Test Report

Testing Laboratory
Product Safety

Test report No.	QA20140701
Applicant:	KingRack
Test item:	Rear Bicycle Carrier
Item No.	Scorpion
Test date:	2014/5/27~7/1
Testing Location	KingRack Testing Lab
Test Principle:	XP 18 904 4
Test Result:	The item passed the test.

Test Engineer:	Lung	Date:	2014/7/2
Reviewer:	Chiason	Date:	2014/7/2

Remark notes:

1.Test smaple should carry two e-bikes with 30kg each.

2.Rear bicycles carrier installed on the tow ball.

No. 152 Shunfan 2nd Rd. Lin Fude Li Dajia Town Tai Chung Taiwan 437
Tel: +886 (4) 26817989 Fax: +886 (4) 26815696 E-mail Address: kingrack@ms75.hinet.net

Static tests

Description of the Six Dimension Tensile Test

The test shall be according to figure 14.

Figure 1 - Six Dimension Tensile Test

This test shall be carried out as follows :

a) Mount the rear bicycle carrier device on the tow ball.

b) The screw of conic system of tight power is 60 N.m .

c) Adjust the test E-bike to 30kg each.

d) Measure and record the residual deflection.

Figure 2 - Application of the forces on the test bicycles.

Figure 3 -Set the angle to zero.

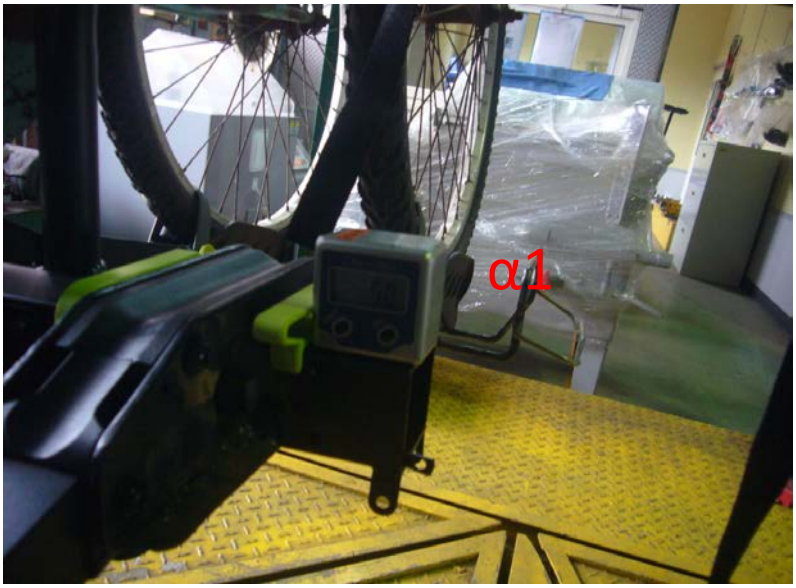

Figure 4 - measure α1 angle.

Figure 5 - measure α2 angle.

Figure 6 - Mark D position

Figure 7 - measure β1 angle.

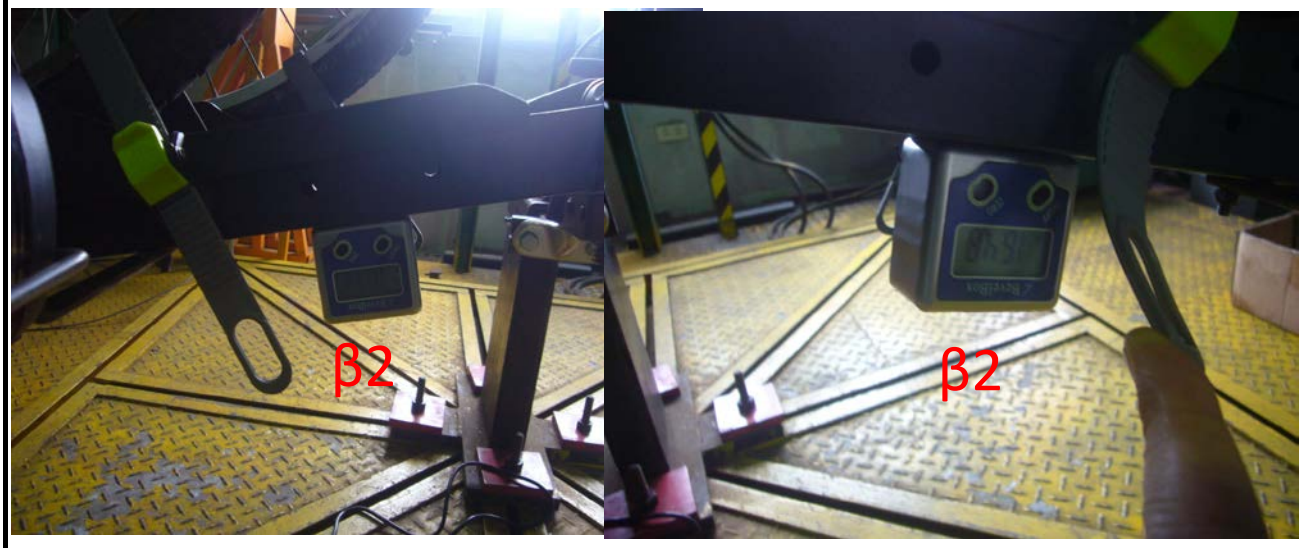

Figure 8 - measure β1 and β2 angle.

α (angle) ≦ 3°	**δ (angle) ≦ 3°**	**e (distance) ≦ 5 mm**
β (angle) ≦ 3°	**D (distance) ≦ 20 mm**	

+Fa		
	Before	**After**
α1	**5.5°**	**5.6°**
α2	**174.8°**	**174.6°**
β1	**-0.1°**	**0°**
β2	**166.2°**	**165.9°**
β3	**166°**	**166.4°**
δ	**0°**	**0°**
D	0mm	0mm
Verdict	**PASS**	

Figure 9 - +Fa test, Force=225kg.

-Fa		
	Before	**After**
α1	**5.6°**	**5.3°**
α2	**174.6°**	**175°**
β1	**0°**	**0°**
β2	**165.9°**	**166.1°**
β3	**166.4°**	**166.2°**
δ	**0°**	**0°**
D	0mm	0mm
Verdict	**PASS**	

Figure 10 - -Fa test, Force=225kg.

α (angle) ≦ 3°	**δ (angle) ≦ 3°**	**e (distance) ≦ 5 mm**
β (angle) ≦ 3°	**D (distance) ≦ 20 mm**	

+Fl		
	Before	**After**
α1	**4.7°**	**4.7°**
α2	**175.3°**	**175.3°**
β1	**0.5°**	**0.4°**
β2	**166.2°**	**166.1°**
β3	**164.9°**	**166.5°**
δ	**0°**	**0°**
D	0mm	0mm
Verdict	**PASS**	

Figure 11 - +Fl test, Force=225kg.

-Fl		
	Before	**After**
α1	**5.1°**	**5.7°**
α2	**175.1°**	**174.7°**
β1	**0.3°**	**0.5°**
β2	**166°**	**166°**
β3	**165.1°**	**164.9°**
δ	**0°**	**0°**
D	0mm	0mm
Verdict	**PASS**	

Figure 12 - -Fl test, Force=225kg.

α (angle) ≦ 3°	**δ (angle) ≦ 3°**	**e (distance) ≦ 5 mm**
β (angle) ≦ 3°	**D (distance) ≦ 20 mm**	

+Flat		
	Before	**After**
α1	**5.5°**	**5.4°**
α2	**174.8°**	**174.8°**
β1	**-0.1°**	**0.8°**
β2	**165.7°**	**164.5°**
β3	**166°**	**166.9°**
δ	**0°**	**0.6°**
D	0mm	16mm
Verdict	**PASS**	

Figure 13 - +Flat test, Force=162kg.

-Flat		
	Before	**After**
α1	**5.3°**	**5.2°**
α2	**174.8°**	**174.9°**
β1	**-0.5°**	**-2°**
β2	**165.1°**	**162.4°**
β3	**166.1°**	**167.7°**
δ	**0°**	**1°**
D	0mm	14mm
Verdict	**PASS**	

Figure 14 - -Flat test, Force=162kg.