# Table of Contents

General: 3  
1. Inspection 3  
2. Placarding 3  
3. Documentation 3  
4. Train Consists 6  
5. Train Consists 7  
6. Marshalling 7  
7. Emergency Measures 9  
8. Special Dangerous Commodities 10  
9. US Position in Train Chart 11  
10. Key Trains (Canada ONLY) 13
TRANSPORTATION OF DANGEROUS GOODS BY RAIL

General:

The Transportation of Dangerous Goods Act and Regulations govern the transportation of dangerous goods by rail. Violation of these regulations can result in fines or conviction. Crews destined to the U.S. must have a copy of the NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK accessible.

Crewmembers must carry a valid Dangerous Goods Training Certificate while on duty.

1. Inspection

Before lifting dangerous goods cars from shippers tracks, in addition to the inspection requirements of G.O.I section 5 item “Inspection of standing equipment”, where applicable, crews must visually inspect (from a position on the ground) to ensure all closers and openings are in place and secure.

2. Placarding

a) Before lifting dangerous goods cars from shippers or interchange tracks, crews must have verification, or inspect to ensure that the required number of placards are affixed to the car, and with the exception of mixed loads (DANGER placard), the placards indicate the class of the commodity as shown on the shipping documents.

b) Placards will be displayed on both sides and both ends of a rail car, including each compartment of a compartmentalized tank.

Exception: Placards will be clearly visible on both sides of Containers, trailers and other large means of containment containing dangerous goods, being transported on rail cars.

c) Missing or damaged placards must be promptly reported to those who will arrange for replacement.

3. Documentation

A. (i) When lifting from shipper tracks or interchange tracks, and while enroute, crews are responsible to be in possession of the shipping document for each loaded or residue dangerous goods car.
(ii) An SRS waybill (follower lines on Train Lists) is an acceptable shipping document for any loaded or residue dangerous goods car/intermodal traffic.

(iii) If the SRS waybill information-shipping document does not meet all the TDG requirements, the shipment will require a separate shipping document to accompany the car.

(iv) The shipping document may not indicate whether the car contains a “Special Dangerous Commodity”. When a loaded placarded car is lifted enroute, and a consist or other means is not available to indicate that the car is not a “Special Dangerous Commodity”, such car must be handled applying “Special Dangerous Commodity” speed restrictions and inspection instructions until such time as it can be verified otherwise.

B.

(i) Possession of documentation by the crew is not applicable when switching in make up yards, or where cars are being switched onto trains or into classification tracks provided the required documentation is available at the responsible railway office.

(ii) Where Dangerous goods cars are to be placed/pulled on/from a consignee’s track within a yard or a terminal area, the crew must be in possession of the shipping document for each dangerous goods car. Switch lists can be generated containing the required shipping document if a separate shipping document is not provided.

c) Unless relieved of the responsibility, crews are responsible for leaving such documentation at designated locations when setting out or placing cars.

Note: Crews may be relieved of this responsibility:

− when setting out cars, (e.g bad order or set off) provided that the shipping document is available at the responsible railway office;

− when placing cars on a customers track, the shipping document has been delivered to the consignee or the interchange railway.

d) Whenever a car containing dangerous goods is set off, the RTC will instruct a crew member as to the disposition of the documentation.

e) After leaving a terminal, if the required documentation is lost, or it is discovered that a dangerous goods car is in their movement without the required documentation, the RTC must be notified. The crew will be provided details of the commodity in the form of a “Radio Waybill” with the applicable items shown below copied by a crew member. This information will be retained until the proper required documentation is provided to the crew.
The following instructions apply to carloads which are considered “Railway Security Sensitive Material” and may or will operate through, or be lifted or placed at a customer siding, within a High Threat Urban Area (HTUA) within the U.S.

(i) FOLLOWER LINE: These carloads will be identified on all train lists with a follower line that indicates "RSSM".

(ii) CHAIN OF CUSTODY: A documented chain of custody requirement is now mandated. These identified carloads (RSSM) must be "attended" on hand-off and/or receipt with a customer or other railway and a transfer of custody recorded. That is, when lifting or placing cars on a customer siding, delivering or...
receiving to/from a foreign railway directly or in interchange, with RSSM carloads present, the involved crew at the time must identify the receiver or delivering party, and both parties must sign-off and keep record of the transfer of custody of the carloads. The one exception to this requirement occurs where the final destination for the car is to a customer outside of a HTUA, in which case attendance and a chain of custody report is not required.

(iii) DOCUMENTATION: All train lists with RSSM carloads present will have a pre-printed form identified as the "RSSM - Transfer of Custody Supplemental Work Order" which will list all RSSM carloads and provide a form outlining date-time-location-number of RSSM carloads-delivering employee and accepting employee. The header or summary page of all train journals will have a field identifying if the movement has any RSSM carloads present, providing a total number. In addition the presence of a follower line will identify each individual carload on any train list. The conductor of the movement handling or receiving RSSM identified carloads will be responsible to ensure proper compliance and record as required by the regulation is achieved. The "Transfer of Custody Record" must be delivered with the train journal, at the normal locations where train journals are now turned in. It will be kept on record for 60 days.

4. Train Consists

a. Crews shall have in their possession a document indicating the position of each placarded car in their train. When the position is changed, (e.g. cars lifted or set off) or a placarded car is placed in the train, the document must be kept up to date and modified to indicate the change.

b. Any lifts or set-offs must be identified on the original document. In the case of an enroute lift, where a list of cars is provided, it must be verified for accuracy and included with the original document which must have a written insertion mark as indication of where the cars were placed in the train or transfer. The Conductor must sign the document as indication of correctness and as required by regulation or for use by emergency personnel. A train consist, switch list, or other prepared document may be used to meet this requirement.

c. When lifting, and a train list, switch list, or other prepared document is not provided for the car(s) lifted, the following must be recorded on the train’s existing list:

- The car initial and number;
- UN number (for a car containing one commodity) or the words “dangerous goods” for a car which contains more than one commodity. (e.g. mixed load)
Carloads in the Toxic Inhalation Hazard (TIH) category, are restricted to a maximum speed of 50 MPH while in transit within the U.S. A follower line on all train lists will include the information: '50 MPH in USA'.

5. **Switching** (Note: these restrictions are in addition to those restrictions contained in CROR Rules 112 to 116)

   a) Humping operations will be governed by the HPCS procedures outlined in Terminal Manuals.
   
   b) Any impact suspected of being in excess of 6 MPH, with or onto a dangerous goods car must be promptly reported to the appropriate supervisor for furtherance.
   
   c) Cars in class Explosive 1.1, 1.2 or Poison gas 2.3 must not be placed under a bridge or overpass, nor in or alongside a passenger station.
   
   d) Unless further restricted by special instruction, handbrakes must be applied on placarded dangerous goods cars placed for loading or unloading.

   Note: This instruction is also applicable on tracks where the use of handbrakes is not required.

   e) AAR 204 and DOT 113 specification tank cars will have a follower line indicating these cars must NOT be:

      - uncoupled while in motion;
      - coupled into with more force than necessary to complete the coupling; or
      - struck by any railway vehicle moving under it's own motion.

   These cars are stencilled accordingly.

6. **Marshalling**

   Note 1: Any movement, which will enter the U.S., must be marshalled in accordance with U.S. Regulations (49 CFR). U.S. marshalling requirements are provided in the U.S. Position in Train Chart (item 8.0) at the end of this section.

   Note 2: Unless relieved by follower line on Switch lists (e.g. no marshalling required UN/NA 2448 Molten Sulphur), these marshalling restrictions apply to all placarded cars (loads and residues) on movements which will exceed 15 MPH.

   a) General Restrictions - Any placarded dangerous goods car must not be marshalled next to:

      - an operating locomotive; (unless all cars in the train have a placard)
      - any occupied car; (unless all other cars in the train have a placard)
      - a car equipped with a heating or cooling device or has a source of ignition;
      - any open top car;
when the lading protrudes beyond the car and may shift during transport, or
when the lading is higher than the top of the car and may shift during transport.

b) Marshalling Chart - Placarded dangerous goods cars are subject to the following marshalling group restrictions in addition to general restrictions.

<table>
<thead>
<tr>
<th>DANGEROUS GOODS MARSHALLING GROUP</th>
<th>Must not be next to</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group A</td>
</tr>
<tr>
<td>Group A: Explosive 1.1, and 1.2</td>
<td>X</td>
</tr>
<tr>
<td>Group B: (If handled, see list below)</td>
<td>X</td>
</tr>
<tr>
<td>Group C: Explosive classes 1.3 to 1.6</td>
<td>X_{(1)}</td>
</tr>
<tr>
<td>Group C: Classes 2, 3, 4 and 5</td>
<td>X_{(1)}</td>
</tr>
<tr>
<td>Group D: Classes 6, 7, 8, 9 and Mixed Loads</td>
<td>Only General Restrictions (a) as above.</td>
</tr>
</tbody>
</table>

6.1 Marshalling Chart Footnotes:

(1) not applicable to explosives Classes 1.3 to 1.6
(2) not applicable if the next car has the same UN number.
List of Group B Dangerous Goods

UN 1008, CLASS 2.3   UN 1026, CLASS 2.3
UN 1051, CLASS 6.1   UN 1076, CLASS 2.3
UN 1067, CLASS 2.3   UN 1589, CLASS 2.3
UN 1614, CLASS 6.1   UN 1660, CLASS 2.3
UN 1911, CLASS 2.3   UN 1975, CLASS 2.3
UN 2204, CLASS 2.3   UN 2188, CLASS 2.3
UN 2199, CLASS 2.3   UN 3294, CLASS 6.1

c) Marshalling of plain bearing cars
   When there are plain bearings ahead, loaded dangerous goods cars must be marshalled:

- within the first 2000 feet on trains 4000 ft. or less; or,
- must not be in the last 2000 ft. on trains over 4000 ft.

d) Marshalling of placarded trailers/containers on intermodal rail cars.

Containers/Trailers placarded as “Explosives 1.1, 1.2, or “ Radioactive class 7” must be
loaded/marshalled on an intermodal railcar so it will NOT be the first platform/car next to the
locomotive, and in addition, explosives 1.1 and 1.2 must not be loaded/marshalled next to a container/trailer/car which has a mechanical heating/cooling device.

For trains destined to the U.S., Explosives 1.1 and 1.2” must be loaded/marshalled on an
intermodal railcar so it will NOT be nearer than the sixth platform/ car next to the locomotive.

7. Emergency Measures

a) A dangerous goods car discovered leaking must not be moved without authority and be kept away from switch heaters, engines, occupied passenger equipment, or any car, container, or trailer with an operating mechanical heating/ cooling device.

b) When it has been determined that dangerous goods are involved in an incident, the following procedures must be followed:

   (i) Protect the movement and notify the RTC, Transportation Supervisor, or Yard Coordinator where applicable;

   (ii) Keep clear of the incident scene and when possible, remain up wind of cars suspected of containing dangerous goods;

   (iii) Take immediate action to warn other employees and, if necessary, the public;
(iv) Avoid any unnecessary exposure to smoke or fumes and keep all open flames and smoking material away from the incident;

(v) Determine as quickly as possible what cars are directly involved in the incident, as well as those in close proximity to them;

(vi) Identify commodities involved from information contained in shipping documents;

(vii) If the locomotive consist is not directly involved, and it is safe to do so, the movement should be cut as close as possible to the incident location and the remaining cars moved a safe distance;

(viii) Provide the RTC Transportation Supervisor, or Yard Coordinator all pertinent information for the cars of dangerous goods involved in the incident such as:

- car number(s);
- contents;
- 24 hr. emergency phone numbers;
- condition of cars e.g. leaking, on fire etc.

(ix) The RTC Transportation Supervisor, or Yard Coordinator will inform crews of emergency action to be taken to minimize the effect of the dangerous goods involved.

(x) Documentation accompanying the cars involved must remain at the scene and be made available to emergency response authorities. Employees must retain possession of the documentation until relieved of that responsibility by a railway officer.

(xi) Employees must not speculate on the cause and should only provide pertinent information.

8. **Special Dangerous Commodities**

a) Movements carrying one or more loaded Special Dangerous Commodities will be governed by Timetable Subdivision Footnotes under the heading “Special Dangerous Commodities”.

b) Special Dangerous Commodities will be identified on consists by the follower line “SPD - Special Commodity - 35 MPH in Canada”. The shipping document may not indicate whether the car contains a “Special Dangerous Commodity”. When a placarded car is lifted enroute, and a consist or other means is not available to indicate that the car is not a “Special Dangerous Commodity”, such car must be
handled applying “Special Dangerous Commodity” speed restrictions and inspection instructions until such time as it can be verified otherwise.

c) Conductors will ensure that other members of the train crew are aware that Special Dangerous Commodities are part of the movement. Conductors will also ensure that the RTC is aware that Special Dangerous Commodities are being handled in their movement:

(i) upon departure from the station where their train was ordered,

(ii) when Special Dangerous Commodities are picked up enroute.

d) When an inspection is required or when performed in lieu of a speed restriction in compliance with the Timetable Subdivision Footnotes pertaining to Special Dangerous Commodities, it must be performed within one mile of the mileage indicated in timetable footnotes.

(i) A movement may be inspected by a hotbox or dragging equipment detector. When such inspection is not performed, an inspection of the equipment affected must be done at a speed not exceeding 5 MPH by one of the following:

- Mechanical department car inspectors; or
- Crews of standing trains or transfer movements; or
- Pull-by inspection by crew members; or
- Walking inspection while the movement is stopped.

(ii) Such inspection may be confined to the portion of the train or transfer movement from the front, back to and including the second car behind the last special dangerous commodity car. The Rail Traffic Control Centre must be notified if speed is to be reduced or the movement is to be stopped for inspection in compliance with these instructions.

9. US Position in Train chart

e) In the event of the failure of a Hot Box or Dragging Equipment Detector which protects a populated area (census metropolitan area), the Rail Traffic Control Centre will provide instructions with regards to the inspection requirements for that movement.
10. Key Trains (Canada ONLY)

a. KEY TRAIN Definition

Movements carrying any one or combination of the following:

- One (1) or more tank car loads of Poison or Toxic Inhalation Hazard (PIH or TIH) (Hazard Zone A, B, C, or D), anhydrous ammonia (UN1005), or ammonia solutions (UN 3318);
- One (1) or more car loads of spent nuclear fuel (SNF) or high level radioactive waste (HLRW);
- A combination of twenty (20) or more car loads or intermodal portable tank loads of any combination of dangerous goods.

b. Identifying Key Trains:

The train consist must contain a “Key Train” status marking. The crew will ensure it is printed or hand written on the consist.

When a train journal is not available, or dangerous goods cars are picked up or set out, the conductor must review the shipping papers for all dangerous goods cars and determine Key Train status. If the Key Train status changes the RTC must be promptly notified.

c. Instructions for operating Key Trains:

Key Trains must hold the main track at meeting or passing points when the maximum speed in the siding is 10 mph or less.

Exception: a Key train may operate on any siding if:

a) the non-Key Train is a passenger train;
b) two Key Trains are meeting or passing;
c) non-Key Train exceeds siding length;
d) there is insufficient clearance in the siding for the non-Key Train;
e) the main track is impassible;
f) the Key Train is being staged; or

the crew operating the Key Train is going to be relieved because they have reached their regulated on duty time limit.

Cars not equipped with roller bearings are restricted from operating in a Key train.

If a defective bearing (hot box) is identified by a WIS detector and confirmed by crew inspection, the car must be set out or, if required, the train may operate at a safe speed not exceeding 15 MPH until the car with the defective bearing is set out. If a defective bearing (hot box) is identified by a WIS detector and
nothing is found during crew inspection, the movement must not exceed 30 MPH until that identified rail car has received an inspection over the next working WIS detector. If a defect in a bearing of the same car is reported by two consecutive WIS detectors, the car must be set out or must operate the Key Train at a safe speed not exceeding 15 MPH until the car with the defective bearing is set out.

Unless relieved of the requirement to do so by the operating railroad’s Rail Traffic Controller, the crew operating a speed restricted Key Train on a foreign railroad must, at the earliest opportunity, notify the foreign railroad’s Rail Traffic Controller that the train is a speed restricted Key Train as defined by the operating railroad.

d. Key Routes

When operating on “Key Routes” identified in special instructions, Key Trains must not proceed more than 40 miles without having received an inspection on both sides of the train by:

- Hot box component of a Wayside Inspection system
- Roll-by by wayside employees’
- Roll-by by crews of standing trains or transfer movements
- Roll-by or walking inspection by crew member

When required to use an inspection other than a WIS inspection to comply with the 40 miles restriction, crews must notate the location and results of the inspection on the train journal.