



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:

- | | |
|----------------------------------|-----------------------------------|
| 1) Mylar and four cabinet prints | 10) Circuit breakers |
| 2) Manuals | 11) Transient voltage suppresser |
| 3) Labeling | 12) Modem(s) |
| 4) Air filter | 13) Phone jack for modem |
| 5) All wire laced and clamped | 14) Radio interference suppresser |
| 6) Field wire terminal blocks | 15) Door light switch(s) |
| 7) Door locks | 16) Pedestrian switches |
| 8) Police keys | 17) Cabinet light |
| 9) Police panel switches | 18) 120 VAC receptacle outlet |

- | | |
|---|--|
| 19) Ground fault interrupter | 35) C-2 plug and cable (170) |
| 20) Equipment/Cabinet clearance | 36) Rack mounted document drawer (170) |
| 21) Load switches | 37) Verify circuit breakers capacities |
| 22) Intersection display panel | 38) Absence of red assembly (170) |
| 23) Isolated 120VAC bus bar (neutral) | 39) Controller |
| 24) Phase Selectors | 40) Software |
| 25) Flash transfer relays | 41) AC isolator (170) |
| 26) Supplemental resistor loads | 42) DC isolator (170) |
| 27) Two position door stop | 43) Aux. file (170) |
| 28) Emergency indicator lights | 44) External logic (NEMA) |
| 29) Railroad preemption | 45) CMU door interlock switch |
| 30) Cabinet Construction | 46) Stop Time switch |
| 31) Detector Panel | 47) Cabinet Ground Bus bar |
| 32) Detector Panel shorting plug (NEMA) | 48) Conflict Monitor |
| 33) Plastic document envelope (NEMA) | 49) Inside auto/flash switch |
| 34) DB9 socket and C20 plug (170) | 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

Yes No

Preparation

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

First attempt: Pass Fail

Second attempt: Pass Fail

Signature of Examiner _____

Comments:

