



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
HC2234
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

RECOMMENDATION

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0935939	WC0893024	WC0810515
Sample Date		Client Info		24 May 2024	15 Mar 2024	25 Jul 2023
Machine Age	hrs	Client Info		4357	4040	3265
Oil Age	hrs	Client Info		1092	0	0
Filter Age	hrs	Client Info		1092	0	0
Oil Changed		Client Info		Not Changed	Not Changed	Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				ATTENTION	ABNORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	3	0	2
Chromium	ppm	ASTM D5185m	>10	<1	<1	0
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	2	3	<1
Lead	ppm	ASTM D5185m	>10	<1	1	<1
Copper	ppm	ASTM D5185m	>75	5	9	3
Tin	ppm	ASTM D5185m	>10	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

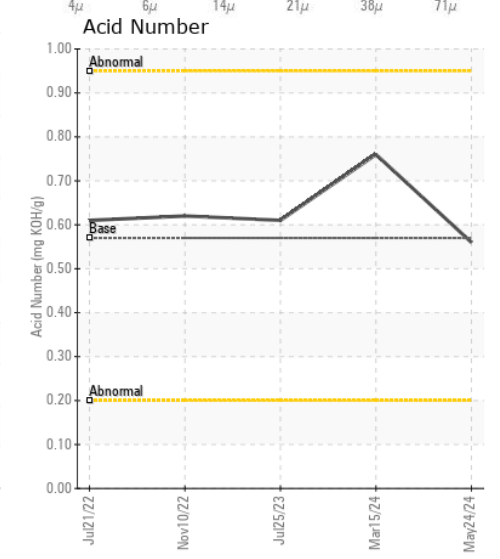
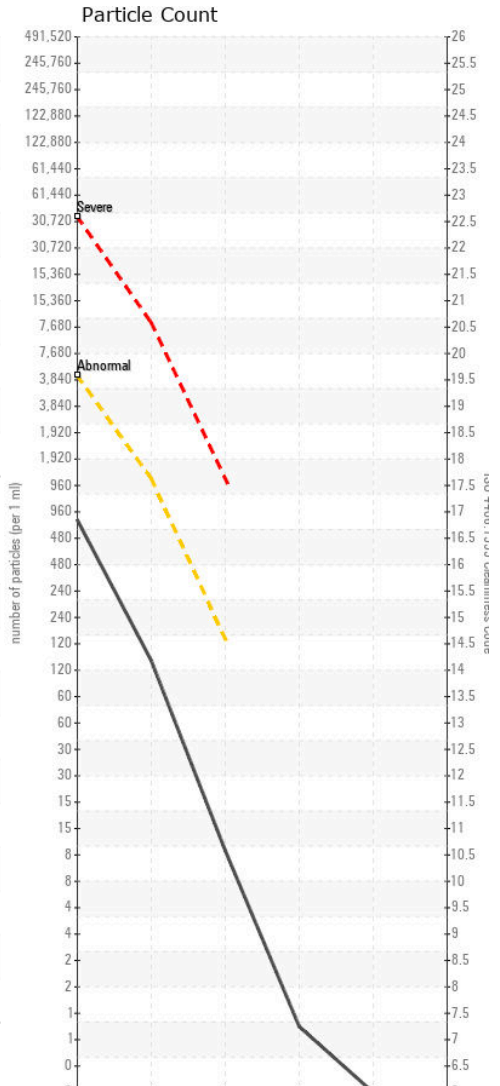
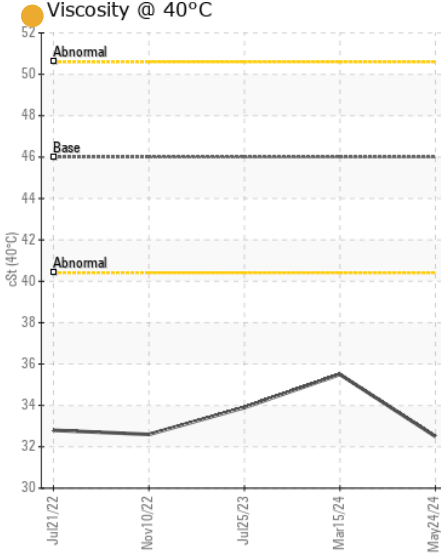
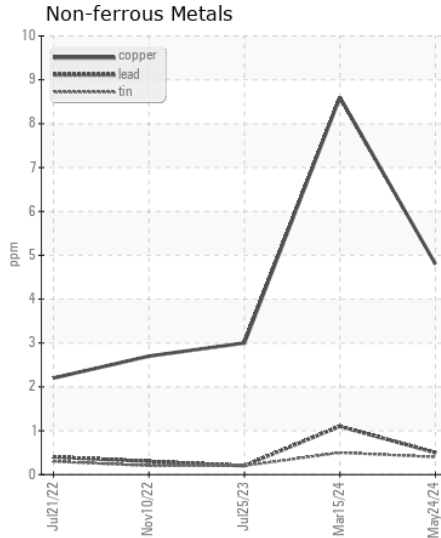
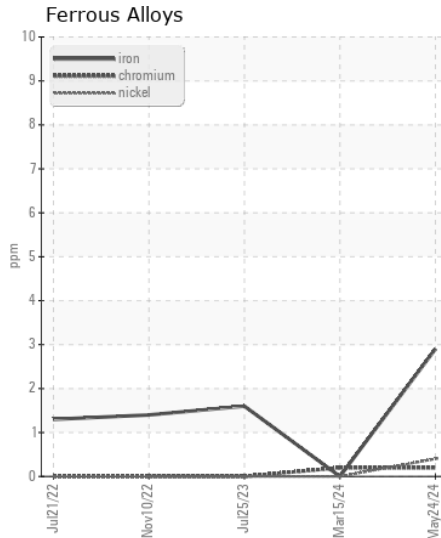
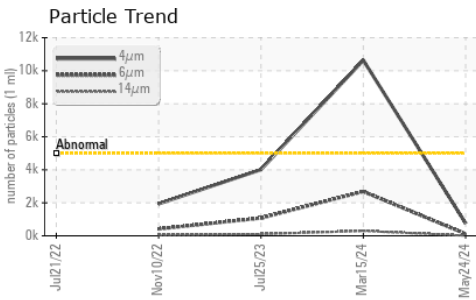
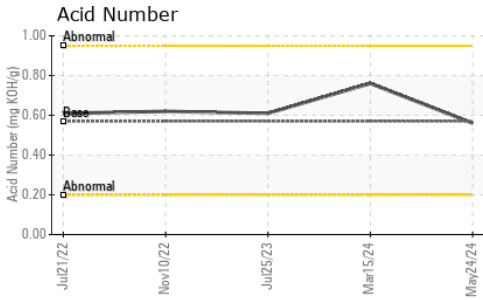
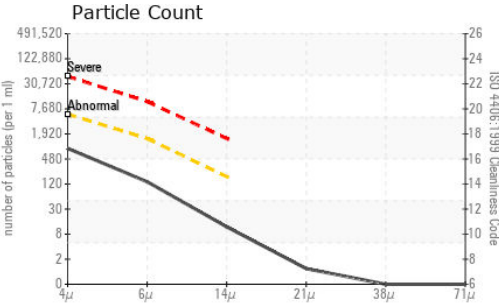
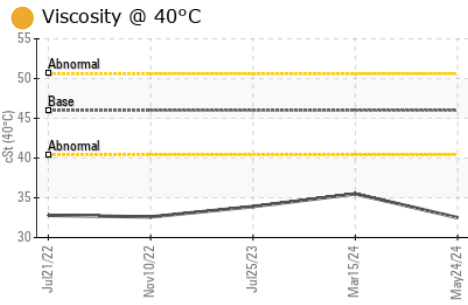
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>20	4	<1	2
Potassium	ppm	ASTM D5185m	>20	1	1	1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	757	▲ 10635	4010
Particles >6µm		ASTM D7647	>1300	120	▲ 2686	1077
Particles >14µm		ASTM D7647	>160	10	▲ 297	106
Particles >21µm		ASTM D7647	>40	1	▲ 107	32
Particles >38µm		ASTM D7647	>10	0	6	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	17/14/10	▲ 21/19/15	19/17/14
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	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

FLUID CONDITION

Viscosity of sample indicates oil is within ISO 32 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m		0	0	0
Boron	ppm	ASTM D5185m	5	0	0	0
Barium	ppm	ASTM D5185m	5	1	<1	0
Molybdenum	ppm	ASTM D5185m	5	96	0	99
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m	25	4	4	0
Calcium	ppm	ASTM D5185m	200	28	55	37
Phosphorus	ppm	ASTM D5185m	300	428	253	424
Zinc	ppm	ASTM D5185m	370	429	266	420
Sulfur	ppm	ASTM D5185m	2500	1866	3112	2278
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.56	0.76	0.61
Visc @ 40°C	cSt	ASTM D445	46	32.5	35.5	33.9



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0935939 **Received** : 14 Jun 2024
Lab Number : 06210697 **Tested** : 18 Jun 2024
Unique Number : 11083561 **Diagnosed** : 18 Jun 2024 - Angela Borella
Test Package : CONST

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Certificate L2367
 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.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)