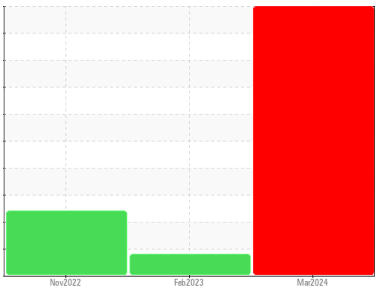
OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
INTERNATIONAL 545
Component
Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

DIAGNOSIS

▲ Recommendation
We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the fuel injection system. Oil and filter 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
Sodium and/or potassium levels are high. Test for glycol is positive. There is a high amount of fuel present in the oil.

▲ Fluid Condition
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0878889**	WC0727299	WC0727347
Sample Date		Client Info		**27 Mar 2024**	13 Feb 2023	14 Nov 2022
Machine Age	mls	Client Info		**193948**	180034	175276
Oil Age	mls	Client Info		**5000**	0	0
Oil Changed		Client Info		**Changed**	Changed	N/A
Sample Status				**SEVERE**	MARGINAL	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**83**	8	63
Chromium	ppm	ASTM D5185m	>20	**3**	<1	2
Nickel	ppm	ASTM D5185m	>4	**2**	0	<1
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**11**	<1	7
Lead	ppm	ASTM D5185m	>40	**4**	0	2
Copper	ppm	ASTM D5185m	>330	**3**	<1	1
Tin	ppm	ASTM D5185m	>15	**1**	0	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**13**	16	11
Barium	ppm	ASTM D5185m		**0**	<1	2
Molybdenum	ppm	ASTM D5185m		**65**	57	55
Manganese	ppm	ASTM D5185m		**1**	<1	<1
Magnesium	ppm	ASTM D5185m		**832**	782	515
Calcium	ppm	ASTM D5185m		**981**	1027	1008
Phosphorus	ppm	ASTM D5185m		**893**	913	729
Zinc	ppm	ASTM D5185m		**1103**	1080	916
Sulfur	ppm	ASTM D5185m		**2797**	2980	2588

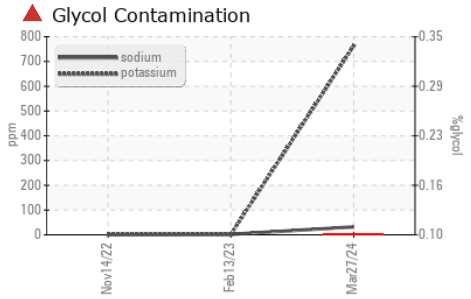
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**6**	4	3
Sodium	ppm	ASTM D5185m		▲ **32**	2	0
Potassium	ppm	ASTM D5185m	>20	▲ **763**	1	2
Fuel	%	ASTM D3524	>5	▲ **13.2**	▲ 2.2	▲ 14.6
Glycol	%	*ASTM D2982		▲ **0.10**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**2.7**	0.2	2.2
Nitration	Abs/cm	*ASTM D7624	>20	**14.5**	5.3	14.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	**27.0**	17.7	27.0

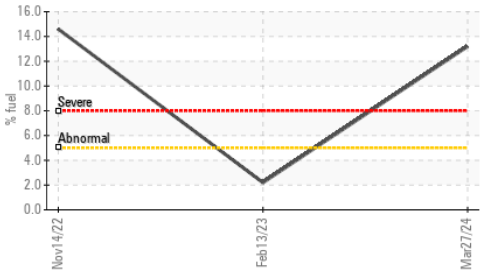
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**23.3**	13.4	26.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**8.2**	8.7	8.9

OIL ANALYSIS REPORT

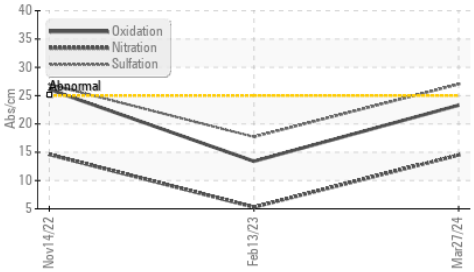
▲ Glycol Contamination



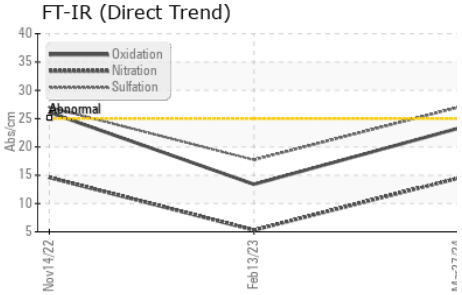
▲ Fuel Dilution



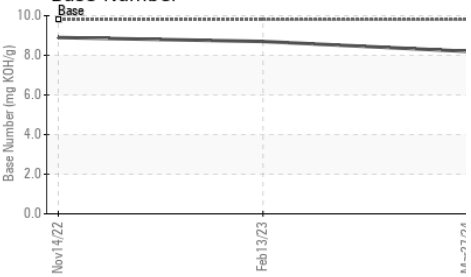
FT-IR (Direct Trend)



FT-IR (Direct Trend)



Base Number

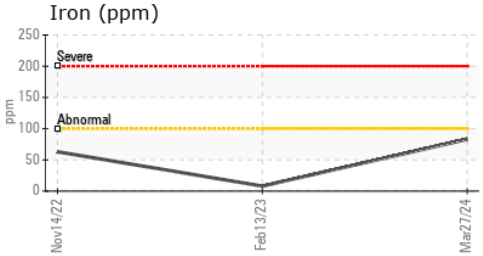


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

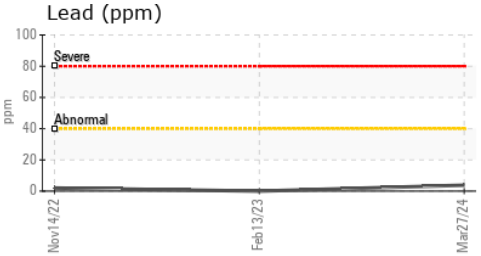
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.6	▲ **11.8**	13.9	▲ 10.2

GRAPHS

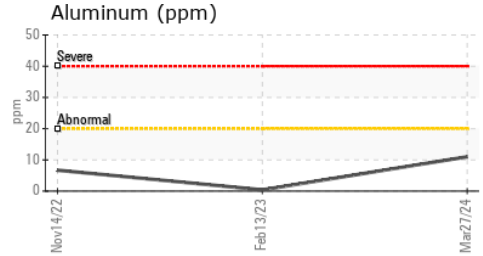
Iron (ppm)



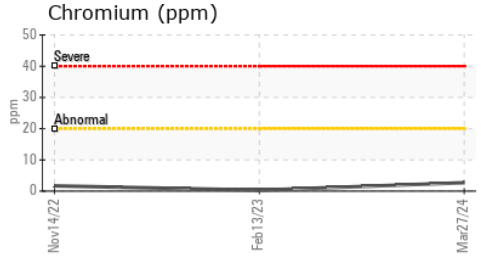
Lead (ppm)



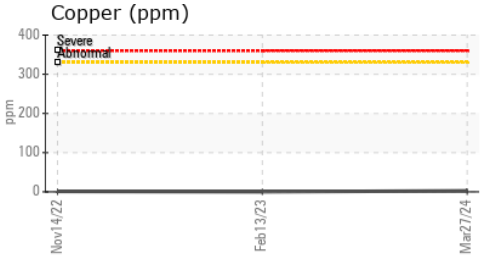
Aluminum (ppm)



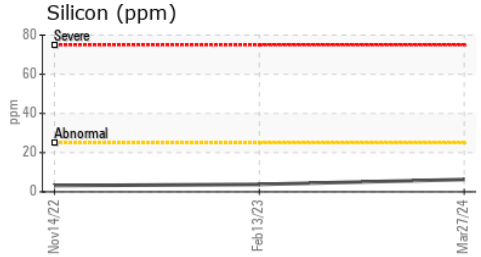
Chromium (ppm)



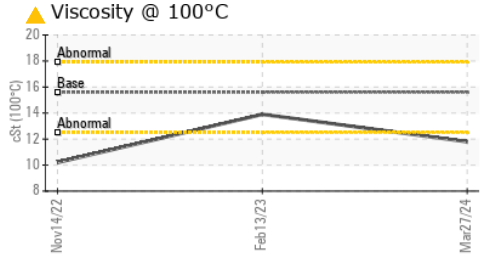
Copper (ppm)



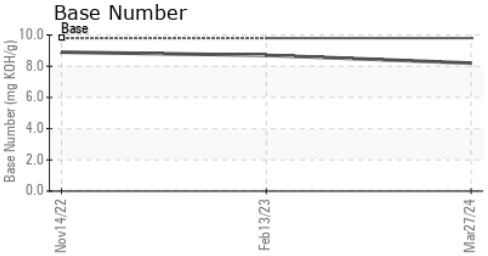
Silicon (ppm)



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0878889
Lab Number : 06143672
Unique Number : 10968480
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, PercentFuel, TBN)

Received : 09 Apr 2024
Tested : 15 Apr 2024
Diagnosed : 15 Apr 2024 - Jonathan Hester

To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

WAYNE CO SCHOOL BUS GARAGE
1603 SALEM CHURCH RD
GOLDSBORO, NC
US 27530
Contact: BRANDON BRIGGS
brandonbriggs@wcps.org
T:
F: