



**Implementation Guide
Rail Carrier Waybill Interchange message**

EDI 417

Version 8050

Purpose of EDI 417 Rail Carrier Waybill Interchange message

The EDI 417 Rail Carrier Waybill Interchange message can be used to provide a rail carrier or customer with detailed movement instructions pertinent to a rail carrier shipment and is used by all Class 1 rail carriers in the US, Canada, and Mexico.

EDI Version & Guidelines

The EDI 417 closely complies with the Accredited Standards Committee X12. We are currently sending EDI 417 in Version 8050.

Connection to CN

CN has a secure MFT server <https://mftedi.cn.ca/> or we can push to an FTP server if you require. CN also connects with all major VAN's (Value Added Networks) and interconnects can be made available.

CN Contact

The **EDI Onboarding team** email address is EDIMGR@cn.ca. You can also visit us at www.cn.ca.

Rail Carrier Waybill Interchange Mapping Guide (EDI 417)

This section contains the details of the EDI 417 message format.

Example EDI 417 message

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ISA*00*      *00*      *02*CN      *ZZ*GENERIC      *250110*1339*      U*00805*006298413*0*P*>
GS*WB*CN*GENERIC*20250110*1336*98826*X*008050
ST*417*988260001
BX*00*R*PP*1257*CN*L*B*N****N
BNX*R**S
N9*BM*1257**20250110*1336
DTM*168*20250110*1336*ET
N7*CN*123456*213360*N*66700*****RR****6711*M*****186*128***C214
M7*12345
N8*111111*20250110
F9*070112*WATSON*SK****071511*S0K4V0
D9*093390*VANCOUVER*BC*****0093900*V5T1E1
N1*SH*GENERIC CARLOAD INC*C5*11111111111111
N3*123 FIRST ROAD
N4*WATSON*SK*S0K 4V0*CA
PER*IC*CONTACT NAME*TE*123-123-1234
N1*CN*GENERIC CONSIGNEE CO*C5*22222222222222
N3*12 SMITH STREET
N4*VANCOUVER*BC*V5K 1P7*CA
N1*PF*GENERIC CARLOAD INC*C5*11111111111111
N3*123 FIRST ROAD
N4*WATSON*SK*S0K 4V0*CA
R2*CN*S****R
LX*1
L5*1*WALLBOARD*3275440*T
L0*1***213360*N***1*CLD
MEA*AI*VOL*250.6041*CR***15
MEA**VWT*0.7167*KC***15
SE*31*988260001
GE*1*98826
IEA*1*006298413
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ISA Segment: Interchange Control Header

ISA*00* *00* *02*CN *ZZ*GENERIC *250110*1339*U*00805*006298413*0*P*>

Ref. Des.	Name	Data Element	Attributes
ISA01	Authorization Information Qualifier	I01	ID 2/2
ISA02	Authorization Information (Ten spaces)	I02	AN 10/10
ISA03	Security Information Qualifier	I03	ID 2/2
ISA04	Security Information	I04	AN 10/10
ISA05	Interchange ID Qualifier	I05	ID 2/2
ISA06	Interchange Sender ID (CN - fill out field with spaces)	I06	AN 15/15
ISA07	Interchange ID Qualifier (If RR SCAC use 02)	I05	ID 2/2
ISA08	Interchange Receiver ID (GENERIC- fill out field with spaces)	I07	AN 15/15
ISA09	Interchange Date (YYMMDD)	I08	DT 6/6
ISA10	Interchange Time (HHMM)	I09	TM 4/4
ISA11	Repetition Separator (Suggest “^”)	I65	1/1
ISA12	Interchange Control Version Number (Value 00803)	I11	ID 5/5
ISA13	Interchange Control Number (a control number assigned by sender)	I12	N0 9/9
ISA14	Acknowledgment Requested (0 = none requested) (1 = requested)	I13	ID 1/1
ISA15	Usage Indicator (P = Production) (T = Test)	I14	ID 1/1
ISA16	Component Element Separator (Suggest “:”)	I15	1/1

GS Segment: Functional Group Header

GS*WB*CN*GENERIC*20250110*1336*98826*X*008050

Ref. Des.	Name	Data Element	Attributes	
GS01	Functional Identifier Code (WB= Rail Carrier Waybill Interchange (417))	479	ID	2/2
GS02	Application Sender's Code	142	AN	2/15
GS03	Application Receiver's Code	124	AN	2/15
GS04	Date (YYYYMMDD)	373	DT	8/8
GS05	Time (HHMM)	337	TM	4/8
GS06	Group Control Number (Assigned number originated and maintained by CN)	28	N0	1/9
GS07	Responsible Agency Code (X=Accredited Standards Committee X12)	455	ID	1/2
GS08	Version / Release / Industry Identify	480	AN	1/12

ST Segment: Transaction Set Header

To indicate the start of a transaction set and to assign a control number.

ST*417*988260001

Ref. Des.	Name	Data Element	Attributes	
ST01	Transaction Set Identifier Code (417=Rail Carrier Waybill Interchange)	143	ID	3/3
ST02	Transaction Set Control Number (Sequential control number generated by CN)	329	AN	4/9

BX Segment: General Shipment Information**BX*00*R*PP*1257*CN*L*B*N****N**

Ref. Des.	Name	Data Element	Attributes
BX01	Transaction Set Purpose Code (00 = Original)	353	ID 2/2
BX02	Transportation Method/Type Code (R = Rail)	91	ID 1/2
BX03	Shipment Method of Payment (PP = Prepaid)	146	ID 2/2
BX04	Shipment ID Number (1257)	145	AN 1/30
BX05	Standard Carrier Alpha Code (CN = CN Rail)	140	ID 2/4
BX06	Weight Unit Code (L = Pounds)	188	ID 1/1
BX07	Shipment Qualifier (B = Bill of Lading for Individual Shipment)	147	ID 1/1
BX08	Section Seven Code (N=not in effect)	226	ID 1/1
BX12	Confidential Billing Request Code (N=not applicable)	199	ID 1/1

BNX Segment: Rail Shipment Information**BNX*R**S**

Ref. Des.	Name	Data Element	Attributes
BNX01	Shipment Weight Code (R = Rail Carrier Scale)	460	ID 1/1
BNX03	Billing Code (S = Single Shipment Billing)	11	ID 1/1

N9 Segment: Extended Reference Information

At least one N9 containing a Bill of Lading number must be included. This number will be included on all other documents such as Freight Invoice and Remittance/Payment.

N9*BM*125720250110*1336**

Ref. Des.	Name	Data Element	Attributes	
N901	Reference Number Qualifier (BM = Bill of Lading number)	128	ID	2/3
N902	Reference Number (Max 15 characters for B/L # (N9*BM))	127	AN	1/30
N904	Date (CCYYMMDD, required for B/L (N9*BM))	373	DT	8/8
N905	Time (HHMM, 24-hour clock 0001-2359 or HHMMSS or HHMMSSD or HHMMSSDD H=hours 00-23 M=minutes 00-59 S=seconds 00-59 DD=decimal seconds in tenths and hundredths 00-99)	337	TM	4/8
N906	Time Code	623	ID	2/2

DTM segment: Date/Time Reference

DTM*168*20250110*1336*ET

Ref. Des.	Name	Data Element	Attributes	
DTM01	Date/Time Qualifier (168=Release)	374	ID	3/3
DTM02	Date (CCYYMMDD)	373	DT	8/8
DTM03	Time (HHMM, 24-hour clock 0001-2359 or HHMMSS or HHMMSSD or HHMMSSDD H=hours 00-23 M=minutes 00-59 S=seconds 00-59 DD=decimal seconds in tenths and hundredths 00-99)	337	TM	4/8
DTM04	Time Code (ET=eastern time)	623	ID	2/2

N7 Segment: Equipment Details

N7*CN*123456*213360*N*66700***RR****6711*M****186*128***C214**

Ref. Des.	Name	Data Element	Attributes
N701	Equipment Initial	206	AN 2/4
N702	Equipment Number	207	AN 1/15
N703	Weight	81	R 1/8
N704	Weight Qualifier (N = Net Weight)	187	ID 1/2
N705	Tare Weight	167	N0 3/8
N711	Equipment Description Code (RR = Railcar }	40	ID 2/2
N715	Equipment Length (Length in feet and inches)	567	N0 4/5
N716	Tare Qualifier Code (M=marked)	571	ID 1/1
N720	Height (expressed in inches)	65	R 1/8
N721	Width (expressed in inches)	189	R 1/8
N724	Car Type Code (AAR Equipment Type code)	301	ID 1/4

M7 Segment: Seal Number

M7*12345

Ref. Des.	Name	Data Element	Attributes
M701	Seal Number	225	AN 2/15

N8 Segment: Waybill Reference

N8*111111*20230710

Ref. Des.	Name	Data Element	Attributes
N801	Waybill Number (111111)	186	N0 1/6
N802	Date (CCYYMMDD)	373	DT 8/8

F9 Segment: Origin Station

Indicates the origin of the shipment, the point from where it is shipped. The spelling should be in accordance with that listed in the Standard Point Location Code (SPLC) standard available from the National Motor Freight Tariff Association (USA) or the National Transportation Agency (Canada). CN can provide spellings for your stations.

F9*070112*WATSON*SK***071511*S0K4V0**

Ref. Des.	Name	Data Element	Attributes
F901	Freight Station Accounting Code (FSAC)	573	ID 1/5
F902	Origin Station	19	AN 2/19
F903	State or Province Code	156	ID 2/2
F908	Standard Point Location Code (SPLC)	154	ID 6/9
F909	Postal Code	116	ID 3/15

D9 Segment: Destination Station

Indicates the destination of the shipment, the point at which it will be unloaded or where the transportation responsibility reverts to the consignee. The spelling should be in accordance with that listed in the Standard Point Location Code (SPLC) standard available from the National Motor Freight Tariff Association (USA) or the National Transportation Agency (Canada). CN can provide spellings for your stations.

D9*093390*VANCOUVER*BC***0093900*V5T1E1**

Ref. Des.	Name	Data Element	Attributes
D901	Freight Station Accounting Code (FSAC)	573	ID 1/5
D902	Destination Station	19	AN 2/19
D903	State or Province Code	156	ID 2/2
D908	Standard Point Location Code (SPLC)	154	ID 6/9
D909	Postal Code	116	ID 3/15

N1 Segment: Party Identification

Associated to the N3 and N4 segments below. N1, N3 and N4 segments are required for the Consignee and any other Additional Parties to the shipment.

N1*SH*GENERIC CARLOAD INC*C5*11111111111111
N3*123 FIRST ROAD
N4*WATSON*SK*S0K 4V0*CA
N1*CN*GENERIC CONSIGNEE CO*C5*22222222222222
N3*12 SMITH STREET
N4*VANCOUVER*BC*V5K 1P7*CA
N1*PF*GENERIC CARLOAD INC*C5*11111111111111
N3*123 FIRST ROAD
N4*WATSON*SK*S0K 4V0*CA

Ref. Des.	Name	Data Element	Attributes
N101	Entity Identifier Code (SH = Shipper) (CN = Consignee) (PF = Payer of Freight)	98	ID 2/3
N102	Name	93	AN 1/35
N103	Identification Code Qualifier (C5=Customer Identification File Number)	66	ID 1/2
N104	Identification Code (This field should contain the full 13-character CIF format including leading zeros)	67	AN 2/80

N3 Segment: Party Location

Ref. Des.	Name	Data Element	Attributes
N301	Address Information	166	AN 1/30

N4 Segment: Geographic Location

Ref. Des.	Name	Data Element	Attributes	
N401	City Name	19	AN	2/30
N402	State or Province Code	156	ID	2/2
N403	Postal Code	116	ID	3/15
N404	Country Code	26	ID	2/3

PER Segment: Administrative Communications Contact

PER*IC*CONTACT NAME*TE*123-123-1234

Must be present on the inbound EDI 404.

Ref. Des.	Name	Data Element	Attributes	
PER01	Contact function code (IC = Information contact)	366	ID	2/2
PER02	Name	93	ID	1/60
PER03	Communication number qualifier (TE=telephone) (EM=email address)	365	ID	2/2
PER04	Communication number	364	ID	1/25

R2 Segment: Route Information

One R2 segment for each railroad in the route. CN can provide route information for your shipments.
(i.e.: Railroad SCAC's and junctions)

R2*CN*S**R**

Ref. Des.	Name	Data Element	Attributes	
R201	Standard Carrier Alpha Code (SCAC) (CN = Canadian National etc.)	140	ID	2/4
R202	Routing Sequence Code (S = Origin Carrier, Shipper's Routing (Rail))	133	ID	1/2
R206	Transportation Method/Type Code (R = Rail)	91	ID	1/2

LX Segment: Transaction Set Line Number

LX*1

Ref. Des.	Name	Data Element	Attributes	
LX01	Assigned Number (Number assigned for differentiation within a transaction set)	554	N0	1/6

L5 Segment: Description, Marks, and Numbers

CN can provide Standard Transportation Commodity Codes (STCC) for your commodities. The commodity code is required only on the first L5 segment. Additional L5 segments can be used to provide additional description of lading.

L5*1*WALLBOARD*3275440*T

Ref. Des.	Name	Data Element	Attributes	
L501	Line Number	213	N0	1/6
L502	Commodity Description	79	AN	1/50
L503	Commodity Code (7-digit Standard Transportation Commodity Code (STCC))	22	AN	1/30
L504	Commodity Code Qualifier (T = Standard Transportation Commodity Code (STCC))	23	ID	1/1

L0 Segment: Line Item - Quantity and Weight

L0*1*213360*N***1*CLD**

Ref. Des.	Name	Data Element	Attributes	
L001	Lading Line Item Number	213	N0	1/6
L004	Weight	81	R	1/8
L005	Weight Qualifier (N = Net Weight)	187	ID	1/2
L008	Lading Quantity	80	N0	1/5
L009	Packaging Form Code (CLD = Carload)	211	ID	3/3

MEA Segment: Measurements

To specify physical measurements or counts, including dimensions, tolerances, variances, and weights.

MEA*AI*VOL*250.6041*CR*15**

MEAVWT*0.7167*KC***15**

Ref. Des.	Name	Data Element	Attributes	
MEA01	Measurement Reference ID Code (AI = Net Compliance Total)	737	ID	2/2
MEA02	Measurement Qualifier (VOL = volume) (VWT = volume weight)	738	ID	1/3
MEA03	Measurement Value	739	R	1/28
MEA04	Unit or Basis for measurement code (CR = cubic meters) (KC = kilograms per cubic meter)	355	ID	2/2
MEA07	Measurement significance code (15 = Standard temperature and pressure)	935	ID	2/2

SE Segment: Transaction Set Trailer

SE*31*988260001

Ref. Des.	Name	Data Element	Attributes	
SE01	Number of Included Segments (Includes ST and SE segments)	96	N0	1/10
SE02	Transaction Set Control Number (Repeated from ST segment ST02)	329	AN	4/9

GE Segment: Functional Group Trailer

GE*1*98826

Ref. Des.	Name	Data Element	Attributes	
GE01	Number of Transaction Sets Included	97	N0	1/6
GE02	Group Control Number (Repeated from GS segment GS06)	28	N0	1/9

IEA Segment: Interchange Control Trailer

IEA*1*006298413

Ref. Des.	Name	Data Element	Attributes	
IEA01	Number of included Functional Groups	I16	N0	1/5
IEA02	Interchange Control Number (Same number as ISA13)	I12	N0	9/9