# C.H. Robinson Worldwide

## **MESSAGE IMPLEMENTATION GUIDE**

TECHNICAL SPECIFICATION FOR XML LOAD BOOKING MESSAGE

### **Document Information**

Document Name: MESSAGE IMPLEMENTATION GUIDE

TECHNICAL SPECIFICATION FOR XML LOAD BOOKING MESSAGE

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## **Revision History**

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## **Contents**

Rev	vision History	
1.	vision HistoryIntroduction	4
2.	XML Structure	5
3.	Load Booking Message	6
	3.1 Shipment	6
	3.2 Header	
	3.3 Shipment Details	8
	3.4 Charges	
	3.5 Stops	11
	3.6 Carriers	
	3.7 Commodities	
	3.8 Item Associations	
4.	Useful Contacts	
5.	Appendices	
	Appendix A: FTP Information	
		Error! Bookmark not defined
		25

## 1. Introduction

This document is intended for business and technical personnel engaged in establishing an electronic connection with C.H. Robinson for the purpose of receiving a **Load Booking** XML EDI message. Separate Implementation Guides have been created for the XML Response and Status Update EDI messages.

The documents describes the XML schema's from which **three** types of standard messages can be created and communicated between C.H. Robinson and a Carrier

#### 1. Outbound Message (C.H. Robinson to Carrier):

• **Load Booking** – C.H. Robinson sends a load booking to a carrier. This booking will include all information as to the pick-up and delivery of the load, required dates, rates, and item details.

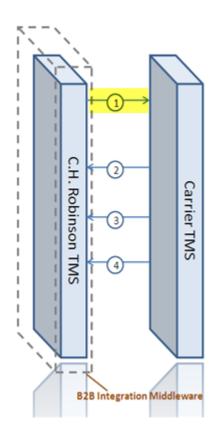
#### 2. Inbound Message (Carrier to C.H. Robinson):

- Response to Load Booking The carrier sends C.H. Robinson a response to the received load booking (accept or decline).
- **Shipment Status Updates** The carrier sends C.H. Robinson updates to provide up-to-date status and reference information on in-transit shipments.

These messages can be visualized in the below diagram. The diagram below outlines a typical EDI transmission scenario between C.H. Robinson and a carrier.

#### System Interface Map

- Shipment (includes item location elements)
- Shipment Response (Accept / Reject)
- Driver & Vehicle Details
- Carrier Status (Pickup, In-Transit, and Delivery)



- 1. C.H. Robinson will send a Load booking to a carrier (This Spec)
- 2. A carrier will either accept or reject the booking
- 3. After acceptance a carrier will send driver and vehicle details (e.g. license plate information)
- 4. During transit up to the final delivery a carrier will send multiple status updates related to the location and status of the shipment.

C.H. Robinson Europe Page 4 of 26 Version 2.0

## 2. XML Structure

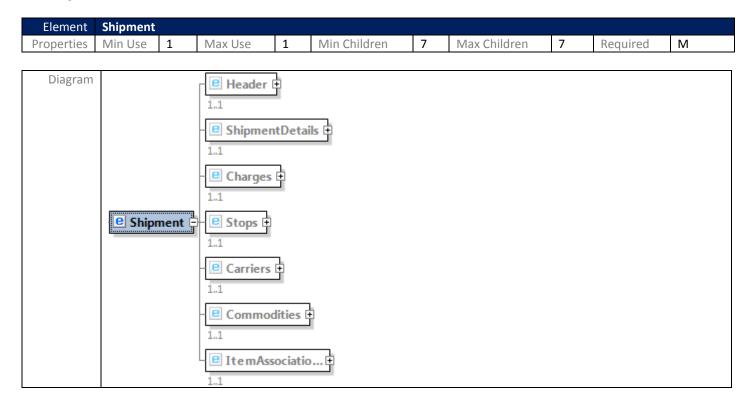
- The message specification is broken down into sections for ease of explanation. In practice the entire message will be transmitted as one.
- In the below diagrams any element that displays 0...1, 0...\*, etc. can be considered optional data elements.
- Min (Use) and Max (Use) refers to the minimum and maximum occurrence of the field it describes
- Min Children and Max Children refers to the minimum and maximum sub-elements linked to the field it describes
- Required describes if the element is mandatory (M), Optional (O) or Conditional (C)
- Length refers to the maximum length of the field it describes
- Type describes what kind of data a certain element holds (Alpha Numeric (AN) or Numeric (N) and its subtype (String, Integer, Long or Boolean).

## 3. Load Booking Message

A Load Booking message will include all critical shipment information (locations, items, charges etc.) for pickup and delivery and will need to be either accepted or rejected by the recipient.

#### 3.1 Shipment

XML documents must contain a root element. The **Shipment** element is the root element for the Load Booking XML message.



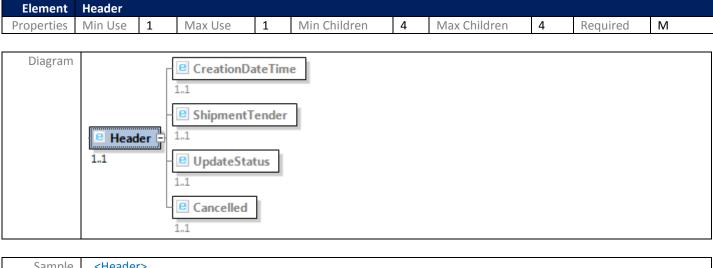
C.H. Robinson Europe Page 6 of 26 Version 2.0

#### 3.2 Header

The **Header** element is used to indicate the type of message and the date and time of creation. The element can indicate one of three message types:

- A new booking
- An updated booking
- A cancelled booking

Only one of the message type indicators will be set to "1" (Yes) per message. All other message type indicators will be set to "0" (No).



Sample	<header></header>
	<creationdatetime>20170409233400</creationdatetime>
	<shipmenttender>0</shipmenttender>
	<updatestatus>1</updatestatus>
	<cancelled>0</cancelled>

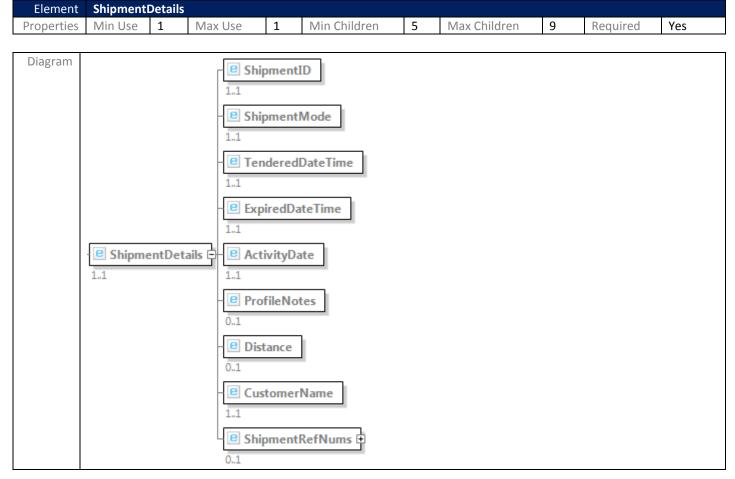
Element	Min	Max	Required	Туре	Length	Description	Example	
CreationDateTime	1	1	М	AN (String)	14	Document Creation Date and Time (Format: YMMDDHHMMSS)	20110110144343	
ShipmentTender	1	1	М	N (Integer)	1	New booking indicator; Value "1" indicates a new booking (Format: 1 / 0)	1	
UpdateStatus	1	1	М	N (Integer)	1	Updated booking indicator; Value "1" indicates an updated booking (Format: 1 / 0)	0	
Cancelled	1	1	М	N (Integer)	1	Cancelled booking indicator; Value "1" indicates a cancelled booking. (Format: 1 / 0)	0	

Notes	

C.H. Robinson Europe Page 7 of 26 Version 2.0

#### 3.3 Shipment Details

The **ShipmentDetails** element contains information about the shipment including the date range wherein a carrier must approve or reject the booking request, and the C.H. Robinson shipment number, a key field in all communication between C.H. Robinson and all its business partners.



Sample	<shipmentdetails></shipmentdetails>
	<shipmentid>229643413</shipmentid>
	<shipmentmode>V</shipmentmode>
	<tendereddatetime>20170409233400</tendereddatetime>
	<expireddatetime>20170410003400</expireddatetime>
	<activitydate>20170410000000</activitydate>
	<profilenotes>Rush Order!!!</profilenotes>
	<distance>461</distance>
	<customername>CH Robinson</customername>
	<shipmentrefnums></shipmentrefnums>

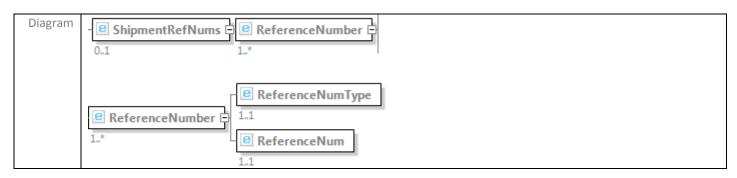
Element	Min	Max	Required	Туре	Length	Description	Example
ShipmentID	1	1	М	N (String)	256	C.H. Robinson shipment number	229643413
ShipmentMode	1	1	М	AN (String)	256	Mode of Transport (Code)	V
TenderedDateTime	1	1	М	AN (String)	256	Start of acceptance time window (Format: YMMDDHHMMSS)	20170409233400
ExpiredDateTime	1	1	M	AN (String)	256	Deadline for acceptance of booking by carrier (Format: YMMDDHHMMSS)	20170410003400

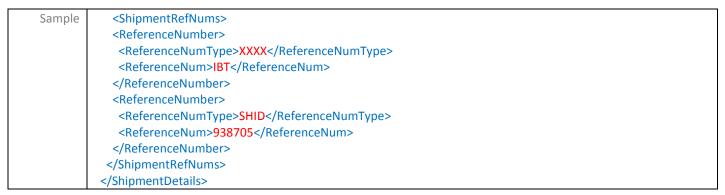
ActivityDate	1	1	М	AN	256	Requested Loading Date	20170410000000
				(String)		(Format: YMMDDHHMMSS)	
ProfileNotes	0	1	0	AN (String)	256	Common Notes	Rush Order!!!
Distance	0	1	0	N (Integer)	256	Route Distance	461
CustomerName	1	1	M	AN (String)	256	For Shippers Agent business this will be the name of the customer, all other (brokerage) loads it will be CH Robinson	CH Robinson

#### 3.3.1 Shipment Reference Numbers

The **ShipmentRefNums** element is an optional grouping that contains any additional reference number information at the shipment level.

Element	Shipment	hipmentRefNums													
Properties	Min Use	n Use 0 Max Use 1 Min Children 1 Max Children ∞ Required No													
Element	Reference	ReferenceNumber													
Properties	Min Use	1	Max Use	8	Min Children	2	Max Children	2	Required	Yes					



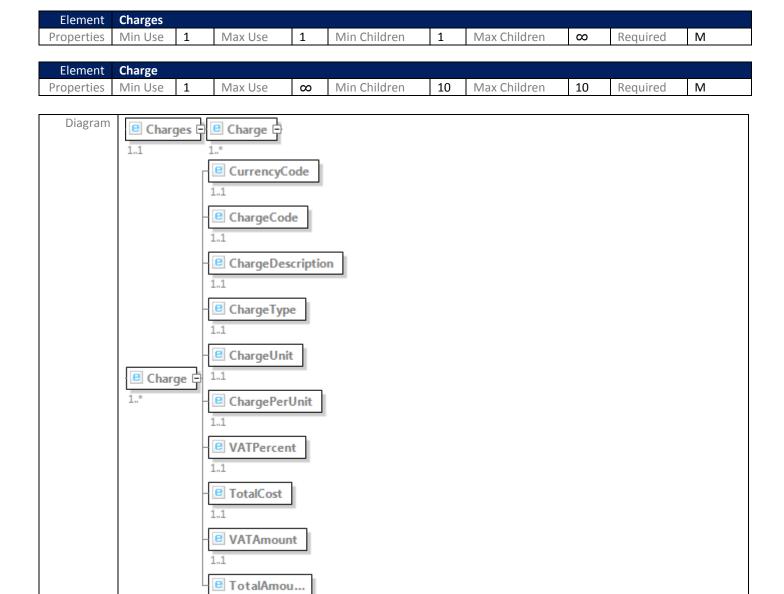


Sub Element	Min	Max	Required	Туре	Length	Description	Example
RefNumType	1	1	М	AN (String)	256	Code used to identify type of reference number	SHID
ReferenceNum	1	1	М	AN (String)	256	Reference number	938705

Version 2.0

#### 3.4 Charges

The **Charges** element shows the agreed charges for the load. Each charge type will be sent in separate **Charge** elements.



Element	Min	Max	Required	Туре	Length	Description	Example
CurrencyCode	1	1	М	AN (String)	256	Currency Code	EUR
ChargeCode	1	1	М	AN (String)	256	C.H. Robinson Charge Code	400
ChargeDescription	1	1	М	AN (String)	256	Charge Description	Line Haul
ChargeType	1	1	М	AN (String)	256	Charge Type	F
ChargeUnit	1	1	М	N (Decimal)	256	Number of Units	1.0
ChargePerUnit	1	1	М	N (Decimal)	256	Charge per Unit	990.0
VATPercent	1	1	М	N (Decimal)	256	VAT Percentage Rate	0
TotalCost	1	1	М	N (Decimal)	256	Total Charges	0
VATAmount	1	1	М	N (Decimal)	256	VAT Amount	0
TotalAmount	1	1	М	N (Decimal)	256	Total Including VAT	934.56

Notes

#### 3.5 Stops

The **Stops** element contains information related to ach pick-up and delivery location (stops). Every individual stop will be sent as a separate element. As a minimum of 2 stops are required for each shipment, 2 sections of **Stop** information will be present in the most basic message.

Element	Stops									
Properties	Min Use	1	Max Use	1	Min Children	2	Max Children	8	Required	М
Element	Stop									
					Min Children	15	Max Children	31	Required	М



```
E StopSeqNum
       ■ LocationID
       StopOrderSeqNum
       StopType
       Name
       MainPhone
       ■ StopContact

■ Address1

       @ Address2
       City
       Country
       ZipCode
        ScheduledStartDateTi...
       CheduledEndDateTi...
       RequestedStartDateTi...
Stop RefNum
       0.1
        ArrivalDateTime
        DepartureDateTime
        SealNumber
0.1
        ■ BlindStop
        © BlindName
        BlindAddr...
        0.1
        BlindState
0.1
        CaleRequired
        LoadingTy...
        DriverWork
        StopNote

    StopRequirements 
    ⊕

        🗈 StopRefNums 🗈
```

Sample	<stops></stops>
	<stop></stop>
	<stopseqnum>1</stopseqnum>
	<locationid>8187</locationid>
	<stoporderseqnum>0</stoporderseqnum>
	<stoptype>P</stoptype>
	<name>Johnson Controls Autobaterie Ceska Lipa - HALL B</name>
	<mainphone>+420.487807111</mainphone>
	<stopcontact>Antonin Olsar</stopcontact>
	<address1>Dubick 958,</address1>
	<address2>HALL B</address2>
	<city>Ceska Lipa</city>
	<country>CZ</country>
	<zipcode>47090</zipcode>
	<scheduledstartdatetime>20170410061500</scheduledstartdatetime>
	<scheduledenddatetime>20170410211500</scheduledenddatetime>
	<requestedstartdatetime>201704102115</requestedstartdatetime>
	<refnum>938705</refnum>
	<pre><driverwork>NT</driverwork></pre>
	<stopnote> ALL TRUCKS LOADING IN CESKA LIPA MUST HAVE ANTI-SLIDEMATS</stopnote>

Sub Element	Min	Max	Required	Туре	Length	Description	Example
StopSeqNum	1	1	М	N (table as a)	2	Unique Stop ID within the	1
	-			(Integer)		shipment	
LocationID	1	1	М	AN	10	C.H. Robinson Location ID	W90222948
	1			(String)			
StopOrderSeqNum	1	1	М	N	2	Sequence number of the	2
				(Integer)		Stop in relation to all	
						stops. (Ascending)	
StopType	1	1	M	AN	1	Type of Stop	P
				(String)			
Name	1	1	M	AN	100	Location Name	LHR
				(String)			
MainPhone	1	1	M	AN	25	Location Main Phone	+49.5117400150
				(String)		Number	
StopContact	1	1	М	AN	25	Location Contact	Adam Smith
				(String)			
Address1	1	1	M	AN	100	Location Address	Units 8 & 9
				(String)			
Address2	1	1	М	AN	100	Location Address	Blackthorne
				(String)			Crescent
City	1	1	М	AN	60	Location City	Colebrook
-				(String)		-	
Country	1	1	М	AN	2	Location Country	UK
•				(String)		_	
ZipCode	0	1	0	AN	10	ZIP or Postal Code	SL30QR
•				(String)			,
ScheduledStartDateTime	1	1	М	AN O	14	Scheduled Date & Time of	20091229094510
				(String)		Arrival at stop	
				`		(Format:	
						YMMDDHHMMSS)	
ScheduledEndDateTime	1	1	М	AN	14	Scheduled Date & Time of	20091229101515
				(String)		Departure at stop	

						(Format: YMMDDHHMMSS)	
RequestedStartDateTime	0	1	0	AN (String)	14	Requested Pickup or Delivery time (Format: YMMDDHHMMSS)	20091229111559
RefNum	0	1	0	AN (String)	50	Main Pickup or Delivery Reference	123456XY
CMRNumber	0	1	0	AN (String)	20	CMR Number	123456
ArrivalDateTime	0	1	0	AN (String)	14	Date & Time of Arrival at stop (Format: YMMDDHHMMSS)	20091229113057
DepartureDateTime	0	1	0	AN (String)	14	Date & Time of Departure at stop (Format: YMMDDHHMMSS)	20091229123055
SealNumber	0	1	0	AN (String)	50	Security Seal Number	45687965214
BlindStop	0	1	0	N (String)	1	In case the actual shipper/consignee information should be disclosed, "Blind Stop" details will be provided here (Format: 1 / 0)	0
BlindName	0	1	0	AN (String)	250	Blind Stop Company Name	
BlindAddress	0	1	0	AN (String)	250	Blind Stop Address	
BlindCity	0	1	0	AN (String)	60	Blind Stop City	
BlindState	0	1	0	AN (String)	2	Blind Stop State	
ScaleRequired	0	1	0	N (Boolean)	1	If Value is "1" Scale Infor is required for this stop (Format: 1 / 0)	0
LoadingType	0	1	0	AN (String)	10	(Un)Loading Requirements	REAR/SIDE
DriverWork	0	1	0	AN (String)	10	Driver Requirements	NT
StopNote	0	1	О	AN (String)	4000	Stop specific information	ALL TRUCKS LOADING

### 3.5.1 StopRequirements

The **StopRequirements** element contains information related any special requirements that the carrier needs to observe while shipping the load.



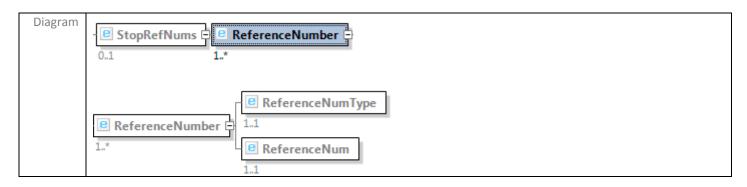
Sample	<stoprequirements></stoprequirements>
	<stoprequirement>ALL TRUCKS LOADING IN CESKA LIPA MUST HAVE ANTI-SLIDEMATS</stoprequirement>

Sub Element	Min	Max	Required	Туре	Length	Description	Example
StopRequirement	1	8	M	AN	1000	Stop specific requirements	ALL TRUCKS
				(String)			LOADING

## 3.5.2 StopRefNums

The **StopRefNums** element contains information related any stop specific reference numbers that the carrier needs to observe while shipping the load.

Element	StopRefNums											
Properties	Min Use	0	Max Use	1	Min Children	1	Max Children	8	Required	No		
Element	nt ReferenceNumber											
Properties	Min Use	1	Max Use	8	Min Children	2	Max Children	2	Required	Yes		



Sample	<stoprefnums></stoprefnums>
	<referencenumber></referencenumber>
	<referencenumtype>PO</referencenumtype>
	<referencenum>124516</referencenum>

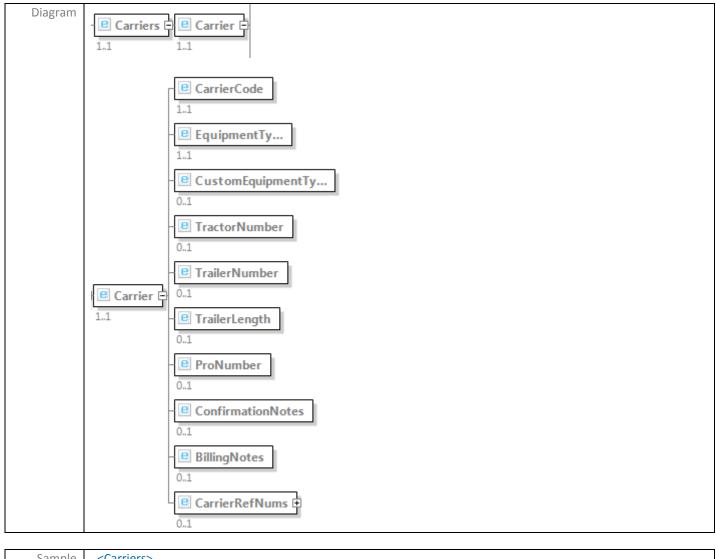
Sub Element	Min	Max	Required	Туре	Length	Description	Example
RefNumType	1	1	M	AN	256	Code used to identify type of	PO
				(String)		reference number	
ReferenceNum	1	1	M	AN	256	Reference number	124516
				(String)			

No	atoc			
IVC	otes			

#### 3.6 Carriers

The Carriers message Element includes basic carrier and carrier equipment information.

Element	Carriers									
Properties	Min Use	1	Max Use	1	Min Children	1	Max Children	1	Required	М
Element	Carrier									
Properties	Min Use	1	Max Use	1	Min Children	2	Max Children	10	Required	М



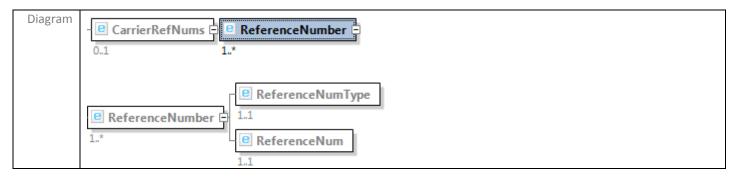
Element	Min	Max	Required	Туре	Length	Description	Example
CarrierCode	1	1	М	AN (String)	256	CHR Carrier ID	T9014293
EquipmentType	1	1	М	AN (String)	256	Requested equipment type	Т
TractorNumber	0	1	0	AN (String)	256	Tractor Registration Number	Y454THU
TrailerNumber	0	1	0	AN (String)	256	Trailer Registration Number	A450CAV
TrailerLength	0	1	0	N (String)	256	Trailer Length (Meter)	13.6
ProNumber	0	1	0	AN (String)	256	Carrier Shipment Reference Number	123456YHTE
ConfirmationNotes	0	1	0	AN (String)	256	Load Specific Notes	Text
BillingNotes	0	1	0	AN (String)	256	Invoice Requirements	Text

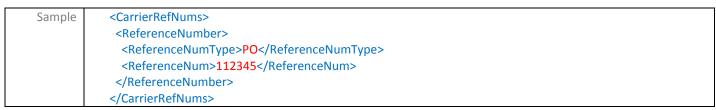
Notes

#### 3.6.1 CarrierRefNums

The **CarrierRefNums** element contains information related any carrier specific reference numbers that the carrier needs to observe while shipping the load.

Element	CarrierRefNums										
Properties	Min Use	0	Max Use	1	Min Children	1	Max Children	8	Required	No	
Element	ReferenceNumber										
Properties	Min Use	1	Max Use	8	Min Children	2	Max Children	2	Required	Yes	



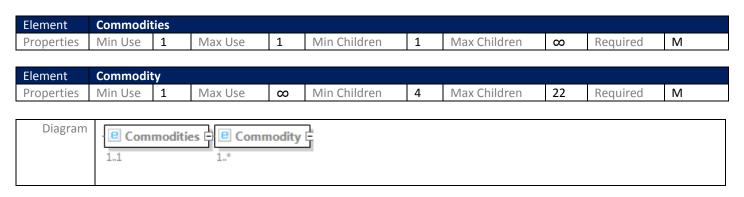


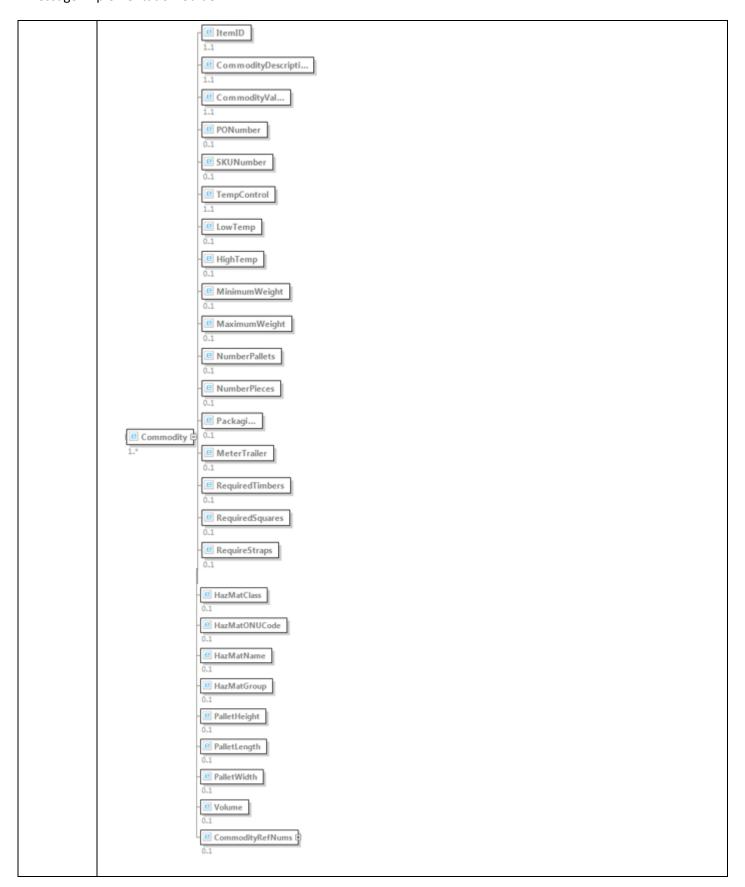
Sub Element	Min	Max	Required	Туре	Length	Description	Example
RefNumType	1	1	М	AN (String)	256	Code used to identify type of reference number	PO
ReferenceNum	1	1	М	AN (String)	256	Reference number	124516

Notes

#### 3.7 Commodities

The **Commodities** message Element includes all item information including pieces, pallets and/or meter of trailer. This Element describes the goods in transit, and highlights any special requirements. This message section will be included for each commodity. Multiple commodities can exist.





Sample	<commodities></commodities>
	<commodity></commodity>
	<pre><itemid>229643413-0</itemid></pre> /ItemID>
	<commoditydescription>Battery,wet prefix 2</commoditydescription>
	<commodityvalue>80000</commodityvalue>
	<tempcontrol>False</tempcontrol>
	<minimumweight>780</minimumweight>
	<maximumweight>780</maximumweight>
	<numberpieces>48</numberpieces>
	<packaging>PCS</packaging>
	<requirestraps>0</requirestraps>
	<commodityrefnums></commodityrefnums>

Sub Element	Mi n	Max	Required	Туре	Length	Description	Example
ItemID	1	1	М	AN (String)	256	Reference number for item	229643413-0
CommodityDescription	1	1	М	AN (String)	256	Description of the Goods in Transit	Battery,wet prefix 2
CommodityValue	1	1	М	N (Decimal)	256	Cargo Value (in Local currency)	80000
PONumber	0	1	0	AN (String)	256	Commodity PO Number	123456
SKUNumber	0	1	0	AN (String)	256	Commodity SKU Number	987654
TempControl	1	1	M	N (Boolean)	256	Temp. controlled indicator; Value "TRUE" indicates temperature control is required (Format: TRUE / FALSE)	TRUE
LowTemp	0	1	С	AN (String)	256	Minimum Temperature (Celsius)	-2
HighTemp	0	1	С	AN (String)	256	Maximum Temperature (Celsius)	10
MinimumWeight	0	1	0	N (Decimal)	256	Minimum Weight (Kg)	150
MaximumWeight	0	1	0	N (Decimal)	256	Maximum Weight (Kg)	200
NumberPallets	0	1	0	N (Integer)	256	Number of Pallets	10
NumberPieces	0	1	0	N (Integer)	256	Number of Pieces	500
Packaging	0	1	0	AN (String)	256	Type of Packaging	PLT
MeterTrailer	0	1	0	N (Decimal)	256	Loading Meter	13.6
RequiredTimbers	0	1	0	N (Integer)	256	Number of required timbers	9

RequiredSquares	0	1	0	N (totales)	256	Number of required	15
		-		(Integer)		squares	
RequiredStraps	0	1	0	N	256	Number of required straps	1
				(Integer)			
HazMatClass	0	1	0	AN	256	ADR Classification	3
				(String)			
HazMatONUCode	0	1	0	AN	256	ADR UN code	0197
				(String)			
HazMatName	0	1	0	AN	256	ADR Description	Signals, smoke
				(String)			
HazMatGroup	0	1	0	AN	256	ADR Group description	Very Dangerous
-				(String)			Materials
PalletHeight	0	1	0	AN	256	Pallet Height (in Cm)	150
J				(String)			
PalletLength	0	1	0	AN	256	Pallet Length (in Cm)	120
-				(String)			
PalletWidth	0	1	0	AN	256	Pallet Width (in Cm)	80
				(String)		, ,	
Volume	0	1	0	AN	256	Pallet Volume in (Cubic	.0034
				(String)		meters)	

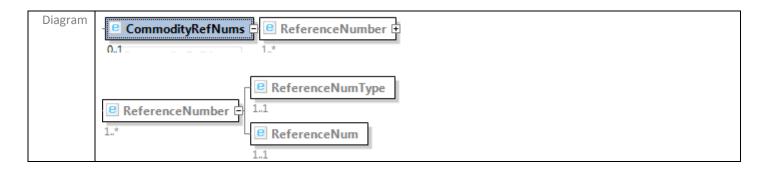
Code	Description	Code	Description
BAG	Bag	LNFT	Linear Foot
BAL	Bale	LSE	Loose
BDL	Bundle	LUG	Lug
BGBAG	Big bags	OTHR	Other
BIN	Bin	PAL	Pail
BOT	Bottle	PANELS	panels
BOX	Box	PCS	Pieces
BULK	Bulk	PKG	Package
BXT	Bucket	PLT	Pallets
CA	Case	RCK	Rack
CRT	Crate	REEL	Reels
CTN	Carton	REL	Reels
DRM	Drum	ROL	Roll
DRUM	Drums	SAK	Sack
DZ	Dozens	SKD	Skid
EAC	Eaches	SKE	Skid, elevating or lift truck
GAL	Gallon	SLP	Slip Sheet
GYL	Gaylords	TLD	Intermodal Trailer/Container Load (Rail)
HDW	Hundred Weight (lbs)	TOT	Totes
IPLT	(Industrial) Pallets	TRY	Tray
JAR	Jar	TUB	Tub
LBS	Pounds	YD	Yards

## 3.7.1 CommodityRefNums

The **CommodityRefNums** element contains information related any additional commodity specific reference numbers that the carrier needs to observe while shipping the load.

Element	CommodityRefNums									
Properties	Min Use	0	Max Use	1	Min Children	1	Max Children	8	Required	No
Element	ReferenceNumber									
Properties	Min Use	1	Max Use	8	Min Children	2	Max Children	2	Required	Yes

C.H. Robinson Europe Page 21 of 26 Version 2.0



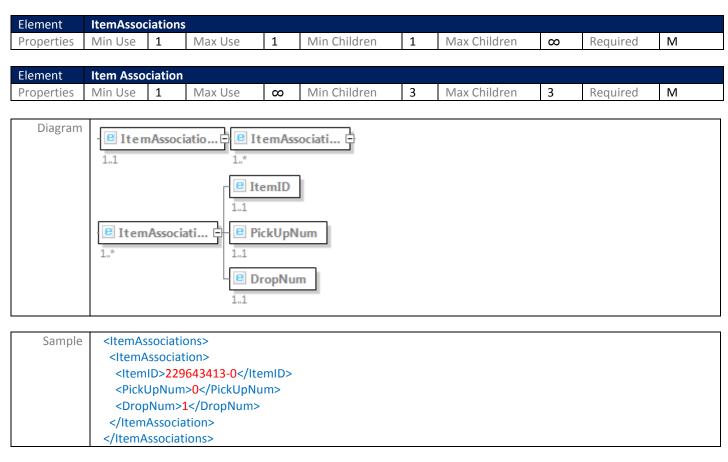
<carrierrefnums></carrierrefnums>
<commodityrefnums></commodityrefnums>
<referencenumber></referencenumber>
<referencenumtype>PO</referencenumtype>
<referencenum>112345</referencenum>

Sub Element	Min	Max	Required	Туре	Length	Description	Example
RefNumType	1	1	М	AN (String)	256	Code used to identify type of reference number	PO
ReferenceNum	1	1	М	AN (String)	256	Reference number	112345

Notes	

#### 3.8 Item Associations

The **Item Associations** Element details how the items are associated to the various stops. Especially when there are multiple pickups or deliveries and details which item(s) is expected to be picked up at stop 1, stop 2, stop 3, etc. Essentially, it determines which goods are picked up what pickup location, and then delivered to which delivery location. There will be an Item Associations section for each item in the load.



Sub Element	Min	Max	Required	Туре	Length	Description	Example
ItemID	1	1	M	AN	256	ItemID in Commodity Element	1512343-0
				(String)			
PickUpNum	1	1	М	N	256	StopSeqNum of the Pickup Location	0
				(Integer)			
DropNum	1	1	М	N	256	StopSeqNum of the Delivery Location	1
-				(Integer)			

Notes	es.	

## 4. Useful Contacts

For questions send an email to CIT Carrier BA@chrobinson.com

There will be a separate and more specific contact when a project is created to implement the XML trading between partners and CH Robinson.

C.H. Robinson Europe Page 24 of 26 Version 2.0

## 5. Appendices

#### Appendix A: Outbound XML EDI Schema



#### Appendix B: Example Messages

#### **Outbound Messages**

• 1A: Booking for a simple shipment (1 Pickup and 1 Delivery)



1A\_Booking\_Request\_Simple.xml

• 1B: Booking for a complex shipment (1 Pickup and 3 Deliveries)



1B\_Booking\_Request\_MultiStop.xml

#### **Inbound Messages**

2A: A Response (Accept) message to the above mentioned 1A



2A\_IB\_Response\_Ac cept.xml

• 2B: A Response (Decline) message to the above mentioned 1B



2B\_IB\_Response\_De cline.xml

3A: A Status Update (Vehicle Information) to the above mentioned 1A



3A\_IB\_Status\_Vehicl e\_Information.xml

• 3B: A Status Update (Arrived and Departed Pickup Location) to the above mentioned 1A





3B\_IB\_Status\_Arrive 3B\_IB\_Status\_Depar d-at-Pickup.xml ted-Pickup.xml

• 3C: A Status Update (Arrived and Departed Destination) to the above mentioned 1A



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3C\_IB\_Status\_Arrive 3C\_IB\_Status\_Depar d-at-Destination.xml

• 4A: A Status Update (Shipment Delayed) to the above mentioned 1A

C.H. Robinson Europe Page 25 of 26 Version 2.0

