MOB I

Dura-Check Fluid Analysis

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
M32005
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

Piston, ring and cylinder wear is indicated.

CONTAMINATION

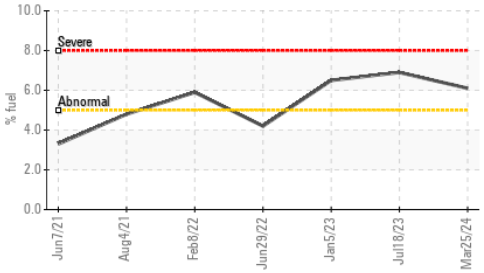
There is a moderate amount of fuel present in the oil.

FLUID CONDITION

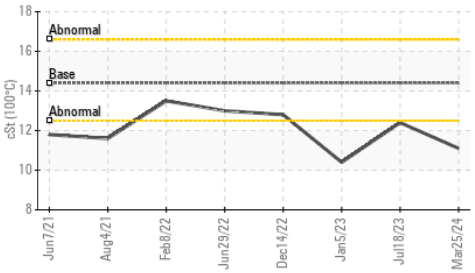
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DC0032252	DC0028306	DC0024124
Sample Date		Client Info		25 Mar 2024	18 Jul 2023	05 Jan 2023
Machine Age	mls	Client Info		84435	66966	32436
Oil Age	mls	Client Info		5558	4448	3409
Filter Age	mls	Client Info		5558	4448	3409
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	▲ 274	236	31
Chromium	ppm	ASTM D5185m	>20	3	3	2
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	▲ 28	33	4
Lead	ppm	ASTM D5185m	>40	0	0	1
Copper	ppm	ASTM D5185m	>330	5	2	1
Tin	ppm	ASTM D5185m	>15	1	1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	11	11	5
Potassium	ppm	ASTM D5185m	>20	38	32	2
Fuel	%	ASTM D3524	>5	▲ 6.1	▲ 6.9	▲ 6.5
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.4	1.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	15.8	14.6	11.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	32.3	33.8	22.0
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	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m	>158	7	6	3
Boron	ppm	ASTM D5185m	250	50	60	20
Barium	ppm	ASTM D5185m	10	1	0	0
Molybdenum	ppm	ASTM D5185m	100	8	2	83
Manganese	ppm	ASTM D5185m		4	2	<1
Magnesium	ppm	ASTM D5185m	450	28	131	64
Calcium	ppm	ASTM D5185m	3000	2360	2456	2088
Phosphorus	ppm	ASTM D5185m	1150	991	1078	927
Zinc	ppm	ASTM D5185m	1350	1236	1435	1170
Sulfur	ppm	ASTM D5185m	4250	3277	4170	3882
Oxidation	Abs/.1mm	*ASTM D7414	>25	34.0	33.4	18.9
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	4.8	5.0	5.58
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 11.1	▲ 12.4	▲ 10.4

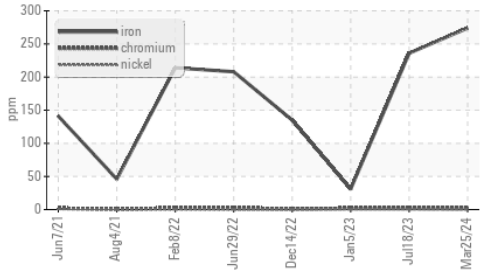
Fuel Dilution



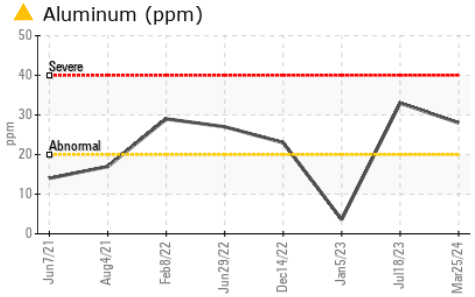
Viscosity @ 100°C



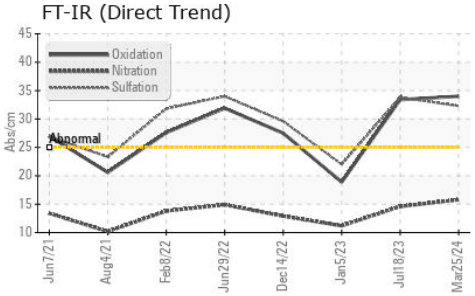
Ferrous Alloys



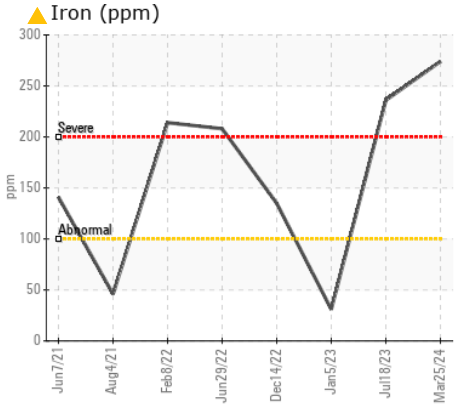
Aluminum (ppm)



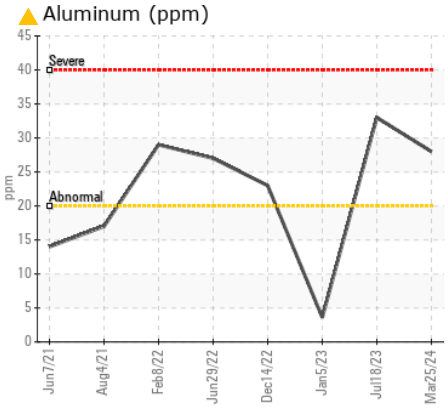
FT-IR (Direct Trend)



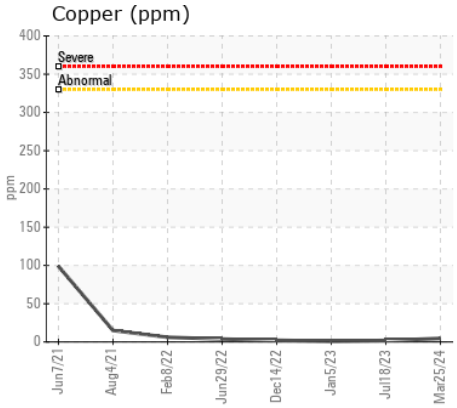
Iron (ppm)



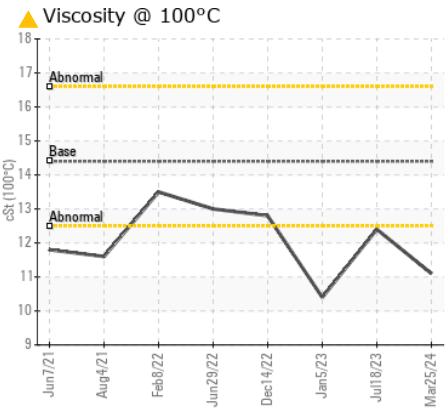
Aluminum (ppm)



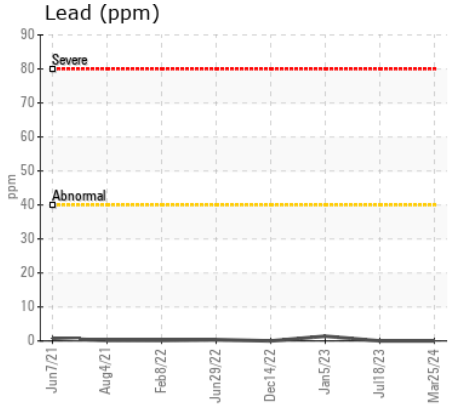
Copper (ppm)



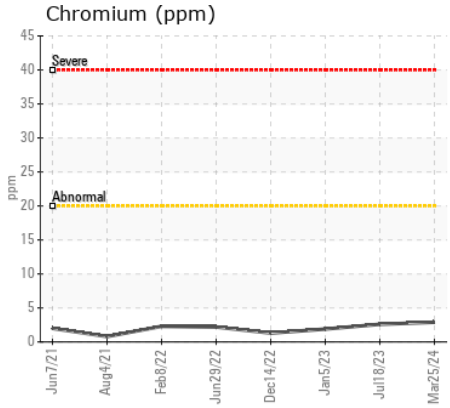
Viscosity @ 100°C



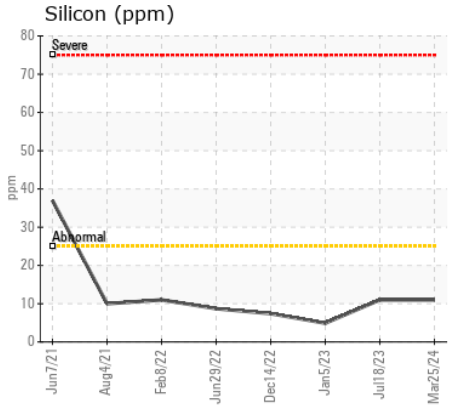
Lead (ppm)



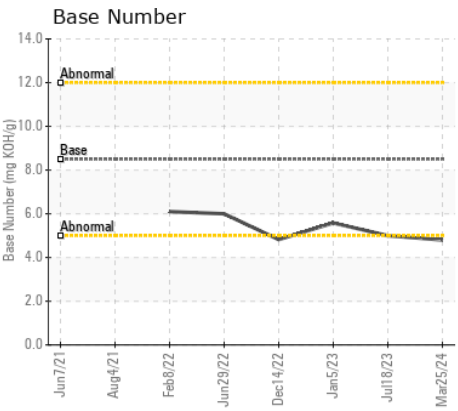
Chromium (ppm)



Silicon (ppm)



Base Number



ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DC0032252 **Received** : 22 Apr 2024
Lab Number : 06155716 **Tested** : 25 Apr 2024
Unique Number : 10991139 **Diagnosed** : 25 Apr 2024 - Don Baldridge
Test Package : MOB 1 (Additional Tests: PercentFuel, TBN)

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)

M&M FLEET
5046 BUCHANAN ST.
HYATTSVILLE, MD
US 20781
Contact: June McClosky
office@mmfleet.net
T: (301)779-4545
F: x: