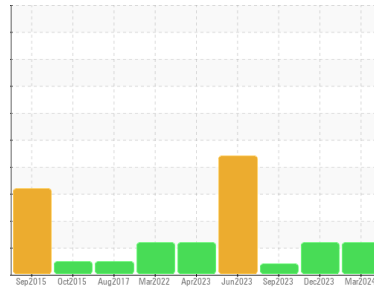




# OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id  
**INTERNATIONAL 53**  
 Component  
**Front Diesel Engine**  
 Fluid  
**SERVICE PRO 15W40 SYN BLEND (8 GAL)**

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Light fuel dilution occurring.

### Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>RW0004771</b>	RW0004769	RW0004531
Sample Date	Client Info		<b>27 Mar 2024</b>	28 Dec 2023	07 Sep 2023
Machine Age	mls	Client Info	<b>321429</b>	311048	301596
Oil Age	mls	Client Info	<b>10373</b>	9452	9389
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>ATTENTION</b>	ABNORMAL	ATTENTION

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >150	<b>34</b>	34	53
Chromium	ppm	ASTM D5185m >15	<b>&lt;1</b>	2	5
Nickel	ppm	ASTM D5185m >4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	2
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >15	<b>3</b>	2	8
Lead	ppm	ASTM D5185m >70	<b>2</b>	1	2
Copper	ppm	ASTM D5185m >175	<b>6</b>	32	75
Tin	ppm	ASTM D5185m >5	<b>1</b>	1	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>6</b>	4	7
Barium	ppm	ASTM D5185m	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m	<b>63</b>	59	66
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>935</b>	868	956
Calcium	ppm	ASTM D5185m	<b>1122</b>	1114	1243
Phosphorus	ppm	ASTM D5185m	<b>1073</b>	1006	1039
Zinc	ppm	ASTM D5185m	<b>1245</b>	1149	1254
Sulfur	ppm	ASTM D5185m	<b>3386</b>	2822	3501

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	6	14
Sodium	ppm	ASTM D5185m	<b>6</b>	6	8
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	<1
Fuel	%	ASTM D3524 >3.0	<b>▲ 2.7</b>	▲ 2.4	1.5

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.9</b>	0.8	0.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.2</b>	8.2	9.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.7</b>	19.5	23.4

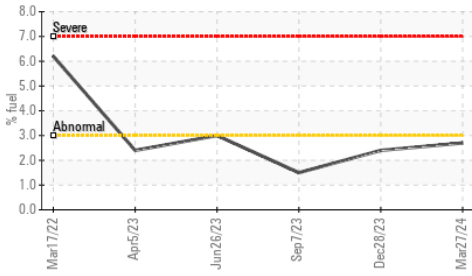
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.4</b>	14.8	15.8
Base Number (BN)	mg KOH/g	ASTM D2896	<b>8.88</b>	9.41	9.02

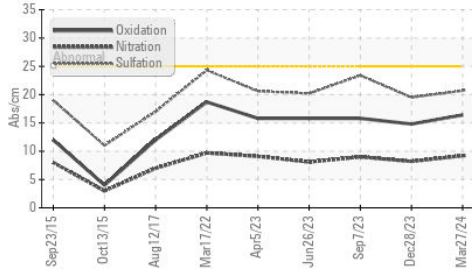


# OIL ANALYSIS REPORT

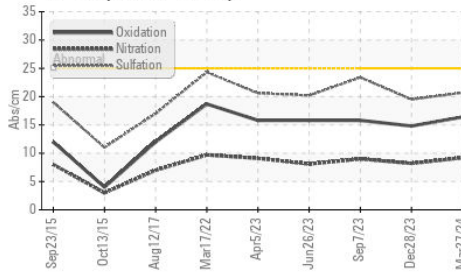
## Fuel Dilution



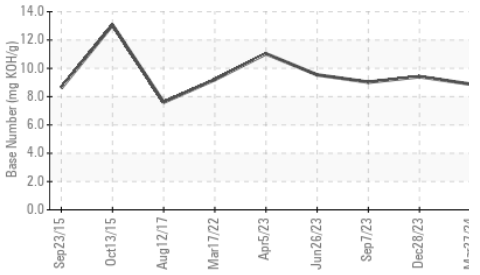
## FT-IR (Direct Trend)



## FT-IR (Direct Trend)



## Base Number

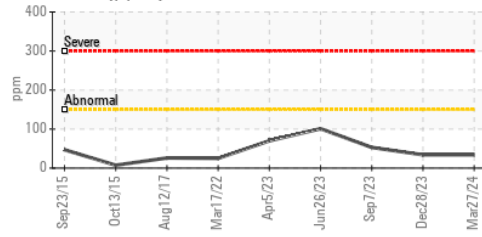


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

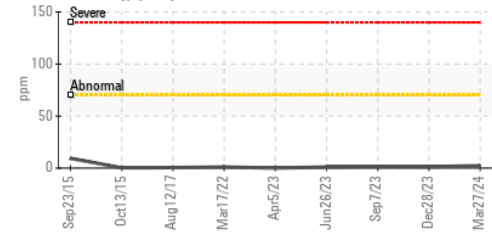
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	● 11.7	▲ 11.5	● 11.7

## GRAPHS

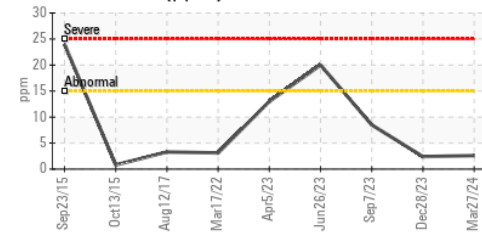
### Iron (ppm)



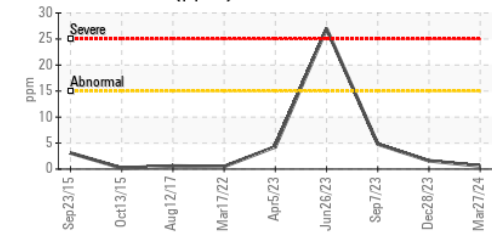
### Lead (ppm)



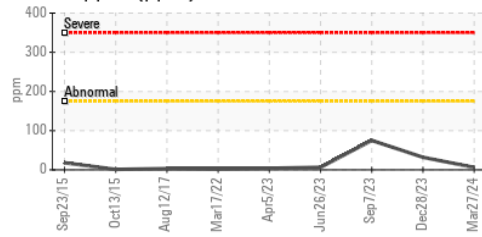
### Aluminum (ppm)



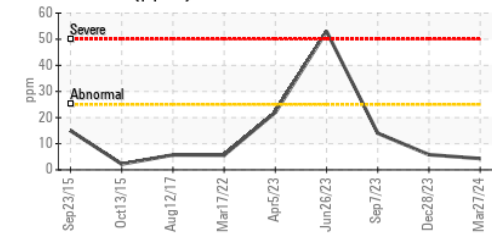
### Chromium (ppm)



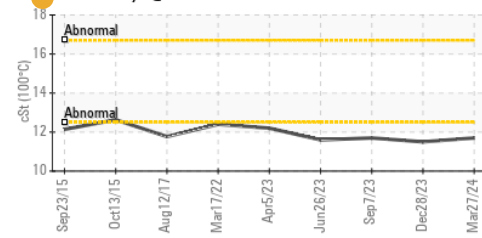
### Copper (ppm)



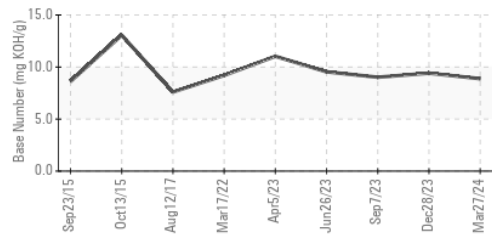
### Silicon (ppm)



### Viscosity @ 100°C



### Base Number



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RW0004771 **Received** : 22 Apr 2024  
**Lab Number** : 06157105 **Tested** : 25 Apr 2024  
**Unique Number** : 10992528 **Diagnosed** : 25 Apr 2024 - Jonathan Hester  
**Test Package** : MOB 2 ( Additional Tests: PercentFuel )

**MICHIGAN WOOD CARRIERS**  
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 US 49795  
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 sbeyer@ntimberlands.com  
 T: (989)983-2485  
 F: (989)983-9678

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)