

OIL ANALYSIS REPORT

Sample Rating Trend





Diesel Engine

PETRO CANADA DURON SHP 10W30 (16 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0105806	PCA0089996	PCA0068436
Sample Date		Client Info		20 Oct 2023	18 Dec 2022	02 Mar 2022
Machine Age	mls	Client Info		0	115031	0
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	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	27	29	25
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	4	4
Lead	ppm	ASTM D5185m	>40	4	2	2
Copper	ppm	ASTM D5185m	>330	1	2	2
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Antimony	ppm	ASTM D5185m				0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	2	7	8
Barium		ASTM D5185m	0	0	0	0
Danam	ppm	ASTIVI DOTODITI	÷		Ū	0
Molybdenum	ppm ppm	ASTM D5185m	50	62	62	58
			50 0	62 <1		58 <1
Molybdenum Manganese Magnesium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950	<1 882	62 1 873	58 <1 974
Molybdenum Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050	<1 882 1276	62 1 873 1134	58 <1 974 1168
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995	<1 882 1276 1026	62 1 873 1134 985	58 <1 974 1168 1076
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180	<1 882 1276 1026 1287	62 1 873 1134 985 1228	58 <1 974 1168 1076 1212
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995	<1 882 1276 1026	62 1 873 1134 985	58 <1 974 1168 1076
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180	<1 882 1276 1026 1287	62 1 873 1134 985 1228	58 <1 974 1168 1076 1212
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600	<1 882 1276 1026 1287 3328 current 4	62 1 873 1134 985 1228 3180 history1 5	58 <1 974 1168 1076 1212 2726 history2 4
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	50 0 950 1050 995 1180 2600 limit/base >25	<1 882 1276 1026 1287 3328 current 4 1	62 1 873 1134 985 1228 3180 history1 5 6	58 <1 974 1168 1076 1212 2726 history2 4 4
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 limit/base >25 >20	<1 882 1276 1026 1287 3328 current 4 1 4	62 1 873 1134 985 1228 3180 history1 5 6 2	58 <1 974 1168 1076 1212 2726 history2 4 4 4 0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 limit/base >25 >20	<1 882 1276 1026 1287 3328 current 4 1 4 2 1 4	62 1 873 1134 985 1228 3180 history1 5 6 2 2 history1	58 <1 974 1168 1076 1212 2726 history2 4 4 0 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3	<1 882 1276 1026 1287 3328 current 4 1 4 current 1.1	62 1 873 1134 985 1228 3180 history1 5 6 2 <u>history1</u> 1.1	58 <1 974 1168 1076 1212 2726 history2 4 4 4 0 bistory2 0.8
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m *ASTM D7844	50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20	<1 882 1276 1026 1287 3328 current 4 1 4 1	62 1 873 1134 985 1228 3180 history1 5 6 2 history1 1.1 1.1	58 <1 974 1168 1076 1212 2726 history2 4 4 4 0 0 history2 0.8 10.7
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3	<1 882 1276 1026 1287 3328 current 4 1 4 current 1.1	62 1 873 1134 985 1228 3180 history1 5 6 2 2 history1 1.1	58 <1 974 1168 1076 1212 2726 history2 4 4 4 0 bistory2 0.8
Molybdenum 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 D5185m	50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20	<1 882 1276 1026 1287 3328 current 4 1 4 1 1 10.8	62 1 873 1134 985 1228 3180 history1 5 6 2 history1 1.1 1.1	58 <1 974 1168 1076 1212 2726 history2 4 4 4 0 0 history2 0.8 10.7
Molybdenum 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 D5185m	50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20 >30	<1 882 1276 1026 1287 3328 current 4 1 4 1 4 current 1.1 10.8 20.8	62 1 873 1134 985 1228 3180 history1 5 6 2 history1 1.1 1.1 1.1 20.7	58 <1 974 1168 1076 1212 2726 history2 4 4 4 0 history2 0.8 10.7 20.7 history2 17.9
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7415	50 0 950 1050 995 1180 2600 imit/base >25 20 imit/base >3 >20 >30 imit/base	<1 882 1276 1026 1287 3328 current 4 1 4 1 4 current 1.1 10.8 20.8 current	62 1 873 1134 985 1228 3180 history1 5 6 2 history1 1.1 11.0 20.7 history1	58 <1 974 1168 1076 1212 2726 history2 4 4 4 0 history2 0.8 10.7 20.7 history2

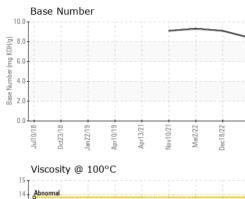


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Abnorm

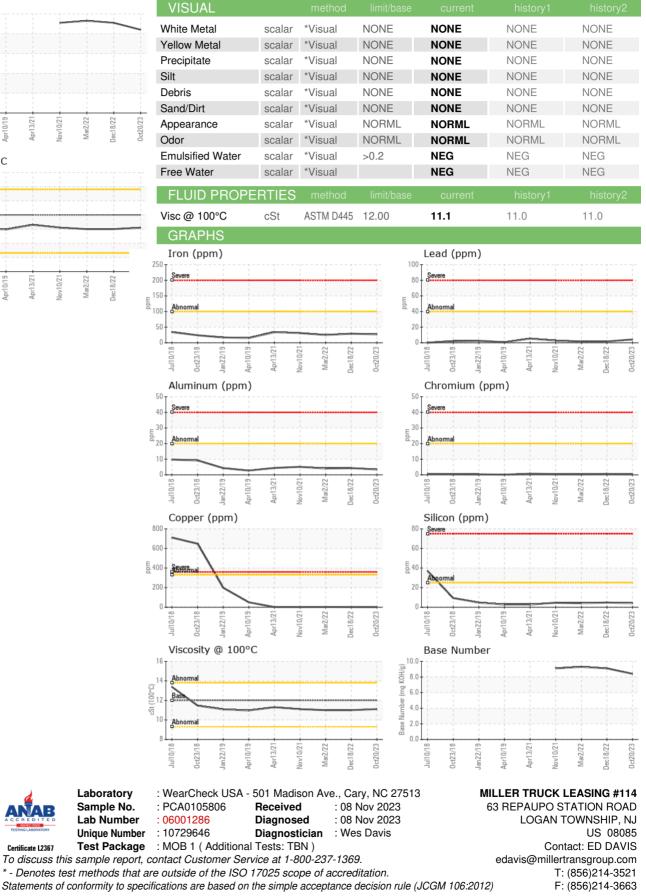
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OIL ANALYSIS REPORT



Mar2/22

10/01/20



Certificate L2367

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