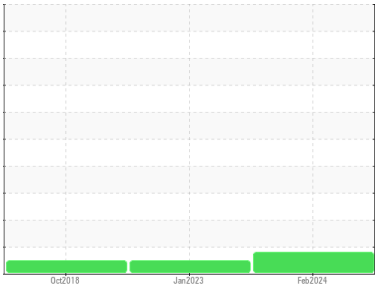
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
SPARTON 25069/P114
Component
Front Diesel Engine
Fluid
CASTROL HYPURON 15W40 (--- GAL)

DIAGNOSIS

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

Fluid Condition
The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC0085021**	PC0067232	AP104574
Sample Date		Client Info		**15 Feb 2024**	25 Jan 2023	17 Oct 2018
Machine Age	kms	Client Info		**147396**	98570	27532
Oil Age	kms	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	0.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>75	**40**	35	49
Chromium	ppm	ASTM D5185(m)	>5	**1**	1	1
Nickel	ppm	ASTM D5185(m)	>4	**<1**	<1	0
Titanium	ppm	ASTM D5185(m)	>2	**0**	<1	<1
Silver	ppm	ASTM D5185(m)	>2	**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>15	**4**	3	5
Lead	ppm	ASTM D5185(m)	>25	**<1**	<1	2
Copper	ppm	ASTM D5185(m)	>100	**5**	2	57
Tin	ppm	ASTM D5185(m)	>4	**<1**	<1	<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)		**3**	4	4
Barium	ppm	ASTM D5185(m)		**0**	0	0
Molybdenum	ppm	ASTM D5185(m)		**60**	61	53
Manganese	ppm	ASTM D5185(m)		**0**	<1	1
Magnesium	ppm	ASTM D5185(m)		**954**	1004	804
Calcium	ppm	ASTM D5185(m)		**1068**	1114	1313
Phosphorus	ppm	ASTM D5185(m)		**987**	1073	918
Zinc	ppm	ASTM D5185(m)		**1155**	1212	1214
Sulfur	ppm	ASTM D5185(m)		**2496**	2458	2314
Lithium	ppm	ASTM D5185(m)		**<1**	<1	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**13**	11	10
Sodium	ppm	ASTM D5185(m)		**7**	9	4
Potassium	ppm	ASTM D5185(m)	>20	**2**	<1	5
Fuel	%	ASTM D7593*	>3.0	**3.1**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	**0.9**	0.4	1.1
Nitration	Abs/cm	ASTM D7624*	>20	**14.7**	9.1	12.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	**31.4**	25.8	28.5

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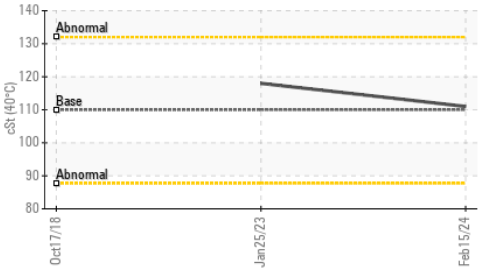
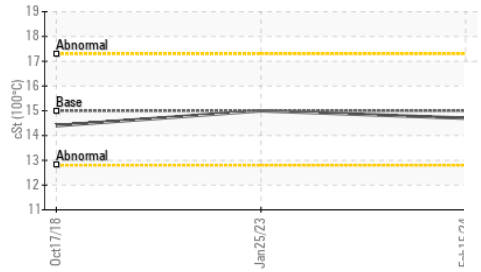
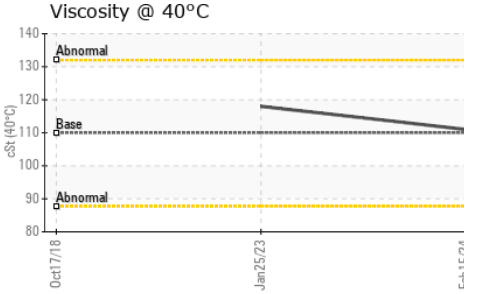
Viscosity @ 40°C



Viscosity @ 100°C



Viscosity @ 40°C



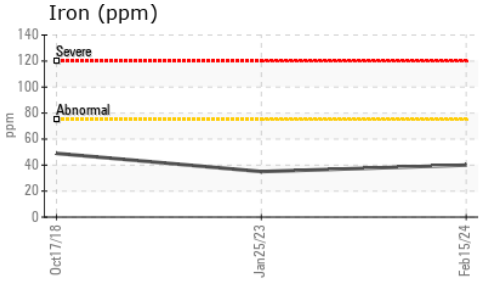
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**34.4**	19.6	25.2

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

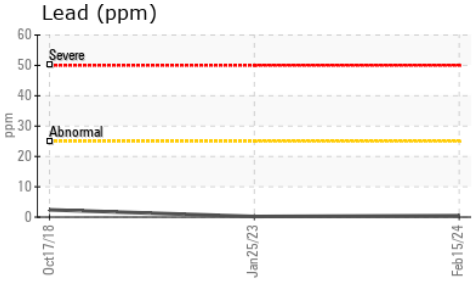
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	110	**111**	118	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.0	**14.7**	15.0	14.4
Viscosity Index (VI)	Scale	ASTM D2270*	140	**136**	131	---

GRAPHS

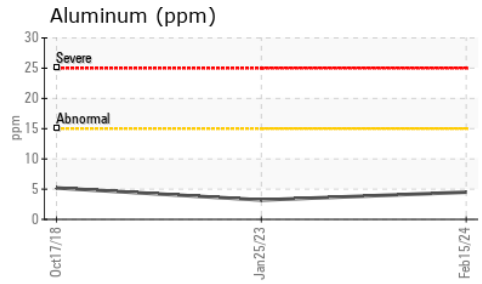
Iron (ppm)



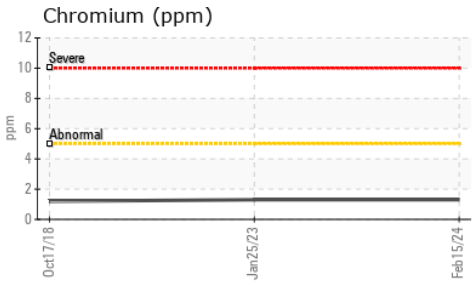
Lead (ppm)



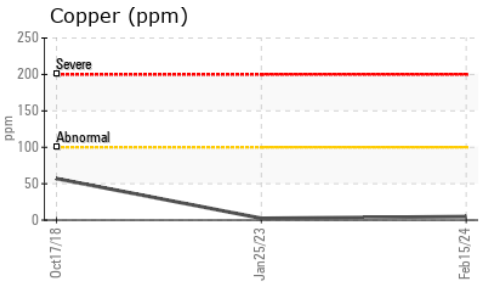
Aluminum (ppm)



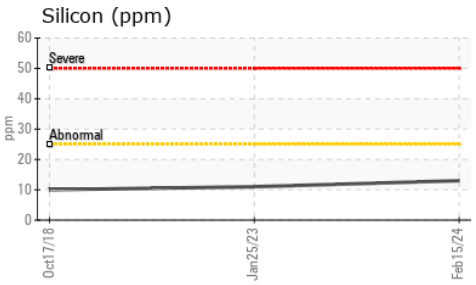
Chromium (ppm)



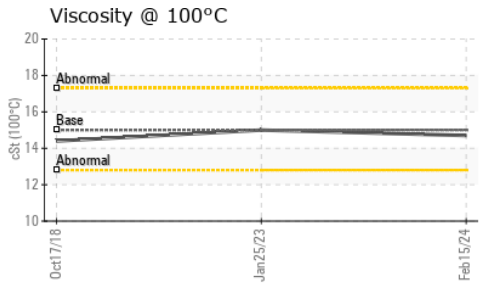
Copper (ppm)



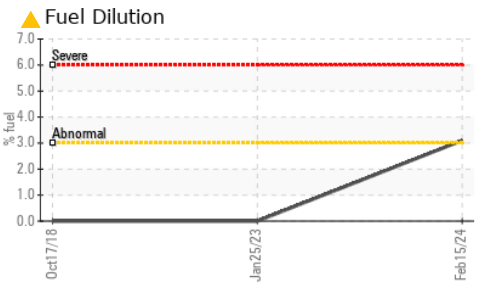
Silicon (ppm)



Viscosity @ 100°C



Fuel Dilution



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0085021 **Received** : 01 Mar 2024
Lab Number : 02619173 **Tested** : 06 Mar 2024
Unique Number : 5736283 **Diagnosed** : 06 Mar 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: FUELDILUTION, KV40, PercentFuel, VI)

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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