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**Question:** Section 15.239, 15.31(d), Testing of an FM-band Transmitter utilizing Car Wiring:  
What are the requirements for a Section 15.239 FM transmitter designed to utilize a vehicle's wiring as a transmitting antenna?

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**Answer:** Since the transmitter utilizes the vehicle wiring as the transmitting antenna, it is not possible to define a typical antenna for use in open-field radiated emission testing of the transmitter. Under such conditions, Section 15.31(d) specifies that radiated emission measurements should be performed in at least three typical installations. The grantee is responsible for a design that is compliant in all types of vehicle that the device is used in. Therefore, measurements of the referenced device must be made with the transmitter installed in at least three different vehicles. A large, midsize and compact vehicle must be chosen based on models in the targeted market. Compliance with the limits specified in Section 15.239 must be demonstrated with the antenna mast placed at least in 8 different radials around the vehicle, as specified in ANSI C63.4, and should be placed at least 3 meters from the test vehicles. Other guidance in ANSI C63.4 to maximize radiated emissions applies.

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