

Advance Notice of Change to JIG Standards

FOR INFORMATION OF HYDRANT SYSTEM OWNERS, OPERATORS AND USERS

Background

In recent years, JIG has been made aware of a number of incidents that occurred when hydrant pit couplers were struck by aircraft ground servicing vehicles such as baggage tractors, high loaders, or conveyor belts. In most of these incidents, the coupler was struck by vehicles during fuel flow for aircraft fuelling resulting in spillage and in some cases fuel release under pressure (forming a geyser such as the one shown below) with spillage of a few thousand litres.



Although the detailed incident investigation for these incidents is not known to JIG, it appears that the incidents can be attributed to a range of different root causes, including human error (distraction, inattention), lack of training and lack of adherence to procedures.

What appears to be a common characteristic in all of these recent incidents is that the hydrant pit couplers and valves did comply with EI 1584 3rd/4th edition but were not of dual air/lanyard pilot design. The hydrant pit valves were fitted with a lanyard only.

Based on information provided to JIG, it appears that in a number of these incidents, the spillage

could have been significantly reduced if the hydrant pit valve / coupler pilot had been a dual air/lanyard type. Because of its design, a hydrant pit valve operated by a dual air / lanyard device will close quickly when the deadman is released.

JIG standards currently mandate dual air / lanyard devices for new hydrants and recommend that they are also installed on existing systems. Dual air lanyard devices are available from all hydrant pit valve OEMs and have been in service at many locations for a long period of time.

Dual air / lanyard devices offer a number of advantages over lanyard only as follows:

- The pilot operated valve will close under spring pressure in the case of a pneumatic line rupture. A pneumatic line rupture may be caused, for example, by fire or impact from another vehicle on the hydrant pit valve / coupler assembly.
- The pilot operated valve will close if the deadman is released.
- The pilot operated valve can be more easily operated and closed repeatedly at a remote distance from the hydrant pit. This may be a particular advantage when the fueling operator is performing additional services during the aircraft fuelling.
- Dual air /lanyard operation affords a dual closure. When the air pressure is released, the pilot operated valve closes and remains closed and the subsequent disconnection and removal of the pit coupler closes the pit valve outlet adapter poppet. With a lanyard only device, unless the lanyard is pulled during the disconnection process, the pilot operated valve will not close resulting in a pressurized hydrant pit valve (hot hydrant) condition.

Case for action

The JIG Operations Committee with support from the JIG Council have therefore unanimously agreed to mandate in the next revision of JIG standards (issue 13 – planned for Q1-2021), that dual air/lanyard operated pilots are fitted on all hydrant pit valves. The implementation period for this change is yet to be determined but likely to be at least 3 years from the publication of JIG issue 13.

Hydrant system owners / operators should start establishing plans to retrofit existing systems with dual air/lanyard pilots, with advice from the equipment manufacturers.

JIG intends to support this important transition through Workshops, Technical Forums and publications of advisory bulletins.

Actions to Implement this Bulletin (See Table 1 for Action Type Codes)

Action Description	Action Type	Target Completion Date
In the light of the planned change in JIG standards of mandating dual air/lanyard operated pilots on all hydrant pit valves (new and existing systems), it is recommended that hydrant system owners/operators start establishing plans to retrofit existing systems with dual air/lanyard pilots, with advice from the equipment manufacturers.	RP	To be defined in JIG issue 13

Table 1 Action Type Codes

Action Types	JIG Bulletin Action Type Definition
JS	Change to JIG Standard – to be adopted by JV and/or Operator to continue to meet the JIG Standard(s) (JIG 1, 2, 4, EI/JIG 1530 and the JIG HSSE Management System).
RA	Required Action to implement one off verification or checks outlined in the table of actions.
RP	JIG Recommended Practice which the JV should consider adopting as its own practice (**).
I	Issued for information purposes only.
Note (**) - If the JV agreements require any of the JIG Standards and/or any of the JIG Common Processes as the governing operational standard then adoption of changes to applicable JIG Standards and/or Common Processes should not be considered optional by the JV Board.	

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