



Safe Handling of Hoses – Good Practice

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JIG Hose Testing Introduction

A range of inspections and checks conducted at defined intervals are implemented to ensure the continued safe operation of aviation fuelling hoses to protect operators and assets and prevent any product loss to the local environment.

This presentation provides guidance on these checks and includes best practice recommendations and procedural guidance.

JIG References –

- JIG 1 Appendix A7 - Hose Inspection and Test Procedures
- JIG 2 Appendix A6 – Hose Inspection and Test Procedures



Hose Pressure Test Requirements

Application	Acceptable Hose Type	Monthly Test	6-Monthly Pressure Test	Commissioning new hose with fixed factory couplings	Attaching/ Re-Attaching New Couplings
Aircraft Fuelling & Defuelling	EI 1529 grade 2, Type C ISO 1825, Type C	Normal Operating Pressure	225 psi (15 Bar)	225 psi (15 Bar)	300 psi (20 Bar)
High flow rate de-fuelling	EI 1529 grade 2, Type F ISO 1825, Type F	Normal Operating Pressure	225 psi (15 Bar)	225 psi (15 Bar)	300 psi (20 Bar)
Fuelling equipment hoses between fixed pipework & fuelling platforms and trailer connection hoses	EI 1529 grade 2, Type E or Type F ISO 1825, Type E or Type F	Normal Operating Pressure	225 psi (15 Bar)	225 psi (15 Bar)	300 psi (20 Bar)
Hydrant Dispenser Inlet Hoses	EI 1529 grade 2, Type C ISO 1825, Type C	Normal Operating Pressure	225 psi (15 Bar)	225 psi (15 Bar)	300 psi (20 Bar)
Fueller Loading	EI 1529 grade 2, Type C or Type F ISO 1825, Type C or Type F		225 psi (15 Bar)	225 psi (15 Bar)	300 psi (20 Bar)



Monthly Visual Inspection



- Fully extend the hose and apply normal operating pressure.
- Carry out a full inspection of the hose, utilizing the loop method where possible.
- Inspect all hose end fittings and markings.
- Safely depressurise the hose and check for soft spots.
- If satisfactory, return to service and complete all documentation.

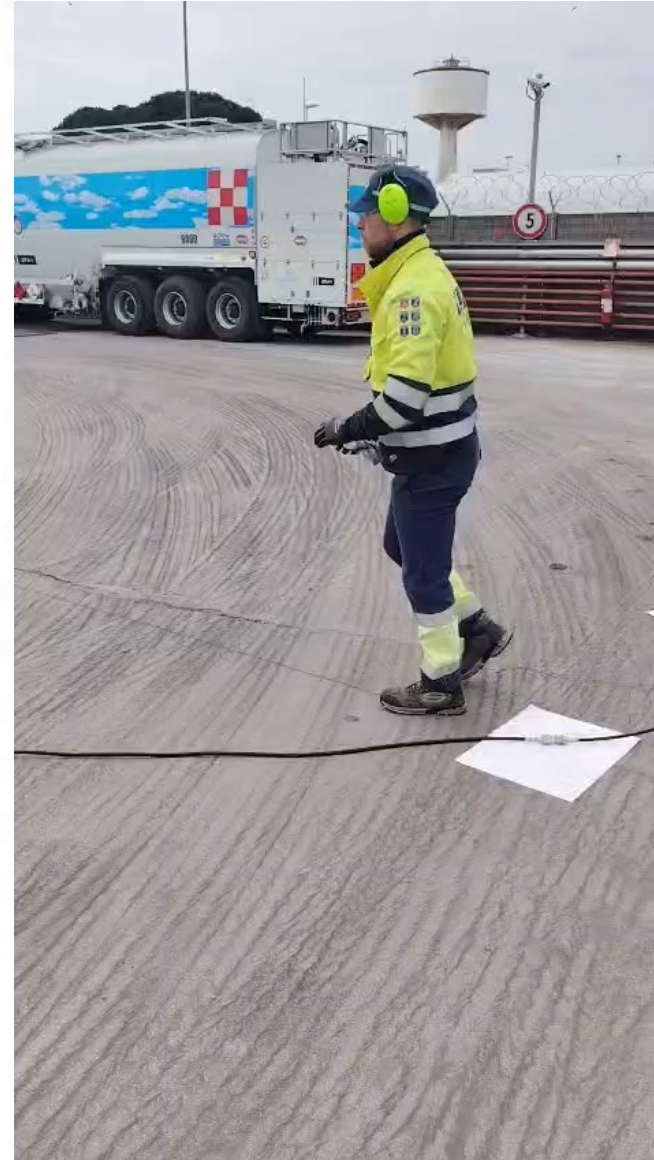


Monthly Inspection - Loop Inspection

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Monthly Inspection - Soft Spot Check



Six Monthly Hydrostatic Hose Testing Procedure

- Fully extend the hose, remove or isolate from vehicle.
- Remove hose nozzle or isolate any HEPCV.
- Remove all hose accessories, remove or loosen wheel fittings.
- Perform a precautionary visual inspection of the hose at normal operating pressure.
- Gradually increase hose pressure from hydrostatic pump whilst bleeding any trapped air from the pump.
- Wait for 1 minute after reaching max test pressure before inspecting visually.
- Perform visual inspection from a safe distance. Hold test pressure for 3 minutes. Release test pressure upon completion.
- Repressurise the hose to normal operating pressure.
- Perform an inspection utilising a loop test or visual aid e.g. mirrors. Check hose end couplings and slippage marks.
- Release pressure from hose and check hose for soft spots.
- If satisfactory, return to service and complete all documentation.



Six Monthly Inspection - Pre Test Check



Six Monthly Inspection - Hose Inspection at a Safe Distance



Kinked Hoses

Kinking and repeated kinking of the hose may damage the internal structure of the hose.

When internal lining in the hose becomes damaged, the fuel may travel along the carcass and appear some distance from the source of the damage.



Damaged Hoses

Any of the following types of abnormalities or damage found during inspection or daily use require immediate action -

- Soft spots, kinks/ deformities, bulges or blistering, excessive abrasion or cracking exposing the reinforcement textile layer.
- Hose run-over by vehicles.
- Minor cuts and abrasions often do not require replacement but require monitoring.



Hose Inspection Aids

Useful tools that can be used to aid in the inspection of hoses, including trolleys and mirrors.

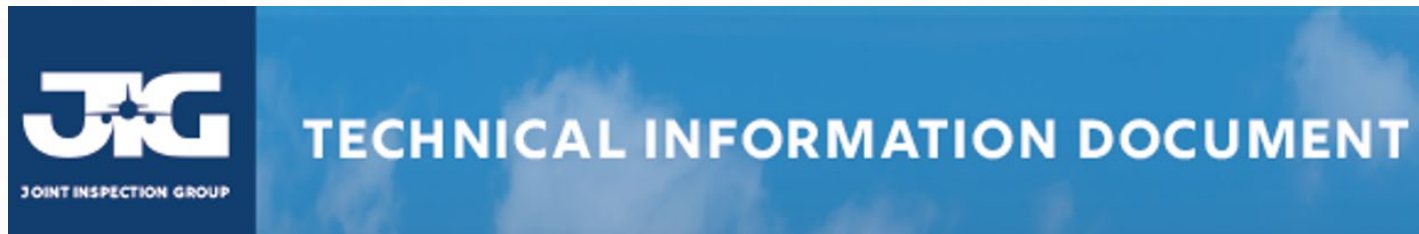
Allowing a full inspection and reduce the manual handling load placed on operators.



TID #7 – Hoses

This TID will provide an overview of hoses and flexible joints used in aviation fuel handling operations in accordance with JIG 1, 2 and 4 standards.

It covers specification, selection, operation, inspection and testing requirements to support safe and compliant fuel handling practices aligned with industry best practices.



Questions?

