

TROUBLESHOOTING

Although Tuthill Vacuum & Blower Systems blowers are well designed and manufactured, problems may occur due to normal wear and the need for readjustment. The chart below lists symptoms that may occur along with probable causes and remedies.

| SYMPTOM | PROBABLE CAUSE | REMEDIES |
|--------------------------------|--|--|
| Loss of oil | Gear housing not tightened properly. | Tighten gear housing bolts. |
| | Lip seal failure. | Disassemble and replace lip seal. |
| | Insufficient sealant. | Remove gear housing and replace sealant. (See <i>Disassembly</i> section on page 10) |
| | Loose drain plug. | Tighten drain plug. |
| Excessive bearing or gear wear | Improper lubrication. | Correct oil level. Replace dirty oil. (See <i>Lubrication</i> section on page 8) |
| | Excessive belt tension. | Check belt manufacturer's specifications for tension and adjust accordingly. |
| | Coupling misalignment. | Check carefully, realign if necessary. |
| Lack of volume | Slipping belts. | Check belt manufacturer's specifications for tension and adjust accordingly. |
| | Worn lobe clearances. | Check for proper clearances. (See <i>Assembly Clearances</i> on pages 17-21) |
| | Speed too low. | Increase blower speed within limits. |
| | Obstruction in piping. | Check system to assure an open flow path. |
| Knocking | Unit out of time. | Re-time. |
| | Distortion due to improper mounting or pipe strains. | Check mounting alignment and relieve pipe strains. |
| | Excessive pressure differential. | Reduce to manufacturer's recommended pressure. Examine relief valve and reset if necessary. |
| | Worn gears. | Replace timing gears. (See <i>Disassembly</i> section on page 10) |
| Excessive blower temperature | Too much or too little oil in gear reservoir. | Check oil level. (See <i>Lubrication</i> section on page 5) |
| | Too low operating speed. | Increase blower speed within limits. |
| | Clogged filter or silencer. | Remove cause of obstruction. |
| | Excessive pressure differential. | Reduce pressure differential across the blower. |
| | Elevated inlet temperature. | Reduce inlet temperature. |
| | Worn lobe clearances. | Check for proper clearances. (See <i>Assembly Clearances</i> on pages 17-21) |
| Rotor end or tip drag | Insufficient assembled clearances. | Correct clearances (See <i>Assembly Clearances</i> on pages 17-21) |
| | Case or frame distortion. | Check mounting and pipe strain. |
| | Excessive operating pressure. | Reduce pressure differential. |
| | Excessive operating temperature. | Reduce pressure differential or reduce inlet temperature. |
| Vibration | Belt or coupling misalignment. | Check carefully, realign if necessary. |
| | Lobes rubbing. | Check cylinder for hot spots, then check for lobe contact at these points. Correct clearances. (See <i>Assembly Clearances</i> on pages 17-21) |
| | Worn bearings or gears. | Check condition of gears and bearings; replace if necessary. |
| | Unbalanced or rubbing lobes. | Possible buildup on casing or lobes, or inside lobes. Remove buildup and restore clearances. |
| | Driver or blower loose. | Check mounting and tighten if necessary. |
| | Piping resonance. | Check pipe supports, check resonance of nearby equipment, check foundation. |