GRAMMER

# DIMENSIONAL PART REPORT

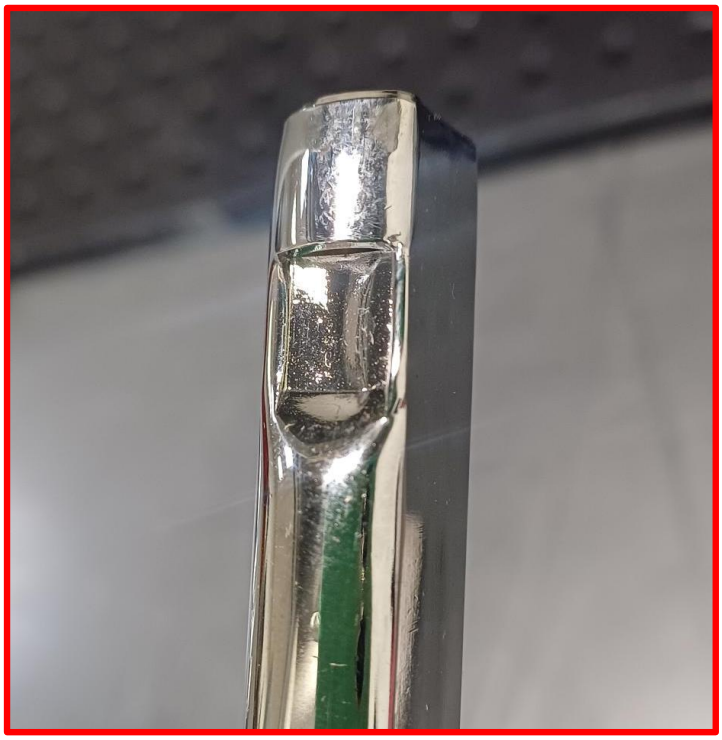
**LABORATORY**

| | | | |
|---|---|---|---|
| **Report Number:** | 2024-0005_s | | |
| **Customer:** | BMW | | **Issue date:** October 7, 2024 |
| **Customer part number:** | | | |
| **Part name:** SUPPORT ROD RS CPL VCR | | **Evaluation reason:** | **Evaluated by:** MIREYA HERNANDEZ |
| **Part number:** 1372108 | | Anual validation: | **Evaluation date:** October 7, 2024 |
| **Number of pieces:** 5 | | New part. / Engineering change. / New tooling. / Corrected tooling. / Prototype piece. | **Autorized by:** OSCAR GOMEZ |
| **Plane No.:** 1372107 | | Others (Specify): X | **Evaluation machine:** CMM (EM-005) /Vision System / Caliper |
| **Dated:** 02.10.18 | | | |
| **Change:** c | | | |
| **Date of production and/or Batch Number** | FULL LAY OUT _supplier _Nigbo | | **Calibration date:** FEB-24 / JUN-24 / SEP-24 |

**Observations:**

| Item | Measuring equipment used | Characteristics | Especial Features | Spec.: NOMINAL | TOL. MIN - | TOL. MAX + | Limits MIN. - | MAX. + | Draw: 1372107 Change: c — Obtained Value: Piece 1 | Piece 2 | Piece 3 | Piece 4 | Piece 5 | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CMM | WIDENING ALLOWED MAX. | | | | 14.300 | 0.000 | 14.300 | 14.210 | 14.190 | 14.220 | 14.190 | 14.210 | OK |
| 2 | Vernier | WIDENING ALLOWED MAX. | | | | 16.000 | 0.000 | 16.000 | 14.440 | 14.430 | 14.400 | 14.380 | 14.41 | OK |
| 3 | CMM | Radius | | 850.000 | 50.000 | 50.000 | 800.000 | 900.000 | 893.440 | 897.120 | 892.440 | 893.150 | 892.1 | OK |
| 4 | CMM | Position | | | ⌖ 3 A B C | | 0.000 | 3.000 | 1.526 | 1.313 | 1.313 | 1.328 | 1.261 | OK |
| 5 | V. System | Distance | | 12.000 | 0.100 | 0.100 | 11.900 | 12.100 | 12.000 | 12.020 | 12.030 | 12.040 | 12.04 | OK |
| 6 | Vernier | WIDENING ALLOWED MAX. | | | | 12.300 | 0.000 | 12.300 | 12.060 | 12.070 | 12.070 | 12.060 | 12.07 | OK |
| 7 | CMM | Diameter | ⌀ | 14.000 | 0.050 | 0.110 | 13.950 | 14.110 | 13.983 | 13.950 | 13.950 | 13.985 | 13.971 | OK |
| | CMM | Position | | | ⌖ Ø2 A B C | | 0.000 | 2.000 | 1.238 | 0.933 | 0.933 | 1.053 | 0.858 | OK |
| 8 | V. System | Radius | | 0.300 | 0.000 | 0.200 | 0.300 | 0.500 | 0.305 | 0.303 | 0.307 | 0.304 | 0.302 | OK |
| 9 | CMM | Diameter | ⌀ | 12.000 | 0.100 | 0.100 | 11.900 | 12.100 | 11.950 | 11.990 | 11.950 | 11.950 | 11.96 | OK |
| | CMM | Position | | | ⌖ Ø2 A B C | | 0.000 | 2.000 | 0.796 | 0.502 | 0.502 | 0.632 | 0.569 | OK |
| 10 | CMM | Diameter | ⌀ | 9.000 | 0.100 | 0.100 | 8.900 | 9.100 | 8.980 | 8.981 | 8.981 | 8.995 | 8.999 | OK |
| 11 | CMM | Diameter | | 13.600 | 0.200 | 0.200 | 13.400 | 13.800 | 13.640 | 13.660 | 13.640 | 13.660 | 13.65 | OK |
| 13 | V. System | Distance | | 2.500 | 0.000 | 1.500 | 2.500 | 4.000 | 3.912 | 3.945 | 3.967 | 3.987 | 3.981 | OK |
| 14 | V. System | Draw a. max | | 0.000 | 0.000 | 0.500 | 0.000 | 0.500 | 0.133 | 0.142 | 0.128 | 0.129 | 0.131 | OK |
| 15 | CMM | Angle | | 90.000 | 2.000 | 2.000 | 88.000 | 92.000 | 90.120 | 90.003 | 90.220 | 90.150 | 90.17 | OK |
| 16 | CMM | Angle | | 58.000 | REF. | | | | 60.120 | 60.230 | 60.220 | 60.120 | 60.06 | |
| 17 | CMM | Distance | | 7.700 | MIN. | | | | 7.723 | 7.608 | 7.605 | 7.684 | 7.724 | OK |
| 18 | CMM | Distance | | 10.000 | 0.200 | 0.200 | 9.800 | 10.200 | 10.100 | 10.100 | 10.160 | 10.080 | 10.11 | OK |
| 19 | Vernier | Distance | ⌀ | 3.000 | 0.000 | 0.500 | 3.000 | 3.500 | 3.420 | 3.420 | 3.460 | 3.350 | 3.37 | OK |
| 20 | V. System | Distance | | 13.300 | MAX. | | | | 13.240 | 13.220 | 13.260 | 13.240 | 13.26 | OK |
| 21 | CMM | Distance | | 7.600 | 0.000 | 0.300 | 7.600 | 7.900 | 7.560 | 7.550 | 7.550 | 7.560 | 7.58 | X |
| 22 | CMM | Distance | | 8.800 | 0.200 | 0.200 | 8.600 | 9.000 | 8.910 | 8.940 | 8.900 | 8.880 | 8.840 | OK |
| 23 | CMM | Perpendicularity | | | ⊥ 0,4 A | | 0.000 | 0.400 | 0.432 | 0.414 | 0.433 | 0.422 | 0.433 | X |

**supplier: Nigbo**



**supplier: T&H**