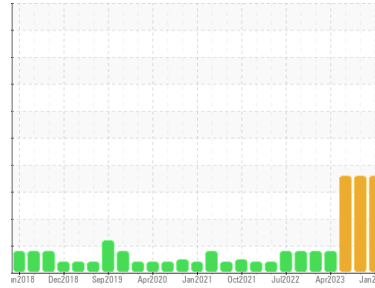




OIL ANALYSIS REPORT

Sample Rating Trend



Area
Refinery
 Machine Id
#2 Finished Starch Aggitator
 Component
Case Drain Gearbox
 Fluid
ROYAL PURPLE SYNERGY 90/220 (5 GAL)

DIAGNOSIS

Recommendation
 We advise that you check all areas where dirt can enter the system. Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 There is a high amount of silt (particulates < 14 microns in size) present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

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		WC0886185	WC0816898	WC0757600
Sample Date	Client Info		23 Jan 2024	30 Oct 2023	26 Jul 2023
Machine Age	mths	Client Info	0	0	0
Oil Age	mths	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>200	22	19	20
Chromium	ppm	ASTM D5185m	>15	0	0	0
Nickel	ppm	ASTM D5185m	>15	0	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>25	60	61	44
Lead	ppm	ASTM D5185m	>100	0	0	0
Copper	ppm	ASTM D5185m	>200	0	<1	0
Tin	ppm	ASTM D5185m	>25	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	<1

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		2	<1	1
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		0	1	3
Calcium	ppm	ASTM D5185m		108	94	54
Phosphorus	ppm	ASTM D5185m	370	151	153	155
Zinc	ppm	ASTM D5185m		36	41	38
Sulfur	ppm	ASTM D5185m		13540	14421	17695

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	75	78	64
Sodium	ppm	ASTM D5185m		7	6	<1
Potassium	ppm	ASTM D5185m	>20	<1	<1	3

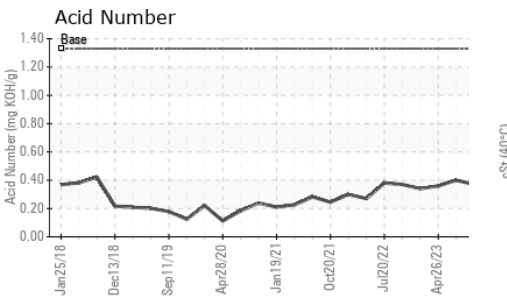
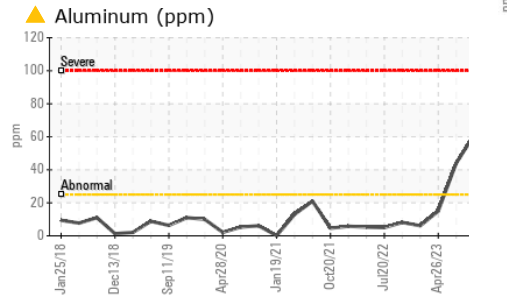
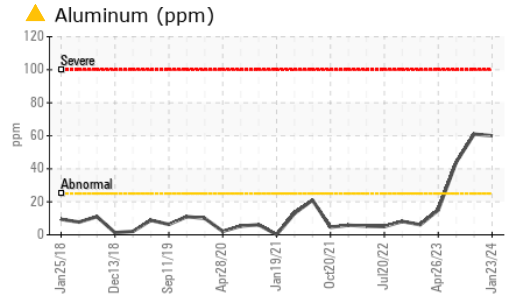
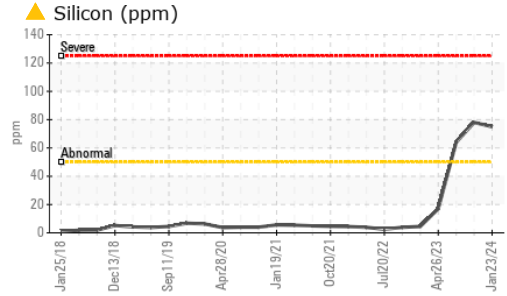
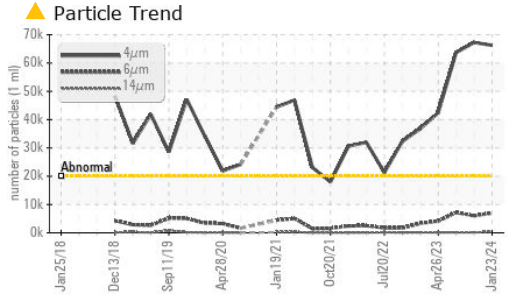
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	66243	67251	63706
Particles >6µm	ASTM D7647	>5000	6963	5983	7226
Particles >14µm	ASTM D7647	>640	279	158	158
Particles >21µm	ASTM D7647	>160	43	25	31
Particles >38µm	ASTM D7647	>40	1	1	2
Particles >71µm	ASTM D7647	>10	1	0	2
Oil Cleanliness	ISO 4406 (c)	>21/19/16	23/20/15	23/20/14	23/20/14

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	1.33	0.56	0.37	0.40

OIL ANALYSIS REPORT

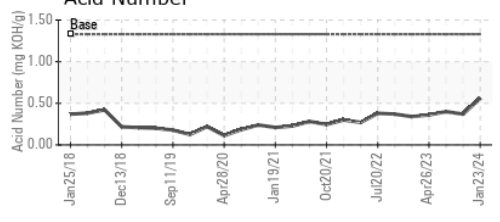
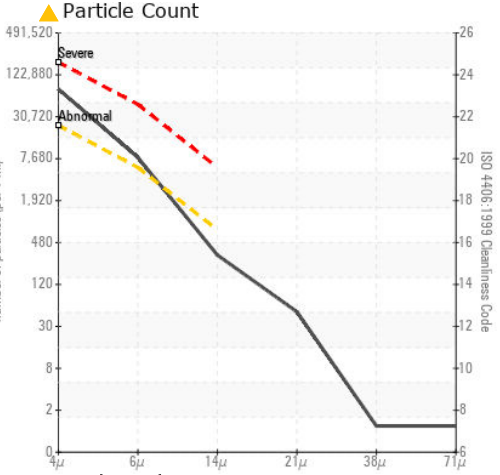
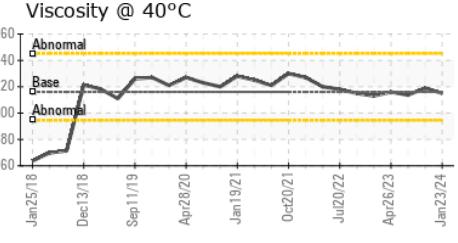
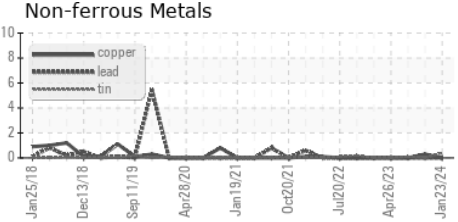
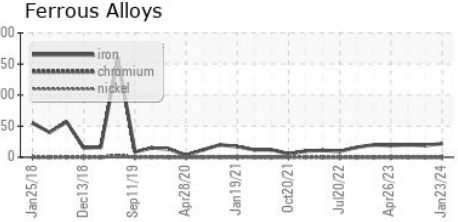


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	216.1	215	219

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0886185 **Received** : 31 Jan 2024
Lab Number : **06075737** **Diagnosed** : 01 Feb 2024
Unique Number : 10857828 **Diagnostician** : Don Baldrige
Test Package : IND 2 (Additional Tests: PrtCount)

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 WINSTON SALEM, NC
 US 27107
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 matthew.king@ingredion.com
 T:
 F: (336)785-8809

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)