

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.

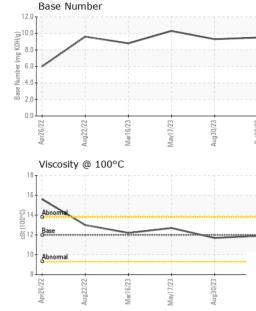
Fluid Condition

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

TS)		Apr2022	Aug2022 Mar2023	May2023 Aug2023	0ct2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0105805	PCA0100899	PCA0097779
Sample Date		Client Info		30 Oct 2023	30 Aug 2023	17 May 2023
Machine Age	mls	Client Info		175227	164693	154308
Oil Age	mls	Client Info		10534	5719	8790
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	17	13	28
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	4	3	<1
Lead	ppm	ASTM D5185m	>40	2	<1	<1
Copper	ppm	ASTM D5185m		- <1	3	1
Tin	ppm	ASTM D5185m		<1	<1	<1
Vanadium	ppm	ASTM D5185m	210	0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	4	10	8
Barium	ppm	ASTM D5185m	0	0	0	11
Molybdenum		ASTM D5185m	50	59		
	maa		50		57	72
Manganese	ppm mag				57	
-	ppm	ASTM D5185m	0	<1	1	<1
Magnesium	ppm ppm	ASTM D5185m ASTM D5185m	0 950	<1 856	1 907	<1 997
Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050	<1 856 1231	1 907 1293	<1 997 1264
Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995	<1 856 1231 894	1 907 1293 1076	<1 997 1264 1122
Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050	<1 856 1231	1 907 1293	<1 997 1264
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180	<1 856 1231 894 1160	1 907 1293 1076 1368	<1 997 1264 1122 1393
Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base	<1 856 1231 894 1160 3100	1 907 1293 1076 1368 4128	<1 997 1264 1122 1393 3854
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base	<1 856 1231 894 1160 3100 current	1 907 1293 1076 1368 4128 history1	<1 997 1264 1122 1393 3854 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 950 1050 995 1180 2600 limit/base >25	<1 856 1231 894 1160 3100 current 3	1 907 1293 1076 1368 4128 history1 5	<1 997 1264 1122 1393 3854 history2 4
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base >25	<1 856 1231 894 1160 3100 current 3 8	1 907 1293 1076 1368 4128 history1 5 7	<1 997 1264 1122 1393 3854 history2 4 6
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20	<1 856 1231 894 1160 3100 current 3 8 4	1 907 1293 1076 1368 4128 history1 5 7 5	<1 997 1264 1122 1393 3854 history2 4 6 2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	<1 856 1231 894 1160 3100 current 3 8 4 4	1 907 1293 1076 1368 4128 history1 5 7 5 5 history1	<1 997 1264 1122 1393 3854 history2 4 6 2 kistory2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	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	0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20	<1 856 1231 894 1160 3100 current 3 8 4 current 1.9	1 907 1293 1076 1368 4128 history1 5 7 5 5 history1 1	<1 997 1264 1122 1393 3854 history2 4 6 2 2 history2 2.6
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624	0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20	<1 856 1231 894 1160 3100 current 3 8 4 current 1.9 10.9	1 907 1293 1076 1368 4128 history1 5 7 5 5 history1 1 7.7	<1 997 1264 1122 1393 3854 history2 4 6 2 2 history2 2.6 11.6
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	0 950 1050 995 1180 2600 imit/base >25 20 20 imit/base >3 >20 30 imit/base	<1 856 1231 894 1160 3100 current 3 8 4 current 1.9 10.9 22.3	1 907 1293 1076 1368 4128 history1 5 7 5 5 history1 1 7.7 19.5	<1 997 1264 1122 1393 3854 history2 4 6 2 history2 2.6 11.6 24.6



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Certificate L2367

Contact/Location: ED DAVIS - MILLOG