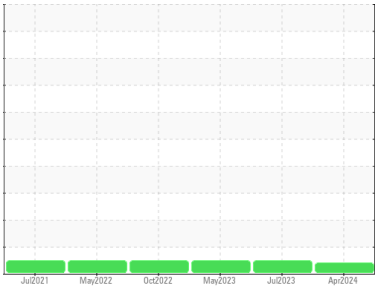
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Area
K5 CONSTRUCTION CORPORATION - HODGKINS IL
Machine Id
1861
Component
Diesel Engine
Fluid
LEAHY WOLF PREMIUM 15W40 (9 LTR)

Sample Rating Trend



VISCOSITY

DIAGNOSIS

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.

Wear
All component wear rates are normal.

Contamination
Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

Fluid Condition
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0122002**	LW0007433	LW0007020
Sample Date		Client Info		**19 Apr 2024**	18 Jul 2023	02 May 2023
Machine Age	hrs	Client Info		**1892**	1660	1360
Oil Age	hrs	Client Info		**232**	1426	234
Oil Changed		Client Info		**Changed**	Changed	Not Changd
Sample Status				**ATTENTION**	NORMAL	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	**8**	34	26
Chromium	ppm	ASTM D5185m	>20	**0**	<1	0
Nickel	ppm	ASTM D5185m	>2	**0**	0	0
Titanium	ppm	ASTM D5185m	>2	**0**	<1	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**1**	6	5
Lead	ppm	ASTM D5185m	>40	**0**	0	0
Copper	ppm	ASTM D5185m	>330	**7**	264	182
Tin	ppm	ASTM D5185m	>15	**0**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**48**	2	<1
Barium	ppm	ASTM D5185m		**0**	<1	0
Molybdenum	ppm	ASTM D5185m		**44**	61	54
Manganese	ppm	ASTM D5185m		**0**	<1	<1
Magnesium	ppm	ASTM D5185m		**672**	1011	941
Calcium	ppm	ASTM D5185m		**1639**	1210	1085
Phosphorus	ppm	ASTM D5185m		**1002**	1058	972
Zinc	ppm	ASTM D5185m		**1254**	1357	1249
Sulfur	ppm	ASTM D5185m		**3938**	3222	2997

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**9**	5	5
Sodium	ppm	ASTM D5185m		**2**	2	0
Potassium	ppm	ASTM D5185m	>20	**<1**	0	<1
Fuel	%	ASTM D3524	>5	**0.3**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.1**	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**5.0**	9.7	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.2**	19.5	17.5

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**17.0**	17.5	14.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**10.3**	7.8	7.6

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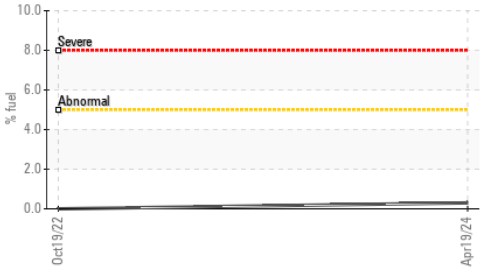
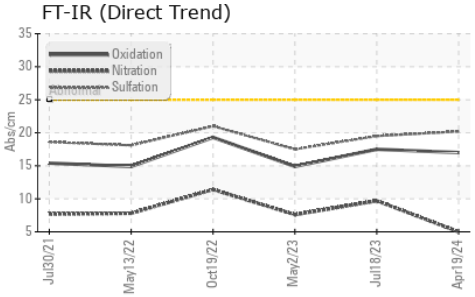
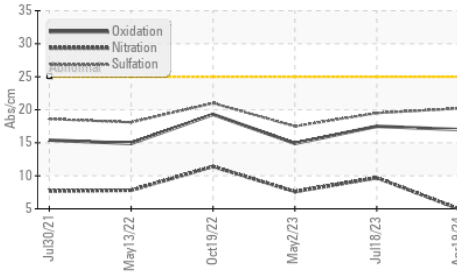
Fuel Dilution



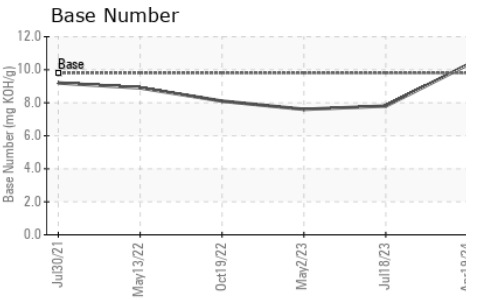
FT-IR (Direct Trend)



FT-IR (Direct Trend)



Base Number

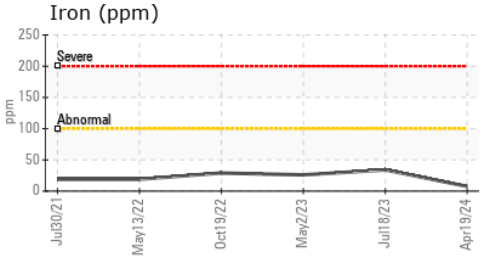


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

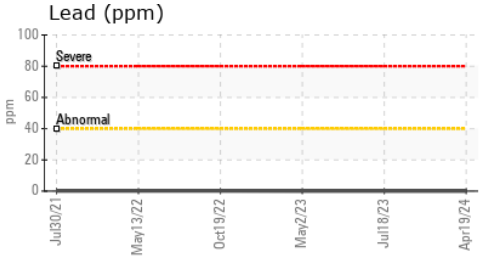
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.6	**12.0**	13.6	13.9

GRAPHS

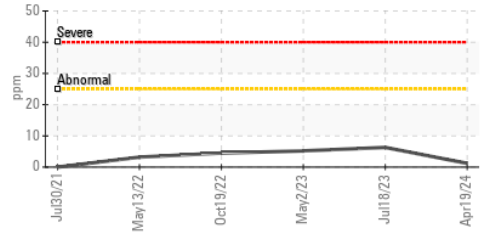
Iron (ppm)



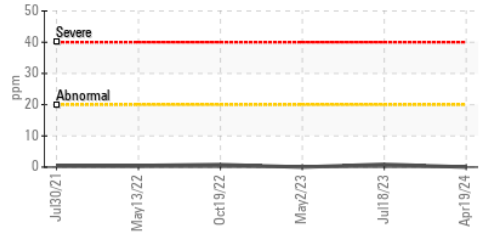
Lead (ppm)



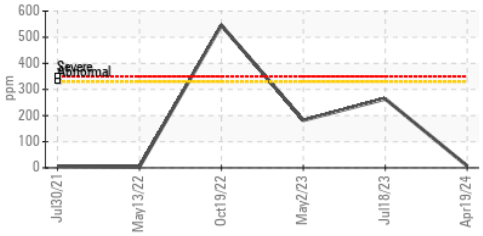
Aluminum (ppm)



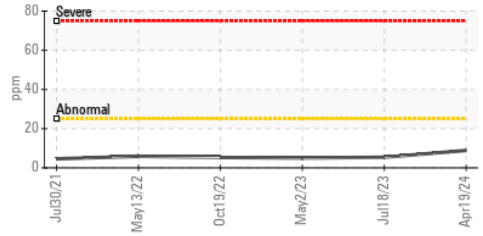
Chromium (ppm)



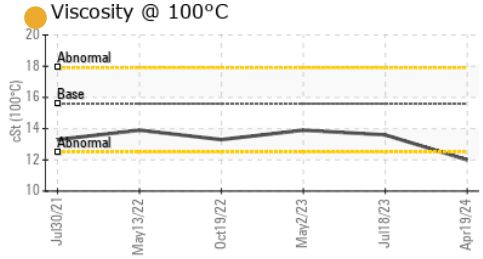
Copper (ppm)



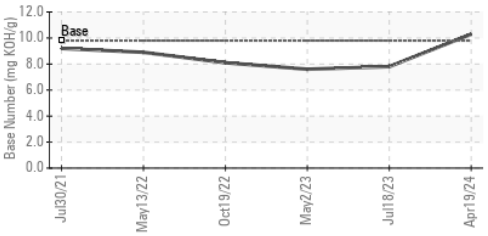
Silicon (ppm)



Viscosity @ 100°C



Base Number



ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0122002
Lab Number : 06160073
Unique Number : 10995496
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN)

Received : 25 Apr 2024
Tested : 29 Apr 2024
Diagnosed : 29 Apr 2024 - Sean Felton

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)

K5 CONSTRUCTION CORPORATION
6301 S EAST AVENUE
HODGKINS, IL
US 60525
Contact: Dave Gorski
daveg@k-five.net
T: (630)257-5600
F:

Report Id: K5CWES [WUSCAR] 06160073 (Generated: 04/29/2024 11:40:38) Rev: 1

Submitted By: NOELLE TERRAULT