

OIL ANALYSIS REPORT

Area MELT SHOP - HYDRAULIC MELT SHOP GRINDER LUBE TANK (S/N 15-4000-0770) Component

Component Tank Bulk Fluid Tank

Fluid FIRE-RESISTANT FLUID ISO 68 (275 QTS)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 6 microns in size) present in the oil. There is a light concentration of water present in the oil.

Fluid Condition

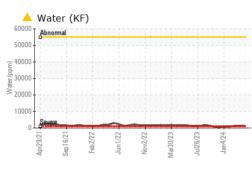
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

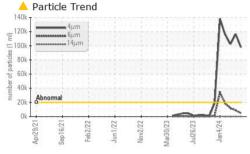
Sample Rating Trend

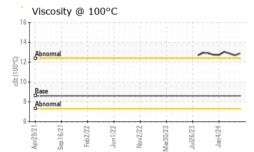
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		RP0039059	RP0042720	RP0042647
Sample Date		Client Info		09 May 2024	28 Mar 2024	05 Mar 2024
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
WEAR METALS		method	limit/base	-	history1	history2
		ASTM D5185m	mmubase		16	15
Iron	ppm			20		
Chromium	ppm	ASTM D5185m		0	<1	0
Nickel	ppm	ASTM D5185m		0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m		0	2	0
Lead	ppm	ASTM D5185m		0	<1	0
Copper	ppm	ASTM D5185m		0	<1	0
Tin	ppm	ASTM D5185m		<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	0	4	0
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	5	0	4	0
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	5	0	13	<1
Calcium	ppm	ASTM D5185m	50	1	31	1
Phosphorus	ppm	ASTM D5185m	175	608	508	511
Zinc	ppm	ASTM D5185m	62	5	14	0
CONTAMINANTS	6	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m		<1	2	0
Sodium	ppm	ASTM D5185m		0	2	0
Potassium	ppm	ASTM D5185m	>20	<1	2	0
Water	%	ASTM D6304	>55	<u> </u>	0 .138	0 .125
ppm Water	ppm	ASTM D6304	>55000	1 317	▲ 1382	1260
FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	4 97798	116527	▲ 102427
Particles >6µm		ASTM D7647	>5000	4730	▲ 8838	🔺 11941
Particles >14µm		ASTM D7647	>640	11	85	67
Particles >21µm		ASTM D7647	>160	3	24	11
Particles >38µm		ASTM D7647	>40	0	1	1
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	4 /19/11	▲ 24/20/14	4 /21/13
FLUID DEGRADA		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	3.63	0.62	0.61	0.62
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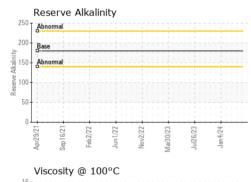


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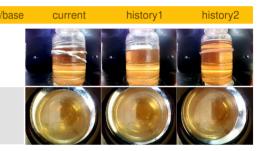




VISUAL		method	limit/base	current	history1	history2
VISUAL		methou	IIIIII/Dase	Current	Thistory I	Thistory2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*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	>55	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	68	71.82	70.86	70.4
Visc @ 100°C	cSt	ASTM D445	8.6	12.88	12.7	12.88
Viscosity Index (VI)	Scale	ASTM D2270	96	181	181	186
SAMPLE IMAGES		method	limit/base	current	history1	history2







GRAPHS Ferrous Alloys Particle Count 491.52 30 122,88 30.72 20 8 7 68 Feb2/22 Anr79/7 4406: per Sep1 1,920 18 1999 cles 480 16 Non-ferrous Metals Cle 10 120 14 12 00 30 0 'n Feb2/22 nr79/ Sep 1 64 144 214 Viscosity @ 40°C Acid Number K0H/g) 80 Abnormal Abnormal B 6.00 () 70 00 Base 1) 12 4.00 12 4.00 Abnorma 53 61 Acid Ni 50 lul26/23 . Jan 4/24 -Feb2/22 Feb2/22 Jul26/23 101/07 Sep16/21 Sep 16/21 CC/100 unr79.77 Aar30/73 : WearCheck USA - 501 Madison Ave., Cary, NC 27513 **OUTOKUMPU STAINLESS USA** : RP0039059 Received : 10 May 2024

: 16 May 2024

: 16 May 2024 - Jonathan Hester

HWY 43 N CALVERT, AL US 36513 Contact: MARIO JOHNSON Mario.johnson@outokumpu.com T: (251)321-4105 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: x:

Report Id: OUTCALAL [WUSCAR] 06175991 (Generated: 05/16/2024 18:03:32) Rev: 1

Certificate 12367

Laboratory

Sample No.

Lab Number : 06175991

Unique Number : 11022044

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Tested

Test Package : IND 2 (Additional Tests: KV100, pH, PrtCount, ReserveAlk, VI)

Diagnosed

Submitted By: DALE ROBINSON

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