

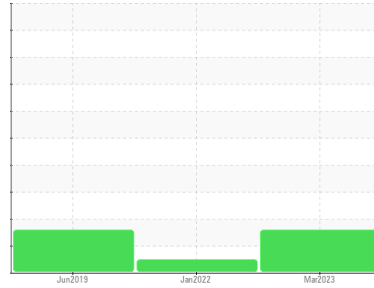


OIL ANALYSIS REPORT



Area
KANSAS/88/FD - EXCAVATOR
 Machine Id
20.105C [KANSAS^88^FD - EXCAVATOR]
 Component
Swing Drive
 Fluid
NOT GIVEN (--- GAL)

Sample Rating Trend



DIRT



DIAGNOSIS

▲ Recommendation

The oil 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 level of silicon (Si) above normal indicating ingress of seal material.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC0741705	WC0603133	WC0339504
Sample Date	Client Info	28 Mar 2023	31 Jan 2022	26 Jun 2019
Machine Age	hrs	2801	2318	1820
Oil Age	hrs	1879	439	0
Oil Changed	Client Info	Changed	N/A	Changed
Sample Status		ABNORMAL	NORMAL	ABNORMAL

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >400	34	14	40
Chromium	ppm ASTM D5185m >10	<1	<1	<1
Nickel	ppm ASTM D5185m >10	0	0	<1
Titanium	ppm ASTM D5185m	0	<1	<1
Silver	ppm ASTM D5185m	0	<1	0
Aluminum	ppm ASTM D5185m >25	2	<1	1
Lead	ppm ASTM D5185m >50	<1	<1	<1
Copper	ppm ASTM D5185m >200	29	24	97
Tin	ppm ASTM D5185m >10	<1	<1	0
Antimony	ppm ASTM D5185m >5	---	<1	0
Vanadium	ppm ASTM D5185m	0	0	<1
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	<1	<1	2
Barium	ppm ASTM D5185m	0	0	4
Molybdenum	ppm ASTM D5185m	0	<1	0
Manganese	ppm ASTM D5185m	1	<1	1
Magnesium	ppm ASTM D5185m	17	19	10
Calcium	ppm ASTM D5185m	3578	3396	3896
Phosphorus	ppm ASTM D5185m	1053	1016	764
Zinc	ppm ASTM D5185m	1369	1245	910
Sulfur	ppm ASTM D5185m	16483	11231	6146

CONTAMINANTS

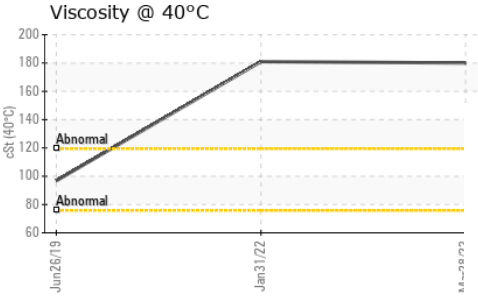
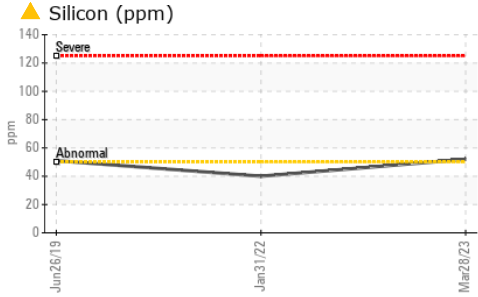
method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >50	▲ 52	40	▲ 51
Sodium	ppm ASTM D5185m	1	1	2
Potassium	ppm ASTM D5185m >20	<1	0	3

VISUAL

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



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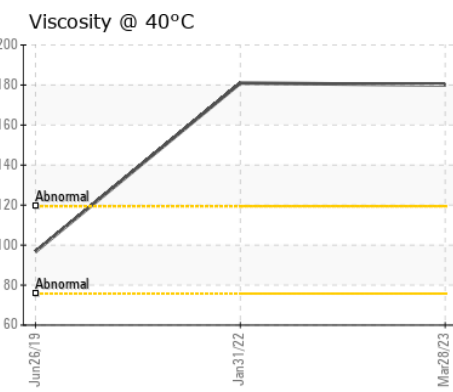
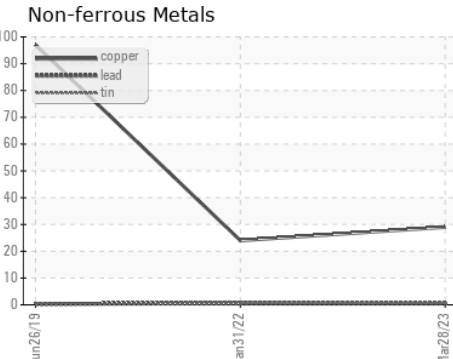
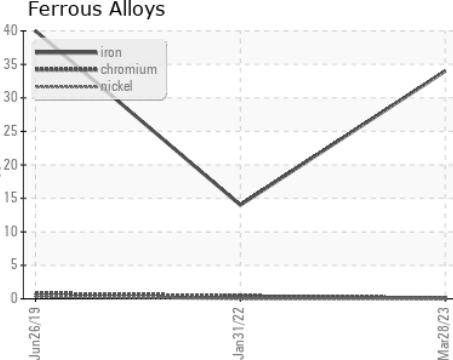


FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	180	181	96.8

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color				no image	no image	no image
Bottom				no image	no image	no image

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0741705
Lab Number : 05809325
Unique Number : 10406854
Test Package : CONST
Received : 03 Apr 2023
Tested : 04 Apr 2023
Diagnosed : 06 Apr 2023 - Angela Borella

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