JIG Learning From Incidents (LFIs) Toolbox Meeting Pack

Pack 20 - February 2017

Learning From Incidents

How to use the JIG Toolbox Meeting Pack

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- The intention is that these slides promote a healthy, informal dialogue on safety between operators and management
- Slides should be shared with all operators (fuelling & depot operators and maintenance technicians) during regular, informal safety meetings
- No need to review every incident in one Toolbox meeting. Select 1 or 2 incidents per meeting
- The supervisor or manager should host the meeting to aid the discussion, but should not dominate the discussion

All published packs can be found in the publications section of the JIG website at

www.jigonline.com

Learning From Incidents

For every incident in this pack, ask yourself the following…

- What is the potential for a similar type of incident at our site?
- How do our risk assessments identify and adequately reflect these incidents?
- What prevention measures are in place (procedures and practices) and how effective are they?
- What mitigation measures are in place (safety equipment/emergency procedures) and how effective are they?
- What can I do personally to prevent this type of incident?

If you would like further assistance or information relating to the contents of this pack,
or if you have any information you feel will help avoid the reoccurrence of such incidents, then please contact JIG at
http://www.jigonline.com/contacts/

Spill during loading a fueller

LFI 2016-24

Incident Summary

A fueller was positioned at fuel depot loading bay in order to load 31.000 litres of Jet A-1. The loading operation is self service controlled on a manned site. The operator started to perform the tasks; connecting the optic overfill protection system and the scully type connection. The volume to be loaded was confirmed and entered in the depot control system. During the loading the operator noticed red control light on the depot control system, this means a tank overfill or a poor plug connection between fueller and depot installation. The operator checked the cable connection and soon after that noticed a spill under the fueller. The operator switched off the button on the depot system, but the pump did not stop so he manually closed the ball valve on the loading installation. After that he checked the fueller and also closed the bottom valve of the fueller. There was a total of 28000 litres pumped into the fueller, with approximately 330 litres spilled although this spilled volume was fully recovered.

Causes

- Operator assumed the fueller was empty and did not check the volumes in the fueller prior to the loading, non-conformance with the loading procedure
- The depot overfill system (optical) was in “bypass mode” during the loading operation. The depot staff did not return the system to “normal operation”, no communication was done around this bypass situation.
- The second overfill system (independent and pneumatic) was also found in “bypass mode” during the loading operation. The operator did not activate the pre-check function before the start of the loading.
- It was found that both overfill systems would have worked if set in “normal operations”.

Toolbox Discussion Points

- Is it possible to have your overfill system in bypass mode without this being indicated at the loading bay?
- When there is the need to bypass safety critical equipment, is this done following a documented Management of Change that ensures that critical or safety equipment is always returned to operational mode after bypass activity is finished?

Can you think of a similar situation that *you* have experienced or witnessed and did you report it?

Lost Time Injury – Pit Cover

LFI 2016-25

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Incident Summary

After completion of a fuelling the operator needs to disconnect the air connection between the vehicle and the pit. He put his weight on the pit cover unnecessarily by holding on to the half-open pit cover with his left hand while removing pneumatic coupling with his right hand. In consequence of the operator leaning against the pit cover with this bodyweight, the cover was dislocated from its hinge and operator's left hand squeezed between hydrant pit cover and apron's ground. The operator was able to complete his task, but the result of the squeeze was 2 broken fingers and 10 days off work.

Causes

- Operator applied unnecessary force on the pit cover while removing pneumatic coupling
- Hinge of the pit cover was worn out, and consequently the cover fell down when it was disconnected from the hinge

Toolbox Discussion Points

- As well as hinged lids are there any other hazards that can impact on good manual handling techniques during fuelling operations ?
- Are staff made aware of the hazards associated with the equipment they are required to use? Does this include awareness of 3rd party equipment?
- Are hinge/ pit covers included in airports/hydrants inspection program, and suspicious or damaged hinges replaced with priority
- Are incident investigations and resulting lessons learned suitably shared with 3rd parties to identify effective corrective actions? e.g. intoplane operations working with Hydrant operators.
- Are you aware of the JIG Bulletin 90 requirements?

Can you think of a similar situation that *you* have experienced or witnessed and did you report it?

Splash of Jet A-1 whilst sampling

LFI 2016-26

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Incident Summary

While undertaking a routine daily drain of a filter water separator (FWS) by manually adjusting a ball valve to release product under pressure into a bucket for inspection, an aviation operator was contaminated with product splashing from the bucket onto his face, head and upper body. Despite the fact that the operator was wearing safety glasses, the force of the splashing resulted in product coming into contact with the operator's eyes. Despite his vision being impaired the operator managed to close the valve to stop the release of product and began to flush his eyes at the nearest eye wash station.

Causes

The incident occurred when the operator accidentally pushed the valve to an increased opening position when he thought that he was adjusting it to an increasingly closed position. With the valve in the extended open position this allowed an uncontrolled release of Jet A-1 to splash into the bucket under pressure and make contact with the operator's face, head and torso. Although the operator had experience in daily drain operations he did not previously drain the FWS at this location and this contributed significantly to the fact that he accidentally turned the valve to the incorrect position. It was decided to install a spring-loaded valve at this location to reduce the risk of an uncontrolled release of Jet fuel.

Toolbox Discussion Points

- Do you have procedures covering safe sampling? Are these understood and applied ?
- Do you have spring loaded valves and are they suitably maintained? Refer to JIG 2 Appendix A6.1
- How could this process be made safer? e.g. closed sampling system
- Have your risk assessments determined whether safety glasses are adequate for activities such as this ? i.e. would would goggles be more appropriate PPE for this task?

Can you think of a similar situation that *you* have experienced or witnessed and did you report it?

Lost Time Injury – Valve Handle

LFI 2016-27

jigonline.com

Incident Summary

An operator was carrying out a routine tank bottom flushing operation. The spring loaded valve was opened and the flow of product routed to the recovery tank. As this was being carried out the Operator experienced a sudden, sharp irritation on his leg and instinctively bent down to scratch it. At this point his right hand slipped from the valve handle. The spring loaded handle hit the side of his head and nose.

Causes

- As the Operator was bending down, he became distracted and lost a grip on the handle. This also moved his body position and put his head directly in the path of the returning spring loaded handle.
- The stored energy in the spring resulted in the Operator being hit with a significant force when released.

Toolbox Discussion Points

- Could this incident happen at your location? Do you have spring loaded valves? Could you inadvertently put yourself in “the line of fire” while carrying out a similar activity?
- Do you adopt a Last Minute Risk Assessment (e.g. Stop – Think – Do) approach to tasks? Do not fall victim to complacency. Could this incident have been avoided if this approach was used?
- Could your valve handles be improved? Could they be re-positioned or re-designed (e.g. lower spring loading) to minimise a repeat of this incident

Can you think of a similar situation that *you* have experienced or witnessed and did you report it?

Lost Time Injury – Fall

LFI 2016-28

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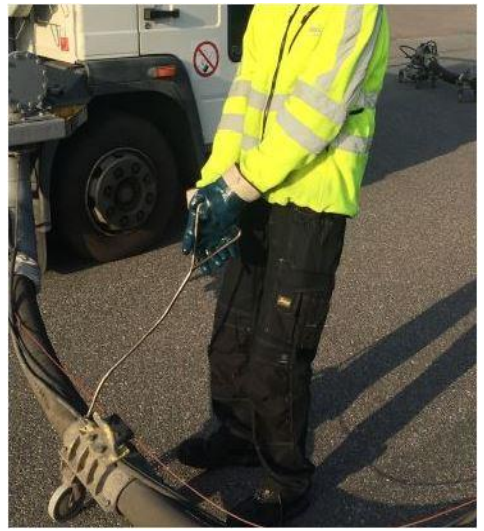
Incident Summary

An operator was attempting to position the inlet hose of a hydrant servicer close to the hydrant pit valve. Connection required the full length of the inlet hose to be utilised, but the Operator experienced difficulty in moving the hose as a swivel joint and first few pairs of wheel supports were jammed. So the Operator decided to use the pit cover hook as an aid to moving the hose. While attempting to pull the hose, the pit cover hook slipped and the Operator fell backwards hitting the back of his head and neck on the inlet hose. The Operator suffered an injury to the back of the head and slight concussion. However, he did not see a doctor until the day after.



Causes

- The inlet hose wheel supports and swivels were not subject to regular preventative maintenance. Overhaul and maintenance relied on defect reports from operators using the equipment. Another operator had experienced difficulties with the swivel and wheel supports on this unit, and reported this verbally to a mechanic. However, the hydrant servicer was not taken out of service as per local procedures.
- The hydrant pit-lid hook is designed to safely lift and remove pit-lids and not intended for other applications.

Toolbox Discussion Points

- Are all Operators aware of what is expected in the event of equipment failure or if equipment is in poor condition? Clarify and re-emphasise your local procedures and requirements (including defect reporting / response and preventative maintenance schedules).
- Are you using any equipment for a purpose it wasn't originally designed for?
- Are you sufficiently familiar with what to do in the event of a medical emergency. Ensure that injured personnel are seen by a doctor as soon as practicable for assessment. Also ensure that all incidents are reported immediately and investigated.
- Do you adopt the Last Minute Risk Assessment (Stop – Think – Do) approach to tasks? Could this incident have been avoided if this approach was used?

Can you think of a similar situation that *you* have experienced or witnessed and did you report it?

Lost Time Injury –Operator struck by Baggage Tractor

LFI 2016-29

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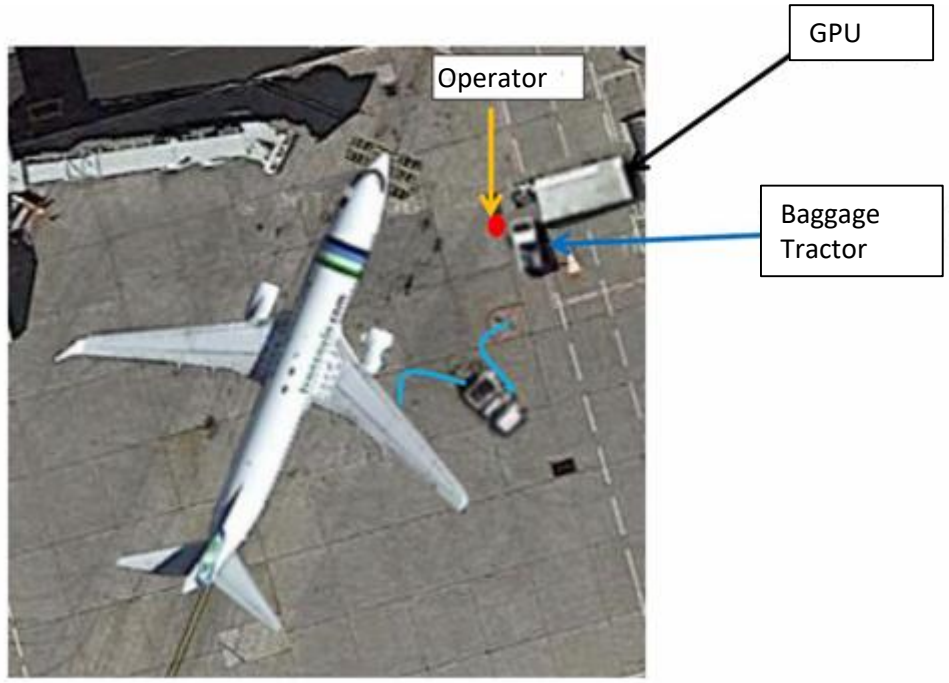
Incident Summary

At the end of fuelling an operator asked the pilot for confirmation of the completion of the fuelling. To make himself visible to the pilot the operator started to walk backwards and waved an arm to gain the pilot's attention. Whilst doing this the operator was struck by a baggage tractor. The operator suffered injuries to his right foot and bruising.



Causes

- The operator walked backwards in order to be seen by the pilot and failed to stay alert to surrounding hazards
- The baggage tractor drove the wrong way, deciding to pass between a generating unit and the operator (See diagram)

Toolbox Discussion Points

- The area around the aircraft stand is very busy, especially during short turnaround times. How do you stay alert to the hazards around you as you work?
- Are there other tasks that you perform that could result in you stepping backwards into a hazard ? How could these tasks be performed more safely?
- Not all apron users have the same safety culture or hazard awareness skills. Do you have system for reporting near misses and sharing the findings of these incidents with other apron users ?

Can you think of a similar situation that *you* have experienced or witnessed and did you report it?