



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
KOMATSU 567714
Component
Hydraulic System
Fluid
KOMATSU HO46 (142 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. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

WEAR

All component wear rates are normal.

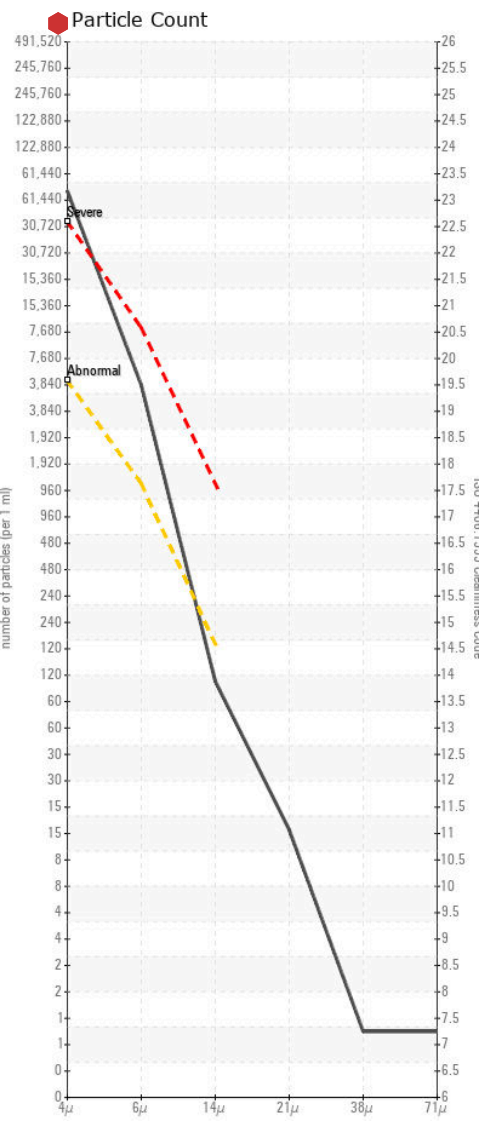
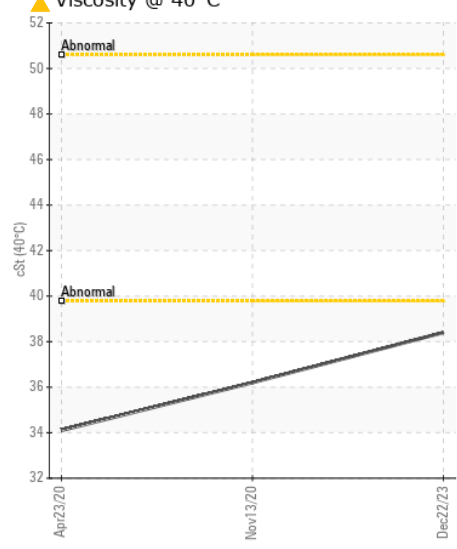
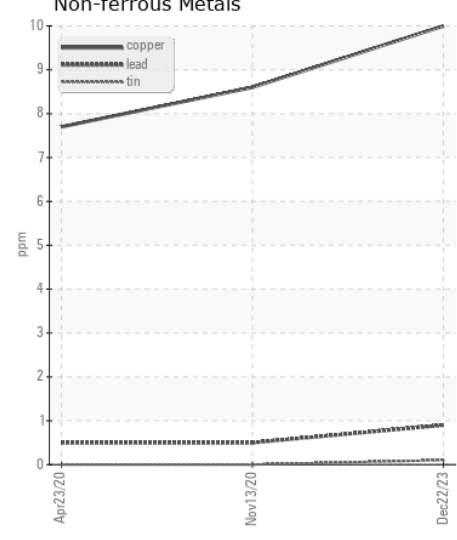
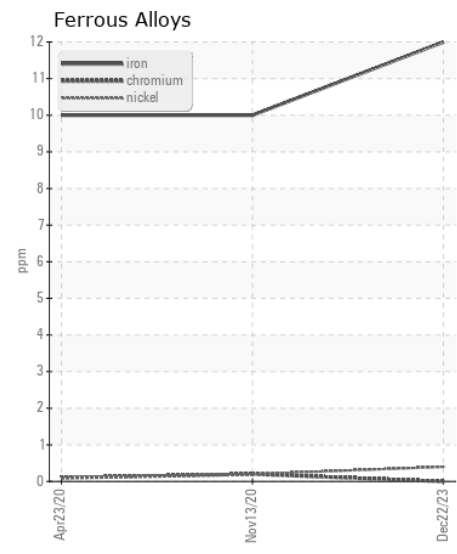
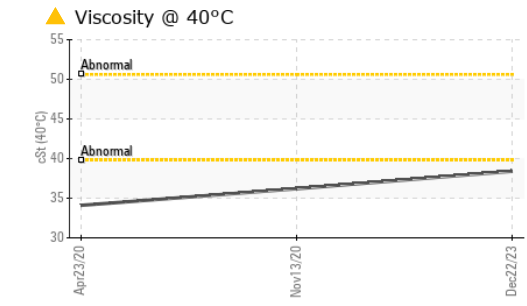
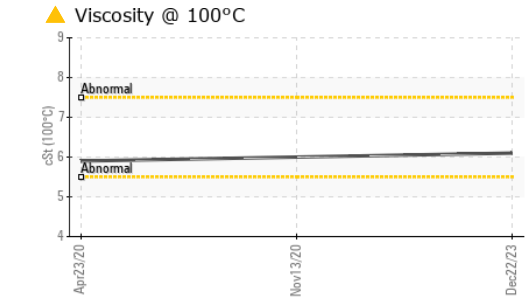
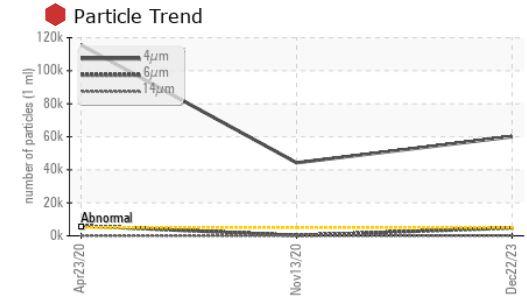
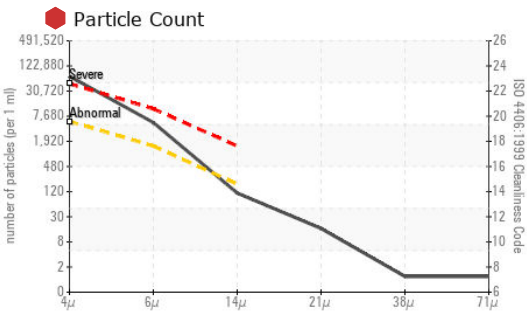
CONTAMINATION

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

FLUID CONDITION

The oil viscosity is lower than typical, possibly indicating the addition of lighter grade oil. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR02607028	TR02392870	TR02364534
Sample Date		Client Info		22 Dec 2023	13 Nov 2020	23 Apr 2020
Machine Age	hrs	Client Info		2481	2121	1940
Oil Age	hrs	Client Info		2481	2121	1940
Filter Age	hrs	Client Info		360	181	1940
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	Not Chngd	Changed
Sample Status				SEVERE	SEVERE	SEVERE
Iron	ppm	ASTM D5185(m)	>20	12	10	10
Chromium	ppm	ASTM D5185(m)	>10	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)		0	<1	3
Aluminum	ppm	ASTM D5185(m)	>10	2	2	2
Lead	ppm	ASTM D5185(m)	>10	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>75	10	9	8
Tin	ppm	ASTM D5185(m)	>10	<1	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185(m)	>20	11	11	11
Potassium	ppm	ASTM D5185(m)	>20	2	2	4
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	60043	44246	115595
Particles >6µm		ASTM D7647	>1300	4723	228	6011
Particles >14µm		ASTM D7647	>160	98	5	43
Particles >21µm		ASTM D7647	>40	14	2	13
Particles >38µm		ASTM D7647	>10	1	0	0
Particles >71µm		ASTM D7647	>3	1	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	23/19/14	23/15/10	24/20/13
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*	>0.1	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)		5	4	4
Boron	ppm	ASTM D5185(m)		6	6	6
Barium	ppm	ASTM D5185(m)		<1	<1	0
Molybdenum	ppm	ASTM D5185(m)		<1	<1	<1
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		35	35	35
Calcium	ppm	ASTM D5185(m)		3554	3559	3479
Phosphorus	ppm	ASTM D5185(m)		805	788	811
Zinc	ppm	ASTM D5185(m)		955	972	938
Sulfur	ppm	ASTM D5185(m)		6882	6769	6523
Visc @ 40°C	cSt	ASTM D7279(m)		38.4	36.2	34.1
Visc @ 100°C	cSt	ASTM D7279(m)		6.1	6.0	5.9
Viscosity Index (VI)	Scale	ASTM D2270*		103	110	116



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : TR02607028 **Received** : 08 Jan 2024
Lab Number : **02607028** **Diagnosed** : 09 Jan 2024
Unique Number : 5708114 **Diagnostician** : Kevin Marson
Test Package : MOB 2 (Additional Tests: KV100, VI)

WILCO CONTRACTORS
 3031 ARTHUR ST
 ROSSLYN, ON
 CA P7K 0P2
 Contact: David Cramer

To discuss this sample report, contact Customer Service at 1-800-827-0711.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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