



# Memorandum

U.S. Department  
of Transportation

**Federal Railroad  
Administration**

---

Date: January 17, 2001

Reply to Attn. of: S-99-06

Subject: Clarification of Application, Interpretation and  
Enforcement of 49 CFR Section 234.273

From: George Gavalla  
Associate Administrator for Safety

To: All Regional Administrators, Deputy Regional Administrators,  
S&TC Specialists and S&TC Inspectors

The S&TC Technical Resolution Committee meeting in Omaha, Nebraska the week of August 16, 1999, acted on a request for clarification of the application, interpretation, and enforcement of 49 CFR Section 234.273, by defining the minimum information required for recording the results of various inspections and tests required by other sections of Part 234. Part of the Committee continued working on this issue via e-mail subsequent to the original meeting to finalize some items that were unresolved.

The Committee considered industry practices, requirements of Part 234 inspection and testing rules, and clarifications which had previously been provided for Section 236.110 in formulating these requirements.

These clarifications are a supplement to what information is required in the rule. They do not relieve any requirements in the rule such as the signature or electronic code for the employee performing the inspection or test. Other items required in the rule, and applicable to each section, include name of the railroad, DOT/AAR inventory number, Place (city/county, state, street/road name), Date (month/day/year), and repairs, replacements, adjustments made. Following are the clarifications of other items which sometime vary by each section due to the equipment being tested.

**Section****Requirements**

- 234.249 Equipment tested (each energy source tested for either positive or negative ground identified by nomenclature (i.e., B10, B12, B16, XB12, EB12, etc.); Results of tests (results may be recorded by using codes which are defined on the record with the exception of when any current ground is detected during tests, the actual measured value and the corrective action taken shall be recorded); and condition in which the apparatus was left. (Satisfactory condition would indicate the test is complete and no ground is found of a value non-compliant with the requirements of Section 234.213.)
- 234.251 Equipment tested (each standby power source tested identified by nomenclature i.e. B10, B12, B16, XB12, EB12, etc.); Results of test (results may be recorded by using codes which are defined on the record with the exception of when any standby power source is detected in an insufficient state during tests, the actual measured value and the corrective action taken shall be recorded); and condition in which the apparatus was left. (Satisfactory condition would indicate the test is complete and the standby power is found of sufficient capacity to comply with the requirements of Section 234.215.)
- 234.253 Equipment inspected or tested (each flashing light unit identified (i.e., all, flasher A, flasher B, unit 2B, etc.); Results of each inspection (subsections (a) and (c) for compliance with Section 234.217), or test (subsection (b) for compliance with Section 234.221). (Results may be recorded by using codes which are defined on the record with the following exceptions: the actual flash rate shall be recorded, when any defective condition is found in lamp voltage the actual measured value shall be recorded, and when any condition is found non-compliant with Section 234.253, it shall be noted and the corrective action taken shall be recorded); and condition in which the apparatus was left. (Satisfactory condition would indicate the flashing light unit(s) has been inspected or lamp voltage tested and no defective condition was found).
- 234.255 Equipment inspected, observed, or tested (each gate arm/gate mechanism identified i.e. all, gate A, gate B, etc.); Results of each inspection (subsection (a)), each observation (subsection (b)), and each test (subsection (c)), all for compliance with Section 234.223. Results may be recorded by using codes which are defined on the record); and condition in which the apparatus was left. (Satisfactory condition would indicate the gate arm, gate mechanism, and/or hold clear device has been inspected, observed, or tested as applicable and no defective condition was found).

<b><u>Section</u></b>	<b><u>Requirements</u></b>
234.257	Equipment tested (the type devices identified (i.e., flashing lights, flashing lights and gates, bell(s), etc.); Results of tests (results may be recorded by using codes which are defined on the record); and condition in which the apparatus was left. (Satisfactory condition would indicate the test is complete and the system is found to be operating as intended.)
234.259	Equipment tested (the type train detection devices identified (i.e., DC track circuits, AC track circuits, AFO track circuits, Model 1140 Motion Detector, GCP 3000, HXP-1, etc.); Results of tests (results shall be recorded by identifying the method of testing used and the actual warning time found); and condition in which the apparatus was left. (Satisfactory condition would indicate the test is complete and the warning time(s) is found to be as prescribed.)
234.261	Equipment tested (the nomenclature or other positive identification for each interconnection); Results of tests (results may be recorded by using codes which are defined on the record); and condition in which the apparatus was left. (Satisfactory condition would indicate the test is complete and the interconnection, for which a railroad has maintenance responsibility, is found to be operating as intended.)
234.263	Equipment tested (the nomenclature, manufacturer or model/type, and Serial number, of each relay tested); Results of tests (results shall be recorded by pick-up and release values or working values where pick-up and release are not applicable. If a relay is found non-compliant, the defective condition shall be noted, the measured values shall be recorded, and the corrective action taken recorded); and condition in which the apparatus was left. (Satisfactory condition would indicate the test is complete and the relay is found to be non-defective, and otherwise operating properly and within specifications.)
234.265	Equipment tested (the nomenclature of each timing relay or timing device); Results of tests (the predetermined time and the actual time measured shall be recorded. If a timing relay or timing device is found non-compliant, the defective condition shall be noted and the corrective action taken shall be recorded); and condition in which the apparatus was left. (Satisfactory condition would indicate the test is complete and the relay or timing device is found to be non-defective, and otherwise operating properly and within the requirements.)

**Section****Requirements**

- 234.267 Equipment tested (each grouping of wires or cable tested shall be positively identified); Results of tests (results may be recorded by using codes which are defined on the record with the exception that when the insulation resistance of any conductor(s) in use is found to be below 500,000 ohms, such conductor(s) shall be individually identified and the actual value of the insulation resistance of that conductor(s) shall be recorded. The corrective action taken shall then also be recorded.); and condition in which the apparatus was left. (Satisfactory condition would indicate the test is complete and each conductor is found to be in compliance with Section 234.267.)
- 234.269 Equipment tested (the nomenclature or other positive identification for each cut-out circuit); Results of tests (results may be recorded by using codes which are defined on the record); and condition in which the apparatus was left. (Satisfactory condition would indicate the test is complete and the cut-out circuit is found to be operating as intended.)
- 234.271 Equipment inspected (either identified as all within the limits of the train detection circuitry or some other effective method if less than all); Results of tests (results may be recorded by using codes which are defined on the record); and condition in which the apparatus was left. (Satisfactory condition would indicate the inspection is complete and no insulated rail joint, bond wire, or track connection is found defective to a point that it is not performing its intended function).

#