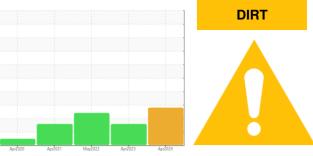


OIL ANALYSIS REPORT

SAMPLE INFORMATION method

Sample Rating Trend

limit/base



history1

history2

current

Machine Id

77AY01 Component Hydraulic System KLUBER KLUBEROIL 4 UH1-68 N (10 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. Elemental level of silicon (Si) above normal.

Fluid Condition

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

Sample Date Client Into 03 Apr 2024 29 Apr 2023 08 May 202. Machine Age yrs Client Info 0 0 0 Oil Age yrs Client Info 0 0 0 Sample Status Client Info N/A N/A ABNORMAL	SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Machine Age yrs Client Info 0 0 0 Oil Age yrs Client Info 0 0 0 0 Oil Changed Client Info NA N/A ABNORMAL ABNORMAL ABNORMAL Sample Status Interview ABNORMAL ABNORMAL ABNORMAL ABNORMAL WEAR METALS method Imil/base current history1 history2 Iron ppm ASTM 05185m >20 <1	Sample Number		Client Info		WC0907811	WC0792585	WC0664347
Oil Age yrs Client Info 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Sample Status Imit Dase current history1 history2 Iron ppm ASTM D5185m >20 2 <1	Sample Date		Client Info		03 Apr 2024	29 Apr 2023	08 May 2022
Ol Changed Client Info N/A N/A N/A N/A N/A Sample Status method limi/base current history1 ABNORMAL WEAR METALS method limi/base current history1 history2 Iron ppm ASTM 05185m >20 2 <1	Machine Age	yrs	Client Info		0	0	0
Sample Status method Imit/base current history1 ABNORMAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM 05/85n >20 2 <1	Oil Age	yrs	Client Info		0	0	0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m<>20 2 <1	Oil Changed		Client Info		N/A	N/A	N/A
Iron ppm ASTM D5185m >20 2 <1 1 Chromium ppm ASTM D5185m >20 <1	Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Ppm ASTM D5185m >20 <1 <1 0 Nickel ppm ASTM D5185m >20 0 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >20 0 <1 0 Titanium ppm ASTM D5185m 0 0 <1	Iron	ppm	ASTM D5185m	>20	2	<1	1
Titanium ppm ASTM D5185m <1 0 0 Silver ppm ASTM D5185m >20 2 0 <1	Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Silver ppm ASTM D5185m 0 0 <1 Aluminum ppm ASTM D5185m<>20 2 0 <1	Nickel	ppm	ASTM D5185m	>20	0	<1	0
Aluminum ppm ASTM D5185m >20 2 0 <1 Lead ppm ASTM D5185m >20 0 0 <1	Titanium	ppm	ASTM D5185m		<1	0	0
Lead ppm ASTM D5185m >20 0 0 <1 Copper ppm ASTM D5185m >20 <1	Silver	ppm	ASTM D5185m		0	0	<1
Copper ppm ASTM D5185m >20 <1 0 <1 Tin ppm ASTM D5185m >20 <1	Aluminum	ppm	ASTM D5185m	>20	2	0	<1
Copper ppm ASTM D5185m >20 <1 0 <1 Tin ppm ASTM D5185m >20 <1	Lead	ppm	ASTM D5185m	>20	0	0	<1
Tin ppm ASTM D5185m >20 <1 0 <1 Antimony ppm ASTM D5185m Vanadium ppm ASTM D5185m <1 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 0 1 1 Magnesium ppm ASTM D5185m 0 1 4 1 Calcium ppm ASTM D5185m 722 673 686 Zinc ppm ASTM D5185m 776 974 638 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 53 17 9 9 Sodium ppm ASTM D5185m >20 <1 1	Copper		ASTM D5185m	>20	<1	0	<1
Antimony ppm ASTM D5185m Vanadium ppm ASTM D5185m <1	Tin						
Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 0 1 4 1 Calcium ppm ASTM D5185m 722 673 686 Zinc ppm ASTM D5185m 776 974 638 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 53 17 9 Sodium ppm ASTM D5185m >20 1 0 0 Vatter <td>Antimony</td> <td></td> <td></td> <td></td> <th></th> <td></td> <td></td>	Antimony						
Cadmium pm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 1 Barium ppm ASTM D5185m 0 0 0 Magnaese ppm ASTM D5185m 0 0 0 0 Magnese ppm ASTM D5185m 0 -1 4 1 Calcium ppm ASTM D5185m <1 4 1 Calcium ppm ASTM D5185m 722 673 686 Zinc ppm ASTM D5185m 776 974 638 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 53 17 9 Sodium ppm ASTM D5185m >20 <1 1 0 Water % ASTM D6304 <tb< td=""><td>Vanadium</td><td></td><td></td><td></td><th><1</th><td>0</td><td>0</td></tb<>	Vanadium				<1	0	0
Boron ppm ASTM D5185m 0 0 1 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 -1 -1 Magnesium ppm ASTM D5185m -1 4 1 Calcium ppm ASTM D5185m -1 4 1 Calcium ppm ASTM D5185m 722 673 686 Zinc ppm ASTM D5185m 776 974 638 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 53 17 9 Sodium ppm ASTM D5185m <1	Cadmium						
Boron ppm ASTM D5185m 0 0 1 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 -1 <1	ADDITIVES		method	limit/base	current	history1	history2
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Manganese ppm ASTM D5185m 0 <1	Barium	ppm	ASTM D5185m		0	0	0
Marganese ppm ASTM D5185m 0 <1 <1 Magnesium ppm ASTM D5185m <1	Molybdenum	ppm	ASTM D5185m		0	0	0
Calcium ppm ASTM D5185m 5 0 1 Phosphorus ppm ASTM D5185m 722 673 686 Zinc ppm ASTM D5185m 4 1 4 Sulfur ppm ASTM D5185m 4 1 4 Sulfur ppm ASTM D5185m 776 974 638 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 53 17 9 Sodium ppm ASTM D5185m >15 53 17 9 Sodium ppm ASTM D5185m >15 53 17 9 Sodium ppm ASTM D5185m >20 <1	-	ppm	ASTM D5185m		0	<1	<1
Calcium ppm ASTM D5185m 5 0 1 Phosphorus ppm ASTM D5185m 722 673 686 Zinc ppm ASTM D5185m 4 1 4 Sulfur ppm ASTM D5185m 4 1 4 Sulfur ppm ASTM D5185m 776 974 638 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 53 17 9 Sodium ppm ASTM D5185m >20 <1	Magnesium	ppm	ASTM D5185m		<1	4	1
Phosphorus ppm ASTM D5185m 722 673 686 Zinc ppm ASTM D5185m 4 1 4 Sulfur ppm ASTM D5185m 776 974 638 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 53 17 9 Sodium ppm ASTM D5185m >15 53 17 9 Sodium ppm ASTM D5185m >20 <1	Calcium		ASTM D5185m		5	0	1
Zinc ppm ASTM D5185m 4 1 4 Sulfur ppm ASTM D5185m 776 974 638 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 ▲ 53 ▲ 17 9 Sodium ppm ASTM D5185m >15 ▲ 53 ▲ 17 9 Sodium ppm ASTM D5185m >15 ▲ 53 ▲ 17 9 Sodium ppm ASTM D5185m >20 <1	Phosphorus				722	673	686
Sulfur ppm ASTM D5185m 776 974 638 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 ▲ 53 ▲ 17 9 Sodium ppm ASTM D5185m >15 ▲ 53 ▲ 17 9 Potassium ppm ASTM D5185m >20 <1			ASTM D5185m		4	1	4
Silicon ppm ASTM D5185m >15 ▲ 53 ▲ 17 9 Sodium ppm ASTM D5185m <1	Sulfur		ASTM D5185m		776	974	638
Sodium ppm ASTM D5185m <1 <1 0 Potassium ppm ASTM D5185m >20 <1	CONTAMINANTS	5	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 <1 1 0 Water % ASTM D6304 >0.05 0.003 0.001 0.001 ppm Water ppm ASTM D6304 >500 36 13.2 4.0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 7473 390 & 88978 Particles >6µm ASTM D7647 >1300 1400 152 9016 Particles >14µm ASTM D7647 >160 67 15 273 Particles >21µm ASTM D7647 >10 0 0 11 Particles >38µm ASTM D7647 >3 0 0 0 Particles >71µm ASTM D7647 >3 0 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 16/14/11 24/20/15 FLUID DEGRADATION method limit/base current history1 <td>Silicon</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>15</td> <th>53</th> <td>17</td> <td>9</td>	Silicon	ppm	ASTM D5185m	>15	5 3	1 7	9
Water % ASTM D6304 >0.05 0.003 0.001 0.001 ppm Water ppm ASTM D6304 >500 36 13.2 4.0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 7473 390 ▲ 88978 Particles >6µm ASTM D7647 >1300 1400 152 9016 Particles >14µm ASTM D7647 >160 67 15 273 Particles >21µm ASTM D7647 >40 16 5 ▲ 89 Particles >38µm ASTM D7647 >10 0 0 11 Particles >71µm ASTM D7647 >3 0 0 0 OIl Cleanliness ISO 4406 (c) >19/17/14 20/18/13 16/14/11 24/20/15 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg K0H/g ASTM D8045 0.85 0.85 <t< td=""><td>Sodium</td><td>ppm</td><td>ASTM D5185m</td><td></td><th><1</th><td><1</td><td>0</td></t<>	Sodium	ppm	ASTM D5185m		<1	<1	0
Water % ASTM D6304 >0.05 0.003 0.001 0.001 ppm Water ppm ASTM D6304 >500 36 13.2 4.0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 7473 390 ▲ 88978 Particles >6µm ASTM D7647 >1300 1400 152 9016 Particles >14µm ASTM D7647 >160 67 15 273 Particles >21µm ASTM D7647 >40 16 5 ▲ 89 Particles >38µm ASTM D7647 >10 0 0 0 Particles >71µm ASTM D7647 >3 0 0 0 OIl Cleanliness ISO 4406 (c) >19/17/14 20/18/13 16/14/11 24/20/15 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg K0H/g ASTM D8045 0.85 0.85 <td< td=""><td>Potassium</td><td></td><td>ASTM D5185m</td><td>>20</td><th><1</th><td>1</td><td>0</td></td<>	Potassium		ASTM D5185m	>20	<1	1	0
ppm Water ppm ASTM D6304 >500 36 13.2 4.0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 7473 390 ▲ 88978 Particles >6µm ASTM D7647 >1300 1400 152 ④ 9016 Particles >14µm ASTM D7647 >160 67 15 ▲ 273 Particles >14µm ASTM D7647 >40 16 5 ▲ 89 Particles >21µm ASTM D7647 >10 0 0 0 11 Particles >38µm ASTM D7647 >3 0 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 16/14/11 24/20/15 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.85 0.85 0.76	Water		ASTM D6304	>0.05		0.001	0.001
Particles >4μm ASTM D7647 >5000 7473 390 ▲ 88978 Particles >6μm ASTM D7647 >1300 1400 152 ▲ 9016 Particles >14μm ASTM D7647 >160 67 15 ▲ 273 Particles >14μm ASTM D7647 >40 16 5 ▲ 89 Particles >21μm ASTM D7647 >40 16 5 ▲ 89 Particles >38μm ASTM D7647 >10 0 0 11 Particles >71μm ASTM D7647 >3 0 0 0 Oli Cleanliness ISO 4406 (c) >19/17/14 20/18/13 16/14/11 24/20/15 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.85 0.85 0.76	ppm Water						
Particles >6µm ASTM D7647 >1300 1400 152 ♦ 9016 Particles >14µm ASTM D7647 >160 67 15 ≥ 273 Particles >21µm ASTM D7647 >40 16 5 ▲ 89 Particles >38µm ASTM D7647 >10 0 0 ▲ 11 Particles >38µm ASTM D7647 >3 0 0 0 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 16/14/11 24/20/15 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.85 0.85 0.76	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >14µm ASTM D7647 >160 67 15 ▲ 273 Particles >21µm ASTM D7647 >40 16 5 ▲ 89 Particles >38µm ASTM D7647 >10 0 0 ▲ 11 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 16/14/11 24/20/15 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.85 0.85 0.76	Particles >4µm		ASTM D7647	>5000	7473	390	▲ 88978
Particles >21μm ASTM D7647 >40 16 5 ▲ 89 Particles >38μm ASTM D7647 >10 0 0 ▲ 11 Particles >71μm ASTM D7647 >3 0 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 16/14/11 ▲ 24/20/15 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.85 0.85 0.76	Particles >6µm		ASTM D7647	>1300	<u> </u>	152	▲ 9016
Particles >38μm ASTM D7647 >10 0 0 ▲ 11 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 16/14/11 24/20/15 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.85 0.85 0.76	Particles >14µm		ASTM D7647	>160	67	15	2 73
Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 16/14/11 24/20/15 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.85 0.85 0.76	Particles >21µm		ASTM D7647	>40	16	5	A 89
Oil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 16/14/11 ▲ 24/20/15 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.85 0.85 0.76	Particles >38µm		ASTM D7647	>10	0	0	1 1
Oil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 16/14/11 ▲ 24/20/15 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.85 0.85 0.76	Particles >71µm		ASTM D7647	>3	0	0	0
Acid Number (AN) mg KOH/g ASTM D8045 0.85 0.76	Oil Cleanliness		ISO 4406 (c)	>19/17/14	e 20/18/13	16/14/11	▲ 24/20/15
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045				

Report Id: TALCLA [WUSCAR] 06141327 (Generated: 04/10/2024 18:26:16) Rev: 1

Contact/Location: KEN TERRY - TALCLA



60

50

40

Ed 30

2

10

0

100

60

40

20 0

6000

> 100 Ab

1.0

(B/HO)

문 0.6

e 0.40

Pio 0.20

0.00

600

500

400

300 Water

2000

1000

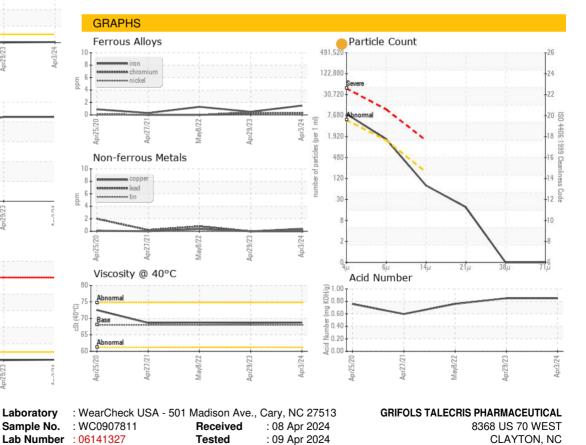
Water (KF)

Î

nr25/20

OIL ANALYSIS REPORT





: 10 Apr 2024 - Don Baldridge

limit/base

NONE

NONE

NONE

NONE

NONE

NORML

NORML

limit/base

limit/base

>0.05

current

NONE

NONE

NONE

NONE

NONE

NONE

NORML

NORML

curren

current

NEG

NEG

68.7

history1

NONE

NONE

NONE

NONE

NONE

NONE

NORML

NORML

history

history1

NEG

NEG

68.6

history2

NONE

NONE

NONE

NONE

NONE

NONE

NORML

NORML

history2

history2

NEG

NEG

68.7



Abnormal

Unique Number : 10966135 Test Package : IND 2 (Additional Tests: KF) Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369.

Apr29/23

Apr29/23

121/8/77

* - 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)

Diagnosed

Report Id: TALCLA [WUSCAR] 06141327 (Generated: 04/10/2024 18:26:16) Rev: 1

Contact/Location: KEN TERRY - TALCLA

Page 2 of 2

US 27520

Contact: KEN TERRY

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