



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**91078**  
 Component  
**Diesel Engine**  
 Fluid  
**MOBIL DELVAC 1300 SUPER 15W40 (10 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>SBP0004988</b>	SBP0004619	SBP0002514
Sample Date		Client Info		<b>16 Jun 2024</b>	08 Nov 2023	28 Mar 2023
Machine Age	mls	Client Info		<b>28000</b>	0	229994
Oil Age	mls	Client Info		<b>0</b>	21000	18460
Filter Age	mls	Client Info		<b>0</b>	21000	18460
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	<b>21</b>	24	17
Chromium	ppm	ASTM D5185m	>5	<b>1</b>	1	1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>7</b>	6	6
Lead	ppm	ASTM D5185m	>30	<b>2</b>	<1	0
Copper	ppm	ASTM D5185m	>150	<b>8</b>	10	10
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

There is no indication of any contamination in the oil.

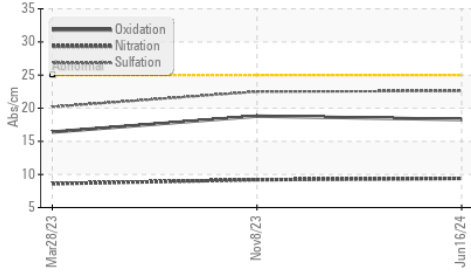
Silicon	ppm	ASTM D5185m	>20	<b>6</b>	6	4
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	4	2
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	0.7	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.4</b>	9.2	8.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.6</b>	22.5	20.2
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

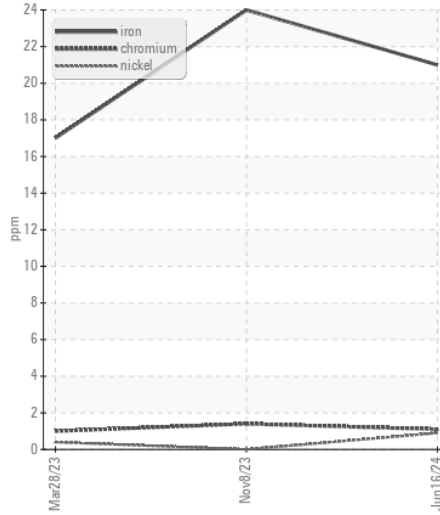
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>3</b>	1	1
Boron	ppm	ASTM D5185m	0	<b>4</b>	0	4
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>62</b>	62	63
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	0	<b>1058</b>	997	1031
Calcium	ppm	ASTM D5185m		<b>1192</b>	1110	1196
Phosphorus	ppm	ASTM D5185m		<b>1113</b>	1019	1081
Zinc	ppm	ASTM D5185m		<b>1425</b>	1358	1370
Sulfur	ppm	ASTM D5185m		<b>3487</b>	2638	3852
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.3</b>	18.8	16.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	<b>7.1</b>	7.0	8.5
Visc @ 100°C	cSt	ASTM D445	14	<b>11.9</b>	11.7	11.2

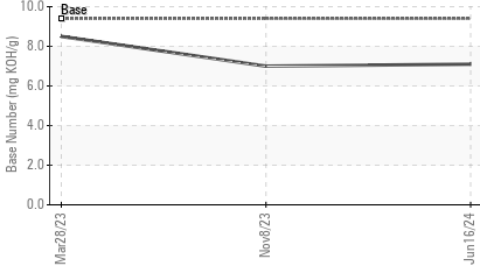
**FT-IR (Direct Trend)**



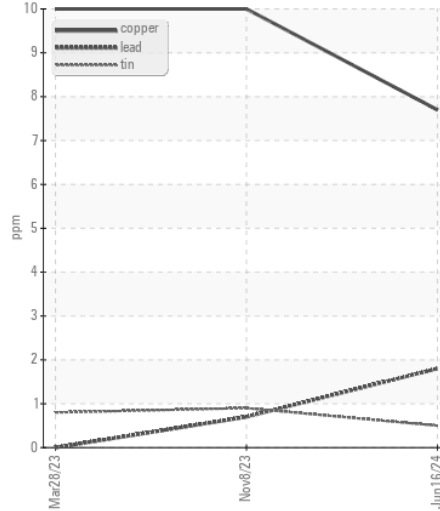
**Ferrous Alloys**



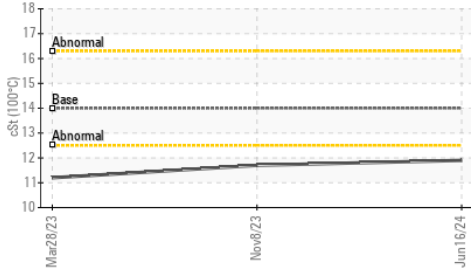
**Base Number**



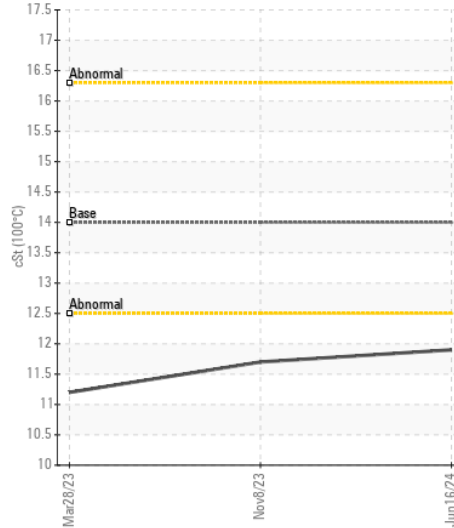
**Non-ferrous Metals**



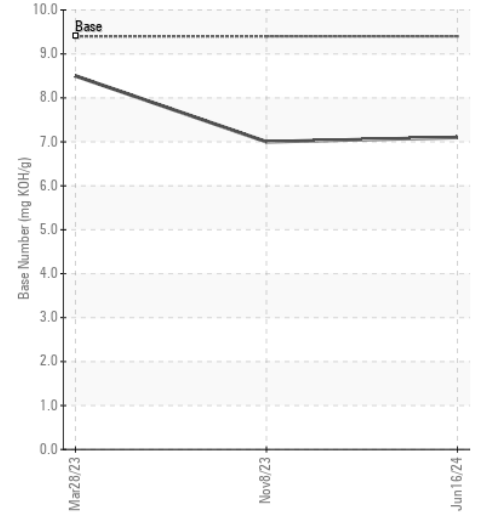
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : SBP0004988 **Received** : 27 Jun 2024  
**Lab Number** : 06222982 **Tested** : 28 Jun 2024  
**Unique Number** : 11101179 **Diagnosed** : 28 Jun 2024 - Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution )

**Sapp Bros. Fleet - York Location**  
 PO Box 249  
 York, NE  
 US 68467  
 Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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F: