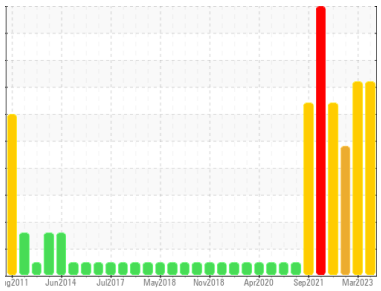
PROBLEM SUMMARY

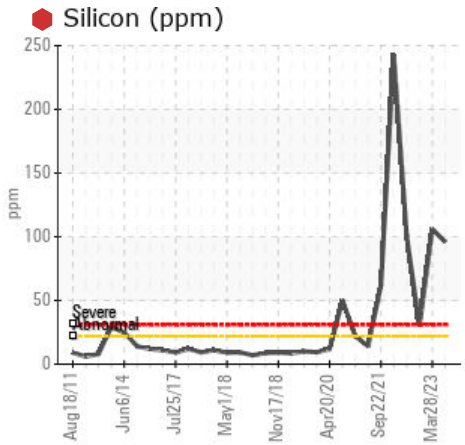
Sample Rating Trend

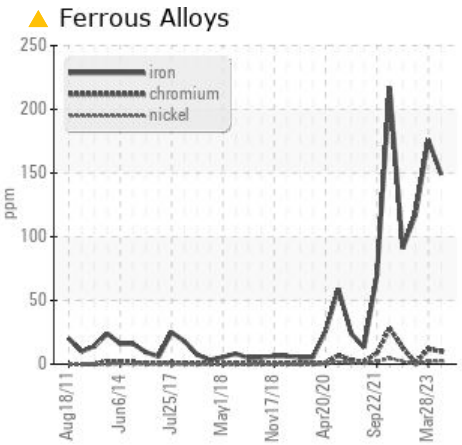


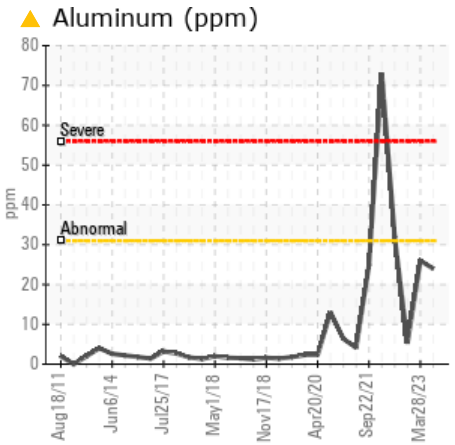
DIRT

Area
OKLAHOMA/102/EG - OTHER SERVICE
Machine Id
54.101L [OKLAHOMA^102^EG - OTHER SERVICE]
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

COMPONENT CONDITION SUMMARY







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. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	ABNORMAL
Iron	ppm	ASTM D5185m	>51	▲ **149**	▲ 176	▲ 117
Chromium	ppm	ASTM D5185m	>11	▲ **10**	▲ 12	<1
Silicon	ppm	ASTM D5185m	>22	⬢ **96**	⬢ 106	▲ 30

Customer Id: SHEWIC
Sample No.: WC0873979
Lab Number: 06060882
Test Package: CONST

To manage this report scan the QR code

To discuss the diagnosis or test data:
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jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Dirt Access	---	---	?	We advise that you check the air filter, air induction system, and any areas where dirt may enter the component.

HISTORICAL DIAGNOSIS

28 Mar 2023 Diag: Don Baldridge

DIRT

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. We recommend an early resample to monitor this condition.Cylinder, crank, or cam shaft wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. 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.

view report

21 Jul 2022 Diag: Don Baldridge

DIRT

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.Cylinder, crank, or cam shaft wear is indicated. All other component wear rates are normal. Elemental level of silicon (Si) above normal. The oil viscosity is higher than normal. This plus the additive levels indicates the addition of a different brand, or type of oil. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report

13 Apr 2022 Diag: Don Baldridge

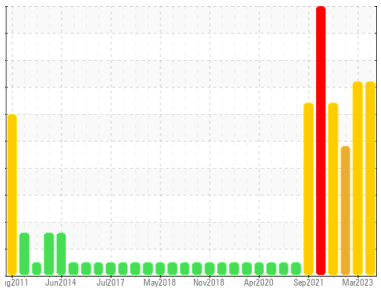
DIRT

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. We recommend an early resample to monitor this condition.Cylinder, crank, or cam shaft wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. 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.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Area
OKLAHOMA/102/EG - OTHER SERVICE
Machine Id
54.101L [OKLAHOMA^102^EG - OTHER SERVICE]
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

DIAGNOSIS

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. We recommend an early resample to monitor this condition.

Wear

Piston, ring and cylinder wear is indicated.

Contamination

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0873979**	WC0792466	WC0702197
Sample Date		Client Info		**03 Jan 2024**	28 Mar 2023	21 Jul 2022
Machine Age	hrs	Client Info		**522**	4900	2032
Oil Age	hrs	Client Info		**122**	2032	100
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	SEVERE	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	▲ **149**	▲ 176	▲ 117
Chromium	ppm	ASTM D5185m	>11	▲ **10**	▲ 12	<1
Nickel	ppm	ASTM D5185m	>5	**2**	2	0
Titanium	ppm	ASTM D5185m		**2**	2	<1
Silver	ppm	ASTM D5185m	>3	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>31	▲ **24**	▲ 26	5
Lead	ppm	ASTM D5185m	>26	**<1**	0	1
Copper	ppm	ASTM D5185m	>26	**8**	11	11
Tin	ppm	ASTM D5185m	>4	**1**	<1	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**60**	63	33
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**41**	37	6
Manganese	ppm	ASTM D5185m		**2**	2	1
Magnesium	ppm	ASTM D5185m	0	**531**	444	▲ 32
Calcium	ppm	ASTM D5185m		**1688**	1579	▲ 3009
Phosphorus	ppm	ASTM D5185m		**793**	652	▲ 1046
Zinc	ppm	ASTM D5185m		**915**	759	▲ 1215
Sulfur	ppm	ASTM D5185m		**2578**	2147	▲ 12851

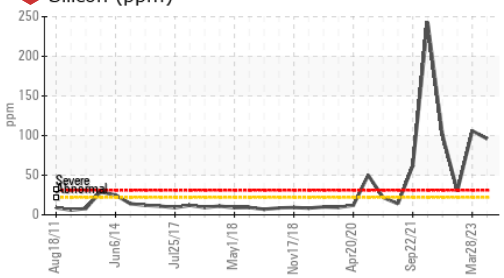
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>22	● **96**	● 106	▲ 30
Sodium	ppm	ASTM D5185m	>31	**3**	4	15
Potassium	ppm	ASTM D5185m	>20	**6**	4	4

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.1**	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**6.6**	6.6	4.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.2**	22.1	18.0

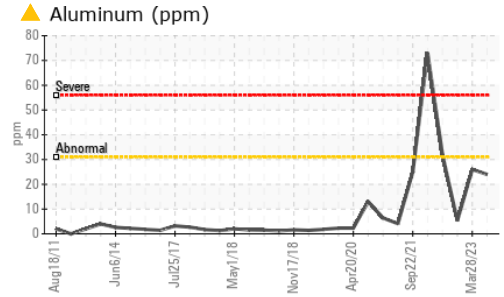
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**20.0**	19.4	3.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	**10.5**	10.9	11.7

OIL ANALYSIS REPORT

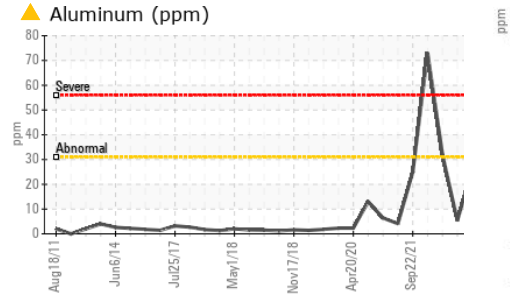
Silicon (ppm)



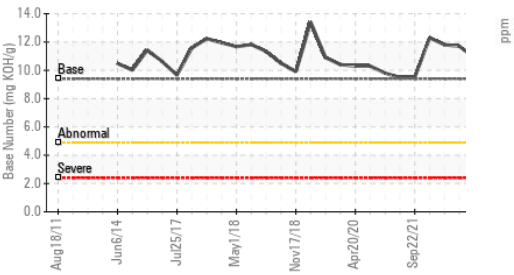
Aluminum (ppm)



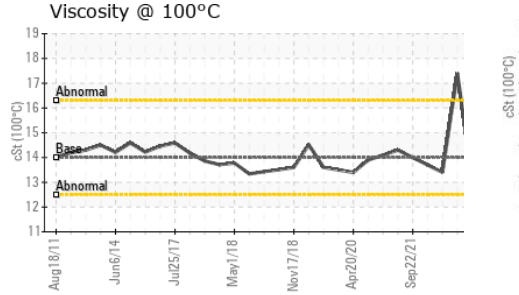
Aluminum (ppm)



Base Number



Viscosity @ 100°C

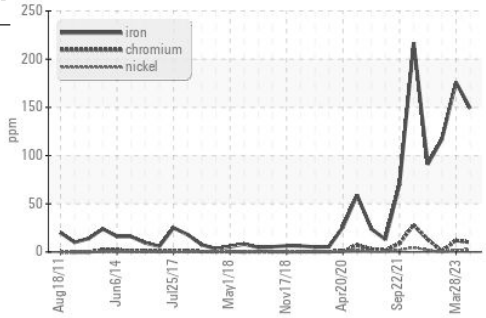


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

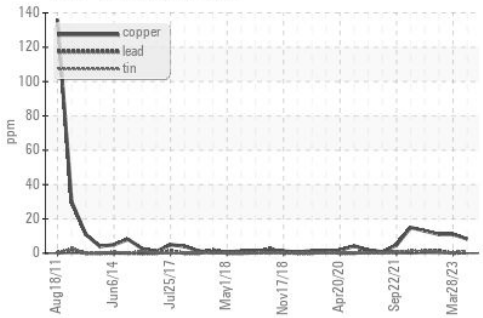
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14	**13.2**	13.1	▲ 17.4

GRAPHS

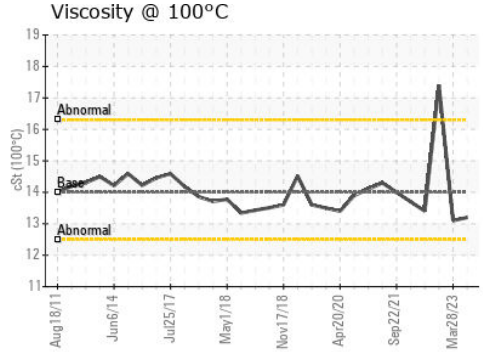
Ferrous Alloys



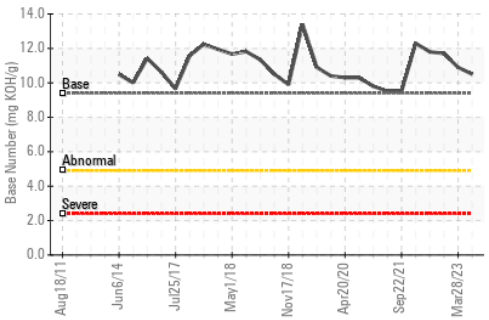
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0873979 **Recieved** : 16 Jan 2024
Lab Number : 06060882 **Diagnosed** : 17 Jan 2024
Unique Number : 10832264 **Diagnostician** : Jonathan Hester
Test Package : CONST (Additional Tests: 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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