

OIL ANALYSIS REPORT

Sample Rating Trend





Component
Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (42 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.

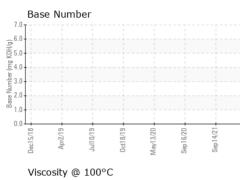
Fluid Condition

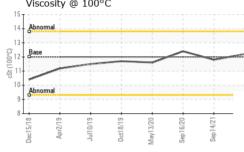
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	IATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		PCA0097799	PCA0055053	PCA0026937
Sample Date		Client Info		05 May 2023	14 Sep 2021	16 Sep 2020
Machine Age	mls	Client Info		0	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	history 1	history 2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>100	32	64	31
Chromium	ppm	ASTM D5185m	>20	2	3	2
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	17	26	13
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	8	14	10
Tin	ppm	ASTM D5185m	>15	<1	2	2
Antimony	ppm	ASTM D5185m			0	<1
Vanadium		AOTH DELOF				
	ppm	ASTM D5185m		0	<1	0
	ppm	ASTM D5185m ASTM D5185m		0 0	<1 0	0
			limit/base	-		
Cadmium ADDITIVES		ASTM D5185m	limit/base	0	0	0
Cadmium ADDITIVES Boron	ppm	ASTM D5185m method ASTM D5185m		0 current	0 history 1	0 history 2
Cadmium ADDITIVES Boron Barium	ppm ppm	ASTM D5185m method ASTM D5185m	2	0 current 6	0 history 1 3	0 history 2 5
Cadmium ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m	2 0 50	0 current 6 2	0 history 1 3 0	0 history 2 5 0
Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	0 current 6 2 67	0 history 1 3 0 61	0 history 2 5 0 66
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	0 current 6 2 67 <1	0 history 1 3 0 61 1	0 history 2 5 0 66 <1
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	0 current 6 2 67 <1 797	0 history 1 3 0 61 1 931	0 history 2 5 0 66 <1 965
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	0 current 6 2 67 <1 797 1203	0 history 1 3 0 61 1 931 1031	0 history 2 5 0 66 <1 965 1126
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	0 current 6 2 67 <1 797 1203 963	0 history 1 3 0 61 1 931 1031 914	0 history 2 5 0 66 <1 965 1126 1061
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180	0 current 6 2 67 <1 797 1203 963 1177	0 history 1 3 0 61 1 931 1031 914 1229	0 history 2 5 0 66 <1 965 1126 1061 1330
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	0 current 6 2 67 <1 797 1203 963 1177 2705	0 history 1 3 0 61 1 931 1031 914 1229 2028	0 history 2 5 0 66 <1 965 1126 1061 1330 2849
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	0 current 6 2 67 <1 797 1203 963 1177 2705 current	0 history 1 3 0 61 1 931 1031 914 1229 2028 history 1	0 history 2 5 0 66 <1 965 1126 1061 1330 2849 history 2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN ^T Silicon Sodium	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25	0 current 6 2 67 <1 797 1203 963 1177 2705 current 5	0 history 1 3 0 61 1 931 1031 914 1229 2028 history 1 6	0 history 2 5 0 66 <1 965 1126 1061 1330 2849 history 2 4
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN ^T Silicon Sodium	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25	0 current 6 2 67 <1 797 1203 963 1177 2705 current 5 0	0 history 1 3 0 61 1 931 1031 914 1229 2028 history 1 6 12	0 history 2 5 0 66 <1 965 1126 1061 1330 2849 history 2 4 <1
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25 >20	0 current 6 2 67 <1 797 1203 963 1177 2705 current 5 0 19	0 history 1 3 0 61 1 931 1031 914 1229 2028 history 1 6 12 34	0 history 2 5 0 66 <1 965 1126 1061 1330 2849 history 2 4 <1 23
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN ^T Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	0 current 6 2 67 <1 797 1203 963 1177 2705 current 5 0 19 current	0 history 1 3 0 61 1 931 1031 914 1229 2028 history 1 6 12 34 34 history 1	0 history 2 5 0 66 <1 965 1126 1061 1330 2849 history 2 4 <1 23 history 2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN ^T Silicon Sodium Potassium	pppm - pppm - ppm - >ppm -<	ASTM D5185m method ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	0 current 6 2 67 <1 797 1203 963 1177 2705 current 5 0 19 current 1.3	0 history 1 3 0 61 1 931 1031 914 1229 2028 history 1 6 12 34 history 1 1.6	0 history 2 5 0 66 <1 965 1126 1061 1330 2849 history 2 4 <1 23 history 2 0.6
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN ^T Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	0 current 6 2 67 <1 797 1203 963 1177 2705 current 5 0 19 current 1.3 10.3	0 history 1 3 0 61 1 931 1031 914 1229 2028 history 1 6 12 34 history 1 1.6 12.7	0 history 2 5 0 66 <1 965 1126 1061 1330 2849 history 2 4 <1 23 history 2 0.6 8.2
Cadmium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm	ASTM D5185m ACM D5185m ASTM D	2 0 50 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20	0 current 6 2 67 <1 797 1203 963 1177 2705 current 5 0 19 current 1.3 10.3 23.9	0 history 1 3 0 61 1 931 1031 914 1229 2028 history 1 6 12 34 history 1 1.6 12.7 25.9	0 history 2 5 0 66 <1 965 1126 1061 1330 2849 history 2 4 <1 23 history 2 0.6 8.2 20.1



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

Certificate L2367

Laboratory

Sample No.

Contact/Location: ED DAVIS - MILLOG