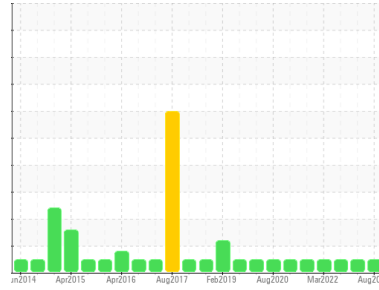




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
52000 series
 Machine Id
Navistar 52574
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (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			WC0837233	WC0771274	WC0717232
Sample Date	Client Info			15 Aug 2023	25 Feb 2023	08 Jun 2022
Machine Age	mls Client Info			497915	481819	464686
Oil Age	mls Client Info			16096	17133	11497
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	<1.0	<1.0
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	18	22	11
Chromium	ppm	ASTM D5185(m)	>20	2	3	2
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	4	5	2
Lead	ppm	ASTM D5185(m)	>40	1	1	<1
Copper	ppm	ASTM D5185(m)	>330	2	1	<1
Tin	ppm	ASTM D5185(m)	>15	<1	<1	0
Antimony	ppm	ASTM D5185(m)		0	0	<1
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)	0	3	2	6
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	63	62	59
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	992	995	969
Calcium	ppm	ASTM D5185(m)	1070	1068	1147	1078
Phosphorus	ppm	ASTM D5185(m)	1150	1041	1107	1003
Zinc	ppm	ASTM D5185(m)	1270	1187	1222	1162
Sulfur	ppm	ASTM D5185(m)	2060	2548	2630	2710
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

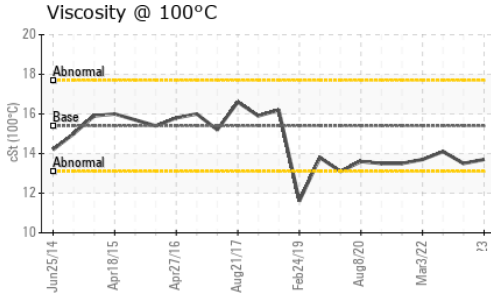
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	6	9	5
Sodium	ppm	ASTM D5185(m)		3	4	3
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.6	0.6	0
Nitration	Abs/cm	ASTM D7624*	>20	10.1	10.5	3.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.9	22.2	12.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.7	17.4	6.8



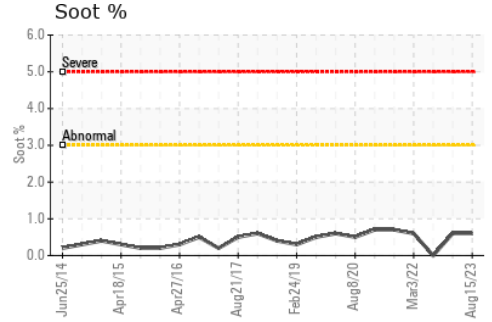
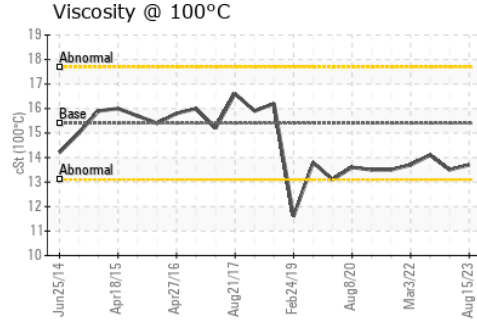
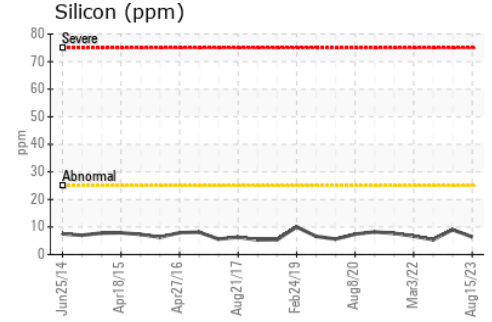
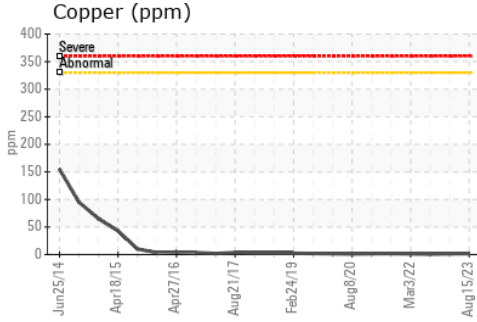
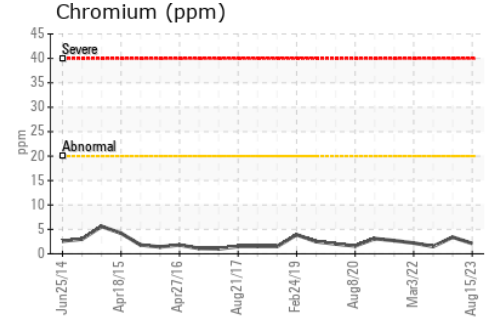
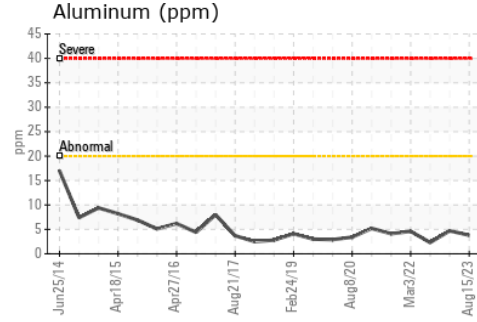
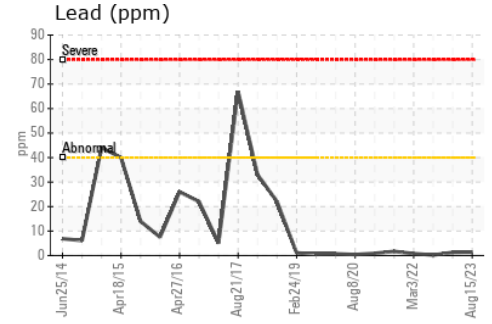
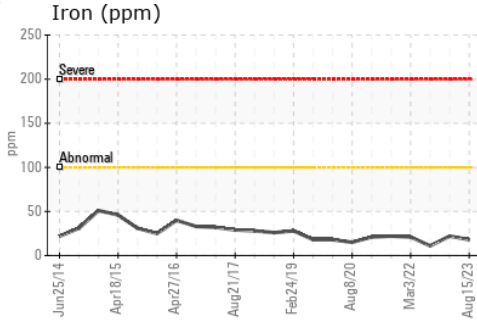
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
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 D7279(m)	15.4	13.7	13.5

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **MANITOU LIN TRANSPORT (GARAGE)**
Sample No. : WC0837233 **Received** : 22 Aug 2023 1335 SHAWSON DRIVE
Lab Number : 02577413 **Diagnosed** : 22 Aug 2023 MISSISSAUGA, ON
Unique Number : 5630473 **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