



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
Store 9 - Marietta
Machine Id
34-018
Component
Diesel Engine
Fluid
{not provided} (--- GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0032052	---	---
Sample Date		Client Info		23 Jan 2024	---	---
Machine Age	hrs	Client Info		500	---	---
Oil Age	hrs	Client Info		500	---	---
Filter Age	hrs	Client Info		500	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	28	---	---
Chromium	ppm	ASTM D5185m	>20	<1	---	---
Nickel	ppm	ASTM D5185m	>4	0	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>20	5	---	---
Lead	ppm	ASTM D5185m	>40	<1	---	---
Copper	ppm	ASTM D5185m	>330	99	---	---
Tin	ppm	ASTM D5185m	>15	0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

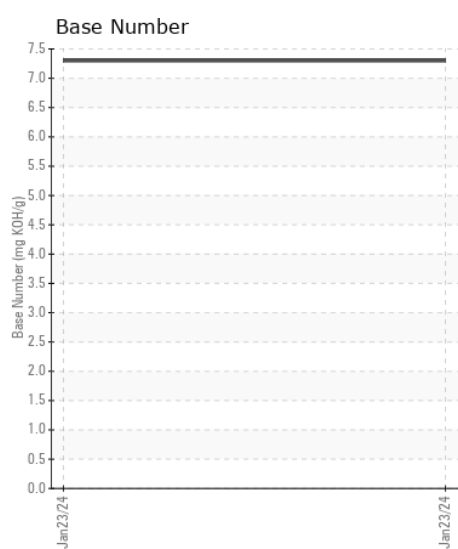
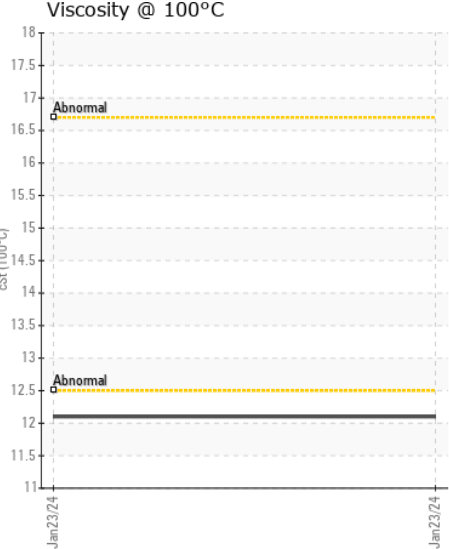
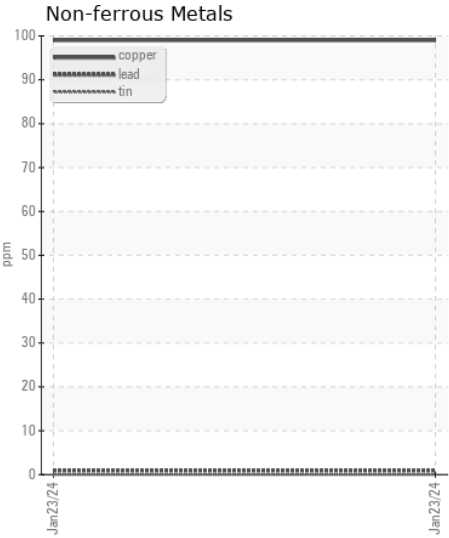
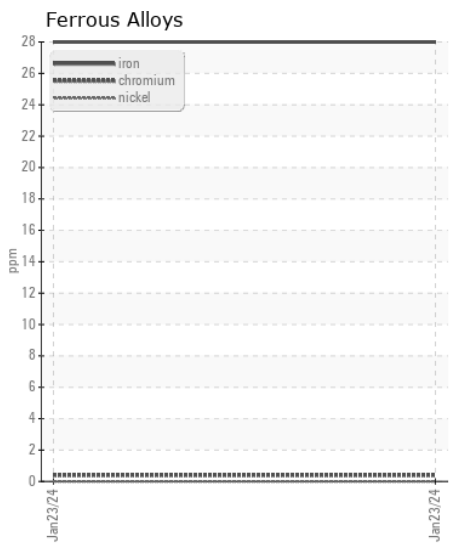
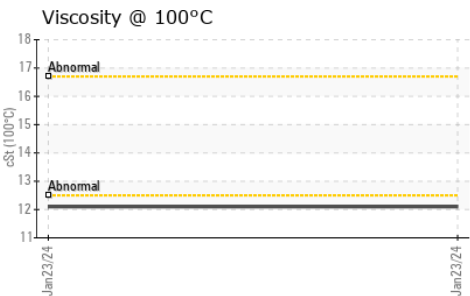
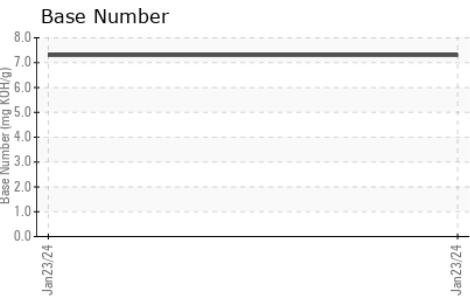
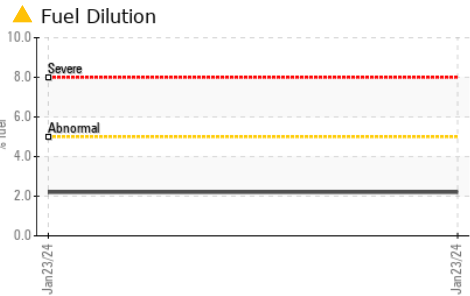
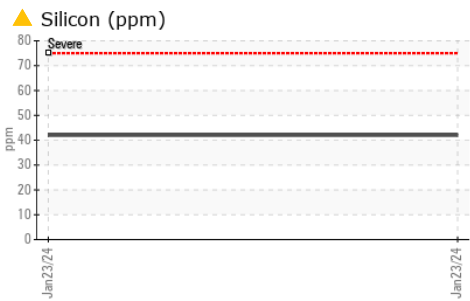
Elemental level of silicon (Si) above normal indicating ingress of dirt/seal material. Light fuel dilution occurring.

Silicon	ppm	ASTM D5185m	>120	▲ 42	---	---
Potassium	ppm	ASTM D5185m	>20	<1	---	---
Fuel	%	ASTM D3524	>5	▲ 2.2	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.4	---	---
Nitration	Abs/cm	*ASTM D7624	>20	9.6	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.7	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	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		7	---	---
Boron	ppm	ASTM D5185m		212	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		206	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		638	---	---
Calcium	ppm	ASTM D5185m		1754	---	---
Phosphorus	ppm	ASTM D5185m		819	---	---
Zinc	ppm	ASTM D5185m		1028	---	---
Sulfur	ppm	ASTM D5185m		3015	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.5	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		7.3	---	---
Visc @ 100°C	cSt	ASTM D445		12.1	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0032052 **Received** : 30 Jan 2024
Lab Number : 06073567 **Tested** : 31 Jan 2024
Unique Number : 10850244 **Diagnosed** : 31 Jan 2024 - Don Baldrige
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

HAYDEN EXCAVATING
 PO BOX 766
 WAYNESBURG, PA
 US 15370
 Contact: ROBBIE
 rts2577@yahoo.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)