

WSDOT Test Method T 428

Test Method for Traffic Controller Compliance Inspection and Test Procedure

1. Scope

The purpose of this procedure is to provide a documented method for the steps involved with the inspection and testing of the completed Traffic Controller Cabinets.

2. Reference Documents

- WSDOT *Standard Specifications* 9-29.13
- WSDOT Test Method T 421, Traffic Controller Cabinet Inspection Procedure
- WSDOT Test Method T 422, Transient Voltage Test (Spike Test) Procedure (optional)
- WSDOT Test Method T 423, Conflict Monitor Test Procedure
- WSDOT Test Method T 424, Power Interruption Test Procedure
- WSDOT Test Method T 425, Environmental Chamber Test Procedure
- WSDOT Test Method T 427, Loop Amplifier Test Procedure

3. Safety

Utilize PPE and observe safety practices as defined in WSDOT Test Methods T 421, T 422, T 423, T 424, T 425, and T 427.

4. Apparatus

Utilize equipment as defined in WSDOT Test Methods T421, T422, T423, T424, T425, and T427.

Combination resistor/LED load bank to simulate each traffic signal light in operation.

EDI Model SM662 Isolator Test Cards to test field termination wiring.

Field termination test probe consisting of two 1N4148 diodes wired in parallel.

Opticom strobe system tester to test pre-emption devices.

Suitable jumper to test pedestrian field terminals.

5. Procedure

- 5.1 Perform Traffic Controller Cabinet Inspection Procedure in accordance with WSDOT Test Method T 421.
- 5.2 Perform Environmental Chamber Test Procedure in accordance with WSDOT Test Method T 425.
- 5.3 If required by Contract Documents or otherwise requested, perform Transient Voltage Test (Spike Test) Procedure in accordance with WSDOT Test Method T 422.
- 5.4 Perform Conflict Monitor Test Procedure in accordance with WSDOT Test Method T 423.

- 5.5 If equipped, perform Loop Amplifier Test Procedure in accordance with WSDOT Test Method T 427.
- 5.6 If applicable, perform Power Interruption Test Procedure in accordance with WSDOT Test Method T 424.
- 5.7 Verify the GFCI is operational.
- 5.8 Verify the vent fan(s) is(are) operational.
- 5.9 Verify the cabinet door light switch(es) is(are) operational.
- 5.10 Verify the correct operation of the master controller, if so equipped.
 - 5.11.1 Verify the correct operation of vehicle test switches, if so equipped.
 - 5.11.2 Verify the correct operation of pedestrian test switches, if so equipped.
 - 5.12.1 Verify the correct operation of vehicle (loop sensor) field terminals. This will require the use of EDI Model SM662 Isolator Test Cards and a field termination probe.
 - 5.12.2 Verify the correct operation of pedestrian field terminals. This will require the use of a suitable jumper.
 - 5.13.1 Verify the correct operation of pre-emption (phase selector) cards, if so equipped.
 - 5.13.2 Verify the correct operation of pre-emption (phase selector) test switches, if so equipped.
 - 5.13.3 Verify the correct operation of pre-emption (phase selector) field terminals, if so equipped. This will require the use of an Opticom strobe system tester.
- 5.14 Verify the correct operation of railroad pre-emption cards, if so equipped.
- 5.15 Verify the correct operation of the internal "auto/flash" switch.
- 5.16 Verify the correct operation of the internal "stop time" switch.
- 5.17 Verify the correct operation of the external police panel switch(es).
- 5.18 Set up cabinet to run on minimum recall with a combination resistor/LED load bank. Run a performance test for a period of no less than 72 hours.

6. Report

Record any deficiency that does not meet the above minimum requirements. Report any corrective actions taken on the test report. The overall test result shall be recorded as a "Pass" or "Fail" for test T 428 in MATS.

Performance Exam Checklist

WSDOT Test Method T 428

Test Method for Traffic Controller Compliance Inspection and Test Procedure

Participant Name: _____ Exam Date: _____

Record the symbols "P" for passing or "F" for failing on each step of the checklist.

Procedure Element	Trial 1	Trial 2
1. Perform Traffic Controller Cabinet Inspection T421	_____	_____
2. Perform Environmental Chamber Test T425	_____	_____
3. If required or requested, perform Transient Voltage Test T422	_____	_____
4. Perform Conflict Monitor Test T423	_____	_____
5. Perform Loop Amplifier Test T427	_____	_____
6. Perform Power Interruption Test T424	_____	_____
7. Perform T428 Specific Compliance Inspection and Tests	_____	_____
8. Report	_____	_____

Comments: First Attempt: Pass _____ Fail _____ Second Attempt: Pass _____ Fail _____

Examiner Signature: _____ WAQTC #: _____

