



OIL ANALYSIS REPORT

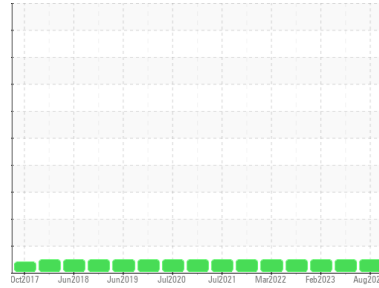
Sample Rating Trend

NORMAL



Area
KANSAS/15/EG - EXCAVATOR
Machine Id
20.137L [KANSAS^15^EG - EXCAVATOR]

Component
Diesel Engine
Fluid
CAT DIESEL ENGINE OIL 10W30 (--- GAL)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination 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			WC0789885	WC0789822	WC0712255
Sample Date	Client Info			16 Aug 2023	02 May 2023	08 Feb 2023
Machine Age	hrs	Client Info		6697	6408	6170
Oil Age	hrs	Client Info		6408	238	243
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	<1.0	<1.0
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	13	8	15
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	9	6	7
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	0	0	<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	145	40	52	52
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.0	43	40	41
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	248	515	509	496
Calcium	ppm	ASTM D5185m	2203	1818	1767	1613
Phosphorus	ppm	ASTM D5185m	731	803	964	899
Zinc	ppm	ASTM D5185m	1460	950	1160	1118
Sulfur	ppm	ASTM D5185m	5088	3085	3688	3335

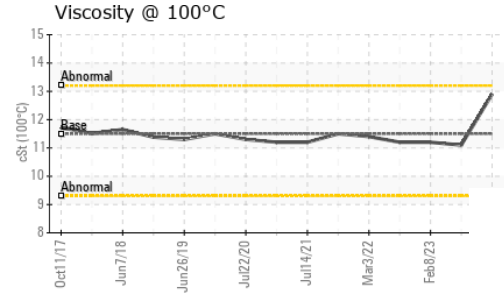
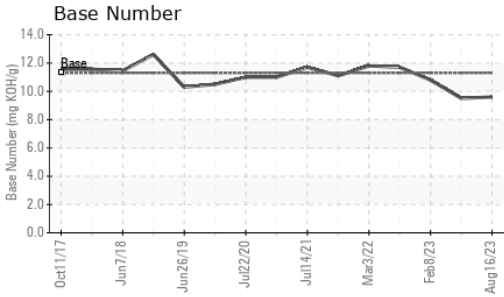
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	6	6
Sodium	ppm	ASTM D5185m		11	5	6
Potassium	ppm	ASTM D5185m	>20	0	<1	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.2	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	6.4	5.9	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	19.7	21.7

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.1	18.3	19.7
Base Number (BN)	mg KOH/g	ASTM D2896	11.3	9.6	9.5	10.8



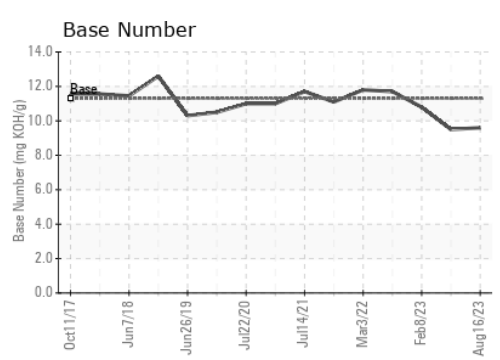
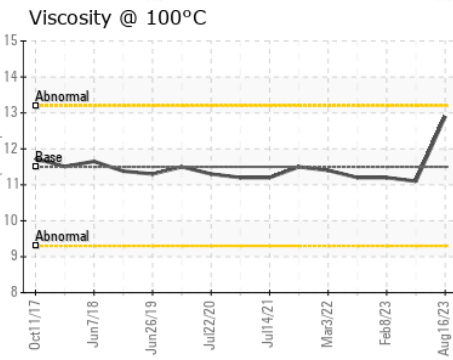
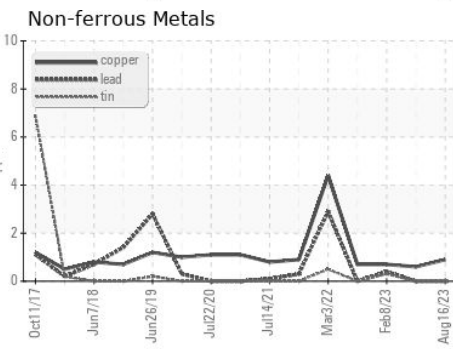
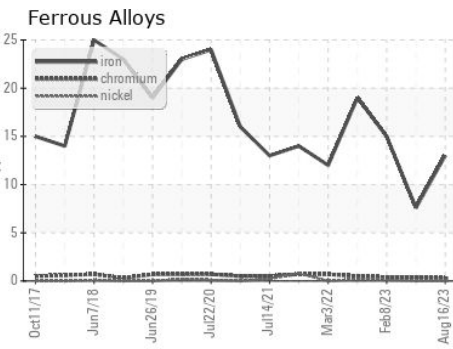
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VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	11.5	12.9	11.1	11.2

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0789885 **Received** : 22 Aug 2023
Lab Number : 05931451 **Diagnosed** : 23 Aug 2023
Unique Number : 10616722 **Diagnostician** : Wes Davis
Test Package : CONST (Additional Tests: 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:

Certificate L2367
 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)