Peak Performance with Tsubaki Wear Indicator Sprockets
Tsubaki’s patented Sprocket Wear Indicator technology offers users the ability to identify and schedule drive system maintenance before critical component failure occurs. Strategic placement of Wear Indicator pins on one or more sprocket teeth provides visual indication that a sprocket is still within the allowable wear tolerance, or that it needs to be replaced. When factoring in the cost of critical drive system components, implementation of Tsubaki Wear Indicator technology makes sense for applications that are driven by capital equipment, or where non-scheduled downtime is simply not acceptable.

As depicted in Figure 1, Wear Indicator pins are strategically placed on the thrust faces of the sprocket tooth, where the resultant pressure angle of the chain roller would create wear. Over time in service, the sprocket tooth profile area is reduced due to induced load created by the chain roller. The reduction in sprocket tooth profile area creates accelerated wear on the drive chain roller, causing poor fit, alignment, and chain wrap as it relates to the tooth profile. Ultimately, chain wear accelerates at an exponential rate, resulting in loss of tension, jumped chain, drive slipping, and catastrophic failure.

Figure 2 provides a comparison and example of a sprocket that was removed from service due to chain failure. Notice the difference in chain engagement between the new and worn sprocket.
Availability

- ANSI 100 through 240 pitch sprockets
- Engineering Class sprockets with pitch lengths greater than 2"
- Carbon steel and stainless steel sprockets
- Hardened and non-hardened teeth
- Type A (no hub extension)
  Type B (one-sided hub extension)
  Type C (two-sided hub extension)
- Taper-Lock® and QD® style sprockets

Value

- Extended chain life through predictable maintenance
- Eliminates the guesswork associated with worn sprockets
- Reduces overall cost of equipment ownership
- Provides warning of catastrophic drive failure
- Provides the opportunity to schedule maintenance based on sprocket wear rate

Examples of Wear Indicator Sprockets

Large Multi-Strand Sprocket

100 Pitch/20 Tooth Finished Bore

Draw Works Sprocket

Ideal Industries and Applications

Mining:
- Rotary Breakers
- Feeder Breakers
- Reclaimers
- Drill Rigs
- Shuttle Car

Oil and Gas Exploration:
- Coiled Tube Injector
- Draw Works

Cement:
- Bucket Elevators
- Conveyor Systems
- Rotary Drive Systems
- Reclaimer Systems

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