

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 300609

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.

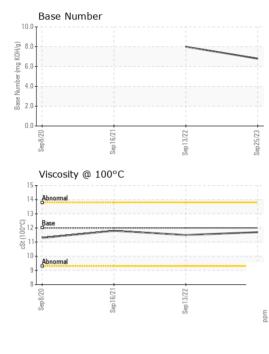
Fluid Condition

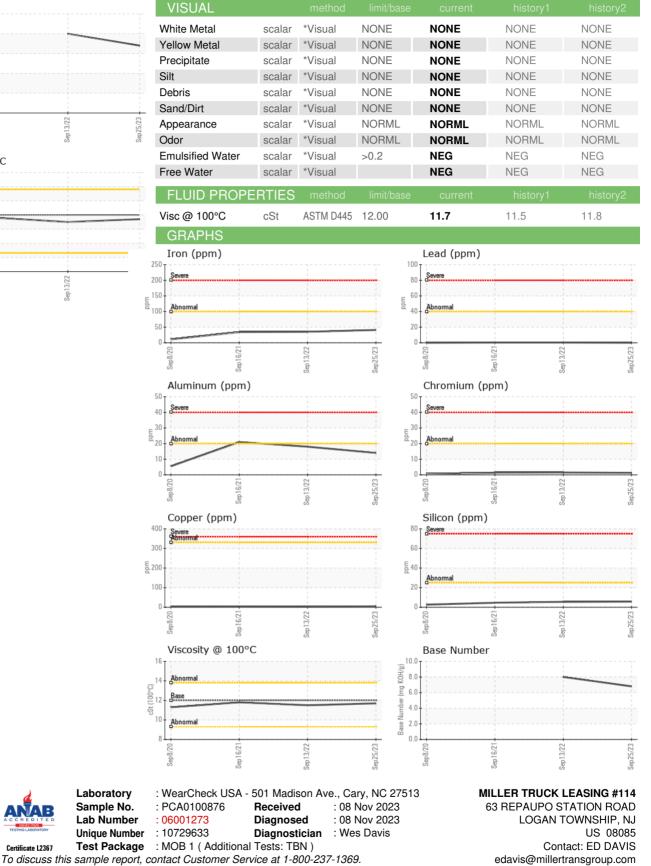
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

(TS)		Sep2020) Sep2021	Sep2022 Se	p2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0100876	PCA0079701	PCA0055059
Sample Date		Client Info		25 Sep 2023	13 Sep 2022	16 Sep 2021
Machine Age	mls	Client Info		129930	0	0
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S .	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	41	35	34
Chromium	ppm	ASTM D5185m	>20	1	2	1
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	14	18	21
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	5	3	4
Tin	ppm	ASTM D5185m	>15	<1	1	2
Antimony	ppm	ASTM D5185m				0
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	5	7	23
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	50	72	68	54
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium						
Coloium	ppm	ASTM D5185m	950	941	827	786
Calcium	ppm ppm	ASTM D5185m ASTM D5185m	950 1050	941 1277		786 1210
				-	827	
Phosphorus	ppm	ASTM D5185m	1050	1277	827 1424	1210
Phosphorus Zinc	ppm ppm	ASTM D5185m ASTM D5185m	1050 995	1277 993	827 1424 1007	1210 935
Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180	1277 993 1306	827 1424 1007 1296	1210 935 1237
Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600	1277 993 1306 3351	827 1424 1007 1296 3907	1210 935 1237 2522 history2 5
Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1050 995 1180 2600 limit/base	1277 993 1306 3351 current	827 1424 1007 1296 3907 history1	1210 935 1237 2522 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1050 995 1180 2600 limit/base	1277 993 1306 3351 current 6	827 1424 1007 1296 3907 history1 6	1210 935 1237 2522 history2 5
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >25	1277 993 1306 3351 current 6 <1	827 1424 1007 1296 3907 history1 6 <1	1210 935 1237 2522 history2 5 3
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >25 >20	1277 993 1306 3351 current 6 <1 13 current 0.9	827 1424 1007 1296 3907 history1 6 <1 17 history1 0.8	1210 935 1237 2522 history2 5 3 25 history2 0.8
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >25 >20 limit/base	1277 993 1306 3351 current 6 <1 13 current 0.9 13.3	827 1424 1007 1296 3907 history1 6 <1 17 history1 0.8 13.3	1210 935 1237 2522 history2 5 3 25 history2 0.8 12.2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >25 >20 limit/base >3	1277 993 1306 3351 current 6 <1 13 current 0.9	827 1424 1007 1296 3907 history1 6 <1 17 history1 0.8	1210 935 1237 2522 history2 5 3 25 history2 0.8
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm TS ppm ppm ppm ppm % Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20	1277 993 1306 3351 current 6 <1 13 current 0.9 13.3	827 1424 1007 1296 3907 history1 6 <1 17 history1 0.8 13.3	1210 935 1237 2522 history2 5 3 25 history2 0.8 12.2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm TS ppm ppm ppm ppm % Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7844	1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20 >30	1277 993 1306 3351 current 6 <1 13 current 0.9 13.3 25.6	827 1424 1007 1296 3907 history1 6 <1 17 history1 0.8 13.3 24.6	1210 935 1237 2522 history2 5 3 25 history2 0.8 12.2 24.1



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* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

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Laboratory

Sample No.

Lab Number

Unique Number

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