KEEP THE POWER FLOWING: BEST PRACTICES FOR MAINTAINING LEVEL 3 EV CHARGING STATIONS

If you are looking to invest in DC fast chargers, there are two questions you need to ask at some point:

How long can a Level 3 EV Charger last?

What can I do to maximize the lifespan of my charger?

In most cases, 10 to 15 years is the expected lifespan of a Level 3 EV charger. However, there's a long list of things that can shorten that lifespan considerably when you consider the environmental conditions and their frequency of use.

Because Level 3 chargers are intended to be used by the public, they are also more likely to be damaged through misuse or vandalism than Level 1 or Level 2 chargers.

The good news is that there are some simple preventative maintenance tasks that anyone responsible for operating an EV charging station can put into practice to make sure each charger functions as optimally as possible.

What You Can Visually Inspect

Charging Plugs

Is the charging plug in the holster where it belongs? Do you see any visible damage to the plug?

The last thing you want is for the plug to be run over by the next person pulling up to your charging station. You should also check if the plug's pins and connectors are properly aligned and that there is no bending, breaks, corrosion or discoloration.

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ARTICLE

Charging Cables

Is the cable securely attached?
Do you notice any wear and tear on the charging cable?

The exterior sheath of the cable should not have cuts, abrasions, cracks or exposed wires. In addition, you should rule out any signs of fraying, stress, kinks, knots or tangles, discoloration, melting or burn marks.

HMI Touchscreen Display

Is the HMI display screen functioning properly?
Do you see any signs of degradation to the screen?

You can't start a charging session if the virtual buttons and touch inputs aren't working.

To test the display screen, you should run through the menus and features to ensure there isn't any freezing, lagging or unresponsive behavior. You should be able to tap and swipe various areas of the screen without delays or glitches and there shouldn't be any smudges, scratches or cracks.

If you notice any damage or potential issues during your visual inspection, document your findings and take pictures of any problem areas. Depending on how bad the damage is, you may need to shut the charging station down and contact an Electric Vehicle Infrastructure Training Program certified electrician to make repairs.

What You Can Digitally Inspect

Your DC fast charger's charge management system can be another way to conduct a health assessment. Not only can it help you schedule preventative maintenance checks, but it can also provide the following alerts (and diagnostics) to you and your EV charger manufacturer or service provider:

- Plug Connection Issues
- Charging Interruptions/Status Updates
- Overcurrent Warnings
- Overvoltage/Undervoltage Warnings
- Temperature Warnings
- Communication Errors
- Fault Codes/User Alerts
- Airflow/Change Filter Warnings
- Maintenance Reminders
- Energy Usage Reports
- Over-the-Air Software and Firmware Updates

It is important to note that you should always refer to the OEM manual for how to respond to different warnings or notifications. You should also seek professional assistance from a factory certified technician to ensure safety and a properly functioning power tower or pedestal if you cannot resolve a specific issue on your own.

While it may not be possible to keep an EV charger operating 100% of the time, with regular maintenance and proper care, you will be more likely to avoid small problems from becoming bigger, more expensive issues down the road.

