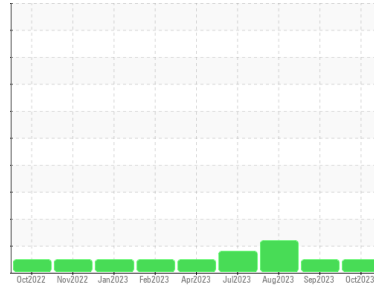




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Paper Side
 Machine Id
PM 1 Wet End Bowser
 Component
Bearing Lube
 Fluid
SHELL PM S2 M 220 (400 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All 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		PE0001444	PE0001428	PE0000970
Sample Date	Client Info		31 Oct 2023	12 Sep 2023	15 Aug 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			NORMAL	NORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184		9	19	7
Iron	ppm	ASTM D5185m >120	0	<1	1
Chromium	ppm	ASTM D5185m >5	<1	0	0
Nickel	ppm	ASTM D5185m >20	0	<1	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	<1	0
Aluminum	ppm	ASTM D5185m >4	2	4	0
Lead	ppm	ASTM D5185m >30	0	0	0
Copper	ppm	ASTM D5185m >17	<1	2	<1
Tin	ppm	ASTM D5185m >10	0	<1	0
Vanadium	ppm	ASTM D5185m	0	0	0
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	0	0
Molybdenum	ppm	ASTM D5185m	0	0	<1
Manganese	ppm	ASTM D5185m	0	<1	0
Magnesium	ppm	ASTM D5185m	2	1	1
Calcium	ppm	ASTM D5185m	62	31	34
Phosphorus	ppm	ASTM D5185m	460	416	364
Zinc	ppm	ASTM D5185m	714	636	578
Sulfur	ppm	ASTM D5185m	4616	4770	3605

CONTAMINANTS

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

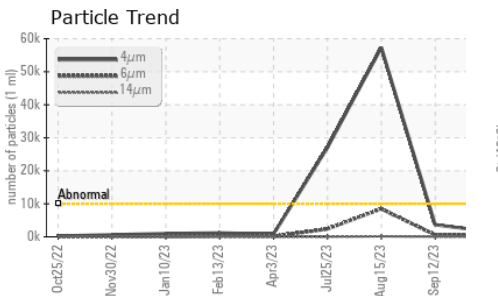
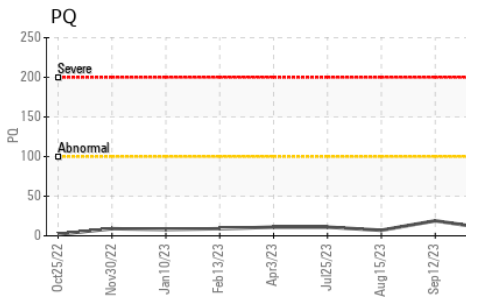
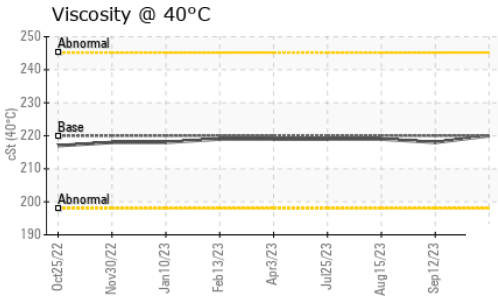
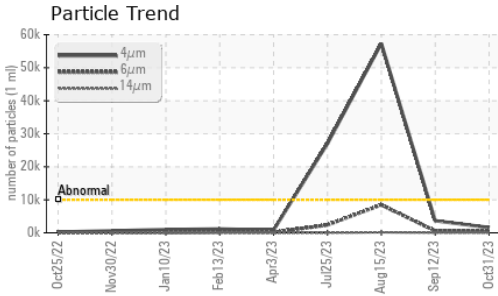
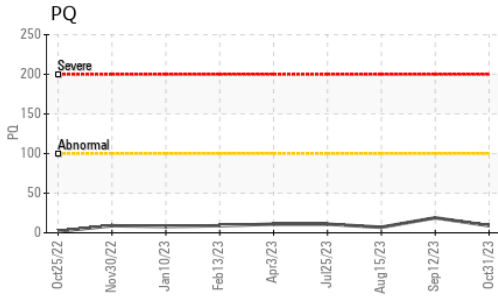
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	1603	3651	▲ 57330
Particles >6µm	ASTM D7647	>2500	422	591	▲ 8467
Particles >14µm	ASTM D7647	>160	35	29	158
Particles >21µm	ASTM D7647	>40	9	7	36
Particles >38µm	ASTM D7647	>10	0	0	1
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/14	18/16/12	19/16/12	▲ 23/20/14

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.71	0.67	0.75

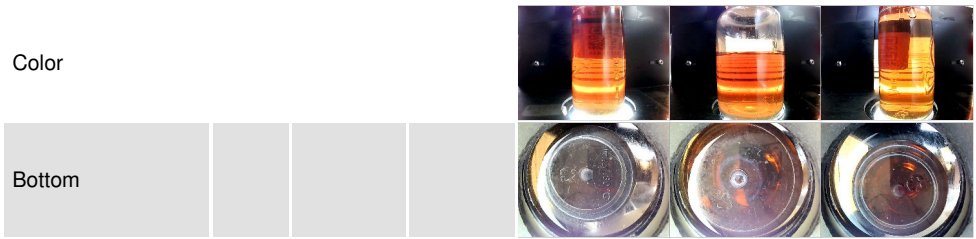
OIL ANALYSIS REPORT



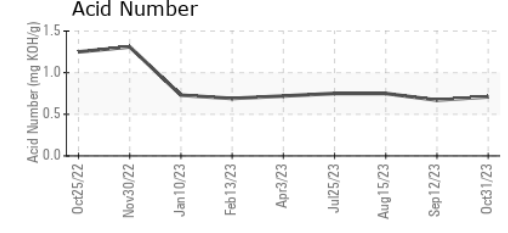
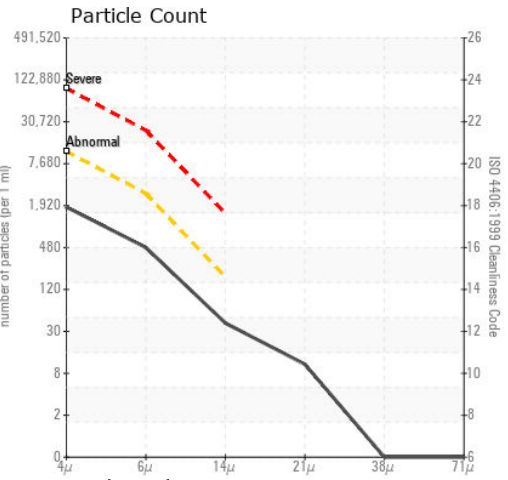
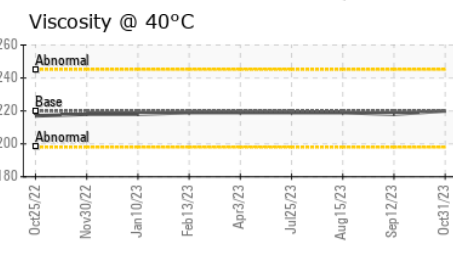
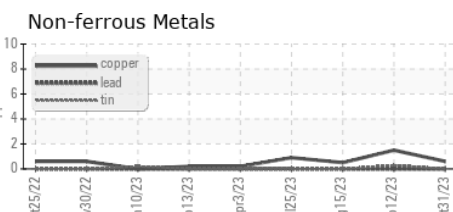
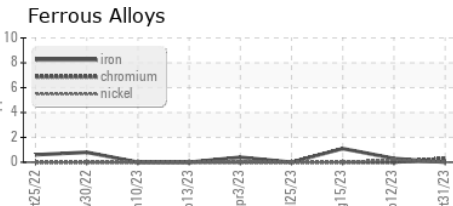
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	218	219

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0001444 **Received** : 08 Nov 2023
Lab Number : 06001499 **Diagnosed** : 09 Nov 2023
Unique Number : 10729859 **Diagnostician** : Jonathan Hester
Test Package : PLANT (Additional Tests: ICP, KV40, PQ, PrtCount, SCREEN)

MCKINLEY PAPER COMPANY
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 PORT ANGELES, WA
 US 98363
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 T: (360)457-4474
 F:

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)