



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
OKLAHOMA/102/EG - BACKHOE LOADER
Machine Id
53.514L [OKLAHOMA^102^EG - BACKHOE LOADER]
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER15W40 (--- 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0886860	WC0857255	WC0769751
Sample Date		Client Info		07 Apr 2024	10 Nov 2023	05 Feb 2023
Machine Age	hrs	Client Info		2554	2310	2062
Oil Age	hrs	Client Info		244	248	265
Filter Age	hrs	Client Info		244	248	265
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ATTENTION	NORMAL

WEAR

The copper level is abnormal. Elemental level of copper (Cu) probably due to leaching of copper from copper components (i.e. cooling core) by the oil additives. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	13	14	18
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	3	3	4
Lead	ppm	ASTM D5185m	>40	4	0	<1
Copper	ppm	ASTM D5185m	>330	425	231	78
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

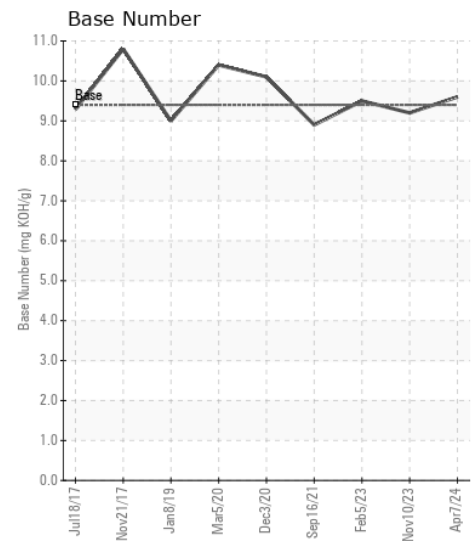
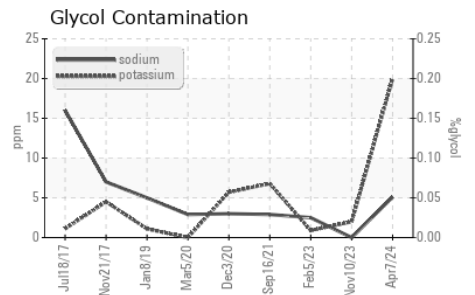
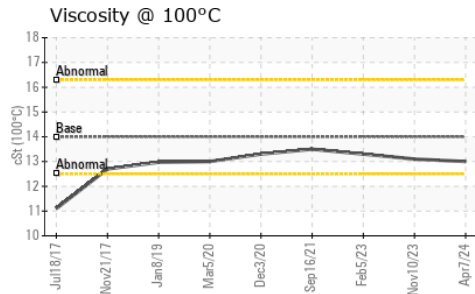
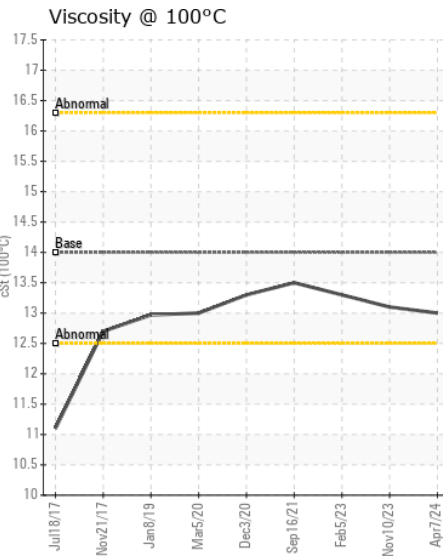
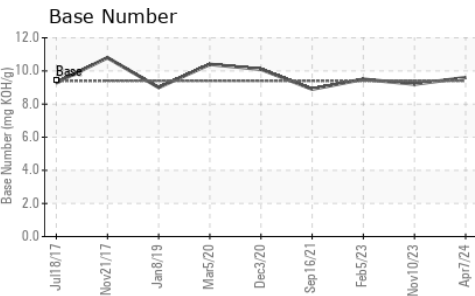
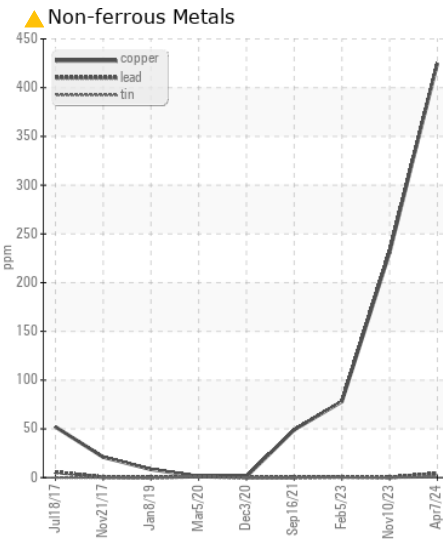
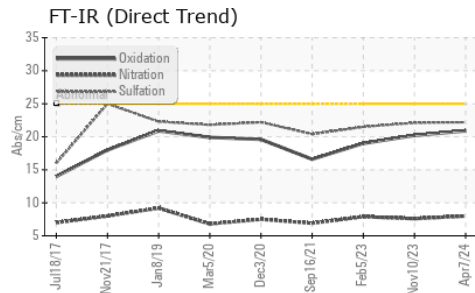
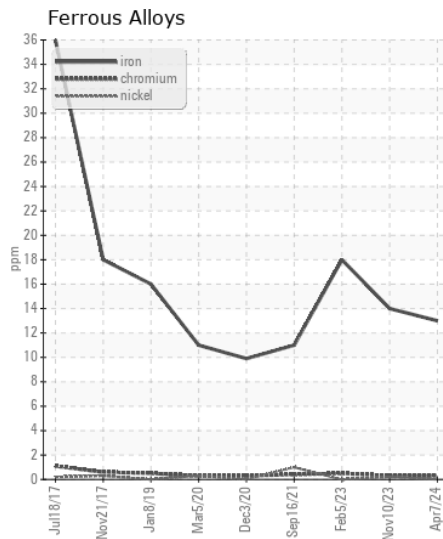
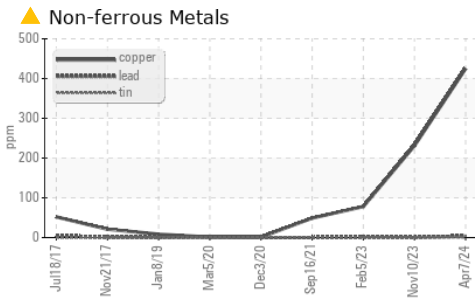
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	8	8
Potassium	ppm	ASTM D5185m	>20	20	2	<1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.0	7.6	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.2	22.1	21.5
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

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		5	0	2
Boron	ppm	ASTM D5185m	0	52	54	54
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	39	43	33
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	0	485	519	572
Calcium	ppm	ASTM D5185m		1715	1723	1701
Phosphorus	ppm	ASTM D5185m		792	769	760
Zinc	ppm	ASTM D5185m		856	940	966
Sulfur	ppm	ASTM D5185m		2859	2710	3243
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.9	20.2	19.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	9.6	9.2	9.5
Visc @ 100°C	cSt	ASTM D445	14	13.0	13.1	13.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0886860 **Received** : 16 Apr 2024
Lab Number : 06150893 **Tested** : 19 Apr 2024
Unique Number : 10980971 **Diagnosed** : 19 Apr 2024 - Don Baldrige
Test Package : CONST (Additional Tests: Glycol, TBN)

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:

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)