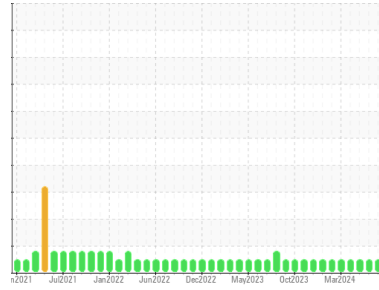




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Nashville
 Machine Id
[Nashville] Oil - Port Genset
 Component
Port Genset
 Fluid
MOBIL 15W40 (6 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 INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0683383	WC0683378	WC0769321
Sample Date	Client Info		06 Jul 2024	09 Jun 2024	13 May 2024
Machine Age	hrs	Client Info	12567	12141	11806
Oil Age	hrs	Client Info	907	482	146
Oil Changed	Client Info		Not Changed	Not Changed	Not Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<1.0	<1.0	<1.0
Water	WC Method	>0.1	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	26	16	15
Chromium	ppm	ASTM D5185m >4	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	0	<1	<1
Titanium	ppm	ASTM D5185m	0	0	<1
Silver	ppm	ASTM D5185m >5	0	0	<1
Aluminum	ppm	ASTM D5185m >12	<1	2	2
Lead	ppm	ASTM D5185m >17	0	<1	2
Copper	ppm	ASTM D5185m >70	<1	1	3
Tin	ppm	ASTM D5185m >15	0	0	<1
Vanadium	ppm	ASTM D5185m	0	0	<1
Cadmium	ppm	ASTM D5185m	0	0	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	36	37	46
Barium	ppm	ASTM D5185m	0	0	<1
Molybdenum	ppm	ASTM D5185m	51	46	50
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1210	1064	1069
Calcium	ppm	ASTM D5185m	1685	1484	1430
Phosphorus	ppm	ASTM D5185m	1102	1013	1003
Zinc	ppm	ASTM D5185m	1362	1262	1228
Sulfur	ppm	ASTM D5185m	3839	3701	3235

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	3	3	3
Sodium	ppm	ASTM D5185m >118	3	3	2
Potassium	ppm	ASTM D5185m >20	2	4	4

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.4	0.3	0.3
Nitration	Abs/cm	*ASTM D7624 >20	13.3	11.3	10.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	23.8	21.7	21.6

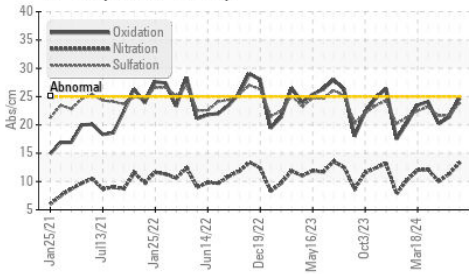
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	24.7	21.4	20.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.33	11.66	10.80

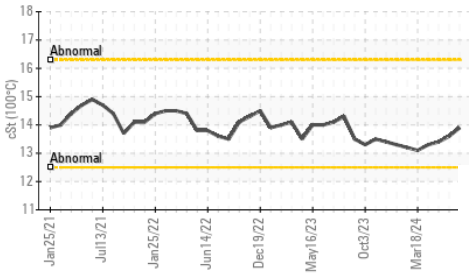


OIL ANALYSIS REPORT

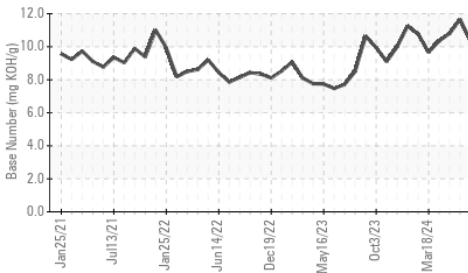
FT-IR (Direct Trend)



Viscosity @ 100°C



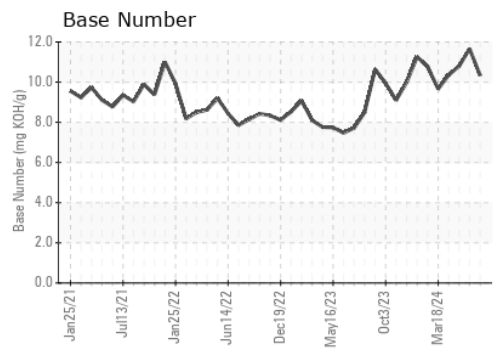
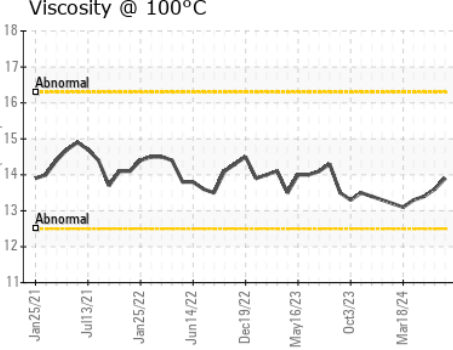
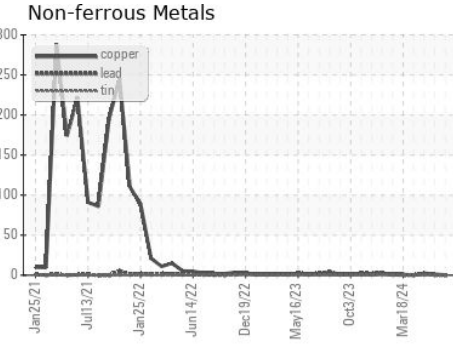
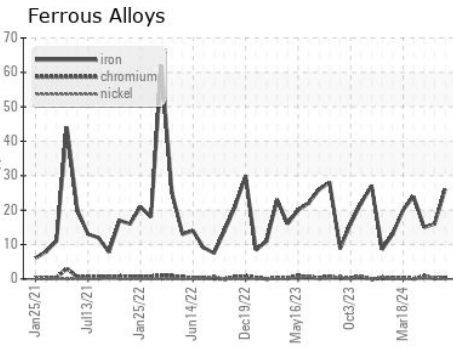
Base Number



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.9	13.6	13.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0683383
Lab Number : 06236252
Unique Number : 11125086
Test Package : IND 2
Received : 15 Jul 2024
Tested : 16 Jul 2024
Diagnosed : 16 Jul 2024 - Sean Felton

MARATHON PETROLEUM CO.
 101 12TH ST
 CATLETTSBURG, KY
 US 41169
 Contact: CORY GUMBERT
 cagumbert@marathonpetroleum.com

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