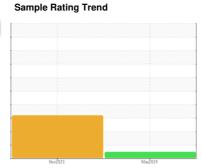


OIL ANALYSIS REPORT





Machine Id 5116 Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (--- Q

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the

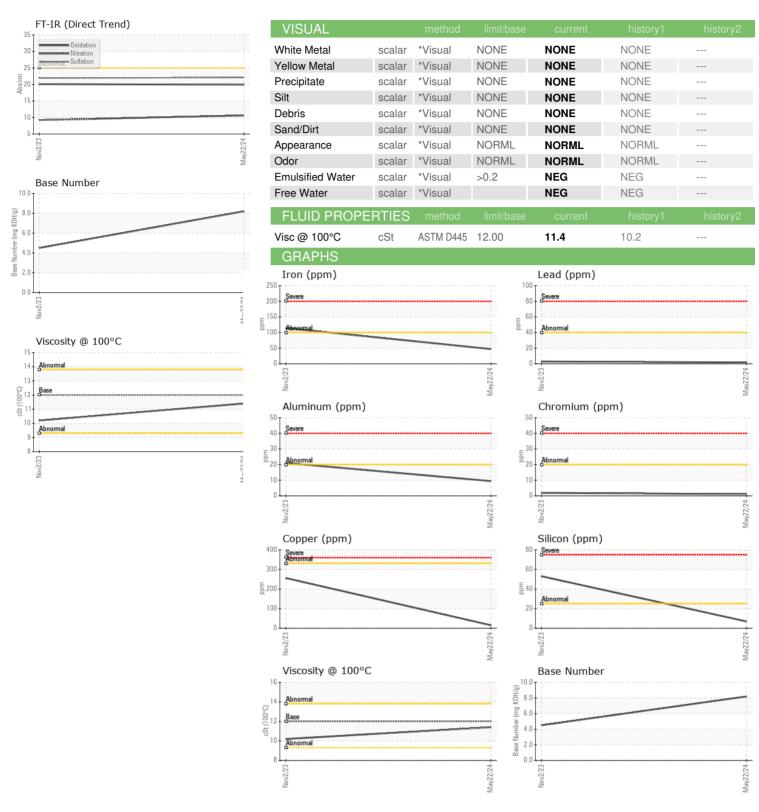
Fluid Condition

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

Fuel	QTS)			Nov2023	May2024		
Sample Number Client Info PCA0126982 PCA0110477	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Client Info					PCA0126982		
Machine Age mls Client Info 45015 0 Oil Age mis Client Info 0 0 Oil Changed Client Info Changed N/A Sample Status NORMAL ABNORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 Water WC Method >0.2 NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM 05185m >100 47 ▲ 114 Chromium ppm ASTM 05185m >20 1 2 Silver ppm ASTM 05185m >3 0 <1 Silver ppm ASTM 05185m >3 0 <1 Silver ppm ASTM 05185m >40 2							
Oil Age mls Client Info 0 0	•	mls			-		
Contained Client Info Changed N/A ABNORMAL CONTAMINATION Method Imilibase current history1 history2							
CONTAMINATION method limit/base current history1 history2	-				-		
Fuel	Sample Status				_	ABNORMAL	
Water Glycol WC Method WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >10.0 47 ▲ 114 Chromium ppm ASTM D5185m >20 1 2 Nickel ppm ASTM D5185m >4 <1 1 Silver ppm ASTM D5185m >4 <1 1 Silver ppm ASTM D5185m >4 <1 1 Silver ppm ASTM D5185m >40 2 3 Aluminum ppm ASTM D5185m >40 2 3 Copper ppm ASTM D5185m >15 256 Tin ppm ASTM D5185m >15 2 5 Vanadium ppm ASTM D5185m 0 <1 <	CONTAMINATI	ION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0	<1.0	
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	
ASTM D5185m STM D5185m S	Glycol		WC Method		NEG	NEG	
Chromium ppm ASTM D5185m >20 1 2	WEAR METALS	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	47	<u> </u>	
Titanium	Chromium	ppm	ASTM D5185m	>20	1	2	
Silver	Nickel	ppm	ASTM D5185m	>4	<1	1	
Aluminum ppm ASTM D5185m >20 9 21 Lead ppm ASTM D5185m >40 2 3 Copper ppm ASTM D5185m >330 15 256 Tin ppm ASTM D5185m >15 2 5 Vanadium ppm ASTM D5185m 0 <1	Titanium	ppm	ASTM D5185m		0	<1	
Lead ppm ASTM D5185m >40 2 3 Copper ppm ASTM D5185m >330 15 256 Tin ppm ASTM D5185m >15 2 5 Vanadium ppm ASTM D5185m 0 <1	Silver	ppm	ASTM D5185m	>3	0	<1	
Copper ppm ASTM D5185m >330 15 256 Tin ppm ASTM D5185m >15 2 5 Vanadium ppm ASTM D5185m 0 <1	Aluminum	ppm	ASTM D5185m	>20	9	21	
Tin	Lead	ppm	ASTM D5185m	>40	2	3	
Vanadium ppm ASTM D5185m 0 <1	Copper	ppm	ASTM D5185m	>330	15	256	
Cadmium ppm ASTM D5185m 0 <1	Tin	ppm	ASTM D5185m	>15	2	5	
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 3 130 Barium ppm ASTM D5185m 0 0 6 Molybdenum ppm ASTM D5185m 50 66 15 Manganese ppm ASTM D5185m 0 <1	Vanadium	ppm	ASTM D5185m		0	<1	
Boron ppm ASTM D5185m 2 3 130 Barium ppm ASTM D5185m 0 0 6 Molybdenum ppm ASTM D5185m 50 66 15 Manganese ppm ASTM D5185m 0 <1	Cadmium	ppm	ASTM D5185m		0	<1	
Barium ppm ASTM D5185m 0 0 6 Molybdenum ppm ASTM D5185m 50 66 15 Manganese ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 66 15 Manganese ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m	2	3	130	
Manganese ppm ASTM D5185m 0 <1 4 Magnesium ppm ASTM D5185m 950 990 121 Calcium ppm ASTM D5185m 1050 1165 1099 Phosphorus ppm ASTM D5185m 995 1074 893 Zinc ppm ASTM D5185m 1180 1284 1130 Sulfur ppm ASTM D5185m 2600 3068 3102 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 53 Sodium ppm ASTM D5185m >20 12 9 Potassium ppm ASTM D5185m >20 12 9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844<	Barium	ppm	ASTM D5185m	0	0	6	
Magnesium ppm ASTM D5185m 950 990 121 Calcium ppm ASTM D5185m 1050 1165 1099 Phosphorus ppm ASTM D5185m 995 1074 893 Zinc ppm ASTM D5185m 1180 1284 1130 Sulfur ppm ASTM D5185m 2600 3068 3102 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 ▲ 53 Sodium ppm ASTM D5185m >20 12 9 Potassium ppm ASTM D5185m >20 12 9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1 0.5 Nitration Abs/.1mm *ASTM D7415 <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td>50</td> <th>66</th> <td>15</td> <td></td>	Molybdenum	ppm	ASTM D5185m	50	66	15	
Calcium ppm ASTM D5185m 1050 1165 1099 Phosphorus ppm ASTM D5185m 995 1074 893 Zinc ppm ASTM D5185m 1180 1284 1130 Sulfur ppm ASTM D5185m 2600 3068 3102 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 53 Sodium ppm ASTM D5185m >20 1 Potassium ppm ASTM D5185m >20 12 9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1 0.5 Nitration Abs/.1mm *ASTM D7415 >30 22.1 21.9 FLUID DEGRADATION *ASTM D7414 >25 <t< td=""><td>Manganese</td><td>ppm</td><td>ASTM D5185m</td><td>0</td><th><1</th><td>4</td><td></td></t<>	Manganese	ppm	ASTM D5185m	0	<1	4	
Phosphorus ppm ASTM D5185m 995 1074 893 Zinc ppm ASTM D5185m 1180 1284 1130 Sulfur ppm ASTM D5185m 2600 3068 3102 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 ▲ 53 Sodium ppm ASTM D5185m >20 12 9 Potassium ppm ASTM D5185m >20 12 9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1 0.5 Nitration Abs/cm *ASTM D7624 >20 10.6 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 21.9 FLUID DEGRADATION	Magnesium	ppm	ASTM D5185m	950	990	121	
Zinc ppm ASTM D5185m 1180 1284 1130 Sulfur ppm ASTM D5185m 2600 3068 3102 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 53 Sodium ppm ASTM D5185m 0 1 Potassium ppm ASTM D5185m >20 12 9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1 0.5 Nitration Abs/cm *ASTM D7624 >20 10.6 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *AST	Calcium	ppm	ASTM D5185m	1050	1165	1099	
Sulfur ppm ASTM D5185m 2600 3068 3102 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 ▲ 53 Sodium ppm ASTM D5185m 0 1 Potassium ppm ASTM D5185m >20 12 9 INFRA-RED method limit/base current history1 history2 Soot % % 'ASTM D7844 >3 1 0.5 Nitration Abs/cm 'ASTM D7624 >20 10.6 9.2 Sulfation Abs/.1mm 'ASTM D7415 >30 22.1 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm 'ASTM D7414 >25 19.9 20.1	Phosphorus	ppm	ASTM D5185m	995	1074		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 ▲ 53 Sodium ppm ASTM D5185m 0 1 Potassium ppm ASTM D5185m >20 12 9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1 0.5 Nitration Abs/cm *ASTM D7624 >20 10.6 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.9 20.1	Zinc	ppm	ASTM D5185m	1180	1284	1130	
Silicon ppm ASTM D5185m >25 7 ▲ 53 Sodium ppm ASTM D5185m 0 1 Potassium ppm ASTM D5185m >20 12 9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1 0.5 Nitration Abs/cm *ASTM D7624 >20 10.6 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.9 20.1	Sulfur		ASTM D5185m	2600	3068	3102	
Sodium ppm ASTM D5185m 0 1 Potassium ppm ASTM D5185m >20 12 9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1 0.5 Nitration Abs/cm *ASTM D7624 >20 10.6 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.9 20.1	CONTAMINAN	TS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 12 9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1 0.5 Nitration Abs/cm *ASTM D7624 >20 10.6 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.9 20.1	Silicon	ppm	ASTM D5185m	>25	7	△ 53	
INFRA-RED	Sodium	ppm	ASTM D5185m		0	1	
Soot % % *ASTM D7844 >3 1 0.5 Nitration Abs/cm *ASTM D7624 >20 10.6 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.9 20.1	Potassium	ppm	ASTM D5185m	>20	12	9	
Nitration Abs/cm *ASTM D7624 >20 10.6 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.9 20.1	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 22.1 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.9 20.1	Soot %	%	*ASTM D7844	>3	1	0.5	
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.9 20.1	Nitration	Abs/cm	*ASTM D7624	>20	10.6	9.2	
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	21.9	
	FLUID DEGRAD	DATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 8.2 4.5	Oxidation	Abs/.1mm	*ASTM D7414	>25	19.9	20.1	
	Base Number (BN)	mg KOH/g	ASTM D2896		8.2	4.5	



OIL ANALYSIS REPORT







Certificate 12367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Lab Number : 06195022

Unique Number : 11057145

: PCA0126982

Diagnosed

Received

Tested

: 30 May 2024

: 31 May 2024

: 31 May 2024 - Wes Davis

Test Package : MOB 1 (Additional Tests: TBN) 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)

MILLER TRUCK LEASING #119

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