



# IMPLEMENTATION GUIDE FOR AUTOMATE

## Automated Release, Switch & Re-sequence

This document explains the procedures to provide data directly from a computer to CN's systems for the purpose of releasing, or switching and resequencing railcars.

April 2018

# Table of Contents

- Introduction ..... 2
- Input Format – Release ..... 3
- Input Format – Release of defective railcar, including grain product loss ..... 4
- Input Format – Switch & Re-sequence ..... 6
- Release Codes ..... 7
- Transaction Examples ..... 8
- Release Output Format ..... 10
- Release Fault Format ..... 10
- Technical Documentation ..... 11

# Introduction

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## I. Purpose

This document describes the exchange of information between your system and CN's system for the purpose of releasing, switching and re-sequencing cars.

## II. Traffic Applicable

This capability relates to railcar shipments only. Transactions for Intermodal containers is not supported.

## III. Capabilities

This system will allow you to report to CN:

<b>Release</b>	The release of an empty railcar
	The release of a loaded railcar
	The release of an empty or loaded railcar and indicate that it is defective (bad order)
	The release of an empty railcar and indicate that it is defective (bad order) AND grain product was lost in transit
<b>Switch &amp; Re-sequence</b>	The current track and sequence of railcars, when you have moved the railcars from where CN left them

## IV. Not Supported

The following items are not supported in this system:

- Release of a car rejected for loading. For that capability you must use the Release Railcars tool on the CN eBusiness website.
- Providing Shipping Instructions in order to release loaded railcars. The eBusiness tool, Shipping Instructions, or EDI404 must be used to provide shipment details.

## V. Timing

To be effective this exchange must take place immediately after the shipment has been determined as loaded or emptied within your system.

## VI. Process

This system has three basic exchanges defined:

- Input, which contains all the data being provided to CN
- Output, which contains confirmation of all input, including any application edits that have failed
- Transmission Fault, to communicate any syntactical or data transport failures

# Input Format – Release

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## I. Introduction

This section describes the main data and format of the input message for releasing railcars that are in normal condition.

## II. Purpose

The purpose of this exchange is to report to CN the release of railcars as loaded or empty. The release notifies CN that railcars are ready for pick up. If railcars are no longer on the same track or in the same position on the track where CN placed them, this transaction can be used to release the railcars and as well as to indicate their new track (Switch) and/or new position (Re-sequence) on the track.

## III. Required Data

The following data is mandatory for the release transaction to be processed:

- Equipment Initials
- Equipment Number
- Loaded or Empty

## IV. Optional Data

The following data may be provided. If it is not provided, the default will apply.

Data	Description	Default												
Release Date & Time		Current time												
Release track	Must be populated if indicating that the railcar is on a different track than the track where CN placed it.	Current track												
After Car Initials	Must be populated if indicating that the railcar's position on the track, is different than where CN placed it.	Current position												
After Car Number	Must be populated if indicating that the railcar's position on the track, is different than where CN placed it	Current position												
Lid Number	Lid number must be populated when releasing CN gondolas covered with Ecofab lids													
Release Detail	When a Release Code is provided, up to 215 characters can be entered to describe the problem with the railcar.													
Residue Weight	Specify the residue weight for releasing empty gondolas, hoppers and tanks originating in Canada. Zero weight is considered empty													
Residue Unit of Measure	<table border="1"><thead><tr><th>Code</th><th>Description</th></tr></thead><tbody><tr><td>KG</td><td>Kilograms</td></tr><tr><td>LB</td><td>Pounds</td></tr><tr><td>ST</td><td>Short Tons</td></tr><tr><td>LT</td><td>Long Tons</td></tr><tr><td>MT</td><td>Metric Tons</td></tr></tbody></table>	Code	Description	KG	Kilograms	LB	Pounds	ST	Short Tons	LT	Long Tons	MT	Metric Tons	
Code	Description													
KG	Kilograms													
LB	Pounds													
ST	Short Tons													
LT	Long Tons													
MT	Metric Tons													
Version	If you have not yet included changes regarding residue return, then version should be 0	1												

# Input Format – Release of defective railcar, including grain product loss

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## I. Introduction

This section describes the main data and format of the input message for releasing railcars that are defective (bad order).

## II. Purpose

The purpose of this exchange is to report to CN the release of railcars that are defective. This notifies CN that railcars are ready for pick up and that the railcars are in need of repair. If railcars are no longer on the same track or in the same position on the track where CN placed them, this transaction can be used to release the railcars as well as to indicate their new track (Switch) and/or new position (Re-sequence) on the track.

## III. Required Data

The following data is mandatory for the release of defective railcars to be processed:

- Equipment Initials
- Equipment Number
- Loaded or Empty
- Release Code (see section “Release Codes” for the applicable code)

## IV. Optional Data

The following data may be provided. If it is not provided, the default will apply.

Data	Description	Default												
Release Date & Time		Current time												
Release track	Must be populated if indicating that the railcar is on a different track than the track where CN placed it.	Current track												
After Car Initials	Must be populated if indicating that the railcar’s position on the track, is different than where CN placed it.	Current position												
After Car Number	Must be populated if indicating that the railcar’s position on the track, is different than where CN placed it	Current position												
Lid Number	Lid number must be populated when releasing CN gondolas covered with Ecofab lids													
Release Detail	When a Release Code is provided, up to 215 characters can be entered to describe the problem with the railcar. Must be populated when using Release Code ‘BQ’ (grain product loss)													
Residue Weight	Specify the residue weight for releasing empty gondolas, hoppers and tanks originating in Canada. Zero weight is considered empty													
Residue Unit of Measure	<table border="1"> <thead> <tr> <th>Code</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>KG</td> <td>Kilograms</td> </tr> <tr> <td>LB</td> <td>Pounds</td> </tr> <tr> <td>ST</td> <td>Short Tons</td> </tr> <tr> <td>LT</td> <td>Long Tons</td> </tr> <tr> <td>MT</td> <td>Metric Tons</td> </tr> </tbody> </table>	Code	Description	KG	Kilograms	LB	Pounds	ST	Short Tons	LT	Long Tons	MT	Metric Tons	
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KG	Kilograms													
LB	Pounds													
ST	Short Tons													
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MT	Metric Tons													

Version	If you have not yet included changes regarding residue return, then version should be 0	1
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# Input Format – Switch & Re-sequence

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## I. Introduction

This section describes the main data and format of the input message for reporting to CN the track and position of railcars.

## II. Purpose

The purpose of this exchange is to report to CN the current track and sequence of railcars, when you have moved the railcars from where CN left them. Note: This transaction will only report the new location of the railcars, it will not perform a release.

## III. Required Data

The following data is mandatory for the switch and re-sequence to be processed:

- Equipment Initials
- Equipment Number
- Release Track
- After Car Initials (blank indicates the car is positioned in the front of the track)
- After Car Number (blank indicates that car is positioned in the front of the track)
- Load or Empty
- Release Code (SW)

## IV. Optional Data

The following data may be provided. If it is not provided, the default will apply.

Data	Description	Default
Release Date & Time		Current time

# Release Codes

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## I. Release Empty Defective

One of the following codes should be provided when releasing an empty car that is defective (bad order):

Code	Description
BA	Release-Side Doors (Box Type Cars)
BC	Release-Wood Lining
BD	Release-Account Dirty
BE	Release-Bulkheads Defective
BG	Release-Bad End Gates
BJ	Release-Floor Defective
BL	Release-Hatch Covers
BP	Release-Roof Defective
BQ	Release-Grain Product Loss
BS	Release-Hopper Gates Defective
BV	Release-Unloading System
BW	Release-Lining Hopper
DE	Release-Declared Empty
CP	Release-Car has been cleaned/purged

## II. Release Load Defective

One of the following codes should be provided when releasing a loaded car that is defective (bad order):

Code	Description
BM	Reject-Unloading System-Full Load
BN	Reject-Unloading System-Partial Load

## III. Switch & Re-sequence

This code should be provided when reporting the switching and re-sequencing of railcars. If no After Car Initials and After Car Number is specified, then the car will be moved to the head of the track.

Code	Description
SW	Switch and Re-sequence



# Transaction Examples

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## I. Release Empty Defective Railcar (Bad Order)

```
<SROReleaseRequest> <UserName>username</UserName> <Version>1</Version >
<ReleaseSummary>
<Date>20180421</Date>
<Time>13:09</Time>
</ReleaseSummary>
      <EquipmentReleaseDetail>
        <EquipmentInfo>
<EquipmentInitials>BN</EquipmentInitials>
<EquipmentNumber>500390</EquipmentNumber>
      <ReleasedTrack>EJ61</ReleasedTrack>
        </EquipmentInfo>
      <LoadEmpty>EMPTY</LoadEmpty>
      <LidNumber>FC1234</LidNumber>
      <ReleaseCode> BP </ReleaseCode >
      <ReleaseDetail>side door is sticky</ ReleaseDetail>
      <ResidueWeight>
      <Weight>1500</Weight>
      <WeightUOM>KG</WeightUOM>
      </ ResidueWeight >
        </EquipmentReleaseDetail>
</SROReleaseRequest>
```

## II. Switch & Re-Sequence

```
<SROReleaseRequest>
<UserName>username</UserName>
<Version>1</Version >
<ReleaseSummary>
<Date>20180421</Date>
<Time>13:09</Time>
</ReleaseSummary>
  <EquipmentReleaseDetail>
    <EquipmentInfo>
<EquipmentInitials>BN</EquipmentInitials>
<EquipmentNumber>500390</EquipmentNumber>
      <ReleasedTrack>EJ61</ReleasedTrack>
      <AfterCarInitials> UTLX </ AfterCarInitials>
      <AfterCarNumber> 156151 </ AfterCarNumber>
    </EquipmentInfo>
    <LoadEmpty>EMPTY</LoadEmpty>
    <ReleaseCode> SW </ReleaseCode >
  </EquipmentReleaseDetail>
</SROReleaseRequest>
```

# Release Output Format

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## I. Introduction

This section describes the response to a request.

## II. Purpose

The purpose of this exchange is to provide positive response on all equipment requested for processing. It provides either an acceptance or rejection message for each railcar. Where there is a rejection an error code is returned.

## III. Data Provided

The output consists of two components:

- Header, which confirms the date and time, track, and number of cars processed.
- Details, which provides the equipment ID processed and its status

# Release Fault Format

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## I. Introduction

This section describes the data exchange fault notification process. This message relates only to the syntax of the message and not the content validity.

## II. Purpose

Provides notification if there is a problem with the exchange of the data across the Internet.

## III. Data Provided

This exchange provides:

- Error code
- Error description

## IV. When Sent

This exchange is only sent if there is an error encountered.

# Technical Documentation

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## XML & WSL Documentation

<https://www.cn.ca/-/media/Files/Customer%20Centre/Customer-Centre-Documents/automated-railcar-release-WSDL-and-XML-documentation-en.pdf>

## Error Codes

This link provides a list of the error codes, their meaning, and possible corrective action.

These codes are generated by the application that is processing the release request. Syntactical errors will be generated by the Release Fault exchange.

<https://www.cn.ca/-/media/Files/Customer%20Centre/Customer-Centre-Documents/automated-railcar-release-error-codes-en.pdf>