

REPORT No 11287

Date of issue: October 3, 2025

Status: FINAL REPORT

ISO 4210-8

CYCLES - SAFETY REQUIREMENTS FOR BICYCLES PEDAL AND DRIVE SYSTEM TEST METHODS

Program: SQ-6116.V2

This document is issued by the Company subject to its Terms and Conditions, available on request or accessible at <https://www.ptsouthquality.com/terms-and-conditions>. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Copyright © 2024 South Quality, Buenos Aires, ARGENTINA



Prepared by:	Reviewed by:	Approved by:
Berenice Ferrel Assistant Technician	Lic. Esther Casas Physics expert	Eng. Emiliano Medina Quality Assurance Lead

TABLE OF CONTENTS

1. FOREWORD	3
2. ORGANIZATION	3
3. OBJECTIVE	3
4. PARTICIPANT	3
5. HOMOGENEITY	4
6. SAMPLE INFORMATION	4
7. IMAGES	5
8. ASSIGNED VALUES	6
9. PARTICIPANT RESULTS	6
10. STATISTICS	6
11. EVALUATION OF PERFORMANCE	7
12. CONCLUSIONS	7
 APPENDICES	
APPENDIX A - INSTRUCTIVE	8
APPENDIX B - PARTICIPANT RESULTS (TR #2501-0057301R01)	11
APPENDIX C - PARTICIPANT RESULTS (TR #2501-0057301R02)	15
APPENDIX D - PARTICIPANT RESULTS (TR #2501-0057301R04)	19

1. FOREWORD

This report summarizes the results of the **SQ-6116.V2** proficiency testing program regarding the verification of compliance with safety requirements for bicycle pedals. This program is conducted in a bilateral format, following the A.3.3 classification of the ISO 17043 standard ("Split-sample testing schemes").

South Quality conducted the testing program between March and June 2025 with the aim of assessing the laboratory's ability to competently perform the designated tests.

2. ORGANIZATION

Program Coordinator: Lic. Esther Casas
Assistant Technician: Berenice Ferrel
Statistic: Lic. Manuel Tozaki
Supervision: Eng. Emiliano Medina

3. OBJECTIVE

The objective of this proficiency testing program is to verification of compliance with safety requirements for bicycle pedals, using the following standard:

Standard
ISO 4210-2: 2023 + ISO 4210-8: 2023

To verify this, batches of mountain bike pedal have been chosen.

Participants in this program have not been previously informed about the expected behavior of the samples they receive.

4. PARTICIPANT

Company: **QIMA Certification (Germany) GmbH**
Laboratory: **Mechanic Lab**
Country: Germany
Client ID: E490
Contact person: Gunnar Prager
Laboratory manager - Hardlines division - Bicycle laboratory
gunnar.prager@qima.com

5. HOMOGENEITY

Several batches were prepared identically by the staff at South Quality.

Subsequently, a homogeneity study was conducted with an ISO 17025 accredited laboratory.

The control process followed ISO Guide 35: 2017, clause 7.4.1.2. Stratified random sampling was employed, and samples were chosen using random number generation software.

The results of this test are presented below:

Size of each batch: **500 units**

Tested samples from each batch: **150 units**

DETERMINATION	HOMOGENEITY OF RESULTS IN THE ANALYZED SAMPLES		
	BATCH: LMI3441	BATCH: LMI3442	BATCH: LMI3443
SAFETY REQUIREMENTS (CLAUSE 4.1)	NO	YES	YES
SAFETY REQUIREMENTS (CLAUSE 4.2)	NO	YES	YES
SAFETY REQUIREMENTS (CLAUSE 4.3)	NO	YES	YES

Samples for this program are taken from the selected batch identified as LMI3443.

For the indicated batch, the values determined in the homogeneity study are utilized as the assigned values.

The analysis of the test data indicated that the selected samples exhibited sufficient homogeneity for the program. Therefore, the results of participants identified as outliers cannot be attributed to sample variability.

6. SAMPLE INFORMATION

The following sample was sent for testing:

Batch:	LMI3443
Sample ID:	12
Characteristics:	Mountain bike pedal - 10 units

7. IMAGES

SAMPLE



8. ASSIGNED VALUES

BATCH	CLAUSE	RESULT
LMI3443	4.1	FAIL
	4.2	FAIL
	4.3	FAIL

9. PARTICIPANT RESULTS (SEE APPENDICES B, C AND D)

CODE	CLAUSE	SAMPLE	RESULT
LMI3443-12	4.1	5-6	PASS
		9	FAIL
	4.2	5-6	FAIL
		10	PASS
	4.3	1-2	FAIL
		3-4	FAIL
		7-8	FAIL

10. STATISTICS

The results must be treated as qualitative.

For qualitative results, the comparison will be made directly against the assigned values, so any difference will be evaluated as **Unsatisfactory**.

11. EVALUATION OF PERFORMANCE

BATCH: LMI3443				
CLAUSE	SAMPLE	PARTICIPANT RESULT	ASSIGNED VALUE	PERFORMANCE RESULT
4.1	5-6	PASS	FAIL	UNSATISFACTORY
	9	FAIL	FAIL	SATISFACTORY
4.2	5-6	FAIL	FAIL	SATISFACTORY
	10	PASS	FAIL	UNSATISFACTORY
4.3	1-2	FAIL	FAIL	SATISFACTORY
	3-4	FAIL	FAIL	SATISFACTORY
	7-8	FAIL	FAIL	SATISFACTORY

12. CONCLUSIONS

The overall performance on this **SQ-6116.V2** program from the participant laboratory **QIMA Certification (Germany) GmbH - Mechanic Lab**, is **INSUFFICIENT** based on expected results.

The criteria used for the evaluation of the overall performance is the following:

- **SUFFICIENT** performance: No unsatisfactory results were obtained.
- **INSUFFICIENT** performance: An unsatisfactory result was obtained.

APPENDIX A

INSTRUCTIVE



INSTRUCTIVE

PROGRAM:	Cycles - Safety requirements for bicycles Pedal and drive system test methods
CODE:	SQ-6116
VERSION:	2
STANDARD:	ISO 4210-8
COORDINATOR:	Lic. Esther Casas (ecasas@ptsouthquality.com)

1 - General

This document serves as a guide for managing the results of the **SQ-6116.V2** program.

2 - Standard

ISO 4210-8: 2023

3 - Tests involved

TEST
Verification of compliance with safety requirements for bicycle pedals (Clauses 4.1 + 4.2 + 4.3)

4 - Samples

CODE	SAMPLE	QUANTITY
LMI3443-12	Mountain bike pedal	10

5 - Notes

- a) Being a bilateral program, there is no deadline for submitting results.
- b) The participant must submit the results using the usual report employed by their laboratory.
- c) Samples must be retained until the end of the program, which concludes with the submission of the final report.
- d) To review the results, test images would be appreciated. Images can be attached at the end of this document or sent by email.

PHOTOGRAPHS

DSQ-012 - REV 05 -

SQ-6116.V2

3 de 3

APPENDIX B

PARTICIPANT RESULTS (TR #2501-0057301R01)



Deutsche
Akkreditierungsstelle
D-PL-12142-01-01

QIMA

TEST-REPORT

2501-0057301R01



Client:	Name:	PT South Quality SAS
	Street:	Pareja 3981
	Place:	Villa Devoto (C1419GVG) Ciudad Autónoma de Buenos Aires
	Country:	Argentina

Device:	Test item:	Bicycle pedal
	Supplier:	-
	Type:	FP-631 left/right
	Article/Ser.-no.:	-
	Project-no.:	-
	Condition of sample at delivery:	No defects
	Date of receipt:	14.03.2025 - -
	Sample-no.:	2501-00573S01,2501-00573S02

Test:	Description:	Mechanical safety for bicycles - MTB - Pedals
	Standards:	DIN EN ISO 4210-1:2023-05
		DIN EN ISO 4210-2:2023-05
		DIN EN ISO 4210-3:2023-05
		DIN EN ISO 4210-8:2023-05
	Notes:	Partial test_please refer to the following report
	Date of report:	14.04.2025 Pages of report: 10

Final result: FAIL



Marten René Linhart
Test Engineer



Gunnar Prager
Test Engineer

Approved by

Reviewed by

Die Beurteilung bezieht sich ausschließlich auf das angelieferte Prüfmuster. Wenn nicht anders ausgewiesen, wurde bei einer Konformitätsaussage die QIMA Certification (Germany) GmbH-Entscheidungsregel angewendet. Die aktuelle Version ist hier abrufbar <https://www.qima.com/hansecontrol-terms-conditions>. Ohne schriftliche Genehmigung des Prüflaboratoriums ist eine auszugsweise Vervielfältigung des Prüfberichts nicht gestattet.
 (The test results relate only to the tested sample. If it is not further specified in the report, the decision rule for stating conformity is based on the QIMA Certification (Germany) GmbH decision rule. The current version is available at <https://www.qima.com/hansecontrol-terms-conditions>. The report shall not be reproduced except in full without the written approval of the testing laboratory.)

QIMA Certification (Germany) GmbH Schleidenstraße 1 D-22083 Hamburg Geschäftsführer Pierre-Nicolas Dissler, Dr. Philipp Brünig
 Sitz der Gesellschaft AG Hamburg HR B 98213 USt-ID: DE- 263357135
 Bankverbindung HSBC Trinkaus & Burkhardt Düsseldorf BIC: TUBDDE33XXX IBAN: DE64 3003 0880 0016 2100 05
 Telefon +49 (0)40 600 202 - 888 E-Mail support.de@qima.com Internet www.qima.com

Result remarks / Bemerkungen:

P: Pass, Complies with the requirements / Entspricht den Anforderungen / F: Fail, Does not comply with the requirements / Entspricht nicht den Anforderungen / NT: Not tested / Nicht geprüft / NA: Not applicable / Nicht anwendbar / I: Informative / informativ nicht bewertet / PS: Complies with the requirements, regarding the construction a measurement is not necessary / Entspricht den Anforderungen aufgrund der Konstruktion, eine Messung / Test ist nicht notwendig / *The Test was performed by an accredited external laboratory / Die Prüfung wurde durch ein akkreditiertes externes Labor durchgeführt. # Not accredited / Nicht akkreditiert

Table of contents

1. Summary	3
2. Sample photos	4
3. Sample specification	5
4. Tests according to DIN EN ISO 4210-1:2023-05	6
1 Scope	6
5. Partial tests according to DIN EN ISO 4210-2:2023-05	6
4.12 Pedals and pedalcrank drive system	6
6. Partial tests according to DIN EN ISO 4210-3:2023-05	7
4. Test methods	7
4.5 Fatigue test	7
4.7 Impact test	7
4.8 Plastic material test ambient temperature	7
7. Partial tests according to DIN EN ISO 4210-5:2023-05	8
4 Test methods	8
8. List of test equipment	8
9. Test climate	9
10. Attachment	9

1. Summary

The samples do not comply with the stated requirements of the DIN EN ISO 4210-2:2023-05

Please refer to the attachment of the report for possible detailed information on tests carried out.

Failed sections

Clause	Title	Evaluation	Sample	Sequence
4.12.5	Pedal – Dynamic durability test	Fail	SQ14-S02	1

2. Sample photos
Pedal left - 2501-00573501


Figure 1

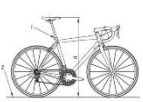
Pedal right - 2501-00573502


Figure 2

3. Sample specification

Sample data	
Sample no.	2501-00573501+S02
Manufacturer / Customer	PT South Quality
Type	Pedals
Category (according to ISO 4210)	FC16 FC17 FC18 FC19 FC20 FC21 FC22 FC23 FC24 FC25 FC26
Category (according to EN 17466)	FC1 FC2 FC3 FC4 FC5 FC6
Technical data	
Permissible total weight [Kg]	-
Sample weight [g]	109.0
Max. rider weight [kg]	90.0 (according to standard)
Drive train	
Sample no.	2501-00573501+S02
Type of pedals	FP-631 plastic bicycle pedal
Torque [Nm]	-

4. Tests according to DIN EN ISO 4210-1:2023-05

Clause	Title	Evaluation	Sample	Sequence
1 Scope				
	Maximum saddle height			
	☒ City and trekking bicycles - 635 or more ☐ Young adult bicycles - 630 or more and less than 750, young adult whose mass is less than 50 kg ☒ Mountain bicycles - 635 or more ☐ Racing bicycles - 1030 or more, maximum mass of 12 kg for the fully assembled bicycle			
		I	-	-
	Note: -			

5. Partial tests according to DIN EN ISO 4210-2:2023-05

Clause	Title	Evaluation	Sample	Sequence
4.12 Pedals and pedal/crank drive system				
4.12.3 Pedal – Static strength test				
	Requirement method described in ISO 4210-6:2023, 4.1			
	Performed on			
	Pedal			
	Left			
	Right			
	Note: -			
		NT	-	-
4.12.4 Pedal – Impact test				
	Requirement method described in ISO 4210-6:2023, 4.2			
	Performed on			
	Pedal			
	Left			
	Right			
	Note: -			
		NT	-	-
4.12.5 Pedal – Dynamic durability test				
	Requirement method described in ISO 4210-6:2023, 4.3			
	Performed on			
	Pedal			
	Left			
	Right			
	Note: -			
		S01*	S02	1

6. Partial tests according to DIN EN ISO 4210-3:2023-05

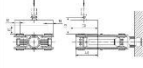
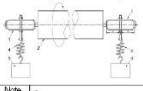
Clause	Title	Evaluation	Sample	Sequence
4. Test methods				
4.1 Brake tests and strength tests				
4.1.1	Brake tests to which special requirements apply Brake tests to which maximum permissible error requirements apply as in 4.1.4, are those specified in ISO 4210-2:2023, 4.6.3 to 4.6.6, ISO 4210-4:2023, 4.2, and ISO 4210-6:2023, 4.6.3.3	NA	-	-
4.1.2	Strength tests to which special requirements apply Strength tests to which maximum permissible error requirements apply as in 4.1.4, are those involving static, impact, or fatigue loading as specified in ISO 4210-2:2023, 4.7 to 4.12, ISO 4210-2:2023, 4.13.2, 4.15 and ISO 4210-7:2023, 4.10.2	NA	-	-
4.1.3	Numbers and condition of specimens for the strength tests ☒ Any one service is available - sequence of testing being fatigue, static, and impact ☒ Test sequence shall be clearly recorded in the test report ☒ In all strength tests, specimens shall be in the fully finished condition	I	-	-
4.1.4	Maximum permissible error or tolerances of test conditions for brake tests and strength tests Forces and torques: $\pm 0.5\%$ Masses: $\pm 1\%$ Dimensions: $\pm 1\text{ mm}$ Angles: $\pm 1^\circ$ Time duration: $\pm 0.5\%$ Temperature: $\pm 2^\circ\text{C}$ Pressures: $\pm 5\%$	I	-	-

Clause	Title	Evaluation	Sample	Sequence
4.5 Fatigue test				
	☒ All fatigue test frequencies lower 10 Hz ☒ General re-check of torques after 1.000 cycles			
	Note: -			

Clause	Title	Evaluation	Sample	Sequence
4.7 Impact test				
	☐ All vertical impact tests - at least 95 % of the free fall velocity			
	Note: -			

Clause	Title	Evaluation	Sample	Sequence
4.8 Plastic material test ambient temperature				
	☒ Strength tests involving any plastic materials - pre-conditioned (ie 2h), ambient temperature of $23 \pm 5^\circ\text{C}$			
	Note: -			

7. Partial tests according to DIN EN ISO 4210-3:2023-05

Clause	Title	Evaluation	Sample	Sequence
4 Test methods				
4.1 Pedal – Static strength test				
				
	Note: -			
	☐ Customer requirement - increased testing requirements were applied - Please see attachment			
4.2 Pedal – Impact test				
				
	Note: -			
	☐ Customer requirement - increased testing requirements were applied - Please see attachment			
4.3 Pedal – Dynamic durability test				
				
	Note: -			
	☐ Customer requirement - increased testing requirements were applied - Please see attachment			

8. List of test equipment

Item	Equipment No.
1.	000536
2.	001828
3.	000306
4.	002729
5.	002650

9. Test climate

☒ The required test climate was maintained and monitored during the entire period of the test. climate data on temperature and humidity are available in the QIMA database.	
Note: -	

Testroom	Start date (YYYY-MM-DD)	End date (YYYY-MM-DD)
EG 01	2025-04-01	2025-04-02

10. Attachment

4.12.5	Pedal – Dynamic durability test
	
Figure 3	
	
Figure 4	

After 50.000 cycles the pedal cage on sample S01 broke.

4.12.5 Pedal – Dynamic durability test



Figure 5

After 50,000 cycles the pedal cage on sample S02 broke.



Figure 5

4.2.15 Test set up

report template: TRF_FT_DIN_ISO 4210-1 - 9_2023_V2.1

end of report

APPENDIX C

PARTICIPANT RESULTS (TR #2501-0057301R02)



Deutsche
Akkreditierungsstelle
D-PL-12142-01-01

QIMA

TEST-REPORT

2501-0057301R02



Client:	Name:	PT South Quality SAS
	Street:	Pareja 3981
	Place:	Villa Devoto (C1419GVG) Ciudad Autónoma de Buenos Aires
	Country:	Argentina

Device:	Test item:	Bicycle pedal
	Supplier:	-
	Type:	FP-631 left/right
	Article/Ser.-no.:	-
	Project-no.:	-
	Condition of sample at delivery:	No defects
	Date of receipt:	14.03.2025
	Sample-no.:	2501-00573S03, 2501-00573S04, 2501-00573S05, 2501-00573S06

Test:	Description:	Mechanical safety for bicycles - MTB - Pedals
	Standards:	DIN EN ISO 4210-1:2023-05
		DIN EN ISO 4210-2:2023-05
		DIN EN ISO 4210-3:2023-05
		DIN EN ISO 4210-8:2023-05
	Notes:	Partial test_please refer to the following report
	Date of report:	17.06.2025
		Pages of report: 11

Final result:	FAIL
 Marten René Linhart Test Engineer	
Approved by	Reviewed by

Die Beurteilung bezieht sich ausschließlich auf das angelieferte Prüfmuster. Wenn nicht anders ausgewiesen, wurde bei einer Konformitätsaussage die QIMA Certification (Germany) GmbH-Entscheidungsregel angewendet. Die aktuelle Version ist hier abrufbar <https://www.qima.com/hansecontrol-terms-conditions>. Ohne schriftliche Genehmigung des Prüflaboratoriums ist eine auszugsweise Vervielfältigung des Prüfberichts nicht gestattet.

(The test results relate only to the tested sample. If it is not further specified in the report, the decision rule for stating conformity is based on the QIMA Certification (Germany) GmbH decision rule. The current version is available at: <https://www.qima.com/hansecontrol-terms-conditions>. The report shall not be reproduced except in full without the written approval of the testing laboratory.)

QIMA Certification (Germany) GmbH Schleidenstraße 1 D-22083 Hamburg Geschäftsführer Pierre-Nicolas Disser, Dr. Philipp Brüning
 Sitz der Gesellschaft AG Hamburg HR B 98213 USt-ID: DE- 263357135
 Bankverbindung HSBC Trinkaus & Burkhardt Düsseldorf BIC: TUBDDE33XXX IBAN: DE64 3003 0880 0016 2100 05
 Telefon +49 (0)40 600 202 - 888 E-Mail support.de@qima.com Internet www.qima.com

Result remarks / Bemerkungen:

P: Pass, Complies with the requirements / Entspricht den Anforderungen. F: Fail, Does not comply with the requirements / Entspricht nicht den Anforderungen. NT: Not tested / Nicht geprüft. NA: Not applicable / Nicht anwendbar. I: Informative / informativ. # Not applicable / Nicht anwendbar. PS: Complies with the requirements regarding the construction a measurement is not necessary. / Entspricht den Anforderungen aufgrund der Konstruktion, eine Messung / Test ist nicht notwendig. *The Test was performed by an accredited external laboratory. / Die Prüfung wurde durch ein akkreditiertes externes Labor durchgeführt. # Not accredited / Nicht akkreditiert

Table of contents

1. Summary	3
2. Sample photos	4
3. Sample specification	6
4. Tests according to DIN EN ISO 4210-1:2023-05	7
1 Scope	7
5. Partial tests according to DIN EN ISO 4210-2:2023-05	7
4.12 Pedals and pedal/crank drive system	7
6. Partial tests according to DIN EN ISO 4210-3:2023-05	8
4. Test methods	8
4.5 Fatigue test	8
4.7 Impact test	8
4.8 Plastic material test ambient temperature	8
7. Partial tests according to DIN EN ISO 4210-5:2023-05	9
4 Test methods	9
8. List of test equipment	9
9. Test climate	10
10. Attachment	10

1. Summary

The samples does not comply with the stated requirements from DIN EN ISO 4210-2:2023-05

Please refer to the attachment of the report for possible detailed information on tests carried out.

Clause	Title	Evaluation	Sample	Sequence
4.12.5	Pedal – Dynamic durability test	F	S03, S04	1
4.12.4	Pedal – Impact test	F	S05, S06	2

2. Sample photos

Pedal left – 2501-00573503



Figure 1

Pedal right - 2501-00573504



Figure 2

Pedal left – 2501-00573505



Figure 3

Pedal right - 2501-00573506



Figure 4

17 of 23

9. Test climate

6	The required test climate was maintained and monitored during the entire period of the test. climate data on temperature and humidity are available in the QIMA database.
Note	-

Testroom	Start date (YYYY-MM-DD)	End date (YYYY-MM-DD)
EG 01	2025-04-08	2025-04-10
EG 01	2025-04-21	2025-04-21

10. Attachment

4.3 Pedal – Dynamic durability test

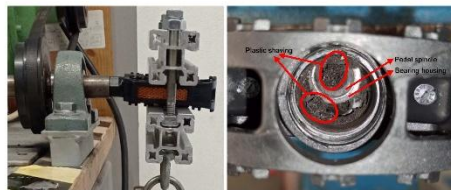


Figure 5

Image (left): Dynamic test after 100,000 cycles.
Image (right): Bearing system dislodged from the pedal body due to material abrasion (plastic shaving). The entire bearing system rotates freely within the pedal body (separation of the bearing system).

4.1 Pedal – Static strength test

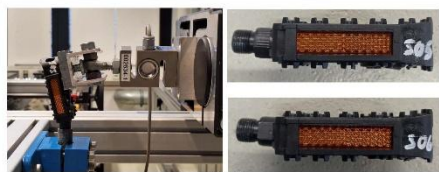


Figure 6

Image (left): Strength test under static load.
Images (right): Pedal spindle shows minor deformation. Sample remains functional, with no signs of failure. Disassembly of the pedal was not carried out (sample proceeded to impact test).

4.2 Pedal – Impact test



Figure 7

Images (top): left pedal and pedal spindle disassembled from pedal body.
Images (bottom): right pedal and pedal spindle disassembled from pedal body.
Dismantling requires drilling out the rivets at the end of the pedal spindle.
No fractures of pedal body, pedal spindle, or any separation of the bearing system. The pedal spindle shows significant deformation, resulting in complete blockage of pedal body rotation (safety related hazards).

report template: TRF_FT_DIN_EN_ISO 4210-1 - 9_2023_V2.1

end of report

APPENDIX D

PARTICIPANT RESULTS (TR #2501-0057301R04)



Deutsche
Akkreditierungsstelle
D-PL-12142-01-01

QIMA

TEST-REPORT

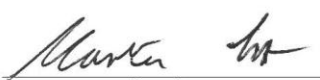
2501-0057301R04



Client:	<i>Name:</i>	PT South Quality SAS
	<i>Street:</i>	Pareja 3981
	<i>Place:</i>	Villa Devoto (C1419GVG) Ciudad Autónoma de Buenos Aires
	<i>Country:</i>	Argentina

Device:	<i>Test item:</i>	Bicycle pedal
	<i>Supplier:</i>	-
	<i>Type:</i>	FP-631 left/right
	<i>Article/Ser.-no.:</i>	-
	<i>Project-no.:</i>	-
	<i>Condition of sample at delivery:</i>	No defects
	<i>Date of receipt:</i>	14.03.2025
	<i>Sample-no.:</i>	2501-00573S07, 2501-00573S08, 2501-000573S09, 2501-000573S10

Test:	<i>Description:</i>	Mechanical safety for bicycles – MTB - Pedals
	<i>Standards:</i>	DIN EN ISO 4210-1:2023-05 DIN EN ISO 4210-2:2023-05 DIN EN ISO 4210-3:2023-05 DIN EN ISO 4210-8:2023-05
	<i>Notes:</i>	Partial test_please refer to the following report
	<i>Date of report:</i>	18.06.2025
	<i>Pages of report:</i>	11

Final result:	FAIL
 Marten René Linhart Test Engineer	
Approved by	Reviewed by

Die Beurteilung bezieht sich ausschließlich auf das angelieferte Prüfmuster. Wenn nicht anders ausgewiesen, wurde bei einer Konformitätsaussage die QIMA Certification (Germany) GmbH-Entscheidungsregel angewendet. Die aktuelle Version ist hier abrufbar <https://www.qima.com/hansecontrol-terms-conditions>. Ohne schriftliche Genehmigung des Prüflaboratoriums ist eine auszugsweise Vervielfältigung des Prüfberichts nicht gestattet.
 (The test results relate only to the tested sample. If it is not further specified in the report, the decision rule for stating conformity is based on the QIMA Certification (Germany) GmbH decision rule. The current version is available at: <https://www.qima.com/hansecontrol-terms-conditions>. The report shall not be reproduced except in full without the written approval of the testing laboratory.)

QIMA Certification (Germany) GmbH Schleidenstraße 1 D-22083 Hamburg Geschäftsführer Pierre-Nicolas Disser, Dr. Philipp Brüning
 Sitz der Gesellschaft AG Hamburg HR B 98213 USt-ID: DE- 263357135
 Bankverbindung HSBC Trinkaus & Burkhardt Düsseldorf BIC: TUBDDE33XXX IBAN: DE64 3003 0880 0016 2100 05
 Telefon +49 (0)40 600 202 - 888 E-Mail support.de@qima.com Internet www.qima.com

Result remarks / Bemerkungen:

P: Pass, Complies with the requirements / Entspricht den Anforderungen / F: Fail, Does not comply with the requirements / Entspricht nicht den Anforderungen / NT: Not tested / Nicht geprüft / NA: Not applicable / Nicht anwendbar / I: Informative / informativ, nicht beurteilt / PP: Complies with the requirements, regarding the conclusion a measurement is not necessary / Entspricht den Anforderungen aufgrund der Konstellation, eine Messung / Test ist nicht notwendig / * The Test was performed by an accredited external laboratory / Die Prüfung wurde durch ein akkreditiertes externes Labor durchgeführt. / # Not accredited / Nicht akkreditiert

Table of contents

1	Summary	3
2	Sample photos	4
3	Sample specification	5
4	Tests according to DIN EN ISO 4210-1:2023-05	6
1	Scope	6
5	Partial tests according to DIN EN ISO 4210-2:2023-05	6
4.12	Pedals and pedal/crank drive system	6
6	Partial tests according to DIN EN ISO 4210-3:2023-05	7
4	Test methods	7
4.5	Fatigue test	7
4.7	Impact test	7
4.8	Plastic material test ambient temperature	7
7	Partial tests according to DIN EN ISO 4210-8:2023-05	8
4	Test methods	8
8	List of test equipment	9
9	Test climate	9
10	Attachment	9

1 Summary

The samples do not comply with the stated requirements of the DIN EN ISO 4210-2:2023-05

Please refer to the attachment of the report for possible detailed information on tests carried out.

Failed sections

Clause	Title	Evaluation	Sample	Sequence
4.12.3	Pedal – Static strength test	F	S09	-
4.12.5	Pedal – Dynamic durability test	F	S08	-

2 Sample photos
Pedal left – 2501-00573507


Figure 1

Pedal right – 2501-00573508


Figure 2

3 Sample specification

Sample data	
Sample no.	2501-00573507, 2501-00573508, 2501-00573509, 2501-00573510
Manufacturer / Customer	PT South Quality SAS
Type	Pedal FP-831
Category (according to ISO 4210)	JCTB JYouth JMTB JRace
Category (according to EN 17400)	11 12 13 14 15 16
Technical data	
Permissible total weight [kg]	-
Sample weight [g]	168 ± (50g)
Max. rider weight [kg]	90 (according to standard)
Drive train	
Sample no.	2501-00573507, 2501-00573508, 2501-00573509, 2501-00573510
Type of pedals	FP, FP-831
Torque [Nm]	-

4 Tests according to DIN EN ISO 4210-1:2023-05

Clause	Title	Evaluation	Sample	Sequence
1	Scope			
	Maximum saddle height			
	☐ City and trekking bicycles - 635 or more ☐ Young adult bicycles - 635 or more and less than 750 Young adult whose mass is less than 40 kg ☐ Mountain bicycles - 635 or more ☐ Racing bicycles - 635 or more, maximum mass of 12 kg for the fully assembled bicycle			
				
	Note			

5 Partial tests according to DIN EN ISO 4210-2:2023-05

Clause	Title	Evaluation	Sample	Sequence
4.12	Pedals and pedal/crank drive system			
4.12.3	Pedal - Static strength test			
	Requirement: method described in ISO 4210-8:2023, 4.1			
	Performed on			
	Pedal			
	Left			
	Right			
	Note			
4.12.4	Pedal - Impact test			
	Requirement: method described in ISO 4210-8:2023, 4.2			
	Performed on			
	Pedal			
	Left			
	Right			
	Note			
4.12.5	Pedal - Dynamic durability test			
	Requirement: method described in ISO 4210-8:2023, 4.3			
	Performed on			
	Pedal			
	Left			
	Right			
	Note			

6 Partial tests according to DIN EN ISO 4210-3:2023-05

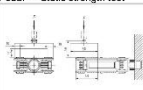
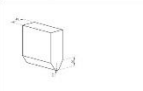
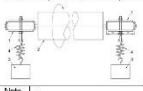
Clause	Title	Evaluation	Sample	Sequence
4.1	Test methods			
4.1.1	Brake tests and strength tests			
	Brake tests to which special requirements apply			
	Brake tests to which maximum permissible error requirements apply, as in 4.1.1, are those specified in ISO 4210-2:2023, 4.6.3 to 4.6.6, ISO 4210-4:2023, 4.2 and ISO 4210-2:2023, 4.6.3.3			
4.1.2	Strength tests to which special requirements apply			
	Strength tests to which maximum permissible error requirements apply, as in 4.1.4, are those involving static, impact, or fatigue loading as specified in ISO 4210-2:2023, 4.7 to 4.12, ISO 4210-3:2023, 4.13.2, 4.13 and ISO 4210-2:2023, 4.19.2			
4.1.3	Numbers and condition of specimens for the strength tests			
	☐ If only one specimen is available, sequence of testing being fatigue, static, and impact ☐ First sequence shall be clearly recorded in the test report ☐ In all strength tests, specimens shall be in the fully finished condition			
4.1.4	Maximum permissible error tolerances of test conditions for brake tests and strength tests			
	Forces and torques Masses Dimensions Angles Time duration Temperatures Pressures			

Clause	Title	Evaluation	Sample	Sequence
4.5	Fatigue test			
	☐ At fatigue test frequencies below 10 Hz ☐ General re-check of torque after 1,000 cycles			
	Note			

Clause	Title	Evaluation	Sample	Sequence
4.7	Impact test			
	☐ All vertical impact tests - at least 95 % of the free fall velocity			
	Note			

Clause	Title	Evaluation	Sample	Sequence
4.8	Plastic material test ambient temperature			
	☐ Strength tests involving any plastic materials - pre-conditioned for 2 h, ambient temperature of 23 °C ± 5 °C			
	Note			

7 Partial tests according to DIN EN ISO 4210-8:2023-05

Clause	Title	Evaluation	Sample	Sequence
4	Test methods			
4.1	Pedal - Static strength test			
				
	Note			
	☐ Customer requirement - increased testing requirements were applied Please see attachment			
4.2	Pedal - Impact test			
				
	Note			
	☐ Customer requirement - increased testing requirements were applied Please see attachment			
4.3	Pedal - Dynamic durability test			
				
	Note			
	☐ Customer requirement - increased testing requirements were applied Please see attachment			

8 List of test equipment

Item	Equipment No.
1.	003085
2.	003086
3.	000536
4.	002634
5.	000547
6.	002731

9 Test climate

☐ The required test climate was maintained and monitored during the entire period of the test. climate data on temperature and humidity are available in the QIMA database.	
Note	

Testroom	Start date (YYYY-MM-DD)	End date (YYYY-MM-DD)
EG 01	2025-05-07	2025-05-13

10 Attachment

4.12.5	Pedal - Dynamic durability test
	
Figure 3	Figure 4
Separation of the bearing from the pedal body and plastic deformation of the pedal body after a total of approx. 30,500 cycles on the right pedal sample. The left pedal shows no abnormalities. The test was aborted after 30,500 cycles.	

4.12.3 Pedal — Static strength test



Figure 5

After the static strength test, the pedal shows no fractures or visible cracks, the bearing is easy to rotate and has bearing play. The pedal shows considerable permanent deformation. The deformation impairs the function, leads to uneven pedalling and can cause the pedal to lose the desired grip between the sole of the shoe and the pedal surface, resulting in slipping.

4.12.4 Pedal — Impact test



Figure 6



Figure 7

After the impact test, the pedal shows no fractures or visible cracks and separations, but the bearing is very difficult to turn and the axle shows a significant deformation. The axle shows no fractures or visible cracks.

report template: TRF_FT_DIN_EN_ISO 4210-1 - 8_2023_V2.1

end of report

----- END OF REPORT -----