



# Paisley News



Issue 3 21/04/08 **J . E . P A I S L E Y & C O L T D**

**For all your Diesel Fuel  
Injection and Turbocharger  
Requirements**

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Oamaru

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## VE Top cover seal kits available \$6.50 + GST

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After a busy February, displaying our services and meeting Capricorn members during the southern road shows at Cromwell, Invercargill and Dunedin we should by now have sent out everything we promised. If we haven't, please contact us and we will get it sorted. A reminder that free freight and lollies applies to each pump, injector and turbo job. We will cover the return freight and credit you the cost of freighting the job to us.

Our web site is now up and running. The web address is [www.jep.co.nz](http://www.jep.co.nz) here you will find a Capricorn link for our Capricorn customers and a JEPCO link for general information, news and specials. The other two links are for customers with small vehicle workshops and heavy vehicle and tractor workshops. All but the JEPCO link are password protected. User name and passwords will go out to all our customers over the next few weeks. Phone or Email us at [info@jep.co.nz](mailto:info@jep.co.nz) if you haven't received yours. If you Email we will need your Capricorn number. We hope the information on these links prove useful and beneficial. If you require more information than what you find on the web site, contact us and if it's possible we will endeavour to upload it. If there's anything you would like to see added let us know.



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**Back Page.** On the back page we outline the basic procedures for determining if one or more common rail injectors are faulty while still fitted in the engine. This is meant as a brief guide only. More information is available on our web site. **The relevant engine manufactures safety and test procedures should always be consulted and adhered to.**

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### Exchange pumps Available for

DE10 John Deere — Class

VP44 fitted to Nissan—MAN—Isuzu — Cummins

Japanese pumps available for WL Mazda - Ford Courier—4M40 Mitsubishi - Toyota 1HD T

Nissan Covic TD27Ti

Others available, ring us for details with the vehicle model and engine type

**Authorised Service to the world's leading Diesel Fuel Injection systems**



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**Diesel systems OAMARU**

Injectors with excessively high return quantities may have the following effects on engine performance.

- Poor engine starting
- No engine starting
- Engine cuts-out
- Reduced power output (limp-home or fail safe mode)
- High fuel consumption

To carry out the test the return pipes are disconnected from all injectors. Pinch off or plug the return pipes to stop fuel escaping. Connect the return quantity measuring graduates to each injector. The test can be carried out with the engine running or in the case of an inoperative engine at engine cranking. Generally the maximum permissible return quantity is 3 times the lowest measured return quantity. Start the engine and run until top mark is reached in one of the graduated beakers. Switch off the engine immediately.

#### Example 1

Injector 1 29ml

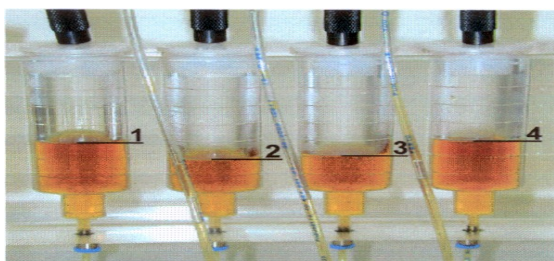
Injector 2 21ml

Injector 3 21ml

Injector 4 29ml

Max permissible return quantity:  $21\text{ml} \times 3 = 63\text{ml}$

All injectors OK



#### Example 2

Injector 1 53ml

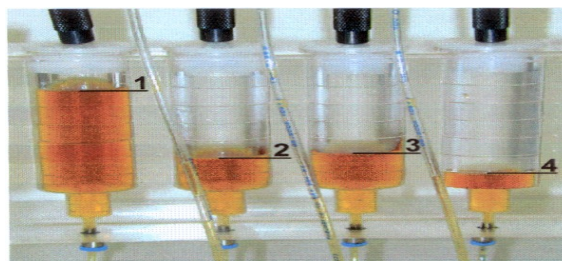
Injector 2 21ml

Injector 3 21ml

Injector 4 13ml

Max permissible return quantity:  $13\text{ml} \times 3 = 39\text{ml}$

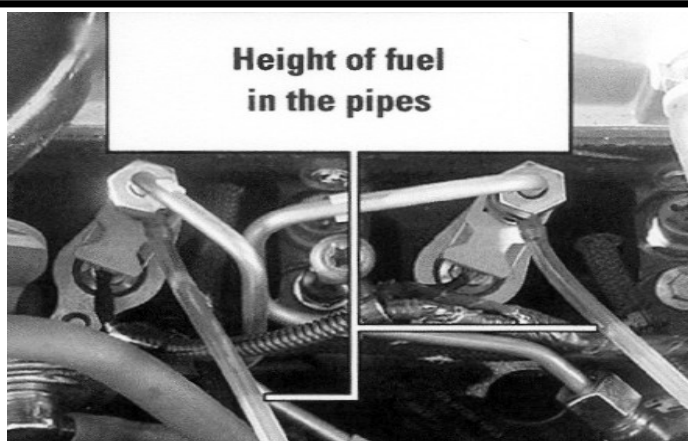
Injectors 2,3,4 are OK Injector 1 is defective



In the case if an engine not starting, it is only possible to measure the static leakage, ie no manifold closed injectors.

For all applications use the same procedures to connect the leakage return measuring containers. Disconnect the IMV on the pump (brown connector) and the connectors on the injectors.

Activate the starter motor for a maximum of 5 seconds. **Note:** The engine speed under starter motor activation must be higher than 200rpm for the test to be valid.



Evaluate the return height in each of the pipes. Any injector with an excessive return should be considered as faulty and should be replaced or checked on the EPS200.

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