



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area
4000 Series
 Machine Id
Navistar 4270
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (16 LTR)

RECOMMENDATION

Check for low coolant level. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0892065	WC0828257	WC0844401
Sample Date		Client Info		21 Feb 2024	01 Sep 2023	18 Aug 2023
Machine Age	mls	Client Info		216991	126479	125797
Oil Age	mls	Client Info		0	751	7424
Filter Age	mls	Client Info		0	551	7424
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	NORMAL	ABNORMAL

WEAR

Aluminum ppm levels are abnormal. Piston wear is indicated.

Iron	ppm	ASTM D5185(m)	>130	53	12	62
Chromium	ppm	ASTM D5185(m)	>10	2	<1	2
Nickel	ppm	ASTM D5185(m)	>4	<1	0	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	<1
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	▲ 21	5	▲ 25
Lead	ppm	ASTM D5185(m)	>20	<1	0	0
Copper	ppm	ASTM D5185(m)	>125	2	<1	2
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

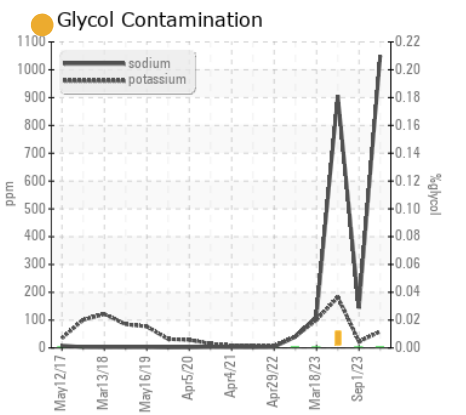
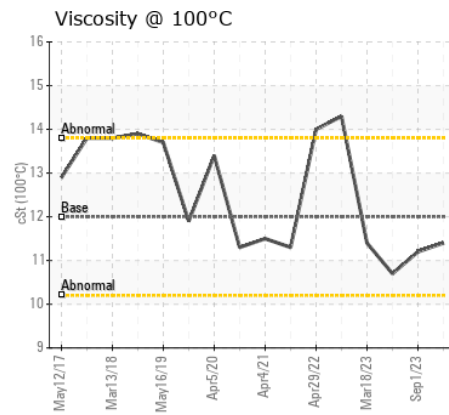
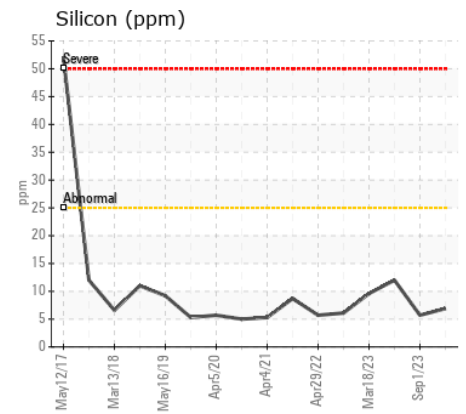
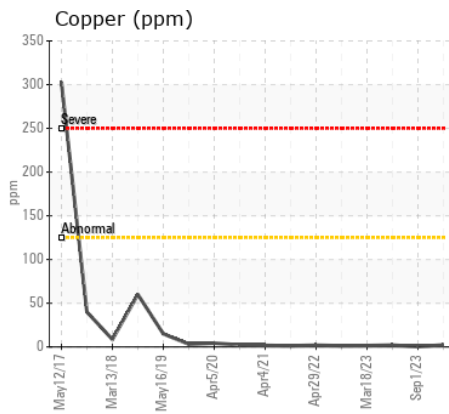
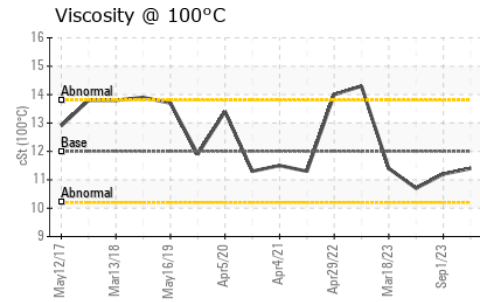
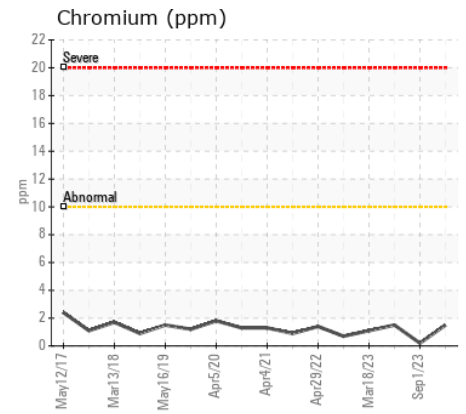
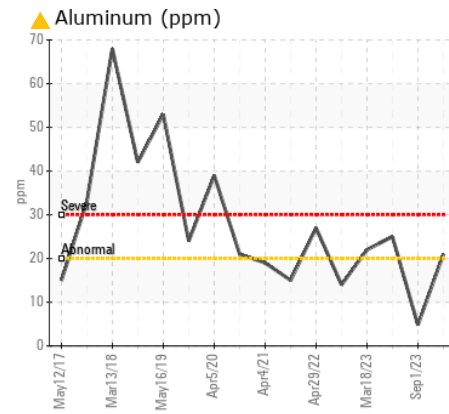
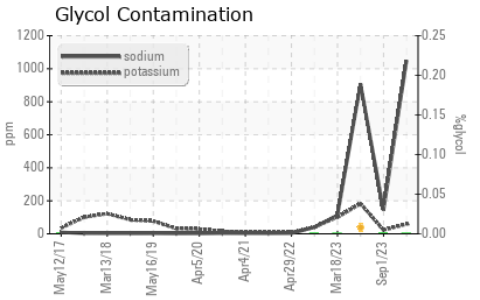
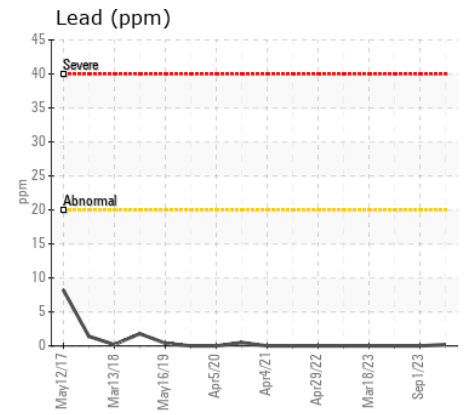
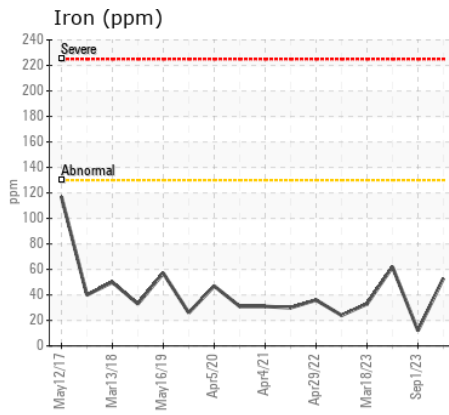
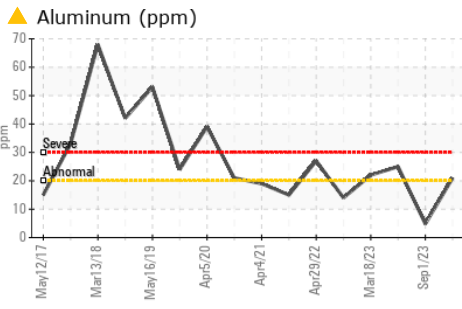
Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	7	6	12
Potassium	ppm	ASTM D5185(m)	>20	59	23	▲ 183
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		0.0	0.0	▲ 0.012
Soot %	%	ASTM D7844*	>6	0.7	0	0.7
Nitration	Abs/cm	ASTM D7624*	>20	13.2	5.7	11.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.4	19.6	23.3
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The oil is no longer serviceable as a result of the abnormal and/or severe wear. The condition of the oil is acceptable for the time in service (see recommendation).

Sodium	ppm	ASTM D5185(m)		● 1050	144	● 907
Boron	ppm	ASTM D5185(m)	2	4	8	6
Barium	ppm	ASTM D5185(m)	0	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	50	104	61	94
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	950	870	919	901
Calcium	ppm	ASTM D5185(m)	1050	1024	993	963
Phosphorus	ppm	ASTM D5185(m)	995	862	1004	997
Zinc	ppm	ASTM D5185(m)	1180	1096	1113	1110
Sulfur	ppm	ASTM D5185(m)	2600	2729	2529	2575
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.8	14.2	18.8
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	11.4	11.2	10.7



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0892065 **Received** : 29 Feb 2024
Lab Number : 02618914 **Tested** : 29 Feb 2024
Unique Number : 5736024 **Diagnosed** : 01 Mar 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol)

MANITOU LIN TRANSPORT
 75 MUMFORD ROAD
 LIVELY, ON
 CA P3Y 1L1
 Contact: Todd Smith
 tosmith@manitoulintransport.com
 T: (705)562-3302
 F: x:

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.