



U.S. Department
of Transportation

**Federal Transit
Administration**

SA-22-1

Safety Advisory

10/13/2022

Office of Transit Safety and Oversight
Washington, DC

Subject: Rail Car Passenger Door Inspection and Function Testing

Purpose: The Federal Transit Administration (FTA) is issuing Safety Advisory 22-1 to recommend safety practices for Periodic Maintenance Inspections (PMI) for Rail Car Passenger Door Inspection and Function Testing. FTA recommends that State Safety Oversight Agencies (SSOAs) direct rail transit agencies (RTA) to review current RTA policies, procedures, and checklists for Rail Car Passenger Door PMIs to determine if they meet the recommended practices outlined in this FTA Safety Advisory and should revise and improve them as necessary.

Background: FTA is aware that an RTA recently identified a scenario where faulty wiring allowed a train to operate without rail car doors being fully closed. Specifically, a short-circuited wire kept a door interlock electrical system energized in a position that overrode the door interlock system and allowed propulsion power to be applied to the train while the doors were not fully closed. The open-door indication did not signal that a door was open. The PMI procedures this RTA used did not identify the failure of the door interlock system, and the RTA did not identify the unsafe door condition until an incident occurred.

SSOAs have safety oversight authority over the RTAs within their State. Each SSOA has investigative and enforcement authority with respect to the safety of all RTAs within their State and, with these authorities, can require or review any safety-related procedural or inspection evaluations or changes.

Recommended Actions: FTA recommends that SSOAs direct RTAs in their jurisdictions to evaluate the sufficiency of current RTA PMI procedures for Rail Car Passenger Door Inspection and Function Testing. FTA recommends that PMI procedures include the following practices:

- As part of the recurring maintenance cycle:
 - Visual inspection of door control wiring for improper crimps or unnecessary bends.
 - Visual inspection of mounting hardware to ensure it is properly insulated to avoid inadvertent grounding.
- As part of the recurring inspection cycle:
 - Testing of sensitive door edges to verify the door opens upon fouling of the sensitive edge.
 - Testing of propulsion interlocks to verify a vehicle cannot move if any interlocked door is not completely closed.

Although not a factor in the referenced door issue, door interlocks typically have a bypass that

can be activated in emergency situations to allow the vehicle to move if a door is jammed, broken, or otherwise unable to close. FTA recommends the following practices for the bypass:

- RTAs should have administrative and/or engineering controls in place to prevent the use of the bypass except in cases of emergency or for maintenance purposes.
 - For example, the Standard Operating Procedure could prohibit an operator from bypassing the interlock unless all passengers are removed from the vehicle, or interlock controls may be secured by a key only issued to supervisors and maintenance personnel.
- In case there should be a similar type of failure, RTAs should consider what safety protections may be required at the specific testing location in the shop facility or on-track location when personnel attempt to apply propulsion power during any door interlock testing procedures.

If an SSOA determines that an RTA's existing PMI procedures are insufficient, the SSOA should direct the RTA to develop a related Corrective Action Plan (CAP) in accordance with the SSOA Program Standard requirements. The RTA and SSOA must track any CAPs using the established program CAP process.

Resources:

American Public Transportation Association (APTA) Recommended Practice:

- Door System Periodic Inspection and Maintenance for Rail Transit Vehicles:
 - [APTA-RT-VIM-RP-005-02-Rev-1.pdf](#).

Contact: For program-related questions or comments regarding this Safety Advisory, contact Joe DeLorenzo, Associate Administrator for Transit Safety and Oversight and Chief Safety Officer, FTA, 1200 New Jersey Avenue, SE, Washington, DC 20590, telephone (202) 366-1783 or email joseph.delorenzo@dot.gov.