



WSDOT Test Method T 421

Test Method for Traffic Controller Inspection and Test Procedure

1. Scope

The purpose of this procedure is to provide a documented method for the steps involved with inspection and testing of the completed traffic controller cabinets.

2. Reference Documents

WSDOT *Standard Specifications* 9-29.13

NEMA Publication TS-1

FHWA Publication IP-78-16

Caltrans: Traffic Signal Controller Equipment Specification

3. Safety

Use proper equipment to reduce the risk of electrical shock.

4. Apparatus

Equipment as defined to perform WSDOT Test Methods T 422, T 423, T 424, T 425, and T 427.

Resistor load bank to simulate each traffic signal light (150 Ohm 100W wire wound resistors).

5. Procedure

The traffic controller cabinet shall be inspected to ensure that it is in compliance with the contract documents. Ensure that all of the required equipment is installed and the cabinet and meets the requirements of the contract documents. The results of successful completion of this procedure will be acceptance for testing.

As a minimum, the following items shall be inspected:

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|----------------------------------|---------------------------------------|
| 1) Mylar and four cabinet prints | 13) Phone jack for modem |
| 2) Manuals | 14) Radio interference suppresser |
| 3) Labeling | 15) Door light switch(s) |
| 4) Air filter | 16) Pedestrian switches |
| 5) All wire laced and clamped | 17) Cabinet light |
| 6) Field wire terminal blocks | 18) 120 VAC receptacle outlet |
| 7) Door locks | 19) Ground fault interrupter |
| 8) Police keys | 20) Equipment/Cabinet clearance |
| 9) Police panel switches | 21) Load switches |
| 10) Circuit breakers | 22) Intersection display panel |
| 11) Transient voltage suppresser | 23) Isolated 120VAC bus bar (neutral) |
| 12) Modem(s) | 24) Phase Selectors |

- | | |
|---|-----------------------------------|
| 25) Flash transfer relays | 38) Absence of red assembly (170) |
| 26) Supplemental resistor loads | 39) Controller |
| 27) Two position door stop | 40) Software |
| 28) Emergency indicator lights | 41) AC isolator (170) |
| 29) Railroad preemption | 42) DC isolator (170) |
| 30) Cabinet Construction | 43) Aux. file (170) |
| 31) Detector Panel | 44) External logic (NEMA) |
| 32) Detector Panel shorting plug (NEMA) | 45) CMU door interlock switch |
| 33) Plastic document envelope (NEMA) | 46) Stop Time switch |
| 34) DB9 socket and C20 plug (170) | 47) Cabinet Ground Bus bar |
| 35) C-2 plug and cable (170) | 48) Conflict Monitor |
| 36) Rack mounted document drawer (170) | 49) Inside auto/flash switch |
| 37) Verify circuit breakers capacities | 50) Loop Amplifiers |
- a. The traffic controller cabinet shall be connected to the resistor load bank.
- b. WSDOT Test Method T 425, Environmental Chamber Test shall be performed. Any deficiencies shall be documented on the test report.

6. Report

Record any response found to be in disagreement with the published standards, report pass or fail and any corrective actions taken on the test report.

Performance Exam Checklist

Test Method for Traffic Controller Inspection and Test Procedure Method T 421 Checklist

Participant Name _____

Exam Date _____

Procedure Element

Preparation

Yes No

1. Cabinet inspected for damage during shipping.
2. Letter to project office sent
3. Traffic controller assessed for compliance with contract provisions.
4. Simulated load connected to the Controller.
5. Perform Environmental test WSDOT Method T 425
6. Document test results on report.

First Attempt: Pass Fail

Second Attempt: Pass Fail

Signature of Examiner

Comments:

