

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 626780

Component Diesel Engine

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

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.

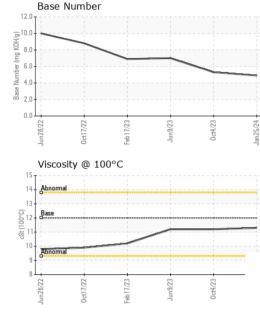
Fluid Condition

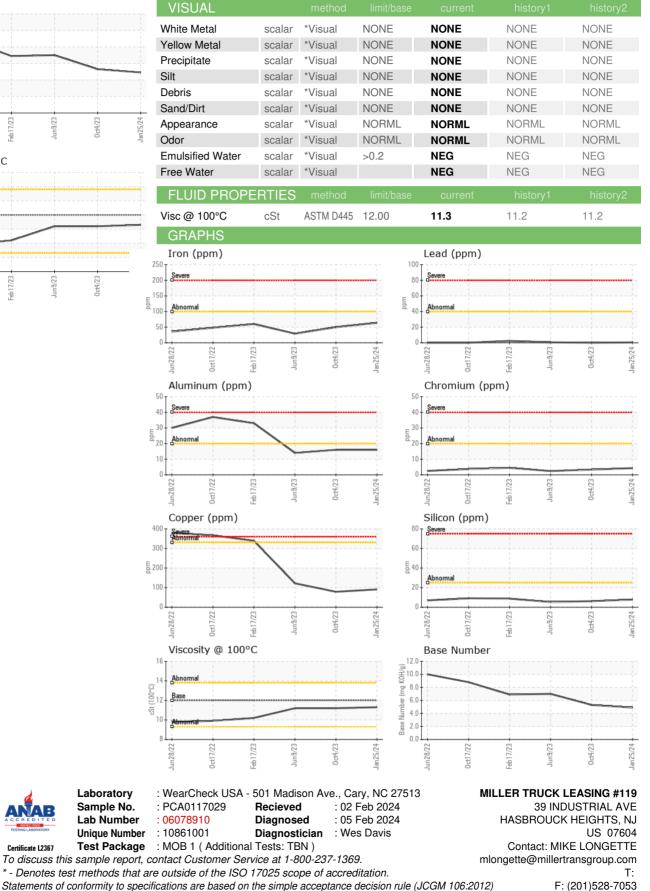
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

		Jun2022	0ct2022 Feb2023	Jun2023 Oct2023	Jan2024	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0117029	PCA0106328	PCA0095939
Sample Date		Client Info		25 Jan 2024	04 Oct 2023	09 Jun 2023
Machine Age	mls	Client Info		106276	86685	65831
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	64	50	29
Chromium	ppm	ASTM D5185m	>20	4	3	2
Nickel	ppm	ASTM D5185m	>4	2	1	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	16	16	14
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	91	79	122
Tin	ppm	ASTM D5185m	>15	5	5	5
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	2	4	8
	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm ppm	ASTM D5185m	50	62	61	58
Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m	50 0	62 2	61 2	58 2
Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950	62 2 895	61 2 953	58 2 920
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050	62 2 895 1200	61 2 953 1314	58 2 920 1300
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995	62 2 895 1200 863	61 2 953 1314 929	58 2 920 1300 990
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	62 2 895 1200 863 1190	61 2 953 1314 929 1313	58 2 920 1300 990 1273
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	50 0 950 1050 995 1180 2600	62 2 895 1200 863 1190 2086	61 2 953 1314 929 1313 2335	58 2 920 1300 990 1273 3044
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 Method	50 0 950 1050 995 1180 2600 Limit/base	62 2 895 1200 863 1190 2086 current	61 2 953 1314 929 1313 2335 history1	58 2 920 1300 990 1273 3044 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	50 0 950 1050 995 1180 2600	62 2 895 1200 863 1190 2086 current 8	61 2 953 1314 929 1313 2335 history1 6	58 2 920 1300 990 1273 3044 history2 5
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	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	62 2 895 1200 863 1190 2086 current 8 0	61 2 953 1314 929 1313 2335 history1 6 3	58 2 920 1300 990 1273 3044 history2 5 2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	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	50 0 950 1050 995 1180 2600 limit/base >25 >20	62 2 895 1200 863 1190 2086 <u>current</u> 8 0 37	61 2 953 1314 929 1313 2335 history1 6 3 35	58 2 920 1300 990 1273 3044 history2 5 2 2 25
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	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	62 2 895 1200 863 1190 2086 current 8 0 37 current	61 2 953 1314 929 1313 2335 history1 6 3 35 history1	58 2 920 1300 990 1273 3044 history2 5 2 25 history2
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	50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	62 2 895 1200 863 1190 2086 current 8 0 37 current 1.3	61 2 953 1314 929 1313 2335 history1 6 3 35 history1 1	58 2 920 1300 990 1273 3044 history2 5 2 25 history2 0.6
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m *ASTM D7844	50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20	62 2 895 1200 863 1190 2086 <u>current</u> 8 0 37 <u>current</u> 1.3 12.0	61 2 953 1314 929 1313 2335 history1 6 3 35 history1 1 1 10.3	58 2 920 1300 990 1273 3044 history2 5 2 25 2 25 history2 0.6 8.4
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 D7844 *ASTM D7624	50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20 >30	62 2 895 1200 863 1190 2086 current 8 0 37 current 1.3 12.0 24.5	61 2 953 1314 929 1313 2335 history1 6 3 35 history1 1 1 10.3 22.0	58 2 920 1300 990 1273 3044 history2 5 2 25 history2 0.6 8.4 20.9
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	50 0 950 1050 995 1180 2600 imit/base >25 20 imit/base >3 >20 >30 >30	62 2 895 1200 863 1190 2086 current 8 0 37 current 1.3 12.0 24.5 current	61 2 953 1314 929 1313 2335 history1 6 3 35 history1 1 10.3 22.0 history1	58 2 920 1300 990 1273 3044 history2 5 2 25 history2 0.6 8.4 20.9 history2
Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624	50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20 >30	62 2 895 1200 863 1190 2086 current 8 0 37 current 1.3 12.0 24.5	61 2 953 1314 929 1313 2335 history1 6 3 35 history1 1 1 10.3 22.0	58 2 920 1300 990 1273 3044 history2 5 2 25 history2 0.6 8.4 20.9



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Certificate L2367

Laboratory

Sample No.

Lab Number

Contact/Location: MIKE LONGETTE - MILRUT