

OIL ANALYSIS REPORT

Sample Rating Trend



Area (C-GYHM) 003 Component Hydraulic System Fluid ESSO HYJET IV-A PLUS (100 LTR)

DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0936379	WC0872728	
Sample Date		Client Info		14 Jun 2024	23 Oct 2023	
Machine Age	hrs	Client Info		373	373	
Oil Age	hrs	Client Info		1	0	
Oil Changed		Client Info		Not Changd	Not Changd	
Sample Status				NORMAL	ATTENTION	
CONTAMINATION	٧	method	limit/base	current	history1	history2
Water		WC Method	>0.750	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	2	2	
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	
Nickel	ppm	ASTM D5185(m)	>20	<1	0	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)		<1	<1	
Aluminum	ppm	ASTM D5185(m)	>20	<1	<1	
Lead	ppm	ASTM D5185(m)	>20	<1	<1	
Copper	ppm	ASTM D5185(m)	>20	8	7	
Tin	ppm	ASTM D5185(m)	>20	0	0	
Antimony	ppm	ASTM D5185(m)		0	0	
Vanadium	ppm	ASTM D5185(m)		0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	
Cadmium	ppm	ASTM D5185(m)		9	9	
						history2
ADDITIVES		method	iimii/base	current	history1	TIIStOFy2
Boron	ppm	ASTM D5185(m)	IIIIII/base	8	6	
Boron Barium	ppm ppm	ASTM D5185(m) ASTM D5185(m)	Innivoase	8 <1		
Boron Barium Molybdenum		ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	IIMI/base	8 <1 0	6 <1 0	
Boron Barium Molybdenum Manganese	ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		8 <1 0 0	6 <1 0 0	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		8 <1 0 0 7	6 <1 0 0 4	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	110	8 <1 0 0 7 80	6 <1 0 0 4 85	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		8 <1 0 0 7 80 44229	6 <1 0 0 4 85 51419	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	110 37	8 <1 0 0 7 80 44229 32	6 <1 0 0 4 85 51419 21	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	110	8 <1 0 0 7 80 44229 32 592	6 <1 0 0 4 85 51419 21 573	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	110 37	8 <1 0 0 7 80 44229 32	6 <1 0 0 4 85 51419 21	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	110 37	8 <1 0 0 7 80 44229 32 592	6 <1 0 0 4 85 51419 21 573	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	110 37 220	8 <1 0 0 7 80 44229 32 592 <1	6 <1 0 0 4 85 51419 21 573 <1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	110 37 220 limit/base	8 <1 0 0 7 80 44229 32 592 <1 current	6 <1 0 0 4 85 51419 21 573 <1 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	110 37 220 limit/base >15	8 <1 0 0 7 80 44229 32 592 <1 current 2	6 <1 0 0 4 85 51419 21 573 <1 573 <1 <i>history1</i> 2	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	110 37 220 limit/base >15	8 <1 0 0 7 80 44229 32 592 <1 current 2 7	6 <1 0 4 85 51419 21 573 <1 history1 2 5	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	110 37 220 limit/base >15 >20	8 <1 0 0 7 80 44229 32 592 <1 current 2 7 28	6 <1 0 0 4 85 51419 21 573 <1 bistory1 2 5 32	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	110 37 220 limit/base >15 >20 limit/base >5000	8 <1 0 0 7 80 44229 32 592 <1 current 2 7 28 current	6 <1 0 0 4 85 51419 21 573 <1 bistory1 2 5 32 bistory1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	110 37 220 limit/base >15 >20 limit/base >5000	8 <1 0 0 7 80 44229 32 592 <1 current 2 2 7 28 current 2294	6 <1 0 0 4 85 51419 21 573 <1 ► history1 2 5 32 ► history1 206	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	110 37 220 limit/base >15 >20 limit/base >5000 >1300 >160	8 <1 0 0 7 80 44229 32 592 <1 <i>current</i> 2 2 7 28 <i>current</i> 2294 667	6 <1 0 0 4 85 51419 21 573 <1 bistory1 2 5 32 bistory1 206 63	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D76477 ASTM D7647	110 37 220 limit/base >15 >20 limit/base >5000 >1300 >160	8 <1 0 0 7 80 44229 32 592 <1 <i>current</i> 2 7 28 <i>current</i> 2294 667 67	6 <1 0 0 4 85 51419 21 573 <1 bistory1 2 5 32 bistory1 206 63 63 6	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	110 37 220 imit/base >15 >20 imit/base >5000 >1300 >160 >40 >10	8 <1 0 0 7 80 44229 32 592 <1 current 2 2 7 28 current 2294 667 67 24	6 <100 004 85 51419 21 573 <10 1000 10	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	110 37 220 imit/base >15 >20 imit/base >5000 >1300 >160 >40 >10	8 <1 0 0 7 80 44229 32 592 <1 <u>current</u> 2 7 28 <u>current</u> 2294 667 67 24 3 1 18/17/13	6 <1 0 0 4 85 51419 21 573 <1 history1 2 5 32 history1 206 63 6 2 1 0 1 0 15/13/10	 history2 history2 history2



OIL ANALYSIS REPORT

6k4μm]		FLUID DEGRAD		method	limit/base	current	history1	history2
5k - Παιασταστά 6μm		Acid Number (AN)	mg KOH/g	ASTM D974*	0.04	0.37	0.44	
1k		VISUAL		method	limit/base	current	history1	history2
		White Metal	scalar	Visual*	NONE	NONE	NONE	
2k		Yellow Metal	scalar	Visual*	NONE	NONE	NONE	
	***************************************	Precipitate	scalar	Visual*	NONE	NONE	NONE	
0ct23/23 -	4/24 -	Silt	scalar	Visual*	NONE	NONE	NONE	
0ct2	Jun14/24	Debris	scalar	Visual*	NONE	NONE	NONE	
Additives		Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	
		Appearance	scalar	Visual*	NORML	NORML	NORML	
00 - calcium	4	Odor	scalar	Visual*	NORML	NORML	NORML	
00 - Zinc		Emulsified Water	scalar	Visual*	>0.750	NEG	NEG	
0		Free Water	scalar	Visual*		NEG	NEG	
- 00		FLUID PROPER	TIES	method	limit/base	current	history1	history2
0		Visc @ 40°C	cSt	ASTM D7279(m)	10.55	7.8	7.8	
0ct23/23	Jun14/24 -	SAMPLE IMAGE	S	method	limit/base	current	history1	history2
Viscosity @ 40°C	η 	Color						no image
2 - Base 0 - 9 9		Bottom						no image
7 - Abnormal		GRAPHS						
0ct23/23	р. С. Р.	Ferrous Alloys				Particle Count		
0	1	10 iron 1			491,520			1 ²⁶
Particle Trend		E 5-			122,880	Severe		-24
4μm					30,720			-22
k - Ganadaaaaaa 6µm		0			- 7,680	Abnormal		-20
k		23/23			lun 14/24 s (per 1 ml			-20 -18 -16
k		Oct			Jun 14/24 - Jun 14/24 - 176'1 ml) 899'/		•	+10
k		Non-ferrous Meta	s					-16
k -		10 copper			ja 120			-14
	~	E 5-			E 30	1		-12
0ct23/23								10
ō	1	0			-			
Additives		0ct23/2			Jun14/24	2-		-8
calcium					- ⁻ (4μ 6μ	14µ 21µ	38µ 71µ
0 - management phosphorus		Viscosity @ 40°C			<u> </u>	Acid Number	40 A)	
0-		Abnormal			(^B)1.50 NHOX			
0		012 Base 000000000000000000000000000000000000			Ê 1.00			
0-		85 8						
0		6			4- Pico 0.00	Base		
23	e. C	0ct23/23			Jun14/24	0ct23/23		47.4
0ct23/23	the state of the s	06			Jun	Oct		
	CALLA To25:2017 Credited boratory discuss this sample report t denoted (*) outside scop dity of results and interport	: 5799857 : IND 2 (Additional Tes t, contact Customer Serv be of accreditation, (m) m	Rece Teste Diagr sts: TAN ice at 1-8 pethod mo	ived : 17 id : 18 nosed : 18 Man) 800-268-213 pdified, (e) te	7 Jun 2024 3 Jun 2024 Jun 2024 - Kev 1. ested at extern	in Marson nal lab.	Mo Contac j.le T:	KF Aero 0 Airport Roac ount Hope, Of CA LOR 1W0 ct: Justin Lewi wis@kfaero.c; (905)679-3313 (905)679-492

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