

OIL ANALYSIS REPORT

Sample Rating Trend





Component Diesel Engine Fluid

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

DIAGNOSIS	
Recommendation	

Resample at the next service interval to monitor.

Machine Id 913170

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

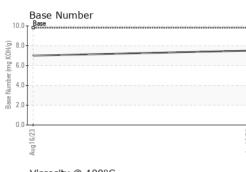
Fluid Condition

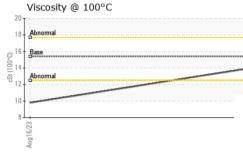
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0108417	GFL0089499	
Sample Date		Client Info		18 Jan 2024	16 Aug 2023	
Machine Age	hrs	Client Info		1741	585	
Oil Age	hrs	Client Info		1741	0	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	ABNORMAL	
CONTAMINAT	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	0.4	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	17	54	
Chromium	ppm	ASTM D5185m	>5	<1	2	
Nickel	ppm	ASTM D5185m	>2	1	<u> </u>	
Titanium	ppm	ASTM D5185m		<1	<1	
Silver	ppm	ASTM D5185m	>3	0	<1	
Aluminum	ppm	ASTM D5185m	>30	1	7	
Lead	ppm	ASTM D5185m	>30	0	0	
Copper	ppm	ASTM D5185m	>150	2	42	
Tin	ppm	ASTM D5185m	>5	<1	4	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
	1-1-			U	0	
ADDITIVES	F F	method	limit/base	current	history1	history2
ADDITIVES Boron	ppm		limit/base	-	-	
		method		current	history1	history2
Boron	ppm	method ASTM D5185m	0	current 2	history1 223	history2
Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	0	current 2 0	history1 223 0	history2
Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	current 2 0 62	history1 223 0 134	history2
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	current 2 0 62 <1	history1 223 0 134 6	history2
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	current 2 0 62 <1 968	history1 223 0 134 6 727	history2
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	current 2 0 62 <1 968 1094	history1 223 0 134 6 727 1617	history2
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	0 0 60 0 1010 1070 1150	Current 2 0 62 <1 968 1094 1016	history1 223 0 134 6 727 1617 746	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	current 2 0 62 <1 968 1094 1016 1235	history1 223 0 134 6 727 1617 746 912	history2
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	0 0 60 0 1010 1070 1150 1270 2060	Current 2 0 62 <1 968 1094 1016 1235 3154	history1 223 0 134 6 727 1617 746 912 2822	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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 ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	current 2 0 62 <1 968 1094 1016 1235 3154 current	history1 223 0 134 6 727 1617 746 912 2822 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	current 2 0 62 <1 968 1094 1016 1235 3154 current 4	history1 223 0 134 6 727 1617 746 912 2822 history1 ▲ 94	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	current 2 0 62 <1 968 1094 1016 1235 3154 current 4 0	history1 223 0 134 6 727 1617 746 912 2822 history1 ▲ 94 5	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >20	current 2 0 62 <1 968 1094 1016 1235 3154 current 4 0 2	history1 223 0 134 6 727 1617 746 912 2822 history1 ▲ 94 5 12	history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 220 220	current 2 0 62 <1 968 1094 1016 1235 3154 current 4 0 2 current	history1 223 0 134 6 727 1617 746 912 2822 history1 4 94 5 12 history1	history2 history2 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >20 20 limit/base	current 2 0 62 <1 968 1094 1016 1235 3154 current 4 0 2 current 0 2 current 0.6	history1 223 0 134 6 727 1617 746 912 2822 history1 ▲ 94 5 12 history1 0.6	history2 history2 history2 history2 history2
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	0 0 0 1010 1070 1150 1270 2060 2060 2060 200 200 200 200 200 200	current 2 0 62 <1 968 1094 1016 1235 3154 current 4 0 2 current 0 2 current 0.6 9.0	history1 223 0 134 6 727 1617 746 912 2822 history1 ▲ 94 5 12 history1 0.6 10.6	history2 history2
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 ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 200 200 200 320 320 33 220 330	current 2 0 62 <1 968 1094 1016 1235 3154 current 4 0 2 current 0.6 9.0 20.4	history1 223 0 134 6 727 1617 746 912 2822 history1 ▲ 94 5 12 history1 0.6 10.6 25.3	history2 history2 history2



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VISUAL		method	limit/base	current	history1	history
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Wa	ater scalar	*Visual	>0.2	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	
FLUID PR	OPERTIES	method	limit/base	current	history1	history
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	9.8	
GRAPHS						
Ferrous Allo	ys					
60 iron]					
50 - nickel	IM					
40-						
Eas						
<u>통</u> 30 -						
20-						
10						
10 -	19 1 may 2 may					
0	19. Mary & Mary					
0	99 4 499 6 4499 28888888888888888888888888888888888		18/24			
all the fact and the factor of the second state of	*****	*****	Jan 18/24			
Non-ferrous	Metals		Jan18/24 5			
Non-ferrous	Metals		Jan 18/24			
Non-ferrous	Metals		Jan 18/24			
Non-ferrous	Metals		Jan 18/24			
Non-ferrous	Metals		Jan 18/24			
Non-ferrous	Metals		Jan 18/24			
Non-ferrous	Metals		Jan18/24			
Non-ferrous	Metals		Jan18/24			
Non-ferrous	Metals		Jan18/24			
Non-ferrous	Metals					
Non-ferrous	Metals					
Non-ferrous			Jan18/24			
Non-ferrous				Base Numb	er	
Non-ferrous			Jan18/24	Base Numb	er	
Non-ferrous			10.0		er	
Non-ferrous			10.0		er	
Non-ferrous			10.0		er	
Non-ferrous			10.0		er	
Non-ferrous			10.0		er	
Non-ferrous			10.0 386 Mumber (mg KOH(g) 4.0		er	
Non-ferrous			0.0 0.0 0.0 0.0 0.0		er	
Non-ferrous			10.0 (b)HDX but		er	
Non-ferrous			10.0 386 Mumber (mg KOH(g) 4.0		er	

: 24 Jan 2024



Unique Number : 10846052 Test Package : FLEET Certificate L2367 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)

Diagnosed

Diagnostician : Wes Davis

: 06069375

Lab Number

Hartland, WI

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