



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Area
AMR-St Louis
Machine Id
574556 CATERPILLAR 966M CAT0966MLKJP02701
Component
Hydraulic System
Fluid
SHELL TELLUS 46 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. 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		DJJ0020767	DJJ0020801	DJJ0012799
Sample Date		Client Info		06 Feb 2024	16 Oct 2023	24 May 2023
Machine Age	hrs	Client Info		15844	15098	14098
Oil Age	hrs	Client Info		1000	0	1000
Filter Age	hrs	Client Info		500	0	500
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

The chromium level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	15	10	10
Chromium	ppm	ASTM D5185m	>10	▲ 24	11	5
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	2	1	<1
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>75	2	<1	1
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

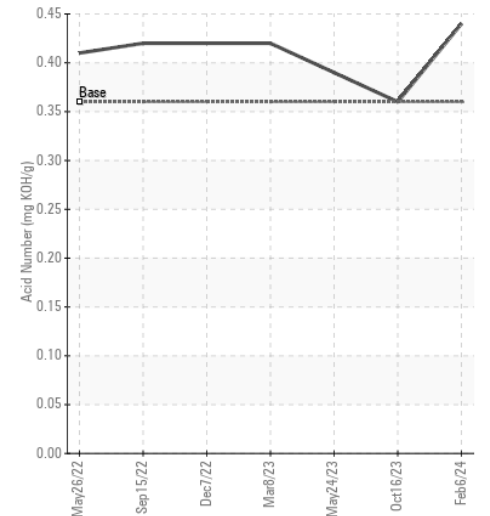
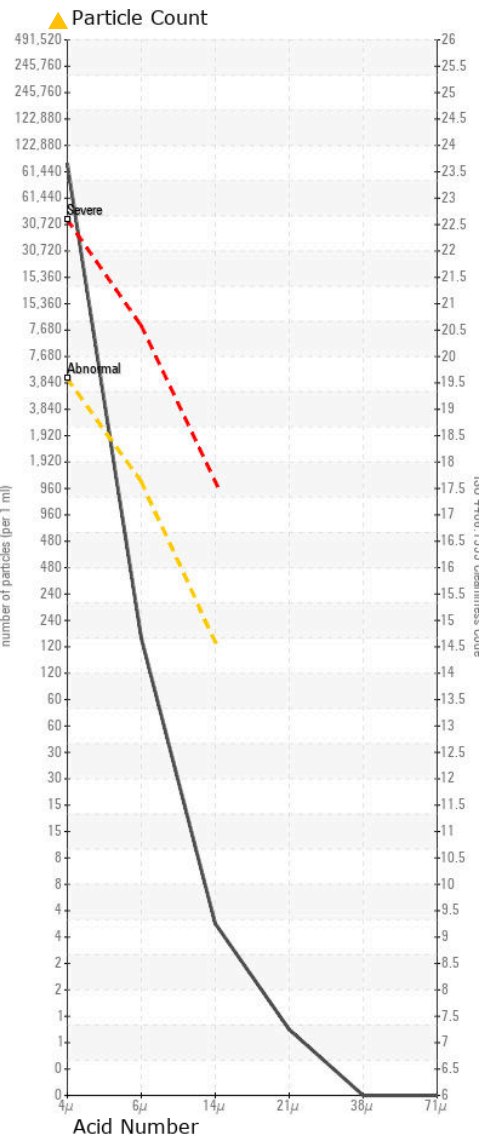
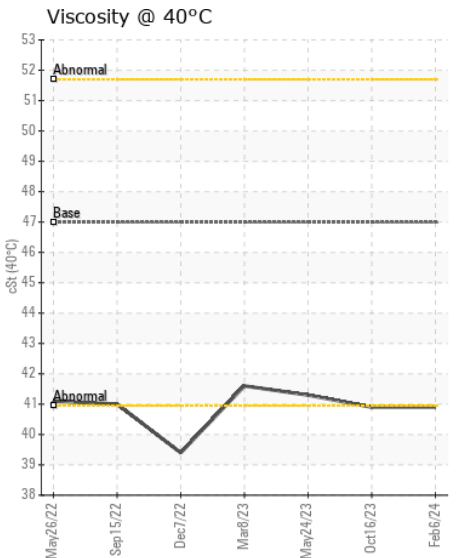
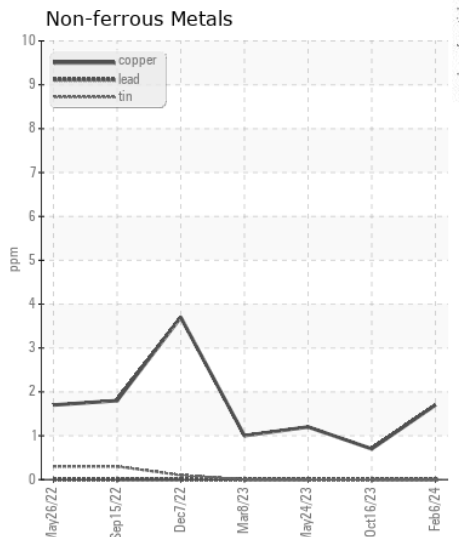
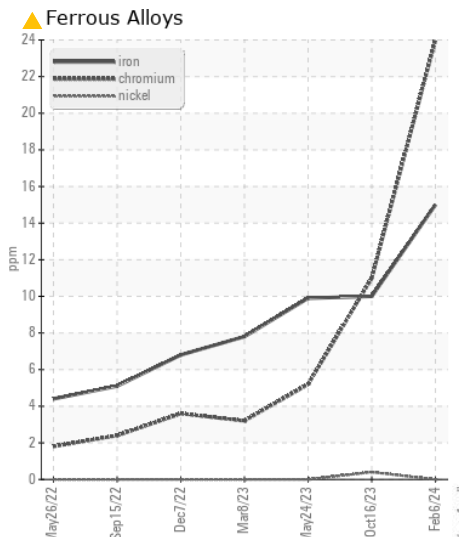
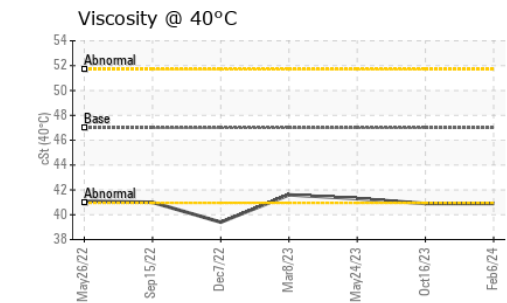
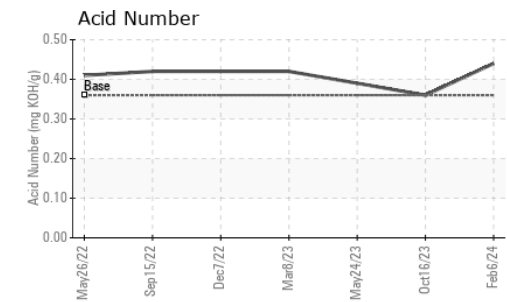
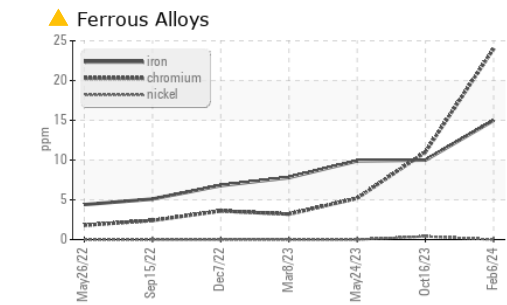
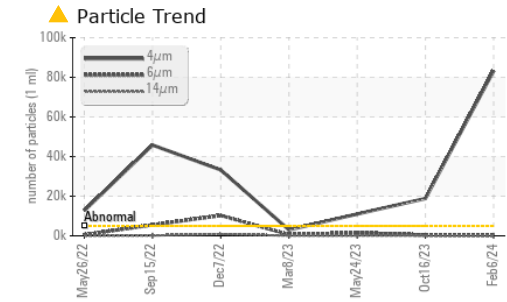
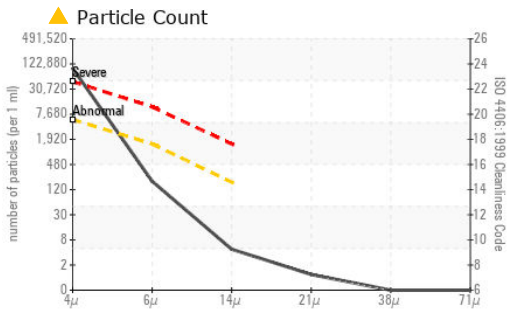
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	3	2	2
Potassium	ppm	ASTM D5185m	>20	0	<1	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 83253	▲ 18817	▲ 10994
Particles >6µm		ASTM D7647	>1300	168	393	● 1574
Particles >14µm		ASTM D7647	>160	4	21	56
Particles >21µm		ASTM D7647	>40	1	9	13
Particles >38µm		ASTM D7647	>10	0	1	1
Particles >71µm		ASTM D7647	>3	0	1	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 24/15/9	▲ 21/16/12	▲ 21/18/13
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

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oils additive package is suitable for further service.

Sodium	ppm	ASTM D5185m		3	0	2
Boron	ppm	ASTM D5185m	0.0	<1	0	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	<1	0	1
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m	11	39	55	52
Calcium	ppm	ASTM D5185m	35	108	69	66
Phosphorus	ppm	ASTM D5185m	266	294	326	327
Zinc	ppm	ASTM D5185m	276	367	410	391
Sulfur	ppm	ASTM D5185m	1847	919	1017	972
Acid Number (AN)	mg KOH/g	ASTM D8045	0.36	0.44	0.36	0.39
Visc @ 40°C	cSt	ASTM D445	46.99	40.9	40.9	41.3



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0020767
Lab Number : 06105124
Unique Number : 10903354
Test Package : MOBCE
Received : 29 Feb 2024
Tested : 01 Mar 2024
Diagnosed : 04 Mar 2024 - Don Baldrige

ADVANTAGE METALS RECYCLING - ST LOUIS
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 ST LOUIS, MO
 US 63102
 Contact: JEANETTE VAGO
 jeanette.vago@advantagerecycling.com

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)