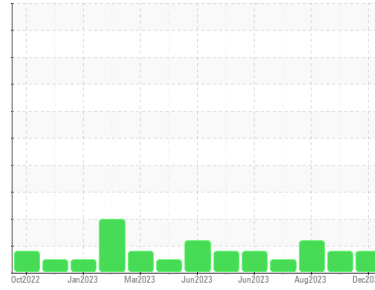


# PROBLEM SUMMARY

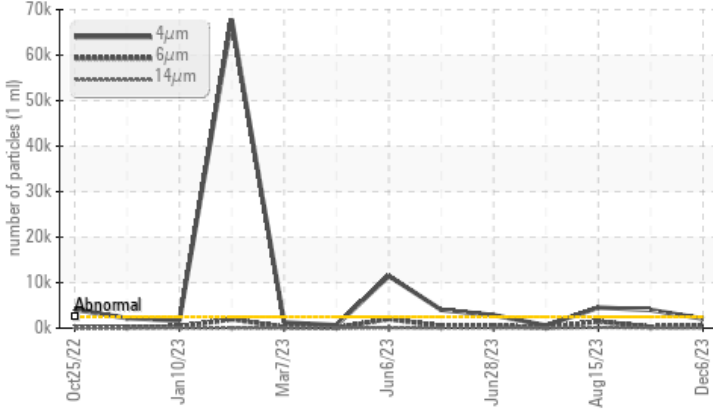
Sample Rating Trend



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

## COMPONENT CONDITION SUMMARY

▲ Particle Trend



### RECOMMENDATION

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

### PROBLEMATIC TEST RESULTS

Sample Status		ATTENTION	ATTENTION	ABNORMAL
Particles >6µm	ASTM D7647 >640	▲ 695	298	▲ 1473
Oil Cleanliness	ISO 4406 (c) >18/16/14	▲ 18/17/13	▲ 19/15/11	▲ 19/18/14

Customer Id: MCKPOR  
 Sample No.: PE0001451  
 Lab Number: 06029962  
 Test Package: PLANT



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

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

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

### 25 Oct 2023 Diag: Don Baldrige

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



### 15 Aug 2023 Diag: Angela Borella

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 high amount of silt (particulates < 6 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



### 18 Jul 2023 Diag: Doug Bogart

NORMAL

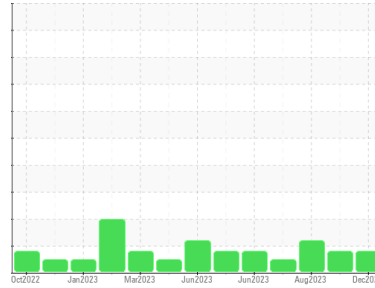


Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for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

view report



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 moderate amount of silt (particulates < 14 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	<b>PE0001451</b>	PE0001431	PE0000966
Sample Date	Client Info	<b>06 Dec 2023</b>	25 Oct 2023	15 Aug 2023
Machine Age	hrs	<b>0</b>	0	0
Oil Age	hrs	<b>0</b>	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ATTENTION</b>	ATTENTION	ABNORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184	<b>16</b>	8	14
Iron	ppm ASTM D5185m >120	<b>0</b>	0	0
Chromium	ppm ASTM D5185m >5	<b>0</b>	0	0
Nickel	ppm ASTM D5185m >20	<b>0</b>	0	0
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm ASTM D5185m	<b>0</b>	1	0
Aluminum	ppm ASTM D5185m >4	<b>0</b>	0	0
Lead	ppm ASTM D5185m >30	<b>&lt;1</b>	0	<1
Copper	ppm ASTM D5185m >17	<b>4</b>	5	5
Tin	ppm ASTM D5185m >10	<b>0</b>	0	0
Vanadium	ppm ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm ASTM D5185m	<b>0</b>	<1	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	<b>0</b>	0	0
Barium	ppm ASTM D5185m	<b>0</b>	<1	0
Molybdenum	ppm ASTM D5185m	<b>&lt;1</b>	0	<1
Manganese	ppm ASTM D5185m	<b>0</b>	0	0
Magnesium	ppm ASTM D5185m	<b>0</b>	2	3
Calcium	ppm ASTM D5185m	<b>78</b>	99	85
Phosphorus	ppm ASTM D5185m	<b>853</b>	809	702
Zinc	ppm ASTM D5185m	<b>1174</b>	1075	992
Sulfur	ppm ASTM D5185m	<b>6324</b>	5895	5686

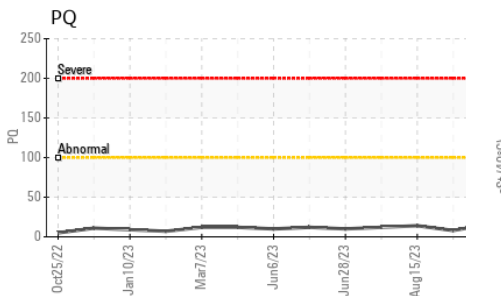
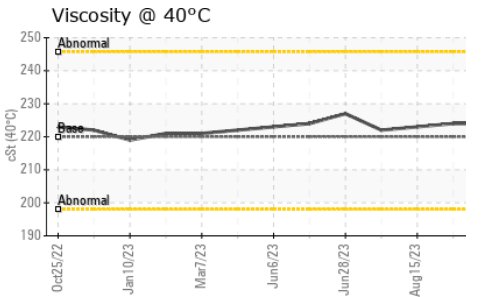
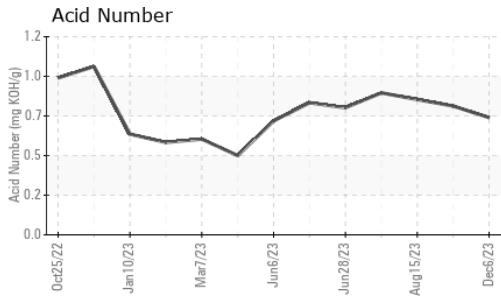
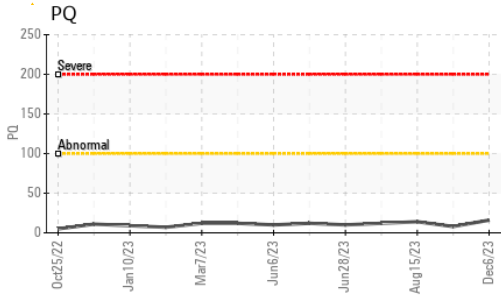
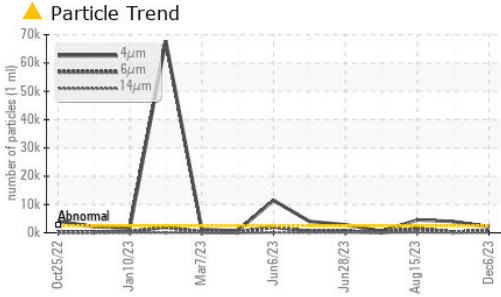
## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>3</b>	2	2
Sodium	ppm ASTM D5185m	<b>20</b>	22	2
Potassium	ppm ASTM D5185m >20	<b>2</b>	3	0

## FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >2500	<b>2077</b>	▲ 4002	▲ 4532
Particles >6µm	ASTM D7647 >640	▲ <b>695</b>	298	▲ 1473
Particles >14µm	ASTM D7647 >160	<b>54</b>	20	153
Particles >21µm	ASTM D7647 >40	<b>12</b>	7	43
Particles >38µm	ASTM D7647 >10	<b>0</b>	0	2
Particles >71µm	ASTM D7647 >3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >18/16/14	▲ <b>18/17/13</b>	▲ 19/15/11	▲ 19/18/14

# OIL ANALYSIS REPORT

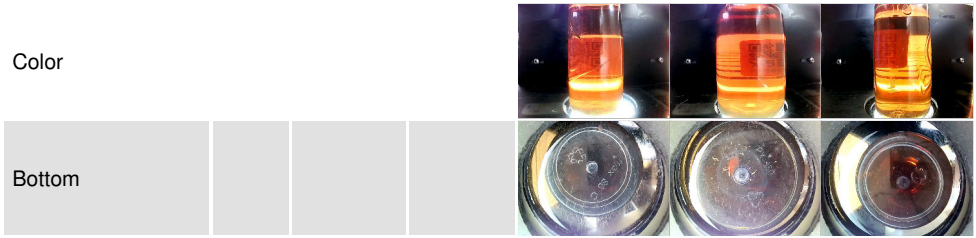


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.71</b>	0.78	0.82

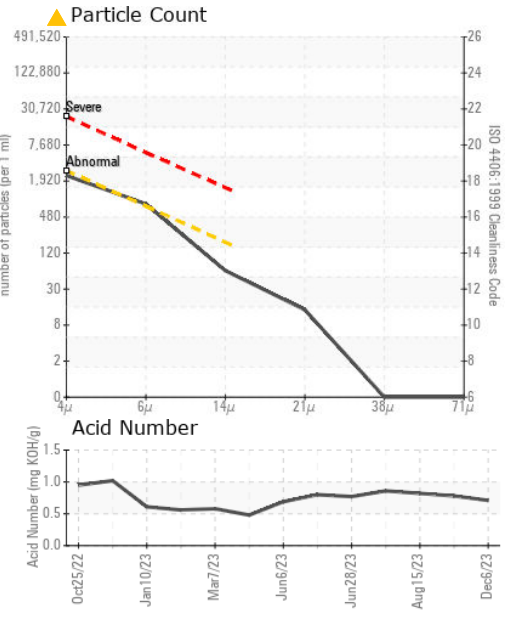
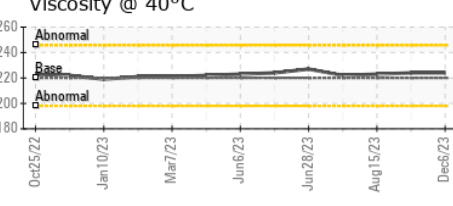
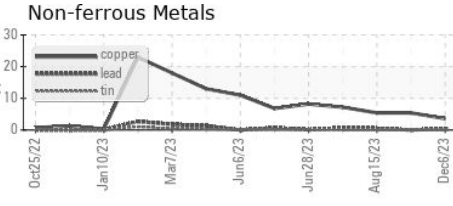
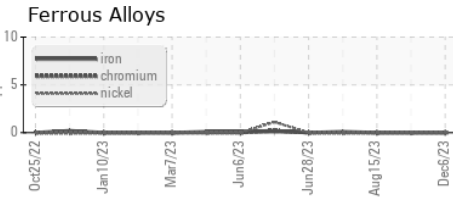
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	<b>224</b>	224	223

SAMPLE IMAGES		method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PE0001451 **Received** : 08 Dec 2023  
**Lab Number** : **06029962** **Diagnosed** : 12 Dec 2023  
**Unique Number** : 10779753 **Diagnostician** : Don Baldrige  
**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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