MOB I WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
THOMAS 1417
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

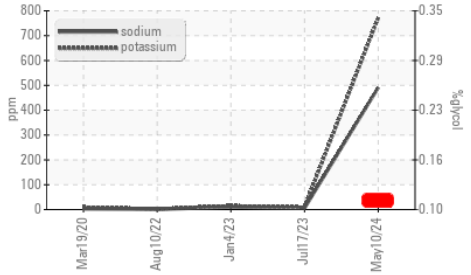
Sodium and/or potassium levels are high. There is a high concentration of glycol present in the oil. There is a high amount of fuel present in the oil.

FLUID CONDITION

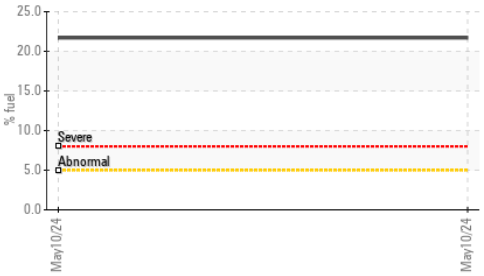
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0932763**	WC0821346	WC0772882
Sample Date		Client Info		**10 May 2024**	17 Jul 2023	04 Jan 2023
Machine Age	mls	Client Info		**230937**	213934	203953
Oil Age	mls	Client Info		**0**	0	0
Filter Age	mls	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Filter Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**SEVERE**	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	**28**	19	37
Chromium	ppm	ASTM D5185m	>20	**2**	1	3
Nickel	ppm	ASTM D5185m	>4	**<1**	<1	<1
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m	>3	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>20	**14**	8	14
Lead	ppm	ASTM D5185m	>40	**<1**	0	<1
Copper	ppm	ASTM D5185m	>330	**2**	<1	2
Tin	ppm	ASTM D5185m	>15	**<1**	0	<1
Vanadium	ppm	ASTM D5185m		**<1**	<1	<1
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	**10**	4	5
Potassium	ppm	ASTM D5185m	>20	▲ **772**	9	15
Fuel	%	ASTM D3524	>5	▲ **21.7**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol	%	*ASTM D2982		▲ **0.12**	NEG	NEG
Soot %	%	*ASTM D7844	>3	**0.7**	0.6	0.9
Nitration	Abs/cm	*ASTM D7624	>20	**11.3**	9.3	10.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	**18.6**	19.3	20.7
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	▲ **491**	6	10
Boron	ppm	ASTM D5185m	250	**23**	33	14
Barium	ppm	ASTM D5185m	10	**0**	0	1
Molybdenum	ppm	ASTM D5185m	100	**174**	80	50
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	450	**49**	135	92
Calcium	ppm	ASTM D5185m	3000	**1697**	2231	1954
Phosphorus	ppm	ASTM D5185m	1150	**842**	1039	858
Zinc	ppm	ASTM D5185m	1350	**957**	1239	1087
Sulfur	ppm	ASTM D5185m	4250	**3082**	4258	3752
Oxidation	Abs/.1mm	*ASTM D7414	>25	**14.0**	14.6	14.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**8.4**	7.8	7.0
Visc @ 100°C	cSt	ASTM D445	14.4	▲ **8.8**	13.6	13.5

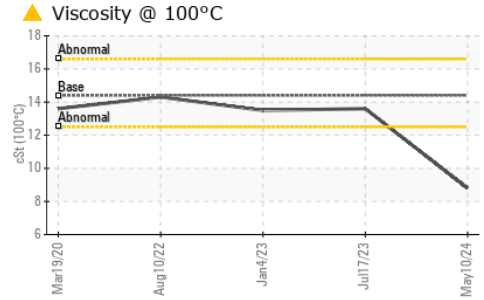
Glycol Contamination



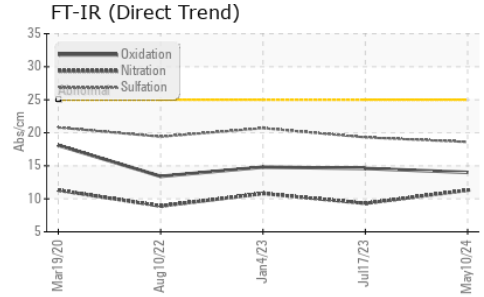
Fuel Dilution



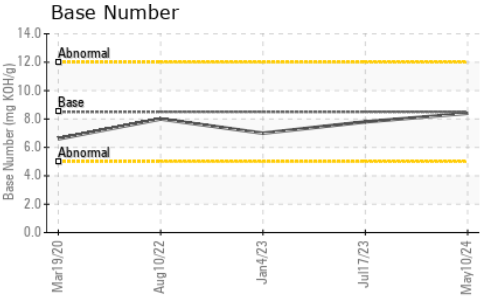
Viscosity @ 100°C



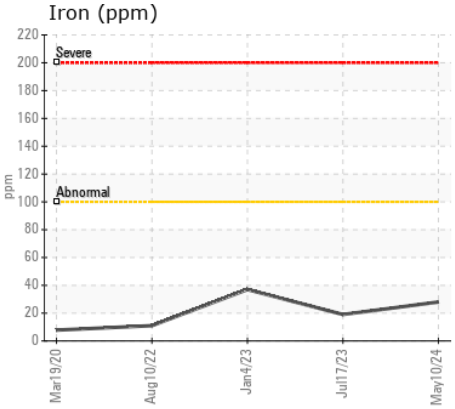
FT-IR (Direct Trend)



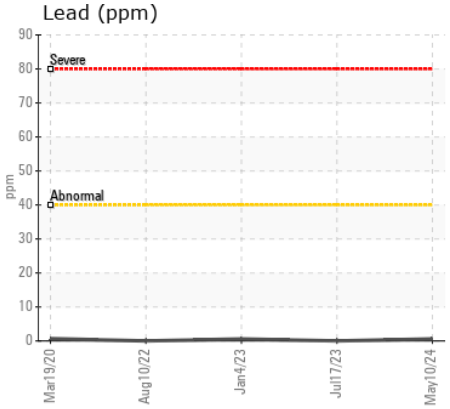
Base Number



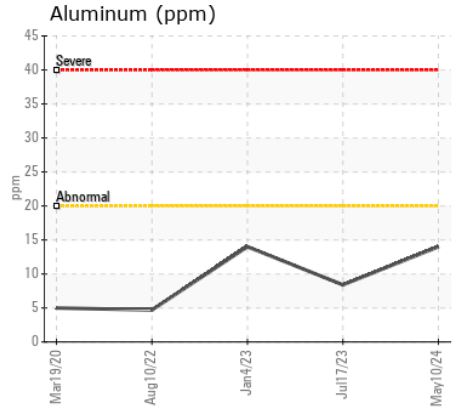
Iron (ppm)



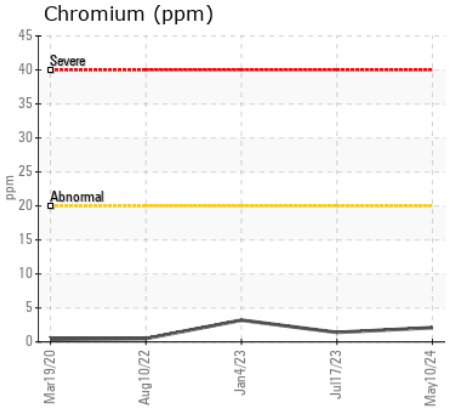
Lead (ppm)



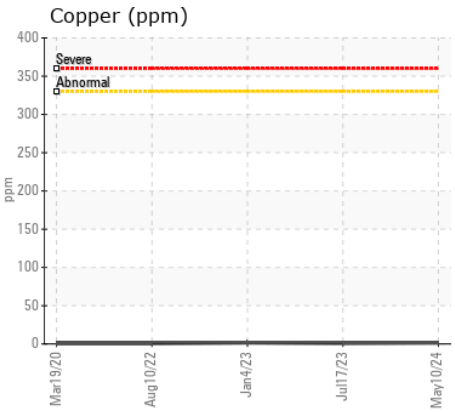
Aluminum (ppm)



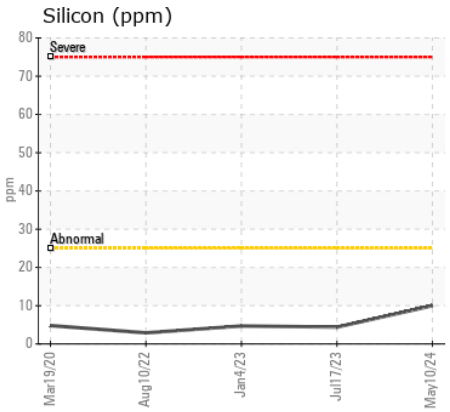
Chromium (ppm)



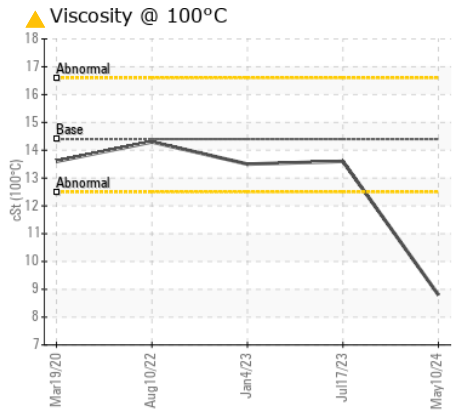
Copper (ppm)



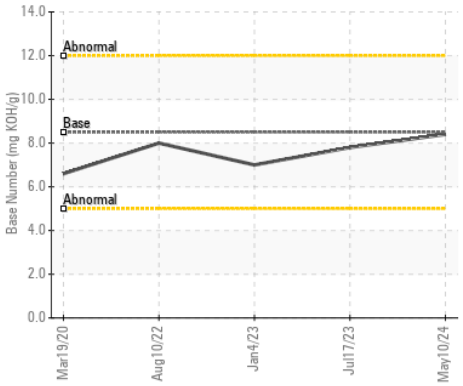
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0932763
Lab Number : 06189042
Unique Number : 11045794
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, PercentFuel, TBN)
Received : 23 May 2024
Tested : 29 May 2024
Diagnosed : 29 May 2024 - Jonathan Hester

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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