CB(1)631/98-99

LETTERHEAD OF ENVIRONMENTAL SYSTEMS (FAR EAST)LTD.

C/O Open University

For the attention of Dr. Gordon Maxwell

Date: December 1st 1998

Dear Dr. Maxwell

Re: Diesel emission

With reference to the radio 3 broadcast wherein you gave your support to the promotion of LPG fuel use in Hong Kong for the reduction of air born pollution

I think it is generally known and accepted that particulate emission from diesel engines can be due to poor maintenance and/or poor fuel quality. The mechanics of the cause of the process may not be as well known but should be apparent that unspent fuel (fuel not fully combusted) will be exhausted. Routine regular servicing will, to a certain extent balance the fuel delivery in accordance with the pump and engine condition at that time for good motor operation. Unfortunately wear and tear from running use, soon changes the status quo and increases to emission will be observed.

The amount of emission and particulate can be considered directly related to the amount of non combusted fuel. The resultant problem with atmospheric pollution is obvious by the clarity of air we daily observe. It is laudable that attention is now brought to bear on a positive action in Hong Kong to make improvements.

Your, and legislator support for introduction of LPG fuel for vehicles will undoubtedly make a significant improvement once implemented. Perhaps an even longer term solution will be the “electric vehicle”. As mentioned when we met recently, there is a battery under development using aluminium as a basis - purportedly with 20 times the capacity size for size of conventional types. In addition gearless and clutchless transmission development underway in the UK will eventually provide environmentally clean efficient transportation.

These are no doubt, all long term solutions. Even for LPG, with the best will in the world, will take many months to establish the associated infrastructure required for distribution, safety etc and of course for engine conversion.

Some years ago whilst researching improved incineration of solid waste, I was introduced to a product which may help to fill the time gap to full introduction and usage of LPG. This is an “add on” device fitted to a diesel fuel system to improve engine efficiency and combat pollution. The unit once installed and set up, seldom requires attention and self regulates independently adjusting for the wear and tear of the delivery pump.

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Accordingly as promised, please find enclosed sample of the Clean-Burn unit. This size is suitable for minibus to medium lorry use to significantly reduce particulate emission - smoke belching.

The Clean Burn unit is designed to regulate fuel pressure delivery to the injector nozzles as required by the motor loading. By this regulatory process a better vaporisation of the fuel occurs in the cylinder with a much improved combustion as a result.

The improved combustion, causes less wear on the engine and a better running efficiency is achieved requiring less fuel (up to 20% reduction is possible).

For practical purposes the claimed payback period provides an incentive, to the diesel owner to install and use the Clean Burn unit, to make a saving on fuel costs. Naturally the use of the vehicle and mileage will dictate the achievable saving long term benefit. The basic principal is that both the operator and the environment gain.

The question of fuel quality is not so easily solved. Legislation should control contraband but it must be difficult to operate for lorries and trucks crossing the boarder from China into Hong Kong with a full tank of low quality fuel purchased in China.

Under our “Environmental” auspices we are currently developing a MagnetoHydroDynamic product (we intend to use for water treatment) which in theory polarises ions in liquids. It may be that experimentation will show improved burning characteristics for low quality fuel subjected to a magnetic field where molecules have been aligned prior to ignition. This is unsubstantiated and a somewhat unscientific description, but should be easy to demonstrate by fitting coil around the fuel pipe. Engine revolution change should noticeably increase on tick-over between without with the magnetic field switched on.

It would be very nice if you can use the above to assist Hong Kong to reduce atmospheric pollution. Please let me know if I can be of further assistance.

Yours Sincerely

Paul Storer