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**SERVICE ADVISORY**

**Date: 11/21/01**

**Advisory #SV2001-2**

**SUBJECT: Gear Rattle – Hurth Reduction Gear Transmissions**

We have received a number of complaints regarding rattling or noisy ZF/Hurth reduction gears (V-drive or in-line). The noise is most pronounced at idle RPM and typically goes away when the engine RPM is raised above idle. Although the noise can be irritating, this is a normal condition with these transmissions that in no way affects the durability or reliability of the unit.

In an effort to reduce the gear rattle noise at low RPM; the transmission manufacturer has suggested that we change from the current Dexron 3 transmission fluid that we use in the transmission to 15W40 motor oil. This is the same oil that we recommend for use in the engine and its higher viscosity helps “dampen” the contact of the gears and reduces the noise significantly.

Indmar has started using 15W40 Pennzoil Marine Motor Oil in all reduction gears starting with engine IC985313. Those units will be identified with a Pennzoil 15W40 Marine Oil sticker on the transmission in place of the ATF sticker that was previously attached.

We suggest that if you have a customer complaint of a noisy or rattling reduction gear that you replace the transmission fluid with 15W40 motor oil at the next scheduled service. Our current recommended maintenance schedule calls for changing the transmission oil at the first service (10-20 hours) and then annually or every 300 hours, whichever comes first.

Since the transmission has no drain plug, it is necessary to suck the fluid out of the transmission through the opening in the bottom of the filter cavity. Use a suitable oil removal pump with a pick-up long enough to get to the bottom of the transmission housing. You might also want to remove the coolant lines and let the cooler and hoses drain into a suitable container to make sure as much of the fluid as possible is removed from the transmission. It is not necessary to flush the transmission, just get as much of the old fluid out as possible.

Reconnect the cooling lines and fill the transmission with 15W40 motor oil. The level of the oil should be between the “max” and “min” marks on the dipstick. The following chart gives you the approximate capacities of the various reduction gears.

<b>Model</b>	<b>Capacity</b>
450A	2.12 qt (2L)
630A	4.2 qt (4L)
630V	4.2 qt (4L)