F-15SA Hazard Worksheet

Hazard # SA49-14c ***Last Update:*** 3/15/2024

Effectivity: Production BCU3 ***Software:*** No

Component/Function/Task ***MIL-STD:*** 882E

New and unique electronic equipment for F-15SA
MIDS JTRS

Hazard Description

Flight worthiness issues –
- LRU overheat or material compatibility that leads to fire/explosion initiation & propagation.

Hazard Cause

1) Design unable to withstand F-15 operational temperature environment.
2) Equipment faults.
3) Installation errors.

Hazard Effect

Major damage to equipment/loss of aircraft or major personnel injury if fire is initiated

Phase: ALL

Initial Risk: ***HAZ CLASS:*** I - Catastrophic ***HAZ PROB:*** E - Improbable ***RISK:*** 12

Hazard Action:

1. Provide LRU enclosure that limits propagation.
2. Incorporate drainage provisions in avionics bays to minimize flammable fluid accumulation.
3. Minimize ignition sources.
4. Provide appropriate installation instructions in TO data with sufficient detail to minimize installation errors.

Current Risk: ***HAZ CLASS:*** I - Catastrophic ***HAZ PROB:*** E - Improbable ***RISK:*** 12

Final Risk: ***HAZ CLASS:*** I - Catastrophic ***HAZ PROB:*** E - Improbable ***RISK:*** 12

Hazard Status: Monitor

Remarks:

Action 1: All aircraft LRUs are enclosed in a chassis/cover, which is designed to contain LRU internal fires.
Action 2: Installation is in accordance with standard F-15 specifications and processes. Standard drainage provisions apply throughout the aircraft. The referenced LRUs are all mounted in existing standard F-15 equipment bays that are away from fuel lines.
Action 3: Completed

Severity: Qualitatively assessed as Catastrophic (I) based on the potential for loss of aircraft if an uncontrollable, sustained fire occurs.

Probability: Qualitatively assessed as Improbable (E) based on USAF F-15 mishap history. Aircraft losses due to fire events were associated with catastrophic engine failures, ground maintenance, or in one case, a brake fire.

References:
N/A

Linked Hazards: MIDS JTRS 602

Revision History:
- 05/23/2022: Hazard Initiation
- 03/15/2024: Hazard Status updated to MONITOR
- 03/21/2024: Action 3 completed