

CFM-OP-01 Liquid fuel loss of containment - operating beyond equipment design capabilities

During operations, there is a failure of reservoirs, hoses or lines containing fuel, hydraulics, lubrication, coolant etc. caused by:

- Mechanical or heat damage to hoses, lines or reservoirs (e.g. Continuing to operate after a collision where tanks/lines are/could have been damaged)
- Flammable fluids/lubricants introduced by operators - leading to a situation where the released liquid becoming a fuel that can be ignited by a hot component (e.g. turbo charger, exhaust, electrical fault, etc.)
- Operating practices leading to leaks and, or the failure and release of liquid e.g. Overloading engine (increased pressure leading to release)
- Operating after coolant loss including operating with low oil levels; not responding to alarms for fluid loss
- Fluid loss due to mechanical damage from collisions; being struck by materials (e.g. during bogging/digging activities)
- Operating on a gradient leads to release of fuel (e.g. through fuel flooding or tank spills)

Credible Failure mode is addressed by:

- 🛡️ BI-01.04 Trained, Competent and Authorised Mobile Equipment Operators
- 🛡️ BI-01.43 Required system health checks before mobile equipment operation - information for operator by vehicle type specifying: access and escape, alarms, fire suppression, auto shutdowns and other relevant protective systems
- 🛡️ BI-02A.45 Confirm that hydraulic systems performance meets OEM guarantees
- 🛡️ BI-02A.50.1 Flammable Fluid Line Control Systems detect and react to loss of containment
- 🛡️ BI-02A.52 Operator access specifications are detailed for mobile equipment
- 🛡️ BI-02A.53 Operator display specifications are detailed for mobile equipment
- 🛡️ BI-02A.59 Restraints on drive trains and other mechanical components to arrest damage from failed components
- 🛡️ BI-02A.70 Fire resistant coolants, hydraulic fluids are tested, approved and available for use in mobile equipment, when required.
- 🛡️ BI-04.02 Appropriate system for scheduled inspections including structured checklists and defect reporting
- 🛡️ BI-09.06 Site spill response