

Additional Information

Exocet Diesel Power Restorer

Introduction

Exocet Diesel Power Restorer is a highly concentrated diesel deposit control additive formulated to break down hard deposits (lacquers and varnishes) in the engine's fuel supply and delivery system and within the combustion chamber.

The deposits build up over time, notably within fuel injectors, and act to restrict fuel flow severely especially on newer engines with precision-built injectors having tight tolerances. This is an increasingly common phenomenon, notably in high pressure common rail (HPCR) engines and as the quantity of FAME (biodiesel) in the fuel increases. The result is an appreciable loss of available power leading to overall vehicle inefficiency. Diesel Power Restorer is intended to be used as a 'single hit' product with one tank of fuel.

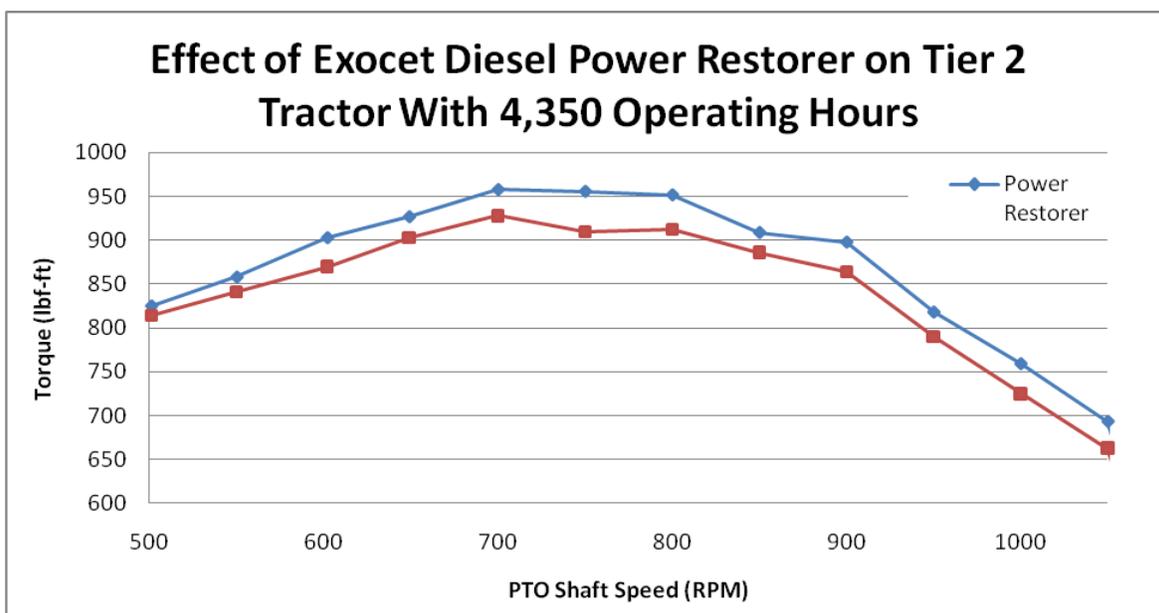
When to use Diesel Power Restorer

Diesel Power Restorer should be used when:

- ❖ Power delivery has noticeably reduced
- ❖ Power surges occur sometimes with excessive smoking
- ❖ Engine 'runs rough' and/or misfires at idle
- ❖ A fast-acting solution is required with negligible vehicle downtime

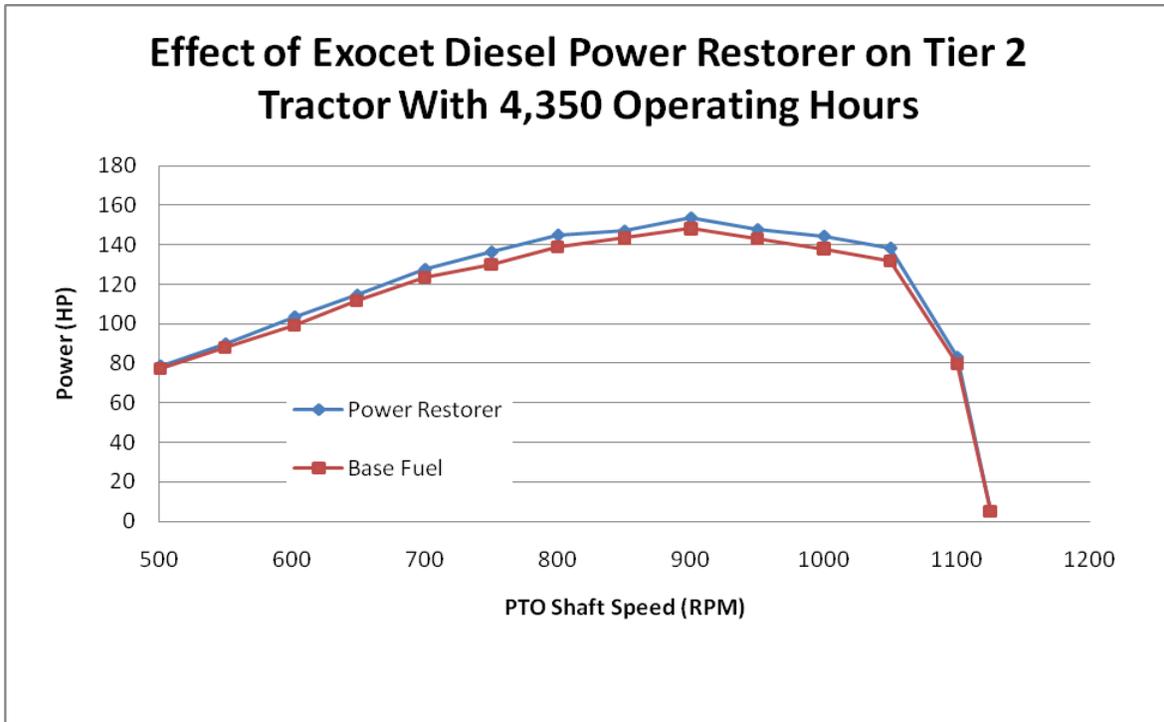
Empirical data – off-road

The graphs below show the effect of Exocet Diesel Power Restorer on two different tractors. The first is a ten-year old vehicle with 4,350 operating hours and a standard injection system. The second is a five-year old vehicle with 3,155 operating hours with an HPCR injection system. Power and torque at the PTO shaft were measured using a dynamometer test (engine speed = 2 x PTO speed).



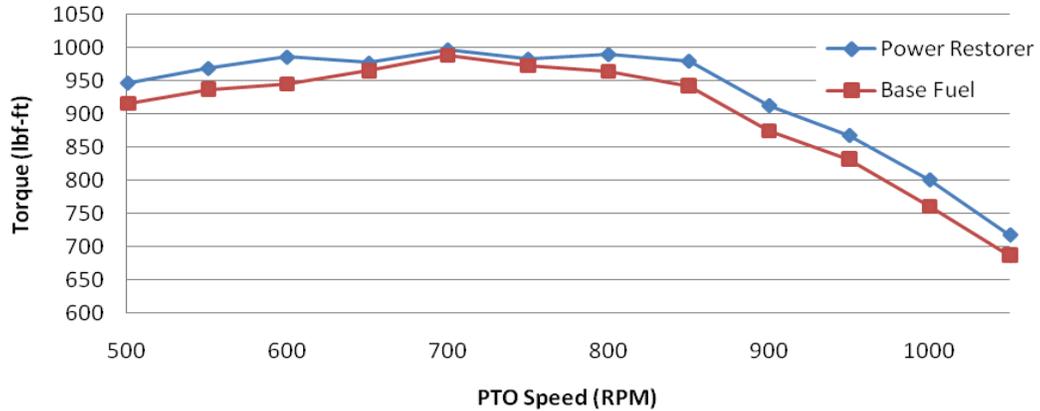
The graph above shows that torque was immediately increased over the range of operating speeds, with an average 3.5% increase and peaking at 5.1%.

The graph below for the same tractor on the same dynamometer test shows the rated power at the shaft. Again consistent improvements through the speed range are apparent. These improvements averaged 3.6% with a 4.9% peak.

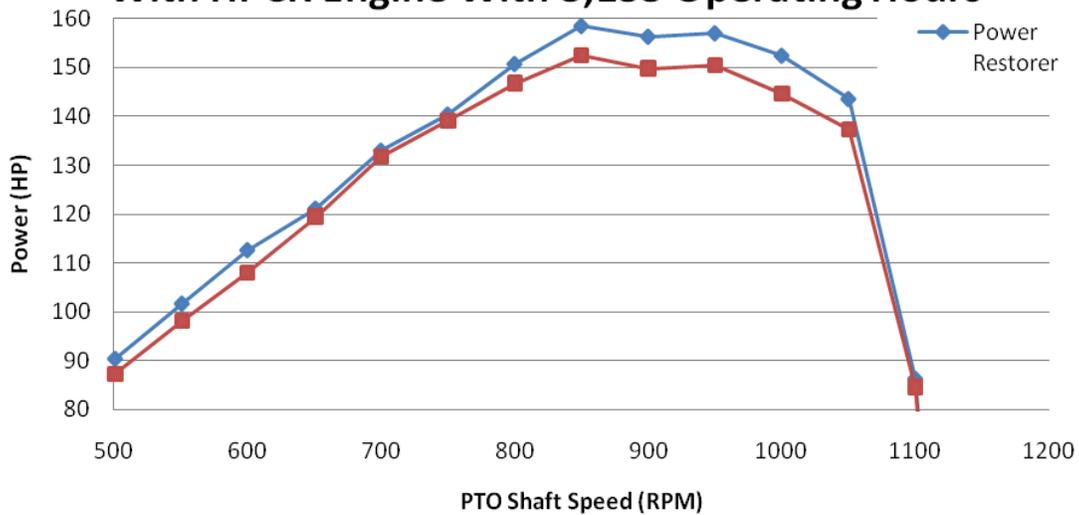


For the second tractor operating with a common rail injection system the equivalent graphs are as follows

Effect of Exocet Diesel Power Restorer on Tractor With HPCR Engine With 3,155 Operating Hours



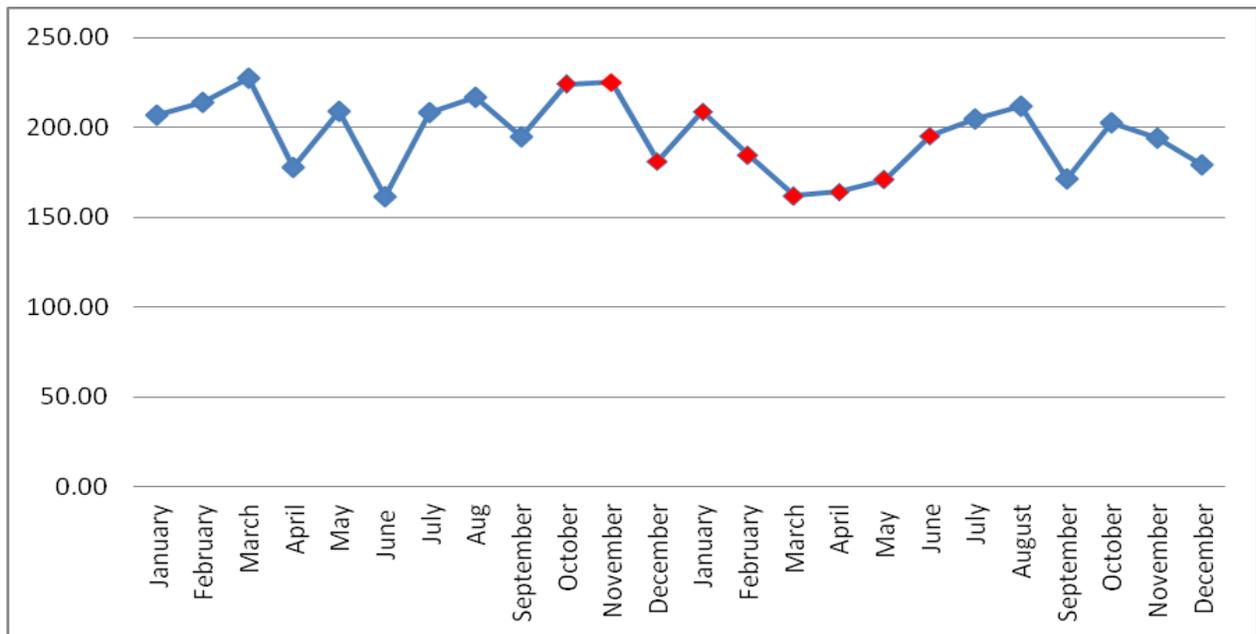
Effect of Exocet Diesel Power Restorer on Tractor With HPCR Engine With 3,155 Operating Hours



Again this was an instantaneous dynamometer test with minimal run time after additive dosing. The torque response increased by an average of 3.2% with a 5.4% maximum. Power output averaged a 3.1% increase again with a 5.4% peak improvement across the operating range.

Empirical data – on-road

More recently, FAST has worked with a national agricultural haulier to trial a combination of Exocet Diesel Power Restorer and Exocet Gas Oil Extra. This was a two year exercise covering fourteen vehicles designed mainly to assess the fuel economy benefits of using the fuel additives.



The y-axis represents cost per payload-tonne (£).

Diesel Power Restorer was added in the first October and again one month later. Gas Oil Extra was added continually from October for a period of nine months at which point no additives were used until the end of the trial.

The statistical significance of this trial was >83% i.e. the level of confidence that the additive combination was causing the changes is very high.

The fuel economy benefit over the duration of the trial was 4.6% and carryover effect of the additives was observed.

At the time of writing a second trial is underway with a lubricant blender who is using the same additive regime in a road tanker. It is early days but similar fuel consumption benefits are being observed. Of additional significance to this user is the carbon footprint of its operation and in time it is expected that an overall reduction in CO₂ emissions resulting from additive use will be reported.



What This Means For The Diesel User

Operating problems associated with internal injector deposits and general lacquering within the engine can be quickly and effectively countered with a single dose of Exocet Diesel Power Restorer. Any recurrence of the problems can be inhibited with regular use of Exocet Diesel Supreme.

Furthermore, trial data shows that vehicle performance can be significantly enhanced in terms of torque and power output as well as overall fuel economy by incorporating a suitably designed fuel additive dosing regime into routine vehicle operation.

Note. FAST strongly recommends that Exocet Diesel Power Restorer is added directly to the vehicle fuel tank and is not added to bulk fuel storage.