

OIL ANALYSIS REPORT

Area MIX ROOM E [98982996] KR-GR-003116 - EAST DUMPER (S/N MIX E - 11513082)

Hydraulic System

AW HYDRAULIC OIL ISO 68 (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. (Customer Sample Comment: 98982996)

Wear

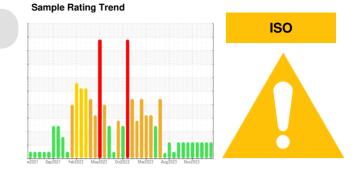
All component wear rates are normal.

Contamination

There is a high 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.



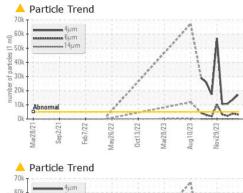
Sample NumberClient InfoPCA0124748PCA0114150PCA0119595Sample DateClient Info24 May 202416 Apr 202420 Mar 2024Machine AgehrsClient Info000Oil AgehrsClient InfoN/ANol ChangedN/ASample StatusIClient InfoN/ANol ChangedN/ASample StatusINethodInitbasecurrenthistory!history!WaterWCMedoJoiteNEGNEGNEGVEAR METALSmethodInitbasecurrenthistory!history!InonppmASTM 0518m>20000ChromiumppmASTM 0518m>20<100NickelppmASTM 0518m>20<100AluminumppmASTM 0518m>20<100AluminumppmASTM 0518m>20<100AdminumppmASTM 0518m>20<100AdminumppmASTM 0518m>20<100AdminumppmASTM 0518m>20<100AdminumppmASTM 0518m5000AdminumppmASTM 0518m5<100AdminumppmASTM 0518m5<100AdminumppmASTM 0518m5<100Adminum	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 0 0 0 Oil Age hrs Client Info N/A NAChangd N/A Sample Status Imathema ABNORMAL ABNORMAL ABNORMAL ABNORMAL CONTAMINATION wethod >0.05 NEG NEG NEG Water WC Method >0.05 NEG NEG NEG Wetar ppm ASTM D518m >20 0 0 0 Iron ppm ASTM D518m >20 0 0 0 Nickel ppm ASTM D518m >20 0 0 0 Itanium ppm ASTM D518m >20 4 0 <1 0 <1 Silver ppm ASTM D518m >20 <1 0 <1 0 <1 Cadadium ppm ASTM D518m >20 <1 0 <1 0 <1 Vanadium pm ASTM D518m	Sample Number		Client Info		PCA0124748	PCA0114150	PCA0119595
Oil Age hrs Client Info N/A Not Changed O O Sample Status Image Client Info N/A ABNORMAL ABNORMAL ABNORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.05 NEG NEG NEG Wear method limit/base current history1 history2 Iron ppm ASTM D5185m >20 0 0 0 Chromium ppm ASTM D5185m >20 0 0 0 Silver ppm ASTM D5185m >20 c1 0 -1 Silver ppm ASTM D5185m >20 c1 0 -1 Copper ppm ASTM D5185m >20 c1 0 -1 Copper ppm ASTM D5185m >20 c1 0 -1 Copper ppm ASTM D5185m 20 c1	Sample Date		Client Info		24 May 2024	16 Apr 2024	20 Mar 2024
Oli Changed Sample Status Client Info N/A ABNORMAL Not Changd ABNORMAL N/A ABNORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.05 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 0 0 0 Othornium ppm ASTM D5185m >20 0 0 0 Nickel ppm ASTM D5185m >20 0 0 0 Silver ppm ASTM D5185m >20 21 0 11 Copper ppm ASTM D5185m >20 21 0 21 Cadmium ppm ASTM D5185m >20 21 0 21 Cadmium ppm ASTM D5185m >20 21 0 21 Cadmium ppm ASTM D5185m 20 0 0	Machine Age	hrs	Client Info		0	0	0
Sample Status Method Imit/base Current NEG NEG NEG Water WC Method >0.05 NEG NEG NEG Water WC Method >0.05 NEG NEG NEG Wetar METALS method limit/base current history1 history2 Iron ppm ASTM D5185n >20 0 0 0 Nickel ppm ASTM D5185n >20 0 0 0 Silver ppm ASTM D5185n >20 2 0 3 Lead ppm ASTM D5185n >20 <1 0 <1 Copper ppm ASTM D5185n >20 <1 0 <1 Adminum ppm ASTM D5185n >20 <1 0 <1 Cadmium ppm ASTM D5185n >2 <1 0 0 Madium ppm ASTM D5185n 5 <1 0 0 <	Oil Age	hrs	Client Info		0	0	0
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Water WC Method >0.05 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 0 0 0 Chromium ppm ASTM D5185m >20 0 0 0 Nickel ppm ASTM D5185m >20 0 0 0 Aluminum ppm ASTM D5185m >20 2 0 3 Lead ppm ASTM D5185m >20 <1 0 <1 Capper ppm ASTM D5185m >20 <1 0 <1 Vanadium ppm ASTM D5185m >20 <1 0 <1 Cadmium ppm ASTM D5185m >20 <1 0 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 <1 0 0 <th>Sample Status</th> <th></th> <th></th> <th></th> <th>ABNORMAL</th> <th>ABNORMAL</th> <th>ABNORMAL</th>	Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5165m >20 0 0 0 Chromium ppm ASTM D5165m >20 0 0 0 Nickel ppm ASTM D5165m >20 0 0 0 Silver ppm ASTM D5165m >20 2 0 3 Lead ppm ASTM D5165m >20 <1 0 <1 Copper ppm ASTM D5165m >20 <1 0 <1 Vanadium ppm ASTM D5165m >20 <1 0 <1 Vanadium ppm ASTM D5165m >20 <1 0 <1 Cadmium ppm ASTM D5165m >20 <1 0 <1 Mangaines ppm ASTM D5165m 5 0 0 0 Marganesium ppm ASTM D5165m 5 <1 <1<	CONTAMINAT	ION	method	limit/base	current	history1	history2
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Chromium ppm ASTM D5185m >20 <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >20 0 0 0 Titanium ppm ASTM D5185m <1	Iron	ppm	ASTM D5185m	>20	0	0	0
Titanium ppm ASTM D5185m </td <th>Chromium</th> <td>ppm</td> <td>ASTM D5185m</td> <td>>20</td> <th><1</th> <td>0</td> <td><1</td>	Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m >20 2 0 3 Lead ppm ASTM D5185m >20 <1	Nickel	ppm	ASTM D5185m	>20	0	0	0
Aluminum ppm ASTM D5185m >20 2 0 3 Lead ppm ASTM D5185m >20 <1	Titanium	ppm	ASTM D5185m		<1	0	<1
Lead ppm ASTM D5185m >20 <1 0 <1 Copper ppm ASTM D5185m >20 <1	Silver	ppm	ASTM D5185m		0	0	0
Copper ppm ASTM D5185m >20 <1 0 <1 Tin ppm ASTM D5185m >20 <1	Aluminum	ppm	ASTM D5185m	>20	2	0	3
Copper ppm ASTM D5185m >20 <1 0 <1 Tin ppm ASTM D5185m >20 <1	Lead		ASTM D5185m	>20	<1	0	<1
Vanadium ppm ASTM D5185m 0 <1 <1 Cadmium ppm ASTM D5185m <1 0 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 <1 0 0 Molybdenum ppm ASTM D5185m 5 <1 0 0 Manganese ppm ASTM D5185m 25 <1 <1 <1 Calcium ppm ASTM D5185m 250 <1 <1 <1 Calcium ppm ASTM D5185m 200 0 0 3 Silicon ppm ASTM D5185m 2500 438 554 467 Sodium ppm ASTM D5185m >15 2 <1 1 Sodium ppm ASTM D5185m >20 <1 0 1	Copper		ASTM D5185m	>20	<1	0	<1
Cadmium ppm ASTM D5185m <1 0 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 <1 0 0 Molybdenum ppm ASTM D5185m 5 <1 0 0 Manganese ppm ASTM D5185m 25 <1 <1 <1 Calcium ppm ASTM D5185m 25 <1 <1 <1 <1 Calcium ppm ASTM D5185m 200 0 0 3 Phosphorus ppm ASTM D5185m 200 438 554 467 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 <1 0 1 FLUID CLEANLINESS method <thimit base<="" th=""> current <t< td=""><th>Tin</th><td>ppm</td><td>ASTM D5185m</td><td>>20</td><th><1</th><td>0</td><td><1</td></t<></thimit>	Tin	ppm	ASTM D5185m	>20	<1	0	<1
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 <1	Vanadium		ASTM D5185m		0	<1	<1
Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 <1	Cadmium	ppm	ASTM D5185m		<1	0	<1
Barium ppm ASTM D5185m 5 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 5 <1 0 0 Manganese ppm ASTM D5185m 25 <1	Boron	ppm	ASTM D5185m	5	0	0	0
Maganese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 25 <1	Barium	ppm	ASTM D5185m	5	<1	0	0
Name Ppm ASTM D5185m 25 <1 <1 <1 Calcium ppm ASTM D5185m 200 0 0 3 Phosphorus ppm ASTM D5185m 300 407 375 436 Zinc ppm ASTM D5185m 370 <1	Molybdenum	ppm	ASTM D5185m	5	<1	0	0
Calcium ppm ASTM D5185m 200 0 0 3 Phosphorus ppm ASTM D5185m 300 407 375 436 Zinc ppm ASTM D5185m 370 <1	Manganese	ppm	ASTM D5185m		0	0	0
Phosphorus ppm ASTM D5185m 300 407 375 436 Zinc ppm ASTM D5185m 370 <1	Magnesium	ppm	ASTM D5185m	25	<1	<1	<1
Zinc ppm ASTM D5185m 370 <1 0 0 Sulfur ppm ASTM D5185m 2500 438 554 467 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 <1	Calcium	ppm	ASTM D5185m	200	0	0	3
Sulfur ppm ASTM D5185m 2500 438 554 467 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 <1	Phosphorus	ppm	ASTM D5185m	300	407	375	436
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 <1 1 Sodium ppm ASTM D5185m >15 2 <1 1 Sodium ppm ASTM D5185m >0 0 0 0 Potassium ppm ASTM D5185m >20 <1 0 1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 ▲ 17068 ▲ 13664 10723 Particles >6µm ASTM D7647 >1300 ▲ 3109 ▲ 3816 2170 Particles >6µm ASTM D7647 >320 34 59 31 Particles >14µm ASTM D7647 >80 5 7 7 Particles >38µm ASTM D7647 >20 0 0 1 Particles >71µm ASTM D7647 >4 0 0 21/18/12	Zinc	ppm	ASTM D5185m	370	<1	0	0
Silicon ppm ASTM D5185m >15 2 <1	Sulfur	ppm	ASTM D5185m	2500	438	554	467
Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 <1 0 1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 ▲ 17068 ▲ 13664 ▲ 10723 Particles >6µm ASTM D7647 >1300 ▲ 3109 ▲ 3816 2170 Particles >14µm ASTM D7647 >320 34 59 31 Particles >21µm ASTM D7647 >80 5 7 7 Particles >38µm ASTM D7647 >20 0 0 1 Particles >71µm ASTM D7647 >4 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/15 ▲ 21/19/12 ▲ 21/19/13 ▲ 21/18/12 FLUID DEGRADATION method limit/base current history1 history2	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 <1	Silicon	ppm	ASTM D5185m	>15	2	<1	1
FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 17068 13664 10723 Particles >6µm ASTM D7647 >1300 3109 3816 2170 Particles >6µm ASTM D7647 >320 34 59 31 Particles >14µm ASTM D7647 >80 5 7 7 Particles >21µm ASTM D7647 >80 5 7 7 Particles >38µm ASTM D7647 >20 0 0 1 Particles >71µm ASTM D7647 >4 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/15 21/19/12 21/19/13 21/18/12 FLUID DEGRADATION method limit/base current history1 history2	Sodium	ppm	ASTM D5185m		0	0	0
Particles >4μm ASTM D7647 >5000 ▲ 17068 ▲ 13664 ▲ 10723 Particles >6μm ASTM D7647 >1300 ▲ 3109 ▲ 3816 ≥170 Particles >14μm ASTM D7647 >320 34 59 31 Particles >21μm ASTM D7647 >80 5 7 7 Particles >21μm ASTM D7647 >20 0 0 1 Particles >38μm ASTM D7647 >20 0 0 1 Particles >71μm ASTM D7647 >4 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/15 21/19/12 21/19/13 21/18/12	Potassium	ppm	ASTM D5185m	>20	<1	0	1
Particles >6µm ASTM D7647 >1300 ▲ 3109 ▲ 3816 2170 Particles >14µm ASTM D7647 >320 34 59 31 Particles >21µm ASTM D7647 >80 5 7 7 Particles >38µm ASTM D7647 >20 0 0 1 Particles >38µm ASTM D7647 >20 0 0 1 Particles >71µm ASTM D7647 >4 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/15 21/19/12 21/19/13 21/18/12 FLUID DEGRADATION method limit/base current history1 history2	FLUID CLEAN	LINESS	method	limit/base	current	history1	history2
Particles >6μm ASTM D7647 >1300 ▲ 3109 ▲ 3816 2170 Particles >14μm ASTM D7647 >320 34 59 31 Particles >21μm ASTM D7647 >80 5 7 7 Particles >38μm ASTM D7647 >20 0 0 1 Particles >38μm ASTM D7647 >20 0 0 1 Particles >71μm ASTM D7647 >4 0 0 0 Oli Cleanliness ISO 4406 (c) >19/17/15 21/19/12 21/19/13 21/18/12 FLUID DEGRADATION method limit/base current history1 history2	Particles >4µm		ASTM D7647	>5000	<u> 17068</u>	🔺 13664	1 0723
Particles >21μm ASTM D7647 >80 5 7 7 Particles >38μm ASTM D7647 >20 0 0 1 Particles >37μm ASTM D7647 >4 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/15 21/19/12 21/19/13 21/18/12 FLUID DEGRADATION method limit/base current history1 history2	Particles >6µm		ASTM D7647	>1300	<u> </u>	A 3816	2170
Particles >38μm ASTM D7647 >20 0 0 1 Particles >71μm ASTM D7647 >4 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/15 21/19/12 21/19/13 21/18/12 FLUID DEGRADATION method limit/base current history1 history2	Particles >14µm		ASTM D7647	>320	34	59	31
Particles >38μm ASTM D7647 >20 0 0 1 Particles >71μm ASTM D7647 >4 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/15 ▲ 21/19/12 ▲ 21/19/13 ▲ 21/18/12 FLUID DEGRADATION method limit/base current history1 history2	Particles >21µm		ASTM D7647	>80	5	7	7
Particles >71μm ASTM D7647 >4 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/15 ▲ 21/19/12 ▲ 21/19/13 ▲ 21/18/12 FLUID DEGRADATION method limit/base current history1 history2						0	1
Oil Cleanliness ISO 4406 (c) >19/17/15 21/19/12 21/19/13 21/18/12 FLUID DEGRADATION method limit/base current history1 history2			ASTM D7647	>4	0	0	0
	-					1 /19/13	▲ 21/18/12
Acid Number (AN) mg KOH/g ASTM D8045 0.57 0.16 0.13 0.12	FLUID DEGRA		method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.16	0.13	0.12

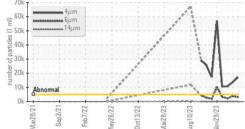
Report Id: KRAKIR [WUSCAR] 06195380 (Generated: 05/31/2024 20:29:33) Rev: 1

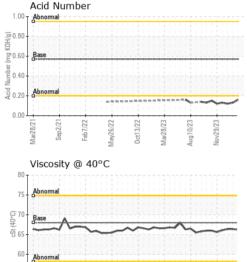
Submitted By: Wilberto Pacheco Garcia



OIL ANALYSIS REPORT







0ct13/22

lay26/22

Aug10/23 Vov29/23

Mar28/23

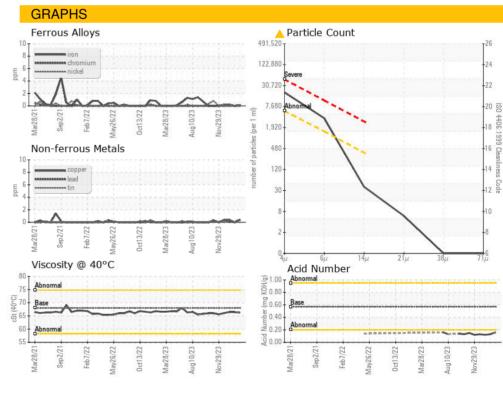
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Mar28/21

C/Cue

CC/Lda

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
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	NONE	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	>0.05	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	68	66.2	66.4	66.4
SAMPLE IMAG	ES	method	limit/base	current	history1	history2
Color				·		
Bottom						



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 KraftHeinz - Kirksville - Plant 8333 PCA Sample No. : PCA0124748 Received : 30 May 2024 2504 INDUSTRIAL DR Lab Number : 06195380 Tested : 31 May 2024 KIRKSVILLE, MO Unique Number : 11057503 Diagnosed : 31 May 2024 - Angela Borella US 63501 Test Package : IND 2 Contact: WALLACE WARD Certificate 12367 wallace.ward@kraftheinzcompany.com 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. T: (660)627-1031 F: (660)627-5887

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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Submitted By: Wilberto Pacheco Garcia