E- Cigarette battery bursts into flames whilst in engineer's pocket

WHAT HAPPENED

This incident reinforces the potential hazards presented by E-cigarette batteries and the importance of using them safely with particular regard to how they are charged and stored, both at home and in the workplace to keep yourself, your colleagues and families safe.

An air conditioning engineer received a minor burn to his thigh and carpet tiles were burnt / scorched after an e-cig battery in his pocket instantaneously heated up and burst into flames.

- An air conditioning engineer was on site at the company's offices to carry out routine servicing of the sites AC systems.
- He had been inducted and authorised to work on site and had been working for approx. 1.5 hours and was on the first-floor corridor when suddenly an e-cig battery in the right-hand pocket of his shorts overheated instantaneously, making a hissing and popping sound.
- The heat was so intense that it melted through the pocket and fell to the floor where it burst into flames.
- The H&S Manager heard this and on leaving his office to investigate instructed the AC Engineer to grab a nearby CO fire extinguisher which he did and proceeded to extinguish the flames. This took a couple of attempts as the battery re-ignited.
- The battery was then safely placed outside to cool down.
- The heat from the battery caused a minor burn to the AC Engineers thigh and subsequent battery fire burnt and scorched several carpet tiles.
- A great deal of smoke was raised from the battery fire which activated the fire alarm with the Sales Office promptly evacuating to the Assembly Point and others in the building informed that the fire had been dealt with successfully.
- Once the smoke had been cleared from the corridor persons were advised that it was safe to re-enter the building.
- An investigation found that the e-cigarette battery was most likely defective and/or faulty as the only other items in the same pocket were a mobile phone, in a plastic case and plastic pen.

The images below show the size of the battery after the fire and the normal size for this type of battery.





LEARNING POINTS / ACTIONS TAKEN

In the UK here have been other reported rare incidents of E-cigarettes or “vapes” exploding and seriously injuring people. Lots of the risk around vaping and e-cigarettes is related to their batteries and how they’re charged, used and stored so following the safety tips below may help you to avoid an E-cig battery fire or explosion:

- Only buy E-cigarette devices from reputable retailers. Don’t buy counterfeit goods. Fire risks around vaping often come from counterfeit or faulty products.
- Only use the charger that was supplied with the E-cigarette / battery for charging.
- Don’t charge your E-cigarette overnight and regularly check your device when it is charging.
- Unplug your E-cigarette when it is fully charged. Don’t leave items continuously on charge (after the charge cycle is complete).
- Charge your E-cigarette on a clean, flat surface and away from anything that can easily catch fire. Ensure you can clearly see your E-cigarette when it is charging.
- Do not cover batteries that are on charge, in case of overheating.
- Ensure that you read and follow the safety instructions, markings or warnings on or supplied with the E-cigarette. Contact the manufacturer if you have any further questions or if your E-cigarette wasn’t supplied with instructions.
- Consider using E-cigarettes with safety features and don’t remove or disable safety features.
- Never let your battery come into contact with metal items such as coins or keys in a pocket or bag, as this can cause a short circuit and explosion. Store removable and spare batteries in a plastic case to prevent accidental contact.
- Protect batteries against being damaged, crushed or punctured and do not immerse in water.
- Keep batteries out of the reach of children.
- Regularly inspect your E-cigarette batteries and replace your battery immediately if it is damaged, leaking or not functioning properly. Dispose of batteries at recycle or disposal points.
- Protect your E-cigarette battery from extreme temperatures by not leaving it in direct sunlight or in your car on a freezing cold night.

LOCATION:	**OFFICE**	**ALERT STATUS:**	**Normal**
ACTIVITY:	**POWER TOOLS AND BATTERY SAFETY**	**DATE ISSUED:**	**08/01/2024 18:26:30**
SUB ACTIVITY:	**NO SUB ACTIVITY AVAILABLE**	**INCIDENT No:**	**03689**