

## Chain Elongation

You can estimate the remaining chain life by determining chain elongation. This is illustrated in Figure 18. Measure chain elongation in the following manner.

1. Locate a straight section of chain that is under tension.
2. Using a vernier or scale, measure the inside (L1) and outside (L2) of the pins at both ends of the measured links.
3. Calculate the measurement (L) using the formula:

$$L = \frac{(L1 + L2)}{2}$$

4. Calculate chain elongation.

$$\text{Chain elongation} = \frac{\text{Measured length} - \text{Standard length} \times 100\%}{\text{Standard length}}$$

Where:

Standard length = Chain pitch x Number of links

## When Chains Should Be Replaced

Replace drive chains corresponding to the number of sprocket teeth as shown in Table 2.

**Table 2 — Drive Chain Replacement (Full Wrap)**

% Chain Elongation	Number of Teeth in Large Sprocket
1	≥ 140
2	> 72
3	≤ 72

**Figure 18**

