



## The Adastra DPF

# Active regeneration diesel particulate filter system Product Information Sheet

### Introduction

The Adastra — diesel particulate filter system is a leading technology in the field of retrofit emission abatement technology. This patented technology, developed by Adastra — Octel Exhaust Systems Ltd is manufactured under license and utilises Satacen 3<sup>®</sup> fuel borne catalyst from Innospec Specialty Chemicals.



### Accreditations

- ◆ Suitable for retrofit to meet the requirements of the London LEZ (see LEZ guidance leaflet)
- ◆ VCA certified for the RPC Scheme (Reduced pollution certificates possible on qualifying vehicles)
- ◆ VERT approved

### Summary Features

- ◆ Typically removes 90 — 95% of the total mass of particulate matter
- ◆ Reduces the total particle count by 99% (including sub micron particle sizes)
- ◆ No negative impacts on other pollutants such as NO<sub>2</sub> or total Oxides of Nitrogen (NO<sub>x</sub>), - available with base metal coated filter options to reduce CO, HC and NO<sub>x</sub> (inc NO<sub>2</sub>)
- ◆ Regeneration of filter ensured by two methods:-
  - ◆ Injection of a fuel borne catalyst which lowers the ignition temperature of the collected soot — regeneration is normally triggered by duty cycle
  - ◆ Active regeneration — for prolonged periods of low temperature operation, back pressure monitoring triggers a heat source to induce regeneration
- ◆ Suitable for low temperature duty cycle applications, such as refuse collectors, construction vehicles and multi drop delivery vehicles.

Innospec Manufacturing Park, Oil Sites Rd, Ellesmere Port, Cheshire, CH65 4EY

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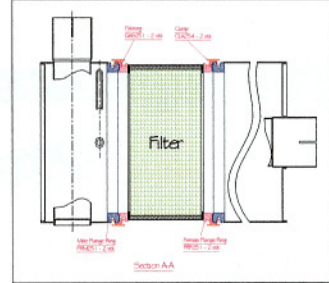
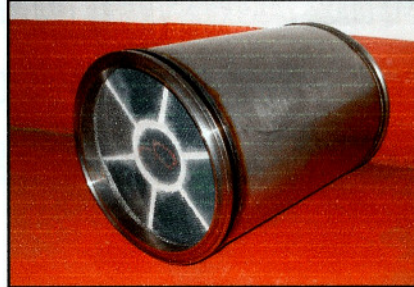
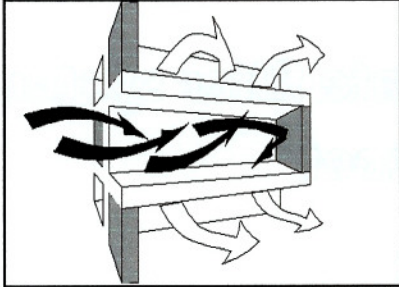
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## Description

The Adastra DPF is a modular system comprising:

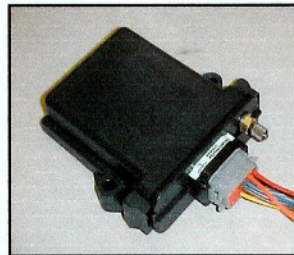
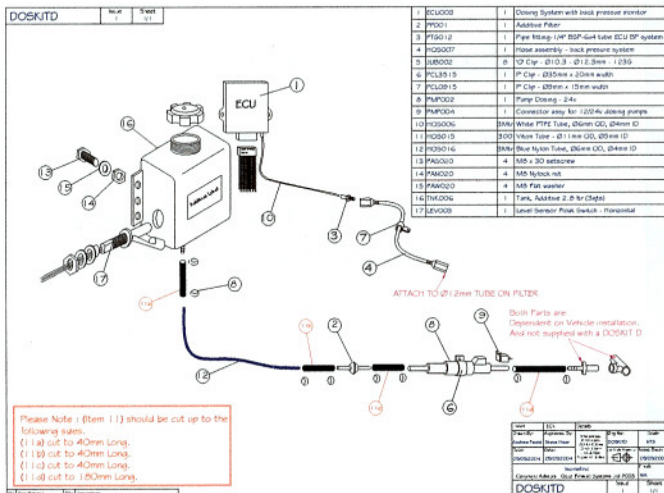
1. a rugged silicon carbide filter
2. Adinject™ - additive injection, monitoring and active regeneration control system
3. Satacen 3® fuel borne catalyst



### 1. Filter

A highly efficient and thermally robust "wall flow" type filter of silicon carbide construction, is housed within a modular stainless steel silencer, which may be mounted horizontally under the chassis or vertically as part of an Astra stack exhaust system.

Catalysed soot loaded gas flows through the channels of the filter. The porous ceramic walls allow gas to pass through, retaining only the soot (particulate). Operation of the vehicle will normally produce sufficient temperature to periodically ignite the collected soot, thus lowering back pressure and "regenerating" the filter.



### 2. Adinject — dosing and control system

The AdInject system, comprises a storage tank, injection pump, electronic control unit, and all necessary installation fittings. The system monitors performance and controls the injection of fuel borne catalyst into the fuel system prior to combustion. Combustion of the catalyst in the fuel mixture conditions the soot retained in the filter, allowing low temperature ignition. The AdInject system also monitors filter back pressure conditions, energising glow plugs fitted in the filter module, when preset conditions are reached.

### 3. Satacen 3® — Fuel Borne Catalyst (FBC)

FBC is stored in a vehicle mounted tank, which is provided as part of the Adastra DPF system installation. FBC is consumed at approx 1 litre per 2200 litres of fuel consumed. FBC tanks normally provide up to 6 months usage, between refills. Satacen 3® is available in convenient refill container sizes.



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