

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Machine Id 732007

Component
Natural Gas Engine

PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

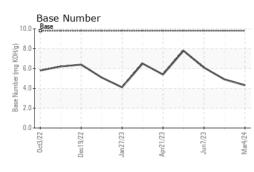
Fluid Condition

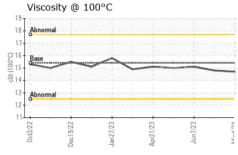
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

		0ct2022	Deczozz Janzoz3	Apr2023 Jun2023	Mar2024	
SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0106771	GFL0092084	GFL0084673
Sample Date		Client Info		04 Mar 2024	18 Dec 2023	07 Jun 2023
Machine Age	hrs	Client Info		6110	5489	4103
Oil Age	hrs	Client Info		600	600	0
Oil Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	ON	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS	\$	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	9	8	9
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	1	<1
Lead	ppm	ASTM D5185m	>30	0	0	0
Copper	ppm	ASTM D5185m	>35	<1	2	<1
Tin	ppm	ASTM D5185m	>4	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
					,	
Boron	ppm	ASTM D5185m	0	5	12	19
	ppm ppm			5 0		
Boron		ASTM D5185m	0		12	19
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	0	12 <1	19 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	0 53	12 <1 58	19 0 58
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	0 53 1	12 <1 58 <1	19 0 58 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	0 53 1 552	12 <1 58 <1 601	19 0 58 <1 649
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	0 53 1 552 1696	12 <1 58 <1 601 1775	19 0 58 <1 649 1819
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	0 53 1 552 1696 722	12 <1 58 <1 601 1775 809	19 0 58 <1 649 1819 817
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	0 53 1 552 1696 722 994	12 <1 58 <1 601 1775 809 1063	19 0 58 <1 649 1819 817 1074
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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 0 60 0 1010 1070 1150 1270 2060	0 53 1 552 1696 722 994 2316 current 3	12 <1 58 <1 601 1775 809 1063 2593	19 0 58 <1 649 1819 817 1074 3129
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT	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 0 60 0 1010 1070 1150 1270 2060 limit/base >+100	0 53 1 552 1696 722 994 2316 current	12 <1 58 <1 601 1775 809 1063 2593 history1	19 0 58 <1 649 1819 817 1074 3129 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon	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	0 0 60 0 1010 1070 1150 1270 2060 limit/base	0 53 1 552 1696 722 994 2316 current 3	12 <1 58 <1 601 1775 809 1063 2593 history1 4	19 0 58 <1 649 1819 817 1074 3129 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium	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 0 60 0 1010 1070 1150 1270 2060 limit/base	0 53 1 552 1696 722 994 2316 2316 current 3 3 3	12 <1 58 <1 601 1775 809 1063 2593 history1 4 9	19 0 58 <1 649 1819 817 1074 3129 history2 5 7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 60 0 1010 1150 1270 2060 >+100 >20	0 53 1 552 1696 722 994 2316 current 3 3 0	12 <1 58 <1 601 1775 809 1063 2593 history1 4 9 <1	19 0 58 <1 649 1819 817 1074 3129 history2 5 7 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 2060 >+100 >20 20 imit/base	0 53 1 552 1696 722 994 2316 current 3 3 0 0	12 <1 58 <1 601 1775 809 1063 2593 history1 4 9 <1 ×1	19 0 58 <1 649 1819 817 1074 3129 history2 5 7 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm S ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >+100 20 <i>limit/base</i>	0 53 1 552 1696 722 994 2316 current 3 3 0 current 0	12 <1 58 <1 601 1775 809 1063 2593 history1 4 9 <1 4 9 <1 0	19 0 58 <1 649 1819 817 1074 3129 history2 5 7 <1 +istory2 0.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >+100 20 <i>limit/base</i>	0 53 1 552 1696 722 994 2316 current 3 3 0 0 current 0 11.6	12 <1 58 <1 601 1775 809 1063 2593 history1 4 9 <1 4 9 <1 history1 0 11.2	19 0 58 <1 649 1819 817 1074 3129 history2 5 7 <1 5 7 <1 history2 0.1 9.9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 >+100 >20 20 imit/base >20 >30 imit/base	0 53 1 552 1696 722 994 2316 current 3 3 0 current 0 11.6 22.4	12 <1 58 <1 601 1775 809 1063 2593 history1 4 9 <1 4 9 <1 history1 0 11.2 21.8	19 0 58 <1 649 1819 817 1074 3129 history2 5 7 <1 <1 history2 0.1 9.9 21.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	0 0 0 1010 1070 1150 1270 2060 2060 >+100 >20 20 20 20 20 20 30 20 20 20 20 20 20 20 20 20 20 20 20 20	0 53 1 552 1696 722 994 2316 current 3 3 0 current 0 11.6 22.4 current	12 <1 58 <1 601 1775 809 1063 2593 history1 4 9 <1 history1 0 11.2 21.8 history1	19 0 58 <1 649 1819 817 1074 3129 history2 5 7 <1 history2 0.1 9.9 21.5 history2

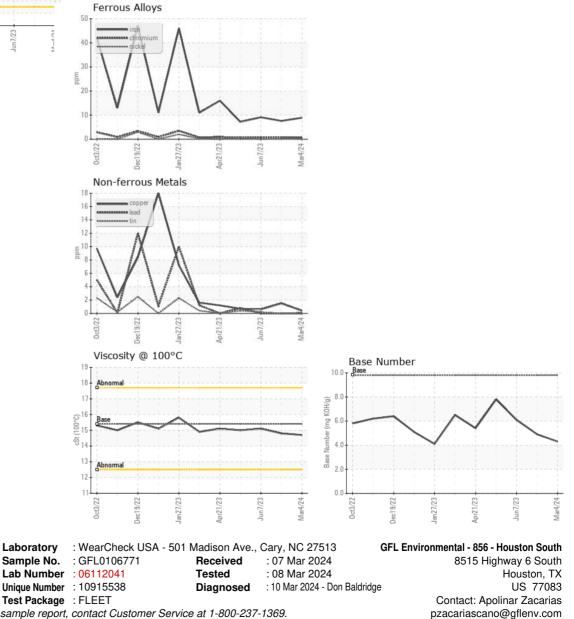


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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*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	>0.1	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	15.4	14.7	14.8	15.1
GRAPHS						





 Certificate 12367
 Test Package
 : FLEET
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 To discuss this sample report, contact Customer Service at 1-800-237-1369.
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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)

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