

## **OIL ANALYSIS RE**

### CONSTRUCTORS, INC 080545 Component

**Diesel Engine** 

MOBIL DELVAC 1300 SUPER 10W30 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

Metal levels are typical for a new component breaking in.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Rating Trend						NORMAL	
AL)		0eddi7	FedDIS	Sm2019 Apr2021	Mu2024		
SAMPLE INFORM	<b>NATION</b>	method	limit/base	current	history1	history2	
Sample Number		Client Info		SBP0005790	SBP11191031	SBP69230019	
Sample Date		Client Info		14 Mar 2024	15 Apr 2021	24 Sep 2019	
Machine Age	hrs	Client Info		773	588	450	
Oil Age	hrs	Client Info		185	78	113	
Oil Changed		Client Info		Changed	Changed	Changed	
Sample Status				NORMAL	NORMAL	ABNORMAL	
CONTAMINATIO	N	method	limit/base	current	history1	history2	
Fuel		WC Method	>5	<1.0	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	NEG	
Glycol		WC Method		NEG	0.0	0.0	
WEAR METALS		method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>100	87	29	▲ 84	
Chromium	ppm	ASTM D5185m	>20	3	1	2	
Nickel	ppm	ASTM D5185m	>4	<1	0	1	
Titanium				-	0		
	ppm	ASTM D5185m		0	0	0	
Silver	ppm ppm	ASTM D5185m ASTM D5185m	>3	0	0	0	
			>3 >20	-			
Silver	ppm	ASTM D5185m		0	0	0	
Silver Aluminum	ppm ppm	ASTM D5185m ASTM D5185m	>20	0 24	0 8	0	
Silver Aluminum Lead Copper Tin	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >40	0 24 0	0 8 0 1 0	0 9 1	
Silver Aluminum Lead Copper Tin Vanadium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >40 >330	0 24 0 2 <1 0	0 8 0 1 0 0	0 9 1 2 0 0	
Silver Aluminum Lead Copper Tin	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >40 >330	0 24 0 2 <1	0 8 0 1 0	0 9 1 2 0	
Silver Aluminum Lead Copper Tin Vanadium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >40 >330	0 24 0 2 <1 0	0 8 0 1 0 0	0 9 1 2 0 0	
Silver Aluminum Lead Copper Tin Vanadium Cadmium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >40 >330 >15	0 24 0 2 <1 0 0 0 current 54	0 8 0 1 0 0 0 0 history1 42	0 9 1 2 0 0 0	
Silver Aluminum Lead Copper Tin Vanadium Cadmium ADDITIVES Boron Barium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	>20 >40 >330 >15	0 24 0 2 <1 0 0 0 Current	0 8 0 1 0 0 0 0 history1 42 0	0 9 1 2 0 0 0 0 0 history2 46 0	
Silver Aluminum Lead Copper Tin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >40 >330 >15	0 24 0 2 <1 0 0 0 <i>current</i> 54 0 27	0 8 0 1 0 0 0 0 history1 42 0 36	0 9 1 2 0 0 0 0 0 history2 46 0 44	
Silver Aluminum Lead Copper Tin Vanadium Cadmium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >40 >330 >15	0 24 0 2 <1 0 0 0 <i>current</i> 54 0 27 1	0 8 0 1 0 0 0 0 <b>history1</b> 42 0 36 0	0 9 1 2 0 0 0 0 0 <b>history2</b> 46 0 44	
Silver Aluminum Lead Copper Tin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>20 >40 >330 >15	0 24 0 2 <1 0 0 0 <del>current</del> 54 0 27 1 552	0 8 0 1 0 0 0 0 <b>history1</b> 42 0 36 0 439	0 9 1 2 0 0 0 0 0 0 <b>history2</b> 46 0 44 0 556	
Silver Aluminum Lead Copper Tin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>20 >40 >330 >15	0 24 0 2 <1 0 0 0 <del>current</del> 54 0 27 1 552 1609	0 8 0 1 0 0 0 0 <del>history1</del> 42 0 36 0 36 0 439 1592	0 9 1 2 0 0 0 0 0 0 <b>history2</b> 46 0 44 0 44 0 556 1723	
Silver Aluminum Lead Copper Tin Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>20 >40 >330 >15	0 24 0 2 <1 0 0 0 <del>current</del> 54 0 27 1 552	0 8 0 1 0 0 0 0 <b>history1</b> 42 0 36 0 439	0 9 1 2 0 0 0 0 0 0 <b>history2</b> 46 0 44 0 556	

Sulfur	ppm	ASTM D5185m		3029		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	13	9	15
Sodium	ppm	ASTM D5185m		3	4	3
Potassium	ppm	ASTM D5185m	>20	1	2	1
Chlorine	ppm	ASTM D5185m			0	0
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.2	0.11	0.27
Nitration	Abs/cm	*ASTM D7624	>20	6.8		
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.7		

Oxidation Abs/.1mm \*ASTM D7414 >25 10 16.8 11 Base Number (BN) mg KOH/g ASTM D2896 10.5 9.2

Submitted By: Loren Michael



# **OIL ANALYSIS REPORT**

Base Number 12.0 Base 10.0 Base Number (mg KOH/g) 7. 8. 7 8. 7 8. 7 8. 7 8. 7 0.0 Mar14/24 -Apr15/21 Feb 15/19 Sen24/19 Viscosity @ 100°C 15 14 Abnorm 13 cSt (100°C) Bas Abnorma Feb15/19

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.2	NEG		
Free Water	scalar	*Visual		NEG		
FLUID PROPER	TIEQ	method	limit/base	current	history1	history2
	IIE3	method	IIIIII/Dase	current	TIISTOLA	nistory2
Visc @ 100°C	cSt	ASTM D445	11.9	11.3	11.1	11.2
GRAPHS						

