



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
ACELA TECUMSEH SUPPORT #2

Component
Rear Differential

Fluid
CHEVRON DELO GEAR ESI OIL 80W90 (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.
Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0895864	WC0777325	---
Sample Date		Client Info		06 Feb 2024	08 Mar 2023	---
Machine Age	mls	Client Info		13890	15669	---
Oil Age	mls	Client Info		5221	5000	---
Filter Age	mls	Client Info		0	0	---
Oil Changed		Client Info		Not Changd	Not Changd	---
Filter Changed		Client Info		Not Changd	N/A	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

PQ		ASTM D8184*		56	---	---
Iron	ppm	ASTM D5185(m)	>500	91	100	---
Chromium	ppm	ASTM D5185(m)	>10	<1	1	---
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	---
Titanium	ppm	ASTM D5185(m)		0	<1	---
Silver	ppm	ASTM D5185(m)		0	0	---
Aluminum	ppm	ASTM D5185(m)	>25	4	5	---
Lead	ppm	ASTM D5185(m)	>25	<1	<1	---
Copper	ppm	ASTM D5185(m)	>100	<1	<1	---
Tin	ppm	ASTM D5185(m)	>10	0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

There is no indication of any contamination in the oil.

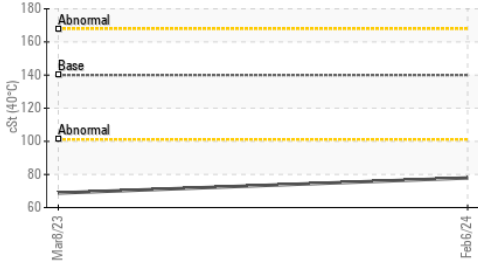
Silicon	ppm	ASTM D5185(m)	>75	47	59	---
Potassium	ppm	ASTM D5185(m)	>20	3	3	---
Water		WC Method	>.2	NEG	NEG	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>.2	NEG	NEG	---

FLUID CONDITION

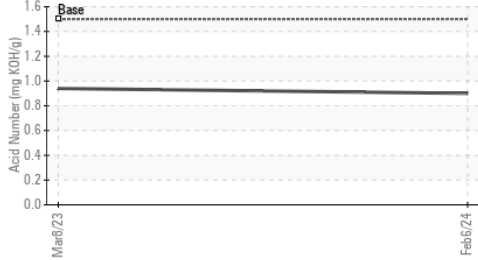
Viscosity of sample indicates oil is within ISO 68 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		3	4	---
Boron	ppm	ASTM D5185(m)	15	27	33	---
Barium	ppm	ASTM D5185(m)	0	1	1	---
Molybdenum	ppm	ASTM D5185(m)	0	4	5	---
Manganese	ppm	ASTM D5185(m)		2	3	---
Magnesium	ppm	ASTM D5185(m)	0	12	13	---
Calcium	ppm	ASTM D5185(m)	5	112	136	---
Phosphorus	ppm	ASTM D5185(m)	600	386	412	---
Zinc	ppm	ASTM D5185(m)	0	44	51	---
Sulfur	ppm	ASTM D5185(m)	22000	16221	14309	---
Acid Number (AN)	mg KOH/g	ASTM D974*	1.5	0.90	0.94	---
Visc @ 40°C	cSt	ASTM D7279(m)	140	▲ 77.9	▲ 68.8	---

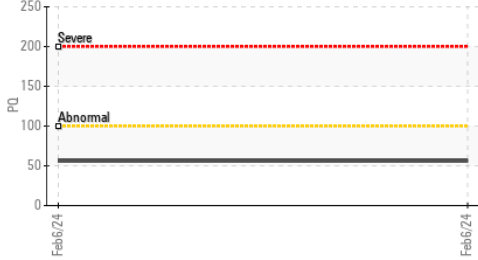
▲ Viscosity @ 40°C



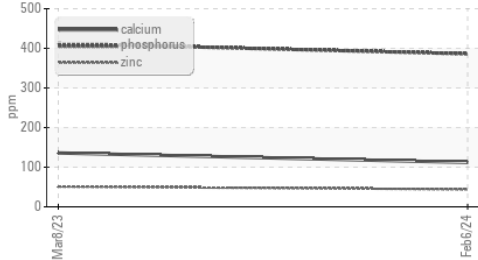
Acid Number



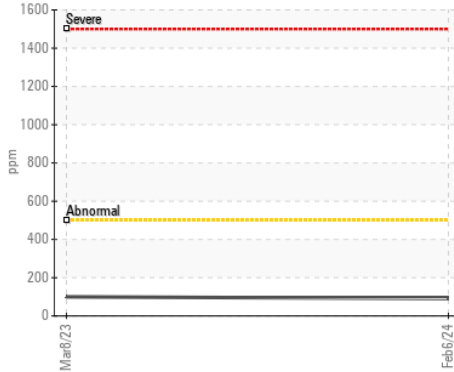
PQ



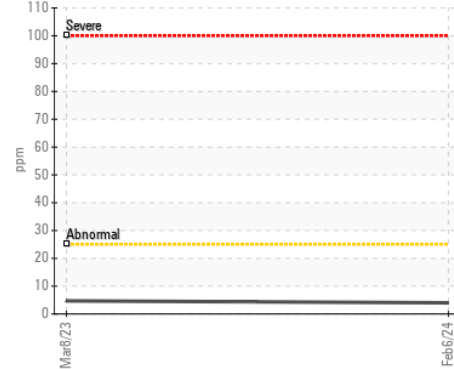
Additives



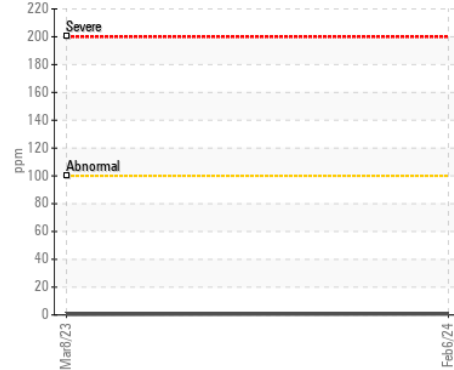
Iron (ppm)



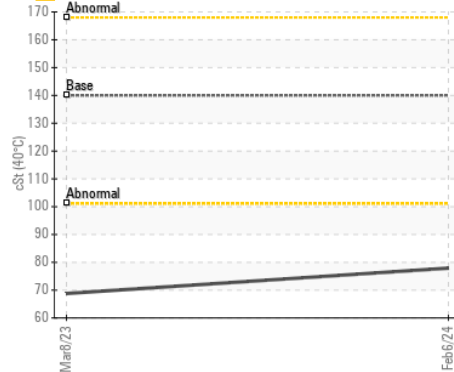
Aluminum (ppm)



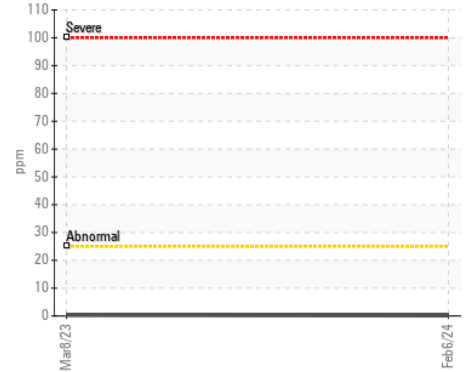
Copper (ppm)



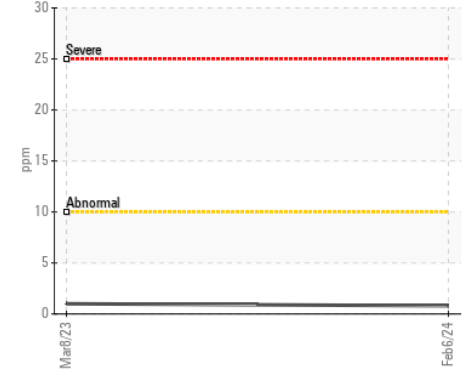
▲ Viscosity @ 40°C



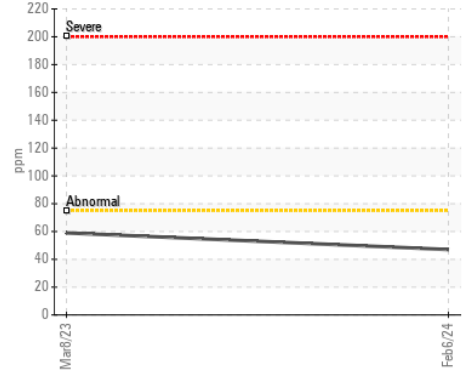
Lead (ppm)



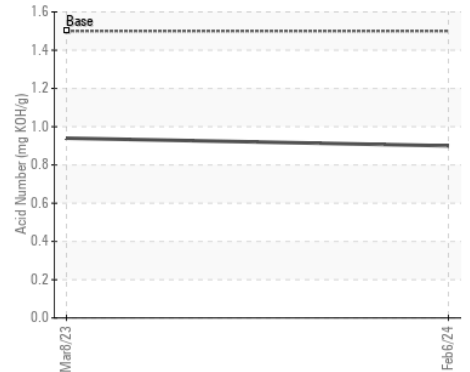
Chromium (ppm)



Silicon (ppm)



Acid Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0895864 **Received** : 27 Feb 2024
Lab Number : 02618436 **Tested** : 28 Feb 2024
Unique Number : 5735546 **Diagnosed** : 28 Feb 2024 - Kevin Marson
Test Package : MOB 2 (Additional Tests: PQ, 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.

City of Windsor
 2885 Kew Drive
 Windsor, ON
 CA N8T 3B7
 Contact: Brent Paisley
 bpaisley@citywindsor.ca
 T: (519)945-7395
 F: (519)948-9095