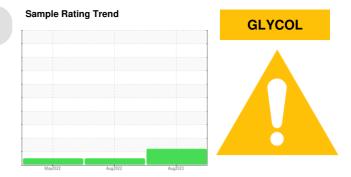


## **PROBLEM SUMMARY**

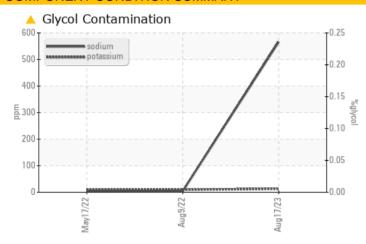


**Diesel Engine** 

PETRO CANADA DURON SHP 15W40 (36 QTS)



#### **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				ABNORMAL	NORMAL	NORMAL	
Sodium	ppm	ASTM D5185m		<b>^</b> 566	4	5	

Customer Id: GFL410 Sample No.: GFL0084865 Lab Number: 05929184 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

TILOOMINILINDLE	AOTIONS			
Action	Status	Date	Done By	Description
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

09 Aug 2022 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.



#### 17 May 2022 Diag: Jonathan Hester



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.





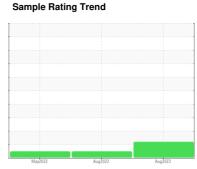
# **OIL ANALYSIS REPORT**



{UNASSIGNED} 4577M Component

**Diesel Engine** 

PETRO CANADA DURON SHP 15W40 (36 QTS)





#### **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.

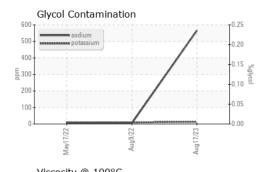
#### Fluid Condition

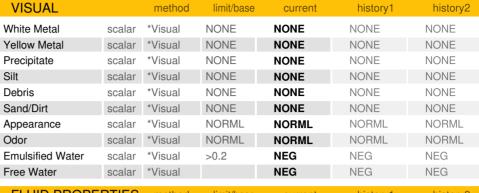
The BN result indicates that there is suitable alkalinity remaining in the oil.

Sample Date         Client Info         17 Aug 2023         09 Aug 2022         17 May 2022           Machine Age         hrs         Client Info         191316         191316         18427           Oil Age         hrs         Client Info         191316         191316         18427           Oil Changed         Client Info         Changed         N/A         N/A           Sample Status         ABNORMAL         NORMAL         NORMAL           CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >3.0         <1.0         <1.0         <1.0           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >75         74         34         21           Chromium         ppm         ASTM D5185m         >5         3         2         1           Nickel         ppm         ASTM D5185m         >2         <1         0         0           Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m </th <th></th> <th></th> <th></th> <th>2022</th> <th>Aug2022 Aug20</th> <th>23</th> <th></th>				2022	Aug2022 Aug20	23	
Sample Date         Client Info         17 Aug 2023         09 Aug 2022         17 May 2022           Machine Age         hrs         Client Info         191316         191316         18427           Oil Age         hrs         Client Info         191316         191316         18427           Oil Changed         Client Info         Changed         N/A         N/A           Sample Status         ABNORMAL         NORMAL         NORMAL           CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >3.0         <1.0         <1.0         <1.0           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >5         3         2         1           Nickel         ppm         ASTM D5185m         >5         3         2         1           Nickel         ppm         ASTM D5185m         >2         <1         0         0           Alluminum         ppm         ASTM D5185m         >2         <1         0         0           Lead         ppm         ASTM D5185m	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age         hrs         Client Info         191316         191316         18427           Oil Age         hrs         Client Info         191316         191316         18427           Oil Changed         Client Info         Changed         N/A         N/A           Sample Status         Image: Control of Changed         N/A         N/A           CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >3.0         <1.0	Sample Number		Client Info		GFL0084865	GFL0052089	GFL0052140
Oil Age         hrs         Client Info         191316         191316         18427           Oil Changed         Client Info         Changed         N/A         N/A         N/A           Sample Status         ABNORMAL         NORMAL         NORMAL           CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >3.0         <1.0         <1.0         <1.0           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >75         74         34         21           Chromium         ppm         ASTM D5185m         >5         3         2         1           Nikel         ppm         ASTM D5185m         >2         <1	Sample Date		Client Info		17 Aug 2023	09 Aug 2022	17 May 2022
Client Info   Changed   N/A   N/A   N/A   N/A   ABNORMAL   NORMAL   NORMAL   NORMAL   NORMAL	Machine Age	hrs	Client Info		191316	191316	18427
ABNORMAL   NORMAL   NORMAL   CONTAMINATION   method   limit/base   current   history1   history2	Oil Age	hrs	Client Info		191316	191316	18427
CONTAMINATION         method         limit/base         current         history1         history2           WEAR METALS         method         limit/base         current         history1         history2           Iron         ASTM D5185m         >75         74         34         21           Chromium         ppm         ASTM D5185m         >55         3         2         1           Nickel         ppm         ASTM D5185m         >5         3         2         1           Nickel         ppm         ASTM D5185m         >2         0         0         0           Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >2         0         1         1         1           Aluminum         ppm         ASTM D5185m         >2         0         1         1         1         1           Lead         ppm         ASTM D5185m         >2         0         1         1         1         1         1         1         1         1         1         1 <td>Oil Changed</td> <td></td> <td>Client Info</td> <td></td> <th>Changed</th> <td>N/A</td> <td>N/A</td>	Oil Changed		Client Info		Changed	N/A	N/A
WEAR METALS	Sample Status				ABNORMAL	NORMAL	NORMAL
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM DS185m         >75         74         34         21           Chromium         ppm         ASTM DS185m         >5         3         2         1           Nickel         ppm         ASTM DS185m         >4         2         0         0           Titanium         ppm         ASTM DS185m         >2         <1	CONTAMINATION	NC	method	limit/base	current	history1	history2
Iron	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Chromium         ppm         ASTM D5185m         >5         3         2         1           Nickel         ppm         ASTM D5185m         >4         2         0         <1	WEAR METALS	)	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>75	74	34	21
Titanium         ppm         ASTM D5185m         >2         <1         0         0           Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >15         9         7         5           Lead         ppm         ASTM D5185m         >25         0         <1         <1           Copper         ppm         ASTM D5185m         >100         2         <1         <1           Vanadium         ppm         ASTM D5185m         0         0         <1         <1           Vanadium         ppm         ASTM D5185m         0         0         <1         <1           Vanadium         ppm         ASTM D5185m         0         0         0         <1         <1         <1            Vanadium         ppm         ASTM D5185m         0         12         2         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1	Chromium	ppm	ASTM D5185m	>5	3	2	1
Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >15         9         7         5           Lead         ppm         ASTM D5185m         >25         0         <1         <1           Copper         ppm         ASTM D5185m         >100         2         <1         <1           Tin         ppm         ASTM D5185m         >4         <1         <1         <1           Vanadium         ppm         ASTM D5185m         <1         0         <1         <1           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         12         2         4           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         12         2         4           Boron         ppm         ASTM D5185m         0         <1         <1	Nickel	ppm	ASTM D5185m	>4	2	0	<1
Aluminum         ppm         ASTM D5185m         >15         9         7         5           Lead         ppm         ASTM D5185m         >25         0         <1	Titanium	ppm	ASTM D5185m	>2	<1	0	0
Lead         ppm         ASTM D5185m         >25         0         <1         <1           Copper         ppm         ASTM D5185m         >100         2         <1         <1           Tin         ppm         ASTM D5185m         >4         <1         <1         <1           Vanadium         ppm         ASTM D5185m         <4         <1         0         <1           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         12         2         4           Barium         ppm         ASTM D5185m         0         0         2         0           Molybdenum         ppm         ASTM D5185m         0         0         2         4           Barium         ppm         ASTM D5185m         0         <1         <1         <1         <1           Magnesium         ppm         ASTM D5185m         100         <1         1030         875         971           Calcium         ppm         ASTM D5185m         1270		ppm	ASTM D5185m	>2	0	0	0
Copper         ppm         ASTM D5185m         >100         2         <1         <1           Tin         ppm         ASTM D5185m         >4         <1	Aluminum	ppm	ASTM D5185m	>15	9	7	5
Tin         ppm         ASTM D5185m         >4         <1         <1         <1           Vanadium         ppm         ASTM D5185m         O         0         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1 <t< td=""><td>Lead</td><td>ppm</td><td>ASTM D5185m</td><td>&gt;25</td><th>0</th><td>&lt;1</td><td>&lt;1</td></t<>	Lead	ppm	ASTM D5185m	>25	0	<1	<1
Vanadium         ppm         ASTM D5185m         <1         0         <1           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         12         2         4           Barium         ppm         ASTM D5185m         0         0         2         0           Molybdenum         ppm         ASTM D5185m         0         <1         <1         <1           Manganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         1010         1030         875         971           Calcium         ppm         ASTM D5185m         1070         1194         1032         1137           Phosphorus         ppm         ASTM D5185m         1270         1326         1221         1358           Sulfur         ppm         ASTM D5185m         2060         3548         2864         2757           CONTAMINANTS         method         limit/base         current         history1	Copper	ppm	ASTM D5185m	>100	2	<1	<1
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         12         2         4           Barium         ppm         ASTM D5185m         0         0         2         0           Molybdenum         ppm         ASTM D5185m         60         83         58         60           Manganese         ppm         ASTM D5185m         0         <1	Tin	ppm	ASTM D5185m	>4	<1	<1	<1
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         12         2         4           Barium         ppm         ASTM D5185m         0         0         2         0           Molybdenum         ppm         ASTM D5185m         0         <1	Vanadium	ppm	ASTM D5185m		<1	0	<1
Boron         ppm         ASTM D5185m         0         12         2         4           Barium         ppm         ASTM D5185m         0         0         2         0           Molybdenum         ppm         ASTM D5185m         60         83         58         60           Manganese         ppm         ASTM D5185m         10 10         1030         875         971           Calcium         ppm         ASTM D5185m         1070         1194         1032         1137           Phosphorus         ppm         ASTM D5185m         1070         1194         1032         1137           Phosphorus         ppm         ASTM D5185m         1270         1326         1221         1358           Sulfur         ppm         ASTM D5185m         2060         3548         2864         2757           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         21         9         5           Sodium         ppm         ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D5185m	Cadmium	ppm	ASTM D5185m		0	0	0
Barium         ppm         ASTM D5185m         0         0         2         0           Molybdenum         ppm         ASTM D5185m         60         83         58         60           Manganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         1010         1030         875         971           Calcium         ppm         ASTM D5185m         1070         1194         1032         1137           Phosphorus         ppm         ASTM D5185m         1070         1194         1032         1137           Phosphorus         ppm         ASTM D5185m         1270         1326         1221         1358           Sulfur         ppm         ASTM D5185m         2060         3548         2864         2757           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         21         9         5           Sodium         ppm         ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D5185m	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         60         83         58         60           Manganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         1010         1030         875         971           Calcium         ppm         ASTM D5185m         1070         1194         1032         1137           Phosphorus         ppm         ASTM D5185m         1270         1326         1221         1358           Zinc         ppm         ASTM D5185m         2060         3548         2864         2757           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         21         9         5           Sodium         ppm         ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D5185m         >20<	Boron	ppm	ASTM D5185m	0	12	2	4
Manganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         1010         1030         875         971           Calcium         ppm         ASTM D5185m         1070         1194         1032         1137           Phosphorus         ppm         ASTM D5185m         1150         1078         1007         1087           Zinc         ppm         ASTM D5185m         1270         1326         1221         1358           Sulfur         ppm         ASTM D5185m         2060         3548         2864         2757           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         21         9         5           Sodium         ppm         ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D5185m	Barium	ppm	ASTM D5185m	0	0	2	0
Magnesium         ppm         ASTM D5185m         1010         1030         875         971           Calcium         ppm         ASTM D5185m         1070         1194         1032         1137           Phosphorus         ppm         ASTM D5185m         1150         1078         1007         1087           Zinc         ppm         ASTM D5185m         1270         1326         1221         1358           Sulfur         ppm         ASTM D5185m         2060         3548         2864         2757           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         21         9         5           Sodium         ppm         ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D5484	Molybdenum	ppm			83	58	60
Calcium         ppm         ASTM D5185m         1070         1194         1032         1137           Phosphorus         ppm         ASTM D5185m         1150         1078         1007         1087           Zinc         ppm         ASTM D5185m         1270         1326         1221         1358           Sulfur         ppm         ASTM D5185m         2060         3548         2864         2757           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         21         9         5           Sodium         ppm         ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D2982         NEG         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         11.6         9.0         9.5           Sulfation         Abs/:nmm         *ASTM D7415         >30	Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Phosphorus         ppm         ASTM D5185m         1150         1078         1007         1087           Zinc         ppm         ASTM D5185m         1270         1326         1221         1358           Sulfur         ppm         ASTM D5185m         2060         3548         2864         2757           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         21         9         5           Sodium         ppm         ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D2982         NEG         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >6         0.7         0.2         0.5           Nitration         Abs/:mm         *ASTM D7415         >30	Magnesium	ppm	ASTM D5185m	1010	1030	875	971
Zinc         ppm         ASTM D5185m         1270         1326         1221         1358           Sulfur         ppm         ASTM D5185m         2060         3548         2864         2757           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         21         9         5           Sodium         ppm         ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D2982         NEG         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >6         0.7         0.2         0.5           Nitration         Abs/cm         *ASTM D7624         >20         11.6         9.0         9.5           Sulfation         Abs/.1mm         *ASTM D7415         >30         21.6         21.3         20.4           FLUID DEGRADATION         *ASTM D7414         >25         18.6 <td>Calcium</td> <td>ppm</td> <td>ASTM D5185m</td> <td>1070</td> <th>1194</th> <td>1032</td> <td>1137</td>	Calcium	ppm	ASTM D5185m	1070	1194	1032	1137
Sulfur         ppm         ASTM D5185m         2060         3548         2864         2757           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         21         9         5           Sodium         ppm         ASTM D5185m         >20         13         9         9           Potassium         ppm         ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D2982         NEG         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >6         0.7         0.2         0.5           Nitration         Abs/cm         *ASTM D7624         >20         11.6         9.0         9.5           Sulfation         Abs/.1mm         *ASTM D7415         >30         21.6         21.3         20.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25	Phosphorus	ppm	ASTM D5185m	1150		1007	1087
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         21         9         5           Sodium         ppm         ASTM D5185m         ▲ 566         4         5           Potassium         ppm         ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D2982         NEG         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >6         0.7         0.2         0.5           Nitration         Abs/cm         *ASTM D7624         >20         11.6         9.0         9.5           Sulfation         Abs/.1mm         *ASTM D7415         >30         21.6         21.3         20.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.6         18.2         17.5	-	ppm	ASTM D5185m	1270	1326	1221	1358
Silicon         ppm         ASTM D5185m         >25         21         9         5           Sodium         ppm         ASTM D5185m         ▲ 5666         4         5           Potassium         ppm         ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D2982         NEG         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >6         0.7         0.2         0.5           Nitration         Abs/cm         *ASTM D7624         >20         11.6         9.0         9.5           Sulfation         Abs/.1mm         *ASTM D7415         >30         21.6         21.3         20.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.6         18.2         17.5	Sulfur	ppm	ASTM D5185m	2060	3548	2864	2757
Sodium         ppm         ASTM D5185m         ▲ 566         4         5           Potassium         ppm         ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D2982         NEG         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >6         0.7         0.2         0.5           Nitration         Abs/cm         *ASTM D7624         >20         11.6         9.0         9.5           Sulfation         Abs/.1mm         *ASTM D7415         >30         21.6         21.3         20.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.6         18.2         17.5	CONTAMINANT	S	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         13         9         9           Glycol         %         *ASTM D2982         NEG         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >6         0.7         0.2         0.5           Nitration         Abs/cm         *ASTM D7624         >20         11.6         9.0         9.5           Sulfation         Abs/.1mm         *ASTM D7415         >30         21.6         21.3         20.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.6         18.2         17.5		ppm				9	5
NEG   NEG	Sodium	ppm	ASTM D5185m		<u> </u>	4	5
INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >6         0.7         0.2         0.5           Nitration         Abs/cm         *ASTM D7624         >20         11.6         9.0         9.5           Sulfation         Abs/.1mm         *ASTM D7415         >30         21.6         21.3         20.4           FLUID DEGRADATION method limit/base current history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.6         18.2         17.5	Potassium	ppm	ASTM D5185m	>20	13	9	9
Soot %         %         *ASTM D7844 >6         0.7         0.2         0.5           Nitration         Abs/cm         *ASTM D7624 >20         11.6         9.0         9.5           Sulfation         Abs/.1mm         *ASTM D7415 >30         21.6         21.3         20.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 >25         18.6         18.2         17.5	Glycol	%	*ASTM D2982		NEG	NEG	NEG
Nitration         Abs/cm         *ASTM D7624         >20         11.6         9.0         9.5           Sulfation         Abs/.1mm         *ASTM D7415         >30         21.6         21.3         20.4           FLUID DEGRADATION method limit/base current history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.6         18.2         17.5	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         21.6         21.3         20.4           FLUID DEGRADATION method limit/base current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.6         18.2         17.5	Soot %	%	*ASTM D7844	>6	0.7	0.2	0.5
FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     18.6     18.2     17.5	Nitration	Abs/cm	*ASTM D7624	>20	11.6	9.0	9.5
Oxidation Abs/.1mm *ASTM D7414 >25 <b>18.6</b> 18.2 17.5	Sulfation	Abs/.1mm	*ASTM D7415	>30	21.6	21.3	20.4
	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 9.8 <b>8.5</b> 8.6 8.6	Oxidation	Abs/.1mm	*ASTM D7414	>25	18.6	18.2	17.5
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.5	8.6	8.6



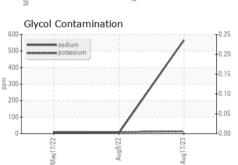
### **OIL ANALYSIS REPORT**





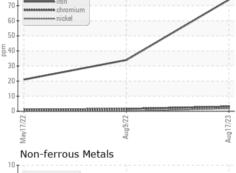
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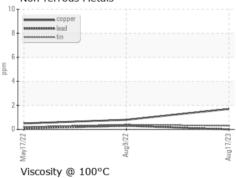
FLUID PROPI	ERTIES	method	limit/base	current	history1	history
Visc @ 100°C	cSt	ASTM D445	15.4	14.5	13.8	14.0

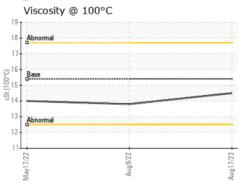


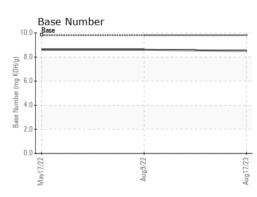
# Ferrous Alloys

**GRAPHS** 













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

: 10609131

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0084865 : 05929184

Received Diagnosed Diagnostician

: 21 Aug 2023 : 22 Aug 2023 : 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.

GFL Environmental - 410 - Michigan West

39000 Van Born Rd Wayne, MI US 48184

Contact: Belal Dgheish bdgheish@gflenv.com T: (734)714-2340

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)