

PROBLEM SUMMARY

Sample Rating Trend

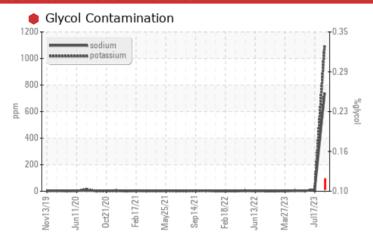
GLYCOL

Machine Id **10978** Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (5 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. 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	NORMAL	NORMAL	
Sodium	ppm	ASTM D5185m		739	13	4	
Potassium	ppm	ASTM D5185m	>20	<u> </u>	10	3	
Glycol	%	*ASTM D2982		0.12	NEG	NEG	

Customer Id: GFL017 Sample No.: GFL0098101 Lab Number: 05997296 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 ihester@wearcheckusa.com

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

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 Glycol Access			?	We advise that you check for the source of the coolant leak.		

HISTORICAL DIAGNOSIS

17 Jul 2023 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.



29 Jun 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.

view report

22 May 2023 Diag: Wes Davis

NORMAL



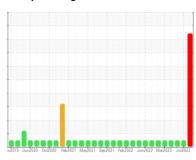
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.





OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id 10978 Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (5 GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. 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

Sodium and/or potassium levels are high. There is a high concentration of glycol present in the oil.

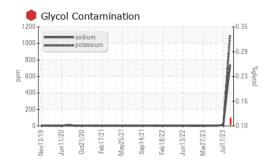
▲ Fluid Condition

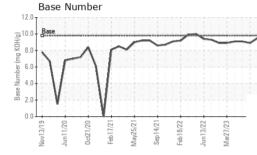
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

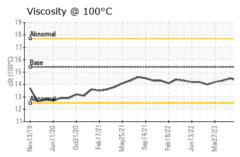
Sample Date Client Info 01 Nov 2023 17 Jul 2023 29 Jun 2023 Machine Age hrs Client Info 1432 <	AL)						
Sample Date Client Info 01 Nov 2023 17 Jul 2023 29 Jun 2023 Machine Age hrs Client Info 1432 1432 1432 Oil Age hrs Client Info 530 140 320 Oil Changed Client Info N/A N/A N/A Sample Status SEVERE NORMAL NORMAL CONTAMINATION method Imitibase current history1 history2 Fuel WC Method 5 <1.0	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 1432 1432 1432 1432 Oil Age hrs Client Info 530 140 320 Oil Changed Client Info N/A N/A N/A Sample Status Normal Normal Normal CONTAMINATION method Imitibase current history1 history2 Fuel WC Method 5 <1.0 <1.0 <1.0 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 32 9 11 Chromium ppm ASTM D5185m >20 1 <1 <1 Iron ppm ASTM D5185m >20 1 <1 <1 Chromium ppm ASTM D5185m >3 0 0 <1 Iron ppm ASTM D5185m >3 0 0 <1 Chadelium ppm A	Sample Number		Client Info		GFL0098101	GFL0088572	GFL0083299
Oil Age hrs Client Info 530 140 320 Oil Changed Client Info N/A N/A N/A N/A Sample Status Client Info N/A N/A N/A N/A CONTAMINATION method limit/base current history1 history2 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m 100 32 9 11 Chromium ppm ASTM D5185m 20 1 <1 <1 Nickel ppm ASTM D5185m 20 1 <1 <1 Aluminum ppm ASTM D5185m 20 5 2 <1 Lead ppm ASTM D5185m 20 5 2 <1 Lead ppm ASTM D5185m 20 5 2 <1 Vanadium ppm ASTM D5185m 30 19 <1 <	Sample Date		Client Info		01 Nov 2023	17 Jul 2023	29 Jun 2023
Oil Changed Sample Status Client Info N/A N/A N/A N/A CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0	Machine Age	hrs	Client Info		1432	1432	1432
Several Normal Normal	Oil Age	hrs	Client Info		530	140	320
CONTAMINATION method limit/base current history2 Fuel WC Method >5 <1.0	Oil Changed		Client Info		N/A	N/A	N/A
WEAR METALS	Sample Status				SEVERE	NORMAL	NORMAL
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 32 9 11 Chromium ppm ASTM D5185m >20 1 <1 <1 Nickel ppm ASTM D5185m >4 <1 <1 0 Titanium ppm ASTM D5185m 3 0 0 0 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >40 0 0 0 Aluminum ppm ASTM D5185m >40 0 0 0 Copper ppm ASTM D5185m >40 0 0 0 Copper ppm ASTM D5185m >15 0 <1 0 Cadadium ppm ASTM D5185m 0 <1 0 0 ADDTTVES method imit/base current history1	CONTAMINAT	ION	method	limit/base	current	history1	history2
Iron	Fuel		WC Method	>5	<1.0	<1.0	<1.0
Chromium ppm ASTM D5185m >20 1 <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	32	9	11
Titanium ppm ASTM D5185m 0 <1	Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >20 5 2 <1	Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Aluminum	Titanium	ppm	ASTM D5185m		0	<1	<1
Lead ppm ASTM D5185m >40 0 0 0 Copper ppm ASTM D5185m >330 19 <1	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper ppm ASTM D5185m >330 19 <1	Aluminum	ppm	ASTM D5185m	>20	5	2	<1
Tin ppm ASTM D5185m >15 0 <1	Lead	ppm	ASTM D5185m	>40	0	0	0
Tin ppm ASTM D5185m >15 0 <1	Copper	ppm	ASTM D5185m	>330	19	<1	<1
Vanadium ppm ASTM D5185m 0 <1				>15	0	<1	0
Cadmium ppm ASTM D5185m <1	Vanadium	• •	ASTM D5185m		0	<1	0
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 17 6 4 Barium ppm ASTM D5185m 0 <1 1 14 Molybdenum ppm ASTM D5185m 60 86 60 61 Manganese ppm ASTM D5185m 0 2 <1 0 Magnesium ppm ASTM D5185m 1010 877 997 971 Calcium ppm ASTM D5185m 1070 1277 1229 1177 Phosphorus ppm ASTM D5185m 1150 931 1064 1052 Zinc ppm ASTM D5185m 1270 1251 1364 1316 Sulfur ppm ASTM D5185m 2060 3465 3860 3765 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m <					<1		0
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Magnesium ppm ASTM D5185m 1010 877 997 971 Calcium ppm ASTM D5185m 1070 1277 1229 1177 Phosphorus ppm ASTM D5185m 1150 931 1064 1052 Zinc ppm ASTM D5185m 1270 1251 1364 1316 Sulfur ppm ASTM D5185m 2060 3465 3860 3765 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 19 5 4 Sodium ppm ASTM D5185m >20 1101 10 3 Glycol % *ASTM D5185m >20 1101 10 3 Glycol % *ASTM D5282 0.12 NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >	Boron	• •	ASTM D5185m	0	17	6	4
Calcium ppm ASTM D5185m 1070 1277 1229 1177 Phosphorus ppm ASTM D5185m 1150 931 1064 1052 Zinc ppm ASTM D5185m 1270 1251 1364 1316 Sulfur ppm ASTM D5185m 2060 3465 3860 3765 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m ≥25 19 5 4 Sodium ppm ASTM D5185m ≥20 1101 10 3 Potassium ppm ASTM D5185m >20 1101 10 3 Glycol "ASTM D5185m >20 1101 10 3 Glycol "ASTM D5282 0.12 NEG NEG INFRA-RED method limit/base current history1 history2 Soot % "ASTM D7624 >20 11.7 6.8 <	Boron	ppm	ASTM D5185m ASTM D5185m	0	17 <1	6	4 14
Calcium ppm ASTM D5185m 1070 1277 1229 1177 Phosphorus ppm ASTM D5185m 1150 931 1064 1052 Zinc ppm ASTM D5185m 1270 1251 1364 1316 Sulfur ppm ASTM D5185m 2060 3465 3860 3765 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 19 5 4 Sodium ppm ASTM D5185m >20 1101 10 3 Potassium ppm ASTM D5185m >20 1101 10 3 Glycol % *ASTM D2982 0.12 NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 11.7 6.8 7.8 Sulfation Abs/:nm *ASTM D7415	Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	17 <1 86	6 1 60	4 14 61
Phosphorus ppm ASTM D5185m 1150 931 1064 1052 Zinc ppm ASTM D5185m 1270 1251 1364 1316 Sulfur ppm ASTM D5185m 2060 3465 3860 3765 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 19 5 4 Sodium ppm ASTM D5185m >20 1101 10 3 Glycol % *ASTM D5185m >20 1101 10 3 Glycol % *ASTM D2982 • 0.12 NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 11.7 6.8 7.8 Sulfation Abs/:nm *ASTM D7415 >30 22.2 19.1 20.3 FLUID DEGRADATION limit/base	Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	17 <1 86 2	6 1 60 <1	4 14 61 0
Zinc ppm ASTM D5185m 1270 1251 1364 1316 Sulfur ppm ASTM D5185m 2060 3465 3860 3765 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 19 5 4 Sodium ppm ASTM D5185m >20 1101 10 3 Potassium ppm ASTM D5185m >20 1101 10 3 Glycol % *ASTM D2982 ● 0.12 NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.9 0.6 0.7 Nitration Abs/cm *ASTM D7624 >20 11.7 6.8 7.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 19.1 20.3 FLUID DEGRADATION method limit/bas	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	17 <1 86 2 877	6 1 60 <1 997	4 14 61 0 971
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Silicon ppm ASTM D5185m >25 19 5 4 Sodium ppm ASTM D5185m ▲ 739 13 4 Potassium ppm ASTM D5185m >20 ▲ 1101 10 3 Glycol % *ASTM D2982 ● 0.12 NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.9 0.6 0.7 Nitration Abs/cm *ASTM D7624 >20 11.7 6.8 7.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 19.1 20.3 FLUID DEGRADATION method limit/base current history1 history2	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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	17 <1 86 2 877 1277 931	6 1 60 <1 997 1229 1064	4 14 61 0 971 1177 1052
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Sodium ppm ASTM D5185m ▲ 739 13 4 Potassium ppm ASTM D5185m >20 ▲ 1101 10 3 Glycol % *ASTM D2982 ● 0.12 NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.9 0.6 0.7 Nitration Abs/cm *ASTM D7624 >20 11.7 6.8 7.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 19.1 20.3 FLUID DEGRADATION method limit/base current history1 history2	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 ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	17 <1 86 2 877 1277 931 1251 3465	6 1 60 <1 997 1229 1064 1364 3860	4 14 61 0 971 1177 1052 1316 3765
Potassium ppm ASTM D5185m >20 ▲ 1101 10 3 Glycol % *ASTM D2982 ♠ 0.12 NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.9 0.6 0.7 Nitration Abs/cm *ASTM D7624 >20 11.7 6.8 7.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 19.1 20.3 FLUID DEGRADATION method limit/base current history1 history2	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 0 1010 1070 1150 1270 2060	17 <1 86 2 877 1277 931 1251 3465 current	6 1 60 <1 997 1229 1064 1364 3860 history1	4 14 61 0 971 1177 1052 1316 3765
Glycol % *ASTM D2982 ● 0.12 NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.9 0.6 0.7 Nitration Abs/cm *ASTM D7624 >20 11.7 6.8 7.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 19.1 20.3 FLUID DEGRADATION method limit/base current history1 history2	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	17 <1 86 2 877 1277 931 1251 3465 current	6 1 60 <1 997 1229 1064 1364 3860 history1 5	4 14 61 0 971 1177 1052 1316 3765 history2
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Soot % % *ASTM D7844 >3 0.9 0.6 0.7 Nitration Abs/cm *ASTM D7624 >20 11.7 6.8 7.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 19.1 20.3 FLUID DEGRADATION method limit/base current history1 history2	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	17 <1 86 2 877 1277 931 1251 3465 current 19 △ 739 △ 1101	6 1 60 <1 997 1229 1064 1364 3860 history1 5 13	4 14 61 0 971 1177 1052 1316 3765 history2 4 4
Nitration Abs/cm *ASTM D7624 >20 11.7 6.8 7.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 19.1 20.3 FLUID DEGRADATION method limit/base current history1 history2	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	17 <1 86 2 877 1277 931 1251 3465 current 19 △ 739 △ 1101 ● 0.12	6 1 60 <1 997 1229 1064 1364 3860 history1 5 13 10 NEG	4 14 61 0 971 1177 1052 1316 3765 history2 4 4 3 NEG
Sulfation Abs/.1mm *ASTM D7415 >30 22.2 19.1 20.3 FLUID DEGRADATION method limit/base current history1 history2	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D2982	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	17 <1 86 2 877 1277 931 1251 3465 current 19 △ 739 △ 1101 ○ 0.12 current	6 1 60 <1 997 1229 1064 1364 3860 history1 5 13 10 NEG history1	4 14 61 0 971 1177 1052 1316 3765 history2 4 4 3 NEG
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D2982 *Method *ASTM D7844	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	17 <1 86 2 877 1277 931 1251 3465 current 19 ▲ 739 ▲ 1101 ● 0.12 current 0.9	6 1 60 <1 997 1229 1064 1364 3860 history1 5 13 10 NEG history1 0.6	4 14 61 0 971 1177 1052 1316 3765 history2 4 4 3 NEG history2 0.7
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D5185m *ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7844	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	17 <1 86 2 877 1277 931 1251 3465 current 19 739 1101 0.12 current 0.9 11.7	6 1 60 <1 997 1229 1064 1364 3860 history1 5 13 10 NEG history1 0.6 6.8	4 14 61 0 971 1177 1052 1316 3765 history2 4 4 3 NEG history2 0.7 7.8
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7624	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >3	17 <1 86 2 877 1277 931 1251 3465 current 19 ▲ 739 ▲ 1101 ● 0.12 current 0.9 11.7 22.2	6 1 60 <1 997 1229 1064 1364 3860 history1 5 13 10 NEG history1 0.6 6.8 19.1	4 14 61 0 971 1177 1052 1316 3765 history2 4 4 3 NEG history2 0.7 7.8 20.3
Base Number (BN) mg KOH/g ASTM D2896 9.8 9.5 8.9 9.1	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m METHOD ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7624 *ASTM D7415 method	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30 limit/base	17 <1 86 2 877 1277 931 1251 3465 current 19 739 1101 0.12 current 0.9 11.7 22.2 current	6 1 60 <1 997 1229 1064 1364 3860 history1 5 13 10 NEG history1 0.6 6.8 19.1 history1	4 14 61 0 971 1177 1052 1316 3765 history2 4 4 3 NEG history2 0.7 7.8 20.3 history2



OIL ANALYSIS REPORT



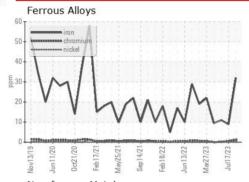


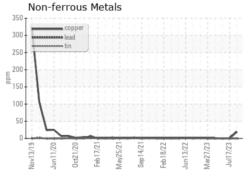


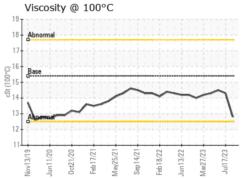
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

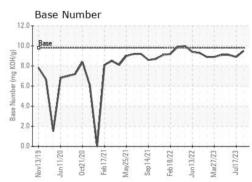
FLUID PROPI	ERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.8	14.3	14.5

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number Unique Number

: GFL0098101 : 05997296 : 10725656

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 02 Nov 2023 Diagnosed

: 07 Nov 2023 Diagnostician : Jonathan Hester

Test Package : FLEET (Additional Tests: GLYCOL) 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 - 017 - Durham

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