



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
TRACTORS
Machine Id
[TRACTORS] TR372
Component
Diesel Engine
Fluid
KENDALL 15W40 (--- 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		LP0001116	WC0570781	WC0570722
Sample Date		Client Info		16 Nov 2023	25 Apr 2022	17 Dec 2021
Machine Age	hrs	Client Info		15019	13969	13399
Oil Age	hrs	Client Info		600	600	600
Filter Age	hrs	Client Info		600	600	600
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	23	36	38
Chromium	ppm	ASTM D5185m	>20	1	2	2
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		2	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	3	5
Lead	ppm	ASTM D5185m	>40	4	11	20
Copper	ppm	ASTM D5185m	>330	9	6	4
Tin	ppm	ASTM D5185m	>15	<1	1	1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

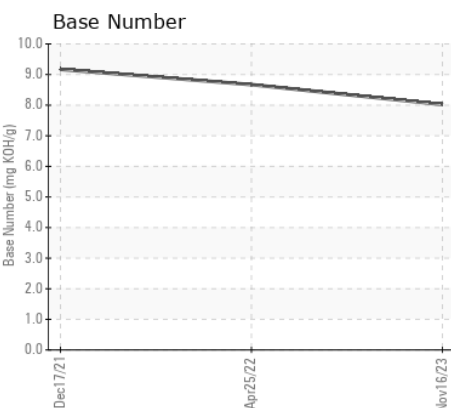
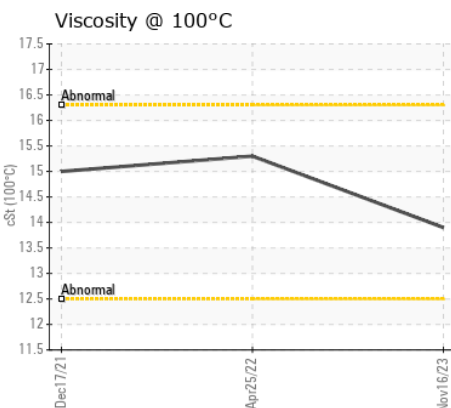
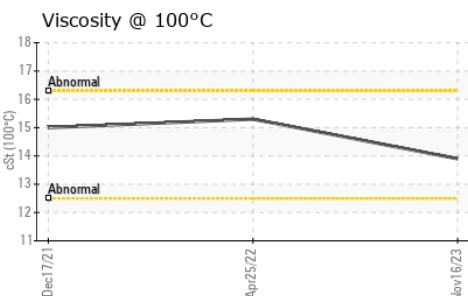
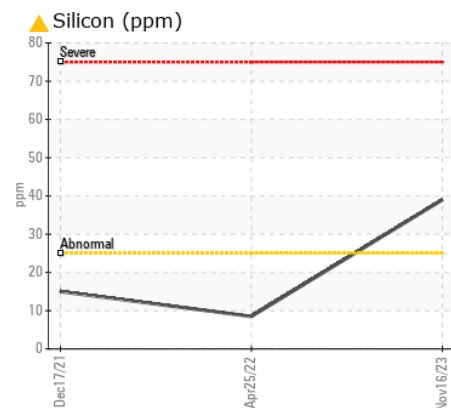
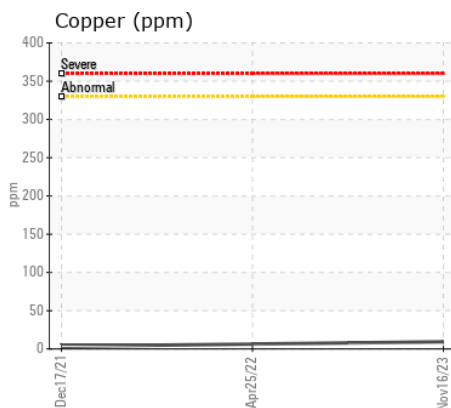
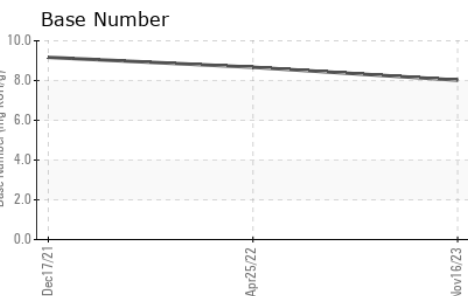
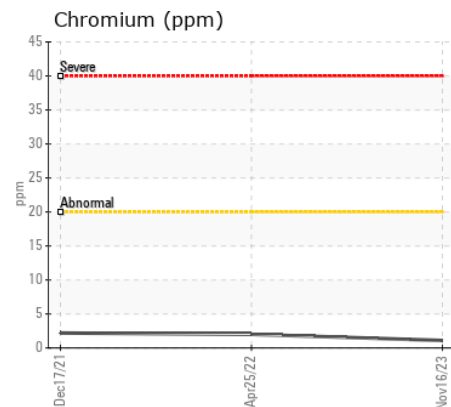
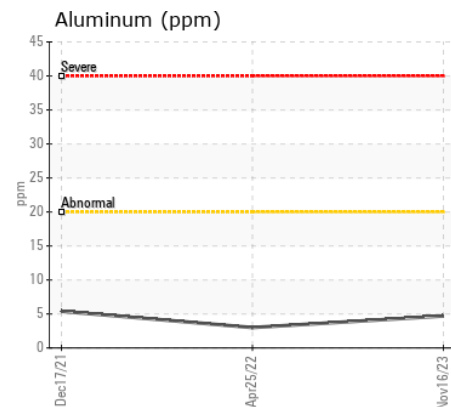
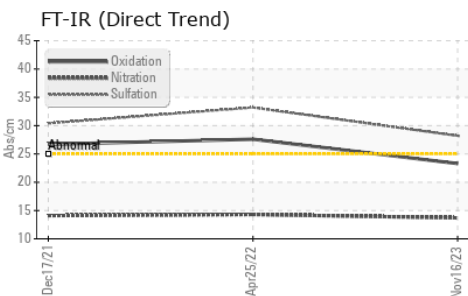
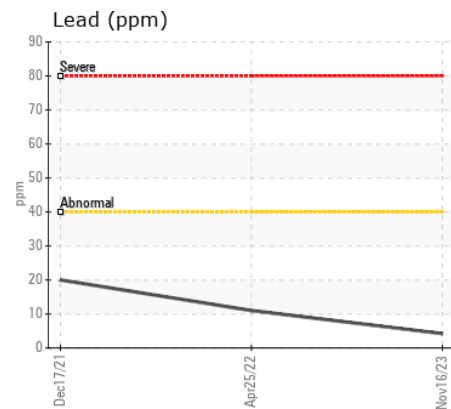
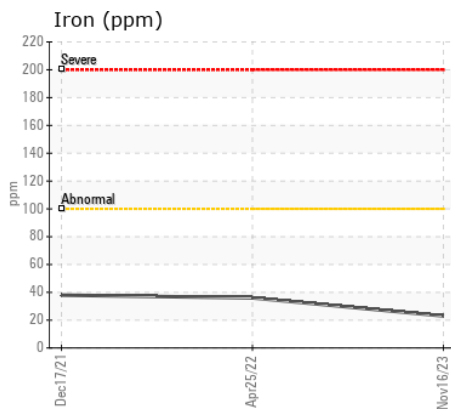
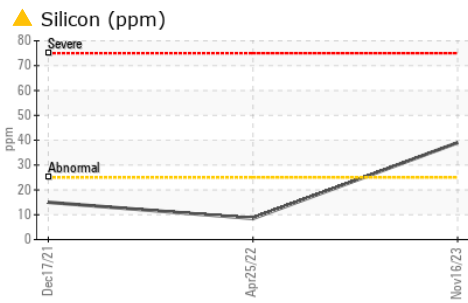
Elemental level of silicon (Si) above normal indicating ingress of seal material.

Silicon	ppm	ASTM D5185m	>25	▲ 39	8	15
Potassium	ppm	ASTM D5185m	>20	12	5	4
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.7	0.6
Nitration	Abs/cm	*ASTM D7624	>20	13.7	14.3	14.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	28.2	33.2	30.4
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 suitable for further service.

Sodium	ppm	ASTM D5185m		8	3	6
Boron	ppm	ASTM D5185m	6.3	22	45	114
Barium	ppm	ASTM D5185m	0.6	0	0	0
Molybdenum	ppm	ASTM D5185m	0.4	93	41	92
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	277	414	1087	934
Calcium	ppm	ASTM D5185m	1514	2171	1872	2052
Phosphorus	ppm	ASTM D5185m	634	1159	1401	1118
Zinc	ppm	ASTM D5185m	743	1486	1720	1291
Sulfur	ppm	ASTM D5185m	2592	3797	3238	3121
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.3	27.6	26.7
Base Number (BN)	mg KOH/g	ASTM D2896		8.02	8.67	9.17
Visc @ 100°C	cSt	ASTM D445		13.9	15.3	15.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : LP0001116

Lab Number : 06015824

Unique Number : 10754968

Test Package : MOB 2

Received : 22 Nov 2023

Tested : 26 Nov 2023

Diagnosed : 27 Nov 2023 - Sean Felton

CONSTRUCTION SERVICES

2420 BOSTON RD

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US 01095

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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)