

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **190811** Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (--- QTS)

DIAGNOSIS

Recommendation

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

Wear

Elui

Metal levels are typical for a new component breaking in.

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.

TS)		Jui2019	Apr2020 Mar2021	Feb2022 Oct2022 Ju	n2023	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0106290	PCA0098010	PCA0089633
Sample Date		Client Info		27 Sep 2023	08 Jun 2023	17 Jan 2023
Machine Age	mls	Client Info		12548	115000	101471
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	19	19	21
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm		>4	<1	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm		>3	<1	0	0
Aluminum	ppm	ASTM D5185m		3	4	2
Lead	ppm	ASTM D5185m	>40	2	2	2
Copper	ppm	ASTM D5185m		3	5	11
Tin	ppm		>15	ء <1	2	1
Vanadium	ppm	ASTM D5185m	210	<1	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	1	10	13
Barium	ppm	ASTM D5185m	0	0	0	2
Molybdenum	ppm	ASTM D5185m	50	63	66	69
Manganese	ppm	ASTM D5185m	0	<1	1	<1
Magnesium	ppm	ASTM D5185m	950	1040	964	903
Calcium	ppm	ASTM D5185m	1050	1254	1230	1193
Phosphorus	ppm				1200	
	ppin	ASTM D5185m	995	1187	1105	1065
Zinc	ppm	ASTM D5185m ASTM D5185m	995 1180	1187 1464		1065 1288
Zinc Sulfur		ASTM D5185m		-	1105	
-	ppm ppm	ASTM D5185m	1180	1464	1105 1386	1288
Sulfur	ppm ppm	ASTM D5185m ASTM D5185m	1180 2600	1464 3525	1105 1386 4001	1288 3622
Sulfur CONTAMINAN	ppm ppm TS	ASTM D5185m ASTM D5185m method	1180 2600 limit/base	1464 3525 current	1105 1386 4001 history1	1288 3622 history2
Sulfur CONTAMINAN Silicon	ppm ppm TS ppm	ASTM D5185m ASTM D5185m method ASTM D5185m	1180 2600 limit/base	1464 3525 current 5	1105 1386 4001 history1 5	1288 3622 history2 5
Sulfur CONTAMINAN Silicon Sodium	ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	1180 2600 limit/base >25	1464 3525 current 5 <1	1105 1386 4001 history1 5 2	1288 3622 history2 5 4
Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	1180 2600 limit/base >25 >20	1464 3525 current 5 <1 <1	1105 1386 4001 history1 5 2 2 2	1288 3622 history2 5 4 3
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m Method	1180 2600 limit/base >25 >20 limit/base	1464 3525 current 5 <1 <1 <1 current	1105 1386 4001 history1 5 2 2 2 history1	1288 3622 history2 5 4 3 history2
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844	1180 2600 limit/base >25 >20 limit/base >3	1464 3525 current 5 <1 <1 <1 current 1.1	1105 1386 4001 history1 5 2 2 2 history1 1.2	1288 3622 history2 5 4 3 history2 1
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7824 *ASTM D7415	1180 2600 limit/base >25 >20 limit/base >3 >20	1464 3525 current 5 <1 <1 <1 current 1.1 10.1	1105 1386 4001 history1 5 2 2 history1 1.2 11.0	1288 3622 history2 5 4 3 history2 1 10.1
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7824 *ASTM D7415	1180 2600 limit/base >25 >20 limit/base >3 >20 >30	1464 3525 current 5 <1 <1 <1 i urrent 1.1 10.1 20.6	1105 1386 4001 history1 5 2 2 2 history1 1.2 11.0 21.5	1288 3622 history2 5 4 3 history2 1 10.1 20.1



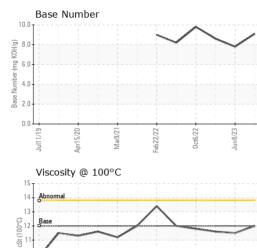
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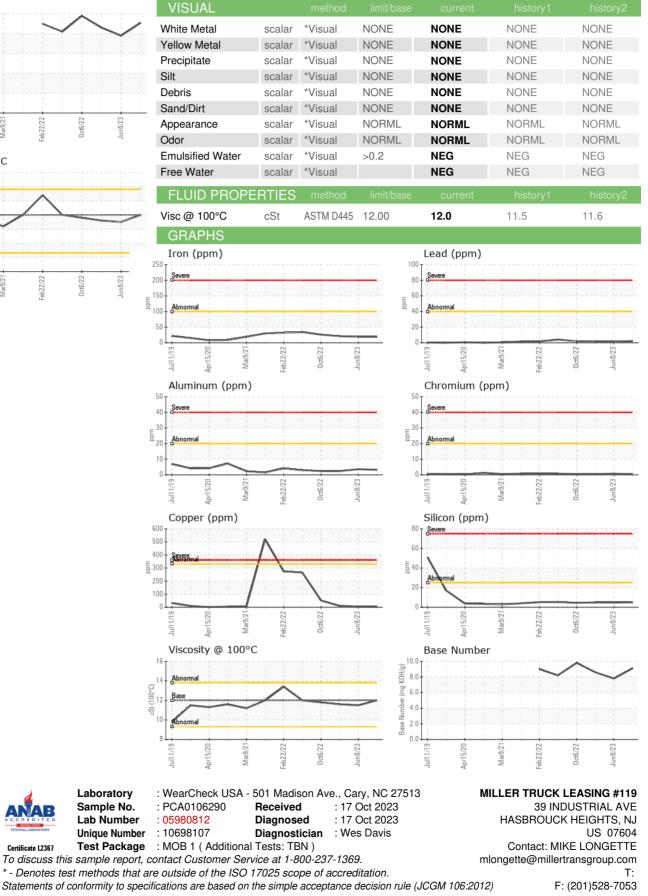
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OIL ANALYSIS REPORT



0ct6/22

Jun8/23



Certificate L2367

Laboratory

Sample No.

Lab Number

Contact/Location: MIKE LONGETTE - MILRUT