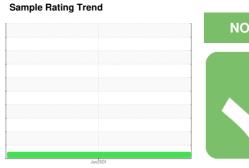


OIL ANALYSIS REPORT

FLEET VOLVO 1926724 (S/N 4V4WC9EHXLN254797)

Diesel Engine

PETRO CANADA DURON SHP 10W30 (42 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

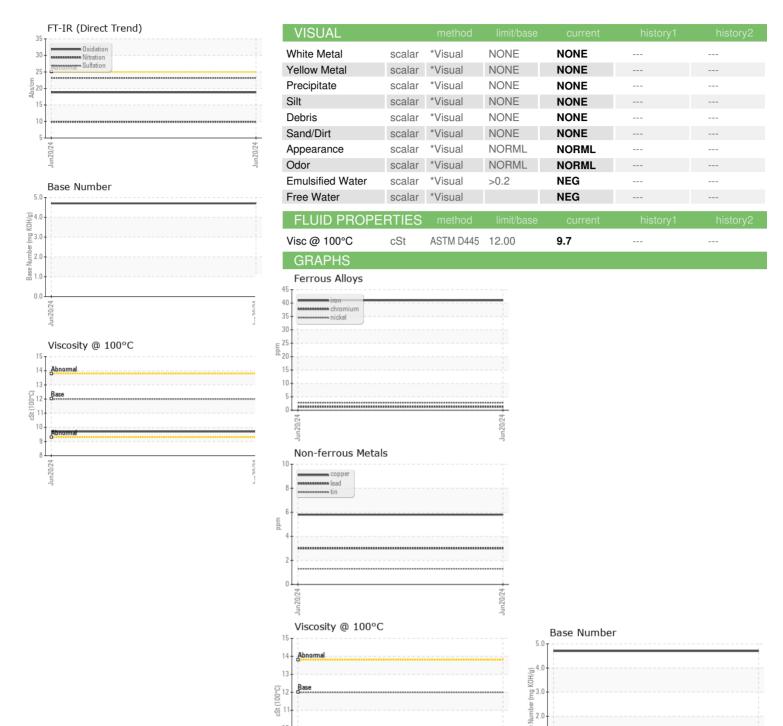
Fluid Condition

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

Client Info 20 Jun 2024	QTS)				Jun2024		
Client Info 20 Jun 2024 Machine Age mls Client Info 408540	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 38654	Sample Number		Client Info		PCA0128379		
Machine Age mls Client Info 408540 Oil Age mls Client Info 38625 Oil Changed Client Info Changed Sample Status NORMAL CONTAMINATION Fuel WC Method >6.0 <1.0	•		Client Info		20 Jun 2024		
Contamped Client Info Changed Changed Contample Status Contample Status Contample Contample Status Contample	Machine Age	mls	Client Info		408540		
CONTAMINATION	Oil Age	mls	Client Info		38625		
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >6.0 <1.0	Oil Changed		Client Info		Changed		
Fuel	Sample Status				NORMAL		
Water WC Method WC Method NEG	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>6.0	<1.0		
WEAR METALS	Water		WC Method	>0.2	NEG		
Chromium	Glycol		WC Method		NEG		
Chromium	WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	41		
Titanium	Chromium	ppm	ASTM D5185m	>20	1		
Silver	Nickel	ppm	ASTM D5185m	>2	3		
Aluminum ppm ASTM D5185m >25 8 Copper ppm ASTM D5185m >40 3 Tin ppm ASTM D5185m >15 1 Vanadium ppm ASTM D5185m <1	Titanium	ppm	ASTM D5185m		15		
Lead	Silver	ppm	ASTM D5185m	>2	<1		
Copper ppm ASTM D5185m >330 6 Tin ppm ASTM D5185m >15 1 Vanadium ppm ASTM D5185m <1	Aluminum	ppm	ASTM D5185m	>25	8		
Tin	Lead	ppm	ASTM D5185m	>40	3		
Vanadium ppm ASTM D5185m <1 Cadmium ppm ASTM D5185m <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 5 Barium ppm ASTM D5185m 0 1 Molybdenum ppm ASTM D5185m 50 44 Manganese ppm ASTM D5185m 950 700 Magnesium ppm ASTM D5185m 950 700 Calcium ppm ASTM D5185m 995 844 Zinc ppm ASTM D5185m 1050 1096 Sulfur ppm ASTM D5185m 2600 2502 CONTAMINANTS method limit/base current history1 </td <td>Copper</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>330</td> <td>6</td> <td></td> <td></td>	Copper	ppm	ASTM D5185m	>330	6		
Cadmium ppm ASTM D5185m <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 5 Barium ppm ASTM D5185m 0 1 Molybdenum ppm ASTM D5185m 50 44 Manganese ppm ASTM D5185m 0 1 Magnesium ppm ASTM D5185m 950 700 Calcium ppm ASTM D5185m 995 844 Phosphorus ppm ASTM D5185m 995 844 Zinc ppm ASTM D5185m 2600 2502 Sulfur ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m >20 17 <td>Tin</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>15</td> <td>1</td> <td></td> <td></td>	Tin	ppm	ASTM D5185m	>15	1		
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 5 Barium ppm ASTM D5185m 0 1 Molybdenum ppm ASTM D5185m 50 44 Manganese ppm ASTM D5185m 0 1 Magnesium ppm ASTM D5185m 950 700 Calcium ppm ASTM D5185m 1050 1096 Phosphorus ppm ASTM D5185m 995 844 Zinc ppm ASTM D5185m 1089 Sulfur ppm ASTM D5185m 2600 2502 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 <td< td=""><td>Vanadium</td><td>ppm</td><td>ASTM D5185m</td><td></td><td><1</td><td></td><td></td></td<>	Vanadium	ppm	ASTM D5185m		<1		
Boron ppm ASTM D5185m 2 5 Barium ppm ASTM D5185m 0 1 Molybdenum ppm ASTM D5185m 50 44 Magnesium ppm ASTM D5185m 0 1 Magnesium ppm ASTM D5185m 950 700 Magnesium ppm ASTM D5185m 1050 1096 Phosphorus ppm ASTM D5185m 995 844 Phosphorus ppm ASTM D5185m 1180 1089 Phosphorus ppm ASTM D5185m 2600 2502 Phosphorus ppm ASTM D5185m 2600 2502 Phosphorus ppm ASTM D5185m 2600 2502 Phosphorus ppm ASTM D5185m 225 6 Phosphorus ppm ASTM D5185m 225 6 Phosphorus ppm ASTM D5185m 225 6 Phosphorus ppm ASTM D5185m 225 17 Phosphorus ppm ASTM D5185m 20 17 Phosphorus ppm ASTM D5185m 20 17 Phosphorus ppm ASTM D5185m 20 17 Phosphorus Ppm ASTM D7844 20 9.9 Phosphorus Ppm ASTM D7844 20 9.9 Phosphorus Ppm ASTM D7845 20 9.9 Phosphorus Ppm ASTM D7845 20 9.9 Phosphorus Ppm ASTM D7845 20 9.9 Phosphorus Ppm ASTM D7845 20 9.9 Phosphorus Ppm ASTM D7845 20 9.9 Phosphorus Ppm ASTM D7845 20 9.9 Phosphorus Ppm ASTM D7845 20 9.9 Phosphorus Ppm ASTM D7845 20 9.9 Phosphorus Ppm ASTM D7844 20 9.9 Phosphorus Ppm ASTM D7845 20 9.9 Phosphorus Ppm ASTM D7844 20 9.9 Phosphorus Ppm ASTM D7845 20 Ppm Ppm	Cadmium	ppm	ASTM D5185m		<1		
Barium ppm ASTM D5185m 0 1 Molybdenum ppm ASTM D5185m 50 44 Manganese ppm ASTM D5185m 0 1 Magnesium ppm ASTM D5185m 950 700 Calcium ppm ASTM D5185m 1050 1096 Phosphorus ppm ASTM D5185m 995 844 Zinc ppm ASTM D5185m 2600 2502 Sulfur ppm ASTM D5185m 2600 2502 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m >20 17 Potassium ppm	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 44 Manganese ppm ASTM D5185m 0 1 Magnesium ppm ASTM D5185m 950 700 Calcium ppm ASTM D5185m 1050 1096 Phosphorus ppm ASTM D5185m 1180 1089 Zinc ppm ASTM D5185m 2600 2502 Sulfur ppm ASTM D5185m 2600 2502 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m >20 17 Potassium ppm ASTM D5185m >20 17 INFRA-RED method limit/bas	Boron	ppm	ASTM D5185m	2	5		
Manganese ppm ASTM D5185m 0 1 Magnesium ppm ASTM D5185m 950 700 Calcium ppm ASTM D5185m 1050 1096 Phosphorus ppm ASTM D5185m 995 844 Zinc ppm ASTM D5185m 1180 1089 Sulfur ppm ASTM D5185m 2600 2502 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m >20 17 Potassium ppm ASTM D5185m >20 17 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844	Barium	ppm	ASTM D5185m	0	1		
Magnesium ppm ASTM D5185m 950 700 Calcium ppm ASTM D5185m 1050 1096 Phosphorus ppm ASTM D5185m 995 844 Zinc ppm ASTM D5185m 1180 1089 Sulfur ppm ASTM D5185m 2600 2502 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m 10 Potassium ppm ASTM D5185m >20 17 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7415 >30 23.1<	Molybdenum	ppm	ASTM D5185m	50	44		
Calcium ppm ASTM D5185m 1 050 1096 Phosphorus ppm ASTM D5185m 995 844 Zinc ppm ASTM D5185m 1180 1089 Sulfur ppm ASTM D5185m 2600 2502 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m >20 17 Potassium ppm ASTM D5185m >20 17 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7415 >30 23.1 FLUID DEGRADATION *AST	Manganese	ppm	ASTM D5185m	0	1		
Phosphorus ppm ASTM D5185m 995 844 Zinc ppm ASTM D5185m 1180 1089 Sulfur ppm ASTM D5185m 2600 2502 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m >20 17 Potassium ppm ASTM D5185m >20 17 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7624 >20 9.9 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method	Magnesium	ppm	ASTM D5185m	950	700		
Zinc ppm ASTM D5185m 1180 1089 Sulfur ppm ASTM D5185m 2600 2502 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m 10 Potassium ppm ASTM D5185m >20 17 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7624 >20 9.9 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414	Calcium	ppm	ASTM D5185m	1050	1096		
Sulfur ppm ASTM D5185m 2600 2502 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m 10 Potassium ppm ASTM D5185m >20 17 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7624 >20 9.9 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.8	Phosphorus	ppm	ASTM D5185m	995	844		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m 10 Potassium ppm ASTM D5185m >20 17 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7624 >20 9.9 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.8	Zinc	ppm	ASTM D5185m	1180	1089		
Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m 10 Potassium ppm ASTM D5185m >20 17 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7624 >20 9.9 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.8	Sulfur	ppm	ASTM D5185m	2600	2502		
Sodium ppm ASTM D5185m 10 Potassium ppm ASTM D5185m >20 17 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7624 >20 9.9 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.8	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 17 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7624 >20 9.9 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.8	Silicon	ppm	ASTM D5185m	>25	6		
INFRA-RED	Sodium	ppm	ASTM D5185m		10		
Soot % % *ASTM D7844 >3 0.8 Nitration Abs/cm *ASTM D7624 >20 9.9 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.8	Potassium	ppm	ASTM D5185m	>20	17		
Nitration Abs/cm *ASTM D7624 >20 9.9 Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.8	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 23.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.8	Soot %	%	*ASTM D7844	>3	8.0		
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.8	Nitration	Abs/cm	*ASTM D7624	>20	9.9		
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	23.1		
	FLUID DEGRAI	DATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 4.7	Oxidation	Abs/.1mm	*ASTM D7414	>25	18.8		
	Base Number (BN)	mg KOH/g	ASTM D2896		4.7		



OIL ANALYSIS REPORT







Certificate 12367

Laboratory Sample No. Unique Number : 11097663

: PCA0128379 Lab Number : 06219466

Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 25 Jun 2024

Tested : 26 Jun 2024 Diagnosed

: 26 Jun 2024 - Don Baldridge

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

0.0

US 23301 Contact: PEGGY KIMES peggy.kimes@perdue.com T: (757)787-5304

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ACCOMAC, VA

* - 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)