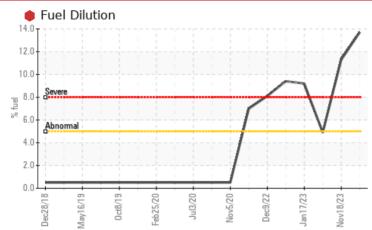


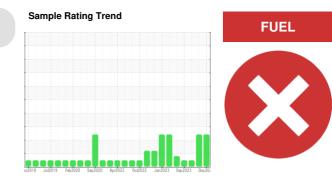
PROBLEM SUMMARY

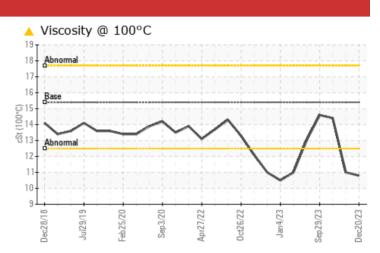
Area GFL836 Machine Id 425062-402315

Component Diesel Engine Fluid PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY







RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS								
Sample Status				SEVERE	SEVERE	NORMAL		
Fuel	%	ASTM D3524	>5	🛑 13.7	11.3	<1.0		
Visc @ 100°C	cSt	ASTM D445	15.4	A 10.8	🔺 11.0	14.4		

Customer Id: GFL836 Sample No.: GFL0103366 Lab Number: 06042853 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data: Jonathan Hester +1 919-379-4092 x4092 <u>jhester@wearcheckusa.com</u>

To change component or sample information: Customer Service +1 1-800-237-1369 <u>customerservice@wearcheck.com</u>

RECOMMENDED ACTIONS							
Action	Status	Date	Done By	Description			
Change Fluid			?	We recommend that you drain the oil and perform a filter service on this component if not already done.			
Change Filter			?	We recommend that you drain the oil and perform a filter service on this component if not already done.			
Resample			?	We recommend an early resample to monitor this condition.			
Check Fuel/injector System			?	We advise that you check the fuel injection system.			

HISTORICAL DIAGNOSIS



18 Nov 2023 Diag: Don Baldridge

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.





Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



01 Nov 2023 Diag: Wes Davis

NORMAL



29 Sep 2025 Diag. Wes Davis

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



view report





OIL ANALYSIS REPORT

Area GFL836 Machine Id 425062-402315 Component

Diesel Engine Fluid PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

Wear

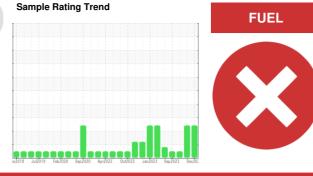
All component wear rates are normal.

Contamination

There is a high amount of fuel present in the oil.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

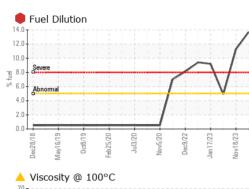


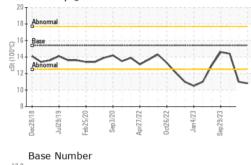
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0103366	GFL0099939	GFL0095162
Sample Date		Client Info		20 Dec 2023	18 Nov 2023	01 Nov 2023
Machine Age	hrs	Client Info		24793	24505	24383
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				SEVERE	SEVERE	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
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	>100	39	37	17
Chromium	ppm	ASTM D5185m	>20	2	2	1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	5	6
Lead	ppm	ASTM D5185m	>40	2	0	0
Copper	ppm	ASTM D5185m	>330	3	<1	2
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
					· ····································	,
Boron	ppm	ASTM D5185m	0	<1	2	4
	ppm ppm					
Boron Barium		ASTM D5185m	0	<1	2	4
Boron	ppm	ASTM D5185m ASTM D5185m	0 0 60	<1 0	2 0	4
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	<1 0 52	2 0 53	4 0 60
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	<1 0 52 <1	2 0 53 <1	4 0 60 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	<1 0 52 <1 825	2 0 53 <1 891	4 0 60 0 929
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	<1 0 52 <1 825 883	2 0 53 <1 891 920	4 0 60 0 929 1066
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	<1 0 52 <1 825 883 870	2 0 53 <1 891 920 923	4 0 60 0 929 1066 1012
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	<1 0 52 <1 825 883 870 1067	2 0 53 <1 891 920 923 1129	4 0 60 0 929 1066 1012 1250
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	<1 0 52 <1 825 883 870 1067 2374	2 0 53 <1 891 920 923 1129 2594	4 0 60 0 929 1066 1012 1250 3067
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 ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	<1 0 52 <1 825 883 870 1067 2374 current	2 0 53 <1 891 920 923 1129 2594 history1	4 0 60 0 929 1066 1012 1250 3067 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	<1 0 52 <1 825 883 870 1067 2374 current 8	2 0 53 <1 891 920 923 1129 2594 history1 9	4 0 60 0 929 1066 1012 1250 3067 history2 8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm 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 method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 imit/base >25	<1 0 52 <1 825 883 870 1067 2374 Current 8 3	2 0 53 <1 891 920 923 1129 2594 history1 9 2	4 0 60 0 929 1066 1012 1250 3067 history2 8 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25	<1 0 52 <1 825 883 870 1067 2374 Current 8 3 0	2 0 53 <1 891 920 923 1129 2594 history1 9 2 2 <1	4 0 60 0 929 1066 1012 1250 3067 history2 8 4 4 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 Imit/base >25 >20 >5	<1 0 52 <1 825 883 870 1067 2374 Current 8 3 0 13.7	2 0 53 <1 891 920 923 1129 2594 history1 9 2 2 <1 € 11.3	4 0 60 0 929 1066 1012 1250 3067 history2 8 4 4 <1 <1.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm %	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 >25 >20 >5 S	<1 0 52 <1 825 883 870 1067 2374 Current 8 3 0 13.7 Current	2 0 53 <1 891 920 923 1129 2594 history1 9 2 2 <1 ◆ 11.3 history1	4 0 60 929 1066 1012 1250 3067 history2 8 4 <1 <1.0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm %	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 >20 >20 >20 >5	<1 0 52 <1 825 883 870 1067 2374 current 8 3 0 13.7 current 1.2	2 0 53 <1 891 920 923 1129 2594 history1 9 2 2 <1 € 11.3 history1 1.2	4 0 60 929 1066 1012 1250 3067 history2 8 4 <1 <10 history2 0.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel 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 2060 225 >20 >20 >5 imit/base >3 >20	<1 0 52 <1 825 883 870 1067 2374 Current 8 3 0 13.7 Current 1.2 14.0	2 0 53 <1 891 920 923 1129 2594 history1 9 2 2 54 11.3 1.3 history1 1.2 1.2 12.8	4 0 60 0 929 1066 1012 1250 3067 history2 8 4 <1 <10 history2 0.5 7.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel 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 imit/base >25 imit/base >3 >20 >30 imit/base	<1 0 52 <1 825 883 870 1067 2374 Current 8 3 0 13.7 Current 1.2 14.0 28.3 Current	2 0 53 <1 891 920 923 1129 2594 history1 9 2 2 <1 11.3 history1 1.2 12.8 26.3 history1	4 0 60 0 929 1066 1012 1250 3067 history2 8 4 4 <1 <1.0 history2 0.5 7.1 19.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAC	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 220 >20 >20 >20 >20 >3 20 >3 20 20 20 20 20 20 20 20 20 20 20 20 20	<1 0 52 <1 825 883 870 1067 2374 Current 8 3 0 13.7 Current 1.2 14.0 28.3	2 0 53 <1 891 920 923 1129 2594 history1 9 2 2 54 11.3 1.3 history1 1.2 1.2 12.8 26.3	4 0 60 929 1066 1012 1250 3067 history2 8 4 <1 <1.0 history2 0.5 7.1 19.3

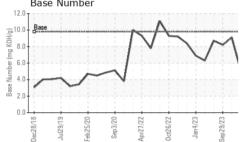
Contact/Location: See also GFL823, 834, 837, 840 - Robert Hart - GFL836



OIL ANALYSIS REPORT



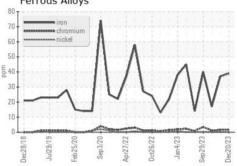


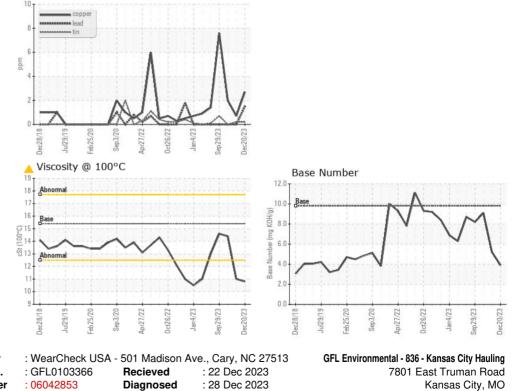


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	15.4	10.8	1 1.0	14.4
GRAPHS						

Ferrous Alloys

Non-ferrous Metals





Laboratory Sample No. Lab Number : 06042853 Diagnosed : 28 Dec 2023 Unique Number : 10803461 Diagnostician : Jonathan Hester Test Package : FLEET (Additional Tests: PercentFuel) Contact: Robert Hart Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. rhart@gflenv.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (580)461-1509 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)



Report Id: GFL836 [WUSCAR] 06042853 (Generated: 12/28/2023 08:59:30) Rev: 1

Contact/Location: See also GFL823, 834, 837, 840 - Robert Hart - GFL836

US 64126

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