Datum	View	Sheet/Location
X	Top View	(SH1/D3)
Y	Front View	(SH1/D7,F11)
Z	Front View	(SH1/F11)

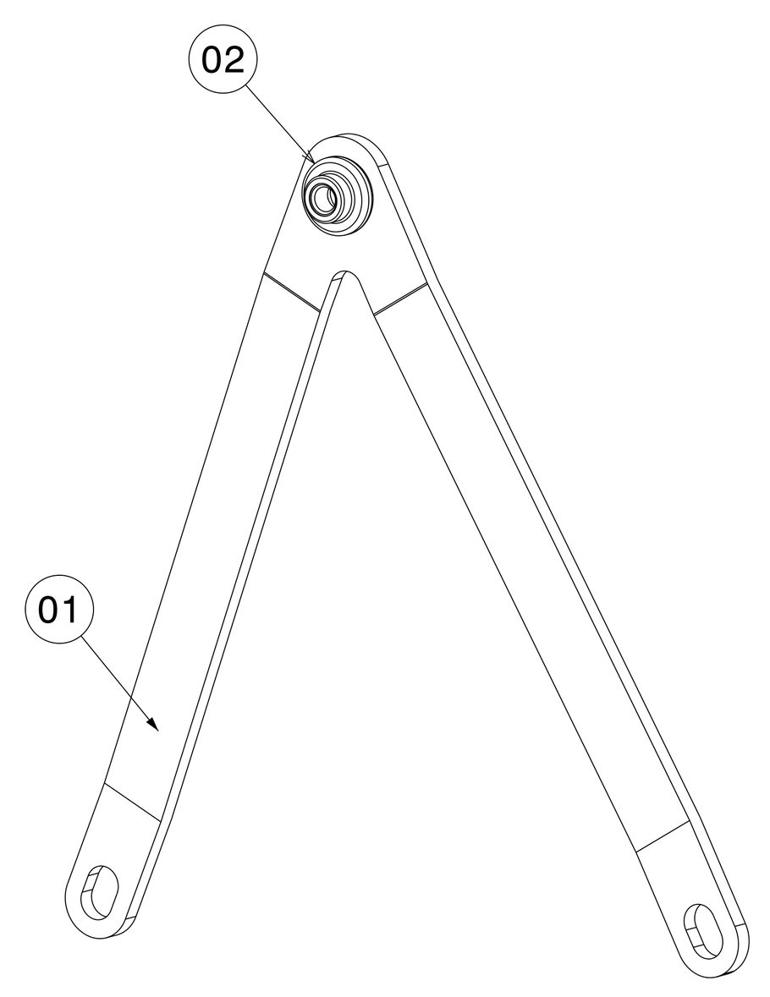
Allgemeintoleranzen nach General tolerances acc. to MBN 10 231

Symbol	Toleranz Tolerance -Art -Wert -type-value	Bedeutung / Meaning
	0	Bezugsstellen nach Datum targets according MBN 11 011
	2 X Y Z	Flaechenformtoleranz fuer umgeformte Flaechen Surface tolerance for formed surfaces
	0.6	Ebenheit im Anschlussbereich Flatness in the connecting area
	2 X Y Z	Linienformtoleranz fuer geschnittene Kanten Line tolerance for cut edges
		Materialseite Side of material
	0.6 X Y Z	Positionstoleranz fuer Loecher Position tolerance for holes
	0.4 X Y Z	Positionstoleranz Fixierloecher (Bezugselemente) fuer die nicht fixierte Raumrichtung Position tolerance for locating holes (reference elements) of the not defined direction of space
∅	+0.2 -0.1	Lochdurchm. allg. bzw. Formkontur Hole diameter general resp. shape
	+2	Biegeradien / Bending radii
	+2	Freischnitte / Free cuts

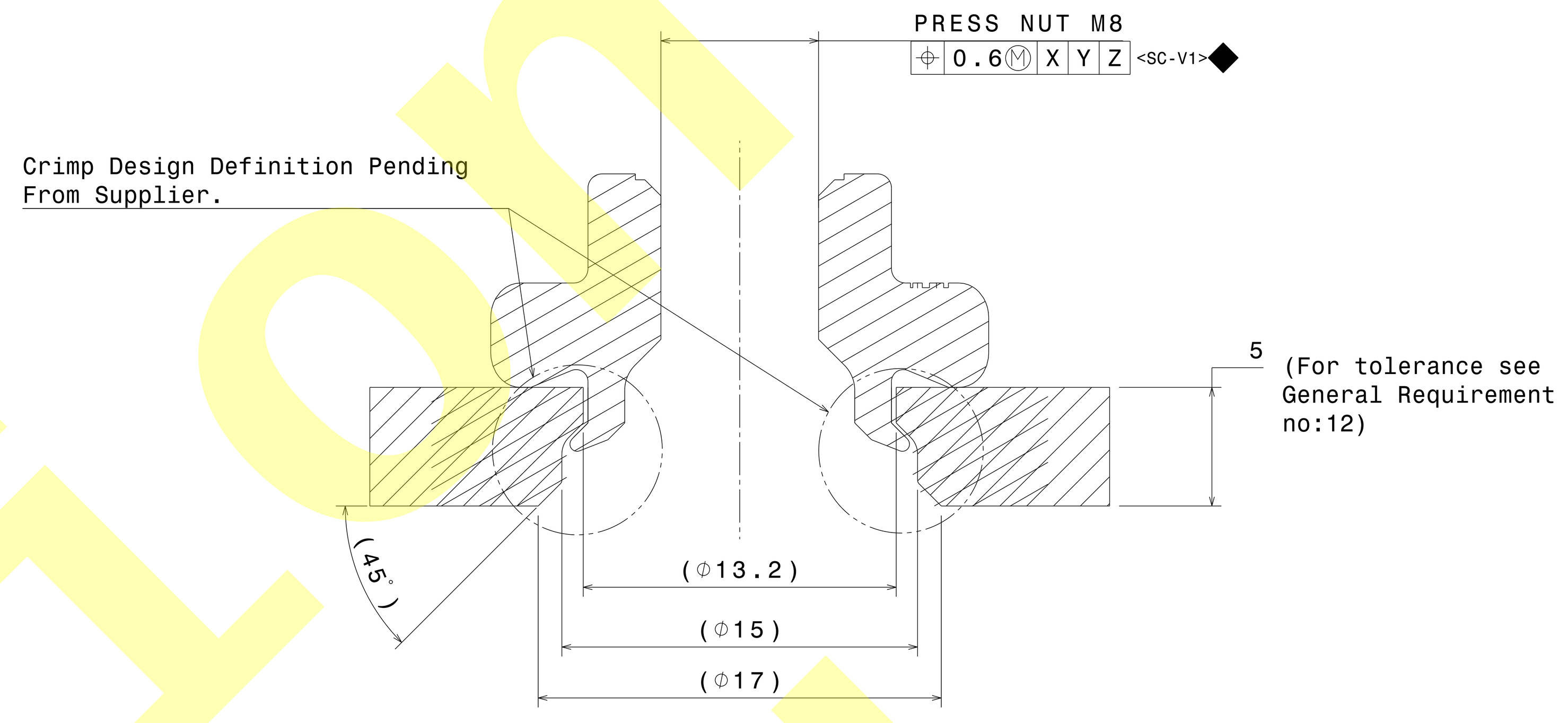
Reference points in vehicle axis system

Datum	X	Y	Z	Notes
X1	-686.50	87.90	221.26	"X" Ref surface of part
X2	-672.38	0	409.24	
X3	-686.50	-88.43	221.64	
Y4	-672.38	0	397.74	"Y" Ref center point of hole
Y5	-686.50	-96.50	203.50	""Y" Ref center of Oblong hole
Z6	-672.38	0	397.74	"Z" Ref center point of hole

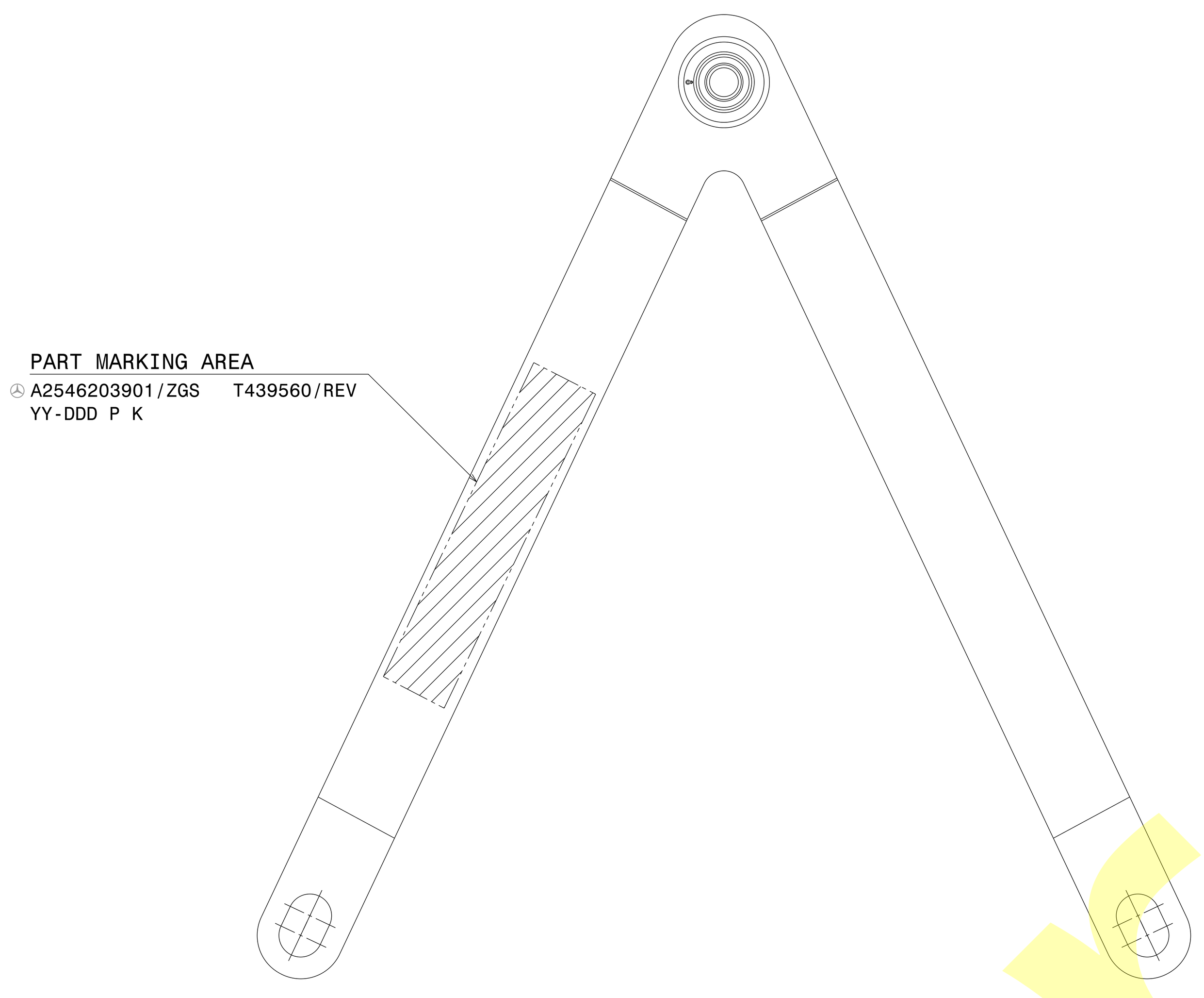
ITEM	VALEO PN.	TITLE	DAG PART NUMBER	NORM	QTY	MATERIAL	MATERIAL REQUIREMENT	SURFACE	SURFACE REQUIREMENT	MASS [g]
-	T439560	ASSEMBLY V-SHAPE NVH-BAR	A2546203901	-	-	-	-	BLACK E-COATING	DBL 7381.00	133.7
01	T474377	V-SHAPE NVH-BAR	-	-	1	MBN 11253-1-AL5-IIC-NP-U	DBL4952.00	-	-	119.6
02	T513924	CRIMPING NUT M8	-	MBN 10324 + BQF MBN 10324	1	STEEL // SUPPLIER DEFINITION	-	-	DBL 8451.76	14.1



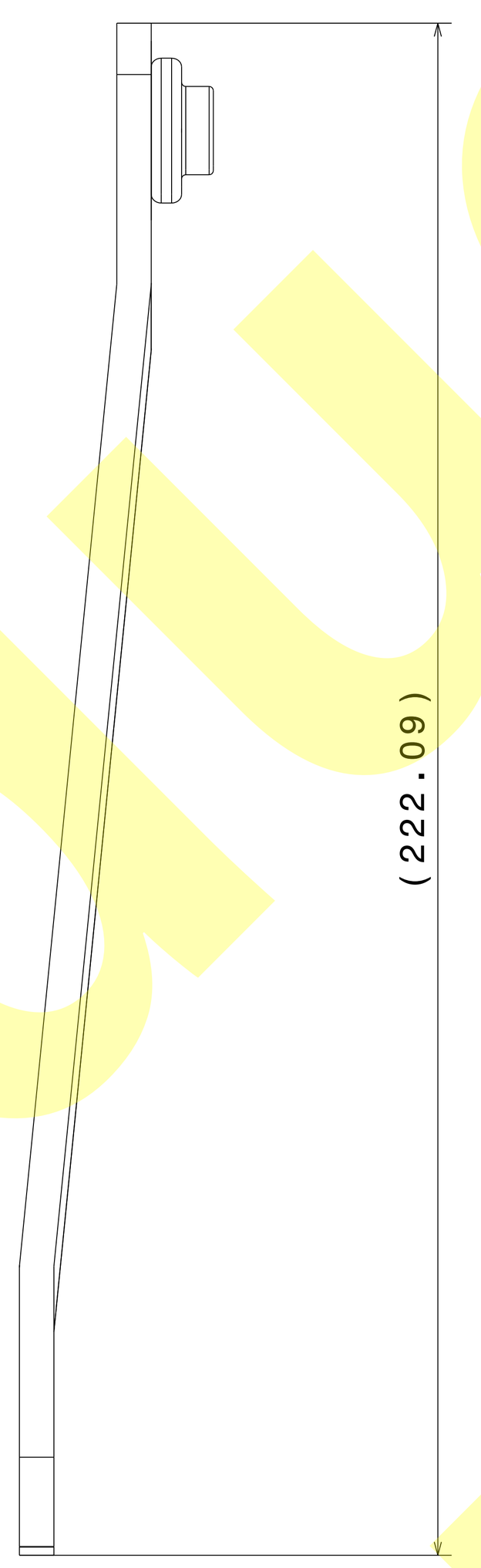
Isometric view
Scale: 1:2



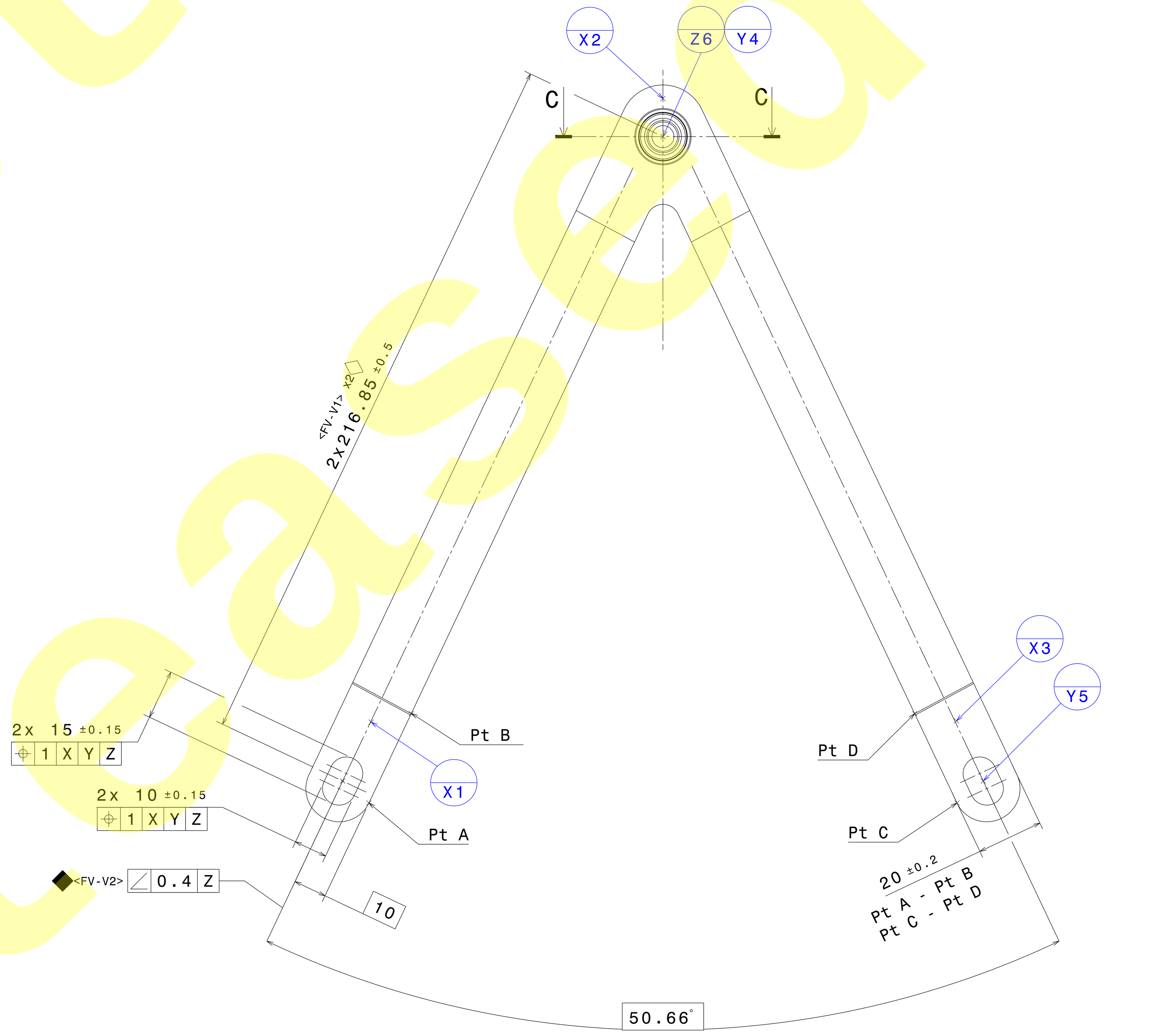
Section cut C-C
Scale: 5:1



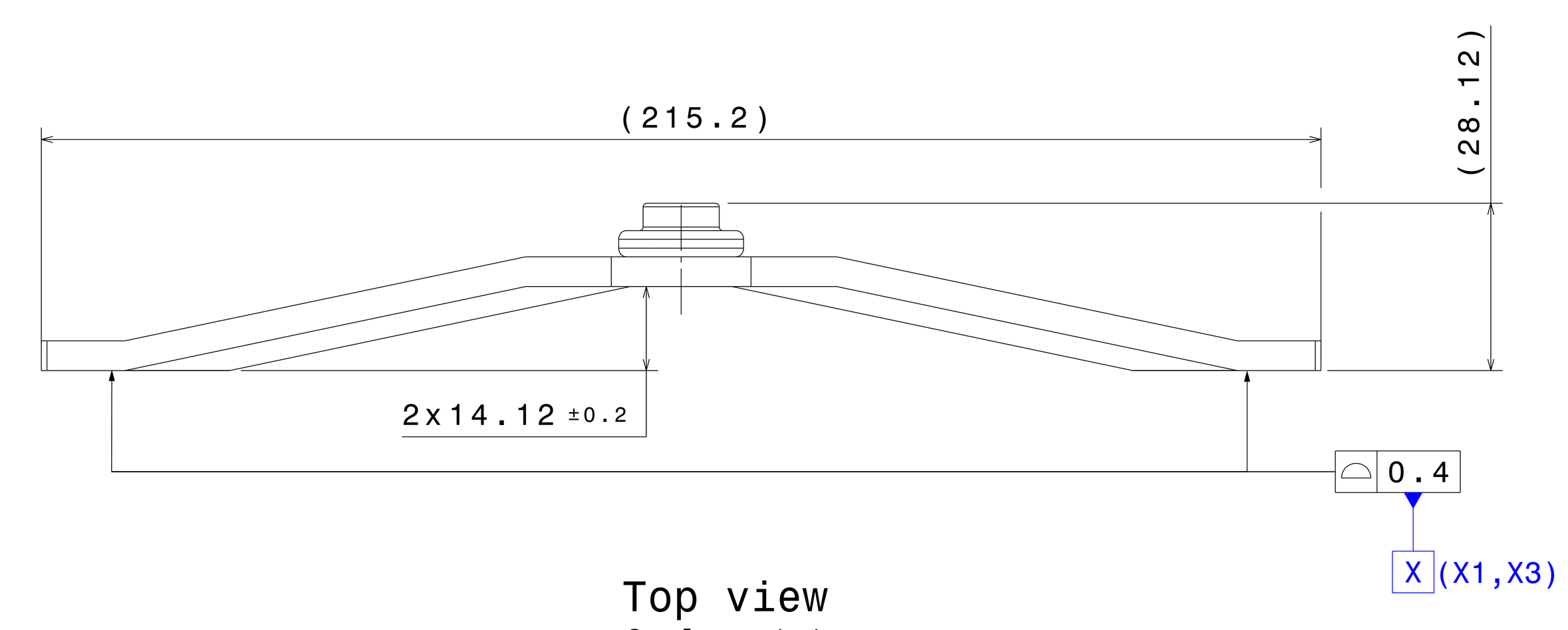
Rear view
Scale: 1:1



Right view
Scale: 1:1



Front view
Scale: 1:1



Top view
Scale: 1:1

General Requirements

1)Max. burr height (+0.3mm), Max. notches depth (-0.3mm) allowed.
2)Compliance with environmental, health and occupational safety requirements for regulated substance or process material restriction according to DBL 8585
3)Part marking position - See drawing reference :
According to customer MBN 10435 (logo, customer part number, ZGS + index)
According to Valeo requirement (logo, part number + index, daily production date).
4)Form / shape : refer to CAD model provided in the defined revision level - CAD revision level is always master
5)Gaging: supplier must demonstrate capability for SPPC relevant characteristics using statistical analysis
6)Appearance requirements: see "book of defects"
7)GD&T symbology: Daimler MBN 11011i
8)Weight tolerance: ± 5%
9)No change in manufacturing process or product design without Valeo approval
10)All tests of functional and material DBL by Daimler to be performed and documented by supplier
11)Forming limitations
Max.allowable thinning: 11%
Max.allowable thickening: 10%
12)Thickness tolerance according to MBN_10231
13)Testing of the thickness e-coating every batch.
14a)Pullout and torque testing according to MBN 10365. Pullout Torque M8 ≥ 31.2N_m. <NT-F1>
14)Insulating plastic coating (Nycoat) on the thread before e-coating.
15)No Scratch / Failure impacting the surface treatment or mechanical properties
16)No material cracks allowed.
17)E-Coating should not impact the screw thread quality.
18)Display of crimping is to be understood schematically and the crimping design must be agreed with nut supplier to fulfill the RPA requirements.
19)Note Removed.
20)Formability: forming/stamping simulation to be presented by supplier and to be approved by Valeo.
21)Surface Black painted acc.to DBL 7381.00, No cass test is required acc.DBL 7381.00.
22)Crimping nut of Profile with nycote.
720 hours salt spray test DIN EN ISO 9227 NSS (h), valid only for the Profile crimping nut before nycote.

SPPC Sum Up

Internal	2	◆
Internal Followed	2	◇
Customer	0	◆
Customer Followed	0	◇
Safety and/or Regulation	1	S R
Other	1	

◆	SIGNIFICANT CHARACTERISTICS Cpk ≥ 1.66	2
◇	FUNCTIONAL CHARACTERISTICS Cpk ≥ 1.33	2
<F>	FUNCTIONAL CHARACTERISTICS WITHOUT CAPABILITY REQUIREMENT	1

R Marking	Regulation Theme	Standard number (Including Revision)for Global Product	Regulation number (Including Revision)
<NT-R2> R	- Material Restrictions	- Valeo BRDS (Latest Revision)	1907/2006/EC
		- TDOC_100363499 Rev A (Regulation Standard)	2000/53/EC
			GBT 30512:2014

Drawing assumes ISO-14405 E (envelope principle), unless otherwise specified

REV	ECO NUMBER	RESPONSIBLE	DATE	DESCRIPTION OF CHANGE
C.01	TCO_100821621_01	S.CHANDRA / T.FROEBIG	2022-05-16	1) Master Data at Customer changed. ZGS counts up to ZGS 005
C	TCO_100692191_01	S.CHANDRA / T.FROEBIG	2021/11/02	1) Added Datum Index Table. (SH1/O16) 2) Added Material Regulation Table. (SH1/E2) 3) Added Envelope Principle Note. (SH1/D1) 4) Updated Material for T474377:"MBN 11253-1-AL5-IIC-NP-U" WAS "MBN 11253-1-AL5-IIC-5754".(SH1/F15) 5) Added NORM information for T513924:"MBN 10324 + BQF MBN 10324". (SH1/H15) 6) Removed Note-19: Corrosion Requirement.(SH1/O1) 7) Added Note-20: "Formability". (SH1/L1) 8) Added Note-21: Coating information. (SH1/M1) 9) Added Note-22: Salt spray test. (SH1/M1)
B	TCO_100532269_01	S.VENKATESH / T.FROEBIG	2020/10/14	- Updated drawing for W-Release.3D Revision R01V04. - Updated Datum Coordinates Table. (M16) - Modified Crimping Nut Part number in BOM. (J15) - Coating information updated. (C2) - Corrosion information updated. (P1) - Formability information removed. (P3) - Tolerance & SPPC added for dimension 216.85. (G9) - Tolerance added for dimension 14.12. (F3)
A	-	TF / VS / VK	2019/11/25	Initial release.

All units shown are in millimeters (mm), unless otherwise indicated.
All surface finish is in micrometers (µm), unless otherwise indicated.

Template update: 2020/09/14

Reason: -
Interchangeability -
Checked -
Tech. Checked -
Customer: Mercedes-Benz — REV
Part: A2546203901 — ZGS 005
Drawing: -

Former Part N°	Rev	Prototype Drw	Rough Part N°	Dev Code	Project Code
-	-	-	-	-	BR254 FEM

MATERIAL SEE CHART

APPROVED BY T. FROEBIG

TREATMENT COATING E-Coating Black acc.to DBL 7381.00 (For additional requirement see gen.requirement no.19)

APPROVED DATE 2022/07/25

TITLE & DESCRIPTION Front End Module
ASSEMBLY V-SHAPE NVH-BAR

ESTIMATED MASS SEE CHART

CREATED BY Sai Tarang

CREATION DATE 2019-11-25

Thermal Front End
Germany
Valeostrasse 1, 74321 Bietigheim-Bissingen

DRAWING NUMBER	DRAWING REV.
DRW_T439560_001	C.01
PART NUMBER SEE CHART	

SCALE 1 : 1 — First Angle Std
SIZE A0 — SHEET 1 / 1