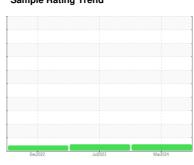


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id MB8966

Component

Hydraulic System

AW HYDRAULIC OIL ISO 46 (--- QTS)

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Recommendation

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

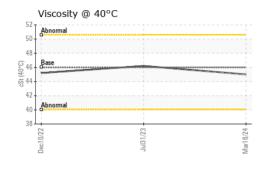
Fluid Condition

The condition of the oil is acceptable for the time in service.

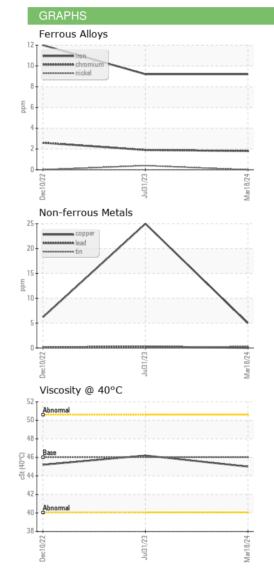
SAMPLE INFORMATION method limit/base current history1 history2							
Sample Number Client Info WC0891858 WC0789664 WC0732678 Sample Date Client Info 18 Mar 2024 31 Jul 2023 10 Dec 2022 Machine Age hrs Client Info 0							
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 0 0 0 0 0 0 0 0 0	Sample Number		Client Info		WC0891858	WC0789664	WC0732678
Oil Age Ihrs Client Info 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Sample Date		Client Info		18 Mar 2024	31 Jul 2023	10 Dec 2022
Oil Changed Client Info N/A N/A N/A N/A NORMAL NORMAL NORMAL ABNORMAL	Machine Age	hrs	Client Info		0	_	_
NORMAL NORMAL ABNORMAL CONTAMINATION method limit/base current history1 history2 history2	Oil Age	hrs	Client Info		0	0	0
CONTAMINATION method Imit/base current history1 history2 Water WC Method >0.05 NEG NEG NEG WEAR METALS method Imit/base current history1 history2 Iron ppm ASTM D5185m >20 9 9 12 Chromium ppm ASTM D5185m >20 2 2 3 Nickel ppm ASTM D5185m >20 0 <1	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 9 9 12 Chromium ppm ASTM D5185m >20 2 2 3 Nickel ppm ASTM D5185m >20 0 <1	Sample Status				NORMAL	NORMAL	ABNORMAL
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM DS185m >20 9 9 12 Chromium ppm ASTM DS185m >20 2 2 3 Nickel ppm ASTM DS185m >20 0 <1 0 Titanium ppm ASTM DS185m >20 0 <1 0 Silver ppm ASTM DS185m >20 2 <1 0 Aluminum ppm ASTM DS185m >20 0 <1 <1 Lead ppm ASTM DS185m >20 5 25 25 6 Lead ppm ASTM DS185m >20 5 25 25 6 Lead ppm ASTM DS185m >20 1 0 0 Copper ppm ASTM DS185m 0 0 0 0 Cadmium ppm ASTM DS185m 5 <	CONTAMINATION	V	method	limit/base	current	history1	history2
Irron	Water		WC Method	>0.05	NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 2 2 3 Nickel ppm ASTM D5185m >20 0 <1 0 Tittanium ppm ASTM D5185m >20 0 <1 0 Silver ppm ASTM D5185m >20 2 <1 0 Aluminum ppm ASTM D5185m >20 2 <1 0 Lead ppm ASTM D5185m >20 0 <1 <1 Copper ppm ASTM D5185m >20 5 25 6 Tin ppm ASTM D5185m >20 <1 0 0 Vanadium ppm ASTM D5185m >20 <1 0 0 Vanadium ppm ASTM D5185m >20 <1 0 0 Cadmium ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 <1 0	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>20	9	9	12
Titanium ppm ASTM D5185m <1 0 0 Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m >20 2 <1	Chromium	ppm	ASTM D5185m	>20	2	2	3
Silver	Nickel	ppm	ASTM D5185m	>20	0	<1	0
Aluminum	Titanium	ppm	ASTM D5185m		<1	0	0
Lead ppm ASTM D5185m >20 0 <1 <1 Copper ppm ASTM D5185m >20 5 25 6 Tin ppm ASTM D5185m >20 <1 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Boron ppm ASTM D5185m 5 0 0 0 0 Barium ppm ASTM D5185m 5 0 1 1 1 Molybdenum ppm ASTM D5185m 5 0 1 1 1 Magnesium ppm ASTM D5185m 5 0 1 1 1 Magnesium ppm ASTM D5185m 25 4 1 6 6 21 0 0 1 1 1 1 1 1 1 1 1 1	Silver	ppm	ASTM D5185m		0	0	0
Copper ppm ASTM D5185m >20 5 25 6 Tin ppm ASTM D5185m >20 <1	Aluminum	ppm	ASTM D5185m	>20	2	<1	0
Tin ppm ASTM D5185m >20 <1 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 0 1 1 Molybdenum ppm ASTM D5185m 5 <1 0 0 Manganese ppm ASTM D5185m 25 <1 0 0 Manganesium ppm ASTM D5185m 25 4 1 6 Calcium ppm ASTM D5185m 20 33 13 27 Phosphorus ppm ASTM D5185m 200 33 13 27 Sulfur ppm ASTM D5185m 2500 3259 3522 <td>Lead</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>20</td> <th>0</th> <td><1</td> <td><1</td>	Lead	ppm	ASTM D5185m	>20	0	<1	<1
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 0 1 1 Molybdenum ppm ASTM D5185m 5 0 1 1 Magnesium ppm ASTM D5185m 5 4 1 6 Calcium ppm ASTM D5185m 200 33 13 27 Phosphorus ppm ASTM D5185m 200 333 13 27 Phosphorus ppm ASTM D5185m 370 302 247 279 Sulfur ppm ASTM D5185m 370 302 247 279 Sulfur ppm ASTM D5185m 2500 3259 3522 3555	Copper	ppm	ASTM D5185m	>20	5	25	6
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 0 1 1 Molybdenum ppm ASTM D5185m 5 0 1 1 Molybdenum ppm ASTM D5185m 5 <1 0 0 Manganese ppm ASTM D5185m 20 33 13 27 Magnesium ppm ASTM D5185m 200 33 13 27 Phosphorus ppm ASTM D5185m 200 33 13 27 Phosphorus ppm ASTM D5185m 370 302 247 279 Sulfur ppm ASTM D5185m 2500 3259 3522 3555 CONTAMINANTS method limit/base current history1 <td>Tin</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>20</td> <th><1</th> <td>0</td> <td>0</td>	Tin	ppm	ASTM D5185m	>20	<1	0	0
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 0 1 1 Molybdenum ppm ASTM D5185m 5 <1	Vanadium	ppm	ASTM D5185m		0	0	0
Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 0 1 1 Molybdenum ppm ASTM D5185m 5 <1 0 0 Manganese ppm ASTM D5185m 0 <1 <1 6 Calcium ppm ASTM D5185m 20 33 13 27 Phosphorus ppm ASTM D5185m 300 260 248 260 Zinc ppm ASTM D5185m 370 302 247 279 Sulfur ppm ASTM D5185m 2500 3259 3522 3555 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 1 2 Sodium ppm ASTM D5185m >20 1 <1 <1 <1 VISUAL method limit/base current	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 5 0 1 1 Molybdenum ppm ASTM D5185m 5 <1 0 0 Manganese ppm ASTM D5185m 25 4 1 6 Calcium ppm ASTM D5185m 200 33 13 27 Phosphorus ppm ASTM D5185m 300 260 248 260 Zinc ppm ASTM D5185m 370 302 247 279 Sulfur ppm ASTM D5185m 2500 3259 3522 3555 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 1 2 Sodium ppm ASTM D5185m >20 1 <1 <1 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE <td< th=""><th>ADDITIVES</th><th></th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></td<>	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 5 <1	Boron	ppm	ASTM D5185m	5	0	0	0
Manganese ppm ASTM D5185m 0 <1 <1 Magnesium ppm ASTM D5185m 25 4 1 6 Calcium ppm ASTM D5185m 200 33 13 27 Phosphorus ppm ASTM D5185m 300 260 248 260 Zinc ppm ASTM D5185m 370 302 247 279 Sulfur ppm ASTM D5185m 2500 3259 3522 3555 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 1 2 Sodium ppm ASTM D5185m >15 2 1 2 Sodium ppm ASTM D5185m >20 1 <1	Barium	ppm	ASTM D5185m	5	0	1	1
Magnesium ppm ASTM D5185m 25 4 1 6 Calcium ppm ASTM D5185m 200 33 13 27 Phosphorus ppm ASTM D5185m 300 260 248 260 Zinc ppm ASTM D5185m 370 302 247 279 Sulfur ppm ASTM D5185m 2500 3259 3522 3555 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 1 2 Sodium ppm ASTM D5185m >20 1 <1 <1 <1 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar <	Molybdenum	ppm	ASTM D5185m	5	<1	0	0
Calcium ppm ASTM D5185m 200 33 13 27 Phosphorus ppm ASTM D5185m 300 260 248 260 Zinc ppm ASTM D5185m 370 302 247 279 Sulfur ppm ASTM D5185m 2500 3259 3522 3555 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 1 2 Sodium ppm ASTM D5185m >20 1 <1	Manganese	ppm	ASTM D5185m		0	<1	<1
Phosphorus ppm ASTM D5185m 300 260 248 260 Zinc ppm ASTM D5185m 370 302 247 279 Sulfur ppm ASTM D5185m 2500 3259 3522 3555 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 1 2 Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 1 <1	Magnesium	ppm	ASTM D5185m	25	4	1	6
Zinc ppm ASTM D5185m 370 302 247 279 Sulfur ppm ASTM D5185m 2500 3259 3522 3555 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 1 2 Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 1 <1	Calcium	ppm	ASTM D5185m	200	33	13	27
Sulfur ppm ASTM D5185m 2500 3259 3522 3555 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 1 2 Sodium ppm ASTM D5185m >0 0 0 0 Potassium ppm ASTM D5185m >20 1 <1	Phosphorus	ppm	ASTM D5185m	300	260	248	260
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 2 1 2 Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 1 <1	Zinc	ppm	ASTM D5185m	370	302	247	279
Silicon ppm ASTM D5185m >15 2 1 2 Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 1 <1	Sulfur	ppm	ASTM D5185m	2500	3259	3522	3555
Sodium ppm ASTM D5185m 0 0 0 Potassium ppm ASTM D5185m >20 1 <1 <1 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 NORML NORML NORML NORML Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual >0.05 NEG NEG	CONTAMINANTS	;	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 1 <1 <1 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML MORML NORML NORML NORML NORML Emulsified Water scalar *Visual >0.05 NEG NEG NEG	Silicon	ppm	ASTM D5185m	>15	2	1	2
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	Sodium	ppm	ASTM D5185m		0	0	0
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	Potassium	ppm	ASTM D5185m	>20	1	<1	<1
Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE MODER NONE NORML	VISUAL		method	limit/base	current	history1	history2
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	White Metal	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 NORML Odor scalar *Visual NORML NORML NORML NORML NORML Emulsified Water scalar *Visual >0.05 NEG NEG NEG	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Debris scalar *Visual NONE NONE NONE MODER Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML NORML Emulsified Water scalar *Visual >0.05 NEG NEG NEG	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.05NEGNEGNEG	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.05NEGNEGNEG	Debris	scalar	*Visual	NONE	NONE	NONE	▲ MODER
Odor scalar *Visual NORML NORML NORML NORML NORML Emulsified Water scalar *Visual >0.05 NEG NEG NEG	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Emulsified Water scalar *Visual >0.05 NEG NEG NEG	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Free Water scalar *Visual NEG NEG NEG	Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	NEG
	Free Water	scalar	*Visual		NEG	NEG	NEG



OIL ANALYSIS REPORT











Certificate L2367

Laboratory

Sample No.

: WC0891858 Lab Number : 06122825 Unique Number : 10936976 Test Package : IND 1

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 19 Mar 2024 Tested

Diagnosed

: 20 Mar 2024 : 20 Mar 2024 - Wes Davis **SUMIRIKO TENNESSEE INC** 150 HESTER LN

TAZEWELL, TN US 37879 Contact: JEREMY COLLINS

jcollins@us.sumiriko.com

T: (423)626-8805 F: (423)626-2065

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

Report Id: DTRTAZ [WUSCAR] 06122825 (Generated: 03/20/2024 14:26:15) Rev: 1

Contact/Location: JEREMY COLLINS - DTRTAZ