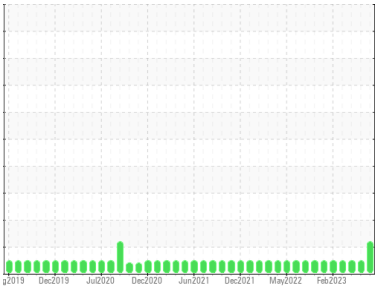
PROBLEM SUMMARY

Sample Rating Trend

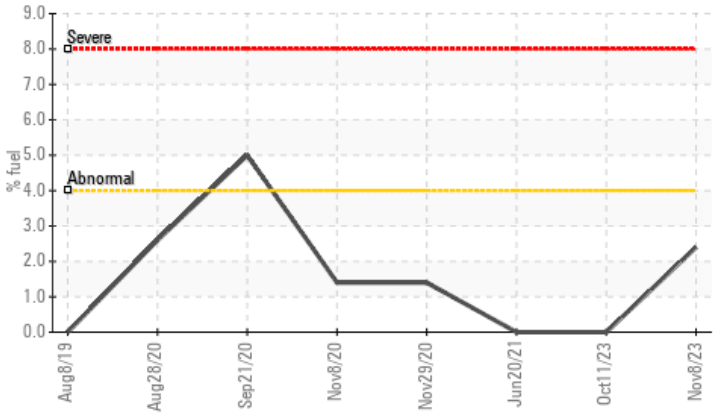


FUEL

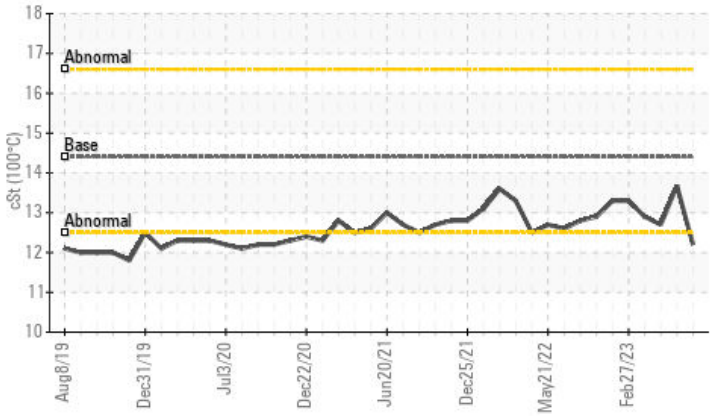
Area
Galveston Bay
Machine Id
[Galveston Bay] Oil - Starboard Genset
Component
Starboard Genset
Fluid
DIESEL ENGINE OIL SAE 15W40 (8 GAL)

COMPONENT CONDITION SUMMARY

▲ Fuel Dilution



▲ Viscosity @ 100°C



RECOMMENDATION

No corrective action is recommended at this time.
Resample at the next service interval to monitor. (
Customer Sample Comment:
Top Up Amount: 1 GAL)

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	NORMAL	NORMAL
Fuel	%	ASTM D3524	>4.0	▲ **2.4**	<1.0	<1.0
Visc @ 100°C	cSt	ASTM D445	14.4	▲ **12.2**	13.68	12.7

Customer Id: MARCAT
Sample No.: WC0735306
Lab Number: 06008540
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Sean Felton +1 919-379-4092
sfelton@wearcheckusa.com

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

11 Oct 2023 Diag: Jonathan Hester

NORMAL

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

20 Jun 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

25 Apr 2023 Diag: Wes Davis

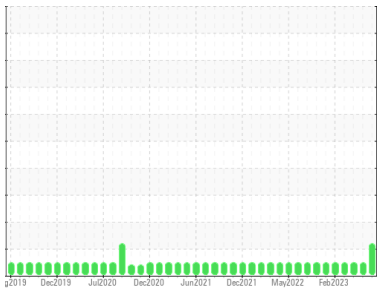
NORMAL

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Area
Galveston Bay
Machine Id
[Galveston Bay] Oil - Starboard Genset
Component
Starboard Genset
Fluid
DIESEL ENGINE OIL SAE 15W40 (8 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment:
Top Up Amount: 1 GAL)

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0735306**	WC0805200	WC0769422
Sample Date		Client Info		**08 Nov 2023**	11 Oct 2023	20 Jun 2023
Machine Age	hrs	Client Info		**351**	11	21135
Oil Age	hrs	Client Info		**351**	11	5867
Oil Changed		Client Info		**Oil Added**	N/A	Filtered
Sample Status				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION		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	**15**	5	24
Chromium	ppm	ASTM D5185m	>4	**<1**	0	1
Nickel	ppm	ASTM D5185m	>2	**0**	<1	<1
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m	>5	**<1**	<1	<1
Aluminum	ppm	ASTM D5185m	>12	**1**	2	0
Lead	ppm	ASTM D5185m	>17	**0**	<1	1
Copper	ppm	ASTM D5185m	>70	**23**	27	1
Tin	ppm	ASTM D5185m	>15	**<1**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	**60**	77	37
Barium	ppm	ASTM D5185m	10	**<1**	4	4
Molybdenum	ppm	ASTM D5185m	100	**31**	33	38
Manganese	ppm	ASTM D5185m		**5**	6	1
Magnesium	ppm	ASTM D5185m	450	**899**	950	1132
Calcium	ppm	ASTM D5185m	3000	**1312**	1403	1611
Phosphorus	ppm	ASTM D5185m	1150	**790**	956	988
Zinc	ppm	ASTM D5185m	1350	**1015**	1119	1238
Sulfur	ppm	ASTM D5185m	4250	**2926**	3331	3949

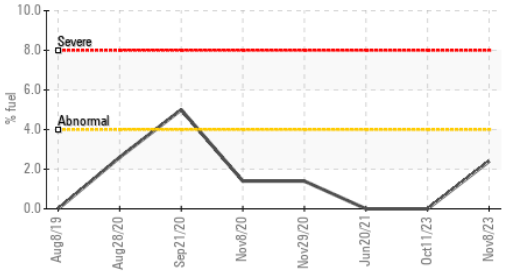
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**19**	12	5
Sodium	ppm	ASTM D5185m	>158	**3**	3	8
Potassium	ppm	ASTM D5185m	>20	**1**	2	4
Fuel	%	ASTM D3524	>4.0	▲ **2.4**	<1.0	<1.0
Water	%	ASTM D6304	>0.1	**---**	0.038	---
ppm Water	ppm	ASTM D6304	>1000	**---**	382.7	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0.1**	0	0.2
Nitration	Abs/cm	*ASTM D7624	>20	**7.5**	5.4	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.4**	18.6	23.6

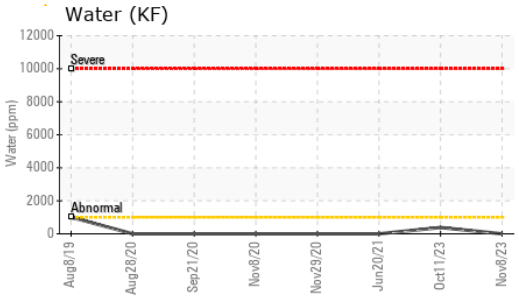
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.2**	14.2	24.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**6.46**	4.55	9.05

OIL ANALYSIS REPORT

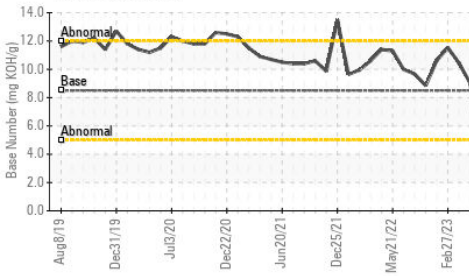
Fuel Dilution



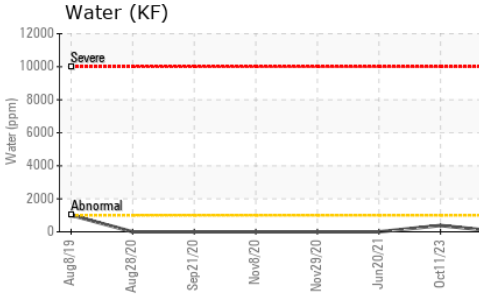
Water (KF)



Base Number



Water (KF)

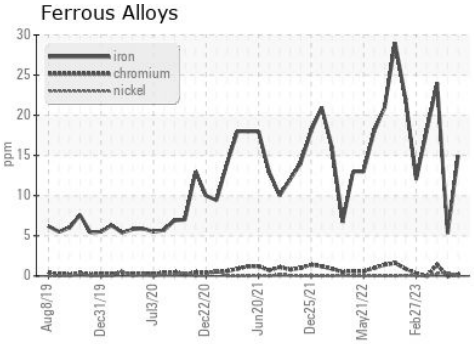


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

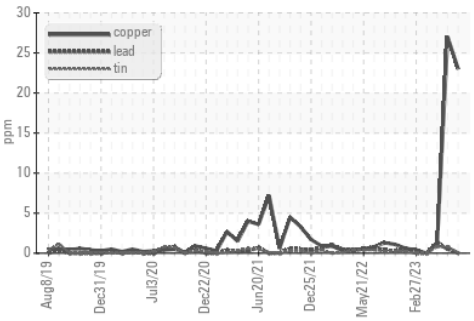
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	▲ **12.2**	13.68	12.7

GRAPHS

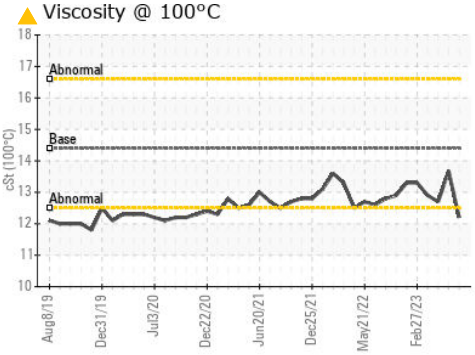
Ferrous Alloys



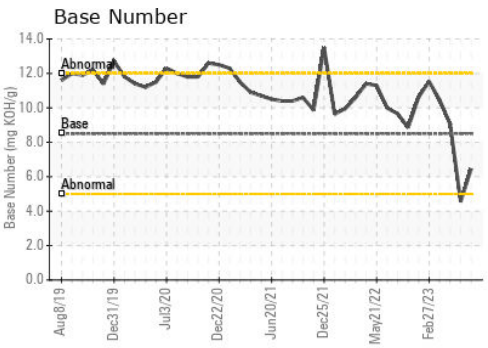
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0735306 **Received** : 15 Nov 2023
Lab Number : 06008540 **Diagnosed** : 17 Nov 2023
Unique Number : 10742302 **Diagnostician** : Sean Felton
Test Package : IND 2 (Additional Tests: FuelDilution, KF, PercentFuel)

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)

MARATHON PETROLEUM CO.
101 12TH ST
CATLETTSBURG, KY
US 41169
Contact: SHAWN MCCLASKEY
stmcclaskey@marathonpetroleum.com
T: (606)739-2416
F: x: