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## DOES YOUR DIESEL ENGINE SMOKE?



We have all seen smoke coming from a well used diesel engine at some time, be it from a boat, truck, generator, etc. Do you know what that smoke means? Here are some reasons why your diesel engine may be smoking

- Black smoke = Unburned Diesel
- Blue smoke = Engine oil being burnt.
- White smoke = normally 'steam' which means water is vapourising! If it is white 'smoke' then it could be as a result of low engine temperature. White Smoke will smell of unburned diesel - White 'Steam' will not!

### **The exhaust smoke coming out of your diesel engine can tell you what's happening inside your engine!**

We must first of all assume that your engine is running! The colour and characteristics of the smoke emitted will do much to tell you either what is wrong with your engine, or what will need attention in the

not too distant future!

All diesel engines show a little bit of black smoke when accelerating. This is normal. It takes a little time for the engine system to develop the RPM and necessary power to use/burn all the fuel that is being fed to it! This is not a smoky diesel engine. If there is a 'lot' of black (or other coloured) smoke during acceleration, then there is probably something that needs to be put right!

### **There are other reasons why you can end up with a smoky engine.**

If the white smoke is 'steam' than it is almost certainly a damaged head gasket that is allowing water to seep into the engine to get 'boiled'. This could be an indication that either the engine block or the cylinder head are warped causing the gasket to fail.

If your smoke problem is blue! It is a sign that your engine oil is being burned. If the blue smoke is mainly right after start-up, but then subsides after a warm running of the engine, it is probably worn valve guides. The oil seeps down slowly past the valve guides overnight or whenever, and a little is then 'available' for burning in the system! If this is the problem, then the oil will be burned off quickly during start up. If you see blue smoke constantly when running you most probably have a problem with your piston rings, maybe the cylinder liners are worn or maybe both! Either way, these indicate the need for a major overhaul, involving taking the engine apart.

Worn valves or valve guides can also result in continuous black smoke as the wear will not allow the proper compression to be created in the cylinder resulting in unburned fuel being passed in to the exhaust system. This can be seen further through compression testing of each cylinder.

Of course, don't forget to check the condition of your air intake filters, injectors, engine timing, etc. before panicking.

Any work required to correct these problems can be carried out at AIM for General Engineering in our workshop staffed by qualified and experienced technicians. The workshop is fully equipped with the machines necessary to carry out cylinder head and engine block grinding, valve and valve guide grinding and re-boring of the cylinders to insert oversized gas rings or replacement piston liners.

Call us on **(002) 017 591 9 591** for more information.

AIM for General Engineering also offer many other mechanical engineering services, some of which are listed below...

- grinding of the bearing seats on camshafts and crankshafts ready for the installation of new shell bearings
- regrinding of valves and valve seats to ensure gas tight fit and effective operation

- vertical and horizontal milling of components to ensure flat, true surfaces
- re-boring of engine block piston sleeves ready for the installation of new liners
- horizontal boring for camshaft and crankshaft bearing alignment
- turning and grinding on propeller shafts to ensure correct balance and straightness
- knowledge and experience in the repair or maintenance of suspension systems for boat engine/gearbox/driveshaft configurations
- general cutting, welding and fabrication
- readily available stock of up to 95% of all spares for Perkins engines (typically used for marine generators)

Contact us on **(002) 017 591 9 591** or come and see us (map below) to find out what how we can help you.

### Where are we located?

Plot 462, 464 & 466, El Herafyin Area  
(Behind Hurghada Airport)

