

## Self-Ejecting Power Plugs Prevent Equipment Damage and Personnel Hazards

The University of Virginia in Charlottesville has a fleet of about 25 buses that need to have their engine blocks heated electrically overnight so they can be started reliably on cold mornings. Up until recently, each bus was heated by a standard straight blade plug, with each device connected to a power panel located where the buses are garaged. Yet, this presumably simple power connection installation had an inherent flaw.

Prior to departing the garage, each bus's driver was required to manually disconnect the power plug and stow the power cable. But many times, student bus drivers forgot to disconnect the power plug before they drove out of the garage, causing equipment damage and the potential for personnel injury.

In response, the UVA Parking and Transportation Department decided to address the problem before more damage or an injury occurred. After researching different kinds of electrical connecting systems, they discovered that MELTRIC Corporation offered a self-ejecting plug specifically engineered for the problem they were experiencing. So, they contacted MELTRIC to obtain an evaluation sample of its self-ejecting power plug and connector.

### A Steep Decline in Plug Driveaway Incidents

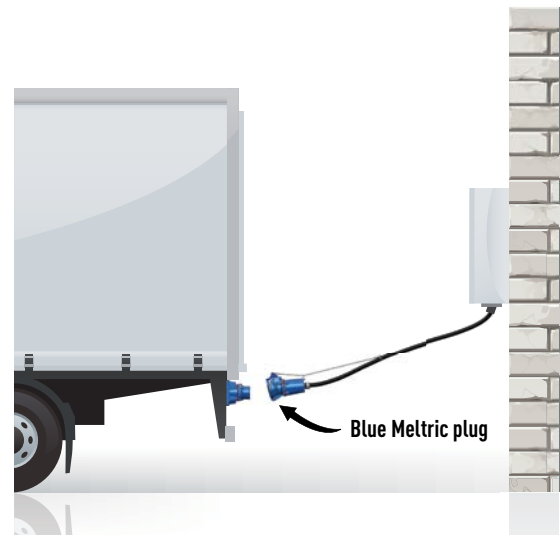
After testing the MELTRIC self-ejecting power plug and connector, they believed it was a far better means of addressing their problem of power plug driveaway incidents than other competing electrical connecting solutions. After installing the MELTRIC self-ejecting plug and receptacle on its bus fleet, UVA experienced a steep decline in power plug driveaway incidents. They concluded that MELTRIC's self-ejecting plug was the safest way to power their bus fleet's engine block heaters as well as a proactive means of preventing future equipment damage or personnel injury.

### How The Meltric Self-Ejecting Plug Works

The potential for personnel hazards or equipment damage is created when a truck, bus, or other type of mobile vehicle drives away prior to having its power plug manually disconnected from electrical power. Personnel hazards and equipment damage are eliminated when a mobile vehicle



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**Preventing Equipment Damage:** Equipment damage is eliminated when the vehicle is fitted with a MELTRIC self-ejecting device, which will orderly and safely disconnect power prior to the occurrence of damage or injury.

is fitted with a self-ejecting device, which will orderly and safely disconnect power prior to the occurrence of damage or injury. Here's how it works.

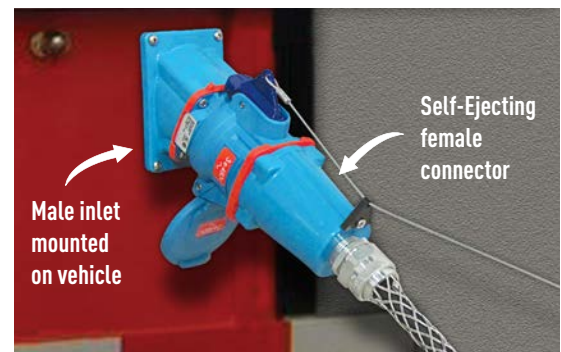
A self-ejecting mechanism is added to a MELTRIC power plug or receptacle, and a tension cord is attached between the pushbutton (pawl) and the power cable (Pictured below). This self-ejecting system is activated when enough tension is exerted on the cord which then tightens the cord and automatically releases the plug or receptacle via the plug's spring-loaded, quick disconnect action, allowing it to be released from the moving vehicle.

To ensure electrical safety and prevent personal injury, MELTRIC engineered a spring-loaded, quick disconnect technology that both safely deenergizes the connector and ejects it from the inlet. Additionally, the self-ejecting system is enhanced for durability and reliability with MELTRIC's exclusive silver-nickel, butt-style contact system and weather-resistant poly casings. The self-ejecting plug/connector can also be fitted with optional auxiliary contacts to monitor the plug's status or equipment operating conditions.

### **The Peace of Mind Provided by Self-Ejecting Plugs**

Since MELTRIC's self-ejecting system is designed to automatically release a power plug from its receptacle when tension is detected, UVA found a reliable solution for its problem: no more headaches of damaged equipment, delayed buses, or worrying about potential injuries.

With MELTRIC's self-ejecting plug/connector, the bus fleet now has the safest means of providing power to engine block heaters, giving UVA the peace of mind that there won't be any more unscheduled incidents or emergency repairs needed in the event of a power connection that wasn't manually disconnected before the bus starts on its route.



**How the Self-Ejecting Mechanism Works:** When tension is applied to the cord, the shark's fin pawl is actuated and the connector is then released safely. (The device can be optionally set up as a self-ejecting male plug as well.)