

## **OIL ANALYSIS REPORT**

SAMPLE INFORMATION method

Sample Rating Trend NORMAL



#### **Diesel Engine** Fluic MOBIL DELVAC 1300 SUPER 10W30 (--- GAL)

CONSTRUCTORS, INC

#### Recommendation

Resample at the next service interval to monitor.

010093 Component

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

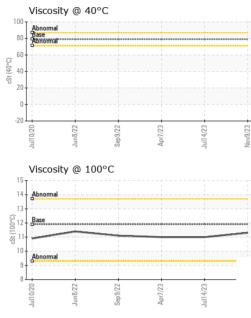
### Fluid Condition

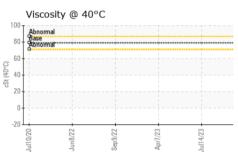
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM		method	limit/base	current	history1	history2
Sample Number		Client Info		SBP0005553	SBP0004552	SBP0003750
Sample Date		Client Info		09 Nov 2023	14 Jul 2023	07 Apr 2023
Machine Age	hrs	Client Info		5045	4552	3995
Oil Age	hrs	Client Info		493	557	566
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	5	11	10
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	0	1	0
Copper	ppm	ASTM D5185m	>330	0	1	<1
Tin	ppm	ASTM D5185m	>15	<1	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base		history1 4	history2 5
	ppm ppm		limit/base	current 0 0		
Boron Barium	ppm	ASTM D5185m	limit/base	0	4	5
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	limit/base	0 0	4	5 0
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 56	4 1 58	5 0 55
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 56 <1	4 1 58 <1	5 0 55 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 56 <1 944	4 1 58 <1 966	5 0 55 <1 912
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 56 <1 944 1072	4 1 58 <1 966 1196	5 0 55 <1 912 1187
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 56 <1 944 1072 1030	4 1 58 <1 966 1196 1015	5 0 55 <1 912 1187 987
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 56 <1 944 1072 1030 1234	4 1 58 <1 966 1196 1015 1274	5 0 55 <1 912 1187 987 1250
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 56 <1 944 1072 1030 1234 2828	4 1 58 <1 966 1196 1015 1274 3571	5 0 55 <1 912 1187 987 1250 3209
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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	limit/base	0 0 56 <1 944 1072 1030 1234 2828 current	4 1 58 <1 966 1196 1015 1274 3571 history1	5 0 55 <1 912 1187 987 1250 3209 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	limit/base	0 0 56 <1 944 1072 1030 1234 2828 current 4	4 1 58 <1 966 1196 1015 1274 3571 history1 4	5 0 55 <1 912 1187 987 1250 3209 history2 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	limit/base	0 0 56 <1 944 1072 1030 1234 2828 current 4 2	4 1 58 <1 966 1196 1015 1274 3571 history1 4 6	5 0 55 <1 912 1187 987 1250 3209 history2 6 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base	0 0 56 <1 944 1072 1030 1234 2828 current 4 2 3	4 1 58 <1 966 1196 1015 1274 3571 history1 4 6 6 6	5 0 55 <1 912 1187 987 1250 3209 history2 6 4 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >4	0 0 56 <1 944 1072 1030 1234 2828 current 4 2 3 3	4 1 58 <1 966 1196 1015 1274 3571 history1 4 6 6 6 history1	5 0 55 <1 912 1187 987 1250 3209 history2 6 4 3 3 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >4	0 0 56 <1 944 1072 1030 1234 2828 <u>current</u> 4 2 3 <u>current</u> 0.2	4 1 58 <1 966 1196 1015 1274 3571 history1 4 6 6 history1 0.2	5 0 55 <1 912 1187 987 1250 3209 history2 6 4 3 3 <b>history2</b> 0.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >4 >20	0 0 56 <1 944 1072 1030 1234 2828 current 4 2 3 current 0.2 8.0	4 1 58 <1 966 1196 1015 1274 3571 history1 4 6 6 6 history1 0.2 8.7	5 0 55 <1 912 1187 987 1250 3209 history2 6 4 3 3 history2 0.3 8.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	limit/base >25 >20 limit/base >20 limit/base >4 >20 >30 limit/base	0 0 56 <1 944 1072 1030 1234 2828 Current 4 2 3 Current 0.2 8.0 19.8 Current	4 1 58 <1 966 1196 1015 1274 3571 history1 4 6 6 history1 0.2 8.7 20.0 history1	5 0 55 <1 912 1187 987 1250 3209 history2 6 4 3 3 history2 0.3 8.5 19.8 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	limit/base >25 >20 limit/base >20 >30 limit/base >30 limit/base >25	0 0 56 <1 944 1072 1030 1234 2828 <u>current</u> 4 2 3 <u>current</u> 0.2 8.0 19.8	4 1 58 <1 966 1196 1015 1274 3571 history1 4 6 6 6 history1 0.2 8.7 20.0	5 0 55 <1 912 1187 987 1250 3209 <b>history2</b> 6 4 3 <b>bistory2</b> 0.3 8.5 19.8



# **OIL ANALYSIS REPORT**





VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	11.9	11.3	11.0	11.0
GRAPHS						
Ferrous Alloys						
30 - iron						
25-						
20						
10						
5-						
0						
	2	/23 -	1/23			
Jul10/20 Jun8/22 Sep9/22	Apr7/23	Jul14/23 -	Nov9/23			
Non-ferrous Metal		Jul14/23 -	Nov9/23			
Non-ferrous Metal		- 52,4 []u[	876voN			
Non-ferrous Metal		Jul14/23	Nov9/23			
Non-ferrous Metal		Juli 4,23 -	Nov9/23			
Non-ferrous Metal		Jul14/23-	Nov9/23			
Non-ferrous Metal		Juli 4,23	Nov9/23			
Non-ferrous Metal		Jul14/23-	Nov922			
Non-ferrous Metal		Jul14/23	Wov9/23			
Non-ferrous Metal	S		Nov9/23			

Base Number

un8/22

Sep9/22+

12.0

10.

8 (

6.0

2 ( 0.0

ul10/20

nber (mg K0H/g)

Base Nur 4.0

Nov9/23 -



Sample No. : SBP0005553 Received : 16 Nov 2023 1815 Y Street Lab Number :06010111 Diagnosed : 20 Nov 2023 Lincoln, NE : 10749255 Unique Number Diagnostician : Don Baldridge US 68508 Test Package : FLEET (Additional Tests: KV40) Contact: Jack Linhart Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. jackl@constructorslincoln.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (402)434-2157 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Apr7/23 -

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Jul14/23

Viscosity @ 100°C

Jun8/22 -

Sep9/22.

14

13

10 Abnorm

8 Jul10/20

Laboratory

cSt (100°C)

Jul14/23 -

Constructors Inc. - 603659

Apr7/23

Nov9/23 -

F: