

Cooling



Water Pump Noise

COTB 0010

WHISTLING OR SQUEAKING

A problem becoming increasingly common is excessive noise from the mechanical seal, especially at low rpm.

This issue is related to the introduction of harder materials such as hard carbon used in the dynamic seal pack (which has greatly reduced the frequency of leaks) and only occurs in specific pump operating conditions.

This phenomenon is known as "stick-slip" which is noticeable as a kind of whistle or squeak and occurs as the ceramic and carbon sealing surfaces first stick together then slip apart and is especially noticeable when the pump is running almost dry at low rpm. This problem is usually linked to poor initial system bleeding following installation of the pump, especially if the impeller's shape makes it difficult to remove air from around the seal. Cooling circuit design can cause initial pump priming problems thereby increasing the risk of dry running. Lubrication of the seal faces during normal pump operation is reliant upon a film of clean coolant solution between the ceramic and carbon seal faces to prevent wear, leakage and noise.

For some time now, seal manufacturers have been directing their research into materials able to overcome any noise problems.