

# **PROBLEM SUMMARY**

# Sample Rating Trend

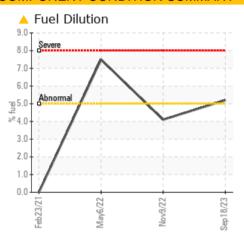
WEAR

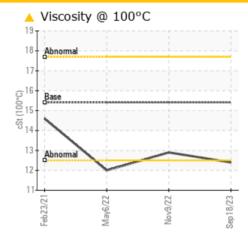
# 221010 - 204 can truck

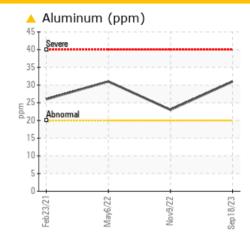
Component **Diesel Engine** 

PETRO CANADA DURON SHP 15W40 (9 QTS)

## **COMPONENT CONDITION SUMMARY**







### RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS								
Sample Status				ABNORMAL	MARGINAL	ABNORMAL		
Aluminum	ppm	ASTM D5185m	>20	<u></u> 31	23	31		
Fuel	%	ASTM D3524	>5	<b>▲</b> 5.2	<b>4.1</b>	<b>△</b> 7.5		
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.4</b>	12.9	<u>▲</u> 12.0		

Customer Id: GFL656 Sample No.: GFL0090923 Lab Number: 05958093 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data: Wes Davis +1 905-569-8600 x223 wesd@wearcheck.ca

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 from the component if this has not already been done.
Resample			?	We recommend an early resample to monitor this condition.

### HISTORICAL DIAGNOSIS

#### 09 Nov 2022 Diag: Angela Borella

FUEL



We advise that you check the fuel injection system. Resample at the next service interval to monitor. All component wear rates are normal. Light fuel dilution occurring. The BN result indicates that there is suitable alkalinity remaining in the oil.



#### 06 May 2022 Diag: Don Baldridge

FUEL



We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.



#### 23 Feb 2021 Diag: Don Baldridge

SOOT



Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is an abnormal amount of solids and carbon present 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**



**WEAR** 



# 221010 - 204 can truck

**Diesel Engine** 

PETRO CANADA DURON SHP 15W40 (9 QTS)

# **DIAGNOSIS**

#### Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

### Wear

Aluminum ppm levels are abnormal. Piston wear is indicated.

#### Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

#### ▲ Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION   method   limit/base   current   history1   history2	TS)		Feb 202	1 May2022	Nov2022 Si	mp2023	
Sample Date	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age         hrs         Client Info         10795         10755         10678           Oil Age         hrs         Client Info         88         100         297           Oil Changed         Client Info         Not Changed         N/A         Changed           Sample Status         Image: Client Info         Net Changed         N/A         ABNORMAL         ABNORMAL           CONTAMINATION         method         Image: Client Info         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         48         37         73           Chromium         ppm         ASTM D5185m         >20         <1	Sample Number		Client Info		GFL0090923	GFL0062015	GFL0048400
Oil Age         hrs         Client Info         Not Changd Name         Changed Changed Name         Changed Changed Name         Changed Name         Changed Name         Changed Name         Name         Changed Name         ABNORMAL         ABNORM	Sample Date		Client Info		18 Sep 2023	09 Nov 2022	06 May 2022
Oil Changed Sample Status         Client Info         Not Changed ABNORMAL ABNORMAL ABNORMAL ABNORMAL ABNORMAL ABNORMAL ABNORMAL ABNORMAL ABNORMAL CONTAMINATION         method         limit/base current         history1         history2           Glycol         WC Method         NEG         NEG         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         48         37         73           Chromium         ppm         ASTM D5185m         >20         <1         <1         <1           Nickel         ppm         ASTM D5185m         >20         <1         <1         <1           Nickel         ppm         ASTM D5185m         >20         <1         <1         <1           Nickel         ppm         ASTM D5185m         >20         <31         <23         <0           Alluminum         ppm         ASTM D5185m         >20         <31         <23         <3         <0           Caded         ppm         ASTM D5185m         >30         <2         <2         <5           Antimony         ppm         ASTM D5185m         0         0 </td <td>Machine Age</td> <td>hrs</td> <td>Client Info</td> <td></td> <th>10795</th> <td>10755</td> <td>10678</td>	Machine Age	hrs	Client Info		10795	10755	10678
CONTAMINATION         method         limit/base         current         history1         history2           Glycol         WC Method         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         48         37         73           Chromium         ppm         ASTM D5185m         >20         <1         <1         1           Nickel         ppm         ASTM D5185m         >4         <1         <1         <1           Titanium         ppm         ASTM D5185m         >3         0         3         0           Silver         ppm         ASTM D5185m         >3         0         3         0           Silver         ppm         ASTM D5185m         >30         0         3         0           Cadd         ppm         ASTM D5185m         >40         0         0         0           Copper         ppm         ASTM D5185m         >30         2         2         5           Tin         ppm         ASTM D5185m         >30         0         0         0         1	Oil Age	hrs	Client Info		89	100	297
CONTAMINATION         method         limit/base         current         history1         history2           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         48         37         73           Chromium         ppm         ASTM D5185m         >20         <1	Oil Changed		Client Info		Not Changd	N/A	Changed
Silycol   WC Method   Imili/base   Current   history1   history2	Sample Status				ABNORMAL	MARGINAL	ABNORMAL
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >10.0         48         37         73           Chromium         ppm         ASTM D5185m         >20         <1         <1         1           Nickel         ppm         ASTM D5185m         >4         <1         <1         <1           Titanium         ppm         ASTM D5185m         >3         0         3         0           Sliver         ppm         ASTM D5185m         >3         0         3         0           Aluminum         ppm         ASTM D5185m         >20         31         23         3           Lead         ppm         ASTM D5185m         >40         0         0         0           Copper         ppm         ASTM D5185m         >330         2         2         5           Tin         ppm         ASTM D5185m         15         <1         0         <1            Vanadium         ppm         ASTM D5185m         0         0         0         <1         <1         <1         <1         <1         <1         <1         <1 <th>CONTAMINAT</th> <th>ION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	CONTAMINAT	ION	method	limit/base	current	history1	history2
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium         ppm         ASTM D5185m         >20         <1         <1         1           Nickel         ppm         ASTM D5185m         >4         <1	WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel         ppm         ASTM D5185m         >4         <1         <1         <1           Titanium         ppm         ASTM D5185m         3         0         3         0           Silver         ppm         ASTM D5185m         >3         0         3         0           Aluminum         ppm         ASTM D5185m         >20         31         23         31           Lead         ppm         ASTM D5185m         >40         0         0         0           Copper         ppm         ASTM D5185m         >15         <1	Iron	ppm	ASTM D5185m	>100	48	37	73
Titanium	Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Silver         ppm         ASTM D5185m         >3         0         3         0           Aluminum         ppm         ASTM D5185m         >20         ▲ 31         23         31           Lead         ppm         ASTM D5185m         >40         0         0         0           Copper         ppm         ASTM D5185m         >330         2         2         5           Tin         ppm         ASTM D5185m         15         <1         0         <1           Antimony         ppm         ASTM D5185m         0         0         0         <1           Vanadium         ppm         ASTM D5185m         0         0         0         <1           Cadmium         ppm         ASTM D5185m         0         0         0         <1           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         20         14         18           Barium         ppm         ASTM D5185m         0         0         0         0           Mangaesium         ppm         ASTM D5185m         0         59         56         <	Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Aluminum         ppm         ASTM D5185m         >20         ▲ 31         23         31           Lead         ppm         ASTM D5185m         >40         0         0         0           Copper         ppm         ASTM D5185m         >330         2         2         5           Tin         ppm         ASTM D5185m         >15         <1	Titanium	ppm	ASTM D5185m		4	5	23
Lead         ppm         ASTM D5185m         >40         0         0         0           Copper         ppm         ASTM D5185m         >330         2         2         5           Tin         ppm         ASTM D5185m         >15         <1         0         <1           Antimony         ppm         ASTM D5185m         0         0         <1	Silver	ppm	ASTM D5185m	>3	0	3	0
Copper         ppm         ASTM D5185m         >330         2         2         5           Tin         ppm         ASTM D5185m              Antimony         ppm         ASTM D5185m         0         0         <1	Aluminum	ppm	ASTM D5185m	>20	<u>▲</u> 31	23	31
Tin         ppm         ASTM D5185m         >15         <1         0         <1           Antimony         ppm         ASTM D5185m              Vanadium         ppm         ASTM D5185m         0         0         <1           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         20         14         18           Barium         ppm         ASTM D5185m         0         0         0         0         0           Molybdenum         ppm         ASTM D5185m         0         <1         <1         <1         <1           Magnesium         ppm         ASTM D5185m         0         <1         <1         <1         <1         <1           Calcium         ppm         ASTM D5185m         1010         888         857         792           Calcium         ppm         ASTM D5185m         1070         1138         1116         1321           Phosphorus         ppm	Lead	ppm	ASTM D5185m	>40	0	0	0
Antimony         ppm         ASTM D5185m              Vanadium         ppm         ASTM D5185m         0         0         <1           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         20         14         18           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         0         59         56         44           Manganese         ppm         ASTM D5185m         1010         888         857         792           Calcium         ppm         ASTM D5185m         1070         1138         1116         1321           Phosphorus         ppm         ASTM D5185m         1270         1243         1227         1187           Sulfur         ppm         ASTM D5185m         2060         3742         3817         2833           CONTAMINANTS         method         limit/base         current         history1	Copper	ppm	ASTM D5185m	>330	2	2	5
Vanadium         ppm         ASTM D5185m         0         0         <1           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         20         14         18           Barium         ppm         ASTM D5185m         0         0         0         0         0           Molybdenum         ppm         ASTM D5185m         0         <1         <1         <1         <1           Manganese         ppm         ASTM D5185m         0         <1         <1         <1         <1           Magnesium         ppm         ASTM D5185m         1010         888         857         792           Calcium         ppm         ASTM D5185m         1070         1138         1116         1321           Phosphorus         ppm         ASTM D5185m         1270         1243         1227         1187           Sulfur         ppm         ASTM D5185m         2060         3742         3817         2833           CONTAMINANTS         method <t< td=""><td>Tin</td><td>ppm</td><td>ASTM D5185m</td><td>&gt;15</td><th>&lt;1</th><td>0</td><td>&lt;1</td></t<>	Tin	ppm	ASTM D5185m	>15	<1	0	<1
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         20         14         18           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         0         59         56         44           Manganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         1010         888         857         792           Calcium         ppm         ASTM D5185m         1070         1138         1116         1321           Phosphorus         ppm         ASTM D5185m         1270         1243         1227         1187           Sulfur         ppm         ASTM D5185m         2060         3742         3817         2833           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >225         7	Antimony	ppm	ASTM D5185m				
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         20         14         18           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         60         59         56         44           Manganese         ppm         ASTM D5185m         0         <1	Vanadium	ppm	ASTM D5185m		0	0	<1
Boron         ppm         ASTM D5185m         0         20         14         18           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         60         59         56         44           Manganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         1010         888         857         792           Calcium         ppm         ASTM D5185m         1070         1138         1116         1321           Phosphorus         ppm         ASTM D5185m         1150         1049         1005         1038           Zinc         ppm         ASTM D5185m         1270         1243         1227         1187           Sulfur         ppm         ASTM D5185m         >2060         3742         3817         2833           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         4         7           Sodium         ppm         ASTM D5185m <td>Cadmium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>0</th> <td>0</td> <td>0</td>	Cadmium	ppm	ASTM D5185m		0	0	0
Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         60         59         56         44           Manganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         1010         888         857         792           Calcium         ppm         ASTM D5185m         1070         1138         1116         1321           Phosphorus         ppm         ASTM D5185m         1150         1049         1005         1038           Zinc         ppm         ASTM D5185m         1270         1243         1227         1187           Sulfur         ppm         ASTM D5185m         2060         3742         3817         2833           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         4         7           Sodium         ppm         ASTM D5185m         >20         20         15         27           Fuel         %         ASTM D5185m	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         60         59         56         44           Manganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         1010         888         857         792           Calcium         ppm         ASTM D5185m         1070         1138         1116         1321           Phosphorus         ppm         ASTM D5185m         1150         1049         1005         1038           Zinc         ppm         ASTM D5185m         1270         1243         1227         1187           Sulfur         ppm         ASTM D5185m         2060         3742         3817         2833           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         4         7           Sodium         ppm         ASTM D5185m         >20         20         15         27           Fuel         %         ASTM D5185m         >20         20         15         27           Fuel         %         ASTM D5185m <td>Boron</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <th>20</th> <td>14</td> <td>18</td>	Boron	ppm	ASTM D5185m	0	20	14	18
Manganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         1010         888         857         792           Calcium         ppm         ASTM D5185m         1070         1138         1116         1321           Phosphorus         ppm         ASTM D5185m         1150         1049         1005         1038           Zinc         ppm         ASTM D5185m         1270         1243         1227         1187           Sulfur         ppm         ASTM D5185m         2060         3742         3817         2833           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         4         7           Sodium         ppm         ASTM D5185m         >20         20         15         27           Fuel         %         ASTM D3524         >5         5.2         4.1         7.5           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *A		ppm	ASTM D5185m	0	0	0	0
Magnesium         ppm         ASTM D5185m         1010         888         857         792           Calcium         ppm         ASTM D5185m         1070         1138         1116         1321           Phosphorus         ppm         ASTM D5185m         1150         1049         1005         1038           Zinc         ppm         ASTM D5185m         1270         1243         1227         1187           Sulfur         ppm         ASTM D5185m         2060         3742         3817         2833           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         4         7           Sodium         ppm         ASTM D5185m         >20         20         15         27           Fuel         %         ASTM D5185m         >20         20         15         27           Fuel         %         ASTM D3524         >5         5.2         4.1         7.5           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624	Molybdenum	ppm			59	56	44
Calcium         ppm         ASTM D5185m         1070         1138         1116         1321           Phosphorus         ppm         ASTM D5185m         1150         1049         1005         1038           Zinc         ppm         ASTM D5185m         1270         1243         1227         1187           Sulfur         ppm         ASTM D5185m         2060         3742         3817         2833           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         4         7           Sodium         ppm         ASTM D5185m         >20         20         15         27           Fuel         %         ASTM D3185m         >20         20         15         27           Fuel         %         ASTM D3524         >5         ▲ 5.2         ▲ 4.1         ▲ 7.5           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         9.1         8.7         13.0           Sulfation         Abs/.1mm         *ASTM D7	Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Phosphorus         ppm         ASTM D5185m         1150         1049         1005         1038           Zinc         ppm         ASTM D5185m         1270         1243         1227         1187           Sulfur         ppm         ASTM D5185m         2060         3742         3817         2833           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         4         7           Sodium         ppm         ASTM D5185m         >25         7         4         7           Sodium         ppm         ASTM D5185m         >20         20         15         27           Fuel         %         ASTM D3524         >5         5.2         4.1         7.5           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >3         0.2         0.9         1.7           Nitration         Abs/.1mm         *ASTM D7415         >30         22.2         20.7         24.3           FLUID DEGRADATION         method         lim	Magnesium	ppm	ASTM D5185m	1010	888	857	792
Zinc         ppm         ASTM D5185m         1270         1243         1227         1187           Sulfur         ppm         ASTM D5185m         2060         3742         3817         2833           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         4         7           Sodium         ppm         ASTM D5185m         >25         7         4         7           Sodium         ppm         ASTM D5185m         >20         20         15         27           Fuel         %         ASTM D3524         >5         ▲ 5.2         ▲ 4.1         ▲ 7.5           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         9.1         8.7         13.0           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2         20.7         24.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *AS	Calcium	ppm	ASTM D5185m	1070	1138	1116	1321
Sulfur         ppm         ASTM D5185m         2060         3742         3817         2833           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         4         7           Sodium         ppm         ASTM D5185m         >20         13         10         18           Potassium         ppm         ASTM D5185m         >20         20         15         27           Fuel         %         ASTM D3524         >5         ▲ 5.2         ▲ 4.1         ▲ 7.5           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2         0.9         1.7           Nitration         Abs/.mm         *ASTM D7624         >20         9.1         8.7         13.0           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2         20.7         24.3           FLUID DEGRADATION method         limit/base         current         history1         history2           Oxidation         Abs/.1mm <t< td=""><td>Phosphorus</td><td>ppm</td><td></td><td></td><th></th><td></td><td></td></t<>	Phosphorus	ppm					
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         4         7           Sodium         ppm         ASTM D5185m         >20         20         15         27           Fuel         %         ASTM D3524         >5         ▲ 5.2         ▲ 4.1         ▲ 7.5           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2         0.9         1.7           Nitration         Abs/cm         *ASTM D7624         >20         9.1         8.7         13.0           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2         20.7         24.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.2         16.1         20.2	Zinc	ppm	ASTM D5185m	1270	1243	1227	1187
Silicon       ppm       ASTM D5185m       >25       7       4       7         Sodium       ppm       ASTM D5185m       13       10       18         Potassium       ppm       ASTM D5185m       >20       20       15       27         Fuel       %       ASTM D3524       >5       ▲ 5.2       ▲ 4.1       ▲ 7.5         INFRA-RED       method       limit/base       current       history1       history2         Soot %       %       *ASTM D7844       >3       0.2       0.9       1.7         Nitration       Abs/cm       *ASTM D7624       >20       9.1       8.7       13.0         Sulfation       Abs/.1mm       *ASTM D7415       >30       22.2       20.7       24.3         FLUID DEGRADATION       method       limit/base       current       history1       history2         Oxidation       Abs/.1mm       *ASTM D7414       >25       16.2       16.1       20.2	Sulfur	ppm	ASTM D5185m	2060	3742	3817	2833
Sodium         ppm         ASTM D5185m         13         10         18           Potassium         ppm         ASTM D5185m         >20         20         15         27           Fuel         %         ASTM D3524         >5         ▲ 5.2         ▲ 4.1         ▲ 7.5           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2         0.9         1.7           Nitration         Abs/cm         *ASTM D7624         >20         9.1         8.7         13.0           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2         20.7         24.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.2         16.1         20.2	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         20         15         27           Fuel         %         ASTM D3524         >5         ▲ 5.2         ▲ 4.1         ▲ 7.5           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2         0.9         1.7           Nitration         Abs/cm         *ASTM D7624         >20         9.1         8.7         13.0           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2         20.7         24.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.2         16.1         20.2	Silicon	ppm	ASTM D5185m	>25	7	4	7
Fuel         %         ASTM D3524         >5         ▲ 5.2         ▲ 4.1         ▲ 7.5           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2         0.9         1.7           Nitration         Abs/cm         *ASTM D7624         >20         9.1         8.7         13.0           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2         20.7         24.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.2         16.1         20.2	Sodium	ppm	ASTM D5185m		13	10	18
INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2         0.9         1.7           Nitration         Abs/cm         *ASTM D7624         >20         9.1         8.7         13.0           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2         20.7         24.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.2         16.1         20.2	Potassium	ppm	ASTM D5185m	>20	20	15	27
Soot %         %         *ASTM D7844 >3         0.2         0.9         1.7           Nitration         Abs/cm         *ASTM D7624 >20         9.1         8.7         13.0           Sulfation         Abs/.1mm         *ASTM D7415 >30         22.2         20.7         24.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 >25         16.2         16.1         20.2	Fuel	%	ASTM D3524	>5	<u>▲</u> 5.2	<b>▲</b> 4.1	<b>△</b> 7.5
Nitration         Abs/cm         *ASTM D7624         >20         9.1         8.7         13.0           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2         20.7         24.3           FLUID DEGRADATION method limit/base current history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.2         16.1         20.2	INFRA-RED		method	limit/base	current	history1	history2
Nitration         Abs/cm         *ASTM D7624         >20         9.1         8.7         13.0           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2         20.7         24.3           FLUID DEGRADATION method limit/base current history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.2         16.1         20.2	Soot %	%	*ASTM D7844	>3	0.2	0.9	1.7
Sulfation         Abs/.1mm         *ASTM D7415 >30         22.2         20.7         24.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 >25         16.2         16.1         20.2	Nitration	Abs/cm	*ASTM D7624	>20			13.0
Oxidation Abs/.1mm *ASTM D7414 >25 <b>16.2</b> 16.1 20.2	Sulfation	Abs/.1mm	*ASTM D7415	>30		20.7	24.3
	FLUID DEGRAI	DATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.2	16.1	20.2



# **OIL ANALYSIS REPORT**







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

: 05958093

: GFL0090923 : 10659306

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 21 Sep 2023 Diagnosed

: 25 Sep 2023 Diagnostician : Wes Davis

Test Package : FLEET ( Additional Tests: FuelDilution, PercentFuel ) To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

GFL Environmental - 656 - Culpeper Hauling

15490 Montanus Drive Culpeper, VA US 22701

Contact: Matt Hanna mhanna@gflenv.com T: (540)727-0887

Report Id: GFL656 [WUSCAR] 05958093 (Generated: 09/26/2023 13:58:24) Rev: 1