



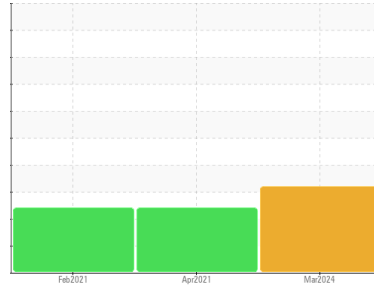
# OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area  
**GROUPE EGC INC [02622500]**  
 Machine Id  
**KOMATSU PC45MR3 203-10 (S/N KMTPC207E05005354)**  
 Component  
**Hydraulic System**  
 Fluid  
**PANOLIN HLP SYNTH 46 (60 LTR)**



## DIAGNOSIS

### ▲ Recommendation

Nous vous recommandons de vérifier tous les endroits par lesquels des contaminants peuvent pénétrer dans le système. Nous vous recommandons de remplacer le filtre et d'utiliser un système de filtrage hors-ligne afin d'améliorer la propreté du fluide. Le reniflard d'air doit être réparé. S'il n'est pas classé, nous vous recommandons de le remplacer par un reniflard à air adapté au micron et / ou au dessiccant. Si évalué, nous vous recommandons de réparer / remplacer le reniflard. Échantillonner de nouveau dans 30 à 45 jours afin de contrôler la situation.

### Wear

Les taux d'usure de tous les composants sont normaux.

### ▲ Contamination

Il y a une quantité élevée de matières particulaires (2 à 100 µm de taille) présente dans l'huile. Il y a une faible concentration (<5.0%) d'huile minérale présente dans le fluide. La teneur en eau est négligeable. Le code de propreté du système est beaucoup plus haut que la limite acceptable pour votre objectif de propreté ISO 4406.

### ● Fluid Condition

Le AN est acceptable pour ce fluide. l'huile peut encore servir si la contamination peut être réduite à un niveau acceptable.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>WC</b>	WC	WC
Sample Date	Client Info	<b>12 Mar 2024</b>	15 Apr 2021	01 Feb 2021
Machine Age	hrs Client Info	<b>5961</b>	4825	4685
Oil Age	hrs Client Info	<b>0</b>	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>SEVERE</b>	ABNORMAL	ABNORMAL

## WEAR METALS

method	limit/base	current	history1	history2
Iron ppm ASTM D5185(m)	>20	<b>6</b>	7	3
Chromium ppm ASTM D5185(m)	>10	<b>0</b>	<1	0
Nickel ppm ASTM D5185(m)	>10	<b>&lt;1</b>	<1	<1
Titanium ppm ASTM D5185(m)		<b>0</b>	<1	<1
Silver ppm ASTM D5185(m)		<b>0</b>	<1	<1
Aluminum ppm ASTM D5185(m)	>10	<b>&lt;1</b>	<1	<1
Lead ppm ASTM D5185(m)	>10	<b>3</b>	6	2
Copper ppm ASTM D5185(m)	>75	<b>7</b>	13	7
Tin ppm ASTM D5185(m)	>10	<b>0</b>	<1	<1
Antimony ppm ASTM D5185(m)		<b>0</b>	0	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

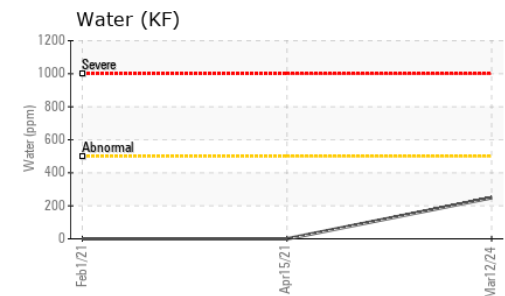
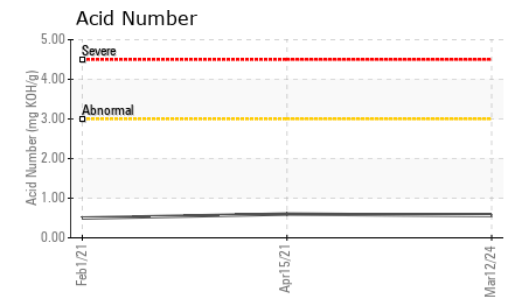
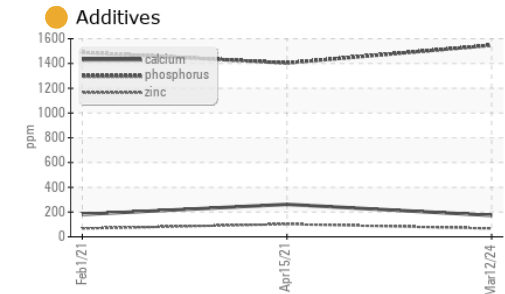
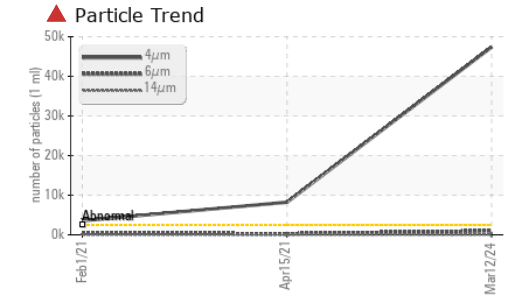
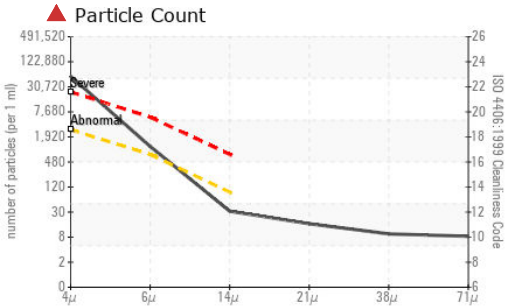
method	limit/base	current	history1	history2
Boron ppm ASTM D5185(m)	0	<b>10</b>	17	13
Barium ppm ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum ppm ASTM D5185(m)	0	<b>0</b>	<1	<1
Manganese ppm ASTM D5185(m)	0	<b>0</b>	<1	<1
Magnesium ppm ASTM D5185(m)	0	<b>10</b>	14	10
Calcium ppm ASTM D5185(m)	0	<b>173</b>	262	181
Phosphorus ppm ASTM D5185(m)	1700	<b>1547</b>	1404	1489
Zinc ppm ASTM D5185(m)	0	<b>67</b>	102	67
Sulfur ppm ASTM D5185(m)	1350	<b>1646</b>	1704	1620
Lithium ppm ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm ASTM D5185(m)	>20	<b>2</b>	2	1
Sodium ppm ASTM D5185(m)		<b>&lt;1</b>	2	<1
Potassium ppm ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Water % ASTM D6304*	>0.05	<b>0.024</b>	---	---
ppm Water ppm ASTM D6304*	>500	<b>249</b>	---	---

## INFRA-RED

method	limit/base	current	history1	history2
Soot % ASTM D7844*		<b>0</b>	---	---
Nitration Abs/cm ASTM D7624*		<b>4.1</b>	---	---
Sulfation Abs/.1mm ASTM D7415*		<b>153.1</b>	---	---
Mineral Oil Content % ASTM D7418*	<5.0%	<b>&lt;5.0</b>	▲ 9.0	▲ 8.7



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC  
**Lab Number** : 02622511  
**Unique Number** : 5747630  
**Test Package** : MOB 2 ( Additional Tests: SAMPLECOLOR, TAN Man )

**Received** : 15 Mar 2024  
**Tested** : 18 Mar 2024  
**Diagnosed** : 19 Mar 2024 - Kevin Marson

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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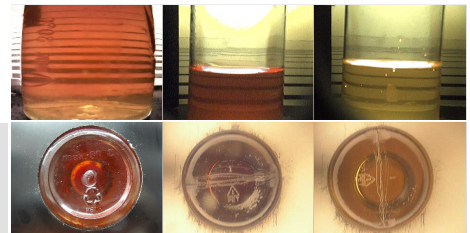
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	▲ 47400	▲ 8224	● 3567
Particles >6µm	ASTM D7647	>640	● 994	258	401
Particles >14µm	ASTM D7647	>80	28	10	28
Particles >21µm	ASTM D7647	>20	14	2	5
Particles >38µm	ASTM D7647	>4	● 8	0	0
Particles >71µm	ASTM D7647	>3	▲ 7	0	0
Oil Cleanliness	ISO 4406 (c)	>18/16/13	▲ 23/17/12	▲ 20/15/10	● 19/16/12

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	148.5	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*	0.56	0.60	0.50

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*	>0.05	NEG	NEG
Free Water	scalar	Visual*	NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	47.0	46.6	45.0	44.4
Visc @ 100°C	cSt	ASTM D7279(m)	8.1	8.5	8.1	8.1
Viscosity Index (VI)	Scale	ASTM D2270*	146	161	154	157

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					





# MINERAL OIL CONTENT REPORT

PASS

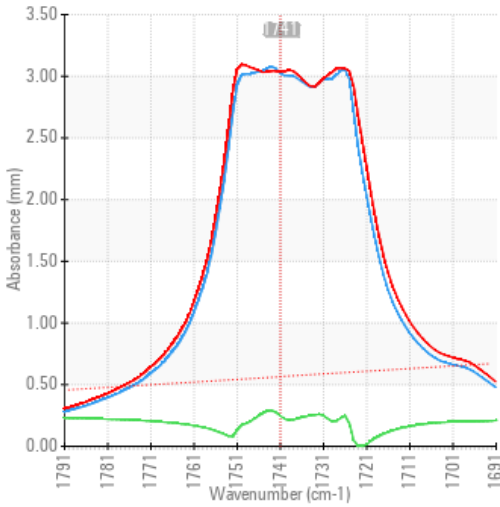


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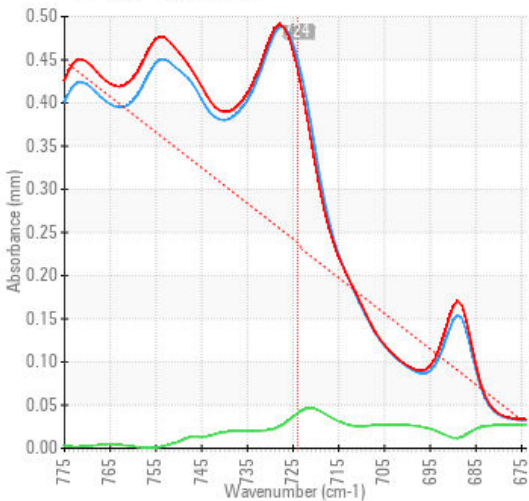
## SPECTRAL ANALYSIS

		method	limit/base	current	history1	history2
Zinc	ppm	ASTM D5185(m)	0	<b>67</b>	102	67
Mineral Oil Content	%	ASTM D7418*	<5.0%	<b>&lt;5.0</b>	9.0	8.7

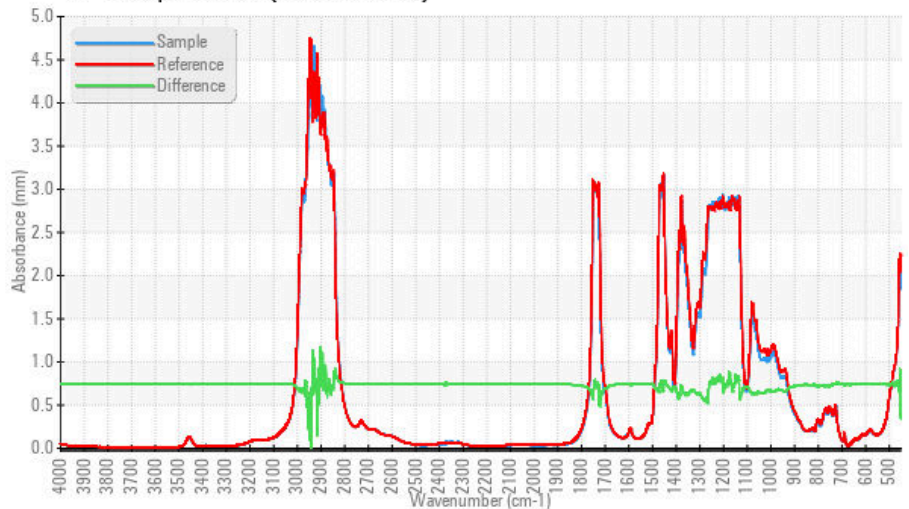
### FT-IR - Esters I



### FT-IR - Esters II



### FT-IR Spectrum (Absorbance)



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