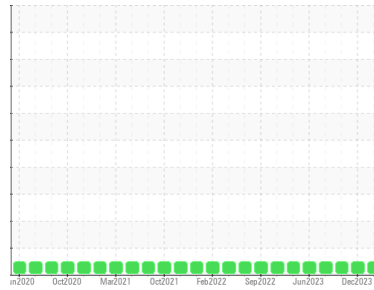




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
INTERNATIONAL 330
 Component
Diesel Engine
 Fluid
SERVICE PRO 15W40 SYN BLEND (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			RW0005403	RW0004768	RW0004527
Sample Date	Client Info			17 Apr 2024	26 Dec 2023	17 Oct 2023
Machine Age	mls	Client Info		376783	363159	350121
Oil Age	mls	Client Info		13624	13038	14962
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>3.0		<1.0	<1.0	<1.0
Water	WC Method	>0.2		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>165	23	18	17
Chromium	ppm	ASTM D5185m	>5	<1	1	1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	5	6
Lead	ppm	ASTM D5185m	>150	3	5	11
Copper	ppm	ASTM D5185m	>90	0	1	2
Tin	ppm	ASTM D5185m	>5	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		10	22	10
Barium	ppm	ASTM D5185m		0	0	10
Molybdenum	ppm	ASTM D5185m		63	55	70
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		938	869	948
Calcium	ppm	ASTM D5185m		1223	1300	1305
Phosphorus	ppm	ASTM D5185m		1124	1105	1190
Zinc	ppm	ASTM D5185m		1301	1343	1363
Sulfur	ppm	ASTM D5185m		3490	3118	3887

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>35	4	3	4
Sodium	ppm	ASTM D5185m		3	3	1
Potassium	ppm	ASTM D5185m	>20	3	6	13

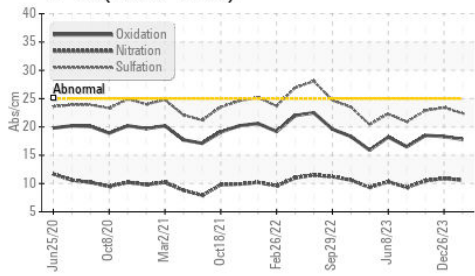
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>7.5	0.9	1.2	0.9
Nitration	Abs/cm	*ASTM D7624	>20	10.6	10.9	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.4	23.4	22.9

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.8	18.3	18.5
Base Number (BN)	mg KOH/g	ASTM D2896		8.44	8.56	13.28

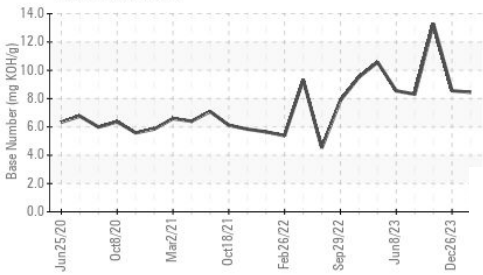


OIL ANALYSIS REPORT

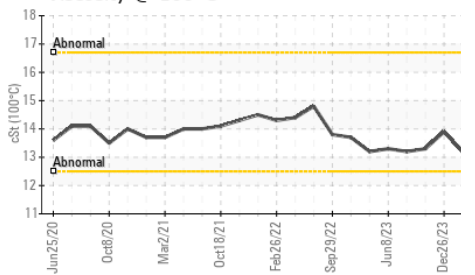
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

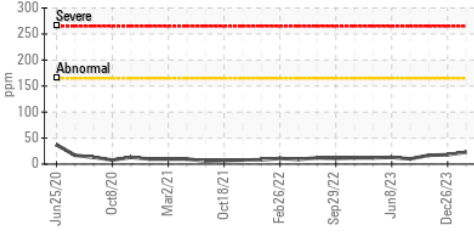


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

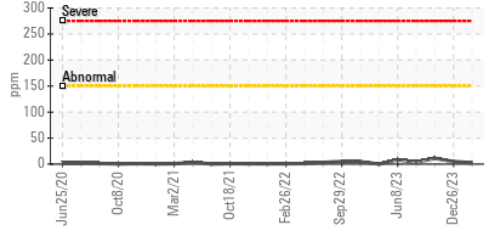
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.2	13.9	13.3

GRAPHS

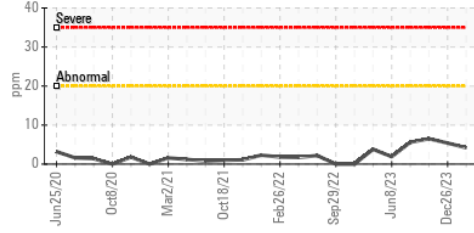
Iron (ppm)



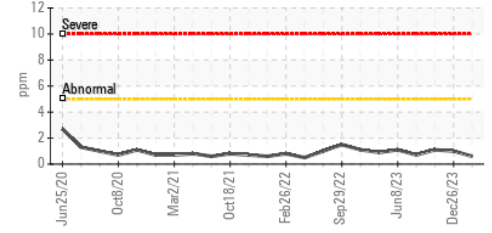
Lead (ppm)



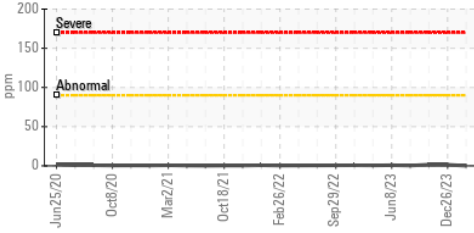
Aluminum (ppm)



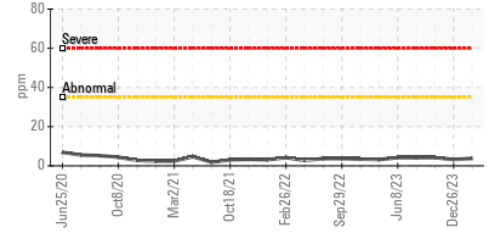
Chromium (ppm)



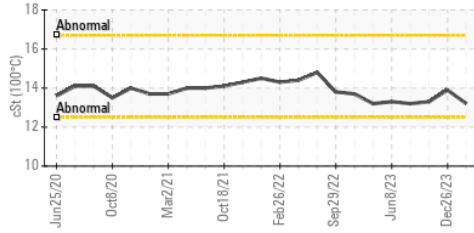
Copper (ppm)



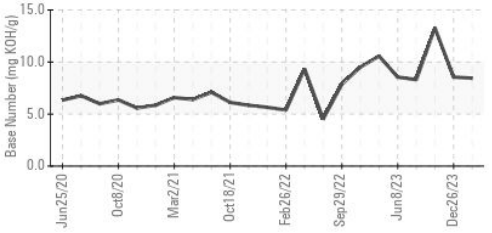
Silicon (ppm)



Viscosity @ 100°C



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RW0005403 **Received** : 22 Apr 2024
Lab Number : 06157104 **Tested** : 23 Apr 2024
Unique Number : 10992527 **Diagnosed** : 23 Apr 2024 - Wes Davis
Test Package : MOB 2

MICHIGAN WOOD CARRIERS
 P.O. BOX 337
 VANDERBILT, MI
 US 49795
 Contact: STEVE WOLFE
 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)