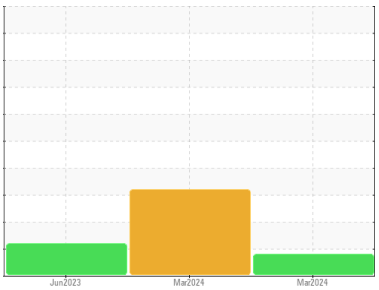
OIL ANALYSIS REPORT

Area
[02630824]
Machine Id
KOMATSU MACH3MD21 (S/N A28645)
Component
Hydraulic System
Fluid
SINTO MULTIGRADE BIO (--- GAL)

Sample Rating Trend



ADDITIVES

DIAGNOSIS

Recommendation
Confirmez la source du lubrifiant utilisé pour l'appoint/remplissage. Échantillonner de nouveau l`équipement au prochain intervalle de vidange afin d`en surveiller la condition.

Wear
Les taux d`usure de tous les composants sont normaux.

Contamination
Il n`y a pas d`huile minérale présente dans le fluide. La propreté du système est acceptable pour votre objectif de propreté ISO 4406. La propreté du système et du fluide est acceptable.

Fluid Condition
Les niveaux d`additifs indiquent l`ajout d`une autre marque ou d`un autre type d`huile. L`état de l`huile est acceptable pour la durée de service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PP**	PP	PP
Sample Date		Client Info		**23 Mar 2024**	04 Mar 2024	14 Jun 2023
Machine Age	hrs	Client Info		**1123**	1123	4
Oil Age	hrs	Client Info		**1**	1123	1
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ATTENTION**	SEVERE	ATTENTION

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.05	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	**3**	5	<1
Chromium	ppm	ASTM D5185(m)	>20	**0**	<1	0
Nickel	ppm	ASTM D5185(m)	>20	**0**	<1	<1
Titanium	ppm	ASTM D5185(m)		**<1**	0	<1
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Lead	ppm	ASTM D5185(m)	>20	**0**	13	0
Copper	ppm	ASTM D5185(m)	>20	**<1**	4	<1
Tin	ppm	ASTM D5185(m)	>20	**0**	0	0
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

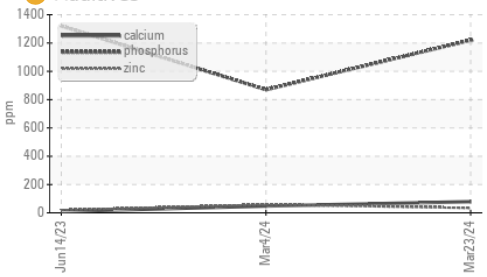
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0.7	**2**	<1	1
Barium	ppm	ASTM D5185(m)	0.0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	0.0	**0**	0	0
Manganese	ppm	ASTM D5185(m)	0.0	**0**	0	0
Magnesium	ppm	ASTM D5185(m)	0.2	**2**	4	<1
Calcium	ppm	ASTM D5185(m)	6.5	**79**	48	9
Phosphorus	ppm	ASTM D5185(m)	1332	**1220**	870	1321
Zinc	ppm	ASTM D5185(m)	4.6	**34**	58	19
Sulfur	ppm	ASTM D5185(m)	2499	**2524**	1985	2377
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**3**	5	4
Sodium	ppm	ASTM D5185(m)		**1**	1	<1
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	0

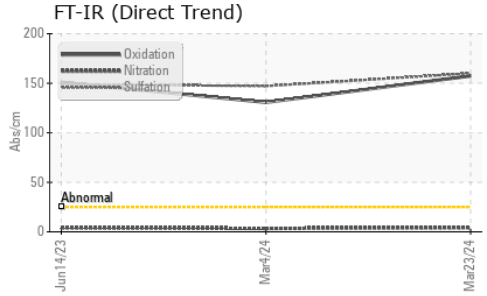
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		**0**	0	0
Nitration	Abs/cm	ASTM D7624*		**4.1**	3.4	4.1
Sulfation	Abs/.1mm	ASTM D7415*		**160.0**	147.1	148.9
Mineral Oil Content	%	ASTM D7418*	<5.0%	**0.0**	▲ 14.7	1.1

OIL ANALYSIS REPORT

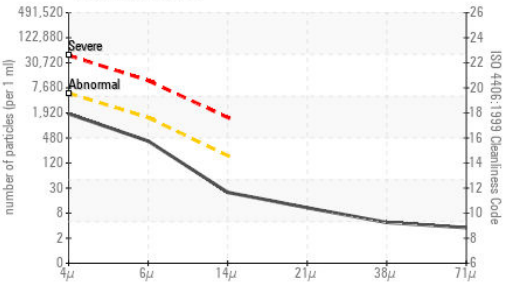
Additives



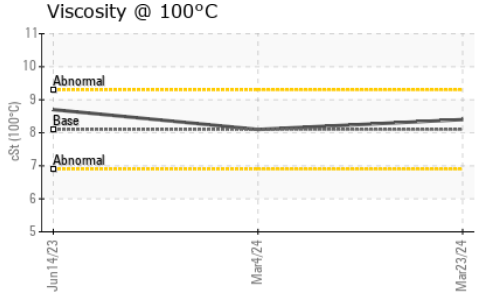
FT-IR (Direct Trend)



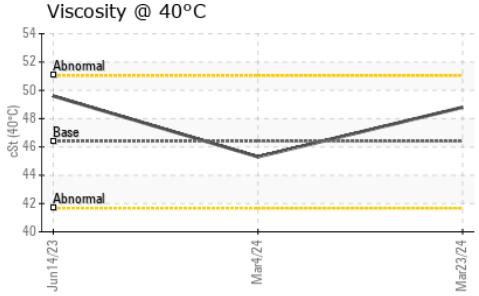
Particle Count



Viscosity @ 100°C



Viscosity @ 40°C

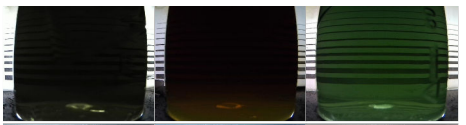
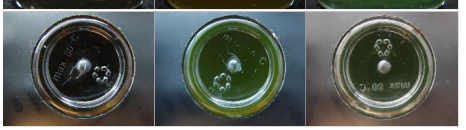


FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**1598**	2212	7667
Particles >6µm		ASTM D7647	>1300	**356**	194	2059
Particles >14µm		ASTM D7647	>160	**21**	13	123
Particles >21µm		ASTM D7647	>40	**9**	4	24
Particles >38µm		ASTM D7647	>10	**4**	1	5
Particles >71µm		ASTM D7647	>3	**3**	0	3
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**18/16/12**	18/15/11	20/18/14

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*		**157.4**	130.7	151.0

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	**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)	46.4	**48.8**	45.3	49.6
Visc @ 100°C	cSt	ASTM D7279(m)	8.1	**8.4**	8.1	8.7
Viscosity Index (VI)	Scale	ASTM D2270*	148	**148**	153	154

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PP
Lab Number : 02630823
Unique Number : 5763955
Test Package : MOB 2 (Additional Tests: FT-IR, KV100, Mineral Oil Content, VI)
Received : 22 Apr 2024
Tested : 24 Apr 2024
Diagnosed : 25 Apr 2024 - Bill Quesnel

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.

SINTO INC
3750, 14 AVE WEST
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Contact: Jimmie Roy
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MINERAL OIL CONTENT REPORT

PASS

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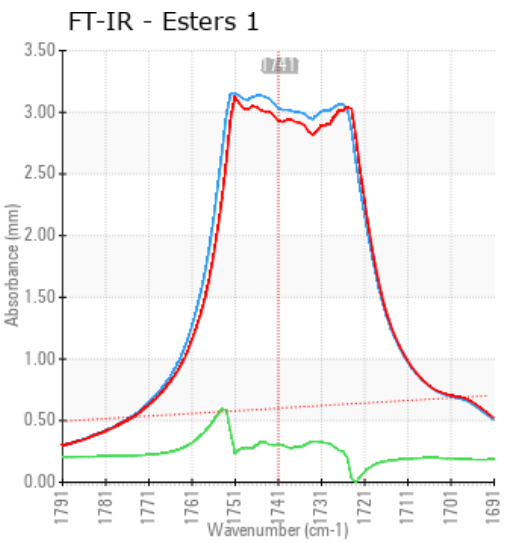
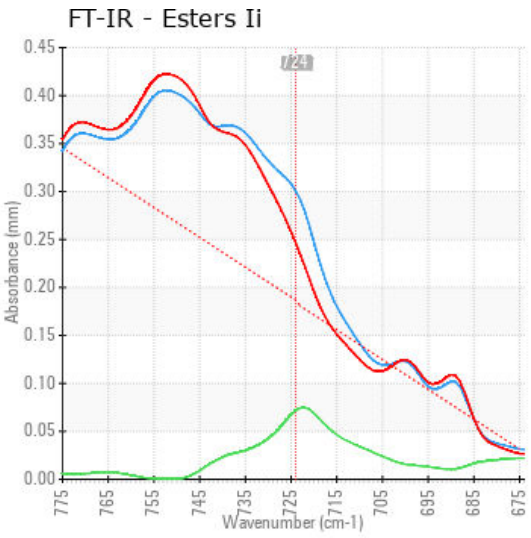
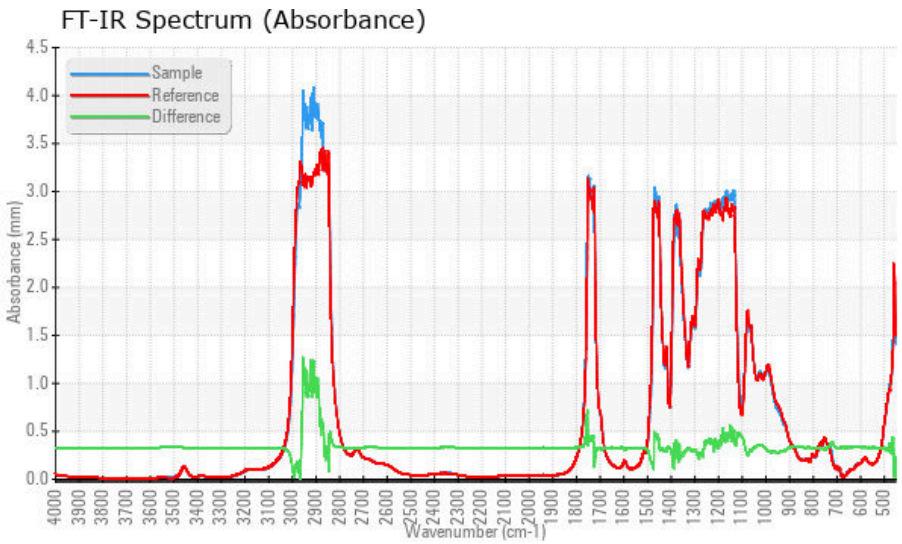
[02630824]
Machine Id
KOMATSU MACH3MD21 (S/N A28645)
Component
Hydraulic System
Fluid
SINTO MULTIGRADE BIO (--- GAL)

SPECTRAL ANALYSIS

		method	limit/base	current	history1	history2
Zinc	ppm	ASTM D5185(m)	4.6	**34**	58	19
Mineral Oil Content	%	ASTM D7418*	<5.0%	**0.0**	14.7	1.1







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