



OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

MOFFETT M238

Component

Diesel Engine

Fluid

CHEVRON DELO 400 SYNTHETIC 5W40 (--- 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 acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0735074	---	---
Sample Date	Client Info		08 Jun 2024	---	---
Machine Age	hrs	Client Info	0	---	---
Oil Age	hrs	Client Info	0	---	---
Oil Changed	Client Info		N/A	---	---
Sample Status			NORMAL	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	---	---
Water	WC Method	>0.2	NEG	---	---
Glycol	WC Method		NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	6	---	---
Chromium	ppm	ASTM D5185m >20	<1	---	---
Nickel	ppm	ASTM D5185m >4	0	---	---
Titanium	ppm	ASTM D5185m	<1	---	---
Silver	ppm	ASTM D5185m >3	0	---	---
Aluminum	ppm	ASTM D5185m >20	2	---	---
Lead	ppm	ASTM D5185m >40	<1	---	---
Copper	ppm	ASTM D5185m >330	<1	---	---
Tin	ppm	ASTM D5185m >15	0	---	---
Vanadium	ppm	ASTM D5185m	<1	---	---
Cadmium	ppm	ASTM D5185m	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	115	---	---
Barium	ppm	ASTM D5185m	0	---	---
Molybdenum	ppm	ASTM D5185m	3	---	---
Manganese	ppm	ASTM D5185m	<1	---	---
Magnesium	ppm	ASTM D5185m	697	---	---
Calcium	ppm	ASTM D5185m	1334	---	---
Phosphorus	ppm	ASTM D5185m 1150	748	---	---
Zinc	ppm	ASTM D5185m 1270	841	---	---
Sulfur	ppm	ASTM D5185m 2900	3540	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	10	---	---
Sodium	ppm	ASTM D5185m	4	---	---
Potassium	ppm	ASTM D5185m >20	3	---	---

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.1	---	---
Nitration	Abs/cm	*ASTM D7624 >20	6.2	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	17.8	---	---

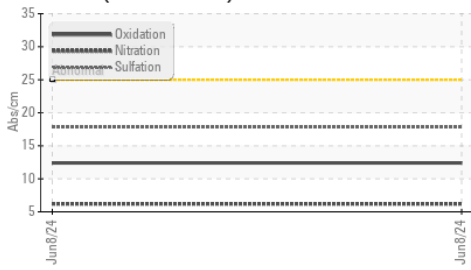
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	12.4	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 10.3	9.95	---	---

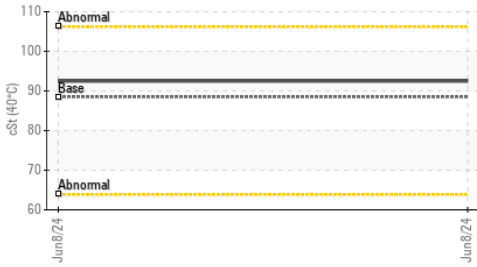


OIL ANALYSIS REPORT

FT-IR (Direct Trend)



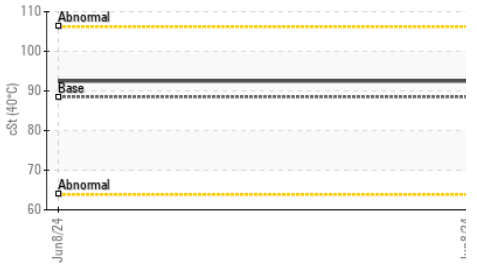
Viscosity @ 40°C



Viscosity @ 100°C



Viscosity @ 40°C

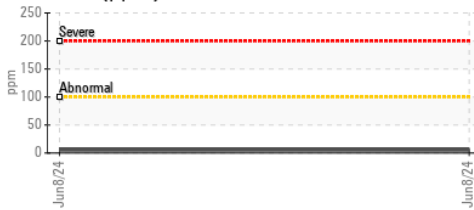


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

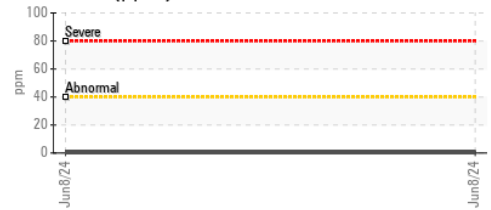
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	88.5	92.5	---
Visc @ 100°C	cSt	ASTM D445	14.6	14.8	---
Viscosity Index (VI)	Scale	ASTM D2270	168	167	---

GRAPHS

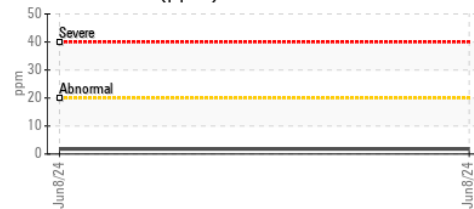
Iron (ppm)



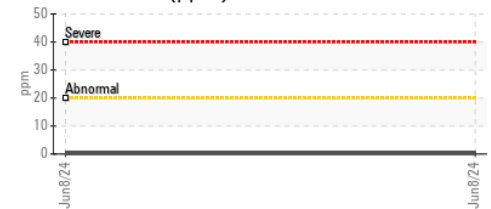
Lead (ppm)



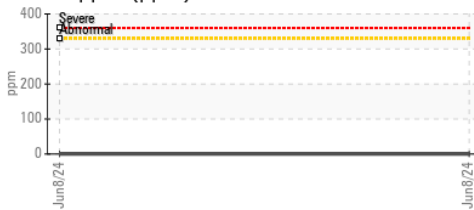
Aluminum (ppm)



Chromium (ppm)



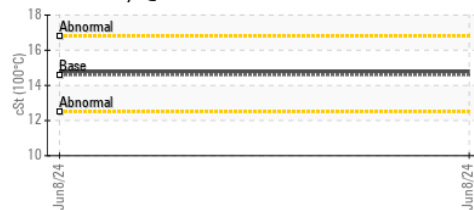
Copper (ppm)



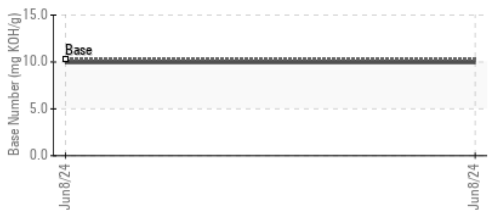
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0735074 **Received** : 07 Jun 2024
Lab Number : 06202949 **Tested** : 11 Jun 2024
Unique Number : 11070410 **Diagnosed** : 11 Jun 2024 - Sean Felton
Test Package : MOB 2 (Additional Tests: KV40, VI)

HIAB USA - BRIGHTON
 10360 E 107TH PL
 BRIGHTON, CO
 US 80601
 Contact: JAKE GHOLSON
 Jake.Gholson@hiab.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)

T:
F: