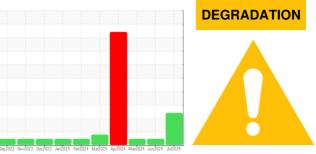


## **OIL ANALYSIS REPORT**

SAMPLE INFORMATION method

Sample Rating Trend

limit/base



history1

history2

current

#### Machine Id

**Smith Ridge 1** 

Natural Gas Engine

#### Fluid CITGO PACEMAKER GAS ENGIN 1700 SERIES 40W (--- GAL)

### DIAGNOSIS

#### Recommendation

We recommend that you drain the oil and perform a filter service on this component if not already done. Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

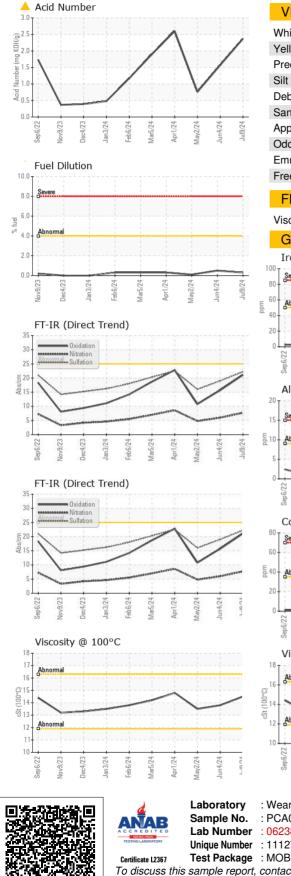
#### Fluid Condition

The BN level is low. The AN level is at the top-end of the recommended limit. The oil is no longer serviceable.

Sample Date     I     Client Info     99 Jul 2024     04 Jun 2024     02 May 2024       Machine Age     hrs     Client Info     187361     187336     186556       Oil Age     hrs     Client Info     187381     780     237       Oil Changed     Client Info     Not Changed     Not Changed     Not Changed     Nort Changed       Sample Status     I     Nethod     >0.1     NEG     NEG     NEG       Water     WC Method     >0.1     NEG     NEG     NEG     NEG       Nickel     ppm     ASTM051850     >4     <1     <1     <1     <1       Nickel     ppm     ASTM051850     >20     0     0     <1     1       Nickel     ppm     ASTM051850     >30     0     0     <1     1     1       Silver     ppm     ASTM051850     >30     22     21     14     11     1       Copper     ppm     ASTM051850     >30     20     <1     1     1	SAMPLE INFORM		method	limit/base	current	nistory i	history2
Machine Age Oil Age Oil Age Oil ChangedNisClient Info18816118736186556Oil Changed Sample StatusClient InfoNot Changed ABNORMALONE MAL NORMALNORMAL NORMAL <t< th=""><th>Sample Number</th><th></th><th>Client Info</th><th></th><th>PCA0117266</th><th>PCA0117262</th><th>PCA0117195</th></t<>	Sample Number		Client Info		PCA0117266	PCA0117262	PCA0117195
Oil Age     hrs     Client Info     187381     780     237       Oil Changed     Client Info     Not Changd     Not Changd     Changed     Changed       Sample Status     Image     Image     Not Changd     Not Changd     Not Changd     Nor Changd       Water     WC Method     >0.1     NEG     NEG     NEG       Water     WC Method     >0.1     NEG     NEG     NEG       Chromium     ppm     ASTM 05185m     >50     6     6     3       Chromium     ppm     ASTM 05185m     >4     <1	Sample Date		Client Info		09 Jul 2024	04 Jun 2024	02 May 2024
Oli Changed Client Info Not Changd ABNORMAL Not Changd NORMAL Changed NORMAL Changed 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 D5185n >50 6 6 3   Chromium ppm ASTM D5185n >2 0 0 41   Nickel ppm ASTM D5185n >2 0 0 41   Silver ppm ASTM D5185n >3 0 0 0   Itanium ppm ASTM D5185n >3 2 2 1   Copper ppm ASTM D5185n >3 2 1 1   Cadmium ppm ASTM D5185n >4 7 5 1   Cadmium ppm ASTM D5185n >4 7 5 1   ASTM D5185n >4 7 5 1 1 1   Vanadium ppm ASTM D5185n <1	Machine Age	hrs	Client Info		188161	187336	186556
Sample Status     Method     Imit/base     Current     NoRMAL     NORMAL       CONTAMINATION     method     Imit/base     current     history1     history2       Water     WC Method     >0.1     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185n     >50     6     6     3       Iron     ppm     ASTM D5185n     >4     <1	Oil Age	hrs	Client Info		187381	780	237
CONTAMINATION     method     limit/base     current     history1     history2       Water     WC Method     >0.1     NEG     NEG     NEG       Water     WC Method     >0.1     NEG     NEG     NEG       Water     ppm     ASTM 05186m     >50     6     6     3       Chromium     ppm     ASTM 05186m     >4     <1	Oil Changed		Client Info		Not Changd	Not Changd	Changed
Water     WC Method     >0.1     NEG     NEG     NEG       WEAR METALS     method     imit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >50     6     6     3       Chromium     ppm     ASTM D5185m     >22     0     0     <1	Sample Status				ABNORMAL	NORMAL	NORMAL
Water     WC Method     >0.1     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >50     6     6     3       Chromium     ppm     ASTM D5185m     >2     0     0     <1       Nickel     ppm     ASTM D5185m     >2     0     0     <1       Silver     ppm     ASTM D5185m     >3     0     0     <1       Aduminum     ppm     ASTM D5185m     >30     25     1.4     11       Copper     ppm     ASTM D5185m     >30     2     1     1     1       Vanadium     ppm     ASTM D5185m     >4     <1     1	CONTAMINATIO		method	limit/base	current	history1	history2
WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >50     6     6     3       Chromium     ppm     ASTM D5185m     >4     <1     <1     <1       Nickel     ppm     ASTM D5185m     >2     0     0     <1       Titanium     ppm     ASTM D5185m     >3     0     0     0       Aluminum     ppm     ASTM D5185m     >3     0     0     0       Lead     ppm     ASTM D5185m     >35     4     7     5       Tin     ppm     ASTM D5185m     >35     4     7     5       Tin     ppm     ASTM D5185m     <4     1     1     1       Cadmium     ppm     ASTM D5185m     <0     0     <1     0     0       Boron     ppm     ASTM D5185m     <1     0     0     0     0       Magnesium     ppm     ASTM D5185m     100     12 <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>							
Iron     ppm     ASTM D5185m     >50     6     6     3       Chromium     ppm     ASTM D5185m     >4     <1     <1     <1       Nickel     ppm     ASTM D5185m     >2     0     0     <1       Silver     ppm     ASTM D5185m     >3     0     0     0       Aluminum     ppm     ASTM D5185m     >30     25     14     11       Copper     ppm     ASTM D5185m     >30     25     14     11       Cadmium     ppm     ASTM D5185m     >30     25     14     11       Cadmium     ppm     ASTM D5185m     >4     <1     1     1       Vanadium     ppm     ASTM D5185m      0     0     1       Cadmium     ppm     ASTM D5185m      1     0     0       Barium     ppm     ASTM D5185m      10     12     8       Calcium     ppm     ASTM D5185m     10     1506     1589			WC Method	-	NEG	NEG	NEG
Chromium     ppm     ASTM D5185m     >4     <1	WEAR METALS	6	method	limit/base	current	history1	history2
Nickel     ppm     ASTM D5185m     >2     0     0     <1       Titanium     ppm     ASTM D5185m     <1	Iron	ppm	ASTM D5185m	>50	6	6	3
Titanium     ppm     ASTM D5185m     <1     0     <1       Silver     ppm     ASTM D5185m     >3     0     0     0       Aluminum     ppm     ASTM D5185m     >30     25     14     11       Copper     ppm     ASTM D5185m     >30     25     14     11       Copper     ppm     ASTM D5185m     >4     <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     25     14     11       Copper     ppm     ASTM D5185m     >35     4     7     5       Tin     ppm     ASTM D5185m     >4     <1     1     1       Vanadium     ppm     ASTM D5185m     0     0     <1     1       Cadmium     ppm     ASTM D5185m     0     0     0     <1       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0     0     0       Magnese     ppm     ASTM D5185m     0     2     <1       Magnesium     ppm     ASTM D5185m     10     12     8       Calcium     ppm     ASTM D5185m     320     349     303       Sulfar	Nickel	ppm	ASTM D5185m	>2	0	0	<1
Atuminum     ppm     ASTM D5185m     >9     2     2     <1       Lead     ppm     ASTM D5185m     >30     25     14     11       Copper     ppm     ASTM D5185m     >35     4     7     5       Tin     ppm     ASTM D5185m     >4     <1	Titanium	ppm	ASTM D5185m		<1	0	<1
Lead     ppm     ASTM D5185m     >30     25     14     11       Copper     ppm     ASTM D5185m     >35     4     7     5       Tin     ppm     ASTM D5185m     >4     <1	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper     ppm     ASTM D5185m     >35     4     7     5       Tin     ppm     ASTM D5185m     >4     <1	Aluminum	ppm	ASTM D5185m	>9	2	2	<1
Tin     ppm     ASTM D5185m     >4     <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     0     0     0     0       Barium     ppm     ASTM D5185m     0     0     0     0       Manganese     ppm     ASTM D5185m     1     4     2       Magnesium     ppm     ASTM D5185m     10     12     8       Calcium     ppm     ASTM D5185m     320     349     303       Zinc     ppm     ASTM D5185m     320     349     303       Sulfur     ppm     ASTM D5185m     2360     3075     2867       CONTAMINANTS     method     limit/base     current     history1     history2       Sulfur     ppm     ASTM D5185m     >20     2 <th>Lead</th> <td>ppm</td> <td>ASTM D5185m</td> <td>&gt;30</td> <th>25</th> <td>14</td> <td>11</td>	Lead	ppm	ASTM D5185m	>30	25	14	11
Vanadium     ppm     ASTM D5185m     <1     0     <1       Cadmium     ppm     ASTM D5185m     0     0     <1       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     <1     0     0       Barium     ppm     ASTM D5185m     0     0     0       Manganese     ppm     ASTM D5185m     0     2     1       Magnesium     ppm     ASTM D5185m     0     2     1       Galcium     ppm     ASTM D5185m     10     12     8       Calcium     ppm     ASTM D5185m     320     349     303       Zinc     ppm     ASTM D5185m     320     349     303       Sulfur     ppm     ASTM D5185m     2360     3075     2867       CONTAMINANTS     method     limit/base     current     history1     history2       Sulfur     ppm     ASTM D5185m     >20     2     5     2	Copper	ppm	ASTM D5185m	>35	4	7	5
Cadmium     ppm     ASTM D5185m     0     0     <1       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     <1     0     0     0       Barium     ppm     ASTM D5185m     0     0     0     0       Maganese     ppm     ASTM D5185m     1     44.2     2       Magnesium     ppm     ASTM D5185m     10     12     8       Calcium     ppm     ASTM D5185m     1506     1589     1366       Phosphorus     ppm     ASTM D5185m     320     349     303       Zinc     ppm     ASTM D5185m     32360     3075     2867       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >+100     2     3     2     2       Sodium     ppm     ASTM D5185m     >20     2     5     2     2       Fuel <th>Tin</th> <td>ppm</td> <td>ASTM D5185m</td> <td>&gt;4</td> <th>&lt;1</th> <td>1</td> <td>1</td>	Tin	ppm	ASTM D5185m	>4	<1	1	1
ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     <1	Vanadium	ppm	ASTM D5185m		<1	0	<1
Boron     ppm     ASTM D5185m     <1     0     0       Barium     ppm     ASTM D5185m     0     0     0     0       Molybdenum     ppm     ASTM D5185m     1     4     2       Manganese     ppm     ASTM D5185m     0     2     <1	Cadmium	ppm	ASTM D5185m		0	0	<1
Barium     pm     ASTM D5185m     0     0     0       Molybdenum     ppm     ASTM D5185m     1     4     2       Manganese     ppm     ASTM D5185m     0     2     <1       Magnesium     ppm     ASTM D5185m     10     12     8       Calcium     ppm     ASTM D5185m     1506     1589     1366       Phosphorus     ppm     ASTM D5185m     320     349     303       Zinc     ppm     ASTM D5185m     3260     3075     2867       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >+100     2     3     2       Sodium     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 <th>ADDITIVES</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum     ppm     ASTM D5185m     1     4     2       Manganese     ppm     ASTM D5185m     0     2     <1	Boron	ppm	ASTM D5185m		<1	0	0
Manganese   ppm   ASTM D5185m   0   2   <1     Magnesium   ppm   ASTM D5185m   10   12   8     Calcium   ppm   ASTM D5185m   10   12   8     Phosphorus   ppm   ASTM D5185m   320   349   303     Zinc   ppm   ASTM D5185m   320   349   363     Sulfur   ppm   ASTM D5185m   2360   3075   2867     CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >+100   2   3   2     Sodium   ppm   ASTM D5185m   >+100   2   3   2     Sodium   ppm   ASTM D5185m   >20   2   5   2     Fuel   %   ASTM D5185m   >20   2   5   2     Fuel   %   ASTM D5185m   >20   2   5   0.1     INFRA-RED   method   limit/base   current   history1   history2     Soot %   % <td< td=""><th>Barium</th><td>ppm</td><td>ASTM D5185m</td><td></td><th>0</th><td>0</td><td>0</td></td<>	Barium	ppm	ASTM D5185m		0	0	0
Magnesium   ppm   ASTM D5185m   10   12   8     Calcium   ppm   ASTM D5185m   1506   1589   1366     Phosphorus   ppm   ASTM D5185m   320   349   303     Zinc   ppm   ASTM D5185m   320   349   363     Sulfur   ppm   ASTM D5185m   418   435   363     Sulfur   ppm   ASTM D5185m   2360   3075   2867     CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >+100   2   3   2     Sodium   ppm   ASTM D5185m   >20   2   5   2     Fuel   %   ASTM D5185m   >20   2   5   2     Fuel   %   ASTM D5185m   >20   2   5   0.1     INFRA-RED   method   limit/base   current   history1   history2     Soot %   %   *ASTM D7624   >20   7.7   6.0   4.8     Sulfation   Ab	Molybdenum	ppm	ASTM D5185m		1	4	2
Calcium     ppm     ASTM D5185m     1506     1589     1366       Phosphorus     ppm     ASTM D5185m     320     349     303       Zinc     ppm     ASTM D5185m     320     349     303       Sulfur     ppm     ASTM D5185m     418     435     363       Sulfur     ppm     ASTM D5185m     2360     3075     2867       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >+100     2     3     2       Sodium     ppm     ASTM D5185m     >+100     2     3     0       Potassium     ppm     ASTM D5185m     >20     2     5     2       Fuel     %     ASTM D3524     >4.0     0.3     0.5     0.1       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     0     0.1     0       Nitration     Abs/.1mm	Manganese	ppm	ASTM D5185m		0	2	<1
Phosphorus     ppm     ASTM D5185m     320     349     303       Zinc     ppm     ASTM D5185m     418     435     363       Sulfur     ppm     ASTM D5185m     2360     3075     2867       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >+100     2     3     2       Sodium     ppm     ASTM D5185m     >+100     2     3     2       Sodium     ppm     ASTM D5185m     >20     2     5     2       Fuel     %     ASTM D5185m     >20     2     5     0.1       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7624     >20     7.7     6.0     4.8       Sulfation     Abs/.tmm     *ASTM D7415     >30     22.2     19.0     16.0       FLUID DEGRADATION     method     limit/base     current     history1     history2	Magnesium	ppm	ASTM D5185m		10	12	8
Zinc     ppm     ASTM D5185m     418     435     363       Sulfur     ppm     ASTM D5185m     2360     3075     2867       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >+100     2     3     2       Sodium     ppm     ASTM D5185m     >+100     2     3     2       Sodium     ppm     ASTM D5185m     >+20     2     5     2       Fuel     %     ASTM D5185m     >20     2     5     2       Fuel     %     ASTM D5185     >20     2     5     0.1       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7624     >20     7.7     6.0     4.8       Sulfation     Abs/.mm     *ASTM D7415     >30     22.2     19.0     16.0       FLUID DEGRADATION     method     limit/base     current     history1     his	Calcium	ppm	ASTM D5185m		1506	1589	1366
Sulfur     ppm     ASTM D5185m     2360     3075     2867       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >+100     2     3     2       Sodium     ppm     ASTM D5185m     >+100     2     3     2       Sodium     ppm     ASTM D5185m     >20     2     5     2       Fuel     %     ASTM D5185m     >20     2     5     2       Fuel     %     ASTM D5185m     >20     2     5     2       Soot %     %     ASTM D7844     0     0.3     0.5     0.1       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7624     >20     7.7     6.0     4.8       Sulfation     Abs/.mm     *ASTM D7415     >30     22.2     19.0     16.0       FLUID DEGRADATION     method     limit/base     current     history1	Phosphorus	ppm	ASTM D5185m		320	349	303
CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >+100     2     3     2       Sodium     ppm     ASTM D5185m     >+100     2     3     0       Potassium     ppm     ASTM D5185m     >20     2     5     2       Fuel     %     ASTM D5185m     >20     2     5     2       Fuel     %     ASTM D5185m     >20     2     5     0.1       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     0     0.1     0       Nitration     Abs/cm     *ASTM D7624     >20     7.7     6.0     4.8       Sulfation     Abs/.1mm     *ASTM D7415     >30     22.2     19.0     16.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     21.1 </td <th>Zinc</th> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>418</th> <td>435</td> <td>363</td>	Zinc	ppm	ASTM D5185m		418	435	363
Silicon   ppm   ASTM D5185m   >+100   2   3   2     Sodium   ppm   ASTM D5185m   >+100   2   3   0     Potassium   ppm   ASTM D5185m   >20   2   5   2     Fuel   %   ASTM D5185m   >20   2   5   2     Fuel   %   ASTM D3524   >4.0   0.3   0.5   0.1     INFRA-RED   method   limit/base   current   history1   history2     Soot %   %   *ASTM D7624   >20   7.7   6.0   4.8     Sulfation   Abs/cm   *ASTM D7415   >30   22.2   19.0   16.0     FLUID DEGRADATION   method   limit/base   current   history1   history2     Oxidation   Abs/1mm   *ASTM D7414   >25   21.1   15.7   10.8     Acid Number (AN)   mg KOHg   ASTM D8045 $\blacktriangle$ 2.37   1.57   0.76	Sulfur	ppm	ASTM D5185m		2360	3075	2867
Sodium     ppm     ASTM D5185m     <1	CONTAMINANT	S	method	limit/base	current	history1	history2
Sodium     ppm     ASTM D5185m     <1     3     0       Potassium     ppm     ASTM D5185m<>20     2     5     2       Fuel     %     ASTM D5185m<>20     2     5     2       Fuel     %     ASTM D5185m<>20     2     5     2       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     0     0.1     0       Nitration     Abs/cm     *ASTM D7624     >20     7.7     6.0     4.8       Sulfation     Abs/.1mm     *ASTM D7415     >30     22.2     19.0     16.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     21.1     15.7     10.8       Acid Number (AN)     mg KOHg     ASTM D8045     A 2.37     1.57     0.76	Silicon	ppm	ASTM D5185m	>+100	2	3	2
Fuel     %     ASTM D3524     >4.0     0.3     0.5     0.1       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     0     0.1     0       Nitration     Abs/cm     *ASTM D7624     >20     7.7     6.0     4.8       Sulfation     Abs/.1mm     *ASTM D7415     >30     22.2     19.0     16.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     21.1     15.7     10.8       Acid Number (AN)     mg KOH/g     ASTM D8045     A     2.37     1.57     0.76			ASTM D5185m		<1	3	0
Fuel     %     ASTM D3524     >4.0     0.3     0.5     0.1       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     0     0.1     0       Nitration     Abs/cm     *ASTM D7624     >20     7.7     6.0     4.8       Sulfation     Abs/.1mm     *ASTM D7415     >30     22.2     19.0     16.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     21.1     15.7     10.8       Acid Number (AN)     mg KOHg     ASTM D8045     A 2.37     1.57     0.76	Potassium	ppm	ASTM D5185m	>20	2	5	2
Soot %     %     *ASTM D7844     0     0.1     0       Nitration     Abs/cm     *ASTM D7624     >20     7.7     6.0     4.8       Sulfation     Abs/.1mm     *ASTM D7415     >30     22.2     19.0     16.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     21.1     15.7     10.8       Acid Number (AN)     mg KOH/g     ASTM D8045 <b>A</b> 2.37     1.57     0.76			ASTM D3524	>4.0	0.3	0.5	0.1
Nitration     Abs/cm     *ASTM D7624     >20     7.7     6.0     4.8       Sulfation     Abs/.1mm     *ASTM D7415     >30     22.2     19.0     16.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     21.1     15.7     10.8       Acid Number (AN)     mg KOH/g     ASTM D8045 <b>A 2.37</b> 1.57     0.76	INFRA-RED		method	limit/base	current	history1	history2
Sulfation     Abs/.1mm     *ASTM D7415     >30     22.2     19.0     16.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     21.1     15.7     10.8       Acid Number (AN)     mg KOH/g     ASTM D8045     Action 2.37     1.57     0.76	Soot %	%	*ASTM D7844		0	0.1	0
Sulfation     Abs/.1mm     *ASTM D7415     >30     22.2     19.0     16.0       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     21.1     15.7     10.8       Acid Number (AN)     mg KOH/g     ASTM D8045     Action 2.37     1.57     0.76	Nitration	Abs/cm	*ASTM D7624	>20	7.7	6.0	4.8
Oxidation     Abs/.1mm     *ASTM D7414     >25     21.1     15.7     10.8       Acid Number (AN)     mg KOH/g     ASTM D8045 $\triangle$ 2.37     1.57     0.76			*ASTM D7415	>30	22.2	19.0	16.0
Acid Number (AN) mg KOH/g ASTM D8045 🔺 2.37 1.57 0.76	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045 🔺 2.37 1.57 0.76	Oxidation	Abs/.1mm	*ASTM D7414	>25	21.1	15.7	10.8
			ASTM D8045			1.57	0.76
Base Number (BN) mg KOH/g ASTM D2896 ▲ 2.13 2.82 3.43	( )	v v					



# **OIL ANALYSIS REPORT**



	VISUAL		method	limit/base	current	history1	history2
A	White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
<b>v</b>	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Mar5/24 Apr1/24 May2/24 Jun4/24 Jun4/24	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
May Jun Jur	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
	Free Water	scalar	*Visual		NEG	NEG	NEG
	FLUID PROPE	RTIES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445		14.5	13.8	13.5
	GRAPHS	001				10.0	10.0
	Iron (ppm)				Lead (ppm)		
	100 T			10			
Apr1/24 - May2/24 - Jun4/24 - Jul9/24 -	80 - Severe	1		8	•	/	\
Apr1/24 May2/24 Jun4/24 Jul9/24	E 60 Abnormal			е <sup>6</sup>	Severe	<u></u>	<u>\</u>
	Abnormal 40	1 1		ed 4	Abnormal		
	20 -			2			1
	53	24	24	24		24	24
1	Sep6/22 Nov9/23 Dec4/23 Jan3/24	Feb6/24 Mar5/24	Apr1/24 May2/24	Jul9/24	Sep6/22 Nov9/23 Dec4/23	Jan3/24 Feb6/24 Mar5/24 Aor1/24	May2/24 Jun4/24
	Aluminum (ppm)		2		Chromium (pp		~ ,
	<sup>20</sup> T		1 1 1			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
And the other designment of th	15 Severe				Severe		
<u></u>	E 10 - Abnormal			ud d	Abnormal		
Mar5/24 Apr1/24 May2/24 Jun4/24 Jun4/24							
M A M P	5-	1			2		
		4	4			4	4
	Sep6/22 Nov9/23 Dec4/23 Jan3/24	Feb6/24 Mar5/24	Apr1/24 May2/24	Jul9/24	Sep 6/22 Nov9/23 Dec4/23	Jan3/24 Feb6/24 Mar5/24 Aor1/24	May2/24 Jun4/24
	Copper (ppm)		2		Silicon (ppm)		2 7
1	<sup>80</sup> Severe	+		20	Sincon (ppin)	·····	
	60	1 1	1 1 1	15			
	E 40 - Abnormal			툍 10	Abnormal		
and a second sec	The second second						
(24 - (24 - (24 -	20			51			
Mar5/24 Apr1/24 May2/24 Jun4/24	123	124 -	/24 - /24 -	/24	723	/24 /24 /24	/24
	Sep 6/22 Nov9/23 Dec4/23 Jan 3/24	Feb6/24 Mar5/24	Apr1/24 May2/24	Jul9/24	Sep6/22 Nov9/23 Dec4/23	Jan 3/24 Feb 6/24 Mar5/24 Aor1/24	May2/24 Jun4/24
	Viscosity @ 100°C			_	Base Number		
	Abnormal			(B) H 5			1 I I I
~	0+			(B),HOX Bay North Bays Number Base Number			
$\sim$	14-100-C)		~	ja 3.			$\wedge$
	성 12 Abnormal			тр 2.	•	1	
	10			2 1. 0.			
* * * * *		Feb6/24 + Mar5/24 -	Apr1/24 - May2/24 -			Jan3/24 + Feb6/24 + Mar5/24 +	/ay2/24 -
Mar5/24 Apr1/24 May2/24 Jun4/24	Sepf Nov: Jan.j	Feb 6/24 Mar5/24	Apr1/24 May2/24	Jul	Sepl Nov!	Jan. Feb( Mar5	May2/24 Jun4/24
A A A A							
Laboratory	: WearCheck USA - 501	Madiso	n Ave., Carv	. NC 27513	ENFRVF	ST OPERATING	- SMITH RIDO
Sample No.	: PCA0117266	Recei		5 Jul 2024			SMITH RIDG
Lab Number		Teste		7 Jul 2024		I	MCCLURE, V
Unique Number		Diagn		Jul 2024 - Do	ug Bogart	<b>A</b> · · · <b>A</b>	US 2426
te L2367 Test Package	: MOB 2 ( Additional Te	sts: ⊢uel	Ullution. Pe	cent⊢uel)		Contact: Se	ervice Manag

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: ENEMCCSR [WUSCAR] 06238557 (Generated: 07/18/2024 12:26:56) Rev: 1

Submitted By: Adam Kimberlin Page 2 of 2

F: