

OIL ANALYSIS REPORT

Sample Rating Trend





Component Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (36 mls)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

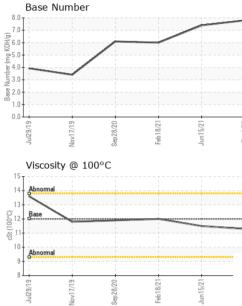
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0104196	PCA0046165	PCA0036891
Sample Date		Client Info		04 Dec 2023	15 Jun 2021	18 Feb 2021
Machine Age	mls	Client Info		28325	0	0
Oil Age	mls	Client Info		28325	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	11	16	24
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	2
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	3	6	9
Lead	ppm	ASTM D5185m	>45	0	0	0
Copper	ppm	ASTM D5185m	>85	<1	1	1
Tin	ppm	ASTM D5185m	>4	0	<1	0
Antimony	ppm	ASTM D5185m			0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	11	15	24
Boron Barium	ppm ppm		2 0	11 0	15 0	24 0
Barium	ppm	ASTM D5185m	0 50	0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0 50	0 63	0 55	0 28
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0	0 63 <1	0 55 <1	0 28 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950	0 63 <1 954	0 55 <1 843	0 28 <1 695
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050	0 63 <1 954 1215	0 55 <1 843 1245	0 28 <1 695 1423
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995	0 63 <1 954 1215 1076	0 55 <1 843 1245 937	0 28 <1 695 1423 735
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180	0 63 <1 954 1215 1076 1325	0 55 <1 843 1245 937 1116	0 28 <1 695 1423 735 851
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600	0 63 <1 954 1215 1076 1325 3025	0 55 <1 843 1245 937 1116 2538	0 28 <1 695 1423 735 851 2335
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600	0 63 <1 954 1215 1076 1325 3025 current	0 55 <1 843 1245 937 1116 2538 history1	0 28 <1 695 1423 735 851 2335 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 limit/base >30	0 63 <1 954 1215 1076 1325 3025 current 5	0 55 <1 843 1245 937 1116 2538 history1 5	0 28 <1 695 1423 735 851 2335 history2 6
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 <i>limit/base</i> >30 >20	0 63 <1 954 1215 1076 1325 3025 current 5 1 1 1 1 current	0 55 <1 843 1245 937 1116 2538 history1 5 2 7 history1	0 28 <1 695 1423 735 851 2335 history2 6 4 27 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 limit/base >30	0 63 <1 954 1215 1076 1325 3025 current 5 1 1 1 2 0.4	0 55 <1 843 1245 937 1116 2538 history1 5 2 7 7 history1 0.5	0 28 <1 695 1423 735 851 2335 history2 6 4 27 history2 0.6
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 <i>limit/base</i> >30 >20	0 63 <1 954 1215 1076 1325 3025 <u>current</u> 5 1 1 1 <i>current</i> 0.4 7.8	0 55 <1 843 1245 937 1116 2538 history1 5 2 7 7 history1 0.5 10.1	0 28 <1 695 1423 735 851 2335 history2 6 4 27 history2 0.6 10.3
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 <i>limit/base</i> >30 <i>limit/base</i> >20	0 63 <1 954 1215 1076 1325 3025 current 5 1 1 1 2 0.4	0 55 <1 843 1245 937 1116 2538 history1 5 2 7 7 history1 0.5	0 28 <1 695 1423 735 851 2335 history2 6 4 27 history2 0.6
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	ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 imit/base >30 >20 imit/base >3	0 63 <1 954 1215 1076 1325 3025 <u>current</u> 5 1 1 1 <i>current</i> 0.4 7.8	0 55 <1 843 1245 937 1116 2538 history1 5 2 7 7 history1 0.5 10.1	0 28 <1 695 1423 735 851 2335 history2 6 4 27 history2 0.6 10.3
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	ASTM D5185m ASTM D5185m	0 50 950 1050 995 1180 2600 imit/base >30 imit/base >3 20 imit/base >3 >20	0 63 <1 954 1215 1076 1325 3025 current 5 1 1 1 0.4 7.8 19.9	0 55 <1 843 1245 937 1116 2538 history1 5 2 7 7 history1 0.5 10.1 22.6	0 28 <1 695 1423 735 851 2335 history2 6 4 27 history2 0.6 10.3 24.5
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAC	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7414	0 50 950 1050 995 1180 2600 limit/base >30 220 limit/base >3 >20 >30	0 63 <1 954 1215 1076 1325 3025 current 5 1 1 1 current 0.4 7.8 19.9 current	0 55 <1 843 1245 937 1116 2538 history1 5 2 7 7 history1 0.5 10.1 22.6 history1	0 28 <1 695 1423 735 851 2335 history2 6 4 27 history2 0.6 10.3 24.5 history2



OIL ANALYSIS REPORT

VISUAL



	Laboratory Sample No. Lab Number Unique Number Test Package	: PCA0104196 : 06027536	Received Diagnose			513 NW WHITE & CO - BEAUFORT DIVISION 1491 YENMASSEE HIGHWAY VARNVILLE, SC US 29944 Contact: VINCENT BULLOCH bullockvince514@gmail.con		
		9 8 61/62/10 9 8 61/62/10 9 8 0000000000000000000000000000000000	58µ20/20 Feb18/21	Jun15/21	1.0- 1.0- 1.0- 0.0- 0.0-	linga/19	Sep28/20 Feb18/21	- 15/21 - 15/21
		Abnormal 14 13 (5) 12 Base 31 11			8.0 7.0 (6,6.0 (b)(HOX 50) (b)(HOX 50) (b)(HOX 50) (b)(HOX 50) (b)(HOX 50) (c)(f)(f)(f)(f)(f)(f)(f)(f)(f)(f)(f)(f)(f)		<u> </u>	
		0 61/62/m Viscosity @ 100°C		Jun15/21	Dec4/23	Base Number		
		15 10 5						
		Non-ferrous Meta	IIS					
		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Jun15/21	Dec4/23			
		E 15 10 5			/			
Sep 20/20	Jun 15/21	30 25						
		Visc @ 100°C GRAPHS Ferrous Alloys	cSt	ASTM D445	12.00	11.3	11.5	12.0
		FLUID PROPE		method	limit/base	current	history1	history2
		Emulsified Water Free Water	scalar scalar	*Visual *Visual	>0.2	NEG	NEG NEG	NEG
Sep 28/20 -	Jun15/21+ Dec4/23 +	Appearance Odor	scalar scalar	*Visual *Visual	NORML	NORML	NORML	NORML
		Debris Sand/Dirt	scalar scalar	*Visual *Visual	NONE	NONE	NONE	NONE
		Precipitate Silt	scalar scalar	*Visual *Visual	NONE NONE	NONE NONE	NONE NONE	NONE NONE
		Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE