

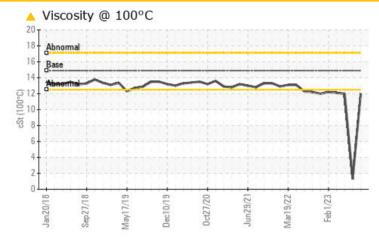
PROBLEM SUMMARY

Area DENNIS T DELANEY Machine Id [DENNIS T DELANEY] 008 536790-8 Component

Starboard Genset

CHEVRON DELO 400 XLE 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS							
Sample Status				ATTENTION		ATTENTION	
Visc @ 100°C	cSt	ASTM D445	14.9	<u> </u>	1.3	12.0	

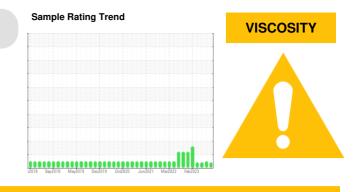
Customer Id: INGPAD Sample No.: MW0061587 Lab Number: 05999691 Test Package: MAR 2



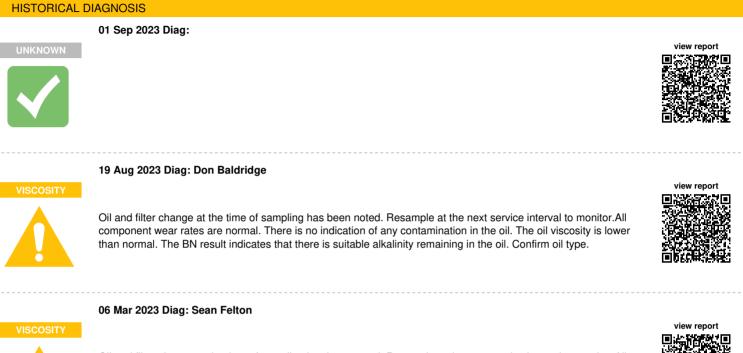
To manage this report scan the QR code

To discuss the diagnosis or test data: Don Baldridge +1 <u>don.b505@comcast.net</u>

To change component or sample information: Customer Service +1 1-800-237-1369 <u>customerservice@wearcheck.com</u>



RECOMMENDED ACTIONS							
Action	Status	Date	Done By	Description			
Change Fluid			?	Oil and filter change at the time of sampling has been noted.			
Change Filter			?	Oil and filter change at the time of sampling has been noted.			





Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.





OIL ANALYSIS REPORT

DENNIS T DELANEY [DENNIS T DELANEY] 008 536790-8 Component

Starboard Genset

CHEVRON DELO 400 XLE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

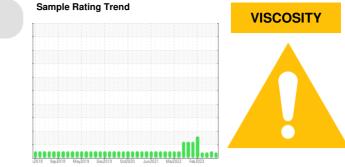
All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



SAMPLE INFORMATION method limit/base ourrent history1 history2 Sample Date Client Info 01 Nov 2023 01 Sep 2023			12018 Sep20	18 May2019 Dec2019	Oct2020 Jun2021 Mar2022	Feb2023	
Sample DateClient Info01 Nov 202301 Sep 202319 Aug 2023Machine AgehrsClient Info514944364370Oil AgehrsClient Info066450Oil ChangedClient InfoChangedChangedATTENTIONSample StatusIImit/basecurrenthistory1history2FuelWC Method>4.0<1.0<1.0<1.0GlycolIWC Method>506910ChromiumppmASTM 05185>5000ChromiumppmASTM 05185>5000ChromiumppmASTM 05185>5000SilverppmASTM 05185>5000AluminumppmASTM 05185>17000CopperppmASTM 05185>17000CadmiumppmASTM 05185>17000CadmiumppmASTM 05185>17000CadmiumppmASTM 05185>100<11NadauppmASTM 0518510000CadmiumppmASTM 0518510000CadmiumppmASTM 051850000ASTM 051851005000CadmiumppmASTM 051851011 <th>SAMPLE INFORM</th> <th>IATION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 5149 4436 4370 Oil Age hrs Client Info 0 66 450 Oil Changed Client Info Changed Changed Changed Changed Sample Status Imation Imation ATTENTION	Sample Number		Client Info		MW0061587	MW0058558	MW0035415
Oil AgehrsClient InfoChanged<	Sample Date		Client Info		01 Nov 2023	01 Sep 2023	19 Aug 2023
Oll Changed Sample Status Client Info Changed ATTENTION Changed ATT	Machine Age	hrs	Client Info		5149	4436	4370
Sample Status Image: method Imit/base current history1 history2 Fuel WC Method >4.0 <1.0 <1.0 <1.0 Glycol WC Method >4.0 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 6 9 10 Chromium ppm ASTM D5185m >20 0 0 1 Nickel ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >12 3 4 4 Lead ppm ASTM D5185m >17 0 0 0 Copper ppm ASTM D5185m >15 0 0 0 Cadmium ppm ASTM D5185m >15 0 0 0 Boron ppm ASTM D5185m 132 120 118 <t< th=""><th>Oil Age</th><th>hrs</th><th>Client Info</th><th></th><th>0</th><th>66</th><th>450</th></t<>	Oil Age	hrs	Client Info		0	66	450
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >4.0 <1.0 <1.0 <1.0 <1.0 Glycol WC Method >4.0 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >4 0 <1 <1 Nickel ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >12 3 4 4 Lead ppm ASTM D5185m >17 0 0 0 Copper ppm ASTM D5185m >17 0 0 0 Cadmium ppm ASTM D5185m >17 0 0 0 Vanadium ppm ASTM D5185m >17 0 0 0 Cadmium ppm ASTM D5185m 17 0 0 0 <th>Oil Changed</th> <th></th> <th>Client Info</th> <th></th> <th>Changed</th> <th>Changed</th> <th>Changed</th>	Oil Changed		Client Info		Changed	Changed	Changed
Fuel WC Method >4-0 <1.0	Sample Status				ATTENTION		ATTENTION
Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 6 9 10 Chromium ppm ASTM D5185m >4 0 <1 <1 Nickel ppm ASTM D5185m >2 0 0 0 Titanium ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >12 3 4 4 Lead ppm ASTM D5185m >17 0 0 0 Copper ppm ASTM D5185m >17 0 0 0 Vanadium ppm ASTM D5185m 10 0 0 0 Cadmium ppm ASTM D5185m 132 120 118 Manganese ppm ASTM D5185m 697 593 640 Calcium	CONTAMINATION	١	method	limit/base	current	history1	history2
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Nickel ppm ASTM D5185m >2 0 0 0 Titanium ppm ASTM D5185m >5 0 0 0 Silver ppm ASTM D5185m >5 0 0 0 Aluminum ppm ASTM D5185m >12 3 4 4 Lead ppm ASTM D5185m >17 0 0 0 Copper ppm ASTM D5185m >70 0 <1	Iron	ppm	ASTM D5185m	>50	6	9	10
Titanium ppm ASTM D5185m 0 <1 <1 Silver ppm ASTM D5185m >5 0 0 0 Aluminum ppm ASTM D5185m >12 3 4 4 Lead ppm ASTM D5185m >17 0 0 0 Copper ppm ASTM D5185m >70 0 <1	Chromium	ppm	ASTM D5185m	>4	0	<1	<1
Silver ppm ASTM D5185m >5 0 0 0 Aluminum ppm ASTM D5185m >12 3 4 4 Lead ppm ASTM D5185m >17 0 0 0 Copper ppm ASTM D5185m >70 0 <1 <1 Tin ppm ASTM D5185m >15 0 0 <1 <1 Vanadium ppm ASTM D5185m >15 0 0 0 0 Cadmium ppm ASTM D5185m <15 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 132 120 118 Magnesium ppm ASTM D5185m 697 593 640 Calcium ppm ASTM D5185m 760 727 688 690 Zinc ppm ASTM D5185m 270 285 <th>Nickel</th> <td>ppm</td> <td>ASTM D5185m</td> <td>>2</td> <th>0</th> <td>0</td> <td>0</td>	Nickel	ppm	ASTM D5185m	>2	0	0	0
Auminum ppm ASTM D5185m >12 3 4 4 Lead ppm ASTM D5185m >17 0 0 0 Copper ppm ASTM D5185m >70 0 <1	Titanium	ppm	ASTM D5185m		0	<1	<1
Lead ppm ASTM D5185m >17 0 0 0 Copper ppm ASTM D5185m >70 0 <1	Silver	ppm	ASTM D5185m	>5	0	0	0
Copper ppm ASTM D5185m >70 0 <1 <1 Tin ppm ASTM D5185m >15 0 0 <1	Aluminum	ppm	ASTM D5185m	>12	3	4	4
Tin ppm ASTM D5185m >15 0 0 <1 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 299 255 262 Barium ppm ASTM D5185m 0 5 0 Molybdenum ppm ASTM D5185m 132 120 118 Magnese ppm ASTM D5185m 697 593 640 Calcium ppm ASTM D5185m 760 727 698 690 Zinc ppm ASTM D5185m 270 2585 2860 2973 Sulfur ppm ASTM D5185m >22 7 8 8 Sodium ppm ASTM D5185m >20 0 2 0 Intretanon	Lead	ppm	ASTM D5185m	>17	0	0	0
Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 299 255 262 Barium ppm ASTM D5185m 0 5 0 Molybdenum ppm ASTM D5185m 132 120 118 Manganese ppm ASTM D5185m 697 593 640 Calcium ppm ASTM D5185m 1556 1375 1502 Phosphorus ppm ASTM D5185m 760 727 698 690 Zinc ppm ASTM D5185m 2770 2585 2860 2973 Solicon ppm ASTM D5185m >225 7 8 8 Sodium ppm ASTM D5185m >20 0 2 0 INFRA-RED	Copper	ppm	ASTM D5185m	>70	0	<1	<1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 299 255 262 Barium ppm ASTM D5185m 0 5 0 Molybdenum ppm ASTM D5185m 132 120 118 Manganese ppm ASTM D5185m 697 593 640 Calcium ppm ASTM D5185m 697 593 640 Calcium ppm ASTM D5185m 760 727 698 690 Zinc ppm ASTM D5185m 760 727 698 690 Zinc ppm ASTM D5185m 770 2585 2860 2973 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 8 8 Sodium ppm	Tin	ppm	ASTM D5185m	>15	0	0	<1
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Boron ppm ASTM D5185m 299 255 262 Barium ppm ASTM D5185m 0 5 0 Molybdenum ppm ASTM D5185m 132 120 118 Manganese ppm ASTM D5185m 132 120 118 Magnesium ppm ASTM D5185m 697 593 640 Calcium ppm ASTM D5185m 697 593 640 Calcium ppm ASTM D5185m 697 593 640 Calcium ppm ASTM D5185m 760 727 698 690 Zinc ppm ASTM D5185m 270 2585 2860 2973 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 0 2 0 INFRA-RED method limit/base current history1 history2 Soot % % 'A	Cadmium	ppm	ASTM D5185m		0	0	0
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Molybdenum ppm ASTM D5185m 132 120 118 Manganese ppm ASTM D5185m 1 <1 1 Magnesium ppm ASTM D5185m 697 593 640 Calcium ppm ASTM D5185m 697 593 640 Calcium ppm ASTM D5185m 697 593 640 Calcium ppm ASTM D5185m 760 727 698 690 Zinc ppm ASTM D5185m 760 727 698 690 Zinc ppm ASTM D5185m 2770 2585 2860 2973 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 0 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 0.1 0.1 Nitration <t< th=""><th>Boron</th><th>nnm</th><th>ASTM D5185m</th><th></th><th>299</th><th>255</th><th>262</th></t<>	Boron	nnm	ASTM D5185m		299	255	262
Manganese ppm ASTM D5185m 1 <1		pp					
Magnesium ppm ASTM D5185m 697 593 640 Calcium ppm ASTM D5185m 1556 1375 1502 Phosphorus ppm ASTM D5185m 760 727 698 690 Zinc ppm ASTM D5185m 760 727 698 690 Zinc ppm ASTM D5185m 760 727 698 690 Sulfur ppm ASTM D5185m 2770 2585 2860 2973 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 8 8 Sodium ppm ASTM D5185m >20 0 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 0.1 0.1 Nitration Abs/.1mm *ASTM D7415 >30 22.9 21.4	Barium		ASTM D5185m		0	5	
Calcium ppm ASTM D5185m 1556 1375 1502 Phosphorus ppm ASTM D5185m 760 727 698 690 Zinc ppm ASTM D5185m 830 853 824 826 Sulfur ppm ASTM D5185m 2770 2585 2860 2973 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 8 8 Sodium ppm ASTM D5185m >20 0 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 8.6 11.1 9.2 Sulfation Abs/.1mm *ASTM D7624 >20 8.6 11.4 22.1 FLUID DEGRADATION method limit/base cu		ppm			-		0
Phosphorus ppm ASTM D5185m 760 727 698 690 Zinc ppm ASTM D5185m 830 853 824 826 Sulfur ppm ASTM D5185m 2770 2585 2860 2973 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 8 8 Sodium ppm ASTM D5185m >20 0 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D784# 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 8.6 11.1 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.9 21.4 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 <td< td=""><th>Molybdenum Manganese</th><td>ppm ppm</td><td>ASTM D5185m</td><td></td><th>132</th><td>120</td><td>0 118</td></td<>	Molybdenum Manganese	ppm ppm	ASTM D5185m		132	120	0 118
Zinc ppm ASTM D5185m 830 853 824 826 Sulfur ppm ASTM D5185m 2770 2585 2860 2973 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 8 8 Sodium ppm ASTM D5185m >25 7 8 8 Sodium ppm ASTM D5185m >20 0 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D784 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 8.6 11.1 9.2 Sulfation Abs/.1mm *ASTM D7115 >30 22.9 21.4 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25	Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m		132 1	120 <1	0 118 1
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Silicon ppm ASTM D5185m >25 7 8 8 Sodium ppm ASTM D5185m <1 2 3 Potassium ppm ASTM D5185m >20 0 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 8.6 11.1 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.9 21.4 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.4 18.7 18.4	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	830	132 1 697 1556 727 853	120 <1 593 1375 698 824	0 118 1 640 1502 690 826
Sodium ppm ASTM D5185m <1	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	830 2770	132 1 697 1556 727 853	120 <1 593 1375 698 824 2860	0 118 1 640 1502 690 826 2973
Potassium ppm ASTM D5185m >20 0 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 8.6 11.1 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.9 21.4 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.4 18.7 18.4	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	830 2770 limit/base	132 1 697 1556 727 853 2585 current	120 <1 593 1375 698 824 2860 history1	0 118 1 640 1502 690 826 2973 history2
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 8.6 11.1 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.9 21.4 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.4 18.7 18.4	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	830 2770 limit/base	132 1 697 1556 727 853 2585 current 7	120 <1 593 1375 698 824 2860 history1 8	0 118 1 640 1502 690 826 2973 history2 8
Soot % % *ASTM D7844 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 8.6 11.1 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 22.9 21.4 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.4 18.7 18.4	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	830 2770 limit/base >25	132 1 697 1556 727 853 2585 2585 current 7 <1	120 <1 593 1375 698 824 2860 history1 8 2	0 118 1 640 1502 690 826 2973 history2 8 3
Nitration Abs/cm *ASTM D7624 >20 8.6 11.1 9.2 Sulfation Abs/.1mm *ASTM D7615 >30 22.9 21.4 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.4 18.7 18.4	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	830 2770 limit/base >25	132 1 697 1556 727 853 2585 2585 current 7 <1	120 <1 593 1375 698 824 2860 history1 8 2	0 118 1 640 1502 690 826 2973 history2 8 3
Sulfation Abs/.1mm *ASTM D7415 >30 22.9 21.4 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.4 18.7 18.4	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	830 2770 limit/base >25 >20	132 1 697 1556 727 853 2585 current 7 <1 0	120 <1 593 1375 698 824 2860 history1 8 2 2 2 history1	0 118 1 640 1502 690 826 2973 history2 8 3 0 history2
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.4 18.7 18.4	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm	ASTM D5185m ASTM D5185m	830 2770 limit/base >25 >20 limit/base	132 1 697 1556 727 853 2585 current 7 <1 0 current 0.1	120 <1 593 1375 698 824 2860 history1 8 2 2 2 history1 0.1	0 118 1 640 502 690 826 2973 history2 8 3 0 history2 0.1
Oxidation Abs/.1mm *ASTM D7414 >25 18.4 18.7 18.4	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	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	830 2770 limit/base >25 >20 limit/base	132 1 697 1556 727 853 2585 current 7 <1 0 current 0.1 8.6	120 <1 593 1375 698 824 2860 history1 8 2 2 2 history1 0.1 11.1	0 118 1 640 1502 690 826 2973 history2 8 3 0 history2 0.1 9.2
	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 *ASTM D7844	830 2770 limit/base >25 >20 limit/base >20	132 1 697 1556 727 853 2585 current 7 <1 0 current 0.1 8.6	120 <1 593 1375 698 824 2860 history1 8 2 2 2 history1 0.1 11.1	0 118 1 640 1502 690 826 2973 history2 8 3 0 history2 0.1 9.2
Base Number (BN) mg KOH/g ASTM D2896 10.7 8.4 9.1 7.7	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 D7844	830 2770 limit/base >25 >20 limit/base >20 >30	132 1 697 1556 727 853 2585 current 7 <1 0 current 0.1 8.6 22.9	120 <1 593 1375 698 824 2860 history1 8 2 2 history1 0.1 11.1 21.4	0 118 1 640 1502 690 826 2973 history2 8 3 0 history2 0.1 9.2 22.1
	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	830 27770 limit/base >25 >20 limit/base >20 >30 limit/base	132 1 697 1556 727 853 2585 current 7 <1 0 current 0.1 8.6 22.9 current	120 <1 593 1375 698 824 2860 history1 8 2 2 history1 0.1 11.1 21.4 history1	0 118 1 640 1502 690 826 2973 history2 8 3 0 history2 0.1 9.2 22.1 history2



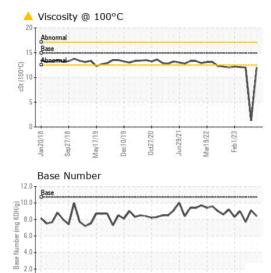
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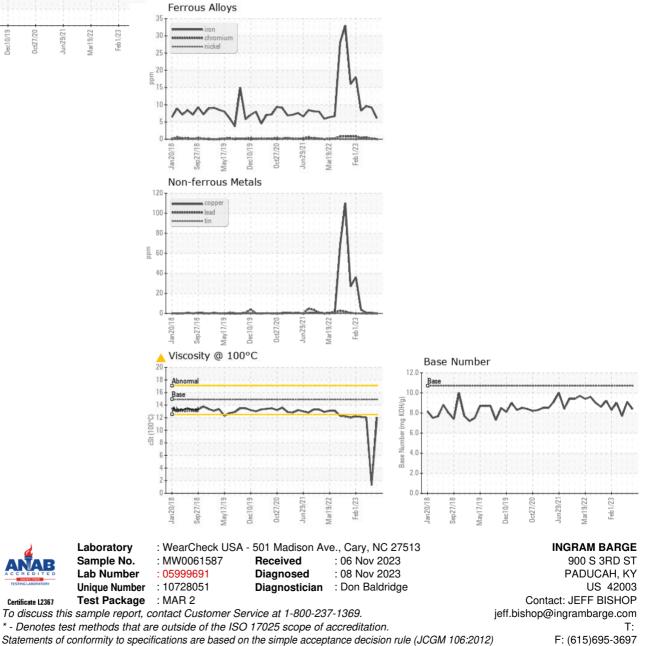
May17/19

1/11/1

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	>0.1	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	14.9	12.0	1.3	1 2.0
GRAPHS						



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