

OIL ANALYSIS REPORT

Sample Rating Trend





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

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

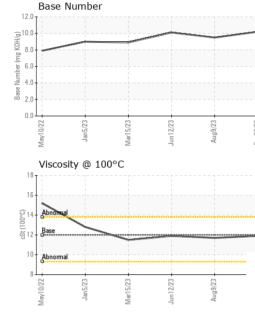
Fluid Condition

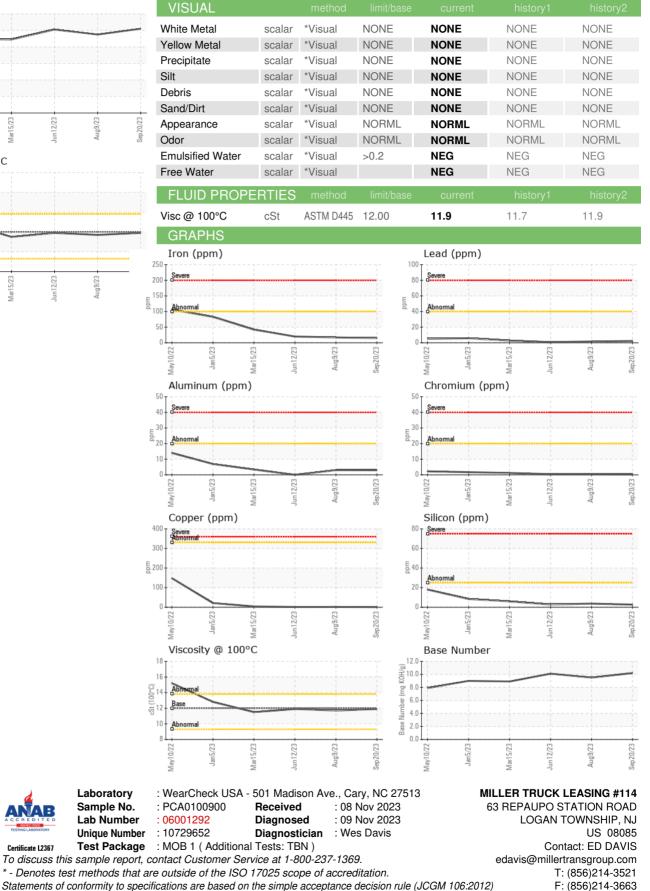
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

ITS)		May2022	Jan2023 Mar2023	3 Jun2023 Aug2023	Sep 2023	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0100900	PCA0100913	PCA0097783
Sample Date		Client Info		20 Sep 2023	09 Aug 2023	12 Jun 2023
Machine Age	mls	Client Info		121801	0	107635
Oil Age	mls	Client Info		8792	5374	11792
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	15	17	20
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	3	0
Lead	ppm	ASTM D5185m	>40	2	2	<1
Copper	ppm	ASTM D5185m	>330	<1	1	1
Tin	ppm	ASTM D5185m	>15	<1	<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	3	9	4
Barium	ppm	ASTM D5185m	0	0	0	11
Banan	ppiii			57		
	ppm	ASTM D5185m	50	57	61	56
Molybdenum				57 <1	61 1	56 <1
Molybdenum Manganese	ppm	ASTM D5185m				
Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m	0	<1	1	<1
Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 950	<1 894	1 954	<1 805
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050	<1 894 1258	1 954 1246	<1 805 953
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995	<1 894 1258 901	1 954 1246 1089	<1 805 953 873
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	0 950 1050 995 1180	<1 894 1258 901 1233	1 954 1246 1089 1382	<1 805 953 873 1093
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	0 950 1050 995 1180 2600 limit/base	<1 894 1258 901 1233 3254	1 954 1246 1089 1382 4061	<1 805 953 873 1093 2983
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base	<1 894 1258 901 1233 3254 current	1 954 1246 1089 1382 4061 history1	<1 805 953 873 1093 2983 history2
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 method ASTM D5185m	0 950 1050 995 1180 2600 limit/base >25	<1 894 1258 901 1233 3254 current 3	1 954 1246 1089 1382 4061 history1 4	<1 805 953 873 1093 2983 history2 3
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 method ASTM D5185m	0 950 1050 995 1180 2600 limit/base >25	<1 894 1258 901 1233 3254 current 3 3 3	1 954 1246 1089 1382 4061 history1 4 2	<1 805 953 873 1093 2983 history2 3 2
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 imit/base >25 >20	<1 894 1258 901 1233 3254 current 3 3 2	1 954 1246 1089 1382 4061 history1 4 2 2	<1 805 953 873 1093 2983 history2 3 2 0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 imit/base >25 >20	<1 894 1258 901 1233 3254 current 3 3 2 current	1 954 1246 1089 1382 4061 history1 4 2 2 2 history1	<1 805 953 873 1093 2983 history2 3 2 0 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	<1 894 1258 901 1233 3254 current 3 3 2 current 1.4	1 954 1246 1089 1382 4061 history1 4 2 2 2 history1 1.1	<1 805 953 873 1093 2983 history2 3 2 0 history2 1.5
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	0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20	<1 894 1258 901 1233 3254 current 3 3 2 current 1.4 9.2	1 954 1246 1089 1382 4061 history1 4 2 2 history1 1.1 8.2	<1 805 953 873 1093 2983 history2 3 2 0 history2 1.5 10.4
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7415	0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20 >30	<1 894 1258 901 1233 3254 current 3 3 2 current 1.4 9.2 20.8	1 954 1246 1089 1382 4061 history1 4 2 2 <u>history1</u> 1.1 8.2 19.6	<1 805 953 873 1093 2983 history2 3 2 0 history2 1.5 10.4 21.9



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Certificate L2367

Laboratory

Sample No.

Contact/Location: ED DAVIS - MILLOG