



LEAHY-WOLF
Lubricating specialists since 1946

OIL ANALYSIS REPORT

WEAR
CONTAMINATION
FLUID CONDITION

ATTENTION
NORMAL
NORMAL

Machine Id
INTERNATIONAL 5000
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LW0007863	LW0007872	LW0009033
Sample Date		Client Info		24 Jun 2024	05 Jun 2024	14 Mar 2024
Machine Age	mls	Client Info		0	0	0
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

An increase in the iron level is noted. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	87	12	46
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	4	3
Lead	ppm	ASTM D5185m	>40	11	<1	8
Copper	ppm	ASTM D5185m	>330	13	2	26
Tin	ppm	ASTM D5185m	>15	1	<1	1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

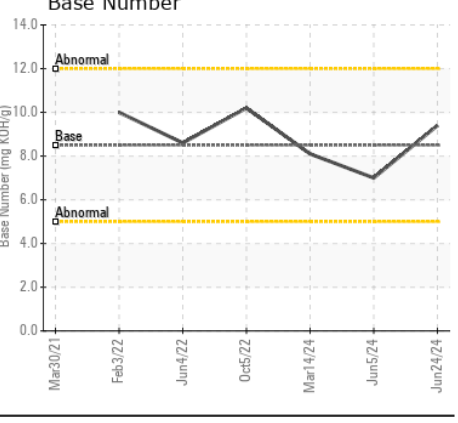
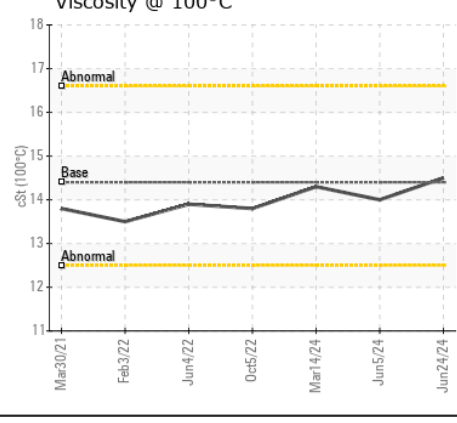
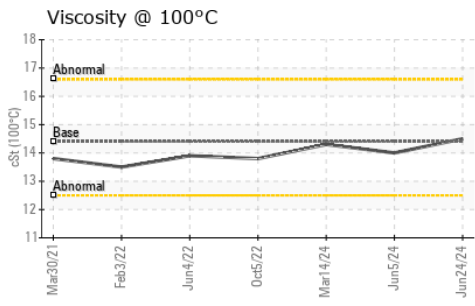
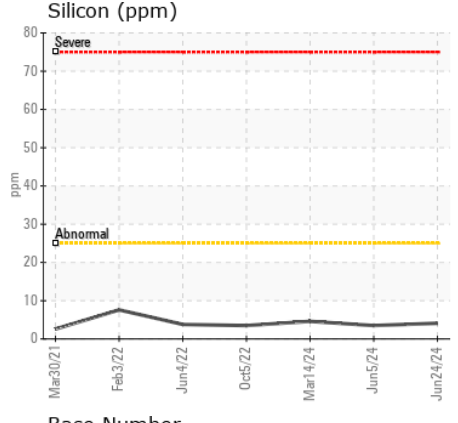
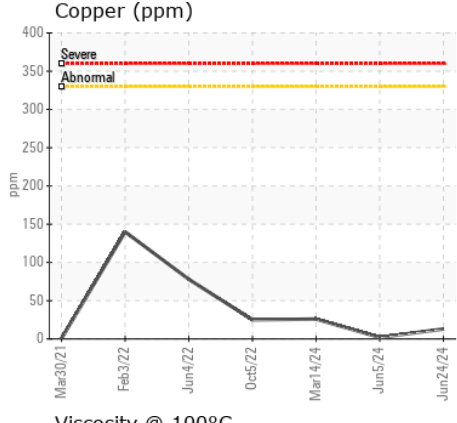
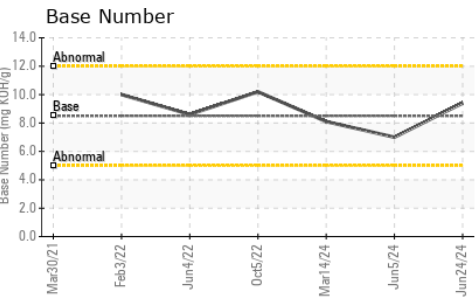
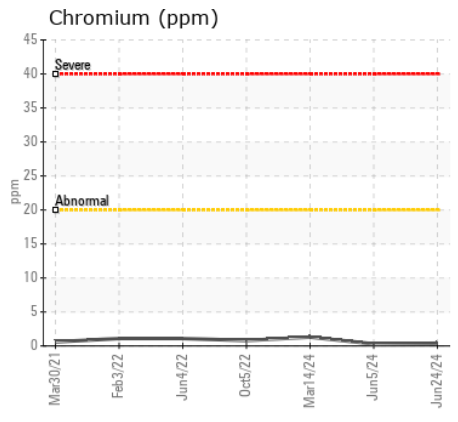
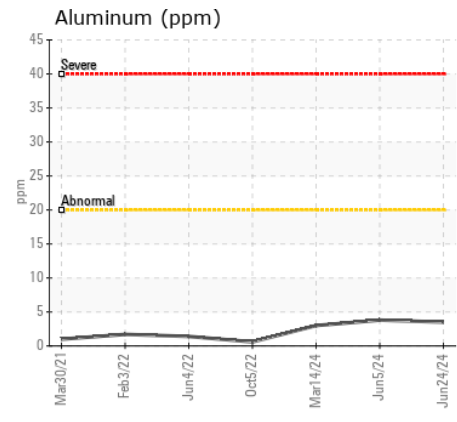
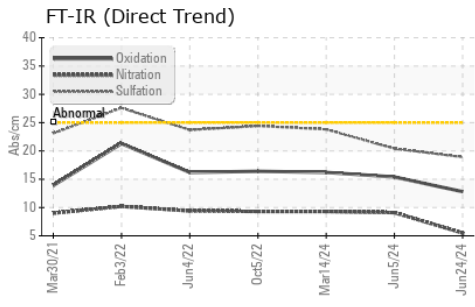
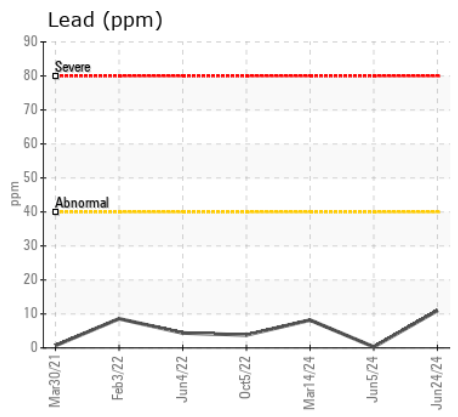
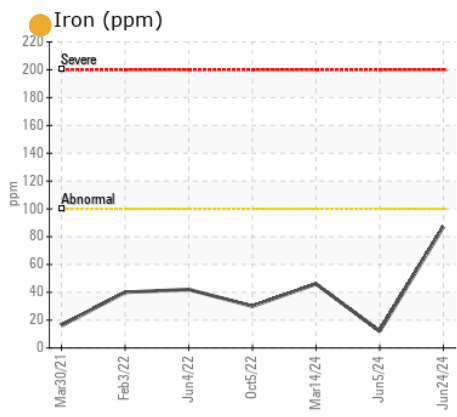
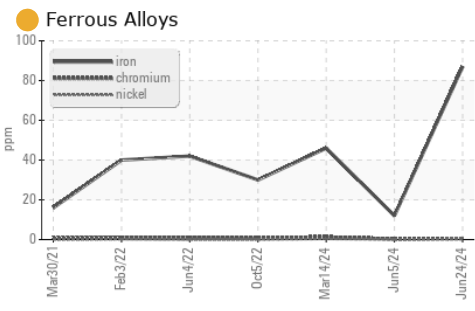
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	4	5
Potassium	ppm	ASTM D5185m	>20	2	2	2
Fuel		WC Method	>2.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.8	0.9	2.9
Nitration	Abs/cm	*ASTM D7624	>20	5.5	9.1	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.9	20.4	23.8
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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>216	6	4	3
Boron	ppm	ASTM D5185m	250	4	0	3
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	56	62	65
Manganese	ppm	ASTM D5185m		2	<1	<1
Magnesium	ppm	ASTM D5185m	450	970	1030	1034
Calcium	ppm	ASTM D5185m	3000	1078	1172	1226
Phosphorus	ppm	ASTM D5185m	1150	1072	1071	1241
Zinc	ppm	ASTM D5185m	1350	1301	1335	1371
Sulfur	ppm	ASTM D5185m	4250	3599	3423	3321
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.8	15.4	16.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.4	7.0	8.1
Visc @ 100°C	cSt	ASTM D445	14.4	14.5	14.0	14.3



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LW0007863
Lab Number : 06222012
Unique Number : 11100209
Test Package : MOB 1 (Additional Tests: TBN)
Received : 27 Jun 2024
Tested : 27 Jun 2024
Diagnosed : 28 Jun 2024 - Don Baldrige

LRs - NILES
 33541 REUM RD
 NILES, MI
 US 49120
 Contact: JOHN HUGHES
 johnh@michianarecyclinganddisposal.com
 T: (269)684-0900 X:124
 F:

Certificate L2367
 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)