

OIL ANALYSIS REPORT

Sample Rating Trend

ISO

Machine Id **B3 B SIDE HOIST**

Component **Hydraulic System** ESSO NUTO H ISO 32 (200 GAL)

DIAGNOSIS

A Recommendation

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

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 oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

				Feb2024		
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0862403		
Sample Date		Client Info		20 Feb 2024		
Machine Age	yrs	Client Info		20		
Oil Age	yrs	Client Info		3		
Oil Changed	yro	Client Info		Changed		
Sample Status				ABNORMAL		
		mathad	limit/base	-		
CONTAMINATION Water	N	method WC Method	limit/base		history1	history2
				NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	4		
Chromium	ppm	ASTM D5185(m)	>20	0		
Nickel	ppm	ASTM D5185(m)	>20	<1		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		0		
Aluminum	ppm	ASTM D5185(m)	>20	<1		
Lead	ppm	ASTM D5185(m)	>20	<1		
Copper	ppm	ASTM D5185(m)	>20	<1		
Tin	ppm	ASTM D5185(m)	>20	0		
Antimony	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		0		
	ppm ppm	ASTM D5185(m) ASTM D5185(m)		0		
Barium		. /				
Barium Molybdenum	ppm	ASTM D5185(m)		0		
Barium Molybdenum Manganese	ppm ppm	ASTM D5185(m) ASTM D5185(m)		0 0		
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		0 0 0		
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		0 0 0 1		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		0 0 0 1 55	 	
Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		0 0 1 55 350	 	
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)		0 0 1 55 350 426	 	
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)	limit/base	0 0 1 55 350 426 3206 <1	 	
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)		0 0 1 55 350 426 3206 <1 current		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	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)	limit/base >15	0 0 1 55 350 426 3206 <1 current 3	 history1	 history2
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) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		0 0 1 55 350 426 3206 <1 current	 history1	 history2
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)	>15 >20	0 0 1 55 350 426 3206 <1 current 3 0 1	 history1 	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	>15 >20 limit/base	0 0 1 55 350 426 3206 <1 current 3 0 1 current	 history1 history1	 history2 history2
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)	>15 >20 limit/base >5000	0 0 1 55 350 426 3206 <1 current 3 0 1 1 current	 history1 history1	 history2 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	>15 >20 limit/base >5000 >1300	0 0 1 55 350 426 3206 <1 current 3 0 1 2 current 1 20650 ▲ 20650	 history1 history1 	 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	>15 >20 limit/base >5000 >1300 >160	0 0 1 55 350 426 3206 <1 current 3 0 1 20650 1 20650 ▲ 20650 ▲ 3306 66	 history1 history1 history1	 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>15 >20 limit/base >5000 >1300 >160 >40	0 0 1 55 350 426 3206 <1 current 3 0 1 current ▲ 20650 ▲ 3306 66 12	history1 history1 <td> history2 history2 </td>	 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>15 >20 limit/base >5000 >1300 >160 >40 >10	0 0 1 55 350 426 3206 <1 current 3 0 1 2 0 1 2 0 1 20650 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	history1 history1 <td> history2 history2 </td>	 history2 history2
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 D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>15 >20 limit/base >5000 >1300 >160 >40 >10	0 0 1 55 350 426 3206 <1 current 3 0 1 current ▲ 20650 ▲ 3306 66 12	history1 history1 <td> history2 history2 </td>	 history2 history2



OIL ANALYSIS REPORT

A Particle Trend	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
0k	Acid Number (AN)	mg KOH/g	ASTM D974*	.40	0.39		
5k	VISUAL		method	limit/base	current	history1	history2
n.	White Metal	scalar	Visual*	NONE	NONE		
5k Abnormal	Yellow Metal	scalar	Visual*	NONE	NONE		
5k + 0	Precipitate	scalar	Visual*	NONE	NONE		
0k	Silt	scalar	Visual*	NONE	NONE		
Feb 20/24	Debris	scalar	Visual*	NONE	NONE		
	Sand/Dirt	scalar	Visual*	NONE	NONE		
A Particle Trend	Appearance	scalar	Visual*	NORML	NORML		
	Odor	scalar	Visual*	NORML	NORML		
τι 14μm	Emulsified Water	scalar	Visual*	>0.05	NEG		
	Free Water	scalar	Visual*		NEG		
Ok - Abnomal	FLUID PROPER	FIES	method	limit/base	current	history1	history2
	Visc @ 40°C	cSt	ASTM D7279(m)	32.6	31.8		
Feb20/24 F	SAMPLE IMAGE	S	method	limit/base	current	history1	history2
Acid Number	Color					no image	no image
40 - Base 30	Bottom					no image	no image
Viscosity @ 40°C	Ferrous Alloys			491,520 122,880 30,720 100,7680 100,7680 100,7680 10,920 480 480 480 480	Severe		21 -2- -2: -2: -2: -2: -1: -1: -1:
Abnormal	Non-ferrous Meta	ls		to 121			-16 -14 -12 -10 -8
	Viscosity @ 40°C Abnormal (1)06/1334 Base Abnormal 28 40 40°C			24 Provide (mg KOH4g) Provide (mg KOH4g) Provide (mg KOH4g)	D	14μ 21μ	38µ 71µ
Iso 17025:2017 Accredited Laboratory To discuss this sample report	: 5746628 : IND 2 (Additional Tes	Recei Teste Diagr sts: TAN	ived : 12 id : 13 nosed : 13 Man)	2 Mar 2024 3 Mar 2024 9 Mar 2024 - W		TILLS	DAR STREE ONBURG, C CA N4G 4H Ron Theissl

Contact/Location: Ron Theissler - DYNTIL