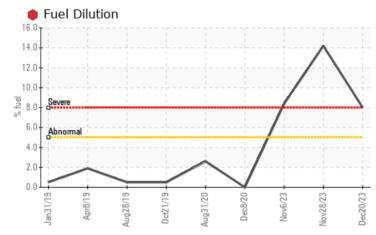


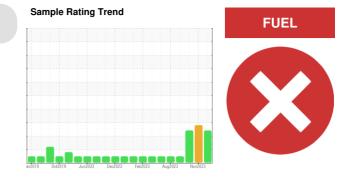
### **PROBLEM SUMMARY**

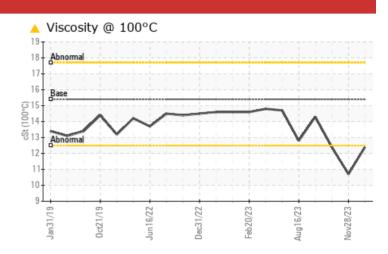
# Machine Id 727108-310052

Component Diesel Engine Fluid PETRO CANADA DURON SHP 15W40 (--- GAL)

### COMPONENT CONDITION SUMMARY







### RECOMMENDATION

We advise that you check the fuel injection system. 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				SEVERE	SEVERE	SEVERE	
Fuel	%	ASTM D3524	>5	<b>e</b> 8.0	14.2	8.4	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.4</b>	<b>1</b> 0.7	<b>1</b> 2.4	

Customer Id: GFL821 Sample No.: GFL0090340 Lab Number: 06042859 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

RECOMMENDEL	J 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.
Check Fuel/injector System			?	We advise that you check the fuel injection system.

### HISTORICAL DIAGNOSIS



FUEL

### 28 Nov 2023 Diag: Wes Davis

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. 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 due to the presence of contaminants.



view report

### 06 Nov 2023 Diag: Wes Davis

We advise that you check the fuel injection system. 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.All component wear rates are normal. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. 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 due to the presence of contaminants.





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





### **OIL ANALYSIS REPORT**

### Sample Rating Trend



## Machine Id 727108-310052

#### Component Diesel Engine

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

### DIAGNOSIS

### Recommendation

We advise that you check the fuel injection system. 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

All component wear rates are normal.

### Contamination

There is a high 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 due to the presence of contaminants.

Sample Number     Client Info     Q FL0090340     GFL0090340     GFL0090334     GFL0090333       Sample Date     Client Info     1875     1747     11563       Oil Age     hrs     Client Info     Not Changed     Changed     Not Changed       Oil Age     hrs     Client Info     Not Changed     Changed     Not Changed       CONTAMINATION     method     SeVERe     SeVERe     SeVERe     SeVERe       Quotation     VO Method     0.2     NEG     NEG     NEG       Water     WC Method     0.2     NEG     NEG     NEG       Vater     WC Method     0.2     NEG     NEG     NEG       Nickel     ppm     ASTM 05185m     2.0     0     0     -1       Nickel     ppm     ASTM 05185m     2.0     0     -1     1       Nickel     ppm     ASTM 05185m     2.0     0     -1     1       Nickel     ppm     ASTM 05185m     3.0     0     -1     1       Nickel	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Machine Age     hrs     Client Info     1875     1747     11563       Oil Age     hrs     Client Info     Not Changed     Severe     Severe       Sample Status     Image     Lient Info     Not Changed     Severe     Severe       CONTAMINATION     method     Imit/base     current     history1     History2       Water     WC Method     >0.2     NEG     NEG     NEG       Wetar     WC Method     >0.2     NEG     NEG     NEG       Wetar     WC Method     >5     <1     2.0     1     Netory2       Iron     ppm     ASTM 05155m     >20     0     0     <1     1       Iron     ppm     ASTM 05155m     >2     0     0     <1     2       Iron     ppm     ASTM 05155m     >30     0     <1     2     <1     2     <1     2     <1     2     <1     2     <1     2     <1     2     <1     2     <1     2     2	Sample Number		Client Info		GFL0090340	GFL0090334	GFL0090303
Oil Age     hrs     Client Info     150     600     150       Oil Changed     Client Info     Not Changed     SevERE     SeVERE     SeVERE       CONTAMINATION     method     Imit/base     current     history1     history2       Water     WC Method     >0.2     NEG     NEG     NEG       Glycol     WC Method     >0.2     NEG     NEG     NEG       Water     WC Method     >0.2     NEG     NEG     NEG       Uron     ppm     ASTM D5185n     >80     10     40     29       Chromium     ppm     ASTM D5185n     >5     <1     2     1       Nickel     ppm     ASTM D5185n     >30     0     <1     1       Itanium     ppm     ASTM D5185n     >30     0     <1     1       Qopper     ppm     ASTM D5185n     >30     0     <1     1       Tin     ppm     ASTM D5185n     >5     0     0     1     1 <td< th=""><th>Sample Date</th><th></th><th>Client Info</th><th></th><th>20 Dec 2023</th><th>28 Nov 2023</th><th>06 Nov 2023</th></td<>	Sample Date		Client Info		20 Dec 2023	28 Nov 2023	06 Nov 2023
Oil Changed Sample Status     Client Info     Not Changd SEVERE     Changed SEVERE     Not Changed SEVERE     Not Changed SEVERE       CONTAMINATION     method     Imit/base     current     history1     history2       Water     WC Method     >0.2     NEG     NEG     NEG     NEG       Water     WC Method     >0.2     NEG     NEG     NEG     NEG       WEAR METALS     method     Imit/base     current     history1     history2       Iron     ppm     ASTM D5185n     >5     <1	Machine Age	hrs	Client Info		1875	1747	11563
Sample Status     Init of the init/base     SEVERE     SEVERE     SEVERE     SEVERE       CONTAMINATION     method     imit/base     current     history1     history2       Water     WC Method     >0.2     NEG     NEG     NEG       Glycol     WC Method     >0.2     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >80     10     40     29       Chromium     ppm     ASTM D5185m     >20     0     <1     1       Nickel     ppm     ASTM D5185m     >30     0     <1     <1       Outminum     ppm     ASTM D5185m     >30     0     <1     <1       Cadmium     ppm     ASTM D5185m     >5     0     0     <1       Cadmium     ppm     ASTM D5185m     0     0     0     <1       Manganese     ppm     ASTM D5185m     0     0     0     2 </th <th>Oil Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>150</th> <th>600</th> <th>150</th>	Oil Age	hrs	Client Info		150	600	150
CONTAMINATION     method     limit/base     current     history1     history2       Water     WC Method     >0.2     NEG     NEG     NEG       Glycol     WC Method     So.2     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185n     >80     10     40     29       Chromium     ppm     ASTM D5185n     >2     0     0     <1       Nickel     ppm     ASTM D5185n     >30     0     0     <1       Silver     ppm     ASTM D5185n     >30     0     0     <1       Auminum     ppm     ASTM D5185n     >30     0     0     <1       Auminum     ppm     ASTM D5185n     >5     0     0     <1       Cadmium     ppm     ASTM D5185n     0     0     <1     <1       Adminum     ppm     ASTM D5185n     0     0     <1     1	Oil Changed		Client Info		Not Changd	Changed	Not Changd
Water     WC Method     >0.2     NEG     NEG     NEG       Glycol     WC Method     Imit/base     current     Nistory1     Nistory2       Iron     ppm     ASTM D5185m     >80     10     40     29       Chromium     ppm     ASTM D5185m     >5     <1     2     1       Nickel     ppm     ASTM D5185m     >2     0     0     <1       Silver     ppm     ASTM D5185m     >30     0     <1     1       Aluminum     ppm     ASTM D5185m     >30     0     <1     1       Aluminum     ppm     ASTM D5185m     >30     0     <1     1       Copper     ppm     ASTM D5185m     >50     0     <1     1       Tin     ppm     ASTM D5185m     50     0     <1     1       Cadmium     ppm     ASTM D5185m     0     0     <1     1       Magnesium     ppm     ASTM D5185m     0     0     <1     1 </th <th>Sample Status</th> <th></th> <th></th> <th></th> <th>SEVERE</th> <th>SEVERE</th> <th>SEVERE</th>	Sample Status				SEVERE	SEVERE	SEVERE
Glycol     WC Method     NEG     NEG     NEG     NEG       WEAR METALS     nethod     limil/base     current     history1     history2       Iron     ppm     ASTM D5185m     >50     <1     2     1       Nickel     ppm     ASTM D5185m     >2     0     0     <1       Titanium     ppm     ASTM D5185m     >3     0     0     <1       Aluminum     ppm     ASTM D5185m     >30     0     <1     <1       Copper     ppm     ASTM D5185m     >30     0     <1     <1       Cadmium     ppm     ASTM D5185m     >5     0     0     <1       Cadmium     ppm     ASTM D5185m     >5     0     0     <1       Cadmium     ppm     ASTM D5185m     >5     0     0     <1       ADDITIVES     nethod     Imit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0     0     <1	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >80     10     40     29       Chromium     ppm     ASTM D5185m     >5     <1     2     1       Nickel     ppm     ASTM D5185m     >2     0     0     <1       Titanium     ppm     ASTM D5185m     >30     0     0     <1       Aluminum     ppm     ASTM D5185m     >30     2     4     2       Lead     ppm     ASTM D5185m     >30     0     <1     <1     <1       Tin     ppm     ASTM D5185m     >50     0     0     <1     <1       Cadmium     ppm     ASTM D5185m     0     0     0     <1     <1       ADDTIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0     0     0     0       Magnesium     ppm     AST	Water		WC Method	>0.2	NEG	NEG	NEG
Iron     ppm     ASTM D5185m     >80     10     40     29       Chromium     ppm     ASTM D5185m     >5     <1     2     1       Nickel     ppm     ASTM D5185m     >2     0     0     <1       Titanium     ppm     ASTM D5185m     >3     0     0     <1       Silver     ppm     ASTM D5185m     >30     2     4     2       Lead     ppm     ASTM D5185m     >30     2     10     11       Tin     ppm     ASTM D5185m     >5     0     0     <1       Cadmium     ppm     ASTM D5185m     >5     0     0     <1       Cadmium     ppm     ASTM D5185m     0     0     0     <1       Cadmium     ppm     ASTM D5185m     0     0     0     0     0       ADDITVES     method     imil/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0     0	Glycol		WC Method		NEG	NEG	NEG
Chromium     ppm     ASTM D5185m     >5     <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel     ppm     ASTM D5185m     >2     0     0     <1       Titanium     ppm     ASTM D5185m     33     0     0     <1	Iron	ppm	ASTM D5185m	>80	10	40	29
Titanium     ppm     ASTM D5185m     0     0     <1	Chromium	ppm	ASTM D5185m	>5	<1	2	1
Silver     ppm     ASTM D5185m     >3     0     0     <1       Aluminum     ppm     ASTM D5185m     >30     2     4     2       Lead     ppm     ASTM D5185m     >30     0     <1     <1       Copper     ppm     ASTM D5185m     >5     0     0     <1       Tin     ppm     ASTM D5185m     >5     0     0     <1       Cadmium     ppm     ASTM D5185m     >5     0     0     <1       Cadmium     ppm     ASTM D5185m     0     0     0     0     0     0       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0     0     0     0       Manganese     ppm     ASTM D5185m     0     0     0     <1<     1       Magnesium     ppm     ASTM D5185m     1010     844     759     810       Calcium     ppm     ASTM D5	Nickel	ppm	ASTM D5185m	>2	0	0	<1
Atuminum     ppm     ASTM D5185m     >30     2     4     2       Lead     ppm     ASTM D5185m     >30     0     <1     <1       Copper     ppm     ASTM D5185m     >150     2     10     11       Tin     ppm     ASTM D5185m     >5     0     0     <1       Vanadium     ppm     ASTM D5185m      <1     0     <1       Cadmium     ppm     ASTM D5185m     0     0     0     <1       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0     0     0       Molybdenum     ppm     ASTM D5185m     0     0     <1     <1       Magnanese     ppm     ASTM D5185m     1010     844     759     810       Calcium     ppm     ASTM D5185m     1100     847     759     810       Sulfur     ppm     ASTM D5185m     1270     1117 <t< th=""><th>Titanium</th><th>ppm</th><th>ASTM D5185m</th><th></th><th>0</th><th>0</th><th>&lt;1</th></t<>	Titanium	ppm	ASTM D5185m		0	0	<1
Lead     ppm     ASTM D5185m     >30     0     <1	Silver	ppm	ASTM D5185m	>3	0	0	<1
Copper     ppm     ASTM D5185m     >150     2     10     11       Tin     ppm     ASTM D5185m     >5     0     0     <1       Vanadium     ppm     ASTM D5185m      <1     0     <1       Cadmium     ppm     ASTM D5185m     0     0     0     <1       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0     0     0       Molydenum     ppm     ASTM D5185m     0     0     0     0       Marganese     ppm     ASTM D5185m     0     0     <1     <1       Magnesium     ppm     ASTM D5185m     1010     844     759     810       Calcium     ppm     ASTM D5185m     1070     887     879     924       Phosphorus     ppm     ASTM D5185m     1270     1117     997     1092       Sulfur     ppm     ASTM D5185m     2060     2744	Aluminum	ppm	ASTM D5185m	>30	2	4	2
Tin     ppm     ASTM D5185m     >5     0     0     <1	Lead	ppm	ASTM D5185m	>30	0	<1	<1
Vanadium     ppm     ASTM D5185m     <1	Copper	ppm	ASTM D5185m	>150	2	10	11
Cadmium     ppm     ASTM D5185m     0     0     <1	Tin	ppm	ASTM D5185m	>5	0	0	<1
ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m00000BariumppmASTM D5185m00000MolybdenumppmASTM D5185m60514554ManganeseppmASTM D5185m000<1	Vanadium	ppm	ASTM D5185m		<1	0	<1
Boron     ppm     ASTM D5185m     0     0     0     0     2       Barium     ppm     ASTM D5185m     0     0     0     0     0       Molybdenum     ppm     ASTM D5185m     60     51     45     54       Manganese     ppm     ASTM D5185m     0     0     <1     <1       Magnesium     ppm     ASTM D5185m     1010     844     759     810       Calcium     ppm     ASTM D5185m     1010     844     759     810       Calcium     ppm     ASTM D5185m     1070     887     879     924       Phosphorus     ppm     ASTM D5185m     1070     887     879     924       Sulfur     ppm     ASTM D5185m     1270     1117     997     1092       Sulfur     ppm     ASTM D5185m     2060     2744     2105     2852       CONTAMINANTS     method     limit/base     current     history1     history2       Sodium     ppm	Cadmium	ppm	ASTM D5185m		0	0	<1
Barium     ppm     ASTM D5185m     0     0     0     0       Molybdenum     ppm     ASTM D5185m     60     51     45     54       Manganese     ppm     ASTM D5185m     0     0     <1     <1       Magnesium     ppm     ASTM D5185m     1010     844     759     810       Calcium     ppm     ASTM D5185m     1070     887     879     924       Phosphorus     ppm     ASTM D5185m     1070     887     879     924       Phosphorus     ppm     ASTM D5185m     1070     887     879     924       Sulfur     ppm     ASTM D5185m     1270     1117     997     1092       Sulfur     ppm     ASTM D5185m     2060     2744     2105     2852       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >20     4     9     4       Potassium     ppm     ASTM D5185m	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum     ppm     ASTM D5185m     60     51     45     54       Manganese     ppm     ASTM D5185m     0     0     <1     <1       Magnesium     ppm     ASTM D5185m     1010     844     759     810       Calcium     ppm     ASTM D5185m     1070     887     879     924       Phosphorus     ppm     ASTM D5185m     1070     887     879     924       Phosphorus     ppm     ASTM D5185m     1150     941     813     897       Zinc     ppm     ASTM D5185m     1270     1117     997     1092       Sulfur     ppm     ASTM D5185m     2060     2744     2105     2852       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >20     4     9     4       Potassium     ppm     ASTM D5185m     >20     0     <1     5       Fuel     %     ASTM D5185m	Boron	ppm	ASTM D5185m	0	0		
Manganese   ppm   ASTM D5185m   0   0   <1	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium     ppm     ASTM D5185m     1010     844     759     810       Calcium     ppm     ASTM D5185m     1070     887     879     924       Phosphorus     ppm     ASTM D5185m     1150     941     813     897       Zinc     ppm     ASTM D5185m     1270     1117     997     1092       Sulfur     ppm     ASTM D5185m     2060     2744     2105     2852       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >20     4     10     9       Sodium     ppm     ASTM D5185m     >20     4     9     4       Potassium     ppm     ASTM D5185m     >20     0     <1     5       Fuel     %     ASTM D5185m     >20     0     <14.2     8.4       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3 <th>Molybdenum</th> <th>ppm</th> <th>ASTM D5185m</th> <th>60</th> <th>-</th> <th>45</th> <th>54</th>	Molybdenum	ppm	ASTM D5185m	60	-	45	54
Calcium     ppm     ASTM D5185m     1070     887     879     924       Phosphorus     ppm     ASTM D5185m     1150     941     813     897       Zinc     ppm     ASTM D5185m     1270     1117     997     1092       Sulfur     ppm     ASTM D5185m     2060     2744     2105     2852       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >20     4     10     9       Sodium     ppm     ASTM D5185m     >20     4     9     4       Potassium     ppm     ASTM D5185m     >20     0     <1     5       Fuel     %     ASTM D5185m     >20     0     <1     5       Fuel     %     ASTM D5185m     >20     0     <1     5       Fuel     %     ASTM D5185m     >20     0     <14.2     8.4       INFRA-RED     method     limit/base     current	Manganese	ppm	ASTM D5185m	0	0	<1	<1
Phosphorus     ppm     ASTM D5185m     1150     941     813     897       Zinc     ppm     ASTM D5185m     1270     1117     997     1092       Sulfur     ppm     ASTM D5185m     2060     2744     2105     2852       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >20     4     10     9       Sodium     ppm     ASTM D5185m     >20     4     9     4       Potassium     ppm     ASTM D5185m     >20     0     <1     5       Fuel     %     ASTM D5185m     >20     0     <1     5       Soot %     %     ASTM D5185m     >20     0     <1     5       Soot %     %     ASTM D5185m     >20     0     <14.2     8.4       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7624     >20     8.0<	•	ppm			844		810
Zinc     ppm     ASTM D5185m     1270     1117     997     1092       Sulfur     ppm     ASTM D5185m     2060     2744     2105     2852       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >20     4     10     9       Sodium     ppm     ASTM D5185m     >20     4     9     4       Potassium     ppm     ASTM D5185m     >20     0     <1     5       Fuel     %     ASTM D5185m     >20     0     <1     5       Fuel     %     ASTM D5185m     >20     0     <1     5       Fuel     %     ASTM D524     >5     8.0     14.2     8.4       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7624     >20     8.0     12.0     10.0       Sulfation     Abs/.mm< *ASTM D7415     >30     19.4	Calcium	ppm	ASTM D5185m	1070	887	879	924
SulfurppmASTM D5185m2060274421052852CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>204109SodiumppmASTM D5185m>20494PotassiumppmASTM D5185m>200<15Fuel%ASTM D3524>58.014.28.4INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>30.71.61.1NitrationAbs/cm*ASTM D7624>208.012.010.0SulfationAbs/.1mm*ASTM D7415>3019.423.221.1FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2515.320.617.0	Phosphorus	ppm			941	813	897
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>204109SodiumppmASTM D5185m>20494PotassiumppmASTM D5185m>200<15Fuel%ASTM D5185m>200<15SodiumppmASTM D5185m>200<15Fuel%ASTM D5185m>200<15Soot %%ASTM D7824>58.014.28.4INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>30.71.61.1NitrationAbs/cm*ASTM D7624>208.012.010.0SulfationAbs/.imm*ASTM D7415>3019.423.221.1FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.imm*ASTM D7414>2515.320.617.0	Zinc	ppm	ASTM D5185m	1270	1117	997	1092
Silicon   ppm   ASTM D5185m   >20   4   10   9     Sodium   ppm   ASTM D5185m   4   9   4     Potassium   ppm   ASTM D5185m   >20   0   <1	Sulfur	ppm	ASTM D5185m	2060	2744	2105	2852
Sodium     ppm     ASTM D5185m     4     9     4       Potassium     ppm     ASTM D5185m     >20     0     <1     5       Fuel     %     ASTM D5185m     >20     0     <14.2	CONTAMINAN	TS	method	limit/base	current	history1	
Potassium     ppm     ASTM D5185m     >20     0     <1		ppm	ASTM D5185m	>20	4	10	9
Fuel     %     ASTM D3524     >5     8.0     14.2     8.4       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     0.7     1.6     1.1       Nitration     Abs/cm     *ASTM D7624     >20     8.0     12.0     10.0       Sulfation     Abs/.1mm     *ASTM D7415     >30     19.4     23.2     21.1       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     15.3     20.6     17.0		ppm	ASTM D5185m		4	9	
INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     0.7     1.6     1.1       Nitration     Abs/cm     *ASTM D7624     >20     8.0     12.0     10.0       Sulfation     Abs/.1mm     *ASTM D7415     >30     19.4     23.2     21.1       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     15.3     20.6     17.0			ASTM D5185m	>20			
Soot %     %     *ASTM D7844     >3     0.7     1.6     1.1       Nitration     Abs/cm     *ASTM D7624     >20     8.0     12.0     10.0       Sulfation     Abs/.1mm     *ASTM D7615     >30     19.4     23.2     21.1       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     15.3     20.6     17.0	Fuel	%	ASTM D3524	>5	8.0	14.2	8.4
Nitration     Abs/cm     *ASTM D7624     >20     8.0     12.0     10.0       Sulfation     Abs/.1mm     *ASTM D7415     >30     19.4     23.2     21.1       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     15.3     20.6     17.0	INFRA-RED			limit/base			
Sulfation     Abs/.1mm     *ASTM D7415     >30     19.4     23.2     21.1       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     15.3     20.6     17.0							
FLUID DEGRADATION method limit/base current history1 history2   Oxidation Abs/.1mm *ASTM D7414 >25 15.3 20.6 17.0	Nitration	Abs/cm	*ASTM D7624	>20	8.0	12.0	10.0
Oxidation     Abs/.1mm     *ASTM D7414     >25     15.3     20.6     17.0	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.4	23.2	21.1
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Base Number (BN)     mg KOH/g     ASTM D2896     9.8     8.5     6.4     7.2	Oxidation	Abs/.1mm	*ASTM D7414	>25	15.3	20.6	17.0
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.5	6.4	7.2

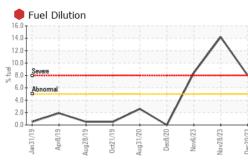


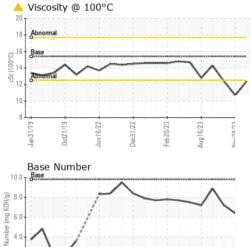
4.0 Base | 0.0

Jan31/19

## **OIL ANALYSIS REPORT**

VISUAL





Jun16/22

0ct21/19

Dec31/22

Feb20/23

VIOUAL		method	initi bas	ourrent	matory	motor
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	NORM
Odor	scalar	*Visual	NORML	NORML	NORML	NORM
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROP	ERTIES	method	limit/bas	se current	history1	histor
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.4</b>	• 10.7	12.4
GRAPHS						
Ferrous Alloys						
70 iron						
60 - chromium						
50						
40 30	1		Λ			
<sup>a</sup> 30-	1~	$\wedge$	1			
20	V	$\setminus$ /	1			
10		$\sim$	1			
0 passes and a superson and a supers						
	Dec31/22 -					
Jan31/19 Oct21/19 Jun16/22	Dec31/22 Feb20/23	Aug16/23	Nov28/23			
Non-ferrous Met	tals					
12 T						
10 - copper lead						
8						
5						
4						
			1			
In	20	X				
719 / 19	722	123	/23			
Jan31/19 0ct21/19 Jun16/22	Dec31/22 Feb20/23	Aug 16/23 -	Nov28/23			
Viscosity @ 100		A		_		
<sup>19</sup> T				Base Num	ber	
18 - Abnormal				10.0 T Deservices and a second	$\wedge$	
17-			.0	, 8.0-	72	$\sim \Lambda$
16 Base			Base Number (mg KOH/g)		1. 1. 1. 1. 1.	~ (
3 13 Abnormal	~	$\neg$	(mg	6.0-	1	
3 13 Abnormal		$\vee$	Imper	4.0		
12			VI VI			
11				2.0		
10				0.0		
/19 + /	722	/23	/23	0.0	722 -	/23+
Jan31/19 Oct21/19 Jun16/22	Dec31/22 Feb20/23	Aug 16/23	Nov28/23	Jan 31/19 0ct21/19	Jun 16/22 Dec3 1/22	Feb 20/23 Aug 16/23
		A.	2	r o	·	A.
: WearCheck USA	- 501 Madis	on Ave Ca	ary, NC 275	513 <b>GF</b> L	Environmental - 82	21 - Ozarks Ha
: GFL0090340	Recieved	: 22	Dec 2023			3924 Olath
: 06042859	Diagnose		Dec 2023			Lebanon
: 10803467	Diagnosti	cian : We	s Davis			US 6

Unique Number : 10803467 Diagnostician : Wes Davis Test Package : FLEET (Additional Tests: PercentFuel) Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. landen.johnson@gflenv.com \* - 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)

Submitted By: GFL821, GFL824 and GFL829 - Landen Johnson

F:

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