

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **125276** Component

Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (--- 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.

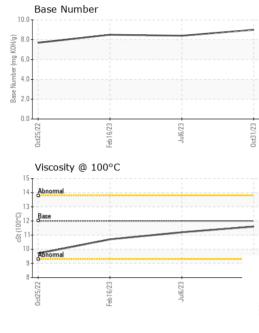
Fluid Condition

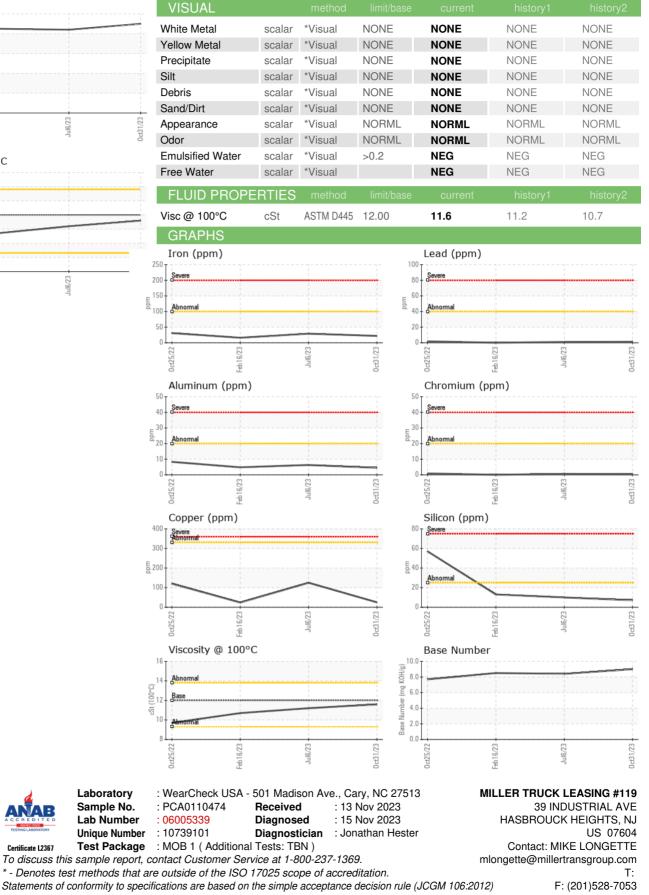
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0110474	PCA0101312	PCA0092380
Sample Date		Client Info		31 Oct 2023	06 Jul 2023	16 Feb 2023
Machine Age	mls	Client Info		17143	2963	7541
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	22	29	16
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m	- T	<1	0	0
Silver		ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>3	4	6	5
Lead	ppm		>20	4	1	5 0
	ppm	ASTM D5185m				
Copper	ppm	ASTM D5185m	>330	25	125	24
Tin	ppm	ASTM D5185m	>15	1	2	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method				history2
		mothod	innibadoo	cancin	motory	
Boron	ppm	ASTM D5185m	2	2	10	28
	ppm ppm					
Boron Barium		ASTM D5185m	2	2	10	28
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	2 0 50	2 <1	10 0	28 0
Boron	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	2 <1 63	10 0 64	28 0 57
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	2 <1 63 <1	10 0 64 <1	28 0 57 <1
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	2 <1 63 <1 962	10 0 64 <1 863	28 0 57 <1 734
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	2 <1 63 <1 962 1093	10 0 64 <1 863 1147	28 0 57 <1 734 1159
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	2 <1 63 <1 962 1093 1056	10 0 64 <1 863 1147 1047	28 0 57 <1 734 1159 882
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180	2 <1 63 <1 962 1093 1056 1258	10 0 64 <1 863 1147 1047 1224	28 0 57 <1 734 1159 882 1118
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	2 <1 63 <1 962 1093 1056 1258 3148	10 0 64 <1 863 1147 1047 1224 3090	28 0 57 <1 734 1159 882 1118 3090
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	2 <1 63 <1 962 1093 1056 1258 3148 current	10 0 64 <1 863 1147 1047 1224 3090 history1	28 0 57 <1 734 1159 882 1118 3090 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm 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	2 0 50 950 1050 995 1180 2600	2 <1 63 <1 962 1093 1056 1258 3148 <i>current</i> 7	10 0 64 <1 863 1147 1047 1224 3090 history1 10	28 0 57 <1 734 1159 882 1118 3090 history2 13
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm 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	2 0 50 950 1050 995 1180 2600 limit/base >25	2 <1 63 <1 962 1093 1056 1258 3148 current 7 0 2	10 0 64 <1 863 1147 1047 1224 3090 history1 10 0	28 0 57 <1 734 1159 882 1118 3090 history2 13 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	2 <1 63 <1 962 1093 1056 1258 3148 current 7 0 2	10 0 64 <1 863 1147 1047 1224 3090 history1 10 0 2	28 0 57 <1 734 1159 882 1118 3090 history2 13 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 -20 limit/base	2 <1 63 <1 962 1093 1056 1258 3148 current 7 0 2 2	10 0 64 <1 863 1147 1047 1224 3090 history1 10 0 2 history1	28 0 57 <1 734 1159 882 1118 3090 history2 13 <1 0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >20	2 <1 63 <1 962 1093 1056 1258 3148 <i>current</i> 7 0 2 2 <i>current</i> 0.4	10 0 64 <1 863 1147 1047 1224 3090 history1 10 0 2 history1 0.4	28 0 57 <1 734 1159 882 1118 3090 history2 13 <1 0 history2 0.2
Boron Barium 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	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i>	2 <1 63 <1 962 1093 1056 1258 3148 <i>current</i> 7 0 2 <i>current</i> 0.4 7.8	10 0 64 <1 863 1147 1047 1224 3090 history1 10 0 2 history1 0.4 9.3	28 0 57 <1 734 1159 882 1118 3090 history2 13 <1 0 history2 0.2 7.6
Boron Barium 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	2 0 50 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20 >30	2 <1 63 <1 962 1093 1056 1258 3148 current 7 0 2 2 current 0.4 7.8 20.1	10 0 64 <1 863 1147 1047 1224 3090 history1 10 0 2 history1 0.4 9.3 19.6	28 0 57 <1 734 1159 882 1118 3090 history2 13 <1 0 history2 0.2 7.6 19.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	2 0 0 50 0 950 1050 995 1180 2600 2600 25 20 220 20 20 20 20 20 20 20 20 20 20 20	2 <1 63 <1 962 1093 1056 1258 3148 <i>current</i> 7 0 2 <i>current</i> 0.4 7.8 20.1	10 0 64 <1 863 1147 1047 1224 3090 history1 10 0 2 history1 0.4 9.3 19.6 history1	28 0 57 <1 734 1159 882 1118 3090 history2 13 <1 0 history2 0.2 7.6 19.0 history2



OIL ANALYSIS REPORT





Certificate L2367

Laboratory

Sample No.

Lab Number

Contact/Location: MIKE LONGETTE - MILRUT