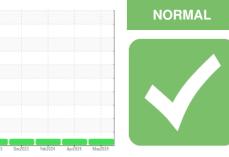


OIL ANALYSIS REPORT



Machine Id

1013 Component Diesel Engine Fluid DIESEL ENGINE OIL SAE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

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

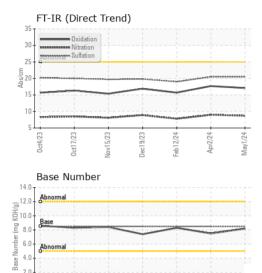
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

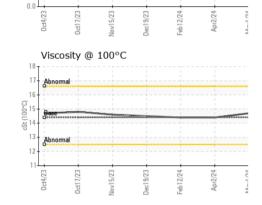
Sample Number Client Info WC0897846 WC0893950 WC0897866 Sample Date Client Info 01 May 2024 02 Apr 2024 12 Feb 2024 Machine Age mis Client Info 0 0 0 Ol Age mis Client Info N/A N/A N/A Sample Status Client Info N/A N/A N/A N/A CONTAMINATION method imit/base current history1 History2 Fuel WC Method >.0 <1.0 <1.0 <1.0 Water WC Method >.0 <1.0 NEG NEG Mater WC Method >.0 <1.0 <1.0 <1.0 Water WC Method >.0 <16 17 15 Chromium ppm ASTM05185m<>.2 <1 0 0 Nickel ppm ASTM05185m<>.2 <1 0 0 Alumium ppm ASTM05185m<>.2 <1 0 0 <th>SAMPLE INFORM</th> <th>ATION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Machine Age mils Client Info 0 0 0 Oil Age mils Client Info 0 0 0 Oil Changed Client Info N/A N/A N/A Sample Status Imit/base current History1 History2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG Chromium ppm ASTM D5185m >20 <1 <1 <1 Nickel ppm ASTM D5185m >20 <1 0 0 Silver ppm ASTM D5185m >20 2 <1 0 0 Auminum ppm ASTM D5185m >20 2 <1 0 0 Auminum ppm ASTM D5185m >20 2 <1 0 0 Auminum ppm	Sample Number		Client Info		WC0897846	WC0893950	WC0878766
Oit Age mis Client Info 0 0 0 Oil Changed Client Info N/A N/A N/A Sample Status Imit/base NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 Water WC Method NEG NEG NEG Glycol WC Method NEG NEG NEG WARM ppm ASTM D5185m >20 <1 <1 <1 Nickel ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >2 <1 0 0 Aluminum ppm ASTM D5185m >2 <1 0 0 Copper ppm ASTM D5185m >1 0 0 0 Cadmium ppm ASTM D5185m 1 0 0	Sample Date		Client Info		01 May 2024	02 Apr 2024	12 Feb 2024
Oli Changed Client Info N/A N/A N/A N/A Sample Status Image of the status Image of the status NoRMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >0.2 NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASIM D5185m >90 16 17 15 Chromium ppm ASIM D5185m >20 <1	Machine Age	mls	Client Info		858091	0	0
Sample Status Image: method NORMAL NORMAL NORMAL NORMAL CONTAMINATION method imit/base current history1 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Glycol WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM 05185m >20 <1 <1 <1 1 Nockel ppm ASTM 05185m >2 <1 0 0 Aluminum ppm ASTM 05185m >2 <1 0 0 Aluminum ppm ASTM 05185m >2 <1 0 0 Vanadium ppm ASTM 05185m >1 0 0 Vanadium ppm ASTM 05185m	Oil Age	mls	Client Info		0	0	0
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Glycol WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 <1 <1 <1 Ohromium ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >2 <1 0 0 Copper ppm ASTM D5185m >20 2 <1 1 Lead ppm ASTM D5185m >330 2 2 <1 0 0 Vanadium ppm ASTM D5185m >15 <1 0 0 <1 Cadmium ppm ASTM D5185m 250	Oil Changed		Client Info		N/A	N/A	N/A
Fuel WC Method >3.0 <1.0	Sample Status				NORMAL	NORMAL	NORMAL
Water WC Method >0.2 NEG NEG NEG NEG Glycol WC Method Imit/base current history1 history2 Iron ppm ASTM D5185m >90 16 17 15 Chromium ppm ASTM D5185m >20 <1 <1 <1 Nickel ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >20 2 <1 0 0 Copper ppm ASTM D5185m >20 2 <1 1 Lead ppm ASTM D5185m >300 2 2 <1 Tin ppm ASTM D5185m >40 <1 <1 <1 Cadmium ppm ASTM D5185m >50 0 0 <1 Barium ppm ASTM D5185m 10 2	CONTAMINATION	٧	method	limit/base	current	history1	history2
Glycol WC Method NEG NEG NEG WEAR METALS method imit/base current history1 history2 Iron ppm ASTM D5185m >90 16 17 15 Chromium ppm ASTM D5185m >20 <1 <1 <1 Nickel ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >2 <1 0 0 Aluminum ppm ASTM D5185m >20 2 <1 1 Lead ppm ASTM D5185m >20 2 <1 1 Lead ppm ASTM D5185m >15 <1 0 0 Vanadium ppm ASTM D5185m 15 <1 0 0 Vanadium ppm ASTM D5185m 10 2 0 0 Vanadium ppm ASTM D5185m 100 66 978 1076 <tr< th=""><th>Fuel</th><th></th><th>WC Method</th><th>>3.0</th><th><1.0</th><th><1.0</th><th><1.0</th></tr<>	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >90 16 17 15 Chromium ppm ASTM D5185m >20 <1 <1 <1 Nickel ppm ASTM D5185m >2 <1 0 0 Titanium ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >20 2 <1 0 Copper ppm ASTM D5185m >20 2 <1 0 Copper ppm ASTM D5185m >20 2 <1 0 Cadmium ppm ASTM D5185m >15 <1 0 0 Admium ppm ASTM D5185m <1 0 0 0 Vanadium ppm ASTM D5185m 10 2 0 0 Boron ppm ASTM D5185m 10 2 0	Water		WC Method	>0.2	NEG	NEG	NEG
Iron ppm ASTM D5185m >90 16 17 15 Chromium ppm ASTM D5185m >20 <1 <1 <1 Nickel ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >2 <1 0 0 Aluminum ppm ASTM D5185m >2 <1 0 0 Aluminum ppm ASTM D5185m >2 <1 0 0 Copper ppm ASTM D5185m >2 <1 0 0 Vanadium ppm ASTM D5185m >15 <1 0 0 Vanadium ppm ASTM D5185m <1 <1 <1 <1 Cadmium ppm ASTM D5185m <50 0 0 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 1 1	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >2 <1	Iron	ppm	ASTM D5185m	>90	16	17	15
Titanium ppm ASTM D5185m >2 <1	Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Silver ppm ASTM D5185m >2 <1	Nickel	ppm	ASTM D5185m	>2	<1	0	0
Aluminum ppm ASTM D5185m >20 2 <1	Titanium	ppm	ASTM D5185m	>2	<1	0	0
Lead ppm ASTM D5185m >40 <1	Silver	ppm	ASTM D5185m	>2	<1	0	0
Copper ppm ASTM D5185m >330 2 2 <1	Aluminum	ppm	ASTM D5185m	>20	2	<1	1
Tin ppm ASTM D5185m >15 <1	Lead	ppm	ASTM D5185m	>40	<1	<1	0
Vanadium ppm ASTM D5185m <1	Copper	ppm	ASTM D5185m	>330	2	2	<1
Cadmium ppm ASTM D5185m <1	Tin	ppm	ASTM D5185m	>15	<1	0	0
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 250 0 0 <1 Barium ppm ASTM D5185m 10 2 0 0 Molybdenum ppm ASTM D5185m 100 66 60 59 Manganese ppm ASTM D5185m 100 666 978 1076 Calcium ppm ASTM D5185m 450 9666 978 1076 Calcium ppm ASTM D5185m 3000 1119 1088 1132 Phosphorus ppm ASTM D5185m 1350 1260 1223 1356 Sulfur ppm ASTM D5185m 255 18 9 15 Sodium ppm ASTM D5185m >25 18 9 15 Sodium ppm ASTM D5185m >25 18 9 15 Sodium ppm ASTM D5185m >20	Vanadium	ppm	ASTM D5185m		<1	<1	<1
Boron ppm ASTM D5185m 250 0 0 <1	Cadmium	ppm	ASTM D5185m		<1	0	0
Barium ppm ASTM D5185m 10 2 0 0 Molybdenum ppm ASTM D5185m 100 66 60 59 Manganese ppm ASTM D5185m 100 66 60 59 Magnesium ppm ASTM D5185m 450 966 978 1076 Calcium ppm ASTM D5185m 450 966 978 1076 Calcium ppm ASTM D5185m 3000 1119 1088 1132 Phosphorus ppm ASTM D5185m 1350 1260 1223 1356 Sulfur ppm ASTM D5185m 4250 3086 3309 3063 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 18 9 15 Sodium ppm ASTM D5185m >20 6 0 <1 INFRA-RED method limit/base							
Molybdenum ppm ASTM D5185m 100 66 60 59 Manganese ppm ASTM D5185m <1 0 Magnesium ppm ASTM D5185m 450 966 978 1076 Calcium ppm ASTM D5185m 3000 1119 1088 1132 Phosphorus ppm ASTM D5185m 1150 1110 1012 1075 Zinc ppm ASTM D5185m 1350 1260 1223 1356 Sulfur ppm ASTM D5185m 4250 3086 3309 3063 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 18 9 15 Sodium ppm ASTM D5185m >20 6 0 <1 INFRA-RED method imit/base current history1 history2 Soot % % *ASTM D7844 >6	ADDITIVES		method	limit/base	current	history1	history2
Manganese ppm ASTM D5185m <1		ppm					
Magnesium ppm ASTM D5185m 450 966 978 1076 Calcium ppm ASTM D5185m 3000 1119 1088 1132 Phosphorus ppm ASTM D5185m 1150 1110 1012 1075 Zinc ppm ASTM D5185m 1350 1260 1223 1356 Sulfur ppm ASTM D5185m 4250 3086 3309 3063 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 18 9 15 Sodium ppm ASTM D5185m >25 18 9 15 Sodium ppm ASTM D5185m >20 6 0 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.7 0.5 0.4 Nitration Abs/.1mm *ASTM D7624	Boron		ASTM D5185m	250	0	0	<1
Calcium ppm ASTM D5185m 3000 1119 1088 1132 Phosphorus ppm ASTM D5185m 1150 1110 1012 1075 Zinc ppm ASTM D5185m 1350 1260 1223 1356 Sulfur ppm ASTM D5185m 4250 3086 3309 3063 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 18 9 15 Sodium ppm ASTM D5185m >25 18 9 15 Sodium ppm ASTM D5185m >20 6 0 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.7 0.5 0.4 Nitration Abs/.tmm *ASTM D7624 >20 8.7 9.0 7.8 Sulfation Abs/.tmm *ASTM D7415<	Boron Barium	ppm	ASTM D5185m ASTM D5185m	250 10	0 2	0	<1 0
Phosphorus ppm ASTM D5185m 1150 1110 1012 1075 Zinc ppm ASTM D5185m 1350 1260 1223 1356 Sulfur ppm ASTM D5185m 4250 3086 3309 3063 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 18 9 15 Sodium ppm ASTM D5185m >25 18 9 15 Sodium ppm ASTM D5185m >20 6 0 <1	Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	0 2 66	0 0 60	<1 0 59 0
Zinc ppm ASTM D5185m 1350 1260 1223 1356 Sulfur ppm ASTM D5185m 4250 3086 3309 3063 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 18 9 15 Sodium ppm ASTM D5185m >25 18 9 15 Sodium ppm ASTM D5185m >20 6 0 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.7 0.5 0.4 Nitration Abs/cm *ASTM D7624 >20 8.7 9.0 7.8 Sulfation Abs/.imm *ASTM D7415 >30 20.5 20.5 19.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.imm *ASTM D741	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	0 2 66 <1 966	0 0 60 <1 978	<1 0 59 0 1076
Sulfur ppm ASTM D5185m 4250 3086 3309 3063 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 18 9 15 Sodium ppm ASTM D5185m >25 18 9 15 Potassium ppm ASTM D5185m >20 6 0 <1	Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	0 2 66 <1 966 1119	0 0 60 <1 978 1088	<1 0 59 0 1076 1132
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 18 9 15 Sodium ppm ASTM D5185m >158 0 2 <1 Potassium ppm ASTM D5185m >20 6 0 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.7 0.5 0.4 Nitration Abs/cm *ASTM D7624 >20 8.7 9.0 7.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.5 20.5 19.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1 17.7 15.7	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	0 2 66 <1 966 1119 1110	0 0 60 <1 978 1088 1012	<1 0 59 0 1076 1132 1075
Silicon ppm ASTM D5185m >25 18 9 15 Sodium ppm ASTM D5185m >158 0 2 <1	Boron 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 ASTM D5185m	250 10 100 450 3000 1150 1350	0 2 66 <1 966 1119 1110 1260	0 0 60 <1 978 1088 1012 1223	<1 0 59 0 1076 1132 1075 1356
Sodium ppm ASTM D5185m >158 0 2 <1	Boron 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 ASTM D5185m	250 10 100 450 3000 1150 1350	0 2 66 <1 966 1119 1110 1260	0 0 60 <1 978 1088 1012 1223	<1 0 59 0 1076 1132 1075 1356
Potassium ppm ASTM D5185m >20 6 0 <1	Boron 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 ASTM D5185m	250 10 100 450 3000 1150 1350 4250	0 2 66 <1 966 1119 1110 1260 3086	0 0 60 <1 978 1088 1012 1223 3309	<1 0 59 0 1076 1132 1075 1356 3063
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.7 0.5 0.4 Nitration Abs/cm *ASTM D7624 >20 8.7 9.0 7.8 Sulfation Abs/.tmm *ASTM D7415 >30 20.5 20.5 19.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.tmm *ASTM D7414 >25 17.1 17.7 15.7	Boron 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 ASTM D5185m	250 10 100 450 3000 1150 1350 4250	0 2 66 <1 966 1119 1110 1260 3086 current	0 0 60 <1 978 1088 1012 1223 3309 history1	<1 0 59 0 1076 1132 1075 1356 3063 history2
Soot % % *ASTM D7844 >6 0.7 0.5 0.4 Nitration Abs/cm *ASTM D7624 >20 8.7 9.0 7.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.5 20.5 19.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1 17.7 15.7	Boron 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 method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base	0 2 66 <1 966 1119 1110 1260 3086 current 18	0 0 60 <1 978 1088 1012 1223 3309 history1 9	<1 0 59 0 1076 1132 1075 1356 3063 history2 15
Nitration Abs/cm *ASTM D7624 >20 8.7 9.0 7.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.5 20.5 19.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1 17.7 15.7	Boron 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 ASTM D5185m method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158	0 2 66 <1 966 1119 1110 1260 3086 <u>current</u> 18 0	0 0 60 <1 978 1088 1012 1223 3309 history1 9 2	<1 0 59 0 1076 1132 1075 1356 3063 history2 15 <1
Sulfation Abs/.1mm *ASTM D7415 >30 20.5 20.5 19.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1 17.7 15.7	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20	0 2 66 <1 966 1119 1110 1260 3086 Current 18 0 6	0 0 60 <1 978 1088 1012 1223 3309 history1 9 2 0	<1 0 59 0 1076 1132 1075 1356 3063 history2 15 <1 <1
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1 17.7 15.7	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 Imit/base >25 >158 >20 Imit/base	0 2 66 <1 966 1119 1110 1260 3086 <u>current</u> 18 0 6 <u>current</u>	0 0 60 <1 978 1088 1012 1223 3309 history1 9 2 0 0 history1	<1 0 59 0 1076 1132 1075 1356 3063 history2 15 <1 <1 <1 <1 <1
Oxidation Abs/.1mm *ASTM D7414 >25 17.1 17.7 15.7	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 Imit/base >25 >158 >20 Imit/base >6	0 2 66 <1 966 1119 1110 1260 3086 <u>current</u> 18 0 6 <u>current</u>	0 0 60 <1 978 1088 1012 1223 3309 history1 9 2 0 0 history1 0.5	<1 0 59 0 1076 1132 1075 1356 3063 history2 15 <1 <1 <1 <1 <1 history2 0.4
	Boron Barium 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	250 10 100 450 3000 1150 1350 4250 i mit/base >25 >158 >20 i mit/base >6 >20	0 2 66 <1 966 1119 1110 1260 3086 <i>current</i> 18 0 6 <i>current</i> 0.7 8.7	0 0 60 <1 978 1088 1012 1223 3309 history1 9 2 0 history1 0.5 9.0	<1 0 59 0 1076 1132 1075 1356 3063 history2 15 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1
Base Number (BN) mg KOH/g ASTM D2896 8.5 8.2 7.5 8.3	Boron Barium 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	250 10 100 450 3000 1150 1350 4250 Imit/base >25 >158 >20 Imit/base >6 >20	0 2 66 <1 966 1119 1110 1260 3086 <u>current</u> 18 0 6 <u>current</u> 0.7 8.7 20.5	0 0 60 <1 978 1088 1012 1223 3309 history1 9 2 0 bistory1 0.5 9.0 20.5	<1 0 59 0 1076 1132 1075 1356 3063 history2 15 <1 <1 <1 <1 history2 0.4 7.8 19.0
	Boron Barium 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 D7844 *ASTM D7844	250 10 100 450 3000 1150 1350 4250 imit/base >25 >158 >20 imit/base >6 >20 >30	0 2 66 <1 966 1119 1110 1260 3086 Current 18 0 6 Current 0.7 8.7 20.5 Current	0 0 60 <1 978 1088 1012 1223 3309 history1 9 2 0 history1 0.5 9.0 20.5 history1	<1 0 59 0 1076 1132 1075 1356 3063 history2 15 <11 <10 history2 0.4 7.8 19.0 history2



2.0

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
Apr2/24	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Apr2/24 May1/24	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	14.4	14.7	14.4	14.4
	GRAPHS						
	Iron (ppm)			100	Lead (ppm)		
- +7) V G	250 Severe			100	Severe		
4-2/21дА Ал. т	E 150 - Abnormal						
	and Abnormal	1		E 40	Abnormal		
	50-			20			
	0		_	0			
	0ct4/23 0ct17/23 Nov15/23	Dec19/23	Feb12/24 Apr2/24	May1/24	0ct4/23 0ct17/23	Nov15/23 Dec19/23	Feb12/24 Apr2/24
	0 2	Dec	A	Ma	0		A, A,
	Aluminum (ppm)			50	Chromium (opm)	
	40 Severe			40	Severe		
No.1N	and the second s			³⁰ 20	Abnormal		
VG UT W	10			10	1.		
	0						
	0ct4/23 - 0ct17/23 - Nov15/23 -	Dec19/23 -	Feb12/24 - Apr2/24 -	May1/24 -	0ct4/23 . 0ct17/23 .	Nov15/23 . Dec19/23 .	Feb12/24 - Apr2/24 -
		Dec1	Feb1 Apr	May	0		Feb1
	Copper (ppm)			80	Silicon (ppm)	
	Abnonnal						
	300-			60			
	틆 200 -			튭 40			
	100-			20	Abnormal		
	0			0			
	0ct4/23 0ct17/23 Nov15/23	Dec19/23	Feb12/24 Apr2/24	May1/24	0ct4/23 0ct17/23	Nov15/23 Dec19/23	Feb12/24 - Apr2/24 -
	0 1		Feb Ap	Ma	0ct 0c	Nov	Ap
	Viscosity @ 100°C				Base Numbe	r	
	Abnormal			0.01 Base Number (mg KOH/g)	Abnormal		
	Contraction of the second seco			E ^{10.0}	Base		
	은 14 경 Abnormal			per co	Abnormal		
	12-			N S.U			
	10			0.0)		
	0ct4/23 0ct17/23 Nov15/23	Dec19/23	Feb12/24 - Apr2/24 -	May1/24	0ct4/23 0ct17/23	Nov15/23 Dec19/23	Feb12/24 - Apr2/24 -
	Nov Oct 0	Dec	Aş	W	000	Nov	Fet.



Unique Number : 11022855 Diagnosed : 14 May 2024 - Wes Davis Test Package : MOB 1 (Additional Tests: TBN) Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. Robert.losiniecki@ratpdev.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: GODDUR [WUSCAR] 06176802 (Generated: 05/14/2024 04:29:21) Rev: 1

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Page 2 of 2

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