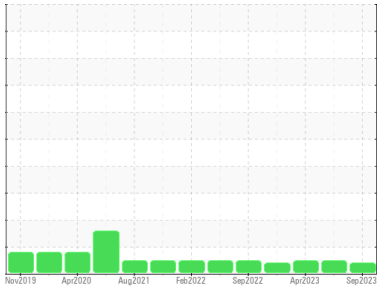
OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

Machine Id
9424
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL 10W40 (--- GAL)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0853424**	WC0796542	WC0796269
Sample Date		Client Info		**03 Sep 2023**	05 Jun 2023	02 Apr 2023
Machine Age	kms	Client Info		**544444**	507469	477956
Oil Age	kms	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	Not Changd	Changed
Sample Status				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	**19**	7	17
Chromium	ppm	ASTM D5185(m)	>20	**1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	<1
Silver	ppm	ASTM D5185(m)	>3	**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**3**	2	3
Lead	ppm	ASTM D5185(m)	>40	**2**	<1	<1
Copper	ppm	ASTM D5185(m)	>330	**<1**	<1	<1
Tin	ppm	ASTM D5185(m)	>15	**0**	0	<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

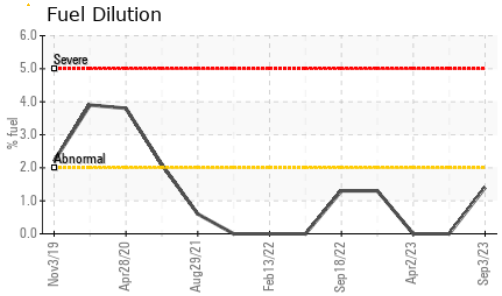
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	250	**25**	66	39
Barium	ppm	ASTM D5185(m)	10	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	100	**2**	2	2
Manganese	ppm	ASTM D5185(m)		**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)	450	**681**	729	773
Calcium	ppm	ASTM D5185(m)	3000	**1450**	1332	1470
Phosphorus	ppm	ASTM D5185(m)	1150	**763**	748	778
Zinc	ppm	ASTM D5185(m)	1350	**831**	790	814
Sulfur	ppm	ASTM D5185(m)	4250	**2538**	2538	2654
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

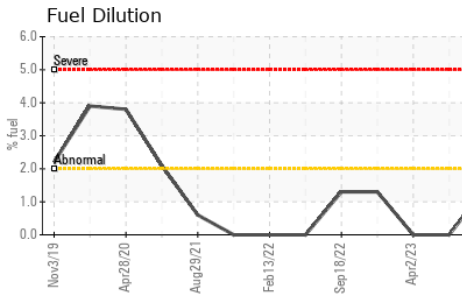
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**5**	4	4
Sodium	ppm	ASTM D5185(m)		**3**	3	3
Potassium	ppm	ASTM D5185(m)	>20	**8**	4	0
Fuel	%	ASTM D7593*	>2.0	**1.4**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.3**	0	0.1
Nitration	Abs/cm	ASTM D7624*	>20	**10.5**	8.8	10.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	**25.4**	19.0	24.9

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**19.5**	13.6	16.9

OIL ANALYSIS REPORT

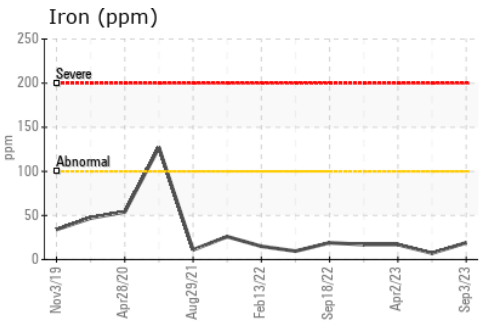


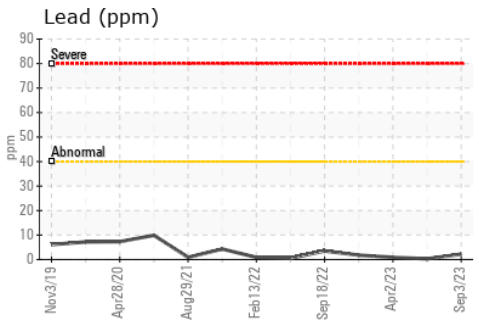


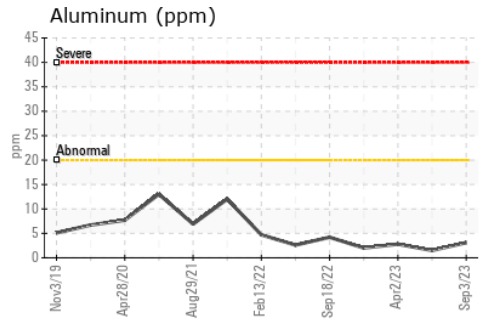
VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

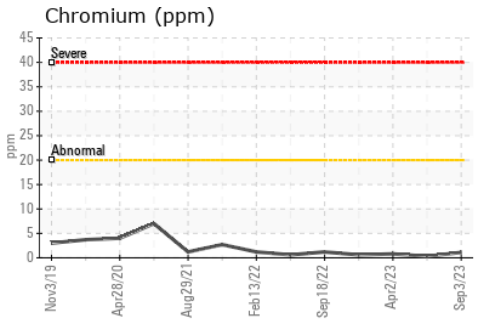
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	▲ **11.7**	11.4	11.5

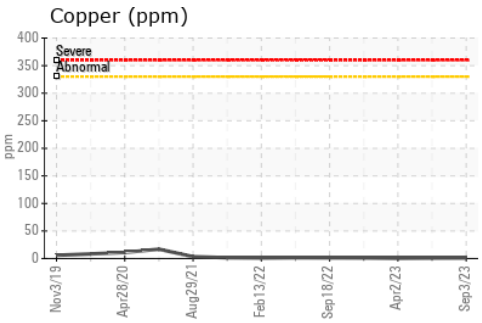
GRAPHS

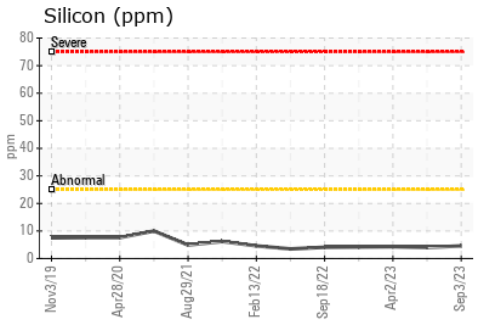


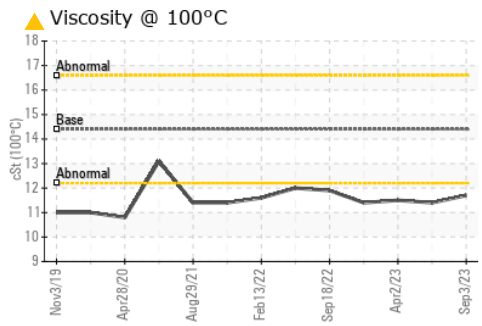


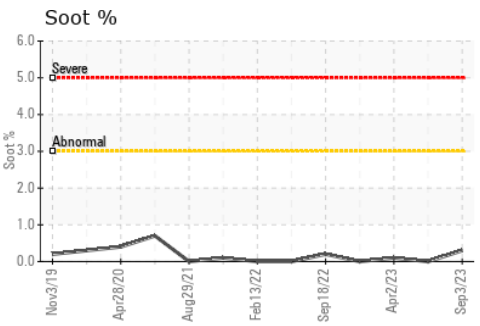












ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0853424 **Received** : 06 Sep 2023
Lab Number : 02580582 **Diagnosed** : 07 Sep 2023
Unique Number : 5633642 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

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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