



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ABNORMAL

Area
Store 9 - Marietta
Machine Id
233
Component
Diesel Engine
Fluid
LYDEN 15W40 (--- GAL)

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		LEC0051226	LEC0034547	LEC0044024
Sample Date		Client Info		04 Jun 2024	28 Feb 2024	29 Sep 2023
Machine Age	hrs	Client Info		2385	2184	1983
Oil Age	hrs	Client Info		201	201	198
Filter Age	hrs	Client Info		201	201	198
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	12	14	14
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		57	62	64
Silver	ppm	ASTM D5185m	>3	<1	<1	0
Aluminum	ppm	ASTM D5185m	>20	3	4	5
Lead	ppm	ASTM D5185m	>40	<1	<1	2
Copper	ppm	ASTM D5185m	>330	2	2	2
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

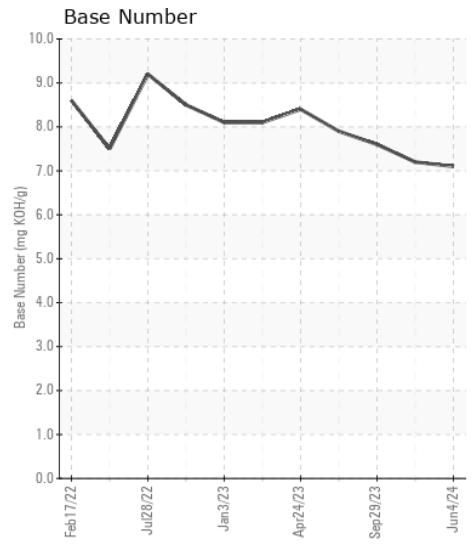
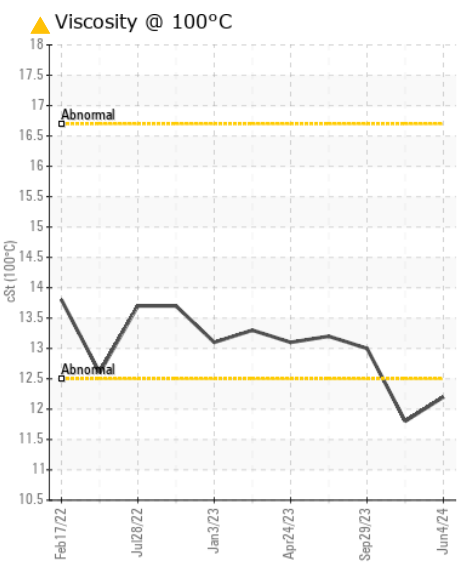
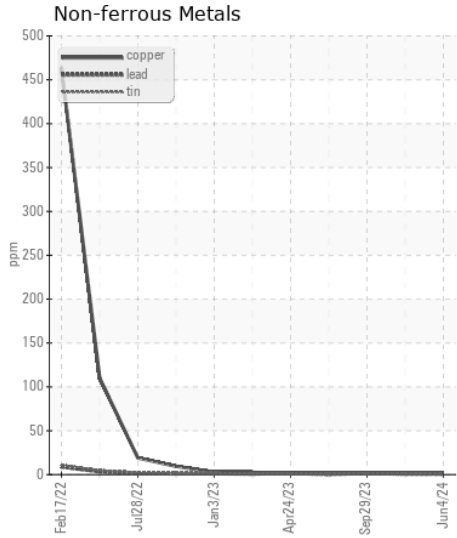
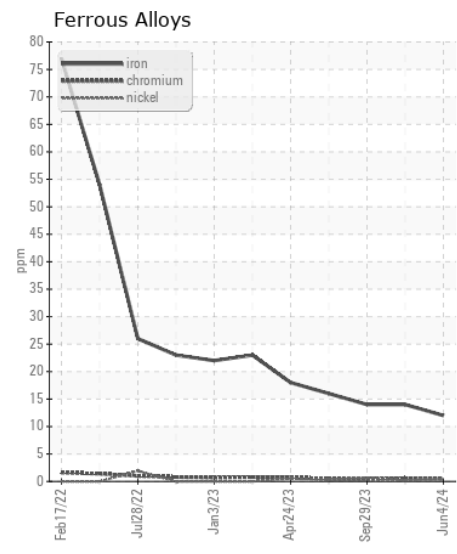
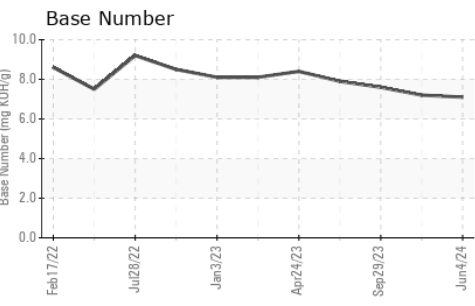
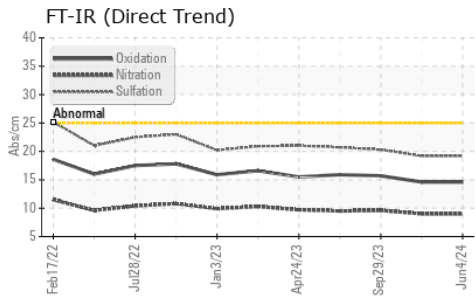
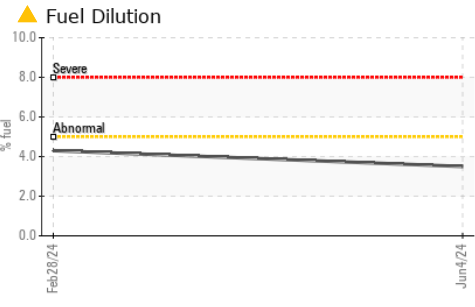
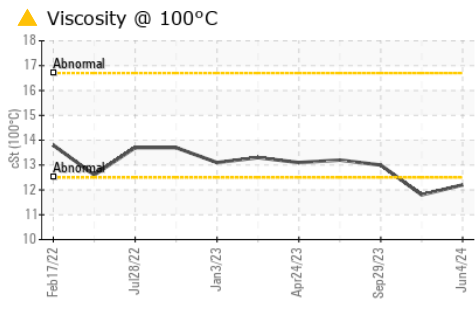
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>120	10	16	10
Potassium	ppm	ASTM D5185m	>20	5	6	6
Fuel	%	ASTM D3524	>5	▲ 3.5	▲ 4.3	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.5	0.6
Nitration	Abs/cm	*ASTM D7624	>20	9.0	9.0	9.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2	19.2	20.3
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		2	<1	2
Boron	ppm	ASTM D5185m		71	92	70
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		14	13	8
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		368	363	383
Calcium	ppm	ASTM D5185m		1492	1806	1651
Phosphorus	ppm	ASTM D5185m		847	1029	965
Zinc	ppm	ASTM D5185m		1040	1142	1155
Sulfur	ppm	ASTM D5185m		3272	3938	3506
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.6	14.6	15.7
Base Number (BN)	mg KOH/g	ASTM D2896		7.1	7.2	7.6
Visc @ 100°C	cSt	ASTM D445		▲ 12.2	▲ 11.8	13.0



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0051226 **Received** : 18 Jun 2024
Lab Number : 06213109 **Tested** : 20 Jun 2024
Unique Number : 11085973 **Diagnosed** : 20 Jun 2024 - Don Baldrige
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

LAROCHE TREE SERVICE
 7 COMMERCE PKWY
 BELLAIRE, OH
 US 43906
 Contact: GLEN VARGO
 glen.vargo@larochetree.com

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)