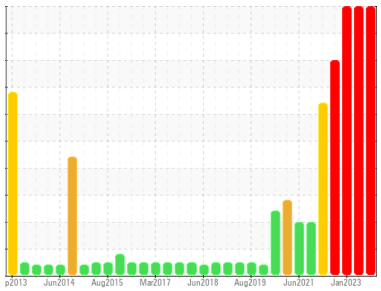
PROBLEM SUMMARY

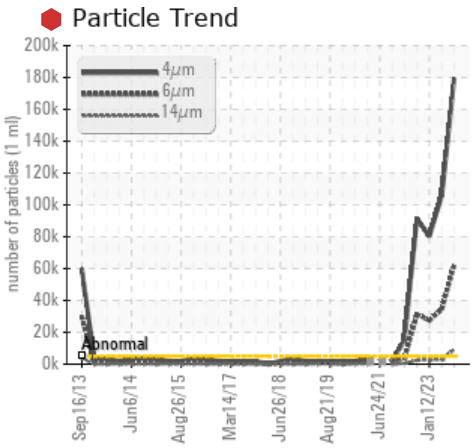
Sample Rating Trend

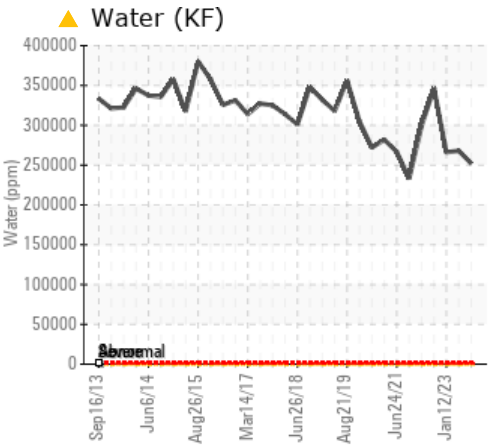


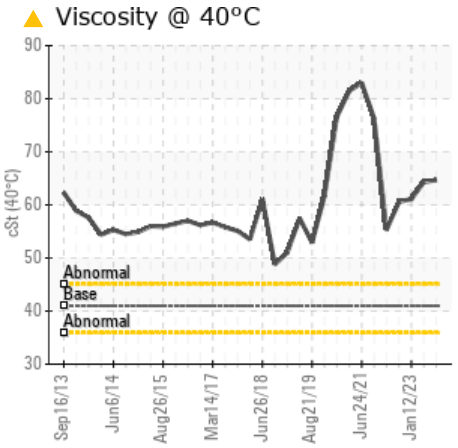
ISO

Area
[7832910]
Machine Id
MONORAIL SYSTEM PH83500 MONO RAIL MOLD CARRIER
Component
Hydraulic System
Fluid
CITGO CITGO GLYCOL FR-40 XD (65 GAL)

COMPONENT CONDITION SUMMARY







RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you add water to increase the water concentration level to 40%. Ensure that only distilled water or boiler feed water condensate are used for make-up. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	SEVERE	SEVERE
Particles >4µm		ASTM D7647	>5000	**179506**	105871	80070
Particles >6µm		ASTM D7647	>1300	**61939**	34445	27389
Particles >14µm		ASTM D7647	>160	**9229**	2711	2750
Particles >21µm		ASTM D7647	>40	**3119**	680	754
Particles >38µm		ASTM D7647	>10	**269**	37	32
Particles >71µm		ASTM D7647	>3	**32**	8	4
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**25/23/20**	24/22/19	24/22/19

Customer Id: ESCPOR
Sample No.: WC0741320
Lab Number: 02587349
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
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Kevin.Marson@wearcheck.com

To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Service/change Fluid	---	---	?	We advise that you add water to increase the water concentration level to 40%. Ensure that only distilled water or boiler feed water condensate are used for make-up.
Change Filter	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Dirt Access	---	---	?	We advise that you check all areas where contaminants can enter the system.
Filter Fluid	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

HISTORICAL DIAGNOSIS

ISO

01 May 2023 Diag: Kevin Marson

We advise that you check all areas where contaminants can enter the system. We advise that you add water to increase the water concentration level to 40%. Ensure that only distilled water or boiler feed water condensate are used for make-up. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.All component wear rates are normal. There is a high amount of particulates (2 to 100 microns in size) present in the oil. The water concentration level is lower than acceptable for this fluid. Viscosity of sample indicates oil is within ISO 68 range, advise investigate. The AN level is acceptable for this fluid. The pH level of this fluid is within the acceptable limits. The reserve alkalinity of this fluid is acceptable. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

ISO

12 Jan 2023 Diag: Kevin Marson

We advise that you check all areas where contaminants can enter the system. We advise that you add water to increase the water concentration level to 40%. Ensure that only distilled water or boiler feed water condensate are used for make-up. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.All component wear rates are normal. Particles >14µm are severely high. Particles >21µm are severely high. Particles >6µm are severely high. Oil Cleanliness are severely high. Particles >4µm are severely high. Water contamination levels are abnormally low. ppm Water contamination levels are abnormally low. Particles >38µm are abnormally high. The water concentration level is lower than acceptable for this fluid. Viscosity of sample indicates oil is within ISO 68 range, advise investigate. The AN level is acceptable for this fluid. The pH level of this fluid is within the acceptable limits. The reserve alkalinity of this fluid is acceptable. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

ISO

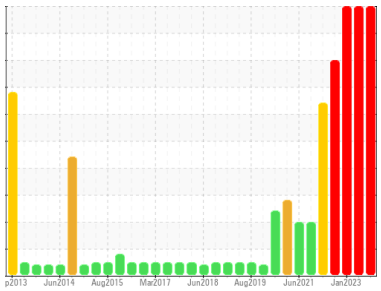
19 Sep 2022 Diag: Kevin Marson

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.All component wear rates are normal. Particles >14µm are severely high. Particles >21µm are severely high. Particles >6µm are severely high. Oil Cleanliness are severely high. Particles >4µm are severely high. Viscosity of sample indicates oil is within ISO 68 range, advise investigate. The AN level is acceptable for this fluid. The pH level of this fluid is within the acceptable limits. The reserve alkalinity of this fluid is acceptable. The water concentration level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

COOLANT REPORT

Sample Rating Trend



ISO

Area
[7832910]
Machine Id
MONORAIL SYSTEM PH83500 MONO RAIL MOLD CARRIER
Component
Hydraulic System
Fluid
CITGO CITGO GLYCOL FR-40 XD (65 GAL)

DIAGNOSIS

Recommendation

We advise that you check all areas where contaminants can enter the system. We advise that you add water to increase the water concentration level to 40%. Ensure that only distilled water or boiler feed water condensate are used for make-up. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates (2 to 100 microns in size) present in the oil.

Fluid Condition

The water concentration level is lower than acceptable for this fluid. The pH is low indicating a high acidity of the fluid. Viscosity of sample indicates oil is within ISO 68 range, advise investigate. The AN level is acceptable for this fluid. The reserve alkalinity of this fluid is acceptable.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0741320**	WC0741331	WC0741334
Sample Date		Client Info		**21 Aug 2023**	01 May 2023	12 Jan 2023
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**SEVERE**	SEVERE	SEVERE

CORROSION INHIBITORS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)		**<1**	1	0
Phosphorus	ppm	ASTM D5185(m)		**<1**	2	2
Boron	ppm	ASTM D5185(m)		**0**	2	0
Molybdenum	ppm	ASTM D5185(m)		**0**	1	<1

CORROSION		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	**0**	5	<1
Aluminum	ppm	ASTM D5185(m)	>20	**0**	<1	0
Copper	ppm	ASTM D5185(m)	>20	**0**	5	1
Lead	ppm	ASTM D5185(m)	>20	**0**	<1	0
Tin	ppm	ASTM D5185(m)	>20	**0**	0	0
Silver	ppm	ASTM D5185(m)		**<1**	<1	0
Zinc	ppm	ASTM D5185(m)		**13**	29	16

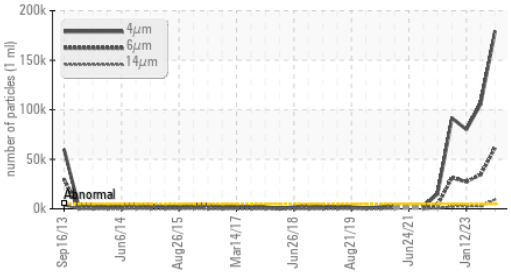
CONTAMINANTS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	**179506**	105871	80070
Particles >6µm	ASTM D7647	>1300	**61939**	34445	27389
Particles >14µm	ASTM D7647	>160	**9229**	2711	2750
Particles >21µm	ASTM D7647	>40	**3119**	680	754
Particles >38µm	ASTM D7647	>10	**269**	37	32
Particles >71µm	ASTM D7647	>3	**32**	8	4
Oil Cleanliness	ISO 4406 (c)	>19/17/14	**25/23/20**	24/22/19	24/22/19

CARRIER SALTS		method	limit/base	current	history1	history2
Sodium	ppm	ASTM D5185(m)		**13**	18	16
Potassium	ppm	ASTM D5185(m)		**36**	62	36

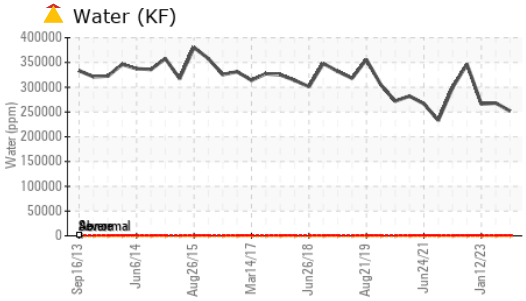
SCALE POTENTIAL		method	limit/base	current	history1	history2
Calcium	ppm	ASTM D5185(m)		**<1**	2	<1
Magnesium	ppm	ASTM D5185(m)		**<1**	1	0

COOLANT REPORT

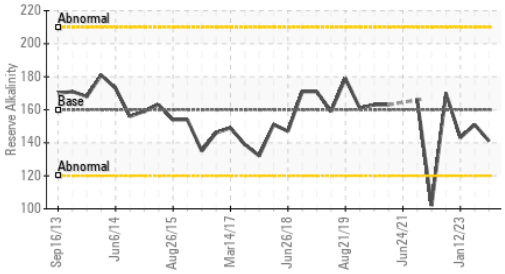
Particle Trend



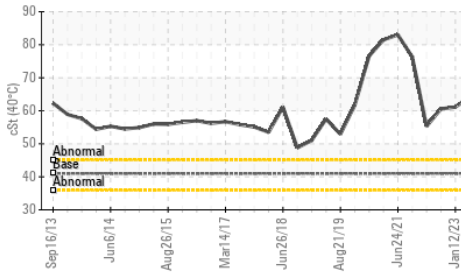
Water (KF)



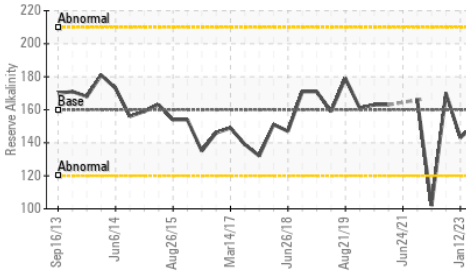
Reserve Alkalinity



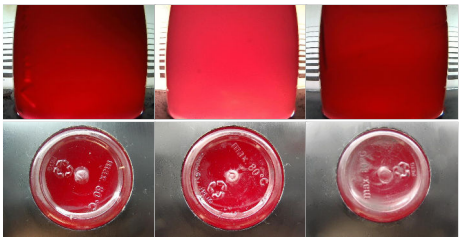
Viscosity @ 40°C



Reserve Alkalinity

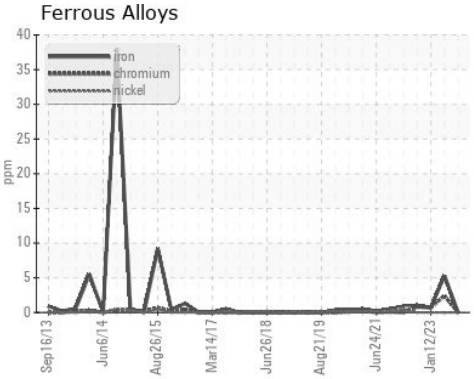


VISUAL	method	limit/base	current	history1	history2
Color					
Bottom					

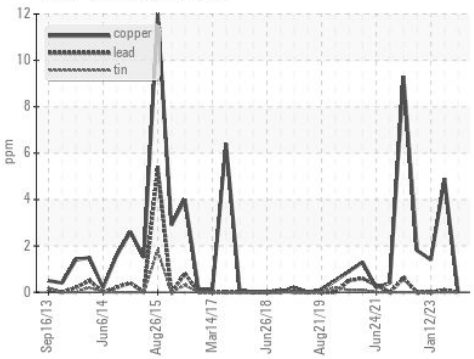


GRAPHS

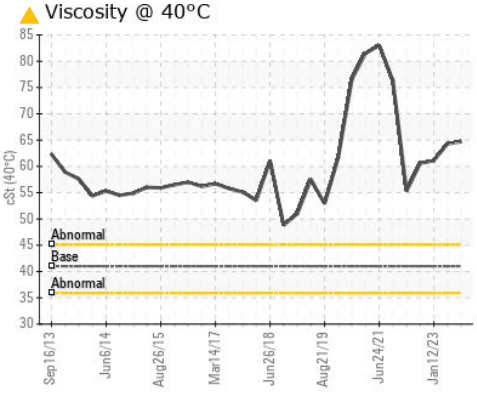
Ferrous Alloys



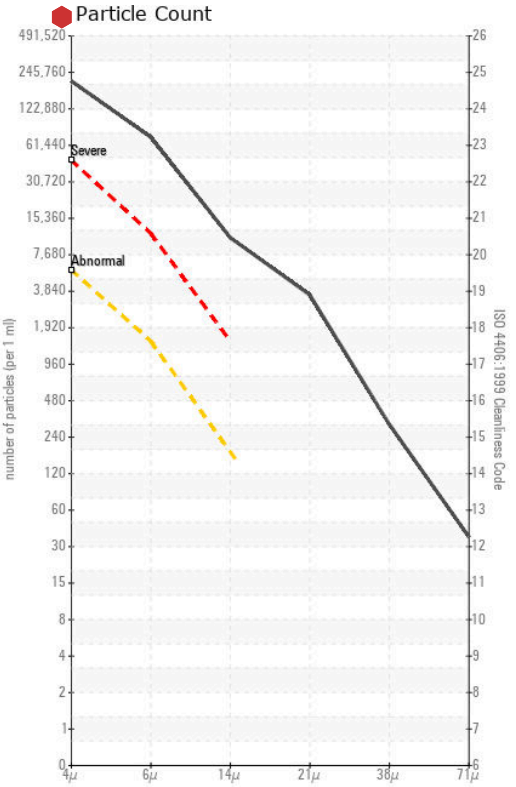
Non-ferrous Metals



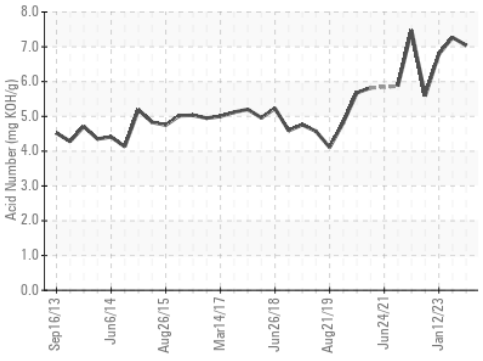
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory	: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9		
Sample No.	: WC0741320	**Received**	: 05 Oct 2023
Lab Number	: 02587349	**Diagnosed**	: 11 Oct 2023
Unique Number	: 5656415	**Diagnostician**	: Kevin Marson
Test Package	: IND 2 (Additional Tests: KF, pH, ReserveAlk, TAN Man)		

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.

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F: (905)885-7600