Part 233 — Signal System Reporting Requirements

49 C.F.R. § 233.1 Scope.

This section identifies the systems, methods, and appliances that are subject to the reporting requirements.

§ 233.3 Application.

This section makes this part applicable to each railroad subject to the Signal Inspection Act, 49 U.S.C. § 26.

It does not apply to rapid transit system or privately-owned system not transporting interstate commerce.

Also, it does not apply to automatic classification yards or to rail/highway grade crossing warning devices.

§ 233.5 Application resulting from signal failure.

This section requires each carrier to report by toll-free telephone number 800-424-0201 within 24-hours of each accident/incident resulting from a false proceed signal indication or failure.

§ 233.7 Signal failure reports.

This section requires each carrier to report within 15 days each false proceed signal indication or failure.

§ 233.9 Report.

This section requires each carrier to file a signal systems report every five years.

§ 233.11 Civil penalty.

Any person (including a railroad and any manager, supervisor, official, or other employee or agent of a railroad) who violates any requirement of this part or causes the violation of any such requirement is subject to a civil penalty of $2,500, except that: Penalties may be assessed against individuals only for willful violations, and where a grossly negligent violation or a pattern of repeated violations has created an imminent hazard of death or

1/ Because of the complexity of the signal rules, each section of the federal regulation is summarized.
injury to persons, or has caused death or injury, a penalty not to exceed $20,000 per violation may be assessed. Each day a violation continues shall constitute a separate offense.  (See 49 C.F.R. Part 209, Appendix A).

§ 233.13  Criminal penalty.

Whoever knowingly and willfully—
(a) Makes, causes to be made, or participates in the making of a false entry in reports required to be filed by this part; or

(b) Files a false report or other document required to be filed by this part is subject to a $5,000 fine and 2 years imprisonment as prescribed by 49 U.S.C. § 522(a) and section 209(e) of the Federal Railroad Safety Act of 1970, as amended (45 U.S.C. § 438(3)).

Part 235 — Instructions Governing Applications For Approval Of Discontinuance Or Material Modification Of A Signal System Or Relief From The Requirements Of Part 236

§ 235.1  Scope.

This section identifies those changes in S&TC systems, methods, and appliances that require FRA approval, those that are exempt from approval, and provides for relief from the RS&I regulations.

This section is applicable to all block signal systems, interlockings, traffic control systems, automatic train stop, train control, or cab signal systems or other similar appliances, methods or systems.

§ 235.3  Application.

This section makes this part applicable to each railroad subject to the Signal Inspection Act, 49 U.S.C. § 26.

It does not apply to rapid transit systems or privately-owned systems not transporting interstate commerce.

§ 235.5  Changes requiring filing of application.

This section prescribes application for approval of discontinuance, decrease of limits of a system, or material modification, except as exempted in § 235.7.

§ 235.7  Changes not requiring filing of application.

This section lists each change which is not considered to be a discontinuance, decrease of limits, or material modification, and, therefore, does not require FRA
approval.

§ 235.8 Relief from the requirements of Part 236.

This section provides for relief from any requirement contained in the RS&I.

§ 235.9 Civil penalty.

Any person (including a railroad and any manager, supervisor, official, or other employee or agent of a railroad) who violates any requirement of this part or causes the violation of any such requirement is subject to a civil penalty of $2,500 except that: Penalties may be assessed against individuals only for willful violations, and where a grossly negligent violation or a pattern of repeated violations has created an imminent hazard of death or injury to persons, or has caused death or injury, a penalty not to exceed $20,000 per violation may be assessed. Each day a violation continues shall constitute a separate offense. See 49 C.F.R. Part 209 Appendix A.

§ 235.10 Contents of applications

This sets forth what information must be contained in an application.

§ 235.12 Additional required information—prints.

These sections set forth the information that is required when submitting an application. They itemize the information that is required on block signal applications and applications for relief from the RS&I.

§ 235.13 Filing procedure.

This section sets forth the procedure for filing a block signal application.

§ 235.14 Notice.

This section provides for the posting of a public notice in connection with the filing of each application or request for reconsideration.

§ 235.20 Protests.

This prescribes the method and procedure for filing a protest against granting a block signal application or an application for relief from the requirements of the RS&I.
Part 236 — Rules, Standards and Instructions Governing The Installation, Inspection, Maintenance And Repair Of Systems, Devices, And Appliances.

§ 236.0 Applicability of this Part.

This rule requires that a block signal system comply with the RS&I, or a manual block system complying with the provisions of this section, be installed where passenger trains operate at 60 or more miles per hour or freight trains operate at 50 or more miles per hour. Further, an automatic train stop, train control, or cab signal system shall be installed where any train operates at 80 or more miles per hour.

This section details how a manual block system shall operate and requires that it be permanently in effect, i.e., all trains must be operated by manual block system rules.

Where any train is operated at a speed of 80 or more miles per hour, an automatic cab signal, automatic train stop, or automatic train control system shall be installed.

Nothing in this section authorizes the discontinuance of a block signal system, interlocking, traffic control system, automatic train stop, train control, or cab signal system without the approval of the FRA.

Subpart A — Rules and Instructions All Systems. General

§ 236.1 Plans, where kept.

Plans shall be kept for the installation, inspection, maintenance, and repair of signal systems and are required to be correct and legible. This rule specifies where the plans are required to be kept.

§ 236.2 Grounds.

Vital circuits shall be kept free of grounds equal to or in excess of 75% of the release value of relay or electromagnetic device in circuits. Track circuits, common return wires of single-wire, single-break signal control circuits grounded by design, and alternating current power distribution circuits grounded in the interest of safety are excluded.

§ 236.3 Locking of signal apparatus housing.

Housings of all signal apparatus shall be secured to prevent unauthorized entry.

§ 236.4 Interference with normal functioning of device.
Safety of train operation must be provided before interfering with the normal functioning of any device.

The intent of this rule is to insure carriers maintain the integrity of signal systems by prohibiting procedures or practices which defeat or nullify the minimum requirements of the RS&I.

§ 236.5 Design of control circuits on closed circuit principle.

This rule requires that control circuits which affect the safety of train operation be designed on the closed circuit principle.

It excludes circuits for roadway equipment of intermittent automatic train-stop system, normally open track circuits used to energize signal lamps when occupied, and fouling circuits.

§ 236.6 Hand-operated switch equipped with switch circuit controller.

Hand-operated switch equipped with switch circuit controller connected to the point, or with facing-point lock and circuit controller, must be maintained to open or shunt, or both, track circuits or control circuits, when point is open 1/4 inch or more on facing-point switch and 3/8 inch or more on trailing-point switch. Circuit controllers, facing-point locks, and switch-and-lock movements, and their connections must be securely fastened in place. When open, contacts must be maintained with an opening of at least 1/16th inch.

This rule does not apply to power-operated switches, spring switches, or electric locks on hand-operated switches.

§ 236.7 Circuit controller operated by switch-and-lock movement.

Circuit controller operated by switch-and-lock movement is required to be maintained so that normally open contacts will remain closed and normally closed contacts will remain open until switch is locked.

§ 236.8 Operating characteristics of electromagnetic, electronic, or electrical apparatus.

Operating characteristics of electromagnetic, electronic, or electrical apparatus in service shall be in accordance with the limits within which it is designed to operate.

Sections 236.101, .102, .105, .106, .107, .108, .109, .551, .552, .588, and .589 address those devices so important to safety of train operation that periodic tests are required to ascertain that operating characteristics remain unchanged.
§ 236.9  Selection of circuits through indicating or annunciating instruments.

Signal control and electric locking circuits shall not be selected through contacts of instruments designed for indicating or annunciating purposes in which an indicating element attached to the armature could in itself cause improper operation of the armature.

§ 236.10  Electric locks, force drop type; where required.

This rule requires that electric locks applied to new installations and new electric locks applied to existing installations be of the forced-drop type.

§ 236.11  Adjustment, repair, or replacement of component.

This requires a carrier to determine the cause when any component of a signal system essential to the safety of train operation fails to perform its intended function or is not in correspondence with known operating conditions. Faulty components must then be adjusted, repaired or replaced without undue delay.

§ 236.12  Spring switch signal protection; where required.

This rule prescribes signal protection for spring switches in interlockings; and for spring switches installed after October 1, 1950, in automatic block signal, train stop, train control or cab signal territory where movements over the switch exceed 20 miles per hour.

This rule prescribes where spring switch protection is required. Sections 236.13 and 236.14 prescribe how it will operate.

§ 236.13  Spring switch; selection of signal control circuits through circuit controller.

This rule requires that control circuits of signals governing facing movements over a main track spring switch be selected through the switch circuit controller or a relay repeating the position of such circuit controller.

This rule applies only to automatic block signal and other protective systems. Sections 236.303 and 236.342 apply to spring switches in interlocking and traffic control systems.

§ 236.14  Spring switch signal protecting; requirements.

This rule prescribes signal indications for movements through spring switches in automatic block signal territory, including: (1) movement from siding to main track with the current of traffic on track signaled for movements in one direction; (2) movement
against the current of traffic from the reverse main to a single track; (3) movement from a siding to a main track signaled for movements in either direction. Switch indications may be less restrictive where approach or time locking are used.

§ 236.15  **Timetable instructions.**

This rule requires automatic block, traffic control, train stop, train control, and cab signal territory be designated in timetable instructions.

It may be published in either timetable or special instructions in any manner carrier chooses. Interlockings are not required to be so designated.

§ 236.16  **Electric lock, main track releasing circuit.**

This rule sets forth the requirements for main track releasing circuit for electric lock on hand-operated switch.

It prohibits the electric lock releasing circuit on the main track from being of such length that distance or curvature of track will prevent a crew member standing at the switch from observing a train or car occupying the releasing circuit.

This section also requires that where the electric lock releasing circuit extends into the fouling section of turnout, train shall be prevented from occupying the fouling section by pipe-connected or independently operated, electrically locked derail at the clearance point. The releasing circuit shall be considered as extending into the fouling section if it extends further than the heel of the switch points.

§ 236.17  **Pipe for operating connections; requirements.**

This section prescribes steel or wrought-iron pipe 1 inch or larger for operating connections of pipe-connected appliances, with each joint fully screwed into coupling with each end of pipe secured by two rivets. Pipe shall be supported on carriers not more than 8 feet apart on tangent and curves of less than 2 degrees and not more than 7 feet apart on curves of more than 2 degrees. Pipeline shall be properly aligned and compensated and couplings shall not foul carriers. Up-and-down rods of mechanically operated signals may be 3/4 inch pipe or solid rod.

**Roadway Signals and Cab Signals**

§ 236.21  **Location of roadway signals.**

This requires that a roadway signal be positioned and aligned so that it is clearly associated with track it governs.

§ 236.22  **Semaphore signal arm; clearance to other objects.**
This rule requires 1/2 inch clearance between a semaphore arm and any object which may interfere with its operation.

§ 236.23 Aspects and indications.

This section prescribes how aspects shall be shown by signals and the authorized methods of qualifying aspects. It requires the use of lights for night aspects and prohibits the use of reflector lenses or other devices which depend on reflected light for visibility. It also establishes requirements for cab signal aspects. It prescribes that each aspect be identified by a name and specification of the action to be taken. Requires aspects to conform to the fundamental indications of stop, restricted speed and proceed. Information on aspects and indications shall be defined in the carrier's operating rule books or special instructions. Conditions such as lamp failure or false restrictive position of semaphore arm shall not cause display of a less restrictive aspect.

§ 236.24 Spacing of roadway signals.

This rule requires signals to be adequately spaced to provide proper distances for reducing speeds or stopping by use of other than an emergency brake application before reaching the point where reduced speed or stopping is required.

Carrier's braking distance charts shall be used to determine proper spacing. In event a carrier does not have a braking distance chart, braking tests may be required at suspected locations.

§ 236.26 Buffing device, maintenance.

This rule requires that buffing device be so maintained that it cannot cause a signal to display a less restrictive aspect than intended.

Operational test should be made to observe that oil or air buffers operate properly.

In the event the buffing device causes a signal to display a less restrictive aspect than intended, a false proceed report shall be filed with the FRA.

Track Circuits

§ 236.51 Track circuit requirements.

This rules establishes the standards for operation of track relays controlling home signals and track circuits of automatic train stop, train control or cab signal systems. It does not apply to circuits such as approach lighting circuits on non-signaled sidings or annunciator circuits. Prohibits use of shunt fouling circuits in turnouts where permissible speed is greater than 45 mph.

Track relay shall be in deenergized position or device that functions as a track
relay shall be in its most restrictive state when a rail is broken, when a rail or switch frog is removed, when a train, locomotive or car occupies any part of a track circuit, including fouling sections, and, where switch shunting is used, when switch is not locked, or independently operated derail is not in derailing position. Provides that when sand, rust, dirt, grease or other foreign matter prevents effective shunting, carrier is required to take adequate measures to safeguard safety of train operation.

§ 236.52 Relayed cut-section.

This requires that where energy of noncoded direct current track circuit is supplied through contacts of track relay at a cut-section, the energy circuit shall be opened and adjoining track circuit shunted when track relay is deenergized.

§ 236.53 Track circuit feed at grade crossing.

At crossing-at-grade of a nonelectrified railroad using noncoded direct-current track circuits with electrified railroad, this requires the battery end of direct-current track circuit be located at the crossing. This section is not applicable unless foreign current is proven to be present.

§ 236.54 Minimum length of track circuit.

This section requires the use of other circuits or devices to provide equivalent protection when a track circuit used for signal control is shorter than inner wheelbase of any car or locomotive operating over the track.

§ 236.55 Dead section; maximum length.

This section prohibits the use of dead section longer than the shortest outer wheelbase of a carrier's locomotive, but in no case longer than 35 feet without protecting it with a special circuit.

§ 236.56 Shunting sensitivity.

This section requires that track circuit controlling signal aspects or electric locking shall be maintained so that where a shunt of 0.06 ohm resistance is connected across the rails of the track circuit at any location in the circuit, including shunt fouling section, the track relay shall assume the deenergized position, or if an electronic device is used in lieu of a track relay, such electronic device shall assume its most restrictive state.

§ 236.57 Shunting and fouling wires.

Shunt wires and fouling wires are each required to be of sufficient conductivity and maintained in such condition that the track relay will be deenergized when the track circuit is shunted. Two completely separate conductors are required, except where switch circuit controller is used to both open control circuits and shunt the track circuit.
§ 236.58 Turnout, fouling section.

This rule requires that fouling section of each turnout shall extend to a point on the turnout where a standing car or engine will clear a movement on the main track under all circumstances. It also requires that each rail joint in the fouling section be bonded.

§ 236.59 Insulated rail joints.

Insulated rail joints shall be maintained in condition to prevent sufficient track circuit current from flowing between the rails separated by the insulation to cause a failure of any track circuit involved.

§ 236.60 Switch shunting circuit, use restricted.

This rule prohibits the installation of switch shunting circuit except where track or control circuit is also opened through the switch circuit controller.

Wires and Cable

§ 236.71 Signal wires on pole line and aerial cable.

Signal wires carried on pole lines are required to be securely fastened to insulators. Cable used aerially is required to be supported by messenger.

The intent of this rule is that all signal wires including A.C. power supply carried on pole line are required to be tied in on insulators that are securely fastened to a crossarm or bracket attached to a pole. Signal wire is required to be maintained clear of all other wires.

§ 236.73 Open-wire transmission line; clearance to other circuits.

Open-wire transmission lines of 750 volts or more shall be placed at least 4 feet above the nearest crossarm carrying signal or communication wires.

§ 236.74 Protection of insulated wire; splice in underground wire.

Insulated wire shall be protected from mechanical injury. This prohibits puncturing insulation for test purposes and requires that splice in underground wire have insulation resistance at least equal that of the wire spliced.

§ 236.76 Tagging of wires and interference of wires or tags with signal apparatus.

Each wire is required to be tagged or otherwise marked so it can be identified at each terminal. Tags or other marks of identification are required to be made of insulating material and wires and tags are prohibited from interfering with moving parts of signal
Inspections and Tests: All Systems

§ 236.101 Purpose of inspections and tests; removal from service of relay failing to meet test requirements.

This section prescribes certain inspections and tests of vital importance be made. The inspections and tests must be performed in accordance with carrier specifications which are subject to FRA approval. The purpose of inspections and tests is to determine if operating characteristics of relays and electromagnetic devices are within specified values and that apparatus and equipment is being maintained in condition to assure safety of train operation. Electronic device, relay or other electromagnetic device which fails to meet requirement of specified tests must be removed from service and not restored to service until its operating characteristics are within proper limits.

§ 236.102 Semaphore or searchlight signal mechanism.

This requires inspection of semaphore signal mechanism at least once every 6 months. Tests of the operating characteristics are required to be made every 2 years. Searchlight signal mechanism shall be inspected, and the mechanical movement shall be observed while operating the mechanism to all positions, at least once every 6 months. Tests of the operating characteristics shall be made at least once every 2 years.

§ 236.103 Switch circuit controller or point detector.

Switch circuit controllers and point detectors are required to be inspected and tested at least once every 3 months.

Applies to all switch circuit controllers and point detectors in all systems required by §§ 236.6, 236.13, 236.51, 236.57, 236.202, 236.203, 236.334 and 236.342.

§ 236.104 Shunt fouling circuit.

Shunt fouling circuit is required to be inspected and tested at least once every 3 months.

Inspection should determine bonds and fouling wires are applied in compliance with §§ 236.51, 236.56, 236.57 and 236.58 at the proper places, intact and in good condition.

§ 236.105 Electric lock.

This rule requires that electric locks be tested once every 2 years. It excludes forced drop type electric locks.
§ 236.106  Relays.

Each relay used in vital circuits of wayside equipment shall be tested at intervals prescribed for its type of design.

Each relay, the functioning of which affects the safety of train operations, shall be tested at least once every 4 years, except:

(a) Alternating current centrifugal type relay shall be tested at least once every 12 months;

(b) Alternating current vane type relay and direct current polar type relay shall be tested at least once every 2 years; and

(c) Relay with soft iron magnetic structure shall be tested at least once every 2 years.

§ 236.107  Ground tests.

This rule requires a test for grounds on energy bus supplying power to circuits which affect the safety of train operation. Test is required when the energy bus is placed in service and at least once every three months thereafter.

The provisions of this rule shall not apply to track circuit wires, common return wires of grounded common single-break circuits, or alternating current power distribution circuits grounded in interest of safety.

§ 236.108  Insulation resistance  tests, wires in trunking and cable.

Tests of insulation resistance of wires and cable, including resistance between conductors in multiple conductor cable and in trunking, shall be made when installed and at least once every 10 years thereafter. Tests must be made when wires, cable and insulation are dry, however, wet conditions do not provide relief from Section 236.2. Requires prompt action to replace or repair cable or wire found to have less than 500,000 ohms insulation resistance and annual tests until repairs are made. Cable or wire found to have less than 200,000 ohms insulation resistance shall be removed from use of signal circuits.

§ 236.109  Time releases, timing relays and timing devices.

This test requires that time releases and time relays be tested once every 12 months, and that timing be maintained at not less than 90% of the predetermined time interval, which shall be shown on the plans or marked on the time release or relay.

§ 236.110  Results of tests.
This rule requires that the results of vital tests be recorded and filed in the office of the responsible supervisory official having jurisdiction. It specifies those results to be recorded, specifies the general format to be used and requires that the recording be made by the employee who makes the test.

Whenever there is a test of an automatic train stop, train control, or cab signal apparatus, the person performing such test shall record the results on preprinted or computerized forms provided by the railroad. Such forms shall show the name of the railroad, place and date, equipment tested, results of tests, repairs, replacements, adjustments made, and condition in which the apparatus was left. Each record shall be signed by the employee making the test and shall be filed in the office of a supervisory official having jurisdiction. Results of these tests shall be retained until the next record is filed but not less than 1 year.

Subpart B — Automatic Block Signal Systems

Standards

§ 236.201 Track-circuit control of signals.

This rule requires that aspects of signals with indications more favorable than "Proceed at Restricted Speed" be controlled automatically by track circuits extending through the entire block. It applies to automatic block and traffic control systems.

§ 236.202 Signal governing movements over hand-operated switch.

Signal governing movements over hand-operated switch in the facing direction shall display its most restrictive aspect when the points are open 1/4 inch or more, in the trailing direction, 3/8 inch or more, except that where a separate aspect is displayed for facing movements over the switch in the normal and in the reverse position, the signal shall display its most restrictive aspect when the switch points are open 1/4 inch or more from either the normal or reverse position.

§ 236.203 Hand-operated crossover between main tracks; protection.

This section requires that hand-operated crossover between main tracks provide protection for train movements by either an arrangement of one or more track circuits and switch circuit controllers; facing-point locks on both switches operated from a single lever; or, by electric locking of both switches of the crossover.

Signals governing movements over either switch must display their most restrictive aspect when either switch is not in proper position, the crossover is occupied by a train, locomotive, or car; where facing-point locks are used and either switch is unlocked; and, where electric locks are used, before the electric locking releases. Relief is provided for certain conditions adverse to shunting.
§ 236.204 Track signaled for movements in both direction, requirements.

This rule requires that on track signaled for movements in both directions a train shall cause one or more opposing signal ahead of it to display the most restrictive aspect. Signals are required to be spaced or arranged to provide stopping distance for opposing trains.

In absolute permissive block signaling when a train passes a head block signal it must cause the opposing head block signal to display an aspect not more favorable than "stop."

§ 236.205 Signal control circuits; requirements.

Control circuits are required to be installed so that each signal will display its most restrictive aspect when the block it governs is occupied by a train, locomotive, or car; a switch is not in proper position; an independently operated derail equipped with switch circuit controller is not in derailing position; when a track relay is in deenergized position or device that functions as a track relay is in its most restrictive state; or when a signal control circuit is deenergized. It applies to both automatic block signal and traffic control systems.

§ 236.206 Battery or power supply with respect to relay; location.

Battery or power supply for each signal control relay circuit, either open-wire circuit or common return circuit, shall be located at the end of the circuit farthest from the relay.

§ 236.207 Electric lock on hand-operated switch; control.

Electric lock on hand-operated switch is prohibited from being unlocked before control circuits of signals governing movement over switch are opened. Approach or time locking must be provided. This is applicable only to automatic block signal systems.

There are no requirements for the installation of electric locks in automatic block signal territory. However, if installed, such electric lock must comply with this rule.

Subpart C — Interlocking Standards

§ 236.301 Where signals shall be provided.

This section requires that a signal be provided to govern train movements into and through interlocking limits except over electrically locked hand-operated switch with either a pipe-connected derail or independently-operated electrically locked derail. This rule applies to interlocking only. It does not apply to controlled points in traffic control systems.
Electric locks installed under this rule must conform to requirements of §§ 236
314, (without reference to the 20-mile exceptions) 236.760, 236.768 without regard to speed.

§ 236.302 Track circuits and route locking.

Track circuits and route locking shall be provided and shall be effective when the first pair of wheels of a locomotive or a car passes a point not more than 13 feet in advance of the signal governing its movement, measured from the center of the mast, or if there is no mast, from the center of the signal.

§ 236.303 Control circuits for signals, selection through circuit controller operated by switch points or by switch locking mechanism.

This section requires control circuits of signal aspect with indications more favorable than proceed at restricted speed be selected through circuit controller or relay operated by circuit controller of each switch, movable point frog, or derail in the route governed. It requires each switch, movable point frog, or derail to be in proper position before such signal aspect can be displayed.

It applies to both interlocking and traffic control systems. This rule is not applicable to control circuits of aspects indicating "proceed at restricted speed."

§ 236.304 Mechanical locking or same protection effected by circuits.

Each interlocking is required to be so arranged either mechanically and/or electrically so that operation of controlling devices or apparatus must succeed each other in proper sequence before a proceed aspect can be displayed.

§ 236.305 Approach or time locking.

This section requires approach or time locking be provided in connection with signals displaying aspects with indications more favorable than proceed at restricted speed.

§ 236.306 Facing point lock or switch-and-lock movement.

Facing point lock or switch and lock movement is required for mechanically-operated switch, movable point frog or split point derail.

§ 236.307 Indication locking.

This section requires indication locking for operative approach signals of the semaphore type, power-operated home signals, power-operated switches, movable point frogs and derails, and for all approach signals, except light signals with all aspects
controlled by polar or coded track circuits, or line circuits so installed that a single fault will not permit a more favorable aspect than intended to be displayed.

§ 236.308 Mechanical or electric locking or electric circuits; requisites.

This section prohibits display of conflicting aspects except on track used for switching movements only by one train at a time. Manual interlockings installed prior to October 1, 1950, are excluded provided simultaneous opposing movements are not permitted between stations on either side of the interlocking when it is unattended.

Mechanical locking, electric locking, or electric circuits are required to be installed so that signals cannot display aspects which permit conflicting movements.

Opposing signals on track used for switching movements only are excluded and may display aspect indicating "proceed at restricted speed" when used by only one train at a time.

§ 236.309 Loss of shunt protection; where required.

This section requires that loss of shunt of 5 seconds or less, regardless if it occurs on the approach circuit or on a track circuit within the limits of an automatic interlocking, must not permit established route to be changed. It also requires that loss of shunt of 5 seconds or less shall not permit the release of route locking.

It applies to all automatic interlockings whether or not they are connected to other signal systems. This includes automatic drawbridges, manual interlockings arranged for automatic operation when unattended and interlockings having both automatic and controlled routes, and to route locking of power-operated switch.

§ 236.310 Signal governing approach to home signal.

This rule requires that a signal be provided on main track to govern the approach with the current of traffic to any home signal. It excludes the first signal encountered when leaving yards or stations and authorized speed approaching home signal is not higher than slow speed. It provides for use of inoperative approach signal when authorized speed between home signals on route governed is 20 mph or less.

§ 236.311 Signal control circuits, selection through track relays, and through signal mechanism contacts and time releases at automatic interlocking.

This section requires that at all interlockings the control circuit for aspect with indication more favorable than "proceed at restricted speed" be selected through relays or devices that function as track relays of all track circuits in the route governed or through repeating relays for such track circuits. Additionally, at automatic interlocking, such control circuits shall be selected through relays or devices that function as track relays of
track circuits in all conflicting routes or through repeating relays for such track circuits; through signal mechanism contacts or through relay contacts closed when conflicting signals display stop aspects; and through normal contacts of time releases or timing devices for conflicting routes or contact of relays repeating the normal position of contacts on such time releases or timing devices.

§ 236.312 Movable bridge, interlocking of signal appliances with bridge devices.

This rule requires that interlocking of movable bridge be so interconnected with bridge devices that bridge must be properly locked and track properly aligned before a signal governing movements over the bridge can display an aspect to proceed.

The bridge locking members shall be within 1 inch of their proper positions and the track rail on the movable span within 3/8 inch of correct surface and alignment with rail seating device on bridge abutment or fixed span. Emergency bypass switches and devices shall be locked or sealed.

§ 236.314 Electric lock for hand-operated switch or derail.

This requires each hand-operated switch or derail within interlocking limits where train speeds exceed 20 mph be electrically locked. At manually operated interlocking it shall be controlled by the operator of the machine. Approach or time locking shall be provided.

Rules and Instructions

§ 236.326 Mechanical locking removed or disarranged; requirements for permitting train movements through interlocking.

This section prescribes the procedures for train operation through interlocking when the mechanical interlocking is being changed or is removed from the machine, or locking becomes disarranged or broken.

§ 236.327 Switch, movable point frog or split point derail.

Switch, movable point frog or split point derail equipped with lock rod shall be so adjusted that locking is prevented when the switch point is obstructed by 3/8 inch obstruction.

§ 236.328 Plunger of facing-point lock.

This rule requires that plunger of lever operated facing-point lock have at least 8 inches stroke and, when unlocked, clear the lock rod not more than 1 inch.
§ 236.329 Bolt lock.

This section requires that bolt lock be so maintained that governing signal over a switch or derail cannot display an aspect to proceed unless derail is in nonderailing position and switch is within 1/2 inch proper position.

§ 236.330 Locking dog of switch-and-lock movement.

This requires that locking dog of switch and lock movement extend through lock rod 1/2 inch or more in either normal or reverse position.

§ 236.334 Point detector.

Point detector shall be so maintained that contacts cannot be opened by manually applying force at the closed point when switch is locked in either normal or reverse position. Its circuit controller contacts shall not assume the position corresponding to switch point closure if the switch point is prevented by an obstruction from closing to within 1/4 inch where latch-out device is not used and 3/8 inch where latch-out device is used.

§ 236.335 Dogs, stops and trunnions of mechanical locking.

This requires that driving pieces, dogs, stops and trunnions be rigidly fastened to locking bars, that swing dogs have full and free movement and that top plates be securely fastened in place.

§ 236.336 Locking bed.

This section requires that various parts of the locking bed, locking bed supports, and tappet stop rail shall be rigidly secured in place and aligned to permit free operation of locking.

§ 236.337 Locking faces of mechanical locking; fit.

Locking faces shall fit squarely against each other when locked with minimum engagement of at least 1/2 the designed locking face.

§ 236.338 Mechanical locking required in accordance with locking sheet and dog chart.

This rule requires that mechanical locking in service be in accordance with locking sheet and dog chart. Section 236.1 requires locking sheet and dog chart to be kept at mechanical interlocking and be correct and legible.

§ 236.339 Mechanical locking, maintenance requirements.
This section requires that locking and connections be maintained so that motion of levers or latches, when locked, do not exceed prescribed tolerances.

**Mechanical Machine:**

More than 90% of mechanical interlocking machines installed were of two types: Saxby and Farmer and Style A. Both have latch operated locking. When locked, the latch block of each lever may not be raised so that the bottom thereof is within 3/8 inch of top of quadrant. The balance of the machines installed have lever operated locking. When locked, the lever latch block may not be moved more than the 3/8 inch on top of the quadrant.

**Electromechanical Machine:**

Electromechanical machines are combinations of electric machines and mechanical machines. When locked, electric levers operating in horizontal plane may not be moved more than 5/16 inch in normal position or more than 9/16 inch in reverse position. When locked, electric levers moving in an arc may not be moved more than 5 degrees. When locked, the mechanical levers must comply with requirements for mechanical machines.

**Power Machine:**

At some large manual interlockings, power (electric) interlocking machines manufactured by the Federal Railway Signal Company were installed. When locked, the latch block of each lever may not be raised so that the bottom thereof is within 7/32 inch of top of quadrant.

The majority of power interlocking machines installed at large manual interlockings were Model 2, Model 14, and Model 5. The levers of these machines must meet the same requirements as the electric levers of electromechanical machines.

§ 236.340 Electromechanical interlocking machine; locking between electrical and mechanical levers.

This section requires that locking between electric and mechanical levers of electromechanical interlocking machine be maintained so that mechanical lever cannot be operated except when released by electric lever.

§ 236.341 Latch shoes, rocker, links and quadrants.

This section requires that latch shoes, rocker links, and quadrants of S&F machines be maintained so that locking will not release when a downward force not exceeding a man's weight is exerted on the rocker with the lever in mid-stroke position.

§ 236.342 Switch circuit controller.
Switch circuit controller connected at the point to switch, derail, or movable point frog shall be maintained so that its contacts will not be in position corresponding to switch point closure when point is open 1/4 inch or more in either normal or reverse position.

Inspection and Tests

§ 236.376 Mechanical locking.

This rule requires testing of mechanical locking when new locking is installed, when there is a change in locking or when locking is restored after being disarranged. It requires a complete test of all mechanical locking at least once every 2 years. Test should be made to insure that levers equipped with electric locks mechanically lock all levers previously operated in that lineup. Check shall be made to determine that the locking is in accordance with the locking sheet and dog chart as required by § 236.338. Compliance with §§ 236.326, 236.335, 236.336, 236.337, 236.339, 236.340, and 236.341 is required.

§ 236.377 Approach locking.

Approach locking shall be tested when installed, modified or disarranged and at least once every 2 years, whichever shall first occur.

§ 236.378 Time locking.

Time locking to be tested when installed, modified, or disarranged and at least once every 2 years, whichever shall occur first.

§ 236.379 Route locking.

This section requires that route or any other type of switch locking be tested when installed, modified, or disarranged and at least once every 2 years, whichever shall first occur.

§ 236.380 Indication locking.

Indication locking shall be tested when installed, modified, or disarranged and at least once every 2 years, whichever shall first occur.

§ 236.381 Traffic locking.

This section requires that traffic locking be tested when installed, modified, or disarranged and at least once every 2 years, whichever shall first occur.
§ 236.382 Switch obstruction test.

A switch obstruction test shall be made when lock rod is installed or changed out and at least once a month thereafter.

§ 236.383 Valve locks and valve magnets.

Valve locks on valves of the non-cutoff type shall be tested at least once every 3 months and valves and valve magnets be tested at least once every year.

§ 236.384 Cross protection.

Cross protection shall be tested at least once every 6 months.

§ 236.386 Restoring feature on power switches.

This rule requires that restoring feature on power switches be tested once every 3 months.

§ 236.387 Movable bridge locking.

Movable bridge locking shall be tested at least once a year.

Subpart D — Traffic Control Systems

§ 236.401 Automatic block signal system and interlocking standards applicable to traffic control systems.

This section prescribes the following automatic block signal system and interlocking standards be applied to traffic control systems:

§ 236.201 Track-circuit control of signals; § 236.202 Signal governing movements over hand operated switch; § 236.203 Hand-operated crossover between main tracks; protection; § 236.205 Signal control circuits; requirements; § 236.206 Battery or power supply with respect to relay; location; § 236.303 Control circuits for signals, selection through circuit controller operated by switch points or by switch locking mechanism;§ 236.307 Indication locking; § 236.309 Loss of shunt protection; where required; § 236.310 Signal governing approach to home signal; § 236.311 Signal control circuits, selection through track relays, or devices functioning as track relays, and through signal mechanism contacts and time releases at automatic interlocking.

§ 236.402 Signals controlled by track circuits and control operator.

This standard requires that all home signal aspects more favorable than "proceed at restricted speed" be controlled by track circuits extending through the entire block. At a controlled point the control circuits may be controlled by a control operator and at
manually operated interlockings the home signals shall be controlled manually in cooperation with control operator.

§ 236.403  Signals at controlled point.

This rule requires signals at a controlled point to be so interconnected that aspects to proceed cannot be displayed simultaneously for conflicting movements, except they may display an aspect indicating "proceed at restricted speed" at the same time on track used for switching movements only, by one train at a time.

§ 236.404  Signals at adjacent control points.

Signals at adjacent controlled points shall be so interconnected that aspects to proceed on tracks signaled for movements at greater than restricted speed cannot be displayed simultaneously for conflicting movements.

This section permits restricted speed aspects to be displayed simultaneously for opposing or converging routes at adjacent control points provided the speed restrictions between the control points do not exceed 20 mph. The maximum authorized speed between adjacent controlled points where signals can simultaneously display aspects indicating proceed at restricted speed shall not exceed 20 mph regardless of more favorable aspects displayed and regardless whether or not track is signaled.

§ 236.405  Track signaled for movements in both directions, change of direction of traffic.

This prevents the changing of the direction of traffic from that which was obtained at the time the track was occupied between opposing signals at adjacent controlled points on track signaled for movement in both directions except that when a train having left one controlled point reaches a section of track immediately adjacent to the next controlled point at which switching is to be performed, an aspect permitting movement at not exceeding restricted speed may be displayed into the occupied block.

§ 236.407  Approach or time locking; where required.

Approach or time locking shall be provided for each controlled signal where route or direction of traffic can be changed.

§ 236.408  Route locking.

This specifies where route locking shall be provided and where it shall become effective in the route entered.

At any location in traffic control territory where switches are power-operated, route locking must be provided and it must be effective when the first pair of wheels of a locomotive or car passes a point 13 feet in advance of the signal governing its movement.
The 13 feet shall be measured from the center of the signal mast to the effective insulated joint. This rule does not apply to controlled signals or automatic signals that do not have power-operated switches in the route governed.

§ 236.410 Locking, hand-operated switch.

This requires that hand-operated switch in main track be locked either electrically or mechanically in normal position, or a signal be provided to govern train movements to the signalled track. It exempts those hand-operated switches on main track where train speeds do not exceed 20 mph, on signalled sidings without intermediate signals where train speeds do not exceed 30 mph, or where trains are not permitted to clear the signalled track. It requires approach or time locking and provides that locking may be released either automatically or by the control operator after the control circuits of signals governing movements over the switch have been opened directly or by shunting of track circuit. When a signal is used in lieu of a lock for movement from auxiliary track to signalled track, the signal shall not display aspect to proceed until control circuits of main track signals in either direction have been opened and the approach locking circuits for the approaches to the switch are unoccupied or a predetermined time has expired.

§ 236.426 Interlocking rules and instructions applicable to traffic control systems.

This rule prescribes the following interlocking rules and instructions be applied to traffic control systems.

§ 236.327 Switch, movable-point frog split point derail; § 236.328 Plunger of facing-point lock; § 236.330 Locking dog of switch-and-lock movement; § 236-334 Point detector; § 236.342 Switch circuit controller.

§ 236.476 Interlocking inspections and tests applicable to traffic control systems.

This rule prescribes the following interlocking inspections and tests be made of traffic control systems.

§ 236.377 Approach locking; § 236.378 Time locking; § 236.379 Route locking; §236.380 Indication locking; § 236.382 Switch obstruction test; § 236.383 Valve locks, valves and valve magnets; § 236.386 Restoring feature on power switches.

Subpart E — Automatic Train Stop, Train Control and Cab Signal Systems Standards

§ 236.501 Forestalling device and speed control.

This section permits the use of a forestalling device in automatic train stop systems and sets forth the minimum requirements for control of speed in automatic train
control systems.

§ 236.502 Automatic brake application, initiation by restrictive block conditions stopping distance in advance.

This is a companion section to § 236.504 and requires that the automatic brake application be initiated at least stopping distance to the entrance of a block where any condition exists as described in § 236.205.

§ 236.503 Automatic brake application; initiation when predetermined rate of speed exceeded.

This is a companion section to § 236.501 and requires overspeed protection of all restrictive features used in automatic train control systems.

§ 236.504 Operation interconnected with automatic block-signal system.

This prescribes the use and operation of an automatic train stop or train control system. Either system shall be so interconnected with the signal system that the failure of the engineer to acknowledge a restrictive wayside signal will cause the train stop system to perform its intended function.

§ 236.505 Proper operative relation between parts along roadway and parts on locomotive.

This section requires that proper operation occur between parts along the roadway and parts on the locomotive under all conditions.

§ 236.506 Release of brakes after automatic application.

This prescribes the conditions under which the brakes may be released following an automatic brake application.

§ 236.507 Brake application; full service.

This is a companion rule to § 236.502 and requires the apparatus on the locomotive, when operated, to impose a full service application of the brakes.

§ 236.508 Interference with application of brakes by means of brake valve.

This prohibits use of apparatus that affects the proper functioning of the air brake system.

§ 236.509 Two or more locomotives coupled.

This requires automatic train stop, train control or cab signal apparatus be
operative only on the locomotive from which the brakes are controlled.

§ 236.511 Cab signals controlled in accordance with block conditions stopping distance in advance.

This requires that automatic cab signals be continuously controlled and provide proper aspects and stopping distances to conditions described in § 236.205.

§ 236.512 Cab signal indication when locomotive enters block where restrictive conditions obtain.

This is a companion rule to § 236.514 and requires the cab signal indicate "Proceed at Restricted Speed" when a locomotive enters or is within a block in cab signal territory wherein a condition described in § 236.205 exists except where a signal control circuit is deenergized.

§ 236.513 Audible indicator.

When the cab signal aspect changes to a more restrictive indication, an audible indicator shall sound continuously until silenced by manual operation of an acknowledging device.

§ 236.514 Interconnection of cab signal system with roadway signal system.

This rule prohibits the cab signal from indicating a speed higher than that authorized by roadway signal indication except when the condition changes after the roadway signal has been passed.

§ 236.515 Visibility of cab signals.

This requires that the cab signal be so located that the locomotive crew can plainly see the aspect from their stations.

§ 236.516 Power supply.

Automatic cab signal, train stop, or train control device shall operate from a separate power supply.

Rules and Instructions: Roadway

§ 236.526 Roadway element not functioning properly.

This requires that when the roadway element, except track circuit, of an automatic train stop, train control, or cab signal system has failed to perform its intended function, the associated signal shall be caused manually to display the most restrictive aspect.
§ 236.527 Roadway element insulation resistance.

Insulation resistance between roadway inductor and ground shall be maintained at not less than 10,000 ohms.

§ 236.528 Restrictive condition resulting from open hand-operated switch; requirement.

When a facing point hand-operated switch is open 1/4 inch or more, a trailing-point hand-operated switch 3/8 inch or more, or hand-operated switch is not locked where facing point lock with circuit controller is used, the restrictive condition of continuous inductive automatic train stop or train control device or restrictive cab signal indication of an automatic cab signal device be maintained to within 300 feet of an open hand-operated switch or unlocked facing point lock in equipped territory.

§ 236.529 Roadway element inductor; height and distance from rail.

Inductors of the inert roadway type shall be installed and maintained with the inductor pole faces at a height above the plane of the tops of the rails, and with its inner edge at a horizontal distance from the gage side of the nearest running rail, in accordance with specifications of the carrier on file with FRA.

§ 236.530 Ramp; height and distance from rail.

This rule requires that ramp of automatic train stop device be installed and maintained at a height above the plane of the rails, and at a horizontal distance from its center line to gage side of the nearest running rail, in accordance with specifications of the carrier on file with the FRA.

§ 236.531 Trip arm; height and distance from rail.

Trip arm of automatic train stop device, when in stop position, shall be installed and maintained at a height above the plane of the tops of the rails, and at a horizontal distance from its center line to gage side of the nearest running rail, in accordance with specifications of the carrier on file with FRA.

§ 236.532 Strap iron inductor; use restricted.

This restricts the use of strap iron inductors, short ramps or other roadway element with characteristics different from its standard type where speed higher than restricted speed is permitted.

§ 236.534 Entrance to equipped territory; requirements.

Where trains are not required to stop at the entrance to equipped territory, except when leaving yards and stations and speed until entering equipped territory does not
exceed restricted speed, the automatic train stop, train control or cab signal device shall be operative at least stopping distance from the entrance to such territory except where the approach thereto is governed by automatic approach signal.

Rules and Instructions: Locomotives

§ 236.551 Power supply voltage; requirement.

The tolerance within which the power supply voltage shall be maintained is 10% of rated voltage.

§ 236.552 Insulation resistance; requirement.

When performing periodic test, this prescribes the minimum insulation resistance permitted between wiring and ground.

§ 236.553 Seal, where required.

This rule requires that a seal be maintained on any device other than brake pipe cut-out cock (double heading cock), by means of which the operation of pneumatic portion of automatic train stop or train control apparatus can be cut out.

§ 236.554 Rate of pressure reduction; equalizing reservoir or brake pipe.

This is a companion rule to § 236.508 and requires that the equalizing reservoir pressure or brake pipe pressure reduction during an automatic brake application be at a rate not less than that which results from a manual service application.

§ 236.555 Repaired or rewound receiver coil.

A receiver coil which has been repaired or rewound shall have the same operating characteristics which is possessed originally or as currently specified for new equipment.

§ 236.556 Adjustment of relay.

This prohibits the adjustment of a relay other than in a shop equipped for that purpose except when receiver coils, electropneumatic valve or other essential part of the equipment is replaced. Irregularities in power-supply voltage or other variable factors in the circuits shall not be compensated for by adjustment of the relay.

§ 236.557 Receiver; location with respect to rail.

(a) Receiver of intermittent inductive automatic train stop device of the inert roadway element type shall be maintained with bottom of the receiver at a height above the plane of the tops of the rails, and with its outer edge at a horizontal distance from the gage side of the nearest rail, in accordance with specifications of the carrier.
(b) Receiver of continuous inductive automatic cab signal, train stop, or train control device of locomotive equipped with on-board test equipment, shall be maintained with the bottom of the receiver at a height above the plane of the tops of the rails, and with its outer edge at a horizontal distance from the gage side of the nearest rail, in accordance with specifications of the carrier.

§ 236.560 Contact element, mechanical trip type; location with respect to rail.

Contact element of automatic train stop device of the mechanical trip type shall be maintained at a height above the plane of the tops of the rails, and at a horizontal distance from the gage side of the rail, in accordance with specifications of the carrier.

§ 236.562 Minimum rail current required.

The minimum rail current required to restore the locomotive equipment of continuous inductive automatic train stop or train control device to normal condition or to obtain a proceed indication of automatic cab signal device (pick-up) shall be in accordance with specifications of the carrier.

§ 236.563 Delay time.

This rule prescribes that the delay time of automatic train stop or train control system not exceed 8 seconds and that the spacing of signals to meet the requirements of § 236.24 take into consideration the delay time.

§ 236.564 Acknowledging time.

The acknowledging time of intermittent automatic train stop device shall not exceed 30 seconds.

§ 236.565 Provision made for preventing operation of pneumatic brake-applying apparatus by double-heading cock; requirements.

This section requires that where provision are made for preventing the operation of the pneumatic brake-applying apparatus of an automatic train stop or train control device when the double-heading cock is placed in double-heading position, it shall be so arranged that the automatic brake valve is cut out in advance of or simultaneously with the train stop or train control apparatus.

§ 236.566 Locomotive of each train operating in train stop, train control or cab signal territory; equipped.

This requires that the locomotive, from which brakes are controlled, of each train operating in automatic train stop, train control or cab signal territory shall be equipped
with apparatus responsive to the roadway equipment installed on all or any part of the route traversed, and such apparatus shall be in operation.

§ 236.567 Restrictions imposed when device fails and/or is cut out en route.

This section sets forth the procedures and restrictions that shall be followed when an automatic train stop, train control or cab signal device fails and/or is cut out en route. Where an automatic train stop, train control, or cab signal device fails and/or is cut out en route, train may proceed at restricted speed or if an automatic block signal system is in operation according to signal indication but not to exceed medium speed, to the next available point of communication where report must be made to a designated officer. Where no automatic block signal system is in use train shall be permitted to proceed at restricted speed or where automatic block signal system is in operation according to signal indication but not to exceed maximum speed to a point where absolute block can be established. Where an absolute block is established in advance of the train on which the device is operative train may proceed at not to exceed 79 miles per hour.

§ 236.568 Difference between speeds authorized by roadway signal and cab signal; action required.

In the event a cab signal authorizes a speed different from that authorized by a roadway signal, the most restrictive speed shall not be exceeded.

Inspections and Tests: Roadway

§ 236.576 Roadway element.

Roadway elements, except track circuits, including those for test purposes, shall be gaged monthly for height and alinement, and shall be tested at least every 6 months.

§ 236.577 Test, acknowledgment and cut-in circuits.

Test, acknowledgment and cut-in circuits shall be tested at least once every 12 months.

Inspection and Tests; Locomotive

§ 236.586 Daily or after trip test.

(a) Except where tests prescribed by § 236.588 are performed at intervals of not more than 2 months, each locomotive equipped with an automatic cab signal or train stop or train control device operating in equipped territory shall be inspected for damage to the equipment and tested at least once each calendar day or within 24 hours before departure upon each trip.
(b) Each equipped locomotive shall be tested to determine the locomotive equipment is responsive to the wayside equipment and shall be cycled to determine the device functions as intended.

(c) Each locomotive equipped with intermittent inductive automatic train stop or noncoded continuous inductive automatic train control device shall be tested to determine that the pickup of the device is within specified limits.

§ 236.587 Departure test.

(a) The automatic train stop, train control, or cab signal apparatus on each locomotive, except a locomotive or a multiple-unit car equipped with mechanical trip stop, shall be tested using one of the following methods:

(1) Operation over track elements;
(2) Operation over test circuit;
(3) Use of portable test equipment; or
(4) Use of on-board test device.

(b) The test shall be made on departure of the locomotive from its initial terminal unless that apparatus will be cut out between the initial terminal and the equipped territory. If the apparatus is cut out between the initial terminal and the equipped territory the test shall be made prior to entering equipped territory.

(c) If a locomotive makes more than one trip in any 24-hour period, only one departure test is required in such 24-hour period.

(d) If a departure test is made by an employee, other than the engineer, the engineer shall be informed of the results of such test and a record kept thereof. (Record requirement not yet approved by the Office of Management and Budget)

Results of departure tests shall be retained for 92 days. Results of all other tests listed in this section shall be retained until the next record is filed but in no case less than one year.

Whoever performs the departure test shall certify in writing that such test was properly performed. The certification and the test results shall be posted in the cab of the locomotive and a copy of the certification and test results left at the test location for filing in the office of the supervisory official having jurisdiction.

If it is impractical to leave a copy of the certification and test results at the location of the test, the test results shall be transmitted to either (i) the dispatcher or (ii) one other designated individual at each location, who shall keep a written record of the test results and the name of the person performing the test. These records shall be retained for at least 92 days.
§ 236.588 Periodic test.

Except as provided in § 236.586, periodic test of the automatic train stop, train control, or cab signal apparatus shall be made at least once every 92 days, and on multiple-unit cars as specified by the carrier, subject to approval by the FRA.

§ 236.589 Relays.

(a) Each relay shall be removed from service, subjected to thorough test, necessary repairs and adjustments made, and shall not be replaced in service unless its operating characteristics are in accordance with the limits within which such relay is designed to operate, as follows:

(1) Master or primary relays of torque type depending on spring tension to return contacts to deenergized position in noncoded continuous inductive automatic train stop or train control system, at least every 2 years; and (2) all others, at least once every 6 years.

§ 236.590 Pneumatic apparatus.

Automatic train stop, train control or cab signal pneumatic apparatus shall be inspected and cleaned at least once every 736 days.2/

Subpart F — Dragging Equipment and Slide Detectors and Other Similar Protective Devices

Standards

§ 236.601 Signals controlled by devices; location.

Signals controlled by devices used to provide protection against unusual contingencies, such as landslides, dragging equipment, burned bridges or trestles and washouts shall be located so that stopping distance will be provided between the signal and the point where it is necessary to stop the train.

Subpart G — Definitions

§ 236.700 Definitions.

Definitions of the technical words used in the signal rules are contained in this subpart.

§ 236.701 Application, brake; full service.

2/ Any changes in the inspection and cleaning of the airbrakes under 49 C.F.R. § 229.29 will automatically apply to this section.
An application of the brakes resulting from a continuous or a split reduction in brake pipe pressure at a service rate until maximum brake cylinder pressure is developed. As applied to an automatic or electropneumatic brake with speed governor control, an application other than emergency which develops the maximum brake cylinder pressure, as determined by the design of the brake equipment for the speed at which the train is operating.

49 U.S.C. §§ 20102; 20602-20605; 20902; 21302; 21304