

Area GEORGIA

OIL ANALYSIS REPORT

Sample Rating Trend

WEAR

Diesel Engine Fluid CAM2 MAGUM SUPER HD 15W40 (--- QTS)

DIAGNOSIS

5566

A Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

🔺 Wear

Cylinder, crank, or cam shaft wear is indicated.

Contamination

Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

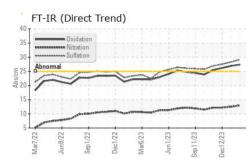
Fluid Condition

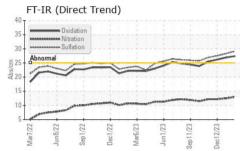
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

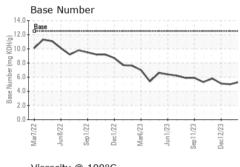
Sample NumberClient InfoWC0911858WC092143WC082183Sample DateClient Info12 May 202412 Jan 202412 Dec 203Machine AgemisClient Info0681106010Ol AgemisClient Info000Ol ChangedClient InfoN/ANot ChangedNot ChangedSample StatusIClient InfoN/ANot ChangedNot ChangedCONTAMINATIONmethod50.<1.0NISO<1.0VaterWC Methol50.<1.0<1.0<1.0WaterWC Methol50.<1.0NISO<1.0WaterWC Methol50.<1.0NISO<1.0NoronppmASTM 05185>10.0A12.210.010.0NickelppmASTM 05185>10.0A12.00<1.0NickelppmASTM 05185>3.0000AluminumppmASTM 05185>3.06.05.55.7LeadppmASTM 05185>3.06.05.05.7LeadppmASTM 05185>3.06.000AluminumppmASTM 05185>1111NambueppmASTM 05185>1111AdditionppmASTM 05185>1111NickelppmASTM 05185>1133Mandumppm <t< th=""><th>SAMPLE INFORM</th><th>IATION</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></t<>	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2		
Machine AgemisClient Info06981066517Oil AgemisClient InfoN/ANot ChangdNot ChangdSample StatusaaaN/ANoRMALNORMALCONTAMINATIONmethodJimit/bascurrenthistory1history2FuelWC Method>5<1.0	<1<	01ASTM D5185m133333MolybeinumppmASTM D5185m25	Sample Number		Client Info		WC0911658	WC0892143	WC0881853
Machine AgemisClient Info06981066517Oil AgemisClient InfoN/ANot ChangdNot ChangdSample StatusaaaN/ANoRMALNORMALCONTAMINATIONmethodJimit/bascurrenthistory1history2FuelWC Method>5<1.0	<1<	01ASTM D5185m133333MolybeinumppmASTM D5185m25	Sample Date		Client Info		12 May 2024	12 Jan 2024	12 Dec 2023
Oli Changed Client Info N/A Not Changd Not Changd Sample Status Image Image RBNORMAL NORMAL NORMAL CONTAMINATION method imit/base current history1 history2 Fuel WC Method >5.5 <1.0	Machine Age	mls	Client Info		-	69810	66517		
Oli Changed Client Info N/A Not Changd Not Changd Sample Status Image Image ABNORMAL NORMAL NORMAL CONTAMINATION method ismit/base current history1 history2 Fuel WC Method >5 <1.0	Oil Age	mls	Client Info		0	0	0		
Sample Status Image: March Mark Mark Mark Mark Mark Mark Mark Mark	-		Client Info			Not Changd	Not Changd		
CONTAMINATIONmethodlimit/basecurrenthistory1history2FuelWC Method>5<1.0	-				ABNORMAL	-	-		
Fuel WC Method >5 <1.0	-	N	method	limit/base	current	historv1	historv2		
Water WC Method >0.2 NEG NEG NEG Glycol WC Method Imil/base current history1 history2 Iron ppm ASTM D5185m >100 122 100 100 Chromium ppm ASTM D5185m >20 7 6 7 Nickel ppm ASTM D5185m >4 <1			WC Method	>5	<1.0				
Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 122 100 100 Chromium ppm ASTM D5185m >20 7 6 7 Nickel ppm ASTM D5185m >4 -1 0 0 Silver ppm ASTM D5185m >4 -1 0 0 Aluminum ppm ASTM D5185m >20 60 55 57 Lead ppm ASTM D5185m >1 -1 -1 -1 Vanadium ppm ASTM D5185m >1 -1<									
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 ▲ 122 100 100 Chromium ppm ASTM D5185m >20 7 6 7 Nickel ppm ASTM D5185m >4 <1				7 0.1					
Iron ppm ASTM D5185m >100 ▲ 122 100 100 Chromium ppm ASTM D5185m >20 7 6 7 Nickel ppm ASTM D5185m >4 <1	•			limit/bass	-				
Chromium ppm ASTM D5185m >20 7 6 7 Nickel ppm ASTM D5185m >4 <1 0 <1 Titanium ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >20 60 5 57 Lead ppm ASTM D5185m >40 <1 0 0 Copper ppm ASTM D5185m >330 6 5 5 Tin ppm ASTM D5185m >1 <1 <1 1 Vanadium ppm ASTM D5185m <21 0 0 0 Addminum ppm ASTM D5185m <25 22 24 4 Cadmium ppm ASTM D5185m 422 34 3 3 Manganese ppm ASTM D5185m 422 32 424									
Nickel ppm ASTM D5185m >4 <1 0 <1 Titanium ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >20 60 55 57 Lead ppm ASTM D5185m >20 60 55 57 Lead ppm ASTM D5185m >20 60 5 5 Copper ppm ASTM D5185m >40 <1	Iron	ppm	ASTM D5185m	>100					
Titanium ppm ASTM D5185m <1 0 0 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >20 60 55 57 Lead ppm ASTM D5185m >40 <1	Chromium	ppm	ASTM D5185m			6			
Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >20 60 55 57 Lead ppm ASTM D5185m >40 <1 0 0 Copper ppm ASTM D5185m >330 6 5 5 Tin ppm ASTM D5185m >15 1 <1< <1 <1 Vanadium ppm ASTM D5185m >15 1 <1 <1 <1 <1 Vanadium ppm ASTM D5185m <15 1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	Nickel	ppm	ASTM D5185m	>4					
AluminumppmASTM D5185m>20605557LeadppmASTM D5185m>40<1	Titanium	ppm	ASTM D5185m			0	0		
Lead ppm ASTM D5185m >40 <1 0 0 Copper ppm ASTM D5185m >330 6 5 5 Tin ppm ASTM D5185m >15 1 <1	Silver	ppm	ASTM D5185m	>3	0	0	0		
Copper ppm ASTM D5185m >330 6 5 5 Tin ppm ASTM D5185m >15 1 <1	Aluminum	ppm	ASTM D5185m	>20	60	55	57		
Tin ppm ASTM D5185m >15 1 <1 <1 <1 Vanadium ppm ASTM D5185m <1	Lead	ppm	ASTM D5185m	>40	<1	0	0		
Vanadium ppm ASTM D5185m <1 0 <1 Cadmium ppm ASTM D5185m <1	Copper	ppm	ASTM D5185m	>330	6	5	5		
Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 25 22 24 Barium ppm ASTM D5185m 4 0 3 Molybdenum ppm ASTM D5185m 42 34 36 Manganese ppm ASTM D5185m 422 392 424 Calcium ppm ASTM D5185m 422 392 424 Calcium ppm ASTM D5185m 934 739 897 Zinc ppm ASTM D5185m 934 739 897 Zinc ppm ASTM D5185m 30255 2552 2805 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 15 13 15 Sodium ppm ASTM D5185m >20 186<	Tin	ppm	ASTM D5185m	>15	1	<1	<1		
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 25 22 24 Barium ppm ASTM D5185m 4 0 3 Molybdenum ppm ASTM D5185m 422 34 36 Manganese ppm ASTM D5185m 422 392 424 Calcium ppm ASTM D5185m 422 392 424 Calcium ppm ASTM D5185m 934 739 897 Zinc ppm ASTM D5185m 934 739 897 Zinc ppm ASTM D5185m 934 739 897 Sulfur ppm ASTM D5185m 934 739 897 Sulfur ppm ASTM D5185m 932 2552 2805 CONTAMINANTS method limit/base current history1 history2 Sodium ppm ASTM D5185m >20 186 <td< td=""><td>Vanadium</td><td>ppm</td><td>ASTM D5185m</td><td></td><th><1</th><td>0</td><td><1</td></td<>	Vanadium	ppm	ASTM D5185m		<1	0	<1		
Boron ppm ASTM D5185m 25 22 24 Barium ppm ASTM D5185m 4 0 3 Molybdenum ppm ASTM D5185m 42 34 36 Manganese ppm ASTM D5185m 42 34 36 Magnesium ppm ASTM D5185m 422 392 424 Calcium ppm ASTM D5185m 422 392 424 Calcium ppm ASTM D5185m 422 392 424 Calcium ppm ASTM D5185m 934 739 897 Zinc ppm ASTM D5185m 934 739 897 Zinc ppm ASTM D5185m 3025 2552 2805 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 186 163 172 INFRA-RED method limit/base current history	Cadmium	ppm	ASTM D5185m		<1	0	0		
Barium ppm ASTM D5185m 4 0 3 Molybdenum ppm ASTM D5185m 42 34 36 Manganese ppm ASTM D5185m 3 3 3 Magnesium ppm ASTM D5185m 422 392 424 Calcium ppm ASTM D5185m 934 739 897 Zinc ppm ASTM D5185m 93025 2552 2805 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 15 13 172 Sodium ppm ASTM D5185m 20 186	ADDITIVES		method	limit/base	current	history1	history2		
Molybdenum ppm ASTM D5185m 42 34 36 Manganese ppm ASTM D5185m 3 3 3 Magnesium ppm ASTM D5185m 422 392 424 Calcium ppm ASTM D5185m 422 392 424 Calcium ppm ASTM D5185m 934 739 897 Phosphorus ppm ASTM D5185m 934 739 897 Zinc ppm ASTM D5185m 934 739 897 Sulfur ppm ASTM D5185m 932 2552 2805 CONTAMINANTS method limit/base current history1 history2 Sulfur ppm ASTM D5185m >25 15 13 15 Sodium ppm ASTM D5185m >20 186 163 172 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624	Boron	ppm	ASTM D5185m		25	22	24		
Manganese ppm ASTM D5185m 3 3 3 Magnesium ppm ASTM D5185m 422 392 424 Calcium ppm ASTM D5185m 422 392 424 Calcium ppm ASTM D5185m 1775 1638 1771 Phosphorus ppm ASTM D5185m 934 739 897 Zinc ppm ASTM D5185m 934 739 897 Sulfur ppm ASTM D5185m 934 739 897 Sulfur ppm ASTM D5185m 93025 2552 2805 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 186 163 172 Sodium ppm ASTM D5185m >20 186 163 12.2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844<	Barium				4	0	3		
Magnesium ppm ASTM D5185m 422 392 424 Calcium ppm ASTM D5185m 1725 1638 1771 Phosphorus ppm ASTM D5185m 934 739 897 Zinc ppm ASTM D5185m 934 739 897 Zinc ppm ASTM D5185m 934 739 897 Sulfur ppm ASTM D5185m 934 739 897 Sulfur ppm ASTM D5185m 934 739 897 Sulfur ppm ASTM D5185m 932 2552 2805 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 186 163 172 Sodium ppm ASTM D5185m >20 186 163 172 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 <td>Danum</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>•</th> <td>0</td> <td>5</td>	Danum	ppm	ASTM D5185m		•	0	5		
Calcium ppm ASTM D5185m 1725 1638 1771 Phosphorus ppm ASTM D5185m 934 739 897 Zinc ppm ASTM D5185m 934 739 897 Zinc ppm ASTM D5185m 934 739 897 Zinc ppm ASTM D5185m 1080 1019 1107 Sulfur ppm ASTM D5185m 3025 2552 2805 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 15 13 15 Sodium ppm ASTM D5185m >20 186 163 172 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 13.0 12.5 12.2 Sulfation Abs/.1mm *ASTM D7415 >30 29.1 28.3 27.5 FLUID DE					-		-		
Phosphorus ppm ASTM D5185m 934 739 897 Zinc ppm ASTM D5185m 1080 1019 1107 Sulfur ppm ASTM D5185m 3025 2552 2805 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 15 13 15 Sodium ppm ASTM D5185m >25 15 13 15 Sodium ppm ASTM D5185m >20 186 163 172 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1.2 1.2 1.1 Nitration Abs/cm *ASTM D7624 >20 13.0 12.5 12.2 Sulfation Abs/.1mm *ASTM D7644 >30 29.1 28.3 27.5 FLUID DEGRADATION method limit/base current history1	Molybdenum	ppm	ASTM D5185m		42	34	36		
Zinc ppm ASTM D5185m 1080 1019 1107 Sulfur ppm ASTM D5185m 3025 2552 2805 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 15 13 15 Sodium ppm ASTM D5185m >20 186 163 172 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1.2 1.2 1.1 Nitration Abs/cm *ASTM D7624 >20 13.0 12.5 12.2 Sulfation Abs/.1mm *ASTM D7624 >30 29.1 28.3 27.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4 26.9 26.2	Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m		42 3	34 3	36 3		
SulfurppmASTM D5185m302525522805CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25151315SodiumppmASTM D5185m>20186163172INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>31.21.21.1NitrationAbs/cm*ASTM D7624>2013.012.512.2SulfationAbs/1mm*ASTM D7415>3029.128.327.5FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2527.426.926.2	Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		42 3 422	34 3 392	36 3 424		
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25151315SodiumppmASTM D5185m>20186163172PotassiumppmASTM D5185m>20186163172INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>31.21.21.1NitrationAbs/cm*ASTM D7624>2013.012.512.2SulfationAbs/lmm*ASTM D7415>3029.128.327.5FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/lmm*ASTM D7414>2527.426.926.2	Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		42 3 422 1725	34 3 392 1638	36 3 424 1771		
Silicon ppm ASTM D5185m >25 15 13 15 Sodium ppm ASTM D5185m 4 6 8 Potassium ppm ASTM D5185m >20 186 163 172 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1.2 1.2 1.1 Nitration Abs/cm *ASTM D7624 >20 13.0 12.5 12.2 Sulfation Abs/.1mm *ASTM D7624 >30 29.1 28.3 27.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4 26.9 26.2	Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		42 3 422 1725 934	34 3 392 1638 739	36 3 424 1771 897		
Sodium ppm ASTM D5185m 4 6 8 Potassium ppm ASTM D5185m<>20 186 163 172 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844<>3 1.2 1.2 1.1 Nitration Abs/cm *ASTM D7624 >20 13.0 12.5 12.2 Sulfation Abs/.1mm *ASTM D7415 >30 29.1 28.3 27.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4 26.9 26.2	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		42 3 422 1725 934 1080	34 3 392 1638 739 1019	36 3 424 1771 897 1107		
Potassium ppm ASTM D5185m >20 186 163 172 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1.2 1.2 1.1 Nitration Abs/cm *ASTM D7624 >20 13.0 12.5 12.2 Sulfation Abs/.1mm *ASTM D7415 >30 29.1 28.3 27.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4 26.9 26.2	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	limit/base	42 3 422 1725 934 1080 3025	34 3 392 1638 739 1019 2552	36 3 424 1771 897 1107 2805		
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1.2 1.2 1.1 Nitration Abs/cm *ASTM D7624 >20 13.0 12.5 12.2 Sulfation Abs/.1mm *ASTM D7415 >30 29.1 28.3 27.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4 26.9 26.2	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method		42 3 422 1725 934 1080 3025 current	34 3 392 1638 739 1019 2552 history1	36 3 424 1771 897 1107 2805 history2		
Soot % % *ASTM D7844 >3 1.2 1.2 1.1 Nitration Abs/cm *ASTM D7624 >20 13.0 12.5 12.2 Sulfation Abs/.1mm *ASTM D7415 >30 29.1 28.3 27.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4 26.9 26.2	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m		42 3 422 1725 934 1080 3025 current 15	34 3 392 1638 739 1019 2552 history1 13	36 3 424 1771 897 1107 2805 history2 15		
Nitration Abs/cm *ASTM D7624 >20 13.0 12.5 12.2 Sulfation Abs/.1mm *ASTM D7615 >30 29.1 28.3 27.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4 26.9 26.2	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	>25	42 3 422 1725 934 1080 3025 current 15 4	34 3 392 1638 739 1019 2552 history1 13 6	36 3 424 1771 897 1107 2805 history2 15 8		
Sulfation Abs/.1mm *ASTM D7415 >30 29.1 28.3 27.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4 26.9 26.2	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	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 D5185m	>25 >20	42 3 422 1725 934 1080 3025 current 15 4 186	34 3 392 1638 739 1019 2552 history1 13 6 163	36 3 424 1771 897 1107 2805 history2 15 8 172		
Sulfation Abs/.1mm *ASTM D7415 >30 29.1 28.3 27.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4 26.9 26.2	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	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 D5185m	>25 >20 limit/base	42 3 422 1725 934 1080 3025 current 15 4 186 current	34 3 392 1638 739 1019 2552 history1 13 6 163 history1	36 3 424 1771 897 1107 2805 history2 15 8 172 history2		
Oxidation Abs/.1mm *ASTM D7414 >25 27.4 26.9 26.2	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>25 >20 limit/base >3	42 3 422 1725 934 1080 3025 current 15 4 186 current 1.2	34 3 392 1638 739 1019 2552 history1 13 6 163 history1 1.2	36 3 424 1771 897 1107 2805 history2 15 8 172 history2 1.1		
	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	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 D5185m method *ASTM D7844	>25 >20 limit/base >3 >20	42 3 422 1725 934 1080 3025 current 15 4 186 current 1.2 1.2 13.0	34 3 392 1638 739 1019 2552 history1 13 6 163 history1 1.2 1.2 12.5	36 36 3 424 1771 897 1107 2805 history2 15 8 172 history2 1.1 1.1 12.2		
	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium 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 D5185m *ASTM D7844 *ASTM D7824	>25 >20 limit/base >3 >20 >30	42 3 422 1725 934 1080 3025 <u>current</u> 15 4 186 <u>current</u> 1.2 1.2 13.0 29.1	34 3 392 1638 739 1019 2552 history1 13 6 163 history1 1.2 1.2 12.5 28.3	36 3 424 1771 897 1107 2805 history2 15 8 172 history2 1.1 1.2.2 27.5		
	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	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 D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	>25 >20 limit/base >3 >20 >30 limit/base	42 3 422 1725 934 1080 3025 current 15 4 186 current 1.2 13.0 29.1 current	34 3 392 1638 739 1019 2552 history1 13 6 163 history1 1.2 12.5 28.3 history1	36 3 424 1771 897 1107 2805 history2 15 8 172 history2 1.1 12.2 27.5 history2		

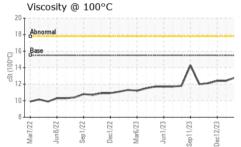


OIL ANALYSIS REPORT

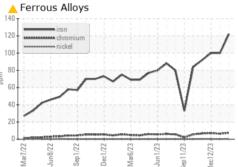


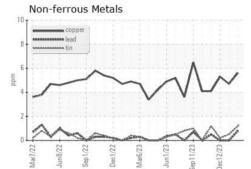


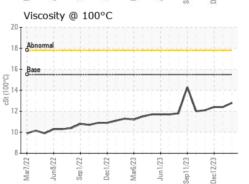


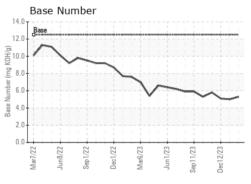


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.5	12.8	12.4	12.4
GRAPHS						









Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 LIBERTY DISPOSAL Sample No. : WC0911658 Received : 10 May 2024 6401 S EASTERN AVE Lab Number : 06176522 Tested : 13 May 2024 OKLAHOMA CITY, OK Unique Number : 11022575 Diagnosed : 14 May 2024 - Sean Felton US 73149 Test Package : FLEET Contact: M Rutherford Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. M.Rutherford@ldi89.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T:

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

Report Id: SEAOKL [WUSCAR] 06176522 (Generated: 05/14/2024 14:43:03) Rev: 1

Contact/Location: M Rutherford - SEAOKL

Page 2 of 2

F: