

ZF

ZF 63A Gear Question

Hello:

Officially at pleasure duty rating, the ZF 63A has a maximum 363hp at 3800 RPM. The gear itself has a maximum RPM of 5,500.

ZF is pretty conservative about their ratings, but I don't think the gear would last long at 550HP and 6000 RPM. I think ZF is about 20% lower than the actual rating of the gear, but ZF would not admit this and it would void warranty.

If you went with a ZF85A gear it would be able to handle the horsepower and the torque, but the maximum RPM is 4500 RPM.

I think the 6000 RPM is going to be an issue. Most gears are not designed for this type of speed. Twin Disc gears are in the 5000 RPM range. Borg Warner gears are in the 4500 RPM and they couldn't come close to handling the HP or the torque.

The trouble is that they can't handle the cooling at high RPM. The pump can only work over a relatively small range.

I know of no way to rebuild this gear to handle the extra load. But just for fun I will send your E-mail and my response to our local transmission god and he might have an idea for us.

J.D.

Unique solution ID: #1063

Author:

Last update: 2015-03-10 15:25