

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 112646

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

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil.

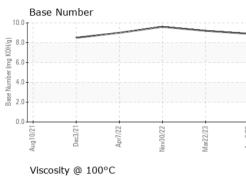
Fluid Condition

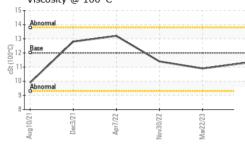
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

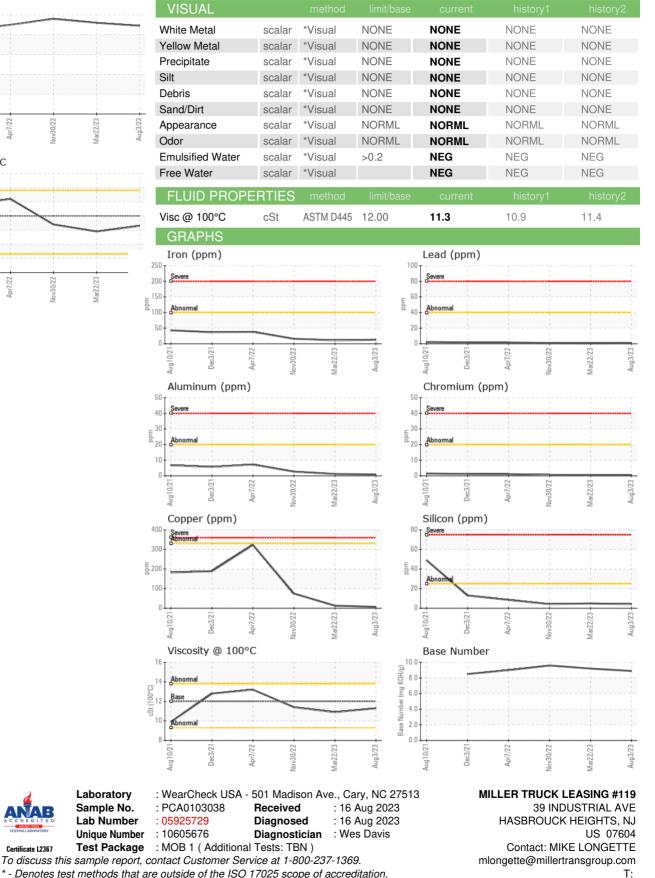
QTS)		Aug ² 021	Des2021 Apr2022	Nov2022 Mar2023	Aug2023	
SAMPLE INFORM	NATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0103038	PCA0094248	PCA0083562
Sample Date		Client Info		03 Aug 2023	22 Mar 2023	30 Nov 2022
Machine Age	mls	Client Info		21997	20107	18686
Oil Age	mls	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	6	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	13	11	16
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	1	3
Lead	ppm	ASTM D5185m	>40	1	<1	<1
Copper	ppm	ASTM D5185m	>330	7	13	75
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	10	15	0
Barium	ppm	ASTM D5185m	0	0	0	1
Molybdenum	ppm	ASTM D5185m	50	63	57	70
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	950	957	912	907
Calcium	ppm	ASTM D5185m	1050	1167	1222	1144
Phosphorus	ppm	ASTM D5185m	995	1038	970	1001
Zinc					970	1001
	ppm	ASTM D5185m	1180	1287	1282	1250
Sulfur	ppm ppm	ASTM D5185m ASTM D5185m	1180 2600			
-	ppm			1287	1282	1250
Sulfur	ppm	ASTM D5185m	2600	1287 3748	1282 3260	1250 3463
Sulfur CONTAMINAN	ppm TS	ASTM D5185m method	2600 limit/base	1287 3748 current	1282 3260 history1	1250 3463 history2
Sulfur CONTAMINANT Silicon	ppm TS ppm	ASTM D5185m method ASTM D5185m	2600 limit/base >25	1287 3748 current 4	1282 3260 history1 5	1250 3463 history2 4
Sulfur CONTAMINAN Silicon Sodium	ppm TS ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m	2600 limit/base >25	1287 3748 current 4 2	1282 3260 history1 5 1	1250 3463 history2 4 <1
Sulfur CONTAMINANT Silicon Sodium Potassium	ppm TS ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	2600 limit/base >25 >20	1287 3748 current 4 2 3	1282 3260 history1 5 1 3	1250 3463 history2 4 <1 0
Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED	ppm TS ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method	2600 limit/base >25 >20 limit/base >3	1287 3748 current 4 2 3 current	1282 3260 history1 5 1 3 history1	1250 3463 history2 4 <1 0 history2
Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot %	ppm TS ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844	2600 limit/base >25 >20 limit/base >3 >20	1287 3748 current 4 2 3 current 0.4	1282 3260 history1 5 1 3 history1 0.3	1250 3463 history2 4 <1 0 history2 0.5
Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm pm % Abs/cm Abs/.1mm	ASTM D5185m method ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	2600 limit/base >25 >20 limit/base >3 >20	1287 3748 current 4 2 3 current 0.4 7.3	1282 3260 history1 5 1 3 history1 0.3 7.0	1250 3463 history2 4 <1 0 history2 0.5 9.6
Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm pm % Abs/cm Abs/.1mm	ASTM D5185m method ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	2600 limit/base >25 >20 limit/base >3 >20 >30	1287 3748 current 4 2 3 current 0.4 7.3 18.4	1282 3260 history1 5 1 3 history1 0.3 7.0 18.6	1250 3463 history2 4 <1 0 history2 0.5 9.6 21.8



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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)

Laboratory

Sample No.

F: (201)528-7053

Certificate L2367