

**§ 234.265 Timing relays and timing devices.**

Each timing relay and timing device shall be tested at least once every twelve months. The timing shall be maintained at not less than 90 percent nor more than 110 percent of the 41 predetermined time interval. The predetermined time interval shall be shown on the plans or marked on the timing relay or timing device. Timing devices which perform internal functions associated with motion detectors, motion sensors, and grade crossing predictors are not subject to the requirements of this section.

**§ 234.267 Insulation resistance tests, wires in trunking and cables.**

(a) Insulation resistance tests shall be made when wires or cables are installed and at least once every ten years thereafter.

(b) Insulation resistance tests shall be made between all conductors and ground, between conductors in each multiple conductor cable, and between conductors in trunking. Insulation resistance tests shall be performed when wires, cables, and insulation are dry.

(c) Subject to paragraph (d) of this section, when insulation resistance of wire or cable is found to be less than 500,000 ohms, prompt action shall be taken to repair or replace the defective wire or cable. Until such defective wire or cable is replaced, insulation resistance tests shall be made annually.

(d) A circuit with a conductor having an insulation resistance of less than 200,000 ohms shall not be used.

(e) Required insulation resistance testing that does not conform to the required testing schedule of this section shall be completed in accordance with the following schedule:

(1) Not less than 50% by the end of calendar year 1996;

(2) Not less than a total of 75% by the end of calendar year 1997; and

(3) One hundred percent by the end of calendar year 1998.

**§ 234.269 Cut-out circuits.**

Each cut-out circuit shall be tested at least once every three months to determine that the circuit functions as intended. For purposes of this section, a cut-out circuit is any circuit which overrides the operation of automatic warning systems. This includes both switch cut-out circuits and devices which enable personnel to manually override the operation of automatic warning systems.

**§ 234.271 Insulated rail joints, bond wires, and track connections.**

Insulated rail joints, bond wires, and track connections shall be inspected at least once every three months.

**§ 234.273 Results of inspections and tests.**

(a) Results of inspections and tests made in compliance with this part shall be recorded on forms provided by the railroad, or by electronic means, subject to approval by the Associate Administrator for Safety. Each record shall show the name of the railroad, AAR/DOT inventory number, place and date, equipment tested, results of tests, repairs, replacements, adjustments made, and condition in which the apparatus was left.

(b) Each record shall be signed or electronically coded by the employee making the test and shall be filed in the office of a supervisory official having jurisdiction. Records required to be kept shall be made available to FRA as provided by 49 U.S.C. 20107 (formerly §208 of the Federal Railroad Safety Act of 1970 (45 U.S.C. 437)).

(c) Each record shall be retained until the next record for that test is filed but in no case for less than one year from the date of the test.

APPENDIX A TO PART 234—SCHEDULE OF CIVIL PENALTIES<sup>1</sup>

| Section   | Violation | Willful violation |
|---|-----------|-------------------|
| <b>Subpart B—Reports</b>                                      |           |                   |
| 234.7 Accidents involving grade crossing signal failure ..... | \$5,000   | \$7,500           |
| 234.9 Grade crossing signal system failure reports .....      | 2,500     | 5,000             |

| Section   | Violation | Willful violation |
|---|-----------|-------------------|
| <b>Subpart C—Response to Reports of Warning System Malfunction</b>  |           |                   |
| Sec.  |           |                   |
| 234.101 Employee notification rules .....   | 2,500     | 5,000             |
| 234.103 Timely response to report of malfunction .....  | 2,500     | 5,000             |
| 234.105 Activation failure  |           |                   |
| (a) Failure to notify—train crews .....   | 5,000     | 7,500             |
| Other railroads .....   | 5,000     | 7,500             |
| (b) Failure to notify law enforcement agency .....  | 2,500     | 5,000             |
| (c) Failure to comply with—flagging requirements .....  | 5,000     | 5,000             |
| Speed restrictions .....  | 5,000     | 7,500             |
| (d) Failure to activate horn or whistle .....   | 5,000     | 7,500             |
| 234.106 Partial activation  |           |                   |
| (a) Failure to notify—train crews .....   | 5,000     | 7,500             |
| Other railroads .....   | 5,000     | 7,500             |
| (b) Failure to notify law enforcement agency .....  | 2,500     | 5,000             |
| (c) Failure to comply with—flagging requirements speed restrictions .....   | 5,000     | 7,500             |
| (d) Failure to activate horn or whistle .....   | 5,000     | 7,500             |
| 234.107 False activation  |           |                   |
| (a) Failure to notify—train crews .....   | 5,000     | 7,500             |
| Other railroads .....   | 5,000     | 7,500             |
| (b) Failure to notify law enforcement agency .....  | 2,500     | 5,000             |
| (c) Failure to comply with—flagging requirements .....  | 5,000     | 7,500             |
| Speed restrictions .....  | 5,000     | 7,500             |
| (d) Failure to activate horn or whistle .....   | 5,000     | 7,500             |
| 234.109 Recordkeeping .....   | 1,000     | 2,000             |
| <b>Subpart D—Maintenance, Inspection, and Testing</b>   |           |                   |
| Maintenance Standards:  |           |                   |
| 234.201 Location of plans .....   | 1,000     | 2,000             |
| 234.203 Control circuits .....  | 1,000     | 2,000             |
| 234.205 Operating characteristics of warning system apparatus .....   | 2,500     | 5,000             |
| 234.207 Adjustment, repair, or replacement of component .....   | 2,500     | 5,000             |
| 234.209 Interference with normal functioning of system .....  | 5,000     | 7,500             |
| 234.211 Locking of warning system apparatus .....   | 1,000     | 2,000             |
| 234.213 Grounds .....   | 1,000     | 2,000             |
| 234.215 Standby power system .....  | 5,000     | 7,500             |
| 234.217 Flashing light units .....  | 1,000     | 2,000             |
| 234.219 Gate arm lights and light cable .....   | 1,000     | 2,000             |
| 234.221 Lamp voltage .....  | 1,000     | 2,000             |
| 234.223 Gate arm .....  | 1,000     | 2,000             |
| 234.225 Activation of warning system .....  | 5,000     | 7,500             |
| 234.227 Train detection apparatus .....   | 2,500     | 5,000             |
| 234.229 Shunting sensitivity .....  | 2,500     | 5,000             |
| 234.231 Fouling wires .....   | 1,000     | 2,000             |
| 234.233 Rail joints .....   | 1,000     | 2,000             |
| 234.235 Insulated rail joints .....   | 1,000     | 2,000             |
| 234.237 Switch equipped with circuit controller .....   | 1,000     | 2,000             |
| 234.239 Tagging of wires and interference of wires or tags with signal apparatus .....                                    | 1,000     | 2,000             |
| 234.241 Protection of insulated wire; splice in underground wire .....  | 1,000     | 2,000             |
| 234.243 Wire on pole line and aerial cable .....  | 1,000     | 2,000             |
| 234.245 Signs .....   | 1,000     | 2,000             |
| Inspections and Tests:  |           |                   |
| 234.247 Purpose of inspections and tests; removal from service of relay or device failing to meet test requirements ..... | 2,500     | 5,000             |
| 234.249 Ground tests .....  | 2,500     | 5,000             |
| 234.251 Standby power .....   | 5,000     | 7,500             |
| 234.253 Flashing light units and lamp voltage .....   | 1,000     | 2,000             |
| 234.255 Gate arm and gate mechanism .....   | 1,000     | 2,000             |
| 234.257 Warning system operation .....  | 2,500     | 5,000             |
| 234.259 Warning time .....  | 1,000     | 2,000             |
| 234.261 Highway traffic signal pre-emption .....  | 1,000     | 2,000             |
| 234.263 Relays .....  | 1,000     | 2,000             |
| 234.265 Timing relays and timing devices .....  | 1,000     | 2,000             |
| 234.267 Insulation resistance tests, wires in trunking and cables .....   | 2,500     | 5,000             |
| 234.269 Cut-out circuits .....  | 1,000     | 2,000             |
| 234.271 Insulated rail joints, bond wires, and track connections .....  | 2,500     | 5,000             |
| 234.273 Results of tests .....  | 1,000     | 2,000             |

<sup>1</sup>A penalty may be assessed against an individual only for a willful violation. The Administrator reserves the right to assess a penalty of up to \$22,000 for any violation where circumstances warrant. See 49 CFR Part 209, Appendix A.

APPENDIX B TO PART 234—ALTERNATE METHODS OF PROTECTION UNDER 49 CFR 234.105(C), 234.106, AND 234.107(C)

[This is a summary—see body of text for complete requirements]

|                         | Flagger for each direction of traffic | Police officer present | Flagger present, but not one for each direction of traffic | No flagger/no police                          |
|-------------------------|---------------------------------------|------------------------|--|---|
| False Activation .....  | Normal Speed .....                    | Normal Speed .....     | Proceed with caution—maximum speed of 15 mph.              | Proceed with caution—maximum speed of 15 mph. |
| Partial Activation* ... | Normal Speed .....                    | Normal Speed .....     | Proceed with caution—maximum speed of 15 mph.              | Proceed with caution—maximum speed of 15 mph. |
| Activation Failure**    | Normal Speed .....                    | Normal Speed .....     | Proceed with caution—maximum speed of 15 mph.              | Stop: Crewmember flag traffic and reboard.    |

\*Partial activation—full warning not given.  
 Non-gated crossing with one pair of lights designed to flash alternatively, one light does not work (and back-lights from other side not visible).

Gated crossing—gate arm not horizontal; or any portion of a gate arm is missing if that portion had held a gate arm flashing light.

\*\*Activation failure includes—if more than 50% of the flashing lights on any approach lane not functioning; or if an approach lane has two or more pairs of flashing lights, there is not at least one pair operating as intended.

**PART 235—INSTRUCTIONS GOVERNING APPLICATIONS FOR APPROVAL OF A DISCONTINUANCE OR MATERIAL MODIFICATION OF A SIGNAL SYSTEM OR RELIEF FROM THE REQUIREMENTS OF PART 236**

- Sec.
- 235.1 Scope.
- 235.3 Application.
- 235.5 Changes requiring filing of application.
- 235.7 Changes not requiring filing of application.
- 235.8 Relief from the requirements of part 236 of this title.
- 235.9 Civil penalty.
- 235.10 Contents of application.
- 235.12 Additional required information-prints.
- 235.13 Filing procedure.
- 235.14 Notice.
- 235.20 Protests.

APPENDIX A TO PART 235—SCHEDULE OF CIVIL PENALTIES

AUTHORITY: 49 U.S.C. 20103, 20107, and 49 CFR 1.49.

SOURCE: 49 FR 3380, Jan. 26, 1984, unless otherwise noted.

**§ 235.1 Scope.**

This part prescribes application for approval to discontinue or materially modify block signal systems, interlockings, traffic control systems, automatic train stop, train control, or cab signal systems, or other similar appliances, devices, methods, or systems, and provides for relief from part 236 of this title.

**§ 235.3 Application.**

- (a) Except as provided in paragraph (b) of this section, this part applies to railroads that operate on standard gage track which is part of the general railroad system of transportation.
- (b) This part does not apply to rail rapid transit operations conducted over track that is used exclusively for that purpose and that is not part of the general system of railroad transportation.

**§ 235.5 Changes requiring filing of application.**

- (a) Except as provided in § 235.7, applications shall be filed to cover the following:
  - (1) The discontinuance of a block signal system, interlocking, traffic control system, automatic train stop, train control, or cab signal system or other similar appliance or device;
  - (2) The decrease of the limits of a block signal system, interlocking, traffic control system, automatic train stop, train control, or cab signal system; or
  - (3) The modification of a block signal system, interlocking, traffic control system, automatic train stop, train control, or cab signal system.
- (b) [Reserved]

(Approved by the Office of Management and Budget under control number 2130-0042)

**§ 235.7 Changes not requiring filing of application.**

- (a) It is not necessary to file an application for approval of the following discontinuances: