

OIL ANALYSIS REPORT

(G782HV) Machine Id 10693

Component **Diesel Engine**

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

Sample Rating Trend



DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels are high.

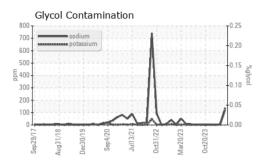
▲ Fluid Condition

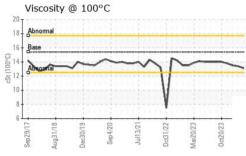
The BN result indicates that there is suitable alkalinity remaining in the oil.

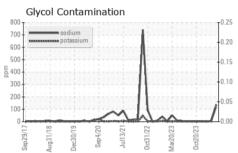
SAMPLE INFORMATION method limit/base current history1 history2	/		p2017 Aug20	18 Dec2019 Sep2020	Jul2021 Oct2022 Mar2023		
Sample Date	SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 17800 17674 17356 Oil Age hrs Client Info 17206 17206 17526 Oil Changed Client Info Changed N/A N/A Sample Status Image: Client Info Changed N/A N/A N/A CONTAMINATION method limit/base current history1 history2 Fuel WC Method 3-0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >75 10 23 17 Chromium ppm ASTM D5185m >75 10 23 17 Chromium ppm ASTM D5185m >75 10 23 17 Chromium ppm ASTM D5185m >2 0 0 <1	Sample Number		Client Info		GFL0098971	GFL0099009	GFL0098980
Oil Age hrs Client Info 17206 17206 17526 Oil Changed Client Info Changed N/A N/A Sample Status Contamination Imitibase current history1 history2 Fuel WC Method >3.0 <1.0	Sample Date		Client Info		10 Jan 2024	26 Dec 2023	29 Nov 2023
Oil Changed Sample Status Client Info Changed ABNORMAL NORMAL NORMAL NORMAL N/A NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >3.0 <1.0	Machine Age	hrs	Client Info		17800	17674	17356
Sample Status	Oil Age	hrs	Client Info		17206	17206	17526
Sample Status	Oil Changed		Client Info		Changed	N/A	N/A
Fuel WC Method >3.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >5 -1 1 <1	-				ABNORMAL	NORMAL	NORMAL
Water WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >75 10 23 17 Chromium ppm ASTM D5185m >5 <1 1 <1 Nickel ppm ASTM D5185m >2 0 0 <1 Silver ppm ASTM D5185m >2 0 0 <1 Aluminum ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >25 0 0 0 Lead ppm ASTM D5185m >4 <1 <1 <1 <1 Vanadium ppm ASTM D5185m >4 <1 <1 0 Vanadium ppm ASTM D5185m 0 <1 2 0 Cadmium ppm ASTM D5185m 0 <1	CONTAMINATION	NC	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >75 10 23 17 Chromium ppm ASTM D5185m >5 <1	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Iron	Water		WC Method	>0.2	NEG	NEG	NEG
Chromium ppm ASTM D5185m >5 <1	WEAR METALS	3	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>75	10	23	17
Titanium	Chromium	ppm	ASTM D5185m	>5	<1	1	<1
Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >15 3 4 2 Lead ppm ASTM D5185m >25 0 0 0 Copper ppm ASTM D5185m >100 <1 <1 <1 Vanadium ppm ASTM D5185m 0 <1 0 <1 Vanadium ppm ASTM D5185m 0 <1 0 <1 Cadmium ppm ASTM D5185m 0 <1 2 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 2 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 2 0 ADDITIVES method limit/base current history1	Nickel	ppm	ASTM D5185m	>4	0	<1	0
Aluminum ppm ASTM D5185m >15 3 4 2 Lead ppm ASTM D5185m >25 0 0 0 Copper ppm ASTM D5185m >100 <1	Titanium	ppm	ASTM D5185m	>2	0	0	<1
Lead ppm ASTM D5185m >25 0 0 0 Copper ppm ASTM D5185m >100 <1 <1 <1 Tin ppm ASTM D5185m >4 <1 <1 0 Vanadium ppm ASTM D5185m 0 <1 <1 0 Cadmium ppm ASTM D5185m 0 <1 2 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 2 0 Barium ppm ASTM D5185m 0 <1 2 0 Molybdenum ppm ASTM D5185m 0 <1 <1 <1 0 Magnesium ppm ASTM D5185m 0 <1 <1 <1 0 Calcium ppm ASTM D5185m 1010 934 896 867 Calcium ppm ASTM D5185m 120	Silver	ppm	ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m >100 <1 <1 <1 Tin ppm ASTM D5185m >4 <1	Aluminum	ppm	ASTM D5185m	>15	3	4	2
Tin ppm ASTM D5185m >4 <1 <1 0 Vanadium ppm ASTM D5185m 0 <1 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1	Lead	ppm	ASTM D5185m	>25	0	0	0
Vanadium ppm ASTM D5185m 0 <1 0 ADDITIVES method limit/base current history1 history2 ADDITIVES method limit/base current history1 history2 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 2 0 6 58 54 59 Magnesium ppm ASTM D5185m 0 <1	Copper	ppm	ASTM D5185m	>100	<1	<1	<1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 2 0 Barium ppm ASTM D5185m 0 0 0 6 6 Molybdenum ppm ASTM D5185m 0 <1 <1 0 Manganese ppm ASTM D5185m 1010 934 896 867 Calcium ppm ASTM D5185m 1070 1272 991 1056 Phosphorus ppm ASTM D5185m 1150 941 1004 986 Zinc ppm ASTM D5185m 1270 1175 1233 1134 Sulfur ppm ASTM D5185m 2060 3163 2911 2769 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m	Tin	ppm	ASTM D5185m	>4	<1	<1	0
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1	Vanadium	ppm	ASTM D5185m		0	<1	0
Boron ppm ASTM D5185m 0 <1 2 0 Barium ppm ASTM D5185m 0 0 0 6 Molybdenum ppm ASTM D5185m 60 58 54 59 Manganese ppm ASTM D5185m 10 10 934 896 867 Calcium ppm ASTM D5185m 10 70 1272 991 1056 Phosphorus ppm ASTM D5185m 10 70 1272 991 1056 Phosphorus ppm ASTM D5185m 12 70 1175 1233 1134 Zinc ppm ASTM D5185m 2060 3163 2911 2769 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 7 6 Sodium ppm ASTM D5185m >20 130 2 3 Glycol % *ASTM D5185m <	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 6 Molybdenum ppm ASTM D5185m 60 58 54 59 Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 1010 934 896 867 Calcium ppm ASTM D5185m 1070 1272 991 1056 Phosphorus ppm ASTM D5185m 1150 941 1004 986 Zinc ppm ASTM D5185m 1270 1175 1233 1134 Sulfur ppm ASTM D5185m 2060 3163 2911 2769 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 7 6 Sodium ppm ASTM D5185m >20 130 2 3 Glycol % *ASTM D2982	ADDITIVES		method	limit/haco	ourront	hietory1	history2
Molybdenum ppm ASTM D5185m 60 58 54 59 Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 1010 934 896 867 Calcium ppm ASTM D5185m 1070 1272 991 1056 Phosphorus ppm ASTM D5185m 1150 941 1004 986 Zinc ppm ASTM D5185m 1270 1175 1233 1134 Sulfur ppm ASTM D5185m 2060 3163 2911 2769 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 7 6 Sodium ppm ASTM D5185m >20 130 2 3 Glycol % *ASTM D5185m >20 NEG NEG NEG INFRA-RED method limi			mounda	IIIIII Dase	Current	History	motory
Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 1010 934 896 867 Calcium ppm ASTM D5185m 1070 1272 991 1056 Phosphorus ppm ASTM D5185m 1150 941 1004 986 Zinc ppm ASTM D5185m 1270 1175 1233 1134 Sulfur ppm ASTM D5185m 2060 3163 2911 2769 CONTAMINANTS method limit/base current history1 history2 Solium ppm ASTM D5185m >25 4 7 6 Sodium ppm ASTM D5185m >20 119 5 0 Potassium ppm ASTM D5185m >20 130 2 3 Glycol % *ASTM D528 NEG NEG NEG INFRA-RED method limit	_	ppm					
Magnesium ppm ASTM D5185m 1010 934 896 867 Calcium ppm ASTM D5185m 1070 1272 991 1056 Phosphorus ppm ASTM D5185m 1150 941 1004 986 Zinc ppm ASTM D5185m 1270 1175 1233 1134 Sulfur ppm ASTM D5185m 2060 3163 2911 2769 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 7 6 Sodium ppm ASTM D5185m >20 130 2 3 Glycol % *ASTM D5185m >20 NEG NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.3 0.7 0.5 Nitration Abs/cm *ASTM	Boron		ASTM D5185m	0	<1	2	0
Calcium ppm ASTM D5185m 1070 1272 991 1056 Phosphorus ppm ASTM D5185m 1150 941 1004 986 Zinc ppm ASTM D5185m 1270 1175 1233 1134 Sulfur ppm ASTM D5185m 2060 3163 2911 2769 CONTAMINANTS method limit/base current history1 history2 CONTAMINANTS method limit/base current history1 history2 Solium ppm ASTM D5185m >25 4 7 6 Sodium ppm ASTM D5185m >20 130 2 3 Potassium ppm ASTM D5185m >20 130 2 3 Glycol % *ASTM D2982 NEG NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 <td>Boron Barium</td> <td>ppm</td> <td>ASTM D5185m ASTM D5185m</td> <td>0</td> <th><1 0</th> <td>2</td> <td>0</td>	Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	<1 0	2	0
Phosphorus ppm ASTM D5185m 1150 941 1004 986 Zinc ppm ASTM D5185m 1270 1175 1233 1134 Sulfur ppm ASTM D5185m 2060 3163 2911 2769 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 7 6 Sodium ppm ASTM D5185m >25 4 7 6 Sodium ppm ASTM D5185m >20 130 2 3 Potassium ppm ASTM D5185m >20 130 2 3 Glycol % *ASTM D2982 NEG NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 5.6 7.4 6.4 Sulfation Abs/.1mm *ASTM D7415 >30	Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	<1 0 58	2 0 54	0 6 59
Zinc ppm ASTM D5185m 1270 1175 1233 1134 Sulfur ppm ASTM D5185m 2060 3163 2911 2769 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 7 6 Sodium ppm ASTM D5185m >25 4 7 6 Sodium ppm ASTM D5185m >20 119 5 0 Potassium ppm ASTM D5185m >20 130 2 3 Glycol % *ASTM D2982 NEG NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 5.6 7.4 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.1 19.2 18.5 FLUID DEGRADATION method limit/base	Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	<1 0 58 <1	2 0 54 <1	0 6 59
Sulfur ppm ASTM D5185m 2060 3163 2911 2769 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 7 6 Sodium ppm ASTM D5185m >20 119 5 0 Potassium ppm ASTM D5185m >20 130 2 3 Glycol % *ASTM D2982 NEG NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.3 0.7 0.5 Nitration Abs/cm *ASTM D7624 >20 5.6 7.4 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.1 19.2 18.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	<1 0 58 <1 934	2 0 54 <1 896	0 6 59 0 867
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 7 6 Sodium ppm ASTM D5185m >20 119 5 0 Potassium ppm ASTM D5185m >20 130 2 3 Glycol % *ASTM D2982 NEG NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.3 0.7 0.5 Nitration Abs/cm *ASTM D7624 >20 5.6 7.4 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.1 19.2 18.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 12.3 14.2 13.7	Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	<1 0 58 <1 934 1272	2 0 54 <1 896 991	0 6 59 0 867 1056
Silicon ppm ASTM D5185m >25 4 7 6 Sodium ppm ASTM D5185m ≥25 4 7 6 Potassium ppm ASTM D5185m >20 130 2 3 Glycol % *ASTM D2982 NEG NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.3 0.7 0.5 Nitration Abs/cm *ASTM D7624 >20 5.6 7.4 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.1 19.2 18.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 12.3 14.2 13.7	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	<1 0 58 <1 934 1272 941	2 0 54 <1 896 991 1004	0 6 59 0 867 1056 986
Sodium ppm ASTM D5185m ▲ 119 5 0 Potassium ppm ASTM D5185m >20 ▲ 130 2 3 Glycol % *ASTM D2982 NEG NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.3 0.7 0.5 Nitration Abs/cm *ASTM D7624 >20 5.6 7.4 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.1 19.2 18.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 12.3 14.2 13.7	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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 0 1010 1070 1150	<1 0 58 <1 934 1272 941 1175	2 0 54 <1 896 991 1004 1233	0 6 59 0 867 1056 986 1134
Potassium ppm ASTM D5185m >20 ▲ 130 2 3 Glycol % *ASTM D2982 NEG NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.3 0.7 0.5 Nitration Abs/cm *ASTM D7624 >20 5.6 7.4 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.1 19.2 18.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 12.3 14.2 13.7	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	<1 0 58 <1 934 1272 941 1175 3163	2 0 54 <1 896 991 1004 1233 2911	0 6 59 0 867 1056 986 1134 2769
Glycol % *ASTM D2982 NEG NEG NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.3 0.7 0.5 Nitration Abs/cm *ASTM D7624 >20 5.6 7.4 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.1 19.2 18.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 12.3 14.2 13.7	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT	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	<1 0 58 <1 934 1272 941 1175 3163 current	2 0 54 <1 896 991 1004 1233 2911	0 6 59 0 867 1056 986 1134 2769 history2
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.3 0.7 0.5 Nitration Abs/cm *ASTM D7624 >20 5.6 7.4 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.1 19.2 18.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 12.3 14.2 13.7	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	<1 0 58 <1 934 1272 941 1175 3163 current	2 0 54 <1 896 991 1004 1233 2911 history1	0 6 59 0 867 1056 986 1134 2769 history2
Soot % % *ASTM D7844 > 6 0.3 0.7 0.5 Nitration Abs/cm *ASTM D7624 > 20 5.6 7.4 6.4 Sulfation Abs/.1mm *ASTM D7415 > 30 17.1 19.2 18.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 > 25 12.3 14.2 13.7	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 Iimit/base	<1 0 58 <1 934 1272 941 1175 3163 current 4 ▲ 119	2 0 54 <1 896 991 1004 1233 2911 history1 7	0 6 59 0 867 1056 986 1134 2769 history2 6 0
Nitration Abs/cm *ASTM D7624 >20 5.6 7.4 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.1 19.2 18.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 12.3 14.2 13.7	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 Iimit/base	<1 0 58 <1 934 1272 941 1175 3163 current 4 119 130	2 0 54 <1 896 991 1004 1233 2911 history1 7 5	0 6 59 0 867 1056 986 1134 2769 history2 6 0 3
Sulfation Abs/.1mm *ASTM D7415 >30 17.1 19.2 18.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 12.3 14.2 13.7	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Glycol	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	<1 0 58 <1 934 1272 941 1175 3163	2 0 54 <1 896 991 1004 1233 2911 history1 7 5 2 NEG	0 6 59 0 867 1056 986 1134 2769 history2 6 0 3
Sulfation Abs/.1mm *ASTM D7415 >30 17.1 19.2 18.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 12.3 14.2 13.7	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Glycol INFRA-RED	ppm	ASTM D5185m *ASTM D2982 *Method	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	<1 0 58 <1 934 1272 941 1175 3163	2 0 54 <1 896 991 1004 1233 2911 history1 7 5 2 NEG	0 6 59 0 867 1056 986 1134 2769 history2 6 0 3 NEG
Oxidation	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm	ASTM D5185m *ASTM D2982 method *ASTM D7844	0 0 60 0 1010 1150 1270 2060 limit/base >25 >20	<1 0 58 <1 934 1272 941 1175 3163	2 0 54 <1 896 991 1004 1233 2911 history1 7 5 2 NEG history1 0.7	0 6 59 0 867 1056 986 1134 2769 history2 6 0 3 NEG history2
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm	ASTM D5185m *ASTM D7844 *ASTM D7844	0 0 60 0 1010 1150 1270 2060 limit/base >25 >20	<1 0 58 <1 934 1272 941 1175 3163	2 0 54 <1 896 991 1004 1233 2911 history1 7 5 2 NEG history1 0.7 7.4	0 6 59 0 867 1056 986 1134 2769 history2 6 0 3 NEG history2
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7624	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	<1 0 58 <1 934 1272 941 1175 3163	2 0 54 <1 896 991 1004 1233 2911 history1 7 5 2 NEG history1 0.7 7.4 19.2	0 6 59 0 867 1056 986 1134 2769 history2 6 0 3 NEG history2 0.5 6.4 18.5
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm	ASTM D5185m *ASTM D2982 *ASTM D7844 *ASTM D7624 *ASTM D7415 *Method	0 0 0 60 0 1010 1150 1270 2060 limit/base >25 >20 limit/base >6 >20 >30 limit/base	<1 0 58 <1 934 1272 941 1175 3163 current 4 ▲ 119 ▲ 130 NEG current 0.3 5.6 17.1 current	2 0 54 <1 896 991 1004 1233 2911 history1 7 5 2 NEG history1 0.7 7.4 19.2 history1	0 6 59 0 867 1056 986 1134 2769 history2 6 0 3 NEG history2 0.5 6.4 18.5



OIL ANALYSIS REPORT



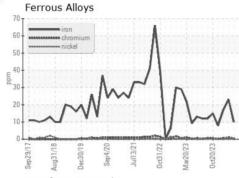


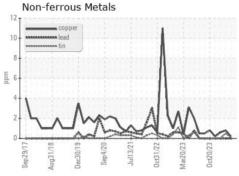


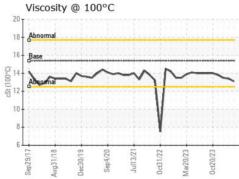
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

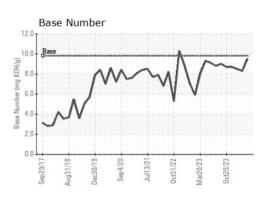
FLUID PROP	EHIIES	method	iiiiii/base	current	riistory i	HIStory
Visc @ 100°C	cSt	ASTM D445	15.4	13.1	13.4	13.5

GRAPHS













Certificate L2367

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

: GFL0098971 : 06070309

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

Diagnosed : 29 Jan 2024 Diagnostician : Jonathan Hester

: 25 Jan 2024

: 10846986 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 - 084 - Clarksville

699 Jack Miller Boulevard Clarksville, TN US 37042

Contact: ROBERT THIBAULT

robert.thibault@gflenv.com T: (931)552-7276

F: (931)572-9674