

November 1988

SUMMARY OF E. W. SAYBOLT & CO., INC.
LAB REPORTS OF OMSTAR DIESEL FUEL CONDITIONER D-1280X,
DIESEL #2, k MIXTURES OF THE TWO

Following in a summary of E. W. Saybolt & Co., Inc., test report n dated October 28. 1988, on four samples. The diesel #2 was made by Mobil and provided by General Petroleum.

SAMPLE 1 - Diesel #2 (without additive)

SAMPLE 2 - Mixture: 1280 parts diesel #2 and 1 part
Omstar Diesel Fuel Conditioner D-1280X

SAMPLE 3 - Omstar Diesel Fuel Conditioner D-1280X

SAMPLE 4 - Mixture: same ratio as Sample #2

| | DIESEL #2 SAMPLE 1 | DIESEL #2 WITH D-1280X | | OMSTAR D-1280X |
|------------------------|-----------------------|---------------------------|----------|-------------------|
| | | SAMPLE 2 | SAMPLE 4 | SAMPLE 3 |
| CETANE NO. | 45.5 | 47.5 | 47.5 | |
| FLASHPOINT PNCC DEG. F | 150 | 150 | 150 | 230+ |
| METALS SPECTOGRAPHIC | | | | |
| IRON, PPM | | | | 0.60 |
| SILICON, PPM | | | | 0.22 |
| MAGNESIUM, PPM | | | | 0.016 |
| COPPER, PPM | | | | 0.017 |
| NICKEL, PPM | | | | 0.044 |
| CALCIUM, PPM | | | | 0.21 |
| ALUMINUM, PPM | | | | TR<0.01 |
| VANADIUM, PPM | | | | 0.069 |
| OTHER ELEMENTS | | | | NTL |
| LOSS ON IGNITION | | | | 99.99976% |

The 99.99976% loss on ignition means the total ash upon burning Omstar D-1280X was 2.4 ppm.

MAJOR TEST RESULTS

1. Adding 1 ounce Omstar Diesel Fuel Conditioner D-1280X to 10 gallons of diesel 12 (ratio 1:1280) raises the cetane number from 15.5 to 47.5.
2. The flash point is not changed by adding Omstar D-1280X to diesel #2 in the ratio 1:1280.
3. Omstar D-1280X has extremely small amounts of metals and is almost completely consumed in burning.

Sample designated as :
DIESEL #2

Identifying Marks :
LISTED WITH ANALYSIS

Submitted by :
GENERAL PETROLEUM
(CUSTOMER OF OMSTAR INC.)
Client :
OMSTAR INC.

TEST

METHOD
(ASTM)

SAMPLE NO. 1
DIESEL #2,
WITHOUT
ADDITIVE

CETANE NO.
FLASH POINT PMCC DEG. F

D613
D93

45.5
150

NOTES

- This laboratory report may not be published or used except in **full**. It shall not be used in connection with any form of advertising unless written consent is received from an **officer** of E.W. SAYBOLT & CO., INC.
- Results were based on **analysis** made at the time samples were **received** at the laboratory.
- Samples, if any, shall be retained for a period of 45 days unless a longer period is requested in writing.
- Sample nomenclature is designated by **the** customer.

MEMBERS ASTM-API-SAE

George Suenosa

E.W. SAYBOLT & CO., INC.

CUSTOMER
REF. NO(S) :NONE/

WILMINGTON LAB OFFICE

DATE : 10/28/88

LABORATORY NO. : 9105

INVOICE NO.:WC-14751A

DESCRIPTION

Sample designated as :
DIESEL #2 WITH D1280X

Identifying Marks :
LISTED WITH ANALYSIS

Submitted by :
GENERAL PETROLEUM
(CUSTOMER OF OMSTAR INC.)

Client :
OMSTAR INC.

ANALYSIS

TEST

METHOD
(ASTM)

SAMPLE NO. 2
DIESEL #2
(1280 PARTS)
+ 1 PART
1280X

CETANE NO:
'FLASH POINT PMCC DEG. F

| | |
|------|------|
| D613 | 47.5 |
| D93 | 150 |

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MEMBERS ASTM-API-SAE

This report is issued solely for the use of our customers and supplies only information they specifically requested. There may be other relevant information which has not been reported. Saybolt will not be responsible to third parties for the contents of this report or for any omission therefrom.

George Sweeney
E.W. SAYBOLT & CO. INC.

E.W. SAYBOLT & CO., INC.

CUSTOMER
REF. NO(S) :NONE/LABORATORY NO. : 9105
INVOICE NO.:WC-14751A

WILMINGTON LAB OFFICE

DATE : 10128188

| DESCRIPTION | ANALYSIS | | |
|---|--|--|---|
| <p>Sample designated as : OMSTAR DIESEL FUEL CONDITIONER D1280X</p> <p>Identifying Marks : LISTED WITH ANALYSIS</p> <p>Submitted by : GENERAL PETROLEUM (CUSTOMER OF OMSTAR INC.)</p> <p>Client : OMSTAR INC.</p> | <p><u>TEST</u></p> <p>FLASH POINT PMCC DEG. F</p> <p>METALS SPECTROGRAPHIC IRON, PPM</p> <p>SILICON, PPM</p> <p>MAGNESIUM. PPM</p> <p>COPPER, PPM</p> <p>NICKEL, PPM</p> <p>CALCIUM. PPM</p> <p>ALUMINUM. PPM</p> <p>VANADIUM. PPM</p> <p>OTHER ELEMENTS</p> <p>LOSS ON IGNITION</p> | <p><u>METHOD</u> (ASTM)</p> <p>D93</p> | <p><u>SAMPLE NO. 3</u> OMSTAR DIESEL FUEL CONDITIONER D1280X</p> <p>230 +</p> <p>0.60</p> <p>0.22</p> <p>0.016</p> <p>0.017</p> <p>0.044</p> <p>0.21</p> <p>TR < 0.01</p> <p>0.069</p> <p>NIL</p> <p>99.99976%</p> |
| <p>NOTES</p> <ul style="list-style-type: none"> - This laboratory report may not be published or used except in full. It shall not be used in connection with any form of advertising unless written consent is received from an officer of E.W. SAYBOLT & CO., INC. - Results were based on analysis made at the time samples were received at the laboratory. - Samples, if any, shall be retained for a period of 45 days unless a longer period is requested in writing. - Sample nomenclature is designated by the customer. | | | |

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George Sumner

E.W. SAYBOLT & CO., INC.

CUSTOMER
REF. NO(S):NONE/

LABORATORY ANALYSIS REPORT

WILMINGTON LAB OFFICE

DATE : 10/28/88

LABORATORY NO. : 9105

INVOICE NO.:WC-14751A

DESCRIPTION

ANALYSIS

Sample designated as :
DIESEL #2 WITH OMSTAR
DIESEL FUEL CONDITIONER D1280X

Identifying Marks :
LISTED WITH ANALYSIS

Submitted by :
GENERAL PETROELUM
(CUSTOMER OF OMSTAR INC.)

Client :
OMSTAR INC.

TEST

METHOD
(ASTM)

SAMPLE NO. 4
DIESEL #2
(1280 PARTS)
+ 1 PART
D1280X

CETANE NO.
FLASH POINT PMCC DEG. F

D613
D93

47.5
150

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MEMBERS ASTM-API-SAE

George Surencia

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