

### **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

# Poplar Gap B

Component • Natural Gas Engine Fluid PETRO CANADA SENTRON LD 3000 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

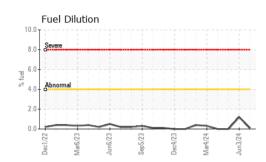
#### Fluid Condition

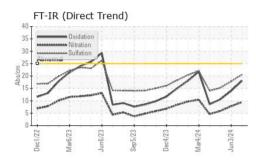
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

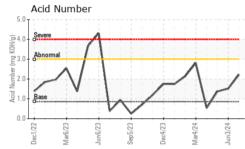
Sample Date       Client Info       08 Jul 2024       03 Jun 2024       01 May 2024         Machine Age       hrs       Client Info       89278       88449       87696         Dil Age       hrs       Client Info       2707       1878       1125         Dil Changed       Client Info       Not Changd       Not Changd       Not Changd       Not Changd         Sample Status       Client Info       Not RMAL       Not Changd       Not Changd       Not MAL         CONTAMINATION       method       imit/base       current       history1       history2         Water       WC Method       >0.1       NEG       NEG       NEG         WEAR METALS       method       imit/base       current       history1       history2         Iron       ppm       ASTM D5185m       >0       0       <1       1         Nickel       ppm       ASTM D5185m       >0       0       <1       1         Namium       ppm       ASTM D5185m       >3       0       <1       1         Namium       ppm       ASTM D5185m       3       1       0       <1	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Machine Age       hrs       Client Info       89278       88449       87696         Dil Age       hrs       Client Info       2707       1878       1125         Dil Changed       Client Info       2707       1878       1125         Dil Changed       Client Info       Not Changd       Not Changd       Not Changd         Sample Status       Client Info       Imit/base       current       History1       History2         Water       WC Method >0.1       NEG       NEG       NEG         WEAR METALS       method       limit/base       current       History1       History2         Kron       ppm       ASTM D5185m       >50       6       6       4         Chromium       ppm       ASTM D5185m       >2       0       0       <1         Titanium       ppm       ASTM D5185m       >3       0       0       <1       1         Lead       ppm       ASTM D5185m       30       0       0       <1       1         Vanadium       ppm       ASTM D5185m       0       0       <1       0       <1	Sample Number		Client Info		PCA0117272	PCA0112044	PCA0117156
Dil Age       hrs       Client Info       2707       1878       1125         Dil Changed       Client Info       Not Changd       Not Changd       Not Changd         Sample Status       Image       Image       Not Changd       Not Changd       Not Changd         CONTAMINATION       method       Imit/base       current       History1       History2         Water       WC Method       >0.1       NEG       NEG       NEG         CONTAMINATION       method       Imit/base       current       History1       History2         Water       WC Method       >0.1       NEG       NEG       NEG         Chromium       ppm       ASTM 05185m       >0       6       6       4         Nickel       ppm       ASTM 05185m       >2       0       <1       1         Nickel       ppm       ASTM 05185m       >3       0       0       0         Alumium       ppm       ASTM 05185m       >3       0       <1       1         Vanadium       ppm       ASTM 05185m       >3       0       <1       1	Sample Date		Client Info		08 Jul 2024	03 Jun 2024	01 May 2024
Oli Changed   Client Info   Not Changd NORMAL   Not Changd NORMAL   Not Changd NORMAL     CONTAMINATION   method   limit/base   current   history1   history2     Water   WC Method   >0.1   NEG   NEG   NEG     WEAR METALS   method   limit/base   current   history1   history2     Iron   ppm   ASTM D5185m   >50   6   6   4     Chromium   ppm   ASTM D5185m   >4   <1   <1   1     Nickel   ppm   ASTM D5185m   >2   0   0   <1     Neiten   ppm   ASTM D5185m   >3   0   0   0     Neaduminum   ppm   ASTM D5185m   >30   2   4   2     Copper   ppm   ASTM D5185m   >30   2   4   2     Cadmium   ppm   ASTM D5185m   >30   0   0   <1     Astm D5185m   >3   0   0   <1   1     Astm D5185m   >3   0   0   <1   1     Astm D5185m   0   0   <1   1   1     Vanadium   ppm   ASTM D5185m   25   28   24 <t< th=""><th>Machine Age</th><th>hrs</th><th>Client Info</th><th></th><th>89278</th><th>88449</th><th>87696</th></t<>	Machine Age	hrs	Client Info		89278	88449	87696
Sample Status       NORMAL       NORMAL       NORMAL       NORMAL       NORMAL         CONTAMINATION       method       limit/base       current       history1       history2         Water       WC Method       >0.1       NEG       NEG       NEG         WEAR METALS       method       limit/base       current       history1       history2         tron       ppm       ASTM 05185m       >50       6       6       4         Nickel       ppm       ASTM 05185m       >2       0       0       <1         Titanium       ppm       ASTM 05185m       >3       0       0       0         Aluminum       ppm       ASTM 05185m       >3       0       0       <1         Silver       ppm       ASTM 05185m       >3       0       0       <1         Copper       ppm       ASTM 05185m       >3       0       0       <1         Vanadium       ppm       ASTM 05185m       2       1       0       <1         Copper       ppm       ASTM 05185m       2       3       6       4 </th <th>Oil Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>2707</th> <th>1878</th> <th>1125</th>	Oil Age	hrs	Client Info		2707	1878	1125
CONTAMINATION       method       limit/base       current       history1       history2         Water       WC Method       >0.1       NEG       NEG       NEG         Wear       WC Method       >0.1       NEG       NEG       NEG         WEAR METALS       method       imit/base       current       history1       history2         Iron       ppm       ASTM D5185m       >50       6       6       4         Chromium       ppm       ASTM D5185m       >2       0       <1       <1         Nickel       ppm       ASTM D5185m       >3       0       0       <1         Aluminum       ppm       ASTM D5185m       >3       0       0       <1         Lead       ppm       ASTM D5185m       >30       2       4       2         Copper       ppm       ASTM D5185m       >30       0       0       <1         Vanadium       ppm       ASTM D5185m       0       0       <1       0         Adamating       pASTM D5185m       5       <1       0       0       0	Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Water       WC Method       >0.1       NEG       NEG       NEG         WEAR METALS       method       limit/base       current       history1       history2         Iron       ppm       ASTM D5185m       >50       6       6       4         Chromium       ppm       ASTM D5185m       >2       0       0       <1         Nickel       ppm       ASTM D5185m       >2       0       0       <1         Silver       ppm       ASTM D5185m       >3       0       0       0         Aduminum       ppm       ASTM D5185m       >35       1       5       2       <1         Lead       ppm       ASTM D5185m       >30       2       4       2       2         Anadum       ppm       ASTM D5185m       >35       1       5       2       1       1         Vanadum       ppm       ASTM D5185m       0       0       <1       1         Vanadum       ppm       ASTM D5185m       1       0       0       0         Cademium       ppm       ASTM D5185m       2<	Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS       method       limit/base       current       history1       history2         iron       ppm       ASTM D5185m       >50       6       6       4         Chromium       ppm       ASTM D5185m       >2       0       0       <1         Nickel       ppm       ASTM D5185m       >2       0       0       <1         Nickel       ppm       ASTM D5185m       >3       0       0       0         Silver       ppm       ASTM D5185m       >3       0       0       0         Lead       ppm       ASTM D5185m       >3       0       0       0       <1         Vanadium       ppm       ASTM D5185m       >35       1       5       2       1         Vanadium       ppm       ASTM D5185m       >35       1       0       0       <1         ADDITVES       method       limit/base       current       history1       history2         Boron       ppm       ASTM D5185m       5       21       0       0         Magnesum       ppm       ASTM D5185m       2	CONTAMINAT	ION	method	limit/base	current	history1	history2
ron       ppm       ASTM D5185m       >50       6       6       4         Chromium       ppm       ASTM D5185m       >4       <1       <1       <1         Nickel       ppm       ASTM D5185m       >2       0       0       <1         Silver       ppm       ASTM D5185m       >3       0       0       0         Aduminum       ppm       ASTM D5185m       >3       0       0       0         Aduminum       ppm       ASTM D5185m       >30       2       4       2         Copper       ppm       ASTM D5185m       >30       2       4       2         Vanadium       ppm       ASTM D5185m       >4       0       1       1         Vanadium       ppm       ASTM D5185m       0       0       <1       1         Adaminum       ppm       ASTM D5185m       0       0       <1       0         Adaminum       ppm       ASTM D5185m       1       0       0       0       0         Barium       ppm       ASTM D5185m       1       0       0 <th>Water</th> <th></th> <th>WC Method</th> <th>&gt;0.1</th> <th>NEG</th> <th>NEG</th> <th>NEG</th>	Water		WC Method	>0.1	NEG	NEG	NEG
Dromium       ppm       ASTM D5185m       >4       <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel       ppm       ASTM D5185m       >2       0       0       <1	Iron	ppm	ASTM D5185m	>50	6	6	4
Titanium       ppm       ASTM D5185m       <1	Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Silver       ppm       ASTM D5185m       >3       0       0       0         Aluminum       ppm       ASTM D5185m       >9       2       2       <1         Lead       ppm       ASTM D5185m       >30       2       4       2         Copper       ppm       ASTM D5185m       >35       1       5       2         Tin       ppm       ASTM D5185m       >4       0       1       1         Vanadium       ppm       ASTM D5185m       0       0       <1       1         Cadmium       ppm       ASTM D5185m       0       0       <1       0       0         Boron       ppm       ASTM D5185m       1       0       0       0       0         Barium       ppm       ASTM D5185m       1       0       0       0       0         Magaesee       ppm       ASTM D5185m       122.0       1461       1561       1386         Phosphorus       ppm       ASTM D5185m       122.0       1461       1561       1386         Solifur       ppm       ASTM D5185m	Nickel	ppm	ASTM D5185m	>2	0	0	<1
Aluminum       ppm       ASTM D5185m       >9       2       2       <1	Titanium	ppm	ASTM D5185m		<1	0	<1
Lead       ppm       ASTM D5185m       >30       2       4       2         Copper       ppm       ASTM D5185m       >35       1       5       2         Tin       ppm       ASTM D5185m       >4       0       1       1         Vanadium       ppm       ASTM D5185m       >4       0       0       <1         Cadmium       ppm       ASTM D5185m       0       0       <1       1         ADDITIVES       method       limit/base       current       history1       history2         Boron       ppm       ASTM D5185m       5       <1       0       0       0         Barium       ppm       ASTM D5185m       1       0       0       0       0         Magnesee       ppm       ASTM D5185m       2       3       6       4         Magnesium       ppm       ASTM D5185m       120       1461       1561       1386         Phosphorus       ppm       ASTM D5185m       120       1461       1561       1386         Sulfur       ppm       ASTM D5185m       1995	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper       ppm       ASTM D5185m       >35       1       5       2         Tin       ppm       ASTM D5185m       >4       0       1       1         Vanadium       ppm       ASTM D5185m       0       0       <1         Cadmium       ppm       ASTM D5185m       0       0       <1         ADDITIVES       method       limit/base       current       history1       history2         Boron       ppm       ASTM D5185m       5       <1       0       0       0         Barium       ppm       ASTM D5185m       1       0       0       0       0         Magnese       ppm       ASTM D5185m       2       3       6       4         Magnesium       ppm       ASTM D5185m       120       1461       1561       1386         Phosphorus       ppm       ASTM D5185m       1220       1461       1561       1386         Sulfur       ppm       ASTM D5185m       1985       2455       3025       2734         CONTAMINANTS       method       limit/base       current       his	Aluminum	ppm	ASTM D5185m	>9	2	2	<1
Tin       ppm       ASTM D5185m       >4       0       1       1         Vanadium       ppm       ASTM D5185m       0       0       <1	Lead	ppm	ASTM D5185m	>30	2	4	2
Vanadium       ppm       ASTM D5185m       0       0       <1	Copper	ppm	ASTM D5185m	>35	1	5	2
Cadmium       ppm       ASTM D5185m       0       < <1	Tin	ppm	ASTM D5185m	>4	0	1	1
ADDITIVES       method       limit/base       current       history1       history2         Boron       ppm       ASTM D5185m       5       <1       0       0         Barium       ppm       ASTM D5185m       1       0       0       0         Manganese       ppm       ASTM D5185m       2       3       6       4         Magnesium       ppm       ASTM D5185m       1       0       2       <1         Magnesium       ppm       ASTM D5185m       5       25       28       24         Calcium       ppm       ASTM D5185m       1220       1461       1561       1386         Phosphorus       ppm       ASTM D5185m       1298       321       342       316         Zinc       ppm       ASTM D5185m       350       413       425       385         Sulfur       ppm       ASTM D5185m       1995       2455       3025       2734         CONTAMINANTS       method       limit/base       current       history1       history2         Solicon       ppm       ASTM D5185m       >20	Vanadium	ppm	ASTM D5185m		0	0	<1
Boron       ppm       ASTM D5185m       5       <1	Cadmium	ppm	ASTM D5185m		0	0	<1
Barium       ppm       ASTM D5185m       1       0       0       0         Molybdenum       ppm       ASTM D5185m       2       3       6       4         Manganese       ppm       ASTM D5185m       1       0       2       <1         Magnesium       ppm       ASTM D5185m       5       25       28       24         Calcium       ppm       ASTM D5185m       1220       1461       1561       1386         Phosphorus       ppm       ASTM D5185m       298       321       342       316         Zinc       ppm       ASTM D5185m       350       4113       425       385         Sulfur       ppm       ASTM D5185m       1995       2455       3025       2734         CONTAMINANTS       method       limit/base       current       history1       history2         Silicon       ppm       ASTM D5185m       >20       0       2       0         Potassium       ppm       ASTM D5185m       >20       2       5       2         Fuel       %       ASTM D5185m       >20 <t< th=""><th>ADDITIVES</th><th></th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></t<>	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum       ppm       ASTM D5185m       2       3       6       4         Manganese       ppm       ASTM D5185m       1       0       2       <1         Magnesium       ppm       ASTM D5185m       5       25       28       24         Calcium       ppm       ASTM D5185m       1220       1461       1561       1386         Phosphorus       ppm       ASTM D5185m       298       321       342       316         Zinc       ppm       ASTM D5185m       350       413       425       385         Sulfur       ppm       ASTM D5185m       1995       2455       3025       2734         CONTAMINANTS       method       limit/base       current       history1       history2         Silicon       ppm       ASTM D5185m       >20       0       2       0         Potassium       ppm       ASTM D5185m       >20       2       5       2         Fuel       %       ASTM D5185m       >20       2       5       2         Sootium       ppm       ASTM D5185m       >20	Boron	ppm	ASTM D5185m	5	<1	0	0
Manganese       ppm       ASTM D5185m       1       0       2       <1	Barium	ppm	ASTM D5185m	1	0	0	0
Magnesium       ppm       ASTM D5185m       5       25       28       24         Calcium       ppm       ASTM D5185m       1220       1461       1561       1386         Phosphorus       ppm       ASTM D5185m       298       321       342       316         Zinc       ppm       ASTM D5185m       350       413       425       385         Sulfur       ppm       ASTM D5185m       1995       2455       3025       2734         CONTAMINANTS       method       limit/base       current       history1       history2         Silicon       ppm       ASTM D5185m       >+100       2       4       3         Sodium       ppm       ASTM D5185m       >20       0       2       0         Potassium       ppm       ASTM D5185m       >20       2       5       2         Fuel       %       ASTM D5185m       >20       2       5       2         Soto       ppm       ASTM D5185m       >20       0       0       0         Nitration       Abs/cm       *ASTM D7844       0       <	Molybdenum	ppm					4
Calcium       ppm       ASTM D5185m       1220       1461       1561       1386         Phosphorus       ppm       ASTM D5185m       298       321       342       316         Zinc       ppm       ASTM D5185m       350       413       425       385         Sulfur       ppm       ASTM D5185m       1995       2455       3025       2734         CONTAMINANTS       method       limit/base       current       history1       history2         Silicon       ppm       ASTM D5185m       >410       2       4       3         Sodium       ppm       ASTM D5185m       >20       0       2       0         Potassium       ppm       ASTM D5185m       >20       0       2       0         Fuel       %       ASTM D5185m       >20       0       2       0         INFRA-RED       method       limit/base       current       history1       history2         Soot %       %       *ASTM D7624       >15       9.5       7.8       5.9         Sulfation       Abs/:mm<*ASTM D7415       >25       20.6 </th <th>Manganese</th> <th>nnm</th> <th>ASTM D5185m</th> <th>1</th> <th>0</th> <th>2</th> <th>.4</th>	Manganese	nnm	ASTM D5185m	1	0	2	.4
Phosphorus       ppm       ASTM D5185m       298       321       342       316         Zinc       ppm       ASTM D5185m       350       413       425       385         Sulfur       ppm       ASTM D5185m       1995       2455       3025       2734         CONTAMINANTS       method       limit/base       current       history1       history2         Silicon       ppm       ASTM D5185m       >+100       2       4       3         Sodium       ppm       ASTM D5185m       >+100       2       4       3         Sodium       ppm       ASTM D5185m       >20       0       2       0         Potassium       ppm       ASTM D5185m       >20       2       5       2         Fuel       %       ASTM D5854       >4.0       0.1       1.2       0.0         INFRA-RED       method       limit/base       current       history1       history2         Soot %       %       *ASTM D7844       0       0       0       0         Nitration       Abs/.1mm<*ASTM D7624       >15       9.5		ppm			•		< 1
Zinc       ppm       ASTM D5185m       350       413       425       385         Sulfur       ppm       ASTM D5185m       1995       2455       3025       2734         CONTAMINANTS       method       limit/base       current       history1       history2         Silicon       ppm       ASTM D5185m       >+100       2       4       3         Sodium       ppm       ASTM D5185m       >+20       0       2       0         Potassium       ppm       ASTM D5185m       >20       2       5       2         Fuel       %       ASTM D5185m       >20       0.1       1.2       0.0         INFRA-RED       method       limit/base       current       history1       history2         Soot %       %       *ASTM D7844       0       0       0       0         Nitration       Abs/cm       *ASTM D7624       >15       9.5       7.8       5.9         Sulfation       Abs/.1mm       *ASTM D7415       >25       20.6       17.8       15.2         FLUID DEGRADATION       method       limit/base	Magnesium				-		
Sulfur       ppm       ASTM D5185m       1995       2455       3025       2734         CONTAMINANTS       method       limit/base       current       history1       history2         Silicon       ppm       ASTM D5185m       >+100       2       4       3         Sodium       ppm       ASTM D5185m       >20       0       2       0         Potassium       ppm       ASTM D5185m       >20       2       5       2         Fuel       %       ASTM D5185m       >20       0.1       1.2       0.0         INFRA-RED       method       limit/base       current       history1       history2         Soot %       %       *ASTM D7844       0       0       0       0         Nitration       Abs/cm       *ASTM D7624       >15       9.5       7.8       5.9         Sulfation       Abs/.1mm       *ASTM D7415       >25       20.6       17.8       15.2         FLUID DEGRADATION       method       limit/base       current       history1       history2         Oxidation       Abs/.1mm       *ASTM D7414	Magnesium Calcium	ppm	ASTM D5185m	5	25	28	24
CONTAMINANTS       method       limit/base       current       history1       history2         Silicon       ppm       ASTM D5185m       >+100       2       4       3         Sodium       ppm       ASTM D5185m       >20       0       2       0         Potassium       ppm       ASTM D5185m       >20       2       5       2         Fuel       %       ASTM D5185m       >20       2       0.0         INFRA-RED       method       limit/base       current       history1       history2         Soot %       %       *ASTM D7844       0       0       0       0         Nitration       Abs/cm       *ASTM D7624       >15       9.5       7.8       5.9         Sulfation       Abs/.1mm       *ASTM D7415       >25       20.6       17.8       15.	-	ppm ppm	ASTM D5185m ASTM D5185m	5 1220	25 1461	28 1561	24 1386
Silicon       ppm       ASTM D5185m       >+100       2       4       3         Sodium       ppm       ASTM D5185m       >20       0       2       0         Potassium       ppm       ASTM D5185m       >20       2       5       2         Fuel       %       ASTM D5185m       >20       2       5       2         Fuel       %       ASTM D5185m       >20       2       5       2         Fuel       %       ASTM D5185m       >20       0.1       1.2       0.0         INFRA-RED       method       limit/base       current       history1       history2         Soot %       %       *ASTM D7844       0       0       0       0         Nitration       Abs/cm       *ASTM D7624       >15       9.5       7.8       5.9         Sulfation       Abs/.1mm       *ASTM D7415       >25       20.6       17.8       15.2         FLUID DEGRADATION       method       limit/base       current       history1       history2         Oxidation       Abs/.1mm       *ASTM D7414       >20 <t< th=""><th>Calcium</th><th>ppm ppm ppm</th><th>ASTM D5185m ASTM D5185m ASTM D5185m</th><th>5 1220 298</th><th>25 1461 321</th><th>28 1561 342</th><th>24 1386 316</th></t<>	Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	5 1220 298	25 1461 321	28 1561 342	24 1386 316
Sodium       ppm       ASTM D5185m       >20       0       2       0         Potassium       ppm       ASTM D5185m       >20       2       5       2         Fuel       %       ASTM D3524       >4.0       0.1       1.2       0.0         INFRA-RED       method       limit/base       current       history1       history2         Soot %       %       *ASTM D7844       0       0       0       0         Nitration       Abs/cm       *ASTM D7624       >15       9.5       7.8       5.9         Sulfation       Abs/.1mm       *ASTM D7415       >25       20.6       17.8       15.2         FLUID DEGRADATION       method       limit/base       current       history1       history2         Oxidation       Abs/.1mm       *ASTM D7414       >20       18.1       14.0       10.6         Acid Number (AN)       mg KOH/g       ASTM D8045       0.86       2.22       1.51       1.37	Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 1220 298 350	25 1461 321 413	28 1561 342 425	24 1386 316 385
Potassium       ppm       ASTM D5185m       >20       2       5       2         Fuel       %       ASTM D3524       >4.0       0.1       1.2       0.0         INFRA-RED       method       limit/base       current       history1       history2         Soot %       %       *ASTM D7844       0       0       0       0         Nitration       Abs/cm       *ASTM D7844       >15       9.5       7.8       5.9         Sulfation       Abs/.1mm       *ASTM D7415       >25       20.6       17.8       15.2         FLUID DEGRADATION       method       limit/base       current       history1       history2         Oxidation       Abs/.1mm       *ASTM D7414       >20       18.1       14.0       10.6         Acid Number (AN)       mg KOH/g       ASTM D8045       0.86       2.22       1.51       1.37	Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	5 1220 298 350 1995 limit/base	25 1461 321 413 2455 current	28 1561 342 425 3025 history1	24 1386 316 385 2734 history2
Fuel       %       ASTM D3524       >4.0       0.1       1.2       0.0         INFRA-RED       method       limit/base       current       history1       history2         Soot %       %       *ASTM D7844       0       0       0       0         Nitration       Abs/cm       *ASTM D7844       0       0       0       0         Sulfation       Abs/.1mm       *ASTM D7624       >15       9.5       7.8       5.9         Sulfation       Abs/.1mm       *ASTM D7415       >25       20.6       17.8       15.2         FLUID DEGRADATION       method       limit/base       current       history1       history2         Oxidation       Abs/.1mm       *ASTM D7414       >20       18.1       14.0       10.6         Acid Number (AN)       mg KOH/g       ASTM D8045       0.86       2.22       1.51       1.37	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 1220 298 350 1995 <i>limit/base</i> >+100	25 1461 321 413 2455 current 2	28 1561 342 425 3025 history1 4	24 1386 316 385 2734 history2 3
INFRA-RED       method       limit/base       current       history1       history2         Soot %       %       *ASTM D7844       0       0       0       0         Nitration       Abs/cm       *ASTM D7624       >15       9.5       7.8       5.9         Sulfation       Abs/.1mm       *ASTM D7415       >25       20.6       17.8       15.2         FLUID DEGRADATION       method       limit/base       current       history1       history2         Oxidation       Abs/.1mm       *ASTM D7414       >20       18.1       14.0       10.6         Acid Number (AN)       mg KOH/g       ASTM D8045       0.86       2.22       1.51       1.37	Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 1220 298 350 1995 <i>limit/base</i> >+100	25 1461 321 413 2455 current 2 0	28 1561 342 425 3025 history1 4 2	24 1386 316 385 2734 history2 3 0
Soot %       %       *ASTM D7844       0       0       0       0         Nitration       Abs/cm       *ASTM D7624       >15       9.5       7.8       5.9         Sulfation       Abs/.1mm       *ASTM D7415       >25       20.6       17.8       15.2         FLUID DEGRADATION       method       limit/base       current       history1       history2         Oxidation       Abs/.1mm       *ASTM D7414       >20       18.1       14.0       10.6         Acid Number (AN)       mg KOH/g       ASTM D8045       0.86       2.22       1.51       1.37	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 1220 298 350 1995 <b>limit/base</b> >+100 >20 >20	25 1461 321 413 2455 <u>current</u> 2 0 2	28 1561 342 425 3025 history1 4 2 5	24 1386 316 385 2734 history2 3 0 2
Nitration       Abs/cm       *ASTM D7624       >15       9.5       7.8       5.9         Sulfation       Abs/.1mm       *ASTM D7615       >25       20.6       17.8       15.2         FLUID DEGRADATION       method       limit/base       current       history1       history2         Oxidation       Abs/.1mm       *ASTM D7414       >20       18.1       14.0       10.6         Acid Number (AN)       mg KOH/g       ASTM D8045       0.86       2.22       1.51       1.37	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 1220 298 350 1995 <b>limit/base</b> >+100 >20 >20	25 1461 321 413 2455 <u>current</u> 2 0 2	28 1561 342 425 3025 history1 4 2 5	24 1386 316 385 2734 history2 3 0 2
Sulfation       Abs/.1mm       *ASTM D7415       >25       20.6       17.8       15.2         FLUID DEGRADATION       method       limit/base       current       history1       history2         Oxidation       Abs/.1mm       *ASTM D7414       >20       18.1       14.0       10.6         Acid Number (AN)       mg KOH/g       ASTM D8045       0.86       2.22       1.51       1.37	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm TS ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 1220 298 350 1995 <b>limit/base</b> >+100 >20 >20 >20 >20	25 1461 321 413 2455 current 2 0 2 0 2 0.1 current	28 1561 342 425 3025 history1 4 2 5 1.2 history1	24 1386 316 385 2734 history2 3 0 2 0.0 history2
FLUID DEGRADATION       method       limit/base       current       history1       history2         Oxidation       Abs/.1mm       *ASTM D7414       >20       18.1       14.0       10.6         Acid Number (AN)       mg KOH/g       ASTM D8045       0.86       2.22       1.51       1.37	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm TS ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524	5 1220 298 350 1995 <b>limit/base</b> >+100 >20 >20 >20 >4.0	25 1461 321 413 2455 current 2 0 2 0.1 2 0.1 current 0	28 1561 342 425 3025 history1 4 2 5 1.2 history1 0	24 1386 316 385 2734 history2 3 0 2 0.0 history2 0
Oxidation       Abs/.1mm       *ASTM D7414       >20       18.1       14.0       10.6         Acid Number (AN)       mg KOH/g       ASTM D8045       0.86       2.22       1.51       1.37	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	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 D3524 method *ASTM D7844	5 1220 298 350 1995 <b>limit/base</b> >+100 >20 >20 >20 >4.0	25 1461 321 413 2455 <u>current</u> 2 0 2 0.1 2 0.1 <u>current</u> 0 9.5	28 1561 342 425 3025 history1 4 2 5 1.2 5 1.2 history1 0 7.8	24 1386 316 385 2734 history2 3 0 2 0.0 history2 0 5.9
Acid Number (AN)       mg KOH/g       ASTM D8045       0.86       2.22       1.51       1.37	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	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 D3524 method *ASTM D7844	5 1220 298 350 1995 <b>imit/base</b> >+100 >20 >20 >20 >4.0 <b>imit/base</b>	25 1461 321 413 2455 <u>current</u> 2 0 2 0.1 2 0.1 <u>current</u> 0 9.5	28 1561 342 425 3025 history1 4 2 5 1.2 5 1.2 history1 0 7.8	24 1386 316 385 2734 history2 3 0 2 0.0 history2 0 5.9
	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	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 D3524 *ASTM D7844 *ASTM D7844	5 1220 298 350 1995 <b>Imit/base</b> >+100 >20 >20 >20 >4.0 <b>Imit/base</b> >15 >25	25 1461 321 413 2455 <b>current</b> 2 0 2 0.1 2 0.1 <b>current</b> 0 9.5 20.6	28 1561 342 425 3025 history1 4 2 5 1.2 5 1.2 history1 0 7.8 17.8	24 1386 316 385 2734 history2 3 0 2 0.0 history2 0 5.9 15.2
	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm TS ppm ppm ppm % % Abs/cm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 ASTM D3524 *ASTM D7844 *ASTM D7624 *ASTM D7415	5 1220 298 350 1995 <b>imit/base</b> >20 >20 >20 >4.0 <b>imit/base</b> >15 >25 <b>imit/base</b>	25 1461 321 413 2455 current 2 0 2 0.1 2 0.1 current 0 9.5 20.6 current	28 1561 342 425 3025 history1 4 2 5 1.2 history1 0 7.8 17.8 history1	24 1386 316 385 2734 history2 3 0 2 0.0 history2 0 5.9 15.2 history2
	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm ppm ppm ppm ppm ppm ppm % % Abs/cm Abs/.1mm Abs/.1mm	ASTM D5185m ASTM D7844 *ASTM D7644 *ASTM D7415	5 1220 298 350 1995 <b>imit/base</b> >20 >20 >20 >4.0 <b>imit/base</b> >25 <b>imit/base</b>	25 1461 321 413 2455 <u>current</u> 2 0 2 0.1 2 0.1 <u>current</u> 0 9.5 20.6 <u>current</u> 18.1	28 1561 342 425 3025 history1 4 2 5 1.2 history1 0 7.8 17.8 history1 14.0	24 1386 316 385 2734 history2 3 0 2 0.0 history2 0 5.9 15.2 history2 10.6

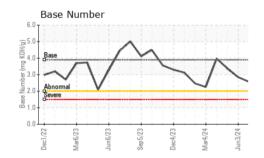


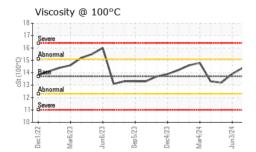
## **OIL ANALYSIS REPORT**



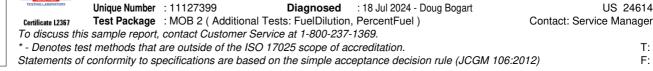












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Laboratory

Sample No.

Submitted By: Josh Moore Page 2 of 2

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