

Machine Id  
**SPARTAN 25048**

Component  
**Front Diesel Engine**

Fluid  
**CASTROL HYPURON 15W40 (25 LTR)**

**DIAGNOSIS**

**Recommendation**

Resample at the next service interval to monitor.

**Wear**

All component wear rates are normal.

**Contamination**

There is no indication of any contamination in the oil.

**Fluid Condition**

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PC0083780</b>	PC0056527	AP105336
Sample Date	Client Info			<b>30 Nov 2023</b>	08 Nov 2022	28 Oct 2016
Machine Age	kms	Client Info		<b>189564</b>	168994	57423
Oil Age	kms	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>3.0		<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2		<b>NEG</b>	NEG	NEG
Glycol	WC Method			<b>NEG</b>	NEG	NEG

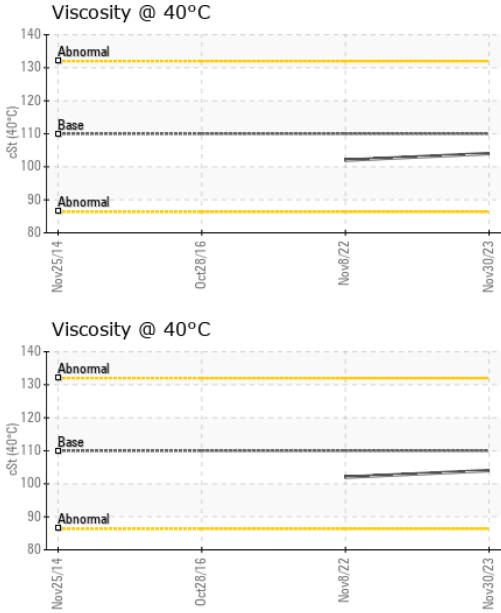
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>75	<b>51</b>	51	13
Chromium	ppm	ASTM D5185(m)	>5	<b>1</b>	2	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>15	<b>2</b>	3	3
Lead	ppm	ASTM D5185(m)	>25	<b>2</b>	2	2
Copper	ppm	ASTM D5185(m)	>100	<b>2</b>	2	4
Tin	ppm	ASTM D5185(m)	>4	<b>0</b>	<1	<1
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		<b>4</b>	30	46
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185(m)		<b>63</b>	59	<1
Manganese	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)		<b>990</b>	1033	14
Calcium	ppm	ASTM D5185(m)		<b>1064</b>	992	2436
Phosphorus	ppm	ASTM D5185(m)		<b>988</b>	1059	1014
Zinc	ppm	ASTM D5185(m)		<b>1200</b>	1175	1195
Sulfur	ppm	ASTM D5185(m)		<b>2404</b>	2641	3401
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	<b>9</b>	10	6
Sodium	ppm	ASTM D5185(m)		<b>5</b>	4	3
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	2	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	<b>1.5</b>	1.5	0.3
Nitration	Abs/cm	ASTM D7624*	>20	<b>14.9</b>	15.6	9.0
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>35.2</b>	33.8	23.4

# OIL ANALYSIS REPORT

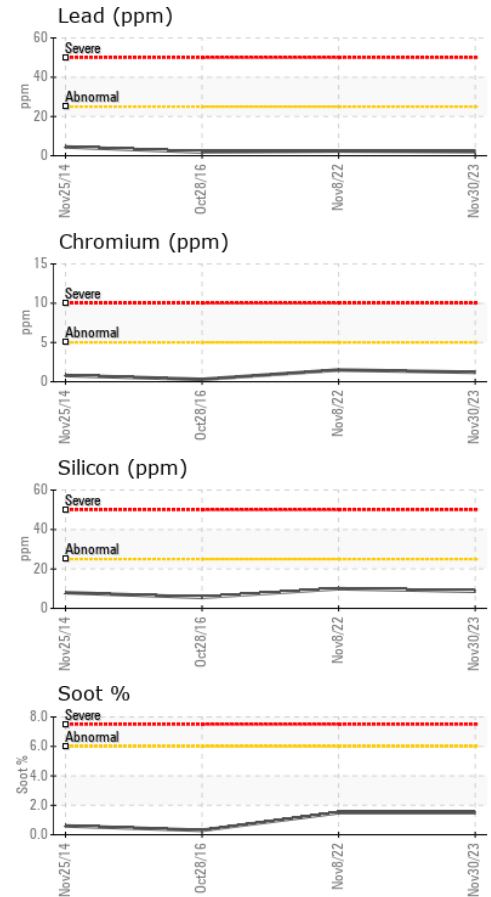
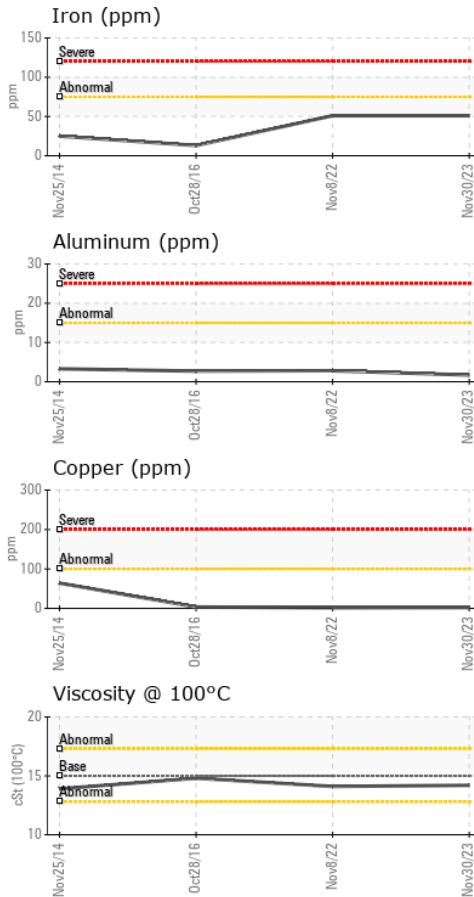


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>38.8</b>	35.1	17.8

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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	110	<b>104</b>	102	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.0	<b>14.2</b>	14.1	14.8
Viscosity Index (VI)	Scale	ASTM D2270*	140	<b>139</b>	140	---

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0083780 **Received** : 15 Dec 2023  
**Lab Number** : **02603425** **Diagnosed** : 18 Dec 2023  
**Unique Number** : 5696510 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: KV40, VI, Visual )

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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.