

TEST REPORT

Mechanical & Hardgoods Laboratory

Report No. : THD0258/2015

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Date : JAN. 11, 2016

GIATEX CYCLE CO., LTD.

6F., No.21, Aly. 29, Ln. 372, Sec. 5, Zhongxiao E. Rd., Xinyi Dist., Taipei City 110, Taiwan

The following merchandise was submitted and identified by the applicant as:

Product Description: Adjustable stretching bicycle frame

Style/Item No.: FIT 20

Sample Quantity: 4 pcs of frame

We have tested the submitted sample(s) as requested and the following results were obtained:

Test Requested: For compliance with Clause 4.8.2, Clause 4.8.3, Clause 4.8.4, Clause 4.8.5 and Clause 4.8.6 of ISO 4210-2:2015 Cycles - Safety requirements for bicycles - Part 2: Requirements for city and trekking, young adult, mountain and racing bicycles.

Test Method: According to Clause 4.1, Clause 4.2, Clause 4.3, Clause 4.4 and Clause 4.5 of ISO 4210-6:2015 Cycles - Safety requirements for bicycles - Part 6: Frame and fork test methods.

Bicycle type: City and trekking Young adult Mountain Racing

Sequence of Testing:
Sample No.1: Clause 4.4 of ISO 4210-6.
Sample No.2: Clause 4.5 of ISO 4210-6.
Sample No.3: Clause 4.3 of ISO 4210-6.
Sample No.4: Clause 4.1 and Clause 4.2 of ISO 4210-6.

Test Result: --See following sheet(s)--

Date of Receipt: DEC. 31, 2015

Testing Period: DEC. 31, 2015 ~ JAN. 08, 2016

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**Signed for and on behalf of
SGS Taiwan Ltd.**

Kaini Chen
Team Leader

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Test Result:

Bicycle type: City and trekking Young adult Mountain Racing

Clauses:

Result

Pass

Clause 4.8.2 (ISO 4210-2) Frame - Impact test (falling mass)

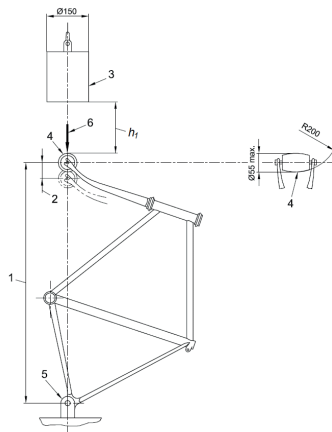
When tested by the method described in ISO 4210-6:2015, 4.1, there shall be no visible cracks or fractures of the frame.

The permanent deformation measured between the axis of the wheel axles (the wheelbase, see ISO 4210-6:2015, 4.1 and ISO 4210-6:2015, Figure 1) shall not exceed the following values:

- a) 30 mm where a fork is fitted;
- b) where a dummy fork is fitted in place of a fork, the values are given in Table 5.

Clause 4.1.2 (ISO 4210-6) Test Method

Figure:



Actual Finding:

Test clause	Test condition	Requirement	Test Result
	Drop height, h_1 (mm)		
Clause 4.1.2 (ISO 4210-6)	180	< 10 mm (Dummy fork)	6.4 mm
Remark	There was no visible crack on the sample after testing.		

- Note:**
- 1. Information of sample: Material (Aluminum), Frame (332 mm), Mass (2,550 g).
 - 2. The rigid fork which is needed to conduct the test was provided by SGS Taiwan and the length of rigid fork is 315 mm.
 - 3. The offset is 25 mm.
 - 4. Sample No. 4
 - 5. Base on T/T is 640mm.

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Test Result:

Bicycle type: City and trekking Young adult Mountain Racing

Clauses:

Result

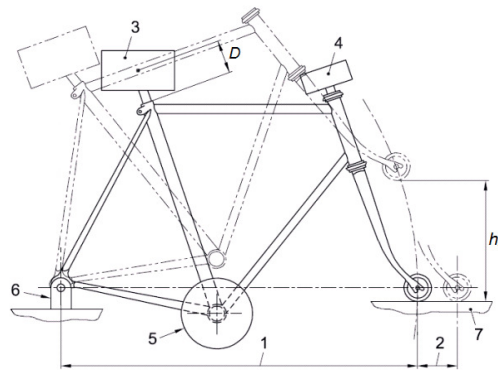
Clause 4.8.3 (ISO 4210-2) Frame and front fork assembly - Impact test (falling frame)

Pass

When tested by the method described in ISO 4210-6:2015, 4.2, there shall be no visible cracks or fractures in the assembly and after the second impact there shall be no separation of any parts of any suspension system. The permanent deformation measured between the axis of the wheel axles shall not exceed the values specified in Table 6.

Clause 4.2.2 (ISO 4210-6) Test Method

Figure:



Actual Finding:

Test clause	Test condition			Requirement	Test Result
Clause 4.2.2 (ISO 4210-6)	Seat post,	M_1	50 kg	< 60 mm	9.0 mm
	Steering head,	M_2	10 kg		
	Bottom bracket,	M_3	30 kg		
	Drop height,	h_2	200 mm		
Remark	There was no visible crack on the sample after testing.				

- Note:**
1. Information of sample: Material (Aluminum), Frame (332 mm), Mass (2,550 g).
 2. The rigid fork which is needed to conduct the test was provided by SGS Taiwan and the length of rigid fork is 315 mm.
 3. The offset is 25 mm.
 4. Sample No. 4
 5. Base on T/T is 640mm.

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Test Result:

Bicycle type: City and trekking Young adult Mountain Racing

Clauses:

Result

Clause 4.8.4 (ISO 4210-2) Frame - Fatigue test with pedalling forces

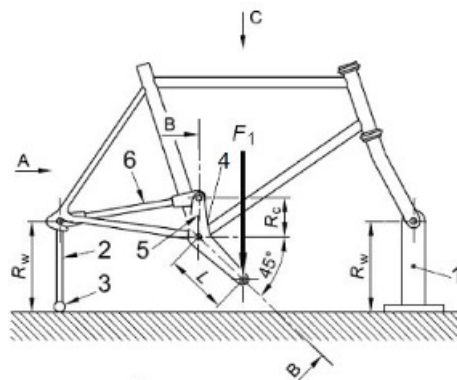
Pass

When tested by the method described in ISO 4210-6:2015, 4.3, there shall be no visible cracks or fractures in any part of the frame, and there shall be no separation of any parts of the suspension system.

For composite frames, the running displacements (peak-to-peak values) at the points where the test forces are applied shall not increase by more than 20 % of the initial values.

Clause 4.3.2 (ISO 4210-6) Test Method

Figure:



Actual Finding:

Test clause	Test conditions			Test Result (Cycles)
	Force (F_1)	Frequency	Cycles	
Clause 4.3.2 (ISO 4210-6)	1,000 N	3 Hz	100,000	100,000
Remark	There was no visible crack on the sample after testing.			

- Note:**
1. Information of sample: Material (Aluminum), Frame (332 mm), Mass (2,550 g).
 2. The rigid fork which is needed to conduct the test was provided by SGS Taiwan and the length of rigid fork is 315 mm.
 3. The offset is 25 mm.
 4. Sample No. 1
 5. Base on T/T is 640mm.

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Test Result:

Bicycle type: City and trekking Young adult Mountain Racing

Clauses:

Result

Clause 4.8.5 (ISO 4210-2) Frame - Fatigue test with horizontal forces

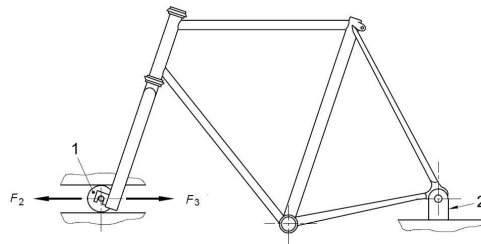
Pass

When tested by the method described in ISO 4210-6:2015, 4.4, there shall be no visible cracks or fractures in the frame and there shall be no separation of any parts of any suspension system.

For composite frames, the running displacement (peak-to-peak value) at the point where the test forces are applied shall not increase by more than 20 % of the initial values (see ISO 4210-3:2014, 4.6).

Clause 4.4.2 (ISO 4210-6) Test Method

Figure:



Actual Finding:

Test clause	Test conditions			Test Result (Cycles)
	Force	Frequency	Cycles	
Clause 4.4.2 (ISO 4210-6)	450 N (F_2) 450 N (F_3)	3 Hz	100,000	100,000
Remark	There was no visible crack on the sample after testing.			

- Note:**
1. Information of sample: Material (Aluminum), Frame (332 mm), Mass (2,550 g).
 2. The rigid fork which is needed to conduct the test was provided by SGS Taiwan and the length of rigid fork is 315 mm.
 3. The offset is 25 mm.
 4. Sample No. 2
 5. Base on T/T is 640mm.

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Test Result:

Bicycle type: City and trekking Young adult Mountain Racing

Clauses:

Result

Clause 4.8.6 (ISO 4210-2) Frame - Fatigue test with a vertical force

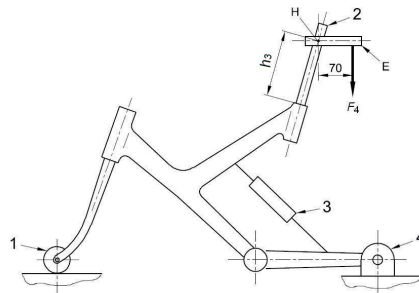
Pass

When tested by the method described in ISO 4210-6:2015, 4.5, there shall be no visible cracks or fractures in the frame and there shall be no separation of any parts of the suspension system.

For composite frames, the running displacement (peak-to-peak value) at the point where the test forces are applied shall not increase by more than 20 % of the initial value (see ISO 4210-3:2014, 4.6).

Clause 4.5.2 (ISO 4210-6) Test Method

Figure:



Actual Finding:

Test clause	Test conditions			Test Result (Cycles)
	Force (F ₄)	Frequency	Cycles	
Clause 4.5.2 (ISO 4210-6)	1,000 N	3 Hz	50,000	50,000
Remark	There was no visible crack on the sample after testing.			

- Note:**
1. Information of sample: Material (Aluminum), Frame (332 mm), Mass (2,550 g).
 2. The rigid fork which is needed to conduct the test was provided by SGS Taiwan and the length of rigid fork is 315 mm.
 3. The offset is 25 mm.
 4. Sample No. 3
 5. Base on T/T is 640mm.

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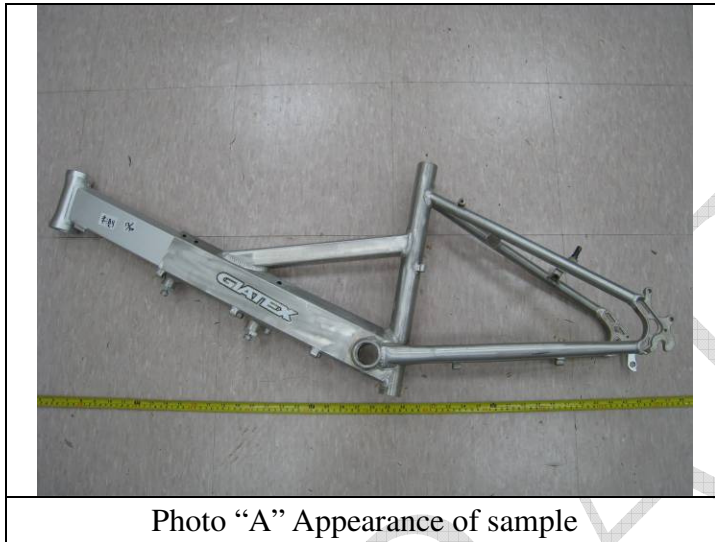
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