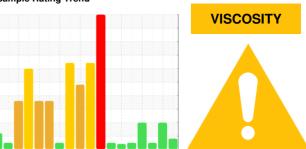


OIL ANALYSIS REPORT

Sample Rating Trend



Aroa

GRIND ROOM [99062848]

KR-GR-002930 - GRINDER A1 (EAST) (S/N GRIND A - 11513021)

Gearbox

Juid

GEAR OIL ISO 220 (6 QTS)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample. (Customer Sample Comment: 99062848)

Wear

All component wear rates are normal.

Contamination

Moderate concentration of visible dirt/debris present in the oil.

Fluid Condition

Viscosity of sample indicates oil is within ISO 460 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

		pr2020 Oct20	20 May2021 Dec2021 Jun	2022 Nov2022 May2023 Oct2023	Apr2024	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0118981	PCA0120383	PCA0088770
Sample Date		Client Info		02 Jul 2024	21 Apr 2024	11 Jan 2024
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	0	4	5
Chromium	ppm	ASTM D5185m	>15	0	0	<1
Nickel	ppm	ASTM D5185m	>15	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	0	0	2
Lead	ppm	ASTM D5185m	>100	0	0	0
Copper	ppm	ASTM D5185m	>200	8	<1	<1
Tin	ppm	ASTM D5185m	>25	<1	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVEO			Paralle flags and			
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	current 0	history1 0	history2 <1
	ppm					
Boron Barium		ASTM D5185m	50	0	0	<1
Boron	ppm ppm	ASTM D5185m ASTM D5185m	50 15	0 0	0	<1
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 15	0 0 0	0 0 0	<1 0 <1
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15	0 0 0 <1	0 0 0	<1 0 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50	0 0 0 <1 0	0 0 0 0 <1	<1 0 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50 50 350	0 0 0 <1 0	0 0 0 0 <1 <1 <1 413	<1 0 <1 0 0 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50	0 0 0 <1 0 0 493	0 0 0 0 <1 <1	<1 0 <1 0 0 0 <1 553
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50 50 350 100	0 0 0 <1 0 0 493	0 0 0 0 <1 <1 413	<1 0 <1 0 0 0 <1 553
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50 50 350 100 12500 limit/base	0 0 0 <1 0 0 493 1 800	0 0 0 0 <1 <1 413 0 1196 history1	<1 0 <1 0 0 <1 553 0 1323 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 15 15 50 50 350 100 12500	0 0 0 <1 0 0 493 1 800 current	0 0 0 0 <1 <1 <1 413 0 1196 history1	<1 0 <1 0 0 0 <1 553 0 1323 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50 50 350 100 12500 Iimit/base >50	0 0 0 <1 0 0 493 1 800	0 0 0 0 <1 <1 413 0 1196 history1	<1 0 <1 0 0 <1 553 0 1323 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 15 15 50 50 350 100 12500 Iimit/base >50	0 0 0 <1 0 0 493 1 800 current 2	0 0 0 0 <1 <1 <1 413 0 1196 history1	<1 0 <1 0 0 <1 553 0 1323 history2 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANI	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 15 15 50 50 350 100 12500 limit/base >50 >20	0 0 0 <1 0 0 493 1 800 current 2 0 <1	0 0 0 0 <1 <1 <1 413 0 1196 history1 3 0	<1 0 <1 0 0 <1 553 0 1323 history2 2 0 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m	50 15 15 50 50 350 100 12500 limit/base >50	0 0 0 0 <1 0 0 493 1 800 current 2 0 <1	0 0 0 0 <1 <1 <1 413 0 1196 history1 3 0 0	<1 0 <1 0 0 <1 553 0 1323 history2 2 0 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m	50 15 15 50 50 50 350 100 12500 limit/base >50 >20 limit/base >10000 >2500	0 0 0 0 <1 0 0 493 1 800 current 2 0 <1 current	0 0 0 0 <1 <1 413 0 1196 history1 3 0 0 history1 △ 63078 △ 19013	<1 0 <1 0 0 <1 553 0 1323 history2 2 0 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D7647 ASTM D7647	50 15 15 15 50 50 350 100 12500 limit/base >50 >20 limit/base >10000 >2500 >640	0 0 0 <1 0 0 493 1 800 current 2 0 <1 current	0 0 0 0 <1 <1 <1 413 0 1196 history1 3 0 0 0 history1 △ 63078 △ 19013 △ 1584	<1 0 <1 0 0 <1 553 0 1323 history2 2 0 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	50 15 15 50 50 350 100 12500 limit/base >50 >20 limit/base >10000 >2500 >640 >160	0 0 0 0 <1 0 0 493 1 800 current 2 0 <1 current	0 0 0 0 <1 <1 413 0 1196 history1 3 0 0 history1 △ 63078 △ 19013 △ 1584 △ 471	<1 0 <1 0 <1 0 0 <1 553 0 1323 history2 2 0 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	50 15 15 15 50 50 350 100 12500 limit/base >50 >20 limit/base >10000 >2500 >640 >40	0 0 0 0 <1 0 0 493 1 800 current 2 0 <1 current	0 0 0 0 0 <1 <1 413 0 1196 history1 3 0 0 0 history1 △ 63078 △ 19013 △ 1584 △ 471 35	<1 0 <1 0 <1 0 0 <1 553 0 1323 history2 2 0 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >54µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	50 15 15 15 50 50 350 100 12500 limit/base >50 >20 limit/base >10000 >2500 >640 >160 >40 >10	0 0 0 0 <1 0 0 493 1 800 current 2 0 <1 current 	0 0 0 0 <1 <1 413 0 1196 history1 3 0 0 history1 △ 63078 △ 19013 △ 1584 △ 471 35 2	<1 0 <1 0 <1 0 0 <1 553 0 1323 history2 2 0 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647	50 15 15 15 50 50 350 100 12500 limit/base >50 >20 limit/base >10000 >2500 >640 >40	0 0 0 0 <1 0 0 493 1 800 current 2 0 <1 current	0 0 0 0 0 <1 <1 413 0 1196 history1 3 0 0 0 history1 △ 63078 △ 19013 △ 1584 △ 471 35	<1 0 <1 0 <1 0 0 <1 553 0 1323 history2 2 0 <1 history2

Acid Number (AN)

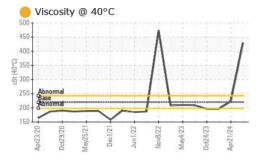
mg KOH/g ASTM D8045 0.85

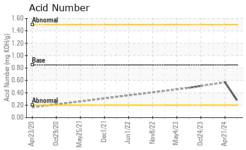
0.28 0.57

Submitted By: DAVID ROBINSON



OIL ANALYSIS REPORT





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

/isc @ 40°C	cSt	ASTM D445	220	428.8	223	196

Statilized in teach in the second in the sec	SAMPLE IMAGES method limit/base current history1 history2
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Color

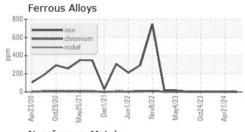
Bottom

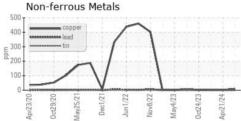
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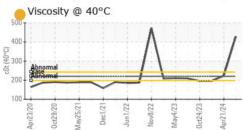


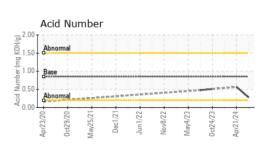
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GRAPHS













Laboratory Sample No. Lab Number : 06228500

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

: PCA0118981

Received : 05 Jul 2024 **Tested** : 10 Jul 2024 Diagnosed

: 10 Jul 2024 - Jonathan Hester

2504 INDUSTRIAL DR KIRKSVILLE, MO US 63501

Contact: WALLACE WARD

KraftHeinz - Kirksville - Plant 8333 PCA

Certificate 12367

Unique Number : 11111993 Test Package : IND 2 (Additional Tests: PrtCount) To discuss this sample report, contact Customer Service at 1-800-237-1369.

wallace.ward@kraftheinzcompany.com

T: (660)627-1031 * - 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) F: (660)627-5887