

## **OIL ANALYSIS REPORT**

Sample Rating Trend



### Machine Id 317891

Component Diesel Engine

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

#### DIAGNOSIS

#### Recommendation

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

#### Wear

Fluid

Metal levels are typical for a new component breaking in.

#### Contamination

There is no indication of any contamination in the oil.

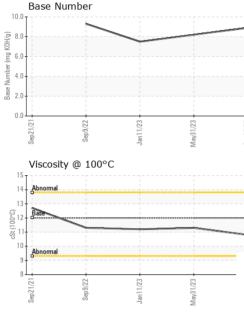
#### Fluid Condition

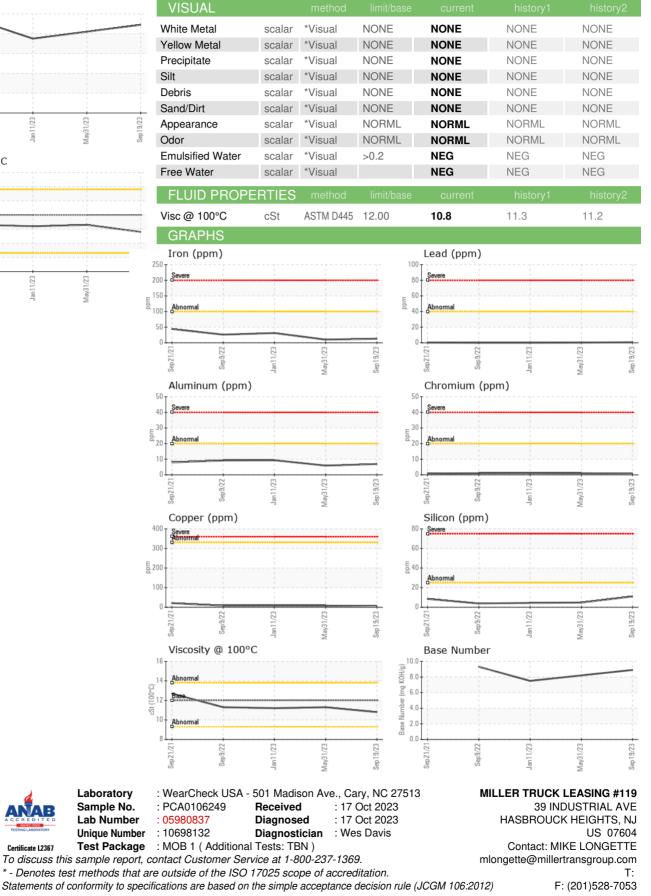
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

AL)		Sep2021	Sep2022	Jan 2023 May2023	Sep2023	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0106249	PCA0098056	PCA0089688
Sample Date		Client Info		19 Sep 2023	31 May 2023	11 Jan 2023
Machine Age	mls	Client Info		35143	29872	24804
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Changed
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	13	10	31
Chromium	ppm	ASTM D5185m	>20	<1	1	1
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m		7	6	9
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m		5	8	9
Tin			>15	1	2	2
Vanadium	ppm	ASTM D5185m	>10	<1	0	0
Cadmium	ppm ppm	ASTM D5185m		0	0	0
ADDITIVES	ppm	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	72	12	8
Barium	ppm	ASTM D5185m		0	0	2
Molybdenum	ppm	ASTM D5185m	50	75	64	56
Manganese	ppm	ASTM D5185m	0	1	1	2
Magnesium	ppm	ASTM D5185m	950	977	962	904
Calcium	ppm	ACTM DE10Em				
Dhaanharua	ppin	ASTM D5185m	1050	1286	1172	1194
Phosphorus	ppm	ASTM D5185m ASTM D5185m	1050 995	1286 1080	1172 1068	1194 970
Zinc						
	ppm	ASTM D5185m	995	1080	1068	970
Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m	995 1180	1080 1363	1068 1330	970 1170
Zinc Sulfur	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	995 1180 2600	1080 1363 3449	1068 1330 3866	970 1170 3006
Zinc Sulfur CONTAMINAN	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	995 1180 2600 limit/base	1080 1363 3449 current	1068 1330 3866 history1	970 1170 3006 history2
Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm JTS ppm	ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	995 1180 2600 limit/base	1080 1363 3449 current 11	1068 1330 3866 history1 5	970 1170 3006 history2 4
Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm VTS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	995 1180 2600 limit/base >25	1080 1363 3449 current 11 2	1068 1330 3866 history1 5 4	970 1170 3006 history2 4 0
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm VTS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	995 1180 2600 limit/base >25 >20	1080 1363 3449 current 11 2 6	1068 1330 3866 history1 5 4 8	970 1170 3006 history2 4 0 13
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm JTS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	995 1180 2600 limit/base >25 >20 limit/base >3	1080 1363 3449 current 11 2 6 current	1068 1330 3866 history1 5 4 8 8 history1	970 1170 3006 history2 4 0 13 history2
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm JTS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844	995 1180 2600 limit/base >25 >20 limit/base >3	1080 1363 3449 current 11 2 6 current 0.4	1068 1330 3866 history1 5 4 8 history1 0.3	970 1170 3006 history2 4 0 13 history2 0.5
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm JTS ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7824	995 1180 2600 limit/base >25 >20 limit/base >3 >20	1080 1363 3449 current 11 2 6 current 0.4 7.6	1068 1330 3866 history1 5 4 8 history1 0.3 7.8	970 1170 3006 history2 4 0 13 history2 0.5 9.8
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm JTS ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7824	995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3 >20 >30 <b>limit/base</b>	1080 1363 3449 current 11 2 6 current 0.4 7.6 18.9	1068 1330 3866 history1 5 4 8 history1 0.3 7.8 19.4	970 1170 3006 history2 4 0 13 history2 0.5 9.8 19.7



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Certificate L2367

Contact/Location: MIKE LONGETTE - MILRUT