



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**STERLING 87**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>RW0005290</b>	RW0004993	RW0004722
Sample Date		Client Info		<b>11 May 2024</b>	11 Dec 2023	04 Nov 2023
Machine Age	hrs	Client Info		<b>22817</b>	22478	22340
Oil Age	hrs	Client Info		<b>339</b>	138	313
Filter Age	hrs	Client Info		<b>339</b>	138	313
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>14</b>	7	21
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>1</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	2	1
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>2</b>	1	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

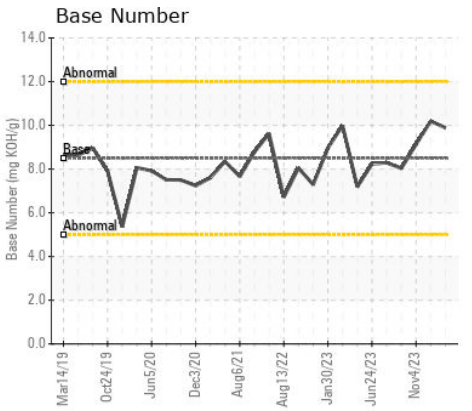
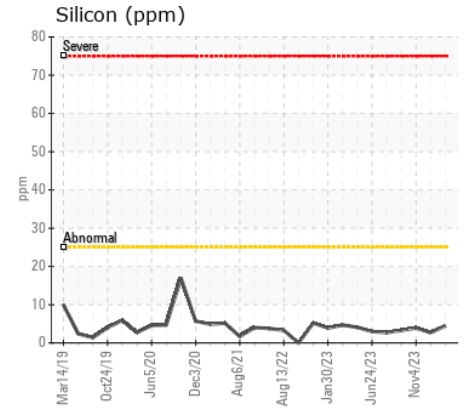
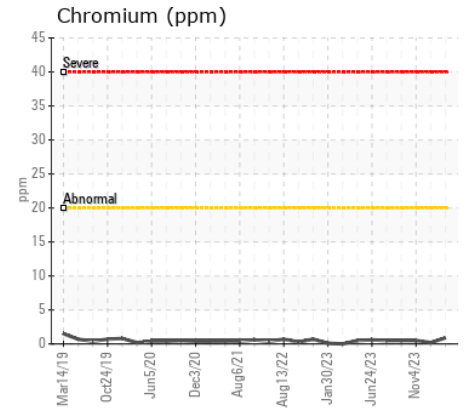
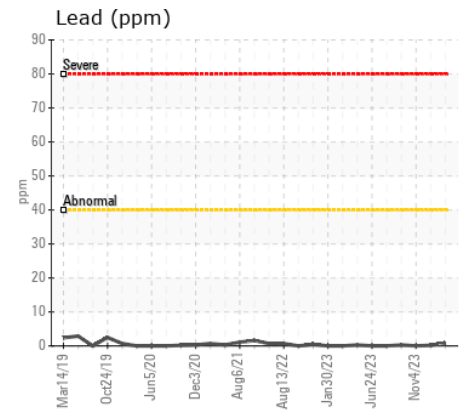
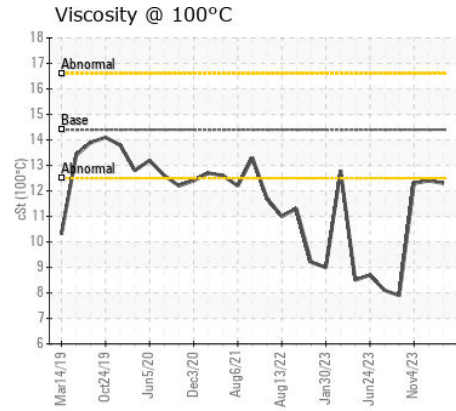
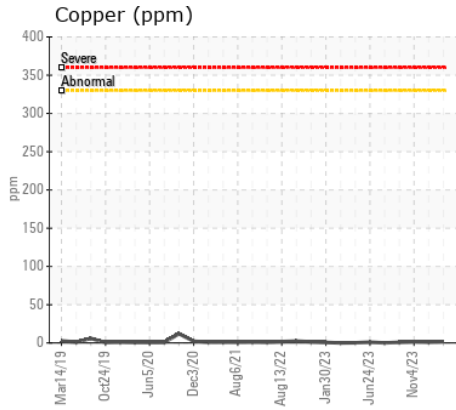
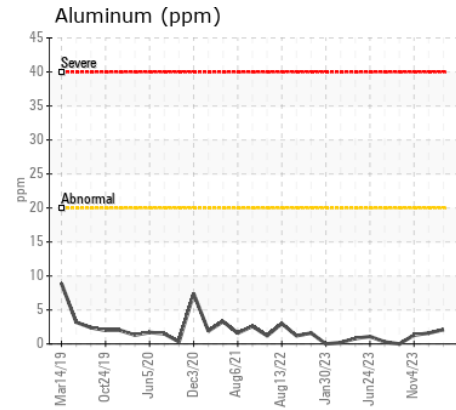
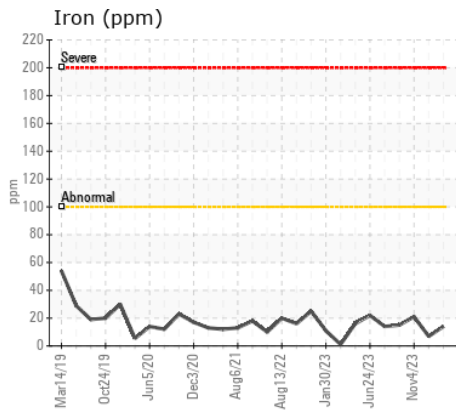
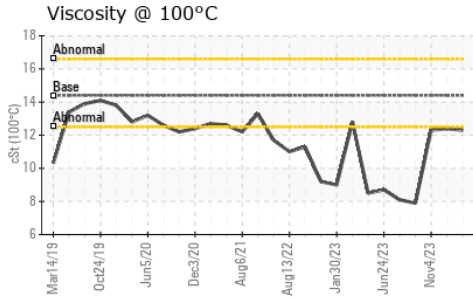
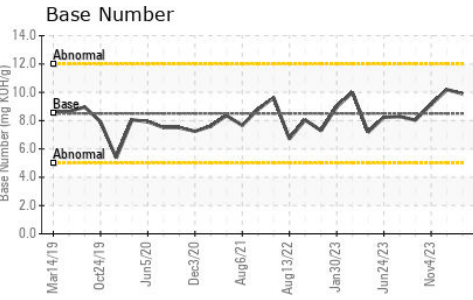
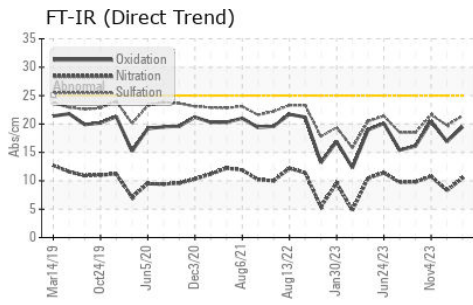
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	3	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	3
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	1.9
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.2	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.5</b>	8.3	10.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.4</b>	19.8	21.6
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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	>158	<b>1</b>	2	0
Boron	ppm	ASTM D5185m	250	<b>15</b>	8	5
Barium	ppm	ASTM D5185m	10	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>61</b>	62	69
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	450	<b>835</b>	951	951
Calcium	ppm	ASTM D5185m	3000	<b>1150</b>	1098	1181
Phosphorus	ppm	ASTM D5185m	1150	<b>915</b>	1073	1133
Zinc	ppm	ASTM D5185m	1350	<b>1115</b>	1290	1278
Sulfur	ppm	ASTM D5185m	4250	<b>3001</b>	3159	3000
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.5</b>	16.9	20.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>9.89</b>	10.19	9.13
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.3</b>	12.4	12.3



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RW0005290  
**Lab Number** : 06193010  
**Unique Number** : 11049762  
**Test Package** : MOB 2

**Received** : 28 May 2024  
**Tested** : 30 May 2024  
**Diagnosed** : 30 May 2024 - Wes Davis

**HALLACK CONTRACTING, INC.**  
 4223 W POLK  
 HART, MI  
 US 49420

Contact: DAN HALLACK KARL BUTCHER  
 shop@hallackcontracting.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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