



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
Store 9 - Marietta
Machine Id
5067
Component
Gasoline Engine
Fluid
NAPA 10W30 (--- GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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		LEC0049499	LEC0041304	LEC0041202
Sample Date		Client Info		03 Apr 2024	12 Sep 2023	19 Jul 2023
Machine Age	hrs	Client Info		562	398	309
Oil Age	hrs	Client Info		164	89	128
Filter Age	hrs	Client Info		164	89	128
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	>150	17	8	22
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>5	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>40	2	0	6
Lead	ppm	ASTM D5185m	>50	12	4	6
Copper	ppm	ASTM D5185m	>155	2	2	6
Tin	ppm	ASTM D5185m	>10	2	<1	1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

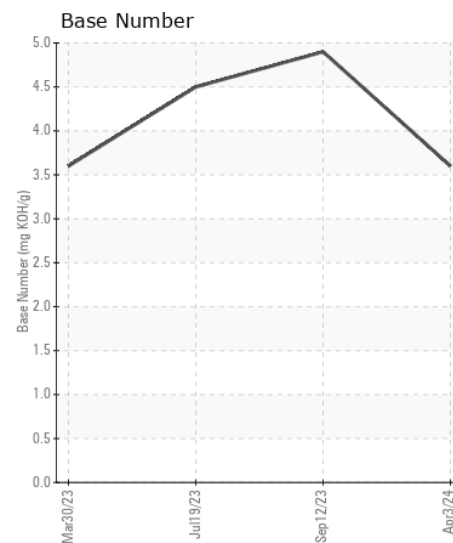
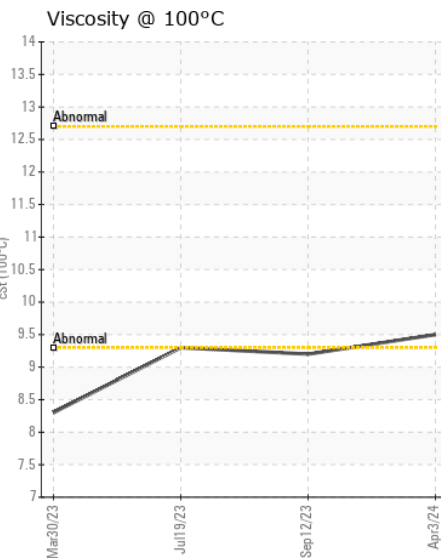
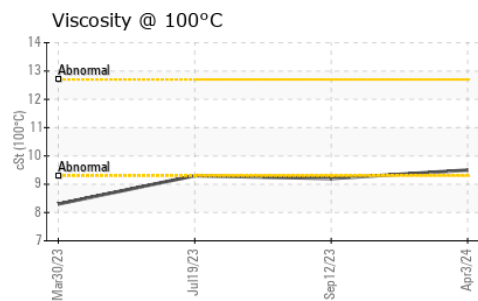
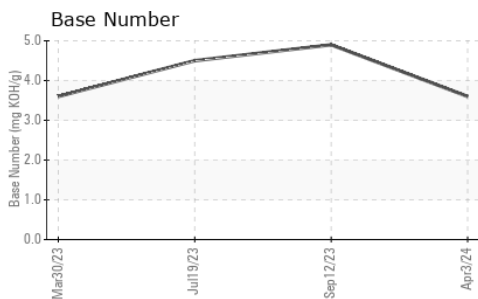
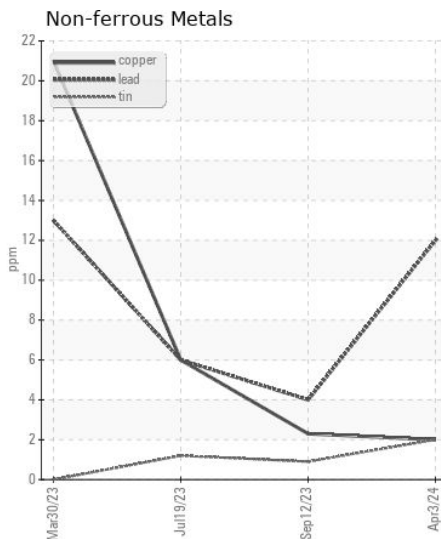
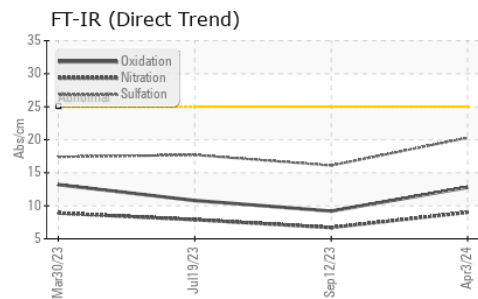
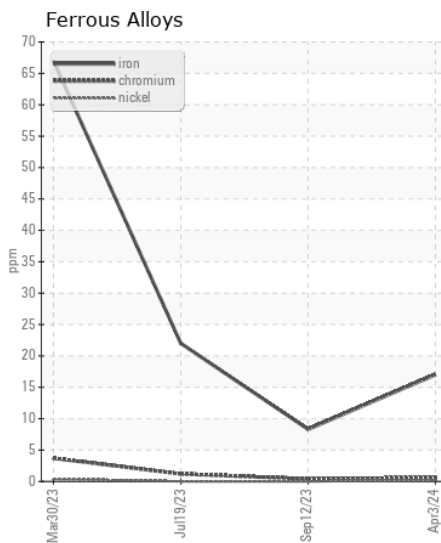
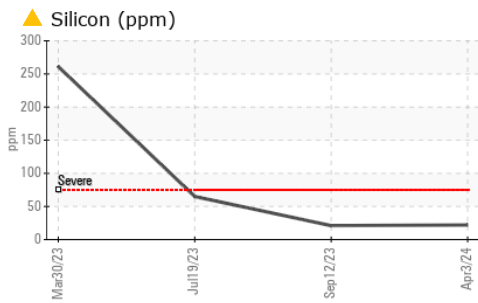
Elemental level of silicon (Si) above normal indicating ingress of dirt/seal material.

Silicon	ppm	ASTM D5185m	>120	▲ 22	▲ 21	▲ 65
Potassium	ppm	ASTM D5185m	>20	<1	0	<1
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0	0
Nitration	Abs/cm	*ASTM D7624	>20	9.0	6.7	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.3	16.1	17.7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	LIGHT
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>400	4	2	6
Boron	ppm	ASTM D5185m		55	101	102
Barium	ppm	ASTM D5185m		0	0	<1
Molybdenum	ppm	ASTM D5185m		65	75	95
Manganese	ppm	ASTM D5185m		<1	<1	2
Magnesium	ppm	ASTM D5185m		476	513	534
Calcium	ppm	ASTM D5185m		946	946	1005
Phosphorus	ppm	ASTM D5185m		560	592	618
Zinc	ppm	ASTM D5185m		645	709	725
Sulfur	ppm	ASTM D5185m		2738	2519	2732
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.8	9.2	10.8
Base Number (BN)	mg KOH/g	ASTM D2896		3.6	4.9	4.5
Visc @ 100°C	cSt	ASTM D445		9.5	9.2	9.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0049499 **Received** : 16 Apr 2024
Lab Number : 06150157 **Tested** : 17 Apr 2024
Unique Number : 10980235 **Diagnosed** : 18 Apr 2024 - Don Baldrige
Test Package : CONST (Additional Tests: 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)

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F: