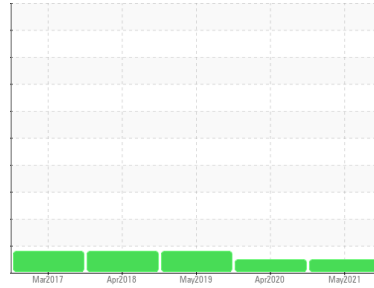


Machine Id  
**SPARTAN 4024**

Component  
**Gearbox**  
Fluid

**CASTROL SYNTEC FULL SYNTHETIC 75W90 (1 LTR)**



**DIAGNOSIS**

**Recommendation**

Confirm the source of the lubricant being utilized for top-up/fill. 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**

Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PC0041415</b>	PC0026550	PC428970
Sample Date	Client Info			<b>20 May 2021</b>	16 Apr 2020	16 May 2019
Machine Age	hrs	Client Info		<b>1037</b>	974	918
Oil Age	hrs	Client Info		<b>63</b>	56	78
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

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

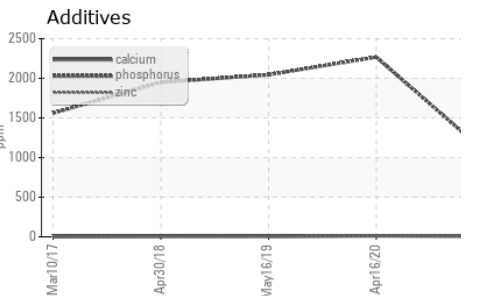
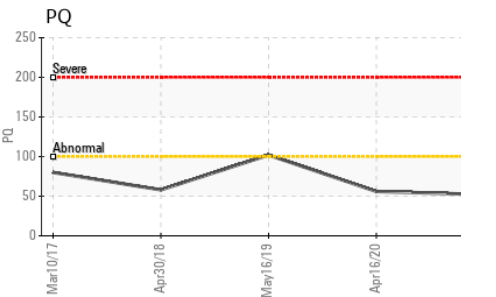
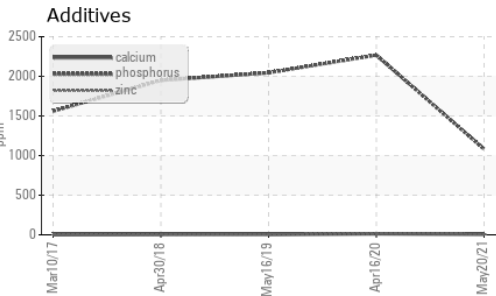
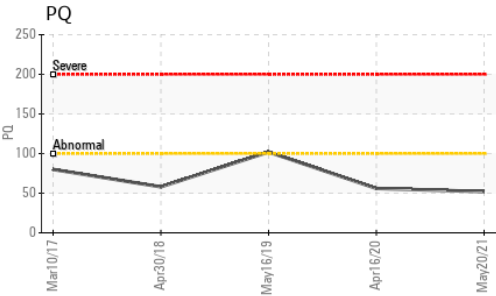
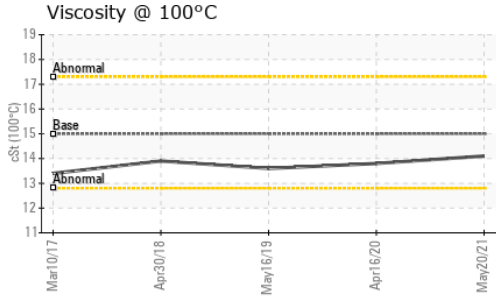
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		<b>52</b>	56	102
Iron	ppm	ASTM D5185(m)	>200	<b>470</b>	523	▲ 750
Chromium	ppm	ASTM D5185(m)	>10	<b>3</b>	4	6
Nickel	ppm	ASTM D5185(m)		<b>1</b>	1	2
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Silver	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>25	<b>&lt;1</b>	1	2
Lead	ppm	ASTM D5185(m)	>50	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185(m)	>200	<b>1</b>	2	2
Tin	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	0
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>238</b>	301	233
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Manganese	ppm	ASTM D5185(m)		<b>5</b>	6	8
Magnesium	ppm	ASTM D5185(m)		<b>1</b>	1	3
Calcium	ppm	ASTM D5185(m)		<b>6</b>	12	4
Phosphorus	ppm	ASTM D5185(m)		<b>1082</b>	2268	2045
Zinc	ppm	ASTM D5185(m)		<b>7</b>	9	6
Sulfur	ppm	ASTM D5185(m)		<b>17432</b>	23852	22746
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	<b>9</b>	10	15
Sodium	ppm	ASTM D5185(m)		<b>2</b>	2	4
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		<b>1.72</b>	3.45	3.28

# OIL ANALYSIS REPORT

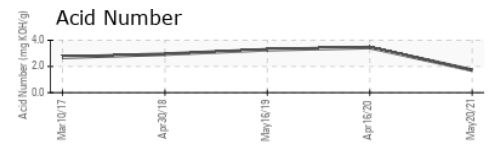
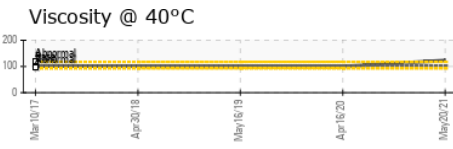
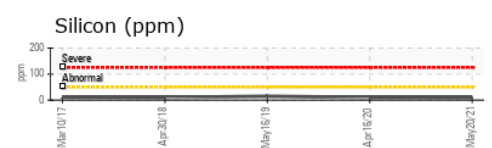
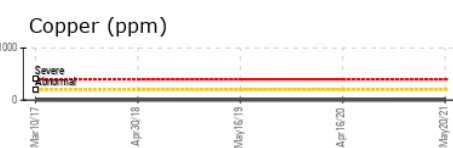
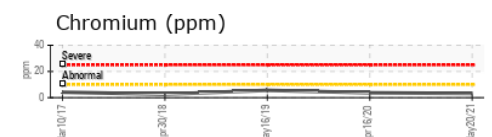
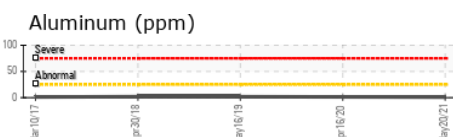
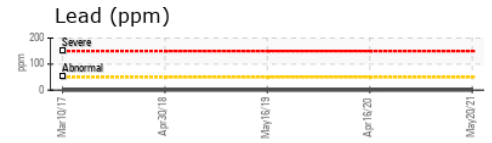
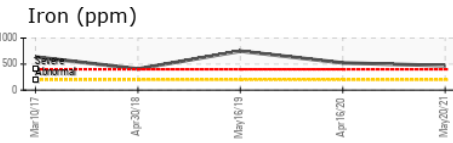


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	103	123	99.8	97.4
Visc @ 100°C	cSt	ASTM D7279(m)	15.0	14.1	13.8	13.6
Viscosity Index (VI)	Scale	ASTM D2270*	149	113	139	140

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0041415 **Received** : 25 May 2021  
**Lab Number** : 02423286 **Diagnosed** : 26 May 2021  
**Unique Number** : 5226786 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 2 ( Additional Tests: KV100, PQ, TAN Man, VI )

**City of Windsor**  
 2885 Kew Drive  
 Windsor, ON  
 CA N8T 3B7  
 Contact: Brent Paisley  
 bpaisley@citywindsor.ca  
 T: (519)945-7395  
 F: (519)948-9095

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.