EFBE PRÜFTECHNIK

Landabsatz 25, D-45731 Waltrop
tel + 49 (0) 2309 78407-0 fax -10
info@efbe.de www.efbe.de

Customer: Black Star Bikes
Contact person: Imke Harms
EFBE Date of Order: 2013-01-15
Fax-No.:

Testreport

Maximum load + Overload test
Bicycle frame
Test item no. 134188

Test sample data

Manufacturer:	Black Star Bikes
Model name:	Male
Identity no.:	No
Suspension:	No
Coating:	Yes
comparison weight (g):	2870
Fork length (mm):	450
Application:	Trekking/City
Frame height (cm)	62
Remarks	None

Test description

Impact test frame/fork EN 14764 (RGIFMENS)

The frame-fork unit is subjected to an Impact test with falling mass. The **test method** is corresponding EN 14764, Abs.4.8.2: weight 22,5 kg, drop height 180 mm.

The **requirements** are corresponding EN 14764, Abs.4.8.2: no crack or fracture or displacement more than 30 mm where a fork is fitted or 10 mm where a solid steel bar is fitted in place of the fork.

Test result:

Permanent deformation: 9.0 mm
Crack or fracture: No

The Impact test was passed.

Remarks: For preceded tests please see testreport No. P1306581.

Test engineer: i.A. V. Stobberg
End of testing: 2013-02-15 Waltrop 2013-02-20 .....
stamp, sign

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Customer: Black Star Bikes
Contact person: Imke Harms
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Testreport

Computer controlled fatigue test of a
Bicycle frame
Test item no. 134188

Test sample data

Manufacturer:	Black Star Bikes
Model name:	Male
Identity no.:	No
Suspension:	No
Coating:	Yes
comparison weight (g):	2870
Fork length (mm):	450
Application:	Trekking/City
Frame height (cm)	62
Remarks	None

Test description

The frame was fatigue tested following EFBE-Standard 7520. This means a computer controlled and documented single stage test (Wöhler-test) with an error less than 1% and a standard deviation less than 0,5%.
In case of suspension test samples the test is carried out with spring rate, spring preload and damping at maximum.

Fatigue test frame saddle load EN 14764 (RDFSENS)
Test method and **requirements** are following EN 14 764, clause 4.8.4. for **trekking/city bikes**:
Test load (pulsating)**:** 1025 N
Allocated number of cycles: 50 000

Test result:

The allocated number of loads was reached without any crack or fracture.
The test was passed.

Remarks: None

Test engineer: M. Schröder
End of testing: 2013-02-11 Waltrop 2013-02-20 .....
stamp, sign

Caution!
Fatigue tested parts cannot be used further on.
Acute danger of fracture!

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Testreport

Computer controlled fatigue test of a
Bicycle frame
Test item no. 134188

Test sample data

Manufacturer:	Black Star Bikes
Model name:	Male
Identity no.:	No
Suspension:	No
Coating:	Yes
comparison weight (g):	2870
Fork length (mm):	450
Application:	Trekking/City
Frame height (cm)	62
Remarks	None

Test description

The frame was fatigue tested following EFBE-Standard 7520. This means a computer controlled and documented single stage test (Wöhler-test) with an error less than 1% and a standard deviation less than 0,5%.
In case of suspension test samples the test is carried out with spring rate, spring preload and damping at maximum.

Fatigue test frame jump EFBE SP-S (RDGSPS)

The **test arrangement** is simulating jumping, braking and riding over obstacles. Push and pull loads are applied to the dropouts of a dummy fork, direction vertical to the fork stem. Reaction forces are absorbed vertically by the bottom bracket and by the rear axle corresponding to the resulting force.
The **requirements** are corresponding EFBE-class **Standard Performance** for **trekking/city bikes** (SP-S):

Top load (against direction of travel)**:**	+ 250 N
Bottom load (into direction of travel)**:**	- 500 N
Allocated number of loads:	100 000

EN 14764 (Trekking/City bike) makes no demands here.

Test result:

The allocated number of loads was reached without any crack or fracture.
The test was passed.

Remarks: For preceeded tests please see testreport No. P1306581, P1306582

Test engineer: M. Schröder
End of testing: 2013-03-02 Waltrop 2013-03-06 .....
stamp, sign

Caution!
Fatigue tested parts cannot be used further on.
Acute danger of fracture!