



Transponder Reader System Verification Procedure

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1 Introduction

1.1 Purpose

This document provides instructions for testing (qualifying) an installed Transponder Tag Reader System. This includes the testing of the cables and equipment for the locomotive associated with the Pull Back Protection System.

1.2 Scope

This procedure describes a series of tests that are sufficient for making sure the locomotive components associated with the Pull Back Protection System are well integrated together and functioning properly.

1.3 Applicability

This document applies to 2OPT-9116-Annn Transponder Reader Systems.

1.4 Overview

This document includes a test procedure section that describes the required material and test procedure steps to qualify a newly installed Transponder Tag Reader and Antenna. The installation is very simple and there is no user adjustment required.

1.5 Cautions and Warnings

According to the requirements of FCC 15,21;

Users are cautioned that changes or modifications to this equipment are expressly prohibited and could void the user's authority to operate the equipment.

According to the requirements of IC;

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

2 Test Procedure

2.1 Required Material

The material listed below is required to perform the validation test of the Transponder Reader System.

2.1.1 Documents

- Reader
- Antenna
- Connecting Cable
- Test Transponder

2.1.2 Equipment

- 2.1.2.1 Multi-meter

2.2 Test Procedure Steps

2.2.1 Installation Verification

2.2.1.1 Ensure that all cables are secured and connected properly.

2.2.2 Power Verification

2.2.2.1 Power on the System

2.2.2.2 Check the power (Yellow LED) on the Transponder Reader. The LED should be on continuously when 72VDC is supplied to the Reader.

2.2.3 Antenna Signal Verification

2.2.3.1 Check the (Green LED) antenna signal going to the Transponder Reader. The LED should be on continuously to indicate that the 200Khz signal is being received from the Transponder Antenna.

2.2.4 Test Transponder Verification

2.2.4.1 Check the (Red LED) antenna signal going to the Transponder Reader. The LED should flash once every 15 seconds when 72VDC is supplied to the Reader.

2.3 Troubleshooting Tips

2.3.1 Power Verification

2.3.1.1 If the power LED (Yellow LED) on the Transponder Reader is not lit, verify first that all connection points for the power cable are secure.

2.3.1.2 Also, verify that the power termination points are connected to the MCC terminal blocks.

2.3.2 Antenna Signal Verification

2.3.2.1 If the antenna signal LED (Green LED) on the Transponder Reader is not lit, verify that all connection points for the antenna cable are secure.