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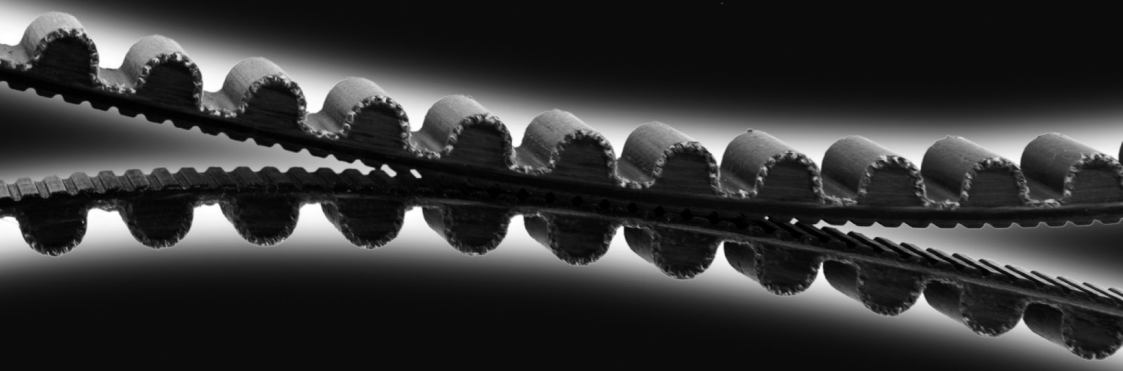
CARBON DRIVE™

Manual

for

Spring Tension Tester



Content

1 Composition

- **Scope of delivery**

Scope of delivery

The Spring Tension Tester consists of a ruler, a pointer and a finger (illustration 1). Place the ruler on the belt above both sprockets. This changes the position of the finger and moves the pointer on the scale. The finger is pretensioned by a spring. The resulting deflection of the belt is a measure for the existing belt tension. Now you can read the current belt tension using the pointer. The Spring Tension Tester allows you to measure the belt tension in the load and return strand. This is shown in illustration 2 and 3. The color code (green, yellow or red) indicates the belt tension. Please refer to page 7 for further information on the belt tension.

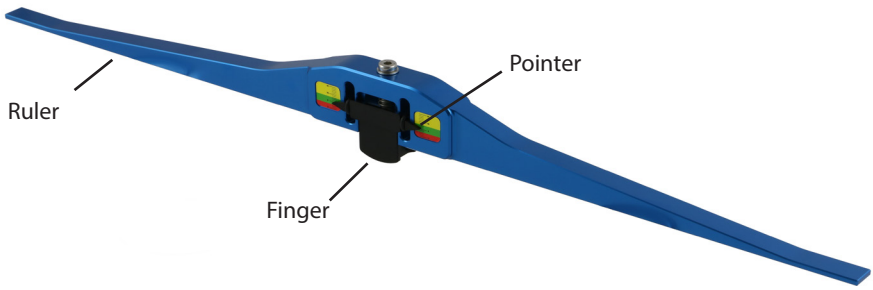


Illustration 1: Structure of the Spring Tension Tester

Please note
After each use the measuring tool should be placed in its intended packaging to avoid damage. The measuring arms must not be bent otherwise accurate measurement is no longer possible.

Illustration 2: **Checking the belt tension in the load strand**

Illustration 3: **Checking the belt tension in the return strand**

2 Handling

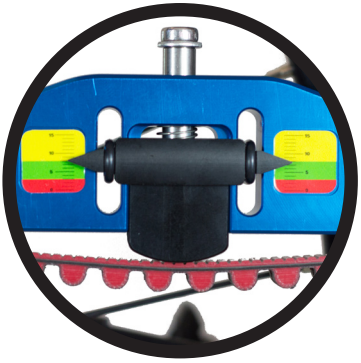
- **Checking the belt tension**

Checking the belt tension

Proper belt tension is essential for optimum operation of the Gates Carbon Drive System.

Lack of belt tension can lead to so-called “ratcheting“. The teeth of the belt will slide over the teeth of the rear sprocket. This causes not only an unpleasant sound, the ratcheting can also cause damage to the carbon tensile cords. This would render a belt useless. If ratcheting has occurred you should replace the belt before the next time it is to be used.

Too much tension can also cause damage to the bearings within the rear hub. It also increases the wear of your drive system and the system can drag.



Note for initial mounting of the belt

Explanation: A one-time settling of the carbon fiber takes place, causing a reduction in the belt tension. In order to counteract this reduction, the belt must be tensioned a little tighter during initial mounting. The optimal belt tension has been reached if the inspection window shows 50% green and 50% yellow.

Illustration 1: **Incorrect belt tension**

Red:
Belt tension is too low (Illustration 1) and can be rectified as follows: The belt tension must be regulated by the adjustable dropout. In addition, it is also possible to increase the belt tension by adjusting the eccentric bottom bracket.If the belt continues to have too little tension, ratcheting may occur, i.e., the belt jumps over teeth on the rear sprocket. If this happens, the Carbon Drive™ may be irreparably damaged and become unserviceable.

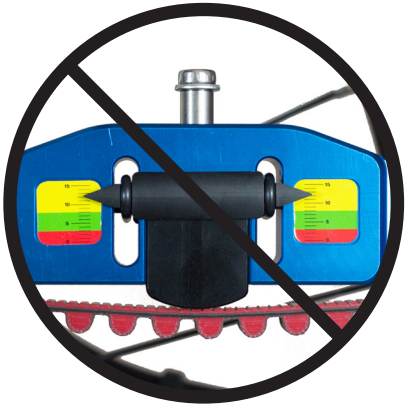


Illustration 2: **Too much belt tension**

Yellow:
Belt tension is too high. The belt tension must be regulated by the adjustable dropout or by adjusting the eccentric bottom bracket. If the belt tension is not adjusted, it may result in increased wear. In addition, the load on the bottom bracket bearing increases, which is associated with more rapid wear. See Illustration 2 for a visual example.

Green:
Belt tension is in an optimum range. See Illustration 3. No additional adjustment is required. This system setting produces the least wear and the highest degree of efficiency.

Illustration 3: **Optimal belt tension**

Please note
Before each measurement the pointer has to be pushed back to its starting position (below the red area, Illustration 4).

Illustration 4:
Align the pointer in the initial position

Please note
The checking of the belt tension should be repeated at different crank positions. Different belt tensions are an indicator for not concentrically mounted front sprocket to the crank axle. If this occurs please contact your bicycle dealer or bicycle manufacturer.

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