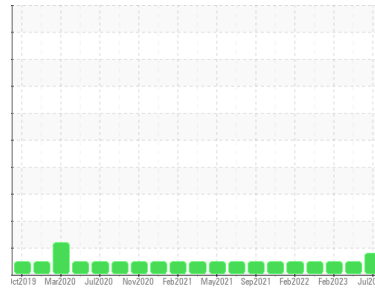




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Area
52000 series
 Machine Id
Navistar 52830
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (40 LTR)

DIAGNOSIS

Recommendation

The oil 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

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

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		WC0948294	WC0828303	WC0771283
Sample Date	Client Info		07 Jul 2024	01 Jul 2023	04 Feb 2023
Machine Age	mls	Client Info	613951	585439	554998
Oil Age	mls	Client Info	28512	30140	33052
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
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)	>90	62	25	29
Chromium	ppm	ASTM D5185(m)	>20	4	2	1
Nickel	ppm	ASTM D5185(m)	>2	<1	0	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	<1
Silver	ppm	ASTM D5185(m)	>2	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>20	17	8	7
Lead	ppm	ASTM D5185(m)	>40	7	2	<1
Copper	ppm	ASTM D5185(m)	>330	2	2	2
Tin	ppm	ASTM D5185(m)	>15	1	<1	<1
Antimony	ppm	ASTM D5185(m)		0	0	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	2	2	2
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	50	59	61	65
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	950	946	1022	1025
Calcium	ppm	ASTM D5185(m)	1050	1041	1073	1172
Phosphorus	ppm	ASTM D5185(m)	995	993	1079	1154
Zinc	ppm	ASTM D5185(m)	1180	1169	1239	1290
Sulfur	ppm	ASTM D5185(m)	2600	2271	2444	2773
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

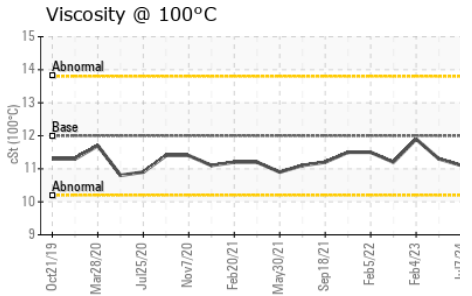
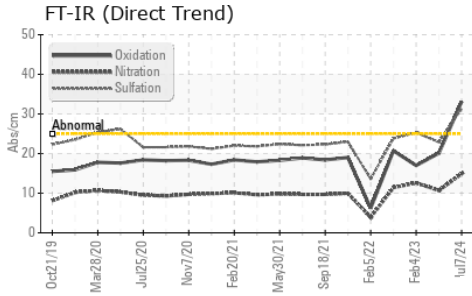
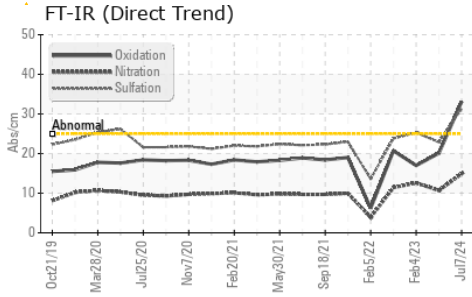
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	5	3	7
Sodium	ppm	ASTM D5185(m)		3	2	3
Potassium	ppm	ASTM D5185(m)	>20	1	<1	7
Fuel	%	ASTM D7593*	>3.0	▲ 5.5	<1.0	<1.0

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>6	1.4	0.4	2.1
Nitration	Abs/cm	ASTM D7624*	>20	14.9	10.7	12.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	31.4	22.9	25.3



OIL ANALYSIS REPORT

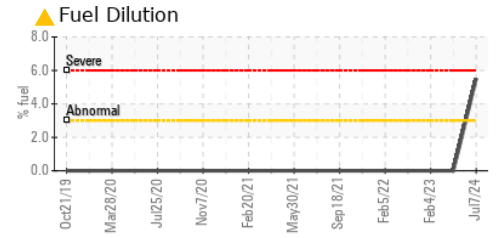
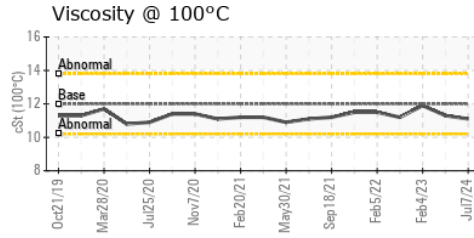
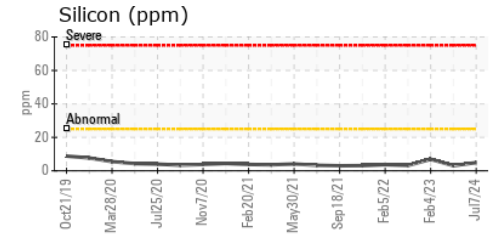
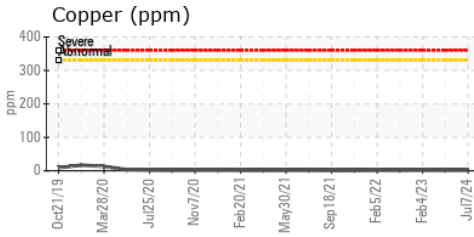
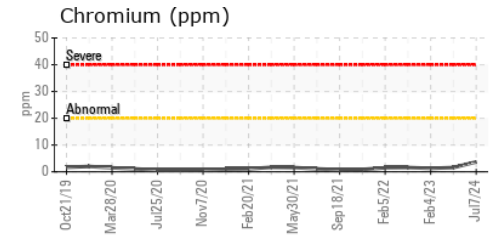
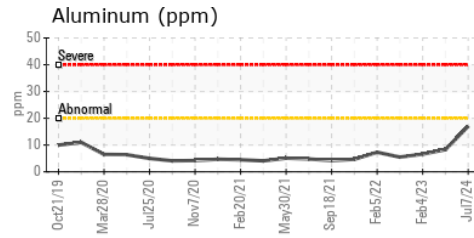
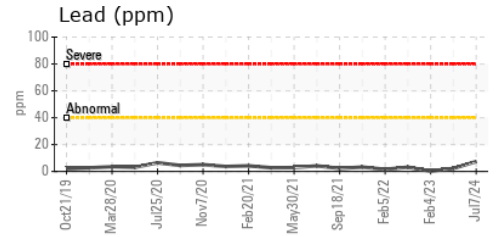
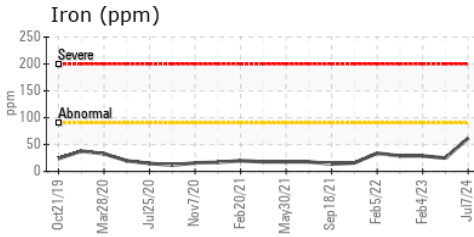


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	ASTM D7414*	>25	33.1	20.1	17.0

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	VLITE	---
Yellow Metal	scalar	Visual*	NONE	VLITE	---
Precipitate	scalar	Visual*	NONE	NONE	---
Silt	scalar	Visual*	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---
Appearance	scalar	Visual*	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 D7279(m)	12.00	11.1	11.3	11.9

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **MANITOU LIN TRANSPORT (GARAGE)**
Sample No. : WC0948294 **Received** : 09 Jul 2024 1335 SHAWSON DRIVE
Lab Number : 02646539 **Tested** : 11 Jul 2024 MISSISSAUGA, ON
Unique Number : 5812091 **Diagnosed** : 11 Jul 2024 - Kevin Marson CA L4W 1C4
Test Package : MOB 1 (Additional Tests: FUELDILUTION, PercentFuel, Visual) 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.

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