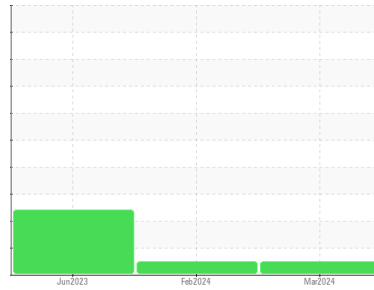


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
KENWORTH 433
 Component
Diesel Engine
 Fluid
 DIESEL ENGINE OIL SAE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

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			PCA0106745	PCA0082947	PCA0069335
Sample Date	Client Info			25 Mar 2024	04 Feb 2024	05 Jun 2023
Machine Age	mls	Client Info		407717	0	335687
Oil Age	mls	Client Info		0	0	1000
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	<1.0	<1.0
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	15	14	29
Chromium	ppm	ASTM D5185m	>20	1	<1	2
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	3	3	8
Lead	ppm	ASTM D5185m	>40	1	2	3
Copper	ppm	ASTM D5185m	>330	2	<1	6
Tin	ppm	ASTM D5185m	>15	1	1	3
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		<1	0	0

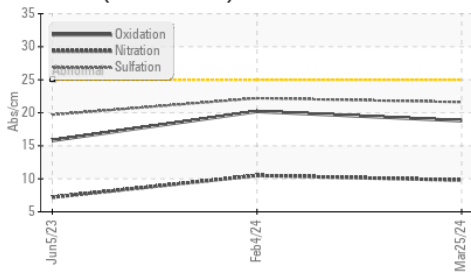
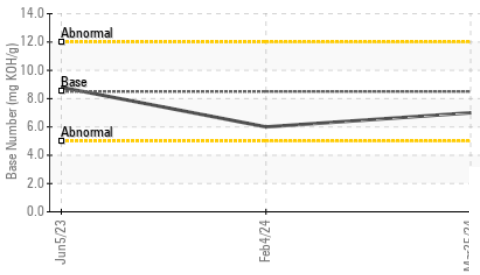
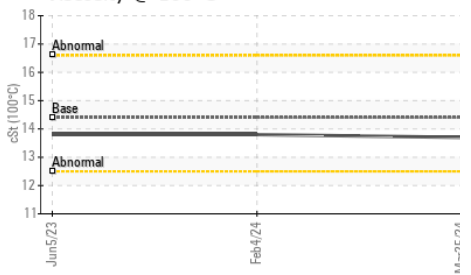
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	6	1	5
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	62	56	86
Manganese	ppm	ASTM D5185m		<1	<1	3
Magnesium	ppm	ASTM D5185m	450	873	989	1271
Calcium	ppm	ASTM D5185m	3000	1096	1047	1524
Phosphorus	ppm	ASTM D5185m	1150	1059	1063	1357
Zinc	ppm	ASTM D5185m	1350	1215	1231	1804
Sulfur	ppm	ASTM D5185m	4250	3152	2693	4511

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	5	5	43
Sodium	ppm	ASTM D5185m	>158	<1	6	6
Potassium	ppm	ASTM D5185m	>20	4	4	4

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.4	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.8	10.5	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.6	22.2	19.7

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.8	20.2	15.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.0	6.0	8.8

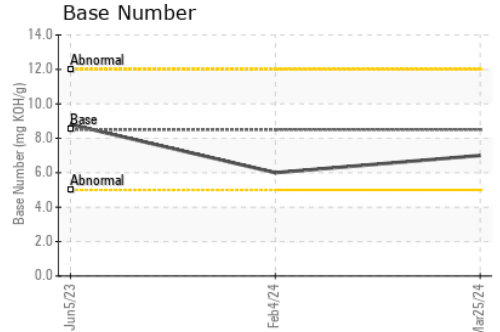
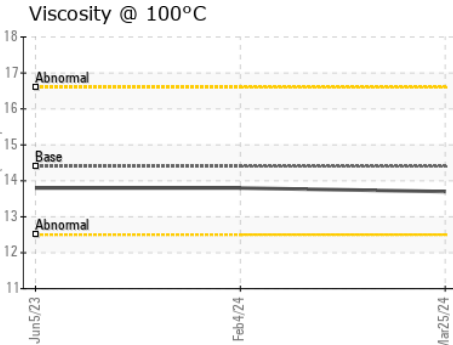
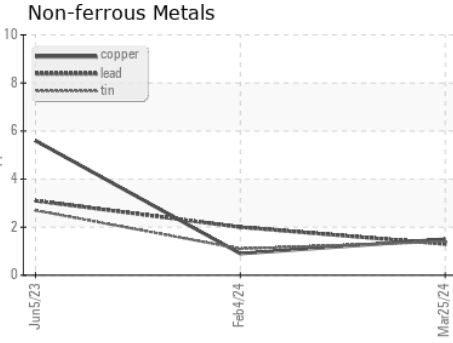
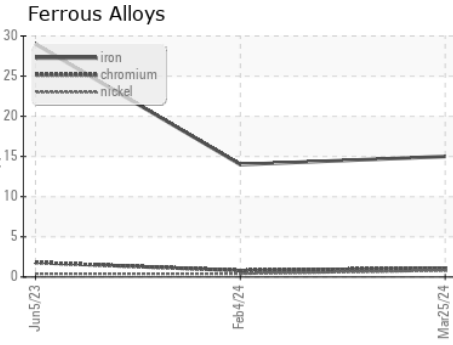
OIL ANALYSIS REPORT

FT-IR (Direct Trend)

Base Number

Viscosity @ 100°C


PARAMETER	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	14.4	13.7	13.8	13.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0106745 **Received** : 22 Apr 2024
Lab Number : **06156694** **Tested** : 23 Apr 2024
Unique Number : 10992117 **Diagnosed** : 23 Apr 2024 - Wes Davis
Test Package : FLEET

LEFEBVRE AND SONS
 10895 171ST AVE NW
 ELK RIVER, MN
 US 55330
 Contact: JAY LEFEBVRE
 jay.lefebvre@lefruck.com

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)