

HALE PUMPS

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SERVICE BULLETIN #31

TO: HALE MIDSHIP & LIGHT TRUCK CUSTOMERS

SUBJECT: Incorrect Diagnosis of Drive Line Noises

Gentlemen:

We are called upon occasionally to explain a noise phenomenon in our pump gear boxes. This noise is best described as a gear flutter, rumble or rattle, resulting from back-lash. It is most evident at low speed (idle to 800 RPM) and steadily disappears with increased RPM.

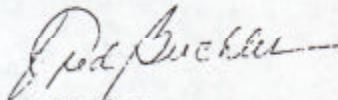
In the field this condition has sometimes been misdiagnosed as a serious problem, resulting in the removal and dismantling of the pump gear box, only to find all component parts in perfect condition. The possibility of this phenomenon is present in all gear boxes to some extent, but it is most evident when magnified by other factors.

For example, a diesel engine has a greater tendency to lug at low RPM, where the torque into our gear box is insufficient to eliminate gear flutter or to "drive" the gear train with a steady force. This gear flutter may be heard but it disappears as RPM is increased. Other factors could contribute to the magnification of this type of noise such as pump mounting, vibration and echoing effects from diamond plate, panel, piping, empty tank, drive line phasing and bad universal joints.

Our best recommendation, if this type of noise is evident, would be to check the idle speed to ensure it is set to the engine manufacturers specification or slightly above. Make sure the engine is tuned to peak performance as a sluggish engine would aggravate this noise phenomenon.

Very truly yours,

HALE FIRE PUMP COMPANY



Fred Buchler
Manager, Customer Service

FB:jo1

Fire, Irrigation, Contractor
and Petroleum Pumps



Ball Valves, Accumulators
and Proportioners