



# OIL ANALYSIS REPORT

WEAR	<b>ABNORMAL</b>
CONTAMINATION	<b>SEVERE</b>
FLUID CONDITION	<b>ABNORMAL</b>

Machine Id  
**FCH 19**  
 Component  
**Diesel Engine**  
 Fluid  
**MOBIL DELVAC 1300 SUPER 10W30 (--- GAL)**

## RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TLY0002234</b>	TLY0001337	TLY0001226
Sample Date		Client Info		<b>12 Apr 2024</b>	03 Feb 2023	13 Oct 2022
Machine Age	mls	Client Info		<b>446938</b>	409113	398297
Oil Age	mls	Client Info		<b>409113</b>	10816	16061
Filter Age	mls	Client Info		<b>409113</b>	10816	16061
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>SEVERE</b>	NORMAL	NORMAL

## WEAR

The aluminum level is abnormal.

Iron	ppm	ASTM D5185m	>100	<b>35</b>	6	7
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>3</b>	<1	4
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>▲ 29</b>	1	2
Lead	ppm	ASTM D5185m	>40	<b>6</b>	1	4
Copper	ppm	ASTM D5185m	>330	<b>9</b>	<1	1
Tin	ppm	ASTM D5185m	>15	<b>1</b>	<1	1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

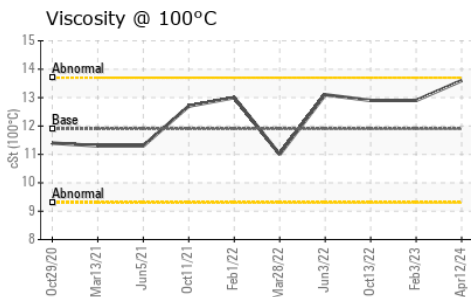
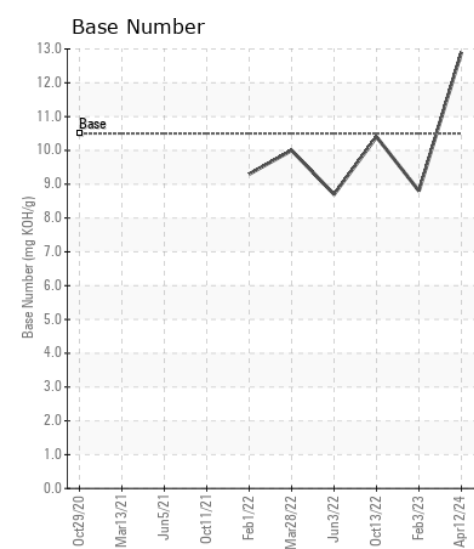
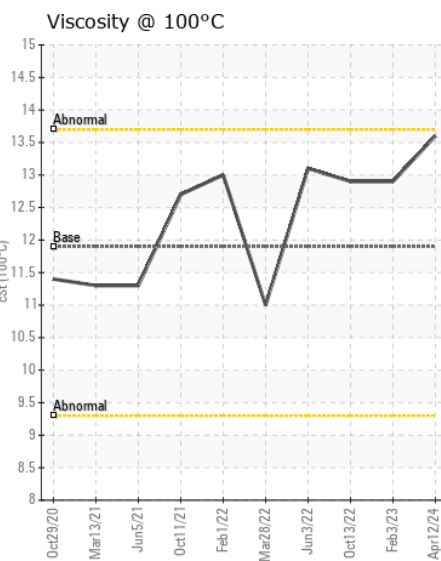
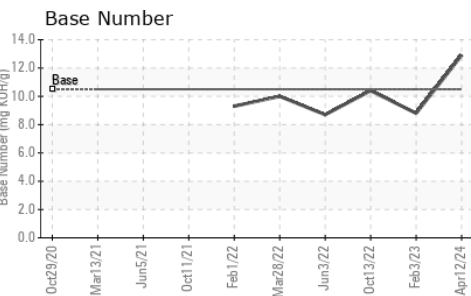
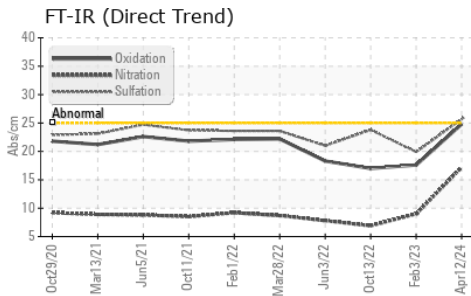
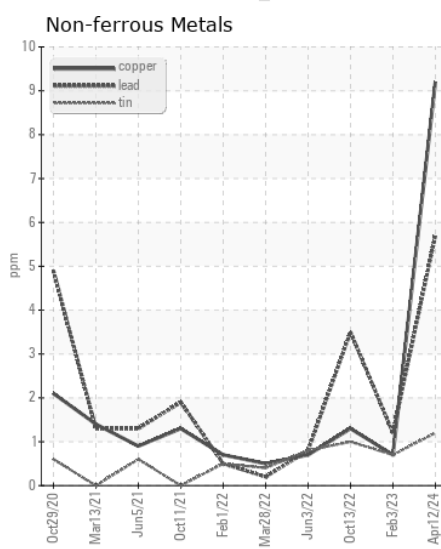
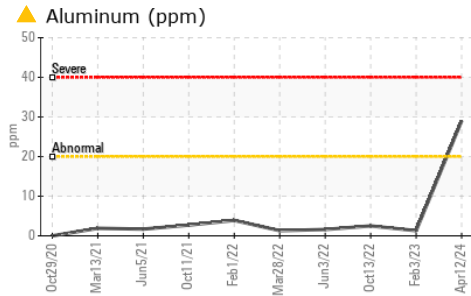
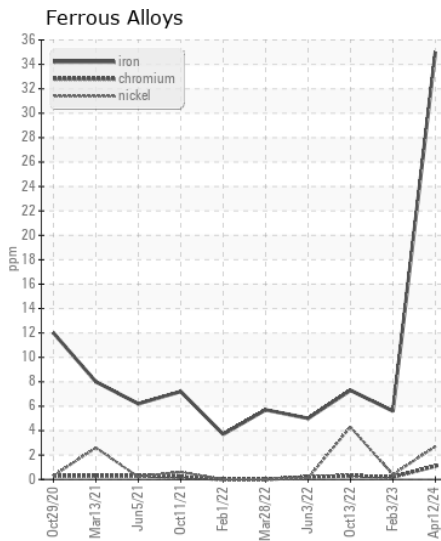
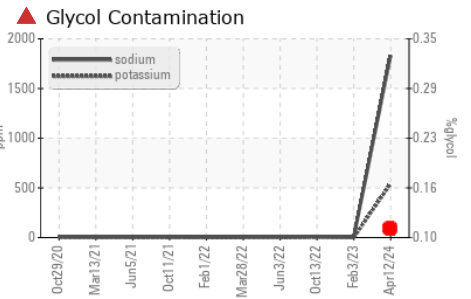
Sodium and/or potassium levels are high. Test for glycol is positive. There is a high concentration of glycol present in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>15</b>	3	3
Potassium	ppm	ASTM D5185m	>20	<b>▲ 543</b>	2	6
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>▲ 0.12</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1</b>	0.4	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>17.2</b>	9.0	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.7</b>	19.9	23.8
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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		<b>▲ 1832</b>	4	7
Boron	ppm	ASTM D5185m		<b>11</b>	20	19
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>224</b>	53	46
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>456</b>	704	634
Calcium	ppm	ASTM D5185m		<b>1560</b>	1384	1419
Phosphorus	ppm	ASTM D5185m		<b>720</b>	832	799
Zinc	ppm	ASTM D5185m		<b>920</b>	1062	1008
Sulfur	ppm	ASTM D5185m		<b>2764</b>	3215	3157
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>24.8</b>	17.6	17.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	<b>12.9</b>	8.8	10.4
Visc @ 100°C	cSt	ASTM D445	11.9	<b>13.6</b>	12.9	12.9



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TLY0002234 **Received** : 19 Apr 2024  
**Lab Number** : 06154006 **Tested** : 23 Apr 2024  
**Unique Number** : 10989429 **Diagnosed** : 23 Apr 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: Glycol, TBN )

**GAINES & COMPANY**  
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 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)