

## **OIL ANALYSIS REPORT**

Sample Rating Trend





Machine Id 429026-1351

Component Diesel Engine Fluid

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

DIAGNOSIS	
Recommendation	

Resample at the next service interval to monitor. ( Customer Sample Comment: D service )

### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### **Fluid Condition**

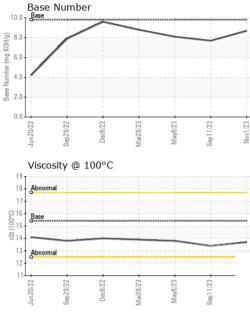
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

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Sample Date     Client Info     D1 Nov 2023     11 Sep 2023     08 May 2023       Machine Age     hrs     Client Info     9493     9239     8691       Oil Age     hrs     Client Info     231     550     590       Oil Changed     Client Info     Changed     NoRMAL     NoRMAL     NoRMAL       CONTAMINATION     method     Imit/base     current     history1     history2       Fuel     WC Method     >3.0     <1.0     <1.0     <1.0       Glycol     WC Method     >3.0     <1     0     0       Chromium     ppm     ASTM 05185m     >20     5     1     1     1       Nickel     ppm     ASTM 05185m     >20     0     0     0     0       Aluminum     ppm     ASTM 05185m     >2     0     0     0     0     0       Aluminum     ppm     ASTM 05185m     >6     <1     <1     0     0     0       Aluminum     ppm     ASTM 05185m	SAMPLE INFORM	ΛΑΤΙΟΝ	method	limit/base	current	history1	history2
Machine Age     hrs     Client Info     9493     9239     8691       Oil Age     hrs     Client Info     231     550     590       Oil Changed     Client Info     Changed     Not Changed     Not Changed       Sample Status     Imit/base     current     NoRMAL     NORMAL       CONTAMINATION     method     imit/base     current     Not Changed     NEG       Fuel     WC Method     >3.0     <1.0     <1.0     <1.0       Glycol     WC Method     >3.0     <1.0     <1.0     <1.0       WEAR METALS     method     imit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >200     5     12     9       Tranium     ppm     ASTM D5185m     >2     0     0     0       Silver     ppm     ASTM D5185m     >50     3     4     5       Lead     ppm     ASTM D5185m     >5     3     2     2       Copper     ppm	Sample Number Cli		Client Info		GFL0088308	GFL0088274	GFL0077528
Oil Age     Inrs     Client Info     231     550     590       Oil Changed     Client Info     Changed     Not Changed     Changed       Sample Status     Imit/base     Current     history1     history2       Fuel     WC Method     >3.0     <1.0     <1.0     <1.0       Glycol     WC Method     >3.0     <1.0     <1.0     <1.0       Chromium     ppm     ASTM D5185m     >200     5     12     9       Chromium     ppm     ASTM D5185m     >2     0     0     0       Silver     ppm     ASTM D5185m     >2     0     0     0       Aduminum     ppm     ASTM D5185m     >2     0     0     0       Aduminum     ppm     ASTM D5185m     >50     3     7     9       Tin     ppm     ASTM D5185m     >6     -1     0     0       Aduminum     ppm     ASTM D5185m     0     6     2     2       Barium     ppm	Sample Date		Client Info		01 Nov 2023	11 Sep 2023	08 May 2023
Oil Changed Sample StatusClient InfoChanged NORMALNot Changed NORMALChanged NORMALChanged NORMALCONTAMINATIONmethodlimit/basecurrenthistory1history2FuelWC Method>3.0<1.0	Machine Age	hrs	Client Info		9493	9239	8691
Oil Changed Sample StatusClient InfoChanged NORMALNot Changed NORMALChanged NORMALChanged NORMALCONTAMINATIONmethodlimit/basecurrenthistory1history2FuelWC Method>3.0<1.0<1.0<1.0GlycolWC Method>3.0<1.0<1.0<1.0GlycolWC MethodNEGNEGNEGNEGWEAR METALSmethodimit/basecurrenthistory1history2IronppmASTM D5185m>2005129ChromiumppmASTM D5185m>2000SilverppmASTM D5185m>2000AluminumppmASTM D5185m>50345LeadppmASTM D5185m>50379TinppmASTM D5185m>6<100ChandiumppmASTM D5185m50379TinppmASTM D5185m0000ADDITIVESmethodimit/basecurrenthistory1history2BoronppmASTM D5185m0000MaganeseppmASTM D5185m0010MaganeseppmASTM D5185m0010MaganeseppmASTM D5185m0011ContaminppmASTM D5185m001 </th <th>Oil Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>231</th> <th>550</th> <th>590</th>	Oil Age	hrs	Client Info		231	550	590
Sample Status     NORMAL     NORMAL     NORMAL     NORMAL       CONTAMINATION     method     limit/base     current     history1     history2       Fuel     WC Method     >3.0     <1.0     <1.0     <1.0       Glycol     WC Method     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >200     5     12     9       Chromium     ppm     ASTM D5185m     >20     0     0     0       Silver     ppm     ASTM D5185m     >2     0     0     0       Itanium     ppm     ASTM D5185m     >50     3     4     5       Lead     ppm     ASTM D5185m     >10     1     0     0       Copper     ppm     ASTM D5185m     >6     <1     <1     0       Cadmium     ppm     ASTM D5185m     0     6     6     6     6     6     6     <	-		Client Info		Changed	Not Changd	Changed
Fuel     WC Method     >3.0     <1.0	-				-	NORMAL	
Glycol     WC Method     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >200     5     12     9       Chromium     ppm     ASTM D5185m     >6     <1     1     <1       Nickel     ppm     ASTM D5185m     >2     0     0     0       Silver     ppm     ASTM D5185m     >2     0     0     0       Aluminum     ppm     ASTM D5185m     >50     3     4     5       Lead     ppm     ASTM D5185m     >50     3     7     9       Tin     ppm     ASTM D5185m     >6     <1     0     0       Vanadium     ppm     ASTM D5185m     0     0     0     0       Cadmium     ppm     ASTM D5185m     0     6     2     2       Barium     ppm     ASTM D5185m     0     0     0     0       Magnesiu	CONTAMINATI	ON	method	limit/base	current	history1	history2
Glycol     WC Method     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >200     5     12     9       Chromium     ppm     ASTM D5185m     >6     <1     1     <1       Nickel     ppm     ASTM D5185m     >2     0     0     0       Silver     ppm     ASTM D5185m     >2     0     0     0       Aluminum     ppm     ASTM D5185m     >50     3     4     5       Lead     ppm     ASTM D5185m     >50     3     7     9       Tin     ppm     ASTM D5185m     >6     <1     0     0       Vanadium     ppm     ASTM D5185m     0     0     0     0       Cadmium     ppm     ASTM D5185m     0     6     2     2       Barium     ppm     ASTM D5185m     0     0     0     0       Magnesiu	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >200     5     12     9       Chromium     ppm     ASTM D5185m     >200     5     12     9       Chromium     ppm     ASTM D5185m     >2     0     0     0       Titanium     ppm     ASTM D5185m     >2     0     0     0       Silver     ppm     ASTM D5185m     >2     0     0     0       Auminum     ppm     ASTM D5185m     >50     3     4     5       Lead     ppm     ASTM D5185m     >50     3     7     9       Tin     ppm     ASTM D5185m     0     1     0     0       Cadmium     ppm     ASTM D5185m     0     0     0     0       Cadmium     ppm     ASTM D5185m     0     6     2     2       Barium     ppm     ASTM D5185m     0     60     60     63 <th></th> <th></th> <th></th> <th>20.0</th> <th></th> <th></th> <th></th>				20.0			
Iron     ppm     ASTM D5185m     >200     5     12     9       Chromium     ppm     ASTM D5185m     >6     <1     1     <1       Nickel     ppm     ASTM D5185m     >3     <1     0     0       Silver     ppm     ASTM D5185m     >2     0     0     0       Aluminum     ppm     ASTM D5185m     >2     0     0     0       Aluminum     ppm     ASTM D5185m     >2     0     0     0       Copper     ppm     ASTM D5185m     >50     3     7     9       Tin     ppm     ASTM D5185m     >6     <1     0     0       Cadmium     ppm     ASTM D5185m     0     6     2     2       Boron     ppm     ASTM D5185m     0     6     0     0     0       Molybdenum     ppm     ASTM D5185m     1010     919     923     1019       Calcium     ppm     ASTM D5185m     1070     1032	-			11 11 11			
Chromium     ppm     ASTM D5185m     >6     <1	WEAR METALS	S	method	limit/base			
Nickel     ppm     ASTM D5185m     >3     <1     0     0       Titanium     ppm     ASTM D5185m     >2     0     0     0       Silver     ppm     ASTM D5185m     >2     0     0     0       Aluminum     ppm     ASTM D5185m     >50     3     4     5       Lead     ppm     ASTM D5185m     >50     3     7     9       Tin     ppm     ASTM D5185m     >6     <1	Iron	ppm	ASTM D5185m	>200	5	12	
Titanium     ppm     ASTM D5185m     >2     0     0     0       Silver     ppm     ASTM D5185m     >2     0     0     0       Aluminum     ppm     ASTM D5185m     >50     3     4     5       Lead     ppm     ASTM D5185m     >10     1     0     0       Copper     ppm     ASTM D5185m     >50     3     7     9       Tin     ppm     ASTM D5185m     >6     <1	Chromium	ppm	ASTM D5185m	>6		1	<1
Silver     ppm     ASTM D5185m     >2     0     0     0       Aluminum     ppm     ASTM D5185m     >50     3     4     5       Lead     ppm     ASTM D5185m     >50     3     7     9       Tin     ppm     ASTM D5185m     >6     <1	Nickel	ppm	ASTM D5185m	>3	<1	0	
Aluminum     ppm     ASTM D5185m     >50     3     4     5       Lead     ppm     ASTM D5185m     >10     1     0     0       Copper     ppm     ASTM D5185m     >50     3     7     9       Tin     ppm     ASTM D5185m     >6     <1	Titanium	ppm	ASTM D5185m	>2	0	0	0
Lead     ppm     ASTM D5185m     >10     1     0     0       Copper     ppm     ASTM D5185m     >50     3     7     9       Tin     ppm     ASTM D5185m     >6     <1     <1     0     0       Vanadium     ppm     ASTM D5185m     >6     <1     <1     0     0       Cadmium     ppm     ASTM D5185m     0     6     2     2       Boron     ppm     ASTM D5185m     0     6     2     2       Barium     ppm     ASTM D5185m     0     60     60     63       Magnesium     ppm     ASTM D5185m     0     <1     <1     0       Magnesium     ppm     ASTM D5185m     1010     919     923     1019       Calcium     ppm     ASTM D5185m     1070     1032     1058     1134       Phosphorus     ppm     ASTM D5185m     2060     3109     3196     3449       Sulfur     ppm     ASTM D5185m	Silver	ppm	ASTM D5185m	>2	0		
Copper     ppm     ASTM D5185m     >50     3     7     9       Tin     ppm     ASTM D5185m     >6     <1	Aluminum	ppm	ASTM D5185m	>50	3	4	5
Tin     ppm     ASTM D5185m     >6     <1	Lead	ppm	ASTM D5185m	>10	1	0	0
Vanadium     ppm     ASTM D5185m     <1     0     0       Cadmium     ppm     ASTM D5185m     0     0     0     0       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     6     2     2       Barium     ppm     ASTM D5185m     0     0     0     0     0       Magnesium     ppm     ASTM D5185m     0     <1     <1     0       Magnesium     ppm     ASTM D5185m     0     <1     <1     0       Calcium     ppm     ASTM D5185m     1010     919     923     1019       Calcium     ppm     ASTM D5185m     1070     1032     1058     1134       Phosphorus     ppm     ASTM D5185m     1270     1269     1196     1326       Sulfur     ppm     ASTM D5185m     2060     3109     3196     3449       CONTAMINATY     method     limit/base     current	Copper	ppm	ASTM D5185m	>50	3	7	9
Cadmium     ppm     ASTM D5185m     0     0     0       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     6     2     2       Barium     ppm     ASTM D5185m     0     0     0     0     0     0       Mayanese     ppm     ASTM D5185m     0     <1	Tin	ppm	ASTM D5185m	>6	<1	<1	0
ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     6     2     2       Barium     ppm     ASTM D5185m     0     0     0     0       Molybdenum     ppm     ASTM D5185m     60     60     60     63       Magnesium     ppm     ASTM D5185m     0     <1	Vanadium	ppm	ASTM D5185m		<1	0	0
Boron     ppm     ASTM D5185m     0     6     2     2       Barium     ppm     ASTM D5185m     0     0     0     0     0       Molybdenum     ppm     ASTM D5185m     60     60     60     60     63       Manganese     ppm     ASTM D5185m     0     <1     <1     0       Magnesium     ppm     ASTM D5185m     1010     919     923     1019       Calcium     ppm     ASTM D5185m     1010     919     923     1019       Calcium     ppm     ASTM D5185m     1070     1032     1058     1134       Phosphorus     ppm     ASTM D5185m     1150     979     958     1061       Zinc     ppm     ASTM D5185m     1270     1269     1196     1326       Sulfur     ppm     ASTM D5185m     2060     3109     3196     3449       Sodium     ppm     ASTM D5185m     >20     2     2     5       Sodium     ppm	Cadmium	ppm	ASTM D5185m		0	0	0
Barium     ppm     ASTM D5185m     0     0     0     0     0       Molybdenum     ppm     ASTM D5185m     60     60     60     63       Manganese     ppm     ASTM D5185m     0     <1     <1     0       Magnesium     ppm     ASTM D5185m     1010     919     923     1019       Calcium     ppm     ASTM D5185m     1070     1032     1058     1134       Phosphorus     ppm     ASTM D5185m     1070     1032     1058     1134       Zinc     ppm     ASTM D5185m     1270     1269     1196     1326       Sulfur     ppm     ASTM D5185m     2060     3109     3196     3449       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >50     4     5     5       Sodium     ppm     ASTM D5185m     >20     2     2     5       INFRA-RED     method     lim	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum     ppm     ASTM D5185m     60     60     60     63       Manganese     ppm     ASTM D5185m     0     <1     <1     0       Magnesium     ppm     ASTM D5185m     1010     919     923     1019       Calcium     ppm     ASTM D5185m     1070     1032     1058     1134       Phosphorus     ppm     ASTM D5185m     1700     1032     1058     1061       Zinc     ppm     ASTM D5185m     1270     1269     1196     1326       Sulfur     ppm     ASTM D5185m     2060     3109     3196     3449       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >50     4     5     5       Sodium     ppm     ASTM D5185m     >20     2     2     5       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844	Boron	ppm	ASTM D5185m	0	6	2	2
Manganese     ppm     ASTM D5185m     0     <1	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium     ppm     ASTM D5185m     1010     919     923     1019       Calcium     ppm     ASTM D5185m     1070     1032     1058     1134       Phosphorus     ppm     ASTM D5185m     1150     979     958     1061       Zinc     ppm     ASTM D5185m     1270     1269     1196     1326       Sulfur     ppm     ASTM D5185m     2060     3109     3196     3449       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >50     4     5     5       Sodium     ppm     ASTM D5185m     >20     2     2     5       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     0.4     0.4     0.3       Nitration     Abs/.mm     *ASTM D7624     >20     6.1     8.0     7.7       Sulfation     Abs/.fmm     *ASTM D74	Molybdenum	ppm	ASTM D5185m	60	60	60	63
Calcium     ppm     ASTM D5185m     1070     1032     1058     1134       Phosphorus     ppm     ASTM D5185m     1150     979     958     1061       Zinc     ppm     ASTM D5185m     1270     1269     1196     1326       Sulfur     ppm     ASTM D5185m     2060     3109     3196     3449       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >50     4     5     5       Sodium     ppm     ASTM D5185m     >20     2     2     5       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     0.4     0.4     0.3       Nitration     Abs/.mm     *ASTM D7624     >20     6.1     8.0     7.7       Sulfation     Abs/.lmm     *ASTM D7415     >30     18.2     18.1     19.0       FLUID DEGRADATION     method     <	Manganese	ppm	ASTM D5185m	0	<1	<1	0
Phosphorus     ppm     ASTM D5185m     1150     979     958     1061       Zinc     ppm     ASTM D5185m     1270     1269     1196     1326       Sulfur     ppm     ASTM D5185m     2060     3109     3196     3449       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >50     4     5     5       Sodium     ppm     ASTM D5185m     >20     2     2     5       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D5185m     >20     2     2     5       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     0.4     0.4     0.3       Nitration     Abs/cm     *ASTM D7624     >20     6.1     8.0     7.7       Sulfation     Abs/.1mm     *ASTM D7415	Magnesium	ppm	ASTM D5185m	1010	919	923	1019
Zinc     ppm     ASTM D5185m     1270     1269     1196     1326       Sulfur     ppm     ASTM D5185m     2060     3109     3196     3449       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >50     4     5     5       Sodium     ppm     ASTM D5185m     >50     4     5     5       Sodium     ppm     ASTM D5185m     >20     2     2     5       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     0.4     0.4     0.3       Nitration     Abs/cm     *ASTM D7624     >20     6.1     8.0     7.7       Sulfation     Abs/.tmm     *ASTM D7415     >30     18.2     18.1     19.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.tmm     *ASTM D7414 <th>Calcium</th> <th>ppm</th> <th>ASTM D5185m</th> <th>1070</th> <th>1032</th> <th>1058</th> <th>1134</th>	Calcium	ppm	ASTM D5185m	1070	1032	1058	1134
Sulfur     ppm     ASTM D5185m     2060     3109     3196     3449       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >50     4     5     5       Sodium     ppm     ASTM D5185m     >50     4     5     5       Sodium     ppm     ASTM D5185m     >20     2     2     5       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     0.4     0.4     0.3       Nitration     Abs/cm     *ASTM D7624     >20     6.1     8.0     7.7       Sulfation     Abs/.1mm     *ASTM D7624     >20     6.1     8.0     7.7       Sulfation     Abs/.1mm     *ASTM D7415     >30     18.2     18.1     19.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D74	Phosphorus	ppm	ASTM D5185m	1150	979	958	1061
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>50455SodiumppmASTM D5185m031PotassiumppmASTM D5185m>20225INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>30.40.40.3NitrationAbs/cm*ASTM D7624>206.18.07.7SulfationAbs/.1mm*ASTM D7415>3018.218.119.0FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2513.513.715.0	Zinc	ppm	ASTM D5185m	1270	1269	1196	1326
Silicon     ppm     ASTM D5185m     >50     4     5     5       Sodium     ppm     ASTM D5185m     0     3     1       Potassium     ppm     ASTM D5185m     >20     2     2     5       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     0.4     0.4     0.3       Nitration     Abs/cm     *ASTM D7624     >20     6.1     8.0     7.7       Sulfation     Abs/.tmm     *ASTM D7415     >30     18.2     18.1     19.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.tmm     *ASTM D7414     >25     13.5     13.7     15.0	Sulfur	ppm	ASTM D5185m	2060	3109	3196	3449
Sodium     ppm     ASTM D5185m     0     3     1       Potassium     ppm     ASTM D5185m     >20     2     2     5       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     0.4     0.4     0.3       Nitration     Abs/cm     *ASTM D7624     >20     6.1     8.0     7.7       Sulfation     Abs/.1mm     *ASTM D7415     >30     18.2     18.1     19.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     13.5     13.7     15.0							
Sodium     ppm     ASTM D5185m     0     3     1       Potassium     ppm     ASTM D5185m     >20     2     2     5       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     0.4     0.4     0.3       Nitration     Abs/cm     *ASTM D7624     >20     6.1     8.0     7.7       Sulfation     Abs/.1mm     *ASTM D7415     >30     18.2     18.1     19.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     13.5     13.7     15.0	CONTAMINAN	TS	method	limit/base	current	history1	history2
Potassium     ppm     ASTM D5185m     >20     2     2     5       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     0.4     0.4     0.3       Nitration     Abs/cm     *ASTM D7624     >20     6.1     8.0     7.7       Sulfation     Abs/.1mm     *ASTM D7415     >30     18.2     18.1     19.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     13.5     13.7     15.0							
Soot %     %     *ASTM D7844     >3     0.4     0.4     0.3       Nitration     Abs/cm     *ASTM D7624     >20     6.1     8.0     7.7       Sulfation     Abs/.1mm     *ASTM D7415     >30     18.2     18.1     19.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     13.5     13.7     15.0	Silicon	ppm	ASTM D5185m		4	5	5
Nitration     Abs/cm     *ASTM D7624     >20     6.1     8.0     7.7       Sulfation     Abs/.1mm     *ASTM D7615     >30     18.2     18.1     19.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     13.5     13.7     15.0	Silicon Sodium	ppm ppm	ASTM D5185m ASTM D5185m	>50	4 0	5 3	5
Nitration     Abs/cm     *ASTM D7624     >20     6.1     8.0     7.7       Sulfation     Abs/.1mm     *ASTM D7615     >30     18.2     18.1     19.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     13.5     13.7     15.0	Silicon Sodium Potassium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>50 >20	4 0 2	5 3 2	5 1 5
Sulfation     Abs/.1mm     *ASTM D7415     >30     18.2     18.1     19.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     13.5     13.7     15.0	Silicon Sodium Potassium INFRA-RED	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	>50 >20 limit/base	4 0 2 current	5 3 2 history1	5 1 5 history2
FLUID DEGRADATION method limit/base current history1 history2   Oxidation Abs/.1mm *ASTM D7414 >25 13.5 13.7 15.0	Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844	>50 >20 limit/base >3	4 0 2 current 0.4	5 3 2 history1 0.4	5 1 5 history2 0.3
Oxidation Abs/.1mm *ASTM D7414 >25 13.5 13.7 15.0	Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm % Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> *ASTM D7844 *ASTM D7624	>50 >20 limit/base >3 >20	4 0 2 current 0.4 6.1	5 3 2 history1 0.4 8.0	5 1 5 history2 0.3 7.7
	Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> *ASTM D7844 *ASTM D7624 *ASTM D7415	>50 >20 limit/base >3 >20 >30	4 0 2 current 0.4 6.1 18.2	5 3 2 history1 0.4 8.0 18.1	5 1 5 history2 0.3 7.7 19.0
Base Number (BIN) mg KUHig ASTM D2896 9.8 8.7 /./ 8.1	Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm % Abs/cm Abs/.1mm OATION	ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7624 Method	>50 >20 limit/base >3 >20 >30 limit/base	4 0 2 current 0.4 6.1 18.2 current	5 3 2 history1 0.4 8.0 18.1 history1	5 1 5 history2 0.3 7.7 19.0 history2
	Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD Oxidation	ppm ppm ppm % Abs/cm Abs/.1mm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415 method *ASTM D7414	>50 >20 limit/base >3 >20 >30 limit/base >25	4 0 2 current 0.4 6.1 18.2 current 13.5	5 3 2 history1 0.4 8.0 18.1 history1 13.7	5 1 5 history2 0.3 7.7 19.0 history2 15.0



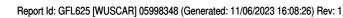
# **OIL ANALYSIS REPORT**

VISUAL



Decolor C	Mar28/23	May6/23 -	Sep 11/23	Yell Pree Silt Deb San App Odd Emu Free	d/Dirt learance or ulsified Wa e Water LUID PF	ROPI		*Visu *Visu *Visu *Visu *Visu *Visu *Visu *Visu *Visu	ial ial ial ial ial ial ial ial	NONE NONE NONE NONE NORM NORM >0.2		NONE NONE NONE NONE NONE NORML NORML NEG NEG		NONE NONE NONE NONE NONE NORML NORML NEG NEG	-	NONE NONE NONE NONE NORM NORM NEG NEG	1L 1L
					e @ 100°C RAPHS		cSt	ASTM	1 D445	15.4		13.7		13.4		13.8	
	Mai28/23 +	May6/23 +	Sep 11/23 +	50 40 30 10 0 220 10 0 220 10 0 220 10 0 220 10 0 220 10 0 220 10 0 220 10 0 20 2	prrous Allc	Deckling	Mai28/23	May8/23	Sep11/23	Nov1/23							
				17- (0)-16- (0)-15- <sup>16</sup> - <sup>16</sup>	inormal							ase Numb	Jer				
				Jun20/22	Sep 29/22	Dec8/22	Mar28/23	May8/23	Sep11/23	Nov1/23	0.0	Sep29/22	Dec8/22	Mar28/23	May8/23	Sep 11/23	Nov1/23
Laboratory Sample No. Lab Number Unique Number Test Package To discuss this sample report, * - Denotes test methods that Statements of conformity to spe				: We : GF : 059 r : 107 e : FLE , contac are outs	arCheck L L0088308 98348 226708 EET t Custome side of the	JSA - er Ser SO	501 Mad Receive Diagnos Diagnos vice at 1- 17025 sc	ve., Ca : 03 f : 06 f : Sea 7-1369 accred	ry, NC 2 Nov 202 Nov 202 In Feltor D. itation.	GFL	GFL Environmental - 625 - Harrison Hauling 4102 Industrial Pkw Harrison, M US 48629 Contact: Glenda Stander gstanden@gflenv.con						

limit/base



回音

Submitted By: also GFL632 and GFL638 - Glenda Standen