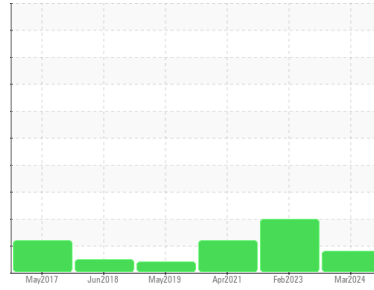




OIL ANALYSIS REPORT

Sample Rating Trend



Area
1220 Birchmount
 Machine Id
D3 NISSAI
 Component
Hydraulic System
 Fluid
{not provided} (--- LTR)

DIAGNOSIS

Recommendation

We recommend an early resample to monitor this condition. 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

Copper ppm levels are abnormal. Oil cooler core leaching or motor piston wear is indicated.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0921789	WC0788499	WC0576450
Sample Date	Client Info		19 Mar 2024	14 Feb 2023	12 Apr 2021
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			ABNORMAL	ABNORMAL	ATTENTION

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	4	4
Chromium	ppm	ASTM D5185(m)	>20	0	0	<1
Nickel	ppm	ASTM D5185(m)	>20	0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	0	0	0
Lead	ppm	ASTM D5185(m)	>20	2	3	3
Copper	ppm	ASTM D5185(m)	>20	▲ 83	▲ 69	● 43
Tin	ppm	ASTM D5185(m)	>20	0	2	2
Antimony	ppm	ASTM D5185(m)		0	<1	0
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)		0	1	1
Barium	ppm	ASTM D5185(m)		27	28	27
Molybdenum	ppm	ASTM D5185(m)		0	<1	<1
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		<1	<1	<1
Calcium	ppm	ASTM D5185(m)		67	67	65
Phosphorus	ppm	ASTM D5185(m)		234	260	223
Zinc	ppm	ASTM D5185(m)		242	238	245
Sulfur	ppm	ASTM D5185(m)		3620	3771	3610
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

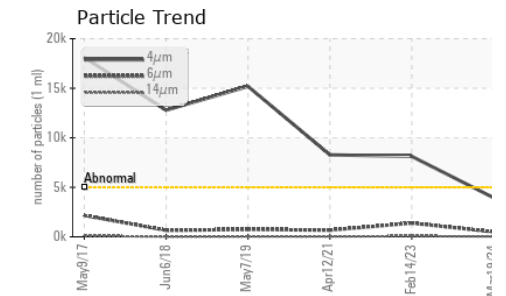
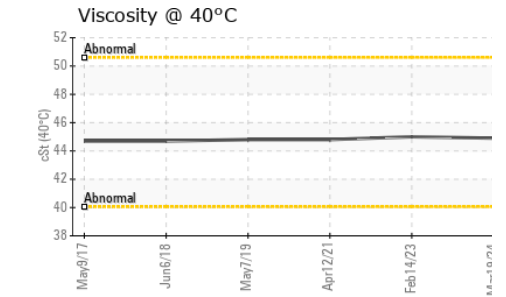
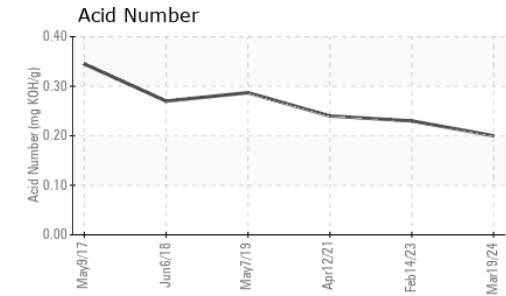
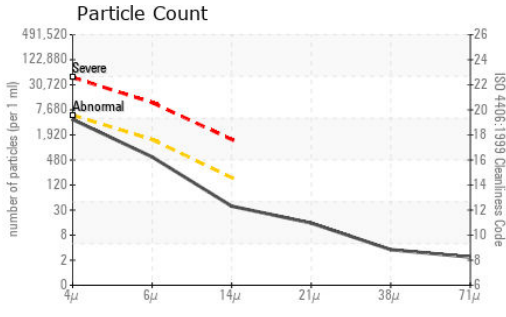
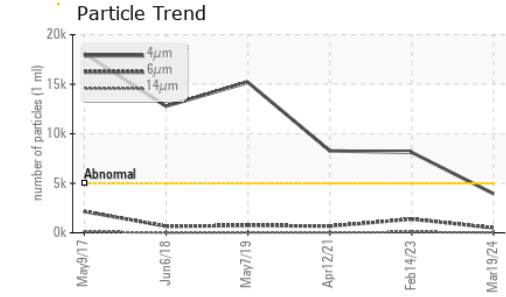
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>15	<1	1	2
Sodium	ppm	ASTM D5185(m)		<1	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	3941	● 8122	● 8276
Particles >6µm	ASTM D7647	>1300	498	● 1384	666
Particles >14µm	ASTM D7647	>160	33	71	31
Particles >21µm	ASTM D7647	>40	13	17	6
Particles >38µm	ASTM D7647	>10	3	1	0
Particles >71µm	ASTM D7647	>3	2	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	19/16/12	● 20/18/13	● 20/17/12



OIL ANALYSIS REPORT

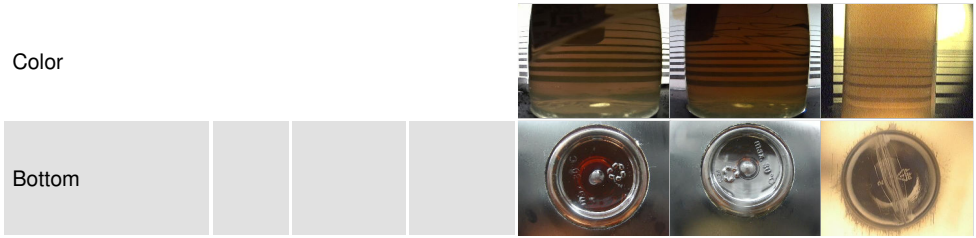


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		0.20	0.23	0.24

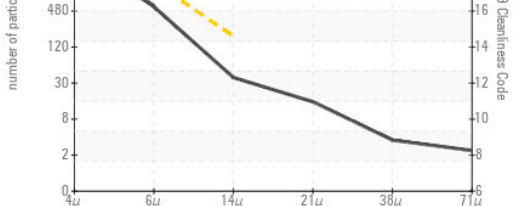
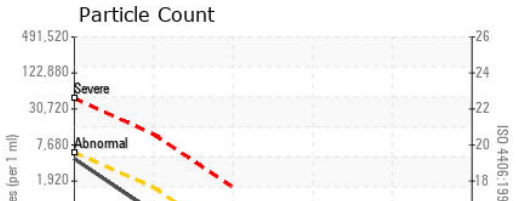
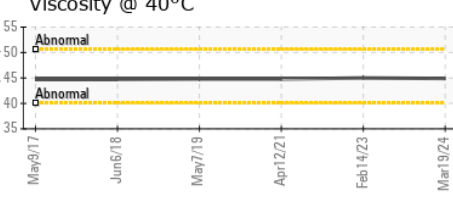
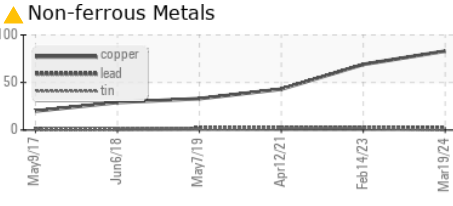
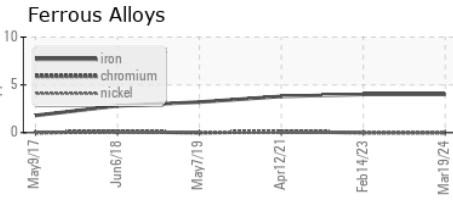
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	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
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)		44.9	45.0	44.8

SAMPLE IMAGES



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0921789
Lab Number : **02623417**
Unique Number : 5748536
Test Package : IND 2
Received : 20 Mar 2024
Tested : 21 Mar 2024
Diagnosed : 21 Mar 2024 - Kevin Marson

MARKDOM PLASTICS PRODUCTS LTD
 1220 BIRCHMOUNT RD
 TORONTO, ON
 CA M1P 2C6
 Contact: Joseph Kovacs
 joseph@markdom.com
 T: (416)752-4290
 F: (416)751-6638

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.