



SERVICE BULLETIN #55
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PRODUCT INFORMATION

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TO: All Hale OEM Midship Pump Customers & PSC's

SUBJECT: HALE MIDSHIP PUMPS/
ALLISON MD SERIES TRANSMISSIONS

Some areas of concern have arisen throughout the industry with the interface of Hale Midship Split Shaft Pumps and the Allison Model MD Series Transmissions. Recently we have been made aware through field reports of serious drive line vibration while operating in the "Road Position" of our split shaft midship pumps. These vibrations have the potential to cause serious damage to all drive components, including the pump gearbox.

Although the midship gearbox in "Road Position" is simply transferring power to the rear wheels, we have been involved in attempting to properly diagnose and assist in solving these problems. One common factor in all of our field reports has been the MD Series Transmissions, and Mr. Rex Beck, of Allison, offers some suggestions.

Rex Beck feels the root of the problems may be the "overdrive" features of MD Series Transmissions when they are not properly calculated into the drive line design (maximum speed and length) which could lead to drive line "whip." Rex Beck encourages all apparatus manufacturers to take advantage and use the Allison Drive Line Analysis Scaan Program available from Allison. Additionally, from some industry sources, it is determined that normally accepted pump mounting and drive line designs are much more critical with this particular transmission. They include: pump mounting angularity; drive shaft size, length, speed, angularity, indexing, balance (dynamic), and the use of slip joints. It is imperative to follow all recommended procedures to eliminate the variables that could cause damage, that is being misdiagnosed as a pump gearbox problem, (which it is not). Characteristic of the affects on the pump gearbox is that the drive line whip and vibration have resulted in unusual damage to the lower gearbox casings.

Interesting to note is that some apparatus manufacturers are using carrier bearings in their front drive line design while others have chosen to eliminate the overdrive features of the MD Series Transmission. These methods are reported to be relatively successful in achieving the necessary compatibility with other drive components, including the split shaft midship pump.

Since this is a relatively new problem we will continue our research and pass along additional information or suggestions as they become available.

Joseph L. Costello, Service Manager