



Rules Respecting Key Trains and Key Routes

February 19, 2016



Railway Association
of Canada

Rules Respecting Key Trains and Key Routes

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1. Short Title

1.1 For ease of reference these rules may be referred to as “Key Train Rules”.

2. Application

2.1 These Rules apply to all companies for which they have been approved by Transport Canada.

3. Definitions

3.1 “Within Census Metropolitan Areas (CMA’s)” means population centres defined and published by Statistics Canada as core (i.e., at least 50,000 persons) and secondary core (i.e., at least 10,000 persons) of CMAs.

3.2 “**Companies**” is as defined under the *Railway Safety Act*.

3.3 “**Key Route**” means any track on which, over a period of one year, is carried 10,000 or more loaded tank cars or loaded intermodal portable tanks containing dangerous goods, as defined in the *Transportation of Dangerous Goods Act, 1992* or any combination thereof that includes 10,000 or more loaded tank cars and loaded intermodal portable tanks.

3.4 “**Key Train**” means an engine with cars:

- a) that includes one or more loaded tank cars of dangerous goods that are included in Class 2.3, Toxic Gases and of dangerous goods that are toxic by inhalation subject to Special Provision 23 of the *Transportation of Dangerous Goods Regulations*; or
- b) that includes 20 or more loaded tank cars or loaded intermodal portable tanks containing dangerous goods, as defined in the *Transportation of Dangerous Goods Act, 1992* or any combination thereof that includes 20 or more loaded tank cars and loaded intermodal portable tanks.

3.5 For the purpose of this Rule, the following terms are to be applied as described or defined in the *Rules Respecting Track Safety*:

- a) Rail flaw inspection
- b) Twice annually
- c) Annually
- d) Three times annually
- e) Electronic geometry inspection
- f) Light geometry inspection vehicle
- g) Heavy geometry inspection vehicle
- h) Walking Inspection
- i) Class 1 track
- j) Class 2 track

4. Key Trains

- 4.1 Companies must restrict Key Trains to a maximum speed of 50 miles per hour (MPH). Companies must further restrict Key Trains to a maximum speed of 40 MPH within the core and secondary core of Census Metropolitan Areas.
- 4.2 Companies must restrict Key Trains transporting one or more DOT-111 loaded tank cars containing UN1170 ETHANOL, UN1202 DIESEL FUEL, UN1203 GASOLINE, UN1267 PETROLEUM CRUDE OIL, UN1268 PETROLEUM DISTILLATES, N.O.S., UN1863 FUEL, AVIATION, TURBINE ENGINE, UN1993 FLAMMABLE LIQUID, N.O.S., UN3295 HYDROCARBONS, LIQUID, N.O.S., UN1987 ALCOHOLS N.O.S., UN3494 PETROLEUM SOUR CRUDE OIL, FLAMMABLE, TOXIC or UN3475 ETHANOL AND GASOLINE MIXTURE to a maximum speed of 40 MPH in areas identified as higher risk through the risk assessment process as required under item 6 of this Rule. The DOT-111 tank cars include those that are CPC-1232 specification.
- 4.3 Companies must communicate to operating employees where speed restrictions identified in 4.1 and 4.2 apply using appropriate location information and must include mileage. This is not required when maximum track speed is lower than or equal to the speed of the restriction.
- 4.4 Key Trains must hold the main track at meeting or passing points unless the siding track meets at a minimum Class 2 track requirements. In situations where the siding does not meet at a minimum Class 2 track requirements, a Key Train may operate on the siding at a speed not exceeding 10 MPH in the following situations:
- a) The non-Key Train is a passenger train; or
 - b) Two Key Trains are meeting or passing; or
 - c) The siding cannot accommodate the length of the non-Key Train; or
 - d) There is insufficient clearance in the siding for the non-Key Train; or
 - e) The main track is impassible; or
 - f) The Key Train is being staged; or
 - g) The crew operating the Key Train is going to be relieved because they have reached their regulated on duty time limit.
- 4.5 A company must only operate a Key Train with cars that are equipped with roller bearings.
- 4.6 A company must perform an inspection of any bearing of a Key Train reported defective by a Wayside Defective Bearing Detector (WDBD).
- a) When a bearing of a Key Train is reported defective by a WDBD, the company must bring the Key Train to a safe and controlled stop immediately after the full Key Train has been inspected by the WDBD site and a visual inspection must be performed.
 - b) If the inspection confirms that a bearing is defective the company must set off that car. The Key Train must be restricted to a safe operating speed not exceeding a maximum of 15 MPH until the car with the defective bearing is set off.

- c) If the inspection fails to confirm a defect in a bearing, a company must restrict the Key Train to a speed not exceeding 30 MPH until the next operational WDBD location.
- d) If the same bearing on a car in the Key Train is reported defective by two consecutive WDBDs, a company must set off that car from the Key Train. The Key Train must be restricted to a safe speed not exceeding 15 MPH until the car with the defective bearing is set off.

5. Key Routes

- 5.1 A company must conduct rail flaw inspections not less than twice annually on main track and subdivision track portions of Key Routes.
- 5.2 A company must conduct an electronic geometry inspection not less than twice annually on main track and subdivision track portions of Key Routes using a heavy geometry inspection vehicle. A light geometry inspection vehicle may be used in lieu of a heavy geometry inspection vehicle only as permitted in the *Rules Respecting Track Safety*. If a light geometry inspection vehicle is used in lieu of a heavy geometry inspection vehicle, inspections must be conducted not less than three times annually.
- 5.3 A company must inspect joint bars on the main track and subdivision track portions of a Key Route in continuous welded rail territory by a walking inspection or electronic inspection by means of a camera or other technology capable of detecting joint bar defects.
- 5.4 A company must have procedures in place for the repair of joint bars in continuous welded rail territory. When a repair is temporary, company procedures must indicate the frequency at which the repair will be inspected until it is permanently repaired.
- 5.5 Companies must install WDBDs on Key Routes. Companies must ensure that Key Trains do not proceed more than 40 miles on a Key Route without having received a valid inspection by a WDBD, or a passing inspection on both sides of the Key Train as per Rule 110 of the *Canadian Rail Operating Rules*, or a pull-by inspection on both sides of the Key Train by the Key Train crew. The results of the passing inspection must be communicated to the Key Train crew and recorded by the Key Train crew to be considered a valid inspection.

6. Key Route Risk Assessments

- 6.1 Companies shall conduct risk assessments and periodic updates based on significant change to determine the level of risk associated with each Key Route over which Key Trains are operated by the company. These Key Route Risk Assessments must be conducted for all Key Routes, at a minimum, every three (3) years and must, at a minimum:
 - a) define each Key Route using appropriate location information such as subdivision or spur names and relevant mile ranges;
 - b) identify and describe all relevant safety and security related risks associated with each Key Route;
 - c) identify, evaluate and compare alternative routes, over which the company has authority to operate;

- d) identify areas of higher risk where the speed restriction referred to in 4.2 may apply;
- e) factor potential or future significant railway operational changes such as new customers moving goods subject to an Emergency Response Assistance Plan under the *Transportation of Dangerous Goods Act, 1992* and population growth;
- f) identify and define the factors taken into account in assessing the safety and security related risks associated with each Key Route including:
 1. Annual volumes and types of dangerous goods being transported by class and division;
 2. Rail traffic density;
 3. Trip length for route;
 4. Presence and characteristics of railway facilities;
 5. Track type, class, and maintenance schedule;
 6. Track grade and curvature;
 7. Presence or absence of signals and train control systems along the route (“dark” versus signaled territory);
 8. Presence or absence of wayside hazard detectors;
 9. Number and types of grade crossings;
 10. Single versus double track territory;
 11. Frequency and location of track turnouts;
 12. Proximity to iconic targets and natural hazards;
 13. Environmentally sensitive or significant areas;
 14. Population density along the route;
 15. Venues along the route (stations, events, places of congregation);
 16. Emergency response capability and capacity along the route including training of local fire services and municipalities with respect to the volumes and types of dangerous goods being transported;
 17. Areas of high consequence along the route;
 18. Presence of passenger traffic along route (shared track);
 19. Speed of train operations;
 20. Proximity to en-route storage or repair facilities;
 21. Known threats, including any non-public threat scenarios;
 22. Measures in place to address apparent safety and security risks including those pertaining to situations and locations where unattended equipment could move uncontrollably should its means of securement fail;
 23. Availability of practicable alternative routes;
 24. Past incidents;
 25. Overall times in transit;
 26. Training and skill level of crews;
 27. Impact on rail network traffic and congestion; and
 28. Geohazards.

7. Consultations with Municipal and Other Levels of Local Government

7.1 Companies will incorporate input from municipal and other levels of local government on safety and security concerns in Key Route risk assessments using the following process.

- a) Companies will provide contact information through a publicly-accessible web site, as well as to the Federation of Canadian Municipalities. The Chief Administrative Officer (CAO) or designate of a municipal or other level of local government can use the contact information to submit safety and security concerns for companies to consider in Key Route risk assessments.
- b) Companies will respond to municipal or other levels of local government regarding, for example, how the risks they have identified are being mitigated. In all cases, companies will acknowledge receipt.
- c) Paragraph (b) does not require companies to disclose information that is deemed confidential by the company if the CAO, or the designate, of the municipal or other level of local government has not undertaken in writing to:
 - i. Disclose the information only to those persons who need to know; and
 - ii. Keep the information confidential and ensure any person to whom the CAO, or the designate, has disclosed the information keeps it confidential, to the maximum extent permitted by law.
- d) Companies will keep records of comments and concerns regarding safety and security from municipal or other levels of local government, as well as any company responses to the municipal or other levels of local government regarding these comments and concerns for a period of seven years.



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