

OIL ANALYSIS REPORT





Area FLEET Machine Id 26650 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.

Q15)		Jul2018 Ju	in2019 Mar2020 Jan	2021 Aug2021 Apr2022	Mar2023	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0095991	PCA0089373	PCA0076801
Sample Date		Client Info		22 Jun 2023	02 Mar 2023	06 Aug 2022
Machine Age	mls	Client Info		462342	38098	396978
Oil Age	mls	Client Info		65364	38098	39502
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	SEVERE
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	0.0	0.10
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	27	47	48
Chromium	ppm	ASTM D5185m	>20	<1	0	1
Nickel	ppm	ASTM D5185m	>4	2	5	2
Titanium	ppm	ASTM D5185m		4	29	0
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	3	3	6
Lead	ppm	ASTM D5185m	>40	1	1	7
Copper	ppm	ASTM D5185m	>330	2	4	5
Tin	ppm	ASTM D5185m	>15	<1	0	1
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 4	history1 5	history2 2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base 2 0	current 4 <1	history1 5 <1	history2 2 2
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50	current 4 <1 61	history1 5 <1 40	history2 2 2 88
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0	current 4 <1 61 <1	history1 5 <1 40 0	history2 2 2 88 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950	current 4 <1 61 <1 1001	history1 5 <1 40 0 640	history2 2 2 88 <1 912
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950 1050	current 4 <1 61 <1 1001 1245	history1 5 <1 40 0 640 1319	history2 2 88 <1 912 1093
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950 1050 995	Current 4 <1 61 <1 1001 1245 1105	history1 5 <1 40 0 640 1319 917	history2 2 88 <1 912 1093 901
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180	4 <1 61 <1 1001 1245 1105 1356	history1 5 <1 40 0 640 1319 917 1142	history2 2 88 <1 912 1093 901 1291
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600	4 <1 61 <1 1001 1245 1105 33772	history1 5 <1 40 0 640 1319 917 1142 3088	history2 2 88 <1 912 1093 901 1291 2858
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base	current 4 <1 61 <1 1001 1245 1105 1356 3772 Current	history1 5 <1 40 0 640 1319 917 1142 3088 history1	history2 2 88 <1 912 1093 901 1291 2858 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25	current 4 <1 61 <1 1001 1245 1105 1356 3772 current 4	history1 5 <1 40 0 640 1319 917 1142 3088 history1 5	history2 2 88 <1 912 1093 901 1291 2858 history2 9
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25	current 4 <1 61 <1 1001 1245 1105 1356 3772 current 4 18	history1 5 <1 40 0 640 1319 917 1142 3088 history1 5 33	history2 2 2 88 <1 912 1093 901 1291 2858 history2 9 ▲ 359
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20	current 4 <1 61 <1 1001 1245 1105 1356 3772 current 4 18 6	history1 5 <1 40 0 640 1319 917 1142 3088 history1 5 33 26	history2 2 88 <1 912 1093 901 1291 2858 history2 9 359 279
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 2600 255 -25 -20 Limit/base	4 <1 61 <1 1001 1245 1105 1356 3772 current 4 18 6 current	history1 5 <1 40 0 640 1319 917 1142 3088 history1 5 33 26 history1	history2 2 88 <1 912 1093 901 1291 2858 history2 9 ▲ 359 ▲ 279 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	4 <1 61 <1 1001 1245 1105 1356 3772 current 4 18 6 current 0.5	history1 5 <1 40 0 640 1319 917 1142 3088 history1 5 33 26 history1 0.6	history2 2 88 <1 912 1093 901 1291 2858 history2 9 ▲ 359 ▲ 279 history2 0.6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20	4 <1 61 <1 1001 1245 1105 1356 3772 current 4 18 6 current 0.5 9.5	history1 5 <1 40 0 640 1319 917 1142 3088 history1 5 33 26 history1 0.6 10.6 20.6	history2 2 2 88 <1 912 1093 901 1291 2858 history2 9 ▲ 359 ≥779 history2 0.6 11.6
ADDITIVES Boron Barium 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	method ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25 20 limit/base >3 >20 >30	current 4 <1 61 <1 1001 1245 1105 1356 3772 current 4 18 6 current 0.5 9.5 21.0	history1 5 <1 40 0 640 1319 917 1142 3088 history1 5 33 26 history1 0.6 10.6 24.9	history2 2 88 <1 912 1093 901 1291 2858 history2 9 359 279 history2 0.6 11.6 24.8
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415 method	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25 20 limit/base >3 >20 30	4 <1 61 <1 1001 1245 1105 1356 3772 current 4 18 6 current 0.5 9.5 21.0	history1 5 <1 40 0 640 1319 917 1142 3088 history1 5 33 26 history1 0.6 10.6 24.9 history1	history2 2 2 88 <1093 901 1093 901 1291 2858 history2 9 359 279 history2 0.6 11.6 24.8 history2
ADDITIVES Boron Barium 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	method ASTM D5185m ASTM D78444 *ASTM D7624 *ASTM D7415 method *ASTM D7414	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25 limit/base >3 >20 >30 limit/base	current 4 <1 61 <1 1001 1245 1105 1356 3772 current 4 18 6 current 0.5 9.5 21.0 current 17.3	history1 5 <1 40 0 640 1319 917 1142 3088 history1 5 33 26 history1 0.6 10.6 24.9 history1 19.5	history2 2 2 88 <1 912 1093 901 1291 2858 history2 9 ▲ 359 ▲ 279 history2 0.6 11.6 24.8 Late of the story of



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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.2	11.1	10.9
GRAPHS						
Ferrous Alloys						





*To discuss this sample report, contact Customer Service at 1-800-237-1369. * - 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)

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