

## ZF

**Good evening I have an old Hurth gearbox hbw 100 or 125 (zf10m or zf12m) with a ratios of A=2.14 and B=1.95, the Nr is: 21-47197. Would you be able to confirm from that information if I have the ZF10M or ZF12M please. It is fitted to a single cylinder engine that turns the wrong way, as in when looking at the front of the engine the flywheel goes anti clockwise. The gearbox is currently working great and I have no problems with it, however.... Would it be possible to lower the ratios to something like A=1.5 and B=1.4, would you be able to supply the parts and guidance if for this. Could my gears be changed to make this work or do ZF make the gearboxes with a similar ratio, Many thanks Cheers Nick**

Hello:

The HBW 100 is now the ZF10 which ZF Marine no longer manufactures. They have sold the rights of the ZF10 to a company that still makes them, but they are pretty pricey so we rarely sell them. The ZF10M does come in a 1.48:1 ratio.

The ZF12M is a tiny bit bigger so most times we replace the ZF10 with the ZF12M, but it is only offered in the ratios 2.136 and 2.632. Given your ratios of 2.14 and 1.95 your original gear is a ZF12M.

So if you want to have a lower ratio you would have to go with the ZF15M which has a 1.56:1 ratio. It is a bit bigger again, but most times it is possible replace the ZF10 or the ZF12 with the ZF15M without too much trouble.

On our website [marinepartsexpress.com](http://marinepartsexpress.com) in the ZF section we have the bulletins for all three of these ZF gears so you can see the differences in sizes.

The counter clockwise flywheel is standard direction. So you couldn't change the ratio of your ZF12M to a smaller ratio as the lower ratio gears are not offered. You could swap over to a ZF15M if you wanted to and sell your ZF12M out in the big world.

Out of curiosity why do you want a lower ratio? Going from 2.14 to 1.5 would speed up your RPMs quite a bit (30 percent faster) and, depending upon your engine HP (torque) you may not be able to prop it large enough to take advantage of the

speed.

Hope this help.  
J.D.

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Author: Nick  
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