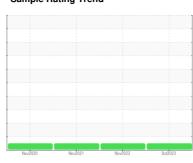


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Tower 1

Component

Hydraulic System

NOT GIVEN (--- GAL)

DIAGNOSIS

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.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

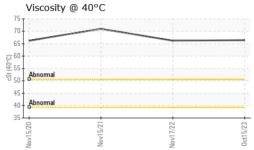
Fluid Condition

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

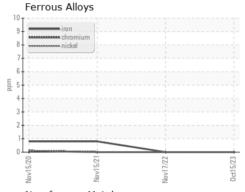
Sample Date			Nov202	0 Nov2021	Nov2022 0	lct2023	
Client Info	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 73 0 0 Oil Age hrs Client Info 1020 0 0 Oil Changed Client Info N/A Not Changd Not Changd Sample Status method Imit base current history1 history2 Iron ppm ASTM D5185m >10 0 0 0 Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >10 0 0 0 Silver ppm ASTM D5185m >10 0 0 0 John Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >10 0 0 0 Lead ppm ASTM D5185m >10 0 0 <1	Sample Number		Client Info		WC0850960	WC0748631	WC0624467
Oil Age hrs Client Info 1020 0 0 Oil Changed Sample Status Client Info N/A Not Changd Not Changd </th <th>Sample Date</th> <th></th> <th>Client Info</th> <th></th> <th>15 Oct 2023</th> <th>17 Nov 2022</th> <th>15 Nov 2021</th>	Sample Date		Client Info		15 Oct 2023	17 Nov 2022	15 Nov 2021
Oil Changed Client Info N/A Not Changd NORMAL NORMAL	Machine Age	hrs	Client Info		73	0	0
NORMAL NORMAL NORMAL NORMAL NORMAL	Oil Age	hrs	Client Info		1020	0	0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 0 0 <1 Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m 0 0 0 0 Titanium ppm ASTM D5185m 0 0 0 0 Aluminum ppm ASTM D5185m 0 0 0 0 Aluminum ppm ASTM D5185m >10 0 0 0 Lead ppm ASTM D5185m >10 0 0 <1 Lead ppm ASTM D5185m >10 0 0 <1 Antimony ppm ASTM D5185m >10 0 0 <1 Antimony ppm ASTM D5185m 0 0 0 <1 Antimony ppm ASTM D5185m 0 0 0 <td< th=""><th>Oil Changed</th><th></th><th>Client Info</th><th></th><th>N/A</th><th>Not Changd</th><th>Not Changd</th></td<>	Oil Changed		Client Info		N/A	Not Changd	Not Changd
	Sample Status				NORMAL	NORMAL	NORMAL
Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >10 0 0 0 Tittanium ppm ASTM D5185m 0 0 0 0 Siliver ppm ASTM D5185m 0 0 0 0 Aluminum ppm ASTM D5185m >10 0 0 0 Lead ppm ASTM D5185m >10 0 0 <1 Copper ppm ASTM D5185m >10 0 0 <1 Antimony ppm ASTM D5185m 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 <th>WEAR METALS</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>20	0	0	<1
Titanium	Chromium	ppm	ASTM D5185m	>10	0	0	0
Silver	Nickel	ppm	ASTM D5185m	>10	0	0	0
Aluminum	Titanium	ppm	ASTM D5185m		0	0	0
Lead	Silver	ppm	ASTM D5185m		0	0	0
Copper ppm ASTM D5185m >75 2 3 2 Tin ppm ASTM D5185m >10 0 0 <1 Antimony ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 3 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 0 0 1 1 1 Calcium ppm ASTM D5185m 0 <1 1 1 22 127 124 24 2 20 1 2 </th <th>Aluminum</th> <th>ppm</th> <th>ASTM D5185m</th> <th>>10</th> <th>0</th> <th>0</th> <th>0</th>	Aluminum	ppm	ASTM D5185m	>10	0	0	0
Tin	Lead	ppm	ASTM D5185m	>10	0	0	<1
Antimony	Copper	ppm	ASTM D5185m	>75	2	3	2
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 <1	Tin	ppm	ASTM D5185m	>10	0	0	<1
Cadmium ppm ASTM D5185m 0 0 <1	Antimony	ppm	ASTM D5185m				0
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	0	0
Boron	Cadmium	ppm	ASTM D5185m		0	0	<1
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m		0	0	3
Manganese ppm ASTM D5185m 0 0 0 Magnesium ppm ASTM D5185m 0 <1 1 Calcium ppm ASTM D5185m 122 127 124 Phosphorus ppm ASTM D5185m 638 662 655 Zinc ppm ASTM D5185m 975 918 946 Sulfur ppm ASTM D5185m 975 918 946 Sulfur ppm ASTM D5185m 20 1801 2171 1818 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 2 2 Sodium ppm ASTM D5185m >20 0 0 0 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar	Barium	ppm	ASTM D5185m		0	0	0
Magnesium ppm ASTM D5185m 0 <1	Molybdenum	ppm	ASTM D5185m		0	<1	<1
Calcium ppm ASTM D5185m 122 127 124 Phosphorus ppm ASTM D5185m 638 662 655 Zinc ppm ASTM D5185m 975 918 946 Sulfur ppm ASTM D5185m 975 918 946 Sulfur ppm ASTM D5185m 1801 2171 1818 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 2 2 Sodium ppm ASTM D5185m >20 0 0 0 VISUAL method limit/base current history1 history2 VISUAL method limit/base current history1 history2 VISUAL NONE NONE NONE NONE NONE VISUAL NONE NONE NONE NONE NONE N	Manganese	ppm	ASTM D5185m		0	0	0
Phosphorus ppm ASTM D5185m 638 662 655 Zinc ppm ASTM D5185m 975 918 946 Sulfur ppm ASTM D5185m 1801 2171 1818 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 20 1 2 2 Sodium ppm ASTM D5185m 20 0 0 0 Potassium ppm ASTM D5185m >20 0 0 0 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE Debris sca	Magnesium	ppm	ASTM D5185m		0	<1	1
Zinc ppm ASTM D5185m 975 918 946 Sulfur ppm ASTM D5185m 1801 2171 1818 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 2 2 Sodium ppm ASTM D5185m >20 0 0 0 Potassium ppm ASTM D5185m >20 0 0 0 VISUAL method limit/base current history1 history2 White Metal scalar *Visual 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 NO	Calcium	ppm	ASTM D5185m		122	127	124
Sulfur ppm ASTM D5185m 1801 2171 1818 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 2 2 Sodium ppm ASTM D5185m >20 0 0 0 Potassium ppm ASTM D5185m >20 0 0 0 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE <t< th=""><th>Phosphorus</th><th>ppm</th><th>ASTM D5185m</th><th></th><th>638</th><th>662</th><th>655</th></t<>	Phosphorus	ppm	ASTM D5185m		638	662	655
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 2 2 Sodium ppm ASTM D5185m >20 0 0 <1 <1 Potassium ppm ASTM D5185m >20 0 0 0 0 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	Zinc	ppm	ASTM D5185m		975	918	946
Silicon ppm ASTM D5185m >20 1 2 2 Sodium ppm ASTM D5185m 0 <1	Sulfur	ppm	ASTM D5185m		1801	2171	1818
Sodium ppm ASTM D5185m 0 <1	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 0 0 0 0 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 Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	Silicon	ppm	ASTM D5185m	>20	1	2	2
White Metal scalar *Visual NONE NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE NONE NONE NON	Sodium	ppm	ASTM D5185m		0	<1	<1
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 >0.1 NEG NEG	Potassium	ppm	ASTM D5185m	>20	0	0	0
Yellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEG	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 >0.1 NEG NEG	White Metal						
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 >0.1 NEG NEG							
Debrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEG	Precipitate						
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEG	Silt						
Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEG	Debris						
Odor scalar *Visual NORML NORML NORML NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	Sand/Dirt						
Emulsified Water scalar *Visual >0.1 NEG NEG NEG	Appearance	scalar	*Visual			NORML	
	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Free Water scalar *Visual NEG NEG NEG	Emulsified Water	scalar	*Visual	>0.1		NEG	NEG
	Free Water	scalar	*Visual		NEG	NEG	NEG

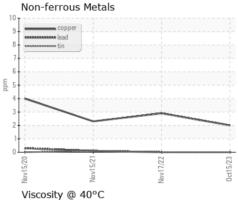


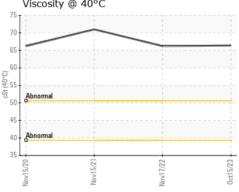
OIL ANALYSIS REPORT



FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		66.4	66.2	71.0
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color				no image	no image	no image
Bottom				no image	no image	no image











Laboratory Sample No. Lab Number Test Package : FLEET

: WC0850960 : 05997019 Unique Number : 10725379

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 02 Nov 2023 Diagnosed : 03 Nov 2023 Diagnostician : Wes Davis

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) **RED RIVER FIRE DEPT**

220 E HIGH ST RED RIVER, NM US 87558 Contact: DEKE WILLIS

dwillis@redriver.org

Submitted By: RANDY PRICE

T: (575)754-6567