

## **OIL ANALYSIS REPORT**

Sample Rating Trend



### Machine Id SJB2813

Component Diesel Engine Fluid

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

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

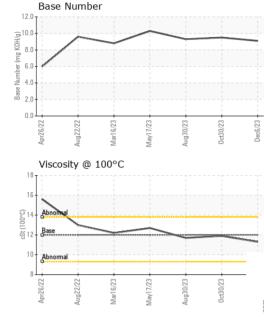
#### Fluid Condition

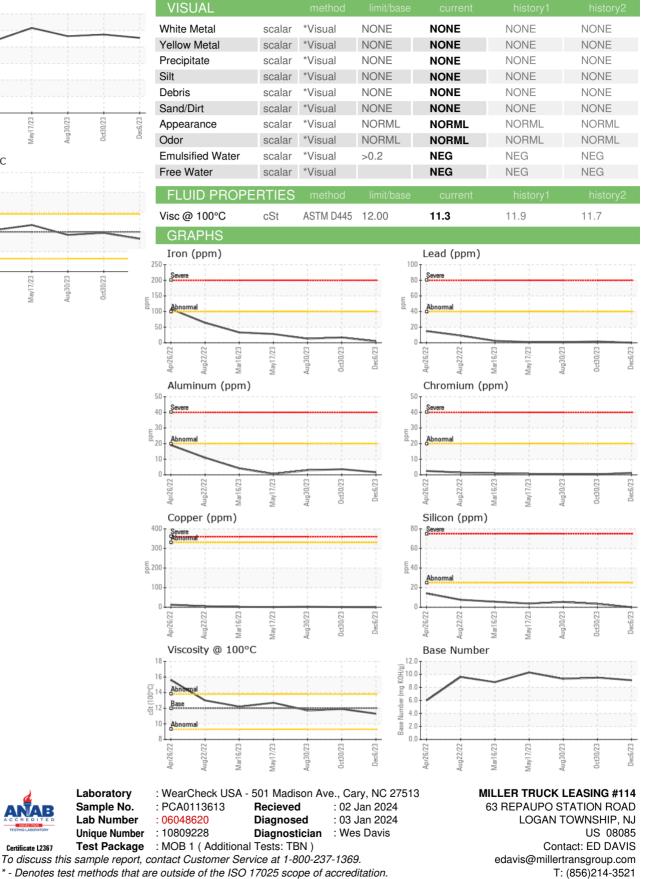
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

		Apr2022	Aug2022 Mar2023	May2023 Aug2023 Oct2023	Dec2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0113613	PCA0105805	PCA0100899
Sample Date		Client Info		06 Dec 2023	30 Oct 2023	30 Aug 2023
Machine Age	mls	Client Info		180688	175227	164693
Oil Age	mls	Client Info		5461	10534	5719
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ION	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
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	5	17	13
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm		>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	4	3
Lead	ppm	ASTM D5185m	>40	0	2	<1
Copper	ppm	ASTM D5185m	>330	0	<1	3
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	2	4	10
Barium	ppm	ASTM D5185m	0	4	0	0
Molybdenum	ppm	ASTM D5185m	50	65	59	57
,	ppm ppm	ASTM D5185m ASTM D5185m	50 0	65 0	59 <1	57 1
Manganese						
Manganese Magnesium	ppm	ASTM D5185m	0	0	<1	1
Manganese Magnesium Calcium Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m	0 950	0 878	<1 856 1231 894	1 907 1293 1076
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050	0 878 1181	<1 856 1231	1 907 1293
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995	0 878 1181 1064	<1 856 1231 894	1 907 1293 1076
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180	0 878 1181 1064 1215	<1 856 1231 894 1160	1 907 1293 1076 1368
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	0 950 1050 995 1180 2600	0 878 1181 1064 1215 3601 current 0	<1 856 1231 894 1160 3100 history1 3	1 907 1293 1076 1368 4128 history2 5
CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	0 950 1050 995 1180 2600 limit/base	0 878 1181 1064 1215 3601 current	<1 856 1231 894 1160 3100 history1	1 907 1293 1076 1368 4128 history2 5 7
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	0 950 1050 995 1180 2600 limit/base	0 878 1181 1064 1215 3601 current 0	<1 856 1231 894 1160 3100 history1 3	1 907 1293 1076 1368 4128 history2 5
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base >25	0 878 1181 1064 1215 3601 current 0 0	<1 856 1231 894 1160 3100 history1 3 8	1 907 1293 1076 1368 4128 history2 5 7
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20	0 878 1181 1064 1215 3601 current 0 0 0	<1 856 1231 894 1160 3100 history1 3 8 4	1 907 1293 1076 1368 4128 history2 5 7 5 5 history2 1
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20	0 878 1181 1064 1215 3601 current 0 0 0 0 0	<1 856 1231 894 1160 3100 history1 3 8 4 history1	1 907 1293 1076 1368 4128 history2 5 7 5 7 5 8
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3	0 878 1181 1064 1215 3601 current 0 0 0 0 0 current 0.7	<1 856 1231 894 1160 3100 history1 3 8 4 history1 1.9	1 907 1293 1076 1368 4128 history2 5 7 5 5 history2 1
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624	0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3 >20	0 878 1181 1064 1215 3601 current 0 0 0 0 0 current 0.7 7.5	<1 856 1231 894 1160 3100 history1 3 8 4 history1 1.9 10.9	1 907 1293 1076 1368 4128 history2 5 7 5 5 history2 1 7.7
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624	0 950 1050 995 1180 2600 <b>imit/base</b> >25 >20 <b>imit/base</b> >3 >20 >30	0 878 1181 1064 1215 3601 current 0 0 0 0 0 0 0 0 0 0 0 1 0 0 1 0 1 1 8.8	<1 856 1231 894 1160 3100 history1 3 8 4 history1 1.9 10.9 22.3	1 907 1293 1076 1368 4128 history2 5 7 5 7 5 <i>history2</i> 1 7.7 19.5



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Report Id: MILLOG [WUSCAR] 06048620 (Generated: 01/03/2024 11:45:47) Rev: 1

Certificate L2367

Laboratory

Sample No.

Lab Number

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Contact/Location: ED DAVIS - MILLOG

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