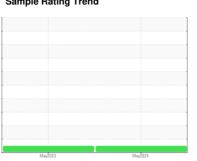


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id **LIVERPOOL E1503**

Component Transfer Case

{not provided} (--- QTS)

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

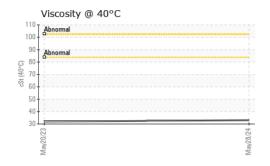
Fluid Condition

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

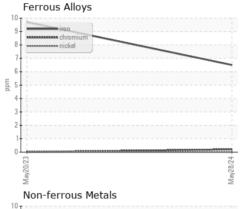
SAMPLE INFORMATION method limit/base current history1 history2							
Sample Number Client Info WC0941893 WC0710285			<u>, </u>	May2023	May2024		
Sample Date Client Info 28 May 2024 20 May 2023	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Date Client Info 28 May 2024 20 May 2023 Machine Age mls Client Info 0 0 Oil Age mls Client Info 0 0 Oil Changed Client Info N/A N/A Sample Status NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 6 10 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 0 Iron ppm ASTM D5185m >5 0 0 Silver ppm ASTM D5185m 0 0 <th>Sample Number</th> <th></th> <th>Client Info</th> <th></th> <th>WC0941893</th> <th></th> <th></th>	Sample Number		Client Info		WC0941893		
Machine Age mls Client Info 0 0			Client Info		28 May 2024	20 May 2023	
Oil Age mls Client Info N/A N/A	•	mls			•	,	
Oil Changed Sample Status Client Info N/A N/A N/A CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >500 6 10 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >500 6 10 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >5 0 0 Chromium ppm ASTM D5185m 0 0 0 Itinatum ppm ASTM D5185m 0 0 0 Copper ppm ASTM D5185m 0 0 0					-		
Sample Status	-	11110			-		
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >500 6 10 Chromium ppm ASTM D5185m >5 <1	-						
Water WC Method >0.2 NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >500 6 10 Chromium ppm ASTM D5185m >5 <1	·	١	method	limit/base	current	history1	history2
Iron			WC Method		NEG	NEG	
Iron	WEAR METALS		method	limit/base	current	history1	history2
Chromium ppm ASTM D5185m >5 <1		nnm		>500	6	· ·	
Nickel							
Titanium ppm ASTM D5185m 0 0 Silver ppm ASTM D5185m 0 0 Aluminum ppm ASTM D5185m >45 0 3 Lead ppm ASTM D5185m >150 0 0 Copper ppm ASTM D5185m >100 0 0 Tin ppm ASTM D5185m >5 0 0 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 28 62 ADDITIVES method limit/base current history1 history2 Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D							
Silver ppm ASTM D5185m 0 0 Aluminum ppm ASTM D5185m >45 0 3 Lead ppm ASTM D5185m >150 0 0 Copper ppm ASTM D5185m >100 0 Tin ppm ASTM D5185m 0 0 Vanadium ppm ASTM D5185m 0 0 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current history1 history2 Barium ppm ASTM D5185m 28 62 ADDITIVES method limit/base current history1 history2 Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 5				/0			
Aluminum ppm ASTM D5185m >45 0 3 Lead ppm ASTM D5185m >150 0 0 Copper ppm ASTM D5185m >100 0 0 Tin ppm ASTM D5185m 0 0 Vanadium ppm ASTM D5185m 0 0 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 28 62 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm					-		
Lead ppm ASTM D5185m >150 0 0				\15	-		
Copper ppm ASTM D5185m >100 0 Tin ppm ASTM D5185m >5 0 0 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 28 62 Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 0 0 Manganese ppm ASTM D5185m <1 0 Magnesium ppm ASTM D5185m 5 2 Calcium ppm ASTM D5185m 147 190 Phosphorus ppm ASTM D5185m 147 190 Sulfur ppm ASTM D5185m 688 692 -							
Tin ppm ASTM D5185m >5 0 0 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 28 62 Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 0 0 Manganese ppm ASTM D5185m <1							
Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 28 62 Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 0 0 Manganese ppm ASTM D5185m 5 2 Magnesium ppm ASTM D5185m 5 2 Calcium ppm ASTM D5185m 202 264 Phosphorus ppm ASTM D5185m 147 190 Zinc ppm ASTM D5185m 688 692 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 <1					-		
Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 28 62 Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 0 0 Manganese ppm ASTM D5185m <1 0 Magnesium ppm ASTM D5185m 5 2 Calcium ppm ASTM D5185m 202 264 Phosphorus ppm ASTM D5185m 147 190 Zinc ppm ASTM D5185m 10 0 Sulfur ppm ASTM D5185m 688 692 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 <1 2 <td></td> <td></td> <td></td> <td>>0</td> <td>-</td> <td></td> <td></td>				>0	-		
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 28 62 Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 0 0 Manganese ppm ASTM D5185m <1 0 Magnesium ppm ASTM D5185m 5 2 Calcium ppm ASTM D5185m 202 264 Phosphorus ppm ASTM D5185m 147 190 Zinc ppm ASTM D5185m 10 0 Sulfur ppm ASTM D5185m 688 692 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 <1 2 VISUAL method limit/base current <t< th=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
Boron ppm ASTM D5185m 28 62		ррпп			U		
Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 0 0 Manganese ppm ASTM D5185m <1 0 Magnesium ppm ASTM D5185m 5 2 Calcium ppm ASTM D5185m 202 264 Phosphorus ppm ASTM D5185m 147 190 Zinc ppm ASTM D5185m 10 0 Sulfur ppm ASTM D5185m 688 692 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >85 12 19 Sodium ppm ASTM D5185m >20 <1 2 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NO	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 0 Manganese ppm ASTM D5185m <1	Boron	ppm	ASTM D5185m		28	62	
Manganese ppm ASTM D5185m <1		ppm	ASTM D5185m		0	0	
Magnesium ppm ASTM D5185m 5 2 Calcium ppm ASTM D5185m 202 264 Phosphorus ppm ASTM D5185m 147 190 Zinc ppm ASTM D5185m 10 0 Sulfur ppm ASTM D5185m 688 692 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >85 12 19 Sodium ppm ASTM D5185m >20 <1 2 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE	Molybdenum	ppm	ASTM D5185m		0	0	
Calcium ppm ASTM D5185m 202 264 Phosphorus ppm ASTM D5185m 147 190 Zinc ppm ASTM D5185m 10 0 Sulfur ppm ASTM D5185m 688 692 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >85 12 19 Sodium ppm ASTM D5185m <1 2 Potassium ppm ASTM D5185m >20 <1 2 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE	Manganese	ppm	ASTM D5185m		<1	0	
Phosphorus ppm ASTM D5185m 147 190 Zinc ppm ASTM D5185m 10 0 Sulfur ppm ASTM D5185m 688 692 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >85 12 19 Sodium ppm ASTM D5185m <1	Magnesium	ppm	ASTM D5185m		5	2	
Zinc ppm ASTM D5185m 10 0 Sulfur ppm ASTM D5185m 688 692 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >85 12 19 Sodium ppm ASTM D5185m <1 2 Potassium ppm ASTM D5185m >20 <1 2 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE	Calcium	ppm	ASTM D5185m		202	264	
Sulfur ppm ASTM D5185m 688 692 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >85 12 19 Sodium ppm ASTM D5185m <1 2 Potassium ppm ASTM D5185m >20 <1 2 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE	Phosphorus	ppm	ASTM D5185m		147	190	
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >85 12 19 Sodium ppm ASTM D5185m <1 2 Potassium ppm ASTM D5185m >20 <1 2 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE	Zinc	ppm	ASTM D5185m		10	0	
Silicon ppm ASTM D5185m >85 12 19 Sodium ppm ASTM D5185m <1	Sulfur	ppm	ASTM D5185m		688	692	
Sodium ppm ASTM D5185m <1	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 <1	Silicon	ppm	ASTM D5185m	>85	12	19	
VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE	Sodium	ppm	ASTM D5185m		<1	2	
White Metal scalar *Visual NONE NONE NONE	Potassium	ppm	ASTM D5185m	>20	<1	2	
	VISUAL		method	limit/base	current	history1	history2
Yellow Metal scalar *Visual NONE NONE NONE	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate scalar *Visual NONE NONE NONE	•	scalar			NONE	NONE	
Silt scalar *Visual NONE NONE NONE	Silt	scalar	*Visual	NONE	NONE	NONE	
Debris scalar *Visual NONE NONE NONE	Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt scalar *Visual NONE NONE NONE	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance scalar *Visual NORML NORML NORML	Appearance	scalar			NORML	NORML	
Odor scalar *Visual NORML NORML NORML	Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water scalar *Visual >0.2 NEG NEG	Emulsified Water	scalar		>0.2	NEG	NEG	
Free Water scalar *Visual NEG NEG Out-06/ Pays 1	Free Water	scalar	*Visual				

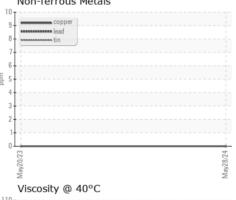


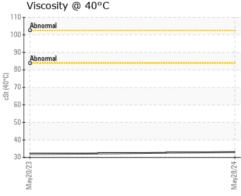
OIL ANALYSIS REPORT



FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		33.1	31.9	
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color				no image	no image	no image
Bottom				no image	no image	no image











Certificate 12367

Laboratory

Sample No. : WC0941893 Lab Number : 06194437 Unique Number : 11056560

Test Package : CONST

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 29 May 2024

Tested : 31 May 2024 : 31 May 2024 - Wes Davis Diagnosed

SIDDONS-MARTIN EMERGENCY GROUP

4401 REX RD FRIENDSWOOD, TX US 77546

Contact: M. LEWIS mlewis@siddons-martin.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.

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

T:

F: