

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

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

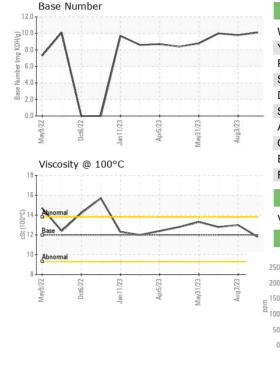
Fluid Condition

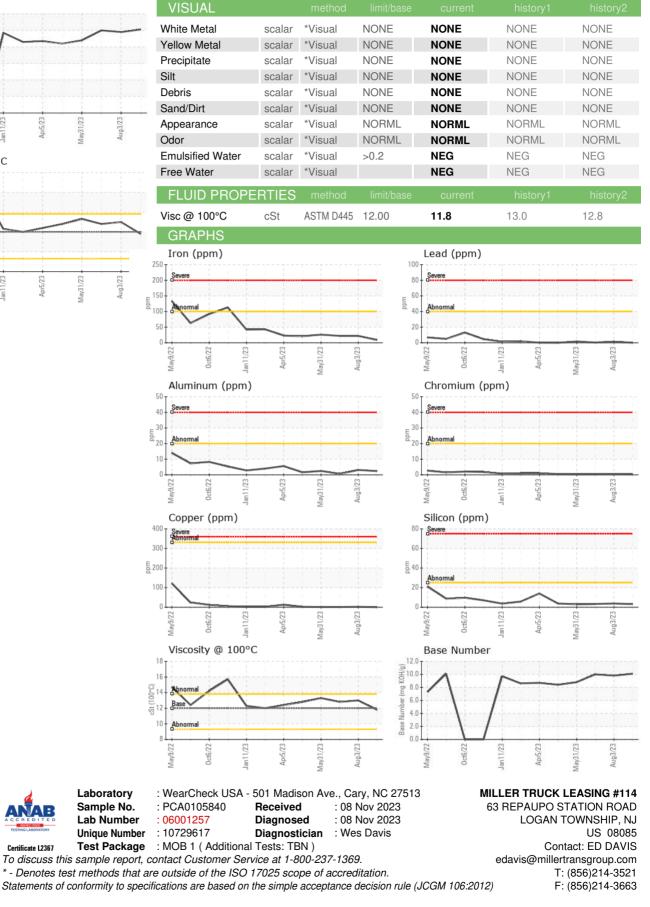
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

1S)		May2022	Oct2022 Jan2023	Apr2023 May2023 Au	1g2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0105840	PCA0100887	PCA0100952
Sample Date		Client Info		11 Sep 2023	03 Aug 2023	28 Jun 2023
Machine Age	mls	Client Info		166511	164606	158578
Oil Age	mls	Client Info		1905	6028	6371
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	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	9	22	22
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	2	3	<1
Lead	ppm	ASTM D5185m	>40	0	1	<1
Copper	ppm	ASTM D5185m	>330	<1	2	1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	5	7	7
Boron Barium	ppm ppm			5 0	7 <1	7
Barium						
Barium Molybdenum	ppm	ASTM D5185m	0 50	0	<1	11
Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m	0 50	0 57	<1 64	11 66
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0	0 57 0	<1 64 1	11 66 <1
	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950	0 57 0 833	<1 64 1 914	11 66 <1 933
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050	0 57 0 833 1151	<1 64 1 914 1359	11 66 <1 933 1251
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995	0 57 0 833 1151 969	<1 64 1 914 1359 1083	11 66 <1 933 1251 1073
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	0 50 0 950 1050 995 1180	0 57 0 833 1151 969 1215	<1 64 1 914 1359 1083 1330	11 66 <1 933 1251 1073 1330
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	0 50 0 950 1050 995 1180 2600 limit/base	0 57 0 833 1151 969 1215 3363	<1 64 1 914 1359 1083 1330 3809	11 66 <1 933 1251 1073 1330 3805
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	0 50 0 950 1050 995 1180 2600 limit/base	0 57 0 833 1151 969 1215 3363 current	<1 64 1 914 1359 1083 1330 3809 history1	11 66 <1 933 1251 1073 1330 3805 history2
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 method ASTM D5185m	0 50 0 950 1050 995 1180 2600 limit/base >25	0 57 0 833 1151 969 1215 3363 current 3	<1 64 1 914 1359 1083 1330 3809 history1 4	11 66 <1 933 1251 1073 1330 3805 history2 3
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 method ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 limit/base >25	0 57 0 833 1151 969 1215 3363 current 3 0	<1 64 1 914 1359 1083 1330 3809 history1 4 4	11 66 <1 933 1251 1073 1330 3805 history2 3 2
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	0 50 0 950 1050 995 1180 2600 limit/base >25	0 57 0 833 1151 969 1215 3363 current 3 0 1	<1 64 1 914 1359 1083 1330 3809 history1 4 4 2	11 66 <1 933 1251 1073 1330 3805 history2 3 2 <1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3	0 57 0 833 1151 969 1215 3363 current 3 0 1	<1 64 1 914 1359 1083 1330 3809 history1 4 4 2 2 history1	11 66 <1 933 1251 1073 1330 3805 history2 3 2 <1 history2
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 ppm	ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 limit/base >25 .20 limit/base >3 >20	0 57 0 833 1151 969 1215 3363 current 3 0 1 1 current 1.4	<1 64 1 914 1359 1083 1330 3809 history1 4 4 2 history1 2.8	11 66 <1 933 1251 1073 1330 3805 history2 3 2 <1 history2 2.8
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 D7844	0 50 0 950 1050 995 1180 2600 limit/base >25 .20 limit/base >3 >20	0 57 0 833 1151 969 1215 3363 <u>current</u> 3 0 1 1 <u>current</u> 1.4 8.0	<1 64 1 914 1359 1083 1330 3809 history1 4 4 2 <u>history1</u> 2.8 10.5	11 66 <1 933 1251 1073 1330 3805 history2 3 2 <1 history2 2.8 10.9
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 D7844	0 50 0 950 1050 995 1180 2600 limit/base >25 -20 limit/base >3 >20 >30 limit/base	0 57 0 833 1151 969 1215 3363 <u>current</u> 3 0 1 1 <u>current</u> 1.4 8.0 20.7	<1 64 1 914 1359 1083 1330 3809 history1 4 4 2 <u>history1</u> 2.8 10.5 23.9	11 66 <1 933 1251 1073 1330 3805 history2 3 2 <1 history2 2.8 10.9 24.8



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Certificate L2367