

OIL ANALYSIS REPORT

NORMA

Machine Id QC240415IND2

Hydraulic System AW HYDRAULIC OIL ISO 68 (--- GAL)

DIAGNOSIS

Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

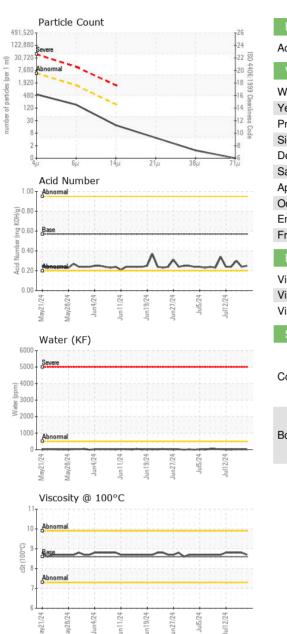
Fluid Condition

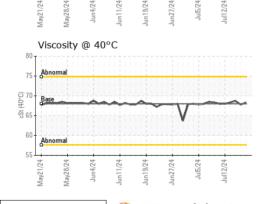
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0957681	WC0957680	WC0957679
Sample Date		Client Info		18 Jul 2024	17 Jul 2024	16 Jul 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				NORMAL	NORMAL	NORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	0	0	0
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<1	<1	0
Lead	ppm	ASTM D5185(m)	>20	0	0	0
Copper	ppm	ASTM D5185(m)	>20	<1	0	<1
Tin	ppm	ASTM D5185(m)	>20	0	0	0
Antimony	ppm	ASTM D5185(m)		<1	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)	5	0	0	0
Barium	ppm	ASTM D5185(m)	5	0	0	0
Molybdenum	ppm	ASTM D5185(m)	5	0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)	25	<1	0	0
Calcium	ppm	ASTM D5185(m)	200	46	47	51
Phosphorus	ppm	ASTM D5185(m)	300	232	238	217
Zinc	ppm	ASTM D5185(m)	370	285	301	299
Sulfur	ppm	ASTM D5185(m)	2500	5118	5322	5304
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)		0	0	0
Sodium	ppm	ASTM D5185(m)		0	0	0
Potassium	ppm	ASTM D5185(m)	>20	0	<1	0
Water	%	ASTM D6304*	>0.05	0.002	0.002	0.002
ppm Water	ppm	ASTM D6304*	>500	20	17	21
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	481	278	765
Particles >6µm		ASTM D7647	>1300	154	75	265
Particles >14µm		ASTM D7647	>160	16	6	34
Particles >21µm		ASTM D7647	>40	4	1	8
Particles >38µm		ASTM D7647	>10	1	1	1
Particles >71µm		ASTM D7647	>3	0	1	1
Oil Cleanliness		ISO 4406 (c)	>19/17/14	16/14/11	15/13/10	17/15/12



OIL ANALYSIS REPORT



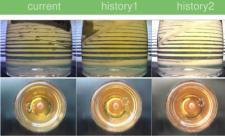


ŝ

FLUID DEGRADA	TION	method				history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.57	0.25	0.24	0.30
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 PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	68	68.3	67.8	68.7
Visc @ 100°C	cSt	ASTM D7279(m)	8.6	8.7	8.8	8.8
Viscosity Index (VI)	Scale	ASTM D2270*	96	98	102	100
SAMPLE IMAGES	S	method	limit/base	current	history1	history2

Color

Bottom



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 WearCheck Quality Control Sample Results CALA Sample No. : WC0957681 Received : 18 Jul 2024 Lab Number : 02648674 Tested : 19 Jul 2024 Burlington, ON ISO 17025:2017 Accredited Laboratory Unique Number : 5814226 Diagnosed : 21 Jul 2024 - Kevin Marson CA Test Package : IND 2 (Additional Tests: KF, KV100, VI) Contact: Dorian Anderson To discuss this sample report, contact Customer Service at 1-800-268-2131. dorian.anderson@wearcheck.com T: (289)291-4652 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. F: (905)569-8605

Report Id: QA [WCAMIS] 02648674 (Generated: 07/21/2024 16:46:17) Rev: 1

Submitted By: ? Page 2 of 2