

# **PROBLEM SUMMARY**

Sample Rating Trend

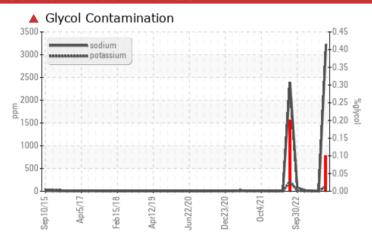
**GLYCOL** 

(H904544) **2520** 

Component **Diesel Engine** 

PETRO CANADA DURON SHP 15W40 (10 GAL)

### **COMPONENT CONDITION SUMMARY**



### 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.

PROBLEMATIC TEST RESULTS							
Sample Status				SEVERE	NORMAL	NORMAL	
Sodium	ppm	ASTM D5185m		<u> </u>	0	6	
Potassium	ppm	ASTM D5185m	>20	<u> </u>	2	2	
Glycol	%	*ASTM D2982		<b>▲</b> 0.10	NEG	NEG	

Customer Id: GFL102 Sample No.: GFL0099757 Lab Number: 06104031 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:

Don Baldridge +1 don.b505@comcast.net

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

### **RECOMMENDED ACTIONS** Description Action **Status** Date Done By ? Change Fluid Oil and filter change at the time of sampling has been noted. Change Filter Oil and filter change at the time of sampling has been noted. ? 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

### 20 Jun 2023 Diag: Wes Davis

### NORMAL



No corrective action is recommended at this time. Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. Fuel content negligible. 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

### 19 May 2023 Diag: Wes Davis

### NORMAL



Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. 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

### 23 Jan 2023 Diag: Wes Davis

### NORMAL



Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. 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**

(**H904544**) 2520

Component **Diesel Engine** 

PETRO CANADA DURON SHP 15W40 (10 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. Test for glycol is positive.

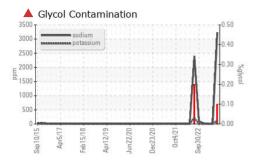
### Fluid Condition

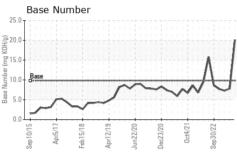
The oil is no longer serviceable.

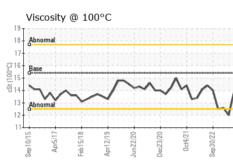
Sample Number Client Info GFL0099757 GFL0073303 GFL0073272	•						
Sample Date	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Machine Age   hrs   Client Info   600	Sample Number		Client Info		GFL0099757	GFL0073303	GFL0073272
Oil Age         hrs         Client Info         600         600         600         600           Oil Changed         Client Info         Changed         Changed <td>Sample Date</td> <td></td> <td>Client Info</td> <td></td> <th>27 Feb 2024</th> <td>20 Jun 2023</td> <td>19 May 2023</td>	Sample Date		Client Info		27 Feb 2024	20 Jun 2023	19 May 2023
Contact	Machine Age	hrs	Client Info		600	600	600
SEVERE   NORMAL   NORMAL	Oil Age	hrs	Client Info		600	600	600
SEVERE   NORMAL   NORMAL	Oil Changed		Client Info		Changed	Changed	Changed
Wear   Wc Method   So.   Value   NEG   N					_		_
Water         WC Method         >0.2         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >165         80         9         66           Chromium         ppm         ASTM D5185m         >5         2         <1         2           Nickel         ppm         ASTM D5185m         >4         <1         <1         0           Silver         ppm         ASTM D5185m         >2         <1         0         0           Aluminum         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >2         0         1         0         4           Lead         ppm         ASTM D5185m         >150         25         0         8           Copper         ppm         ASTM D5185m         >90         5         <1         0         2           Vanadium         ppm         ASTM D5185m         0         0         0         0           Calcium         ppm         ASTM D5185m         0         36	CONTAMINAT	TION	method	limit/base	current	history1	history2
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >16.5         80         9         66           Chromium         ppm         ASTM D5185m         >5         2         <1	Fuel		WC Method	>3.0	<1.0	0.9	<1.0
Iron	Water		WC Method	>0.2	NEG	NEG	NEG
Chromium         ppm         ASTM D5185m         >5         2         <1         2           Nickel         ppm         ASTM D5185m         >4         <1	WEAR METAL	_S	method	limit/base	current	history1	history2
Chromium         ppm         ASTM D5185m         >5         2         <1         2           Nickel         ppm         ASTM D5185m         >4         <1	Iron	maa	ASTM D5185m	>165	80	9	66
Nickel							
Titanium							
Silver							
Aluminum         ppm         ASTM D5185m         >20         11         0         4           Lead         ppm         ASTM D5185m         >150         25         0         8           Copper         ppm         ASTM D5185m         >90         5         <1         21           Tin         ppm         ASTM D5185m         >5         1         0         2           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         36         26         27           Boron         ppm         ASTM D5185m         0         36         26         27           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         0         0         0         0         0           Manganese         ppm         ASTM D5185m         0         2         <1         1           Magnesium         ppm         ASTM D5185m         1010         755         738         729           Zinc         ppm         ASTM D5185m         1070         1082							
Lead         ppm         ASTM D5185m         >150         25         0         8           Copper         ppm         ASTM D5185m         >90         5         <1         21           Tin         ppm         ASTM D5185m         >5         1         0         2           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         36         26         27           Boron         ppm         ASTM D5185m         0         36         26         27           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         0         0         0         0           Manganese         ppm         ASTM D5185m         0         2         <1         1           Magnesium         ppm         ASTM D5185m         1010         755         738         729           Calcium         ppm         ASTM D5185m         1070         1082         1221         1344           Phosphorus         ppm         ASTM D5185m         1270         955         <							
Copper         ppm         ASTM D5185m         >90         5         <1         21           Tin         ppm         ASTM D5185m         >5         1         0         2           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         36         26         27           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         0         2         <1							
Tin							
Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         <1         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         36         26         27           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         60         186         108         79           Manganese         ppm         ASTM D5185m         0         2         <1         1           Magnesium         ppm         ASTM D5185m         1010         755         738         729           Calcium         ppm         ASTM D5185m         1070         1082         1221         1344           Phosphorus         ppm         ASTM D5185m         1150         798         923         976           Zinc         ppm         ASTM D5185m         1270         955         1112         1200           Sulfur         ppm         ASTM D5185m         2060         2764         3264							
Cadmium         ppm         ASTM D5185m         <1         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         36         26         27           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         60         186         108         79           Manganese         ppm         ASTM D5185m         0         2         <1				>5			
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         36         26         27           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         0         2         <1							
Boron		ррпп	ASTIVI DSTOSIII		<1	0	0
Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         60         186         108         79           Manganese         ppm         ASTM D5185m         0         2         <1         1           Magnesium         ppm         ASTM D5185m         1010         755         738         729           Calcium         ppm         ASTM D5185m         1070         1082         1221         1344           Phosphorus         ppm         ASTM D5185m         1150         798         923         976           Zinc         ppm         ASTM D5185m         1270         955         1112         1200           Sulfur         ppm         ASTM D5185m         2060         2764         3264         3752           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >35         81         3         9           Sodium         ppm         ASTM D5185m         >20         110         2         2           Glycol         "ASTM D5185m         >20 <th></th> <th></th> <th></th> <th>12 24 //</th> <th></th> <th></th> <th>hiotonya</th>				12 24 //			hiotonya
Molybdenum         ppm         ASTM D5185m         60         186         108         79           Manganese         ppm         ASTM D5185m         0         2         <1         1           Magnesium         ppm         ASTM D5185m         1010         755         738         729           Calcium         ppm         ASTM D5185m         1070         1082         1221         1344           Phosphorus         ppm         ASTM D5185m         1150         798         923         976           Zinc         ppm         ASTM D5185m         1270         955         1112         1200           Sulfur         ppm         ASTM D5185m         2060         2764         3264         3752           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >35         81         3         9           Sodium         ppm         ASTM D5185m         >20         110         2         2           Glycol         %         *ASTM D5185m         >20         110         NEG         NEG           INFRA-RED         method         limit/base	ADDITIVES		method	limit/base	current	nistory i	HISTOLÄ
Manganese         ppm         ASTM D5185m         0         2         <1         1           Magnesium         ppm         ASTM D5185m         1010         755         738         729           Calcium         ppm         ASTM D5185m         1070         1082         1221         1344           Phosphorus         ppm         ASTM D5185m         1150         798         923         976           Zinc         ppm         ASTM D5185m         1270         955         1112         1200           Sulfur         ppm         ASTM D5185m         2060         2764         3264         3752           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >35         81         3         9           Sodium         ppm         ASTM D5185m         >20         110         2         2           Glycol         *ASTM D5185m         >20         110         2         2           Glycol         *ASTM D5185m         >20         110         NEG         NEG           INFRA-RED         method         limit/base         current         history		ppm			36	26	•
Magnesium         ppm         ASTM D5185m         1010         755         738         729           Calcium         ppm         ASTM D5185m         1070         1082         1221         1344           Phosphorus         ppm         ASTM D5185m         1150         798         923         976           Zinc         ppm         ASTM D5185m         1270         955         1112         1200           Sulfur         ppm         ASTM D5185m         2060         2764         3264         3752           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >35         81         3         9           Sodium         ppm         ASTM D5185m         >20         110         2         2           Glycol         %         *ASTM D5185m         >20         110         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >7.5         0.5         0.6         0.7           Nitration         Abs/cm         *AST	Boron		ASTM D5185m	0	36	26	27
Calcium         ppm         ASTM D5185m         1070         1082         1221         1344           Phosphorus         ppm         ASTM D5185m         1150         798         923         976           Zinc         ppm         ASTM D5185m         1270         955         1112         1200           Sulfur         ppm         ASTM D5185m         2060         2764         3264         3752           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >35         81         3         9           Sodium         ppm         ASTM D5185m         >35         81         3         9           Sodium         ppm         ASTM D5185m         >20         110         2         2           Glycol         "ASTM D5185m         >20         110         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         "ASTM D7844         >7.5         0.5         0.6         0.7           Nitration         Abs/cm         "ASTM D7415         >30         24.6	Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	36 0	26 0	27 0
Phosphorus         ppm         ASTM D5185m         1150         798         923         976           Zinc         ppm         ASTM D5185m         1270         955         1112         1200           Sulfur         ppm         ASTM D5185m         2060         2764         3264         3752           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >35         81         3         9           Sodium         ppm         ASTM D5185m         >3231         0         6           Potassium         ppm         ASTM D5185m         >20         110         2         2           Glycol         %         *ASTM D5185m         >20         110         2         2           Glycol         %         *ASTM D2982          0.10         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         17.7         7.7         9.3           Sulfation         Abs/.1mm         *ASTM D7415         >30	Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	36 0 186	26 0 108	27 0 79
Zinc         ppm         ASTM D5185m         1270         955         1112         1200           Sulfur         ppm         ASTM D5185m         2060         2764         3264         3752           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >35         81         3         9           Sodium         ppm         ASTM D5185m         >3231         0         6           Potassium         ppm         ASTM D5185m         >20         110         2         2           Glycol         %         *ASTM D5185m         >20         110         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >7.5         0.5         0.6         0.7           Nitration         Abs/cm         *ASTM D7624         >20         17.7         7.7         9.3           Sulfation         Abs/.1mm         *ASTM D7415         >30         24.6         18.8         20.8           FLUID DEGRADATION         *ASTM D7414	Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	36 0 186 2	26 0 108 <1	27 0 79
Sulfur         ppm         ASTM D5185m         2060         2764         3264         3752           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >35         81         3         9           Sodium         ppm         ASTM D5185m         >3231         0         6           Potassium         ppm         ASTM D5185m         >20         110         2         2           Glycol         %         *ASTM D2982         ▲ 0.10         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >7.5         0.5         0.6         0.7           Nitration         Abs/cm         *ASTM D7624         >20         17.7         7.7         9.3           Sulfation         Abs/.1mm         *ASTM D7415         >30         24.6         18.8         20.8           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	36 0 186 2 755	26 0 108 <1 738	27 0 79 1 729
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >35         81         3         9           Sodium         ppm         ASTM D5185m         >3231         0         6           Potassium         ppm         ASTM D5185m         >20         110         2         2           Glycol         %         *ASTM D2982         ▲ 0.10         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >7.5         0.5         0.6         0.7           Nitration         Abs/cm         *ASTM D7624         >20         17.7         7.7         9.3           Sulfation         Abs/.1mm         *ASTM D7415         >30         24.6         18.8         20.8           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.3         13.0         16.0	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	36 0 186 2 755 1082	26 0 108 <1 738 1221	27 0 79 1 729 1344
Silicon         ppm         ASTM D5185m         >35         81         3         9           Sodium         ppm         ASTM D5185m         >3231         0         6           Potassium         ppm         ASTM D5185m         >20         110         2         2           Glycol         %         *ASTM D2982         ▲ 0.10         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >7.5         0.5         0.6         0.7           Nitration         Abs/cm         *ASTM D7624         >20         17.7         7.7         9.3           Sulfation         Abs/.1mm         *ASTM D7415         >30         24.6         18.8         20.8           FLUID DEGRADATION method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.3         13.0         16.0	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	36 0 186 2 755 1082 798	26 0 108 <1 738 1221 923	27 0 79 1 729 1344 976
Sodium         ppm         ASTM D5185m         ▲ 3231         0         6           Potassium         ppm         ASTM D5185m         >20         ▲ 110         2         2           Glycol         %         *ASTM D2982         ▲ 0.10         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >7.5         0.5         0.6         0.7           Nitration         Abs/cm         *ASTM D7624         >20         17.7         7.7         9.3           Sulfation         Abs/.1mm         *ASTM D7415         >30         24.6         18.8         20.8           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.3         13.0         16.0	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	36 0 186 2 755 1082 798	26 0 108 <1 738 1221 923 1112	27 0 79 1 729 1344 976 1200
Potassium         ppm         ASTM D5185m         >20         ▲ 110         2         2           Glycol         %         *ASTM D2982         ▲ 0.10         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >7.5         0.5         0.6         0.7           Nitration         Abs/cm         *ASTM D7624         >20         17.7         7.7         9.3           Sulfation         Abs/.1mm         *ASTM D7415         >30         24.6         18.8         20.8           FLUID DEGRADATION method limit/base current history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.3         13.0         16.0	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	36 0 186 2 755 1082 798 955 2764	26 0 108 <1 738 1221 923 1112 3264	27 0 79 1 729 1344 976 1200 3752
Soot %	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	36 0 186 2 755 1082 798 955 2764 current	26 0 108 <1 738 1221 923 1112 3264 history1	27 0 79 1 729 1344 976 1200 3752 history2
INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >7.5         0.5         0.6         0.7           Nitration         Abs/cm         *ASTM D7624         >20         17.7         7.7         9.3           Sulfation         Abs/.1mm         *ASTM D7415         >30         24.6         18.8         20.8           FLUID DEGRADATION method limit/base current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.3         13.0         16.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	36 0 186 2 755 1082 798 955 2764 current	26 0 108 <1 738 1221 923 1112 3264 history1	27 0 79 1 729 1344 976 1200 3752 history2
Soot %         %         *ASTM D7844 > 7.5         0.5         0.6         0.7           Nitration         Abs/cm         *ASTM D7624 > 20         17.7         7.7         9.3           Sulfation         Abs/.1mm         *ASTM D7415 > 30         24.6         18.8         20.8           FLUID DEGRADATION method limit/base current history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 > 25         19.3         13.0         16.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	36 0 186 2 755 1082 798 955 2764 current 81 ▲ 3231	26 0 108 <1 738 1221 923 1112 3264 history1 3	27 0 79 1 729 1344 976 1200 3752 history2
Nitration         Abs/cm         *ASTM D7624         >20         17.7         7.7         9.3           Sulfation         Abs/.1mm         *ASTM D7415         >30         24.6         18.8         20.8           FLUID DEGRADATION method limit/base current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.3         13.0         16.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	36 0 186 2 755 1082 798 955 2764 current 81 ▲ 3231 ▲ 110	26 0 108 <1 738 1221 923 1112 3264 history1 3 0 2	27 0 79 1 729 1344 976 1200 3752 history2 9
Sulfation         Abs/.1mm         *ASTM D7415         >30         24.6         18.8         20.8           FLUID DEGRADATION method limit/base current history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.3         13.0         16.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >35	36 0 186 2 755 1082 798 955 2764 current 81 ▲ 3231 ▲ 110 ▲ 0.10	26 0 108 <1 738 1221 923 1112 3264 history1 3 0 2 NEG	27 0 79 1 729 1344 976 1200 3752 history2 9 6 2 NEG
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.3 13.0 16.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED	ppm	ASTM D5185m *ASTM D2982	0 0 60 0 1010 1070 1150 1270 2060 limit/base >35	36 0 186 2 755 1082 798 955 2764 current 81 ▲ 3231 ▲ 110 ▲ 0.10	26 0 108 <1 738 1221 923 1112 3264 history1 3 0 2 NEG history1	27 0 79 1 729 1344 976 1200 3752 history2 9 6 2 NEG
Oxidation Abs/.1mm *ASTM D7414 >25 <b>19.3</b> 13.0 16.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN 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 >35 >20	36 0 186 2 755 1082 798 955 2764 current 81 ▲ 3231 ▲ 110 ▲ 0.10 current 0.5	26 0 108 <1 738 1221 923 1112 3264 history1 3 0 2 NEG history1 0.6	27 0 79 1 729 1344 976 1200 3752 history2 9 6 2 NEG history2
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm	ASTM D5185m *ASTM D5185m *ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7844	0 0 60 0 1010 1150 1270 2060 limit/base >35 >20 limit/base	36 0 186 2 755 1082 798 955 2764 current 81 ▲ 3231 ▲ 110 ▲ 0.10 current 0.5 17.7	26 0 108 <1 738 1221 923 1112 3264 history1 3 0 2 NEG history1 0.6 7.7	27 0 79 1 729 1344 976 1200 3752 history2 9 6 2 NEG history2
Base Number (BN) mg KOH/g ASTM D2896 9.8 <b>20.1</b> 7.8 7.3	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7624	0 0 0 0 1010 1070 1150 1270 2060 limit/base >35 >20 limit/base >7.5 >20 >30	36 0 186 2 755 1082 798 955 2764  current 81  ▲ 3231  ▲ 110	26 0 108 <1 738 1221 923 1112 3264 history1 3 0 2 NEG history1 0.6 7.7 18.8	27 0 79 1 729 1344 976 1200 3752 history2 9 6 2 NEG history2 0.7 9.3 20.8
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation FLUID DEGRA	ppm	ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D2982  method  *ASTM D7844 *ASTM D7624 *ASTM D7415  method	0 0 0 1010 1070 1150 1270 2060 limit/base >35 >20 limit/base >7.5 >20 >30 limit/base	36 0 186 2 755 1082 798 955 2764	26 0 108 <1 738 1221 923 1112 3264 history1 3 0 2 NEG history1 0.6 7.7 18.8 history1	27 0 79 1 729 1344 976 1200 3752 history2 9 6 2 NEG history2 0.7 9.3 20.8



## **OIL ANALYSIS REPORT**



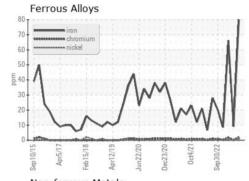


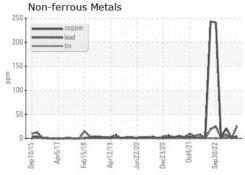


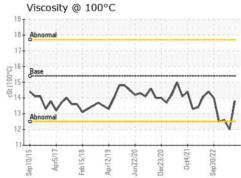
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

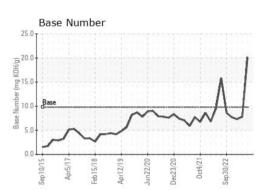
FLUID PROPE	ERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	12.0	12.6

### **GRAPHS**













Laboratory Sample No. Lab Number : 06104031 Unique Number : 10902261

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0099757

Received **Tested** 

: 01 Mar 2024 Diagnosed Test Package: FLEET (Additional Tests: Glycol)

: 02 Mar 2024 - Don Baldridge

: 29 Feb 2024

GFL Environmental - 102 - Morristown TN

415 Ryder Lane, PO Box 1894 Morristown, TN US 37813

Contact: Ricky Dunlap ricky.dunlap@gflenv.com T: (800)207-6618

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)