



WEAR

NORMAL

CONTAMINATION

NORMAL

FLUID CONDITION

ATTENTION

OIL ANALYSIS REPORT



Area

K5 CONSTRUCTION CORPORATION - HODGKINS IL

Machine Id

1159

Component

Diesel Engine

Fluid

LEAHY WOLF PREMIUM 15W40 (15 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		LW0007154	LW0005058	LW0004800
Sample Date		Client Info		14 Jun 2023	15 Jun 2022	26 Apr 2022
Machine Age	hrs	Client Info		16470	16220	15951
Oil Age	hrs	Client Info		250	269	285
Filter Age	hrs	Client Info		250	269	285
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	15	12	24
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>25	2	<1	2
Lead	ppm	ASTM D5185m	>40	3	2	6
Copper	ppm	ASTM D5185m	>330	110	17	77
Tin	ppm	ASTM D5185m	>15	2	<1	<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

Sodium and/or potassium levels are high. Fuel content negligible. Test for glycol is negative.

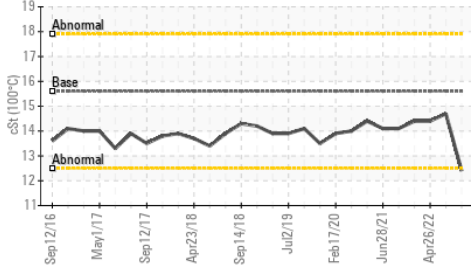
Silicon	ppm	ASTM D5185m	>25	11	3	5
Potassium	ppm	ASTM D5185m	>20	7	0	1
Fuel	%	ASTM D3524	>5	0.7	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.4	0.8
Nitration	Abs/cm	*ASTM D7624	>20	6.8	6.5	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.9	20.1	21.9
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

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

Sodium	ppm	ASTM D5185m		96	<1	1
Boron	ppm	ASTM D5185m		14	8	3
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		70	58	30
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		775	883	504
Calcium	ppm	ASTM D5185m		1571	1153	1833
Phosphorus	ppm	ASTM D5185m		1080	1036	1074
Zinc	ppm	ASTM D5185m		1297	1238	1321
Sulfur	ppm	ASTM D5185m		3926	3203	3069
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.0	15.6	18
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.6	9.0	7.2
Visc @ 100°C	cSt	ASTM D445	15.6	12.4	14.7	14.4

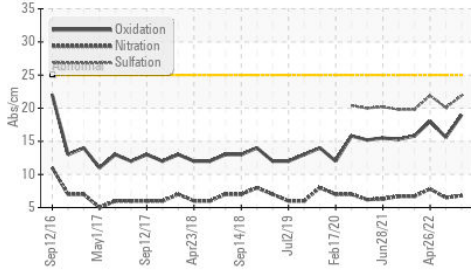
▲ Viscosity @ 100°C



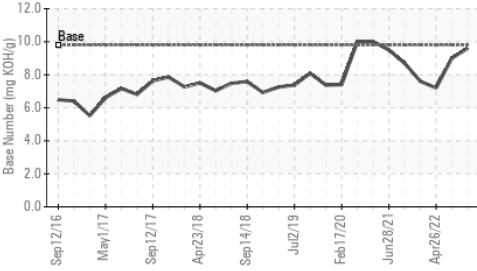
Fuel Dilution



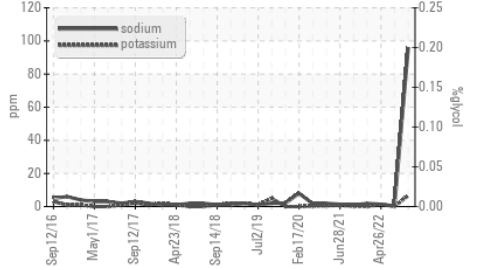
FT-IR (Direct Trend)



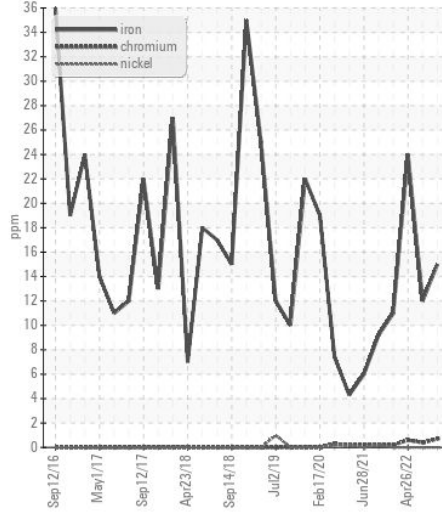
Base Number



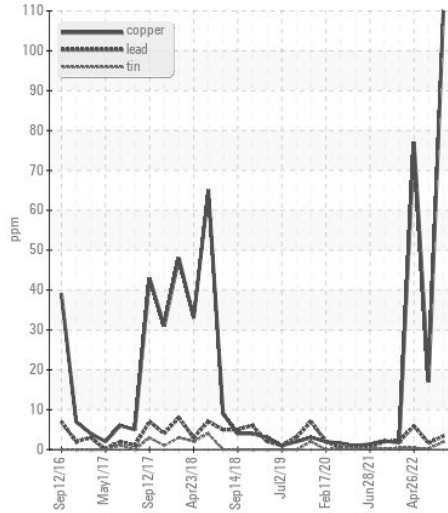
Glycol Contamination



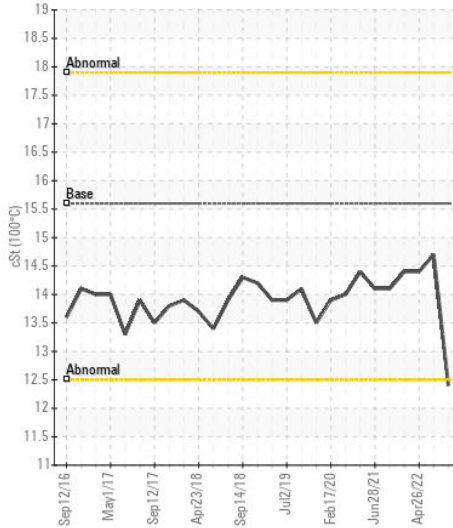
Ferrous Alloys



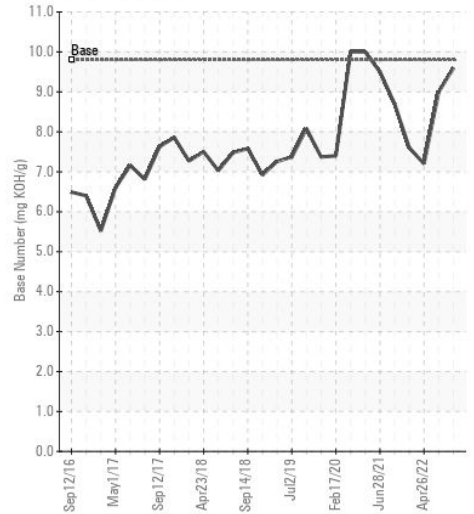
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LW0007154 **Received** : 19 Jun 2023
Lab Number : 05876571 **Tested** : 20 Jun 2023
Unique Number : 10521674 **Diagnosed** : 20 Jun 2023 - Jonathan Hester
Test Package : FLEET (Additional Tests: FuelDilution, Glycol, 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)