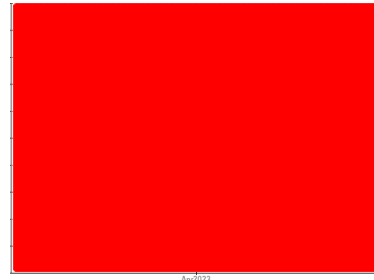




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
TOYOTA LANDCRUISER FMC028
Component
Front Differential
Fluid
SAE 80W90 (--- GAL)

DIAGNOSIS

▲ Recommendation

We advise that you check all areas where contaminants can enter the system. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition. Please note that the oil was too thick to perform some of the normal laboratory tests.

▲ Wear

We have assumed that the oil was taken hot, according to the sampling instructions. Iron ppm levels are severe. PQ levels are severe. Chromium ppm levels are abnormal. Aluminum ppm levels are noted. Titanium ppm levels are marginal. Gear wear is indicated. The very high ferrous density (PQ) index indicates that severe wear is occurring.

▲ Contamination

Lithium (Li) level severe at 476ppm., indicates possible grease contamination. There is a moderate concentration of water present in the oil. Free water present. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

▲ Fluid Condition

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			WC0801098	---	---
Sample Date	Client Info			07 Apr 2023	---	---
Machine Age	hrs	Client Info		988	---	---
Oil Age	hrs	Client Info		0	---	---
Oil Changed	Client Info			N/A	---	---
Sample Status				SEVERE	---	---

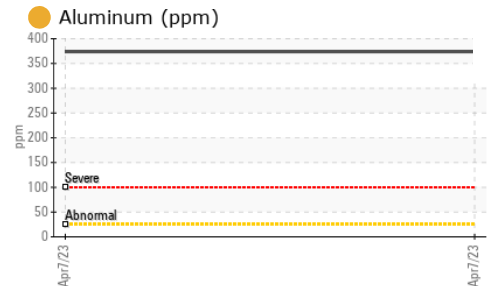
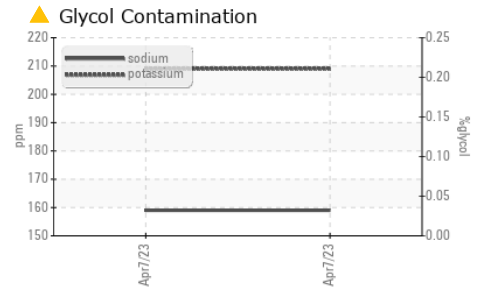
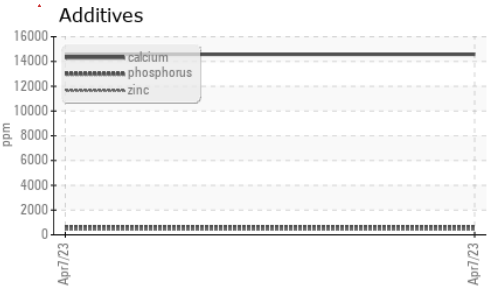
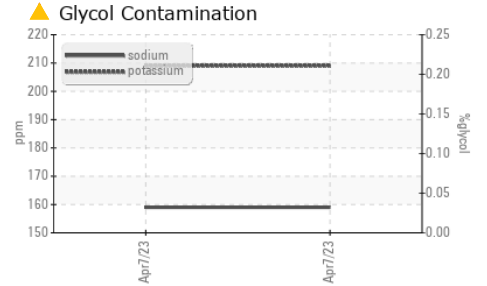
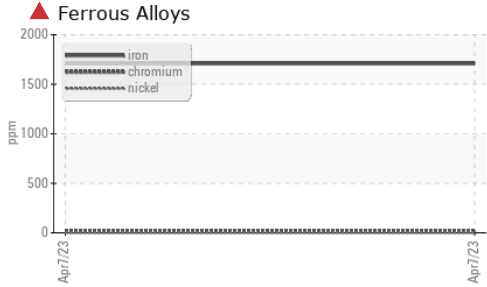
CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>.2	NEG	---	---

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		▲ 2042	---	---
Iron	ppm	ASTM D5185(m)	>500	▲ 1708	---	---
Chromium	ppm	ASTM D5185(m)	>10	▲ 13	---	---
Nickel	ppm	ASTM D5185(m)	>10	<1	---	---
Titanium	ppm	ASTM D5185(m)		▲ 23	---	---
Silver	ppm	ASTM D5185(m)		0	---	---
Aluminum	ppm	ASTM D5185(m)	>25	● 374	---	---
Lead	ppm	ASTM D5185(m)	>25	1	---	---
Copper	ppm	ASTM D5185(m)	>100	13	---	---
Tin	ppm	ASTM D5185(m)	>10	<1	---	---
Antimony	ppm	ASTM D5185(m)	>5	6	---	---
Vanadium	ppm	ASTM D5185(m)		1	---	---
Beryllium	ppm	ASTM D5185(m)		0	---	---
Cadmium	ppm	ASTM D5185(m)		0	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	200	741	---	---
Barium	ppm	ASTM D5185(m)	0	19	---	---
Molybdenum	ppm	ASTM D5185(m)	0	723	---	---
Manganese	ppm	ASTM D5185(m)		21	---	---
Magnesium	ppm	ASTM D5185(m)	0	166	---	---
Calcium	ppm	ASTM D5185(m)	20	14574	---	---
Phosphorus	ppm	ASTM D5185(m)	1000	635	---	---
Zinc	ppm	ASTM D5185(m)	20	441	---	---
Sulfur	ppm	ASTM D5185(m)	22000	9871	---	---
Lithium	ppm	ASTM D5185(m)		▲ 476	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>75	▲ 1310	---	---
Sodium	ppm	ASTM D5185(m)	>50	▲ 159	---	---
Potassium	ppm	ASTM D5185(m)	>20	209	---	---

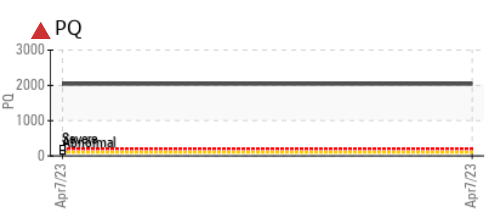
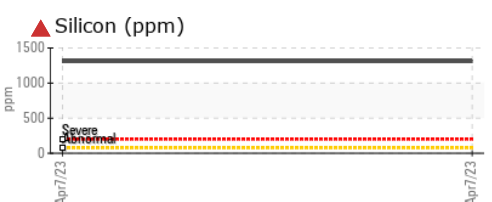
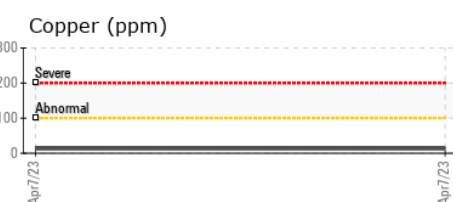
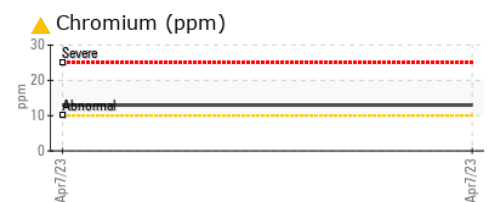
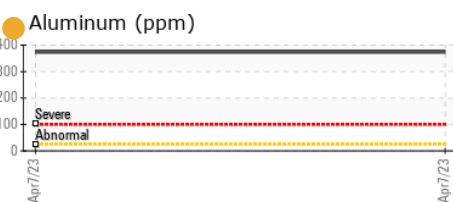
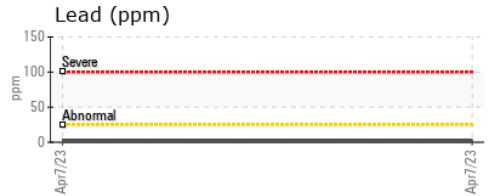
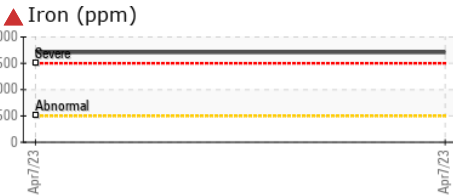
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	VLITE	---
Yellow Metal	scalar	Visual*	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	---
Silt	scalar	Visual*	NONE	VLITE	---
Debris	scalar	Visual*	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	---
Emulsified Water	scalar	Visual*	>.2	▲ .5%	---
Free Water	scalar	Visual*		▲ 5%	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				no image	no image
Bottom				no image	no image

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0801098 **Received** : 03 May 2023
Lab Number : 02555141 **Tested** : 05 May 2023
Unique Number : 5568156 **Diagnosed** : 05 May 2023 - Kevin Marson
Test Package : MOB 1 (Additional Tests: PQ)

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 Kirkland Lake, ON
 CA P2N 3J1
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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.