

Test Report

2024-TB-PSA-0913-E

Applicant: WT SP. Z O.O.
Litewska 4
85-658 Bydgoszcz
POLAND

Test component: Car-alloy-special wheel, monobloc

Type: JR30N 20X8½J

Wheel type-ID: 913

Name: JR30N

Wheel size: 8½Jx20FH2

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, VwBI 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	A	5	108	63,4	33	11,3	cone 60°	780	2.450	200	L	P	01/2024	05.09.2024
JR30N 43	A	5	108	63,4	43	10,7	cone 60°	780	2.450	200	L	P	01/2024	05.09.2024
JR30N 25	A	5	112	72,6	25	11,3	cone 60°	780	2.450	200	L	P	01/2024	05.09.2024
JR30N 33	A	5	120	72,6	33	11,3	cone 60°	780	2.450	200	L	P	01/2024	05.09.2024
JR30N 43	A	5	120	72,6	43	10,7	cone 60°	780	2.450	200	L	P	01/2024	05.09.2024

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
M_R: permissible wheel load [kg]
A_R: 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 20X81/2J
Version	--	f. ex. JR30N 25
Manufacturer	--	--
Wheel size	--	20X81/2J
PCD holes [mm]	--	--
Offset [mm]	--	f. ex. 25
Mark of origin	--	--
Date of manufacture	--	Date grid

5. Technical documentation

Testing was based on the following documents:

General designation	Name of document	Date of issue / revision
Description of wheel	JR30N Wheel description KBA 20x8,5 et25 5x112	23.07.2023
	JR30N Wheel description KBA 20x8,5 et33 5x108	23.07.2023
	JR30N Wheel description KBA 20x8,5 et33 5x120	23.07.2023
	JR30N Wheel description KBA 20x8,5 et43 5x108	23.07.2023
	JR30N Wheel description KBA 20x8,5 et43 5x120	23.07.2023
Wheel drawing	8272-2085-ABF p.1-Model	19.07.2024
	8272-2085-ABF p.2-Model	19.07.2024
	8272-2085-ABF p.3-Model	19.07.2024
	8272-2085-ABF p.4-Model	19.07.2024
	8272-2085-ABF p.5-Model	19.07.2024
Wheel attachment	--	--

6. Wheel test procedure

6.1 Rotating bending test

The following parameters were used for 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 33	5	108	33	780	2.450	0,390	2	50%	5.876
JR30N 43	5	108	43	780	2.450	0,390	2	75%	6.029
JR30N 43	5	108	43	780	2.450	0,390	2	50%	6.029
JR30N 25	5	112	25	780	2.450	0,390	2	75%	5.754
JR30N 25	5	112	25	780	2.450	0,390	2	50%	5.754
JR30N 33	5	120	33	780	2.450	0,390	2	75%	5.876
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	75%	6.029
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	225/30R20	200	1*	648
JR30N 43	5	108	43	780	225/30R20	200	2*	648
JR30N 25	5	112	25	780	225/30R20	200	1*	648
JR30N 25	5	112	25	780	225/30R20	200	2*	648
JR30N 43	5	120	43	780	225/30R20	200	1*	648
JR30N 43	5	120	43	780	225/30R20	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	108	43	780	305/50R20	450	2.000	80	19,13
JR30N 43	5	120	43	780	305/50R20	450	2.000	80	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 hole [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 50%	Dye penetrant inspection	in order
Rotating bending test 75%	Dye penetrant inspection	in order
Impact rest	Dye penetrant inspection	in order
Rolling test	Dye penetrant inspection	in order

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, Germany	July, August, September 2024

8. Revision status

Test Report no.	Remark	Date of issue / revision
2024-TB-PSA-0913-E	--	05.09.2024

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 AUTOMOTIVE GMBH	20110 026717	06.09.2025

10. Appendices

General designation	Name of document	Date of issue / revision
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11. Expert review

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.

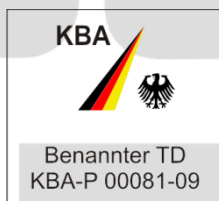
12. Notes

This Test Report consists of pages 1 to 6. 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, 05.09.2024

Prüflabor Süd GmbH

Named Technical Service
of the Federal Office for Motor Vehicles, Federal Republic of Germany



Authorised expert



Engineer M. Kleingarn



End of the technical report