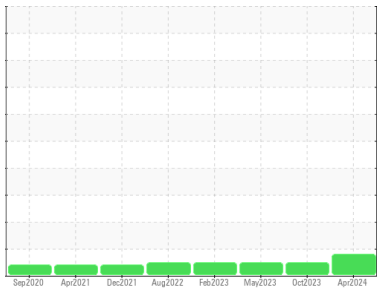
OIL ANALYSIS REPORT

Area
KANSAS/44/EG - EXCAVATOR
Machine Id
20.019L [KANSAS^44^EG - EXCAVATOR]
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

Sample Rating Trend



FUEL

DIAGNOSIS

Recommendation
The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear
All component wear rates are normal.

Contamination
Light fuel dilution occurring. No other contaminants were detected 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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0918141**	WC0833816	WC0789932
Sample Date		Client Info		**01 Apr 2024**	23 Oct 2023	12 May 2023
Machine Age	hrs	Client Info		**1063**	7556	2276
Oil Age	hrs	Client Info		**0**	0	5553
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**MARGINAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**9**	6	8
Chromium	ppm	ASTM D5185m	>20	**1**	0	<1
Nickel	ppm	ASTM D5185m	>2	**<1**	0	<1
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**3**	2	<1
Lead	ppm	ASTM D5185m	>40	**<1**	0	0
Copper	ppm	ASTM D5185m	>330	**2**	<1	<1
Tin	ppm	ASTM D5185m	>15	**1**	0	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**53**	48	55
Barium	ppm	ASTM D5185m	0	**<1**	0	0
Molybdenum	ppm	ASTM D5185m	0	**40**	39	41
Manganese	ppm	ASTM D5185m		**1**	0	<1
Magnesium	ppm	ASTM D5185m	0	**483**	476	517
Calcium	ppm	ASTM D5185m		**1615**	1677	1747
Phosphorus	ppm	ASTM D5185m		**767**	786	793
Zinc	ppm	ASTM D5185m		**902**	878	955
Sulfur	ppm	ASTM D5185m		**2707**	2359	2535

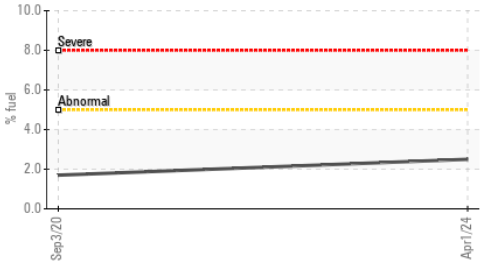
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**6**	9	5
Sodium	ppm	ASTM D5185m		**3**	4	3
Potassium	ppm	ASTM D5185m	>20	**2**	<1	<1
Fuel	%	ASTM D3524	>5	▲ **2.5**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.2**	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	**7.5**	6.8	7.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.5**	22.0	22.5

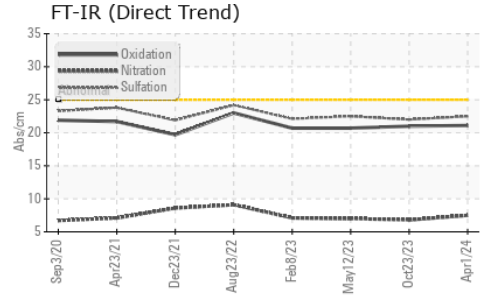
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**21.1**	21.0	20.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	**9.1**	10.1	10.6

OIL ANALYSIS REPORT

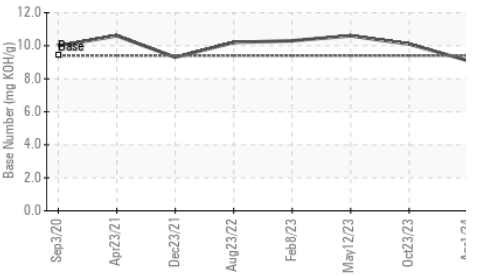
Fuel Dilution



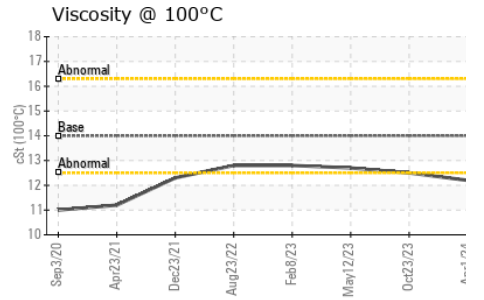
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

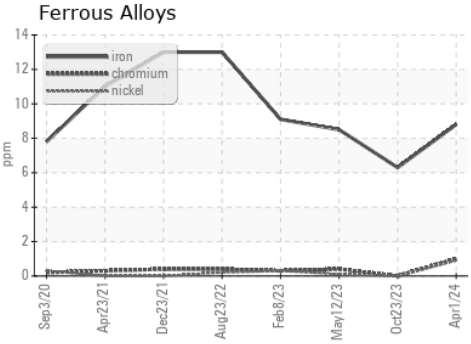


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

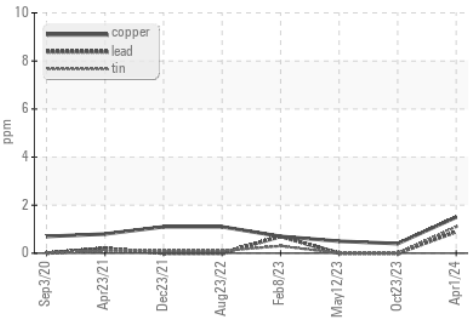
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14	**12.2**	12.5	12.7

GRAPHS

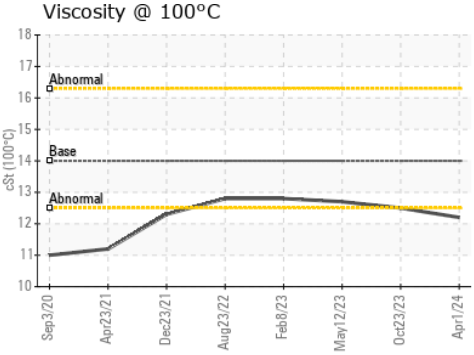
Ferrous Alloys



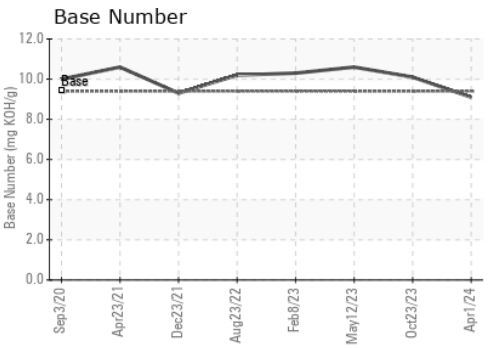
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0918141
Lab Number : 06142891
Unique Number : 10967699
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

Received : 09 Apr 2024
Tested : 15 Apr 2024
Diagnosed : 15 Apr 2024 - Wes Davis

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)

SHERWOOD CONSTRUCTION CO INC
3219 WEST MAY ST
WICHITA, KS
US 67213
Contact: DOUG KING
doug.king@sherwood.net
T: (316)617-3161
F: x:

Report Id: SHEWIC [WUSCAR] 06142891 (Generated: 04/15/2024 11:28:54) Rev: 1

Submitted By: JAMES MOORE