



## **FV21 Finished vehicles - Compound Geo Fence Data**

OEMs and LSPs often use geo-fenced areas on their premises, where they park vehicles with the same process status. This way, by knowing the exact position of a vehicle in a compound, the process status can be automatically determined.

VERSION No: V1R1  
DATE: SEPTEMBER 2022  
Author: ECG/Odette/VDA

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## CHANGE HISTORY

No	Changes
01	Date 2022-05-12 Version 1.1 Change Description optional -> required Path Envelope/Header/ReceiverID/@Agency
02	Date 2022-05-12 Version 1.1 Change Description optional -> required Path Envelope/Header/SenderID/@Agency
03	Date 2022-05-05 Version 1.1 Change Description extension of integer changed to extension of string to match added formats. Path Envelope/Body/CompoundGeoFenceData/IssueDate
04	Date 2022-09-13 Version 1.1 Change Description Deleted CCYYMMDDhhmmZ and CCYYMMDDhhmmssZ - no appropriate EDIFACT codes available. Use corresponding format with CCYYMMDDhhmmssZZZ and CCYYMMDDhhmmssZZZ with UTC to denominate zulu-time Path Envelope/Body/CompoundGeoFenceData/IssueDate/@Format
05	Date 2022-05-12 Version 1.1 Change Description optional -> required Path Envelope/Body/CompoundGeoFenceData/IssueDate/@Format
06	Date 2022-05-12 Version 1.1 Change Description optional -> required Path Envelope/Body/CompoundGeoFenceData/Header/SenderID/@Agency
07	Date 2022-05-12 Version 1.1 Change Description optional -> required Path Envelope/Body/CompoundGeoFenceData/Header/ReceiverID/@Agency
08	Date 2022-02-17 Version 1.1 Change Description Comment amended Path Envelope/Body/CompoundGeoFenceData/Line/ID
09	Date 2022-05-05 Version 1.1 Change Description extension of integer changed to extension of string to match added formats. Path Envelope/Body/CompoundGeoFenceData/Line/ValidFromDate
10	Date 2022-09-13 Version 1.1 Change Description Deleted CCYYMMDDhhmmZ and CCYYMMDDhhmmssZ - no appropriate EDIFACT codes available. Use corresponding format with CCYYMMDDhhmmssZZZ and CCYYMMDDhhmmssZZZ with UTC to denominate zulu-time Path Envelope/Body/CompoundGeoFenceData/Line/ValidFromDate/@Format
11	Date 2022-05-12 Version 1.1 Change Description optional -> required Path Envelope/Body/CompoundGeoFenceData/Line/ValidFromDate/@Format

## CHANGE HISTORY

No	Changes
12	Date 2022-02-17 Version 1.1 Change Description New element AccountID Path Envelope/Body/CompoundGeoFenceData/Line/AccountID

## STRUCTURE

Occurrence	Element/Attribute
	<b>Envelope</b>
required	@ Version
required	@ ControllingInstance
1 .. 1	xs:sequence
1 .. 1	<b>Header</b>
1 .. 1	xs:sequence
1 .. 1	<b>ReceiverID</b>
required	@ Agency
1 .. 1	<b>SenderID</b>
required	@ Agency
1 .. 1	<b>MessageType</b>
1 .. 1	<b>InterchangeID</b>
1 .. 1	<b>Timestamp</b>
0 .. 1	<b>TestIndicator</b>
1 .. 1	<b>Body</b>
1 .. 1	xs:sequence
1 .. 1	xs:sequence
1 .. 1	xs:choice
1 .. 1	<b>CompoundGeoFenceData</b>
required	@ Version
required	@ ControllingInstance
1 .. 1	xs:sequence
1 .. 1	<b>SubType</b>
0 .. 1	<b>Profile</b>
1 .. 1	<b>DocumentID</b>
1 .. 1	<b>IssueDate</b>
required	@ Format
1 .. 1	<b>Header</b>
1 .. 1	xs:sequence
1 .. 2	<b>SenderID</b>
required	@ Agency
1 .. 2	<b>ReceiverID</b>
required	@ Agency
1 .. unbounded	<b>Line</b>
required	@ LevelID
1 .. 1	xs:sequence
1 .. 1	<b>ID</b>
0 .. 1	<b>Name</b>
0 .. 1	<b>ParentID</b>
0 .. 1	<b>ValidFromDate</b>
required	@ Format
0 .. unbounded	<b>AccountID</b>
1 .. unbounded	<b>GeoPoint</b>
required	@ Lat
required	@ Lon
0 .. 1	<b>Radius</b>

Bold = Simple Element, Bold on grey background = Complex Element, @ + Italic = Attribute, Grey = Group

## STRUCTURE

Occurrence	Element/Attribute
required	L @ UoM

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Verband der  
Automobilindustrie

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**GUIDELINE**

Element/Attribute	Annotation
<b>Envelope</b>	<p><b>Type</b> extension (EnvelopeType)</p> <p><b>Remark</b> The Envelope element provides a wrapper around the message that can be used by traditional EDI-systems and web-services to identify the message sender and receiver on a technical level rather than the commercial level. It contains also a unique interchange number for tracking, tracing and reference, a timestamp and an indicator, whether the interchange is a test.</p> <p>To keep it simple each envelope contains exactly one specified business message in its Body sub-element. For technical reasons (e.g. to select the correct converter-procedure in the EDI-system) this business message type must be specified in the Envelope/Header element as well.</p>
@ <i>Version</i>	<p><b>Type</b> xs:normalizedString</p> <p><b>Fixed</b> 2022A</p> <p><b>Use</b> required</p> <p><b>WhiteSpace</b> replace</p> <p><b>Remark</b> Schema version</p> <p><b>Applicable Codes</b></p> <p>2022A</p>
@ <i>ControllingInstance</i>	<p><b>Type</b> xs:string</p> <p><b>Fixed</b> Odette</p> <p><b>Use</b> required</p> <p><b>Remark</b> To indicate the author (fixed: Odette)</p>
xs:sequence	<p><b>Occurrence</b> 1 .. 1</p>
<b>Header</b>	<p><b>Occurrence</b> 1 .. 1</p> <p><b>Type</b> EnvelopeHeaderType</p> <p><b>Remark</b> This element contains the interchange information of the data exchange.</p>
xs:sequence	<p><b>Occurrence</b> 1 .. 1</p>
<b>ReceiverID</b>	<p><b>Occurrence</b> 1 .. 1</p> <p><b>Type</b> PartyIdentifierType</p> <p><b>Length</b> 1 .. 70</p> <p><b>Remark</b> Technical ID of the receiver - e.g. address of a web-service or OFTP2-ID</p>
@ <i>Agency</i>	<p><b>Type</b> IdentifierAssigningAgencyCode</p> <p><b>Use</b> required</p> <p><b>Remark</b> Responsible agency or organisation assigning the identifier.</p> <p><b>Applicable Codes</b></p> <p><b>Buyer</b> Identifier assigned by the buyer (customer)</p> <p><b>DUNS</b> D.U.N.S. number, assigned by Dun and Bradstreet</p> <p><b>Odette</b> Assigned by Odette</p>

Bold = Element, @ + Italic = Attribute, Grey = Group



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**GUIDELINE**

Element/Attribute	Annotation
<b>SenderID</b>	<b>Applicable Codes</b>
	<b>Operator</b> Assigned by the owner of the operation
	<b>Seller</b> Identifier assigned by the supplier
	<b>Occurrence</b> 1 .. 1
	<b>Type</b> PartyIdentifierType
	<b>Length</b> 1 .. 70
	<b>Remark</b> Technical ID of the sender - e.g. address of a web-service or OFTP2-ID
	<b>@ Agency</b>
	<b>Type</b> IdentifierAssigningAgencyCode
	<b>Use</b> required
<b>Remark</b> Responsible agency or organisation assigning the identifier.	
<b>MessageID</b>	<b>Applicable Codes</b>
	<b>Buyer</b> Identifier assigned by the buyer (customer)
	<b>DUNS</b> D.U.N.S. number, assigned by Dun and Bradstreet
	<b>Odette Operator</b> Assigned by Odette
	<b>Seller</b> Identifier assigned by the supplier
	<b>Occurrence</b> 1 .. 1
	<b>Type</b> ElectronicDocumentTypeCode
	<b>Remark</b> The message type as identified in the web service.
	<b>Applicable Codes</b>
	<b>CompoundGeoFenceData</b>
<b>InterchangeID</b>	<b>Occurrence</b> 1 .. 1
	<b>Type</b> xs:string
	<b>Remark</b> The unique ID assigned by the connector to the interchange. Recommended: combination of sender's URL+timestamp
<b>Timestamp</b>	<b>Occurrence</b> 1 .. 1
	<b>Type</b> xs:dateTime
	<b>Remark</b> Date and time of generation of the envelope (may differ from the message date itself), local time CCYY-MM-DDTHH:MM:SS - example: 2010-10-04T10:15:32
<b>TestIndicator</b>	<b>Occurrence</b> 0 .. 1
	<b>Type</b> xs:boolean
	<b>Default</b> false
	<b>Remark</b> To mark the interchange as test (true).
<b>Body</b>	<b>Occurrence</b> 1 .. 1
	<b>Type</b> EnvelopeBodyType
	<b>Remark</b> The Body element contains the business message and - in some cases - Attachments.

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**GUIDELINE**

Element/Attribute	Annotation
xs:sequence	<b>Occurence</b> 1 .. 1
xs:sequence	<b>Occurence</b> 1 .. 1
xs:choice	<b>Occurence</b> 1 .. 1 <b>Remark</b> Here, exactly one of the defined message elements follows.
<b>CompoundGeoFenceData</b>	<b>Occurence</b> 1 .. 1 <b>Type</b> extension (ElectronicDocumentType_2)
@ <i>Version</i>	<b>Type</b> xs:normalizedString <b>Fixed</b> 1.1 <b>Use</b> required <b>WhiteSpace</b> replace <b>Remark</b> Schema version <b>Applicable Codes</b> 1.1
@ <i>ControllingInstance</i>	<b>Type</b> ControllingInstanceCode <b>Fixed</b> Odette <b>Use</b> required <b>Remark</b> To indicate the author. <b>Applicable Codes</b> Odette VDA
xs:sequence	<b>Occurence</b> 1 .. 1
<b>SubType</b>	<b>Occurence</b> 1 .. 1 <b>Type</b> ElectronicDocumentSubTypeCode <b>Remark</b> To define the sub-type of the document - see codes <b>Applicable Codes</b> <b>CompoundGeoFenceData</b> A message to define areas or zones with specific meaning in the finished vehicle distribution process.
<b>Profile</b>	<b>Occurence</b> 0 .. 1 <b>Type</b> xs:string <b>Name</b> To identify the implementation profile of the message (e.g. the underlying business process etc.)
<b>DocumentID</b>	<b>Occurence</b> 1 .. 1 <b>Type</b> string_1_35 <b>Length</b> 1 .. 35 <b>Remark</b> The number issued by the creator of the document.
<b>IssueDate</b>	<b>Occurence</b> 1 .. 1 <b>Type</b> DateType2 <b>Remark</b> Issue date / time of this message
@ <i>Format</i>	<b>Type</b> DateTypeFormatCode <b>Use</b> required <b>Remark</b> Format of date / date + time , coded <b>Applicable Codes</b> CCYYMMDD Date

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**GUIDELINE**

Element/Attribute	Annotation
	<p><b>Applicable Codes</b></p> <p><b>CCYYMMDDhhmm</b> Date and time</p> <p><b>CCYYMMDDhhmmZhmm</b> Date &amp; time with time zone offset, e. g. 20190124153000+0100 =&gt; 24.01. 2019 15:30:00 Berlin time zone (UTC +1 hour)</p> <p><b>CCYYMMDDhhmmss</b> Date &amp; time including seconds</p> <p><b>CCYYMMDDhhmmssZhmm</b> Date &amp; time including seconds with time zone</p>
<b>Header</b>	<p><b>Occurrence</b> 1 .. 1</p> <p><b>Type</b> VehicleGeofenceHeaderType</p>
xs:sequence	<p><b>Occurrence</b> 1 .. 1</p>
<b>SenderID</b>	<p><b>Occurrence</b> 1 .. 2</p> <p><b>Type</b> PartyIdentifierType</p> <p><b>Length</b> 1 .. 70</p> <p><b>Remark</b> Commercial ID of the sender of the message</p>
@ Agency	<p><b>Type</b> IdentifierAssigningAgencyCode</p> <p><b>Use</b> required</p> <p><b>Remark</b> Responsible agency or organisation assigning the identifier.</p>
	<p><b>Applicable Codes</b></p> <p><b>Buyer</b> Identifier assigned by the buyer (customer)</p> <p><b>DUNS</b> D.U.N.S. number, assigned by Dun and Bradstreet</p> <p><b>Odette Operator</b> Assigned by Odette Assigned by the owner of the operation</p>
<b>ReceiverID</b>	<p><b>Occurrence</b> 1 .. 2</p> <p><b>Type</b> PartyIdentifierType</p> <p><b>Length</b> 1 .. 70</p> <p><b>Remark</b> Commercial ID of the receiver of the message.</p>
@ Agency	<p><b>Type</b> IdentifierAssigningAgencyCode</p> <p><b>Use</b> required</p> <p><b>Remark</b> Responsible agency or organisation assigning the identifier.</p>
	<p><b>Applicable Codes</b></p> <p><b>Buyer</b> Identifier assigned by the buyer (customer)</p> <p><b>DUNS</b> D.U.N.S. number, assigned by Dun and Bradstreet</p> <p><b>Odette Operator</b> Assigned by Odette Assigned by the owner of the operation</p>
<b>Line</b>	<p><b>Occurrence</b> 1 .. unbounded</p> <p><b>Type</b> VehicleGeofenceLineType</p>

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**GUIDELINE**

Element/Attribute	Annotation						
<b>@</b> <i>LevelID</i>	<p><b>Remark</b> Each line defines one functional area including its boundaries (geo-coordinates).</p> <p><b>Type</b> xs:string</p> <p><b>Use</b> required</p> <p><b>Remark</b> Level of the area / zone:                      1 - plant, compound, facility                      2 - functional area within the boundaries of a level 1 area                      3 - functional sub-area within the boundaries of a level 2 area</p> <p><b>Applicable Codes</b></p> <table border="1"> <tr> <td><b>1</b></td> <td>plant, compound. facility</td> </tr> <tr> <td><b>2</b></td> <td>functional area within the boundaries of a level 1 area</td> </tr> <tr> <td><b>3</b></td> <td>functional sub-area within the boundaries of a level 2 area</td> </tr> </table>	<b>1</b>	plant, compound. facility	<b>2</b>	functional area within the boundaries of a level 1 area	<b>3</b>	functional sub-area within the boundaries of a level 2 area
<b>1</b>	plant, compound. facility						
<b>2</b>	functional area within the boundaries of a level 1 area						
<b>3</b>	functional sub-area within the boundaries of a level 2 area						
xs:sequence	<b>Occurrence</b> 1 .. 1						
<b>ID</b>	<p><b>Occurrence</b> 1 .. 1</p> <p><b>Type</b> string_1_35</p> <p><b>Length</b> 1 .. 35</p> <p><b>Remark</b> Area identification:                      For level 2 zones, the following zone identification terms shall be used:                      - Production                      - Factory handover                      - Storage                      - Non-conform products                      - Pre-loading area                      - Workshop standby                      - Workshop                      - Workshop done                      - Customs import                      - Customs export                      - Shipment                      - First place of rest (FPOR)                      - Transport</p> <p>For further details, see the process description: If necessary, index numbers or values can be added to differentiate several level 2 areas of the same function (e.g. Workshop 1, Workshop 2 or the like).                      It is strongly recommended to apply the following scheme to build the IDs of zones:                      a. L1 : CENTREXXXX                      b. L2 : L2_CENTREXXXX_STORAGE1                      c. L3 : L3_CENTREXXXX_STORAGE1_AREA1 (name of Level 3 is free)</p>						

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**GUIDELINE**

Element/Attribute	Annotation								
<b>Name</b>	<p><b>Occurrence</b> 0 .. 1  <b>Type</b> string_1_35  <b>Length</b> 1 .. 35  <b>Remark</b> Name of the area or zone</p>								
<b>ParentID</b>	<p><b>Occurrence</b> 0 .. 1  <b>Type</b> string_1_35  <b>Length</b> 1 .. 35  <b>Remark</b> ID of the next higher level area, this area belongs to. Required for level 2 and level 3 areas.</p>								
<b>ValidFromDate</b>	<p><b>Occurrence</b> 0 .. 1  <b>Type</b> DateType2</p>								
@ <i>Format</i>	<p><b>Type</b> DateTypeFormatCode  <b>Use</b> required  <b>Remark</b> Format of date / date + time , coded</p> <p><b>Applicable Codes</b></p> <table border="0"> <tr> <td>CCYYMMDD</td> <td>Date</td> </tr> <tr> <td>CCYYMMDDhhmm</td> <td>Date and time</td> </tr> <tr> <td>CCYYMMDDhhmmZZZ</td> <td>Date &amp; time with time zone</td> </tr> <tr> <td>CCYYMMDDhhmmZhmm</td> <td>Date &amp; time with time zone offset, e.g. 20190124153000+0100 =&gt; 24.01.2019 15:30:00 Berlin time zone (UTC +1 hour)</td> </tr> </table>	CCYYMMDD	Date	CCYYMMDDhhmm	Date and time	CCYYMMDDhhmmZZZ	Date & time with time zone	CCYYMMDDhhmmZhmm	Date & time with time zone offset, e.g. 20190124153000+0100 => 24.01.2019 15:30:00 Berlin time zone (UTC +1 hour)
CCYYMMDD	Date								
CCYYMMDDhhmm	Date and time								
CCYYMMDDhhmmZZZ	Date & time with time zone								
CCYYMMDDhhmmZhmm	Date & time with time zone offset, e.g. 20190124153000+0100 => 24.01.2019 15:30:00 Berlin time zone (UTC +1 hour)								
<b>AccountID</b>	<p><b>Occurrence</b> 0 .. unbounded  <b>Type</b> string_1_35  <b>Length</b> 1 .. 35  <b>Name</b> Associated account ID</p>								
<b>GeoPoint</b>	<p><b>Occurrence</b> 1 .. unbounded  <b>Type</b> extension (xsd:anyType)  <b>Remark</b> Coordinates of a vertex point defining the shape (outline) of the area or the centre (when used with radius).</p>								
@ <i>Lat</i>	<p><b>Type</b> xs:decimal  <b>FractionDigits</b> 6  <b>Use</b> required  <b>Inclusive</b> -90 .. 90</p>								
@ <i>Lon</i>	<p><b>Type</b> xs:decimal  <b>FractionDigits</b> 6  <b>Use</b> required  <b>Inclusive</b> -180 .. 180</p>								
<b>Radius</b>	<p><b>Occurrence</b> 0 .. 1  <b>Type</b> QuantityType  <b>Remark</b> Radius around the identified point</p>								
@ <i>UoM</i>	<p><b>Type</b> MeasurementUnitCode  <b>Use</b> required</p> <p><b>Applicable Codes</b></p> <table border="0"> <tr> <td>KMT</td> <td>Kilometre</td> </tr> </table>	KMT	Kilometre						
KMT	Kilometre								

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## GUIDELINE

Element/Attribute	Annotation
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Applicable Codes	
MTR	Metre

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**EXAMPLE(S)**

## Vehicle geo-fence data (area with corner points)

```
<?xml version="1.0" encoding="UTF-8"?>
<Envelope Version="2022A" ControllingInstance="Odette">
  <Header>
    <ReceiverID>ReceiverID</ReceiverID>
    <SenderID>SenderID</SenderID>
    <MessageType>VehicleGeoFenceData</MessageType>
    <InterchangeID>www.abc.com_201010151433</InterchangeID>
    <Timestamp>2020-01-20T14:33:55</Timestamp>
  </Header>
  <Body>
    <VehicleGeoFenceData Version="1.1" ControllingInstance="Odette">
      <SubType>VehicleGeoFenceData</SubType>
      <Profile>CCC Profile</Profile>
      <DocumentID>1234567</DocumentID>
      <IssueDate Format="CCYYMMDD">20200120</IssueDate>
      <Header>
        <SenderID Agency="DUNS">123456789</SenderID>
        <ReceiverID Agency="DUNS">987654321</ReceiverID>
      </Header>
      <Line LevelID="1">
        <ID>123456789</ID>
        <Name>COMPOUND ABC</Name>
        <GeoPoint Lat="53.59129" Lon="8.539605"/>
        <GeoPoint Lat="53.590121" Lon="8.527117"/>
        <GeoPoint Lat="53.578606" Lon="8.536301"/>
        <GeoPoint Lat="53.578321" Lon="8.556601"/>
      </Line>
      <Line LevelID="2">
        <ID>ZONE A</ID>
        <Name>FPOR</Name>
        <ParentID>123456789</ParentID>
        <ValidFromDate Format="CCYYMMDDhhmm">202001200800</ValidFromDate>
        <GeoPoint Lat="53.592132" Lon="8.530138"/>
        <GeoPoint Lat="53.593125" Lon="8.532541"/>
        <GeoPoint Lat="53.589890" Lon="8.531897"/>
        <GeoPoint Lat="53.590833" Lon="8.534858"/>
      </Line>
    </VehicleGeoFenceData>
  </Body>
</Envelope>
```

## Vehicle geo-fence data (radius)

```
<?xml version="1.0" encoding="UTF-8"?>
<Envelope Version="2020A" ControllingInstance="Odette">
  <Header>
    <ReceiverID>ReceiverID</ReceiverID>
    <SenderID>SenderID</SenderID>
    <MessageType>VehicleGeoFenceData</MessageType>
    <InterchangeID>www.abc.com_201010151433</InterchangeID>
    <Timestamp>2020-01-20T14:33:55</Timestamp>
  </Header>
  <Body>
    <VehicleGeoFenceData Version="1.0" ControllingInstance="Odette">
      <SubType>VehicleGeoFenceData</SubType>
      <Profile>CCC Profile</Profile>
      <DocumentID>1234567</DocumentID>
      <IssueDate Format="CCYYMMDD">20200120</IssueDate>
      <Header>
        <SenderID Agency="DUNS">123456789</SenderID>
        <ReceiverID Agency="DUNS">987654321</ReceiverID>
      </Header>
      <Line LevelID="1">
        <ID>123456789</ID>
        <Name>Dealership XYZ</Name>
        <GeoPoint Lat="53.59129" Lon="8.539605"/>
        <Radius UoM="MTR">100</Radius>
      </Line>
    </VehicleGeoFenceData>
  </Body>
</Envelope>
```