MOB II

HIGH PERFORMANCE LUBRICANTS

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
HAGGIE STS12 HAGGIE STS12 (S/N PE6068U06804)
Component
Diesel Engine
Fluid
HIGH PERFORMANCE LUBRICANTS HDMO 15W40 (9 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

The iron level is abnormal. All other component wear rates are normal.

CONTAMINATION

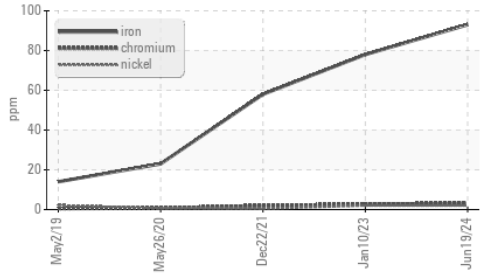
There is no indication of any contamination in the oil.

FLUID CONDITION

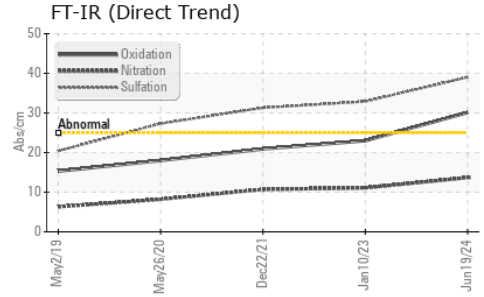
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		HPL0002483	HPL0001442	HPL007870
Sample Date		Client Info		19 Jun 2024	10 Jan 2023	22 Dec 2021
Machine Age	hrs	Client Info		2052	1468	1150
Oil Age	hrs	Client Info		1952	1368	1049
Filter Age	hrs	Client Info		584	318	318
Oil Changed		Client Info		N/A	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>51	▲ 93	▲ 78	▲ 58
Chromium	ppm	ASTM D5185m	>11	3	3	2
Nickel	ppm	ASTM D5185m	>5	2	2	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	8	4	4
Lead	ppm	ASTM D5185m	>26	0	2	2
Copper	ppm	ASTM D5185m	>26	16	12	12
Tin	ppm	ASTM D5185m	>4	<1	2	1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>22	11	13	9
Potassium	ppm	ASTM D5185m	>20	3	<1	0
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.7	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	13.7	11.1	10.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	39.0	32.9	31.3
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	>0.21	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m	>31	6	5	4
Boron	ppm	ASTM D5185m	200	48	119	177
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m	85	429	358	257
Manganese	ppm	ASTM D5185m		2	2	2
Magnesium	ppm	ASTM D5185m	525	671	529	442
Calcium	ppm	ASTM D5185m	4300	3824	4242	3819
Phosphorus	ppm	ASTM D5185m	1000	909	909	772
Zinc	ppm	ASTM D5185m	1100	1221	1091	920
Sulfur	ppm	ASTM D5185m	20200	13475	18574	14378
Oxidation	Abs/.1mm	*ASTM D7414	>25	30.1	23.0	20.9
Base Number (BN)	mg KOH/g	ASTM D2896	14.5	12.04	12.48	13.5
Visc @ 100°C	cSt	ASTM D445	14.5	13.8	13.8	13.6

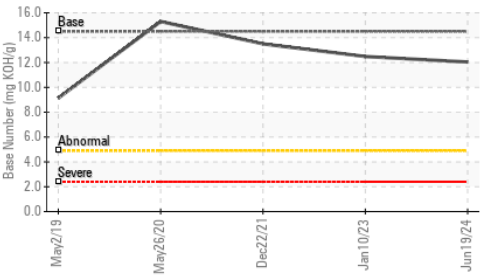
Ferrous Alloys



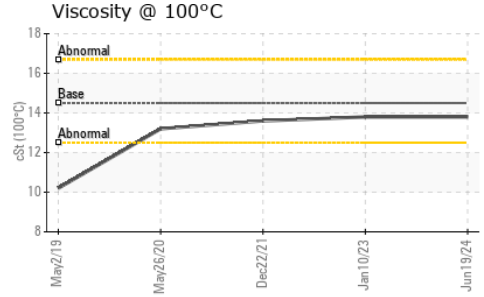
FT-IR (Direct Trend)



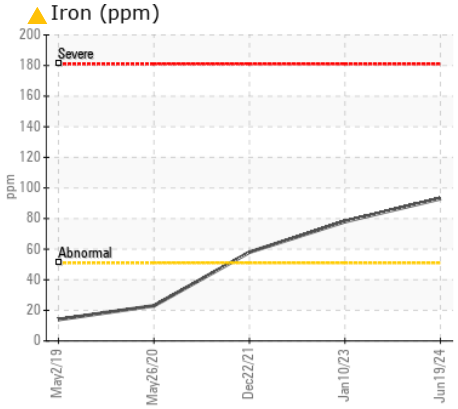
Base Number



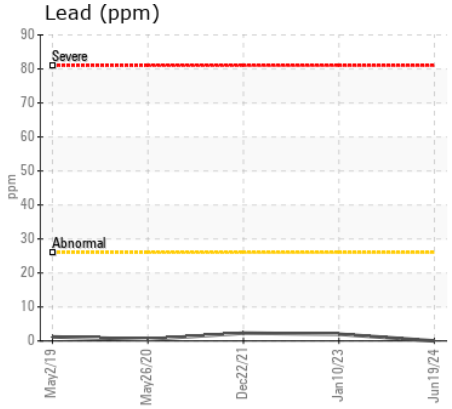
Viscosity @ 100°C



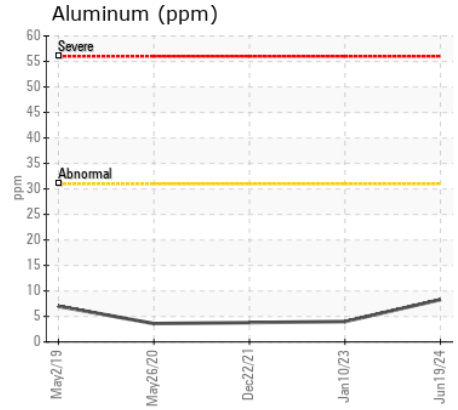
Iron (ppm)



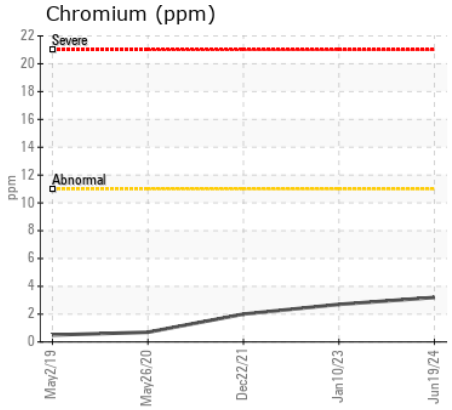
Lead (ppm)



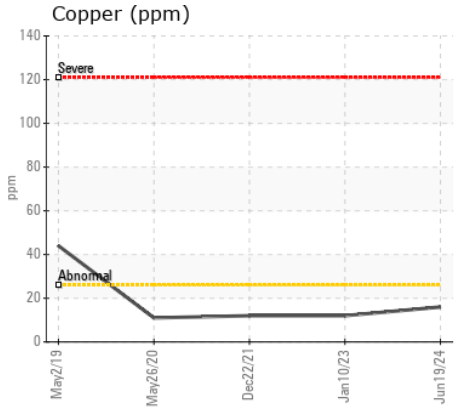
Aluminum (ppm)



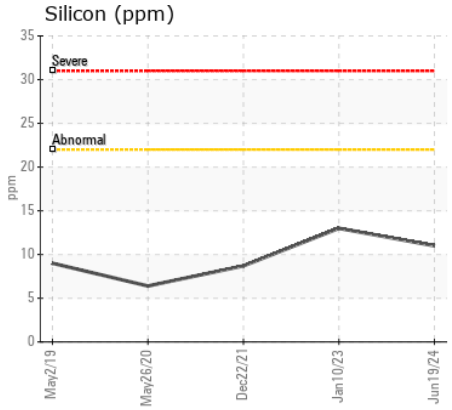
Chromium (ppm)



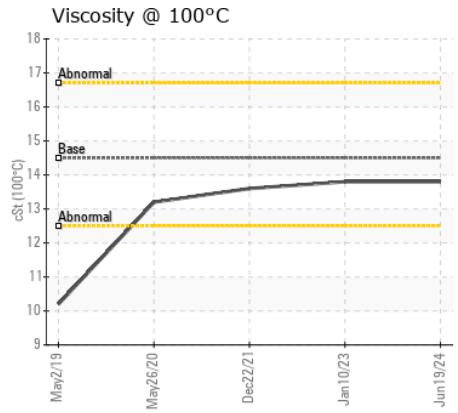
Copper (ppm)



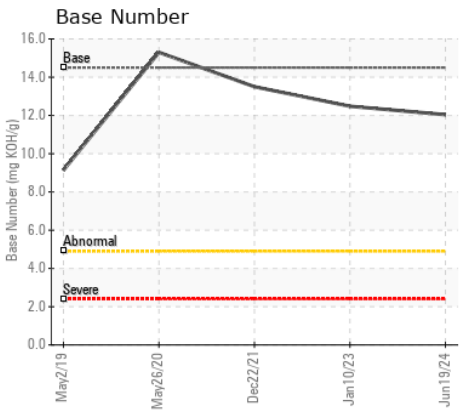
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: HPL0002483	**Received**	: 26 Jun 2024
Lab Number	: 06221425	**Tested**	: 27 Jun 2024
Unique Number	: 11099622	**Diagnosed**	: 27 Jun 2024 - Sean Felton
Test Package	: MOB 2		

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)

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