

OIL ANALYSIS REPORT

Sample Rating Trend



Area

STUFF ROOM B [98966383] KR-GR-000871 - MARLEN (S/N STUFF B - 11513113)

Hydraulic System

AW HYDRAULIC OIL ISO 68 (60 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.

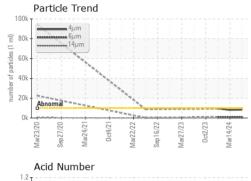
Fluid Condition

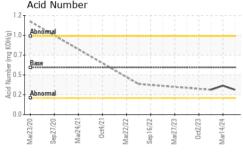
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

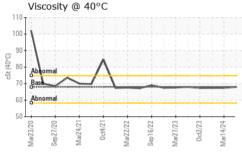
Sample Date			1ar2020 Sep20	20 Marž021 OctŽ021 Ma	r2022 Sep2022 Mar2023 Oct2023	Mar2024	
Sample Date	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 0 0 0 0 Oil Age hrs Client Info 0 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Sample Status NoRMAL NORMAL NORMAL NORMAL CONTAMINATION method Imilibase current history1 history2 Wear WC Method >0.05 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 3 3 3 3 Chromium ppm ASTM D5185m >20 <1 <1 0 0 Vickel ppm ASTM D5185m >20 <1 3 0 0 Chromium ppm ASTM D5185m >20 <1 3 0 0 Lead ppm ASTM D5185m >20 1 </td <td>Sample Number</td> <td></td> <td>Client Info</td> <td></td> <td>PCA0122303</td> <td>PCA0115889</td> <td>PCA0111176</td>	Sample Number		Client Info		PCA0122303	PCA0115889	PCA0111176
Oil Changed	Sample Date		Client Info		24 May 2024	14 Mar 2024	30 Nov 2023
Oil Changed Sample Status	Machine Age	hrs	Client Info		0	0	0
CONTAMINATION method limit/base current history1 history2	Oil Age	hrs	Client Info		0	0	0
Water WC Method So.05 NEG NEG	Oil Changed		Client Info		N/A	N/A	N/A
Water WC Method >0.05 NEG NEG NEG WEAR METALS method Ilmit/base current history1 history2 Iron ppm ASTM D5185m >20 3 3 3 Chromium ppm ASTM D5185m >20 0 0 0 Nickel ppm ASTM D5185m 0 <1 0 Silver ppm ASTM D5185m 0 <1 0 Silver ppm ASTM D5185m >20 1 3 0 Lead ppm ASTM D5185m >20 1 1 0 Copper ppm ASTM D5185m >20 1 1 0 Tin ppm ASTM D5185m >20 1 1 0 Vanadium ppm ASTM D5185m 0 <1 0 Cadmium ppm ASTM D5185m 5 0 0 0 Barium ppm <t< td=""><td>Sample Status</td><td></td><td></td><td></td><td>NORMAL</td><td>NORMAL</td><td>NORMAL</td></t<>	Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 3 3 3 Chromium ppm ASTM D5185m >20 <1	CONTAMINA	ΓΙΟΝ	method	limit/base	current	history1	history2
Irron	Water		WC Method	>0.05	NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 <1 <1 0	WEAR METAI	LS	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>20	3	3	3
Titanium	Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Silver	Nickel	ppm	ASTM D5185m	>20	0	0	0
Aluminum ppm ASTM D5185m >20 1 3 0 Lead ppm ASTM D5185m >20 <1	Titanium	ppm	ASTM D5185m		0	<1	0
Lead ppm ASTM D5185m >20 <1 <1 0 Copper ppm ASTM D5185m >20 1 1 0 Tin ppm ASTM D5185m >20 <1 <1 0 Vanadium ppm ASTM D5185m >20 <1 <1 0 Cadmium ppm ASTM D5185m 0 <1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 5 0 0 0 Magnesium ppm ASTM D5185m 20 37 4 <1 Calcium ppm ASTM D5185m 200 37 4 <1	Silver	ppm	ASTM D5185m		0	0	0
Copper ppm ASTM D5185m >20 1 1 0 Tin ppm ASTM D5185m >20 <1	Aluminum	ppm	ASTM D5185m	>20	1	3	0
Tin ppm ASTM D5185m >20 <1 <1 0 Vanadium ppm ASTM D5185m 0 <1 0 Cadmium ppm ASTM D5185m 0 <1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 0 Barium ppm ASTM D5185m 5 0 0 0 0 Manganese ppm ASTM D5185m 5 0 0 0 0 Manganese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 0 0 0 0 Calcium ppm ASTM D5185m 25 <1 <1 0 Calcium ppm ASTM D5185m 200 37 4 <1 0 Calcium ppm ASTM D5185m 300 323 355 290 Zinc ppm ASTM D5185m 370 28 11 1 0 Sulfur ppm ASTM D5185m 2500 370 558 277 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 200 0 0 0 Potassium ppm ASTM D5185m 200 0 0 0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D5185m >20 <1 1 0 0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >6μm ASTM D7647 >10000 8371 8114 9420 Particles >6μm ASTM D7647 >2500 695 624 900 Particles >21μm ASTM D7647 >640 44 30 44 Particles >38μm ASTM D7647 >10 0 0 0 Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >20/18/16 20/17/13 20/16/12 20/17/13	Lead	ppm	ASTM D5185m	>20	<1	<1	0
Tin	Copper	ppm	ASTM D5185m	>20	1	1	0
Vanadium ppm ASTM D5185m 0 <1 0 Cadmium ppm ASTM D5185m 0 <1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 5 0 0 0 Manganese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 200 37 4 <1 Phosphorus ppm ASTM D5185m 200 37 4 <1 Phosphorus ppm ASTM D5185m 370 28 11 10 Sulfur ppm ASTM D5185m 2500 370 558 277 CONTAMINANTS method limit/base current history1 history2			ASTM D5185m	>20	<1	<1	0
Cadmium ppm ASTM D5185m 0 <1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 5 0 0 0 Magnesium ppm ASTM D5185m 25 <1	Vanadium		ASTM D5185m		0	<1	0
Boron ppm ASTM D5185m 5 0 0 0 0	Cadmium		ASTM D5185m		0	<1	0
Barium ppm ASTM D5185m 5 0 <1 0 Molybdenum ppm ASTM D5185m 5 0 0 0 Manganese ppm ASTM D5185m 25 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 5 0 0 0 Manganese ppm ASTM D5185m 25 <1 <1 0 Calcium ppm ASTM D5185m 25 <1 <1 0 Calcium ppm ASTM D5185m 200 37 4 <1 Phosphorus ppm ASTM D5185m 300 323 355 290 Zinc ppm ASTM D5185m 370 28 11 10 Sulfur ppm ASTM D5185m 2500 370 558 277 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 2 2 2 Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 <1 1 0 FLUID CLEANLINESS method limit/base </td <td>Boron</td> <td>ppm</td> <td>ASTM D5185m</td> <td>5</td> <td>0</td> <td>0</td> <td>0</td>	Boron	ppm	ASTM D5185m	5	0	0	0
Manganese ppm ASTM D5185m 0 0 0 Magnesium ppm ASTM D5185m 25 <1	Barium	ppm	ASTM D5185m	5	0	<1	0
Magnesium ppm ASTM D5185m 25 <1 <1 0 Calcium ppm ASTM D5185m 200 37 4 <1 Phosphorus ppm ASTM D5185m 300 323 355 290 Zinc ppm ASTM D5185m 370 28 11 10 Sulfur ppm ASTM D5185m 2500 370 558 277 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 2 2 Sodium ppm ASTM D5185m >15 2 2 2 Sodium ppm ASTM D5185m >20 <1	Molybdenum	ppm	ASTM D5185m	5	0	0	0
Calcium ppm ASTM D5185m 200 37 4 <1 Phosphorus ppm ASTM D5185m 300 323 355 290 Zinc ppm ASTM D5185m 370 28 11 10 Sulfur ppm ASTM D5185m 2500 370 558 277 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 2 2 Sodium ppm ASTM D5185m >0 0 0 0 Potassium ppm ASTM D5185m >20 <1	Manganese	ppm	ASTM D5185m		0	0	0
Phosphorus ppm ASTM D5185m 300 323 355 290 Zinc ppm ASTM D5185m 370 28 11 10 Sulfur ppm ASTM D5185m 2500 370 558 277 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 2 2 Sodium ppm ASTM D5185m >0 0 0 0 Potassium ppm ASTM D5185m >20 <1	Magnesium	ppm	ASTM D5185m	25	<1	<1	0
Zinc ppm ASTM D5185m 370 28 11 10 Sulfur ppm ASTM D5185m 2500 370 558 277 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 2 2 Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 <1	Calcium	ppm	ASTM D5185m	200	37	4	<1
Sulfur ppm ASTM D5185m 2500 370 558 277 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 2 2 Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 <1	Phosphorus	ppm	ASTM D5185m	300	323	355	290
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 2 2 Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 <1	Zinc	ppm	ASTM D5185m	370	28	11	10
Silicon ppm ASTM D5185m >15 2 2 2 2 Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 <1 1 0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >10000 8371 8114 9420 Particles >6μm ASTM D7647 >2500 695 624 900 Particles >14μm ASTM D7647 >640 44 30 44 Particles >21μm ASTM D7647 >160 12 9 13 Particles >38μm ASTM D7647 >40 2 1 0 Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >20/18/16 20/17/13 20/16/12 20/17/13	Sulfur	ppm	ASTM D5185m	2500	370	558	277
Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 <1	CONTAMINA	NTS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 <1 1 0 FLUID CLEANLINESS method limit/base current bistory1 history2 Particles >4μm ASTM D7647 >10000 8371 8114 9420 Particles >6μm ASTM D7647 >2500 695 624 900 Particles >14μm ASTM D7647 >640 44 30 44 Particles >21μm ASTM D7647 >160 12 9 13 Particles >38μm ASTM D7647 >40 2 1 0 Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >20/18/16 20/17/13 20/16/12 20/17/13	Silicon	ppm	ASTM D5185m	>15	2	2	2
FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >10000 8371 8114 9420 Particles >6μm ASTM D7647 >2500 695 624 900 Particles >14μm ASTM D7647 >640 44 30 44 Particles >21μm ASTM D7647 >160 12 9 13 Particles >38μm ASTM D7647 >40 2 1 0 Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >20/18/16 20/17/13 20/16/12 20/17/13	Sodium	ppm	ASTM D5185m		0	0	0
Particles >4μm ASTM D7647 >10000 8371 8114 9420 Particles >6μm ASTM D7647 >2500 695 624 900 Particles >14μm ASTM D7647 >640 44 30 44 Particles >21μm ASTM D7647 >160 12 9 13 Particles >38μm ASTM D7647 >40 2 1 0 Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >20/18/16 20/17/13 20/16/12 20/17/13	Potassium	ppm	ASTM D5185m	>20	<1	1	0
Particles >6μm ASTM D7647 >2500 695 624 900 Particles >14μm ASTM D7647 >640 44 30 44 Particles >21μm ASTM D7647 >160 12 9 13 Particles >38μm ASTM D7647 >40 2 1 0 Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >20/18/16 20/17/13 20/16/12 20/17/13	FLUID CLEAN	ILINESS	method	limit/base	current	history1	history2
Particles >14μm ASTM D7647 >640 44 30 44 Particles >21μm ASTM D7647 >160 12 9 13 Particles >38μm ASTM D7647 >40 2 1 0 Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >20/18/16 20/17/13 20/16/12 20/17/13	Particles >4µm		ASTM D7647	>10000	8371	8114	9420
Particles >21μm ASTM D7647 >160 12 9 13 Particles >38μm ASTM D7647 >40 2 1 0 Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >20/18/16 20/17/13 20/16/12 20/17/13	Particles >6µm		ASTM D7647	>2500	695	624	900
Particles >38μm ASTM D7647 >40 2 1 0 Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >20/18/16 20/17/13 20/16/12 20/17/13	Particles >14µm		ASTM D7647	>640	44	30	44
Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >20/18/16 20/17/13 20/16/12 20/17/13	Particles >21µm		ASTM D7647	>160	12	9	13
Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >20/18/16 20/17/13 20/16/12 20/17/13	Particles >38µm		ASTM D7647	>40	2	1	0
Oil Cleanliness ISO 4406 (c) >20/18/16 20/17/13 20/16/12 20/17/13	•		ASTM D7647	>10	0	0	0
FLUID DEGRADATION method limit/base current history1 history2	·			>20/18/16	20/17/13	20/16/12	20/17/13
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2

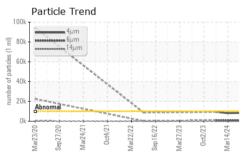


OIL ANALYSIS REPORT







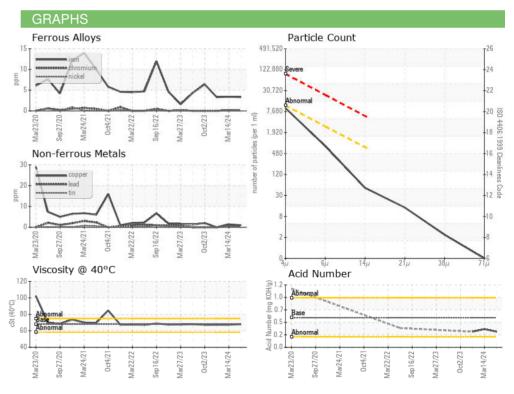


VISUAL	method				history2
White Metal sca	lar *Visual	NONE	NONE	NONE	NONE
Yellow Metal sca	lar *Visual	NONE	NONE	NONE	NONE
Precipitate sca	lar *Visual	NONE	NONE	NONE	NONE
Silt sca	lar *Visual	NONE	NONE	NONE	NONE
Debris sca	lar *Visual	NONE	NONE	NONE	NONE
Sand/Dirt sca	lar *Visual	NONE	NONE	NONE	NONE
Appearance sca	lar *Visual	NORML	NORML	NORML	NORML
Odor sca	lar *Visual	NORML	NORML	NORML	NORML
Emulsified Water sca	lar *Visual	>0.05	NEG	NEG	NEG
Free Water sca	lar *Visual		NEG	NEG	NEG

LEGID PROP	EHILO	method			riistory i	HISTORY
Visc @ 40°C	cSt	ASTM D445	68	68.0	67.4	67.4

SAMPLE IMAGES	method		
Color			

Color	
Bottom	







Laboratory Sample No.

Lab Number : 06195399 Unique Number : 11057522

: PCA0122303

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 30 May 2024 **Tested** : 05 Jun 2024

Diagnosed : 05 Jun 2024 - Jonathan Hester

2504 INDUSTRIAL DR

KIRKSVILLE, MO US 63501 Contact: WALLACE WARD

F: (660)627-5887

Test Package : IND 2 Certificate 12367 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.

wallace.ward@kraftheinzcompany.com T: (660)627-1031

KraftHeinz - Kirksville - Plant 8333 PCA

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) Report Id: KRAKIR [WUSCAR] 06195399 (Generated: 06/05/2024 17:47:25) Rev: 1

Submitted By: Wilberto Pacheco Garcia