



Trailer Plug Incident Learning

A pre-dawn delivery required the tanker work light be used (turned on), the driver connected a delivery hose to the customer diesel delivery point. The driver then proceeded to connect the other end of the delivery hose to the tanker. This is when a spark occurred between the end of the hose and tanker connection point, the spark igniting the vapour emitting from the end of the hose starting a fire. The driver immediately contained the fire, by disconnecting the hose from customer delivery point and dragging the hose away from the delivery area.

Background:

During a routine vehicle service the technician noticed a tanker in a was experiencing an issue with its lighting. The technician diagnosed the cause of the fault in the male electrical trailer plug. The technician replaced the male trailer plug with a new plug, the new plug body was made of stainless steel, the original plug body being plastic. The next day, during the first delivery a fire occurred due to an electrical short in the tanker work light circuit. The external service technician and an auto electrician inspected the tanker combination for faults, while replicating the fault the auto electrician discovered the new stainless steel male trailer plug and its centre retaining clip had pinched the work light power cable, exposing the inner wire, this allowed power to travel through the body of the male plug into the female plug body and on to through to the tanker, making the tanker structure live. The electrical short occurred when the delivery hose touched the tanker connection, ultimately leading to ignition of petroleum vapour from residue in the open hose.

Learning's:

- Hazards associated with the use of metal trailer plugs and bases must be considered and a comprehensive testing and commissioning process employed if used.
- In the event of an incident all deliveries must cease and be reported immediately.
- Fire extinguishers should be used to extinguish fires wherever they are available.
- Operators should consider the use of delivery hose plugs and drivers trained in the practice of touching plugged hoses to the tanker connection point prior to removing the plug from the hose, in this incident a spark would have still occurred, but without access to vapour from the hose, the fire would have been avoided.

