

OIL ANALYSIS REPORT

Sample Rating Trend





Machine Id 927090 Component

Fluid

Diesel 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.

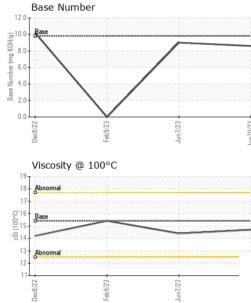
Fluid Condition

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

SAMPLE INFORM	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		GFL0072557	GFL0068317	GFL0067229
Sample Date		Client Info		20 Jun 2023	07 Jun 2023	09 Feb 2023
Machine Age	hrs	Client Info		21319	600	600
Oil Age	hrs	Client Info		600	600	600
Oil Changed		Client Info		N/A	N/A	Changed
Sample Status				NORMAL	NORMAL	SEVERE
CONTAMINAT	ON	method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	<1.0	<1.0	2.7
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	0		limit/base	ourroat		
		method		current	history 1	history 2
Iron	ppm	ASTM D5185m	>80	39	35	99
Chromium	ppm	ASTM D5185m		3	3	10
Nickel	ppm	ASTM D5185m	>2	<1	<1	1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m		1	2	9
Lead	ppm	ASTM D5185m	>30	1	<1	<1
Copper	ppm	ASTM D5185m	>150	<1	<1	2
Tin	ppm	ASTM D5185m	>5	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
			Pres M. Astronom		1 C	biotom O
ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	limit/base	current 4	history 1 5	4
	ppm ppm					
Boron		ASTM D5185m	0	4	5	4
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	4 0	5 0	4
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	4 0 60	5 0 62	4 2 56
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	4 0 60 <1	5 0 62 <1	4 2 56 1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	4 0 60 <1 907	5 0 62 <1 936	4 2 56 1 821
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	4 0 60 <1 907 1077	5 0 62 <1 936 1085	4 2 56 1 821 1036
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	4 0 60 <1 907 1077 976	5 0 62 <1 936 1085 1016	4 2 56 1 821 1036 907
Boron 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	0 0 60 0 1010 1070 1150 1270	4 0 60 <1 907 1077 976 1193	5 0 62 <1 936 1085 1016 1219	4 2 56 1 821 1036 907 1101
Boron 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 0 60 1010 1070 1150 1270 2060	4 0 60 <1 907 1077 976 1193 3296	5 0 62 <1 936 1085 1016 1219 3567	4 2 56 1 821 1036 907 1101 2849
Boron 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 0 60 1010 1070 1150 1270 2060	4 0 60 <1 907 1077 976 1193 3296 current	5 0 62 <1 936 1085 1016 1219 3567 history 1	4 2 56 1 821 1036 907 1101 2849 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	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	4 0 60 <1 907 1077 976 1193 3296 current 12	5 0 62 <1 936 1085 1016 1219 3567 history 1 13	4 2 56 1 821 1036 907 1101 2849 history 2 29
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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 kimit/base >20	4 0 60 <1 907 1077 976 1193 3296 <u>current</u> 12 4	5 0 62 <1 936 1085 1016 1219 3567 history 1 13 2	4 2 56 1 821 1036 907 1101 2849 history 2 29 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	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 >20	4 0 60 <1 907 1077 976 1193 3296 current 12 4 2	5 0 62 <1 936 1085 1016 1219 3567 history 1 13 2 2	4 2 56 1 821 1036 907 1101 2849 history 2 29 6 6 6
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	ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >20 >20 limit/base >20	4 0 60 <1 907 1077 976 1193 3296 <u>current</u> 12 4 2 2 <u>current</u>	5 0 62 <1 936 1085 1016 1219 3567 history 1 13 2 2 2 history 1 1.9	4 2 56 1 821 1036 907 1101 2849 bistory 2 29 6 6 6 bistory 2 ↓
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 Imit/base >20	4 0 60 <1 907 1077 976 1193 3296 current 12 4 2 2	5 0 62 <1 936 1085 1016 1219 3567 history 1 13 2 2 2 history 1 1.9 6.7	4 2 56 1 821 1036 907 1101 2849 history 2 29 6 6 6 8
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 t ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >20 imit/base >3 >20 >3	4 0 60 <1 907 1077 976 1193 3296 <u>current</u> 12 4 2 2 <u>current</u> 2.8 8.3 23.0	5 0 62 <1 936 1085 1016 1219 3567 history 1 13 2 2 2 history 1 1.9 6.7 20.7	4 2 56 1 821 1036 907 1101 2849 bistory 2 29 6 6 6 8 bistory 2 ↓ 5.4 11.2 27.4
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 TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	0 0 0 1010 1070 1150 2060 2060 200 200 200 200 200 200 200	4 0 60 <1 907 1077 976 1193 3296 current 12 4 2 2 current 2.8 8.3 23.0 current	5 0 62 <1 936 1085 1016 1219 3567 history 1 13 2 2 history 1 1.9 6.7 20.7 history 1	4 2 56 1 821 1036 907 1101 2849 bistory 2 29 6 6 6 bistory 2 ↓ 5.4 11.2 27.4 bistory 2
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 t ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >20 imit/base >3 >20 >3	4 0 60 <1 907 1077 976 1193 3296 <u>current</u> 12 4 2 2 <u>current</u> 2.8 8.3 23.0	5 0 62 <1 936 1085 1016 1219 3567 history 1 13 2 2 2 history 1 1.9 6.7 20.7	4 2 56 1 821 1036 907 1101 2849 bistory 2 29 6 6 6 6 bistory 2 ↓ 5.4 11.2 27.4



OIL ANALYSIS REPORT



VISUAL		method	limit/base	current	history 1	history 2
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	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	14.7	14.4	15.42
GRAPHS						
Decb/22	******	Jun7/23	Jun20/23			
Non-ferrous Meta	ls					
copper lead						
•						
2						
Dec6/22		Jun7/23	Jun20/23			
Viscosity @ 100°C	C		-	Base Number		
9			12.0			

10.0

8.0 6.0 4.0

2.0

0.0

Dec8/22

Feb9/23

Base Number (mg KOH/g)

Jun20/23 -

: 29 Jun 2023

: 02 Jul 2023



 Certificate 12367
 Test Package
 : FLEET

 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)

Feb9/23.

Jun7/23 -

Diagnostician : Wes Davis

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Received

Diagnosed

18-

17

(100-01) 15 14

13 Abr

12

Unique Number : 10537820

Laboratory

Sample No.

Lab Number

Dec8/22

: GFL0072557

: 05887337



Jun7/23 -

un20/23