Delivery Schedule Synchronous to Production VDA4916 for Magna Steyr Graz

N10081-9

Standard

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The only valid reference is the Englisch part

Purpose

This Standard describes the specifications of Magna Steyr Graz for suppliers concerning the usage of → VDA4916 for the Delivery Schedule Synchronous to Production.

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1 Message Definition

1.1 Principles

The Delivery Schedule Synchronous to Production intends to:

- specify requirements based on the delivery conditions.
- define the aspects that guarantee synchronization between Magna Steyr Graz (MSG) and the supplier.
- Provide information allowing the supplier to plan for production and to prepare for delivery of goods.

1.2 References

The Delivery Schedule Synchronous to Production is based on:

- the message structure as defined by VDA for the Delivery Schedule Synchronous to Production → VDA4916.
- the message structure defined by MSG and described in this document follows as close as possible the structure of VDA messages.
- the agreement between the trading partners on the data elements to be used, their unique definition, their representation and their values (coded or clear form) as identified in this documents.

1.3 Field of Application

The following definition of a Delivery Schedule Synchronous to Production in VDA format is applicable for the interchange of Delivery Schedule Synchronous to Production issued by MSG for material deliveries to one or more MSG operations.

1.4 JIS-Process Definition

JIS = Just-In-Sequence:
Delivery of parts or modules from the supplier to MSG in same sequence as production sequence at MSG. The supplier is located in immediate area to MSG.

LDJIS = Long-Distance-Just-In-Sequence:
Delivery of parts or modules from the supplier to MSG in same sequence as production sequence at MSG. The supplier is located in Europe – max. about 1.000 km / 20 h delivery time to MSG.

LDJIS-TOP = Long-Distance-Just-In-Sequence with High-, Medium- and Low-Runner:
Delivery of parts or modules from the supplier to MSG in special order-sequence to divide high-, medium- and low-runner (HML). The supplier is located in Europe – max. about 1.000 km / 20 h delivery time to MSG.

Suppliers will be informed about their JIS delivery process as part of the initial procurement / on boarding phase.

2 Message Description

Following pages contain a full description of the → VDA4916 message as implemented by MSG. The VDA segment description is complemented with remarks pertaining to the specific requirements for an interchange with MSG. Those remarks contain specific code values used, additional information on the values shown in a specific field, etc. The aim of those remarks is to simplify the implementation of the message.

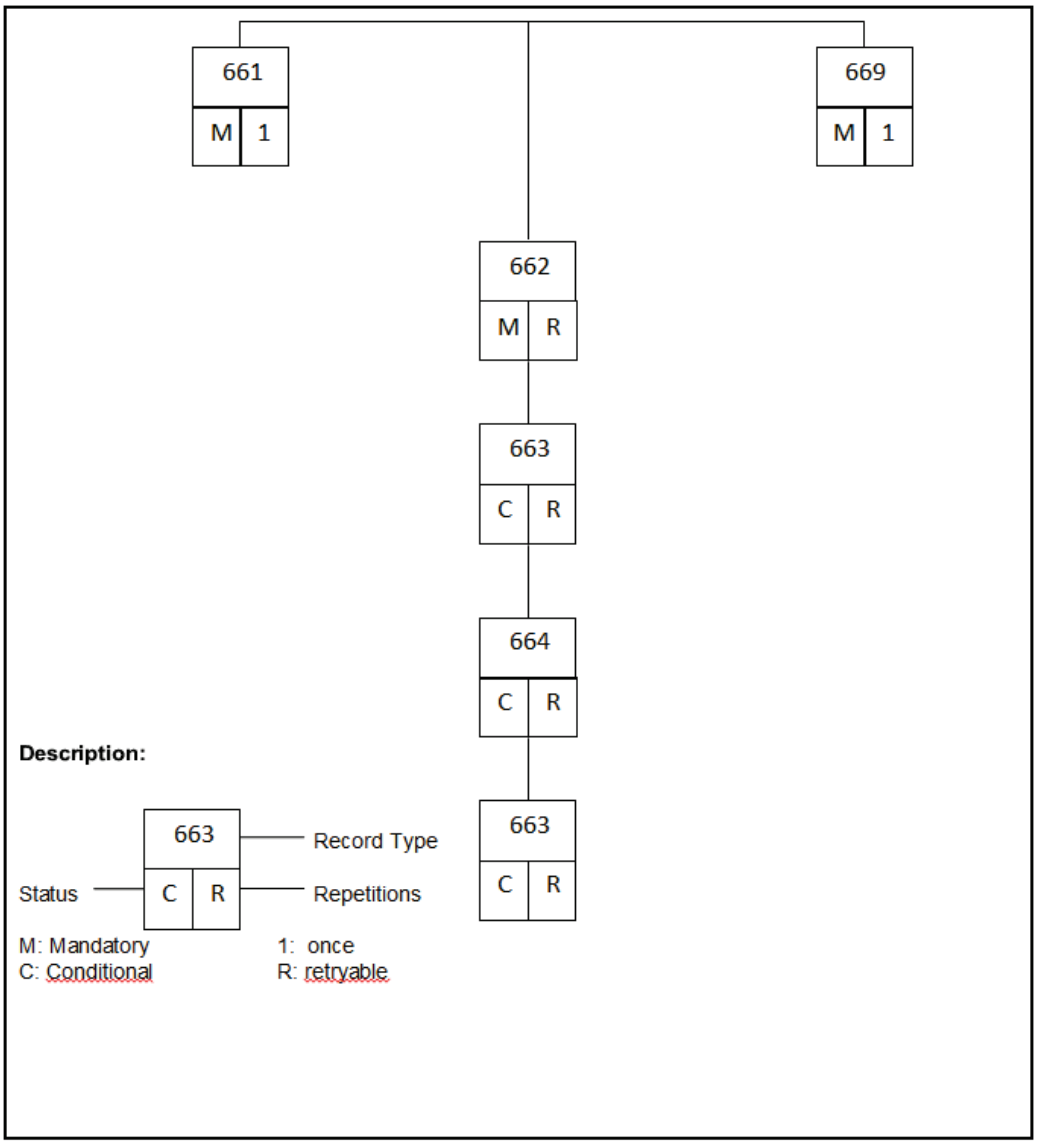
2.1 Segment Table

The following table shows all record-types as defined in the → VDA4916 message.
Shaded areas identify the record-types that are not used in the definition of → VDA4916 used by MSG. This table should be read in conjunction with the branching diagram.

Record-Type	Content	Status	Occurrence
661	Interchange Header	M	1
662	Vehicle Identity Information	M	R
663	Process relevant information	C	R
664	Part Number Information	C	R
669	Record Counter	M	1

2.2 Branching Diagram

The branching diagram shows the structure of the message. It is a combination of record-types that are organized in a certain hierarchical order. Only segments of the message that are used by MSG are shown in the following Branching Diagram.



2.3 Message Standard Description

The message structure illustrates how the segments can be repeated in a → VDA4916 transmission to accommodate the requirements defined by MSG.

2.3.1 Standard / JIS / LDJIS / LDJIS-TOP

661				Interchange Header
Multiple occurrences of 662 loop possible	662			Vehicle Identity Information
	663			Process relevant information – vehicle level
		664		Part Number Information
			663	Process relevant information – part level
		664		Part Number Information
			663	Process relevant information – part level
		664		Part Number Information
			663	Process relevant information – part level
669				Record Counter

2.3.2 Recorder

661				Interchange Header
Multiple occurrences of 662 loop possible	662			Vehicle Identity Information
	663			Process relevant information – vehicle level
		664		Part Number Information
			663	Process relevant information – part level
			663	Reorder information
		664		Part Number Information
			663	Process relevant information – part level
			663	Reorder information
669				Record Counter

3 Record-Type Description

The appearance resp. layout of the following record-type-description is based and leaned on the VDA-description to simplify the reading of this document.

Following remarks are valid for all of the further described record-types:

- Fields not used by MSG are grey shaded.
- Numeric-fields have to be right aligned with preceding zeros. These fields do not contain decimals unless otherwise specified in the field-explanation.
- Alphanumeric-fields have to be left aligned unless otherwise specified in the field-explanation.
- Column *"VDA M/C"* shows the information if a data-field is mandatory ("M") or conditional ("C") defined in the → VDA4916 description.
- Column *"MSG M/C"* shows the information if a data-field is mandatory ("M") or conditional ("C") for the usage with MSG. If a field is handled different to the VDA-standard the content is shown bold.
- Column *"Feature"* defines possible content of a data-field.

3.1 Record Type 661

Record Types	No.	Element	VDA M/C	MSG M/C	Length	Type	from- to	Feature	Description
661	01	Record Type	M	M	3	N	1-3	661	
	02	Version	M	M	2	N	4-5	01	
	03	Data Receiver Number	M	M	9	A	6-14		Identification-number that has to be arranged between the transmitter and the receiver of the data. All data of a record structure containing the field Data Receiver Number are subject to data protection.
	04	Data Transmitter Number	M	M	9	A	15-23		Identification-number that has to be arranged between the receiver and the transmitter of the data. All data of a record structure containing the field Data Receiver Number are subject to data protection.
	05	Transmission Number Old	M	M	5	N	24-28		See “Transmission-Number-New”. At the first transmission, Transmission-Number-Old = Transmission-Number-New; Description as in Pos. 06
	06	Transmission Number New	M	M	5	N	29-33		The data-creator assigns a transmission-number to each application-type (e.g.: call-off, dispatch-advice…). It is not allowed to use the entry “00000”. Data-creator and -receiver keep this number for each application-type up to the next transfer of this special field. As the data-creator states the transmission-number of the preceding interchange within this special field in addition to the Transfer-Number-New, the receiver can check the completeness of the transmissions per application-type. Therefore, no uninterrupted ascending order is necessary.
	07	Transmission Date	M	M	6	N	34-39		Format: YYMMDD.
	08	Empty	M	M	89	A	40-128	Blanks	

3.2 Record Type 662

Record Types	No.	Element	VDA M/C	MSG M/C	Length	Type	from- to	Feature	Description
662	01	Record Type	M	M	3	N	1-3	662	
	02	Version	M	M	2	N	4-5	01	
	03	Change Code	M	M	1	A	6	Z, A, L, N, T	Coded format as follows: Blank = without changes Z = first transmission A = change to earlier transmission L = Storno / deletion of the vehicle N = additional order T = Test
	04	Production Number	M	M	10	A	7-16		ID synchronous to the production.
	05	Serial Number	C	M	12	A	17-28		Assembly sequence number.
	06	Plant Customer	C	C	3	A	29-31		Plant of the recipient where the goods have to be delivered to. Coded customer format.
	07	Point of Unloading	C	C	5	A	32-36		Point at the recipient's plant, where the goods have to be unloaded. Coded customer format.
	08	Using Point	C	C	14	A	37-50		PAB-Group-Name
	09	Production Release Key	C	C	7	A	51-57		Manufacturing department in coded form.
	10	Production Release Date	C	C	6	N	58-63		Format YYMMDD In connection with Item 13 (estimated assembly date)
	11	Production Release Time	C	C	4	N	64-67		Format HHMM In connection with Item 14 (estimated assembly time)
	12	Schedule Code	C		1	A	68	P, T, K	Related to Item 13 and 14 P = production-forecast signal (VPAB) T = production-final signal (TPAB) K = sequenced call-off signal (SPAB)
	13	Call-Off Date	C		6	N	69-74		Format YYMMDD Estimated receiving date as per timeline
	14	Call-Off Time	C		4	N	75-78		Format HHMM Estimated receiving time as per timeline
	15	Special Specification	C		12	A	79-90		Special codes: Depending on product specific handling, this data field can be filled with special code information. e.g: "901+908+910"
	16	Type/Body Model	C		8	A	91-98		Significant information concerning the vehicle in coded form.
	17	Vehicle Identification Number	C		19	A	99-117		Unique ID of the vehicle.
	18	Amount of Units	C		9	N	118-126	0	
	19	Empty	M		2	A	127-128	Blank	

3.3 Record Type 663 after 662

3.3.1 Record Type 663 after 662 - LDJIS & LDJIS-TOP

Record Type 663 after Segment 662 covering process relevant information for LDJIS and LDJIS-TOP process.

Record Types	No.	Element	VDA M/C	MSG M/C	Length	Type	from- to	Feature	Description
663	01	Record Type	M	M	3	N	1-3	663	
	02	Version No.	M	M	2	N	4-5	01	
	03	Marks	M	M	1	A	6	„ „	
	04	Text 1	C	C	35	A	7-41		See A.) – only relevant for LDJIS-TOP
	05	Text 2	C	C	35	A	42-76		See B.) – only relevant for LDJIS-TOP
	06	Text 3	C	C	35	A	77-111		See C.) – used for LDJIS & LDJIS-TOP
	07	Empty	M	M	17	A	112-128	Blanks	

A.) Text 1: Parts-Bundle-Information (TBV) - (maximum length 22 digits):

This field contains the information of “Parts-Bundle-Prefix” and “Parts-Bundle-Number” has to be printed by the supplier on the sequence label as a barcode (e.g. **U123456789**)

Only relevant for the LDJIS-TOP process !

Name	Type	Length	From-to	Example
Type	A	3	1-3	TBV
Separator 1	A	1	4	:
Parts-Bundle-Prefix	A	1	5	U
Module (PAB group)	A	6	6-11	MOTORX
Seperator 2	A	1	12	+
Parts-Bundle-Number	A	10	13-22	123456789

Example: TBV:UMOTORX+1234567890

B.) Text 2: Packing-Information (maximum length 7 digits):

This field contains the information of the packaging type.
Only relevant for the LDJIS-TOP process !

Name	Type	Length	from - to	Example	
Type	A	3	1-3	PAC	
Separator	A	1	4	:	
Packaging-Type	A	2	5-6	01	
Quantity per Package	A	1	7	6, A	*

Example: “PAC:016”, “PAC:01D”

* If “quantity per package” is more than 9, letters are used (e.g. A=10, B=11, C=12, D=13 aso).

C.) Text 3: Packaging-Sequence-Information (maximum length 33 digits):

This field contains the information about the packaging sequence number / rack ID relevant for the LDJIS & LDJIS-TOP process. If sent in the JIS call the packaging sequence number / rack ID needs to be returned in the according delivery notification. Car sets with the same ID are expected to be shipped in the same rack.

Name	Type	Length	From-to	Example	
Type	A	3	1-3	PAS	
Separator 1	A	1	4	:	
Prefix	A	1	5	R	
Product-Flag	A	1	6	X	
Separator 2	A	1	7	+	
Module (PAB group)	A	6	8-13	MOTORX	
Separator 3	A	1	14	+	
LDJIS-TOP-Version	A	4	15-18	H001	*
Separator 4	A	1	19	+	
Year of production	A	2	20-21	09	
Packaging sequence no.	N	6	22-27	000001	**
Separator 5	A	1	28	+	
Status of packaging	A	1	29	L, T	***
Separator 6	A	1	30	+	
Reorder	A	1	31	N	
Separator 7	A	1	32	+	
Change-Flag	A	1	33	A	****

Example 1 – LDJIS: PAS:JX+SPRR60++15004081

Example 2 – LDJIS-TOP: PAS:RX+MOTORX+H001+06000001+++ (= High-Runner)

Example 3 – LDJIS-TOP: PAS:RX+MOTORX+L001+06000001+L++ (= Low-Runner, partly filled)

* Description of string “LDJIS-TOP-Version”:
  Hxxx……High-Runner
  Mxxx……Medium-Runner
  Lxxx…….Low-Runner
  Nxxx……Reorder
  Sxxx……Special order

  Example: PAS:RX+MOTORX+**H001**+06000001

** Description of string “packaging sequence no”: Data value is right justified and filled with zeros.

  Example: PAS:JX+SPRR60++15**004081**

*** Description of string “Empty / partially filled packaging”:
  L……packaging is not completely filled (e.g. one modul is missing)
  T……packaging is partially reordered

  Example: PAS:RX+MOTORX+L001+06000001+**L**

**** Description of string “change-flag”: Data value is to be filled in advanced shipping notice.

3.3.2 Record Type 663 after 662 - specific project information

Record Type 663 after Segment 662 to cover project specific information.

Record Types	No.	Element	VDA M/C	MSG M/C	Length	Type	from- to	Feature	Description
663	01	Record Type	M	M	3	N	1-3	663	
	02	Version No.	M	M	2	N	4-5	01	
	03	Marks	M	M	1	A	6	„ „	
	04	Text 1	C	C	35	A	7-41		See project specific agreement
	05	Text 2	C	C	35	A	42-76		See project specific agreement
	06	Text 3	C	C	35	A	77-111		See project specific agreement
	07	Empty	M	M	17	A	112-128	Blanks	

If needed additional information will be provided in a side letter.

3.4 Record Type 664

Record Types	No.	Element	VDA M/C	MSG M/C	Length	Type	from- to	Feature	Description
664	01	Record Type	M	M	3	N	1-3	664	
	02	Version No.	M	M	2	N	4-5	01	
	03	Part Number Customer	M		22	A	6-27		ID of an article, packaging or other services defined by MSG (see also record type 663)
	04	Unit of Quantity	M		2	A	28-29	ST, M, M2, M3, L, T, KG, KM	Coded format as follows: ST = piece (Stück) M = meter (Meter) M2 = square meter (Quadratmeter) M3 = cubic meter (Kubikmeter) L = litre (Liter) T = ton (Tonne) KG = kilogram (Kilogramm) KM = kilometres (Kilometer)
	05	Call-Off Quantity	M		9	N	30-38		Quantity to be delivered.
	06	Point of Unloading	C		5	A	39-43		Point at the recipient's plant, where the goods have to be unloaded. Coded customer format.
	07	Using Point	C		14	A	44-57		
	08	Schedule Code	C		1	A	58		
	09	Call-Off Date	C		6	N	59-64		Format YYMMDD In connection with the Record 662 if the part number is used at different points
	10	Call-Off Time	C		4	N	65-68		Format HHMM In connection with 662
	11	Engineering Change	C		14	A	69-82		Engineering-change-level of the part number, assigned by MSG.
	12	Empty	C		46	A	83-128	Blanks	

3.5 Record Type 663 after 664

3.5.1 Record Type 663 after 664 – Standard / LDJIS / LDJIS-TOP

Record Type 663 after Segment 664. This segment is used for order information as well as for additional part information.

3.5.1.1 Order Information (Standard)

Record Types	No.	Element	VDA M/C	MSG M/C	Length	Type	from- to	Feature	Description
663	01	Record Type	M	M	3	N	1-3	663	
	02	Version No.	M	M	2	N	4-5	01	
	03	Marks	M	M	1	A	6	„ „	
	04	Text 1	C	C	35	A	7-41		See A.) relevant for all JIS types Versorgugnsart relevant
	05	Text 2	C	C	35	A	42-76		See B.) relevant for all JIS types Versorgugnsart relevant
	06	Text 3	C	C	35	A	77-111		See C.) relevant for all JIS types Versorgugnsart relevant
	07	Empty	M	M	17	A	112-128	Blanks	

A.) Text 1: Barcode-String (maximum length 22 digits):

This field contains a string, which has to be printed from the supplier at the sequence label as a barcode.

Example: X74132817+800+STVE83

B.) Text 2: Order (maximum length 20 digits):

Contains MSG specific production order information.

Name	Type	Length	from - to	Example
Shell 1 (production hall)	A	3	1-3	X
Shell 2 (production type)	A	6	4-9	CBU
Sub-Order-Number	A	8	10-17	74132817
Classification Mark	A	3	18-20	800

Example: X CBU 74132817800

C.) Text 3: PAB-Group (maximum length 6 digits):

Name	Type	Length	from – to	Example
PAB-Group	A	6	1-6	STVE83

3.5.2 Record Type 663 after 664 - Reorder

Record Type 663 after Segment 664.

Record Types	No.	Element	VDA M/C	MSG M/C	Length	Type	from- to	Feature	Description
663	01	Record Type	M	M	3	N	1-3	663	
	02	Version No.	M	M	2	N	4-5	01	
	03	Marks	M	M	1	A	6	„1„	
	04	Text 1	C	M	35	A	7-41		See A.)
	05	Text 2	C	C	35	A	42-76		See B.)
	06	Text 3	C	M	35	N	77-111		See C.)
	07	Empty	M	M	17	A	112-128	Blanks	

A.) Text 1 Reorder-String (maximum length 35 digits):

Name	Type	Length	M / C	from - to	Example:
Indebted by	A	15	M	7 - 21	QPF-VERURSACHER
Order-specification	A	20	C	22 - 41	BESTELLSPEZIFIKATION

B.) Text 2 Reorder-String (maximum length 35 digits):

Name	Type	Length	M / C	from - to	Example:
QPF-Description	A	35	C	42 - 76	QPF-DESCRIPTIONxxxxx

C.) Text 3 Reorder-ID (new and previous - maximum length 24 digits):

Name	Type	Length	M / C	from - to	Example:
Reorder-ID	N	24 (12+12)	M	77 - 100	000000001999000000001878

If previous reorder does not exist, the last 12 digits will be filled with blanks only!

Example:

633011QPF-VERURSACHERBESTELLSPEZIFIKATIONQPF-
BESCHREIBUNG.DER.NACHBESTELLUNG000000001999000000001878

3.6 Record Type 669

Record Types	No.	Element	VDA M/C	MSG M/C	Length	Type	from- to	Feature	Description
669	01	Record Type	M	M	3	N	1-3	669	
	02	Version	M	M	2	N	4-5	01	
	03	Counter Record Type 661	M	M	7	N	6-12		Number transferred Record Type 661
	04	Counter Record Type 662	M	M	7	N	13-19		Number transferred Record Type 662
	05	Counter Record Type 663	M	M	7	N	20-26		Number transferred Record Type 663
	06	Counter Record Type 664	M	M	7	N	27-33		Number transferred Record Type 664
	07	Counter Record Type 669	M	M	7	N	34-40		Number transferred Record Type 669
	09	Empty	M	M	88	A	41128	Blanks	

4 Examples of Message

Following examples are only illustrative and do not necessarily reflect an existing situation.
They **may never** be used as a basis for programming or implementing this message.

For ease of reading following modifications have been made on the subsequently presented examples:

- A line-break has been inserted after each 128 characters
- Each Blank has been replaced by a full-stop (“.”)

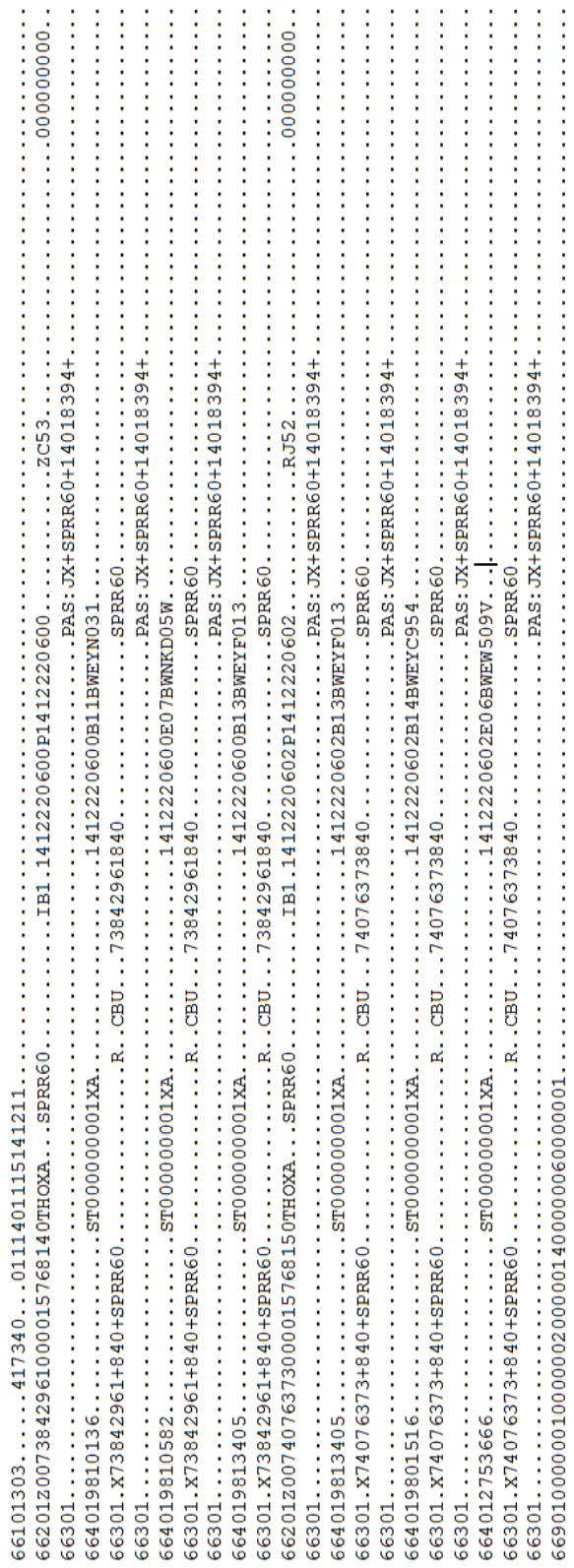
These modifications will not be the case if the message is normally transmitted.

4.1 Standard / LDJIS

Example message without Packaging sequence number.

```
6610120012....426410...2186121862041124.........................................................................................
66201Z0076069467000401123800THOXC...TVKLRH...........RB..0411251111T0411251111............PB11.......................000000000..
664015212696...............ST000000001XC...................0411251111B0283SZ023R.................................................
66301.X76069467+800+TVKLRH...............X..CBU...76069467800...............TVKLRH..............................................
664015215582...............ST000000001XC...................0411251111B0483EZE54T.................................................
66301.X76069467+800+TVKLRH...............X..CBU...76069467800...............TVKLRH..............................................
664015217412...............ST000000001XC...................0411251111B04BWEZP38T.................................................
66301.X76069467+800+TVKLRH...............X..CBU...76069467800...............TVKLRH..............................................
664015215750...............ST000000001XC...................0411251111B04BWEZH80T.................................................
66301.X76069467+800+TVKLRH...............X..CBU...76069467800...............TVKLRH..............................................
66201Z0076394648000401123820THOXC...TVKLRH...........RB..0411251115T0411251115............PB11.......................000000000..
664015212696...............ST000000001XC...................0411251115B0283SZ023R.................................................
66301.X76394648+800+TVKLRH...............X..CBU...76394648800...............TVKLRH..............................................
664015215582...............ST000000001XC...................0411251115B0483EZE54T.................................................
66301.X76394648+800+TVKLRH...............X..CBU...76394648800...............TVKLRH..............................................
664015217412...............ST000000001XC...................0411251115B04BWEZP38T.................................................
66301.X76394648+800+TVKLRH...............X..CBU...76394648800...............TVKLRH..............................................
664015215776...............ST000000001XC...................0411251115B04BWEZH80T.................................................
66301.X76394648+800+TVKLRH...............X..CBU...76394648800...............TVKLRH..............................................
664015215586...............ST000000001XC...................0411251115B0483EZE54T.................................................
66301.X76394648+800+TVKLRH...............X..CBU...76394648800...............TVKLRH..............................................
66201Z0077171685000401123850THOXC...TVKLRH...........RB..0411251125T0411251125............PB51.......................000000000..
664015200110...............ST000000001XC...................0411251125B0283EZU60R.................................................
66301.X77171685+800+TVKLRH...............X..CBU...77171685800...............TVKLRH..............................................
664015213560...............ST000000001XC...................0411251125B0383EZK90S.................................................
66301.X77171685+800+TVKLRH...............X..CBU...77171685800...............TVKLRH..............................................
664015204880...............ST000000001XC...................0411251125B0483EZA00T.................................................
66301.X77171685+800+TVKLRH...............X..CBU...77171685800...............TVKLRH..............................................
664015215586...............ST000000001XC...................0411251125B0483EZE54T.................................................
66301.X77171685+800+TVKLRH...............X..CBU...77171685800...............TVKLRH..............................................
664015217412...............ST000000001XC...................0411251125B04BWEZP38T.................................................
```

4.2 LDJIS including packaging sequence number



4.3 LDJIS-TOP

```
66101100022...439110...0050600507150420.........................................................................................
66201Z0079508375000016069480THOXC...MOTR60...........IB1.1504280850P1504271221............XD32.......................000000000..
66301.TBV:UMOTR60+000019.................PAC:016............................PAS:RX+MOTR60+H004+15000796+L++.....................
664017818897...............ST000000001XC..................1504271221E12SURR..MNN00..............................................
66301.X79508375+840+MOTR60...............R..CBU...79508375840...............MOTR60..............................................
66201Z0077897917000016069470THOXC...MOTR60...........IB1.1504280847P1504271216............ZD11.......................000000000..
66301.TBV:UMOTR60+000016.................PAC:016............................PAS:RX+MOTR60+H005+15001071+L++.....................
664017818894...............ST000000001XC..................1504271216E12SURR..MNN00..............................................
66301.X77897917+840+MOTR60...............R..CBU...77897917840...............MOTR60..............................................
66201Z0077897916000016069460THOXC...MOTR60...........IB1.1504280845P1504271216............ZD11.......................000000000..
66301.TBV:UMOTR60+000016.................PAC:016............................PAS:RX+MOTR60+H005+15001071+L++.....................
664017818894...............ST000000001XC..................1504271216E12SURR..MNN00..............................................
66301.X77897916+840+MOTR60...............R..CBU...77897916840...............MOTR60..............................................
66201Z0074135192000016069430THOXC...MOTR60...........IB1.1504280837P1504271037............ZD72.......................000000000..
66301.TBV:UMOTR60+000014.................PAC:016............................PAS:RX+MOTR60+L001+15001064+L++.....................
664017818890...............ST000000001XC..................1504271037E12SURR..MNN00..............................................
66301.X74135192+840+MOTR60...............R..CBU...74135192840...............MOTR60..............................................
66201Z0075775815000016069440THOXC...MOTR60...........IB1.1504280840P1504271037............ZD71.......................000000000..
66301.TBV:UMOTR60+000015.................PAC:016............................PAS:RX+MOTR60+L001+15001064+L++.....................
664017818891...............ST000000001XC..................1504271037E12SURR..MNN00..............................................
66301.X75775815+840+MOTR60...............R..CBU...75775815840...............MOTR60..............................................
66201Z0079505472000016069250THOXC...MOTR60...........IB1.1504280753P1504271037............XD52.......................000000000..
66301.TBV:UMOTR60+000013.................PAC:016............................PAS:RX+MOTR60+L001+15001064+L++.....................
664017818900...............ST000000001XC..................1504271037E12SURR..MNN00..............................................
66301.X79505472+840+MOTR60...............R..CBU...79505472840...............MOTR60..............................................
66201Z0079504179000016069140THOXC...MOTR60...........IB1.1504280726P1504271037............XD52.......................000000000..
66301.TBV:UMOTR60+000013.................PAC:016............................PAS:RX+MOTR60+L001+15001064+L++.....................
664017818900...............ST000000001XC..................1504271037E12SURR..MNN00..............................................
66301.X79504179+840+MOTR60...............R..CBU...79504179840...............MOTR60..............................................
6690100000010000007000001400000070000001........................................................................................
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5 Revisions since previous version

Complete revision

6 List of abbreviations

Abbreviation	Description
MSG	Magna Steyr Graz
VDA	Verband der Automobilindustrie