

ZF

Volvo 165 (1000 HP), ZF or Twin Disc Gear similar to ZF 550A Question

Howdy JD,

I called you regarding a freewheeling screw (ZF550A) while the other engine/screw is rotating approx. 4.5 knots for about an hour. I called the ZF # you gave me and talked to a service technician he said It most likely did not cause any damage in an hour, after 8 hours it might be a different story.

Thanks for your help

With Best Regards,

J.

Hello J:

Attached is what I found in a Volvo manual for a big Volvo Penta 165 (1000 HP) type engine. This engine came with either a ZF or a Twin Disc gear similar to the size of the ZF 550A.

I think it shows, as we all expected, that you did not do any harm to your gear by letting it turn freely for an hour. I called ZF down in Florida this morning and Don (who is our rep guy) thought so to. He did put me on hold and called their tech department and they confirmed it as well.

On the other hand, if you do it longer, it might damage the clutch packs. You have three oil systems in the gear. You have the system that pushes the clutches together (or helps the spings pull them apart) which runs at about 220 psi. Then you have a running oil system that lubricates the bearings and such that runs as about 70 psi when the gear is turning. Then you have the lube oil system that lubes the gears and stuff which runs about 3 psi. So when you are freewheeling you are covering the lube system as the gears pull up the oil.

What this means is that Dave does not owe me a meal nor do I owe him one - damnit.

Just for fun, I included the ZF550 shop manual (above) so you can take a peek and see if the trouble shooting bit in the shop manual helps you at all.

Almost always, when these bigger gears fail, it is because of overheating - either the cooling water failed or the cooler failed or an oil line blew.

Thank you and please don't hesitate to contact us if you need any more information or would like to place an order.

J.D.

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