CL: O-OPS 045 ELECTRONICS FLIGHT BAG (EFB) APPROVAL CHECKLIST

Instructions for Use:

1. Check `**S**' column if you reviewed the record, procedure or event and it is `**Satisfactory'**.
2. Check `**U**' column if you reviewed the record, procedure or event and it is `**Unsatisfactory'**.
3. Check **NS** (**not seen**) column if you did not review the record, procedure or event or you do not have adequate information to make a valid comment.
4. Check **NA** (**not applicable**) column, if the line item is not required in this particular situation.
5. 'Enter any notes on reverse side regarding a 'U' answer for transfer to the Safety Issues Resolution Report.
6. For later reference, precede any notes with the appropriate question number.

S/N	GENERAL CONSIDERATIONS	S	U	NS	NA
1	Research whether any of the EFB hardware or software is covered by an existing Aircraft Evaluation Group (AEG) report.				
	Workload:				
2	Is an in-flight evaluation necessary? (An in-flight evaluation may be necessary if you are not able to adequately evaluate each function intended for this specific operation while on the ground.) If so, verify that the in-flight evaluation confirms that the overall workload is acceptable.				
3	Review user/operator responses to evaluation question for "Workload" from **Form: O-OPS 011A & 011B** – Tabletop Electronic Bag Evaluation & Electronic Flight Bag Operational Evaluation.				
4	Verify that procedures are published and available to all EFB users and maintainers.				
5	Verify that preflight procedures and checklists are revised to include EFB				
6	Verify that procedures are established for single and dual failure of EFB				
	PHYSICAL PLACEMENT	**S**	**U**	**NS**	**NA**
	Design and Placement of Structural Cradle:				
7	Verify that user/operator procedures specify locations for both EFB stowage and use				
8	Verify that EFB specified locations do not obstruct visual or physical access to flight controls and/or displays.				
9	Verify that EFB locations do not obstruct the emergency egress path.				
10	Verify that EFB locations provide for security in flight.				
11	Does mounting device have appropriate airworthiness documentation per EFB requirements?				
12	Does mounting device lock in position easily?				
13	Is the mounting device adjustable enough to accommodate a range of flight crew member preferences and does range of adjustment accommodate the expected range of user's physical abilities?				
14	Locking mechanisms should be durable enough to minimize slippage after extended periods of normal use.				
15	Crashworthiness considerations must be addressed as well as appropriate restraint of EFB when in use.				
	TRAINING/PROCEDURES CONSIDERATIONS	**S**	**U**	**NS**	**NA**
	EFB Documentations and Policy:				
16	Verify that the written policy adequately addresses each specific EFB application and that any published AEG recommendations have been incorporated into the operator's EFB program.				
17	Verify that procedures are in place to communicate upgrades or malfunctions of EFBs to users in a timely manner.				
18	Verify that the EFB information from the manufacturer is incorporated into operating procedures.				
	EFB Training:				
19	Verify that the initial EFB training includes evaluation of knowledge and skill requirements. The training should include demonstration of key tasks				
20	Verify that the recurrent training includes evaluation of proficiency with the EFB				

21	Verify that minimum training checking and currency requirements are specified in training programs.				
22	Verify that EFB training is customized to EFB applications being used.				
	VALIDATION PHASE AND CONTINUED DATA COLLECTION	**S**	**U**	**NS**	**NA**
	Validation Phase Data Collection:				
23	Verify that the 6-month validation phase pilots/users of the EFB to documents evaluations and that there is a formal process for gathering feedback about the EFB and its performance.				
24	Verify that procedures specify personnel responsible for maintenance and database management.				
25	Ensure that the operator has an ongoing data collection and feedback/correction process that ensures the suitability/reliability of the data. The data collection process in place should be factored into the operator's Safety Management System (SMS).				
	SMS INTERFACE	**S**	**U**	**NS**	**NA**
26	Verify that the hazards associated with the use and integration of the EFB have been identified, eliminated, or controlled to an acceptable level throughout the life cycle. Consider such hazards as: misuse, hazardous misleading information due to failure or malfunction, loss of information when needed, miscalculation, masking of information, confusion, corruption of data, excessive complexity of use, accidental damage, and human error in use, setup, and operation.				
27	Verify that the applicant's SMS has procedures to mitigate identified hazards availability, and reliability of design, cross-checking of calculation/data, crew training, and misuse potential.				
	SOFTWARE CONSIDERATIONS				
28	Verify that procedures are established for testing of each software revision or database update prior to operational use.				
	HARDWARE CONSIDERATIONS	**S**	**U**	**NS**	**NA**
29	Verify that display lightning and reflectivity has been evaluated for acceptability in each aircraft model.				
30	Verify that EFB maintenance procedures are in place for batteries, display interaction devices (pen, etc), display pixel) display pixel burnout, and component condition.				
	ELECTRONIC DOCUMENTS	**S**	**U**	**NS**	**NA**
31	Verify that electronic documents are easily accessed and clearly controlled as to revision and currency.				
32	Verify that use of electronic documents is incorporated in training program for initial and recurrent.				
	ELECTRONIC CHECKLIST (ECL) SYSTEMS	**S**	**U**	**NS**	**NA**
33	Verify that the ECL system is customized to aircraft being operated.				
34	If checklist is "interactive", verify that the checklist is subject to a 6-month validation phase.				
35	If checklist is "automatically linked", ensure that AEG involvement and concurrence is obtained.				
36	Verify that the use of ECL system is incorporated into the training program for initial and recurrent.				
	WEIGHT AND BALANCE (W&B)	**S**	**U**	**NS**	**NA**
37	Verify that EFB procedures provide means to comply with load manifest record keeping requirements.				
38	Verify that procedures clearly identify if the EFB W&B program is for "planning purposes only" when not an approved means for calculating W&B.				
39	Verify that the use of W&B is incorporated into the training program for initial and recurrent.				
	ELECTRONIC PERFORMANCE CALCULATIONS	**S**	**U**	**NS**	**NA**
40	Verify that EFB procedures provide means to comply with load manifest/flight plan record keeping requirements.				
41	Verify that procedures clearly identify if EFB aircraft performance program is for "planning purposes only" when not an approved means for calculating aircraft performance.				

42	Verify that the aircraft performance is incorporated into the training program for initial and recurrent.				
	ELECTRONIC CHARTS	**S**	**U**	**NS**	**NA**
43	Verify that the Electronic Charts Application does not display “own-ship position” except on the ground.				
44	Verify that preflight procedures are established to ensure currency of electronic chart information.				
45	Verify EFB display. The screen must be large enough to show an entire Instrument Approach Procedure (IAP) chart at once, with the equivalent degree of legibility and clarity as a paper chart.				
46	Verify that the use of electronic charts is incorporated into training program for initial and recurrent.				
	VALIDATION PHASE	**S**	**U**	**NS**	**NA**
47	Verify that procedures are established to collect user data for both normal and abnormal. EFB functions during the validation phase and to provide a written report of reliability and problem resolution prior to authorization for paperless operation.				

RECOMMEND ACCEPTANCE: ☐ YES ☐ NO (Reasons cited below)

INSPECTOR SIGNATURE:

REMARKS & OBSERVATIONS

INSPECTOR SIGNATURE

Additional comments attached ☐ =>