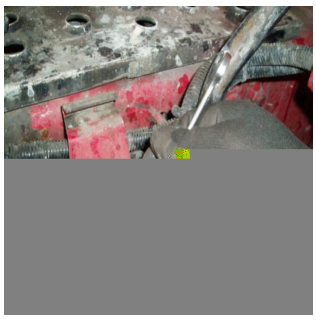
Battery Explosion

WHAT HAPPENED

An LGV vehicle battery top exploded when the hydrogen gas it was venting, was ignited by sparks, caused by a spanner accidently touching earth.

What happened: A contractor was carrying out a modification to a catwalk. As this work involved welding to the chassis, the battery was disconnected. Once the work was completed the battery was reconnected, and the spanner accidently touched the chassis, causing an arc. This in turn ignited the hydrogen venting from the battery, causing it to explode.



LEARNING POINTS / ACTIONS TAKEN

Disconnecting/reconnecting the positive (+) terminal, of the battery is not considered the correct method, as any contact with an earth will cause a spark.

If the negative (-) was disconnected first then any

accidental touching of the chassis would not result in a short circuit. Always remove the negative (-) terminal first!

It would not be expected for a battery to give off gas when not being charged, however in this instance the vehicle was started and moved into the workshop, this will have drained the batteries and caused the vehicle to start charging.

Once in the workshop the positive (+) terminal was disconnected, and the batteries were covered with rags to protect them from welding/cutting & grinding. It is possible that the rags did not allow the gas to dissipate and built up during the time it took to carry out the modification. Never cover the batteries with rags, should the batteries need protection, replace the cover, or remove them.

(The Health and safety Executive also have a relevant guidance note: indg139 Guidance on Using Electric Storage Batteries Safely this can be found at http://www.hse.gov.uk/pubns/indg139.pdf)

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ACTIVITY:	**MAINTENANCE & HOUSEKEEPING**	**DATE ISSUED:**	**01/08/2013**
SUB ACTIVITY:	**N/A**	**INCIDENT No:**	**00368**