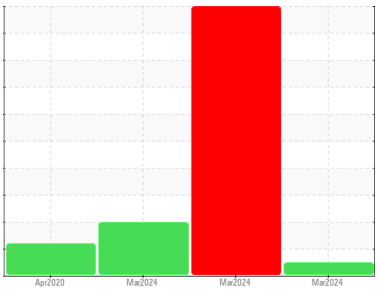
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
CATERPILLAR 980M L56
Component
Hydraulic System
Fluid
SHELL ECOSAFE S3 DU 46 (--- GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. 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 INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0118493**	PCA0118490	PCA0118515
Sample Date		Client Info		**28 Mar 2024**	25 Mar 2024	11 Mar 2024
Machine Age	hrs	Client Info		**16686**	16640	16346
Oil Age	hrs	Client Info		**0**	1303	1011
Oil Changed		Client Info		**Changed**	Not Changd	Not Changd
Sample Status				**NORMAL**	SEVERE	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.1	**NEG**	NEG	NEG

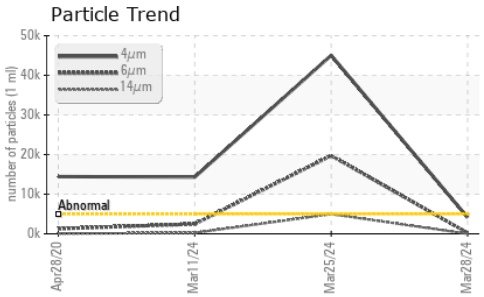
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**10**	10	6
Chromium	ppm	ASTM D5185m	>10	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>10	**0**	1	<1
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>10	**<1**	2	<1
Lead	ppm	ASTM D5185m	>10	**<1**	0	0
Copper	ppm	ASTM D5185m	>75	**42**	38	28
Tin	ppm	ASTM D5185m	>10	**<1**	1	<1
Antimony	ppm	ASTM D5185m		**---**	---	---
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

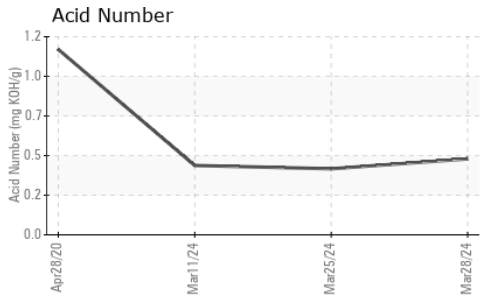
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**1**	<1	<1
Magnesium	ppm	ASTM D5185m		**2**	4	2
Calcium	ppm	ASTM D5185m		**8**	6	5
Phosphorus	ppm	ASTM D5185m		**659**	605	700
Zinc	ppm	ASTM D5185m		**55**	56	43
Sulfur	ppm	ASTM D5185m		**3994**	3986	4374

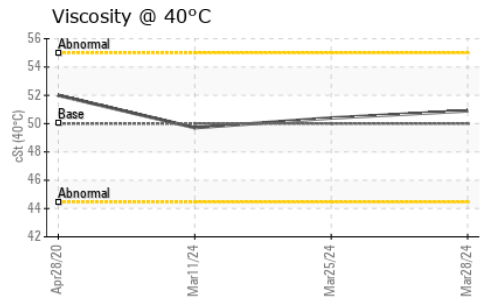
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**<1**	1	<1
Sodium	ppm	ASTM D5185m		**2**	1	1
Potassium	ppm	ASTM D5185m	>20	**3**	3	2

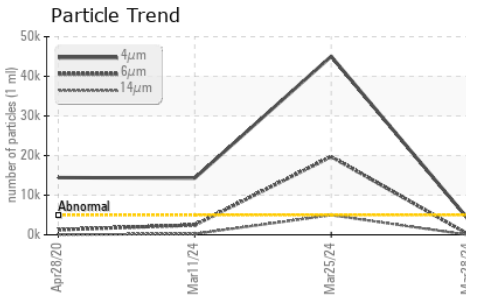
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**4135**	▲ 45039	▲ 14317
Particles >6µm		ASTM D7647	>1300	**227**	▲ 19731	● 2463
Particles >14µm		ASTM D7647	>160	**11**	▲ 4971	● 244
Particles >21µm		ASTM D7647	>40	**3**	▲ 2494	● 59
Particles >38µm		ASTM D7647	>10	**0**	▲ 363	4
Particles >71µm		ASTM D7647	>3	**0**	▲ 47	1
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**19/15/11**	▲ 23/21/19	▲ 21/18/15

OIL ANALYSIS REPORT







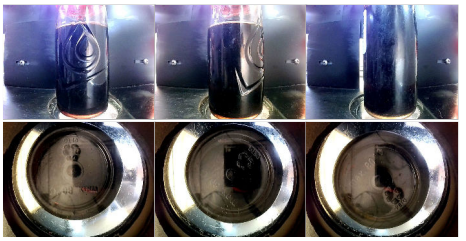


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.46**	0.40	0.42

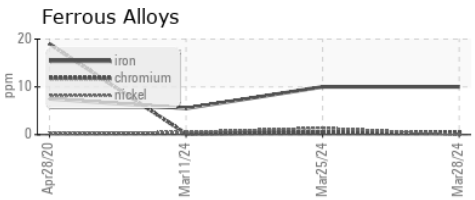
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

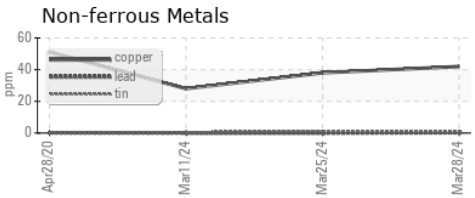
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	50.0	**50.9**	50.4	49.71

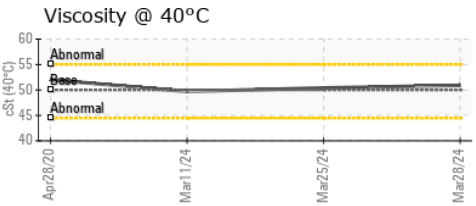
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

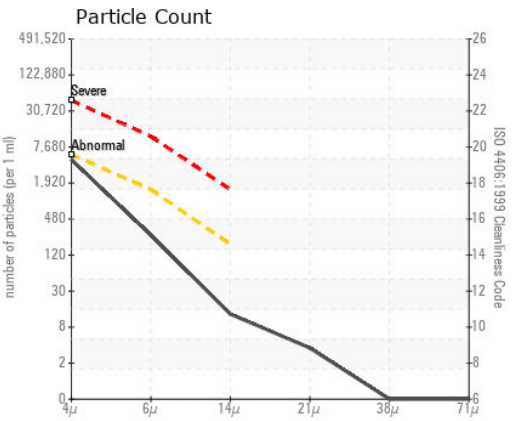


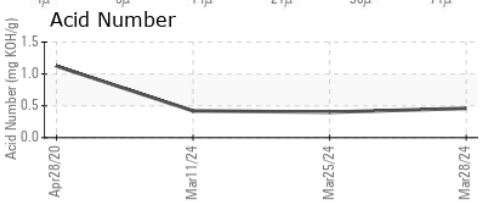
GRAPHS











Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0118493
Lab Number : 06153039
Unique Number : 10983117
Test Package : MOB 2

Received : 18 Apr 2024
Tested : 19 Apr 2024
Diagnosed : 19 Apr 2024 - Wes Davis

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)

SCRAP METAL SERVICES (SMS Mill Services LLC)
1500 COMMERCIAL AVE
MINGO JUNCTION, OH
US 43938
Contact: FRANK NALLY
fnally@scrapmetalservices.com
T:
F:

Report Id: SCRMIN [WUSCAR] 06153039 (Generated: 04/19/2024 12:29:28) Rev: 1
Contact/Location: FRANK NALLY - SCRMIN