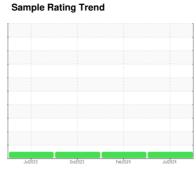


OIL ANALYSIS REPORT

(AU682W) Supermarket - Tractor **FREIGHTLINER 107A1843**

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)





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 INFORMATION method limit/base current history1 nistory2	JAL)		JUIZUZ	3 0012023	1602024 JI	312024	
Sample Date	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 333706 310515 294485 Oil Age mls Client Info 23191 16030 14602 Oil Changed Client Info Changed Changed Changed Changed Sample Status NORMAL NORMAL NORMAL NORMAL NORMAL VERANDER WC Method 5 <1.0 <1.0 <1.0 Water WC Method NEG NEG NEG NEG Rico WC Method NEG NEG NEG NEG WEAR METALS method limit/bass current history1 history2	Sample Number		Client Info		PCA0124108	PCA0116977	PCA0104078
Oil Age mls Client Info 23191 16030 14602 Oil Changed Sample Status Client Info Changed Changed Changed Changed Changed NORMAL NORMA	Sample Date		Client Info		15 Jul 2024	16 Feb 2024	28 Oct 2023
Oil Changed Sample Status Client Info MoRMAL Changed NORMAL NORMAL Changed NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG	Machine Age	mls	Client Info		333706	310515	294485
Sample Status	Oil Age	mls	Client Info		23191	16030	14602
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Glycol WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >80 11 5 26 Chromium ppm ASTM D5185m >5 <1 <1 1 Nickel ppm ASTM D5185m >2 0 0 <1 Silver ppm ASTM D5185m >3 0 0 <1 Lead ppm ASTM D5185m >30 0 0 <1 Lead ppm ASTM D5185m >150 3 3 8 Tin ppm ASTM D5185m >10 0 <1 Vanadium p	Oil Changed		Client Info		Changed	Changed	Changed
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water Glycol WC Method Glycol NEG NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >80 11 5 26 Chromium ppm ASTM D5185m >5 <1 <1 1 Nickel ppm ASTM D5185m >2 0 0 <1 Silver ppm ASTM D5185m >2 0 0 <1 Sliver ppm ASTM D5185m >30 0 0 <1 Aluminum ppm ASTM D5185m >30 0 0 <1 Lead ppm ASTM D5185m >30 0 0 0 Copper ppm ASTM D5185m >5 0 0 0 Vanadium ppm ASTM D5185m >5 0 0 0 Vanadium ppm ASTM D5185m >0 0 0 <t< th=""><th>CONTAMINAT</th><th>ION</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></t<>	CONTAMINAT	ION	method	limit/base	current	history1	history2
Silycol WC Method MEG NEG NEG	Fuel		WC Method	>5	<1.0	<1.0	<1.0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >80 11 5 26 Chromium ppm ASTM D5185m >5 <1	Water		WC Method	>0.2	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >5 <1 <1 1 Nickel ppm ASTM D5185m >2 0 0 <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>80	11	5	26
Titanium ppm ASTM D5185m <1 0 0 Silver ppm ASTM D5185m >3 0 0 <1	Chromium	ppm	ASTM D5185m	>5	<1	<1	1
Silver ppm ASTM D5185m >3 0 0 <1 Aluminum ppm ASTM D5185m >30 5 4 7 Lead ppm ASTM D5185m >30 0 0 0 Copper ppm ASTM D5185m >150 3 3 8 Tin ppm ASTM D5185m >5 0 0 <1 Vanadium ppm ASTM D5185m 0 0 0 <1 Vanadium ppm ASTM D5185m 0 0 0 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 0 4 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 0 4 ADDITIVES method limit/base current history1 history2	Nickel	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	Titanium	ppm	ASTM D5185m		<1	0	0
Lead ppm ASTM D5185m >30 0 0 0 Copper ppm ASTM D5185m >150 3 3 8 Tin ppm ASTM D5185m >5 0 0 <1 Vanadium ppm ASTM D5185m 0 0 0 <1 Cadmium ppm ASTM D5185m 0 0 0 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 3 6 2 Barium ppm ASTM D5185m 0 -1 0 4 Molybdenum ppm ASTM D5185m 0 -1 0 4 Molybdenum ppm ASTM D5185m 0 -1 <1 <1 <1 Magnesium ppm ASTM D5185m 0 -1 <1 <1 <1 <1 <1 <1 <1 <1 <1	Silver	ppm	ASTM D5185m	>3	0	0	<1
Copper ppm ASTM D5185m >150 3 3 8 Tin ppm ASTM D5185m >5 0 0 <1	Aluminum	ppm	ASTM D5185m	>30	5	4	7
Tin ppm ASTM D5185m >5 0 0 <1 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1	Lead	ppm	ASTM D5185m	>30	0	0	0
Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 3 6 2 Barium ppm ASTM D5185m 0 <1 0 4 Molybdenum ppm ASTM D5185m 50 63 57 70 Magnesium ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 950 967 820 901 Calcium ppm ASTM D5185m 995 1009 896 962 Zinc ppm ASTM D5185m 295 1009 896 962 Sulfur ppm ASTM D5185m 2600 3252 2483 2756 CONTAMINANTS method limit/base current	Copper	ppm	ASTM D5185m	>150	3	3	8
Cadmium ppm ASTM D5185m 0 0 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 3 6 2 Barium ppm ASTM D5185m 0 <1	Tin	ppm	ASTM D5185m	>5	0	0	<1
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	0	0
Boron ppm ASTM D5185m 2 3 6 2 Barium ppm ASTM D5185m 0 <1	Cadmium	ppm	ASTM D5185m		0	0	<1
Barium ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 63 57 70 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 950 967 820 901 Calcium ppm ASTM D5185m 1050 1126 980 1109 Phosphorus ppm ASTM D5185m 1099 896 962 Zinc ppm ASTM D5185m 995 1009 896 962 Zinc ppm ASTM D5185m 2600 3252 2483 2756 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 7 Sodium ppm ASTM D5185m >20 1 0 0 Potassium ppm ASTM D5185m >20 1 0 5 INFRA-RED method limit/base current<	Boron	ppm	ASTM D5185m	2	3	6	2
Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 950 967 820 901 Calcium ppm ASTM D5185m 1050 1126 980 1109 Phosphorus ppm ASTM D5185m 995 1009 896 962 Zinc ppm ASTM D5185m 1180 1241 1097 1220 Sulfur ppm ASTM D5185m 2600 3252 2483 2756 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 7 Sodium ppm ASTM D5185m >20 1 0 0 Potassium ppm ASTM D5185m >20 1 0 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624	Barium	ppm	ASTM D5185m	0	<1	0	4
Magnesium ppm ASTM D5185m 950 967 820 901 Calcium ppm ASTM D5185m 1050 1126 980 1109 Phosphorus ppm ASTM D5185m 995 1009 896 962 Zinc ppm ASTM D5185m 1180 1241 1097 1220 Sulfur ppm ASTM D5185m 2600 3252 2483 2756 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 7 Sodium ppm ASTM D5185m >20 1 0 0 Potassium ppm ASTM D5185m >20 1 0 5 INFRA-RED method limit/base current history1 history2 Soot % "ASTM D7844 >3 0.7 0.5 1.1 Nitration Abs/.1mm "ASTM D7415 >	Molybdenum	ppm	ASTM D5185m	50	63	57	70
Calcium ppm ASTM D5185m 1050 1126 980 1109 Phosphorus ppm ASTM D5185m 995 1009 896 962 Zinc ppm ASTM D5185m 1180 1241 1097 1220 Sulfur ppm ASTM D5185m 2600 3252 2483 2756 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 7 Sodium ppm ASTM D5185m >20 1 0 0 Potassium ppm ASTM D5185m >20 1 0 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 8.4 7.8 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.0 22.1 FLUID DEGRADATION method </td <td>Manganese</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <th><1</th> <td><1</td> <td><1</td>	Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Phosphorus ppm ASTM D5185m 995 1009 896 962 Zinc ppm ASTM D5185m 1180 1241 1097 1220 Sulfur ppm ASTM D5185m 2600 3252 2483 2756 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 7 Sodium ppm ASTM D5185m >20 1 0 0 Potassium ppm ASTM D5185m >20 1 0 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.7 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 8.4 7.8 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.0 22.1 FLUID DEGRADATION method<	Magnesium	ppm	ASTM D5185m	950	967	820	901
Zinc ppm ASTM D5185m 1180 1241 1097 1220 Sulfur ppm ASTM D5185m 2600 3252 2483 2756 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 7 Sodium ppm ASTM D5185m >20 1 0 0 Potassium ppm ASTM D5185m >20 1 0 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.7 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 8.4 7.8 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.0 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm	Calcium	ppm	ASTM D5185m	1050	1126	980	1109
Sulfur ppm ASTM D5185m 2600 3252 2483 2756 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 7 Sodium ppm ASTM D5185m >20 1 0 0 Potassium ppm ASTM D5185m >20 1 0 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.7 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 8.4 7.8 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.0 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.8 15.0 17.7	Phosphorus	ppm	ASTM D5185m	995	1009	896	962
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 7 Sodium ppm ASTM D5185m 1 0 0 Potassium ppm ASTM D5185m >20 1 0 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.7 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 8.4 7.8 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.0 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.8 15.0 17.7	Zinc	ppm	ASTM D5185m	1180	1241	1097	1220
Silicon ppm ASTM D5185m >20 4 3 7 Sodium ppm ASTM D5185m 1 0 0 Potassium ppm ASTM D5185m >20 1 0 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.7 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 8.4 7.8 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.0 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.8 15.0 17.7	Sulfur	ppm	ASTM D5185m	2600	3252	2483	2756
Sodium ppm ASTM D5185m 1 0 0 Potassium ppm ASTM D5185m >20 1 0 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.7 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 8.4 7.8 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.0 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.8 15.0 17.7	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 1 0 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.7 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 8.4 7.8 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.0 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.8 15.0 17.7	Silicon	ppm	ASTM D5185m	>20	4	3	7
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.7 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 8.4 7.8 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.0 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.8 15.0 17.7	Sodium	ppm	ASTM D5185m		1	0	0
Soot % % *ASTM D7844 >3 0.7 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 8.4 7.8 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.0 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.8 15.0 17.7	Potassium	ppm	ASTM D5185m	>20	1	0	5
Nitration Abs/cm *ASTM D7624 >20 8.4 7.8 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.0 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.8 15.0 17.7	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.0 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.8 15.0 17.7	Soot %	%	*ASTM D7844	>3	0.7	0.5	1.1
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.8 15.0 17.7	Nitration	Abs/cm	*ASTM D7624	>20	8.4	7.8	9.3
Oxidation Abs/.1mm *ASTM D7414 >25 15.8 15.0 17.7	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.1	19.0	22.1
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 7.7 8.1 6.4	Oxidation	Abs/.1mm	*ASTM D7414	>25	15.8	15.0	17.7
	Base Number (BN)	mg KOH/g	ASTM D2896		7.7	8.1	6.4



OIL ANALYSIS REPORT







Certificate 12367

Laboratory Sample No.

: PCA0124108 Lab Number : 06238849 Unique Number : 11127683

Test Package : FLEET

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

Received : 17 Jul 2024 **Tested** : 17 Jul 2024 Diagnosed : 17 Jul 2024 - Wes Davis

Feb 16/24

Transervice - Shop 1071 - Supermarket-Dayton 60 A Tower Road Dayton, NJ US 08810

Contact: Brian Quinn bquinn@transervice.com T:

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

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