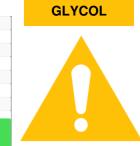


## **OIL ANALYSIS REPORT**

Sample Rating Trend





Machine Id 923018 Component

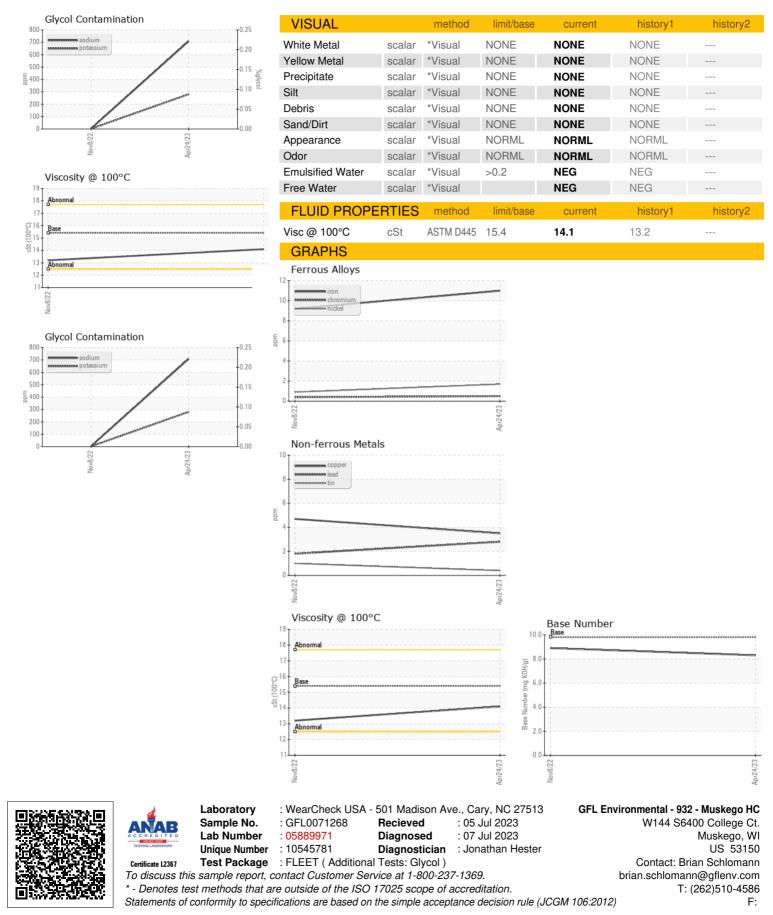
**Diesel Engine** Fluid

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

Recommendation       Sample Number       Client Info       GFL0071268       GFL0060639          We advise that you check for the source of the oolant leak. Check for low coolant level. We ecommend an early resample to monitor this ondition.       Sample Date       Client Info       24 Apr 2023       08 Nov 2022          Machine Age       hrs       Client Info       24731       23664           Vear       Oil Age       hrs       Client Info       24731       23664          Oil Changed       Client Info       24731       23664           Vear       Oil Changed       Client Info       Not Changd           Oil Changed       Client Info       Not Changd            Oil Changed       Client Info       Not Changd            Sample Status       Imit/base       current       history1       history2         Sodium and/or potassium levels are high.       Fuel       WC Method >3.0       <1.0          Wear       WC Method >0.2       NEG       NEG          Wear       Wear       Wear       Imit/base       ourrent       history1       hist	DIAGNOSIS	SAMPLE INFOR		method	limit/base	current	history1	history2
Sample Date       Client Info       P4 p4/2 p22       08 Nov 2022       ···         Sample Date       Client Info       24731       23844       ···         Oall Age       hrs       Client Info       24731       23844       ···         Oall Age       hrs       Client Info       Not Change       ···       ···         Oall Age       hrs       Client Info       Not Change       ···       ···         Contamination       Contamination       Not Change       ···       Not Change       Not Change       ···       Not Change       Not Change       Not Change								
<ul> <li>notation Age in so Client Into 2473 23664</li> <li>veramed an early resample to monitor this ordition.</li> <li>Ker at component wear rates are normal.</li> <li>Constmination dotted are rates are normal.</li> <li>Constmination dotted are high.</li> <li>Fuel CONTAMINATION method into 5 suitable kislanity remaining in the oil.</li> <li>Ker at a sub sub sub sub sub sub sub sub sub sub</li></ul>								
commandiance         Did Age         hrs         Cilent Info         24731         23864            Vear         all component wear rates are normal.         Contamination         Contamination         ABNORMAL            Sample Status         method         limitbase         current         Natoryl            Fuel Condition         hts of the origination         solution         solution             Nickel ppm         ASTI/D585         Solution          NEG            Nickel ppm         ASTI/D585         Solution	coolant leak. Check for low coolant level. We		hre			-		
Oracleon.         Olicency         Client Info         Not Changed         Not Changed <t< td=""><td>recommend an early resample to monitor this</td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	recommend an early resample to monitor this	-						
Year         Sample Status         Image         Main         Moread         Noread         Nore	condition.	-	1113			-		
CONTAMINATION         method         limit/base         current         history1         history2           Solutian and/or potassium levels are high.         Fluid         WC Method         >3.0         <1.0	Wear	•				-		
Fuel         WC Method         >3.0         <1.0         <1.0            Puel         WC Method         >3.0         <1.0	All component wear rates are normal.					ABNORMAL		
Fluid Condition         Water         WC Method         >0.2         NEG         NEG	Contamination	CONTAMINAT	ION	method	limit/base	current	history1	history2
Me BN result indicates that there is suitable         WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM 05168n         >12.0         11         9            Chromium         ppm         ASTM 05168n         >2.2         0.1         <-1	Sodium and/or potassium levels are high.	Fuel		WC Method	>3.0	<1.0	<1.0	
Weak ME IALS         method         introlog         current         intelopy         intelopy           Iron         ppm         ASTM D516m         >120         11         9	Fluid Condition	Water		WC Method	>0.2	NEG	NEG	
Chromium       ppm       ASTM D5185m       >20       <1	The BN result indicates that there is suitable alkalinity remaining in the oil.	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel       ppm       ASTM D51550       >2       Q       Q       Q       Q         Titanium       ppm       ASTM D51550       >2       Q       Q       Q       Q         Silver       ppm       ASTM D51550       >2       Q       Q       Q       Q         Auminum       ppm       ASTM D51550       >20       3       3       Q       Q         Cooper       ppm       ASTM D51550       >340       3       Q       Q       Q         Cooper       ppm       ASTM D51550       >300       4       S       Q       Q       Q       Q       Q         Vanadium       ppm       ASTM D51550       Q <t< td=""><td>-</td><td>Iron</td><td>ppm</td><td>ASTM D5185m</td><td>&gt;120</td><td>11</td><td>9</td><td></td></t<>	-	Iron	ppm	ASTM D5185m	>120	11	9	
Titanium       ppm       ASTM D5185m       >20       0       <1          Silver       ppm       ASTM D5185m       >20       0       0          Auminum       ppm       ASTM D5185m       >20       3       3          Lead       ppm       ASTM D5185m       >40       3       2          Copper       ppm       ASTM D5185m       >40       3       2          Vanadium       ppm       ASTM D5185m       >15       <1       1          Vanadium       ppm       ASTM D5185m       >15       <1       1          ADDITIVES       method       limitbas       current       history!       history!       history!         Boron       ppm       ASTM D5185m       0       16       26          Manganese       ppm       ASTM D5185m       0       111       47          Manganese       ppm       ASTM D5185m       100       97       848          Manganese       ppm       ASTM D5185m       1070       1116       1398          Sulfur       ppm       AS		Chromium	ppm	ASTM D5185m	>20	<1	<1	
Silver       ppm       ASTM D5185m       >2       0       0          Aluminum       ppm       ASTM D5185m       >20       3       2          Lead       ppm       ASTM D5185m       >330       4       5          Copper       ppm       ASTM D5185m       >330       4       5          Tin       ppm       ASTM D5185m       >15       <1		Nickel	ppm	ASTM D5185m	>5	2	<1	
Aluminum       ppm       ASTM D5186m       >20       3       3          Lead       ppm       ASTM D5186m       >40       3       2          Copper       ppm       ASTM D5186m       >40       5           Tin       ppm       ASTM D5186m       >15       <1		Titanium	ppm	ASTM D5185m	>2	0	<1	
Lead       ppm       ASTM D5165m       >>40       3       2          Copper       ppm       ASTM D5165m       >>33.0       4       5          Tin       ppm       ASTM D5165m       >>15       <1		Silver	ppm	ASTM D5185m	>2	0	0	
Copper         ppm         ASTM D5185m         >330         4         5            Tin         ppm         ASTM D5185m         >15         <1		Aluminum	ppm	ASTM D5185m	>20	3	3	
Copper       ppm       ASTM D5185m       >330       4       5          Tin       ppm       ASTM D5185m       >15       <1		Lead	ppm			3	2	
TinppmASTM D5185m>15<11VanadiumppmASTM D5185m00<10		Copper		ASTM D5185m	>330	4	5	
Vanadium         ppm         ASTM D5185m         0         <1            Cadmium         ppm         ASTM D5185m         0         0            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         16         26            Barium         ppm         ASTM D5185m         0         0         0            Molybdenum         ppm         ASTM D5185m         0         111         47            Manganese         ppm         ASTM D5185m         1010         972         677            Calcium         ppm         ASTM D5185m         1070         1116         1398            Magnesium         ppm         ASTM D5185m         1270         1315         1059            Calcium         ppm         ASTM D5185m         260         3672         2974            Sulfur         ppm         ASTM D5185m         225         12         6            Sodium         ppm         ASTM D5185m         >20         280         20						<1	1	
CadmiumpmASTM D5185m00ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m01626BariumppmASTM D5185m000MolybdenumppmASTM D5185m6011147MagnesiumppmASTM D5185m1010972677CalciumppmASTM D5185m107011161398PhosphorusppmASTM D5185m107011161398ZincppmASTM D5185m127013151059SulfurppmASTM D5185m206036722974SodiumppmASTM D5185m>25126PotassiumppmASTM D5185m>25126SodiumpmASTM D5185m>202RINFRA-REDmethodlimit/basecurrenthistory1history2Sooti %%*ASTM D7644>2010.48.1NitrationAbs/m*ASTM D7415>30020.521.3FLUID DEGRA-DTIONmethodlimit/basecurrenthistory1history2Sotiation%*ASTM D7415>3020.521.3NitrationAbs/m*ASTM D7415>3020.521.3Sulfation <td< td=""><td></td><td></td><td></td><td></td><td></td><td>&lt;1</td><td></td></td<>							<1	
BoronppmASTM D518sm01626BariumppmASTM D518sm000MolybdenumppmASTM D518sm011147ManganeseppmASTM D518sm0<		Cadmium						
Barium       ppm       ASTM D5165m       0       0       0          Molybdenum       ppm       ASTM D5165m       60       111       47          Manganesee       ppm       ASTM D5165m       0          Magnesium       ppm       ASTM D5165m       1010       972       677          Calcium       ppm       ASTM D5165m       1070       1116       1398          Phosphorus       ppm       ASTM D5165m       1150       967       848          Zinc       ppm       ASTM D5165m       1270       1315       1059          Sulfur       ppm       ASTM D5165m       2600       3672       2974          Solicon       ppm       ASTM D5165m       2060       3672       2974          Sulfur       ppm       ASTM D5165m       2060       3672       2974          Solicon       ppm       ASTM D5165m       2060       20           Solicon       ppm       ASTM D5165m       >20       260       20          Glycol       %       'A		ADDITIVES		method	limit/base	current	history1	history2
Barium       ppm       ASTM D5185m       0       0       0          Molybdenum       ppm       ASTM D5185m       60       111       47          Manganese       ppm       ASTM D5185m       0           Magnesium       ppm       ASTM D5185m       1010       972       677          Calcium       ppm       ASTM D5185m       1070       1116       1398          Phosphorus       ppm       ASTM D5185m       1070       1315       1059          Sulfur       ppm       ASTM D5185m       1270       1315       1059          Sulfur       ppm       ASTM D5185m       2060       3672       2974          Solicon       ppm       ASTM D5185m       2060       3672       2974          Sulfur       ppm       ASTM D5185m       2060       3672       2974          Solicon       ppm       ASTM D5185m       2060       20           Solicon       ppm       ASTM D5185m       >20       260       20          Glycol								
Maganesee       ppm       ASTM D5185m       0       <1		Boron	ppm	ASTM D5185m	0	16	26	
Manganesee       ppm       ASTM D5185m       0       <1       <1          Magnesium       ppm       ASTM D5185m       1010       972       677          Calcium       ppm       ASTM D5185m       1070       1116       1398          Calcium       ppm       ASTM D5185m       1150       967       848          Phosphorus       ppm       ASTM D5185m       1270       1315       1059          Sulfur       ppm       ASTM D5185m       2060       3672       2974          Sulfur       ppm       ASTM D5185m       2060       3672       2974          Sulfur       ppm       ASTM D5185m       2060       3672       2974          Sulfur       ppm       ASTM D5185m       206       3672       2974          Sulfur       ppm       ASTM D5185m       225       12       6           Solicon       ppm       ASTM D5185m       >20       AS80       2           Solicon       ppm       ASTM D5185m       >20       AS80       2 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
Magnesium       ppm       ASTM D5185m       1010       972       677          Calcium       ppm       ASTM D5185m       1070       1116       1398          Phosphorus       ppm       ASTM D5185m       1150       967       848          Zinc       ppm       ASTM D5185m       1270       1315       1059          Sulfur       ppm       ASTM D5185m       2060       3672       2974          Solform       ppm       ASTM D5185m       2060       3672       2974          Solform       ppm       ASTM D5185m       2060       3672       2974          Solform       ppm       ASTM D5185m       206       12       6          Solform       ppm       ASTM D5185m       >20       12       6          Solform       ppm       ASTM D5185m       >20       280       2          Glycol       %       *ASTM D5185m       >20       NEG       NEG          Solfarion       %       *ASTM D7844       >4       0.2       0.2          Nitration       Abs/rm		Barium	ppm	ASTM D5185m	0	0	0	
Calcium       ppm       ASTM D5185m       1070       1116       1398          Phosphorus       ppm       ASTM D5185m       1150       967       848          Zinc       ppm       ASTM D5185m       1270       1315       1059          Sulfur       ppm       ASTM D5185m       2060       3672       2974          CONTAMINANTS       method       limit/base       current       history1       history2         Silicon       ppm       ASTM D5185m       >25       12       6          Sodium       ppm       ASTM D5185m       >20       2800       2          Potassium       ppm       ASTM D5185m       >20       2800       2          Glycol       %       *ASTM D2982       NEG       NEG           Soot %       %       *ASTM D7844       >4       0.2       0.2           Nitration       Abs/m       *ASTM D7624       >20       10.4       8.1          Sulfation       Abs/m       *ASTM D714       >30       20.5       21.3          Nitration		Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0 60	0 111	0 47	
PhosphorusppmASTM D5185m1150967848ZincppmASTM D5185m127013151059SulfurppmASTM D5185m206036722974CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25126SodiumppmASTM D5185m>207084PotassiumppmASTM D5185m>202802Glycol%*ASTM D2982Currenthistory1history2Soot %%*ASTM D7844>40.20.2NitrationAbs/rm*ASTM D7445>3020.521.3FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/rm*ASTM D7414>2517.318.0		Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0	0 111 <1	0 47 <1	
ZincppmASTM D5185m127013151059SulfurppmASTM D5185m206036722974CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25126SodiumppmASTM D5185m>207084PotassiumppmASTM D5185m>2028002Glycol%*ASTM D2982NEGNEGINFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>40.20.2NitrationAbs/cm*ASTM D7624>2010.48.1SulfationAbs/imm*ASTM D715>3020.521.3FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/imm*ASTM D7414>2517.318.0		Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010	0 111 <1 972	0 47 <1 677	
SulfurppmASTM D5185m206036722974CONTAMINATSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25126SodiumppmASTM D5185m>207084PotassiumppmASTM D5185m>202802Glycol%*ASTM D5185m>20NEGNEGINFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>40.20.2NitrationAbs/cm*ASTM D7844>2010.48.1SulfationAbs/tm*ASTM D7445>3020.521.3FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/tm*ASTM D7445>2517.318.0		Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070	0 111 <1 972 1116	0 47 <1 677 1398	  
SiliconppmASTM D5185m>25126SodiumppmASTM D5185m▲<708		Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150	0 111 <1 972 1116 967	0 47 <1 677 1398 848	   
SodiumppmASTM D5185m▲ 7084PotassiumppmASTM D5185m>20▲ 2802Glycol%*ASTM D2982NEGNEGINFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>40.20.2NitrationAbs/cm*ASTM D7624>2010.48.1SulfationAbs/.1mm*ASTM D715>3020.521.3FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2517.318.0		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270	0 111 <1 972 1116 967 1315	0 47 <1 677 1398 848 1059	   
SodiumppmASTM D5185m▲ 7084PotassiumppmASTM D5185m>20▲ 2802Glycol%*ASTM D2982NEGNEGINFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>40.20.2NitrationAbs/cm*ASTM D7624>2010.48.1SulfationAbs/.1mm*ASTM D715>3020.521.3FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2517.318.0		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060	0 111 <1 972 1116 967 1315 3672	0 47 <1 677 1398 848 1059 2974	    
PotassiumppmASTM D5185m>202802Glycol%*ASTM D2982NEGNEGINFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>40.20.2NitrationAbs/cm*ASTM D7624>2010.48.1SulfationAbs/.1mm*ASTM D7415>3020.521.3FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2517.318.0		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 Iimit/base	0 111 <1 972 1116 967 1315 3672 current	0 47 <1 677 1398 848 1059 2974 history1	    
Glycol%*ASTM D2982NEGINFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>40.20.2NitrationAbs/cm*ASTM D7624>2010.48.1SulfationAbs/.1mm*ASTM D7415>3020.521.3FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2517.318.0		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 Iimit/base	0 111 <1 972 1116 967 1315 3672 current 12	0 47 <1 677 1398 848 1059 2974 history1 6	     history2
Soot %       %       *ASTM D7844       >4       0.2       0.2          Nitration       Abs/cm       *ASTM D7624       >20       10.4       8.1          Sulfation       Abs/.1mm       *ASTM D7415       >30       20.5       21.3          FLUID DEGRADATION       method       limit/base       current       history1       history2         Oxidation       Abs/.1mm       *ASTM D7414       >25       17.3       18.0		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25	0 111 <1 972 1116 967 1315 3672 current 12 ▲ 708	0 47 <1 677 1398 848 1059 2974 history1 6 4	     history2
Soot %       %       *ASTM D7844       >4       0.2       0.2          Nitration       Abs/cm       *ASTM D7624       >20       10.4       8.1          Sulfation       Abs/.1mm       *ASTM D7415       >30       20.5       21.3          FLUID DEGRADATION       method       limit/base       current       history1       history2         Oxidation       Abs/.1mm       *ASTM D7414       >25       17.3       18.0		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm tTS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25	0 111 <1 972 1116 967 1315 3672 current 12 ▲ 708 ▲ 280	0 47 <1 677 1398 848 1059 2974 history1 6 4 2	     history2
NitrationAbs/cm*ASTM D7624>2010.48.1SulfationAbs/.1mm*ASTM D7415>3020.521.3FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2517.318.0		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Silicon Sodium Potassium Glycol	ppm ppm ppm ppm ppm ppm ppm ppm ppm tTS	ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	0 111 <1 972 1116 967 1315 3672 <u>current</u> 12 ▲ 708 ▲ 280 NEG	0 47 <1 677 1398 848 1059 2974 history1 6 4 2 2 NEG	     history2
SulfationAbs/.1mm*ASTM D7415>3020.521.3FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2517.318.0		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm <b>ITS</b> ppm ppm ppm	ASTM D5185m ASTM D5185m *ASTM D2982	0 60 0 1010 1070 1150 1270 2060 Iimit/base >25 >20	0 111 <1 972 1116 967 1315 3672 current 12 ▲ 708 ▲ 280 NEG current	0 47 <1 677 1398 848 1059 2974 history1 6 4 2 2 NEG history1	     history2     history2
FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2517.318.0		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D2982 method *ASTM D7844	0 60 0 1010 1070 1150 1270 2060 <b>limit/base</b> >20 <b>limit/base</b> >4	0 111 <1 972 1116 967 1315 3672 current 12 ▲ 708 ▲ 280 NEG current 0.2	0 47 <1 677 1398 848 1059 2974 history1 6 4 2 2 NEG history1 0.2	     history2    history2
Oxidation         Abs/.1mm         *ASTM D7414         >25         17.3         18.0		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm VTS ppm ppm ppm ppm ppm ppm pm pm pm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D2982 *ASTM D2982 *ASTM D7844	0 60 0 1010 1070 1150 1270 2060 <b>limit/base</b> >20 <b>limit/base</b> >4 >20	0 111 <1 972 1116 967 1315 3672 <urrent 12 ▲ 708 ▲ 280 NEG Current 0.2 10.4</urrent 	0 47 <1 677 1398 848 1059 2974 history1 6 4 2 2 NEG NEG history1 0.2 8.1	     history2    history2
		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 *ASTM D2982 *ASTM D7844 *ASTM D7844 *ASTM D7844	0 60 0 1010 1070 1150 1270 2060 imit/base >25 >20 imit/base >4 >20 >30	0 111 <1 972 1116 967 1315 3672 current 12 ▲ 708 ▲ 280 NEG 0.2 10.4 20.5	0 47 <1 677 1398 848 1059 2974 history1 6 4 2 NEG NEG history1 0.2 8.1 21.3	     history2    history2
Base Number (BN) mg KOH/g ASTM D2896 9.8 8.3 8.9		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 *ASTM D2982 *ASTM D7844 *ASTM D7844 *ASTM D7844	0 60 0 1010 1070 1150 1270 2060 imit/base >25 >20 imit/base >4 >20 >30	0 111 <1 972 1116 967 1315 3672 current 12 ▲ 708 ▲ 280 NEG 0.2 10.4 20.5	0 47 <1 677 1398 848 1059 2974 history1 6 4 2 NEG NEG history1 0.2 8.1 21.3	     history2    history2
		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 Method *ASTM D7844 *ASTM D7624 *ASTM D7615	0 60 0 1010 1070 1150 1270 2060 imit/base >25 >20 imit/base >4 >20 >30 imit/base	0 111 <1 972 1116 967 1315 3672 <urrent 12 ▲ 708 ▲ 280 NEG Current 0.2 10.4 20.5 <urrent< td=""><td>0 47 &lt;1 677 1398 848 1059 2974 history1 6 4 2 NEG NEG NEG 0.2 8.1 21.3 history1</td><td>      history2   history2    history2</td></urrent<></urrent 	0 47 <1 677 1398 848 1059 2974 history1 6 4 2 NEG NEG NEG 0.2 8.1 21.3 history1	      history2   history2    history2



## **OIL ANALYSIS REPORT**



Submitted By: BECKY FLETCHER

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