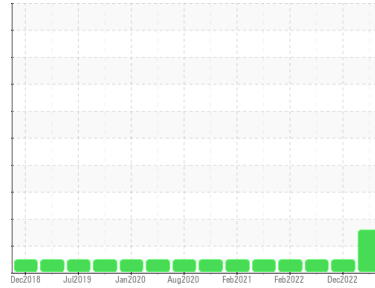




# OIL ANALYSIS REPORT

Sample Rating Trend



**DIRT**



Area  
**52000 series**  
 Machine Id  
**Navistar 52776**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 10W30 (40 LTR)**

## DIAGNOSIS

**Recommendation**  
 We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil from the component if this has not already been done. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

**Wear**  
 All component wear rates are normal.

**Contamination**  
 Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

**Fluid Condition**  
 The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0915036</b>	WC0759723	WC0694034
Sample Date	Client Info		<b>21 Mar 2024</b>	16 Dec 2022	30 May 2022
Machine Age	mls	Client Info	<b>541345</b>	477872	411962
Oil Age	mls	Client Info	<b>29416</b>	31476	0
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>ABNORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<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

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>90	<b>55</b>	35	37
Chromium	ppm	ASTM D5185(m)	>20	<b>2</b>	2	2
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>6</b>	3	4
Lead	ppm	ASTM D5185(m)	>40	<b>7</b>	7	9
Copper	ppm	ASTM D5185(m)	>330	<b>1</b>	<1	1
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	<1
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	2	<b>2</b>	2	1
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	50	<b>64</b>	64	65
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	950	<b>1034</b>	1054	1080
Calcium	ppm	ASTM D5185(m)	1050	<b>1129</b>	1189	1202
Phosphorus	ppm	ASTM D5185(m)	995	<b>1048</b>	1150	1128
Zinc	ppm	ASTM D5185(m)	1180	<b>1264</b>	1316	1358
Sulfur	ppm	ASTM D5185(m)	2600	<b>2455</b>	2613	2632
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>▲ 25</b>	4	4
Sodium	ppm	ASTM D5185(m)		<b>2</b>	2	2
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	2	2

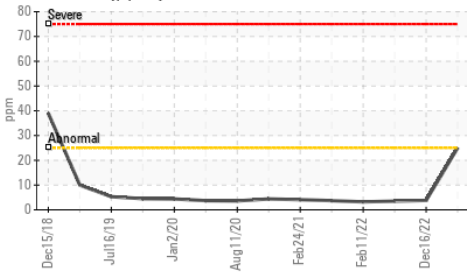
## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>6	<b>0.9</b>	0.5	0.4
Nitration	Abs/cm	ASTM D7624*	>20	<b>13.7</b>	12.4	13.4
Sulfation	Abs.1mm	ASTM D7415*	>30	<b>27.6</b>	26.7	26.6



# OIL ANALYSIS REPORT

▲ Silicon (ppm)



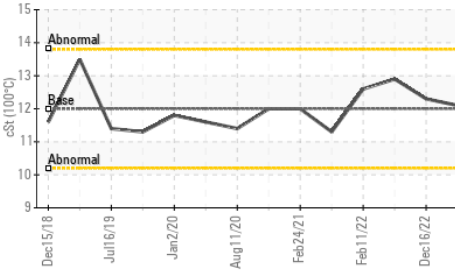
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs.:1mm	ASTM D7414*	>25	<b>26.2</b>	22.7	23.4

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

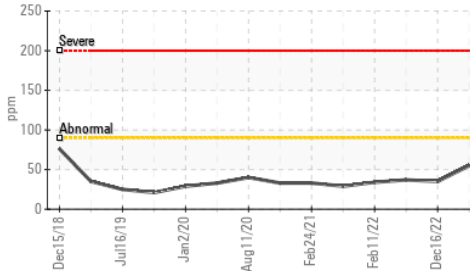
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	<b>12.1</b>	12.3	12.9

## GRAPHS

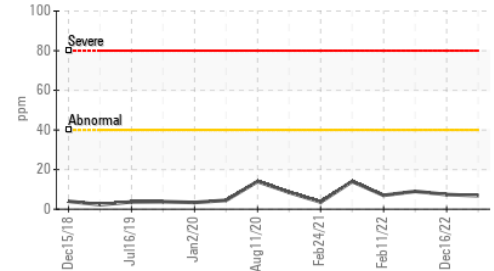
Viscosity @ 100°C



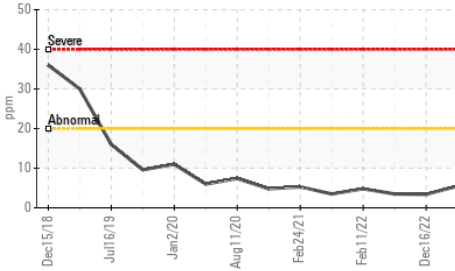
Iron (ppm)



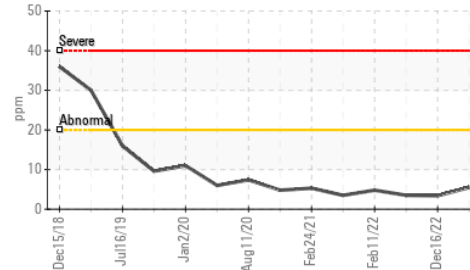
Lead (ppm)



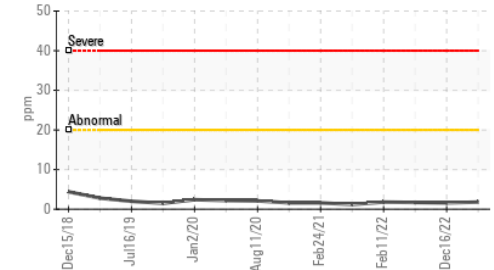
Aluminum (ppm)



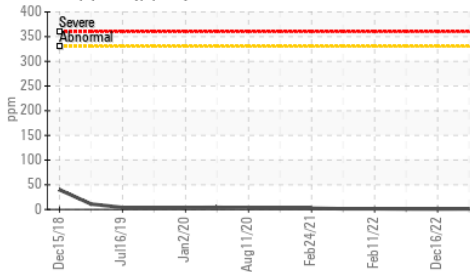
Aluminum (ppm)



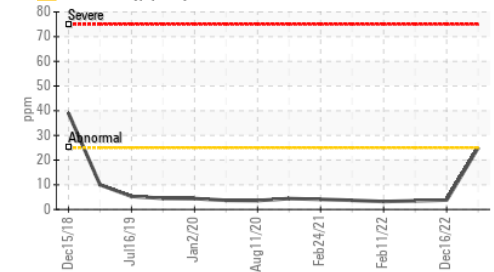
Chromium (ppm)



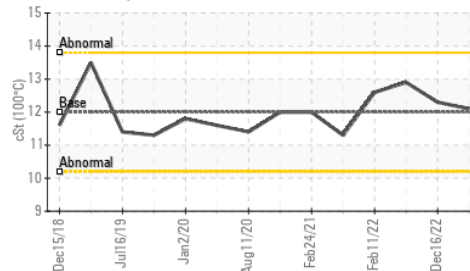
Copper (ppm)



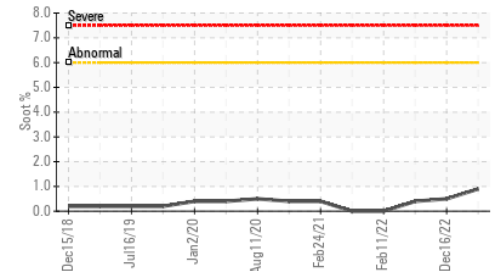
▲ Silicon (ppm)



Viscosity @ 100°C



Soot %



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0915036  
**Lab Number** : 02626385  
**Unique Number** : 5759517  
**Test Package** : MOB 1

**MANITOU LIN TRANSPORT (GARAGE)**  
 1335 SHAWSON DRIVE  
 MISSISSAUGA, ON  
 CA L4W 1C4  
 Contact: Travis Spence  
 tspence@manitoulintransport.com

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.

T:  
 F: (905)564-6361