Air Carrier Maintenance Safety Enhancement Checklist

This checklist focuses on all SEs with Air Carrier Maintenance actions and outputs. SE outputs are categorized as either Airworthiness or Operations. Air Carrier Maintenance is an implementer of the SE.

CONTROLLED FLIGHT INTO TERRAIN (CFIT)

SE 1: Terrain Avoidance Warning System (TAWS)

Output 5

- ☐ Is your air carrier using a comprehensive system to support TAWS that includes information on installation, maintenance, training, and the use of TAWS equipment?

SE 10: Airline Proactive Safety Programs (FOQA & ASAP)

Output 1

- ☐ Has your air carrier's employee group worked with operators (A4A, RAA) to draft contractual language to prevent the use of FOQA or ASAP information as a basis for disciplinary actions?

APPROACH AND LANDING ACCIDENT REDUCTION (ALAR)

SEs 14–16: Policies for ALAR (Safety Culture)

Output 1

- ☐ Are your air carrier's key officers visible and effective in promoting safety culture?

SEs 17–20: Maintenance Procedures

Output 4

- ☐ Has your air carrier's director of safety determined that the maintenance deficiencies, described in the bulletins and policy letters listed in this document, have been remedied?
- ☐ Has your air carrier's director of safety determined that quality control procedures have been implemented to ensure that those deficiencies are continually addressed?
- ☐ Has your air carrier's director of safety ensured an internal audit has been conducted to determine that rules relating to the maintenance deficiencies described in the specified bulletins are being met through adequate maintenance procedures?
- ☐ Has your air carrier's director of safety established system safety procedures to ensure continuing conformance with the bulletins?

SE 21: Flight Deck Equipment Upgrades/Installation to Improve Altitude Awareness and Checklist Completion

Outputs 1 and 3

- ☐ Has your air carrier developed training syllabuses and procedures for interactive checklists and smart alerting system use?

SE 24: Aircraft Design

Output 3

- ☐ Has your air carrier reviewed SAE ARP 5150 (Safety Assessment of Transport Airplanes in Commercial Service) to ensure your continuing airworthiness process(es) incorporates risk management techniques that help ensure that the original design level of safety is not degraded?

LOSS OF CONTROL (LOC)

SE 27: Risk Assessment and Management

Output 3

- ☐ Has your air carrier established a risk management program that—
  - a) Prioritizes safety related decisions?
  - b) Implements risk management methods in operations and maintenance departments?

SE 28: Policies

Output 1

- ☐ Has your air carrier distributed essential operating information identified by the manufacturers to flightcrews and maintenance staff?
- ☐ Has your air carrier's director of safety or equivalent ensured the establishment of a process to identify, review, analyze and include essential operating information in training programs and in manuals used by flightcrews and maintenance staff?
- ☐ Has your air carrier revised the company flight manual(s) as essential operating information is amended or added?

SE 193: Non-Standard, Non-Revenue Flights

Output 1

- ☐ Has your air carrier reviewed the regulator guidance material providing best practices on the conduct of non-standard, non-revenue flights?

Output 2

- ☐ Has your air carrier reviewed the regulator guidance material providing best practices on the conduct of non-standard, non-revenue flights and revised its SOP and policies, as applicable?

RUNWAY INCURSION

SE 51: SOPs for Tow Tug Operators

Output 1

- ☐ Has your air carrier trained its mechanics and others who tow or otherwise move aircraft within the airport movement area on the recommended "best practices" developed to prevent runway incursions and other surface incidents?

CARGO

SE 127: Cargo Fire Management

Output 4

- ☐ Has your cargo air carrier incorporated the new fire suppression and/or containment systems developed by manufacturers?

Output 8

- ☐ If they are available, does your cargo air carrier have the new ULD installed?

SE 131: Safety Culture

Output 2

- ☐ Has your air carrier implemented a self-audit process to further enhance safety?

Output 3

- ☐ Has your air carrier implemented an operational risk management program?

Output 5

- ☐ Has a safety reporting system been implemented? Has a quality assurance program appropriate for your operations been developed?

MIDAIR

SE 165: TCAS Policies and Procedures

Output 6

- ☐ Has your air carriers considered the benefits associated with TCAS DO−185 Version 7.1?
- ☐ If your air carrier is conducting maintenance on its TCAS units, has your air carrier consider upgrading to TCAS DO−185 Version 7.1?

SE 212: Equipment and Procedures to Improve Route Entry for RNAV Departures

Output 3

- ☐ Has your air carrier deployed the capability to autoload pre-departure route clearances, with crew acknowledgement, into the FMS?

MAINTENANCE

SE 169: Work Cards/Shift Change/ Responsibilities/ Manuals

Output 2

- ☐ Has your air carrier audited your compliance with AC 120−16F?

SE 170: OEM Continuous Monitoring of Service History

Output 2

- ☐ Has your air carrier developed processes to follow the intent of the guidance material?
- ☐ Has your air carrier incorporated the best practices into your reporting processes for maintenance task difficulties?

SE 175: Flight Critical Configurations Changes Made During Maintenance

Output 1

- ☐ Has your air carrier reviewed, and amended, procedures as appropriate to ensure that multiple levels of alerting, including visible tagging, are used anytime the pitot static system is covered?
- ☐ Has your air carrier ensured that maintenance procedures include multiple levels of protection to ensure timely removal of covering?
- ☐ Has your air carrier's director of safety, in conjunction with its director of maintenance, ensured the appropriate procedures are covered in maintenance information, including work cards?
- ☐ Does your air carrier include adherence to the process within the internal audit process of its SMS?

Output 2

- ☐ Has your air carrier ensured that preflight walk around procedures ensure that pitot/static ports are uncovered?

UNCONTAINED ENGINE FAILURES

SE 84: Disk Inspection Initiative

Output 1

- ☐ Has your air carrier developed and implemented enhanced disk inspection to detect cracks and help prevent UEF of high energy rotating parts?

WRONG RUNWAY DEPARTURES

SE 183: Cockpit Moving Map Display and Runway Awareness System

Output 1

- ☐ Has your air carrier installed ownship moving map display and/or runway awareness systems?

TERRAIN AWARENESS WARNING SYSTEM

SE 120: TAWS Improved Functionality

Output 3

- ☐ Has your air carrier installed GPS capability on all airplanes with multi sensor RNAV FMS, electronic flight instruments and electronic map displays?
- ☐ If your air carrier flies standard airplanes equipped with non GPS TAWS into regions with minimal NAVAID, have you modified standard TAWS to GPS TAWS, or conducted a risk assessment to develop and implement effective risk mitigation?

Output 4

- ☐ Has your air carrier developed and implemented procedures to ensure that TAWS terrain databases are updated in accordance with the manufacturer's recommendations on all airplanes?

RUNWAY EXCURSION

SE 218: Overrun Awareness and Alerting Systems

Output 3

- ☐ Has your air carrier incorporated into its specific fleet (both existing airplanes and new purchases) and operations onboard technologies that reduce or prevent landing overruns?

- ☐ Has your air carrier implemented systems based on results of its feasibility assessments, where applicable?
- ☐ Has your air carrier reported to industry associations whether it intends to incorporate systems in its fleet?

TAKEOFF MISCONFIGURATION

SE 229: Takeoff Configuration Warning System Maintenance and Operational Assurance

Output 2

- ☐ Has your air carrier reviewed its maintenance programs related to TCWS to ensure they meet the latest manufacturer recommendations for maintenance intervals and procedures?
- ☐ Has your air carrier reviewed its maintenance procedures to ensure circuit breakers pulled during maintenance or troubleshooting that could affect TCWS availability are re engaged before releasing the aircraft for flight?
- ☐ Has your air carrier reviewed its MEL procedures to ensure approved procedures do not allow the TCWS to be disabled by pulling circuit breakers, including circuit breakers for integrated/related systems?
- ☐ Does your air carrier periodically review its maintenance programs related to the TCWS to ensure acceptable in service reliability?