

# **OIL ANALYSIS REPORT**

# Sample Rating Trend





# FLEET Machine Id VOLVO 7636 (S/N 925046)

Diesel Engine

PETRO CANADA DURON SHP 10W30 (36 QTS)

# DIAGNOSIS

## Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil

## **Fluid Condition**

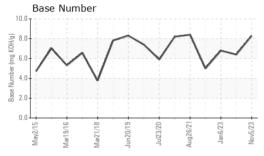
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

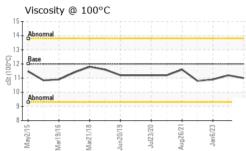


SAMPLE INFORI	VIATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0106362	PCA0101150	PCA0087240
Sample Date		Client Info		05 Nov 2023	03 Sep 2023	06 Jan 2023
Machine Age	mls	Client Info		742150	24000	613618
Oil Age	mls	Client Info		20000	24000	40000
Oil Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
	ION	ام مالم مما	1: :- //		la i a ta mud	la i a ta mu O
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	12	29	38
Chromium	ppm	ASTM D5185m	>20	<1	1	2
Nickel	ppm	ASTM D5185m	>2	<1	2	1
Titanium	ppm	ASTM D5185m		<1	2	6
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	4	11	16
Lead	ppm	ASTM D5185m	>40	<1	2	1
Copper	ppm	ASTM D5185m	>330	<1	3	3
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Antimony	ppm	ASTM D5185m				
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	mag		limit/base		history1	
	ppm	ASTM D5185m		current 0 0		history2 5 0
Boron Barium	ppm		2	0	1	5
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	2	0	1	5
Boron Barium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	0 0 61	1 0 59	5 0 54
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	0 0 61 <1	1 0 59	5 0 54 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	0 0 61 <1 964	1 0 59 1 990	5 0 54 <1 790
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	0 0 61 <1 964 1151	1 0 59 1 990 1179	5 0 54 <1 790 1117
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 ASTM D5185m	2 0 50 0 950 1050 995	0 0 61 <1 964 1151 1131	1 0 59 1 990 1179 1070	5 0 54 <1 790 1117 949
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 ASTM D5185m	2 0 50 0 950 1050 995 1180	0 0 61 <1 964 1151 1131	1 0 59 1 990 1179 1070	5 0 54 <1 790 1117 949 1174
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 ASTM D5185m	2 0 50 0 950 1050 995 1180 2600	0 0 61 <1 964 1151 1131 1318 3102	1 0 59 1 990 1179 1070 1378 3862	5 0 54 <1 790 1117 949 1174 3037
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm 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	2 0 50 0 950 1050 995 1180 2600	0 0 61 <1 964 1151 1131 1318 3102 current	1 0 59 1 990 1179 1070 1378 3862 history1	5 0 54 <1 790 1117 949 1174 3037 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	0 0 61 <1 964 1151 1131 1318 3102 current	1 0 59 1 990 1179 1070 1378 3862 history1	5 0 54 <1 790 1117 949 1174 3037 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	0 0 61 <1 964 1151 1131 1318 3102 current 4	1 0 59 1 990 1179 1070 1378 3862 history1 7	5 0 54 <1 790 1117 949 1174 3037 history2 7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25	0 0 61 <1 964 1151 1131 1318 3102 current 4 3	1 0 59 1 990 1179 1070 1378 3862 history1 7 9	5 0 54 <1 790 1117 949 1174 3037 history2 7 11
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m  Method  *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20	0 0 61 <1 964 1151 1131 1318 3102 current 4 3 current 0.3	1 0 59 1 990 1179 1070 1378 3862 history1 7 9 8 history1	5 0 54 <1 790 11117 949 1174 3037 history2 7 11 19 history2 0.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m  method  *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20	0 0 61 <1 964 1151 1131 1318 3102 current 4 4 3 current 0.3 8.2	1 0 59 1 990 1179 1070 1378 3862 history1 7 9 8 history1 0.7 9.8	5 0 54 <1 790 1117 949 1174 3037 history2 7 11 19 history2 0.5 11.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  Method  ASTM D5185m  Method  *ASTM D7844  *ASTM D7624  *ASTM D76145	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20 >30	0 0 61 <1 964 1151 1131 1318 3102 current 4 3 current 0.3 8.2 19.1	1 0 59 1 990 1179 1070 1378 3862 history1 7 9 8 history1 0.7 9.8 20.9	5 0 54 <1 790 1117 949 1174 3037 history2 7 11 19 history2 0.5 11.1 20.7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m  method  *ASTM D5185m ASTM D5185m  ASTM D5185m ASTM D5185m  ASTM D5185m  *ASTM D5185m  method  *ASTM D7844  *ASTM D7624  *ASTM D7415  method	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20 >30 limit/base	0 0 61 <1 964 1151 1131 1318 3102 current 4 4 3 current 0.3 8.2 19.1	1 0 59 1 990 1179 1070 1378 3862 history1 7 9 8 history1 0.7 9.8 20.9	5 0 54 <1 790 1117 949 1174 3037 history2 7 11 19 history2 0.5 11.1 20.7 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  Method  ASTM D5185m  Method  *ASTM D7844  *ASTM D7624  *ASTM D76145	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20 >30	0 0 61 <1 964 1151 1131 1318 3102 current 4 3 current 0.3 8.2 19.1	1 0 59 1 990 1179 1070 1378 3862 history1 7 9 8 history1 0.7 9.8 20.9	5 0 54 <1 790 1117 949 1174 3037 history2 7 11 19 history2 0.5 11.1 20.7



# **OIL ANALYSIS REPORT**

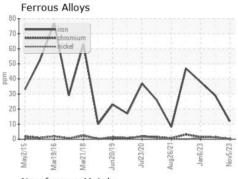


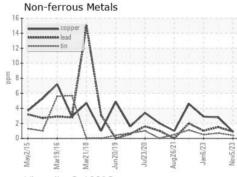


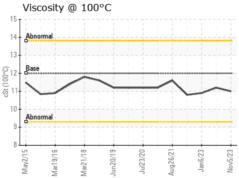
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

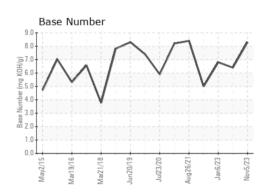
FLUID PROPERTIES		method				history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.0	11.2	10.9

# **GRAPHS**













Certificate L2367

Laboratory Sample No. Lab Number Test Package : FLEET

**Unique Number** 

: PCA0106362 : 06003982

: 10737744

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 10 Nov 2023

Diagnosed : 16 Nov 2023 : Wes Davis

Diagnostician

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)

**PERDUE FARMS - SALISBURY** 

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Report Id: PERSALMD [WUSCAR] 06003982 (Generated: 11/17/2023 12:18:27) Rev: 1

Contact/Location: RICHARD O'NEAL - PERSALMD