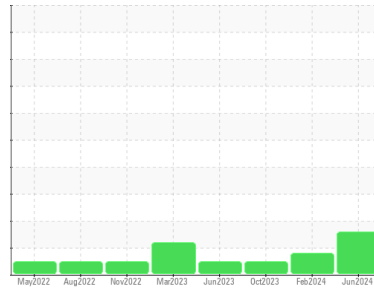


OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Area
TRACTORS
Machine Id
[TRACTORS] TR373
Component
Diesel Engine
Fluid
KENDALL 15W40 (--- GAL)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. No other corrective action is recommended at this time. The fluid was specified as KENDALL 15W40, however, a fluid match indicates that this fluid is SAE 30 Diesel Engine Oil. Please confirm the oil type and grade on your next sample.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. 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			PCA0098500	PCA0110026	LP0000441
Sample Date	Client Info			24 Jun 2024	14 Feb 2024	13 Oct 2023
Machine Age	hrs	Client Info		8653	7856	7218
Oil Age	hrs	Client Info		600	600	600
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				ATTENTION	MARGINAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
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	27	27	32
Chromium	ppm	ASTM D5185m	>20	<1	1	2
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		<1	1	1
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	4	2	4
Lead	ppm	ASTM D5185m	>40	4	6	7
Copper	ppm	ASTM D5185m	>330	<1	1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	6.3	26	28	20
Barium	ppm	ASTM D5185m	0.6	0	<1	0
Molybdenum	ppm	ASTM D5185m	0.4	82	82	88
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	277	53	100	184
Calcium	ppm	ASTM D5185m	1514	2163	1893	2074
Phosphorus	ppm	ASTM D5185m	634	972	939	975
Zinc	ppm	ASTM D5185m	743	1187	1089	1243
Sulfur	ppm	ASTM D5185m	2592	3664	3459	3637

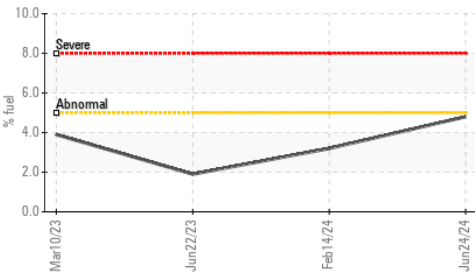
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	6	6
Sodium	ppm	ASTM D5185m		2	0	8
Potassium	ppm	ASTM D5185m	>20	1	5	8
Fuel	%	ASTM D3524	>5	4.8	3.2	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.9	0.7	0.8
Nitration	Abs/cm	*ASTM D7624	>20	11.4	11.2	10.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.3	24.1	23.7

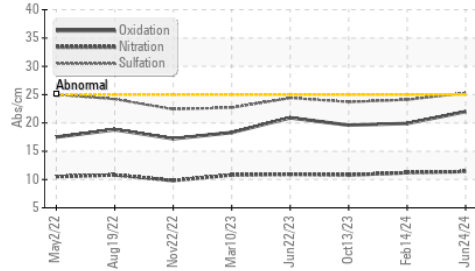
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.0	19.9	19.6
Base Number (BN)	mg KOH/g	ASTM D2896		5.0	5.72	5.2

OIL ANALYSIS REPORT

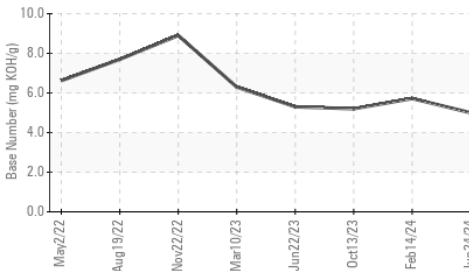
▲ Fuel Dilution



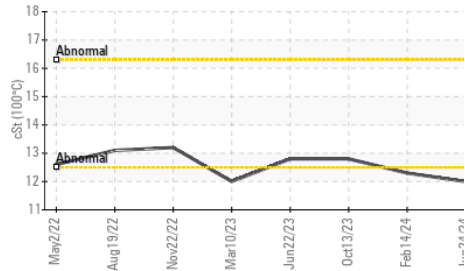
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C



Viscosity @ 100°C

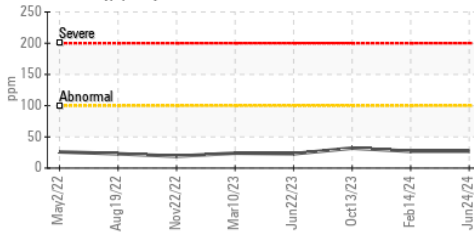


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

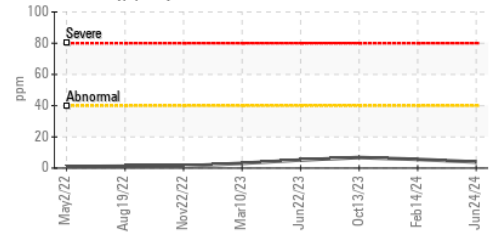
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.0	12.3	12.8

GRAPHS

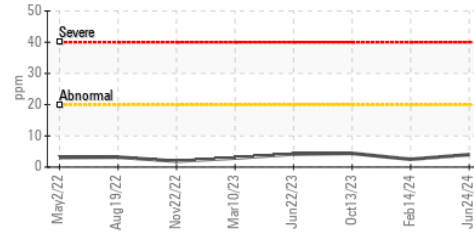
Iron (ppm)



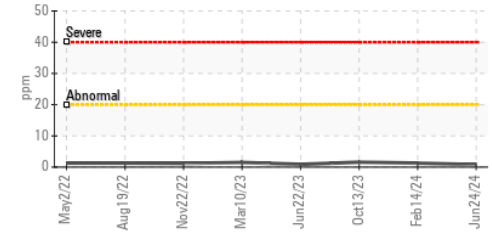
Lead (ppm)



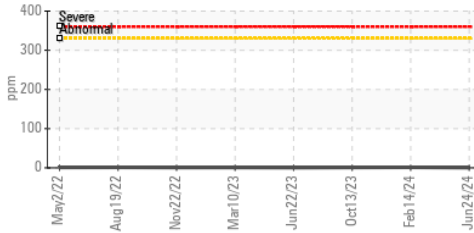
Aluminum (ppm)



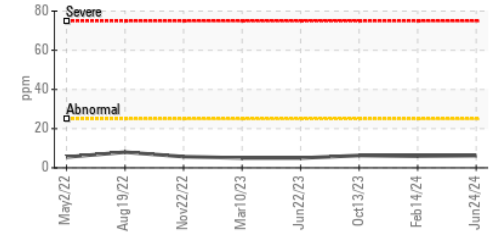
Chromium (ppm)



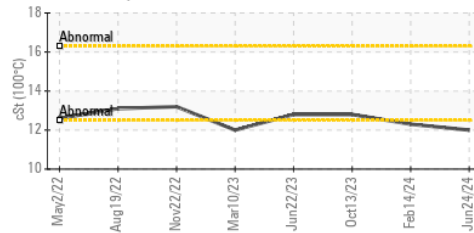
Copper (ppm)



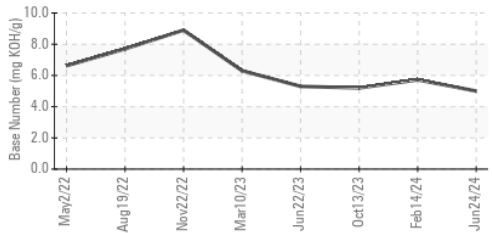
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : PCA0098500

Lab Number : 06225573

Unique Number : 11103770

Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

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)

Received : 01 Jul 2024

Tested : 03 Jul 2024

Diagnosed : 03 Jul 2024 - Wes Davis

CONSTRUCTION SERVICES

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WILBRAHAM, MA

US 01095

Contact: Michael Dupuis

mdupuis@cs-ma.us

T: (413)733-6331

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