

## **SAE International Publishes TIR J2954 for PH/EV Wireless Charging**

*SAE International published “SAE TIR J2954 Wireless Power Transfer for Light-Duty Plug-In/ Electric Vehicles and Alignment Methodology,” a milestone industry guideline to establish wireless power transfer between infrastructure, vehicle suppliers and OEMs for plug-in electric and electric vehicles (PH/EV).*

WARRENDALE, Pa. ([PRWEB](#)) May 31, 2016 -- SAE International published “[SAE TIR J2954 Wireless Power Transfer for Light-Duty Plug-In/ Electric Vehicles and Alignment Methodology](#),” a milestone industry guideline to establish wireless power transfer between infrastructure, vehicle suppliers and OEMs for plug-in electric and electric vehicles (PH/EV). The document is available for purchase from the SAE website (see below).

With wireless charging quickly becoming mainstream for consumer electronic devices in low power applications, standardization is needed for commercialization of high power wireless power transfer (WPT) of PH/EVs. In order to achieve a basis for the start of commercialization for WPT, it is important to define criteria for safety and electromagnetic limits, efficiency and interoperability targets, as well as a test setup for the acceptance of WPT – all of which is addressed in SAE TIR J2954.

SAE TIR J2954 is the first step in standardization and was developed by SAE International’s PH/EV Wireless Power Transfer committee, established in 2010. Jesse Schneider serves as the Chair of SAE International’s Wireless Power Transfer committee and Fuel Cell, Electric Vehicle and Standards Development Manager at BMW.

“Wireless power transfer, using SAE TIR J2954 is a game changer for PH/EVs. This first in a series of documents will enable consumers to simply park their vehicles into spaces equipped with TIR J2954 equipment and walk away without doing anything to charge their PH/EV,” Schneider said. “Standardization of both the vehicle and ground infrastructure WPT has started with SAE TIR J2954. The frequency band, safety, interoperability, EMC/ EMF limits as well as coil definitions from SAE TIR J2954 enable any compatible vehicle to charge wirelessly from its WPT home charger, work, or a shopping mall WPT charger, etc. with the same charging ability. All of this makes it possible to seamlessly transfer power over an air gap with high efficiencies. SAE TIR J2954 WPT automates the process for charging and extends the range for the vehicle customer only by parking in the right spot.”

Many automakers and suppliers are also supporting SAE TIR J2954 (see attached figure) Wireless Power Transfer standardization.

SAE TIR J2954 establishes a common frequency band using 85 kHz (81.39 - 90 kHz) for all light duty vehicle systems. In addition, four classes PH/EV of Wireless Power Transfer levels are given today. Future revisions may include even higher power levels:

- 3.7kW (WPT 1) specified in TIR J2954
- 7.7kW (WPT 2) specified in TIR J2954
- 11kW (WPT 3) to be specified in revision of J2954
- 22kW (WPT 4) to be specified in revision of J2954



TIR J2954 WPT compatible systems have been built by automakers and suppliers and are currently under test with a cross-industry team with the US Department of Energy, Idaho and Argonne National Labs. The test data, first in the bench and later in the vehicle, will be used later to finalize as a Standard to support the roll out of this technology.

For more information about “SAE TIR J2954 Wireless Power Transfer for Light-Duty Plug-In/ Electric Vehicles and Alignment Methodology,” visit: [http://standards.sae.org/j2954\\_201605/](http://standards.sae.org/j2954_201605/)

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