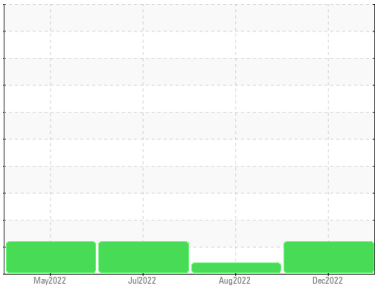
OIL ANALYSIS REPORT

Area
KANSAS/44/HY - SKID STEER
Machine Id
53.157L [KANSAS^44^HY - SKID STEER]
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER15W40 (2 GAL)

Sample Rating Trend



WEAR

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core).

Contamination
There is no indication of any contamination in the oil.

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0749917**	WC0718119	WC0703463
Sample Date		Client Info		**05 Dec 2022**	16 Aug 2022	18 Jul 2022
Machine Age	hrs	Client Info		**849**	605	489
Oil Age	hrs	Client Info		**0**	116	0
Oil Changed		Client Info		**Not Changd**	Not Changd	Changed
Sample Status				**ABNORMAL**	ATTENTION	ATTENTION

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	▲ 4.3
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	**15**	5	14
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>2	**0**	0	0
Titanium	ppm	ASTM D5185m	>2	**<1**	<1	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**2**	<1	3
Lead	ppm	ASTM D5185m	>40	**0**	0	<1
Copper	ppm	ASTM D5185m	>330	▲ **144**	2	24
Tin	ppm	ASTM D5185m	>15	**0**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**71**	114	55
Barium	ppm	ASTM D5185m	0	**0**	0	1
Molybdenum	ppm	ASTM D5185m	0	**11**	10	40
Manganese	ppm	ASTM D5185m		**<1**	<1	2
Magnesium	ppm	ASTM D5185m	0	**679**	651	471
Calcium	ppm	ASTM D5185m		**1599**	1441	1751
Phosphorus	ppm	ASTM D5185m		**741**	665	760
Zinc	ppm	ASTM D5185m		**895**	799	969
Sulfur	ppm	ASTM D5185m		**3476**	2881	3215

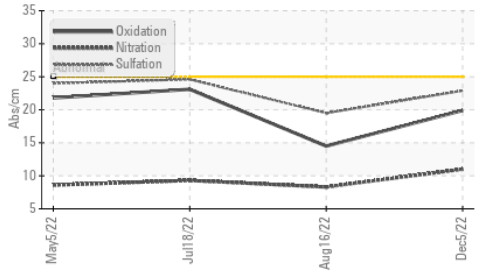
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**6**	4	10
Sodium	ppm	ASTM D5185m		**1**	1	3
Potassium	ppm	ASTM D5185m	>20	**4**	<1	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.2**	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**11.0**	8.3	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.9**	19.5	24.6

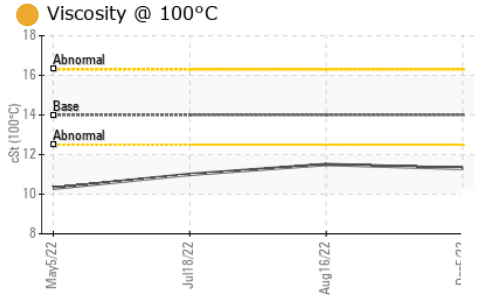
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**19.9**	14.5	23.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	**7.4**	9.3	10.4

OIL ANALYSIS REPORT

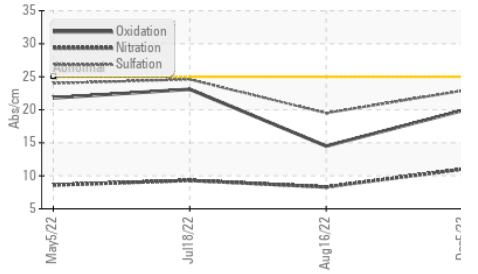
FT-IR (Direct Trend)



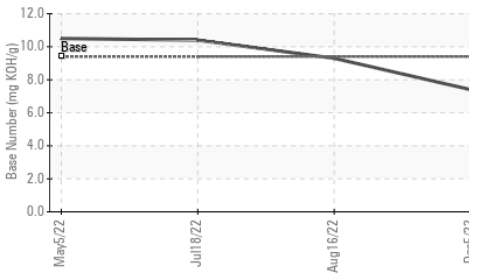
Viscosity @ 100°C



FT-IR (Direct Trend)



Base Number

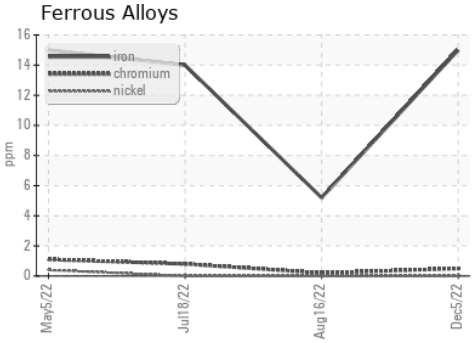


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

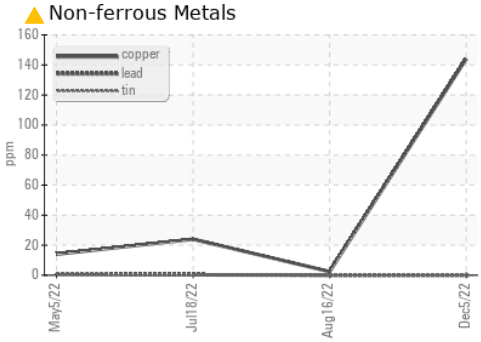
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14	**11.3**	11.5	11.0

GRAPHS

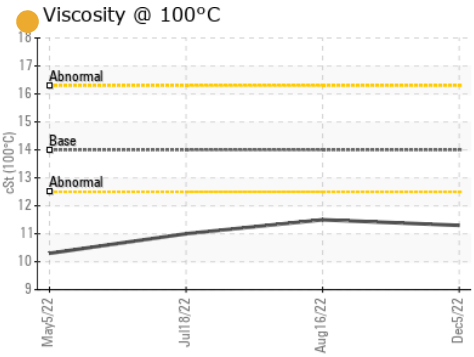
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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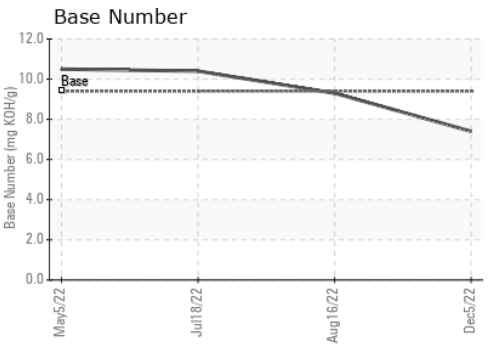

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0749917 **Received** : 09 Dec 2022
Lab Number : 05713495 **Tested** : 12 Dec 2022
Unique Number : 10248070 **Diagnosed** : 13 Dec 2022 - 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)

SHERWOOD CONSTRUCTION CO INC
3219 WEST MAY ST
WICHITA, KS
US 67213
Contact: BILL ORCUTT
william.orcutt@wildcat.net
T: (719)499-6303
F: x:

Report Id: SHEWIC [WUSCAR] 05713495 (Generated: 05/10/2024 14:42:36) Rev: 1

Submitted By: BRANDEN JAQUIAS