



Discharging Electrically Charged Objects

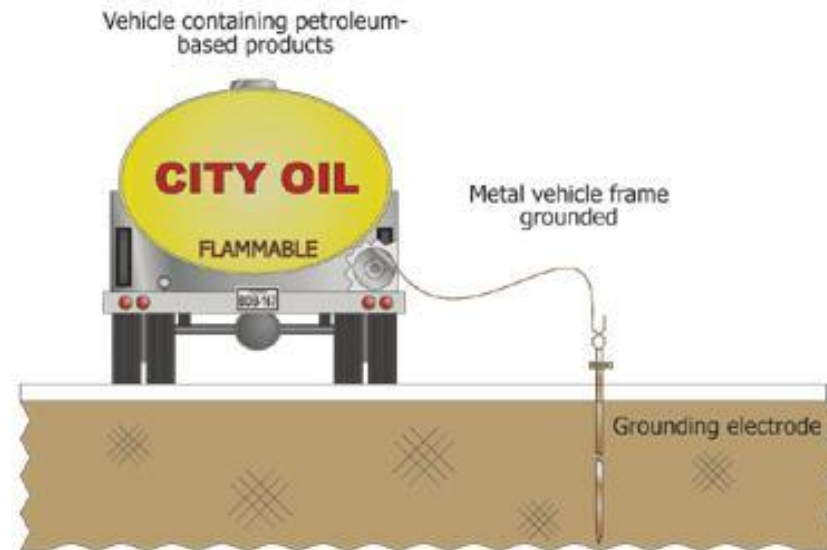
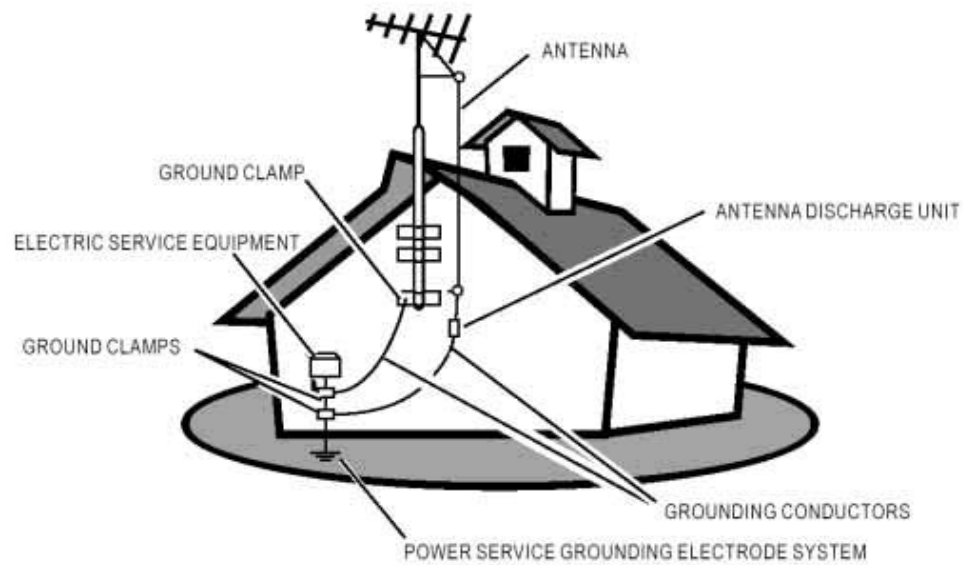
DISCHARGING ELECTRICALLY CHARGED OBJECTS

- **Build up** of a charge on an object can be dangerous.... It can lead to **sparks** that may start a **fire** or damage a sensitive object (like a computer).
- When a charged object is **discharged** it has all of the **excess** electric charges **removed.**
- This returns the object to **neutral**

1. Grounding

Grounding – the charged object is connected to a **wire** that is also connected to the **ground**.

- This wire allows the excess **electrons** to flow from objects into the **earth**.
- Not all objects can be connected to a ground.... It would not be possible to ground an **airplane!**



2. Discharge at a Point

Discharge at a Point –

- Conductors that are painted at the end lose charge fast
- This is because the electrons move through the conductor to the point.
- You build up a lot of charge in a small area... the like charges repel and get pushed off of the point

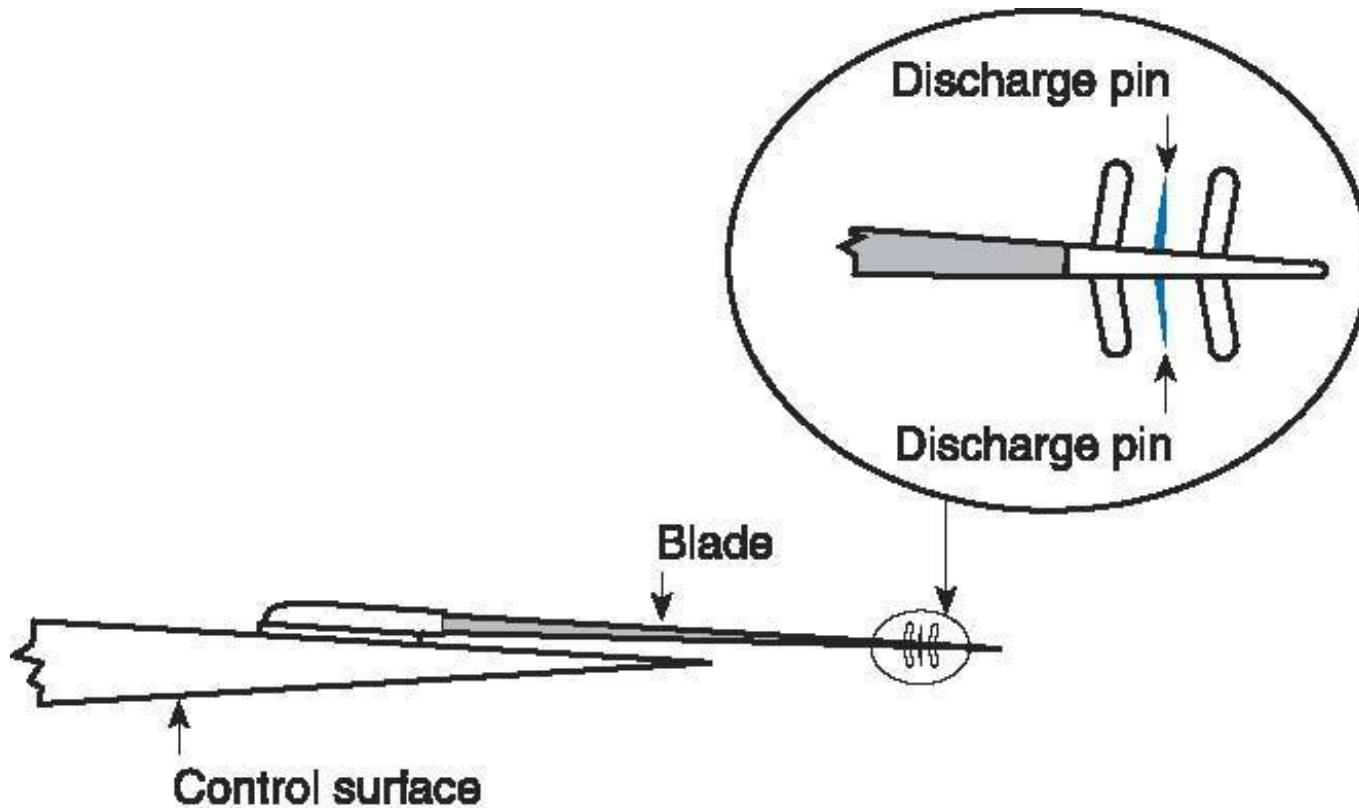


Figure 11-2. *One example of a static wick installed on aircraft control surface to bleed off static charges built up during flight.*

VIDEOS!

- 1: Conductors and Insulators:

<https://www.youtube.com/watch?v=qUhxmXZwPmg>

- 2. Charging and Discharging:

<https://www.youtube.com/watch?v=cr0mf6z1M40>

- 3. Charging by Induction:

<https://www.youtube.com/watch?v=XkAMNFKjds4>