



Marine

Application Bulletin

Fuel Filter Helps Engine Maker Meet Fluid Cleanliness Standards

Application

The new generation of high pressure common rail (HPCR) injection system performance standards demand a fuel cleanliness level corresponding to ISO Code 12/9/6 (ISO4406), in order to:

- Protect common rail Fuel Injection Equipment (FIE)
- Prevent component wear
- Maintain precise injection control timing and volume
- Increase mean time between fuel system component service intervals



Marine Diesel Engine

Problem

A major marine diesel engine manufacturer contacted Pall for help after experiencing difficulties in meeting these cleanliness standards using filter from other (non-Pall) manufacturers.

Solution

The existing filters were replaced with a Pall disposable filter element utilising a polymeric fibre construction. Fibre size and spacing is varied to achieve a tapered pore media structure that captures a wider range of contaminant sizes. The customized filter element design is housed in a standard Pall 8900 series filter bowl, and fitted upstream of the common rail injectors. This filter solution is available in 2 standard lengths; 13" (330 mm) or 16" (406 mm)



Assembly and Element

Results

With the Pall filter element installed, the system cleanliness level improved over ten times from ISO 15/12/11 to exceed the FIE suppliers specification of ISO 12/9/6. The measurement was done using the Pall on-line automatic particle counter.

Pall's proprietary melt blown technologies, ensures that the filter element achieves the required downstream fluid cleanliness, with typical incoming diesel fuel quality and under engine operating conditions.



Pall monitor for measuring fluid cleanliness

Filtration. Separation. Solution.SM



Pall Corporation

Pall Marine

New Port Richey - USA
+1 727 849 9999 telephone
+1 800 933 3111 toll free US

Portsmouth - UK
+44 (0)23 9230 2374 telephone
+44 (0)23 9230 2509 fax
aerospace@pall.com



**ENABLING A
GREENER
FUTURESM**

Visit us on the Web at www.pall.com/marine

Pall Corporation has offices and plants throughout the world. For Pall representatives in your area, please go to www.pall.com/contact

Because of technological developments related to the products, systems, and/or services described herein, the data and procedures are subject to change without notice. Please consult your Pall representative or visit www.pall.com to verify that this information remains valid.

© Copyright 2011, Pall Corporation. Pall, **PALL** and Aquasep, are trademarks of Pall Corporation. ® indicates a trademark registered in the USA. ENABLING A GREENER FUTURE and *Filtration. Separation. Solution.SM* are service marks of Pall Corporation.

Filtration. Separation. Solution.SM

AEENGEN

Printed in the UK.

December 2011