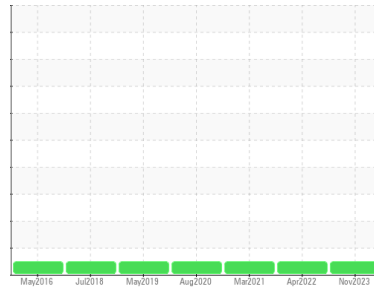




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
SPM CRANES
 Machine Id
SPM-10.2 CRANE MAIN (S/N 16-0149)
 Component
Gearbox
 Fluid
GEAR OIL ISO 220 (--- QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The water content is negligible. There is no indication of any contamination 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			RP0039136	RP0025049	RP0014421
Sample Date	Client Info			16 Nov 2023	20 Apr 2022	22 Mar 2021
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	NORMAL

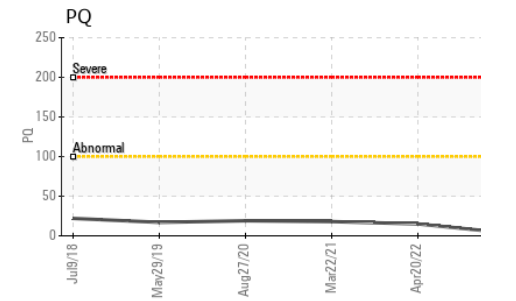
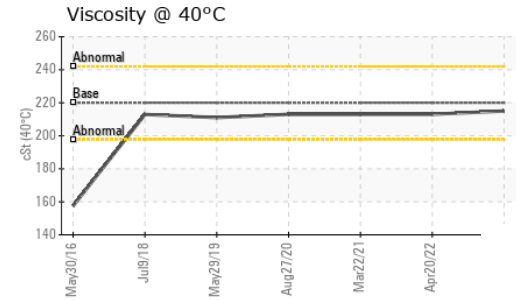
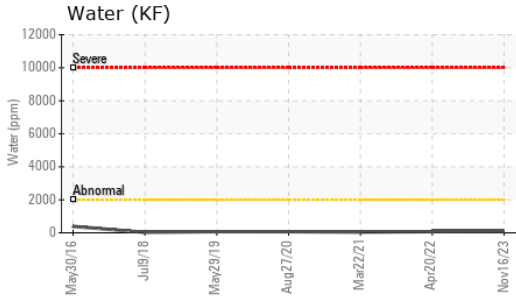
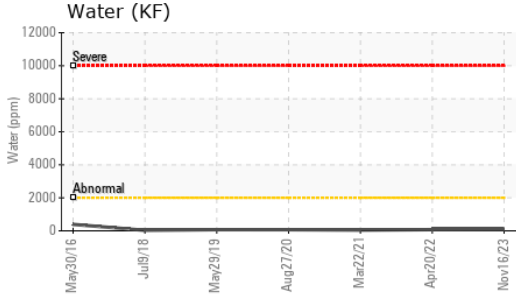
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		4	15	18
Iron	ppm	ASTM D5185m	>200	2	12	9
Chromium	ppm	ASTM D5185m	>15	0	<1	<1
Nickel	ppm	ASTM D5185m	>15	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>25	0	0	0
Lead	ppm	ASTM D5185m	>100	0	0	0
Copper	ppm	ASTM D5185m	>200	0	<1	<1
Tin	ppm	ASTM D5185m	>25	0	0	0
Antimony	ppm	ASTM D5185m	>5	---	---	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	10	12	12
Barium	ppm	ASTM D5185m	15	0	0	2
Molybdenum	ppm	ASTM D5185m	15	0	0	<1
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m	50	<1	0	4
Calcium	ppm	ASTM D5185m	50	5	12	53
Phosphorus	ppm	ASTM D5185m	350	191	215	190
Zinc	ppm	ASTM D5185m	100	0	3	13

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	14	7	4
Sodium	ppm	ASTM D5185m		0	<1	0
Potassium	ppm	ASTM D5185m	>20	0	0	<1
Water	%	ASTM D6304	>0.2	0.009	0.007	0.004
ppm Water	ppm	ASTM D6304	>2000	94.5	72.4	45.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.85	0.45	0.51	0.467

OIL ANALYSIS REPORT



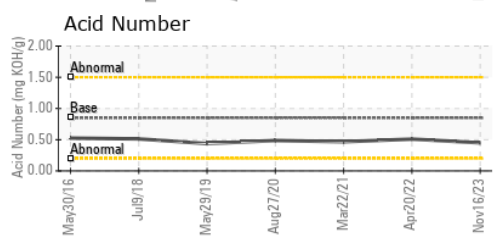
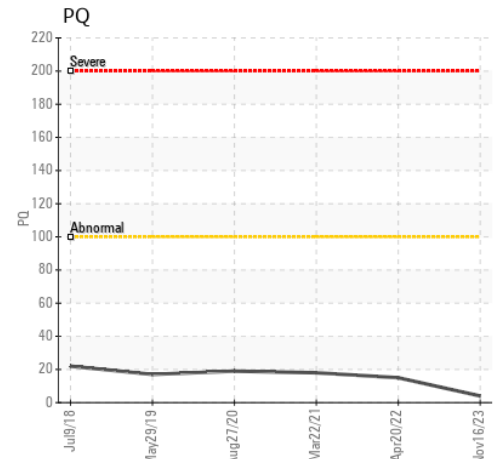
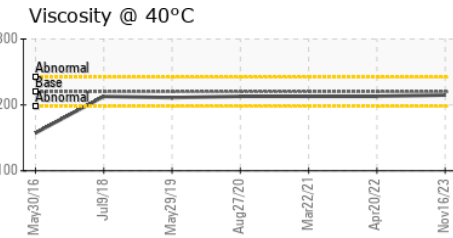
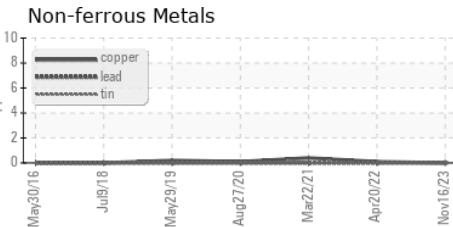
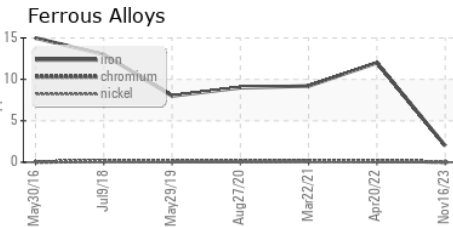
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	215	213	213

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0039136 **Received** : 17 Nov 2023
Lab Number : 06010970 **Diagnosed** : 21 Nov 2023
Unique Number : 10750114 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: PQ)

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 F: x:

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)