



Area
K5 CONSTRUCTION CORPORATION - HODGKINS IL

Machine Id
1849

Component
Diesel Engine

Fluid
LEAHY WOLF PREMIUM 15W40 (3 hrs)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LW0008508	LW0007474	LW0003620
Sample Date		Client Info		01 Feb 2024	10 Aug 2023	08 Nov 2021
Machine Age	hrs	Client Info		2870	2528	2057
Oil Age	hrs	Client Info		342	471	275
Filter Age	hrs	Client Info		342	471	275
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	10	5	5
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	2
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	<1	<1
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	1	<1	<1
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Light fuel dilution occurring.

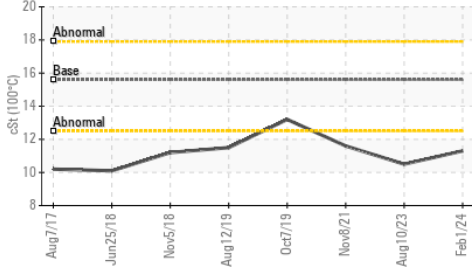
Silicon	ppm	ASTM D5185m	>25	3	3	11
Potassium	ppm	ASTM D5185m	>20	2	0	0
Fuel	%	ASTM D3524	>5	▲ 4.5	▲ 3.9	▲ 4.8
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.3	6.6	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.9	19.0	20.1
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

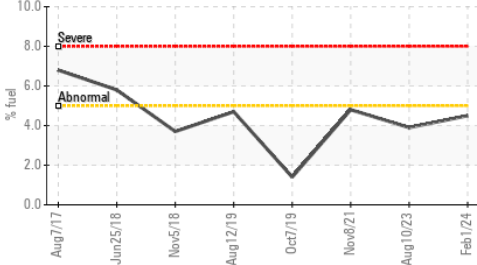
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		0	1	2
Boron	ppm	ASTM D5185m		1	3	8
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		60	54	51
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		905	886	849
Calcium	ppm	ASTM D5185m		1065	961	1110
Phosphorus	ppm	ASTM D5185m		976	947	989
Zinc	ppm	ASTM D5185m		1199	1151	1117
Sulfur	ppm	ASTM D5185m		2967	3328	2654
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.2	17.3	18.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.1	8.2	8.8
Visc @ 100°C	cSt	ASTM D445	15.6	▲ 11.3	▲ 10.5	▲ 11.6

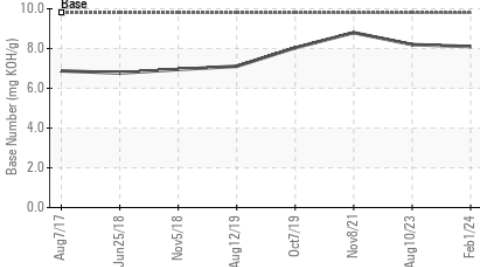
▲ Viscosity @ 100°C



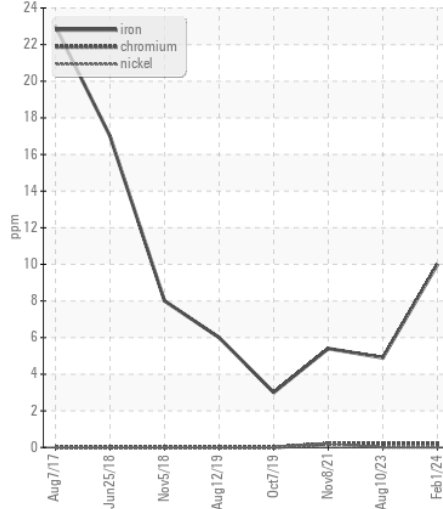
▲ Fuel Dilution



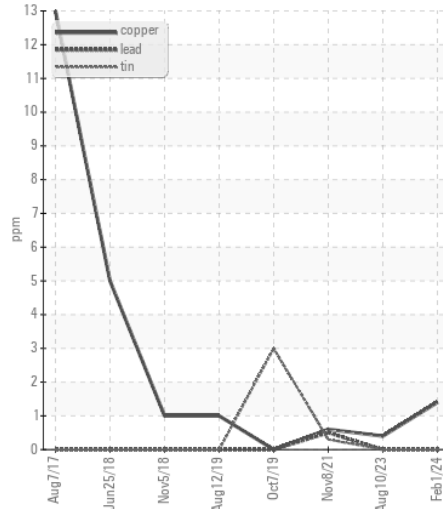
Base Number



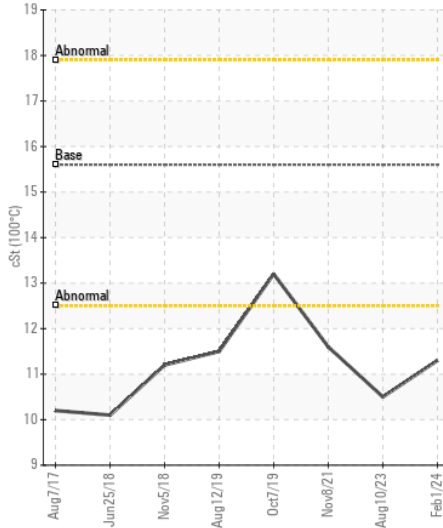
Ferrous Alloys



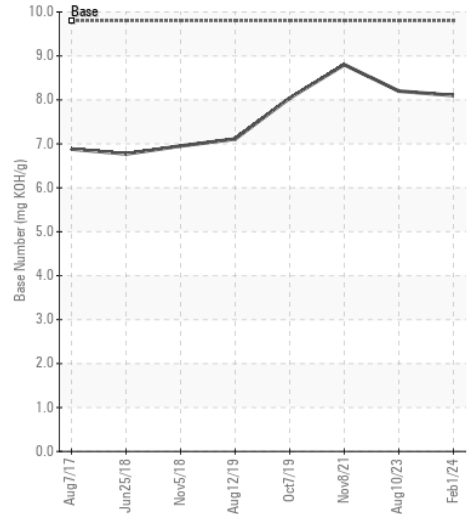
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LW0008508 **Received** : 13 Feb 2024
Lab Number : 06087033 **Tested** : 15 Feb 2024
Unique Number : 10874478 **Diagnosed** : 15 Feb 2024 - Doug Bogart
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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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)