LEAHY·WOLF
Lubricating specialists since 1946

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area
K5 CONSTRUCTION CORPORATION - HODGKINS IL
Machine Id
4354
Component
Diesel Engine
Fluid
LEAHY WOLF PREMIUM 15W40 (5 hrs)

RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

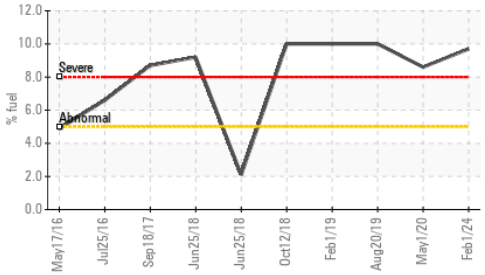
There is a high amount of fuel present in the oil.

FLUID CONDITION

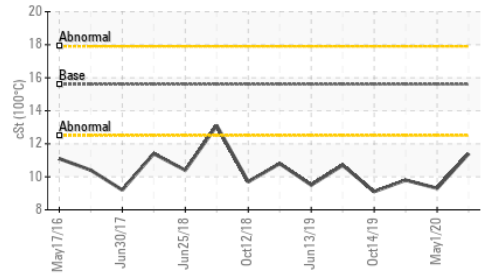
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LW0008511	LWI-256333	LWI-106492
Sample Date		Client Info		01 Feb 2024	01 May 2020	17 Feb 2020
Machine Age	hrs	Client Info		10248	10248	10059
Oil Age	hrs	Client Info		10248	199	228
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	SEVERE	ABNORMAL
Iron	ppm	ASTM D5185m	>100	36	31	67
Chromium	ppm	ASTM D5185m	>20	<1	0	1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	86	77	98
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	4	12	▲ 27
Lead	ppm	ASTM D5185m	>40	0	0	1
Copper	ppm	ASTM D5185m	>330	3	0	1
Tin	ppm	ASTM D5185m	>15	0	0	0
Vanadium	ppm	ASTM D5185m		1	0	0
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Silicon	ppm	ASTM D5185m	>25	15	5	8
Potassium	ppm	ASTM D5185m	>20	4	4	5
Fuel	%	ASTM D3524	>5	⬢ 9.7	⬢ 8.6	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.2	0.4
Nitration	Abs/cm	*ASTM D7624	>20	13.1	11	12
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.3	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---
Sodium	ppm	ASTM D5185m		2	8	8
Boron	ppm	ASTM D5185m		45	68	69
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		5	1	1
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		674	587	635
Calcium	ppm	ASTM D5185m		1165	1028	1168
Phosphorus	ppm	ASTM D5185m		902	773	836
Zinc	ppm	ASTM D5185m		1098	858	972
Sulfur	ppm	ASTM D5185m		3197	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	28.3	▲ 29	▲ 32
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	5.6	▲ 2.24	▲ 2.31
Visc @ 100°C	cSt	ASTM D445	15.6	▲ 11.4	▲ 9.3	▲ 9.8

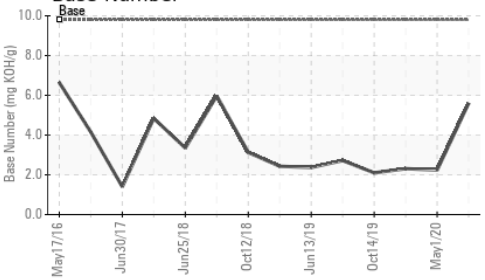
Fuel Dilution



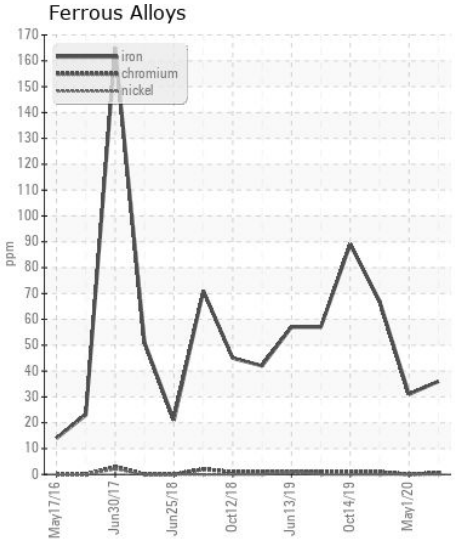
Viscosity @ 100°C



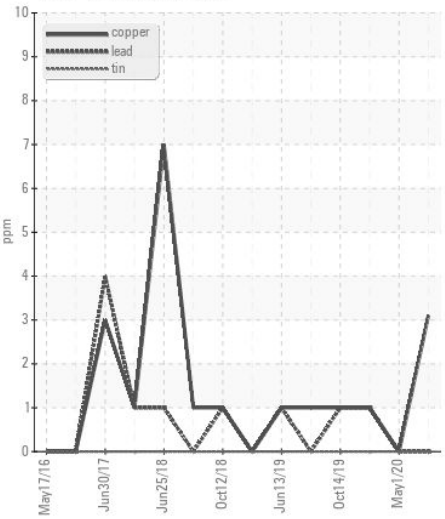
Base Number



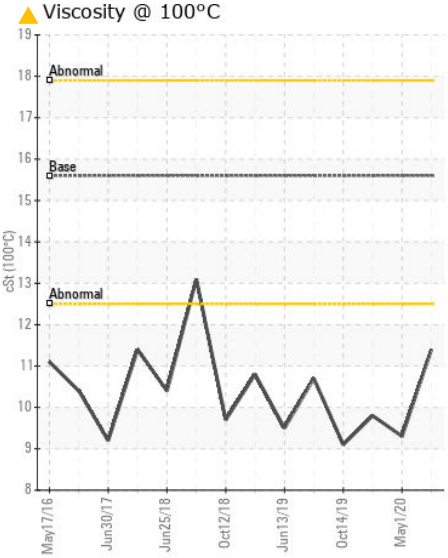
Ferrous Alloys



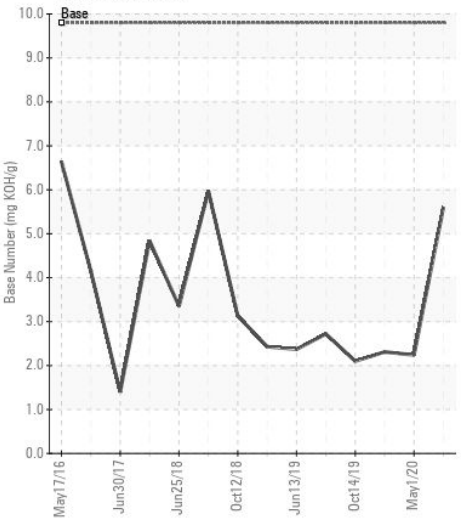
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LW0008511
Lab Number : 06087031
Unique Number : 10874476
Test Package : FLEET (Additional Tests: PercentFuel)

Received : 13 Feb 2024
Tested : 14 Feb 2024
Diagnosed : 14 Feb 2024 - Don Baldridge

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)

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