



# OIL ANALYSIS REPORT

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

Area  
**MILLERS TEXTILE - WAPAK**  
Machine Id  
**WORKHORSE MTS14**  
Component  
**Diesel Engine**  
Fluid  
**NOT GIVEN (--- GAL)**

## RECOMMENDATION

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		<b>NL0002110</b>	NL0000903	---
Sample Date		Client Info		<b>27 Jun 2024</b>	25 May 2022	---
Machine Age	mls	Client Info		<b>166262</b>	145293	---
Oil Age	mls	Client Info		<b>166262</b>	145293	---
Filter Age	mls	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>N/A</b>	N/A	---
Filter Changed		Client Info		<b>N/A</b>	N/A	---
Sample Status				<b>ABNORMAL</b>	ABNORMAL	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>33</b>	52	---
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	2	---
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	---
Titanium	ppm	ASTM D5185m		<b>0</b>	0	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	---
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	11	---
Lead	ppm	ASTM D5185m	>40	<b>9</b>	<1	---
Copper	ppm	ASTM D5185m	>330	<b>11</b>	10	---
Tin	ppm	ASTM D5185m	>15	<b>1</b>	1	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

## CONTAMINATION

Light fuel dilution occurring.

Silicon	ppm	ASTM D5185m	>25	<b>20</b>	18	---
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	---
Fuel	%	ASTM D3524	>5	<b>▲ 2.5</b>	<b>▲ 3.6</b>	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>12.2</b>	13.7	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.6</b>	28.7	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	---

## FLUID CONDITION

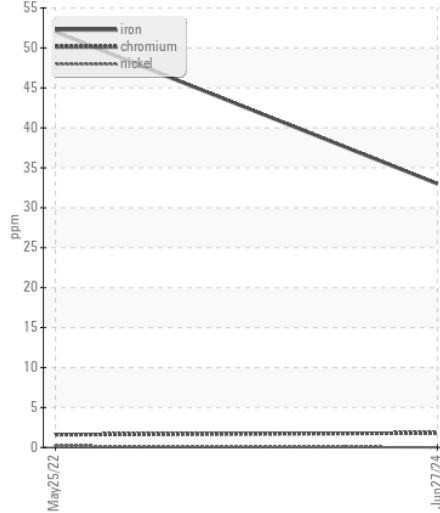
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>11</b>	5	---
Boron	ppm	ASTM D5185m		<b>45</b>	46	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>67</b>	69	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m		<b>508</b>	471	---
Calcium	ppm	ASTM D5185m		<b>1285</b>	1185	---
Phosphorus	ppm	ASTM D5185m		<b>● 676</b>	623	---
Zinc	ppm	ASTM D5185m		<b>● 795</b>	736	---
Sulfur	ppm	ASTM D5185m		<b>3135</b>	2647	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.8</b>	22.2	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>5.2</b>	4.7	---
Visc @ 100°C	cSt	ASTM D445		<b>▲ 9.7</b>	<b>▲ 10.5</b>	---

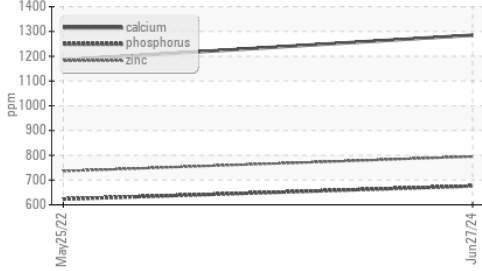
▲ Viscosity @ 100°C



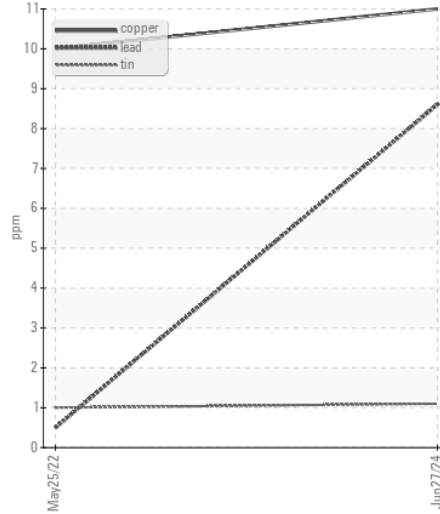
Ferrous Alloys



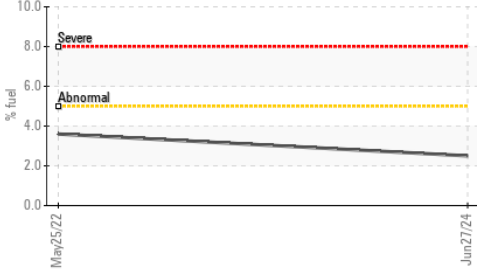
● Additives



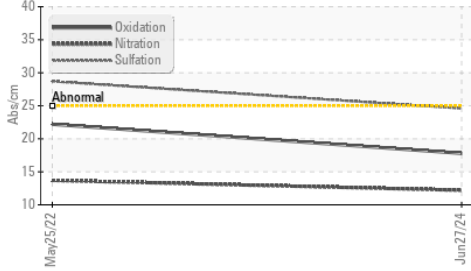
Non-ferrous Metals



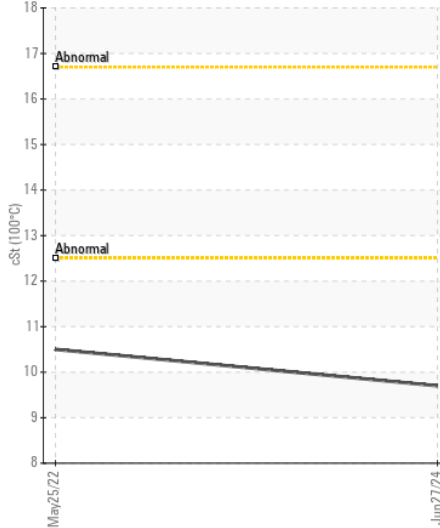
▲ Fuel Dilution



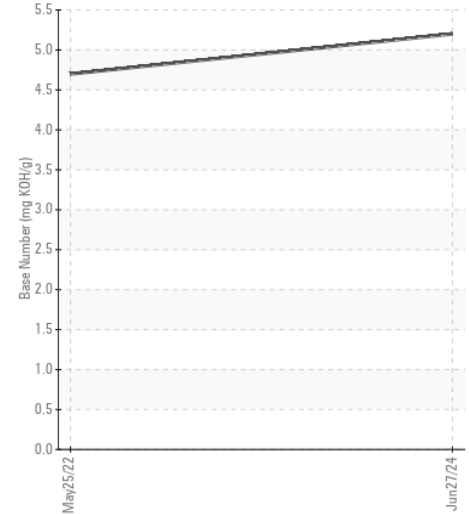
FT-IR (Direct Trend)



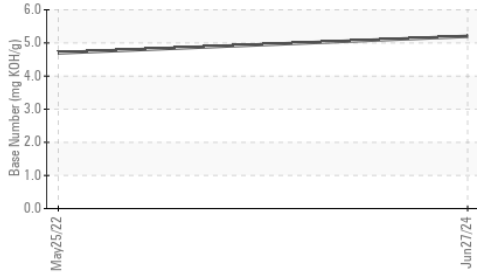
▲ Viscosity @ 100°C



Base Number



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : NL0002110 Received : 05 Jul 2024  
 Lab Number : 06229428 Tested : 10 Jul 2024  
 Unique Number : 11112921 Diagnosed : 10 Jul 2024 - Wes Davis  
 Test Package : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**KIRK NATIONALEASE - SHOP 54**  
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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)