

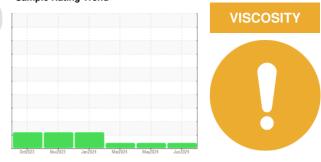
Area

OIL ANALYSIS REPORT

Sample Rating Trend



MINING ME-66 CATERPILLAR 980M MK700460 Diesel Engine



Fluid CAT DEO ULS 15W40 (10 GAL)

Ownerworksion is necommended at this time. The dipange at the time of sampling has been interval to commende at the time of time base based at the time of time base based at the time of time based at the time of time base based at the time base based base based base bat the time base based base based base bat the tinterval t	DIAGNOSIS	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Noncentive action is recommended at this times noted. Pasample at the next service interval to innois. Name	Becommendation	Sample Number		Client Info		WC0950845	WC0910924	WC0909669
The diatage at the first of sampling has benchmark for the service interval to control. Sead GDP4 6540 6084 6549 Var All component wear rates are normal. Changed Client Into 500 500 600 There is no indication of any contamination in the client at the is suitable alkalinity remaining the all clients in the issue base and the suitable alkalinity remaining the all clients in the issue base and the suitable alkalinity remaining the all clients in the issue base and the suitable alkalinity remaining the all clients in the issue base and the suitable alkalinity remaining the all clients in the issue base and the suitable alkalinity remaining the all clients in the issue base and the suitable alkalinity remaining the all clients in the issue base and the suitable alkalinity remaining the all clients in the issue base and the suitable alkalinity remaining the all clients in the issue base and the suitable alkalinity remaining the all clients in the issue base and the suitable alkalinity remaining the alk clients in the issue base and the suitable alkalinity remaining the alk clients in the issue base and the suitable alkalinity remaining the alk clients in the issue base and the suitable alkalinity remaining the alk clients in the issue base and the suitable alkalinity remaining the alk clients in the issue base and the suitable alkalinity remaining the remaining the remaining the alkalinity remaining the alkalinity remaining the rem								
noted. Besample at the noxt service interval log 01 Apa his Cleant Info 500			hrs					
Monit Containation Changed Cleaning of Arrenation Changed Arrenation Containation There is no indication of any contamination in the ol. Fuid Containination in the ol. Imitable alkalinity remaining the oil. Confirm oil type. NEG NEG NEG NEG Fuid Confirm oil type. Fuid Confirm oil type. NEG NEG NEG NEG Nickel Nickel NEG NEG NEG NEG NEG Nickel Nickel NEG NEG NEG NEG NEG Nickel ppm ASTI/DSSS 20 0 -1 0 Nickel ppm ASTI/DSSS 20 0 -1 0 Nickel ppm ASTI/DSSS 20 0 -1 0 Namadium ppm ASTI/DSSS 20 0 -1 0 Auranium ppm ASTI/DSSS -2 2 -1 0 Auranium ppm ASTI/DSSS -2 0 -1 0 <th></th> <th>-</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>		-						
War Sample Status ATTENTION ATTENTION ATTENTION ATTENTION Alcomponent wear rates are normal. Contamination Imit base Current Netdort Netdort </td <th>monitor.</th> <th>-</th> <td>1113</td> <td></td> <td></td> <td></td> <td></td> <td></td>	monitor.	-	1113					
Contamination CONTAMINATION method Imitbase current Heloy1 Heloy2 There is no indication of any contamination in helo. Null Condition Nucl Condition		-		Client Inio		-		
There is no indication of any contamination in the ol. Water WC Method -0.2 NEG NEG NEG Fuid Condition The oli viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the ol. Confirm oil type. Ned Attention Nickel ppm ASTM DEStim >20 <1 18 19 Nickel ppm ASTM DEStim >20 <1 0 0 Nickel ppm ASTM DEStim >2 0 <1 0 Nickel ppm ASTM DEStim >2 0 <1 0 Quardiant ppm ASTM DEStim >2 0	•	CONTAMINATIO	N	method	limit/base	current	history1	history2
Oil Gigeol WC Method NEG NEG NEG Fuel viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining it the oil. Confirm oil type. mithod mithod mithods current history1 history2 Iron ppm ASTM 05156m >20 21 18 19 Iron ppm ASTM 05156m >20 0 <1	There is no indication of any contamination in the	Water		WC Method	>0.2	NEG	NEG	NEG
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type. WEART METALS method indicase current history? history? Iron ppm ASTM 05185m >210 <1		Glycol		WC Method			NEG	NEG
indicates that there is suitable alkalinity remaining in iron ppm ASTM 05185m >200 21 18 19 Chromium ppm ASTM 05185m >20 <1	The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in	WEAR METALS		method	limit/base	current	history1	history2
Attention ppm Attinution ppm		Iron	ppm	ASTM D5185m	>100	21	18	19
Titanium ppm ASTM D5185m >2 0 <1 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminium ppm ASTM D5185m >2 2 2 1 Lead ppm ASTM D5185m >40 <1		Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >25 2 2 <1		Nickel	ppm	ASTM D5185m	>2	0	<1	0
Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >25 2 2 2 1 Lead ppm ASTM D5185m >240 3 3 9 3 Tin ppm ASTM D5185m >15 0 1 0 Vanadium ppm ASTM D5185m >15 0 1 0 Cadmium ppm ASTM D5185m 14 23 15 Boron ppm ASTM D5185m 14 23 16 Barium ppm ASTM D5185m 14 23 16 Magganese ppm ASTM D5185m 14 23 16 Galdium ppm ASTM D5185m 37 42 38 Magganese ppm ASTM D5185m 100 90 31 90 166 176 Calcium ppm ASTM D5185m 1000 995 920 942 21 Conthamm ppm ASTM D5185m 1000 96		Titanium	ppm	ASTM D5185m	>2	0	<1	0
Lead ppm ASTM D5185m >>40 <1		Silver	ppm	ASTM D5185m	>2	0	0	0
Lead ppm ASTM D5185m >>40 <1 1 0 Copper ppm ASTM D5185m >330 3 9 3 Tin ppm ASTM D5185m >>15 0 1 0 Vanadium ppm ASTM D5185m <1 <1 0 Cadmium ppm ASTM D5185m 0 <1 0 ADDITIVES method imit/base current history1 history2 Boron ppm ASTM D5185m 14 23 16 Barium ppm ASTM D5185m 14 23 16 Barium ppm ASTM D5185m 37 42 38 Magnaese ppm ASTM D5185m 100 95 920 942 Calcium ppm ASTM D5185m 1000 995 920 942 Zine ppm ASTM D5185m 1000 995 920 942 Sulfur ppm ASTM D5185m 1000 916 1104 1077 Sulfur <td< th=""><th></th><th>Aluminum</th><th></th><th>ASTM D5185m</th><th>>25</th><th>2</th><th>2</th><th><1</th></td<>		Aluminum		ASTM D5185m	>25	2	2	<1
Copper ppm ASTM D5185m >3300 3 9 3 Tin ppm ASTM D5185m >15 0 1 0 Vanadium ppm ASTM D5185m >15 0 -1 0 Cadmium ppm ASTM D5185m 0 -1 0 ADDITIVES method Imit/base current history1 history2 Boron ppm ASTM D5185m 14 23 16 Barium ppm ASTM D5185m 0 0 0 Magnanese ppm ASTM D5185m 37 42 38 Magnanese ppm ASTM D5185m 37 42 38 Magnanese ppm ASTM D5185m 37 42 38 Magnanese ppm ASTM D5185m 100 920 942 Zinc ppm ASTM D5185m 1000 11626 1104 1077 Sulfur ppm ASTM D5185m <td< th=""><th></th><th>Lead</th><th>ppm</th><th>ASTM D5185m</th><th>>40</th><th><1</th><th>1</th><th>0</th></td<>		Lead	ppm	ASTM D5185m	>40	<1	1	0
Tin ppm ASTM D5185m >15 0 1 0 Vanadium ppm ASTM D5185m 41 <1		Copper		ASTM D5185m	>330	3	9	
Vanadium ppm ASTM D5165m <1				ASTM D5185m	>15	0	1	0
Cadmium ppm ASTM D5185m 0 <1		Vanadium					<1	
Boron ppm ASTM D5185m 14 23 16 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 37 42 38 Manganese ppm ASTM D5185m <1 <1 0 Magnesium ppm ASTM D5185m <10 <17 0 Calcium ppm ASTM D5185m 1000 1626 1763 Phosphorus ppm ASTM D5185m 1000 995 920 942 Zine ppm ASTM D5185m 1000 1626 1763 Sulfur ppm ASTM D5185m 1090 1160 1104 1077 Sulfur ppm ASTM D5185m 3000 3618 3261 3519 CONTAMINANTS method imit/base current history1 history1 Silicon ppm ASTM D5185m >20 <1.0 <1.0 <1.0 Fuel % ASTM D5185m >20 <1.0 <1.0 <1.0 Fuel								
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Manganese ppm ASTM D5185m <1 <1 0 Magnesium ppm ASTM D5185m 460 471 495 Calcium ppm ASTM D5185m 1900 1626 1763 Phosphorus ppm ASTM D5185m 1000 995 920 942 Zinc ppm ASTM D5185m 1000 1160 1104 1077 Sulfur ppm ASTM D5185m 3000 3618 3261 3519 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m >20 <1 3 0 Fuel % ASTM D5185m >20 <1 3 0 Fuel % ASTM D5185m >20 <1.0 <1.0 10 Soot % % *ASTM D7844 >3 0.5 0.4 0.		Boron	ppm	ASTM D5185m		14	23	16
Magnesium ppm ASTM D5185m 460 471 495 Calcium ppm ASTM D5185m 1900 1626 1763 Phosphorus ppm ASTM D5185m 1000 995 920 942 Zinc ppm ASTM D5185m 1090 1160 1104 1077 Sulfur ppm ASTM D5185m 3000 3618 3261 3519 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m >20 <1 3 0 Fuel % ASTM D5185m >20 <1 3 0 Fuel % ASTM D5185m >20 <1.0 <1.0 <1.0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7644 >3 0.5 0.4 0.5 Nitration Abs/m *ASTM D7644 >30 22.6 <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>								
Calcium ppm ASTM D5185m 1900 1626 1763 Phosphorus ppm ASTM D5185m 1000 995 920 942 Zinc ppm ASTM D5185m 1090 1160 1104 1077 Sulfur ppm ASTM D5185m 3000 3618 3261 3519 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m >20 <1 3 0 Fuel % ASTM D5185m >20 <1.0 <1.0 <1.0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.5 Nitration Abs/cm *ASTM D7624 >20 9.6 9.7 10.1 Sulfation Abs/lm *ASTM D7415 >30 22.1 22.6 22.3 FLUID DEGRADATION method lim		Barium	ppm	ASTM D5185m		0	0	0
Phosphorus ppm ASTM D5185m 1000 995 920 942 Zinc ppm ASTM D5185m 1090 1160 1104 1077 Sulfur ppm ASTM D5185m 3000 3618 3261 3519 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m >20 <1		Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m		0 37	0 42	0 38
Zinc ppm ASTM D5185m 1090 1160 1104 1077 Sulfur ppm ASTM D5185m 3000 3618 3261 3519 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m >20 <1 3 0 Potassium ppm ASTM D5185m >20 <1.0 <1.0 <1.0 Fuel % ASTM D5185m >20 <1.0 <1.0 <1.0 NFRA-RED method limit/base current history1 history2 Soot % % 'ASTM D7624 >20 9.6 9.7 10.1 Sulfation Abs/cm 'ASTM D7624 >20 9.6 9.7 10.1 Sulfation Abs/lmm 'ASTM D7624 >20 9.6 9.7 10.1 Sulfation Abs/lmm 'ASTM D7624 >20 9.6 9.7 10.1 Sulfation Abs/lmm </th <th></th> <th>Barium Molybdenum Manganese</th> <th>ppm ppm ppm</th> <th>ASTM D5185m ASTM D5185m ASTM D5185m</th> <th></th> <th>0 37 <1</th> <th>0 42 <1</th> <th>0 38 0</th>		Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		0 37 <1	0 42 <1	0 38 0
SulfurppmASTM D5185m3000361832613519CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25665SodiumppmASTM D5185m>20<130PotassiumppmASTM D5185m>20<130Fuel%ASTM D3524>5<1.0<1.0<1.0INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>30.50.40.5NitrationAbs/cm*ASTM D7624>209.69.710.1SulfationAbs/.1mm*ASTM D7415>3022.122.622.3FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2520.021.621.4		Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 37 <1 460	0 42 <1 471	0 38 0 495
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25665SodiumppmASTM D5185m878PotassiumppmASTM D5185m>20<130Fuel%ASTM D5185m>20<1.0<1.0<1.0INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>30.50.40.5NitrationAbs/cm*ASTM D7624>209.69.710.1SulfationAbs/.1mm*ASTM D7415>3022.122.622.3FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2520.021.621.4		Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1000	0 37 <1 460 1900	0 42 <1 471 1626	0 38 0 495 1763
SiliconppmASTM D5185m>25665SodiumppmASTM D5185m878PotassiumppmASTM D5185m>20<1		Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 37 <1 460 1900 995	0 42 <1 471 1626 920	0 38 0 495 1763 942
Sodium ppm ASTM D5185m 8 7 8 Potassium ppm ASTM D5185m >20 <1 3 0 Fuel % ASTM D3524 >5 <1.0 <1.0 <1.0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.5 Nitration Abs/cm *ASTM D7624 >20 9.6 9.7 10.1 Sulfation Abs/limm *ASTM D7615 >30 22.1 22.6 22.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/limm *ASTM D7414 >25 20.0 21.6 21.4		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	1090	0 37 <1 460 1900 995 1160	0 42 <1 471 1626 920 1104	0 38 0 495 1763 942 1077
Potassium ppm ASTM D5185m >20 <1		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 ASTM D5185m	1090 3000	0 37 <1 460 1900 995 1160 3618	0 42 <1 471 1626 920 1104 3261	0 38 0 495 1763 942 1077 3519
Fuel % ASTM D3524 >5 <1.0		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1090 3000 limit/base	0 37 <1 460 1900 995 1160 3618 current	0 42 <1 471 1626 920 1104 3261 history1	0 38 0 495 1763 942 1077 3519 history2
INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>30.50.40.5NitrationAbs/cm*ASTM D7624>209.69.710.1SulfationAbs/time*ASTM D7415>3022.122.622.3FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/time*ASTM D7414>2520.021.621.4		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS 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	1090 3000 limit/base	0 37 <1 460 1900 995 1160 3618 current 6	0 42 <1 471 1626 920 1104 3261 history1 6	0 38 0 495 1763 942 1077 3519 history2 5
Soot % *ASTM D7844 >3 0.5 0.4 0.5 Nitration Abs/cm *ASTM D7624 >20 9.6 9.7 10.1 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 22.6 22.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.0 21.6 21.4		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1090 3000 limit/base >25	0 37 <1 460 1900 995 1160 3618 current 6 8	0 42 <1 471 1626 920 1104 3261 history1 6 7	0 38 0 495 1763 942 1077 3519 history2 5 8
Nitration Abs/cm *ASTM D7624 >20 9.6 9.7 10.1 Sulfation Abs/.1mm *ASTM D7415 >30 22.1 22.6 22.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.0 21.6 21.4		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	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	1090 3000 limit/base >25 >20	0 37 <1 460 1900 995 1160 3618 <u>current</u> 6 8 8 <1	0 42 <1 471 1626 920 1104 3261 history1 6 7 3	0 38 0 495 1763 942 1077 3519 history2 5 8 0
Sulfation Abs/.1mm *ASTM D7415 >30 22.1 22.6 22.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.0 21.6 21.4		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1090 3000 limit/base >25 >20 >5	0 37 <1 460 1900 995 1160 3618 <u>current</u> 6 8 <1 <1.0	0 42 <1 471 1626 920 1104 3261 history1 6 7 3 <1.0	0 38 0 495 1763 942 1077 3519 history2 5 8 0 <1.0
FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2520.021.621.4		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1090 3000 limit/base >25 >20 >5 limit/base	0 37 <1 460 1900 995 1160 3618 <u>current</u> 6 8 <1 <1.0 <u>current</u>	0 42 <1 471 1626 920 1104 3261 history1 6 7 3 <1.0 history1	0 38 0 495 1763 942 1077 3519 history2 5 8 0 <1.0 history2
Oxidation Abs/.1mm *ASTM D7414 >25 20.0 21.6 21.4		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1090 3000 limit/base >25 >20 >5 limit/base >3	0 37 <1 460 1900 995 1160 3618 <u>current</u> 6 8 <1 <10 <1.0 <u>current</u> 0.5	0 42 <1 471 1626 920 1104 3261 history1 6 7 3 <1.0 history1 0.4	0 38 0 495 1763 942 1077 3519 history2 5 8 0 <1.0 history2 0.5
		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5824 method	1090 3000 limit/base >25 >20 >5 limit/base >3 >20	0 37 <1 460 1900 995 1160 3618 <u>current</u> 6 8 <1 <1.0 <u>current</u> 0.5 9.6	0 42 <1 471 1626 920 1104 3261 history1 6 7 3 <1.0 history1 0.4 9.7	0 38 0 495 1763 942 1077 3519 history2 5 8 0 <1.0 history2 0.5 10.1
		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1090 3000 imit/base >25 >20 >5 imit/base >3 >20 >30	0 37 <1 460 1900 995 1160 3618 current 6 8 <1 <1.0 current 0.5 9.6 22.1	0 42 <1 471 1626 920 1104 3261 history1 6 7 3 <1.0 history1 0.4 9.7 22.6	0 38 0 495 1763 942 1077 3519 history2 5 8 0 <1.0 history2 0.5 10.1 22.3
		Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 ASTM D3524 ASTM D78444 *ASTM D7624 *ASTM D7615	1090 3000 imit/base >25 >20 >5 imit/base >3 >20 >30 imit/base	0 37 <1 460 1900 995 1160 3618 current 6 8 <1 <10 current 0.5 9.6 22.1 current	0 42 <1 471 1626 920 1104 3261 history1 6 7 3 <1.0 history1 0.4 9.7 22.6 history1	0 38 0 495 1763 942 1077 3519 history2 5 8 0 <1.0 history2 0.5 10.1 22.3 history2

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3

30

2!

Abs/cm

10

10.0

8.

6

0.0

12

e Number (mg KOH/g)

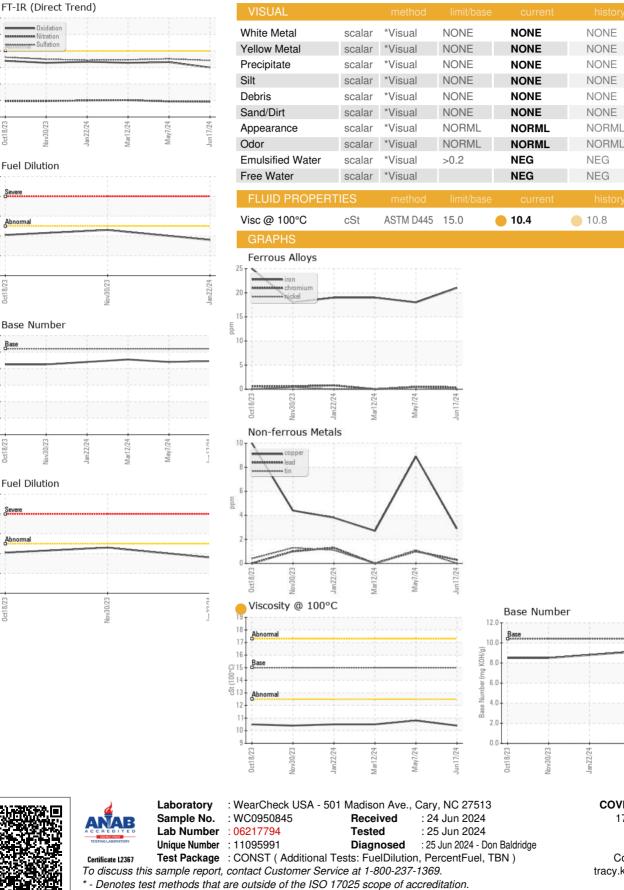
Base

10. 8. 6. % fuel

4

6 fuel

OIL ANALYSIS REPORT



COVIA - CAMDEN - 094 1700 SAND MILL RD CAMDEN, TN US 38320 Contact: TRACY KEE tracy.kee@coviacorp.com T: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

Mar12/24

May7/24

lun17/24

NONE

NONE

NONE

NONE

NONE

NONE

NORML

NORML

NEG

NEG

0.5

Report Id: COVCAMTN [WUSCAR] 06217794 (Generated: 06/25/2024 17:56:31) Rev: 1

Contact/Location: TRACY KEE - COVCAMTN