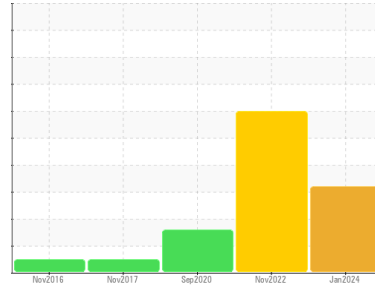




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
DENISON Comp Wabash 50 ton (S/N PRESS)

Component
Hydraulic System

Fluid
MONARCH PREMIUM HYDRAULIC OIL AW R&O 46 (90 GAL)

DIAGNOSIS

Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

Wear

Copper ppm levels are noted. A sharp increase in the copper level is noted. All other component wear rates are normal.

Contamination

There is a moderate amount of particulates (2 to 100 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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0887248	WC0733015	WC0491082
Sample Date	Client Info		04 Jan 2024	23 Nov 2022	08 Sep 2020
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Filtered	N/A	N/A
Sample Status			ABNORMAL	SEVERE	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.05	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>20	4	<1	0
Chromium	ppm	ASTM D5185(m)	>20	0	0	<1
Nickel	ppm	ASTM D5185(m)	>20	<1	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		<1	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<1	<1	0
Lead	ppm	ASTM D5185(m)	>20	<1	1	0
Copper	ppm	ASTM D5185(m)	>20	▲ 13	<1	<1
Tin	ppm	ASTM D5185(m)	>20	0	0	0
Antimony	ppm	ASTM D5185(m)		0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		<1	2	2
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		0	<1	<1
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		<1	<1	<1
Calcium	ppm	ASTM D5185(m)		26	39	34
Phosphorus	ppm	ASTM D5185(m)		280	323	305
Zinc	ppm	ASTM D5185(m)		288	341	361
Sulfur	ppm	ASTM D5185(m)		2554	2630	2724
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

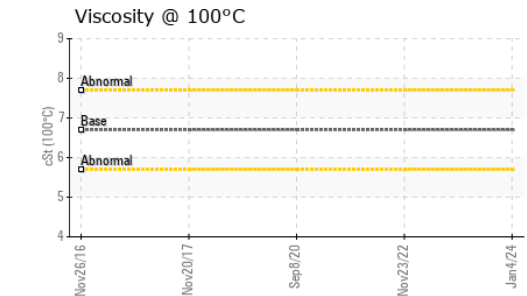
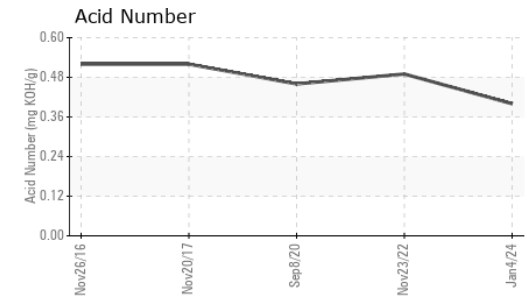
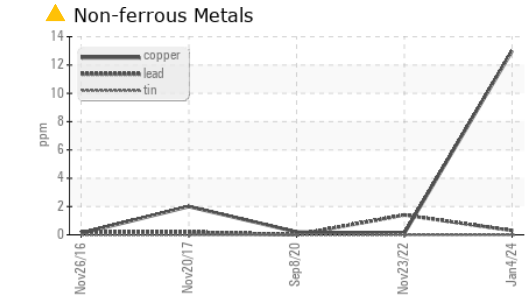
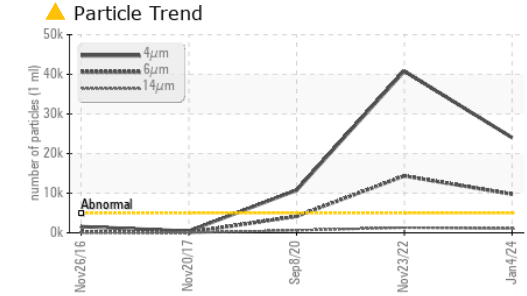
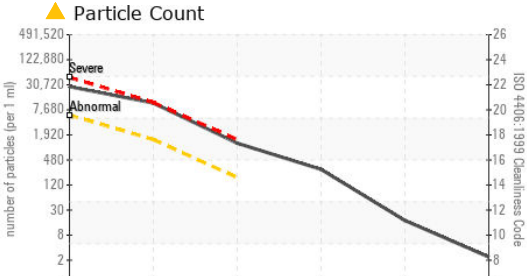
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>15	3	6	0
Sodium	ppm	ASTM D5185(m)		<1	<1	0
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*		0	---	---
Nitration	Abs/cm	ASTM D7624*		2.2	---	---
Sulfation	Abs/.1mm	ASTM D7415*		11.6	---	---



OIL ANALYSIS REPORT



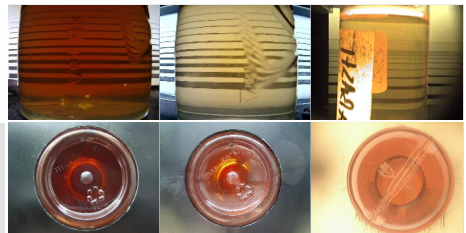
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ 24031	● 40797	▲ 10749
Particles >6µm	ASTM D7647	>1300	▲ 9724	● 14343	▲ 4136
Particles >14µm	ASTM D7647	>160	▲ 1065	● 1304	▲ 620
Particles >21µm	ASTM D7647	>40	▲ 251	▲ 303	▲ 232
Particles >38µm	ASTM D7647	>10	▲ 15	1	4
Particles >71µm	ASTM D7647	>3	2	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 22/20/17	● 23/21/18	▲ 21/19/16

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	2.8	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*	0.40	0.49	0.46

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	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	45.7	40.0	39.0
Visc @ 100°C	cSt	ASTM D7279(m)	6.7	6.4	---
Viscosity Index (VI)	Scale	ASTM D2270*	100	109	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0887248 **Received** : 08 Jan 2024
Lab Number : 02607032 **Diagnosed** : 09 Jan 2024
Unique Number : 5708118 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: Bottom, FT-IR, ICP-NewOil, KV100, VI)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

SWIFT COMPONENTS
 2-280 HOLIDAY INN DRIVE
 CAMBRIDGE, ON
 CA N3C 1Z4
 Contact: Sheldon Rier
 sheldon@swift-co.com
 T: (519)740-3880
 F: (519)620-1701