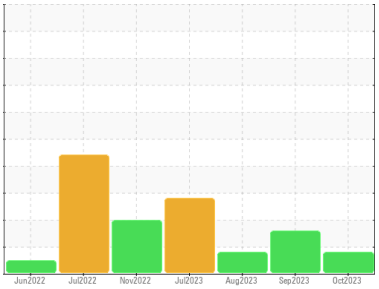
PROBLEM SUMMARY

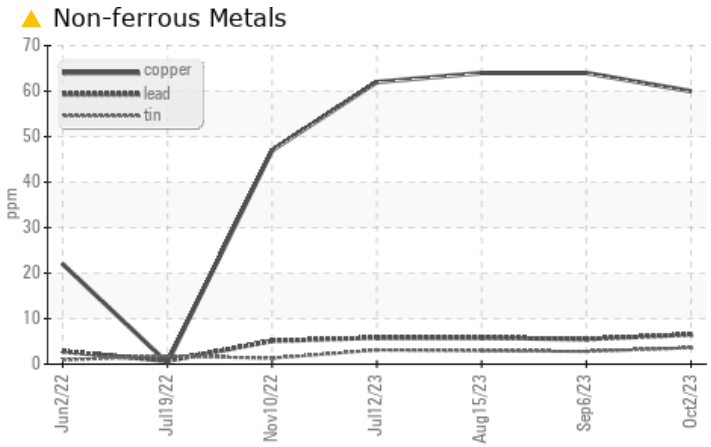
Area
JAL NM
Machine Id
MRC-205
Component
Compressor
Fluid
LO-ASH ENGINE OIL SAE 40 (--- GAL)

Sample Rating Trend



WEAR

COMPONENT CONDITION SUMMARY



RECOMMENDATION

No corrective action is recommended at this time.
Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Copper	ppm	ASTM D5185m	>50	▲ **60**	▲ 64	▲ 64

Customer Id: EOGMID
Sample No.: TO60001481
Lab Number: 05980486
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

06 Sep 2023 Diag: Jonathan Hester

WEAR

No corrective action is recommended at this time. Resample at the next service interval to monitor.The copper level is abnormal. All other component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

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15 Aug 2023 Diag: Don Baldridge

WEAR

No corrective action is recommended at this time. Resample at the next service interval to monitor.The copper level is abnormal. All other component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

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12 Jul 2023 Diag: Doug Bogart

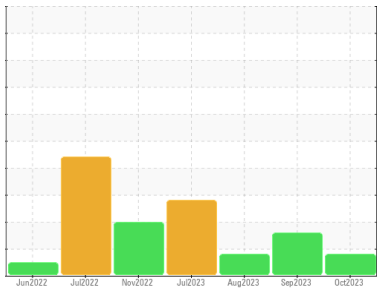
WEAR

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.The copper level is abnormal. All other component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
JAL NM
Machine Id
MRC-205
Component
Compressor
Fluid
LO-ASH ENGINE OIL SAE 40 (--- GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

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

Contamination
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are 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		**TO60001481**	TO60001446	TO60001181
Sample Date		Client Info		**02 Oct 2023**	06 Sep 2023	15 Aug 2023
Machine Age	hrs	Client Info		**19739**	19115	18591
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	current	history1	history2
Iron	ppm	ASTM D5185m	>50	**0**	2	<1
Chromium	ppm	ASTM D5185m	>10	**0**	0	0
Nickel	ppm	ASTM D5185m		**<1**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**<1**	0	0
Aluminum	ppm	ASTM D5185m	>25	**1**	0	0
Lead	ppm	ASTM D5185m	>25	**6**	6	6
Copper	ppm	ASTM D5185m	>50	▲ **60**	▲ 64	▲ 64
Tin	ppm	ASTM D5185m	>15	**4**	3	3
Vanadium	ppm	ASTM D5185m		**0**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	0	0

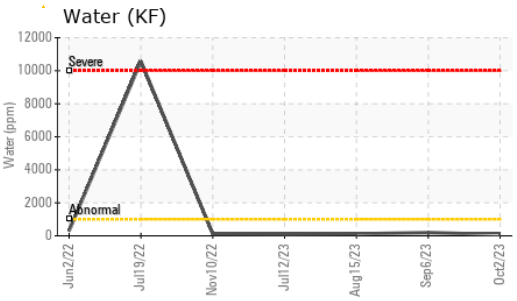
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	37	**62**	68	68
Barium	ppm	ASTM D5185m	12	**0**	0	0
Molybdenum	ppm	ASTM D5185m	200	**<1**	2	2
Manganese	ppm	ASTM D5185m		**<1**	<1	0
Magnesium	ppm	ASTM D5185m	5	**14**	11	8
Calcium	ppm	ASTM D5185m	1600	**1310**	1217	1321
Phosphorus	ppm	ASTM D5185m	300	**290**	275	294
Zinc	ppm	ASTM D5185m	400	**383**	318	332
Sulfur	ppm	ASTM D5185m	2600	**1957**	1935	2042

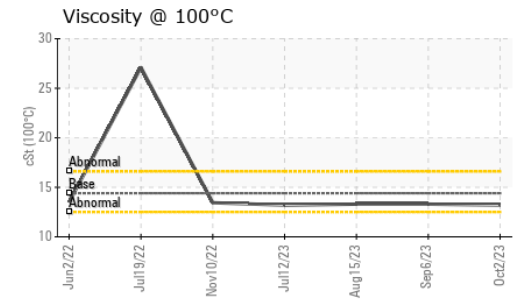
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**1**	2	<1
Sodium	ppm	ASTM D5185m		**<1**	4	3
Potassium	ppm	ASTM D5185m	>20	**2**	0	0
Water	%	ASTM D6304	>0.1	**0.008**	0.019	0.011
ppm Water	ppm	ASTM D6304	>1000	**80.1**	196.1	119.9

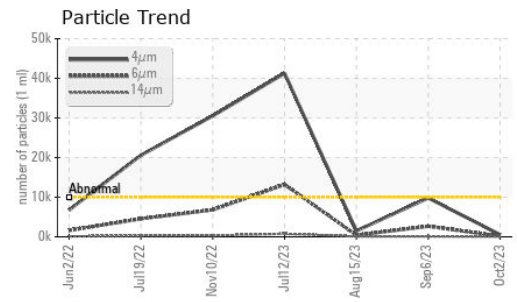
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	**552**	9803	1495
Particles >6µm		ASTM D7647	>2500	**168**	▲ 2678	408
Particles >14µm		ASTM D7647	>320	**14**	101	66
Particles >21µm		ASTM D7647	>80	**4**	19	34
Particles >38µm		ASTM D7647	>20	**0**	0	5
Particles >71µm		ASTM D7647	>4	**0**	0	2
Oil Cleanliness		ISO 4406 (c)	>20/18/15	**16/15/11**	▲ 20/19/14	18/16/13

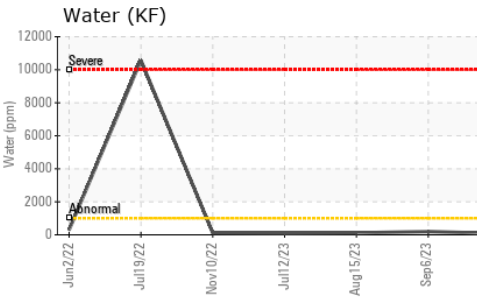
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.65**	0.758	0.502

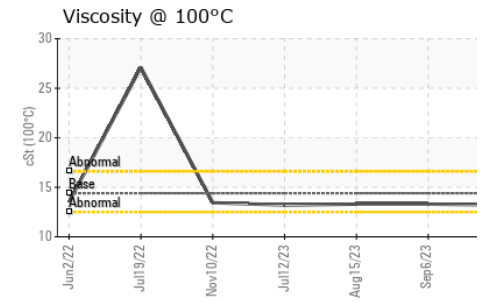
OIL ANALYSIS REPORT







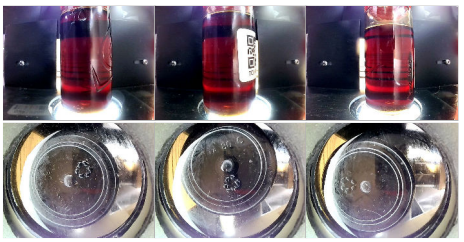




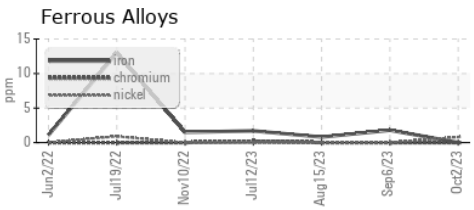
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

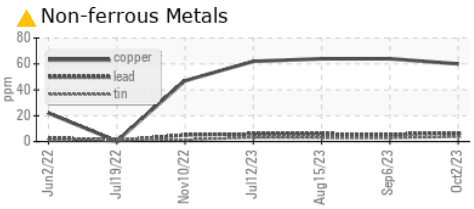
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	138	**129**	128	129
Visc @ 100°C	cSt	ASTM D445	14.4	**13.2**	13.3	13.3
Viscosity Index (VI)	Scale	ASTM D2270	102	**95**	97	97

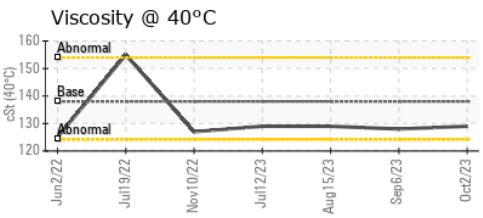
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

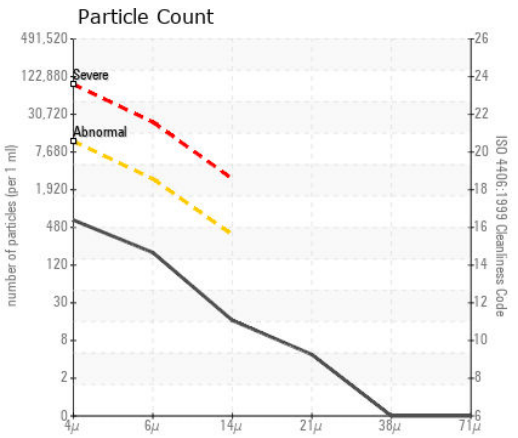


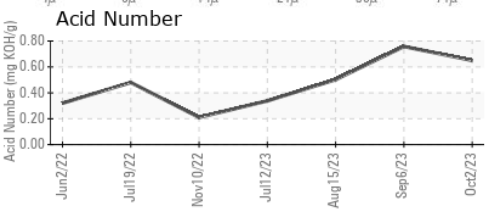
GRAPHS











Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO60001481 **Received** : 16 Oct 2023
Lab Number : 05980486 **Diagnosed** : 18 Oct 2023
Unique Number : 10697781 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, KV100, PrtCount, VI)

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)

MIDLAND - EOG RESOURCES INC.
5509 CHAMPIONS DRIVE
MIDLAND, TX
US 79706
Contact: HERMAN GARZA
herman_garza@eogresources.com
T: (432)686-3600
F: