



OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	ABNORMAL
FLUID CONDITION	ATTENTION

Area
4000 Series
 Machine Id
Navistar 4269
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (16 LTR)

RECOMMENDATION

Check for low coolant level. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. The oil change at the time of sampling has been noted. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0915513	WC0631586	WC0294423
Sample Date		Client Info		21 Mar 2024	09 Aug 2021	19 Jun 2018
Machine Age	kms	Client Info		292544	129252	74408
Oil Age	kms	Client Info		0	10423	11171
Filter Age	kms	Client Info		0	10423	11171
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				SEVERE	MARGINAL	NORMAL

WEAR

Aluminum and iron ppm levels are severe. Nickel ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated. Exhaust valve wear is indicated. Piston wear is indicated.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184*		9	---	---
Iron	ppm	ASTM D5185(m)	>130	▲ 251	46	19
Chromium	ppm	ASTM D5185(m)	>10	6	2	<1
Nickel	ppm	ASTM D5185(m)	>4	▲ 5	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<1	<1	0
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	▲ 40	16	8
Lead	ppm	ASTM D5185(m)	>20	0	0	<1
Copper	ppm	ASTM D5185(m)	>125	7	2	2
Tin	ppm	ASTM D5185(m)	>4	0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

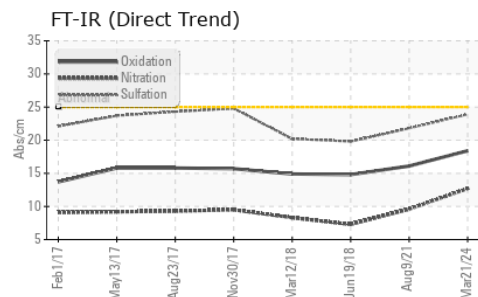
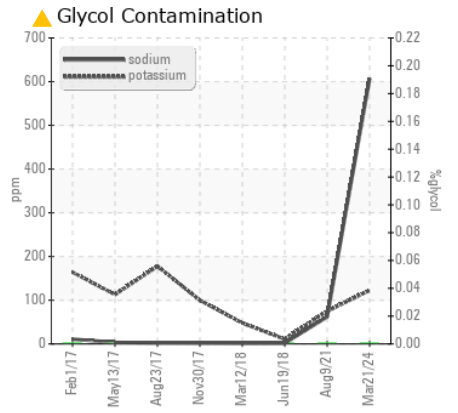
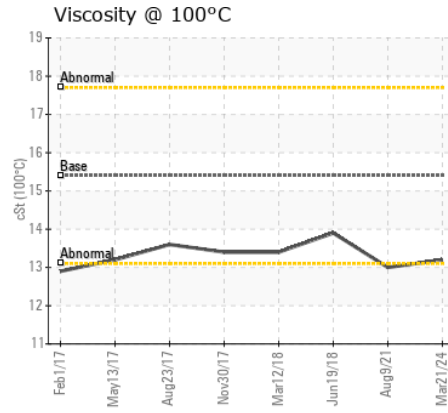
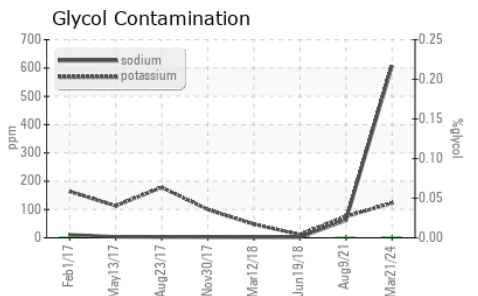
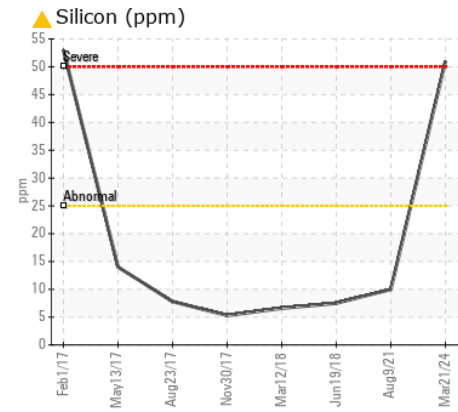
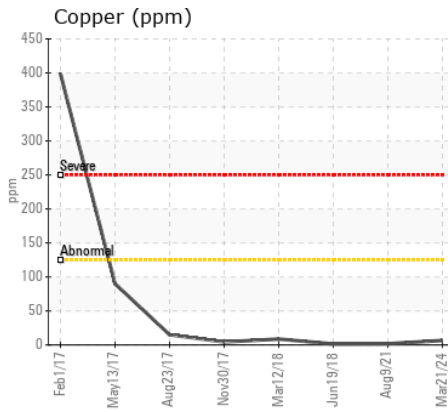
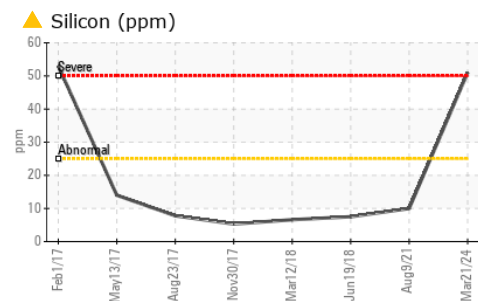
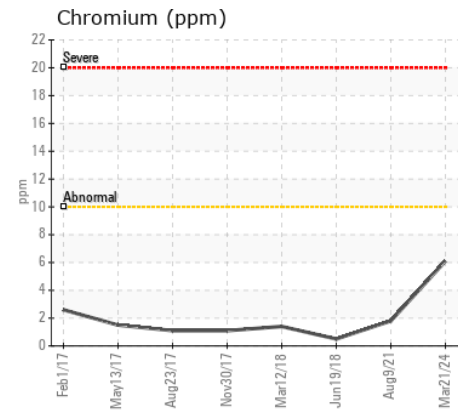
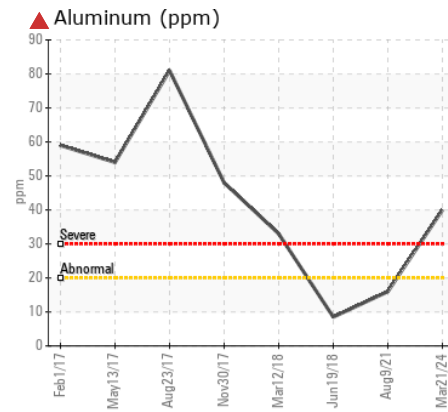
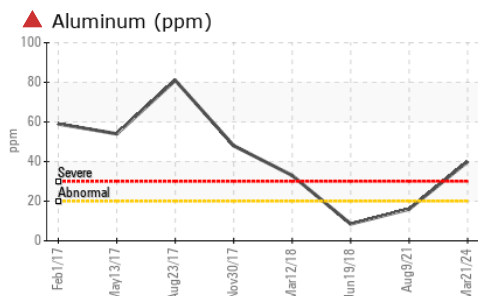
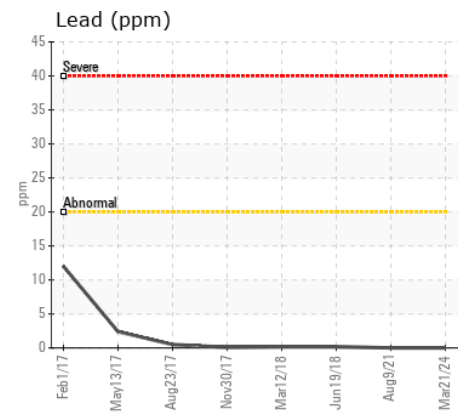
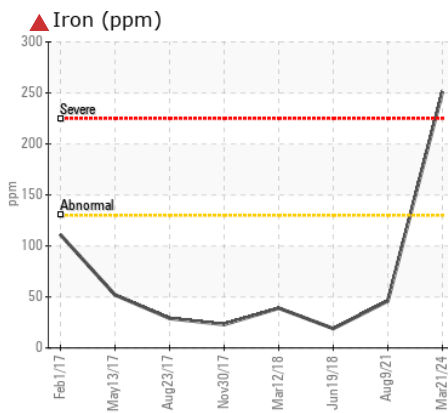
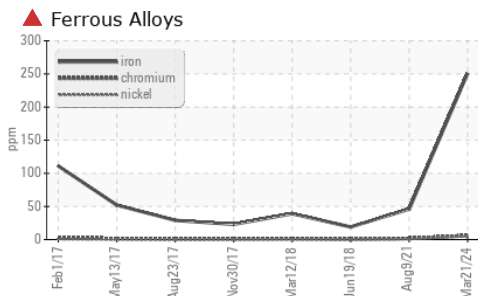
Water treatment chemicals present, indicating slow coolant leak. There is a moderate concentration of dirt present in the oil. Test for glycol is negative. High amount of ingressed dirt has caused abrasive wear to the component.

Silicon	ppm	ASTM D5185(m)	>25	▲ 51	10	8
Potassium	ppm	ASTM D5185(m)	>20	▲ 123	75	11
Fuel		WC Method	>3.0	<1.0	▲ 1	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		0.0	0.0	0.0
Soot %	%	ASTM D7844*	>6	1.5	0.7	0.3
Nitration	Abs/cm	ASTM D7624*	>20	12.7	9.6	7.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.9	21.8	19.8
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.

Sodium	ppm	ASTM D5185(m)		● 607	62	2
Boron	ppm	ASTM D5185(m)	0	1	12	4
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	118	71	59
Manganese	ppm	ASTM D5185(m)	0	2	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	934	1005	932
Calcium	ppm	ASTM D5185(m)	1070	1009	1120	1050
Phosphorus	ppm	ASTM D5185(m)	1150	903	1090	999
Zinc	ppm	ASTM D5185(m)	1270	1158	1266	1238
Sulfur	ppm	ASTM D5185(m)	2060	2473	2732	2662
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.4	16.1	14.8
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	13.2	13.0	13.9



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0915513 **Received** : 08 Apr 2024
Lab Number : 02627266 **Tested** : 09 Apr 2024
Unique Number : 5760398 **Diagnosed** : 09 Apr 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol, PQ)

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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.