

X30 GEARBOX VENTING

The vent fitting onto the X30 crankcase is provided because the gears compartment (like all the gears compartments) need to be vented.

The air contained into the gears compartment is heated by the aluminum walls, by the oil and by the gears themselves, as all these parts are heated up during engine operation. As a result, we will have pressure into the compartment when the engine is warm.

Such a pressure can be further increased by the gas eventually leaking from the crankcase during the pre-compression peak, via the crankshaft oil seal.

If the compartment is sealed, the pressure cannot be exhausted and if it increases finally will leak from the 2 oil seals or from the gasket.

The pressure can leak back to the crankcase when we have depression there, and such a leakage causes the oil of the gears compartment to be delivered into the crankcase and burned.

We recommend connecting a short vertical pipe to the fitting and putting a typical small collector tank above. This way, during the low speed, the oil eventually wasted can come back to the gears compartment, or at least when the engine is switched off.

Suggestions:

1. In my vision this should not be a scrutineering problem. There are no advantages/disadvantages from a performance point of view by venting or sealing the gears compartment. It is rather a reliability/functioning problem.
2. The best solution is not to exceed the prescribed oil quantity in the compartment - but check it frequently.

With an exaggerated quantity you have higher temperatures in the crankcase because oil causes friction, so more pressure in the compartment and more oil wasted from the vent,

I recommend to use good gearbox oils like ELF HTX 740 (which has spec SAE 75W for gearboxes, but it's really fluid and with very good lubrication properties).

Don't use 4t motor oils which are too viscous, and don't use ATF oils which are fluid but have ZERO lubrication properties.

Best regards,

Andrea Bossaglia, Head Engineer

