

OIL ANALYSIS REPORT

Sample Rating Trend



Martinsville Machine Id [Martinsville] Oil - Port Genset

Port Genset

MOBIL 15W40 (7 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

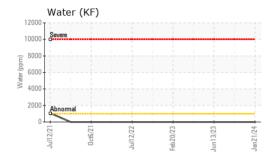
Fluid Condition

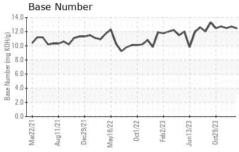
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

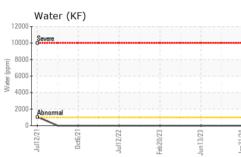
		3r2021 Aug20	21 Dec2021 May2022	Oct2022 Feb2023 Jun2023		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0845819	WC0735537	WC0845818
Sample Date		Client Info		15 Feb 2024	21 Jan 2024	23 Dec 2023
Machine Age	hrs	Client Info		6623	6442	6041
Oil Age	hrs	Client Info		174	391	0
Oil Changed		Client Info		Filtered	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	V	method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	<1.0	0.3	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	2	4	<1
Chromium	ppm	ASTM D5185m	>4	0	0	0
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	0	2	2
Lead	ppm	ASTM D5185m	>17	0	3	<1
Copper	ppm	ASTM D5185m	>70	0	2	<1
Tin	ppm	ASTM D5185m	>15	0	1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
//DDITIVEO		memou			HISTOLY	
Boron	ppm	ASTM D5185m	IIIIIIVDase	26	33	30
	ppm		IIIIIVDase			
Boron Barium	ppm	ASTM D5185m	IIIIII/Dase	26	33	30
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	IIIIIIVDASE	26 0	33 0	30 0
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m	IIIIII/Dase	26 0 59	33 0 69	30 0 58
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		26 0 59 0 1458	33 0 69 2	30 0 58 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	IIIIII/Dase	26 0 59 0 1458 1176	33 0 69 2 1446	30 0 58 <1 1397 1051
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	IIIIIVOASE	26 0 59 0 1458 1176 947	33 0 69 2 1446 1182 1051	30 0 58 <1 1397 1051 996
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	IIIIIVOASE	26 0 59 0 1458 1176	33 0 69 2 1446 1182	30 0 58 <1 1397 1051
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	26 0 59 0 1458 1176 947 1159	33 0 69 2 1446 1182 1051 1264	30 0 58 <1 1397 1051 996 1217
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		26 0 59 0 1458 1176 947 1159 3661	33 0 69 2 1446 1182 1051 1264 3205	30 0 58 <1 1397 1051 996 1217 3247
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	26 0 59 0 1458 1176 947 1159 3661	33 0 69 2 1446 1182 1051 1264 3205 history1	30 0 58 <1 1397 1051 996 1217 3247 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	26 0 59 0 1458 1176 947 1159 3661 current	33 0 69 2 1446 1182 1051 1264 3205 history1	30 0 58 <1 1397 1051 996 1217 3247 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >118 >20	26 0 59 0 1458 1176 947 1159 3661 current 2	33 0 69 2 1446 1182 1051 1264 3205 history1 4	30 0 58 <1 1397 1051 996 1217 3247 history2 5 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >118 >20	26 0 59 0 1458 1176 947 1159 3661 current 2 0	33 0 69 2 1446 1182 1051 1264 3205 history1 4 4	30 0 58 <1 1397 1051 996 1217 3247 history2 5 <1 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >118 >20 >0.1	26 0 59 0 1458 1176 947 1159 3661 current 2 0 0 NEG	33 0 69 2 1446 1182 1051 1264 3205 history1 4 4 3 NEG	30 0 58 <1 1397 1051 996 1217 3247 history2 5 <1 2 NEG
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304	limit/base >25 >118 >20 >0.1 limit/base	26 0 59 0 1458 1176 947 1159 3661 current 2 0 0 NEG current	33 0 69 2 1446 1182 1051 1264 3205 history1 4 4 3 NEG	30 0 58 <1 1397 1051 996 1217 3247 history2 5 <1 2 NEG history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >118 >20 >0.1 limit/base	26 0 59 0 1458 1176 947 1159 3661 current 2 0 0 NEG	33 0 69 2 1446 1182 1051 1264 3205 history1 4 4 3 NEG history1	30 0 58 <1 1397 1051 996 1217 3247 history2 5 <1 2 NEG history2 0.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 method *ASTM D7844 *ASTM D7624	limit/base >25 >118 >20 >0.1 limit/base	26 0 59 0 1458 1176 947 1159 3661 current 2 0 0 NEG current 0.1 7.1	33 0 69 2 1446 1182 1051 1264 3205 history1 4 4 3 NEG history1 0.1 8.1	30 0 58 <1 1397 1051 996 1217 3247 history2 5 <1 2 NEG history2 0.1 5.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 method *ASTM D7844 *ASTM D7624 *ASTM D7415 method	limit/base >25 >118 >20 >0.1 limit/base >20 >30 limit/base	26 0 59 0 1458 1176 947 1159 3661 current 2 0 0 NEG current 0.1 7.1 19.0 current	33 0 69 2 1446 1182 1051 1264 3205 history1 4 4 3 NEG history1 0.1 8.1 20.1	30 0 58 <1 1397 1051 996 1217 3247 history2 5 <1 2 NEG history2 0.1 5.5 18.3 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 method *ASTM D7844 *ASTM D7624 *ASTM D76145	limit/base >25 >118 >20 >0.1 limit/base >20 >30 limit/base	26 0 59 0 1458 1176 947 1159 3661 current 2 0 NEG current 0.1 7.1 19.0	33 0 69 2 1446 1182 1051 1264 3205 history1 4 4 3 NEG history1 0.1 8.1 20.1	30 0 58 <1 1397 1051 996 1217 3247 history2 5 <1 2 NEG history2 0.1 5.5 18.3



OIL ANALYSIS REPORT

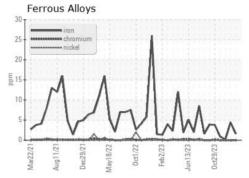




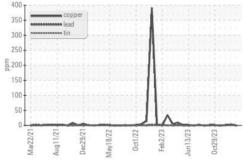


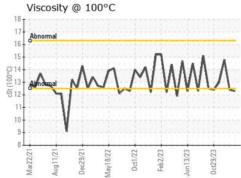
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

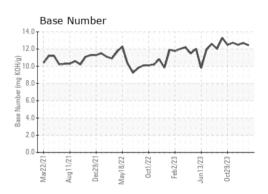
FLUID PROPERTIES		method			history2
Visc @ 100°C	cSt	ASTM D445	12.3	12.4	14.8



Non-ferrous Metals











Certificate L2367

Laboratory Sample No.

Lab Number : 06122606 Unique Number : 10936757

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0845819 Received : 19 Mar 2024

Tested Diagnosed Test Package : IND 2 (Additional Tests: KF)

: 21 Mar 2024 : 21 Mar 2024 - Jonathan Hester MARATHON PETROLEUM CO.

101 12TH ST CATLETTSBURG, KY

US 41169 Contact: CORY GUMBERT

To discuss this sample report, contact Customer Service at 1-800-237-1369.

cagumbert@marathonpetroleum.com T: (606)585-3950

* - 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)

F: x: