



WEAR	<b>SEVERE</b>
CONTAMINATION	<b>SEVERE</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**KOBELCO SK210LC-9 SK210LC9 (S/N YQ13-10185)**

Component  
**Hydraulic System**

Fluid  
**SHELL NATURELLE S2 HYDRAULIC FLUID 46 (--- LTR)**

**RECOMMENDATION**

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. The filter change at the time of sampling has been noted. Resample in 30-45 days to monitor this situation.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PC977262</b>	---	---
Sample Date		Client Info		<b>12 Jun 2024</b>	---	---
Machine Age	hrs	Client Info		<b>9248</b>	---	---
Oil Age	hrs	Client Info		<b>3000</b>	---	---
Filter Age	hrs	Client Info		<b>2000</b>	---	---
Oil Changed		Client Info		<b>Not Chngd</b>	---	---
Filter Changed		Client Info		<b>Changed</b>	---	---
Sample Status				<b>SEVERE</b>	---	---

**WEAR**

Iron ppm levels are severe. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

PQ		ASTM D8184*		<b>0</b>	---	---
Iron	ppm	ASTM D5185(m)	>20	<b>▲ 102</b>	---	---
Chromium	ppm	ASTM D5185(m)	>10	<b>2</b>	---	---
Nickel	ppm	ASTM D5185(m)	>10	<b>0</b>	---	---
Titanium	ppm	ASTM D5185(m)		<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185(m)		<b>0</b>	---	---
Aluminum	ppm	ASTM D5185(m)	>10	<b>3</b>	---	---
Lead	ppm	ASTM D5185(m)	>10	<b>0</b>	---	---
Copper	ppm	ASTM D5185(m)	>75	<b>4</b>	---	---
Tin	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---	---
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

**CONTAMINATION**

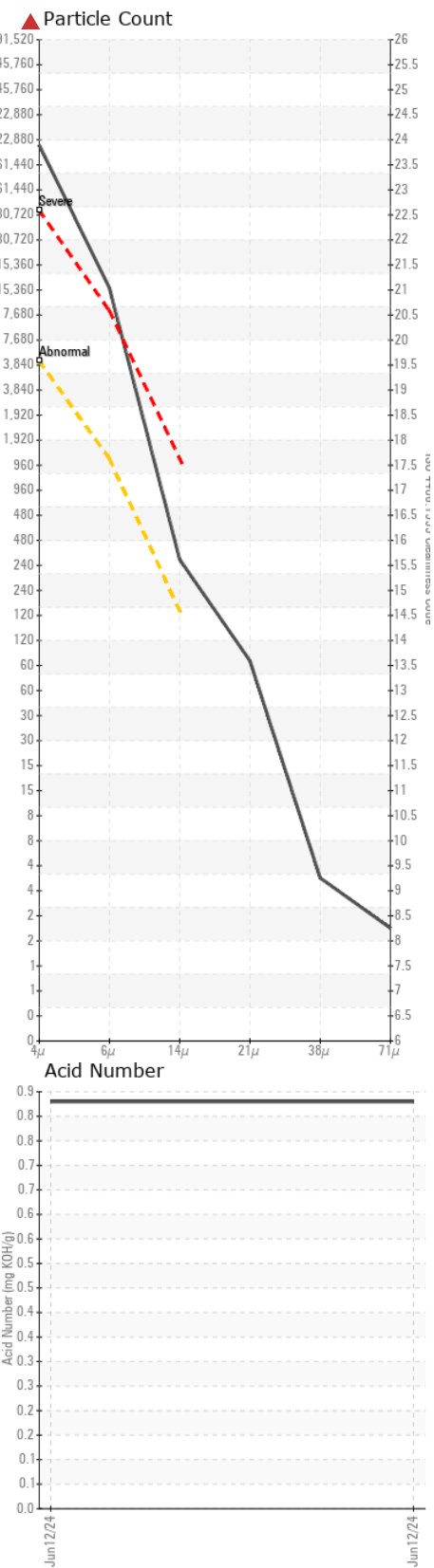
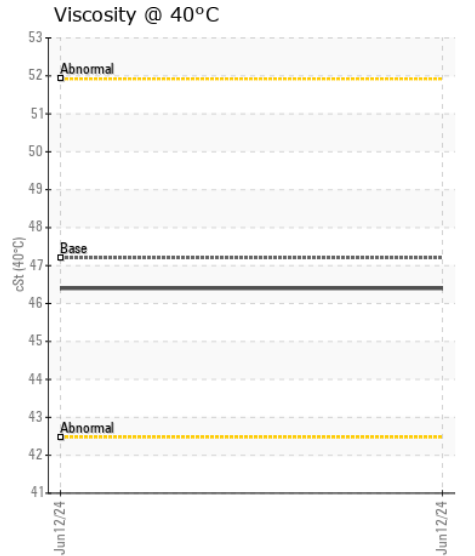
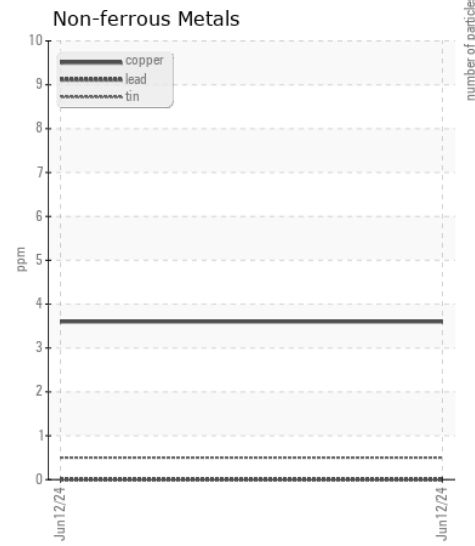
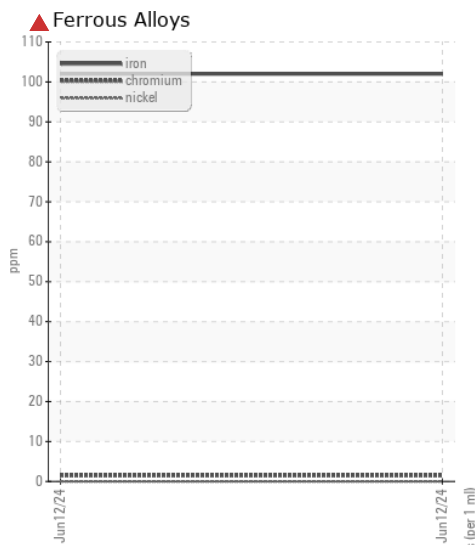
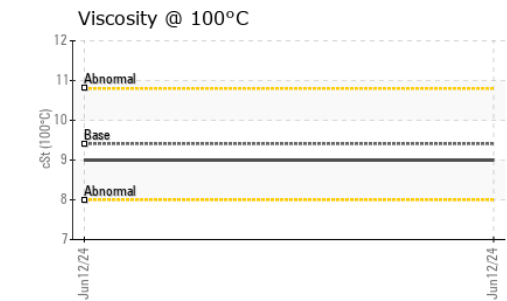
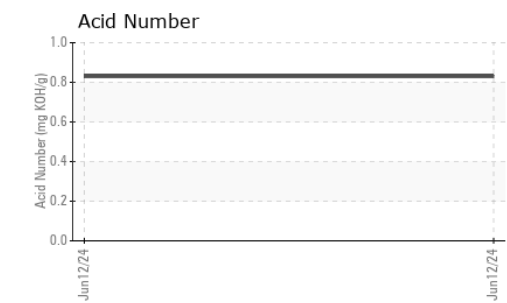
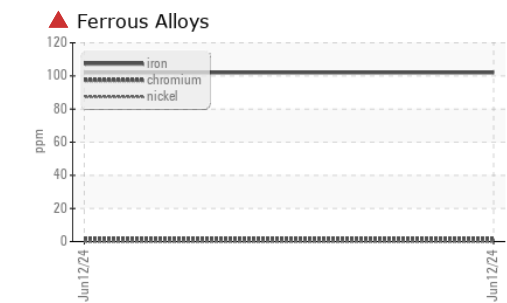
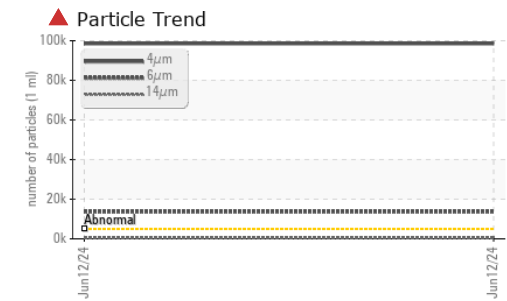
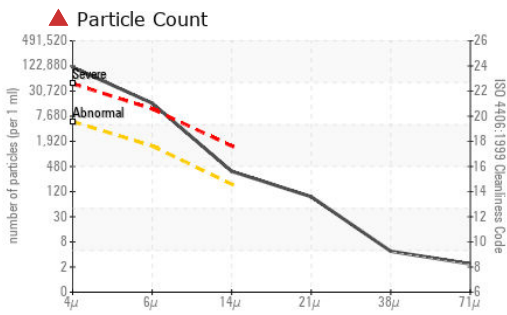
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185(m)	>20	<b>6</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	---	---
Water		WC Method	>0.1	<b>NEG</b>	---	---
Particles >4µm		ASTM D7647	>5000	<b>▲ 98538</b>	---	---
Particles >6µm		ASTM D7647	>1300	<b>▲ 13678</b>	---	---
Particles >14µm		ASTM D7647	>160	<b>▲ 324</b>	---	---
Particles >21µm		ASTM D7647	>40	<b>● 80</b>	---	---
Particles >38µm		ASTM D7647	>10	<b>4</b>	---	---
Particles >71µm		ASTM D7647	>3	<b>2</b>	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>▲ 24/21/16</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>	---	---
Emulsified Water	scalar	Visual*	>0.1	<b>NEG</b>	---	---

**FLUID CONDITION**

The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		<b>2</b>	---	---
Boron	ppm	ASTM D5185(m)		<b>7</b>	---	---
Barium	ppm	ASTM D5185(m)		<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	---	---
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185(m)		<b>1</b>	---	---
Calcium	ppm	ASTM D5185(m)		<b>11</b>	---	---
Phosphorus	ppm	ASTM D5185(m)		<b>201</b>	---	---
Zinc	ppm	ASTM D5185(m)		<b>124</b>	---	---
Sulfur	ppm	ASTM D5185(m)		<b>2129</b>	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*		<b>0.83</b>	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	47.2	<b>46.4</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	9.41	<b>9.0</b>	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	188	<b>178</b>	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC977262 **Received** : 13 Jun 2024  
**Lab Number** : **02641772** **Tested** : 14 Jun 2024  
**Unique Number** : 5799311 **Diagnosed** : 14 Jun 2024 - Kevin Marson  
**Test Package** : MOB 2 ( Additional Tests: KV100, PQ, TAN Auto, TAN Man, VI )

**LES EQUIPEMENT PINSO**  
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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.