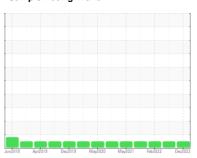


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



VOLVO 26623

Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (36 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

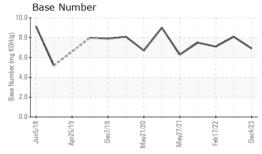
Fluid Condition

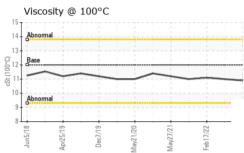
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Number Client Info PCA0106350 PCA0101158 PCA00675 Sample Date Client Info 04 Dec 2023 06 Sep 2023 17 Feb 20 Machine Age mls Client Info 482042 451666 320663 320663 Oil Age mls Client Info 20000 20000 40000 40000 Oil Changed Client Info Changed Changed	QTS)		Jun2018	Apr2019 Dec2019	May2020 May2021 Feb2022	Dec2023	
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Date	Sample Number		Client Info		PCA0106350	PCA0101158	PCA0067344
Oil Age mls Client Info 20000 20000 40000 Oil Changed Chang			Client Info		04 Dec 2023	06 Sep 2023	17 Feb 2022
Changed Changed Changed NORMAL NORMAL NORMAL NORMAL NORMAL	Machine Age	mls	Client Info		482042	451666	320663
Sample Status	Oil Age	mls	Client Info		20000	20000	40000
CONTAMINATION method limit/base current history1 history1 Fuel WC Method >6.0 <1.0 <1.0 <1.0 Water WC Method NEG NEG NEG Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >100 18 21 46 Chromium ppm ASTM D5185m >20 <1 <1 <1 Nickel ppm ASTM D5185m >20 <1 <1 <1 Silver ppm ASTM D5185m >2 0 <1 0 Aluminum ppm ASTM D5185m >2 0 <1 <1 2 Lead ppm ASTM D5185m >40 1 <1 <1 2 Copper ppm ASTM D5185m >15 <1 <1 <1 <1	Oil Changed		Client Info		Changed	Changed	Changed
Fuel WC Method >6.0 <1.0	Sample Status				NORMAL	NORMAL	NORMAL
Water WC Method >0.2 NEG NEG NEG NEG Glycol WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history1 history1 history1 Iron ppm ASTM D5185m >100 18 21 46 Chromium ppm ASTM D5185m >20 -1 -1 -1 Nickel ppm ASTM D5185m >2 -1 -1 6 Silver ppm ASTM D5185m >2 -1 1 6 Aluminum ppm ASTM D5185m >25 2 4 2 Lead ppm ASTM D5185m >40 1 -1 1 2 Copper ppm ASTM D5185m >330 3 3 7 Tin ppm ASTM D5185m >15 <1 <1 1 Antimony ppm ASTM D5185m 0	CONTAMINATI	ON	method	limit/base	current	history1	history2
Glycol WC Method NEG NEG NEG	Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 <1	WEAR METALS	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	18	21	46
Titanium ppm ASTM D5185m <1	Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Silver ppm ASTM D5185m >2 0 <1	Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Aluminum ppm ASTM D5185m >2.25 2 4 2 Lead ppm ASTM D5185m >40 1 <1 2 Copper ppm ASTM D5185m >330 3 3 7 Tin ppm ASTM D5185m >15 <1 <1 1 Antimony ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 <1 7 Barium ppm ASTM D5185m 0 11 0 0 Molybdenum ppm ASTM D5185m 0 11 1 <1 <1 Magnesium ppm ASTM D5185m 0 <1 1 <1 <1 <1 Calcium ppm ASTM D5185m 950 870 960 882	Titanium	ppm	ASTM D5185m		<1	1	6
Lead ppm ASTM D5185m >40 1 <1	Silver	ppm	ASTM D5185m	>2	0	<1	0
Copper ppm ASTM D5185m >330 3 7 Tin ppm ASTM D5185m >15 <1 <1 1 Antimony ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m 2 0 <1 7 Boron ppm ASTM D5185m 0 11 0 0 Molybdenum ppm ASTM D5185m 0 11 0 0 Manganese ppm ASTM D5185m 50 56 57 57 Mangenesium ppm ASTM D5185m 950 870 960 882 Calcium ppm ASTM D5185m 1050 1030 1136 1166 Phosphorus ppm ASTM D5185m 995 897 1034 1037 Zin	Aluminum	ppm	ASTM D5185m	>25	2	4	2
Tin ppm ASTM D5185m >15 <1	Lead	ppm	ASTM D5185m	>40	1	<1	2
Antimony ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m <1	Copper	ppm	ASTM D5185m	>330	3		7
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m <1	Tin	ppm	ASTM D5185m	>15	<1	<1	
Cadmium ppm ASTM D5185m <1	Antimony	ppm	ASTM D5185m				0
ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 2 0 <1 7 Barium ppm ASTM D5185m 0 11 0 0 Molybdenum ppm ASTM D5185m 50 56 57 57 Manganese ppm ASTM D5185m 0 <1 1 <1 Magnesium ppm ASTM D5185m 950 870 960 882 Calcium ppm ASTM D5185m 1050 1030 1136 1166 Phosphorus ppm ASTM D5185m 995 897 1034 1037 Zinc ppm ASTM D5185m 2600 3240 3792 2761 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >20 3 3 3 Potassium ppm ASTM D5185m >20 <th>Vanadium</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th></th> <th></th> <th>0</th>	Vanadium	ppm	ASTM D5185m				0
Boron ppm ASTM D5185m 2 0 <1	Cadmium	ppm	ASTM D5185m		<1	0	0
Barium ppm ASTM D5185m 0 11 0 0 Molybdenum ppm ASTM D5185m 50 56 57 57 Manganese ppm ASTM D5185m 0 <1 1 <1 Magnesium ppm ASTM D5185m 950 870 960 882 Calcium ppm ASTM D5185m 1050 1030 1136 1166 Phosphorus ppm ASTM D5185m 995 897 1034 1037 Zinc ppm ASTM D5185m 1180 1162 1319 1203 Sulfur ppm ASTM D5185m 2600 3240 3792 2761 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m >20 3 3 3 INFRA-RED method limit/base <th>ADDITIVES</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 56 57 57 Manganese ppm ASTM D5185m 0 <1 1 <1 Magnesium ppm ASTM D5185m 950 870 960 882 Calcium ppm ASTM D5185m 1050 1030 1136 1166 Phosphorus ppm ASTM D5185m 995 897 1034 1037 Zinc ppm ASTM D5185m 2600 3240 3792 2761 Sulfur ppm ASTM D5185m 2600 3240 3792 2761 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m >20 3 3 3 INFRA-RED method limit/base current history1 history1 Soot % "ASTM D7844 >3 <th>Boron</th> <th>ppm</th> <th>ASTM D5185m</th> <th>2</th> <th>0</th> <th><1</th> <th>7</th>	Boron	ppm	ASTM D5185m	2	0	<1	7
Manganese ppm ASTM D5185m 0 <1	Barium	ppm	ASTM D5185m	0	11	0	0
Magnesium ppm ASTM D5185m 950 870 960 882 Calcium ppm ASTM D5185m 1050 1030 1136 1166 Phosphorus ppm ASTM D5185m 995 897 1034 1037 Zinc ppm ASTM D5185m 1180 1162 1319 1203 Sulfur ppm ASTM D5185m 2600 3240 3792 2761 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m >20 3 3 3 INFRA-RED method limit/base current history1 history Soot % *ASTM D7844 >3 0.4 0.4 0.5	Molybdenum	ppm	ASTM D5185m	50	56	57	57
Calcium ppm ASTM D5185m 1050 1030 1136 1166 Phosphorus ppm ASTM D5185m 995 897 1034 1037 Zinc ppm ASTM D5185m 1180 1162 1319 1203 Sulfur ppm ASTM D5185m 2600 3240 3792 2761 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m 3 5 12 Potassium ppm ASTM D5185m >20 3 3 3 INFRA-RED method limit/base current history1 history Soot % *ASTM D7844 >3 0.4 0.4 0.5	Manganese	ppm	ASTM D5185m	0	<1	1	<1
Phosphorus ppm ASTM D5185m 995 897 1034 1037 Zinc ppm ASTM D5185m 1180 1162 1319 1203 Sulfur ppm ASTM D5185m 2600 3240 3792 2761 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m 3 5 12 Potassium ppm ASTM D5185m >20 3 3 3 INFRA-RED method limit/base current history1 history1 Soot % *ASTM D7844 >3 0.4 0.4 0.5	Magnesium	ppm	ASTM D5185m				882
Zinc ppm ASTM D5185m 1180 1162 1319 1203 Sulfur ppm ASTM D5185m 2600 3240 3792 2761 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m 3 5 12 Potassium ppm ASTM D5185m >20 3 3 3 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.4 0.4 0.5		ppm					
Sulfur ppm ASTM D5185m 2600 3240 3792 2761 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m 3 5 12 Potassium ppm ASTM D5185m >20 3 3 3 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.4 0.4 0.5							
CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m 3 5 12 Potassium ppm ASTM D5185m >20 3 3 3 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.4 0.4 0.5					-		
Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m 3 5 12 Potassium ppm ASTM D5185m >20 3 3 3 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.4 0.4 0.5							
Sodium ppm ASTM D5185m 3 5 12 Potassium ppm ASTM D5185m >20 3 3 3 INFRA-RED method limit/base current history1 history Soot % *ASTM D7844 >3 0.4 0.4 0.5							history2
Potassium ppm ASTM D5185m >20 3 3 3 INFRA-RED method limit/base current history1 history1 Soot % *ASTM D7844 >3 0.4 0.4 0.5		• • • • • • • • • • • • • • • • • • • •		>25			
INFRA-RED method limit/base current history1 history Soot % *ASTM D7844 >3 0.4 0.5				00			
Soot % % *ASTM D7844 >3 0.4 0.4 0.5		ppm		>20	3	3	3
							history2
Nitration Abs/cm *ASTM D7624 >20 8.4 7.6 10.1							
Sulfation Abs/.1mm *ASTM D7415 >30 19.7 18.8 22.6	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.7	18.8	22.6
FLUID DEGRADATION method limit/base current history1 history	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
Oxidation Abs/.1mm *ASTM D7414 >25 16.0 14.8 18.1		Abs/.1mm	*ASTM D7414	>25	16.0	14.8	18.1
Base Number (BN) mg KOH/g ASTM D2896 6.9 8.1 7.1	Base Number (BN)	mg KOH/g	ASTM D2896		6.9	8.1	7.1



OIL ANALYSIS REPORT

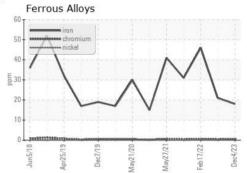


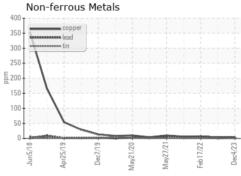


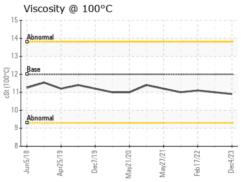
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

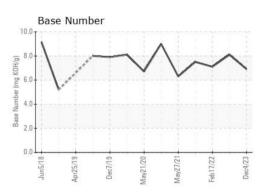
FLUID PROPE	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	12.00	10.9	11.0	11.1

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0106350 : 06033105 : 10782896

Recieved Diagnosed

: 13 Dec 2023 : 14 Dec 2023 Diagnostician : Wes Davis

PERDUE FARMS - SALISBURY 7036 ZION CHURCH ROAD SALISBURY, MD US 21802

Contact: RICHARD O'NEAL richard.oneal@perdue.com

T: (410)543-3628 F: (410)341-2164

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)