CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
Mobile Fleet
Machine Id
5221 5221
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

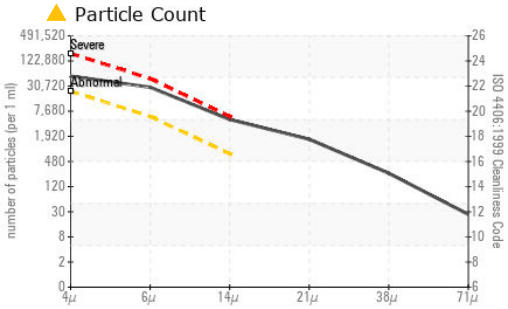
CONTAMINATION

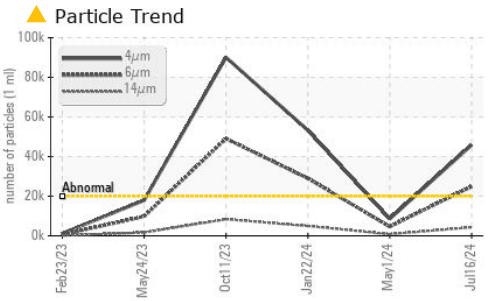
There is a high amount of particulates present in the oil.

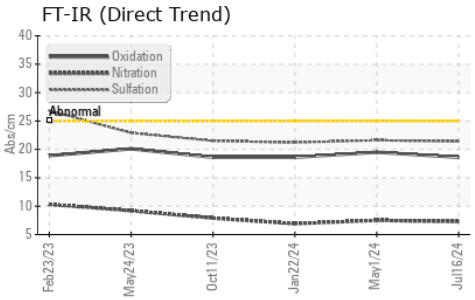
FLUID CONDITION

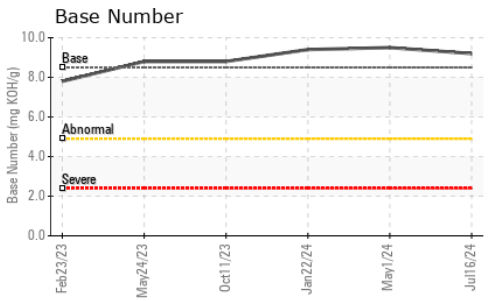
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

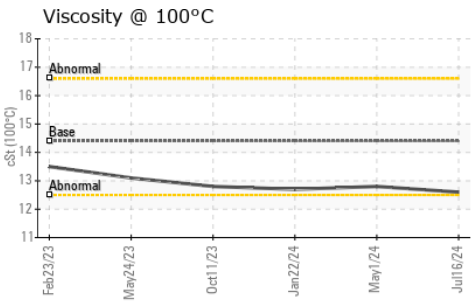
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0947901**	WC0937870	WC0861770
Sample Date		Client Info		**16 Jul 2024**	01 May 2024	22 Jan 2024
Machine Age	hrs	Client Info		**10064**	9523	8902
Oil Age	hrs	Client Info		**491**	622	497
Filter Age	hrs	Client Info		**491**	622	497
Oil Changed		Client Info		**Changed**	Changed	Changed
Filter Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	ATTENTION	ABNORMAL
Iron	ppm	ASTM D5185m	>51	**57**	63	52
Chromium	ppm	ASTM D5185m	>11	**1**	1	<1
Nickel	ppm	ASTM D5185m	>5	**2**	3	3
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>31	**2**	2	1
Lead	ppm	ASTM D5185m	>26	**<1**	<1	<1
Copper	ppm	ASTM D5185m	>26	**1**	2	2
Tin	ppm	ASTM D5185m	>4	**0**	<1	<1
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	>22	**7**	9	10
Potassium	ppm	ASTM D5185m	>20	**3**	2	2
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	**7.3**	7.5	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**21.4**	21.6	21.2
Particles >4µm		ASTM D7647	>20000	▲ **45821**	8561	▲ 53259
Particles >6µm		ASTM D7647	>5000	▲ **24961**	4663	▲ 29013
Particles >14µm		ASTM D7647	>640	▲ **4248**	● 794	▲ 4938
Particles >21µm		ASTM D7647	>160	▲ **1431**	● 267	▲ 1663
Particles >38µm		ASTM D7647	>40	▲ **221**	● 41	▲ 257
Particles >71µm		ASTM D7647	>10	▲ **23**	4	▲ 26
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **23/22/19**	● 20/19/17	▲ 23/22/19
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	>158	**3**	1	0
Boron	ppm	ASTM D5185m	250	**26**	34	33
Barium	ppm	ASTM D5185m	10	**0**	0	0
Molybdenum	ppm	ASTM D5185m	100	**49**	47	51
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	450	**529**	498	501
Calcium	ppm	ASTM D5185m	3000	**1901**	1670	1626
Phosphorus	ppm	ASTM D5185m	1150	**846**	796	764
Zinc	ppm	ASTM D5185m	1350	**991**	939	926
Sulfur	ppm	ASTM D5185m	4250	**3266**	2916	2688
Oxidation	Abs/.1mm	*ASTM D7414	>25	**18.6**	19.5	18.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**9.2**	9.5	9.4
Visc @ 100°C	cSt	ASTM D445	14.4	**12.6**	12.8	12.7

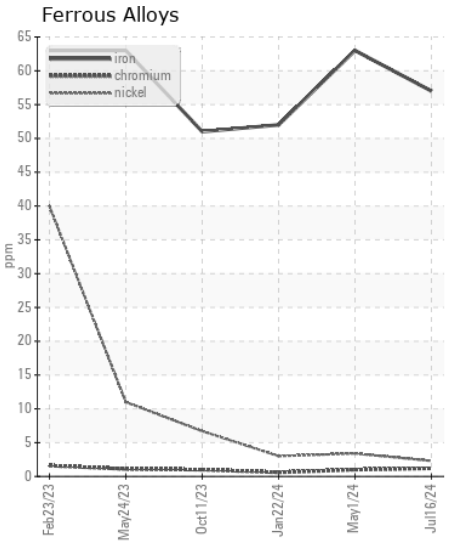


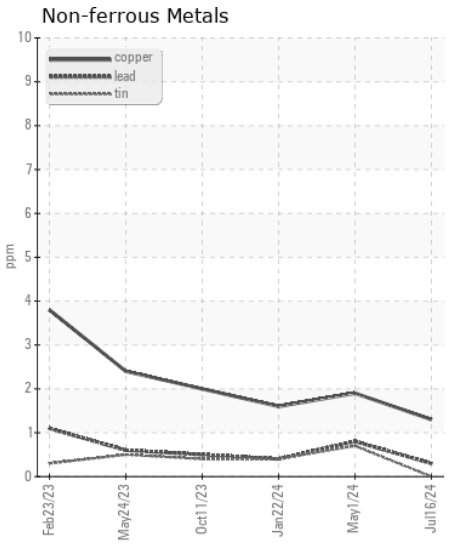


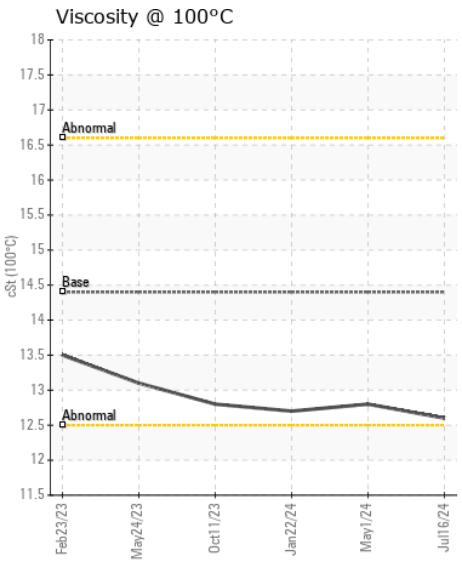


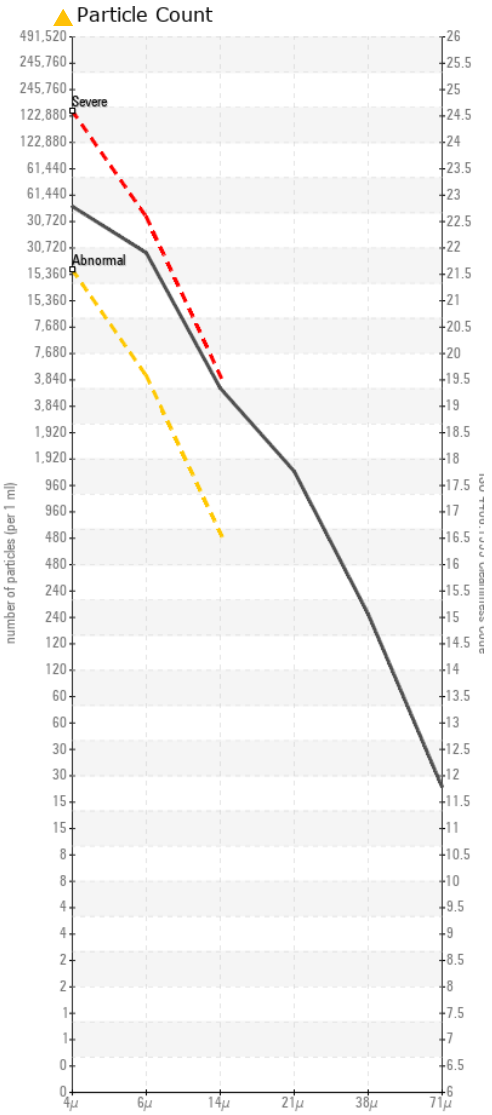


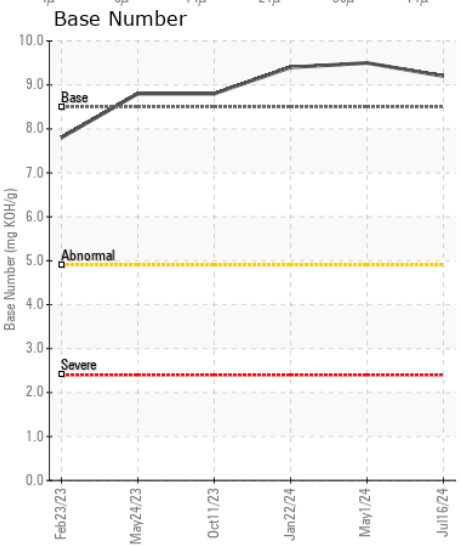












Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0947901
Lab Number : 06240160
Unique Number : 11128994
Test Package : CONST (Additional Tests: PrtCount, TBN)
Received : 18 Jul 2024
Tested : 19 Jul 2024
Diagnosed : 19 Jul 2024 - Don Baldridge

Certificate L2367

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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