



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Area
3000 series
 Machine Id
Navistar 3246
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (26 LTR)

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0501647	WC0575158	WC0390859
Sample Date		Client Info		09 Dec 2023	19 Jul 2021	06 Oct 2019
Machine Age	mls	Client Info		226958	183429	222433
Oil Age	mls	Client Info		0	5200	0
Filter Age	mls	Client Info		0	5200	0
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>90	10	17	34
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	1
Nickel	ppm	ASTM D5185(m)	>2	0	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	<1
Silver	ppm	ASTM D5185(m)	>2	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	3	6	22
Lead	ppm	ASTM D5185(m)	>40	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>330	5	2	4
Tin	ppm	ASTM D5185(m)	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

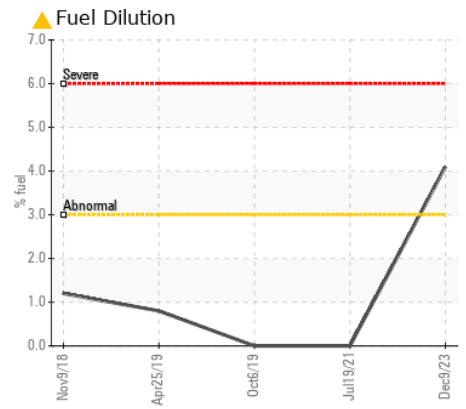
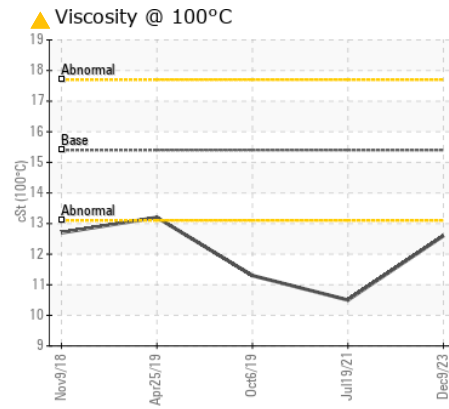
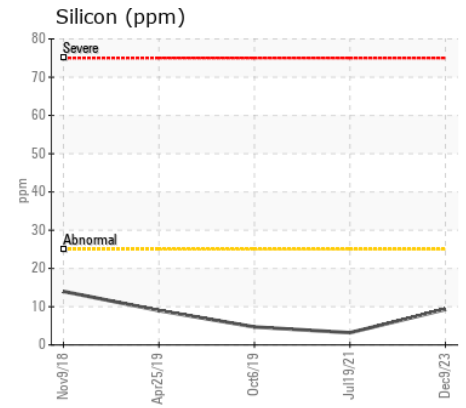
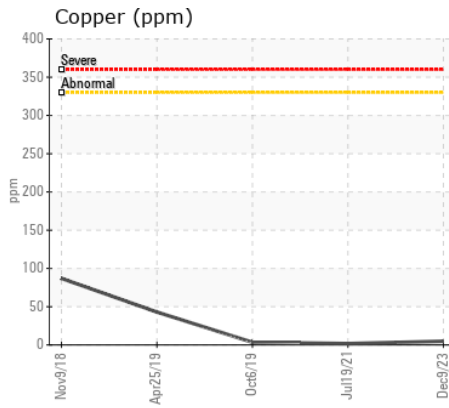
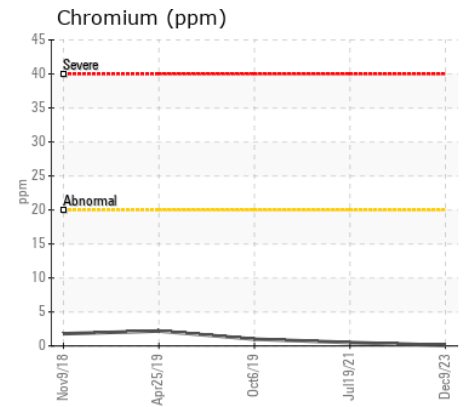
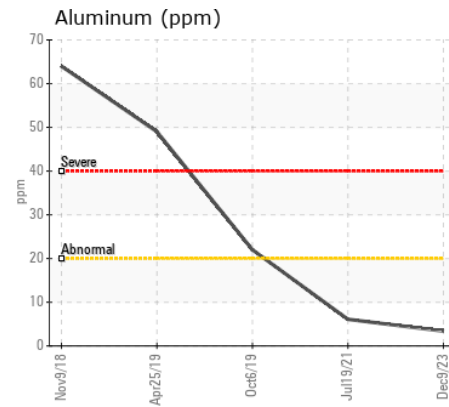
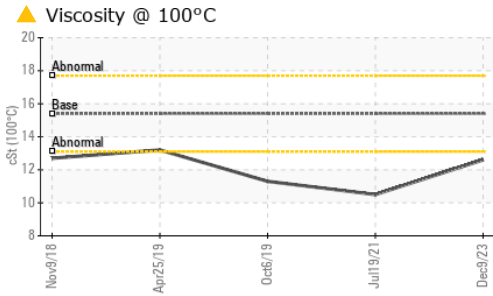
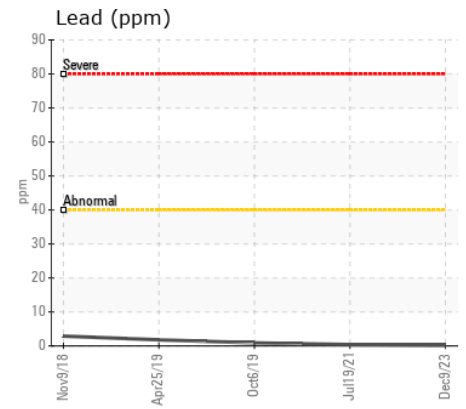
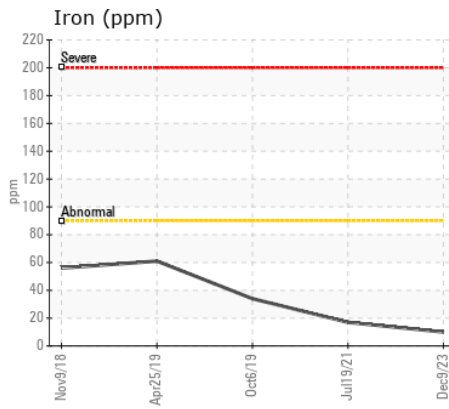
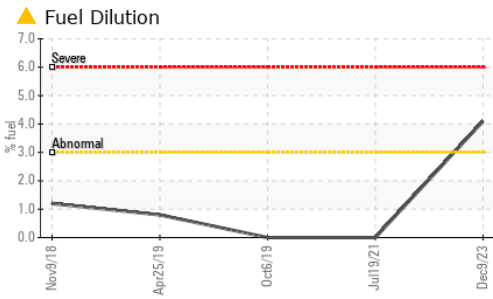
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	9	3	5
Potassium	ppm	ASTM D5185(m)	>20	1	4	32
Fuel	%	ASTM D7593*	>3.0	▲ 4.1	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	0.0
Soot %	%	ASTM D7844*	>6	0.3	0.3	0.4
Nitration	Abs/cm	ASTM D7624*	>20	9.4	11.2	10.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.3	23.6	24.5
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		<1	1	2
Boron	ppm	ASTM D5185(m)	0	8	7	3
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	56	49	60
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	862	782	981
Calcium	ppm	ASTM D5185(m)	1070	955	970	1076
Phosphorus	ppm	ASTM D5185(m)	1150	924	877	1011
Zinc	ppm	ASTM D5185(m)	1270	1077	999	1224
Sulfur	ppm	ASTM D5185(m)	2060	2524	2178	2527
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.5	25.6	20.5
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 12.6	10.5	11.3



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0501647 **Received** : 10 Jan 2024
Lab Number : 02607697 **Diagnosed** : 11 Jan 2024
Unique Number : 5708783 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

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.