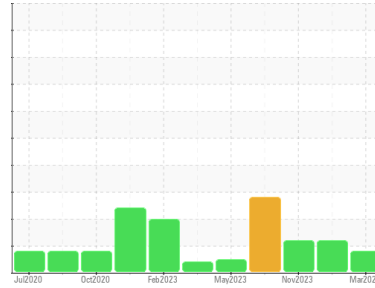


Area
PASTA [98777342]
 Machine Id
RAILCAR UNLOAD EAST
 Component
Blower
 Fluid
GEAR OIL ISO 320 (--- GAL)



DIAGNOSIS

Recommendation
 The oil change at the time of sampling has been noted. 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	PCA0111838	PCA0111835	PCA0111843
Sample Date	Client Info	03 Mar 2024	05 Jan 2024	09 Nov 2023
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		ATTENTION	ABNORMAL	ABNORMAL

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >20	4	4	13
Chromium	ppm	ASTM D5185m >20	<1	0	<1
Nickel	ppm	ASTM D5185m >20	0	0	<1
Titanium	ppm	ASTM D5185m	<1	0	<1
Silver	ppm	ASTM D5185m	<1	0	0
Aluminum	ppm	ASTM D5185m >20	0	0	2
Lead	ppm	ASTM D5185m >20	1	0	0
Copper	ppm	ASTM D5185m >20	0	0	<1
Tin	ppm	ASTM D5185m >20	<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 50	<1	0	0
Barium	ppm	ASTM D5185m 15	0	0	4
Molybdenum	ppm	ASTM D5185m 15	0	0	<1
Manganese	ppm	ASTM D5185m	<1	0	<1
Magnesium	ppm	ASTM D5185m 50	0	0	0
Calcium	ppm	ASTM D5185m 50	0	0	0
Phosphorus	ppm	ASTM D5185m 350	521	539	545
Zinc	ppm	ASTM D5185m 100	0	0	0
Sulfur	ppm	ASTM D5185m 12500	1743	1582	1491

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >15	2	3	2
Sodium	ppm	ASTM D5185m	1	0	0
Potassium	ppm	ASTM D5185m >20	1	0	0

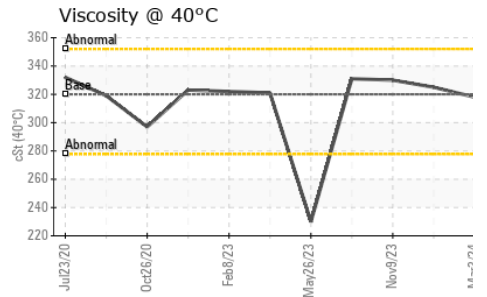
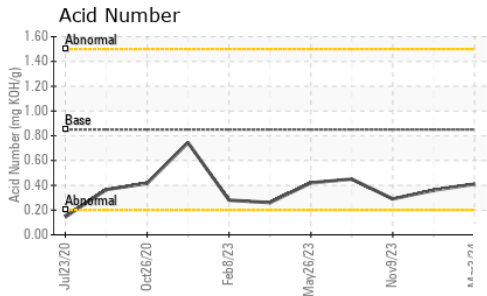
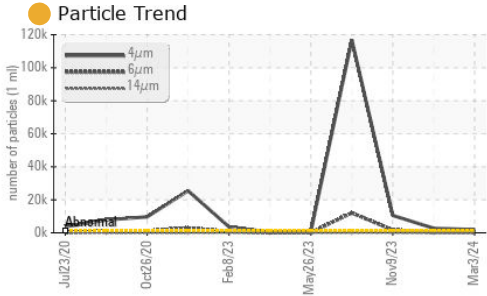
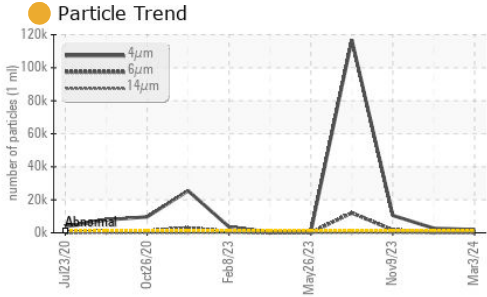
FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >1300	1911	2757	10523
Particles >6µm	ASTM D7647 >320	319	360	1726
Particles >14µm	ASTM D7647 >80	13	18	63
Particles >21µm	ASTM D7647 >20	4	5	12
Particles >38µm	ASTM D7647 >4	1	0	0
Particles >71µm	ASTM D7647 >3	0	0	0
Oil Cleanliness	ISO 4406 (c) >17/15/13	18/15/11	19/16/11	21/18/13

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045 0.85	0.41	0.36	0.29

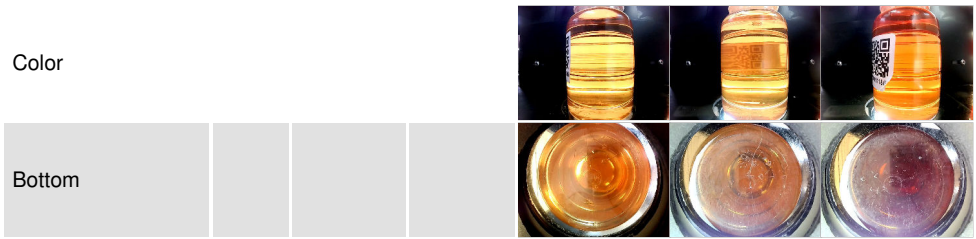
OIL ANALYSIS REPORT



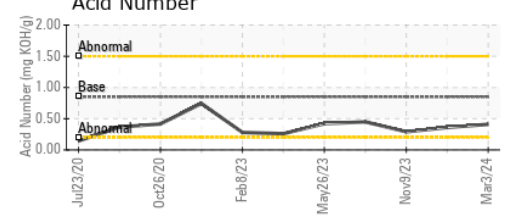
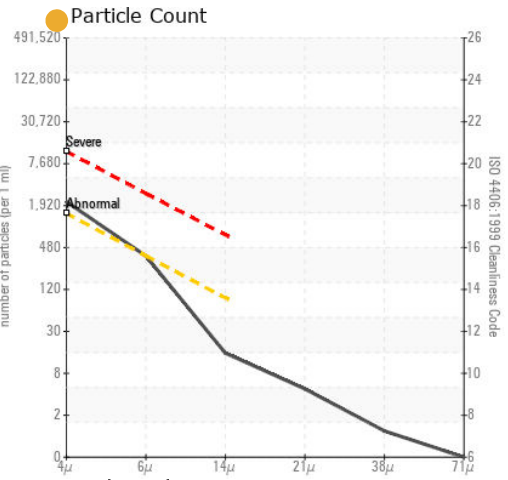
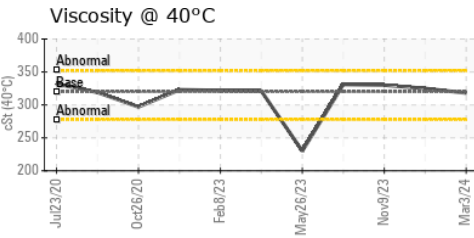
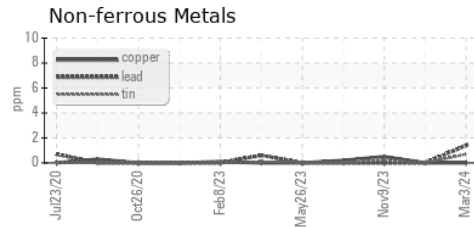
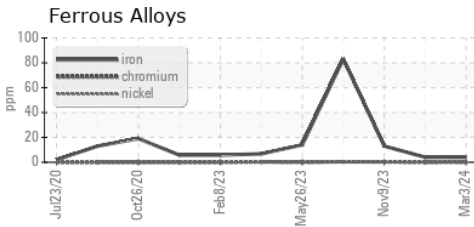
PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

PARAMETER	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	320	318	325

PARAMETER	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0111838
Lab Number : 06118250
Unique Number : 10927083
Test Package : IND 2 (Additional Tests: PrtCount)

Received : 14 Mar 2024
Tested : 15 Mar 2024
Diagnosed : 15 Mar 2024 - Don Baldrige

KraftHeinz - Springfield - Plant 8311 PCA
 2035 E BENNETT
 SPRINGFIELD, MO
 US 65804
 Contact: Service Manager

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)