

Daily Maintenance Guide for Timing Belts

To ensure the proper operation of timing belt mechanisms, please conduct the following regular inspections and take appropriate corrective actions when necessary. Always disconnect power and ensure the timing belt has completely stopped before inspection. Never approach pulleys or timing belts during operation.**

1. Check Installation Tension of Timing Belt

Observation: Significant drop in belt tension.

Notes:

- A slight tension reduction after ~24 hours of operation is normal due to belt-pulley break-in.
- Timing belts transmit power via tooth engagement; if properly tensioned during installation, readjustment is typically unnecessary.
- Repeated overtightening may cause misalignment or shorten belt life.

2. Inspect Backside Cracking

- Observation: Cracks on the belt's back surface.
- Solution: Replace immediately if cracks are detected to prevent further damage.

3. Examine Tooth Root Cracking

- Observation: Cracks at the base of belt teeth.
- Solution: Replace the belt promptly to avoid operational failure.

4. Check Fabric Wear at Tooth Bases

- Observation: Flip the belt to inspect whether the fabric layer at tooth bases is worn through, exposing rubber or core wires.
- Solution: Replace the belt if fabric wear is severe to ensure transmission stability.

5. Assess Side Wear

- Observation: Side surfaces show abrasion or damage from contact with pulley flanges.

- Solution: Verify pulley alignment and adjust if needed; replace the belt if wear is excessive.

6. Monitor Belt Tracking During Operation

- Observation: Pronounced zigzag movement ("snaking") during operation.

- Notes: Minor lateral movement during forward/reverse rotation is normal. For significant tracking issues, check pulley alignment and tension.

7. Inspect for Fluid Contamination

- Observation: Water or oil on the belt surface.

- Solution: Clean and dry the belt to prevent slippage or corrosion.

8. Verify Base Stability

- Observation: Loose sliding base.

- Solution: Tighten base bolts to ensure secure mounting.

9. Check Pulley Teeth/Flanges for Rust

- Observation: Rust on pulley teeth or flanges.

- Solution: Remove rust; replace the pulley if necessary to avoid operational interference.

10. Monitor Operational Noise

- Observation: Abnormal increase in noise during operation.

- Solution: Investigate tension, meshing, or pulley wear; replace components if required.

Safety Reminders:

- Always disconnect power and confirm belt stoppage before inspection.

- Keep hands and body clear of moving pulleys or belts.

