CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	ATTENTION
CONTAMINATION	ABNORMAL
FLUID CONDITION	ATTENTION

Area
Mobile Fleet
Machine Id
544 544
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER15W40 (8 GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

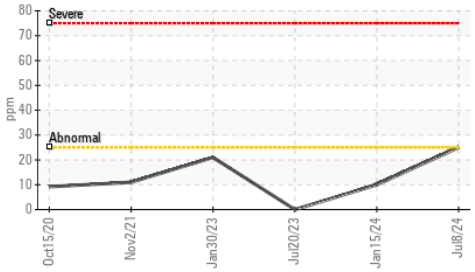
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The amount and size of particulates present in the system are acceptable.

FLUID CONDITION

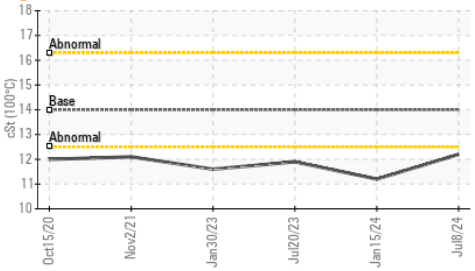
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0955978**	WC0861829	WC0808809
Sample Date		Client Info		**08 Jul 2024**	15 Jan 2024	20 Jul 2023
Machine Age	hrs	Client Info		**2815**	2637	2296
Oil Age	hrs	Client Info		**199**	341	385
Filter Age	hrs	Client Info		**199**	341	385
Oil Changed		Client Info		**Changed**	Changed	Changed
Filter Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	ATTENTION	ATTENTION
Iron	ppm	ASTM D5185m	>120	**18**	10	7
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	0
Nickel	ppm	ASTM D5185m	>5	**<1**	0	0
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	● **10**	3	1
Lead	ppm	ASTM D5185m	>40	**1**	<1	<1
Copper	ppm	ASTM D5185m	>330	**2**	2	2
Tin	ppm	ASTM D5185m	>15	**<1**	0	0
Vanadium	ppm	ASTM D5185m		**<1**	<1	0
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	▲ **25**	10	0
Potassium	ppm	ASTM D5185m	>20	**6**	<1	1
Fuel	%	ASTM D3524	>3.0	**<1.0**	<1.0	▲ 2.8
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG
Soot %	%	*ASTM D7844	>4	**0**	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**5.6**	5.7	5.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**21.0**	21.2	20.8
Particles >4µm		ASTM D7647	>20000	**6368**	3097	2018
Particles >6µm		ASTM D7647	>5000	**3469**	1687	1099
Particles >14µm		ASTM D7647	>640	**590**	287	187
Particles >21µm		ASTM D7647	>160	**199**	97	63
Particles >38µm		ASTM D7647	>40	**31**	15	10
Particles >71µm		ASTM D7647	>10	**3**	2	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**20/19/16**	19/18/15	18/17/15
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		**4**	2	0
Boron	ppm	ASTM D5185m	0	**79**	57	66
Barium	ppm	ASTM D5185m	0	**0**	0	2
Molybdenum	ppm	ASTM D5185m	0	**50**	44	50
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	0	**509**	528	471
Calcium	ppm	ASTM D5185m		**1693**	1550	1602
Phosphorus	ppm	ASTM D5185m		**717**	769	731
Zinc	ppm	ASTM D5185m		**901**	920	871
Sulfur	ppm	ASTM D5185m		**2495**	2554	2575
Oxidation	Abs/.1mm	*ASTM D7414	>25	**18.9**	19.4	19.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	**10.0**	9.8	9.9
Visc @ 100°C	cSt	ASTM D445	14	● **12.2**	● 11.2	● 11.9

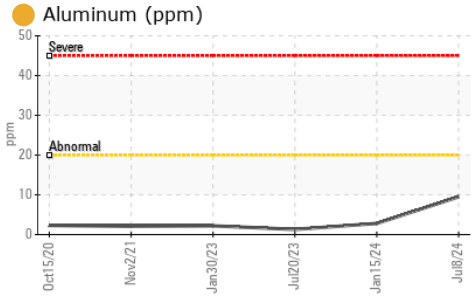
Silicon (ppm)



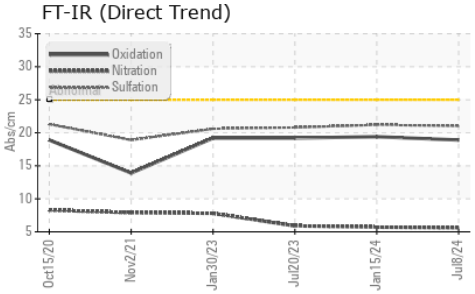
Viscosity @ 100°C



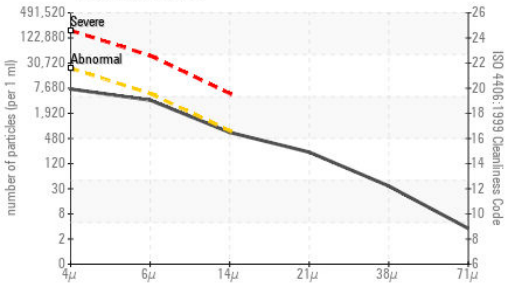
Aluminum (ppm)



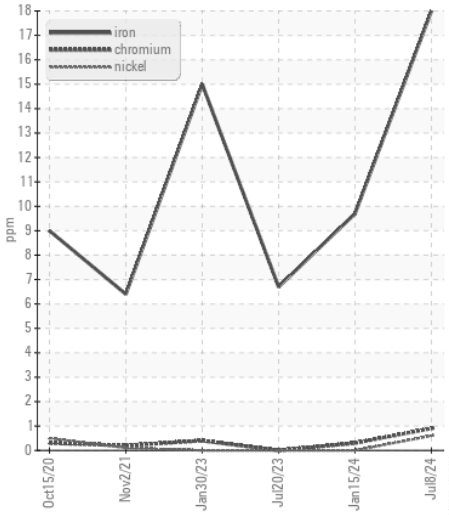
FT-IR (Direct Trend)



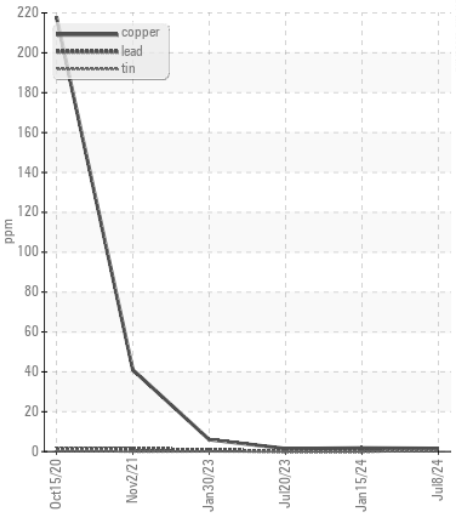
Particle Count



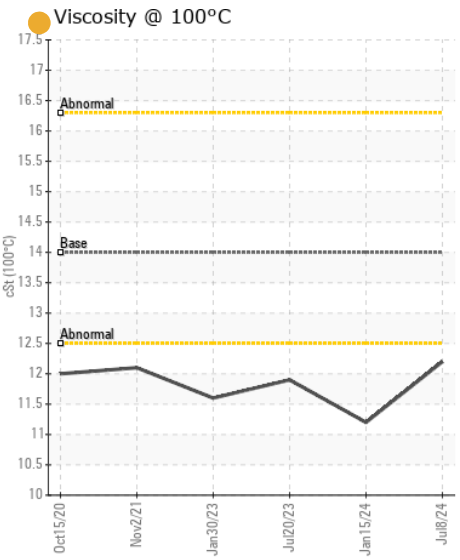
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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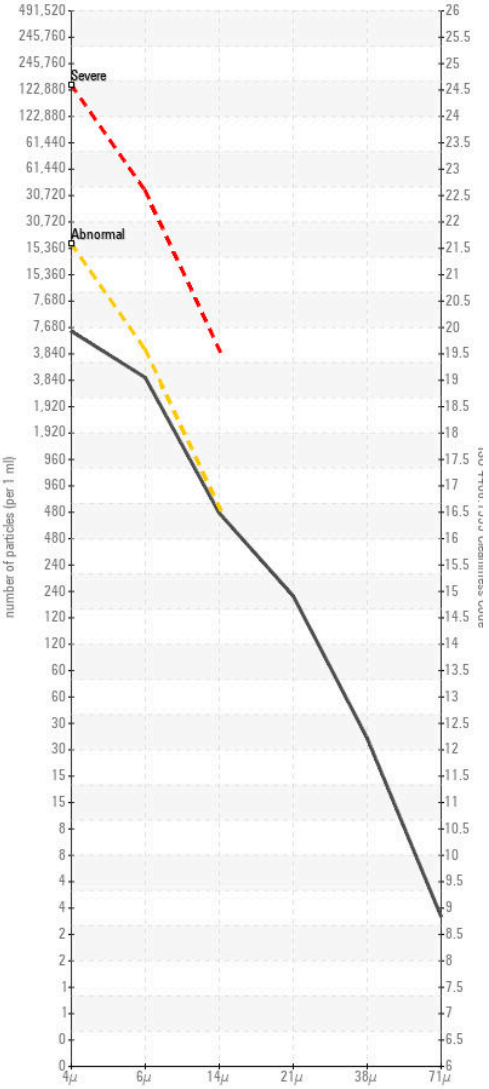
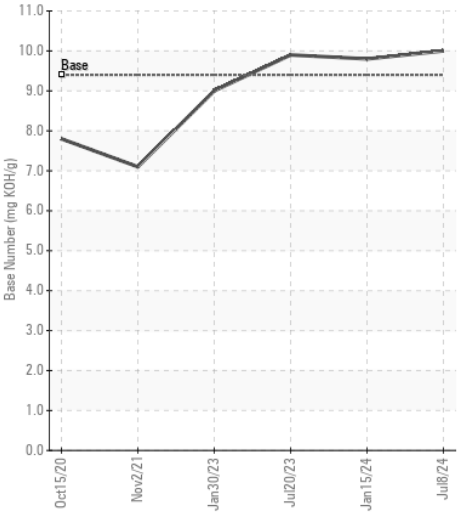


Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0955978 **Received** : 10 Jul 2024
Lab Number : 06232160 **Tested** : 11 Jul 2024
Unique Number : 11115653 **Diagnosed** : 11 Jul 2024 - Don Baldridge
Test Package : CONST (Additional Tests: FuelDilution, PrtCount, 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)

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