



# OIL ANALYSIS REPORT

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

Area

**52000 series**

Machine Id

**Navistar 52819**

Component

**Diesel Engine**

Fluid

**SHELL ROTELLA T5 10W30 (CJ4) (40 LTR)**

## RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0934986</b>	WC0892070	WC0863965
Sample Date		Client Info		<b>28 Jun 2024</b>	24 Feb 2024	13 Nov 2023
Machine Age	kms	Client Info		<b>448872</b>	423082	400610
Oil Age	kms	Client Info		<b>25781</b>	22308	0
Filter Age	kms	Client Info		<b>25781</b>	22308	0
Oil Changed		Client Info		<b>N/A</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>22</b>	24	35
Chromium	ppm	ASTM D5185(m)	>20	<b>1</b>	1	1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	4	4
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>1</b>	1	2
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## CONTAMINATION

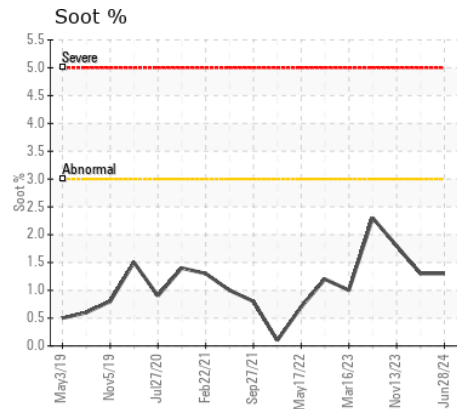
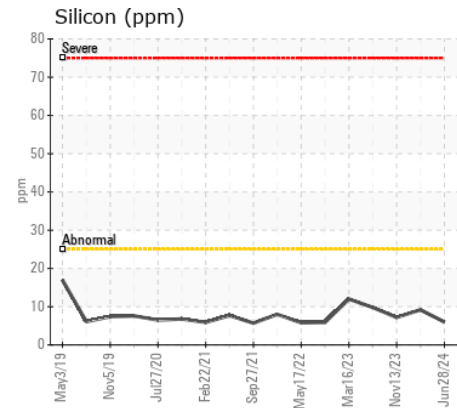
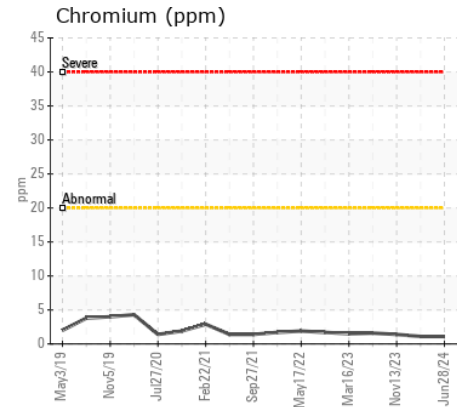
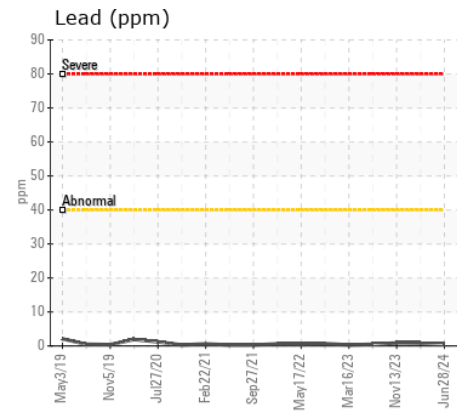
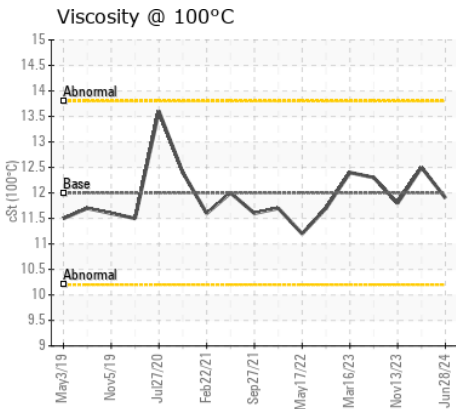
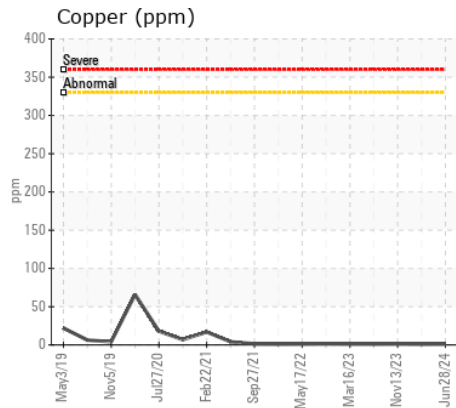
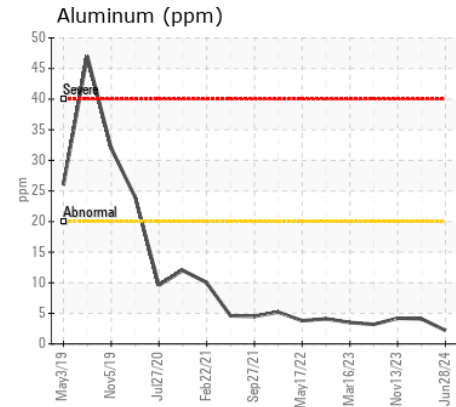
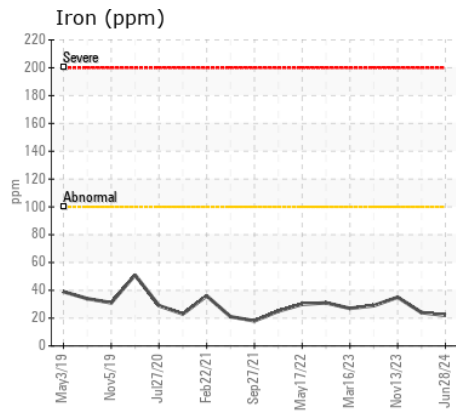
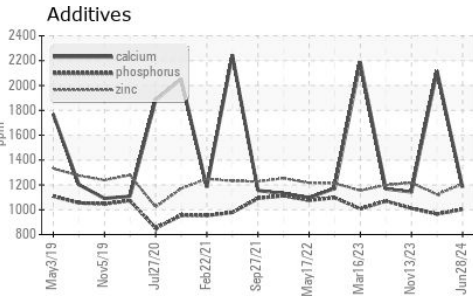
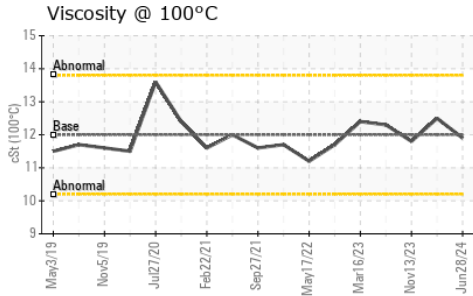
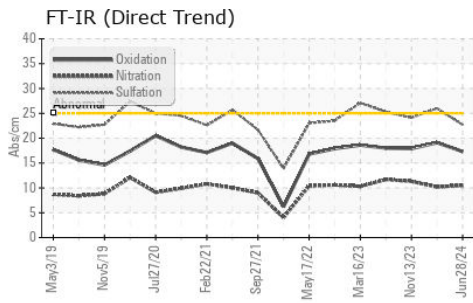
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>6</b>	9	7
Potassium	ppm	ASTM D5185(m)	>20	<b>3</b>	8	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>1.3</b>	1.3	1.8
Nitration	Abs/cm	ASTM D7624*	>20	<b>10.5</b>	10.2	11.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>22.7</b>	26.0	24.1
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>4</b>	4	3
Boron	ppm	ASTM D5185(m)		<b>5</b>	41	5
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>57</b>	7	62
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185(m)		<b>887</b>	111	965
Calcium	ppm	ASTM D5185(m)		<b>1179</b>	2116	1143
Phosphorus	ppm	ASTM D5185(m)		<b>1003</b>	965	1011
Zinc	ppm	ASTM D5185(m)		<b>1208</b>	1123	1217
Sulfur	ppm	ASTM D5185(m)		<b>2525</b>	2986	2485
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>17.3</b>	19.1	17.9
Visc @ 100°C	cSt	ASTM D7279(m)	12.0	<b>11.9</b>	12.5	11.8



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0934986  
**Lab Number** : 02645809  
**Unique Number** : 5803348  
**Test Package** : MOB 1

**Received** : 05 Jul 2024  
**Tested** : 05 Jul 2024  
**Diagnosed** : 05 Jul 2024 - Wes Davis

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To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.