

## **OIL ANALYSIS REPORT**

Sample Rating Trend

### NORMAL

## Machine Id VOLVO 26620

## Diesel Engine

Fluid 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.

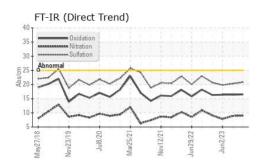
#### Fluid Condition

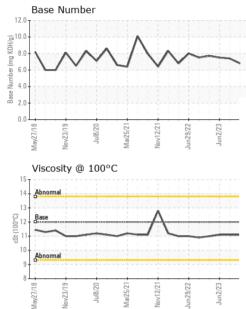
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0123202	PCA0118435	PCA0092441
Sample Date		Client Info		01 Jun 2024	24 Feb 2024	02 Jun 2023
Machine Age	mls	Client Info		590797	563671	5007746
Oil Age	mls	Client Info		20000	40000	20000
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	38	30	19
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m		22	7	2
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	5	5	3
Lead	ppm	ASTM D5185m	>40	1	<1	0
Copper	ppm	ASTM D5185m	>330	4	6	3
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	nnm	ACTM DE10Em		-	0	0
Caumum	ppm	ASTM D5185m		0	0	0
ADDITIVES	ррш	method	limit/base	0 current	0 history1	0 history2
	ppm		limit/base		-	-
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	2	current 15	history1 34	history2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	2 0	current 15 <1	history1 34 0	history2 1 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 15 <1 45	history1 34 0 62	history2 1 0 54
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 15 <1 45 1	history1 34 0 62 <1	history2 1 0 54 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	current 15 <1 45 1 797	history1 34 0 62 <1 779	history2 1 0 54 <1 896
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	current           15           <1           45           1           797           1247	history1 34 0 62 <1 779 1123	history2 1 0 54 <1 896 1123
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	current           15           <1           45           1           797           1247           1040	history1 34 0 62 <1 779 1123 954	history2 1 0 54 <1 896 1123 954
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180	current           15           <1           45           1           797           1247           1040           1231	history1 34 0 62 <1 779 1123 954 1145	history2 1 0 54 <1 896 1123 954 1200
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	Current 15 <1 45 1 797 1247 1040 1231 3653	history1 34 0 62 <1 779 1123 954 1145 2766	history2 1 0 54 <1 896 1123 954 1200 3431
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600	current         15         <1         45         1         797         1247         1040         1231         3653         current	history1         34         0         62         <1         779         1123         954         1145         2766         history1	history2 1 0 54 <1 896 1123 954 1200 3431 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	current         15         <1         45         1         797         1247         1040         1231         3653         current         8	history1           34           0           62           <1           779           1123           954           1145           2766           history1           7	history2           1           0           54           <1           896           1123           954           1200           3431           history2           3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	current         15         <1         45         1         797         1247         1040         1231         3653         current         8         8         8	history1         34         0         62         <1         779         1123         954         1145         2766         history1         7         8	history2         1         0         54         <1         896         1123         954         1200         3431         history2         3         8
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >25	current         15         <1         45         1         797         1247         1040         1231         3653         current         8         8         5	history1         34         0         62         <1         779         1123         954         1145         2766         history1         7         8         4	history2         1         0         54         <1         896         1123         954         1200         3431         history2         3         8         2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	method           ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3	current         15         <1         45         1         797         1247         1040         1231         3653         current         8         5         current	history1         34         0         62         <1         779         1123         954         1145         2766         history1         7         8         4         history1	history2         1         0         54         <1         896         1123         954         1200         3431         history2         3         8         2         history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b> ppm ppm	method           ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3	current         15         <1         45         1         797         1247         1040         1231         3653         current         8         5         current         0.5	history1         34         0         62         <1         779         1123         954         1145         2766         history1         7         8         4         history1         0.5	history2         1         0         54         <1         896         1123         954         1200         3431         history2         3         8         2         history2         0.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m           ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	current         15         <1         45         1         797         1247         1040         1231         3653         current         8         5         current         0.5         9.0	history1         34         0         62         <1         779         1123         954         1145         2766         history1         7         8         4         history1         0.5         8.9	history2         1         0         54         <1         896         1123         954         1200         3431         history2         3         8         2         history2         0.4         7.8
ADDITIVES 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	method           ASTM D5185m           ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>imit/base</b> >25 <b>imit/base</b> >3 >20	current         15         <1         45         1         797         1247         1040         1231         3653         current         8         5         current         0.5         9.0         20.8	history1         34         0         62         <1         779         1123         954         1145         2766         history1         7         8         4         history1         0.5         8.9         20.3	history2         1         0         54         <1         896         1123         954         1200         3431         history2         3         8         2         history2         0.4         7.8         19.8



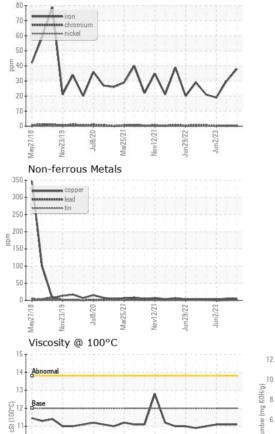
# **OIL ANALYSIS REPORT**





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 PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.1	11.1	11.1
GRAPHS						

Ferrous Alloys



Base Number 12.0 10. Base Number (mg KOH/g) 8 ( 6. 4.0 2 ( 0.0 lu|8/20 Mav27/18 Nov23/19 //ar25/21 Vov12/21

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 **PERDUE FARMS - SALISBURY** Sample No. : PCA0123202 Received : 06 Jun 2024 7036 ZION CHURCH ROAD Lab Number : 06201208 Tested : 07 Jun 2024 SALISBURY, MD Unique Number : 11063331 Diagnosed : 07 Jun 2024 - Wes Davis US 21802 Test Package : FLEET Contact: RICHARD O`NEAL Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. richard.oneal@perdue.com T: (410)543-3628 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. F: (410)341-2164

/ar25/21

Nov12/21

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

10

Abnorma

Mav27/18

Nov23/19

ul8/20

Report Id: PERSALMD [WUSCAR] 06201208 (Generated: 06/10/2024 12:51:45) Rev: 1