



## Phase 2

During this phase of testing, the front and rear cogs are offset 5 degrees to the left to approximate maximum cross gearing. With the chain running under a 300 Newton load at 50 cycles per minute, water is applied, then oil, and finally sand. After 5 minutes at 50 cycles per minute under a 300 newton load, the cycle speed is increased to 100 cycles per minute under a 300 Newton load for 10 hours. At the end of the 10-hour test period, each chain is cleaned and measured, and its length recorded. {anchor anchor='Top' text='(back to top)'}

## Phase 3

Water, oil, and sand are again applied again during phase 3. The front and rear cogs of the test machine are offset 5% to the right to approximate maximum cross-gearing in the other direction. Again, after a 5-minute run-in period at 50 cycles per minute, the speed is increased to 100 cycles per minute under a 300 newton load for 10 hours. After the end of the 3rd phase, each chain is again cleaned and measured, and its length recorded. {anchor anchor='Top' text='(back to top)'}

## Phase 4

The application of water, oil, sand is repeated and each chain is run at 100 cycles per minute with the front and rear cogs in-line for 15 hours. At the end of this phase, each chain is again cleaned and measured, and its length recorded. This fourth phase test protocol, with the front and rear cogs in-line, is repeated every 15 hours until the subject chain shows 1% wear, which is to say a measured length of 808.1 mm, 8 mm longer than the DIN standard. At this point the chain is considered worn out. {anchor anchor='Top' text='(back to top)'}

## Results for: Connex, Shimano, Campagnolo, SRAM, and KMC

Wippermann's 10sX chain with stainless steel inner links underwent 114 hours of this test before it showed 1% wear, considerably out-wearing all the competitor chains tested to date. So far 10 speed chains from Shimano, Campagnolo (campy), SRAM, and KMC have been tested.

Want to know how all the chains stacked up? Check out our [chain test results page](#).

These chain wear tests are on-going, and updates are posted to our [chain test results page](#) as they become available.

To view all available Connex chains by Wippermann, and read customer reviews please [visit our online Connex catalog](#).