



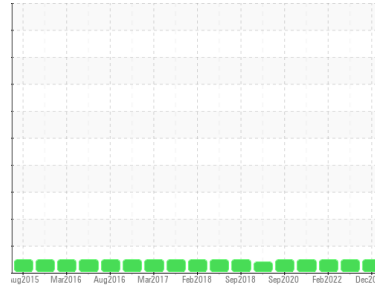
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
52000 series
 Machine Id
Navistar 52652
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (40 LTR)



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 condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0864527	WC0771261	WC0658540
Sample Date	Client Info			09 Dec 2023	22 Jan 2023	19 Feb 2022
Machine Age	mls	Client Info		436128	407981	380199
Oil Age	mls	Client Info		28227	27001	27696
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 D5185(m)	>165	35	28	29
Chromium	ppm	ASTM D5185(m)	>5	1	1	2
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	<1	0
Silver	ppm	ASTM D5185(m)	>2	<1	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	2	2	2
Lead	ppm	ASTM D5185(m)	>150	4	4	4
Copper	ppm	ASTM D5185(m)	>90	2	2	2
Tin	ppm	ASTM D5185(m)	>5	<1	<1	<1
Antimony	ppm	ASTM D5185(m)		0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

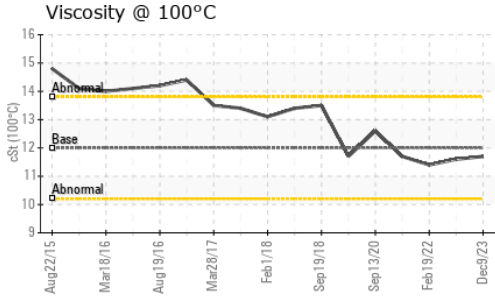
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	2	1	<1	1
Barium	ppm	ASTM D5185(m)	0	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	50	65	63	61
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	950	1031	1022	1026
Calcium	ppm	ASTM D5185(m)	1050	1134	1188	1094
Phosphorus	ppm	ASTM D5185(m)	995	1058	1136	1073
Zinc	ppm	ASTM D5185(m)	1180	1290	1307	1263
Sulfur	ppm	ASTM D5185(m)	2600	2529	2587	2488
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>35	4	4	3
Sodium	ppm	ASTM D5185(m)		2	2	2
Potassium	ppm	ASTM D5185(m)	>20	0	0	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>7.5	1	0.7	0.7
Nitration	Abs/cm	ASTM D7624*	>20	11.7	11.3	11.6
Sulfation	Abs./1mm	ASTM D7415*	>30	24.8	24.8	24.7



OIL ANALYSIS REPORT



FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	ASTM D7414*	>25	20.6	20.0	20.1

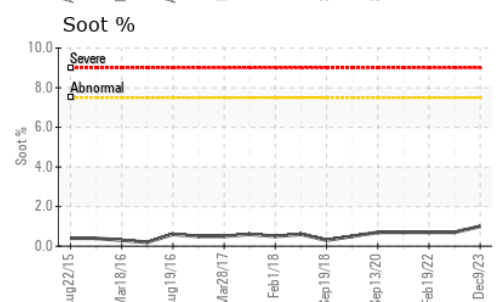
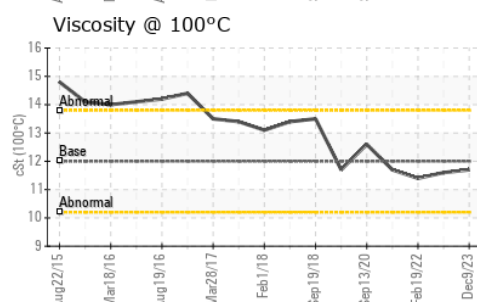
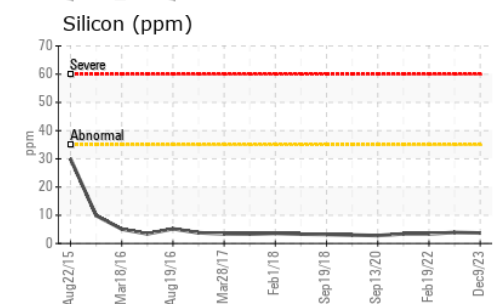
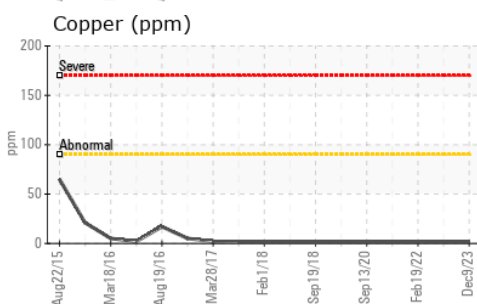
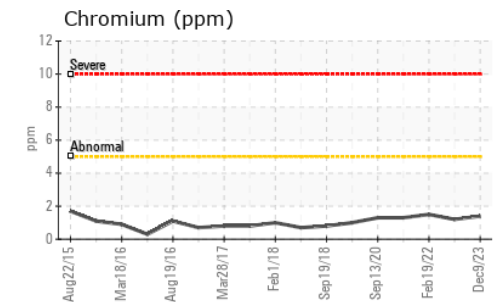
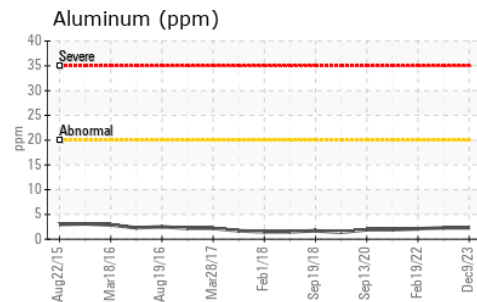
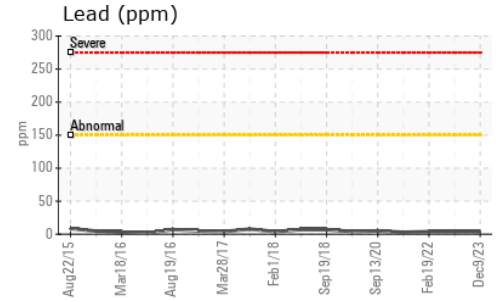
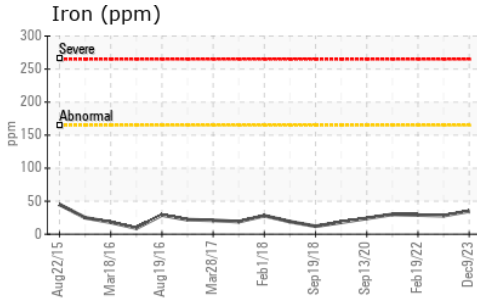
VISUAL

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

FLUID PROPERTIES

	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	11.7	11.6	11.4

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **MANITOU LIN TRANSPORT (GARAGE)**
Sample No. : WC0864527 **Received** : 12 Dec 2023 1335 SHAWSON DRIVE
Lab Number : **02602488** **Diagnosed** : 12 Dec 2023 MISSISSAUGA, ON
Unique Number : 5695573 **Diagnostician** : Wes Davis CA L4W 1C4
Test Package : MOB 1

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.

Contact: Travis Spence
tspence@manitoulintransport.com

T:
F: (905)564-6361