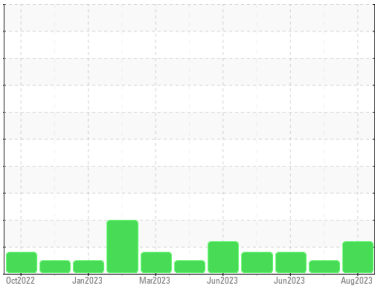
PROBLEM SUMMARY

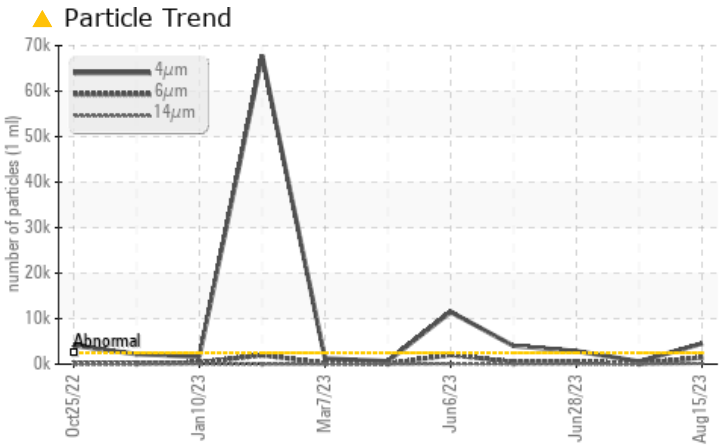
Sample Rating Trend



ISO

Area
Paper Side
Machine Id
PM 2 MAIN BOWSER
Component
Bearing Lube
Fluid
SHELL PM S2 M 220 (3500 GAL)

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	NORMAL	ATTENTION
Particles >4µm		ASTM D7647	>2500	▲ **4532**	568	▲ 2867
Particles >6µm		ASTM D7647	>640	▲ **1473**	138	543
Oil Cleanliness		ISO 4406 (c)	>18/16/14	▲ **19/18/14**	16/14/10	▲ 19/16/13

Customer Id: MCKPOR
Sample No.: PE0000966
Lab Number: 05928715
Test Package: PLANT

To manage this report scan the QR code

To discuss the diagnosis or test data:
Angela Borella +1 800-237-1369
angela.borella@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

18 Jul 2023 Diag: Doug Bogart

NORMAL

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

view report

28 Jun 2023 Diag: Jonathan Hester

ISO

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

20 Jun 2023 Diag: Don Baldridge

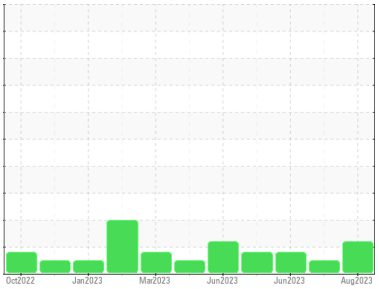
ISO

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

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
Paper Side
Machine Id
PM 2 MAIN BOWSER
Component
Bearing Lube
Fluid
SHELL PM S2 M 220 (3500 GAL)

DIAGNOSIS

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

Wear
All component wear rates are normal.

Contamination
There is a high amount of silt (particulates < 6 microns in size) present in the oil.

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		**PE0000966**	PE0000991	PE0000986
Sample Date		Client Info		**15 Aug 2023**	18 Jul 2023	28 Jun 2023
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				**ABNORMAL**	NORMAL	ATTENTION

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**14**	12	10
Iron	ppm	ASTM D5185m	>120	**0**	<1	0
Chromium	ppm	ASTM D5185m	>5	**0**	0	0
Nickel	ppm	ASTM D5185m	>20	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>4	**0**	0	0
Lead	ppm	ASTM D5185m	>30	**<1**	<1	<1
Copper	ppm	ASTM D5185m	>17	**5**	7	8
Tin	ppm	ASTM D5185m	>10	**0**	0	<1
Vanadium	ppm	ASTM D5185m		**0**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**0**	2	0
Molybdenum	ppm	ASTM D5185m		**<1**	<1	<1
Manganese	ppm	ASTM D5185m		**0**	0	0
Magnesium	ppm	ASTM D5185m		**3**	4	2
Calcium	ppm	ASTM D5185m		**85**	111	93
Phosphorus	ppm	ASTM D5185m		**702**	904	776
Zinc	ppm	ASTM D5185m		**992**	1218	1063
Sulfur	ppm	ASTM D5185m		**5686**	6914	6825

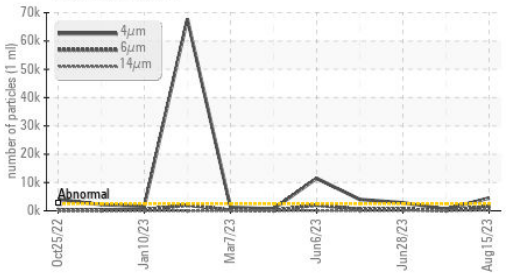
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**2**	3	2
Sodium	ppm	ASTM D5185m		**2**	<1	6
Potassium	ppm	ASTM D5185m	>20	**0**	1	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	▲ **4532**	568	▲ 2867
Particles >6µm		ASTM D7647	>640	▲ **1473**	138	543
Particles >14µm		ASTM D7647	>160	**153**	10	48
Particles >21µm		ASTM D7647	>40	**43**	2	12
Particles >38µm		ASTM D7647	>10	**2**	0	1
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/14	▲ **19/18/14**	16/14/10	▲ 19/16/13

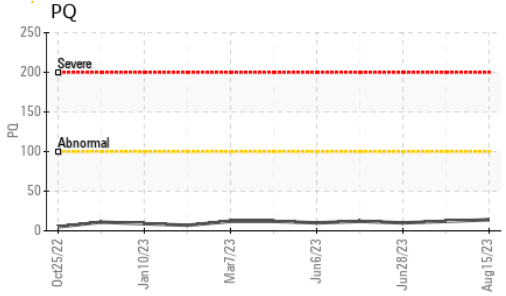
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.82**	0.86	0.77

OIL ANALYSIS REPORT

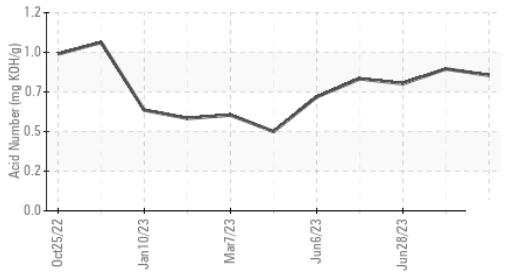
Particle Trend



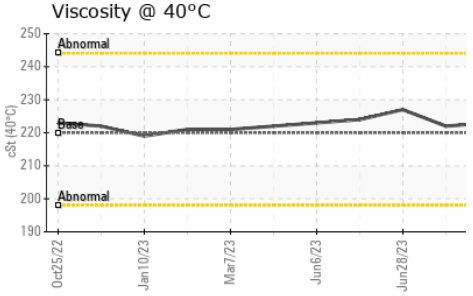
PQ



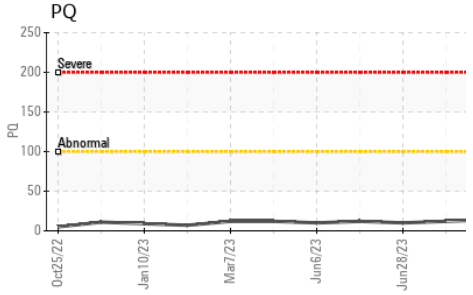
Acid Number



Viscosity @ 40°C



PQ



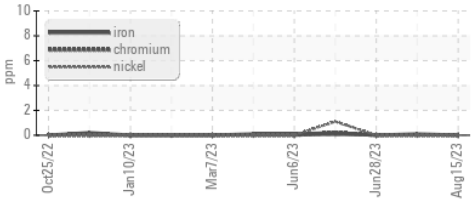
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**LIGHT**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	**223**	222	227

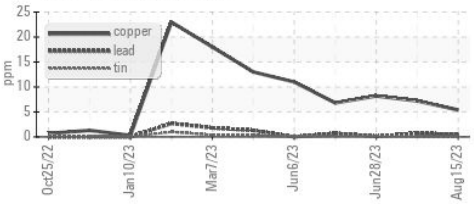
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

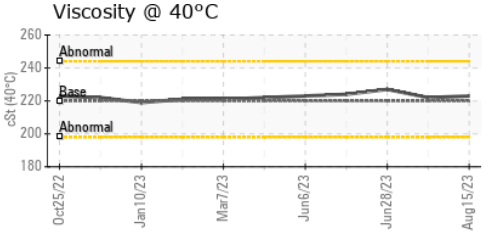
Ferrous Alloys



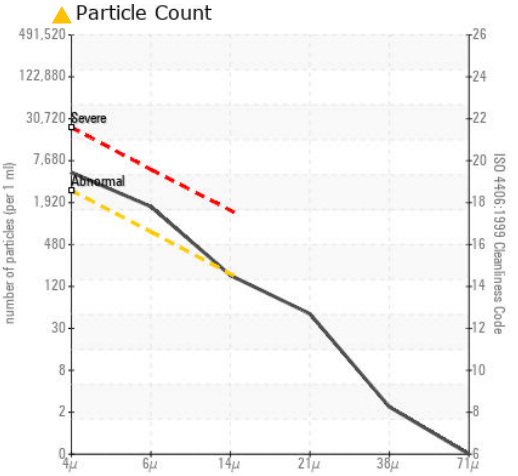
Non-ferrous Metals



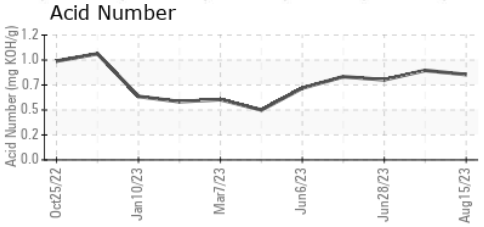
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0000966 **Received** : 18 Aug 2023
Lab Number : 05928715 **Diagnosed** : 21 Aug 2023
Unique Number : 10608662 **Diagnostician** : Angela Borella
Test Package : PLANT (Additional Tests: ICP, KV40, PQ, PrtCount, SCREEN)

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)

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Report Id: MCKPOR [WUSCAR] 05928715 (Generated: 08/21/2023 16:29:48) Rev: 1

Submitted By: DUANE DENOTTA