

OIL ANALYSIS REPORT

Sample Rating Trend







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

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.

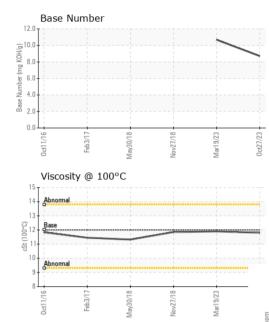
Fluid Condition

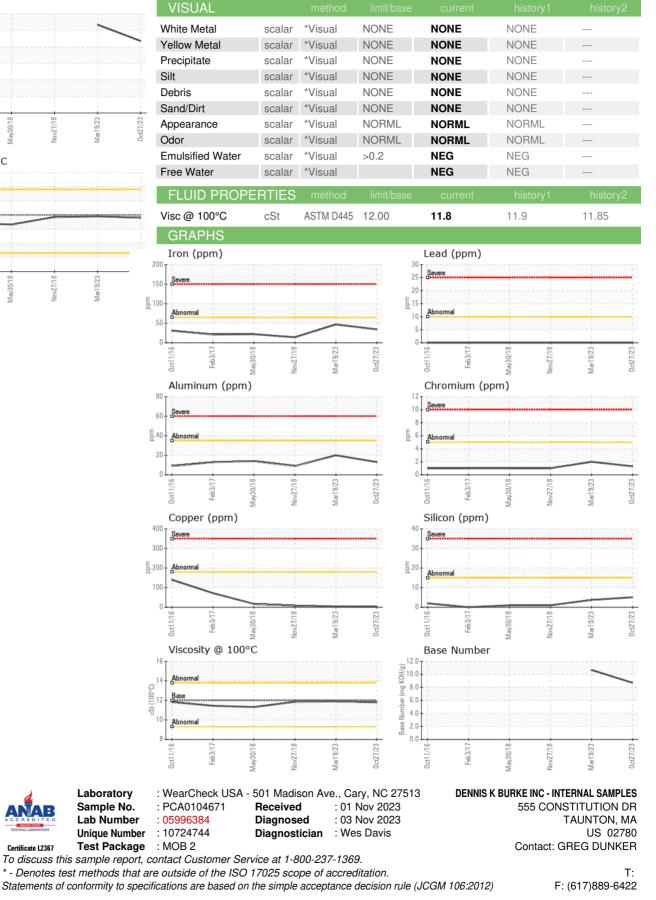
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0104671	PCA0066612	PCA81118355
Sample Date		Client Info		27 Oct 2023	19 Mar 2023	27 Nov 2018
Machine Age	mls	Client Info		285707	285707	144342
Oil Age	mls	Client Info		285707	0	
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS method limit/base current history1 history2						
Iron	ppm	ASTM D5185m	>65	34	47	14
Chromium	ppm	ASTM D5185m	>5	1	2	1
Nickel	ppm	ASTM D5185m	>3	0	<1	0
Titanium	ppm	ASTM D5185m	>5	0	<1	
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>35	13	20	9
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>180	3	4	8
Tin	ppm	ASTM D5185m	>8	0	0	0
Antimony	ppm	ASTM D5185m	>35			0
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 2	current 1	history1 2	history2 3
	ppm ppm	ASTM D5185m				
Boron		ASTM D5185m	2	1 0 57	2 0 61	3
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	1 0 57 0	2 0	3 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	1 0 57	2 0 61 <1 948	3 0 57 865
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	1 0 57 0 923 1034	2 0 61 <1 948 1082	3 0 57 865 1050
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995	1 0 57 0 923 1034 981	2 0 61 <1 948 1082 1026	3 0 57 865 1050 939
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180	1 0 57 0 923 1034 981 1205	2 0 61 <1 948 1082 1026 1240	3 0 57 865 1050 939 1107
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	2 0 50 950 1050 995	1 0 57 0 923 1034 981	2 0 61 <1 948 1082 1026	3 0 57 865 1050 939 1107 2574
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 0 950 1050 995 1180	1 0 57 0 923 1034 981 1205	2 0 61 <1 948 1082 1026 1240	3 0 57 865 1050 939 1107
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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	1 0 57 0 923 1034 981 1205 2783 current 5	2 0 61 <1 948 1082 1026 1240 2800	3 0 57 865 1050 939 1107 2574
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	2 0 50 950 1050 995 1180 2600 Limit/base >15	1 0 57 0 923 1034 981 1205 2783 current 5 23	2 0 61 <1 948 1082 1026 1240 2800 history1 4 5	3 0 57 865 1050 939 1107 2574 history2 1 1
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 method ASTM D5185m	2 0 50 950 1050 995 1180 2600 Limit/base >15	1 0 57 0 923 1034 981 1205 2783 current 5	2 0 61 <1 948 1082 1026 1240 2800 history1 4	3 0 57 865 1050 939 1107 2574 history2 1
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 method ASTM D5185m	2 0 50 950 1050 995 1180 2600 Limit/base >15	1 0 57 0 923 1034 981 1205 2783 <i>current</i> 5 23 31	2 0 61 <1 948 1082 1026 1240 2800 history1 4 5	3 0 57 865 1050 939 1107 2574 history2 1 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 0 950 1050 995 1180 2600 limit/base >15 >20	1 0 57 0 923 1034 981 1205 2783 <i>current</i> 5 23 31	2 0 61 <1 948 1082 1026 1240 2800 history1 4 5 10 history1 0.8	3 0 57 865 1050 939 1107 2574 history2 1 1 1 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	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 >20 limit/base	1 0 57 0 923 1034 981 1205 2783 current 5 23 31 current	2 0 61 <1 948 1082 1026 1240 2800 history1 4 5 10 history1	3 0 57 865 1050 939 1107 2574 history2 1 1 1 1 1 4 <i>h</i> istory2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >20 limit/base >3	1 0 57 0 923 1034 981 1205 2783 <i>current</i> 5 23 31 <i>current</i> 1.4	2 0 61 <1 948 1082 1026 1240 2800 history1 4 5 10 history1 0.8	3 0 57 865 1050 939 1107 2574 history2 1 1 1 1 1 4 history2 0.6
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 0 950 1050 995 1180 2600 <i>limit/base</i> >15 >20 <i>limit/base</i>	1 0 57 0 923 1034 981 1205 2783 <i>current</i> 5 23 31 <i>current</i> 1.4 8.9	2 0 61 <1 948 1082 1026 1240 2800 history1 4 5 10 history1 0.8 9.3	3 0 57 865 1050 939 1107 2574 history2 1 1 1 1 14 14 history2 0.6
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 0 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20 >30	1 0 57 0 923 1034 981 1205 2783 current 5 23 31 current 1.4 8.9 19.9	2 0 61 <1 948 1082 1026 1240 2800 history1 4 5 10 history1 0.8 9.3 20.0	3 0 57 865 1050 939 1107 2574 history2 1 1 1 1 1 4 history2 0.6
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 TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	2 0 50 0 950 1050 995 1180 2600 imit/base >15 >20 imit/base >3 >20 >30	1 0 57 0 923 1034 981 1205 2783 <i>current</i> 5 23 31 <i>current</i> 1.4 8.9 19.9 <i>current</i>	2 0 61 <1 948 1082 1026 1240 2800 history1 4 5 10 history1 0.8 9.3 20.0 history1	3 0 57 865 1050 939 1107 2574 history2 1 1 1 1 1 4 history2 0.6 history2



OIL ANALYSIS REPORT





Certificate L2367

Laboratory

Sample No.

Lab Number

Unique Number

Test Package

Submitted By: JOHN MEDEIROS

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