



Foley Engines
Marine & Industrial Engines

Call us today
800.233.6539

Home | Engine Products | Ask Dr. Diesel | Company Info | Contact Us

Hurth Gears: A Dollar an Hour Transmission?



After the 2008 financial meltdown, boat owners became more cost conscious. A customer said to us one day that a ZF/Hurth gear was a "dollar an hour gear." Dr Diesel looked up sharply and asked him what he meant. The customer explained that typically small Hurth gears last about 1000 hours on average. When they fail, the cost of rebuilding a ZF/Hurth is \$1000 or roughly \$1 per hour. Dr Diesel didn't really like hearing this, but the fellow's logic was impressive.

Now our Dr Diesel is a thoughtful guy. As much as he didn't want to admit it, the fellow pretty much had it nailed. Oh, sure, a guy who sails in the Caribbean may be luckier, but a guy who moors in a harbor littered with lobster traps like Round

Pond, ME has a good chance of getting his prop tangled in pot warp and ruining his ZF/Hurth in only a season or two. (That must be why we ship a lot of gears to Maine, maybe 3 or more per week in-season.) However, generally speaking, the average sailor gets about 1000 hours out of his Hurth marine gear.

Dr. Diesel is also a New Englander. He figures that paying \$1 an hour for anything is too much money. So, he came up with four recommendations that we think will cut that dollar an hour figure in half. They are all very inexpensive and easily installed by the average Hurth marine transmission owner.

1) Run a Good Synthetic Fluid. To give your ZF/Hurth a fighting chance, run a high quality synthetic ATF. Both Red Line and Mobil1 are good choices. Or, go all the way and run our superior Foley Hurth Hytork fluid. Good synthetic runs cooler, lasts longer, and is more forgiving of extended oil change intervals. Spending a little bit of money on a quality fluid is a no brainer. See [Tech Tip # 39, Hurth Marine Transmissions, The Ins and Outs of Basic Service](#) (insert HTML here) for a chart listing the fluid capacity of specific ZF/Hurth marine transmission models. Not only should you run a good fluid, you should



change it frequently. Let's keep in mind that these Hurth gears don't have oil filters to trap sediment and debris, so a short oil change interval is important.

2) Use an Oil Cooler. Cool oil is happy oil. An oil cooler will increase the capacity of your ZF/Hurth gear to handle torque and will significantly extend its life. If you are running a HBW100 and add a cooler, your Hurth now has the same torque capacity of a HBW150. This should be of particular interest to Perkins and Westerbeke owners running the Perkins 4108/Westerbeke 40 marine engine with an under-spec'd HBW100, yacht clubs with inexperienced launch operators, and anyone who would like to get longer life out of their Hurth. Installing an oil cooler on your Hurth marine gear has a very quick payback. The modest cost is more than made up in longevity.



3) Step up to stainless. For people who already have an old-style aluminum cooler, consider stepping up to our new stainless steel oil coolers. We are now making stainless steel coolers for the Hurth marine gear that will not rust, rot or corrode, ever. They are so good; you can take the cooler with you when you change boats! (Yes, one cooler fits all the small Hurths.) Our new stainless oil cooler for the Hurth is significantly larger than the one Westerbeke uses and because of this it cools better. Installation is simple. You just bolt the cooler to the four drilled and tapped 8 mm holes that already exist in your Hurth's case and run a water line to the cooler and back out again. The cold seawater cools the surface of the case. Our stainless steel cooler kit even includes a container of our Hytork Fluid and the four bolts you will need.

4) Install a Flex Coupling. One of the best things you can do to protect your engine/transmission is to install a flex coupling between the output flange on your Hurth and the propeller shaft flange. The idea is that if you hit underwater obstacles, the flex coupling will break the connection between the prop shaft and your drive train. It serves in other words as a sacrificial link, protecting a very expensive engine and transmission. Take a look at [Tech Tip # 27, Marine Coolers and Couplings \(insert HTML here\)](#) for more info on flex couplings.



There you have it Dr Diesel's tips on how to cut in half the operating costs of your ZF/Hurth transmission. Email our Dr Diesel directly at DrDiesel@FoleyEngines.com for more information or call us toll free at 800.233.6539. All in all, Foley is different: we are a 97 year old, three generation family firm that takes tech support seriously and wants to help.



Best Wishes,

The Foley Engines Team
Info@FoleyEngines.com
Quality Since 1916!
800.233.6539

P.S. If you would like more information about your Hurth gear, we have Hurth Workshop Manuals ready to ship. Call us toll free at 800.233.6539 to order.