



# **Implementation Guide Rail Carrier Shipment Information**

## **EDI 404**

**Carload Bill of Lading  
Grain Shipments**

**Version 008030**

## **Connection to CN**

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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**

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The **EDI Onboarding team** email address is [EDIMGR@cn.ca](mailto:EDIMGR@cn.ca). You can also visit us at [www.cn.ca](http://www.cn.ca).

## **Canadian National Railway - Electronic Commerce EDI 404 (Rail Bill of Lading) Requirements**

The enclosed documentation covers information required to handle Grain traffic for Domestic, Port, and Cross Border destinations with origins in Canada.

On this version 8030, there is a new requirement in the R2 segment that when there are multiple R2 segments present, the R203 (junction) is required on each, except for the final R2 segment.

## Canadian National Railway - Electronic Commerce Canadian Grain EDI 404 (Rail Bill of Lading) Requirements

CN recommends EDI shippers to be within 2 versions of the current EDI Standard X12 Standard  
Version/Release 8030/RAIL

Sample EDI Transmission with required data for the 404 Transaction Set on grain traffic  
destined to a Canadian Port:

ISA\*00\* \*00\* \*ZZ\*GENERIC \*02\*CN \*231212\*1454\*U\*00803\*000054913\*0\*P\*^  
GS\*SR\*GENERIC\*CN\*20231212\*1454\*0092\*X\*008030  
ST\*404\*00920001  
BX\*00\*R\*PP\*\*CN\*K\*B  
BNX\*A\*\*S  
M3\*R\*20231212\*1454  
N9\*BM\*495033230\*\*20231212\*1454  
N9\*HS\*100199020  
N7\*CN\*123456\*71384\*E\*\*\*\*\*RR  
GA\*N\*00140\*\*GR\*179052\*202318  
F9\*\*WATSON\*SK  
D9\*\*VANCOUVER\*BC  
N1\*SH\*GRAIN SHIPPER INC  
N3\*123 FIRST ROAD  
N4\*WATSON\*SK\*S0K 4V0\*CA  
PER\*IC\*CONTACT NAME\*TE\*123-123-1234\*EM\*JOHNDOE@GRAINSHIP.COM  
N1\*CN\*GRAIN TERMINAL CO  
N3\*12 SMITH STREET  
N4\*VANCOUVER\*BC\*V5K 1P7\*CA  
N1\*PF\*GRAIN SHIPPER INC  
N3\*123 FIRST ROAD  
N4\*WATSON\*SK\*S0K 4V0\*CA  
R2\*CN\*S  
LX\*1  
L5\*1\*WHEAT\*0113710\*T  
L0\*1\*\*\*71384\*E\*\*\*1\*CLD  
MEA\*AI\*VOL\*250.6041\*CR\*\*\*15  
MEA\*\*VWT\*0.7167\*KC\*\*\*15  
SE\*31\*00920001  
GE\*1\*0092  
IEA\*1\*000054913

## ISA Segment: Interchange Control Header

ISA\*00\*      \*00\*      \*ZZ\*GENERIC      \*02\*CN      \*231212\*1454\*U\*00803\*000054913\*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 (Ten spaces)	I04	AN 10/10
ISA05	Interchange ID Qualifier	I05	ID 2/2
ISA06	Interchange Sender ID (GENERIC - 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 (CN- 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\*SR\*GENERIC\*CN\*20231212\*1454\*0092\*X\*008030**

Ref. Des.	Name	Data Element	Attributes
GS01	Functional Identifier Code (SR = Rail Carrier Shipment Information)	479	ID 2/2
GS02	Application Sender's Code (Customer's sender ID)	142	AN 2/15
GS03	Application Receiver's Code (CN = Canadian National)	124	AN 2/15
GS04	Date (CCYYMMDD)	373	DT 8/8
GS05	Time (HHMM)	337	TM 4/6
GS06	Group Control Number (Assigned number originated and maintained by the sender)	28	N0 1/9
GS07	Responsible Agency Code (X = Accredited Standards Committee X12)	455	ID 1/2
GS08	Version / Release / Industry Identity	480	AN 1/12

**ST Segment: Transaction Set Header**

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

**ST\*404\*00920001**

Ref. Des.	Name	Data Element	Attributes
ST01	Transaction Set Identifier Code (404 = Rail Carrier Shipment Information (Bill of Lading))	143	ID 3/3
ST02	Transaction Set Control Number (Sequential control number generated by Customer)	329	AN 4/9

### **BX Segment: General Shipment Information**

#### **BX\*00\*R\*PP\*\*CN\*K\*B**

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
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

### **BNX Segment: Rail Shipment Information**

#### **BNX\*A\*\*S**

Ref. Des.	Name	Data Element	Attributes
BNX01	Shipment Weight Code (Shipper's Weight Agreement)	460	ID 1/1
BNX03	Billing Code (S = Single Shipment Billing)	11	ID 1/1

### **M3 Segment: Release**

Indicates whether shipment is to be released for movement when the transmission is received or will be released at a future time.

#### **M3\*R\*20231212\*1454**

Ref. Des.	Name	Data Element	Attributes
M301	Release Code (R = Release with Shipment Information)	132	ID 1/1
M302	Release Date (CCYYMMDD)	373	DT 8/8
M303	Release Time (HHMM, 24-hour clock 0001-2359)	337	TM 4/6

### N9 Segment: Extended Reference Information

Allows Reference Numbers to be sent to CN. 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\*495033230\*\*20231212\*1454**  
**N9\*HS\*1001990020**

Ref. Des.	Name	Data Element	Attributes
N901	Reference Number Qualifier (BM = Bill of Lading number) (HS = harmonized system code)	128	ID 2/3
N902	Reference Number (Max 15 characters for B/L # (BM))	127	AN 1/30
N904	Date (CCYYMMDD, required for B/L (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

### N7 Segment: Equipment Details

**N7\*CN\*123456\*71384\*E\*\*\*\*\*RR**

Ref. Des.	Name	Data Element	Attributes
N701	Equipment Initial	206	AN 1/4
N702	Equipment Number	207	AN 1/15
N703	Weight	81	R 1/10
N704	Weight Qualifier (E = Estimated Weight)	187	ID 1/2
N711	Equipment Description Code (RR = Railcar }	40	ID 2/2



## GA Segment: Canadian Grain Information

**GA\*N\*00140\*\*GR\*179086\*202318**

Ref. Des.	Name	Data Element	Attributes	
GA01	Fumigated/Cleaned Indicator (B = Both fumigated and cleaned) (C = Cleaned) (F = Fumigated) (N = Not fumigated or cleaned)	1275	ID	1/1
GA02	Commodity Code CGC Grain Commodity Code	22	AN	1/30
GA04	Reference Identification Qualifier (BO = Bin location number) (CW = CWB contract number) (DK = Platform number (producer/dealer authorization)) (GB = Grain block number) (GR = Grain order reference number) (OH = origin house (for CWB)) (RB = Incentive grain multi-block qualifier) (RN = CWB train run qualifier) (XO = Grain company sample number) This number is from company test weight of grain, expressed as percentage xxx.x (ZT = Milling in transit number)	128	ID	2/3
GA05	Reference Identification (Reference number paired with GA04)	127	AN	1/30
GA06	Week (Loading week expressed as CCYYWW)	642	N0	6/6

**At least one occurrence of a GA04 is required with the code value of GR.**

## 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\*\*WATSON\*SK**

Ref. Des.	Name	Data Element	Attributes	
F902	Origin Station	19	AN	2/30
F903	State or Province Code	156	ID	2/2

### 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\*\*VANCOUVER\*BC**

Ref. Des.	Name	Data Element	Attributes
D902	Destination Station	19	AN 2/30
D903	State or Province Code	156	ID 2/2

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

### 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

*\*\*For North American countries, use the ISO-3166 Alpha-2 character code.*

## PER Segment: Administrative Communications Contact

**PER\*IC\*CONTACT NAME\*TE\*123-123-1234\*EM\*JOHNDOE@GRAINSHIP.COM**

Ref. Des.	Name	Data Element	Attributes
PER01	Contact function code (IC = Information contact)	366	ID 2/2
PER02	Name	93	AN 1/35
PER03	Communication number qualifier (TE=telephone)	365	ID 2/2
PER04	Communication number	364	AN 1/80
PER05	Communication number qualifier (EM=email address)	365	ID 2/2
PER06	Communication number	364	AN 1/80

**Note: Information Contact (IC) information is required for the Shipper (N101=SH) to provide contact for the person submitting the EDI404, and must include both a telephone number (TE) and an email address (EM)**

**The value entered in the PER02/03 should be the preferred method of contact.**

## 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**

Ref. Des.	Name	Data Element	Attributes
R201	Standard Carrier Alpha Code (SCAC) (CN = Canadian National)	140	ID 2/4
R202	Routing Sequence Code (S = Origin Carrier, Shipper's Routing (Rail))	133	ID 1/2
R203	Junction Name (Contains Rule 260 abbreviation only)	19	AN 2/30

**\*\*When multiple iterations of the R2 segment are present, the R203 is required on each, except for the final**

### **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\*WHEAT\*0113710\*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\*\*\*71384\*E\*\*\*1\*CLD**

Ref. Des.	Name	Data Element	Attributes	
L001	Lading Line Item Number	213	N0	1/6
L004	Weight	81	R	1/10
L005	Weight Qualifier (E = Estimated Weight)	187	ID	1/2
L008	Lading Quantity	80	N0	1/7
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**  
**MEA\*\*VWT\*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\*00920001**

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\*0092**

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\*000054913**

Ref. Des.	Name	Data Element	Attributes	
IEA01	Number of included Functional Groups	I16	NO	1/5
IEA02	Interchange Control Number (Same number as ISA13)	I12	NO	9/9

**Canadian National Railway - Electronic Commerce  
Canadian Grain EDI 404 (Rail Bill of Lading) Requirements**

CN is currently using the X12 Standard Version/Release 8030/RAIL

Sample EDI Transmission with required data for the 404 Transaction Set on grain traffic destined to a Canadian domestic location.

ISA\*00\* \*00\* \*ZZ\*GENERIC \*02\*CN \*231212\*1454\*U\*00803\*000054913\*0\*P\*^  
GS\*SR\*GENERIC\*CN\*20231212\*1454\*0092\*X\*008030  
ST\*404\*00920001  
BX\*00\*R\*PP\*\*CN\*K\*B  
BNX\*A\*\*S  
M3\*R\*20231212\*1454  
N9\*BM\*495033230\*\*20231212\*1454  
N9\*LT\*AA100B  
N9\*HS\*1001990020  
N7\*CN\*123456\*71384\*E\*\*\*\*\*RR  
GA\*\*00135\*\*GR\*\*38\*202319  
F9\*\*WATSON\*SK  
D9\*\*CLINTON\*ON  
N1\*SH\*GRAIN SHIPPER INC  
N3\*123 FIRST ROAD  
N4\*WATSON\*SK\*S0K 4V0\*CA  
PER\*IC\*CONTACT NAME\*TE\*123-123-1234\*EM\*JOHNDOE@GRAINSHIP.COM  
N1\*CN\*GRAIN COMMODITIES CO  
N3\*12 SMITH STREET  
N4\*CLINTON\*ON\*N0M 0A5\*CA  
N1\*PF\*GRAIN SHIPPER INC  
N3\*2217 HIGH STREET  
N4\*WINNIPEG\*MB\*R3C 3Z3\*CA  
R2\*CN\*S  
LX\*1  
L5\*1\*WHEAT\*0113710\*T  
L0\*1\*\*\*71384\*E\*\*\*1\*CLD  
MEA\*AI\*VOL\*250.6041\*CR\*\*\*15  
MEA\*\*VWT\*0.7167\*KC\*\*\*15  
SE\*32\*00920001  
GE\*1\*0092  
IEA\*1\*000054913

### **BX Segment: General Shipment Information**

#### **BX\*00\*R\*PP\*\*CN\*K\*B**

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
BX05	Standard Carrier Alpha Code (CN = CN Rail)	140	ID 2/4
BX06	Weight Unit Code (K= Kilograms)	188	ID 1/1
BX07	Shipment Qualifier (B = Bill of Lading for Individual Shipment)	147	ID 1/1

### **BNX Segment: Rail Shipment Information**

#### **BNX\*A\*\*S**

Ref. Des.	Name	Data Element	Attributes
BNX01	Shipment Weight Code (A = Weight Agreement Number)	460	ID 1/1
BNX03	Billing Code (S = Single Shipment Billing)	11	ID 1/1

### **M3 Segment: Release**

Indicates whether shipment is to be released for movement when the transmission is received or will be released at a future time.

#### **M3\*R\*20231212\*1454**

Ref. Des.	Name	Data Element	Attributes
M301	Release Code (R = Release with Shipment Information)	132	ID 1/1
M302	Release Date (CCYYMMDD)	373	DT 8/8
M303	Release Time (HHMM, 24-hour clock 0001-2359)	337	TM 4/6



### N9 Segment: Extended Reference Information

Allows Reference Numbers to be sent to CN. 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\*495033230\*\*20231212\*1454**

**N9\*LT\*AA100B**

**N9\*HS\*1001990020**

Ref. Des.	Name	Data Element	Attributes	
N901	Reference Number Qualifier (BM = Bill of Lading number) (LT = Lot Number) (HS = Harmonized code)	128	ID	2/3
N902	Reference Number (Max 15 characters for B/L # (BM))	127	AN	1/30
N904	Date (CCYYMMDD, required for B/L (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

### N7 Segment: Equipment Details

**N7\*CN\*123456\*71384\*E\*\*\*\*\*RR**

Ref. Des.	Name	Data Element	Attributes	
N701	Equipment Initial	206	AN	1/4
N702	Equipment Number	207	AN	1/15
N703	Weight	81	R	1/10
N704	Weight Qualifier (E = Estimated Weight)	187	ID	1/2
N711	Equipment Description Code (RR = Railcar }	40	ID	2/2

## GA Segment: Canadian Grain Information

**GA\*\*00135\*\*GR\*38\*202319**

Ref. Des.	Name	Data Element	Attributes	
GA01	Fumigated/Cleaned Indicator (B = Both fumigated and cleaned) (C = Cleaned) (F = Fumigated) (N = Not fumigated or cleaned)	1275	ID	1/1
GA02	Commodity Code CGC Grain Commodity Code	22	AN	1/30
GA04	Reference Identification Qualifier (BO = Bin location number) (CW = CWB contract number) (DK = Platform number (producer/dealer authorization)) (GB = Grain block number) (GR = Grain order reference number) (OH = origin house (for CWB)) (RB = Incentive grain multi-block qualifier) (RN = CWB train run qualifier) (XO = Grain company sample number) This number is from company test weight of grain, expressed as percentage xxx.x (ZT = Milling in transit number)	128	ID	2/3
GA05	Reference Identification (Reference number paired with GA04)	127	AN	1/30
GA06	Week (Loading week expressed as CCYYWW)	642	N0	6/6

**At least one occurrence of a GA04 is required with the code value of GR.**

## F9 Segment: Origin Station

Indicates the origin of the shipment, the point from which it is shipped. 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\*\*WATSON\*SK**

Ref. Des.	Name	Data Element	Attributes	
F902	Origin Station	19	AN	2/30
F903	State or Province Code	156	ID	2/2

### 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. 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\*\*CLINTON\*ON**

Ref. Des.	Name	Data Element	Attributes
D902	Destination Station	19	AN 2/30
D903	State or Province Code	156	ID 2/2

### N1 Segment: Party Identification

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

**N1\*SH\*GRAIN SHIPPER INC  
N3\*123 FIRST ROAD  
N4\*WATSON\*SK\*S0K 4V0\*CA  
N1\*CN\*GRAIN COMMODITIES CO  
N3\*12 SMITH STREET  
N4\*CLINTON\*ON\*N0M 0A5\*CA  
N1\*PF\*GRAIN SHIPPER INC  
N3\*2217 HIGH STREET  
N4\*WINNIPEG\*MB\*R3C 3Z3\*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

### 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

*\*\*For North American countries, use the ISO-3166 Alpha-2 character code.*

## PER Segment: Administrative Communications Contact

**PER\*IC\*CONTACT NAME\*TE\*123-123-1234\*EM\*JOHNDOE@GRAINSHIP.COM**

Ref. Des.	Name	Data Element	Attributes
PER01	Contact function code (IC = Information contact)	366	ID 2/2
PER02	Name	93	AN 1/35
PER03	Communication number qualifier (TE=telephone)	365	ID 2/2
PER04	Communication number	364	AN 1/80
PER05	Communication number qualifier (EM=email address)	365	ID 2/2
PER06	Communication number	364	AN 1/80

**Note: Information Contact (IC) information is required for the Shipper (N101=SH) to provide contact for the person submitting the EDI404, and must include both a telephone number (TE) and an email address (EM)  
The value entered in the PER02/03 should be the preferred method of contact.**

## 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**

Ref. Des.	Name	Data Element	Attributes
R201	Standard Carrier Alpha Code (SCAC) (CN = Canadian National)	140	ID 2/4
R202	Routing Sequence Code (S = Origin Carrier, Shipper's Routing (Rail))	133	ID 1/2
R203	Junction Name (Contains Rule 260 abbreviation only)	19	AN 2/30

**\*\*When multiple iterations of the R2 segment are present, the R203 is required on each, except for the final**

### **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\*WHEAT\*0113710\*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\*\*\*71384\*E\*\*\*1\*CLD**

Ref. Des.	Name	Data Element	Attributes	
L001	Lading Line Item Number	213	N0	1/6
L004	Weight	81	R	1/10
L005	Weight Qualifier (E = Estimated Weight)	187	ID	1/2
L008	Lading Quantity	80	N0	1/7
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**

**MEA\*\*VWT\*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

Canadian National Railway - Electronic Commerce  
Canadian Grain EDI 404 (Rail Bill of Lading) Requirements

CN is currently using the X12 Standard Version/Release 8030/RAIL

Sample EDI Transmission with required data for the 404 Transaction Set on grain traffic destined to the USA.:

**EDI 404 with mandatory transborder data highlighted in bold red.**

ISA\*00\* \*00\* \*ZZ\*GENERIC \*02\*CN \*231212\*1454\*U\*00803\*000054913\*0\*P\*^  
GS\*SR\*GENERIC\*CN\*20231212\*1454\*0092\*X\*008030  
ST\*404\*00920001  
BX\*00\*R\*PP\*\*CN\*K\*B\*\*\*\*10\*\*2  
BNX\*A\*\*S  
M3\*R\*20231212\*1454  
N9\*BM\*495033230\*\*20231212\*1454  
N9\*2K\*FDA\*\*20231009\*0934  
N9\*CED\*ZZ1234202311051234567  
N9\*HS\*340319  
N7\*CN\*123456\*71384\*E\*\*\*\*\*RR  
M7\*1234\*5678\*91122  
GA\*\*010100\*\*GR\*297123\*202318  
F9\*\*WATSON\*SK  
D9\*\*ST ANSGAR\*IA  
N1\*SH\*GRAIN SHIPPER INC  
N3\*123 FIRST ROAD  
N4\*WATSON\*SK\*S0K 4V0\*CA  
PER\*IC\*CONTACT NAME\*TE\*123-123-1234\*EM\*JOHNDOE@GRAINSHIP.COM  
N1\*CN\*AGRI TRADING INC  
N3\*12 SMITH STREET  
N4\*ST ANSGAR\*IA\*12345\*US  
N1\*C1\*GRAIN MILLERS CORP  
N3\*2217 HIGH STREET  
N4\*ST ANSGAR\*IA\*12345\*US  
N1\*PF\*GRAIN SHIPPER INC  
N3\*123 FIRST ROAD  
N4\*WATSON\*SK\*S0K 4V0\*CA  
N1\*XU\*LIVINGSTON INTERNATIONAL INC  
N3\*123 MAIN ST  
N4\*RANIER\*MN\*12345\*US  
R2\*CN\*S  
LX\*1  
L5\*1\*WHEAT\*0113710\*T  
L0\*1\*\*\*71384\*E\*\*\*1\*CLD  
MEA\*AI\*VOL\*250.6041\*CR\*\*\*15  
MEA\*\*VWT\*0.7167\*KC\*\*\*15  
X1\*\*\*\*\*CA\*\*\*78\*10769.52\*\*MP\*138  
XH\*USD\*N\*138  
SE\*42\*00920001  
GE\*1\*0092  
IEA\*000054913

### **BX Segment: General Shipment Information**

**BX\*00\*R\*PP\*\*CN\*L\*B\*\*\*\*10\*\*2**

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
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
BX11	Customs Documentation Handling Code (10=Proforma entered – B13 Not Required)	501	ID 2/2
BX13	Goods and Services Tax Reason Code (2=Outbounds Goods and Services Tax Declaration to USA only)	714	ID 1/1

### **BNX Segment: Rail Shipment Information**

**BNX\*A\*\*S**

Ref. Des.	Name	Data Element	Attributes
BNX01	Shipment Weight Code (A=Weight Agreement)	460	ID 1/1
BNX03	Billing Code (S=Single Shipment Billing)	11	ID 1/1



**M3 Segment: Release**

Indicates whether shipment is to be released for movement when the transmission is received or will be released at a future time.

**M3\*R\*20231212\*1454**

Ref. Des.	Name	Data Element	Attributes
M301	Release Code	132	ID 1/1
M302	Release Date (CCYYMMDD)	373	DT 8/8
M303	Release Time (HHMM, 24-hour clock)	337	TM 4/8

**N9 Segment: Extended Reference Information**

Allows Reference Numbers to be sent to CN. 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\*495033230\*\*20231212\*1454**

**N9\*2K\*FDA\*\*20231009\*0934**

**N9\*CED\*ZZ1234202311051234567**

**N9\*HS\*340319**

Ref. Des.	Name	Data Element	Attributes
N901	Reference Number Qualifier (BM=Bill of Lading No) (PO=Purchase Order No) (CED=CBSA Export Declaration Number) (2K=FDA Product type) (HS=harmonized system code)	128	ID 2/3
N902	Reference Number If N901=BM, only 15 characters are allowed max. If N901=2K then N902 will be FDA If N901=CED then N902 will be one of the following: 1. Canadian Automated Export Declaration (CAED)* <b>note</b> BX11 value will be <b>14</b> N9*CED*12X543SC123420050312345 2. G7 EDI Export Reporting * <b>note</b> BX11 value will be <b>14</b> N9*CED*SC123420050312345 3. Summary Reporting ID number * <b>note</b> BX11 value will be <b>16</b> N9*CED*SUM1234 4. Form B13A Export Declaration Stamp Machine or Manual Customs Stamp * <b>note</b> BX11 value will be <b>14</b> N9*CED*200503171300497000235 5. No Declaration Required (NDR) * <b>note</b> BX11 value will be <b>30</b> N9*CED*NO DECLARATION IS REQUIRED	127	AN 1/30
N904	Date (YYYYMMDD)	373	DT 8/8
N905	Time (HHMM)	337	TM 4/8

**N7 Segment: Equipment Details**

**N7\*CN\*123456\*71384\*E\*\*\*\*\*RR**

Ref. Des.	Name	Data Element	Attributes	
N701	Equipment Initial	206	AN	1/4
N702	Equipment Number	207	AN	1/15
N703	Weight	81	R	1/10
N704	Weight Qualifier (E= Estimated Weight)	187	ID	1/2
N711	Equipment Description Code (RR=Rail Car)	40	ID	2/2

**M7 Segment: Seal Numbers**

**M7\*1234\*5678\*91122**

Ref. Des.	Name	Data Element	Attributes	
M701	Seal Number	225	AN	2/15
M702	Seal Number	225	AN	2/15
M703	Seal Number	225	AN	2/15

## **GA Segment: Canadian Grain Information**

**GA\*\*010100\*\*GR\*297123\*202318**

Ref. Des.	Name	Data Element	Attributes	
GA01	Fumigated/Cleaned Indicator (B = Both fumigated and cleaned) (C = Cleaned) (F = Fumigated) (N = Not fumigated or cleaned)	1275	ID	1/1
GA02	Commodity Code CGC Grain Commodity Code	22	AN	1/30
GA04	Reference Identification Qualifier (BO = Bin location number) (CW = CWB contract number) (DK = Platform number (producer/dealer authorization)) (GB = Grain block number) (GR = Grain order reference number) (OH = origin house (for CWB)) (RB = Incentive grain multi-block qualifier) (RN = CWB train run qualifier) (XO = Grain company sample number) This number is from company test weight of grain, expressed as percentage xxx.x (ZT = Milling in transit number)	128	ID	2/3
GA05	Reference Identification (Reference number paired with GA04)	127	AN	1/30
GA06	Week (Loading week expressed as CCYYWW)	642	N0	6/6

**At least one occurrence of a GA04 is required with the code value of GR.**

## **F9 Segment: Origin Station**

Indicates the origin of the shipment, the point from which it is shipped. 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\*\*WATSON\*SK**

Ref. Des.	Name	Data Element	Attributes	
F902	Origin Station	19	AN	2/30
F903	State or Province Code	156	ID	2/2

**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. 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\*\*ST ANSGAR\*IA**

Ref. Des.	Name	Data Element	Attributes
D902	Destination Station	19	AN 2/30
D903	State or Province Code	156	ID 2/2

**N1 Segment: Party Identification**

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

**N1\*SH\*GRAIN SHIPPER INC  
N3\*123 FIRST ROAD  
N4\*WATSON\*SK\*S0K 4V0\*CA  
N1\*CN\*AGRI TRADING INC  
N3\*12 SMITH STREET  
N4\*ST ANSGAR\*IA\*12345\*US  
N1\*C1\*GRAIN MILLERS CORP  
N3\*2217 HIGH STREET  
N4\*ST ANSGAR\*IA\*12345\*US  
N1\*PF\*GRAIN SHIPPER INC  
N3\*123 FIRST ROAD  
N4\*WATSON\*SK\*S0K 4V0\*CA  
N1\*XU\*LIVINGSTON INTERNATIONAL INC  
N3\*123 MAIN STREET  
N4\*RANIER\*MN\*12345\*US**

Ref. Des.	Name	Data Element	Attributes
N101	Entity Identifier Code (SH=Shipper) (CN=Consignee) (PF = payer of freight) (XU= US Customs Broker)	98	ID 2/3
N102	Name	93	AN 1/35

### **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

*\*\*For North American countries, use the ISO-3166 Alpha-2 character code.*

### **PER Segment: Administrative Communications Contact**

**PER\*IC\*CONTACT NAME\*TE\*123-123-1234\*EM\*JOHNDOE@GRAINSHIP.COM**

Ref. Des.	Name	Data Element	Attributes
PER01	Contact function code (IC = Information contact)	366	ID 2/2
PER02	Name	93	AN 1/35
PER03	Communication number qualifier (TE=telephone)	365	ID 2/2
PER04	Communication number	364	AN 1/80
PER05	Communication number qualifier (EM=email address)	365	ID 2/2
PER06	Communication number	364	AN 1/80

**Note: Information Contact (IC) information is required for the Shipper (N101=SH) to provide contact for the person submitting the EDI404, and must include both a telephone number (TE) and an email address (EM)  
The value entered in the PER02/03 should be the preferred method of contact.**

## **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**

Ref. Des.	Name	Data Element	Attributes	
R201	Standard Carrier Alpha Code (SCAC) (CN=Canadian National)	140	ID	2/4
R202	Routing Sequence Code (S=Origin Carrier, Shipper's Routing (Rail))	133	ID	1/2
R203	Junction Name (Contains Rule 260 abbreviation only)	19	AN	2/30

**\*\*When multiple iterations of the R2 segment are present, the R203 is required on each, except for the final**

## **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\*WHEAT\*0113710\*T**

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

### L0 Segment: Line Item - Quantity and Weight

#### **L0\*1\*\*\*71384\*E\*\*\*1\*CLD**

Ref. Des.	Name	Data Element	Attributes	
L001	Lading Line Item Number	213	N0	1/6
L004	Weight	81	R	1/10
L005	Weight Qualifier (N=Actual weight)	187	ID	1/2
L008	Lading Quantity	80	N0	1/7
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**  
**MEA\*\*VWT\*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

### X1 Segment: Export License

*Mandatory for transborder shipments*

**X1\*\*\*\*\*CA\*\*\*78\*10769.52\*\*MP\*138**

Ref. Des.	Name	Data Element	Attributes	
X107	Country Code	26	ID	2/3
X110	Lading quantity	80	N0	1/7
X111	Lading value	148	R	2/9
X113	Unit or basis for measurement code (MP=metric tons)	355	ID	2/2
X114	Unit price	212	R	1/17

### XH Segment: Proforma – B13 Information

**XH\*USD\*N\*\*\*\*\*138**

Ref. Des.	Name	Data Element	Attributes	
XH01	Currency Code	100	ID	3/3
XH02	Related company Indication Code	645	ID	1/1
XH07	Unit Price	212	R	1/17



