### LAB TEST RESULTS



### **Lubricity Test of Diesel with Xp3D**

# **Evaluation of lubrication improvement on Diesel low in sulfur when treated with Xp3D**

### **Test**

The HFRR (High-Frequency Reciprocating Rig) was done accordingly with ASTM method D6079.

### Test done by:

FOI Laboratories 901 W. W. Evergreen Blvd Suite 100 Vancouver, WA 98660, USA www.foilabs.com

### Results

Description	ASTM	Diesel Base	Diesel + Xp3L 1:4000 (2)	
Distillation - 50%	D86-08a	275.66	273.89	°C
API Gravity by Hydrometer	D1298-99	39	39	
Cetane Index	D976-01	55.853	55.53	
Lubricity, HFRR @ 60°C (*)	D6079	360 (1)	300 (1)	micron

### Notes

- (1) The result shows the scar (in microns) that occurs when you use the fuel. A lower number (in this case 300) reflects a better rate of lubricity.
- (2) The Xp3 additive added to fuel based was 1 part of Xp3 for 4000 parts of diesel fuel (ULSD)

### **Attachment**

Laboratory report number 42002035 (Diesel fuel without additive) Laboratory report number 42002036 (Diesel fuel with Xp3)

### **Date of the test report:**

May 4, 2015

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Certificate of Analysis Laboratory Number: 42015035

### WITHIN LIMITS

Mauricio Deicas Mauncio Deicas XP Lab, Inc. 946 W. Hawthorn Street San Diego, CA San Diego US (619) 233-3111 Sample Taken From: Sample ID: PO: WO:

No Additive CCOF

Sample Collection Date: Date Received: Date Released: Component Make: Component Model: Tank Capacity: Quantity in Tank Test Package Type of Fuel: Serial Number:

04/20/2015 05/04/2015

Diesel

Test	Limits	Methods	Sample Result
Distillation - 50%	report °C	ASTM D86-08a	275.56 °C
API Gravity by Hydrometer	report	ASTM D1298-99	39
Cetane Index	40 minimum	ASTM D976-01	55.853
Lubricity, HFRR @ 60°C	520 um maximum (micron)	ASTM D6079	360

Diesel #2 fuel has a 520 um maximum (micron)for Lubricity and Cetane Index has a 40 minimum.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

901 W. Evergreen Blvd Suite 100 Vancouver, WA 98660 Phone: 360-546-3835

## LAB TEST RESULTS





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Certificate of Analysis Laboratory Number: 42015036

### WITHIN LIMITS

Mauricio Deicas XP Lab, Inc. 946 W. Hawthorn Street San Diego, CA San Diego US (619) 233-3111 Sample Taken From: Sample ID: PO: WO:

1pp 4000 CCOF

Sample Collection Date: Sample Collection D Date Received: Date Released: Component Make: Component Model: Tank Capacity: Quantity in Tank Test Package Type of Fuel: Serial Number:

04/20/2015 05/04/2015

Diesel XP3-L

Test	Limits	Methods	Sample Result
Distillation - 50%	report °C	ASTM D86-08a	273.89 °C
API Gravity by Hydrometer	report	ASTM D1298-99	39
Lubricity, HFRR @ 60°C	report in (micron)	ASTM D6079	300
Cetane Index	report	ASTM D976-01	55.53

Note: Diesel #2 fuel has a 520 um maximum (micron)for Lubricity and Cetane Index has a 40 minimum.

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