

Troubleshooting the Serpentine Drive Belt

| Problem | Cause | Solution |
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| Tension sheeting fabric failure (woven fabric on outside circumference of belt has cracked or separated from body of belt) | <ul style="list-style-type: none"> • Grooved or backside idler pulley diameters are less than minimum recommended • Tension sheeting contacting (rubbing) stationary object • Excessive heat causing woven fabric to age • Tension sheeting splice has fractured | <ul style="list-style-type: none"> • Replace pulley(s) not conforming to specification • Correct rubbing condition • Replace belt • Replace belt |
| Noise (objectional squeal, squeak, or rumble is heard or felt while drive belt is in operation) | <ul style="list-style-type: none"> • Belt slippage • Bearing noise • Belt misalignment • Belt-to-pulley mismatch • Driven component inducing vibration • System resonant frequency inducing vibration | <ul style="list-style-type: none"> • Adjust belt • Locate and repair • Align belt/pulley(s) • Install correct belt • Locate defective driven component and repair • Vary belt tension within specifications. Replace belt. |
| Rib chunking (one or more ribs has separated from belt body) | <ul style="list-style-type: none"> • Foreign objects imbedded in pulley grooves • Installation damage • Drive loads in excess of design specifications • Insufficient internal belt adhesion | <ul style="list-style-type: none"> • Remove foreign objects from pulley grooves • Replace belt • Adjust belt tension • Replace belt |
| Rib or belt wear (belt ribs contact bottom of pulley grooves) | <ul style="list-style-type: none"> • Pulley(s) misaligned • Mismatch of belt and pulley groove widths • Abrasive environment • Rusted pulley(s) • Sharp or jagged pulley groove tips • Rubber deteriorated | <ul style="list-style-type: none"> • Align pulley(s) • Replace belt • Replace belt • Clean rust from pulley(s) • Replace pulley • Replace belt |
| Longitudinal belt cracking (cracks between two ribs) | <ul style="list-style-type: none"> • Belt has mistracked from pulley groove • Pulley groove tip has worn away rubber-to-tensile member | <ul style="list-style-type: none"> • Replace belt • Replace belt |
| Belt slips | <ul style="list-style-type: none"> • Belt slipping because of insufficient tension • Belt or pulley subjected to substance (belt dressing, oil, ethylene glycol) that has reduced friction • Driven component bearing failure • Belt glazed and hardened from heat and excessive slippage | <ul style="list-style-type: none"> • Adjust tension • Replace belt and clean pulleys • Replace faulty component bearing • Replace belt |
| "Groove jumping" (belt does not maintain correct position on pulley, or turns over and/or runs off pulleys) | <ul style="list-style-type: none"> • Insufficient belt tension • Pulley(s) not within design tolerance • Foreign object(s) in grooves | <ul style="list-style-type: none"> • Adjust belt tension • Replace pulley(s) • Remove foreign objects from grooves |