

# **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id SJB621

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

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

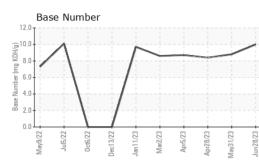
#### Fluid Condition

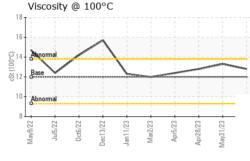
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

(15)						
SAMPLE INFORM	IATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		PCA0100952	PCA0097813	PCA0097748
Sample Date		Client Info		28 Jun 2023	31 May 2023	28 Apr 2023
Machine Age	mls	Client Info		158578	152207	0
Oil Age	mls	Client Info		6371	8513	6259
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL
CONTAMINATI	ON	method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	5	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>100	22	26	21
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	2	2
Lead	ppm	ASTM D5185m	>40	<1	2	0
Copper	ppm	ASTM D5185m	>330	1	1	2
Tin	ppm	ASTM D5185m	>15	<1	<1	0
N / P				•		0
Vanadium	ppm	ASTM D5185m		0	0	0
Vanadium Cadmium	ppm ppm	ASTM D5185m ASTM D5185m		0 0	0	0
			limit/base			
Cadmium		ASTM D5185m	limit/base	0	0	0
Cadmium ADDITIVES Boron	ppm	ASTM D5185m method	2	0 current	0 history 1	0 history 2
Cadmium ADDITIVES Boron Barium	ppm ppm	ASTM D5185m method ASTM D5185m	2	0 current 7	0 history 1 6	0 history 2 13
Cadmium ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m	2 0 50	0 current 7 11	0 history 1 6 2	0 history 2 13 0
Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	0 current 7 11 66	0 history 1 6 2 63	0 history 2 13 0 62
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	0 current 7 11 66 <1	0 history 1 6 2 63 <1	0 history 2 13 0 62 <1
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	0 current 7 11 66 <1 933	0 history 1 6 2 63 <1 850	0 history 2 13 0 62 <1 912
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	0 current 7 11 66 <1 933 1251	0 history 1 6 2 63 <1 850 1128	0 history 2 13 0 62 <1 912 1132
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	0 current 7 11 66 <1 933 1251 1073	0 history 1 6 2 63 <1 850 1128 1017	0 history 2 13 0 62 <1 912 1132 1044
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180	0 current 7 11 66 <1 933 1251 1073 1330	0 history 1 6 2 63 <1 850 1128 1017 1186	0 history 2 13 0 62 <1 912 1132 1044 1276
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	0 current 7 11 66 <1 933 1251 1073 1330 3805	0 history 1 6 2 63 <1 850 1128 1017 1186 3005	0 history 2 13 0 62 <1 912 1132 1044 1276 3667
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	0 current 7 11 66 <1 933 1251 1073 1330 3805 current	0 history 1 6 2 63 <1 850 1128 1017 1186 3005 history 1	0 history 2 13 0 62 <1 912 1132 1044 1276 3667 history 2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm	ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >25	0 current 7 11 66 <1 933 1251 1073 1330 3805 current 3	0 history 1 6 2 63 <1 850 1128 1017 1186 3005 history 1 3	0 history 2 13 0 62 <1 912 1132 1044 1276 3667 history 2 4
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN <sup>T</sup> Silicon Sodium	ppm	ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >25	0 current 7 11 66 <1 933 1251 1073 1330 3805 current 3 2	0 history 1 6 2 63 <1 850 1128 1017 1186 3005 history 1 3 0	0 history 2 13 0 62 <1 912 1132 1044 1276 3667 history 2 4 <1
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN <sup>T</sup> Silicon Sodium Potassium	ppm	ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>imit/base</b> >25 >20	0 current 7 11 66 <1 933 1251 1073 1330 3805 current 3 2 <1	0 history 1 6 2 63 <1 850 1128 1017 1186 3005 history 1 3 0 1	0 history 2 13 0 62 <1 912 1132 1044 1276 3667 history 2 4 <1 1
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>Imit/base</b> >25 >20 <b>Imit/base</b> >3	0 current 7 11 66 <1 933 1251 1073 1330 3805 current 3 2 <1 current	0 history 1 6 2 63 <1 850 1128 1017 1186 3005 history 1 3 0 1 1 history 1	0 history 2 13 0 62 <1 912 1132 1044 1276 3667 history 2 4 <1 1 1
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>Imit/base</b> >25 >20 <b>Imit/base</b> >3 >20	0 current 7 11 66 <1 933 1251 1073 1330 3805 current 3 2 <1 current 2.8	0 history 1 6 2 63 <11 850 1128 1017 1186 3005 history 1 3 0 1 history 1 history 1	0 history 2 13 0 62 <1 912 1132 1044 1276 3667 history 2 4 <1 1 1 history 2 2.7
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>Imit/base</b> >25 >20 <b>Imit/base</b> >3 >20	0 current 7 11 66 <1 933 1251 1073 1330 3805 current 3 2 <1 current 2.8 10.9	0 history 1 6 2 63 <11 850 1128 1017 1186 3005 history 1 3 0 1 1 history 1 history 1 1 12 1 1 1 1 1 1 1 1 1 1 1 1 1	0 history 2 13 0 62 <1 912 1132 1044 1276 3667 history 2 4 <1 1 1 history 2 2.7 9.8
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM	2 0 50 0 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20 >30	0 current 7 11 66 <1 933 1251 1073 1330 3805 current 3 2 <1 current 2.8 10.9 24.8	0 history 1 6 2 63 <11 850 1128 1017 1186 3005 history 1 3 0 1 history 1 ▲ 3.6 12.1 26.7	0 history 2 13 0 62 <1 912 1132 1044 1276 3667 history 2 4 <1 1 1 history 2 2.7 9.8 22.9



# **OIL ANALYSIS REPORT**







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

Certificate L2367

Laboratory

Sample No.

Lab Number

Contact/Location: ED DAVIS - MILLOG

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