

Test to determine the Cetane number increase obtained in ULSD when treated with Xp³D-C (Cetane Booster)

TEST LAB

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OBJECTIVES

Run a laboratory test to determine if Xp3D-C is capable of improving the Cetane number in ULSD - Ultra Low Sulfur Diesel low in Cetane. The test conducted was based on the ASTM D 6890 method.

TEST PROCEDURE

- A fuel sample of low sulfur fuel was obtained from Winnipeg, Canada which we will refer to as Base Sample
- We then sent 2 liters of the Base Sample and one 480ml bottle of Xp3D-C to FOI Laboratory.
- FOI Lab created 3 test samples based on what was received:
 - Base Sample
 - Base Sample + Xp3D-C (1 Xp3D-C to 4000 parts fuel)
 - Base Sample + Xp3D-C (1 Xp3D-C to 2000 parts fuel)
- The treated fuel was tested using the ASTM D6079/D613

TESTING METHOD

This test method measures the ignition delay and utilizes a constant volume combustion chamber with direct fuel injection into heated, compressed air. An equation correlates an ignition delay determination to cetane number by Test Method D613, resulting in a derived cetane number (DCN).

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LAB TEST RESULTS



RESULTS

Description	ASTM	Diesel Base Sample	Diesel + Xp3 1:4000 (a)	Diesel + Xp3 1:2000(b)
Cetane Number	D6890	41.5	46.2	47.1

APPENDIXES

- (a) Laboratory Report 70715038
- (b) Laboratory Report 70715037

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