

# Bicycle Chain Breaking Load Test Results

Testing conducted by Wippermann

Published August, 2007



## Table of Contents

|  |   |
|--|---|
| Breaking Load Results Summary.....       | 1 |
| Breaking Load Test Methodology.....      | 1 |
| Breaking Load of the Connex Link.....    | 1 |
| Breaking Load Test Equipment Photos..... | 2 |
| Breaking Load Full Results Chart.....    | 2 |

## Breaking Load Results Summary

| Chain model            | Ranking |
|------------------------|---------|
| Connex 10S0            | 1       |
| Connex 10S8            | 1       |
| Shimano CN 6600        | 2       |
| Campagnolo C10         | 3       |
| Connex 10S1 *          | 4       |
| Shimano CN 7801        | 5       |
| Campagnolo C10 Ultra * | 6       |
| Shimano CN 5600        | 7       |
| SRAM PC 1090           | 8       |
| SRAM PC 1090 R *       | 9       |
| SRAM PC 1070           | 10      |

*Notice Wippermann's hollow pin chain, the Connex 10S1, out performed other \* hollow pin chains.*

| Chain model            | Breaking Load |         |
|------------------------|---------------|---------|
|                        | Min           | Max     |
| Connex 10S0            | 10,600N       | 10,800N |
| Connex 10S8            | 10,600N       | 10,700N |
| Shimano CN 6600        | 10,400N       | 10,550N |
| Campagnolo C10         | 10,350N       | 10,650N |
| Connex 10S1 *          | 10,300N       | 10,500N |
| Shimano CN 7801        | 10,000N       | 10,150N |
| Campagnolo C10 Ultra * | 9,900N        | 10,050N |
| Shimano CN 5600        | 9,850N        | 9,900N  |
| SRAM PC 1090           | 9,550N        | 9,700N  |
| SRAM PC 1090 R *       | 9,250N        | 9,550N  |
| SRAM PC 1070           | 9,100N        | 9,300N  |

*Sorted by minimum breaking load, highest to lowest.*

*\* hollow pin chains*

## Breaking Load Test Methodology

Five breaking load tests were conducted on each chain model tested. Then the chains were ranked by minimum breaking load.

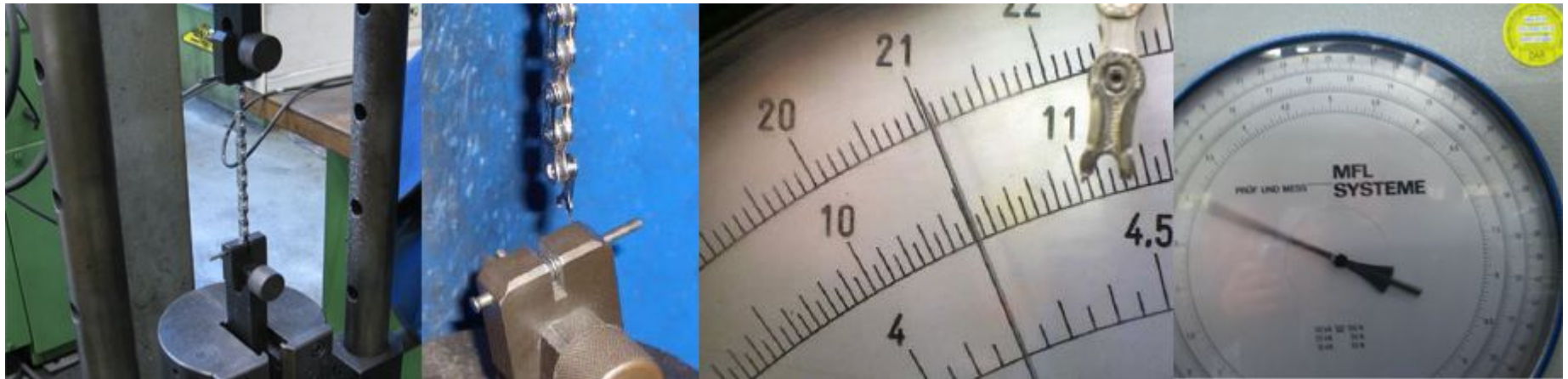
## Breaking Load of the Connex Link

The breaking load on the Connex link, 10-, 9- and 8-speed, is a minimum 2,248 pounds (10,000 Newtons).



*Connex Link*

## Breaking Load Test Equipment Photos



*Photos of the breaking load testing equipment.*

## Breaking Load Full Results Chart

10 speed chain breaking load test conducted August, 2007.

| Chain model            | Samples and Breaking Loads |         |         |         |         | Min     | Max     |
|------------------------|----------------------------|---------|---------|---------|---------|---------|---------|
|                        | P1                         | P2      | P3      | P4      | P5      |         |         |
| Connex 10S0            | 10,600N                    | 10,700N | 10,800N | 10,600N | 10,700N | 10,600N | 10,800N |
| Connex 10S8            | 10,700N                    | 10,600N | 10,600N | 10,700N | 10,700N | 10,600N | 10,700N |
| Shimano CN 6600        | 10,550N                    | 10,500N | 10,400N | 10,500N | 10,450N | 10,400N | 10,550N |
| Campagnolo C10         | 10,400N                    | 10,350N | 10,400N | 10,650N | 10,600N | 10,350N | 10,650N |
| Connex 10S1 *          | 10,300N                    | 10,400N | 10,300N | 10,500N | 10,300N | 10,300N | 10,500N |
| Shimano CN 7801        | 10,000N                    | 10,100N | 10,150N | 10,100N | 10,050N | 10,000N | 10,150N |
| Campagnolo C10 Ultra * | 10,000N                    | 9,900N  | 10,050N | 9,950N  | 10,000N | 9,900N  | 10,050N |
| Shimano CN 5600        | 9,850N                     | 9,850N  | 9,900N  | 9,850N  | 9,900N  | 9,850N  | 9,900N  |
| SRAM PC 1090           | 9,600N                     | 9,650N  | 9,700N  | 9,600N  | 9,550N  | 9,550N  | 9,700N  |
| SRAM PC 1090 R *       | 9,300N                     | 9,300N  | 9,400N  | 9,550N  | 9,250N  | 9,250N  | 9,550N  |
| SRAM PC 1070           | 9,200N                     | 9,300,N | 9,200N  | 9,250N  | 9,100N  | 9,100N  | 9,300N  |

*Results are sorted by **minimum** breaking load, highest to lowest.*

*\* Hollow Pin Chains*