MOB I

Dura-Check Fluid Analysis

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
A-328
Component
Diesel Engine
Fluid
DURAMAX 15W40 (--- QTS)

RECOMMENDATION

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

WEAR

Cylinder, crank, or cam shaft wear is indicated.

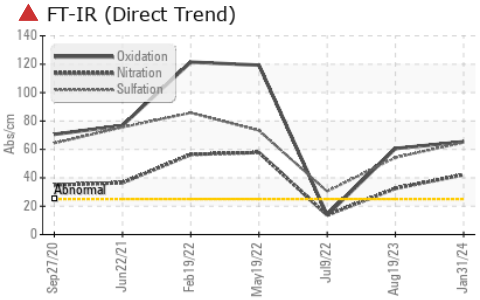
CONTAMINATION

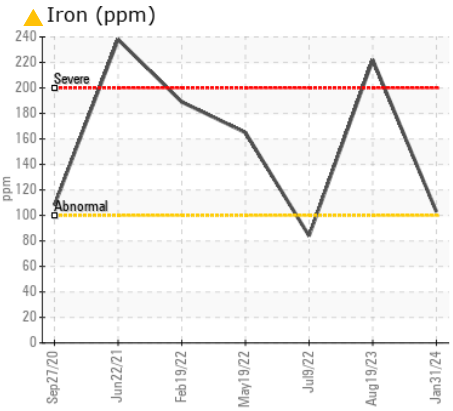
There is an abnormal amount of solids and carbon present in the oil.

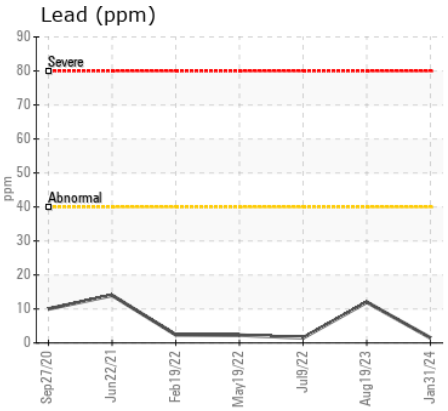
FLUID CONDITION

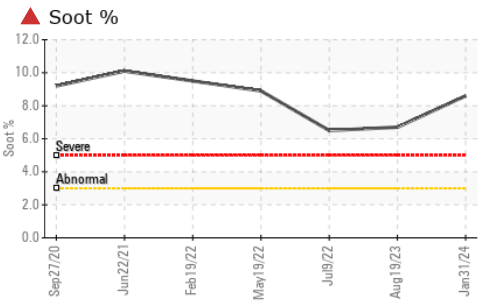
The oil viscosity is higher than normal. The BN level is low. The oil is no longer serviceable due to the presence of contaminants.

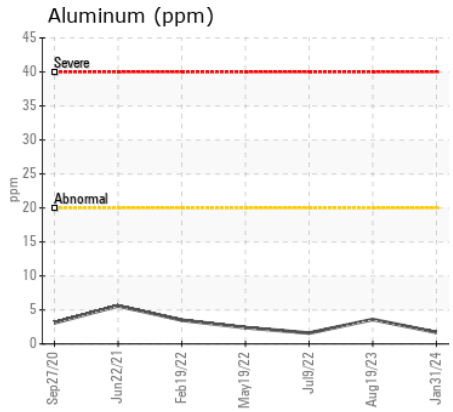
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**DC0020728**	DC0029732	DC0022302
Sample Date		Client Info		**31 Jan 2024**	19 Aug 2023	09 Jul 2022
Machine Age	hrs	Client Info		**36443**	35454	32995
Oil Age	hrs	Client Info		**991**	1324	341
Filter Age	hrs	Client Info		**991**	1324	341
Oil Changed		Client Info		**Changed**	Changed	Changed
Filter Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	SEVERE	SEVERE
Iron	ppm	ASTM D5185m	>100	▲ **103**	▲ 222	84
Chromium	ppm	ASTM D5185m	>20	**3**	9	2
Nickel	ppm	ASTM D5185m	>4	**0**	2	<1
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m	>3	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>20	**2**	4	2
Lead	ppm	ASTM D5185m	>40	**2**	12	2
Copper	ppm	ASTM D5185m	>330	**37**	145	15
Tin	ppm	ASTM D5185m	>15	**<1**	4	2
Vanadium	ppm	ASTM D5185m		**0**	<1	0
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	**5**	8	4
Potassium	ppm	ASTM D5185m	>20	**0**	4	<1
Fuel	%	ASTM D3524	>5	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG
Soot %	%	*ASTM D7844	>3	▲ **8.6**	▲ 6.7	▲ 6.5
Nitration	Abs/cm	*ASTM D7624	>20	**42.1**	32.5	13.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	**64.8**	54.2	30.4
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		**2**	4	1
Boron	ppm	ASTM D5185m		**<1**	2	5
Barium	ppm	ASTM D5185m		**0**	12	0
Molybdenum	ppm	ASTM D5185m		**4**	6	4
Manganese	ppm	ASTM D5185m		**1**	2	<1
Magnesium	ppm	ASTM D5185m		**54**	56	52
Calcium	ppm	ASTM D5185m		**2150**	1974	2198
Phosphorus	ppm	ASTM D5185m		**794**	728	774
Zinc	ppm	ASTM D5185m		**964**	926	951
Sulfur	ppm	ASTM D5185m		**3509**	2764	3778
Oxidation	Abs/.1mm	*ASTM D7414	>25	**65.4**	60.6	13.7
Base Number (BN)	mg KOH/g	ASTM D2896		▲ **0.0**	▲ 0.0	▲ -17.3
Visc @ 100°C	cSt	ASTM D445		▲ **17.6**	▲ 47.7	14.6

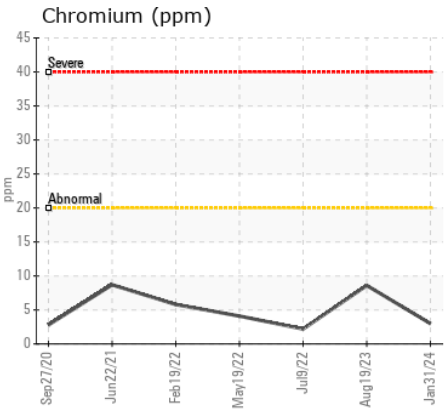


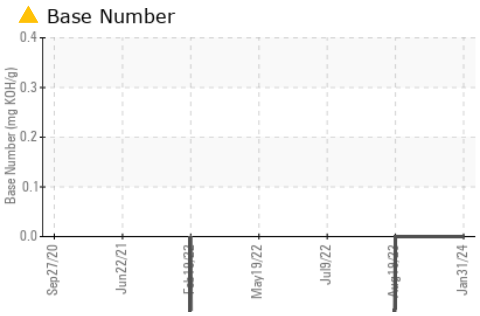


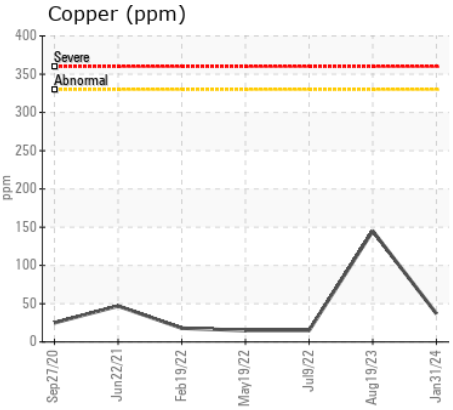


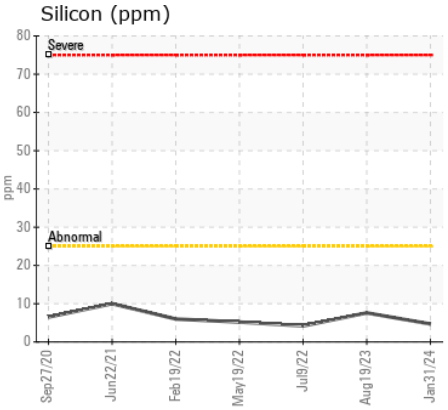


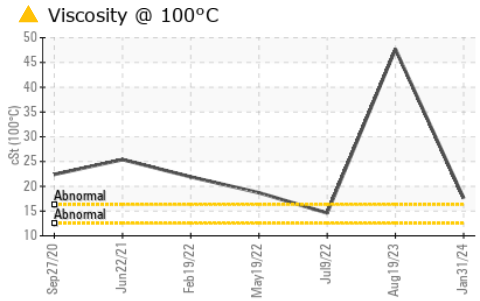


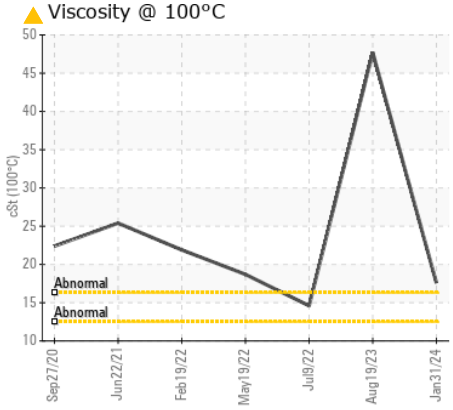


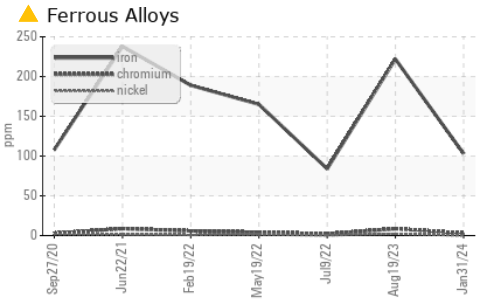


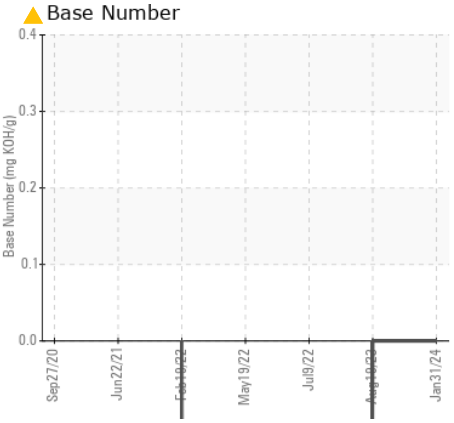












Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DC0020728
Lab Number : 06146466
Unique Number : 10976544
Test Package : MOB 1 (Additional Tests: FuelDilution, TBN)

Received : 11 Apr 2024
Tested : 15 Apr 2024
Diagnosed : 15 Apr 2024 - Don Baldridge

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)

THOMAS BENNETT & HUNTER INC
70 JOHN ST
WESTMINSTER, MD
US 21157
Contact: JOE STEPHAN
jstephan@tbhconcrete.com
T: (410)848-9030
F: (410)848-9032