

APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

# SELF INSPECTION SHEET

**CONFIDENTIAL INFORMATION**  
This document and the information contemplated therein have to be considered as Confidential Information pursuant to the provisions of Clause 25 of the MSA, and treated as such.

APPLICATION REFERENCE										
MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE					WORK INSTRUCTION	SAFETY ?
				TC	M1	M2	M3	TC		
DTB3174497/3	AAD0001413329	CARBODYSHELL M2 ASSEMBLY	CB1230			<input checked="" type="checkbox"/>			PRA.CB1210.DTB31744 97/3.V25	YES
REV	DATE	MODIFICATION CONTENT		RESPONSIBLE	NAME	DATE				
0	10/01/2018	GIBELA NEW CREATION		APPROVER	Itumeleng Modiba	10/01/2018				
				CHECKER	Nosizo Pindela	10/01/2018				
				COMPLIER	Thanyani Mathhegy	10/01/2018				
1	2018/05/18	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality manager		APPROVER	Itumeleng Modiba	2018/05/18				
				CHECKER	Nosizo Pindela	2018/05/18				
				REVISED BY	Ramokone Motama	2018/05/18				
2	2018/07/04	Certain dimensional checks moved to CB1230 and CB1230		APPROVER	Itumeleng Modiba	2018/07/04				
				CHECKER	Nosizo Pindela	2018/07/04				
				REVISED BY	Ramokone Motama	2018/07/04				
3	2018/12/12	Added dimensional check points to CB1210		APPROVER	Itumeleng Modiba	12/12/2018				
				CHECKER	Nosizo Pindela	12/12/2018				
				REVISED BY	Ramokone Motama	12/12/2018				
5	22/01/2019	As per Baseline 10.2		APPROVER	Itumeleng Modiba	22/01/2019				
				CHECKER	Nosizo Pindela	22/01/2019				
				REVISED BY	Vanessa Ntuli	22/01/2019				
6	13/03/2019	Added D1 and D2 on Self - Inspection		APPROVER	Itumeleng Modiba	13/03/2019				
				CHECKER	Nosizo Pindela	13/03/2019				
				REVISED BY	Nosizo Pindela	13/03/2019				
10	21/08/2019	New Baseline 10.2.5		APPROVER	Itumeleng Modiba	21/08/2019				
				CHECKER	Nosizo Pindela	21/08/2019				
				REVISED BY	Nosizo Pindela	21/08/2019				
15	06/08/2020	New Baseline 10.2.6		APPROVER	Timothy Maimela	06/08/2020				
				CHECKER	Bongane Masina	06/08/2020				
				REVISED BY	Bongane Masina	06/08/2020				
20	19/04/2021	New Baseline change 10.3		APPROVER	Timothy Maimela	19/04/2021				
				CHECKER	Bongane Masina	19/04/2021				
				REVISED BY	Bongane Masina	19/04/2021				
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING		APPROVER	Mbhomhi Collins	17/08/2021				
				CHECKER	Mpho Mulaudzi	17/08/2021				
				REVISED BY	Mpho Mulaudzi	17/08/2021				
25	21/02/2022	New Baseline change 10.3.1		APPROVER	Mbhomhi Collins	21/02/2022				
				CHECKER	Andani Muchelo	21/02/2022				
				REVISED BY	Andani Muchelo	21/02/2022				
26	14/04/2023	Addition of welding consumable traceability		APPROVER	Ntuli Vanessa	14/04/2023				
				CHECKER	Mohlampe Amogelang	14/04/2023				
				REVISED BY	Mohlampe Amogelang	14/04/2023				
27	27/07/2023	Added verification of loaded parts		APPROVER	Ngobeni Tyson	27/07/2023				
				CHECKER	Zwane Ntokozo	27/07/2023				
				REVISED BY	Mohlampe Amogelang	27/07/2023				
28	07/11/2023	Addition of welder traceability		APPROVER	Ngobeni Tyson	07/11/2023				
				CHECKER	Andani Muchelo	07/11/2023				
				REVISED BY	Ntokozo Zwane	07/11/2023				
TRAINSET	CAR	OPERATOR NAME&ALPS NO	DATE	SELF INSPECTION NUMBER		PAGES				
15211	M2	P.MWATSI 409964	17/07/24	SI.CB1210.247.V28		17				



CARBODYSHELL M2 ASSEMBLY DTR31374497/3

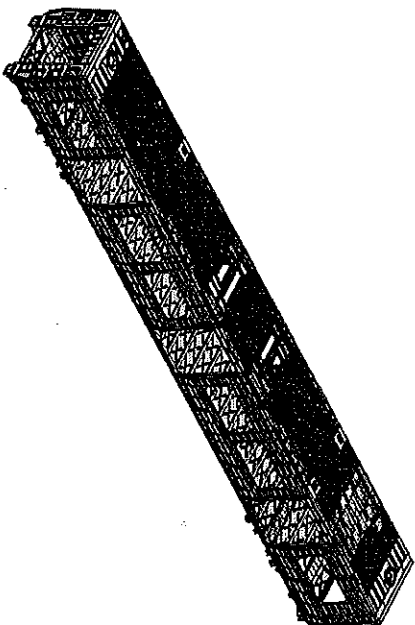
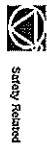
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Date 07/11/2023  
Project: PRASA  
SI.CB1210.247.V28

Car: M2

NGR

Work station:

CB1210



## I - Documentation and Instruments Control

## I.1 - Documentation Control

Document	Type of car					Revision	Observation	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
	101	11	12	13	14					
DTR31374497/3			Y			V28		✓	N/A	17/12/23

## I.2 - Instruments Control


Monitoring and Measuring Instrument Control - Used for Special Process

Instruments	Serial number	Calibration or Verification Valid until	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
TUBULAR	22316	07/02/23	✓	17/12/23	17/12/23
30:11 - IPE	61610084	01/03/23	✓	17/12/23	17/12/23
193ER - IPE	105405901	31/03/23	✓	17/12/23	17/12/23


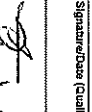


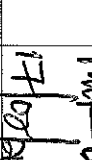
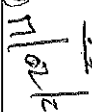

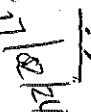



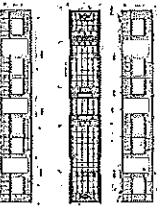
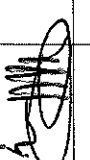
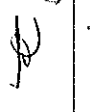
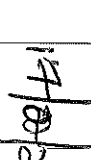

## 1.3 - Consumables

Welding Consumable Control - Used for Special Process

Filler Material	Heat number	Welding Process	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
EP 308 LS1	314018-310097	MLG	✓	17/12/23	17/12/23
ER 308 L	399687-70328	71G	✓	17/12/23	17/12/23

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### II - Self Inspection - Items to Check

II.1 - Items to check						
Item	Photo/Drawing	Description	Acceptance criteria / Record	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Verification of corrod parts loaded (Sidewalls, Endframes, Roof and Underframe)	AA000013750571	<input checked="" type="checkbox"/>	 17/02/24	 17/02/24
02	N/A	Corshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	<input checked="" type="checkbox"/>	 17/02/24	 17/02/24
03	REFER TO ANNEXURE A	Spot welding inspected and approved according to procedure	IND-SAL-WMS-016 e DTD00000210675	<input checked="" type="checkbox"/>	 17/02/24	 17/02/24
04	REFER TO ANNEXURE B	Arc welding inspected and approved according to procedure	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	<input checked="" type="checkbox"/>	 17/02/24	 17/02/24
05		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	<input checked="" type="checkbox"/>	 17/02/24	 17/02/24
06		Functional's dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document	Approved according specified on pages below.	<input checked="" type="checkbox"/>	 17/02/24	 17/02/24
07	N/A	Perform visual inspection of welds in 100% of the project. Run by penetrant testing in electric arc welding (weld ring) as IND-SAL-WMS-018. Run by penetrant testing welds (weld ring) and filler sampling as described in DTD00000210658.	As the welding procedure IND-SAL-WMS-018 and DTD00000210658.	<input checked="" type="checkbox"/>	 17/02/24	 17/02/24

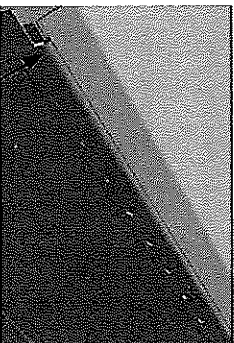


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Welder traceability

Roof ring welds



LHS

Boiler maker (Name & Sign):

*Sean*

Welder (Name & Sign):

*Traberg*

END 1

RHS

Boiler maker (Name & Sign):

*Sean*

Welder (Name & Sign):

*Siphonazi*

LHS

Boiler maker (Name & Sign):

*Sean*

Welder (Name & Sign):

*Traberg*

END 2

RHS

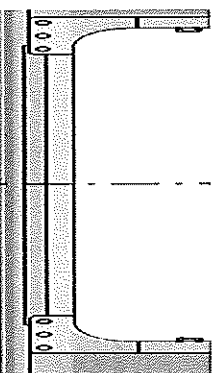
Boiler maker (Name & Sign):

*Sean*

Welder (Name & Sign):

*Siphonazi*

Door ring welds



LHS

Boiler maker (Name & Sign):

*Lawrence Muller*

RHS

Boiler maker (Name & Sign):

*Lawrence*

Welder (Name & Sign):

*Traberg*

Welder (Name & Sign):

*Traberg*

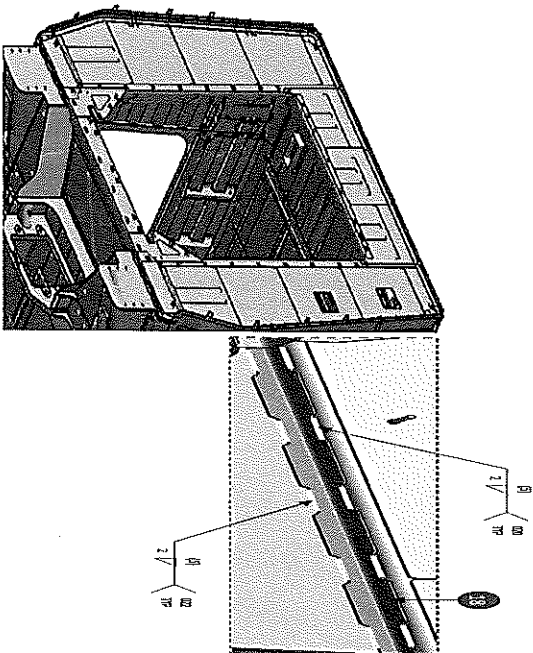


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EUF Reinforcement Plates



END 1

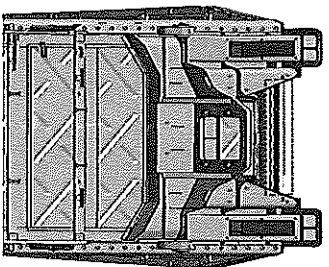
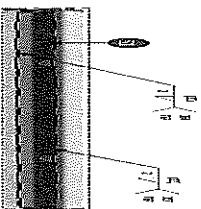
Boiler maker (Name & Sign):

*[Signature]*

Welder (Name & Sign):

*[Signature]*

END 2



Underside the CQR

END 2

Boiler maker (Name & Sign):

*[Signature]*

Welder (Name & Sign):

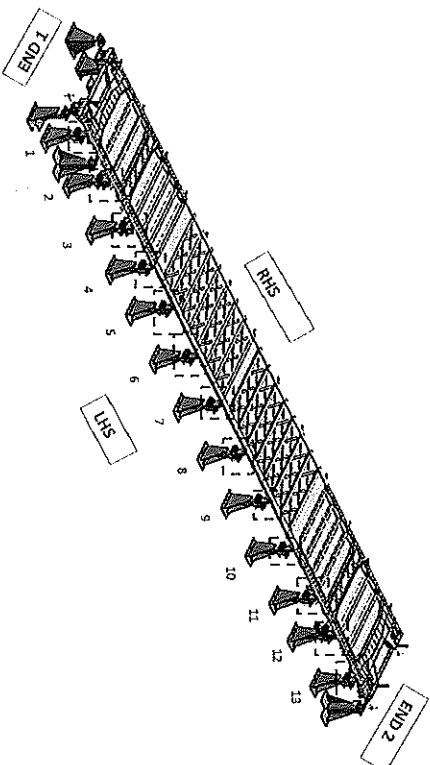
*[Signature]*

FED 011

OPERATOR:

*[Signature]*

**Specifications of Details for CBS measurement**



Measure gap between jig pillar / chair and underframe = 0mm. No

After loading and clamping

Fill in the gap found on each jig pillars / chair and underframe should be 0mm.

	1	2	3	4	5	6	7	8	9	10	11	12	13
Left Hand Side	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Hand Side	0	0	0	0	0	0	0	0	0	0	0	0	0

Signature Operator:  Date: 17/02/24

After Welding.

Fill in the gap found on each jig pillars / chair and underframe should be 0mm.

	1	2	3	4	5	6	7	8	9	10	11	12	13
Left Hand Side	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Hand Side	0	0	0	0	0	0	0	0	0	0	0	0	0

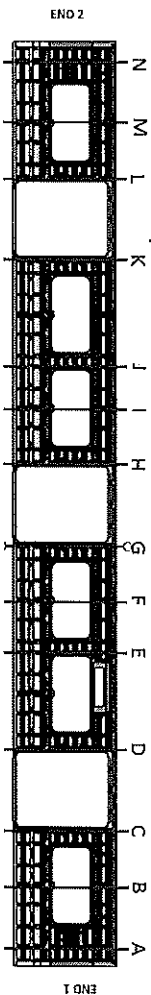
Signature Industrial Quality:  Date: 17/02/24



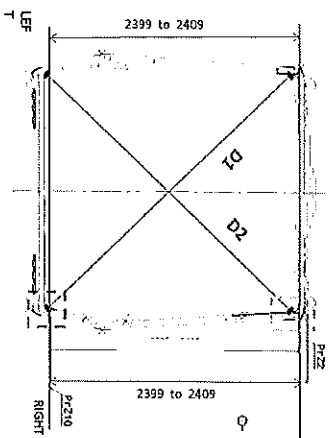
CARBODYSHELL M2 ASSEMBLY DTR31374497/3

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Specifications of Details for GBS measurement



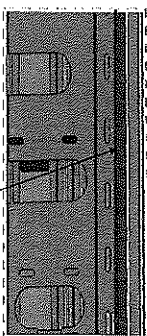
9



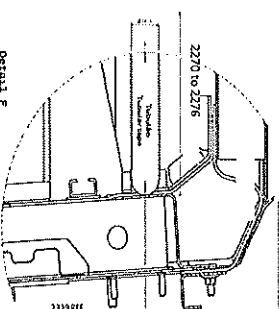
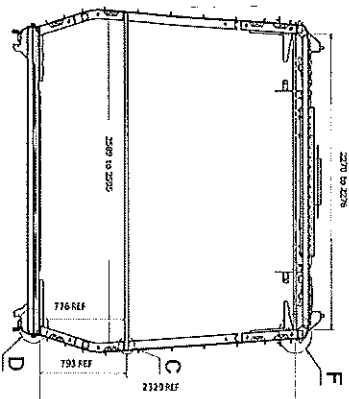
Measurement positions on roof (a) and sidewall opened corner.



Measurement positions on sidewall and side sill corner.



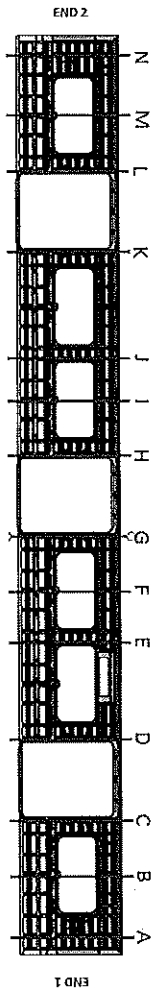
Reinforcement area measurement positions on roof reinforcement area.



DETAIL F  
Don't consider  
the reinforcement

Specifications of Details for GBS measurement

BEFORE WELDING



Note: The difference in Height values measured on the LHS and RHS should be ≤ 2MM on each point.

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2399 to 2409 (LHS)	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3267	3268	1	2404	2404	0
B	3270	3270	0	2405	2406	1
C	3266	3268	2	2404	2404	0
D	3269	3267	2	2405	2404	1
E	3269	3269	0	2404	2404	2
F	3268	3269	1	2404	2404	0
G	3268	3268	0	2404	2405	1
H	3267	3268	1	2406	2404	2
I	3267	3266	3	2405	2404	1
J	3266	3266	0	2404	2406	2
K	3269	3269	2	2404	2405	1
L	3268	3269	1	2406	2405	1
M	3268	3268	0	2404	2404	0
N	3266	3265	1	2404	2403	1

Handwritten signature and date: 17/09/24



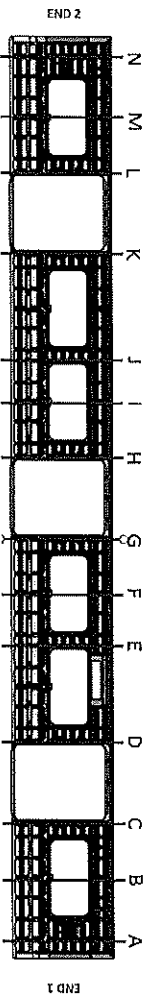


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Specifications of Details for GBS measurement

AFTER WELDING



Note: The difference in Height values measured on the LHS and RHS should be  $\leq 2\text{MM}$  on each point.

Record D1 values	Record D2 values	D1-D2 $\leq 5\text{mm}$	2399 to 2409 (LHS)	2399 to 2409 (RHS)	LHS-RHS $\leq 2$
A 3099	3098	1	2404	2404	0
B 3069	3069	0	2404	2403	1
C 3099	3099	0	2406	2405	1
D 3099	3098	1	2405	2406	1
E 3069	3069	0	2404	2404	0
F 3068	3068	0	2404	2405	1
G 3099	3099	0	2404	2406	2
H 3098	3098	0	2404	2405	1
I 3068	3069	1	2406	2404	2
J 3090	3091	1	2406	2405	1
K 3098	3099	1	2404	2404	0
L 3099	3099	0	2406	2404	2
M 3069	3068	1	2406	2406	0
N 3099	3099	0	2404	2403	1

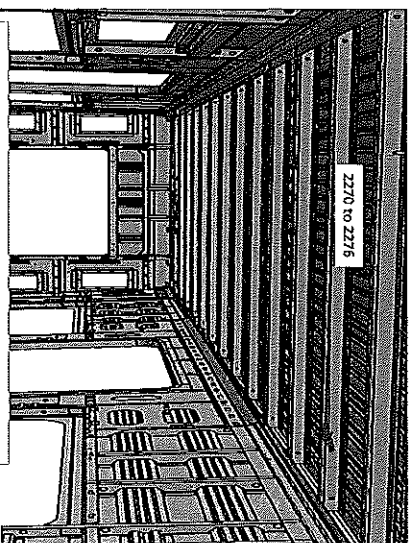
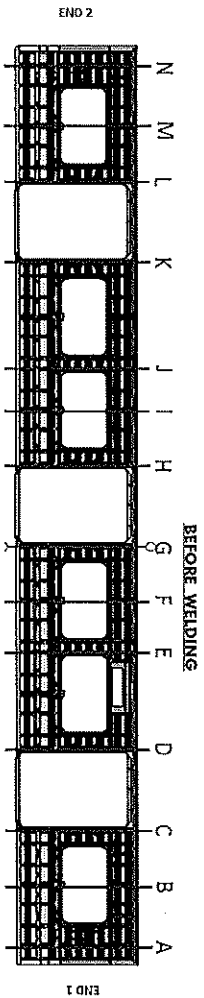
409969  
17100139



CARBODYSHELL M2 ASSEMBLY DTR313744973

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CBS measurement

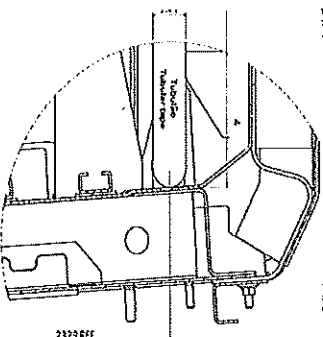
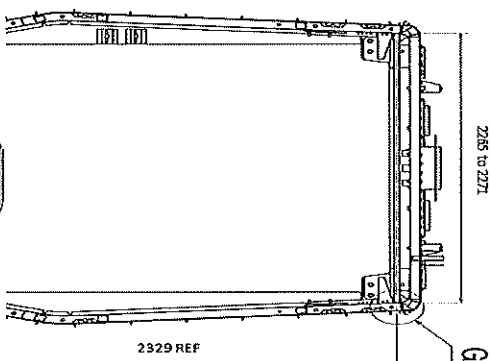


Do not consider reinforcement (Take measurements top area of zee profile)

2265 to 2271

2270 to 2276	A	2274
	B	2276
	C	2270
	D	2276
	E	2276
	F	2271
	G	2274
	H	2276
	I	2275
	J	2276
	K	2274
	L	2276
	M	2275
	N	2270

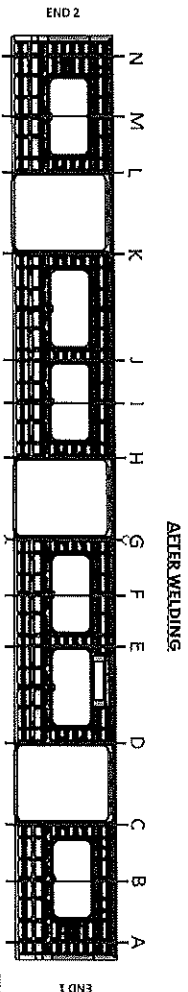
2265 to 2271



Detail C  
Considering the reinforcement plate

17/06/24  
17/06/24  
17/06/24

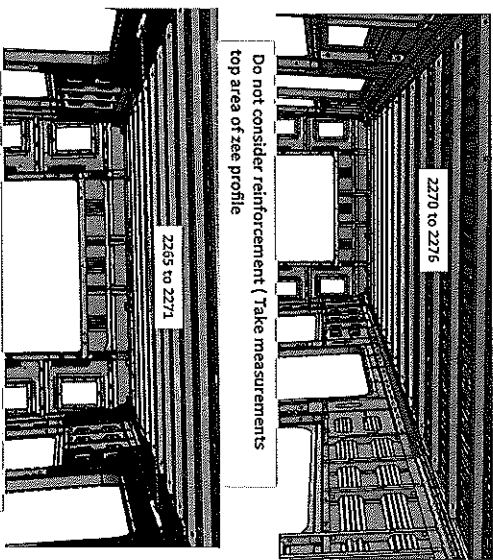
c85 measurement



	2265 to 2271	2270 to 2276
A	2269	/
B	/	2276
C	2270	/
D	2266	/
E	/	2276
F	/	2274
G	2267	/
H	2265	/
I	/	2274
J	/	2272
K	2269	/
L	2268	/
M	/	2274
N	2270	/

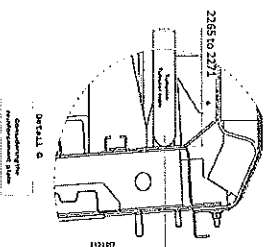
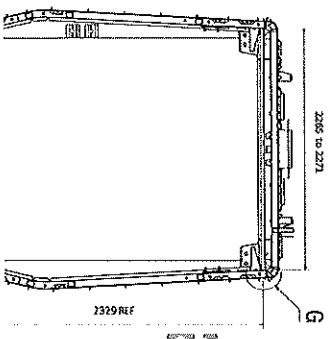
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2072 2071 2070 2069 2068 2067 2066 2065 2064 2063 2062 2061 2060 2059 2058 2057 2056 2055 2054 2053 2052 2051 2050 2049 2048 2047 2046 2045 2044 2043 2042 2041 2040 2039 2038 2037 2036 2035 2034 2033 2032 2031 2030 2029 2028 2027 2026 2025 2024 2023 2022 2021 2020 2019 2018 2017 2016 2015 2014 2013 2012 2011 2010 2009 2008 2007 2006 2005 2004 2003 2002 2001 2000 1999 1998 1997 1996 1995 1994 1993 1992 1991 1990 1989 1988 1987 1986 1985 1984 1983 1982 1981 1980 1979 1978 1977 1976 1975 1974 1973 1972 1971 1970 1969 1968 1967 1966 1965 1964 1963 1962 1961 1960 1959 1958 1957 1956 1955 1954 1953 1952 1951 1950 1949 1948 1947 1946 1945 1944 1943 1942 1941 1940 1939 1938 1937 1936 1935 1934 1933 1932 1931 1930 1929 1928 1927 1926 1925 1924 1923 1922 1921 1920 1919 1918 1917 1916 1915 1914 1913 1912 1911 1910 1909 1908 1907 1906 1905 1904 1903 1902 1901 1900 1899 1898 1897 1896 1895 1894 1893 1892 1891 1890 1889 1888 1887 1886 1885 1884 1883 1882 1881 1880 1879 1878 1877 1876 1875 1874 1873 1872 1871 1870 1869 1868 1867 1866 1865 1864 1863 1862 1861 1860 1859 1858 1857 1856 1855 1854 1853 1852 1851 1850 1849 1848 1847 1846 1845 1844 1843 1842 1841 1840 1839 1838 1837 1836 1835 1834 1833 1832 1831 1830 1829 1828 1827 1826 1825 1824 1823 1822 1821 1820 1819 1818 1817 1816 1815 1814 1813 1812 1811 1810 1809 1808 1807 1806 1805 1804 1803 1802 1801 1800 1799 1798 1797 1796 1795 1794 1793 1792 1791 1790 1789 1788 1787 1786 1785 1784 1783 1782 1781 1780 1779 1778 1777 1776 1775 1774 1773 1772 1771 1770 1769 1768 1767 1766 1765 1764 1763 1762 1761 1760 1759 1758 1757 1756 1755 1754 1753 1752 1751 1750 1749 1748 1747 1746 1745 1744 1743 1742 1741 1740 1739 1738 1737 1736 1735 1734 1733 1732 1731 1730 1729 1728 1727 1726 1725 1724 1723 1722 1721 1720 1719 1718 1717 1716 1715 1714 1713 1712 1711 1710 1709 1708 1707 1706 1705 1704 1703 1702 1701 1700 1699 1698 1697 1696 1695 1694 1693 1692 1691 1690 1689 1688 1687 1686 1685 1684 1683 1682 1681 1680 1679 1678 1677 1676 1675 1674 1673 1672 1671 1670 1669 1668 1667 1666 1665 1664 1663 1662 1661 1660 1659 1658 1657 1656 1655 1654 1653 1652 1651 1650 1649 1648 1647 1646 1645 1644 1643 1642 1641 1640 1639 1638 1637 1636 1635 1634 1633 1632 1631 1630 1629 1628 1627 1626 1625 1624 1623 1622 1621 1620 1619 1618 1617 1616 1615 1614 1613 1612 1611 1610 1609 1608 1607 1606 1605 1604 1603 1602 1601 1600 1599 1598 1597 1596 1595 1594 1593 1592 1591 1590 1589 1588 1587 1586 1585 1584 1583 1582 1581 1580 1579 1578 1577 1576 1575 1574 1573 1572 1571 1570 1569 1568 1567 1566 1565 1564 1563 1562 1561 1560 1559 1558 1557 1556 1555 1554 1553 1552 1551 1550 1549 1548 1547 1546 1545 1544 1543 1542 1541 1540 1539 1538 1537 1536 1535 1534 1533 1532 1531 1530 1529 1528 1527 1526 1525 1524 1523 1522 1521 1520 1519 1518 1517 1516 1515 1514 1513 1512 1511 1510 1509 1508 1507 1506 1505 1504 1503 1502 1501 1500 1499 1498 1497 1496 1495 1494 1493 1492 1491 1490 1489 1488 1487 1486 1485 1484 1483 1482 1481 1480 1479 1478 1477 1476 1475 1474 1473 1472 1471 1470 1469 1468 1467 1466 1465 1464 1463 1462 1461 1460 1459 1458 1457 1456 1455 1454 1453 1452 1451 1450 1449 1448 1447 1446 1445 1444 1443 1442 1441 1440 1439 1438 1437 1436 1435 1434 1433 1432 1431 1430 1429 1428 1427 1426 1425 1424 1423 1422 1421 1420 1419 1418 1417 1416 1415 1414 1413 1412 1411 1410 1409 1408 1407 1406 1405 1404 1403 1402 1401 1400 1399 1398 1397 1396 1395 1394 1393 1392 1391 1390 1389 1388 1387 1386 1385 1384 1383 1382 1381 1380 1379 1378 1377 1376 1375 1374 1373 1372 1371 1370 1369 1368 1367 1366 1365 1364 1363 1362 1361 1360 1359 1358 1357 1356 1355 1354 1353 1352 1351 1350 1349 1348 1347 1346 1345 1344 1343 1342 1341 1340 1339 1338 1337 1336 1335 1334 1333 1332 1331 1330 1329 1328 1327 1326 1325 1324 1323 1322 1321 1320 1319 1318 1317 1316 1315 1314 1313 1312 1311 1310 1309 1308 1307 1306 1305 1304 1303 1302 1301 1300 1299 1298 1297 1296 1295 1294 1293 1292 1291 1290 1289 1288 1287 1286 1285 1284 1283 1282 1281 1280 1279 1278 1277 1276 1275 1274 1273 1272 1271 1270 1269 1268 1267 1266 1265 1264 1263 1262 1261 1260 1259 1258 1257 1256 1255 1254 1253 1252 1251 1250 1249 1248 1247 1246 1245 1244 1243 1242 1241 1240 1239 1238 1237 1236 1235 1234 1233 1232 1231 1230 1229 1228 1227 1226 1225 1224 1223 1222 1221 1220 1219 1218 1217 1216 1215 1214 1213 1212 1211 1210 1209 1208 1207 1206 1205 1204 1203 1202 1201 1200 1199 1198 1197 1196 1195 1194 1193 1192 1191 1190 1189 1188 1187 1186 1185 1184 1183 1182 1181 1180 1179 1178 1177 1176 1175 1174 1173 1172 1171 1170 1169 1168 1167 1166 1165 1164 1163 1162 1161 1160 1159 1158 1157 1156 1155 1154 1153 1152 1151 1150 1149 1148 1147 1146 1145 1144 1143 1142 1141 1140 1139 1138 1137 1136 1135 1134 1133 1132 1131 1130 1129 1128 1127 1126 1125 1124 1123 1122 1121 1120 1119 1118 1117 1116 1115 1114 1113 1112 1111 1110 1109 1108 1107 1106 1105 1104 1103 1102 1101 1100 1099 1098 1097 1096 1095 1094 1093 1092 1091 1090 1089 1088 1087 1086 1085 1084 1083 1082 1081 1080 1079 1078 1077 1076 1075 1074 1073 1072 1071 1070 1069 1068 1067 1066 1065 1064 1063 1062 1061 1060 1059 1058 1057 1056 1055 1054 1053 1052 1051 1050 1049 1048 1047 1046 1045 1044 1043 1042 1041 1040 1039 1038 1037 1036 1035 1034 1033 1032 1031 1030 1029 1028 1027 1026 1025 1024 1023 1022 1021 1020 1019 1018 1017 1016 1015 1014 1013 1012 1011 1010 1009 1008 1007 1006 1005 1004 1003 1002 1001 1000 999 998 997 996 995 994 993 992 991 990 989 988 987 986 985 984 983 982 981 980 979 978 977 976 975 974 973 972 971 970 969 968 967 966 965 964 963 962 961 960 959 958 957 956 955 954 953 952 951 950 949 948 947 946 945 944 943 942 941 940 939 938 937 936 935 934 933 932 931 930 929 928 927 926 925 924 923 922 921 920 919 918 917 916 915 914 913 912 911 910 909 908 907 906 905 904 903 902 901 900 899 898 897 896 895 894 893 892 891 890 889 888 887 886 885 884 883 882 881 880 879 878 877 876 875 874 873 872 871 870 869 868 867 866 865 864 863 862 861 860 859 858 857 856 855 854 853 852 851 850 849 848 847 846 845 844 843 842 841 840 839 838 837 836 835 834 833 832 831 830 829 828 827 826 825 824 823 822 821 820 819 818 817 816 815 814 813 812 811 810 809 808 807 806 805 804 803 802 801 800 799 798 797 796 795 794 793 792 791 790 789 788 787 786 785 784 783 782 781 780 779 778 777 776 775 774 773 772 771 770 769 768 767 766 765 764 763 762 761 760 759 758 757 756 755 754 753 752 751 750 749 748 747 746 745 744 743 742 741 740 739 738 737 736 735 734 733 732 731 730 729 728 727 726 725 724 723 722 721 720 719 718 717 716 715 714 713 712 711 710 709 708 707 706 705 704 703 702 701 700 699 698 697 696 695 694 693 692 691 690 689 688 687 686 685 684 683 682 681 680 679 678 677 676 675 674 673 672 671 670 669 668 667 666 665 664 663 662 661 660 659 658 657 656 655 654 653 652 651 650 649 648 647 646 645 644 643 642 641 640 639 638 637 636 635 634 633 632 631 630 629 628 627 626 625 624 623 622 621 620 619 618 617 616 615 614 613 612 611 610 609 608 607 606 605 604 603 602 601 600 599 598 597 596 595 594 593 592 591 590 589 588 587 586 585 584 583 582 581 580 579 578 577 576 575 574 573 572 571 570 569 568 567 566 565 564 563 562 561 560 559 558 557 556 555 554 553 552 551 550 549 548 547 546 545 544 543 542 541 540 539 538 537 536 535 534 533 532 531 530 529 528 527 526 525 524 523 522 521 520 519 518 517 516 515 514 513 512 511 510 509 508 507 506 505 504 503 502 501 500 499 498 497 496 495 494 493 492 491 490 489 488 487 486 485 484 483 482 481 480 479 478 477 476 475 474 473 472 471 470 469 468 467 466 465 464 463 462 461 460 459 458 457 456 455 454 453 452 451 450 449 448 447 446 445 444 443 442 441 440 439 438 437 436 435 434 433 432 431 430 429 428 427 426 425 424 423 422 421 420 419 418 417 416 415 414 413 412 411 410 409 408 407 406 405 404 403 402 401 400 399 398 397 396 395 394 393 392 391 390 389 388 387 386 385 384 383 382 381 380 379 378 377 376 375 374 373 372 371 370 369 368 367 366 365 364 363 362 361 360 359 358 357 356 355 354 353 352 351 350 349 348 347 346 345 344 343 342 341 340 339 338 337 336 335 334 333 332 331 330 329 328 327 326 325 324 323 322 321 320 319 318 317 316 315 314 313 312 311 310 309 308 307 306 305 304 303 302 301 300 299 298 297 296 295 294 293 292 291 290 289 288 287 286 285 284 283 282 281 280 279 278 277 276 275 274 273 272 271 270 269 268 267 266 265 264 263 262 261 260 259 258 257 256 255 254 253 252 251 250 249 248 247 246 245 244 243 242 241 240 239 238 237 236 235 234 233 232 231 230 229 228 227 226 225 224 223 222 221 220 219 218 217 216 215 214 213 212 211 210 209 208 207 206 205 204 203 202 201 200 199 198 197 196 195 194 193 192 191 190 189 188 187 186 185 184 183 182 181 180 179 178 177 176 175 174 173 172 171 170 169 168 167 166 165 164 163 162 161 160 159 158 157 156 155 154 153 152 151 150 149 148 147 146 145 144 143 142 141 140 139 138 137 136 135 134 133 132 131 130 129 128 127 126 125 124 123 122 121 120 119 118 117 116 115 114 113 112 111 110 109 108 107 106 105 104 103 102 101 100 99 98 97 96 95 94 93 92 91 90 89 88 87 86 85 84 83 82 81 80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1



Do not consider reinforcement (Take measurements top area of zee profile)

Take measurement close to radius ( considering reinforcement)



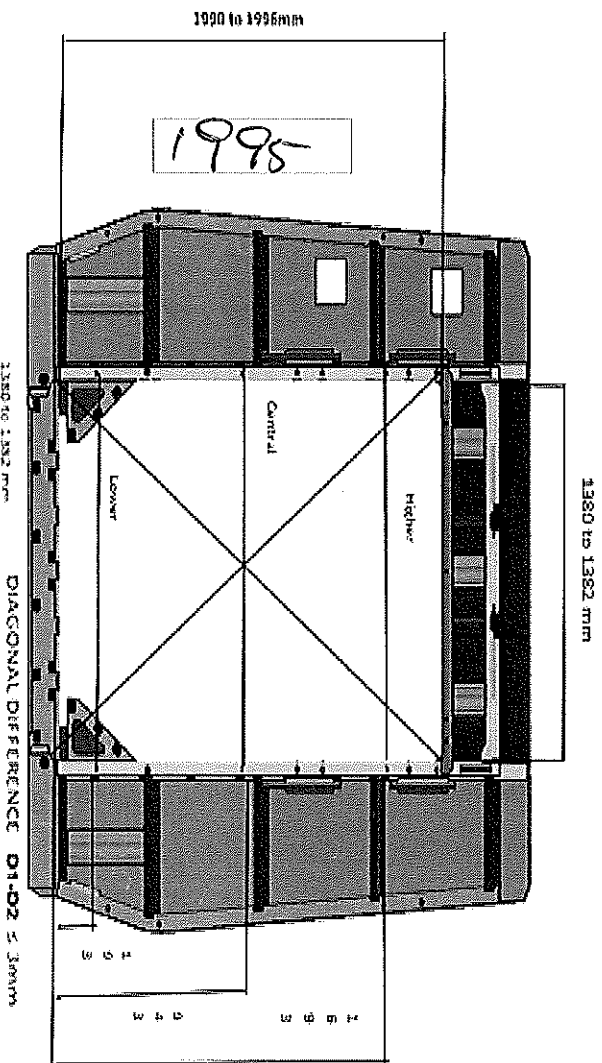


CARBODYSHELL M2 ASSEMBLY DTR3174497/3

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Date	07/11/2023	

GBS measurement

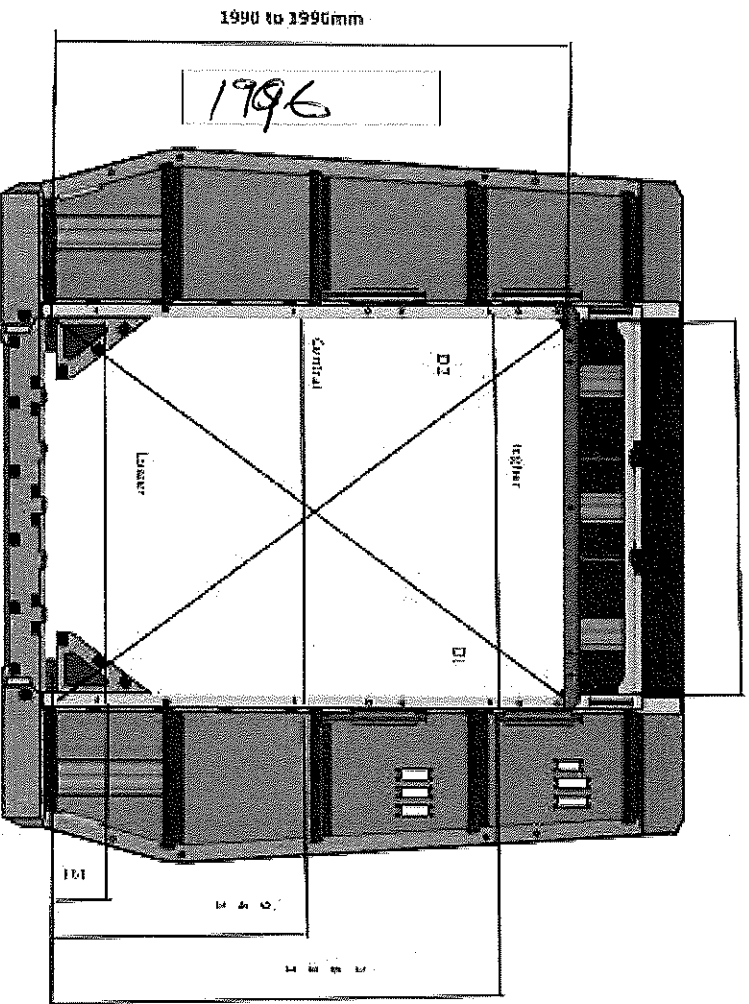
End frame 1



Higher Dimension	1381	01	2416
Central Dimension	1380	02	2415
Lower Dimension	1381	01-02	1

1700/164  
1700/164  
1700/164

End frame 2



1380 to 1381 mm

DIAGONAL DIFFERENCE D1-D2 ± 3mm

Upper Dimension

1380

D1

2415

Central Dimension

1380

D2

2415

Lower Dimension

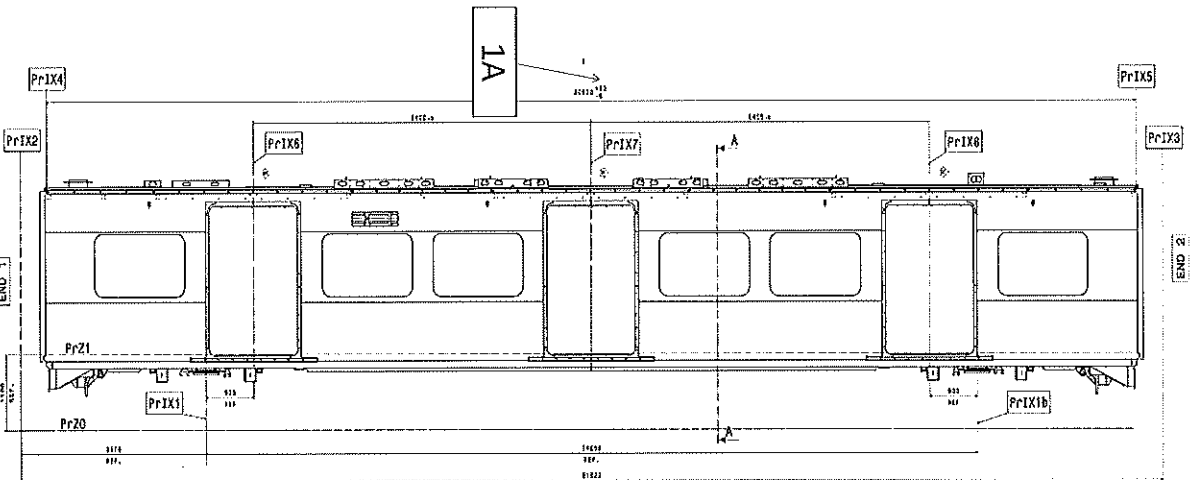
1380

D1-D2

0

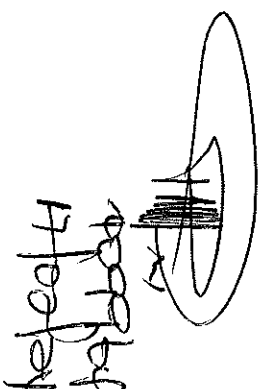
17/02/24  
409264  
17/02/24

**Specifications of Details for CBS measurement**



LEFT SIDE	
SPECIFICATION SIZE	ACTUAL SIZE
1A	20632 - 20614
	20616

RIGHT SIDE	
SPECIFICATION SIZE	ACTUAL SIZE
1A	20632 - 20614
	20616

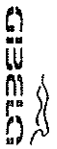


**Dye penetrant test**

Dye-penetration test to be performed by quality personnel



[illegible]



CARBODYSHELL M2 ASSEMBLY DTR31374497/3

Rev. 28  
Date 07/11/2023  
Project: PRASA  
SI.CB1210.247.V28

Self Inspection - Final Result

Is the car good to advance to the next workstation/process?  
(Approval of Operations and Industrial Quality)

DATE

NAME

SIGNATURE

(If activities are not completed, the missing activities must not impact the next stage)

11/06/24

F. MARTIN

Operations

[Signature]

Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the complainant party.)

11/06/24

Andoni

Industrial Quality

[Signature]

There are activities pending that impact the activities of the next process  
Obr: (To describe problems below)

Operations

There are non-conformities impact the quality of the product and there is no corrective action defined yet)

11/06/24

Andoni

Industrial Quality

[Signature]

HOLD POINT

In case of "NO GO", describe blocking problems

Complete welding on last rail rivet

In case of "NO GO", the operations manager must define below action plan to ensure "GO":

Item	Description	Responsible	Due date	Status

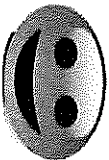
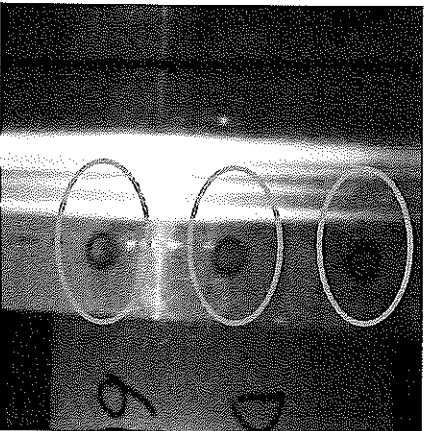
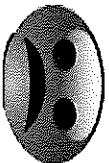
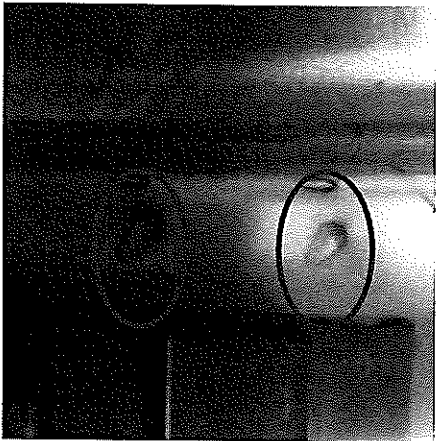
Operations

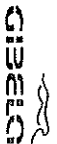
Quality



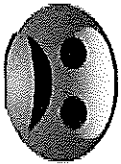
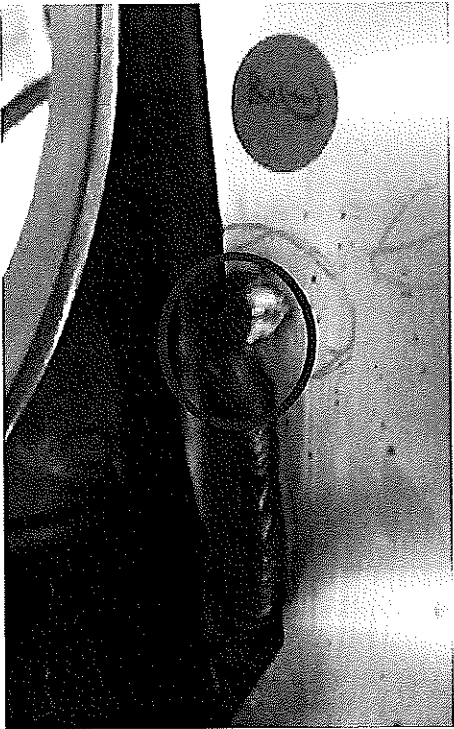
		CARBODYSHELL M2 ASSEMBLY DTR313744973		Rev. 28	Project: PRASA
				Date 07/11/2023	SI.CB1210.247.V28


**ANNEXURE A: Spot Welding Quality Acceptance Standard**



	CARBODYSHELL M2 ASSEMBLY DTR313744973		Rev. 28	Project: PRASA SI.CB1210.247.V28
			Date 07/11/2023	

ANNEXURE B: Arc Welding Quality Acceptance Standard




  
**PRASA PROJECT**


  
**SELF INSPECTION SHEET**

APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

CONFIDENTIAL INFORMATION  
 This document is classified as Confidential. It is to be controlled as Confidential Information pursuant to the provisions of Clause 25 of the MSA, and treated as such.

APPLICATION REFERENCE												
WORKING	DRAWING	DESCRIPTION	STATION	CAR TYPE					WORK INSTRUCTION	SAFETY		
				TC	MA	ME	MS	TC				
<input type="checkbox"/>	DT032744572	CARBON/STEEL M2 ASSEMBLY	GRASSE				X		P84.CB1220.DT032744572/V23	YES		
<input type="checkbox"/>												
<input type="checkbox"/>												
<input type="checkbox"/>												
<input type="checkbox"/>												
<input type="checkbox"/>												
<input type="checkbox"/>												
REV	DATE	MODIFICATION CONTENT							RESPONSIBLE	NAME	DATE	
0	02/02/2018	GIBELA NEW CREATION							APPROVER	Turnberg Modiba	02/02/2018	
									CHECKER	Noszo Pindla	02/02/2018	
									COMPILER	Thanyani Mthopu	02/02/2018	
1	18/05/2018	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality manager.							APPROVER	Turnberg Modiba	18/05/2018	
									CHECKER	Noszo Pindla	18/05/2018	
									REVISED BY	Ramokone Mafama	18/05/2018	
2	2018/07/05	Certain dimensional checks added and others moved to CB1210							APPROVER	Turnberg Modiba	2018/07/05	
									CHECKER	Noszo Pindla	2018/07/05	
									REVISED BY	Turnberg Modiba	2018/08/12	
3	2018/08/12	Width tolerance as per DT0000335600							CHECKER	Noszo Pindla	2018/08/12	
									REVISED BY	Noszo Pindla	2018/08/12	
5	24/01/2019	As per Baseline 10.2							APPROVER	Turnberg Modiba	24/01/2019	
									CHECKER	Noszo Pindla	24/01/2019	
									REVISED BY	Vanessa Nduli	24/01/2019	
6	13/03/2019	Added D1 and D2 on Self - Inspection length measurements							APPROVER	Turnberg Modiba	13/03/2019	
									CHECKER	Noszo Pindla	13/03/2019	
									REVISED BY	Noszo Pindla	13/03/2019	
7	27/05/2019	Removed measurement positions on the display windows							APPROVER	Turnberg Modiba	27/05/2019	
									CHECKER	Noszo Pindla	27/05/2019	
									REVISED BY	Noszo Pindla	27/05/2019	
10	22/08/2019	New Baseline 10.2.5							APPROVER	Turnberg Modiba	22/08/2019	
									CHECKER	Noszo Pindla	22/08/2019	
									REVISED BY	Noszo Pindla	22/08/2019	
15	06/08/2020	New Baseline 10.2.5							APPROVER	Turnberg Modiba	06/08/2020	
									CHECKER	Noszo Pindla	06/08/2020	
									REVISED BY	Bongane Masina	06/08/2020	
20	19/04/2021	New Baseline change 10.3							APPROVER	Turnberg Modiba	19/04/2021	
									CHECKER	Bongane Masina	19/04/2021	
									REVISED BY	Turnberg Modiba	22/08/2019	
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING							APPROVER	Turnberg Modiba	17/08/2021	
									CHECKER	Mpho Mulaudzi	17/08/2021	
									REVISED BY	Mpho Mulaudzi	17/08/2021	
25	20/02/2022	New Baseline change 10.3.1							APPROVER	Mphomabi collins	20/02/2022	
									CHECKER	Andani Muthelo	20/02/2022	
									REVISED BY	Andani Muthelo	20/02/2022	
26	14/06/2022	Update Minimum temperature requirement for sealant application							APPROVER	Mphomabi collins	14/06/2022	
									CHECKER	Andani Muthelo	14/06/2022	
									REVISED BY	Andani Muthelo	14/06/2022	
27	19/10/2022	Addition of traceability for sealant application and welding							APPROVER	Mphomabi collins	19/10/2022	
									CHECKER	Nosozo Zwane	19/10/2022	
									REVISED BY	Amogelang Mphahlepe	19/10/2022	
28	14/04/2023	Added sealant batch number & welding consumables traceability							APPROVER	Vanessa Nduli	14/04/2023	
									CHECKER	Nosozo Zwane	14/04/2023	
									REVISED BY	Amogelang Mphahlepe	14/04/2023	
29	28/10/2023	Addition of bracket quantity							APPROVER	Tyson Ngweni	28/10/2023	
									CHECKER	Kelstone Maphoso	28/10/2023	
									REVISED BY	Amogelang Mphahlepe	28/10/2023	
TRAINSET	CAR	OPERATOR NAME,ALPS NO.	DATE	SELF INSPECTION NUMBER							PAGES	
211	M2	Moshda 410041	18/02/2024	SI.CB1220.276.V29							15	



CARBODYSHELL M2 ASSEMBLY DTR313744972

Rev. 29  
Date 28/10/2023  
Project: PRASA  
SI.CB1220.276.V29

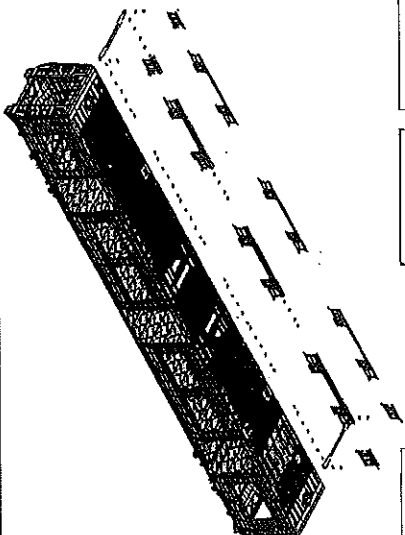
Car: M2

NCR:

Work station: CB1220



Safety Related



### 1 - Documentation and Instruments Control

#### 1.1 - Documentation Control

Document	Type of car					Revision	Observation	OK	Signature (Manufacturing)	Signature (Quality)
	10L	M1	M2	M3	TOT					
DTR313744972			V			29		V	N/A	28/10/2023

#### 1.2 - Instruments Control

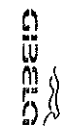
Monitoring and Measuring Instrument Control - Used for Special Process

Instrument	Serial number	Calibration or Verification Validation Date	OK	Signature (Manufacturing)	Signature (Quality)
Fiberglass measuring tape	22117	03/08/2024	V	28/10/2023	28/10/2023
	GUSTO331	03/05/2024			

#### 1.3 Consumables

Welding Consumable Control - Used for Special Process

Welding Material	Heat Number	Welding Process	OK	Signature (Manufacturing)	Signature (Quality)
309 1.0mm	M16		V	28/10/2023	28/10/2023

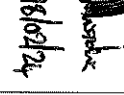



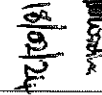

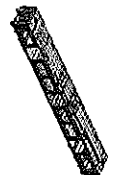


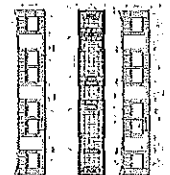


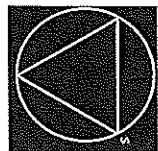


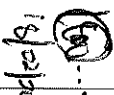

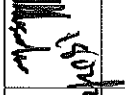



CARBODY/SHELL M2 ASSEMBLY DT3313744972

Rev.  
28  
Date  
28/02/2023Project: PRUSA  
SI.CB1220.276.V29

## II - Self Inspection - Items to Check

II.1 - Items to check

Item	Pictorial Drawing	Description	Acceptance criteria / Procedure	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Assembly according to Inspection Engineering n° PRA.CB1220. DT3313744972 Verification of element for all reinforcement brackets.	PRA.CB1220. DT3313744972	<input checked="" type="checkbox"/>	 18/02/24	 18/02/24
02	N/A	Control free of significant flaws which compromise the appearance or functionality	DTD000210675	<input checked="" type="checkbox"/>	 18/02/24	 18/02/24
03	REFER TO ANNEXURE A	Arc Welding Inspected and approved according procedure.	IND-SAL-WMC-016 REFER TO GIB - TYPDEF - ARC - 0000	<input checked="" type="checkbox"/>	 18/02/24	 18/02/24
04		Cleaning of all Stainless Steel Surface	According to GIB-WEL - PROC 0002	<input checked="" type="checkbox"/>	 18/02/24	 18/02/24
05		Functionals dimensions approved according drawing or complementary document approved by Actium engineering and registered in this document.	Approved according specified on pages below.	<input checked="" type="checkbox"/>	 18/02/24	 18/02/24
06		Perform visual inspection of welds in 100% of the project. Run by pendant testing in electric arc welding (fixed ring) as IND-SAL-WMC-028. Run by pendant testing welds (weld ring) and fillet sampling as described in DTD000210628.	As the welding procedure IND-SAL-WMC-028 and DTD000210628.	<input checked="" type="checkbox"/>	 18/02/24	 18/02/24
07	N/A	Before application of sealant insert the epoxy date and make sure that the room temperature and humidity are within specified values as per Specification Specification: Temperature Min. Max. T1 Min/Max 10°C - 30°C Relative Humidity Min. Max. Min/Max 25% - 80% Max. T1	Sealant Batch No: <u>18-24</u> Exp Date: <u>18-24</u> Actuals: Temperature: <u>15°C</u> Humidity: <u>58%</u>	<input checked="" type="checkbox"/>	 18/02/24	 18/02/24
08	N/A	Verification of sealant application in certain regions in the drawing.	AAD000143329	<input checked="" type="checkbox"/>	 18/02/24	 18/02/24



CARBODYSHELL MZ ASSEMBLY DTR31374487/2

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29	
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28/10/2023	

SEALANT APPLICATION

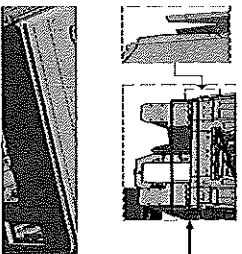
AREA 1 & 2 END 1

Operator (Name & sign):

leao

Operator (Name & sign):

leao



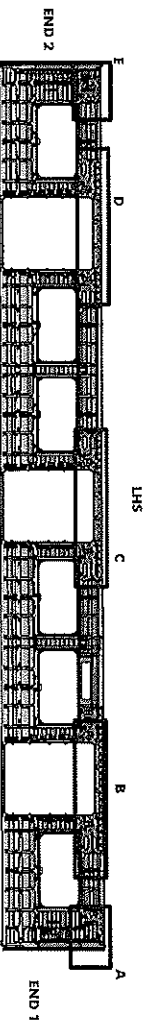
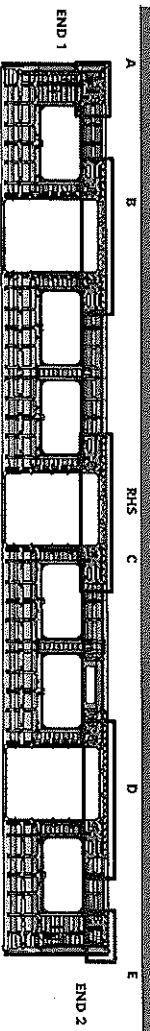


CARBODYSHELL M2 ASSEMBLY DTR313744972

Rev. 29 Project: PRUSA

Date 28/02/2023 SI.CB1220.276.V29

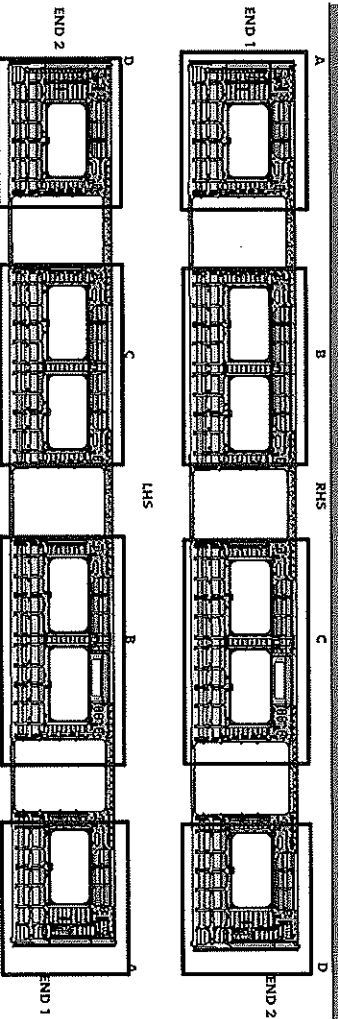
II - Self Inspection - Items to Check



REINFORCEMENT WELDING

AREA	LHS	RHS
A	Operator (Name&sign): <u>Norunigist</u>	Operator (Name&sign): <u>Norunigist</u>
B	Operator (Name&sign): <u>Norunigist</u>	Operator (Name&sign): <u>Norunigist</u>
C	Operator (Name&sign): <u>Norunigist</u>	Operator (Name&sign): <u>Norunigist</u>
D	Operator (Name&sign): <u>Norunigist</u>	Operator (Name&sign): <u>Norunigist</u>
E	Operator (Name&sign): <u>Norunigist</u>	Operator (Name&sign): <u>Norunigist</u>

**II - Self Inspection - Items to Check**



**BRACKETING**

**INSTALLATION**

**C-RAILS:**

Operator:

Leni WBS

Operator:

**DOOR MECHANISMS:**

Operator:

Pocila WBS

Operator:

**TAPPING PADS**

Operator:

Pocila WBS

Operator:

**INSTALLATION & VERIFICATION**

**SEAT & LUGGAGE BRACKETS:**

Operator:

Mingsketo Mwal

Operator:

Mhite

**SEAT BRACKETS VERIFICATION:**

Operator:

Mhobhosi

Operator:

**WELDING**

**AREA**

**LHS**

**RHS**

**A (Seat brackets)**

: Operator (Name&sign):

Mingsketo Mwal

(C-rails, Luggage and earth bushes) : Operator (Name&sign): Mingsketo Mwal

**B (Seat brackets)**

: Operator (Name&sign):

S. Mphahlela

(C-rails, Luggage and earth bushes) : Operator (Name&sign): Mingsketo Mwal

**C (Seat brackets)**

: Operator (Name&sign):

S. Mphahlela

(C-rails, Luggage and earth bushes) : Operator (Name&sign): Mingsketo Mwal

**D (Seat brackets)**

: Operator (Name&sign):

S. Mphahlela

(C-rails, Luggage and earth bushes) : Operator (Name&sign): Mingsketo Mwal

**ENDS**

**END 1 TAPPING PADS WELDING:**

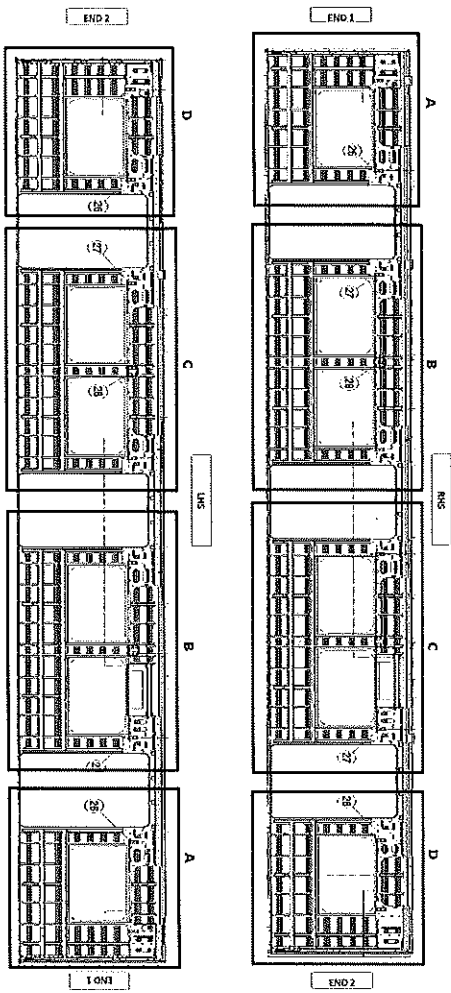
Operator (Name&sign):

Mingsketo Mwal

END 1 TAPPING PADS WELDING: Operator (Name&sign): Mwalungu Mwal



M2 BRACKET INSTALLATION



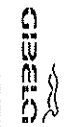
QUANTITIES (M2)

RHS				
SECTION	QUANTITY	OK	NOK	
C-RAILS	A	4		
	B	4		
	C	4		
	D	4		
SEAT BRACKETS	A	21		
	B	21		
	C	21		
	D	21		
EARTH BUSH	A	4		
	B	4		
	C	4		
	D	4		

ROOF ENDS:  
 CHAILS 2 OFF EACH END  
 EARTH BUSH 6 OFF EACH END  
 VERIFICATION BY: *Mashud*

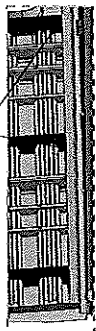
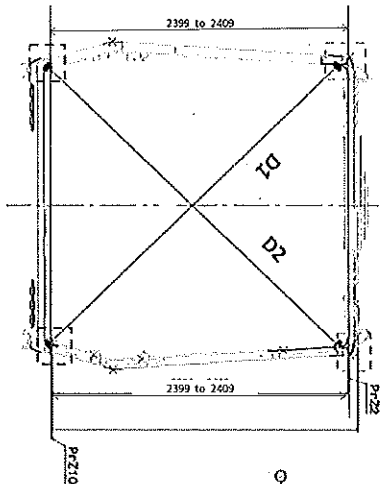
LHS				
SECTION	QUANTITY	OK	NOK	
C-RAILS	A	4		
	B	4		
	C	4		
	D	4		
SEAT BRACKETS	A	21		
	B	21		
	C	21		
	D	21		
EARTH BUSH	A	4		
	B	4		
	C	4		
	D	4		

ROOF ENDS:  
 CHAILS 2 OFF EACH END  
 EARTH BUSH 6 OFF EACH END  
 VERIFICATION BY: *Mashud*

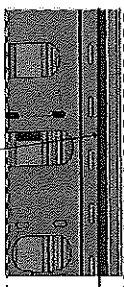


CARBOYSHELL M2 ASSEMBLY DTR313744972

Rev.	Project: PRUSA
29	
Date	
28/10/2023	SI.CB1.220.276.V29



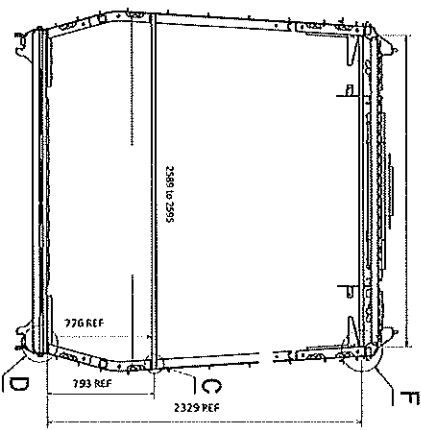
Measurement positions on roof rail and lateral frame details.

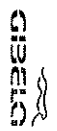


Reinforcement area measurement positions on roof reinforcement area.



Measurement positions on sidewall and side sill corner.



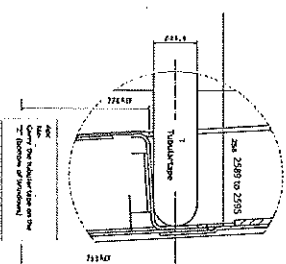
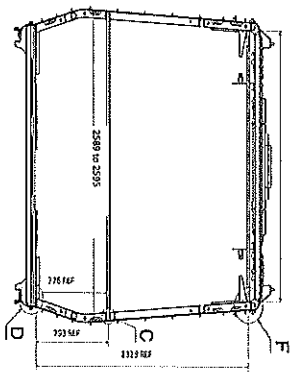


CARBODYSHELL M2 ASSEMBLY DT83137449712

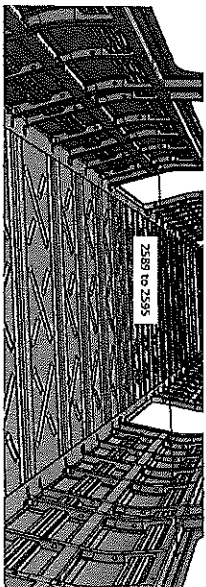
Rev.
28
Date
28/10/2023

Project PRASA

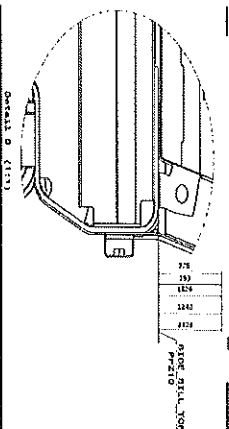
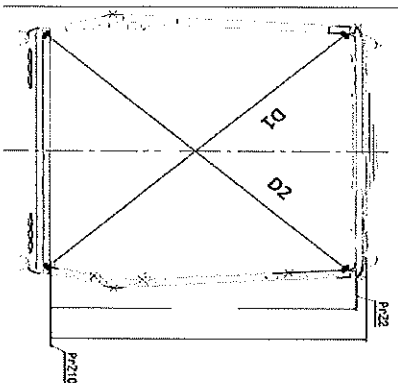
SI.CB1220.276.V29



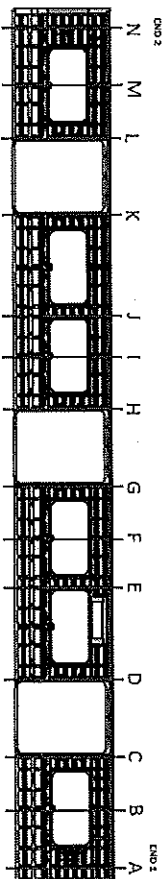
Detail C



Take measurement close to radius



**CBS measurement**



BEFORE WELDING

Record D1 values		Record D2 values		D1-D2 ≤ 5mm		2589 to 2595	
A	3298	3299	1				
B	3268	3261	1				
C	3300	3298	2				
D	3297	3298	1				
E	3267	3268	1				
F	3267	3267	0				
G	3299	3299	0				
H	3297	3293	2				
I	3265	3268	3				
J	3268	3269	1				
K	3298	3300	2				
L	3300	3296	4				
M	3266	3267	1				
N	3295	3295	0				

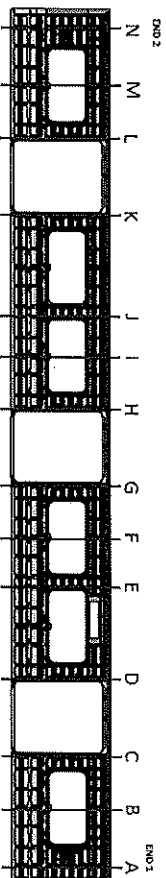


CANBODYSHELL M2 ASSEMBLY DTR313744872

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Project: PRASA

SI.CB1220.276.V29

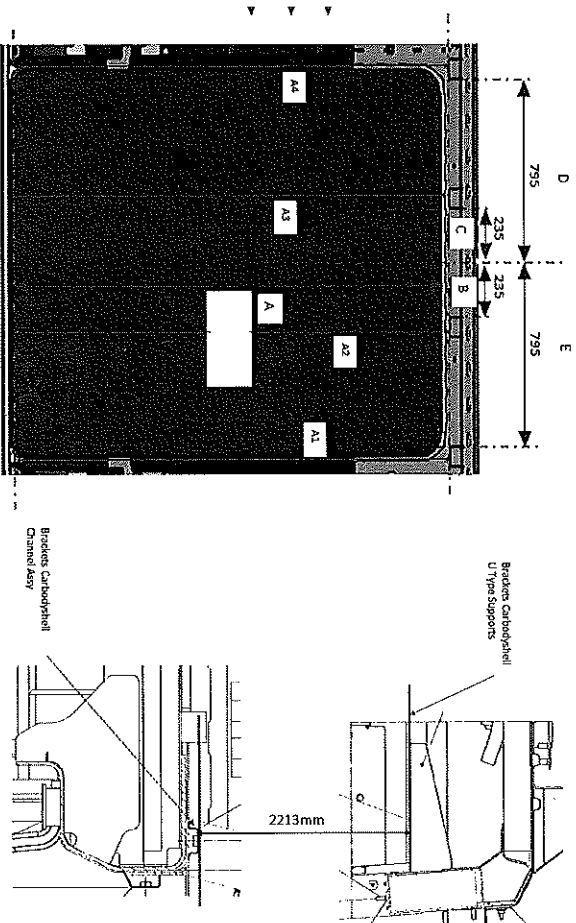
CBS measurement



AFTER WELDING

Record D1 values		Record D2 values		D1-D2 ≤ 5mm		2589 to 2595	
A	3297	3289	2	2594			
B	3269	3266	3	2589			
C	3299	3297	2	2591			
D	3297	3297	0	2590			
E	3269	3268	1	2593			
F	3266	3268	2	2594			
G	3299	3298	1	2592			
H	3295	3291	2	2594			
I	3267	3264	3	2592			
J	3270	3266	4	2594			
K	3291	3301	4	2594			
L	3299	3298	1	2592			
M	3267	3268	1	2591			
N	3298	3296	2	2593			

## Specifications of Details for CB's measurement CB1220



DOOR 1 - LHS

VALUE	ACTUAL
A1 2230 to 2232	2233
A2 2230 to 2232	2233
A3 2230 to 2232	2232
A4 2230 to 2232	2233
B 234 to 236	235
C 234 to 236	235
D 794 to 796	795
E 794 to 796	795

DOOR 2 - LHS

VALUE	ACTUAL
A1 2230 to 2232	2232
A2 2230 to 2232	2232
A3 2230 to 2232	2232
A4 2230 to 2232	2232
B 234 to 236	235
C 234 to 236	235
D 794 to 796	795
E 794 to 796	795

DOOR 3 - LHS

VALUE	ACTUAL
A1 2230 to 2232	2232
A2 2230 to 2232	2232
A3 2230 to 2232	2232
A4 2230 to 2232	2232
B 234 to 236	235
C 234 to 236	236
D 794 to 796	796
E 794 to 796	794

DOOR 1 - RHS

VALUE	ACTUAL
A1 2230 to 2232	2232
A2 2230 to 2232	2232
A3 2230 to 2232	2232
A4 2230 to 2232	2232
B 234 to 236	235
C 234 to 236	235
D 794 to 796	796
E 794 to 796	795

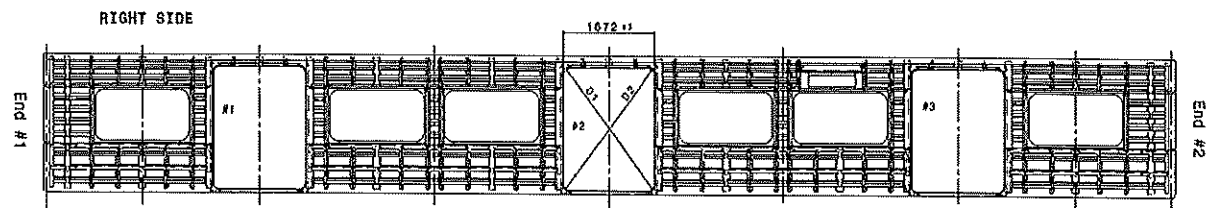
DOOR 2 - RHS

VALUE	ACTUAL
A1 2230 to 2232	2232
A2 2230 to 2232	2232
A3 2230 to 2232	2232
A4 2230 to 2232	2232
B 234 to 236	235
C 234 to 236	234
D 794 to 796	796
E 794 to 796	795

DOOR 3 - RHS

VALUE	ACTUAL
A1 2230 to 2232	2233
A2 2230 to 2232	2232
A3 2230 to 2232	2232
A4 2230 to 2232	2233
B 234 to 236	235
C 234 to 236	235
D 794 to 796	795
E 794 to 796	795

Specifications of Details for CBS measurement CB1220

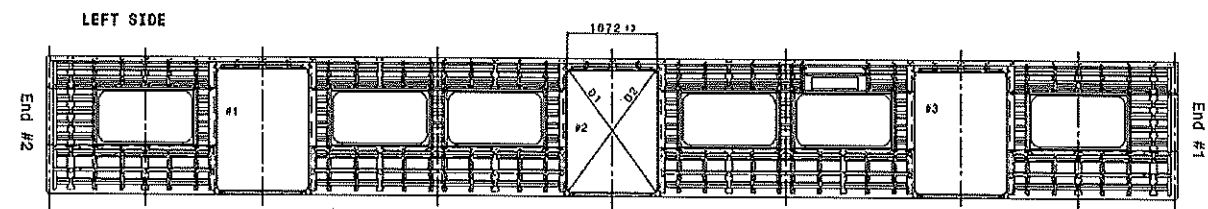


Doors length - 1672 ±3mm

#1	#2	#3	
1673	1671	1671	HIGHER DIMENSION
1672	1671	1672	CENTRAL DIMENSION
1672	1670	1672	LOWER DIMENSION

Doors diagonal D1-D2 maximum difference ≤ 4mm

	#1	#2	#3
D1	2769	2768	2767
D2	2768	2769	2769
D1-D2	1	1	2



Vão de Portas - 1672 ±3mm

#1	#2	#3	
1673	1672	1671	DIMENSÃO SUPERIOR HIGHER DIMENSION
1673	1672	1671	CENTRAL DIMENSION
1672	1671	1670	LOWER DIMENSION

4mm

	#1	#2	#3
D1	2748	2749	2769
D2	2750	2768	2750
D1-D2	2	1	3







CARBODYSHELL M2 ASSEMBLY DTR313744872

Rev. 25  
Date 28/10/2023

Project: PRASA

SI.CB1220.276.V29


Self Inspection - Final Result

Is the car good to advance to the next workstation/process? (Approval of Operations and Industrial Quality)		DATE	NAME	SIGNATURE
HOLD POINT	GO	16/02/2024	M. B. H. M. d. 1	M. B. H. M. d. 1
		14/01/24	M. B. H. M. d. 1	M. B. H. M. d. 1
			Operations	
			Industrial Quality	
		In case of "NO GO", describe blocking problems		
			</	

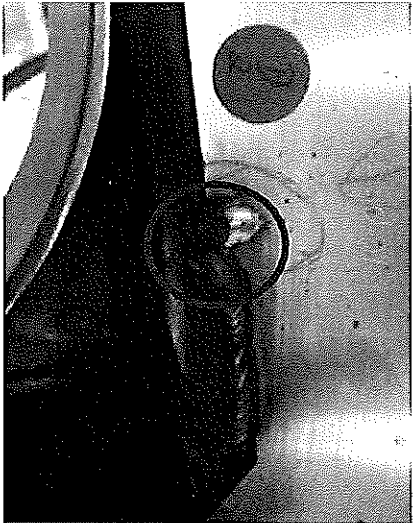
In case of "NO GO", the operations manager must define below action plan to ensure "GO":			
Item	Description	Responsible	Due date

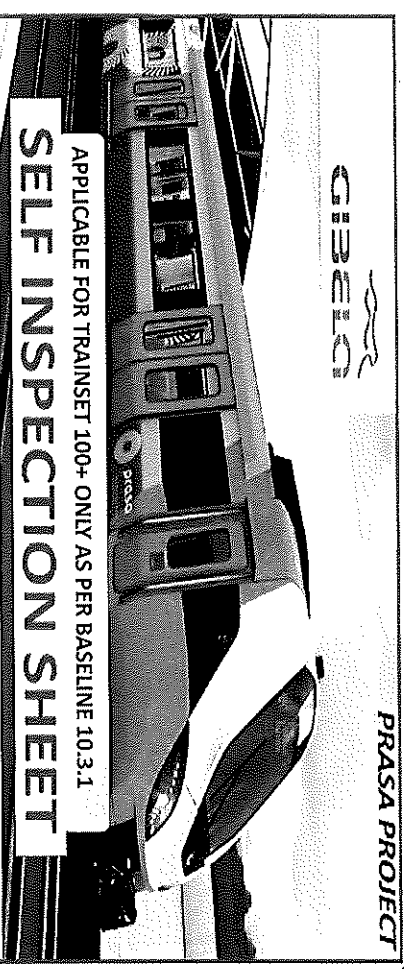
Operations

Quality

 GIBCO	CARBODYSHELL M2 ASSEMBLY DTR313744972			Rev.	Project: PRASA
				29	
				Date	
				29/10/2023	
					SI.CB1220.276.V29

ANNEXURE A: Arc Welding Quality Acceptance Standard

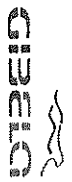




APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1  
SELF INSPECTION SHEET

CONFIDENTIAL INFORMATION  
This document and the information contemplated therein have to be considered as Confidential Information pursuant to the provisions of Clause 25 of the MSA, and treated as such.

MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE				WORK INSTRUCTION	SAFETY ?
				T/C	M1	M2	M3		
<input type="checkbox"/>	AA000137V4497	AA0001413329	CARBOYSHELL M2 ASSEMBLY				X	PRA CB1230.AA000013 74497.V20	YES
<input type="checkbox"/>									
<input type="checkbox"/>									
<input type="checkbox"/>									
<input type="checkbox"/>									
	DATE	MODIFICATION CONTENT							DATE
		RESPONSIBLE							
		NAME							
0	2018/08/02	GIBELA NEW CREATION							
		APPROVER							2018/08/02
		Philippe Marquer							
		CHECKER							2018/08/02
		Nesozo Phodela							
		COMPILED							2018/08/02
		Nesozo Phodela							
		APPROVER							30/5/2018
		Izumeleg Modiba							
1	30/5/2018	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality manager							
		CHECKER							30/5/2018
		Nesozo Phodela							
		REVISED BY							30/5/2018
		Nesozo Phodela							
		APPROVER							2018/05/07
		Ramokone Motema							
2	2018/05/07	Certain dimensional checks moved to CB1220							
		REVISED BY							2018/05/07
		Izumeleg Modiba							
		APPROVER							24/01/2019
		Izumeleg Modiba							
		CHECKER							24/01/2019
		Nesozo Phodela							
		REVISED BY							24/01/2019
		Vanessa Mtshali							
		APPROVER							13/03/2019
		Izumeleg Modiba							
5	24/01/2019	As per Baseline 10.2							
		CHECKER							13/03/2019
		Nesozo Phodela							
		REVISED BY							13/03/2019
		Vanessa Mtshali							
6	13/03/2019	Added Twist and Door Bracket Measurements Remove Door Measurements							
		CHECKER							13/03/2019
		Nesozo Phodela							
		REVISED BY							13/03/2019
		Vanessa Mtshali							
10	23/03/2019	New Baseline 10.2.5							
		CHECKER							23/08/2019
		Izumeleg Modiba							
		REVISED BY							23/08/2019
		Nesozo Phodela							
15	06/08/2020	New Baseline 10.2.6							
		APPROVER							06/08/2020
		Timothy Maimela							
		CHECKER							06/08/2020
		Bongane Masina							
		REVISED BY							06/08/2020
		Bongane Masina							
20	19/04/2021	New Baseline change 10.3							
		APPROVER							19/04/2021
		Timothy Maimela							
		CHECKER							19/04/2021
		Bongane Masina							
		REVISED BY							19/04/2021
		Bongane Masina							
25	20/02/2022	New Baseline change 10.3.1							
		CHECKER							20/02/2022
		Andani Muthelo							
		REVISED BY							20/02/2022
		Andani Muthelo							
		APPROVER							14/06/2022
		Collins Mkhombhi							
26	14/06/2022	Update minimum temperature requirement for sealant application							
		CHECKER							14/06/2022
		Andani Muthelo							
		REVISED BY							14/06/2022
		Andani Muthelo							
		APPROVER							27/07/2022
		Collins Mkhombhi							
27	26/07/2022	Threshold measurement addition							
		CHECKER							27/07/2022
		Andani Muthelo							
		REVISED BY							27/07/2022
		Andani Muthelo							
		APPROVER							17/10/2022
		Collins Mkhombhi							
28	17/10/2022	Addition of traceability for sealant application							
		CHECKER							17/10/2022
		Nesozo Zwane							
		REVISED BY							17/10/2022
		Amogelang Mphahlepe							
		APPROVER							14/04/2023
		Vanessa Mtshali							
29	14/04/2023	Added sealant batch number & welding consumables traceability							
		CHECKER							14/04/2023
		Nesozo Zwane							
		REVISED BY							14/04/2023
		Amogelang Mphahlepe							
		APPROVER							06/11/2023
		Ngobeni Tyson							
30	06/11/2023	Added traceability on thresholds for boiler makers and welders							
		CHECKER							06/11/2023
		Andani Muthelo							
		REVISED BY							06/11/2023
		Nesozo Zwane							
TRAINSET		CAR		OPERATOR NAME: RJS NO		DATE		SELF INSPECTION NUMBER	
211		Mod		L E R A T O 472806		19/09/24		SI.CB1230.277.V29	
								PAGES	
								11	



CARBODYSHELL M2 ASSEMBLY AA00001374497

Rev. 30  
Date 06/11/2023  
Project: PRASA  
SI.CB1230.277.V29

Car:

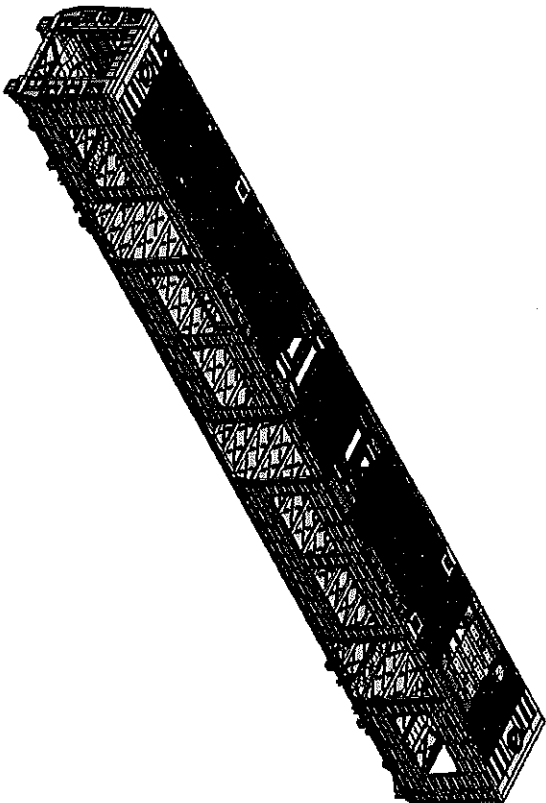
NCR:

Work station:

CB1230



Safety Related



## I - Documentation and Instruments Control

### I.1 - Documentation Control

Document	Type of car					Revision	Observation	OK	NO	Remark	Signature/Date (Operations)	Signature/Date (Quality)
	C1	M1	M2	M3	M4	C2L						
PRASA CB1230 AA00001374497			X				21	X		N/A	19/02/24	19/02/24

### I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process







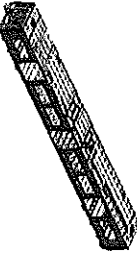


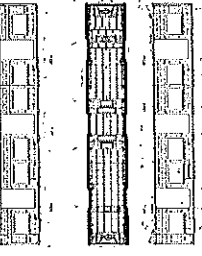


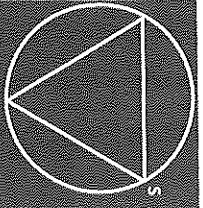



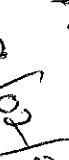


Instruments	Serial number	Calibration or Verification Validation Date	OK	NO	Signature/Date (Operations)	Signature/Date (Quality)
measuring tape	G1187102007	2024/02/23	✓		19/02/24	19/02/24
Ruler	G1185790040	2024/09/14	✓		19/02/24	19/02/24
Combination Square	G118550140	2024/06/26	✓		19/02/24	19/02/24
Gate Tumbler	227	29/11/24	✓		19/02/24	19/02/24

### 1.3 Consumables

Welding Consumable Control - Used for Special Process

Filler Material	Heat Number	Welding Process	OK	NO	Signature/Date (Manufacturing)	Signature/Date (Quality)
ER308-L	310180	MIG welding	✓		19/02/24	19/02/24

**II - Self Inspection - Items to check**
**II.1 - Items to check**

Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	NO	REWORK	Signature/Date (Operations)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering nº PRA.CB1230.AA00001374497 Verification of fitment for all brackets.	PRA.CB1230.AA00001374497	OK			 19/02/24	 19/02/24
02	N/A	Corshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	OK			 19/02/24	 19/03/24
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPEDEF - ARC - 0000	OK			 19/02/24	 19/02/24
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	OK			 19/02/24	 19/02/24
05		Functional dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	OK			 19/02/24	 19/02/24
06		Perform visual inspection of welds in 100% of the project. Run by penetrant testing in electric arc welding (weld ring) as IND-SAL-WMS-018. Run by penetrant testing welds (weld ring) and fillet sampling as described in DTD0000210658.	As the welding procedure IND-SAL-WMS-018 and DTD0000210658.	OK			 19/02/24	 19/02/24
07	N/A	Before application of sealant record the expiry date and make sure that the room temperature and humidity are within specified values as per Works Instructions Specified: Temperature Min - Max (°) Min-Max 10°C - 35°C Relative humidity Min - Max (%) Min-Max 25% - 80%	Sealant Batch No: Exp Date: <u>05 / 24</u> Actuals Temperature: <u>16°C</u> Humidity: <u>62%</u>	OK			 19/02/24	 19/02/24
08	N/A	Verification of sealant application in regions of roof and sidiframe.	Sealant applied in regions of roof and sidiframe.	OK			 19/02/24	 19/02/24



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### END 2 SEALANT

#### AREA 1

OPERATOR  
(Name & sign):

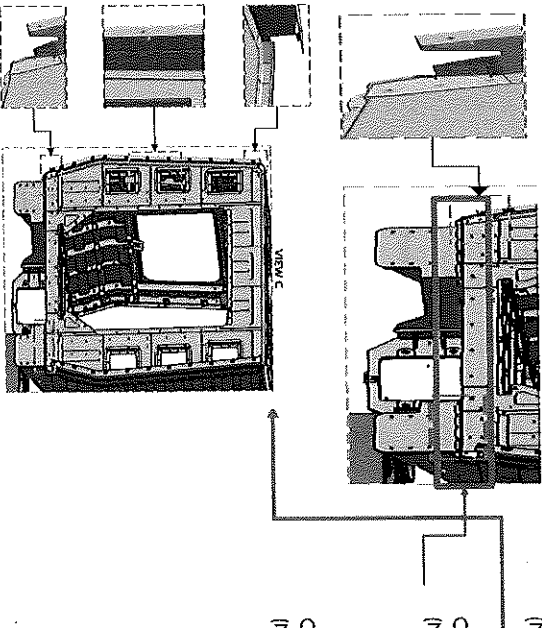
Letato 

OPERATOR  
(Name & sign):

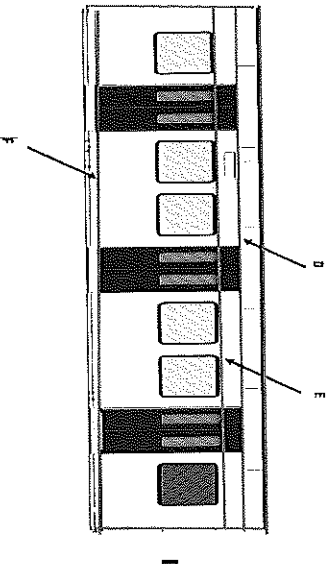
Letato 

OPERATOR  
(Name & sign):

Letato 



#### H



#### Area D,E,F,G,H,I

Operator (Name & sign):

<sup>LHS</sup>  
Djefg, H, I

<sup>RHS</sup>  
Djefg, H, I

Operator (Name & sign):

Bume ~~Boile~~

Bume ~~Boile~~

Operator (Name & sign):

Boile ~~Boile~~

Boile ~~Boile~~

Operator (Name & sign):

Boile ~~Boile~~

Boile ~~Boile~~

Operator (Name & sign):

Boile ~~Boile~~

Boile ~~Boile~~

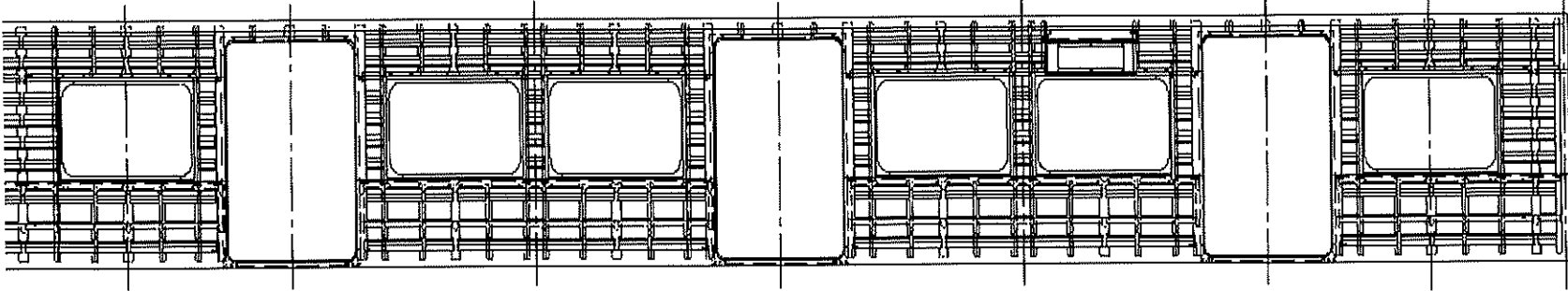
Operator (Name & sign):

Boile ~~Boile~~

Boile ~~Boile~~

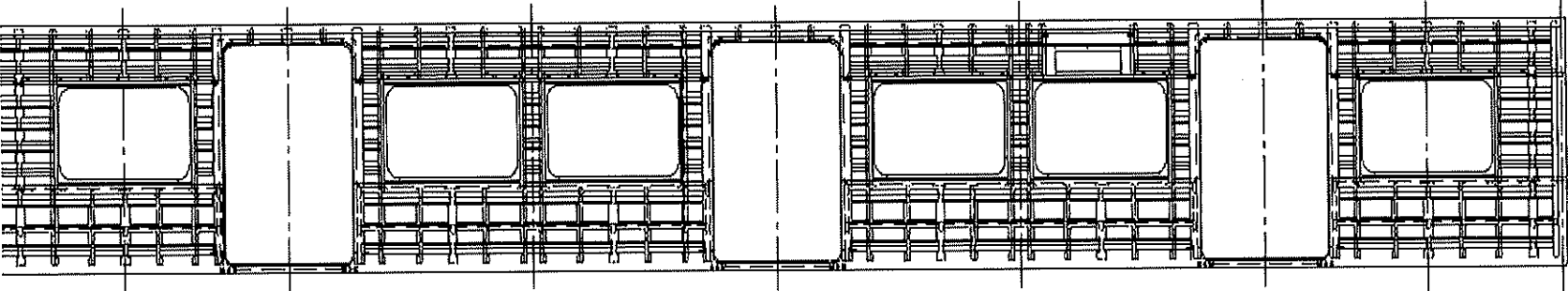
latness side left and right maximum of 2mm in the valley to peak measured in 900mm. Recod the maximum and minimum value foundand indicate the corresponding region.

RIGHT SIDE



MAXIMUM 1.8  
MINIMUM 1.7

LEFT SIDE



MAXIMUM 1.9  
MINIMUM 1.2



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Specifications of Details for CBS measurement CB1230



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END #1

END #2



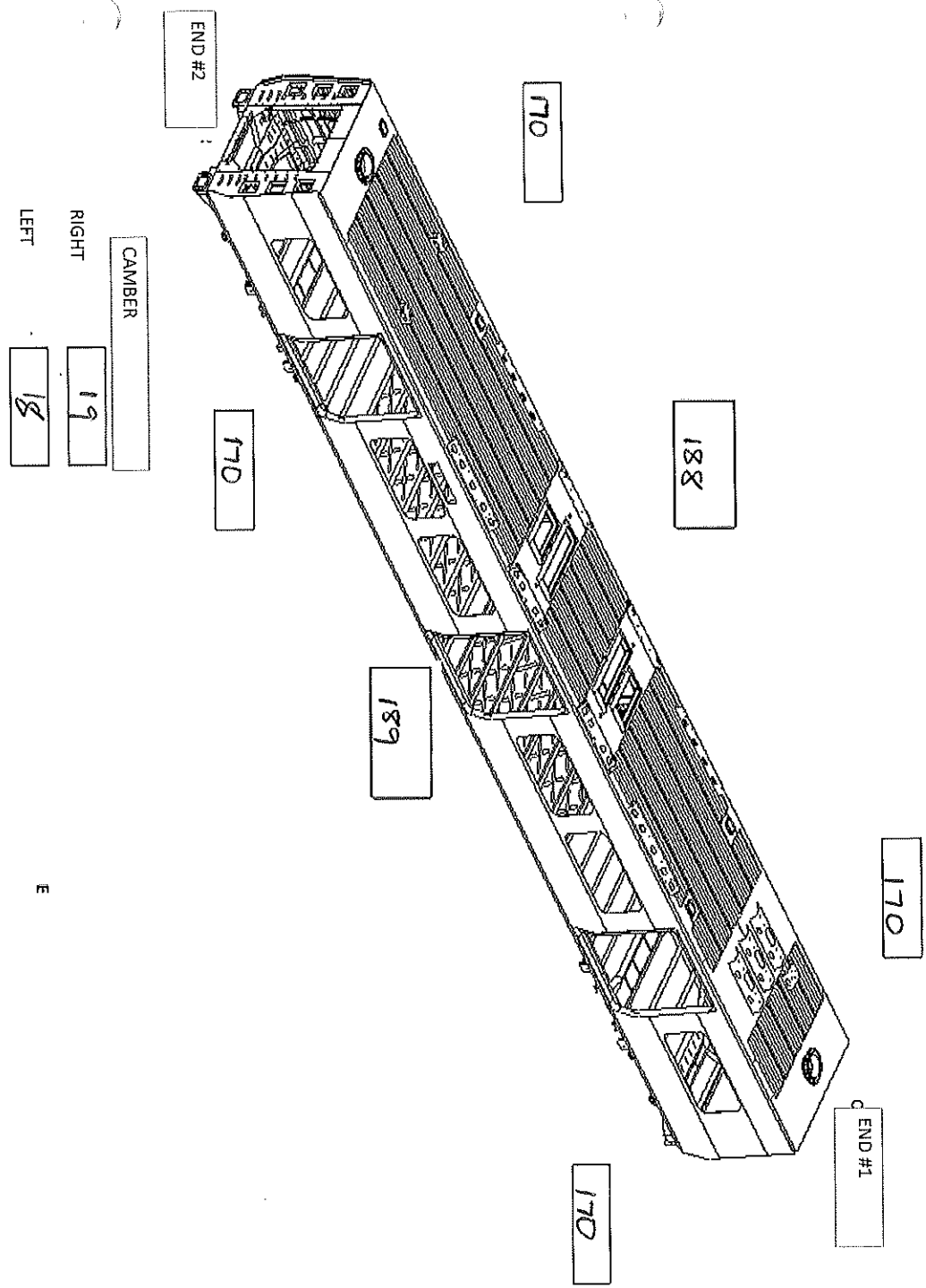


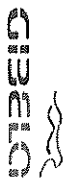
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Specifications of Details for GBS mecsurement CB1230

Specified Camber for car out of jig is 18mm(-0mm + 2mm)





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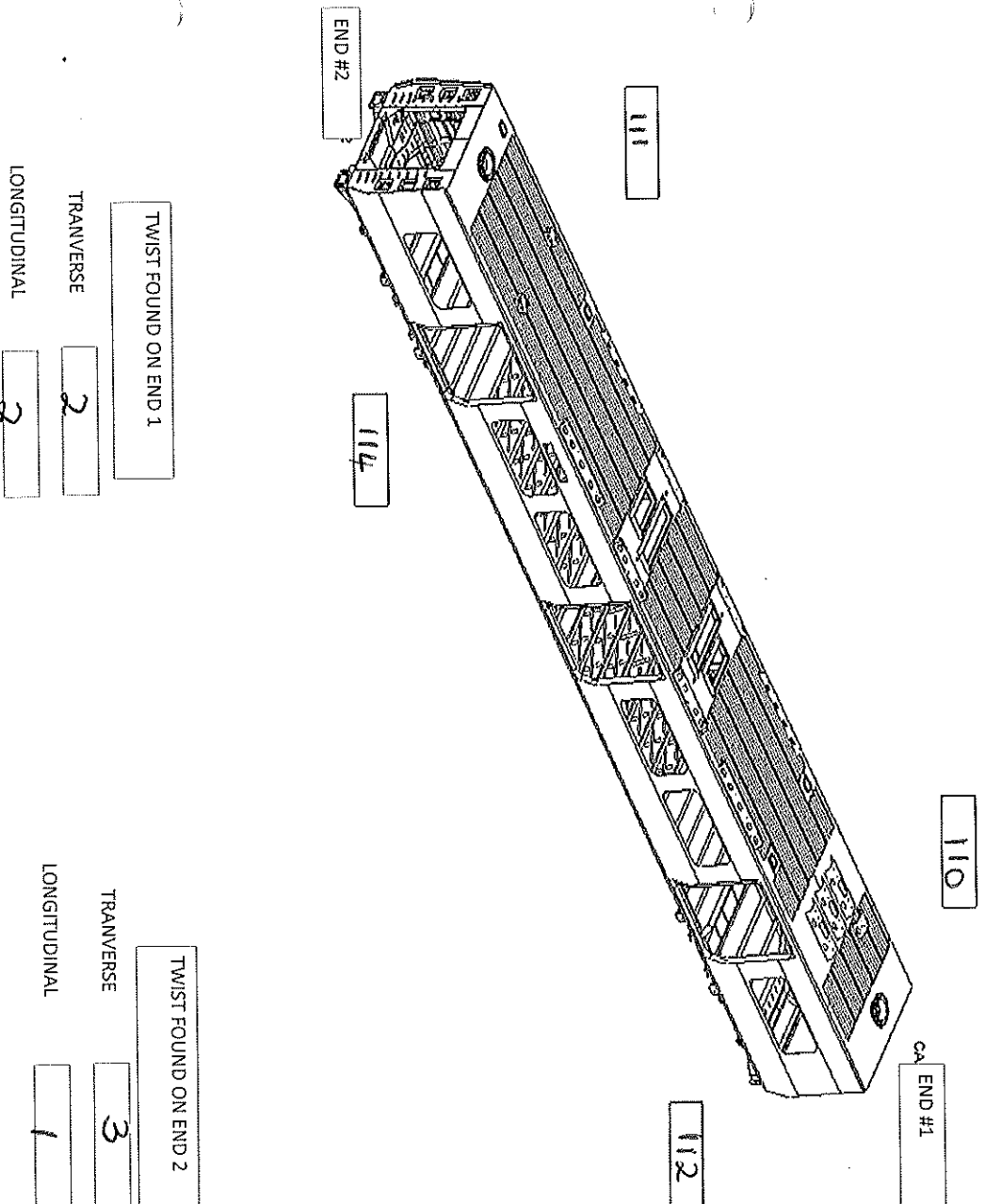
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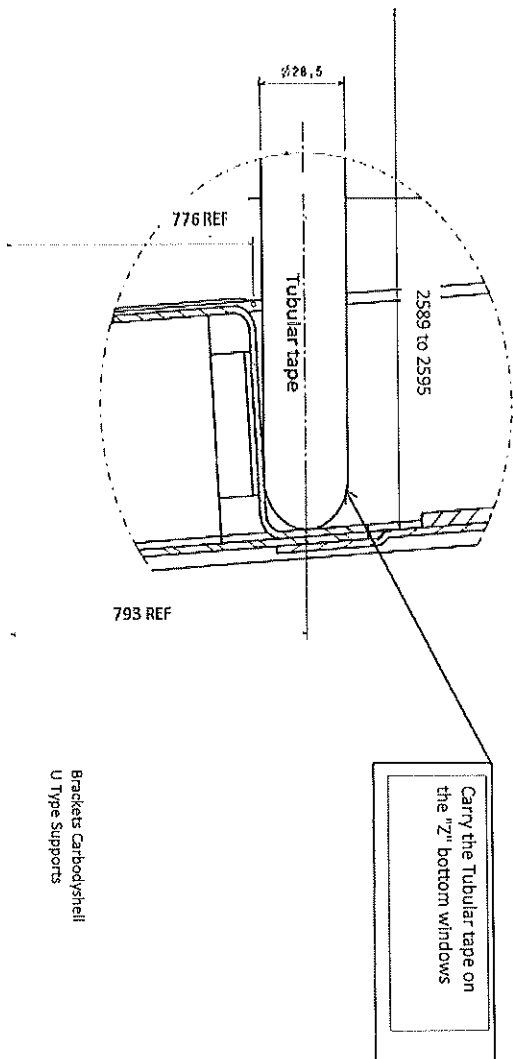
SI.CB1230.277.V29

Specifications of Details for CBS measurement CB1230

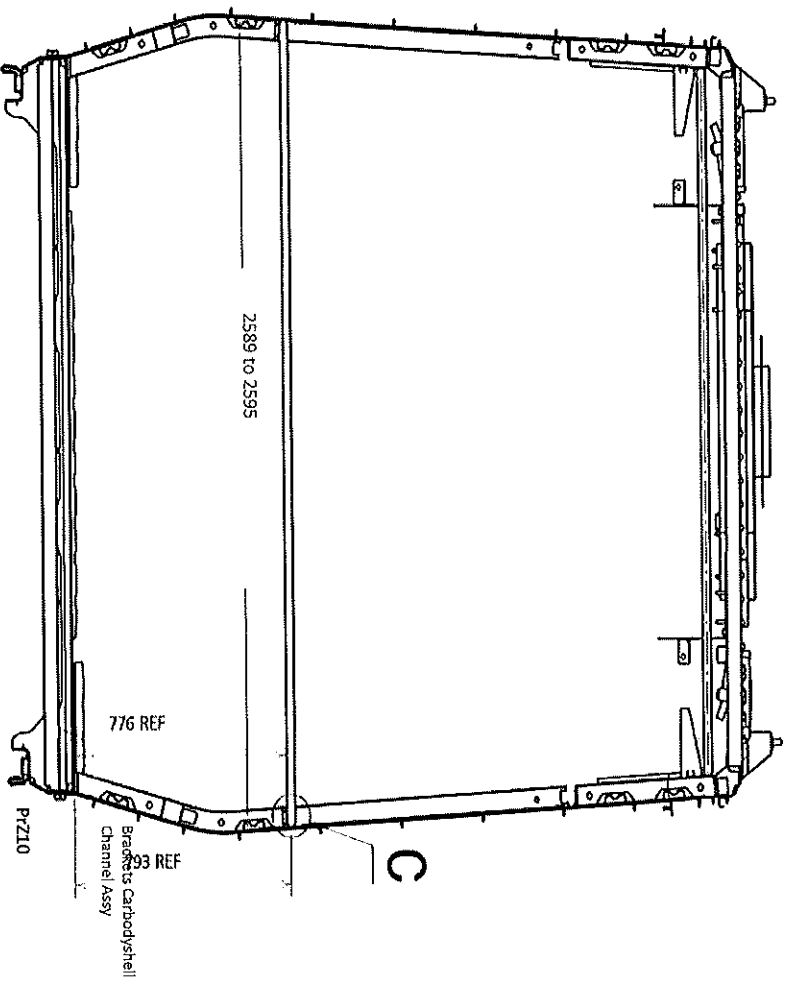
Twist measured in transversal and longitudinal = Maximum 3mm. Measure twist on air spring plates (LHS and RHS), both End 1 and End 2 following twist measurement document.



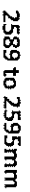
Specifications of Details for CBS measurement CB1230



Detail C



## Specifications of Details for CBS measurement CB1230






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### Dye penetrant test

Dye-penetration test to be performed by quality personnel





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## Specifications of Details for CBS measurement

[illegible]

## III.2 - Check List REX

### Check List Items

Item	Picture/Drawing	Description	Criteria Record	OK	Not OK	Signature/Date (Operations)	Signature/Date (Quality)
01	N/A	To complete REX	Refer to REX. New defects must be added on the REX				



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## Self Inspection - Final Result

Is the car good to advance to the next workstation/process?  
(Approval of Operations and Industrial Quality)

DATE

NAME

SIGNATURE

## HOLD POINT

GO

(If activities are not complete, the missing activities must not impact the next stage!)

19/08/24

LEZARD

Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)

19/02/24

Awo

There are activities pending that impact the activities of the next process  
Obs: (To describe problems below)

Operations

There are non-conformities impact the quality of the product and there is no corrective action defined yet)

Industrial Quality

In case of "NO GO", describe blocking problems


In case of "NO GO", the operations manager must define below action plan to ensure "GO":

Item	Description	Responsible	Due date	Status

Operations

Quality



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ANNEXURE A: Arc Welding Quality Acceptance Standard

