that will be used to collect the data needed to determine the value.

IG-78:

ATA has received only 3 completed surveys to date. Tom Atzert called for all carriers to complete the survey and forward it to ATA. Any questions about completing the survey can be addressed to Tom Atzert or Mark Lopez.

IG-79:

Mark Lopez stated that he would like to obtain at least 8 of 16 carriers to present data from survey request in the near future. Request 5 more operators provide completed surveys to ATA.

Several operators have experienced delays in obtaining requested information from within their own carriers. Mark Lopez is assisting by adding an entry into the (monthly) ATA Senior Advisory Council (SAC) report. This should provide top down support for data requests needed for providing MEL value feedback.

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79-09. Agenda Item 64-10a: PL-98, Navigation Databases

Objective: Modify current PL MMEL provisos by removal of proviso b).

Item Lead: ALPA

Discussion: A current navigation database for an FMS/INS aircraft provides the capability for an aircraft to fly point to point (waypoint to waypoint) without being dependent on ground-based Navaids as a back-up navigation source (assuming no operational restrictions on the route being flown, e.g., DME/DME or GPS update). If the database is not current, but a procedure is established for verifying the accuracy of the waypoints being used, as is required per current Proviso “a)” that outlines the requirement of verifying the waypoints (Navigation Fixes), the aircraft will navigate with the exact same accuracy as an aircraft with a current database.

Current Proviso “b)” seems to imply that ground based Navigation Facilities are required to be used for the enroute portion of flight. The use of such facilities is not necessary if all Navigation Fixes are verified to be valid for enroute operations using available aeronautical charts (as is already directed by proviso a). I believe that proviso “b)”, as written, should be deleted. If a ground based Navigation Facility is “required” for any particular operation, then current practices require that its status be checked through the Notam system (standard operational procedure). Under this strict interpretation that ground navigation facilities are to be used, aircraft would be restricted to filing standard domestic Airways and not able to operate on oceanic, polar or RNAV routes, or any other operator defined custom routes?

As a minimum, the intent of proviso “b” needs to be clarified, and the wording of the proviso revised.

IG-78:

Per Steve Kane, Bob Davis recommends leaving PL-98 in its present form. Dennis Landry strongly disagrees with this and is concerned about data base issues when operating within today’s airspace environment. Tom Atzert recommended leaving PL-98 on the agenda.

UAL nav data base expert Mr. Fergus Flanagan gave a presentation on how they validate nav data base changes and how they cope with nav data base issues at United.

Steve Kane said that he would arrange a nav data base meeting the afternoon of the second day of the next MMEL IG meeting in DCA to discuss.

IG-79:

Meeting mini-meeting conducted on August 19, by Terry Pearsall from AFS 350. Terry to adjust latest PL 98 to include manually tuning approach aids, then post for comments. Discussed were effects on the following operations: RNP 10, RNP 4, RNAV 2, RNAV 1, RNP 0.3 and RNP AR. No SIDs or STARS are allowed with out of date nav data base.

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79-10. Agenda Item 78-10: Nitrogen Gas Generation / Fuel Inerting – Repair Category Discussion

Objective: Change to Category D during compliance period, and Category C at compliance deadline.

Item Lead: AFS-260 / Mark Lopez, ATA

Discussion: Mark has been in discussions with ACO concerning Repair Category.

IG-78:

Mr. Bryan Watson from SEA AEG gave a presentation on the NGS system and how the rules relate to it and how the MMEL time limit was determined for the A318/319/320/321. The timeline was also shown indicating when operators to retrofit their aircraft with these systems. Ref. CFR 121.1117.

Boeing 737, 747-400 & 777 MMEL relief for NGS at Cat A, 10 day
A320 Family MMEL relief for NGS at Cat A, 20 day

Industry is concerned that spare parts unavailability will lead to flight interruptions since MMEL relief at Cat A is not extendable.

It is highly possible that, during the compliance period, an NGS modified airplane at one gate could be grounded for lack of spare parts, while an airplane without NGS installed at the next gate departs.

Dave Stewart suggested that pilot group may be able to influence repair category during the compliance period.

IG-79:

Mark Lopez stated ATA NGS working group gathering costs to install and will petition FAA to delay required dates for installation. Also, trying to change the existing category A (20 flight days) time limit to category C.

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79-11. Agenda Item 79-11: PL-25 Definitions – See Agenda 79-11

Objective: Add FAR Listing in Appendix A

Item Lead: Steve Kane, Paul Nordstrom

Discussion: Add list of FARs to aid MMEL/MEL authors in determining which rules apply for items with “As required by FAR” in the Remarks column.

PL-25 R17 Draft 3 posted on Opspecs.com 7/7/10.

IG-79:

Tom Atzert revised definition 22 to include: (14CFR 91 MEL users do not need to comply with the repair categories but shall comply with any provisos defining a repair interval (flights, flight legs, cycles, hours, etc).

D4 also deletes the proposed change to the “extension” paragraph. Tom’s rationale is this: the proposed change would have set a limit to extensions in a document (PL-25), the purpose of which is to define MMEL terms. Extensions are not really relevant to the content of an MMEL. My position is that any change to extension policy should be made in D095 and FSIMS. I’m not opposed to FAA’s desire to provide some clarity on MEL extension policy and guidance; however, I do oppose using PL-25 to effect the change.

Please consider going final with D4 as I’m sure the UAL CMO is awaiting final resolution of the proposed change to Def # 24.

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79-12. Agenda Item 79-12: PL-70 MMEL Definitions Required in MELs – See Agenda 79-12

Objective: Update PL-70 to align with recent PL 25 activity

Item Lead: Steve Kane

Discussion:

PL-70 R3 Draft 1 posted on Opspecs.com 7/7/10.

IG-79:

Minor adjustments made per Todd Schooler's and Dan Leduc's comments on the OPSPECS web. Add definition 31 to PL-70.

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79-13. Agenda Item 78-15: PL-31 MMEL Format Specifications; Spec #12; Identification of FARs- See Agenda 79-13

Objective: Revise PL-31 Spec #12 to address identification of specific FAR references in MMELs

Item Leads: Paul Nordstrom, Darrel Sheets, Pete Neff

Discussion: Recent change to PL-31 required insertion of specific FAR reference in certain MMELs with “As required by FAR” in Remarks or Exception column. Many members objected to the PL change and offered suitable alternative suggestion, which basically adds a list of specific FAR references and the associated MMEL relief item as Appendix A to PL-25. This will facilitate operator MEL development and the FAA inspector MEL review and approval process.

IG-78:

Paul Nordstrom to update PL 31, to include Appendix A in PL-25 and amend PL-70 as required.

IG-79:

Paul Nordstrom accomplished a re-write of PL and has been forwarded to AFS for posting draft.

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79-14. Agenda Item 75-24: PL-31 MMEL Format Specifications – “Next-Gen” MMEL Specs

Objective: Align PL-31 with new XML MMEL product.

Item Lead: Walt Hutchings, MKC AEG

Discussion:

IG-78:

Steve Kane briefed the group on the movement of all PL’s to FSIMS site by the end of the year. Web view will be very similar to what is seen today for PL’s on the OPSPECS web site.

IG-79:

XML schema is in OKC (ATA spec 2300). Final schemas to be published in about 2 months.

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79-15. Agenda Item 2003-04: Conversion of FAA MMEL Documents to XML (MMEL Transformation)

Objective: To streamline the process of formatting MMELs to upload on FAA server.

Item Leads: AFS-260

Discussion: Working Group formed to develop MMEL XML schema. Group is to report progress at each IG meeting.

IG-78:

Walt Hutchings reports that operator MEL compliance tracking and reporting functionality has been tested and soon to be deployed. Notice that will go out to field offices has been written, and is awaiting final coordination before sending out. AEG authoring/publication tools about two thirds complete.

IG-79:

Mr. Paul Conn from ATA spoke to the group about work being done with XML schemas as they relate to ATA Spec 2300. FOIG group schema is set and should be released within several months.

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79-16. Agenda Item 70-18: Policy Letter Rewrite: New format with FAA branding and incorporate new GC Header

Objective: 1) Adopt new PL format w/FAA branding, and 2) incorporate new GC header.

Item Lead: Mark Lopez / AFS-260 George Ceffalo

Discussion: AFS-260 has begun to use a new PL format that improves readability and standardizes the manner in which PLs are authored. This new format should be rolled to existing PLs. In addition, with the release of revised PL-59 (Global Change), PLs designated as GC should incorporate the new header.

IG-78:

AFS – 200 still working 13 PL’s toward final formatting.

IG-79:

Mark Lopez to send George Cefallo 6 Policy Letters to upload in new format. George said that archived policy letters will be available only to FAA inspectors.

Kevin Peters expressed concerns regarding loss of a Policy Letter “discussion” portion after a PL is archived.

George Ceffalo stated a cross reference list of archived policy letters who’s contents are covered in 8900.1 will be developed to include Vol/Chapter/Section/Paragraph.

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79-17. Agenda Item 75-25: Clarify Use of “-“ in “Number Installed” Column in Operator MELs

Objective: Clarify the use of “-“ in “Number Installed” column in operator MELs.

Item Lead: Tom Atzert, UAL

Discussion: Many in the industry contend that there are many items where a “-“ in the “Number Installed” column of operator MELs is appropriate.

IG 78:

Item tabled until Aug IG meeting.

Suggest this item be address during 8900.1 Vol 4, Chapter 4 rewrite and CLOSE this Agenda item.

IG 79:

Item closed, included into re-write of 8900. Remove from agenda for IG 80.

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79-18. Agenda 77-25: PL-119 – Two Section MMELs – See Agenda 78-18

Objective: Revise PL to add Part 135 applicability.

Item Lead: JP Dargis (Bombardier)

Discussion: Previous release of PL allow Section Two (CAS Message Relief) of Two-Section MMELs to be used by Part 91 operators only. Goal is to introduce Two-Section MMELs to Part 135 operators.

IG 78:

Waiting for information from part 91 operator updates. AFS-800 to facilitate gathering of data from Part 91 Global Express operators. Revisit during Aug IG meeting.

IG 79:

Eli Cotti to update at MMEL IG 80. Bob Wagner to notify JP and Eli of action for IG 80.

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79-19. Agenda Item 78-22: NEF Universal List Discussion

Objective: Clarify PL-116 and FSIMS 8900.1 NEF Guidance concerning items that are candidates for inclusion in operator NEF Programs.

Item Lead: Tom Atzert, Jim Foster

Discussion:

- AFS-260 has been receiving reports of inconsistent application of NEF Guidance; some items being added to list should not be.
- One operator has expressed concerns to the IG about items like Potable Water Quantity Indicators and Potable Water and Toilet Service Dust cover caps for service ports being on the List
- Jim Foster and Tom Atzert had previously agreed to audit List and make recommendations.

IG 78:

Tom Atzert presented NEF and DO NOT NEF lists at the meeting.

Tom will revise the NEF list and adjust items as necessary.

IG 79:

Item CLOSED. Revised document is now available via FSIMS. Remove from agenda for IG 80.

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79-20. Agenda Item 78-23: Airbus EASA MMEL Section 3 Discussion

Objective: Make MMEL IG members aware of Airbus plans to remove Section 3 (Recommended MEL Maintenance Procedures) from the EASA MMEL.

Item Lead: Tom Atzert, Tim Kane, Airbus Rep

Discussion: Operators have expressed concern to Airbus re: their plans to delete Section 3. MMEL IG decided to elevate the discussion.

IG 78:

Airbus representatives Gerry Walker and Valentino Vernier presented Airbus's proposal for the removal of Section 3 from the EASA A320F MMELs. They stated that the AMM will replace section 3. Valentino stated that Airbus was able to identify 28 items that they will convert from (M) procedures to (O) procedures within their MMEL. This will allow more crew deferral items by moving the action from the AMM to the MMEL (O) procedure.

Tim Kane recommended to Airbus that they develop a Dispatch Deviation Guide for operators to use along with the current FAA MMEL. This would synchronize numbering and procedures to the FAA MMEL for use by operators when building their MEL.

Removal of Section 3 from EASA MMELs under review by Airbus.

IG 79:

Item CLOSED. Airbus agreed to provide an extract of the AMM procedures related to the FAA MMEL. Mid-term vision is for Airbus to provide a DDG; Airbus to do a feasibility study and operators will demonstrate the added value of a DDG.

Develop added value statements and provide to Airbus representatives. Tom Atzert, Bob Taylor, Bob Wagner to develop position and provide to Airbus by September 15.

Rudy Canto suggests a conference call with Airbus in late September to follow up.

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79-21. Agenda 39-01: FAA / EASA MMEL Harmonization

Objective: Monitor the status of FAA/EASA Harmonization initiatives regarding MMELs.

Item Lead: Jim Foster (FAA AEG/SEA)

Discussion: FAA MMEL Procedures Manual discussed at IG 60. AEG SEA and AFS 260 will review the FAA MMEL Procedures Manual and report back to the IG.

IG requests this manual be formally accepted as FAA policy.

IG-78:

Emilie Marchais from EASA stated no updates because of cancellation of a meeting in Europe due to travel problems associated with recent volcanic activity.

IG-79:

Pete Neff updated the group that the EASA MMEL policy document will be made available on the EASA website around April 2011.

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79-22. Agenda Item 71-15: PL-58 Boom Microphone

Item Lead: David Burk

Discussion: David Burk proposed revision to PL-58 to address non-certificated operators (Part 91).

IG-78:

Dave Burk briefed the item regarding single pilot headsets/microphones. Dave will solicit inputs from the group and will revise the proposal for the next IG meeting.

IG-79:

Deferred until November IG 80.

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79-23. Agenda: 60-14: PL-85, Lavatory Door Ashtrays

Objective: To determine whether or not to pursue a change to AD 74-08-09 R2

Item Lead: Mark Lopez, Bob Wagner

Discussion: Qantas has requested a change to PL-85 and AD 74-08-09 R2 based on the fact that most airlines, if not all, are operating non-smoking flights. They feel that the interior ashtray is more essential than the exterior ashtray. DAL had submitted a proposal to the FAA to revise the AD in order to give maximum flexibility to the operators. FAA rejected the proposals saying that people will smoke regardless of the operating rule. On-demand air taxi and non-certificated operations (i.e. Part 91) may still allow smoking on board and, on those airplanes, lav door ashtrays are airworthiness/safety items. AD 74-08-09 R2 applies to all transport category airplanes, not just Part 121 passenger carrying operations. Seattle AEG agreed to discuss with ACO the possibility of revision to AD 74-08-09R2.

IG-78:

Tom Atzert updated the group about the status of the AD. The AD is to be revised at FAA, but is in line with several other projects, so the timeframe is undetermined at this time. Todd Schooler to look at part 23 aircraft and split PL and report back to the group.

IG-79:

Jim Foster updated the group and showed a re-write of the AD to the group. NPRM – 45 day response time for review after it is posted for comment.

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79-24. Agenda Item 71-29: ASAWG Update

Objective: To provide update on ASAWG activities

Item Lead: Dennis Landry

Discussion: At IG 70, Dennis Landry showed us a PowerPoint presentation on the Airplane-level Safety Analysis Working Group (ASAWG). This is a panel of engineers and risk experts who are looking into risk assessments pertaining to MMELs. Dennis Landry will keep us updated on the progress of the ASAWG meetings.

IG-78:

Paul Nordstrom stated that numerical analysis for MMEL items is a large part of this. Final report has been sent to FAA and NPRM to be published. Item CLOSED until NPRM is issued.

IG-79:

Closed, Delete item from IG 80 agenda.

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79-25. Agenda Item 78-30: FSIMS 8900.1 Rewrite Project: Volume 4, Chapter 4 (MEL)

Objective: Improve and clarify content of MEL Sections of 8900.1.

Item Lead: Steve Kane

Discussion: Industry and FAA inspectors continue to struggle with intent of various portions of 8900.1 MEL guidance.

IG 78 NOTE: Steve Kane advises that tentative start date for project is June, 2010.

IG 78:

8900.1 Vol4 Chpt 4 re-write project. Steve Kane reported that Bob Davis wants this section re-written starting this summer. Steve has been tasked with forming a working group along with industry involvement. The group will consist of industry and AEG.

Submit to Tom Atzert your name via e-mail if you wish to participate in this effort. Will be 2 face to face meetings and the rest will be telecon. Probably 3 from IG will participate, but more IG members may be involved to assist those chosen. Tom will organize telecon for those interested, and to select industry working group members.

IG 79:

Steve Kane updated the group on 8900 re-write. Meeting in Kansas City in mid July resulted in Part 91 being 85-90% complete. Third week in October for next meeting in Kansas City, work on Part 121 and 135 will begin. Rick Chitwood to fill in for Steve Kane during that meeting.

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79-26. Agenda Item 78-32: TCAS: Required to be Operative in Certain Foreign Airspace?

Objective: Determine foreign country requirements for operative TCAS (China, Japan, Australia, etc).

Item Lead: Tom Atzert

Discussion: IFALPA reports TCAS required to be operative in certain foreign airspace and says flight crews subject to fines if TCAS on MEL and special permission to operate not obtained. Apparently waivers can be obtained, but the method to obtain the waiver is a mystery.

IG 78:

Dave Stewart and Dave Abbott have volunteered to work this and report back to group. They will seek information of possible annual waiver that apparently is available to local Japanese carriers.

IG 79:

Applications JCAB (in Japanese) for annual waivers must be submitted locally. Contact Tom Atzert or Dave Stewart for details. Tom Atzert sent note to AFS-50 for assistance.

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79-27. Agenda Item 78-33: Night Vision Goggles

Objective:

Item Lead: Steve Kane

Discussion:

IG 78:

Steve Kane briefed the group on this new policy as is customary for all PLs. PL formatting will be adjusted before issuance.

IG 79:

Item CLOSED. PL-127 recently published. Delete item from IG 80 agenda.

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79-28. Agenda Item 78-34: Capstone Equipment (was PL-115)

Objective:

Item Lead: Steve Kane

Discussion:

IG 78:

PL needs to be re-issued with new title as it is still needed. New version posted to Opspecs.com for review/comment.

IG 79:

Item CLOSED. PL-126 recently published. Delete item from IG-80 agenda.

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Washington, DC

79-29. New Agenda Item: PL-15 Policy Regarding Continued Operations with Inoperative or Missing Equipment

Objective: No mention of 14 CFR 121.628

Item Lead: Paul Nordstrom

Discussion: Origin of PL and purpose as it simply discusses continued operation with inoperative equipment. It also does not list Part 121 operators.

IG 78:

Recommend archiving.

IG 79:

Archived. Delete from IG-80 agenda.

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79-30. New Agenda Item: PL-29: CVR – See Agenda 79-30

Objective: PL-29 CVR include relief for an independent power source.

Item Lead: Paul Nordstrom

Discussion: PL-29 R5D1 CVR presented which included relief for an independent power source.

IG 78:

Post draft for comments and then re-visit in Aug.

Rev 5, Draft 1 posted 6/10/10.

IG 79:

Closed. Gone final. Delete from IG-80 agenda.

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79-31. New Agenda Item: Category A for Part 91 operations

Objective: A recent change to the Falcon MMEL, changed flight days to calendar days. This is now more restrictive than three flight days and this diverges from the established policy letter 29 for CVR as well.

Item Lead: Dave Burk

Discussion: Must part 91 operators comply with category A time limit since the time limit is listed in the proviso (Remarks column)?

IG 78:

Mark Giron, AFS-800, to research and report back to IG at the August meeting.

IG 79:

Closed. This is covered under existing agenda item 79-11. Delete item from IG-80 agenda.

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79-32. New Agenda Item: PL-87 FDR – See Agenda 79-32

Objective: Minor change proposed.

Item Lead: Paul Nordstrom

Discussion: R10, D1 sent to FAA.

IG 79:

Issued as final closed. Delete item from IG-80 agenda.

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79-33. New Agenda Item: PL-72 Wing Illumination / Ice Detection Lights – See Agenda 79-33

Objective: Resolve concerns raised about relief provided in PL-72.

Item Lead: Steve Kane

Discussion: Draft is posted on Opspecs.com.

IG 79:

Steve Kane briefed the group. Legal reviewed and re-worked R4D8. Original policy letter did not meet the intended purpose of the lighting. It is not only used for ground deicing only, ref. 23.1419d. and 25.1403. Paul Nordstrom briefed the Boeing system and stated the certification of the system is different for the larger Boeing airplanes and that they are used for ground deicing procedures. PL draft posted for comments.

Dave Bridgens recommended two policy letters be developed, one for wing illumination and one for wing ice detection.

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79-34. New Agenda Item: PL-83 Water/Waste – See Agenda 79-34

Objective: Delete the proviso “The Pilot-in –Command will determine if flight duration is acceptable with a FWD/Upper Deck lavatory unusable”.

Item Lead: Tom Atzert

Discussion:

IG 79:

UAL proposal withdrawn. Item closed. Delete item from IG-80 agenda.

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79-35. New Agenda Item: PL-128 Lavatory Call System – See Agenda 79-35

Objective: Resolve concerns with inoperative Lavatory Call System as related to DOT regulations for Wheelchair Accessible lavatories.

Item Lead: Steve Kane

Discussion:

IG 79:

Policy letter proposal is still under consideration. Lav Call Buttons are not “no-go” for other than part 121 and are questionable for Part 121. Steve Kane reminded everyone to post comments to the draft PL proposal.

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79-36. New Agenda Item: Helicopter Operations Monitoring System

Objective: Planning and development of MMEL relief for Helicopter Operations Monitoring System (HOMP) which is similar to the electronic fault alerting system under Part 25

Item Lead: Ed Hinch, FTW AEG

Discussion:

IG 79:

Ed Hinch provided a power point presentation. Eurocopter is developing an ECAM type system similar to Airbus for use on helicopters. Ed will work with Colin Hancock and EASA during certification to develop MMEL and other procedures needed for use with this system. It was suggested that Ed Hinch develop a draft change to definition 23 of PL-25 to accommodate the new monitoring system.

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Special Sesion – PL-98 Navigation Databases

Objective: Discuss PL-98 and develop strategy for revision of the PL.

Item Lead: Steve Kane

Team Members:

FAA (various offices represented)

Mark Lopez

Tom Atzert

Dave Stewart

Dennis Landry

Darrel Sheets

Todd Schooler

Dave Abbott

John McCormick

Bob Wagner

John Melotte

Discussion:

IG 79:

Meeting mini-meeting conducted on August 19, by Terry Pearsall from AFS 350. Terry to adjust latest PL 98 to include manually tuning approach aids, then post for comments. Refer to agenda item 79-09.

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79-37. New Business

1. PL-104, Storage Bins/Cabin and Galley Storage Compartments/Closets – Paul Nordstrom (Boeing). Bring in line with recently issued PL-125 Equipment Relief Without Passengers. To add lavatories per Bob Taylor.
Paul Nordstrom will revise and PL-104 will be posted for comment.
2. PL-47, Megaphones - Paul Nordstrom (Boeing)
Bring in line with recently issued PL-125 Equipment Relief Without Passengers.
Paul Nordstrom will revise and PL-47 will be posted for comment.
3. PL-91, White Position Lights and Strobe Lights - Paul Nordstrom (Boeing).
Paul will continue to research possibility of changes to MMEL.
4. Master Minimum Equipment List (MMEL) Agenda Proposal & Coordination Process document – Mark Lopez (ATA) and Fred Perko (UAL). Keep on agenda for updates.
5. PL-105 ADSB – Paul Nordstrom (Boeing).
No CFR 14 reference in PL, UPS had installed the system under a test program. ADS B will be required by 2020. Reference CFR 91.225, 91.227.
6. PL-73 EEMK – Pete Neff AFS.
MMEL relief established by PL-73 for emergency medical equipment is being challenged by FAA legal. Reference to CFR 121.803, 121.628, and A.C. 121.33b. Policy Letter change to be posted and comments should be made to the posting.
7. PL-120 ELT - Gene Hartman. Fixed ELT per CFR 91.207 was discussed by Gene.
8. WAS (Wide Area System) – Daryl Sheets. GPS function.
9. Walt Hutchings asked for volunteers to submit MMEL items through a new MMEL proposal program.

Foreign Airline MEL granted time limited comprehensive approval for use in Japanese airspace

In January of this year IFALPA issued a Safety Bulletin (10SAB12) which warned that the MELs of foreign airlines are not oversighted in Japan and that operating an aircraft within the FUKOKUA FIR with TCAS inoperative and without dispensation from the Japanese Ministry of Land Infrastructure Transport and Tourism (LITT) could result in the Pilot in Command being personally liable and fined under the penalties section of this Japanese Aviation Law. The penalties could result in the Pilot in Command being personally fined ¥ 1 million (approx US\$11,200) as well as the Operator with a similar fine.

Recently, the Japanese Civil Aviation Bureau (JCAB) has sent a letter to the branch offices of all foreign airlines known to serve destinations in Japan which details all the equipment as set out in Japanese Aviation Law Articles 60 and 61 which are required to be serviceable at the time of dispatch for flights within the FUKOKUA FIR (see the listing below). Significantly, the JCAB also advised airlines that it has set up a Comprehensive Approval which allows an airline to apply its own MEL for inoperative items from the Article 60 & 61 list. This dispensation is limited to a year at a time after which the airline must apply for a further Comprehensive Approval. This means that the PIC will not have to apply for dispensation prior to a specific departure provided his airline has a current Comprehensive Approval from the JCAB.

Serviceable Equipment required by Article 60

- 2 x ADF*
- 2 x VOR*
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- 1 x GPWS
- 1 x TCAS

**not required for RNAV based flight*

Serviceable Equipment required by Article 61

- 1 x Flight Data Recorder (FDR)
- 1 x Cockpit Voice Recorder (CVR)

Contact details:

Flight Standards Division, Japan Civil Aeronautics Bureau
2-1-3 Kasumiagaseki, Chiyoda-ku, Tokyo 100-8918
Tel: +81 3 5253 8731 Fax +81 3 5253 1661

And the email address:

Mr. Kenichi Takahasi
Deputy Director of Flight Standards
takahashi-k2hi@mlit.go.jp

Since failure to comply with the regulation exposes the PIC to the risk of a large fine, it is important to check that your airline has a current Comprehensive Approval if any of the equipment listed above is inoperative before dispatching to or from Japan. You can check the status of your airline via the Flight Standards division of the JCAB (contact details above). This office is manned 24 hours a day, 365 days a year and should individual waiver permissions be required they will be issued without delay (allow between 20 & 30 minutes before departure).

Remember: Failure to follow this procedure could result the fines outlined above being imposed on both the operator and the PIC.

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ARAC ASAWG Report

***Specific Risk
Tasking***

(Rev. 5.0)

April 2010

M MEL Task 4 Recommendation Only

6.4.3 MMEL Task

The final evaluation of the current policies and practices implemented by OEMs and the various regulatory organizations concerning the development and approval of the MMEL over the past several decades has consistently demonstrated a high level of reliability and comprehensiveness in maintaining the necessary safety margins that both the engineering and operations communities have come to expect and require. Our past and current MMEL development considerations have primarily been based on consideration of the “next worst case failure” and the impact of that failure on crew workload and the integrity of the aircraft after that failure. This report finds that these procedures have provided excellent aircraft safety margins and, as such, we recommend that these procedures be continued as the primary path for future MMEL development and approval. This report also recommends establishing a standardized numerical analysis methodology for proposed MMEL items – when a numerical analysis for a given MMEL dispatch configuration is considered useful. This report further recommends revising the Arsenal and current versions of AC 25.1309 / AMC 25.1309 statements relative to the MMEL. Dispatches with multiple inoperative MMEL items are handled separately by the FOEB and considered to be outside the scope of this proposed guidance.

6.4.3.1 Benefits of the Recommendations

When used to support a proposed MMEL item’s qualitative assessment, the recommended numerical analysis guidance would provide a standardized methodology that would maintain fleet average reliability objectives.

6.4.3.2 Applicability of the Recommended Rules/ACs

These changes will apply to new TC or STC, if required according to change product rule, and will not be applied retroactively, unless requested by the applicant.

Changes to the Arsenal version of AC 25.1309 / AMC 25.1309, paragraphs 12.b.(1) and paragraph 12.d., and the current AC 25.1309 -1A, paragraph 12.d are recommended. These changes are intended to make it clear that reliability analyses concerning MMEL dispatches need not be included in the numerical analyses submitted for certification to show compliance with FAR/CS 25.1309(b).

6.4.3.3 The Recommendations

(A) Recommendations to Industry and the Authorities (FAA Flight Standards, EASA, TCCA, etc.) for potential incorporation into MMEL Development Process:

This guidance is provided as a recommendation to industry and the authorities, and is recognized as not the only means to support the primary qualitative justification for a proposed MMEL item; therefore, this guidance is not mandatory. It should also be recognized that the FOEB Chairpersons have the authority to request additional analyses. This guidance is not intended to be applied retroactively to approved MMELs.

This guidance recognizes that under MMEL conditions, single failures leading to a potentially hazardous or catastrophic failure condition are normally not permitted at dispatch.

The results of numerical safety assessment of MMEL allowed dispatch with an inoperative item may be used to supplement the qualitative safety assessment review with the Authorities.

Numerical safety assessments are recommended when both of the following considerations are met:

- 1) Relief is proposed for items, functions and/or systems involved in Catastrophic or Hazardous failure conditions, and MMEL procedures do not mitigate the failure condition by operational procedures, limitations or a maintenance action prior to dispatch, and
- 2) When the operation with the inoperative item leaves the aircraft one failure away from a Hazardous failure condition, or one or two failures away from a Catastrophic failure conditions.

Items for which a numerical assessment is carried out to supplement the qualitative MMEL development process in accordance with the above mentioned considerations should be reported. Items for which the probabilities per flight hour of 1E-8 for Catastrophic failure conditions and 1E-6 for Hazardous failure conditions are not met in that dispatch configuration, should be reviewed with the Authorities. The following guidance applies to these proposed dispatches: This guidance includes equations to control how long these configurations are allowed to exist, such that the fleet average objectives will be achieved (see logic flowchart provided in Figure 6-1).

For Catastrophic Failure Conditions:

- A probability per flight hour of $\leq 1E-8$ is the objective when dispatching with the inoperative item. When this objective is met, no calculation for a maximum allowable dispatch time is considered necessary.

- A limited number of items may be considered when the 1E-8/FH objective is not met. In these cases, the maximum allowable probability per flight hour when dispatching with the inoperative item should not exceed 1E-7/FH, and the maximum dispatch time should be less than that calculated using the following Equation (1).
- The 1E-8/FH objective and 1E-7/FH upper limit apply to each catastrophic top event involving the inoperative-at-dispatch MMEL item. If more than one top level event is involved, the maximum allowable dispatch time should be the smallest of those calculated for the affected top events.
- Equation (1):

$$Max_Disp_Time_{CAT}[FH] = \frac{1 \cdot 10^{-9} [probability_per_FH]}{PF \cdot FR}$$

Where:

Max_Dispatch_Time_{CAT}[FH] = Max Dispatch Time [flight hours]

PF [1/FH] = Probability of Failure Condition [per flight hour] under dispatch condition

FR [1/FH] = Failure Rate of proposed MMEL item [per flight hour]

For Hazardous Failure Conditions:

- A probability per flight hour of $\leq 1E-6$ is the objective when dispatching with the inoperative item. When this objective is met, no calculation for a maximum allowable dispatch time is considered necessary.
- A limited number of items may be considered when the 1E-6/FH objective is not met. In these cases, the maximum allowable probability per flight hour when dispatching with the inoperative item should not exceed 1E-5/FH, and the maximum dispatch time should be less than that calculated using the following Equation (2).
- The 1E-6/FH objective and 1E-5/FH upper limit apply to each Hazardous top event involving the inoperative-at-dispatch MMEL item. If more than one top level event is involved, the maximum allowable dispatch time should be the smallest of those calculated for the affected top events.
- Equation (2):

$$Max_Disp_Time_{HAZ}[FH] = \frac{1 \cdot 10^{-7} [probability_per_FH]}{PF \cdot FR}$$

Where:

Max_Dispatch_Time_{HAZ}[FH] = Max Dispatch Time [flight hours]

PF [1/FH] = Probability of Failure Condition [per flight hour] under dispatch condition

FR [1/FH] = Failure Rate of proposed MMEL item [per flight hour]

Dispatch times will primarily be based on operational considerations. Allowed MMEL dispatch times may be considerably less than the maximum times calculated.

Note: The two equations given above for maximum dispatch times for MMEL items or functions involved in Catastrophic or Hazardous failure conditions provides dispatch times that are compatible with the fleet average top level reliability requirements of FAR/CS 25.1309(b). Equation(1) would yield a maximum operating time in the particular configuration to be $\leq 1\%$ of the fleet operating time when the dispatch configuration has a failure rate of $1E-7/FH$.

Maximum dispatch times as calculated using the above equations or other appropriate methods, should be maintained by the applicant's operations/MMEL group. That group will work with the Flight Operations Evaluation Boards (FOEB/OEBs) to decide on an acceptable MMEL entry.

Example Aircraft Level:

When a quantitative analysis is desired to support the qualitative assessment of an MMEL inoperative item dispatch, the following example may be helpful:

- a) Use the fault trees for the Catastrophic failure conditions affected by the proposed MMEL item, where that failure condition cannot be mitigated by operational procedures, limitations or a maintenance action prior to dispatch.
- b) Review the fault trees to determine whether operation with the inoperative MMEL item (item probability set to 1) leads to a probability per flight hour (at dispatch) of $\leq 1E-8/FH$.
 - If Yes ($\leq 1E-8/FH$): No numerical analysis needed for maximum allowable dispatch time
 - If No ($> 1E-8/FH$): go to c)
- c) Calculate the Maximum Dispatch Time using equation Equation(1):

Example numbers:

- Probability of Failure (PF) condition per flight hour under Dispatch condition – determined from fault tree with probability of MMEL item to 1:

PF: $3E-8/FH$

- Failure Rate (FR) of proposed MMEL item per flight hour

FR: 1E-4/FH

- Maximum Dispatch Time $\leq (1E-9)/[(3E-8) \times (1E-4)]$

Maximum Dispatch Time ≤ 333 flight hours

This may result in a 10 day, Category C relief listing in the MMEL.

(B) Changes to Arsenal version of AC 25.1309 / AMC 25.1309 and AC 25.1309-1A:

The following recommended wording changes to the Arsenal version of AC 25.1309 / AMC 25.1309 will allow better coordination and improved clarity between the AC's / AMC's recommended certification compliance requirements for FAR/CS 25.1309 and this report's recommendations concerning the MMEL development process. The last paragraph, paragraph 12.d, is also contained in the current AC 25.1309 -1A. The following changes shown in paragraph 12.d are also recommended for the current -1A AC. The advisory circular for FAR/CS 25.1309 should not imply that MMEL configurations be included in the reliability analyses required by that regulation for aircraft certification.

The proposed changes to AC 25.1309 (Arsenal) / AMC 25.1309 paragraph 12.b.(1) and 12.d. are:

b. Maintenance Action. Credit may be taken for correct accomplishment of reasonable maintenance tasks, for both qualitative and quantitative assessments. The maintenance tasks needed to show compliance with FAR/CS 25.1309(b) should be established. In doing this, the following maintenance scenarios can be used:

(1) For failures known to the flight crew see paragraph 12.d.

(2) Latent failures will be identified by a scheduled maintenance task. If this approach is taken, and the Failure Condition is Hazardous or Catastrophic, then a CCMR maintenance task should be established. Some Latent Failures can be assumed to be identified based upon return to service test on the LRU following its removal and repair (component Mean Time Between Failures (MTBF) should be the basis for the check interval time).

c. Candidate Certification Maintenance Requirements.

(1) By detecting the presence of, and thereby limiting the exposure time to significant latent failures that would, in combination with one or more other specific failures or events identified by safety analysis, result in a Hazardous or Catastrophic Failure Condition, periodic maintenance or flight crew checks may be used to help show compliance with FAR/CS 25.1309(b). Where such checks cannot be

accepted as basic servicing or airmanship they become CCMRs. AC/AMJ 25.19 details the handling of CCMRs.

(2) Rational methods, which usually involve quantitative analysis, or relevant service experience should be used to determine check intervals. This analysis contains inherent uncertainties as discussed in paragraph 11.e.(3). Where periodic checks become CMRs these uncertainties justify the controlled escalation or exceptional short term extensions to individual CMRs allowed under AC/AMJ 25.19.

d. Flight with Equipment or Functions Known to be Inoperative. An applicant may elect to develop a list of equipment and functions which need not be operative for flight, based on stated compensating precautions that should be taken, e.g., operational or time limitations, flight crew procedures, or ground crew checks. The documents used to show compliance with FAR/CS 25.1309, together with any other relevant information, should be considered in the development of this list. Experienced engineering and operational judgment should be applied during the development of this list. When more than one flight is made with equipment known to be inoperative and that equipment affects the probabilities associated with Hazardous and/or Catastrophic failure conditions, time limits may be needed for the number of flights or allowed operation time in that aircraft configuration. These time limits should be established in accordance with the recommendations contained in FAA Flight Standards Policy.

6.4.3.4 General Comments on Costs and Benefits of the Recommendations

MMEL - Provides a better foundation for potential harmonization between the FOEB and JOEB.

6.4.3.5 Alternatives considered and why they weren't chosen

None

6.4.3.6 Dissenting Opinions

None

Note: A number of discussions have been tracked in the attached appendix as a record of associated rationale.

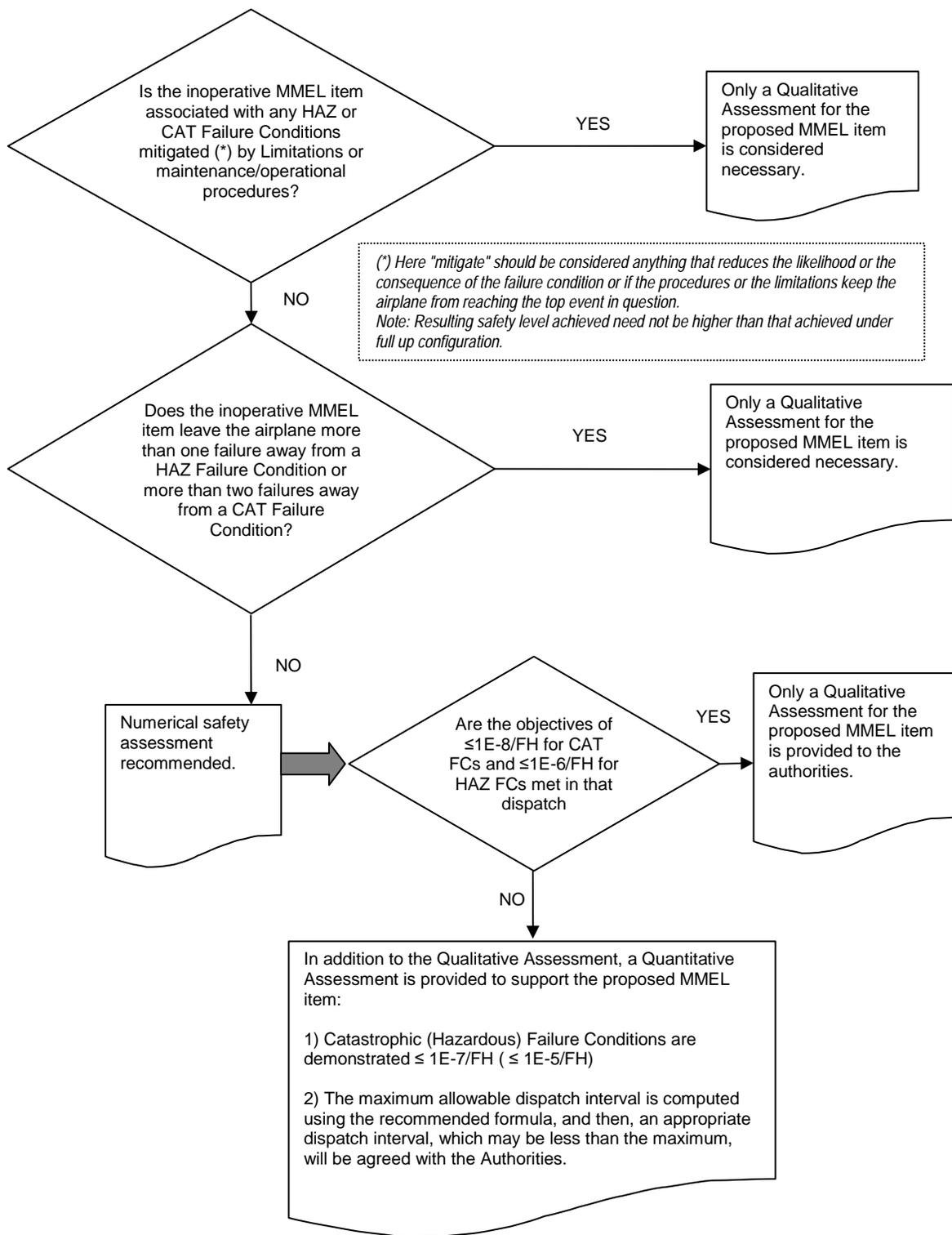


Figure 6-1 Logic Flowchart to Support Numerical Analyses for Proposed MMEL Items

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When a quantitative analysis is desired to support the qualitative assessment of an MMEL inoperative item dispatch, the following example may be helpful:

- a) Use the fault trees for the Catastrophic failure conditions affected by the proposed MMEL item, where that failure condition cannot be mitigated by operational procedures, limitations or a maintenance action prior to dispatch.
- b) Review the fault trees to determine whether operation with the inoperative MMEL item (item probability set to 1) leads to a probability per flight hour (at dispatch) of $\leq 1E-8/FH$.
 - If Yes ($\leq 1E-8/FH$): No numerical analysis needed for maximum allowable dispatch time
 - If No ($> 1E-8/FH$): go to c)
- c) Calculate the Maximum Dispatch Time using equation Equation(1):

Example numbers:

- Probability of Failure (PF) condition per flight hour under Dispatch condition – determined from fault tree with probability of MMEL item to 1:

PF: $3E-8/FH$

- Failure Rate (FR) of proposed MMEL item per flight hour

FR: 1E-4/FH

- Maximum Dispatch Time $\leq (1E-9)/[(3E-8) \times (1E-4)]$

Maximum Dispatch Time ≤ 333 flight hours

This may result in a 10 day, Category C relief listing in the MMEL.

(B) Changes to Arsenal version of AC 25.1309 / AMC 25.1309 and AC 25.1309-1A:

The following recommended wording changes to the Arsenal version of AC 25.1309 / AMC 25.1309 will allow better coordination and improved clarity between the AC's / AMC's recommended certification compliance requirements for FAR/CS 25.1309 and this report's recommendations concerning the MMEL development process. The last paragraph, paragraph 12.d, is also contained in the current AC 25.1309 -1A. The following changes shown in paragraph 12.d are also recommended for the current -1A AC. The advisory circular for FAR/CS 25.1309 should not imply that MMEL configurations be included in the reliability analyses required by that regulation for aircraft certification.

The proposed changes to AC 25.1309 (Arsenal) / AMC 25.1309 paragraph 12.b.(1) and 12.d. are:

b. Maintenance Action. Credit may be taken for correct accomplishment of reasonable maintenance tasks, for both qualitative and quantitative assessments. The maintenance tasks needed to show compliance with FAR/CS 25.1309(b) should be established. In doing this, the following maintenance scenarios can be used:

(1) For failures known to the flight crew see paragraph 12.d.

(2) Latent failures will be identified by a scheduled maintenance task. If this approach is taken, and the Failure Condition is Hazardous or Catastrophic, then a CCMR maintenance task should be established. Some Latent Failures can be assumed to be identified based upon return to service test on the LRU following its removal and repair (component Mean Time Between Failures (MTBF) should be the basis for the check interval time).

c. Candidate Certification Maintenance Requirements.

(1) By detecting the presence of, and thereby limiting the exposure time to significant latent failures that would, in combination with one or more other specific failures or events identified by safety analysis, result in a Hazardous or Catastrophic Failure Condition, periodic maintenance or flight crew checks may be used to help show compliance with FAR/CS 25.1309(b). Where such checks cannot be

accepted as basic servicing or airmanship they become CCMRs. AC/AMJ 25.19 details the handling of CCMRs.

(2) Rational methods, which usually involve quantitative analysis, or relevant service experience should be used to determine check intervals. This analysis contains inherent uncertainties as discussed in paragraph 11.e.(3). Where periodic checks become CMRs these uncertainties justify the controlled escalation or exceptional short term extensions to individual CMRs allowed under AC/AMJ 25.19.

d. Flight with Equipment or Functions Known to be Inoperative. An applicant may elect to develop a list of equipment and functions which need not be operative for flight, based on stated compensating precautions that should be taken, e.g., operational or time limitations, flight crew procedures, or ground crew checks. The documents used to show compliance with FAR/CS 25.1309, together with any other relevant information, should be considered in the development of this list. Experienced engineering and operational judgment should be applied during the development of this list. When more than one flight is made with equipment known to be inoperative and that equipment affects the probabilities associated with Hazardous and/or Catastrophic failure conditions, time limits may be needed for the number of flights or allowed operation time in that aircraft configuration. These time limits should be established in accordance with the recommendations contained in FAA Flight Standards Policy.

6.4.3.4 General Comments on Costs and Benefits of the Recommendations

MMEL - Provides a better foundation for potential harmonization between the FOEB and JOEB.

6.4.3.5 Alternatives considered and why they weren't chosen

None

6.4.3.6 Dissenting Opinions

None

Note: A number of discussions have been tracked in the attached appendix as a record of associated rationale.

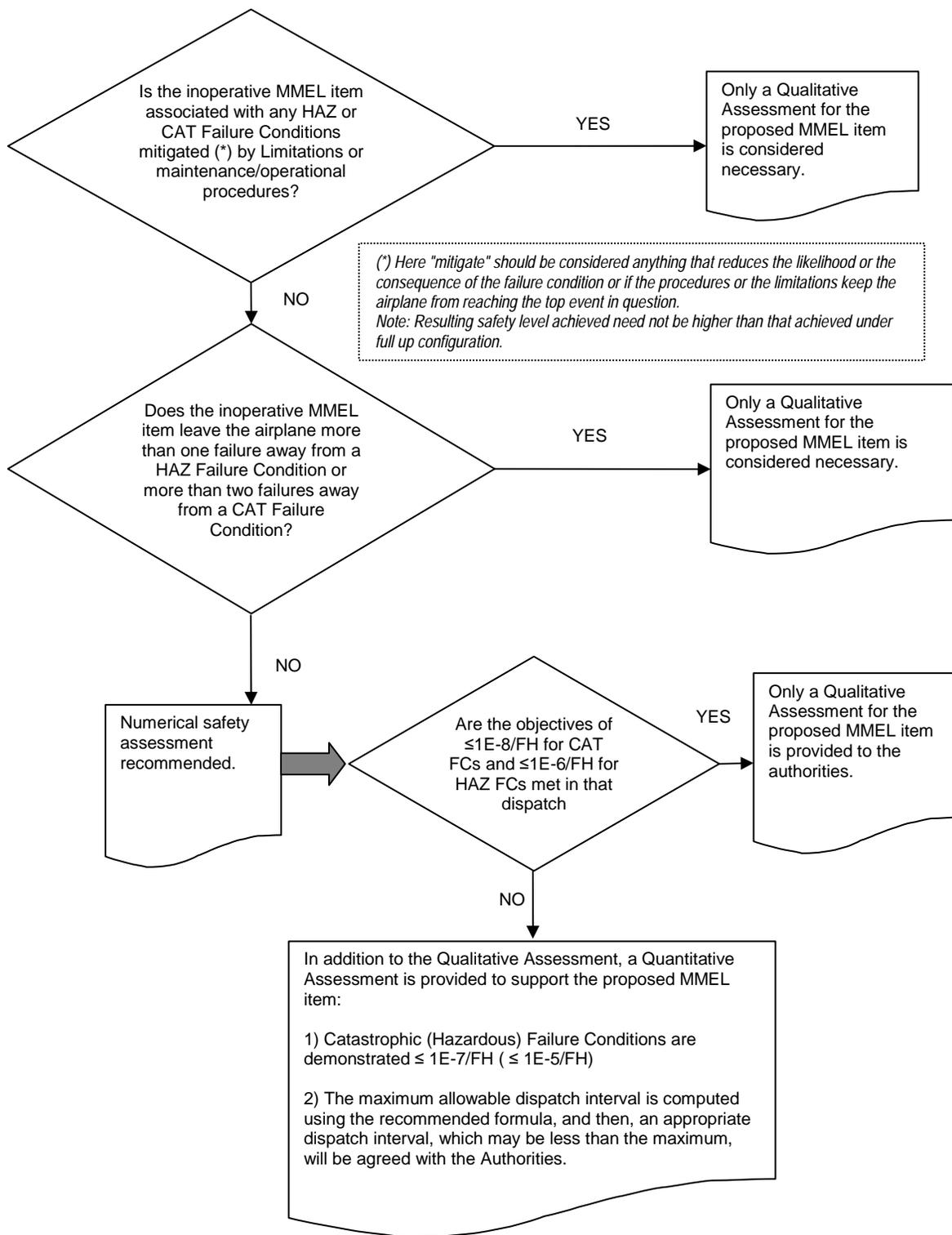


Figure 6-1 Logic Flowchart to Support Numerical Analyses for Proposed MMEL Items

MEL SYSTEM 34	Repair Interval Category				
	Number Installed				
	Number Required for Dispatch				
	Sequence Number System & Item				Remarks or Exceptions
34-60-00					
Flight Management System					
1. System inoperative	C	2	0		(O) May be inoperative provided alternate procedures are established and used. Note 1: At least one FMS is required for RNP .3, RNP 1 and RNP 2 operations. Two FMS required for RNP 10 operations. Note 2: At least one FMS is required for VERTICAL NAVIGATION – BARO VNAV operations.
2. Navigation databases	C	2	0		(O) May be out of currency provided: 1. Current Aeronautical Charts are used to verify Navigation Fixes prior to dispatch, 2. Procedures are established and used to verify status and suitability of Navigation Facilities used to define route of flight, and 3. Approach Navigation Radios are manually tuned and identified. Note 1: A current Navigation Database is required for RNP-0.3 approaches, RNP-1.0 RNAV Departure Procedures and RNP-2.0 en route procedures ("Q" routes).

PLACARD

Place an inoperative placard beside the affected MCDU.

MAINTENANCE (M)

NOT REQUIRED

OPERATIONS (O)

System inoperative (Both)

- Current Aeronautical Charts must be used to verify Navigation Fixes prior to dispatch.
- Manually tune navaids and course on the RADIO PAGE of the MCDU.
- Monitor fuel status against flight release planned fuel burn at a minimum of every 30 minutes en route.
- Do not accept a clearance for an RNAV SID, RNAV STAR or a GPS instrument approach.
- Do not fly a VNAV approach (DA in lieu of MDA).
- Refer to AOM I, Chapter 5, "FMS inoperative procedures."

Navigation Databases (Both)

If the active FMS database is out of currency, the crew may continue to use the FMS for navigation, provided:

-
- The crew verifies each navigational fix used from the database with a current aeronautical chart.
 - NOTAMS and CHART NOTAMS are reviewed to verify the status and suitability of navigational facilities that define the route.
 - Approach Navigation Radios must be manually tuned and identified.
 - Do not accept a clearance for an RNAV SID, RNAV STAR or a GPS instrument approach.

DISPATCH PROCEDURES

System Inoperative (Both)

- Ensure no RNAV SIDs or STARs are filed. Do not plan a flight that requires a GPS instrument approach.
- Do not plan a flight based on a VNAV instrument approach (DA in lieu of MDA).

Navigation Databases (Both)

- Ensure no RNAV SIDs or STARs are filed. Do not plan a flight that requires a GPS instrument approach.

Refer to Embraer 175 MEL Operations Bulletin 08-02 for dispatch procedures



Federal Aviation Administration

[RGL Home](#)

Code of Federal Regulations

▼ Sec. 91.207

Part 91 GENERAL OPERATING AND FLIGHT RULES

Subpart C--Equipment, Instrument, and Certificate Requirements

Sec. 91.207

Emergency locator transmitters.

(a) Except as provided in paragraphs (e) and (f) of this section, no person may operate a U.S.-registered civil airplane unless--

(1) There is attached to the airplane an approved automatic type emergency locator transmitter that is in operable condition for the following operations, except that after June 21, 1995, an emergency locator transmitter that meets the requirements of TSO-C91 may not be used for new installations:

(i) Those operations governed by the supplemental air carrier and commercial operator rules of parts 121 and 125;

(ii) Charter flights governed by the domestic and flag air carrier rules of part 121 of this chapter; and

(iii) Operations governed by part 135 of this chapter; or

(2) For operations other than those specified in paragraph (a)(1) of this section, there must be attached to the airplane an approved personal type or an approved automatic type emergency locator transmitter that is in operable condition, except that after June 21, 1995, an emergency locator transmitter that meets the requirements of TSO-C91 may not be used for new installations.

(b) Each emergency locator transmitter required by paragraph (a) of this section must be attached to the airplane in such a manner that the probability of damage to the transmitter in the event of crash impact is minimized. Fixed and deployable automatic type transmitters must be attached to the airplane as far aft as practicable.

(c) Batteries used in the emergency locator transmitters required by paragraphs (a) and (b) of this section must be replaced (or recharged, if the batteries are rechargeable)--

(1) When the transmitter has been in use for more than 1 cumulative hour; or

(2) When 50 percent of their useful life (or, for rechargeable batteries, 50 percent of their useful life of charge) has expired, as established by the transmitter manufacturer under its approval.

The new expiration date for replacing (or recharging) the battery must be legibly marked on the outside of the transmitter and entered in the aircraft maintenance record. Paragraph (c)(2) of this section does not apply to batteries (such as water-activated batteries) that are essentially unaffected

during probable storage intervals.

(d) Each emergency locator transmitter required by paragraph (a) of this section must be inspected within 12 calendar months after the last inspection for--

- (1) Proper installation;
- (2) Battery corrosion;
- (3) Operation of the controls and crash sensor; and
- (4) The presence of a sufficient signal radiated from its antenna.

(e) Notwithstanding paragraph (a) of this section, a person may--

- (1) Ferry a newly acquired airplane from the place where possession of it was taken to a place where the emergency locator transmitter is to be installed; and
- (2) Ferry an airplane with an inoperative emergency locator transmitter from a place where repairs or replacements cannot be made to a place where they can be made.

No person other than required crewmembers may be carried aboard an airplane being ferried under paragraph (e) of this section.

(f) Paragraph (a) of this section does not apply to--

- [(1) Before January 1, 2004, turbojet-powered aircraft;]
- (2) Aircraft while engaged in scheduled flights by scheduled air carriers;
 - (3) Aircraft while engaged in training operations conducted entirely within a 50-nautical mile radius of the airport from which such local flight operations began;
 - (4) Aircraft while engaged in flight operations incident to design and testing;
 - (5) New aircraft while engaged in flight operations incident to their manufacture, preparation, and delivery;
 - (6) Aircraft while engaged in flight operations incident to the aerial application of chemicals and other substances for agricultural purposes;
 - (7) Aircraft certificated by the Administrator for research and development purposes;
 - (8) Aircraft while used for showing compliance with regulations, crew training, exhibition, air racing, or market surveys;
 - (9) Aircraft equipped to carry not more than one person; and

(10) An aircraft during any period for which the transmitter has been temporarily removed for inspection, repair, modification, or replacement, subject to the following:

(i) No person may operate the aircraft unless the aircraft records contain an entry which includes the date of initial removal, the make, model, serial number, and reason for removing the transmitter, and a placard located in view of the pilot to show "ELT not installed."

(ii) No person may operate the aircraft more than 90 days after the ELT is initially removed from the aircraft; and

[(11) On and after January 1, 2004, aircraft with a maximum payload capacity of more than 18,000 pounds when used in air transportation.]

Amdt. 91-265, Eff. 12/22/2000

▶ Comments

▼ **Document History**

Notice of Proposed Rulemaking Actions:

Not Applicable.

Final Rule Actions:

Not Applicable.

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PL-98 SUBJECT: NAVIGATION DATABASES

M MEL GLOBAL CHANGE PL-98 is designated as GC-XX

This Global Change (GC) is an approved addendum to all existing MMEL documents. Operators may seek use of the specific relief contained in this policy letter by revising their Minimum Equipment List (MEL). In doing so, each applicable sample proviso stating the relief in this policy letter, must be copied verbatim (or by using equivalent text) into the operator's MEL. Approval of a revised MEL is gained utilizing established procedures, through the Operator's assigned Principal Operations Inspector (POI).

PL-98 Revision 1, Draft 9 (Lead: ALPA/ATA)

06/02/2008

SUBJECT: Navigation Databases
MMEL CODE: 34 (NAVIGATION)
REFERENCE: Original PL-98, dated January 20, 1999
FROM: Manager, Air Transportation Division, AFS-200
TO: All Regional Flight Standards Division Managers
All Aircraft Evaluation Group Managers
REPLY TO ATTN OF: Manager, Program Management Branch, AFS-260
PURPOSE: The purpose of this policy is to establish MMEL relief for Navigation Databases as related to Flight Management or Navigation Management Systems.

DISCUSSION (rewritten at Revision 1):

FAA and Industry have determined that operational safety will be enhanced by standardizing the NAV Database repair category, and by developing alternate procedures for ensuring the information in an out of date navigation database is accurate for current operations. This will allow the continued use of Flight and Navigation Management System Navigation Databases which are no longer current. The Remarks column for Navigation Databases has been simplified to read "...alternate procedures must be established and used" if RNAV procedures are to be flown. The provisos from the original issue of this Policy Letter are applicable when RNAV procedures will not be flown.

Alternate procedures developed by the operator must ensure the intended flight can be conducted safely with Navigation Databases out of currency. Specific alternate procedures should be developed using suitable reference material, such as, but not limited to: Aircraft Flight Manual and FAA Advisory Circulars (i.e., 90-100 U.S. TERMINAL AND EN ROUTE AREA NAVIGATION (RNAV) OPERATIONS).

Alternate procedures, (whether accomplished by dispatch organizations in coordination with flight crews, or by flight crews alone), must validate route data for the intended flight from the database that is out of currency, against current navigation data (e.g., current aeronautical charts and other aeronautical data as referenced in pertinent paragraphs of 14 CFR, Sec. 91.503 – Flying Equipment And Operating Information).

NOTE: In accordance with AC 90-100 "Pilots must not fly an RNAV SID or STAR unless it is retrievable by procedure name from the onboard navigation database and conforms to the charted procedure."

After review by the FOPB, a determination was made that the same level of safety intended by the Federal Aviation Regulations could be maintained by these modifications. The FOPB has therefore determined that MMELs should be standardized in accordance with this policy.

POLICY: The following standard MMEL **provisos** and repair category are adopted:

34	NAVIGATION	Remarks or Exceptions
XX-X	Flight Management System	
	1) Navigation Database	<p data-bbox="548 394 683 426">C - 0</p> <p data-bbox="716 394 1446 489">(O) If RNAV procedures are to be flown, database may be out of currency provided alternate procedures are established and used.</p> <p data-bbox="716 520 1455 709">NOTE 1: Alternate procedures should be developed using suitable reference material, (such as, but not limited to, Aircraft Flight Manual and FAA Advisory Circular titled U.S. TERMINAL AND EN ROUTE AREA NAVIGATION (RNAV) OPERATIONS).</p> <p data-bbox="716 741 1459 1024">NOTE 2: Alternate procedures, (whether accomplished by dispatch organizations in coordination with flight crews, or by flight crews alone), must validate route data for the intended flight, from the database that is out of currency, against current navigation data (i.e., current aeronautical charts and other aeronautical data as referenced in pertinent paragraphs of 14 CFR, Sec. 91.503 – flying equipment and operating information).</p> <p data-bbox="548 1056 683 1087">C - 0</p> <p data-bbox="716 1056 1471 1119">(O) If RNAV procedures are not flown, database may be out of currency provided:</p> <ul data-bbox="716 1129 1438 1346" style="list-style-type: none"><li data-bbox="716 1129 1352 1192">a) Current Aeronautical Charts are used to verify navigation fixes prior to dispatch,<li data-bbox="716 1192 1438 1287">b) Procedures are established and used to verify status and suitability of navigation facilities used to define route of flight, and<li data-bbox="716 1287 1425 1346">c) Approach navigation radios are manually tuned and identified.

34	NAVIGATION			Remarks or Exceptions
XX-X	Navigation Management System			
	1) Navigation Database	C	-	0
				<p>(O) If RNAV procedures are to be flown, database may be out of currency provided alternate procedures are established and used.</p>
				<p>NOTE 1: Alternate procedures should be developed using suitable reference material, (such as, but not limited to, Aircraft Flight Manual and FAA Advisory Circular titled U.S. TERMINAL AND EN ROUTE AREA NAVIGATION (RNAV) OPERATIONS).</p>
				<p>NOTE 2: Alternate procedures, (whether accomplished by dispatch organizations in coordination with flight crews, or by flight crews alone), must validate route data for the intended flight, from the database that is out of currency, against current navigation data (i.e., current aeronautical charts and other aeronautical data as referenced in pertinent paragraphs of 14 CFR, Sec. 91.503 - flying equipment and operating information).</p>
		C	-	0
				<p>(O) If RNAV procedures are not flown, database may be out of currency provided:</p> <ul style="list-style-type: none"> a) Current Aeronautical Charts are used to verify navigation fixes prior to dispatch, b) Procedures are established and used to verify status and suitability of navigation facilities used to define route of flight, and c) Approach navigation radios are manually tuned and identified.

Please review all MMELs for which you are responsible, and incorporate this policy through the normal FOEB revision process.

/s/ xx/xx/2008

AFS 200

HOMP and System Status Monitoring



Federal Aviation
Administration

Presented to: MMEL IG 79

By: Edward L. Hinch, FTW AEG

Date: 08/19/2010



Definition - HOMP

- **Helicopter Operations Monitoring Program**
- **Consists of: Flight Data Continuous Recording system (FCDR/HOMP)**
- **Status Monitoring System**







<Presentation Title – Change on Master Slide>
<Date of Presentation – Change on Master Slide>



Federal Aviation
Administration

System Purpose

- **The FDCR/HOMP system provides the helicopter operator with a record of the actual operating profile. This will provide the helicopter manufacturer with means to investigate the actual helicopter use and develop future helicopter maintenance monitoring. This will give the manufacturer the ability to troubleshoot and optimize the maintenance after an inflight event**



Status Monitoring System

- **Purpose is to warn/alert the flight crew and to assist the maintenance operator in case a failure has been detected by the system**



Status Monitoring Functions

Description

- **Function status 1 – provides dispatch/no dispatch information to the flight crew.**
- **Function status 2 – provides failure message report to maintenance.**
- **Function status 3 – provide troubleshooting IBIT to the maintenance operator.**



Operational use Concept

- **Before each flight the crew will be provided with sufficient information to determine if the helicopter can be dispatched for all operations; possible under certain conditions with limitations (ie VFR only), or not possible.**



??

- **What policies cover the approval and use of this type system.**
- **What relief can be given**



- **QUESTIONS/COMMENTS**





Federal Aviation Administration

MMEL Policy Letter 70 Revision 3

Date: August 18, 2010

To: All Region Flight Standards Division Managers
All Aircraft Evaluation Group Managers

From: Manager, Air Transportation Division, AFS-200

Reply To: Manager, Technical Programs Branch, AFS-260
Attn Of:

Subject: Definitions Required in MELs.

MMEL CODE: 00 (GENERAL)

REFERENCE: PL-70, Revision 2 dated September 11, 2008
PL-70, Revision 1 dated December 22, 1993

PURPOSE:

The purpose of this policy letter is to clarify the requirements for Master Minimum Equipment List definitions. The previous policy, contained in Policy Letter 70, dated December 22, 1993 is unchanged.

DISCUSSION:

Revision 3 moved previous revision remarks to this section (Discussion), clarified that PL-25 Appendix A is not required to be included in the operator's MEL and added Definition 31.

Revision 2 adds the definitions of "Considered Inoperative", "Is not used" and "Nonessential equipment and furnishings (NEF)" (reference PL 25, Revision 12). Termination date of December 31, 2007 added to definition 21 – Passenger Convenience Items.

Revision 1 reflects new standardized policy letter formatting.

Master Minimum Equipment List (MMEL) definitions are included to define specific items related to the MMEL and includes specific items which are required to be in an operator's Minimum Equipment List (MEL). Not all of the MMEL definitions are required to be in an operator's MEL, as some are related to format issues, specific aircraft types, and certain types of operations. Certain portions of a MMEL definition may be edited and/or not required, but the intent of the definition must be the same and cannot be less restrictive than the MMEL.

POLICY:

PL-25 Appendix A is not required to be included in the operator's MEL. The following MMEL definitions indicated are to be included in the operator's MEL:

DEFINITION	OPERATOR'S MEL CRITERIA	REMARKS
1. System Definition		
a. Item	Operator must include explanation describing format.	MMEL definition explaining MMEL format. Format issue.
b. Number Installed	Operator must include explanation describing format.	MMEL definition explaining MMEL format. Format issue.
c. Number Required for dispatch	Operator must include explanation describing format.	MMEL definition explaining MMEL format. Format issue.
d. Remarks or Exceptions	Operator must include explanation describing format.	MMEL definition explaining MMEL format. Format issue.
e. Vertical Bar	Operator's manual MMEL definition must indicate revision identification method as specified by the operator. May be "bar" or other suitable method accepted by the Administrator.	MMEL definition explaining MMEL format. Format issue.
2. Airplane/Rotorcraft Flight Manual	Operator must indicate appropriate type manual that applicable to the type of aircraft.	MMEL Definition.
3. As required by FAR	Not allowed in MEL. Definition not applicable to MEL.	MMEL item only; therefore development criteria.
4. "Placarding"	Statement regarding placarding items must be included.	MMEL definition No. 4 NOTE.
5. "-"	MEL item or an acceptable means to determine quantity installed.	MMEL Definition.
6. Deleted	Operator format issue, not required in operator MEL.	MMEL definition explaining MMEL format.
7. ER	Required in operator's MEL dependent on aircraft configuration.	MMEL Definition.
8. FAR	Required in operator's MEL.	MMEL Definition.
9. Flight Day	Required in operator's MEL. Operator may edit to define when clock time starts and ends.	May edit to suit operations.
10. Icing Conditions	Required in operator's MEL.	
11. Alphabetical Symbol	Not required in operator's MEL.	MMEL definition explaining MMEL format.
12. Inoperative	Required in operator's MEL.	
13. Notes	Required in operator's MEL. Operator may edit column references to conform to MEL format.	
14. Inoperative components of an inoperative system	Required in operator's MEL.	

DEFINITION	OPERATOR'S MEL CRITERIA	REMARKS
15. (M)	Required in operator's MEL.	MMEL Definition.
16. (O)	Required in operator's MEL.	MMEL Definition.
17. Deactivated and Secured	Required in operator's MEL.	
18. VFR	Required in operator's MEL.	
19. VMC	Required in operator's MEL.	
20. Visible Moisture	Required in operator's MEL.	
21. Passenger Convenience Items (expires December 31, 2007)	Definition optional dependent on how operator lists these items. If operator includes items in MEL, definition not required	MMEL definition for MEL development criteria.
22. Repair Intervals	Required in operator's MEL. Definition may be edited to conform to MEL format. Limitations cannot be changed and examples need not be included.	
23. EICAS	Required in operator's MEL dependent on aircraft configuration.	
24. Administrative Control Items	Not required in operator's MEL.	MMEL definition for MEL development criteria.
25. ***	Not required in operator's MEL.	MMEL definition for MEL development criteria.
26. Excess Items	Required in operator's MEL only if excess items are installed.	MMEL definition for MEL development criteria.
27. Day of Discovery	Required in operator's MEL.	
28. Considered Inoperative	Required in operator's MEL.	
29. Is not used	Required in operator's MEL.	
30. Nonessential Equipment and Furnishings (NEF)	Required in operator's MEL.	
31. As used in MMELs, Heavy Maintenance Visit (HMV)	Required in operator's MEL.	

Principal operations inspectors are requested to review these definitions with their certificate holders to ensure understanding.

John Duncan, Manager,
Air Transportation Division, AFS-200



Federal Aviation Administration

MMEL Policy Letter 91 Revision 1

Date: November 14, 2003

To: All Region Flight Standards Division Managers
All Aircraft Evaluation Group Managers

From: Manager, Air Transportation Division, AFS-200

Reply To: Manager, Technical Programs Branch, AFS-260
Attn Of:

Subject: White Position lights and Strobe Lights

MMEL CODE: 33 (LIGHTS)

REFERENCE: PL-91, Original, dated August 15, 1997
PL-8, (Item 9), dated July 12, 1982

PURPOSE:

This policy letter provides Master Minimum Equipment List (MMEL) policy concerning wing and tail strobe lights in lieu of the respective position lights.

DISCUSSION:

Revision 1 clarifies policy that refers to wing and tail white position lights.

The original policy letter restated an earlier MMEL policy that was previously contained in PL-8 (Item 9), dated July 12, 1982, which covered multiple issues.

The Regional Airline Association requested authority to use wing and tail strobe lights in lieu of the respective wing and tail position lights required by Federal Aviation Regulation 91.209

The following policy establishes guidelines for granting MMEL relief for use of wing and tail strobe lights in lieu of the respective wing and tail position lights.

POLICY:

MMEL relief may be granted for use for wing and tail strobe lights in lieu of the respective wing and tail white position lights.

NOTE: The strobe lights may not be used in place of the red and/or green wing tip position light during night operations.

Flight Operations Evaluation Board chairmen should not permit use of tail strobe lights in lieu of tail position lights unless it is verified that the airplane's tail position light and the strobe light are in close proximity.

Consideration should also be given to the fact that strobe lights tend to be blinding under certain conditions during ground operations and may not in each case provide a clear definition of an aircraft's direction in flight or on the ground.

Each Flight Operations Evaluation Board (FOEB) chairman should apply the following policy to affected MMELs through the normal FOEB process.

Matthew J. Schack, Manager
Air Transportation Division, AFS-200

PL-91,R 1 reformatted 01/20/2010 with no change in content.



Federal Aviation Administration

MMEL Policy Letter 105 Revision 1

Date: Jan 20,2009

To: All Region Flight Standards Division Managers
All Aircraft Evaluation Group Managers

From: Manager, Air Transportation Division, AFS-200

Reply To: Manager, Technical Programs Branch, AFS-260
Attn Of:

MMEL GLOBAL CHANGE

PL-105 is designated as GC-158

This Global Change (GC) is an approved addendum to some MMEL documents. Operators may seek use of the specific relief contained in this policy letter by revising their Minimum Equipment List (MEL). In doing so, each applicable sample proviso stating the relief in this policy letter, must be copied verbatim in the operator's MEL. Approval of a revised MEL is gained utilizing established procedures, through the Operator's assigned Principal Operations Inspector (POI).

Subject: Automatic Dependent Surveillance-Broadcast System

MMEL CODE: 34 (NAVIGATION)

REFERENCE: Revision Original, dated October 11, 2000

PURPOSE:

The purpose of this policy letter is to provide updated guidance for Flight Operations Evaluation Board (FOEB) Chairmen and principal operations inspectors (POI) in assigning relief for Automatic Dependent Surveillance-Broadcast System (ADS-B) in Master Minimum Equipment Lists (MMEL) and operators Minimum Equipment Lists (MEL).

DISCUSSION:

Revision 1 reformats PL-105 to reflect current ADS-B operations.

The ADS-B is an onboard aircraft system that is designed **to perform various air-to-ground and air-to-air applications. The air-to-ground functions are similar to and can exceed sub-functions of the transponder. The air-to-air applications include situational awareness and spacing.**

For non Traffic Alert Collision Avoidance System (TCAS) equipped aircraft the ADS-B, using a Cockpit Display of Traffic Information (CDTI), can assist the flight crew in avoiding conflicting traffic. Like TCAS, it is considered a backup to the "see and avoid" concept and the air traffic control (ATC) radar environment. Unlike TCAS, it does not provide any Traffic Advisories (TA) or Resolution Advisories (RA). This system is certified as an aid to visual acquisition of conflicting traffic and may not be used to maneuver the aircraft based solely upon traffic information displayed.

ADS-B, when added to a surface moving map, can provide traffic situational awareness on the surface and near the airport for other traffic that may be in conflict (i.e. possible runway incursions). Spacing applications include Merging and Spacing (M&S), In Trail Procedures (ITP), and CDTI Assisted Visual Separation (CAVS). Other applications are also being considered for certification.

The ADS-B system communicates with other ADS-B equipped aircraft and Air Traffic Control (ATC). Message elements are broadcast automatically and include: Global Positioning System latitude/longitude position, aircraft velocity, pressure altitude, flight identifier, and velocity vector. Other traffic information may be uplinked from the ground radar system. This information is derived from air traffic surveillance radars and uplinked to ADS-B In equipped aircraft. This function is called Traffic Information Services – Broadcast (TIS-B).

Relief has been requested for the entire system and for subsystems to allow use of those functions which operate normally, e.g. transmit or receive information if the other function is inoperative.

POLICY:

The Flight Operations Policy Board (FOPB) finds sufficient cause to grant relief for the ADS-B system. It also recognizes that ADS-B may be certified to perform tasks currently being accomplished by Title 14 Code of Federal Regulations (14 CFR) required equipment. Therefore, the POI will ensure that, if ADS-B is installed in lieu of or as a replacement for 14 CFR required equipment, the repair category in the operator's MEL will be the same as that of the 14 CFR required equipment.

34 NAVIGATION	Repair Interval	Number Installed	Number Required for Dispatch	Remarks or Exceptions
Automatic Dependent Surveillance-Broadcast (ADS-B) System	D	-	0	May be inoperative provided it is not required by 14 CFR. NOTE: If ADS-B is installed in lieu of or as a replacement for 14 CFR required equipment, the repair category in the operator's MEL will be the same as that of the 14 CFR required equipment.
1) Cockpit Display and Traffic Information (CDTI)	D	-	0	NOTE: Cockpit Display Traffic of Information (CDTI) display of data from other aircraft systems may be used.
2) CDTI Control Panel	D	-	0	May be inoperative provided:

3) Data Link Transmitter(s)	D	-	0
4) Data Link Receivers	D	-	0
5) ADS-B Applications	D	-	0

- a) Flight ID can be set, and
- b) Screen display is acceptable to the flight crew.

NOTE: In some aircraft the Data Link Transmission is an integral part of the transponder and relief is provided in that section.

(Gregory Kirkland for)
4/10/2009
John Duncan, Manager
AFS-200



Federal Aviation Administration

MMEL Policy Letter 120, Revision 1

Date: Jan 20, 2009

To: All Region Flight Standards Division Managers
All Aircraft Evaluation Group Managers

From: Manager, Air Transportation Division, AFS-200

Reply To: Manager, Technical Programs Branch, AFS-260
Attn Of:

MMEL GLOBAL CHANGE
PL-120 is designated as GC-156

This Global Change (GC) is an approved addendum to all existing MMEL documents. Operators may seek use of the specific relief contained in this policy letter by revising their Minimum Equipment List (MEL). In doing so, each applicable sample proviso stating the relief in this policy letter, must be copied verbatim in the operator's MEL. Approval of a revised MEL is gained utilizing established procedures, through the Operator's assigned Principal Operations Inspector (POI).

Subject: Emergency Locator Transmitters (ELT)

MMEL CODE: **23 (COMMUNICATIONS) and 25 (EQUIPMENT & FURNISHINGS)**

REFERENCE: 14 CFR Part 91.207 (f) (10), dated Jan 01, 2006
PL-120, Original, dated Jan 01, 2007

PURPOSE:

The purpose of this Policy Letter is to provide standardized MMEL requirements for the Emergency Locator Transmitters (ELT).

DISCUSSION:

Revision 1 adds ATA code assignment ATA 23 and the requirement that an inoperative system that remains installed must be deactivated. For Fixed ELTs, split items into two parts, those that are inoperative and those that are missing.

Adds relief for Emergency Locator Transmitters (ELT). After review by the Flight Operations Policy Board, a determination was made that MMEL policy for ELTs was necessary in order to clarify the relief provided in 14 CFR Part 91.207(f)(10).

POLICY:

The following policy has been established for ELTs in order to provide operators with ready access to the dispatch relief allowed by 14 CFR.

For Fixed ELTs required by 14 CFR, Category A repair interval is assigned with repairs to be made within 90 days after the ELT is found to be **missing or temporarily removed for inspection**, repair, modification or replacement.

For ELTs in excess of those required by 14 CFR (Fixed or Survival Type), Category D repair interval is assigned.

**23 – COMMUNICATIONS, or
25 – EQUIPMENT AND
FURNISHINGS**

25-XX Emergency Locator
Transmitter (ELT)

	Repair Interval	Number Installed	Number Required for Dispatch	Remarks or Exceptions
*** Survival Type ELTs	D	–	–	Any in excess of those required by FAR may be inoperative or missing.
*** Fixed ELTs	A	–	0	(M) May be inoperative provided: a) System is deactivated, and b) Repairs are made within 90 days.
	A	–	0	May be missing provided repairs are made within 90 days.
	D	–	–	(M) Any in excess of those required by FAR may be inoperative provided system is deactivated.
	D	–	–	Any in excess of those required by FAR may be missing.

Each Flight Operations Evaluation Board (FOEB) Chairman should apply this Policy to affected MMELs through the normal FOEB process.

(Gregory Kirtland for)
4/10/2009
John Duncan, Manager,
AFS-200

SF – I believe that this proviso is contrary to FAR 91.207(f). For 135 ops, the only relief is provided if the ELT is removed for inspection, repair, modification, or replacement. Otherwise it must be installed and operative. Operations with the ELT deactivated is not permitted by FAR. If the aircraft is over 18,000 pounds payload then no ELT is even required.



PL-98 SUBJECT: NAVIGATION DATABASES

M MEL GLOBAL CHANGE PL-98 is designated as GC-XX

This Global Change (GC) is an approved addendum to all existing MMEL documents. Operators may seek use of the specific relief contained in this policy letter by revising their Minimum Equipment List (MEL). In doing so, each applicable sample proviso stating the relief in this policy letter, must be copied verbatim (or by using equivalent text) into the operator's MEL. Approval of a revised MEL is gained utilizing established procedures, through the Operator's assigned Principal Operations Inspector (POI).

PL-98 Revision 1, Draft 10 (Lead:)

xx/xx/2008

SUBJECT: Navigation Databases
MMEL CODE: 34 (NAVIGATION)
REFERENCE: Original PL-98, dated January 20, 1999
FROM: Manager, Air Transportation Division, AFS-200
TO: All Regional Flight Standards Division Managers
All Aircraft Evaluation Group Managers
REPLY TO ATTN OF: Manager, Program Management Branch, AFS-260
PURPOSE: The purpose of this policy is to establish MMEL relief for Navigation Databases as related to Flight Management or Navigation Management Systems.

DISCUSSION (rewritten at Revision 1):

FAA and Industry have determined that operational safety will be enhanced by standardizing the NAV Database repair category, and by developing alternate procedures for ensuring the information in an out of date navigation database is accurate for current operations. This will allow the continued use of Flight and Navigation Management System Navigation Databases which are no longer current. The Remarks column for Navigation Databases has been simplified to read "...alternate procedures must be established and used" if RNAV procedures are to be flown. The provisos from the original issue of this Policy Letter are applicable when RNAV procedures will not be flown.

Alternate procedures developed by the operator must ensure the intended flight can be conducted safely with Navigation Databases out of currency. Specific alternate procedures should be developed using suitable reference material, such as, but not limited to: Aircraft Flight Manual and FAA Advisory Circulars (e.g., 90-100 U.S. TERMINAL AND EN ROUTE AREA NAVIGATION (RNAV) OPERATIONS).

Alternate procedures, (whether accomplished by dispatch organizations in coordination with flight crews, or by flight crews alone), must validate route data for the intended flight from the database that is out of currency, against current navigation data (e.g., current aeronautical charts and other aeronautical data as referenced in pertinent paragraphs of 14 CFR, Sec. 91.503 – Flying Equipment And Operating Information).

NOTE: In accordance with AC 90-100 "Pilots must not fly an RNAV SID or STAR unless it is retrievable by procedure name from the onboard navigation database and conforms to the charted procedure."

After review by the FOPB, a determination was made that the same level of safety intended by the Federal Aviation Regulations could be maintained by these modifications. The FOPB has therefore determined that MMELs should be standardized in accordance with this policy.

POLICY: The following standard MMEL provisos and repair category are adopted:

34	NAVIGATION	Remarks or Exceptions
XX-X	Flight Management System	
	1) Navigation Database	<p data-bbox="548 394 1468 489">B - 0 (O) If RNAV procedures or routes are to be flown, database may be out of currency provided alternate procedures are established and used.</p> <p data-bbox="719 520 1451 709">NOTE 1: Alternate procedures should be developed using suitable reference material, (such as, but not limited to, Aircraft Flight Manual and FAA Advisory Circular titled U.S. TERMINAL AND EN ROUTE AREA NAVIGATION (RNAV) OPERATIONS).</p> <p data-bbox="719 737 1458 1020">NOTE 2: Alternate procedures, (whether accomplished by dispatch organizations in coordination with flight crews, or by flight crews alone), must validate route data for the intended flight, from the database that is out of currency, against current navigation data (i.e., current aeronautical charts and other aeronautical data as referenced in pertinent paragraphs of 14 CFR, Sec. 91.503 – flying equipment and operating information).</p> <p data-bbox="548 1052 1446 1346">B - 0 (O) If RNAV procedures or routes are not flown, database may be out of currency provided:</p> <ul data-bbox="719 1125 1438 1346" style="list-style-type: none">a) Current Aeronautical Charts are used to verify navigation fixes prior to dispatch,b) Procedures are established and used to verify status and suitability of navigation facilities used to define route of flight, andc) Approach navigation radios are manually tuned and identified.

34	NAVIGATION			Remarks or Exceptions
XX-X	Navigation Management System			
	1) Navigation Database	B	-	0
				<p>(O) If RNAV procedures or routes are to be flown, database may be out of currency provided alternate procedures are established and used.</p> <p>NOTE 1: Alternate procedures should be developed using suitable reference material, (such as, but not limited to, Aircraft Flight Manual and FAA Advisory Circular titled U.S. TERMINAL AND EN ROUTE AREA NAVIGATION (RNAV) OPERATIONS).</p> <p>NOTE 2: Alternate procedures, (whether accomplished by dispatch organizations in coordination with flight crews, or by flight crews alone), must validate route data for the intended flight, from the database that is out of currency, against current navigation data (i.e., current aeronautical charts and other aeronautical data as referenced in pertinent paragraphs of 14 CFR, Sec. 91.503 - flying equipment and operating information).</p> <p>B - 0 (O) If RNAV procedures or routes are not flown, database may be out of currency provided:</p> <ul style="list-style-type: none"> a) Current Aeronautical Charts are used to verify navigation fixes prior to dispatch, b) Procedures are established and used to verify status and suitability of navigation facilities used to define route of flight, and c) Approach navigation radios are manually tuned and identified.

Please review all MMELs for which you are responsible, and incorporate this policy through the normal FOEB revision process.

/s/ xx/xx/2008

AFS 200

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We invite you to comment on Aviation Safety draft guidance and publication documents. We will provide here draft advisory circulars, orders, notices, policy, technical standard orders, and publications when available for comments. We will review all comments received and consider them for incorporation in the final document.

Document Type	No. Open	Last Updated
Advisory Circulars	11	7/21/2010
Notices	none	
Orders	1	7/2/2010
Policy	1	6/10/2010
Publications	none	
Technical Standard Orders (TSOs)	2	7/27/2010

[Master Minimum Equipment List \(MMEL\)](#)[MMEL AEG Policy](#)[Flight Standardization Board \(FSB\) Reports](#)[OpSpecs/MSpecs/LOAs](#)

Related Information

- Final Aircraft Certification advisory circulars, other policy documents, and technical standard orders (TSOs) are available on FAA's [Regulatory and Guidance Library \(RGL\)](#)
- To comment on rulemaking documents, please visit the [DOT Docket Management System](#).

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Aviation Safety Draft MMELS Open for Comment

Print Email | Updated: 10:49 am ET July 2, 2010 Subscribe

Document Title: Draft MMEI: Part 135 - BOMBARDIER Global Express BD-700-1A10 & Global 5000 BD-700-1A11 (Rev 10)

Summary: This order revision incorporates a clarification and deviations issued since the initial publishing of the order. These include:

- clarification of who can be granted delegated signature authority for AMOC approval /denial letters
- approval of AMOCs for foreign-registered aircraft
- coordination of AMOCs with flight standards personnel, using AEG coordination criteria
- procedures for handling urgent "after hours" (24/7) AMOC requests
- approval of AMOCs by means other than a letter (i.e. email or FAX)
- a new boiler plate statement in AMOC approval letters that requires operators notify their PI/FSDO/CHDO before using
- removal of the requirement for the AMOC revocation statement in global AMOC approval letters

It also incorporates additional guidance for writing AMOC approval statements, feedback, and other improvements.

Document for Download: [Draft Document](#) (MS Word) [Draft Document Comment Grid](#) (MS Word)

Reference:

Comments Due: 7/29/2010

How to Comment: Email comments to: brennen.d.roberts@faa.gov

Deliver comments by mail or hand to: Brennen D. Roberts, Federal Aviation Administration, AIR-150, Safety Management Design & Analysis Branch, 6500 S. MacArthur, ARB bldg; Rm 308, Oklahoma City, OK 73169

- Aircraft Certification
- Aircraft Safety
- General Aviation & Recreational Aircraft
- Repair Stations

Do You Want To... ?

- Register an aircraft
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MEL SYSTEM 34	Repair Interval Category			
	Number Installed			
	Number Required for Dispatch			
	Sequence Number System & Item			Remarks or Exceptions
34-60-00				
Flight Management System				
1. System inoperative	C	2	0	(O) May be inoperative provided alternate procedures are established and used. Note 1: At least one FMS is required for RNP .3, RNP 1 and RNP 2 operations. Two FMS required for RNP 10 operations. Note 2: At least one FMS is required for VERTICAL NAVIGATION – BARO VNAV operations.
2. Navigation databases	C	2	0	(O) May be out of currency provided: <ul style="list-style-type: none"> 1. Current Aeronautical Charts are used to verify Navigation Fixes prior to dispatch, 2. Procedures are established and used to verify status and suitability of Navigation Facilities used to define route of flight, and 3. Approach Navigation Radios are manually tuned and identified. Note 1: A current Navigation Database is required for RNP-0.3 approaches, RNP-1.0 RNAV Departure Procedures and RNP-2.0 en route procedures ("Q" routes).

PLACARD

Place an inoperative placard beside the affected MCDU.

MAINTENANCE (M)

NOT REQUIRED

OPERATIONS (O)

System inoperative (Both)

- Current Aeronautical Charts must be used to verify Navigation Fixes prior to dispatch.
- Manually tune navaids and course on the RADIO PAGE of the MCDU.
- Monitor fuel status against flight release planned fuel burn at a minimum of every 30 minutes en route.
- Do not accept a clearance for an RNAV SID, RNAV STAR or a GPS instrument approach.
- Do not fly a VNAV approach (DA in lieu of MDA).
- Refer to AOM I, Chapter 5, "FMS inoperative procedures."

Navigation Databases (Both)

If the active FMS database is out of currency, the crew may continue to use the FMS for navigation, provided:

-
- The crew verifies each navigational fix used from the database with a current aeronautical chart.
 - NOTAMS and CHART NOTAMS are reviewed to verify the status and suitability of navigational facilities that define the route.
 - Approach Navigation Radios must be manually tuned and identified.
 - Do not accept a clearance for an RNAV SID, RNAV STAR or a GPS instrument approach.

DISPATCH PROCEDURES

System Inoperative (Both)

- Ensure no RNAV SIDs or STARs are filed. Do not plan a flight that requires a GPS instrument approach.
- Do not plan a flight based on a VNAV instrument approach (DA in lieu of MDA).

Navigation Databases (Both)

- Ensure no RNAV SIDs or STARs are filed. Do not plan a flight that requires a GPS instrument approach.

Refer to Embraer 175 MEL Operations Bulletin 08-02 for dispatch procedures



Federal Aviation Administration

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Code of Federal Regulations

▼ Sec. 91.207

Part 91 GENERAL OPERATING AND FLIGHT RULES

Subpart C--Equipment, Instrument, and Certificate Requirements

Sec. 91.207

Emergency locator transmitters.

(a) Except as provided in paragraphs (e) and (f) of this section, no person may operate a U.S.-registered civil airplane unless--

(1) There is attached to the airplane an approved automatic type emergency locator transmitter that is in operable condition for the following operations, except that after June 21, 1995, an emergency locator transmitter that meets the requirements of TSO-C91 may not be used for new installations:

(i) Those operations governed by the supplemental air carrier and commercial operator rules of parts 121 and 125;

(ii) Charter flights governed by the domestic and flag air carrier rules of part 121 of this chapter; and

(iii) Operations governed by part 135 of this chapter; or

(2) For operations other than those specified in paragraph (a)(1) of this section, there must be attached to the airplane an approved personal type or an approved automatic type emergency locator transmitter that is in operable condition, except that after June 21, 1995, an emergency locator transmitter that meets the requirements of TSO-C91 may not be used for new installations.

(b) Each emergency locator transmitter required by paragraph (a) of this section must be attached to the airplane in such a manner that the probability of damage to the transmitter in the event of crash impact is minimized. Fixed and deployable automatic type transmitters must be attached to the airplane as far aft as practicable.

(c) Batteries used in the emergency locator transmitters required by paragraphs (a) and (b) of this section must be replaced (or recharged, if the batteries are rechargeable)--

(1) When the transmitter has been in use for more than 1 cumulative hour; or

(2) When 50 percent of their useful life (or, for rechargeable batteries, 50 percent of their useful life of charge) has expired, as established by the transmitter manufacturer under its approval.

The new expiration date for replacing (or recharging) the battery must be legibly marked on the outside of the transmitter and entered in the aircraft maintenance record. Paragraph (c)(2) of this section does not apply to batteries (such as water-activated batteries) that are essentially unaffected

during probable storage intervals.

(d) Each emergency locator transmitter required by paragraph (a) of this section must be inspected within 12 calendar months after the last inspection for--

- (1) Proper installation;
- (2) Battery corrosion;
- (3) Operation of the controls and crash sensor; and
- (4) The presence of a sufficient signal radiated from its antenna.

(e) Notwithstanding paragraph (a) of this section, a person may--

- (1) Ferry a newly acquired airplane from the place where possession of it was taken to a place where the emergency locator transmitter is to be installed; and
- (2) Ferry an airplane with an inoperative emergency locator transmitter from a place where repairs or replacements cannot be made to a place where they can be made.

No person other than required crewmembers may be carried aboard an airplane being ferried under paragraph (e) of this section.

(f) Paragraph (a) of this section does not apply to--

- [(1) Before January 1, 2004, turbojet-powered aircraft;]
- (2) Aircraft while engaged in scheduled flights by scheduled air carriers;
 - (3) Aircraft while engaged in training operations conducted entirely within a 50-nautical mile radius of the airport from which such local flight operations began;
 - (4) Aircraft while engaged in flight operations incident to design and testing;
 - (5) New aircraft while engaged in flight operations incident to their manufacture, preparation, and delivery;
 - (6) Aircraft while engaged in flight operations incident to the aerial application of chemicals and other substances for agricultural purposes;
 - (7) Aircraft certificated by the Administrator for research and development purposes;
 - (8) Aircraft while used for showing compliance with regulations, crew training, exhibition, air racing, or market surveys;
 - (9) Aircraft equipped to carry not more than one person; and

(10) An aircraft during any period for which the transmitter has been temporarily removed for inspection, repair, modification, or replacement, subject to the following:

(i) No person may operate the aircraft unless the aircraft records contain an entry which includes the date of initial removal, the make, model, serial number, and reason for removing the transmitter, and a placard located in view of the pilot to show "ELT not installed."

(ii) No person may operate the aircraft more than 90 days after the ELT is initially removed from the aircraft; and

[(11) On and after January 1, 2004, aircraft with a maximum payload capacity of more than 18,000 pounds when used in air transportation.]

Amdt. 91-265, Eff. 12/22/2000

▶ Comments

▼ **Document History**

Notice of Proposed Rulemaking Actions:

Not Applicable.

Final Rule Actions:

Not Applicable.

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PL-98 SUBJECT: NAVIGATION DATABASES

M MEL GLOBAL CHANGE PL-98 is designated as GC-XX

This Global Change (GC) is an approved addendum to all existing MMEL documents. Operators may seek use of the specific relief contained in this policy letter by revising their Minimum Equipment List (MEL). In doing so, each applicable sample proviso stating the relief in this policy letter, must be copied verbatim (or by using equivalent text) into the operator's MEL. Approval of a revised MEL is gained utilizing established procedures, through the Operator's assigned Principal Operations Inspector (POI).

PL-98 Revision 1, Draft 9 (Lead: ALPA/ATA)

06/02/2008

SUBJECT: Navigation Databases
MMEL CODE: 34 (NAVIGATION)
REFERENCE: Original PL-98, dated January 20, 1999
FROM: Manager, Air Transportation Division, AFS-200
TO: All Regional Flight Standards Division Managers
All Aircraft Evaluation Group Managers
REPLY TO ATTN OF: Manager, Program Management Branch, AFS-260
PURPOSE: The purpose of this policy is to establish MMEL relief for Navigation Databases as related to Flight Management or Navigation Management Systems.

DISCUSSION (rewritten at Revision 1):

FAA and Industry have determined that operational safety will be enhanced by standardizing the NAV Database repair category, and by developing alternate procedures for ensuring the information in an out of date navigation database is accurate for current operations. This will allow the continued use of Flight and Navigation Management System Navigation Databases which are no longer current. The Remarks column for Navigation Databases has been simplified to read "...alternate procedures must be established and used" if RNAV procedures are to be flown. The provisos from the original issue of this Policy Letter are applicable when RNAV procedures will not be flown.

Alternate procedures developed by the operator must ensure the intended flight can be conducted safely with Navigation Databases out of currency. Specific alternate procedures should be developed using suitable reference material, such as, but not limited to: Aircraft Flight Manual and FAA Advisory Circulars (i.e., 90-100 U.S. TERMINAL AND EN ROUTE AREA NAVIGATION (RNAV) OPERATIONS).

Alternate procedures, (whether accomplished by dispatch organizations in coordination with flight crews, or by flight crews alone), must validate route data for the intended flight from the database that is out of currency, against current navigation data (e.g., current aeronautical charts and other aeronautical data as referenced in pertinent paragraphs of 14 CFR, Sec. 91.503 – Flying Equipment And Operating Information).

NOTE: In accordance with AC 90-100 "Pilots must not fly an RNAV SID or STAR unless it is retrievable by procedure name from the onboard navigation database and conforms to the charted procedure."

After review by the FOPB, a determination was made that the same level of safety intended by the Federal Aviation Regulations could be maintained by these modifications. The FOPB has therefore determined that MMELs should be standardized in accordance with this policy.

POLICY: The following standard MMEL **provisos** and repair category are adopted:

34	NAVIGATION	Remarks or Exceptions
XX-X	Flight Management System	
	1) Navigation Database	<p data-bbox="548 394 683 426">C - 0</p> <p data-bbox="716 394 1446 489">(O) If RNAV procedures are to be flown, database may be out of currency provided alternate procedures are established and used.</p> <p data-bbox="716 520 1455 709">NOTE 1: Alternate procedures should be developed using suitable reference material, (such as, but not limited to, Aircraft Flight Manual and FAA Advisory Circular titled U.S. TERMINAL AND EN ROUTE AREA NAVIGATION (RNAV) OPERATIONS).</p> <p data-bbox="716 737 1459 1020">NOTE 2: Alternate procedures, (whether accomplished by dispatch organizations in coordination with flight crews, or by flight crews alone), must validate route data for the intended flight, from the database that is out of currency, against current navigation data (i.e., current aeronautical charts and other aeronautical data as referenced in pertinent paragraphs of 14 CFR, Sec. 91.503 – flying equipment and operating information).</p> <p data-bbox="548 1052 683 1083">C - 0</p> <p data-bbox="716 1052 1471 1115">(O) If RNAV procedures are not flown, database may be out of currency provided:</p> <ul data-bbox="716 1125 1438 1346" style="list-style-type: none"><li data-bbox="716 1125 1354 1188">a) Current Aeronautical Charts are used to verify navigation fixes prior to dispatch,<li data-bbox="716 1188 1438 1283">b) Procedures are established and used to verify status and suitability of navigation facilities used to define route of flight, and<li data-bbox="716 1283 1425 1346">c) Approach navigation radios are manually tuned and identified.

34	NAVIGATION			Remarks or Exceptions
XX-X	Navigation Management System			
	1) Navigation Database	C	-	0
				<p>(O) If RNAV procedures are to be flown, database may be out of currency provided alternate procedures are established and used.</p>
				<p>NOTE 1: Alternate procedures should be developed using suitable reference material, (such as, but not limited to, Aircraft Flight Manual and FAA Advisory Circular titled U.S. TERMINAL AND EN ROUTE AREA NAVIGATION (RNAV) OPERATIONS).</p>
				<p>NOTE 2: Alternate procedures, (whether accomplished by dispatch organizations in coordination with flight crews, or by flight crews alone), must validate route data for the intended flight, from the database that is out of currency, against current navigation data (i.e., current aeronautical charts and other aeronautical data as referenced in pertinent paragraphs of 14 CFR, Sec. 91.503 - flying equipment and operating information).</p>
		C	-	0
				<p>(O) If RNAV procedures are not flown, database may be out of currency provided:</p> <ul style="list-style-type: none"> a) Current Aeronautical Charts are used to verify navigation fixes prior to dispatch, b) Procedures are established and used to verify status and suitability of navigation facilities used to define route of flight, and c) Approach navigation radios are manually tuned and identified.

Please review all MMELs for which you are responsible, and incorporate this policy through the normal FOEB revision process.

/s/ xx/xx/2008

AFS 200

with a “No Smoking” sign, the required procedure must provide that the announcement be made prior to each takeoff.

Ashtray Installation

(i) Except as provided by paragraph (j) of this AD: Within 180 days after August 6, 1974, or before the accumulation of any time in service on a new production aircraft, whichever occurs later—except that new production aircraft may be flown in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to a base where compliance may be accomplished: Install a self-contained, removable ashtray on or near the entry side of each lavatory door. One ashtray may serve more than one lavatory door if the ashtray can be seen readily from the cabin side of each lavatory door served.

(j) An airplane with multiple lavatory doors may be operated with up to 50 percent of the lavatory door ashtrays missing or inoperative, provided 50 percent of the missing or inoperative ashtrays are replaced within 3 days and all remaining missing or inoperative ashtrays are replaced within 10 days. An airplane with only 1 lavatory door may be operated for a period of 10 days with the lavatory door ashtray missing or inoperative.

Note 2: This AD permits a lavatory door ashtray to be missing, although the FAA-approved Master Minimum Equipment List (MMEL) may not allow such provision. In any case, the provisions of this AD prevail.

(k) Within 30 days after August 6, 1974, and thereafter at intervals not to exceed 1,000 hours' time-in-service from the last inspections, accomplish the following:

(1) Inspect all lavatory paper and linen waste receptacle enclosure access doors and disposal doors for proper operation, fit, sealing, and latching for the containment of possible trash fires.

HOMP and System Status Monitoring



Federal Aviation
Administration

Presented to: MMEL IG 79

By: Edward L. Hinch, FTW AEG

Date: 08/19/2010



Definition - HOMP

- **Helicopter Operations Monitoring Program**
- **Consists of: Flight Data Continuous Recording system (FCDR/HOMP)**
- **Status Monitoring System**





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<Date of Presentation – Change on Master Slide>



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Administration



<Presentation Title – Change on Master Slide>
<Date of Presentation – Change on Master Slide>



Federal Aviation
Administration

System Purpose

- **The FDCR/HOMP system provides the helicopter operator with a record of the actual operating profile. This will provide the helicopter manufacturer with means to investigate the actual helicopter use and develop future helicopter maintenance monitoring. This will give the manufacturer the ability to troubleshoot and optimize the maintenance after an inflight event**



Status Monitoring System

- **Purpose is to warn/alert the flight crew and to assist the maintenance operator in case a failure has been detected by the system**



Status Monitoring Functions

Description

- **Function status 1 – provides dispatch/no dispatch information to the flight crew.**
- **Function status 2 – provides failure message report to maintenance.**
- **Function status 3 – provide troubleshooting IBIT to the maintenance operator.**



Operational use Concept

- **Before each flight the crew will be provided with sufficient information to determine if the helicopter can be dispatched for all operations; possible under certain conditions with limitations (ie VFR only), or not possible.**



??

- **What policies cover the approval and use of this type system.**
- **What relief can be given**



- **QUESTIONS/COMMENTS**





Federal Aviation Administration

MMEL Policy Letter 70 Revision 3

Date: August 18, 2010
To: All Region Flight Standards Division Managers
All Aircraft Evaluation Group Managers
From: Manager, Air Transportation Division, AFS-200
Reply To: Manager, Technical Programs Branch, AFS-260
Attn Of:

Subject: Definitions Required in MELs.

MMEL CODE: 00 (GENERAL)

REFERENCE: PL-70, Revision 2 dated September 11, 2008
PL-70, Revision 1 dated December 22, 1993

PURPOSE:

The purpose of this policy letter is to clarify the requirements for Master Minimum Equipment List definitions. The previous policy, contained in Policy Letter 70, dated December 22, 1993 is unchanged.

DISCUSSION:

Revision 3 moved previous revision remarks to this section (Discussion), clarified that PL-25 Appendix A is not required to be included in the operator's MEL and added Definition 31.

Revision 2 adds the definitions of "Considered Inoperative", "Is not used" and "Nonessential equipment and furnishings (NEF)" (reference PL 25, Revision 12). Termination date of December 31, 2007 added to definition 21 – Passenger Convenience Items.

Revision 1 reflects new standardized policy letter formatting.

Master Minimum Equipment List (MMEL) definitions are included to define specific items related to the MMEL and includes specific items which are required to be in an operator's Minimum Equipment List (MEL). Not all of the MMEL definitions are required to be in an operator's MEL, as some are related to format issues, specific aircraft types, and certain types of operations. Certain portions of a MMEL definition may be edited and/or not required, but the intent of the definition must be the same and cannot be less restrictive than the MMEL.

POLICY:

PL-25 Appendix A is not required to be included in the operator's MEL. The following MMEL definitions indicated are to be included in the operator's MEL:

DEFINITION	OPERATOR'S MEL CRITERIA	REMARKS
1. System Definition		
a. Item	Operator must include explanation describing format.	MMEL definition explaining MMEL format. Format issue.
b. Number Installed	Operator must include explanation describing format.	MMEL definition explaining MMEL format. Format issue.
c. Number Required for dispatch	Operator must include explanation describing format.	MMEL definition explaining MMEL format. Format issue.
d. Remarks or Exceptions	Operator must include explanation describing format.	MMEL definition explaining MMEL format. Format issue.
e. Vertical Bar	Operator's manual MMEL definition must indicate revision identification method as specified by the operator. May be "bar" or other suitable method accepted by the Administrator.	MMEL definition explaining MMEL format. Format issue.
2. Airplane/Rotorcraft Flight Manual	Operator must indicate appropriate type manual that applicable to the type of aircraft.	MMEL Definition.
3. As required by FAR	Not allowed in MEL. Definition not applicable to MEL.	MMEL item only; therefore development criteria.
4. "Placarding"	Statement regarding placarding items must be included.	MMEL definition No. 4 NOTE.
5. "-"	MEL item or an acceptable means to determine quantity installed.	MMEL Definition.
6. Deleted	Operator format issue, not required in operator MEL.	MMEL definition explaining MMEL format.
7. ER	Required in operator's MEL dependent on aircraft configuration.	MMEL Definition.
8. FAR	Required in operator's MEL.	MMEL Definition.
9. Flight Day	Required in operator's MEL. Operator may edit to define when clock time starts and ends.	May edit to suit operations.
10. Icing Conditions	Required in operator's MEL.	
11. Alphabetical Symbol	Not required in operator's MEL.	MMEL definition explaining MMEL format.
12. Inoperative	Required in operator's MEL.	
13. Notes	Required in operator's MEL. Operator may edit column references to conform to MEL format.	
14. Inoperative components of an inoperative system	Required in operator's MEL.	

DEFINITION	OPERATOR'S MEL CRITERIA	REMARKS
15. (M)	Required in operator's MEL.	MMEL Definition.
16. (O)	Required in operator's MEL.	MMEL Definition.
17. Deactivated and Secured	Required in operator's MEL.	
18. VFR	Required in operator's MEL.	
19. VMC	Required in operator's MEL.	
20. Visible Moisture	Required in operator's MEL.	
21. Passenger Convenience Items (expires December 31, 2007)	Definition optional dependent on how operator lists these items. If operator includes items in MEL, definition not required	MMEL definition for MEL development criteria.
22. Repair Intervals	Required in operator's MEL. Definition may be edited to conform to MEL format. Limitations cannot be changed and examples need not be included.	
23. EICAS	Required in operator's MEL dependent on aircraft configuration.	
24. Administrative Control Items	Not required in operator's MEL.	MMEL definition for MEL development criteria.
25. ***	Not required in operator's MEL.	MMEL definition for MEL development criteria.
26. Excess Items	Required in operator's MEL only if excess items are installed.	MMEL definition for MEL development criteria.
27. Day of Discovery	Required in operator's MEL.	
28. Considered Inoperative	Required in operator's MEL.	
29. Is not used	Required in operator's MEL.	
30. Nonessential Equipment and Furnishings (NEF)	Required in operator's MEL.	
31. As used in MMELs, Heavy Maintenance Visit (HMV)	Required in operator's MEL.	

Principal operations inspectors are requested to review these definitions with their certificate holders to ensure understanding.

John Duncan, Manager,
Air Transportation Division, AFS-200



Federal Aviation Administration

MMEL Policy Letter 91 Revision 1

Date: November 14, 2003

To: All Region Flight Standards Division Managers
All Aircraft Evaluation Group Managers

From: Manager, Air Transportation Division, AFS-200

Reply To: Manager, Technical Programs Branch, AFS-260
Attn Of:

Subject: White Position lights and Strobe Lights

MMEL CODE: 33 (LIGHTS)

REFERENCE: PL-91, Original, dated August 15, 1997
PL-8, (Item 9), dated July 12, 1982

PURPOSE:

This policy letter provides Master Minimum Equipment List (MMEL) policy concerning wing and tail strobe lights in lieu of the respective position lights.

DISCUSSION:

Revision 1 clarifies policy that refers to wing and tail white position lights.

The original policy letter restated an earlier MMEL policy that was previously contained in PL-8 (Item 9), dated July 12, 1982, which covered multiple issues.

The Regional Airline Association requested authority to use wing and tail strobe lights in lieu of the respective wing and tail position lights required by Federal Aviation Regulation 91.209

The following policy establishes guidelines for granting MMEL relief for use of wing and tail strobe lights in lieu of the respective wing and tail position lights.

POLICY:

MMEL relief may be granted for use for wing and tail strobe lights in lieu of the respective wing and tail white position lights.

NOTE: The strobe lights may not be used in place of the red and/or green wing tip position light during night operations.

Flight Operations Evaluation Board chairmen should not permit use of tail strobe lights in lieu of tail position lights unless it is verified that the airplane's tail position light and the strobe light are in close proximity.

Consideration should also be given to the fact that strobe lights tend to be blinding under certain conditions during ground operations and may not in each case provide a clear definition of an aircraft's direction in flight or on the ground.

Each Flight Operations Evaluation Board (FOEB) chairman should apply the following policy to affected MMELs through the normal FOEB process.

Matthew J. Schack, Manager
Air Transportation Division, AFS-200

PL-91,R 1 reformatted 01/20/2010 with no change in content.



Federal Aviation Administration

MMEL Policy Letter 105 Revision 1

Date: Jan 20,2009

To: All Region Flight Standards Division Managers
All Aircraft Evaluation Group Managers

From: Manager, Air Transportation Division, AFS-200

Reply To: Manager, Technical Programs Branch, AFS-260
Attn Of:

MMEL GLOBAL CHANGE

PL-105 is designated as GC-158

This Global Change (GC) is an approved addendum to some MMEL documents. Operators may seek use of the specific relief contained in this policy letter by revising their Minimum Equipment List (MEL). In doing so, each applicable sample proviso stating the relief in this policy letter, must be copied verbatim in the operator's MEL. Approval of a revised MEL is gained utilizing established procedures, through the Operator's assigned Principal Operations Inspector (POI).

Subject: Automatic Dependent Surveillance-Broadcast System

MMEL CODE: 34 (NAVIGATION)

REFERENCE: Revision Original, dated October 11, 2000

PURPOSE:

The purpose of this policy letter is to provide updated guidance for Flight Operations Evaluation Board (FOEB) Chairmen and principal operations inspectors (POI) in assigning relief for Automatic Dependent Surveillance-Broadcast System (ADS-B) in Master Minimum Equipment Lists (MMEL) and operators Minimum Equipment Lists (MEL).

DISCUSSION:

Revision 1 reformats PL-105 to reflect current ADS-B operations.

The ADS-B is an onboard aircraft system that is designed **to perform various air-to-ground and air-to-air applications. The air-to-ground functions are similar to and can exceed sub-functions of the transponder. The air-to-air applications include situational awareness and spacing.**

For non Traffic Alert Collision Avoidance System (TCAS) equipped aircraft the ADS-B, using a Cockpit Display of Traffic Information (CDTI), can assist the flight crew in avoiding conflicting traffic. Like TCAS, it is considered a backup to the "see and avoid" concept and the air traffic control (ATC) radar environment. Unlike TCAS, it does not provide any Traffic Advisories (TA) or Resolution Advisories (RA). This system is certified as an aid to visual acquisition of conflicting traffic and may not be used to maneuver the aircraft based solely upon traffic information displayed.

ADS-B, when added to a surface moving map, can provide traffic situational awareness on the surface and near the airport for other traffic that may be in conflict (i.e. possible runway incursions). Spacing applications include Merging and Spacing (M&S), In Trail Procedures (ITP), and CDTI Assisted Visual Separation (CAVS). Other applications are also being considered for certification.

The ADS-B system communicates with other ADS-B equipped aircraft and Air Traffic Control (ATC). Message elements are broadcast automatically and include: Global Positioning System latitude/longitude position, aircraft velocity, pressure altitude, flight identifier, and velocity vector. Other traffic information may be uplinked from the ground radar system. This information is derived from air traffic surveillance radars and uplinked to ADS-B In equipped aircraft. This function is called Traffic Information Services – Broadcast (TIS-B).

Relief has been requested for the entire system and for subsystems to allow use of those functions which operate normally, e.g. transmit or receive information if the other function is inoperative.

POLICY:

The Flight Operations Policy Board (FOPB) finds sufficient cause to grant relief for the ADS-B system. It also recognizes that ADS-B may be certified to perform tasks currently being accomplished by Title 14 Code of Federal Regulations (14 CFR) required equipment. Therefore, the POI will ensure that, if ADS-B is installed in lieu of or as a replacement for 14 CFR required equipment, the repair category in the operator's MEL will be the same as that of the 14 CFR required equipment.

34 NAVIGATION	Repair Interval	Number Installed	Number Required for Dispatch	Remarks or Exceptions
Automatic Dependent Surveillance-Broadcast (ADS-B) System	D	-	0	May be inoperative provided it is not required by 14 CFR. NOTE: If ADS-B is installed in lieu of or as a replacement for 14 CFR required equipment, the repair category in the operator's MEL will be the same as that of the 14 CFR required equipment.
1) Cockpit Display and Traffic Information (CDTI)	D	-	0	NOTE: Cockpit Display Traffic of Information (CDTI) display of data from other aircraft systems may be used.
2) CDTI Control Panel	D	-	0	May be inoperative provided:

3) Data Link Transmitter(s)	D	-	0
4) Data Link Receivers	D	-	0
5) ADS-B Applications	D	-	0

- a) Flight ID can be set, and**
- b) Screen display is acceptable to the flight crew.**

NOTE: In some aircraft the Data Link Transmission is an integral part of the transponder and relief is provided in that section.

(Gregory Kirkland for)
4/10/2009
John Duncan, Manager
AFS-200



Federal Aviation Administration

MMEL Policy Letter 120, Revision 1

Date: Jan 20, 2009

To: All Region Flight Standards Division Managers
All Aircraft Evaluation Group Managers

From: Manager, Air Transportation Division, AFS-200

Reply To: Manager, Technical Programs Branch, AFS-260
Attn Of:

MMEL GLOBAL CHANGE
PL-120 is designated as GC-156

This Global Change (GC) is an approved addendum to all existing MMEL documents. Operators may seek use of the specific relief contained in this policy letter by revising their Minimum Equipment List (MEL). In doing so, each applicable sample proviso stating the relief in this policy letter, must be copied verbatim in the operator's MEL. Approval of a revised MEL is gained utilizing established procedures, through the Operator's assigned Principal Operations Inspector (POI).

Subject: Emergency Locator Transmitters (ELT)

MMEL CODE: **23 (COMMUNICATIONS) and 25 (EQUIPMENT & FURNISHINGS)**

REFERENCE: 14 CFR Part 91.207 (f) (10), dated Jan 01, 2006
PL-120, Original, dated Jan 01, 2007

PURPOSE:

The purpose of this Policy Letter is to provide standardized MMEL requirements for the Emergency Locator Transmitters (ELT).

DISCUSSION:

Revision 1 adds ATA code assignment ATA 23 and the requirement that an inoperative system that remains installed must be deactivated. For Fixed ELTs, split items into two parts, those that are inoperative and those that are missing.

Adds relief for Emergency Locator Transmitters (ELT). After review by the Flight Operations Policy Board, a determination was made that MMEL policy for ELTs was necessary in order to clarify the relief provided in 14 CFR Part 91.207(f)(10).

POLICY:

The following policy has been established for ELTs in order to provide operators with ready access to the dispatch relief allowed by 14 CFR.

For Fixed ELTs required by 14 CFR, Category A repair interval is assigned with repairs to be made within 90 days after the ELT is found to be **missing or temporarily removed for inspection**, repair, modification or replacement.

For ELTs in excess of those required by 14 CFR (Fixed or Survival Type), Category D repair interval is assigned.

**23 – COMMUNICATIONS, or
25 – EQUIPMENT AND
FURNISHINGS**

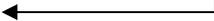
25-XX Emergency Locator
Transmitter (ELT)

	Repair Interval	Number Installed	Number Required for Dispatch	Remarks or Exceptions
*** Survival Type ELTs	D	–	–	Any in excess of those required by FAR may be inoperative or missing.
*** Fixed ELTs	A	–	0	(M) May be inoperative provided: a) System is deactivated, and b) Repairs are made within 90 days.
	A	–	0	May be missing provided repairs are made within 90 days.
	D	–	–	(M) Any in excess of those required by FAR may be inoperative provided system is deactivated.
	D	–	–	Any in excess of those required by FAR may be missing.

Each Flight Operations Evaluation Board (FOEB) Chairman should apply this Policy to affected MMELs through the normal FOEB process.

(Gregory Kirtland for)
4/10/2009
John Duncan, Manager,
AFS-200

SF – I believe that this proviso is contrary to FAR 91.207(f). For 135 ops, the only relief is provided if the ELT is removed for inspection, repair, modification, or replacement. Otherwise it must be installed and operative. Operations with the ELT deactivated is not permitted by FAR. If the aircraft is over 18,000 pounds payload then no ELT is even required.



PL-98 SUBJECT: NAVIGATION DATABASES

M MEL GLOBAL CHANGE PL-98 is designated as GC-XX

This Global Change (GC) is an approved addendum to all existing MMEL documents. Operators may seek use of the specific relief contained in this policy letter by revising their Minimum Equipment List (MEL). In doing so, each applicable sample proviso stating the relief in this policy letter, must be copied verbatim (or by using equivalent text) into the operator's MEL. Approval of a revised MEL is gained utilizing established procedures, through the Operator's assigned Principal Operations Inspector (POI).

PL-98 Revision 1, Draft 10 (Lead:)

xx/xx/2008

SUBJECT: Navigation Databases
MMEL CODE: 34 (NAVIGATION)
REFERENCE: Original PL-98, dated January 20, 1999
FROM: Manager, Air Transportation Division, AFS-200
TO: All Regional Flight Standards Division Managers
All Aircraft Evaluation Group Managers
REPLY TO ATTN OF: Manager, Program Management Branch, AFS-260
PURPOSE: The purpose of this policy is to establish MMEL relief for Navigation Databases as related to Flight Management or Navigation Management Systems.

DISCUSSION (rewritten at Revision 1):

FAA and Industry have determined that operational safety will be enhanced by standardizing the NAV Database repair category, and by developing alternate procedures for ensuring the information in an out of date navigation database is accurate for current operations. This will allow the continued use of Flight and Navigation Management System Navigation Databases which are no longer current. The Remarks column for Navigation Databases has been simplified to read "...alternate procedures must be established and used" if RNAV procedures are to be flown. The provisos from the original issue of this Policy Letter are applicable when RNAV procedures will not be flown.

Alternate procedures developed by the operator must ensure the intended flight can be conducted safely with Navigation Databases out of currency. Specific alternate procedures should be developed using suitable reference material, such as, but not limited to: Aircraft Flight Manual and FAA Advisory Circulars (e.g., 90-100 U.S. TERMINAL AND EN ROUTE AREA NAVIGATION (RNAV) OPERATIONS).

Alternate procedures, (whether accomplished by dispatch organizations in coordination with flight crews, or by flight crews alone), must validate route data for the intended flight from the database that is out of currency, against current navigation data (e.g., current aeronautical charts and other aeronautical data as referenced in pertinent paragraphs of 14 CFR, Sec. 91.503 – Flying Equipment And Operating Information).

NOTE: In accordance with AC 90-100 "Pilots must not fly an RNAV SID or STAR unless it is retrievable by procedure name from the onboard navigation database and conforms to the charted procedure."

After review by the FOPB, a determination was made that the same level of safety intended by the Federal Aviation Regulations could be maintained by these modifications. The FOPB has therefore determined that MMELs should be standardized in accordance with this policy.

POLICY: The following standard MMEL provisos and repair category are adopted:

34	NAVIGATION	Remarks or Exceptions
XX-X	Flight Management System	
	1) Navigation Database	<p data-bbox="548 394 1468 489">B - 0 (O) If RNAV procedures or routes are to be flown, database may be out of currency provided alternate procedures are established and used.</p> <p data-bbox="716 520 1451 709">NOTE 1: Alternate procedures should be developed using suitable reference material, (such as, but not limited to, Aircraft Flight Manual and FAA Advisory Circular titled U.S. TERMINAL AND EN ROUTE AREA NAVIGATION (RNAV) OPERATIONS).</p> <p data-bbox="716 737 1458 1020">NOTE 2: Alternate procedures, (whether accomplished by dispatch organizations in coordination with flight crews, or by flight crews alone), must validate route data for the intended flight, from the database that is out of currency, against current navigation data (i.e., current aeronautical charts and other aeronautical data as referenced in pertinent paragraphs of 14 CFR, Sec. 91.503 – flying equipment and operating information).</p> <p data-bbox="548 1052 1446 1346">B - 0 (O) If RNAV procedures or routes are not flown, database may be out of currency provided:</p> <ul data-bbox="716 1125 1438 1346" style="list-style-type: none">a) Current Aeronautical Charts are used to verify navigation fixes prior to dispatch,b) Procedures are established and used to verify status and suitability of navigation facilities used to define route of flight, andc) Approach navigation radios are manually tuned and identified.

34	NAVIGATION			Remarks or Exceptions
XX-X	Navigation Management System			
	1) Navigation Database	B	-	0
				<p>(O) If RNAV procedures or routes are to be flown, database may be out of currency provided alternate procedures are established and used.</p>
				<p>NOTE 1: Alternate procedures should be developed using suitable reference material, (such as, but not limited to, Aircraft Flight Manual and FAA Advisory Circular titled U.S. TERMINAL AND EN ROUTE AREA NAVIGATION (RNAV) OPERATIONS).</p>
				<p>NOTE 2: Alternate procedures, (whether accomplished by dispatch organizations in coordination with flight crews, or by flight crews alone), must validate route data for the intended flight, from the database that is out of currency, against current navigation data (i.e., current aeronautical charts and other aeronautical data as referenced in pertinent paragraphs of 14 CFR, Sec. 91.503 - flying equipment and operating information).</p>
		B	-	0
				<p>(O) If RNAV procedures or routes are not flown, database may be out of currency provided:</p> <ul style="list-style-type: none"> a) Current Aeronautical Charts are used to verify navigation fixes prior to dispatch, b) Procedures are established and used to verify status and suitability of navigation facilities used to define route of flight, and c) Approach navigation radios are manually tuned and identified.

Please review all MMELs for which you are responsible, and incorporate this policy through the normal FOEB revision process.

/s/ xx/xx/2008

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[Master Minimum Equipment List \(MMEL\)](#)[MMEL AEG Policy](#)[Flight Standardization Board \(FSB\) Reports](#)[OpSpecs/MSpecs/LOAs](#)

Related Information

- Final Aircraft Certification advisory circulars, other policy documents, and technical standard orders (TSOs) are available on FAA's [Regulatory and Guidance Library \(RGL\)](#)
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Aviation Safety Draft MMELS Open for Comment

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Document Title: Draft MMEI: Part 135 - BOMBARDIER Global Express BD-700-1A10 & Global 5000 BD-700-1A11 (Rev 10)**Summary:**

This order revision incorporates a clarification and deviations issued since the initial publishing of the order. These include:

- clarification of who can be granted delegated signature authority for AMOC approval /denial letters
- approval of AMOCs for foreign-registered aircraft
- coordination of AMOCs with flight standards personnel, using AEG coordination criteria
- procedures for handling urgent "after hours" (24/7) AMOC requests
- approval of AMOCs by means other than a letter (i.e. email or FAX)
- a new boiler plate statement in AMOC approval letters that requires operators notify their PI/FSDO/CHDO before using
- removal of the requirement for the AMOC revocation statement in global AMOC approval letters

It also incorporates additional guidance for writing AMOC approval statements, feedback, and other improvements.

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