# Test Report

# 060392100000

**Applicant:** WT SP. z o.o
Trzebieluch 34
86-212 STOLNO

**Test component:** Car-alloy-special wheel, monobloc

**Type:** JR30N 20X10J

**Wheel type-ID:** 914

**Name:** JR30N

**Wheel size:** 10Jx20H2

**Centering:** Hub centering

## 1. General references

### 1.1 General information

The centre bore, fixing holes, offset, cylindrical part of the fixing holes, PCD hole to centre bore, rim width, wheel diameter, wall thickness, hump, radial and axial runout as well as imbalance were tested in line with this testing procedure.

### 1.2. Test Basis

This Test Report is solely the certificate for the fatigue strength of the special wheels described in the following. The special wheels described here were tested in accordance with the “Guidelines for the testing of special wheels for passenger cars and their trailers BMV/StV 13/36.25.07-20.01, VkBl S 1377” dated 25/11/1998.

## 2. Images

Front view

Side view

Back view

## 3. Versions

| Version | V | LZ | LK | ML | ET | RG | BS | $M_R$ | $A_R$ | AM | O | P/A | GAF | AES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JR30N 33 | - | 5 | 108 | 63.4 | 33 | 11.2 | Cone 60° | 780 | 2,450 | 200 | L | P | 01.10.2024 | 04/16/2025 |
| JR30N 43 | - | 5 | 108 | 63.4 | 43 | 10.8 | Cone 60° | 780 | 2,450 | 200 | L | P | 01.10.2024 | 04/16/2025 |
| JR30N 33 | - | 5 | 120 | 72.6 | 33 | 11 | Cone 60° | 780 | 2,450 | 200 | L | P | 01.10.2024 | 04/16/2025 |
| JR30N 43 | - | 5 | 120 | 72.6 | 43 | 10.8 | Cone 60° | 780 | 2,450 | 200 | L | P | 01.10.2024 | 04/16/2025 |

| | |
|---|---|
| V | Variant of version |
| LZ | Number of holes |
| LK | PCD hole [mm] |
| ML | Center bore [mm] |
| ET | Offset [mm] |
| RG | Weight of wheel [kg] |
| BS | Fastening seat |
| MR | Permissible wheel load [kg] |
| AR | Permissible rolling circumference [mm] |
| AM | Tightening torque [Nm] |
| O | Surface (R = raw/ L = coated) |
| P/A | Version tested/derived |
| GAF | Valid from prod. date |
| AES | Revision status |

## 4. Marking

The following marking is engraved, cast or stamped on the outside or inside of the aluminum special wheels:

| | OUTSIDE OF WHEEL | INSIDE OF WHEEL |
|---|---|---|
| KBA type-approval | - | - |
| Japanese approval mark | - | JWL |
| Other testing marks | - | VIA |
| Trade mark | - | - |
| Type | - | JR30N 20X10J |
| Version | - | JR30N 33 |
| Manufacturer | - | JR |
| Wheel size | - | 20X10J |
| PCD holes [mm] | - | - |
| Offset [mm] | - | 33 |
| Mark of origin | - | - |
| Date of manufacture | - | - |

## 5. 5. Technical documentation

Testing was based on the following documents:

| General designation | Name of document | Date of issue / revision |
|---|---|---|
| Wheel attachment | JR30N Wheel description KBA 20x10 | 04/07/2025 |
| Wheel drawing | 8273-2010 | 04/07/2025 |

# 6. Wheel test procedure

## 6.1 Rotating bending test

The following parameters were used fort the rotating bending tests::

| Version | LZ | LK | ET | $M_R$ | $A_R$ | $r_{dyn}$ | f | $ULB_p$ | $M_{bmax.}$ |
|---|---|---|---|---|---|---|---|---|---|
| JR30N 33 | 5 | 108 | 33 | 780 | 2,450 | 0.390 | 2 | 75% | 5,876 |
| JR30N 43 | 5 | 108 | 43 | 780 | 2,450 | 0.390 | 2 | 75% | 6,029 |
| JR30N 33 | 5 | 120 | 33 | 780 | 2,450 | 0.390 | 2 | 75% | 5,876 |
| JR30N 43 | 5 | 120 | 43 | 780 | 2,450 | 0.390 | 2 | 75% | 6,029 |
| JR30N 33 | 5 | 108 | 33 | 780 | 2,450 | 0.390 | 2 | 50% | 5,876 |
| JR30N 43 | 5 | 108 | 43 | 780 | 2,450 | 0.390 | 2 | 50% | 6,029 |
| JR30N 33 | 5 | 120 | 33 | 780 | 2,450 | 0.390 | 2 | 50% | 5,876 |
| JR30N 43 | 5 | 120 | 43 | 780 | 2,450 | 0.390 | 2 | 50% | 6,029 |

The requirements of the guideline have been met. After reaching the prescribed minimum number of load cycles, no technical cracks were found. There was no impermissible drop in the fastening tightening torque.

## 6.2 Impacttest

The impact tests were carried out according to ISO 7141 with the following parameters:

| Version | LZ | LK | ET | $M_R$ | $RD_I$ | $P_{RI}$ | SP | $I_M$ |
|---|---|---|---|---|---|---|---|---|
| JR30N 43 | 5 | 108 | 43 | 780 | 255/30R20 | 200 | 1* | 648 |
| JR30N 43 | 5 | 108 | 43 | 780 | 255/30R20 | 200 | 2* | 648 |
| JR30N 43 | 5 | 120 | 43 | 780 | 255/30R20 | 200 | 1* | 648 |
| JR30N 43 | 5 | 120 | 43 | 780 | 255/30R20 | 200 | 2* | 648 |

1* between two spokes on the valve hole
2* on a spoke opposite the valve hole

The requirements of the guideline have been met. No impermissible technical crack was found. There was no loss of air pressure within one minute.

## 6.3 Rolling test

The following parameters were used for the rolling tests:

| Version | LZ | LK | ET | $M_R$ | $RD_A$ | $P_{RA}$ | $A_S$ | $V_R$ | $F_A$ |
|---|---|---|---|---|---|---|---|---|---|
| JR30N 43 | 5 | 120 | 43 | 780 | 305/50R20 | 450 | 2,000 | 100 | 19.13 |
| JR30N 43 | 5 | 120 | 43 | 780 | 305/50R20 | 450 | 2,000 | 100 | 19.13 |

The requirements of the guideline have been met. After reaching the prescribed roll-off distance, no technical cracks were found. There was no impermissible drop in the fastening tightening torque.

LZ: Number of holes
LK: PCD holes [mm]
ET: Offset [mm]
$M_R$: Permissible wheel load [kg]
$A_R$: Permissible rolling circumference [mm]
f: Wheel load increase factor
$RD_I$: Tire size of the impact test
$RD_A$: Tire size of the rolling test

$ULB_p$: Rotating bending test 75% or 50%
$M_{bmax.}$: Reference torque for the respective load levels [Nm]
$P_{RI}$: tire air pressure of the impact test [kPa]
$P_{RA}$: tire air pressure of the rolling test [kPa]
$I_M$: Impact drop weight [kg]
$A_S$: roll-off distance [km]
$V_R$: wheel rolling speed [km/h]
$F_A$: rolling load [kN]

## 6.4 Summary of the test results

| Type of test | Test procedure | Result of the test |
|---|---|---|
| Rotating bending test 75% | Dye penetrant inspection | i. O. |
| Rotating bending test 50% | Dye penetrant inspection | i. O. |
| Rolling test | Dye penetrant inspection | i. O. |
| Impact test | Dye penetrant inspection | i. O. |

## 6.5 Material and corrosion testing

The composition, strength values and corrosion behavior of the material are listed in the manufacturer´s description; we have not checked this information. Tests for this are explained in the appendix.

## 6.6 Comparison of dimensions

The dimensions and tolerances of the essential main dimensions comply with the E.T.R.T.O.

## 6.7 Tire dimensions used in tests

In the impact and rolling tests, taking into account the E.T.R.T.O. the most critical tire dimension for the respective test is used. The exception here is that the wheel manufacturer can use tire dimensions that deviate from this, taking into account the E.T.R.T.O. for the exams themselves.

# 7. General requirements

## 7.1 Test facilities

The tests were conducted on systems, which comply with the requirements of the testing directive DIN EN ISO/IEC 17025:2018. The measuring and test equipment fulfil the accuracies required in the directives and test instructions and are subject to continuous monitoring.

## 7.2 Subject for testing

The subject for testing was made available by the client.

## 7.3 Wheel fastening parts

The required wheel fastening parts were included in the test. The wheel fastening parts to be used and their tightening torques can be found in the area of application reports.

## 7.4 Technical service and time frame

| Executive technical service | Test location | Test period |
|---|---|---|
| Prüflabor Süd GmbH | Groß Floyen 12, 24616 Brokstedt | July 2024,<br>August 2024,<br>September 2024,<br>March 2025,<br>April 2025 |

# 8. Revision status

| Test Report no. | Remark | Date of issue / revision |
|---|---|---|
| 060392100000 | - | 04/16/2025 |

# 9. Quality management system

QM System according to Annex XIX to §19 StVZO (German road traffic licensing regulations):

| Certification Authority | Certificate No. | Valid until |
|---|---|---|
| TÜV AUSTRIA | 20110 026819 | 09/07/2025 |

# 10. Appendices

| General designation | Name of document | Date of issue / revision |
|---|---|---|
| - | - | - |

## 11. Expert rewiew

The special light alloy wheel complies with the “Guidelines for the testing of special wheels for passenger cars and motorcycles” §30 StVZO in the current version/ annotation 42, (the guidelines for the testing if special wheels for passenger vehicles and their trailers BMV/ StV 13/36.25.07-20.01 dated 25/11/1998). The test samples used were representative regarding the required performance level for the type to be approved.

This Test Report can be used as a working document to issue a part certificate according to §19(3) of the StVZO or a type approval according to §§20, 22 of the StVZO for a special alloy wheel for passenger vehicles for passenger transport class(es) M1, M2.

## 12. Notes

This Test Report consists of pages 1 to 7. It may only be copied and distributed by the client in its entirety with all text. Copies and publications of the Test Report in extracts are subject to written approval by the test lab.

Brokstedt 04/16/2025

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*End of the technical report*