

LOCOMOTIVE SAFETY STANDARDS

The Locomotive Inspection Act makes it unlawful for any carrier to use or permit to be used on its line any locomotive unless the entire locomotive and its appurtenances (1) are in proper condition and safe to operate in the service for which they are put, without unnecessary peril to life or limb and (2) have been inspected and tested as required by the regulations.

When a locomotive has one or more conditions not in compliance, it may be moved only as a light locomotive or a dead locomotive after "a qualified person shall determine that it is safe to move the locomotive and the maximum speed and other restrictions necessary to safe movement." The engineer shall be notified in writing and inform all other crew members of the noncomplying locomotive and any restriction. A copy of a tag bearing the words "noncomplying locomotive" shall be attached to the control stand.

If a locomotive develops a noncomplying condition en route, it may continue to utilize its propelling motors if operated under the restrictions set forth in the above paragraph until the next calendar day inspection or to the nearest repair point.

A noncomplying locomotive may be moved light or dead within a yard at speeds not in excess of ten miles per hour if the movement is solely for the purpose of repair.

A dead locomotive may not continue in use following a calendar day inspection as a controlling locomotive or at the head of a train or locomotive consist.

Each locomotive in use shall be inspected at least once during each calendar day. A written report shall be made of each inspection and a description of the noncomplying conditions must be stated and the conditions corrected before the locomotive is used. The nature of the repairs that have been made shall be placed in the report and signed by the person making the repair.

In conducting the calendar day locomotive inspection, the FRA has issued a clarification of which specific FRA regulations must be complied with. These are:

Section 229.21: Daily Inspections

(a) Requires that a written report be prepared by the railroad inspector after the inspection of a locomotive has been completed. The report must contain:

1. The name of the railroad;
2. The initials and number of the locomotive;
3. The place;
4. The date;
5. The time of the inspection;
6. A description of any noncomplying conditions of this part

- disclosed by the inspection; and
7. The signature of the employee making the inspection.

The inspector must also enter on the record maintained in the locomotive cab the date, time, and place of the daily inspection.

All FRA non-complying conditions reported by the inspector must be repaired before the locomotive is used. However, locomotives that do not comply with the sanitary requirements may remain in service beyond the date on which the daily inspection occurs. For example, a railroad may use a locomotive with a defective toilet in switching service for up to 10 days, at which time it must be repaired or used in the trailing position. The repairs may be recorded electronically.

The inspector performing the inspection should also examine any work reports found on a locomotive which may have information entered by previous engineers regarding FRA defective conditions, and these items should also be inspected. Any noncomplying safety critical condition, under this part found by an inspector and not included in this list, shall also be reported. Those conditions not covered by this part and reported, i.e., toilet facilities, are not considered noncomplying conditions except if excessive strong chemical odors persist in the cab.

In addition to the daily inspection of each locomotive and steam generator, periodic inspections shall be given not to exceed 92 days. Every periodic inspection shall include the following: (1) all gauges used by the engineer for braking shall be tested; (b) all electric devices and visible insulation shall be inspected; (c) all cable connections and jumpers designed to carry 600 volts or more shall be cleaned, inspected and tested for continuity; (d) each steam generator shall be inspected and tested.

Each locomotive shall be inspected and tested annually as follows: (1) the filtering devices or dirt collectors in the main reservoir supply line to the air brake system shall be cleaned, repaired, or replaced; (b) brake cylinder relay valve portions main reservoir safety valves, brake pipe vent valve portions, feed and reducing valve portions in the air brake system shall be drained, repaired and tested; (c) the date and place of cleaning, repairing and testing shall be recorded and signed by the person performing the work and the supervisor.

Load meters shall be tested.

Each steam generator shall be subjected to a hydrostatic pressure at least 25% above the working pressure and the visual return water flow indicator shall be removed and inspected.

Within every two years, all valves, valve portions and MU locomotive cylinders and electric-pneumatic master controllers in the air brake system shall be cleaned, repaired and tested. Those persons performing the work and their supervisors shall sign the form.

Within two years, each main reservoir (other than aluminum reservoir) shall be subjected to a hydrostatic pressure test, and shall be hammer tested over its entire surface while the reservoir is empty.

Each welded main reservoir may be drilled over its entire surface and whenever any such telltale hole shall have penetrated the interior of any reservoir, it shall be permanently withdrawn from service.

All systems and components on a locomotive shall be free of conditions that endanger the safety of the crew, locomotive or train. The regulations set forth specific standards for the brake system, emergency brake valve, main reservoir system, aluminum main reservoir, brake gauges, piston travel, foundation brake gear, leakage, draft systems, suspension system (lateral motion, plain bearings, spring wiggling, trucks, side bearings, clearance above top of rail, wheel sets, wheel and tire defects); electrical system (current collectors, third rail shoes, emergency pole, shoe insulation, insulation or grounding of metal parts, doors and cover plates, hand operated switches, jumpers, cable connections, motors and generators); internal combustion equipment (safety cutoff device, venting, ground fuel tanks, safety hangers, engines); steam generators (safe working pressure, steam generator number, pressure gauge, safety valves, water flow indicator, warning notice); cabs and cab equipment (slip/slide alarms, speed indicators, cabs, floors and passageways, locomotive cab noise, pilots, snow plows, end plates, headlights, cab lights, audible warning device, sanders).

Section 229.23: Periodic Inspection

The Locomotive Inspection and Repair Report F6180.49A, must be examined to determine that the periodic, annual and biennial inspections are not overdue as indicated by the dates. Also, the event recorders must be inspected for any external damage or indications of tampering.

Section 229.25: Tests: Every Periodic Inspection

This requires that each periodic inspection include all gauges(except load meters used with auxiliary brake system), all electrical devices and visible insulation, all cable connections designed to carry 6⁰⁰ volts or more, each steam generator, and the event recorder.

Section 229.27: Annual Tests

This section requires certain testing of the locomotive each 368 days, primarily to the brake system, load meters, and steam generator.

Section 229.41: Protection against personal injury

Fan openings, exposed gears and pinions, and exposed moving parts must be inspected to determine that no significant safety hazard exists.

Section 229.43: Exhaust and battery gases

It must be ascertained that the exhaust manifold system and connections contains no breaks, cracks or openings creating an obvious exhaust gas leak into the engine compartment.

Section 229.45: General conditions

Any condition that would endanger the safety of the crew, locomotive or train would be considered as noncomplying under this section. These conditions include:

1. Insecure attachment of components, including third rail, shoes or beams, traction motors, motor gear cases, and fuel tanks;
2. Fuel, oil, water, and other leaks and accumulations of oil on electrical equipment;
3. Improper functioning of components, including slack adjusters, pantograph operating cylinders, circuit breakers contractors, relays, switches, and fuses;
4. Cracks, breaks or other infirmities, such as quill drives, axles, gears, etc.

Section 229.46: Brakes, general

The locomotive brakes must be tested to determine they operate as intended. The test procedure should be established by the railroad and should include operating the independent and automatic brake valves to observe that the brakes apply and release properly. Water and oil must also be drained from the main air reservoir.

Section 229.47: Emergency brake valve

The emergency brake valve should be inspected. The valve must be properly marked. There is no requirement that the valve be tested when the daily inspection is performed to know if it will initiate an emergency application of the locomotive brakes. To test or not to test is up to the inspector and/or the railroad.

Section 229.53: Brake gauges

All mechanical gauges and all devices providing indication of air pressure electronically that are used by the engineer to aid in the control or braking of the train or locomotive shall be located so that they may be conveniently read from the engineer's usual position during operation of the locomotive. A gauge or device shall not be more than five percent or three pounds per square inch in error, whichever is less.

Section 229.55: Piston travel

The brake cylinder piston travel must be inspected when the brake is applied. The piston travel must not exceed 1-1/2 inches less than the maximum piston travel (maximum piston travel is entered on the Locomotive Inspection and Repair Report located in the cab). For instance, a maximum brake cylinder piston travel of 8 inches will permit a piston travel of 6-1/2 inches. Brake piston travel is only in noncompliance when it exceeds the standard, and an entry on an engineers report of excessive piston travel does not necessarily denote noncompliance, although it may be greater than the railroad's standard. The excuse that piston travel is in noncompliance because the railroad inspector had no ruler is not a valid defense.

Section 229.57: Foundation brake gear

The brake rigging must be inspected for wear, and that all parts are properly secured. Brake shoes must be in approximate alinement with the wheel tread. A wheel which has a brake shoe wearing over the edge of the rim should be inspected for overheating.

Section 229.59: Brake pipe

Brake pipe must be tested to determine that the leakage does not exceed 5 pounds per minute. This is accomplished by making a brake application from an automatic brake pipe reduction, placing the brake pipe cut out valve in the off position, and timing the brake pipe pressure drop for one minute. Other leakage rate tests described in this section would be necessary if an air leak could be heard on a locomotive. If the locomotive is equipped with an Air Flow Meter, it must be inspected to determine that it is not damaged.

Section 229.61: Draft system

Couplers and uncoupling mechanisms must be inspected to determine that they are not bent or broken and function as intended. A coupler, when not coupled to any other equipment, should be operated with the uncoupling lever, and the knuckle must move to the open position freely. The coupler must be inspected to determine that it is free of any cracks, and that the coupler carrier is not broken and secured in position.

Section 229.65: Spring rigging

Truck spring rigging should be inspected to determine that all parts are free of breaks and in proper position. It should be determined that spring safety hangers are in proper position and not fouling the spring mechanism.

Section 229.67: Trucks

A visual inspection of each truck frame shall be performed to determine that it is not broken or have a crack in a stress area that may affect its structural integrity. The securing arrangement to prevent the truck and locomotive body from separating in case of a derailment must be in place and securely fastened. The truck may not have a loose tie bar or a cracked or broken center casting, motor suspension lug, equalizer, hanger, gib or pin.

Section 229.69: Side bearings

Side bearings should not be riding in contact, unless so designed. Also, side bearings should be in good condition and not broken or missing.

Section 229.71: Clearance above top of rail

A visual inspection of the under side of the locomotive must be made from outside the gage of the rail to ascertain that no part of trucks and running gears, with the exception of the wheels and non-metallic sand hoses, are less than 2-1/2 inches above top of rail.

Section 229.75: Wheel and tire defects

Ascertain that wheels do not have egregious defects such as broken or cracked rim or flange and flat spots which would present an immediate derailment hazard. Wheel treads with flat spots or flanges which appear to be high should be measured with an approved gauge to determine whether they are in compliance or not.

Section 229.85: Doors and cover plates marked "Danger"

A visual inspection of all plates covering high voltage electrical apparatus must be performed to ascertain that they are secured in their proper locations.

Section 229.89: Jumper cable connections

Determine that jumper cables are properly stored (ends of cables should not be hanging free) and do not create a tripping hazard.

Section 229.91: Motors and generators

Visual inspection of traction motors and generators must be made to ascertain that they are free of excessive accumulations of oil, that all visible cables and cable connections are free from damage and that no traction motor is cut out.

Section 229.93 Safety cut-off device

Visual inspection of the three safety cut-off devices must be made to ascertain

that they are properly marked and free of any impediment which could prevent their operation. Testing of the push-button type electrical safety cut-off device will result in an immediate engine shut down of a locomotive.

Section 229.117: Speed indicators

Visual inspection of the speed indicator equipment is required to ascertain that the indicator and related apparatus is undamaged. The performance and accuracy of the speed indicator can only be ascertained after departure by means of mileage test sections or equivalent procedures.

Section 229.119: Cabs, floors, and passageways

Visual inspection should be conducted of passageways, walkways, cab control compartment floors, and engine compartment floors. Accumulations of oil, water, debris and other items should only be reported if the condition presents an immediate hazardous and unsafe condition for any person who would use them, e.g. oil accumulation does not provide secure footing or creating a slipping hazard. A visual inspection of the cab seats and windows must also be made to determine that the seats are properly secured to the floor or sides and that the cab windows provide clear vision and are free of broken areas which could create an injury hazard.

Section 229.123: Pilots, snowplows, end plates

A visual inspection must be performed to ascertain that the end of a lead locomotive is equipped with the applicable fixture, properly secured and is not less than 3 inches nor more than 6 inches above top of rail. This item should be inspected on all locomotives in a consist to determine that they are properly secured.

Section 229.125: Headlights

Inspect the headlights to ascertain that they operate properly, and that they can be dimmed as required. On locomotives which have two sealed beams as a headlight, one sealed beam burned out does not necessarily indicate a noncomplying condition. Noncompliance with the candela portion of this Section can only be determined with a light meter.

Section 229.127: Cab lights

Visual inspection of the cab lights must be performed to ascertain that they are operative and provide sufficient illumination. Passageway lights used to illuminate walkways over which railroad personnel walk must be lighted.

Section 229.129: Audible warning device

Operate the horn to ascertain that it functions. The locomotive bell, when

equipped, should also be tested for operation.

Section 229.131: Sanders

Test to determine that each locomotive has sand being delivered to each rail in front of the first power operated wheel set in the direction of movement.

In addition to the above there are design requirements for all MU locomotives.

§ 229.137 -- Sanitation, general requirements.

(a) *Sanitation compartment.* Except as provided in paragraph (b) of this section, all lead locomotives in use shall be equipped with a sanitation compartment. Each sanitation compartment shall be:

- (1) Adequately ventilated;
- (2) Equipped with a door that:
 - (i) Closes, and
 - (ii) Possesses a modesty lock;
- (3) Equipped with a toilet facility, as defined in this part;
- (4) Equipped with a washing system, as defined in this part, unless the railroad otherwise provides the washing system to employees upon reporting for duty or occupying the cab for duty, or where the locomotive is equipped with a stationary sink that is located outside of the sanitation compartment;
- (5) Equipped with toilet paper in sufficient quantity to meet employee needs, unless the railroad otherwise provides toilet paper to employees upon reporting for duty or occupying the cab for duty; and
- (6) Equipped with a trash receptacle, unless the railroad otherwise provides portable trash receptacles to employees upon reporting for duty or occupying the cab for duty.

(b) *Exceptions.* (1) Paragraph (a) of this section shall not apply to:

- (i) Locomotives engaged in commuter service or other short-haul passenger service and commuter work trains on which employees have ready access to railroad-provided sanitation facilities outside of the locomotive or elsewhere on the train, that meet otherwise applicable sanitation standards, at frequent intervals during the course of their work shift;
- (ii) Locomotives engaged in switching service on which employees have ready access to railroad-provided sanitation facilities outside of the locomotive, that meet otherwise applicable sanitation standards, at frequent intervals during the course of their work shift;
- (iii) Locomotives engaged in transfer service on which employees have ready access to railroad-provided sanitation facilities outside of the locomotive, that meet otherwise applicable sanitation standards, at frequent intervals during the course of their work shift;
- (iv) Locomotives of Class III railroads engaged in operations other than switching service or transfer service, that are not equipped with a sanitation compartment as of June 3, 2002. Where an unequipped locomotive of a Class III railroad is engaged in operations other than switching or transfer service,

employees shall have ready access to railroad-provided sanitation facilities outside of the locomotive that meet otherwise applicable sanitation standards, at frequent intervals during the course of their work shift, or the railroad shall arrange for enroute access to such facilities;

(v) Locomotives of tourist, scenic, historic, or excursion railroad operations, which are otherwise covered by this part because they are not propelled by steam power and operate on the general railroad system of transportation, but on which employees have ready access to railroad-provided sanitation facilities outside of the locomotive, that meet otherwise applicable sanitation standards, at frequent intervals during the course of their work shift; and

(vi) Except as provided in § 229.14 of this part, control cab locomotives designed for passenger occupancy and used in intercity push-pull service that are not equipped with sanitation facilities, where employees have ready access to railroad-provided sanitation in other passenger cars on the train at frequent intervals during the course of their work shift.

(2) Paragraph (a)(3) of this section shall not apply to:

(i) Locomotives of a Class I railroad which, prior to [the effective date of this section], were equipped with a toilet facility in which human waste falls via gravity to a holding tank where it is stored and periodically emptied, which does not conform to the definition of toilet facility set forth in this section. For these locomotives, the requirements of this section pertaining to the type of toilet facilities required shall be effective as these toilets become defective or are replaced with conforming units, whichever occurs first. All other requirements set forth in this section shall apply to these locomotives as of June 3, 2002; and

(ii) With respect to the locomotives of a Class I railroad which, prior to June 3, 2002, were equipped with a sanitation system other than the units addressed by paragraph (b)(2)(i) of this section, that contains and removes human waste by a method that does not conform with the definition of toilet facility as set forth in this section, the requirements of this section pertaining to the type of toilet facilities shall apply on locomotives in use on July 1, 2003. However, the Class I railroad subject to this exception shall not deliver locomotives with such sanitation systems to other railroads for use, in the lead position, during the time between June 3, 2002, and July 1, 2003. All other requirements set forth in this section shall apply to the locomotives of this Class I railroad as of June 3, 2002.

(c) *Defective, unsanitary toilet facility; prohibition in lead position.* Except as provided in paragraphs (c)(1) through (5) of this section, if the railroad determines during the daily inspection required by § 229.21 that a locomotive toilet facility is defective or is unsanitary, or both, the railroad shall not use the locomotive in the lead position. The railroad may continue to use a lead locomotive with a toilet facility that is defective or unsanitary as of the daily inspection only where all of the following conditions are met:

(1) The unsanitary or defective condition is discovered at a location where there are no other suitable locomotives available for use, i.e., where it is not possible to switch another locomotive into the lead position, or the location is not equipped to clean the sanitation compartment if unsanitary or repair the toilet facility if defective;

(2) The locomotive, while noncompliant, did not pass through a location where it could have been cleaned if unsanitary, repaired if defective, or switched with another compliant locomotive, since its last daily inspection required by this part;

(3) Upon reasonable request of a locomotive crewmember operating a locomotive with a defective or unsanitary toilet facility, the railroad arranges for access to a toilet facility outside the locomotive that meets otherwise applicable sanitation standards;

(4) If the sanitation compartment is unsanitary, the sanitation compartment door shall be closed and adequate ventilation shall be provided in the cab so that it is habitable; and

(5) The locomotive shall not continue in service in the lead position beyond a location where the defective or unsanitary condition can be corrected or replaced with another compliant locomotive, or the next daily inspection required by this part, whichever occurs first.

(d) *Defective, unsanitary toilet facility; use in trailing position.* If the railroad determines during the daily inspection required by § 229.21 that a locomotive toilet facility is defective or is unsanitary, or both, the railroad may use the locomotive in trailing position. If the railroad places the locomotive in trailing position, they shall not haul employees in the unit unless the sanitation compartment is made sanitary prior to occupancy. If the toilet facility is defective and the unit becomes occupied, the railroad shall clearly mark the defective toilet facility as unavailable for use.

(e) *Defective, sanitary toilet facility; use in switching, transfer service.* If the railroad determines during the daily inspection required by § 229.21 that a locomotive toilet facility is defective, but sanitary, the railroad may use the locomotive in switching service, as set forth in paragraph (b)(1)(ii) of this section, or in transfer service, as set forth in paragraph (b)(1)(iii) of this section for a period not to exceed 10 days. In this instance, the railroad shall clearly mark the defective toilet facility as unavailable for use. After expiration of the 10-day period, the locomotive shall be repaired or used in the trailing position.

(f) *Lack of toilet paper, washing system, trash receptacle.* If the railroad determines during the daily inspection required by § 229.21 that the lead locomotive is not equipped with toilet paper in sufficient quantity to meet employee needs, or a washing system as required by paragraph (a)(4) of this section, or a trash receptacle as required by paragraph (a)(6) of this section, the locomotive shall be equipped with these items prior to departure.

(g) *Inadequate ventilation.* If the railroad determines during the daily inspection required by § 229.21 that the sanitation compartment of the lead locomotive in use is not adequately ventilated as required by paragraph (a)(1) of this section, the railroad shall repair the ventilation prior to departure, or place the locomotive in trailing position, in switching service as set forth in paragraph (b)(1)(ii) of this section, or in transfer service as set forth in paragraph (b)(1)(iii) of this section.

(h) *Door closure and modesty lock.* If the railroad determines during the daily inspection required by § 229.21 that the sanitation compartment on the lead locomotive is not equipped with a door that closes, as required by paragraph (a)(2)(i) of this section, the railroad shall repair the door prior to departure, or place the locomotive in trailing position, in switching service as set forth in paragraph (b)(1)(ii) of this section, or in transfer service as set forth in paragraph (b)(1)(iii) of this section. If the railroad

determines during the daily inspection required by § 229.21 that the modesty lock required by paragraph (a)(2)(ii) of this section is defective, the modesty lock shall be repaired pursuant to the requirements of § 229.139(e).

(i) *Equipped units; retention and maintenance.* Except where a railroad downgrades a locomotive to service in which it will never be occupied, where a locomotive is equipped with a toilet facility as of [the effective date of the final rule], the railroad shall retain and maintain the toilet facility in the locomotive consistent with the requirements of this part, including locomotives used in switching service pursuant to paragraph (b)(1)(ii) of this section, and in transfer service pursuant to paragraph (b)(1)(iii) of this section.

(j) *Newly manufactured units; in-cab facilities.* All locomotives manufactured after June 3, 2002, except switching units built exclusively for switching service and locomotives built exclusively for commuter service, shall be equipped with a sanitation compartment accessible to cab employees without exiting to the out-of-doors for use. No railroad may use a locomotive built after June 3, 2002, that does not comply with this subsection.

(k) *Potable water.* The railroad shall utilize potable water where the washing system includes the use of water.

§ 229.139 -- Sanitation, servicing requirements.

(a) The sanitation compartment of each lead locomotive in use shall be sanitary.

(b) All components required by § 229.137(a) for the lead locomotive in use shall be present consistent with the requirements of this part, and shall operate as intended such that:

(1) All mechanical systems shall function;

(2) Water shall be present in sufficient quantity to permit flushing;

(3) For those systems that utilize chemicals for treatment, the chemical (chlorine or other comparable oxidizing agent) used to treat waste must be present; and

(4) No blockage is present that prevents waste from evacuating the bowl.

(c) The sanitation compartment of each occupied locomotive used in switching service pursuant to § 229.137(b)(1)(ii), in transfer service pursuant to § 229.137(b)(1)(iii), or in a trailing position when the locomotive is occupied, shall be sanitary.

(d) Where the railroad uses a locomotive pursuant to § 229.137(e) in switching or transfer service with a defective toilet facility, such use shall not exceed 10 calendar days from the date on which the defective toilet facility became defective. The date on which the toilet facility becomes defective shall be entered on the daily inspection report.

(e) Where it is determined that the modesty lock required by § 229.137(a)(2) is defective, the railroad shall repair the modesty lock on or before the next 92-day inspection required by this part.

Locomotive Visibility Standards^{1/}

(a) Each lead locomotive operated at speeds greater than 20 miles per hour over a public highway-rail crossing shall be equipped with auxiliary lights, in addition to a headlight. Some locomotives already equipped with auxiliary lights such as an oscillating light or a strobe light will be grandfathered until March 6, 2000.^{2/}

(b) Auxiliary lights shall be composed as follows:

1. Two white auxiliary lights shall be placed at the front of the locomotive to form a triangle with the headlight and shall be at least 36 inches above the top of the rail (except on MU locomotives and control cab locomotives where the placement would be impractical or would compromise the integrity of the car body). On MU locomotives and controlled cab locomotives the auxiliary lights shall be at least 24 inches above the top of the rail. The lights shall be placed at least 36 inches apart. If the vertical distance from the headlight to the horizontal axis of the auxiliary lights is 60 inches or more, they shall be spaced at least 60 inches apart if the vertical distance from the headlight to the horizontal axis of the auxiliary lights is less than 60 inches.
2. Each auxiliary light shall produce at least 200,000 candela.
3. The auxiliary light shall be focused horizontally within 15 degrees of the longitudinal centerline of the locomotive.
4. The lights may be arranged to burn steadily or flash on approach to a crossing. If flashing lights are used, they shall flash alternately at a rate of at least 40 flashes per minute and at most 180 flashes per minute. The railroads operating rules shall set a standard procedure for the use of flashing lights at crossings, and the flashing feature may be automatic, but shall be capable of manual activation and deactivation by the locomotive engineer.
5. The lights shall be continuously illuminated immediately prior to, and during movement of the locomotive, except as provided by railroad operating rules, time table or special instructions, unless such exception is disapproved by

^{1/} On March 6, 1996, the FRA issued its final rule covering locomotive visibility. This resulted from legislation which was proposed by rail labor in 1992.

^{2/} The Secretary submitted a report to Congress in 1983 on whether the lead car of any train should be equipped with a mounted oscillating light. She stated there was no jurisdiction for such lights. However, the BN Railroad now requires two strobe lights on all of its road locomotives for improved safety against highway grade crossing accidents.

the FRA.

6. If an auxiliary light becomes defective, the lead locomotive with only one failed auxiliary light must be repaired or switched to a trailing position before departure where an initial terminal inspection is required. If a failure occurs after departure from an initial terminal, it must be repaired not later than the next locomotive calendar inspection. If a lead has two failed auxiliary lights, it may only proceed to the next place where repairs can be made.
7. Historic equipment (i.e., built before December 31, 1948) that is not used regularly in commuter or intercity passenger service is exempt from the requirements.
8. The following lead locomotives are considered to be in compliance with this rule if equipped with: (1) oscillating lights that were ordered for installation prior to January 1, 1966, is considered in compliance; (2) strobe lights and operated at speeds no greater than 40 miles per hour (until the locomotive is rebuilt); and (3) two white auxiliary lights spaced at least 44 inches apart on at least one axis which was equipped before May 30, 1994.

Appendix A- Form FRA 6180-49A (See 45 FR 21118 for a copy)

Appendix B- Penalty Schedule

Appendix C-Code of Defects(See 45 FR 211121 for a copy)

49 U.S.C. §§ 20143, 20701-20703, 21302, 21304

49 C.F.R. §§ 229.1-229.141