IANA's Bad Order Equipment Status Service (BOES)
EDI Samples

Sep 2014

Table of Contents

1 322 EDI Samples

1.1 322 EDI Guidelines for Bad Order Event

ISA - Interchange Control Header						
						MANDATORY
Maximum USE: 1						
Example:						
ISA*00* *00* *ZZ*IANA *ZZ*NS *140408*1422*U*00401*000163913*0*P*~						
Element ID	**Description**	**Min**	**Max**	**Type**	**Required**	**Content**
ISA01	Authorization Information Qualifier	02	02	ID	M	00
ISA02	Authorization Information	10	10	AN	M	Blank Space
ISA03	Security Information Qualifier	02	02	ID	M	00
ISA04	Security Information	10	10	AN	M	
ISA05	Interchange Sender ID Qualifier	02	02	ID	M	Sender's ID Qualifier
ISA06	Interchange Sender ID	15	15	AN	M	Sender's ID
ISA07	Interchange Receiver ID Qualifier	02	02	ID	M	Receiver's ID Qualifier
ISA08	Interchange Receiver ID	15	15	AN	M	Receiver's ID
ISA09	Interchange Date	06	06	DT	M	YYMMDD
ISA10	Interchange Time	04	04	TM	M	HHMM
ISA11	Interchange Control Standards Identifier	01	01	ID	M	U = US EDI Community of ASC X12, TDCC, and UCS
ISA12	Interchange Control Version Number	05	05	ID	M	00401 = X12 version 4010
ISA13	Interchange Control Number	09	09	N0	M	Sender's interchange control number
ISA14	Acknowledgement Requested	01	01	ID	M	0 = No acknowledgement needed 1 = Acknowledgement requested
ISA15	Usage Indicator	01	01	ID	M	P = Production T = Test
ISA16	Component Element Separator	01	01		M	Tilde "~"

GS - Functional Group Header

						MANDATORY

			Maximum USE: 1			

Example:

GS*SO*IANA*NS*20140408*1422*000163913*X*004010

Element ID	Description	Min	Max	Type	Required	Content
GS01	Functional Identifier Code	02	02	ID	M	SO = 322
GS02	Application Sender ID	02	15	AN	M	Sender's ID
GS03	Application Receiver ID	02	15	AN	M	Receiver's ID
GS04	Group Date	08	08	DT	M	YYYYMMDD
GS05	Group Time	04	04	TM	M	HHMM
GS06	Group Control Number	01	09	N0	M	Sender's Message Control Number
GS07	Agency Code	01	02	ID	M	X = ASC X12
GS08	Version	01	11	AN	M	004010 = Sender's transmission standard version.

ST - Transaction Set Header

						MANDATORY

			Maximum USE: 1			

Example:

ST*322*000411654

Element ID	Description	Min	Max	Type	Required	Content
ST01	Transaction Set Identifier Code	03	03	ID	M	322
ST02	Transaction Set Control Number	04	09	AN	M	Sender's message control number

Q5 - Status Details

To specify the status of the shipment in terms of dates, time, reference numbers, and location

Q5 - Status Details						
						MANDATORY
Maximum USE: 1 per transaction set						
Example:						
Q5*B*20140408*1020*ET~						
Element ID	**Description**	**Min**	**Max**	**Type**	**Required**	**Content**
Q501	Status Code	01	02	ID	O	**B** = Bad order **DT** = Damage Survey Completed **G** = Repaired and/or Released from Bad Order
Q502	Date	08	08	DT	O	YYYYMMDD
Q503	Time	04	04	TM	C	HHMM
Q504	Time Zone	02	02	ID	C	**ET** = Eastern
Q505	Status Reason Code	03	03	ID	O	Not used
Q506	City Name	02	30	AN	C	Not used
Q507	State or Province Code	02	02	ID	O	Not used
Q508	Country Code	02	03	ID	O	Not used
Q509	Equipment Initial	01	04	AN	O	Not used
Q510	Equipment Number	01	10	AN	O	Not used
Q511	Reference Identification Qualifier	02	03	ID	C	Not used
Q512	Reference Identification	01	30	AN	C	Not used
Q513	Direction Identifier Code	01	01	ID	O	Not used
Q514	Reference Identification Qualifier	02	03	AN	C	Not used
Q515	Reference Identification	01	30	AN	C	Not used
Q516	Direction Identifier Code	01	01	ID	O	Not used
Q517	Percentage as Decimal	01	01	R	O	Not used
Q518	Pickup or Delivery Code	01	02	ID	O	Not used

N7 - Equipment Details

To identify the equipment

N7 - Equipment Details						
						MANDATORY
		Maximum USE: 1 per transaction set				
Example:						
N7* NSPZ*132025*******CH****0053*****9~**						
Element ID	**Description**	**Min**	**Max**	**Type**	**Required**	**Content**
N701	Equipment Initial	01	04	AN	M	Equipment Prefix
N702	Equipment Number	01	06	AN	M	Equipment Number
N703	Weight	01	10	R	O	Not used
N704	Weight Qualifier	01	02	ID	C	Not used
N705	Tare Weight	03	08	N0	C	Not used
N706	Weight Allowance	02	06	N0	O	Not used
N707	Dunnage	01	06	N0	O	Not used
N708	Volume	01	08	R	C	Not used
N709	Volume Unit Qualifier	01	01	ID	C	Not used
N710	Ownership Code	01	01	ID	O	Not used
N711	Equipment Description Code	02	02	ID	O	CC = Container on chassis CH = Chassis CN = Container RR = Railcar TL = Trailer
N712	Standard Carrier Alpha Code	02	04	ID	O	SCAC
N713	Temperature Control	03	06	AN	O	Not used
N714	Position	01	03	AN	O	Not used
N715	Equipment Length	04	05	N0	O	The format is FFFII where FFF is feet and II is inches; the range for II is 00 through 11
N716	Tare Qualifier Code	01	01	ID	C	Not used
N717	Weight Unit Code	01	01	ID	O	Not used
N718	Equipment Number Check Digit	01	01	N0	O	Not used
N719	Type of Service Code	02	02	ID	O	Not used
N720	Height	01	08	R	O	Not used
N721	Width	01	08	R	O	Not used
N722	Equipment Type	04	04	ID	O	Not used
N723	Standard Carrier Alpha Code	02	04	ID	O	Not used
N724	Car Type Code	01	04	ID	O	Code specifying type of rail car or intermodal equipment type and its general characteristics

W2 - Equipment Identification
To identify equipment and the commodity being carried

W2 - Equipment Identification						
						OPTIONAL
Maximum USE: 1 per N7 Loop						
Example:						
W2* NSPZ*132025**CH*E**********N~						
Element ID	Description	Min	Max	Type	Required	Content
W201	Equipment Initial	01	04	AN	M	Equipment Prefix
W202	Equipment Number	01	15	AN	M	Equipment Number
W203	Commodity Code	01	30	AN	O	Not used
W204		02	02			CC = Container on chassis
						CH = Chassis
						CN = Container
						RR = Railcar
	Equipment Description Code			ID	M	TL = Trailer
W205		01	02			E = Empty
	Equipment Status Code			ID	M	L = Load
W206	Net Tons	01	03	N0	O	Not used
W207	Intermodal Service Code	01	02	ID	O	Not used
W208	Car Service Order Code	03	05	ID	O	Not used
W209	Date	08	08	DT	C	Not used
W210	Type of Locomotive Maintenance Code	02	02	AN	C	Not used
W211	Equipment Initial	01	04	AN	C	Not used
W212	Equipment Number	01	15	AN	C	Not used
W213	Equipment Number Check Digit	01	01	N0	O	Not used
W214	Position	01	03	AN	O	Not used
W215	Car Type Code	01	04	ID	O	Not used
W216	Yes/No Condition or Response Code	01	01	ID	O	Not used
W217	Tag Status Code	01	01	ID	O	Not used
W218		01	01			Code indicating the direction the equipment is entrained or the lading is loaded; When used to indicate the lading orientation, direction is defined relative to the equipment on which it is loaded
	Equipment Orientation Code			ID	O	

R4 - Port or Terminal
Contractual or operational port or point relevant to the movement of the cargo

R4 - Port or Terminal						
						MANDATORY
Maximum USE: 6 loops per N7 Loop						
Example:						
R4*5*SL*417500*CHARLOTT*ZZ*IN GAT~						
Element ID	Description	Min	Max	Type	Required	Content
R401	Port or Terminal Function Code	01	01	ID	M	1 = Final port of discharge 5 = Activity location 6 = Origin rail terminal 7 = Destination rail terminal D = Port of discharge L = Port of loading
R402	Location Qualifier	01	02	ID	C	SL = SPLC; TM=IANA LOC Code
R403	Location Identifier	01	30	AN	C	Code with identifies SPLC
R404	Port Name	02	24	AN	O	Free-form name for the place at which an offshore carrier originates or terminates (by transshipment or otherwise) its actual ocean carriage of property
R405	Country Code	02	03	ID	O	Code identifying the country
R406	Terminal Name	02	30	AN	O	Free-form field for terminal name
R407	Pier Number	01	04	AN	O	Not used
R408	State or Province Code	02	02	ID	O	Not used

N1 – Party Identification Reference Information
To identify a party by type of organization, name, and code

N1 – Party Identification					
					MANDATORY
			Maximum USE: 1		
Example:					
N1*HA*MAERSK GULF POOL*A4*M002					
Element ID	**Description**	**Min**	**Max**	**Type**	**Required**	**Content**
---	---	---	---	---	---	---
N101	Entity Identifier Code	02	03	ID	M	53 = Registered Owner HA = Owner NX = Primary Owner OG = Co-owner OV = Owner of Vessel OW = Owner of Property or Unit OY = Owner of Vehicle AAU = Marker Owner
N102	Name	01	60	AN	C	Free form name – Name of Pool
N103	Identification Code Qualifier	01	02	ID	C	32 = Assigned by Property Operator 56 = Division 57 = Department A3 = Assigned by Third Party A4 = Assigned by Clearinghouse
N104	Identification Code	02	80	AN	O	Pool Id assigned by IANA
N105	Entity Relationship Code	02	02	ID	O	Not used
N106	Entity Identifier Code	02	03	ID	O	Not used

N9 - Extended Reference Information
To transmit identifying information as specified by the Reference Identification Qualifier

N9 - Extended Reference Information						
						OPTIONAL
Maximum USE: 6 per N7 Loop						
Example:						
N9*BM*1738983~						
Element ID	Description	Min	Max	Type	Required	Content
N901	Reference Identification Qualifier	02	03	ID	M	EV = Receiver Identification number BM = Bill of lading number WY = Waybill number
N902	Reference Identification	01	80	AN	C	Reference number associated with qualifier sent
N903	Free-form Description	01	45	AN	C	Not used
N904	Date	08	08	DT	O	Not used
N905	Time	04	08	TM	C	Not used
N906	Time Code	02	02	ID	O	Not used
N907	Reference Identifier	02	03	ID	O	Not used

R13 - Line Item Repair
To provide line item details of the equipment repair

R13 - Line Item Repair						
						OPTIONAL
Maximum USE: 50						
Example:						
R13*6*5001**02**LF*IN*006****1~						
Element ID	Description	Min	Max	Type	Required	Content
R1301	Repair Line Item Number	1	20	AN	C	1,2,3 etc.
R1302	Trailer Repair Job Code	1	30	AN	M	Value as Integer
R1303	Condition Code	1	30	AN	O	Condition Code from matrix
R1304	Why Made Code	1	30	AN	M	Why made Code from matrix
R1305	Trailer Repair Responsibility Code	1	30	AN	O	Not used
R1306	Repair Location on Trailer	1	30	AN	M	Location code from matrix
R1307	Unit or Basis for Measurement Code	2	2	ID	C	IN
R1308	Quantity	1	15	R	C	Numeric value related to R1307
R1309	Yes/No Condition or Response Code	1	1	ID	O	Not used
R1310	Description	1	80	AN	M	SIMS component handheld description
R1311	Description	1	80	AN	O	Not used
R1312	Quantity	1	15	R	M	Numeric Value of Quantity

SE - Transaction Set Trailer

							MANDATORY

Maximum USE: 1 per transaction set

Example:

SE*13*000411654

Element ID	Description	Min	Max	Type	Required	Content
SE01	Number of Included Segments	01	01	ID	M	The number of segments sent in the transaction set, including both the ST and SE segments
SE02	Transaction Set Control Number	01	09	AN	M	Sender's message control number, this number must match the number sent in the ST segment

GE - Functional Group Trailer

							MANDATORY

Maximum USE: 1 per transaction set

Example:

GE*1*000163913

Element ID	Description	Min	Max	Type	Required	Content
GE01	Number of Included Transaction sets	01	06	N0	M	This reflects the number of sets transmitted
GE02	Group Control Number	01	09	N0	M	Sender's group control number, this number must match the number sent in the GS segment

IEA - Interchange Control Trailer

							MANDATORY

Maximum USE: 1 per transaction set

Example:

GE*1*000163913

Element ID	Description	Min	Max	Type	Required	Content
IEA01	Number of Included Functional Groups	01	05	N0	M	This reflects the number of functional groups sent
IEA02	Interchange Control Number	01	09	N0	M	Sender's interchange control number, this number must match the number sent in the ISA segment

1.2 Inbound & Outbound Samples for each events

1.2.1 Bad Order Event - IEP/MRV/FO to IANA (322 Inbound)

In order to report Bad Order Event, IEP or MRV or FO would send inbound 322 transaction set to IANA in below format.

```
ISA*00*    *00*    *ZZ*BNSF      *ZZ*BOES      *140408*1422*U*00401*000163913*0*T*~
GS*SO*BNSF*BOES*20140408*1422*000163913*X*004010
ST*322*000411654
Q5*B*20140303*1020*ET
N7* NSPZ*132025*********CH****0053*****9
W2* NSPZ*132025**CH*E**********N
R4*5*SL*417500*CHARLOTT*ZZ*IN GAT
R13*1*00**91**C******1
R13*2*3350**02**R*IN*003****1
R13*3*3360**14**R******1
R13*4*3405**02**LR******1
R13*5*3405**02**RR******1
R13*6*5001**02**LF*IN*006****1
R13*7*5001**02**RF*IN*006****1
SE*18*000411654
GE*1*000163913
IEA*1*000163913
```

1.2.2 Damage Event - IANA to IEP/MRV/FO (322 Outbound - AAR)

After processing inbound 322 for bad order event(see 1.2.1) and after identifying IEP, IANA would generate notification/message in below outbound format and send it to IEP. It also notifies MRV and/or FO if selected by IEP and opted to receive notification via 322. Repair items mentioned in AAR codes.

```
ISA*00*    *00*    *ZZ*BOES      *ZZ*NS       *140408*1422*U*00401*000163913*0*T*~
GS*SO*BOES*NS*20140408*1422*000163913*X*004010
ST*322*000411654
Q5*DT*20140303*1020*ET
N7* NSPZ*132025*********CH*NSCU***0053*****9
W2* NSPZ*132025**CH*E**********N
R4*5*SL*417500*CHARLOTT*ZZ*IN GAT
N1*HA*MAERSK GULF POOL*A4*M002
N9*A6*098765
N9*IP*IANA-BOES-000000001
R13*1*00**91**C******1
R13*2*3350**02**R*IN*003****1
R13*3*3360**14**R******1
R13*4*3405**02**LR******1
R13*5*3405**02**RR******1
R13*6*5001**02**LF*IN*006****1
R13*7*5001**02**RF*IN*006****1
SE*21*000411654
GE*1*000163913
IEA*1*000163913
```

1.2.3 Damage Event - IANA to IEP/MRV/FO (322 Outbound - ISO)

After processing inbound 322 for bad order event(see 3.7.1) and after identifying IEP, IANA would generate notification in below outbound format and send it to IEP. It also notifies MRV and/or FO if selected by IEP and opted to receive notification via 322. Repair items mentioned in ISO codes.

```
ISA*00*      *00*      *ZZ*BOES      *ZZ*NS        *140408*1422*U*00401*000163913*0*T*~
GS*SO*BOES*NS*20140408*1422*000163913*X*004010
ST*322*000411654
Q5*DT*20140303*1020*ET
N7* NSPZ*132025*********CH*NSCU***0053*****9
W2* NSPZ*132025**CH*E**********N
R4*5*SL*417500*CHARLOTT*ZZ*IN  GAT
N1*HA*MAERSK GULF POOL*A4*M002
N9*A6*098765
N9*IP*IANA-BOES-000000001
R13*1*00**91**C******1
R13*2*90130**BT** CF7N*IN*003****1
R13*3* 90190**CU** CYLR******1
R13*4* 90565** CU ** CYLR ******1
R13*5*90565**CU** CYRR ******1
R13*6* 90050**BT**CYLF*IN*006****1
R13*7*90050**BT**CYRF*IN*006****1
SE*17*000411654
GE*1*000163913
IEA*1*000163913
```

1.2.4 Repair/Release Event - IANA to IEP/ FO (322 Outbound - AAR)

When MRV marks any of the equipment is repaired in BOES system then system would generate 322 outbound for repair/release event and send it to IEP. It also sends notification to FO if selected by IEP and has opted to receive notification via 322. Repair items mentioned in AAR codes.

```
ISA*00*      *00*      *ZZ*BOES      *ZZ*NS        *140408*1422*U*00401*000163913*0*T*~
GS*SO*BOES*NS*20140408*1422*000163913*X*004010
ST*322*000411654
Q5*G*20140303*1020*ET
N7* NSPZ*132025*********CH*NSCU***0053*****9
W2* NSPZ*132025**CH*E**********N
R4*5*SL*417500*CHARLOTT*ZZ*IN  GAT
N1*HA*MAERSK GULF POOL*A4*M002
N9*A6*098765
N9*IP*IANA-BOES-000000001
SE*17*000411654
GE*1*000163913
IEA*1*000163913
```

1.2.5 Repair/Release Event - IANA to IEP/ FO (322 Outbound - ISO)

When MRV marks any of the equipment is repaired in BOESC system then system would generate 322 outbound for repair/release event and send it to IEP. It also sends notification to FO if selected by IEP and has opted to receive notification via 322. Repair items mentioned in ISO codes.

```
ISA*00*    *00*    *ZZ*BOES    *ZZ*NS    *140408*1422*U*00401*000163913*0*T*~
GS*SO*BOES*NS*20140408*1422*000163913*X*004010
ST*322*000411654
Q5*G*20140303*1020*ET
N7* NSPZ*132025*********CH*NSCU***0053*****9
W2* NSPZ*132025**CH*E**********N
R4*5*SL*417500*CHARLOTT*ZZ*IN  GAT
N1*HA*MAERSK GULF POOL*A4*M002
N9*A6*098765
N9*IP*IANA-BOES-000000001
SE*17*000411654
GE*1*000163913
IEA*1*000163913
```

1.2.6 Release Reject/Receipt OR Not Inventoried OR Off Hold Event - FO to IANA (322 Inbound)

If IANA receives message for release reject or not inventoried or off hold on a particular unit then IANA would identify the IEP and generate notification/message for responsible IEP for that unit. Please refer section 1.2.7.

```
ISA*00*    *00*    *ZZ*BNSF    *ZZ*BOES    *140408*1422*U*00401*000163913*0*T*~
GS*SO*BNSF*BOES*20140408*1422*000163913*X*004010
ST*322*000411654
Q5*HR*20140303*1020*ET
N7* NSPZ*132025*********CH* ***0053*****9
W2* NSPZ*132025**CH*E**********N
R4*5*SL*417500*CHARLOTT*ZZ*IN  GAT
N9*IP*IANA-BOES-000000001
SE*17*000411654
GE*1*000163913
IEA*1*000163913
```

1.2.7 Release Reject/Receipt OR Not Inventoried OR Off Hold Event - IANA to IEP (322 Outbound)

After processing message for release reject or not inventoried or off hold on a particular unit then

```
ISA*00*    *00*    *ZZ*BOES    *ZZ*HJBT    *140408*1422*U*00401*000163913*0*T*~
GS*SO*BOES*HJBT*20140408*1422*000163913*X*004010
ST*322*000411654
Q5*HR*20140303*1020*ET
N7* NSPZ*132025*********CH*HJBT***0053*****9
W2* NSPZ*132025**CH*E**********N
R4*5*SL*417500*CHARLOTT*ZZ*IN  GAT
N9*IP*IANA-BOES-000000001
SE*17*000411654
GE*1*000163913
IEA*1*000163913
```

1.2.8 At Gate & Pre Gate Defects (DVIR) - IEP/MRV/FO to IANA (322 Inbound)

This would be the current 322 transaction set established under IANA's DVIR application.

```
ISA*00*      *00*      *ZZ*NS        *ZZ*DVIR        *140408*1422*U*00401*000163913*0*T*~
GS*SO*DVIR*NS*20140408*1422*000163913*X*004010
ST*322*000411654
N7*ABCZ*544037**********CC*ABCU
R4*5*SL*218317*PITCAIRN****PA
N1*MC*JOE'S TRUCKING COMPANY*2*JTCI
N1*DR*RAIL ROAD INC.*2*RRIN
N1*D1*JOE TRUCKER*ZZ*25612895
N1*HA*MAERSK GULF POOL*A4*M002
N9*5J*123456*PA
N9*X3*02*LIGHTS
N9*X3*03*WHEEL
SE*13*000411654
GE*1*000163913
IEA*1*000163913
```

1.2.9 DVIR - IANA to IEP/MRV/FO (322 Outbound)

After processing DVIR 322(see 3.7.14), the system would generate 322 outbound file and send it to IEP. It also send the file to FO & MRV if selected by IEP and opted to receive DVIR via 322.

```
ISA*00*      *00*      *ZZ*DVIR       *ZZ*NS         *140408*1422*U*00401*000163913*0*T*~
GS*SO*DVIR*NS*20140408*1422*000163913*X*004010
ST*322*000411654
Q5*GI*20090925*0112*ET
N7*ABCZ*544037**********CC*ABCU
R4*5*SL*218317*PITCAIRN****PA
N1*MC*JOE'S TRUCKING COMPANY*2*JTCI
N1*DR*RAIL ROAD INC.*2*RRIN
N1*D1*JOE TRUCKER*ZZ*25612895
N1*HA*MAERSK GULF POOL*A4*M002
N9*IP*555555
N9*5J*123456*PA
N9*MCI*987654
N9*A6*5555555
N9*X3*02*LIGHTS
N9*X3*03*WHEEL
SE*13*000411654
GE*1*000163913
IEA*1*000163913
```

1.2.10 DVER - IANA to IEP (322 Outbound)

Blow message would be generated when IANA receives DVER from FMCSA for your company and your company has elected to receive DVER from IANA in electronic 322 EDI set.

```
ISA*00*      *00*      *ZZ*DVER      *ZZ*NS        *140408*1422*U*00401*000163913*0*T*~
GS*SO*DVER*NS*20140408*1422*000163913*X*004010
ST*322*000411654
Q5*B*20140521
N7*ABCZ*544037**********CC*ABCU
N1*HA*MAERSK GULF POOL*A4*M002
N9*IP*GA0375001036
N9*LV*123456*PA
N9*MCI*123456
N9*A6*098765
SE*11*000411654
GE*1*000163913
IEA*1*000163913
```