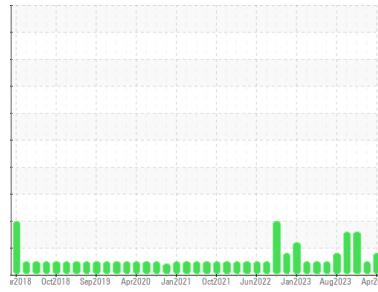




OIL ANALYSIS REPORT

Sample Rating Trend



Area
MP-136
 Machine Id
B24998 - FIREBRAISED CHALLENGE TUMBLER (S/N 0129)
 Component
Hydraulic System
 Fluid
PETRO CANADA PURITY FG AW HYDRAULIC 46 (--- GAL)

DIAGNOSIS

- Recommendation**
No corrective action is recommended at this time. Resample at the next service interval to monitor.
- Wear**
The copper level is abnormal. All other component wear rates are normal.

Contamination
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Fluid Condition
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0908001	WC0894877	WC0872422
Sample Date	Client Info			04 Apr 2024	12 Feb 2024	20 Dec 2023
Machine Age	yrs	Client Info		0	0	0
Oil Age	yrs	Client Info		0	0	0
Oil Changed	Client Info			Not Changed	Not Changed	Not Changed
Sample Status				ABNORMAL	NORMAL	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 D5185m	>20	0	0	0
Chromium	ppm	ASTM D5185m	>20	0	0	0
Nickel	ppm	ASTM D5185m	>20	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	0	0	0
Lead	ppm	ASTM D5185m	>20	0	<1	0
Copper	ppm	ASTM D5185m	>20	▲ 23	20	▲ 24
Tin	ppm	ASTM D5185m	>20	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m		0	<1	0
Calcium	ppm	ASTM D5185m		<1	2	0
Phosphorus	ppm	ASTM D5185m		441	415	398
Zinc	ppm	ASTM D5185m		17	21	0
Sulfur	ppm	ASTM D5185m		503	475	279

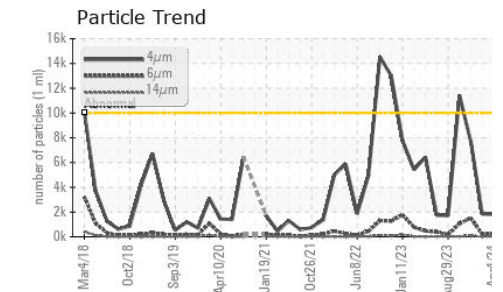
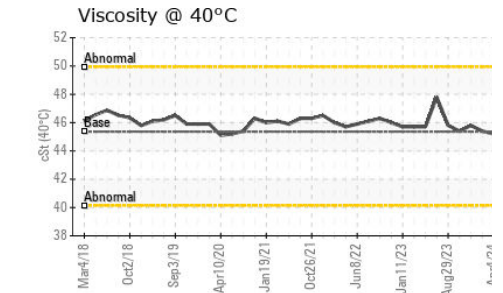
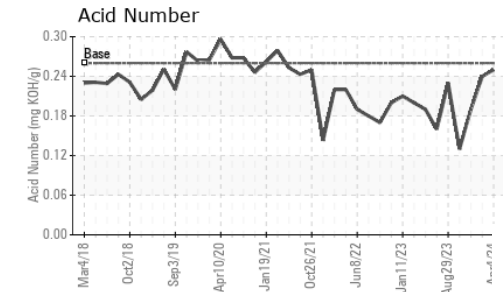
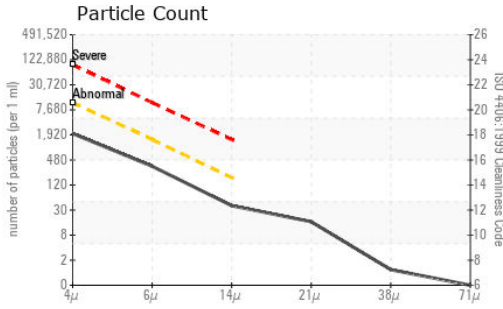
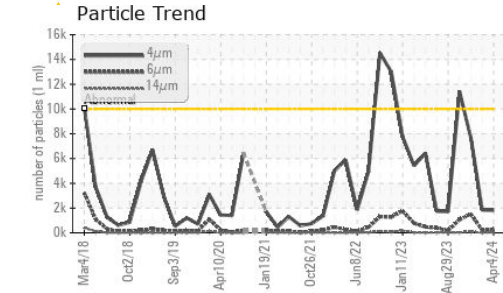
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	<1	2	<1
Sodium	ppm	ASTM D5185m		<1	2	4
Potassium	ppm	ASTM D5185m	>20	0	<1	1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	1816	1837	7680
Particles >6µm		ASTM D7647	>1300	298	194	1523
Particles >14µm		ASTM D7647	>160	34	16	78
Particles >21µm		ASTM D7647	>40	14	4	11
Particles >38µm		ASTM D7647	>10	1	0	1
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>20/17/14	18/15/12	18/15/11	20/18/13

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.26	0.25	0.24	0.19



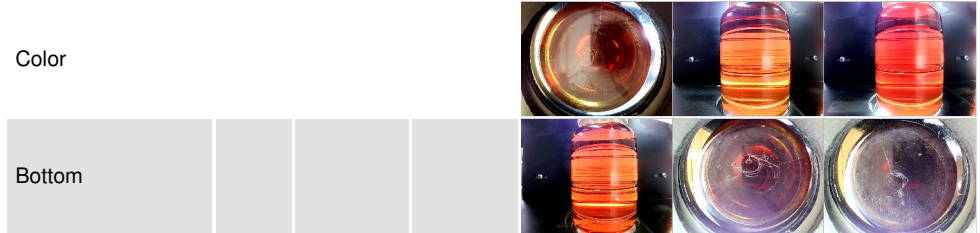
OIL ANALYSIS REPORT



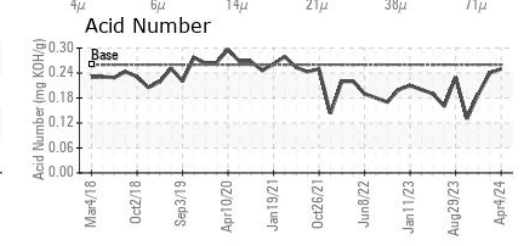
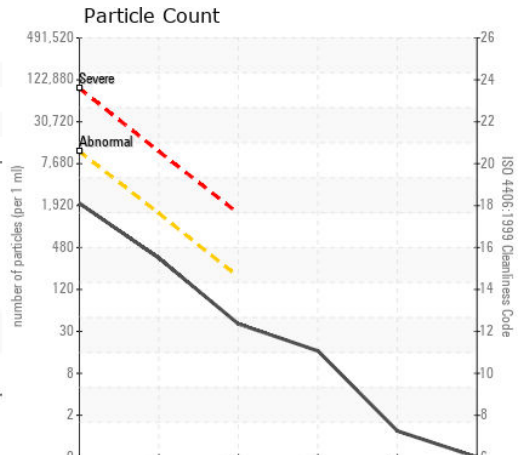
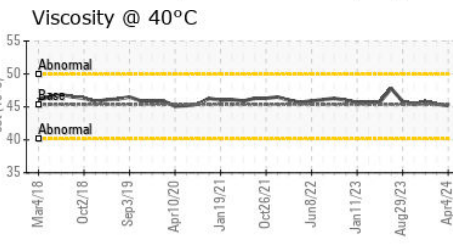
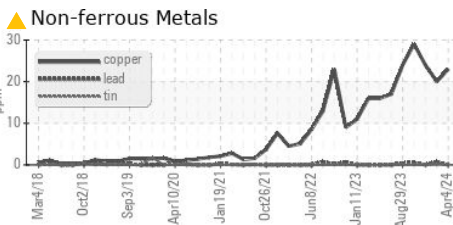
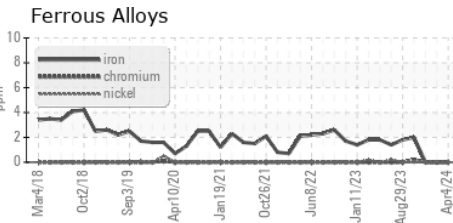
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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 D445	45.36	45.2	45.4

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0908001
 Lab Number : 06144189
 Unique Number : 10968997
 Test Package : IND 2
 Received : 10 Apr 2024
 Tested : 11 Apr 2024
 Diagnosed : 12 Apr 2024 - Don Baldrige

HORMEL FOODS - AUSTIN
 1101 NORTH MAIN ST
 AUSTIN, MN
 US 55912
 Contact: RYAN LOWE
 rslowe@hormel.com
 T: (507)437-5674
 F: (507)437-9805

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)