

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Area Tampa Machine Id [Tampa] Oil - Port Genset Component **Port Genset**

MOBIL 15W40 (35 GAL)

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. 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.

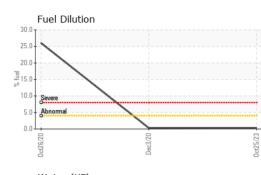


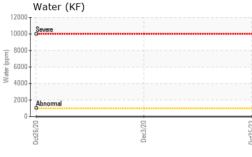


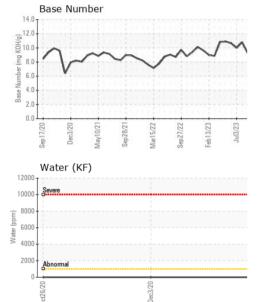
SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0805344	WC0769436	WC0769431
Sample Date		Client Info		25 Oct 2023	27 Sep 2023	30 Aug 2023
Machine Age	hrs	Client Info		19128	18968	18572
Oil Age	hrs	Client Info		160	433	337
Oil Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	4	7	5
Chromium	ppm	ASTM D5185m	>4	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		1	2	2
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m		3	<1	<1
Lead	ppm	ASTM D5185m	>17	0	<1	<1
Copper	ppm	ASTM D5185m	>70	2	3	3
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		91	52	53
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		84	42	40
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		619	575	561
Calcium	ppm	ASTM D5185m		1561	1719	1795
Phosphorus	ppm	ASTM D5185m		793	773	760
Zinc	ppm	ASTM D5185m		949	944	924
Sulfur	ppm	ASTM D5185m		3540	2622	3085
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4	4	4
Sodium	ppm	ASTM D5185m		2	1	2
Potassium	ppm	ASTM D5185m	>20	2	<1	0
Fuel	%	ASTM D3524	_	0.2	<1.0	<1.0
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0.1	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.4	8.1	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.3	21.6	22.1
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.8	19.9	20.1
Base Number (BN)	mg KOH/g	ASTM D2896		13.01	10.56	9.27



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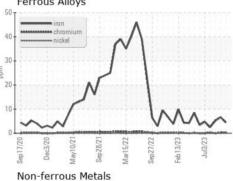


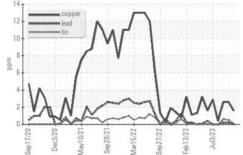


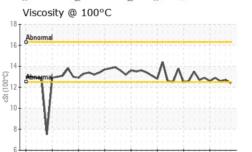


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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		12.4	12.7	12.6
GRAPHS						

Ferrous Alloys







Mar15/22

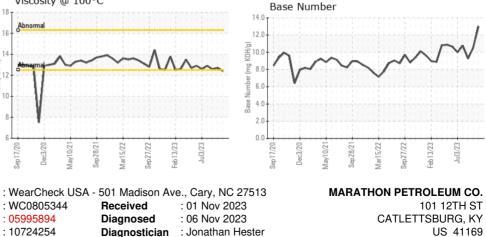
Received

Test Package : IND 2 (Additional Tests: FuelDilution, KF, PercentFuel)

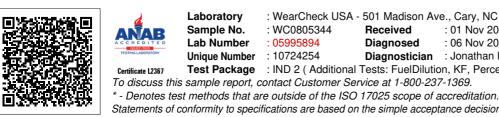
Diagnosed

Sep27/22

Feb 13/23



US 41169 Contact: CORY GUMBERT cagumbert@marathonpetroleum.com T: (606)585-3950 F: x: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)



Laboratory

Sample No.

Lab Number

Unique Number

Sep17/20 Dec3/20 -

: WC0805344

: 05995894

: 10724254

Mav10/21 Sen 28/21

Submitted By: M/V TAMPA