



Tech TIPS

SUPPORTING TODAY'S PROFESSIONAL TECHNICIAN

Why Did the Water Pump Shaft Break?

Application:

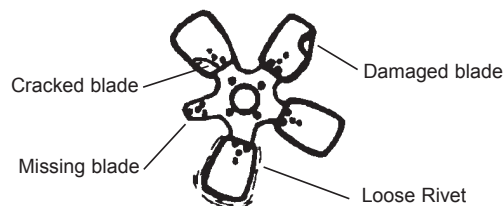
Broken water pump housing or shaft fracture.

Problem:

Excessive vibration and unbalanced load due to:

- Improperly torqued mounting bolts
- Bent or distorted pulley(s)
- Defective fan clutch (if applicable)
- Improperly tightened belts

Always replace damaged fans,
never try to straighten



Blue Discoloration



Heat stress shaft fracture indicates excessive high temperatures generated by centrifugal forces due to unbalance



Clean instantaneous fracture indicates engine accelerated rapidly with an unbalanced load

Solution:

- Torque mounting bolts and fan assembly bolts evenly to proper manufacturer's specifications.
- Check fan clutch for binding, looseness or leakage - replace if necessary.
- DO NOT strike shaft.
- Check fan for damage.
- Make sure pump turns freely by hand.
- Tighten fan belts to factory recommended tension - replace if worn or frayed.
- Check motor mounts - loose or broken mounts will allow fan to hit radiator shroud.

Note:

Always flush entire cooling system. Failure to do so will lead to premature pump failure and **VOID THE WARRANTY**.