

PROBLEM SUMMARY

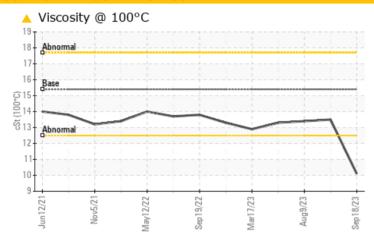
Sample Rating Trend

4696M

Component
Diesel Engine

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

COMPONENT CONDITION SUMMARY



RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS							
Sample Status				ATTENTION	NORMAL	NORMAL	
Visc @ 100°C	cSt	ASTM D445	15.4	10.1	13.5	13.4	

Customer Id: GFL465 Sample No.: GFL0091519 Lab Number: 05958327 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 jhester@wearcheckusa.com

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

30 Aug 2023 Diag: Wes Davis

NORMAL



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.



09 Aug 2023 Diag: Wes Davis

NORMAL



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.



30 May 2023 Diag: Wes Davis

NORMAL



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.





OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id
4696M
Component

Diesel Engine

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

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

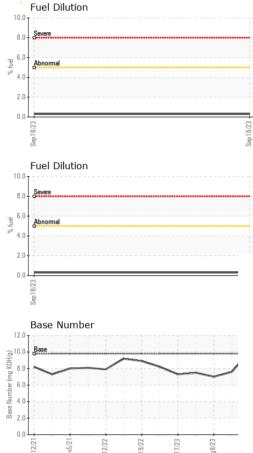
▲ Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Jun2021 Nov2021 May2022 Sap.2022 Mar2023 Aug.2023 Sap.2023						
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0091519	GFL0091527	GFL0081250
Sample Date		Client Info		18 Sep 2023	30 Aug 2023	09 Aug 2023
Machine Age	hrs	Client Info		10709	1512	13257
Oil Age	hrs	Client Info		600	600	600
Oil Changed		Client Info		Not Changd	Changed	Changed
Sample Status				ATTENTION	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	24	12	31
Chromium	ppm	ASTM D5185m	>20	2	<1	2
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m		1	4	3
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m		3	<1	1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m	7.10	0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
	ррпп		11 11 11			
ADDITIVES		method	limit/base	current	history1 2	history2
Boron	nnm		0	49	.)	0
	ppm	ASTM D5185m		-		
Barium	ppm	ASTM D5185m	0	0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0 60	0 32	0 63	0 60
Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0	0 32 <1	0 63 <1	0 60 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010	0 32 <1 426	0 63 <1 977	0 60 <1 994
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070	0 32 <1 426 1617	0 63 <1 977 1156	0 60 <1 994 1157
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150	0 32 <1 426 1617 857	0 63 <1 977 1156 1042	0 60 <1 994 1157 1032
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270	0 32 <1 426 1617 857 1053	0 63 <1 977 1156 1042 1318	0 60 <1 994 1157 1032 1340
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 60 0 1010 1070 1150	0 32 <1 426 1617 857	0 63 <1 977 1156 1042	0 60 <1 994 1157 1032
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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 60 0 1010 1070 1150 1270 2060	0 32 <1 426 1617 857 1053	0 63 <1 977 1156 1042 1318	0 60 <1 994 1157 1032 1340
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 60 0 1010 1070 1150 1270 2060	0 32 <1 426 1617 857 1053 3358	0 63 <1 977 1156 1042 1318 3568	0 60 <1 994 1157 1032 1340 3549
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 60 0 1010 1070 1150 1270 2060	0 32 <1 426 1617 857 1053 3358	0 63 <1 977 1156 1042 1318 3568 history1	0 60 <1 994 1157 1032 1340 3549 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060	0 32 <1 426 1617 857 1053 3358 current	0 63 <1 977 1156 1042 1318 3568 history1	0 60 <1 994 1157 1032 1340 3549 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25	0 32 <1 426 1617 857 1053 3358 current 9 9	0 63 <1 977 1156 1042 1318 3568 history1 4	0 60 <1 994 1157 1032 1340 3549 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25	0 32 <1 426 1617 857 1053 3358 current 9 9 6	0 63 <1 977 1156 1042 1318 3568 history1 4 6	0 60 <1 994 1157 1032 1340 3549 history2 14 8
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5	0 32 <1 426 1617 857 1053 3358 current 9 9 6 0.3	0 63 <1 977 1156 1042 1318 3568 history1 4 6 6	0 60 <1 994 1157 1032 1340 3549 history2 14 8 3 <1.0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5	0 32 <1 426 1617 857 1053 3358 current 9 9 6 0.3 current	0 63 <1 977 1156 1042 1318 3568 history1 4 6 6 6 <1.0	0 60 <1 994 1157 1032 1340 3549 history2 14 8 3 <1.0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm	ASTM D5185m ASTM D7844	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5	0 32 <1 426 1617 857 1053 3358 current 9 9 6 0.3 current 0.1	0 63 <1 977 1156 1042 1318 3568 history1 4 6 6 6 <1.0 history1	0 60 <1 994 1157 1032 1340 3549 history2 14 8 3 <1.0 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D7824 *ASTM D7844 *ASTM D7624 *ASTM D76145	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5 limit/base	0 32 <1 426 1617 857 1053 3358 current 9 9 6 0.3 current 0.1 6.7	0 63 <1 977 1156 1042 1318 3568 history1 4 6 6 <1.0 history1 0.5 9.1	0 60 <1 994 1157 1032 1340 3549 history2 14 8 3 <1.0 history2 0.5 9.4
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	ppm	ASTM D5185m ASTM D7624 *ASTM D7624 *ASTM D7615 method	0 60 0 1010 1070 1150 1270 2060 limit/base >25	0 32 <1 426 1617 857 1053 3358 current 9 9 6 0.3 current 0.1 6.7 20.4 current	0 63 <1 977 1156 1042 1318 3568 history1 4 6 6 <1.0 history1 0.5 9.1 19.6 history1	0 60 <1 994 1157 1032 1340 3549 history2 14 8 3 <1.0 history2 0.5 9.4 20.2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m ASTM D7824 *ASTM D7844 *ASTM D7624 *ASTM D76145	0 60 0 1010 1070 1150 1270 2060 limit/base >25 sa >20 >3 >20 sa limit/base >25	0 32 <1 426 1617 857 1053 3358	0 63 <1 977 1156 1042 1318 3568 history1 4 6 <1.0 history1 0.5 9.1 19.6	0 60 <1 994 1157 1032 1340 3549 history2 14 8 3 <1.0 history2 0.5 9.4 20.2



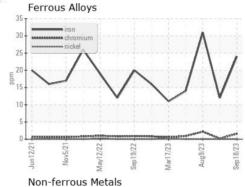
OIL ANALYSIS REPORT

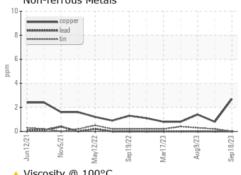


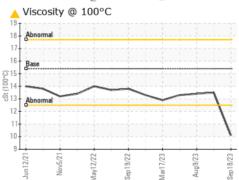
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

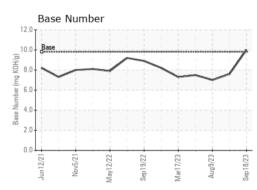
FLUID PROPI	EHILES	method	iiiiii/base	current	riistory i	riistory
Visc @ 100°C	cSt	ASTM D445	15.4	<u> </u>	13.5	13.4

GRAPHS











Laboratory Sample No. Lab Number **Unique Number**

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0091519 : 05958327

: 10659540

Received : 22 Sep 2023 Diagnosed : 26 Sep 2023

Diagnostician : Jonathan Hester **Test Package**: FLEET (Additional Tests: FuelDilution, PercentFuel)

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)

GFL Environmental - 465 - Pontiac

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