

brake application may be forestalled by means of the acknowledging device.

§ 236.831 Time, delay.

As applied to an automatic train stop or train control system, the time which elapses after the onboard apparatus detects a more restrictive indication until the brakes start to apply.

[49 FR 3388, Jan. 26, 1984]

§ 236.831a Track, main.

A track, other than auxiliary track, extending through yards and between stations, upon which trains are operated by timetable or train orders, or both, or the use of which is governed by block signals.

§ 236.832 Train.

A locomotive or more than one locomotive coupled, with or without cars.

§ 236.833 Train, opposing.

A train, the movement of which is in a direction opposite to and toward another train on the same track.

§ 236.834 Trip.

A movement of a locomotive over all or any portion of automatic train stop, train control or cab signal territory between the terminals for that locomotive; a movement in one direction.

CROSS REFERENCE: Trip-arm, see § 236.744.

§ 236.835 Trunking.

A casing used to protect electrical conductors.

§ 236.836 Trunnion.

A cylindrical projection supporting a revolving part.

§ 236.837 Valve, electro-pneumatic.

A valve electrically operated which, when operated, will permit or prevent passage of air.

§ 236.838 Wire, shunt.

A wire forming part of a shunt circuit.

APPENDIX A TO PART 236—CIVIL PENALTIES ¹

Section	Violation	Willful violation
Subpart A—Rules and Instructions—All Systems		
<i>General:</i>		
236.0 Applicability, minimum requirements	\$2,500	\$5,000
236.1 Plans, where kept	1,000	2,000
236.2 Grounds	1,000	2,000
236.3 Locking of signal apparatus housings:		
(a) Power interlocking machine cabinet not secured against unauthorized entry	2,500	5,000
(b) other violations	1,000	2,000
236.4 Interference with normal functioning of device	5,000	7,500
236.5 Design of control circuits on closed circuit principle	1,000	2,000
236.6 Hand-operated switch equipped with switch circuit controller	1,000	2,000
236.7 Circuit controller operated by switch-and-lock movement	1,000	2,000
236.8 Operating characteristics of electro-magnetic, electronic, or electrical apparatus	1,000	2,000
236.9 Selection of circuits through indicating or annunciating instruments	1,000	2,000
236.10 Electric locks, force drop type; where required	1,000	2,000
236.11 Adjustment, repair, or replacement of component	2,500	5,000
236.12 Spring switch signal protection; where required	1,000	2,000
236.13 Spring switch; selection of signal control circuits through circuit controller	1,000	2,000
236.14 Spring switch signal protection; requirements	1,000	2,000
236.15 Timetable instructions	1,000	2,000
236.16 Electric lock, main track releasing circuit:		
(a) Electric lock releasing circuit on main track extends into fouling circuit where turnout not equipped with derail at clearance point either pipe-connected to switch or independently locked, electrically	2,500	5,000
(b) other violations	1,000	2,000
236.17 Pipe for operating connections, requirements	1,000	2,000
<i>Roadway Signals and Cab Signals—</i>		
236.21 Location of roadway signals	1,000	2,000
236.22 Semaphore signal arm; clearance to other objects	1,000	2,000
236.23 Aspects and indications	1,000	2,000
236.24 Spacing of roadway signals	2,500	5,000
236.26 Buffing device, maintenance	1,000	2,000

Section	Violation	Willful violation
<i>Track Circuits—</i>		
236.51 Track circuit requirements:		
(a) Shunt fouling circuit used where permissible speed through turnout greater than 45 m.p.h ..	2,500	5,000
(b) Track relay not in de-energized position or device that functions as track relay not in its most restrictive state when train, locomotive, or car occupies any part of track circuit, except fouling section of turnout of hand-operated main-track crossover	2,500	5,000
(c) other violations	1,000	2,000
236.52 Relayed cut-section	1,000	2,000
236.53 Track circuit feed at grade crossing	1,000	2,000
236.54 Minimum length of track circuit	1,000	2,000
236.55 Dead section; maximum length	1,000	2,000
236.56 Shunting sensitivity	2,500	5,000
236.57 Shunt and fouling wires:		
(a) Shunt or fouling wires do not consist of at least two discrete conductors	2,500	5,000
(b) other violations	1,000	2,000
236.58 Turnout, fouling section:		
(a) Rail joint in shunt fouling section not bonded	2,500	5,000
(b) other violations	1,000	2,000
236.59 Insulated rail joints	1,000	2,000
236.60 Switch shunting circuit; use restricted	2,500	5,000
<i>Wires and Cables—</i>		
236.71 Signal wires on pole line and aerial cable	1,000	2,000
236.73 Open-wire transmission line; clearance to other circuits	1,000	2,000
236.74 Protection of insulated wire; splice in underground wire	1,000	2,000
236.76 Tagging of wires and interference of wires or tags with signal apparatus	1,000	2,000
<i>Inspections and Tests; All Systems—</i>		
236.101 Purpose of inspection and tests; removal from service or relay or device failing to meet test requirements	2,500	5,000
236.102 Semaphore or search-light signal mechanism	1,000	2,000
236.103 Switch circuit controller or point detector	1,000	2,000
236.104 Shunt fouling circuit	1,000	2,000
236.105 Electric lock	1,000	2,000
236.106 Relays	1,000	2,000
236.107 Ground tests	1,000	2,000
236.108 Insulation resistance tests, wires in trunking and cables:		
(a) Circuit permitted to function on a conductor having insulation resistance value less than 200,000 ohms	2,500	5,000
(b) other violations	1,000	2,000
236.109 Time releases, timing relays and timing devices	1,000	2,000
236.110 Results of tests	1,000	2,000
Subpart B—Automatic Block Signal Systems		
236.201 Track circuit control of signals	1,000	2,000
236.202 Signal governing movements over hand-operated switch	1,000	2,000
236.203 Hand-operated crossover between main tracks; protection	1,000	2,000
236.204 Track signaled for movements in both directions, requirements	1,000	2,000
236.205 Signal control circuits; requirements	1,000	2,000
236.206 Battery or power supply with respect to relay; location	1,000	2,000
Subpart C—Interlocking		
236.207 Electric lock on hand-operated switch; control:		
(a) Approach or time locking of electric lock on hand-operated switch can be defeated by unauthorized use of emergency device which is not kept sealed in the non-release position	2,500	5,000
(b) other violations	1,000	2,000
236.301 Where signals shall be provided	1,000	2,000
236.302 Track circuits and route locking	1,000	2,000
236.303 Control circuits for signals, selection through circuit controller operated by switch points or by switch locking mechanism	1,000	2,000
236.304 Mechanical locking or same protection effected by circuits	1,000	2,000
236.305 Approach or time locking	1,000	2,000
236.306 Facing point lock or switch-and-lock movement	1,000	2,000
236.307 Indication locking:		
236.308 Mechanical or electric locking or electric circuits; requisites	1,000	2,000
236.309 Loss of shunt protection; where required:		
(a) Loss of shunt of five seconds or less permits release of route locking of power-operated switch, movable point frog, or derail	2,500	5,000
(b) Other violations	1,000	2,000
236.310 Signal governing approach to home signal	1,000	2,000

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Section	Violation	Willful violation
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	1,000	2,000
236.312 Movable bridge, interlocking of signal appliances with bridge devices:		
(a) Emergency bypass switch or device not locked or sealed	2,500	5,000
(b) other violations	1,000	2,000
236.314 Electric lock for hand-operated switch or derail:		
(a) Approach or time locking of electric lock at hand-operated switch or derail can be defeated by unauthorized use of emergency device which is not kept sealed in non-release position ..	2,500	5,000
(b) other violations	1,000	2,000
<i>Rules and Instructions—</i>		
236.326 Mechanical locking removed or disarranged; requirement for permitting train movements through interlocking	1,000	2,000
236.327 Switch, movable-point frog or split-point derail	1,000	2,000
236.328 Plunger of facing-point	1,000	2,000
236.329 Bolt lock	1,000	2,000
236.330 Locking dog of switch and lock movement	1,000	2,000
236.334 Point detector	1,000	2,000
236.335 Dogs, stops and trunnions of mechanical locking	1,000	2,000
236.336 Locking bed	1,000	2,000
236.337 Locking faces of mechanical locking; fit	1,000	2,000
236.338 Mechanical locking required in accordance with locking sheet and dog chart	1,000	2,000
236.339 Mechanical locking; maintenance requirements	1,000	2,000
236.340 Electromechanical interlocking machine; locking between electrical and mechanical levers	1,000	2,000
236.341 Latch shoes, rocker links, and quadrants	1,000	2,000
236.342 Switch circuit controller	1,000	2,000
<i>Inspection and Tests—</i>		
236.376 Mechanical locking	1,000	2,000
236.377 Approach locking	1,000	2,000
236.378 Time locking	1,000	2,000
236.379 Route locking	1,000	2,000
236.380 Indication locking	1,000	2,000
236.381 Traffic locking	1,000	2,000
236.382 Switch obstruction test	1,000	2,000
236.383 Valve locks, valves, and valve magnets	1,000	2,000
236.384 Cross protection		
236.386 Restoring feature on power switches		
236.387 Movable bridge locking	1,000	2,000
Subpart D—Traffic Control Systems Standards		
236.401 Automatic block signal system and interlocking standards applicable to traffic control systems:		
236.402 Signals controlled by track circuits and control operator	1,000	2,000
236.403 Signals at controlled point	1,000	2,000
236.404 Signals at adjacent control points	1,000	2,000
236.405 Track signaled for movements in both directions, change of direction of traffic	1,000	2,000
236.407 Approach or time locking; where required	1,000	2,000
236.408 Route locking	1,000	2,000
236.410 Locking, hand-operated switch; requirements:		
(a) Hand-operated switch on main track not electrically or mechanically locked in normal position where signal not provided to govern movement to main track, movements made at speeds in excess of 20 m.p.h., and train or engine movements may clear main track	2,500	5,000
(b) Hand-operated switch on signaled siding not electrically or mechanically locked in normal position where signal not provided to govern movements to signaled siding, train movements made at speeds in excess of 30 m.p.h., and train or engine movements may clear signaled siding	2,500	5,000
(c) Approach or time locking of electric lock at hand-operated switch can be defeated by use of emergency release device of electric lock which is not kept sealed in non-release position ..	2,500	5,000
(d) other violations	1,000	2,000
<i>Rules and Instructions—</i>		
236.426 Interlocking rules and instructions applicable to traffic control systems	1,000	2,000
236.476 Interlocking inspections and tests applicable to traffic control systems	1,000	2,000
Subpart E—Automatic Train Stop, Train Control and Cab Signal Systems Standards		
236.501 Forestalling device and speed control	1,000	2,000
236.502 Automatic brake application, initiation by restrictive block conditions stopping distance in advance	1,000	2,000
236.503 Automatic brake application; initiation when predetermined rate of speed exceeded	1,000	2,000

Section	Violation	Willful violation
236.504 Operations interconnected with automatic block-signal system	1,000	2,000
236.505 Proper operative relation between parts along roadway and parts on locomotive	1,000	2,000
236.506 Release of brakes after automatic application	1,000	2,000
236.507 Brake application; full service	1,000	2,000
236.508 Interference with application of brakes by means of brake valve	1,000	2,000
236.509 Two or more locomotives coupled	1,000	2,000
236.511 Cab signals controlled in accordance with block conditions stopping distance in advance	1,000	2,000
236.512 Cab signal indication when locomotive enters blocks	1,000	2,000
236.513 Audible indicator	1,000	2,000
236.514 Interconnection of cab signal system with roadway signal system	1,000	2,000
236.515 Visibility of cab signals	1,000	2,000
236.516 Power supply	1,000	2,000
<i>Rules and Instructions; Roadway—</i>		
236.526 Roadway element not functioning properly	2,500	5,000
236.527 Roadway element insulation resistance	1,000	2,000
236.528 Restrictive condition resulting from open hand-operated switch; requirement	1,000	2,000
236.529 Roadway element inductor; height and distance from rail	1,000	2,000
236.531 Trip arm; height and distance from rail	1,000	2,000
236.532 Strap iron inductor; use restricted	1,000	2,000
236.534 Rate of pressure reduction; equalizing reservoir or brake pipe	1,000	2,000
236.551 Power supply voltage	1,000	2,000
236.552 Insulation resistance	1,000	2,000
236.553 Seal, where required	2,500	5,000
236.554 Rate of pressure reduction; equalizing reservoir or brake pipe	1,000	2,000
236.555 Repaired or rewound receiver coil	1,000	2,000
236.556 Adjustment of relay	1,000	2,000
236.557 Receiver; location with respect to rail	1,000	2,000
236.560 Contact element, mechanical trip type; location with respect to rail	1,000	2,000
236.562 Minimum rail current required	1,000	2,000
236.563 Delay time	1,000	2,000
236.564 Acknowledging time	1,000	2,000
236.565 Provision made for preventing operation of pneumatic brake-applying apparatus by double-heading clock; requirement	1,000	2,000
236.566 Locomotive of each train operating in train stop, train control or cab signal territory; equipped	5,000	7,500
236.567 Restrictions imposed when device fails and/or is cut out en route:		
(a) Report not made to designated officer at next available point of communication after automatic train stop, train control, or cab signal device fails and/or is cut en route	5,000	7,500
(b) Train permitted to proceed at speed exceeding 79 m.p.h. where automatic train stop, train control, or cab signal device fails and/or is cut out en route when absolute block established in advance of train on which device is inoperative	5,000	7,500
(c) other violations	1,000	2,000
236.568 Difference between speeds authorized by roadway signal and cab signal; action	1,000	2,000
<i>Inspection and Tests; Roadway—</i>		
236.576 Roadway element	1,000	2,000
236.577 Test, acknowledgement, and cut-in circuits	1,000	2,000
<i>Inspection and Tests; Locomotive—</i>		
236.586 Daily or after trip test	2,500	5,000
236.587 Departure test:		
(a) Test of automatic train stop, train control, or cab signal apparatus on locomotive not made on departure of locomotive from initial terminal if equipment on locomotive not cut out between initial terminal and equipped territory	5,000	7,500
(b) Test of automatic train stop, train control, or cab signal apparatus on locomotive not made immediately on entering equipped territory, if equipment on locomotive cut out between initial terminal and equipped territory	5,000	7,500
(c) Automatic train stop, train control, or cab signal apparatus on locomotive making more than one trip within 24-hour period not given departure test within corresponding 24-hour period ..	5,000	7,500
(d) other violations	2,500	5,000
236.588 Periodic test	2,500	5,000
236.589 Relays	2,500	5,000
236.590 Pneumatic apparatus:		
(a) Automatic train stop, train control, or cab signal apparatus not inspected and cleaned at least once every 736 days	2,500	5,000
(b) other violations	1,000	2,000
Subpart F—Dragging Equipment and Slide Detectors and Other Similar Protective Devices; Standards		
236.601 Signals controlled by devices; location	1,000	2,000

¹ 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.

[53 FR 52936, Dec. 29, 1988, as amended at 63 FR 11624, Mar. 10, 1998]

PART 238—PASSENGER EQUIPMENT SAFETY STANDARDS**Subpart A—General**

- Sec.
 238.1 Purpose and scope.
 238.3 Applicability.
 238.5 Definitions.
 238.7 Waivers.
 238.9 Responsibility for compliance.
 238.11 Penalties.
 238.13 Preemptive effect.
 238.15 Movement of passenger equipment with power brake defects.
 238.17 Movement of passenger equipment with other than power brake defects.
 238.19 Reporting and tracking of repairs to defective passenger equipment.
 238.21 Special approval procedure.
 238.23 Information collection.

Subpart B—Safety Planning and General Requirements

- 238.101 Scope.
 238.103 Fire safety.
 238.105 Train electronic hardware and software safety.
 238.107 Inspection, testing, and maintenance plan.
 238.109 Training, qualification, and designation program.
 238.111 Pre-revenue service acceptance testing plan.
 238.113 Emergency window exits.
 238.115 Emergency lighting.
 238.117 Protection against personal injury.
 238.119 Rim-stamped straight-plate wheels.

Subpart C—Specific Requirements for Tier I Passenger Equipment

- 238.201 Scope/alternative compliance.
 238.203 Static end strength.
 238.205 Anti-climbing mechanism.
 238.207 Link between coupling mechanism and car body.
 238.209 Forward-facing end structure of locomotives.
 238.211 Collision posts.
 238.213 Corner posts.
 238.215 Rollover strength.
 238.217 Side structure.
 238.219 Truck-to-car-body attachment.
 238.221 Glazing.
 238.223 Locomotive fuel tanks.
 238.225 Electrical system.
 238.227 Suspension system.
 238.229 Safety appliances.
 238.231 Brake system.
 238.233 Interior fittings and surfaces.
 238.235 Doors.

- 238.237 Automated monitoring.

Subpart D—Inspection, Testing, and Maintenance Requirements for Tier I Passenger Equipment

- 238.301 Scope.
 238.303 Exterior calendar day mechanical inspection of passenger equipment.
 238.305 Interior calendar day mechanical inspection of passenger cars.
 238.307 Periodic mechanical inspection of passenger cars and unpowered vehicles used in passenger trains.
 238.309 Periodic brake equipment maintenance.
 238.311 Single car test.
 238.313 Class I brake test.
 238.315 Class IA brake test.
 238.317 Class II brake test.
 238.319 Running brake test.

Subpart E—Specific Requirements for Tier II Passenger Equipment

- 238.401 Scope.
 238.403 Crash energy management.
 238.405 Longitudinal static compressive strength.
 238.407 Anti-climbing mechanism.
 238.409 Forward end structures of power car cabs.
 238.411 Rear end structures of power car cabs.
 238.413 End structures of trailer cars.
 238.415 Rollover strength.
 238.417 Side loads.
 238.419 Truck-to-car-body and truck component attachment.
 238.421 Glazing.
 238.423 Fuel tanks.
 238.425 Electrical system.
 238.427 Suspension system.
 238.429 Safety appliances.
 238.431 Brake system.
 238.433 Draft system.
 238.435 Interior fittings and surfaces.
 238.437 Emergency communication.
 238.439 Doors.
 238.441 Emergency roof entrance location.
 238.443 Headlights.
 238.445 Automated monitoring.
 238.447 Train operator's controls and power car cab layout.

FIGURE 1 TO SUBPART E—POWER CAR CAB FORWARD END STRUCTURE CONCEPTUAL IMPLEMENTATION

FIGURE 2 TO SUBPART E—POWER CAR CAB REAR END STRUCTURE CONCEPTUAL IMPLEMENTATION

FIGURE 3 TO SUBPART E—TRAILER CAR END STRUCTURE CONCEPTUAL IMPLEMENTATION