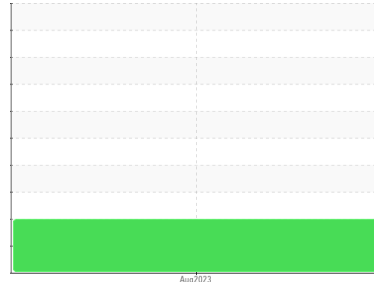




# OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id  
**HYUNDAI 2019 HYUNDAI SANTA FE**

Component  
**Gasoline Engine**

Fluid  
**{not provided} (--- GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

### Fluid Condition

The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0847696</b>	---	---
Sample Date	Client Info		<b>10 Aug 2023</b>	---	---
Machine Age	kms	Client Info	<b>91100</b>	---	---
Oil Age	kms	Client Info	<b>3120</b>	---	---
Oil Changed	Client Info		<b>N/A</b>	---	---
Sample Status			<b>SEVERE</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >150	<b>4</b>	---	---
Chromium	ppm	ASTM D5185(m) >20	<b>0</b>	---	---
Nickel	ppm	ASTM D5185(m) >5	<b>0</b>	---	---
Titanium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Silver	ppm	ASTM D5185(m) >2	<b>2</b>	---	---
Aluminum	ppm	ASTM D5185(m) >40	<b>2</b>	---	---
Lead	ppm	ASTM D5185(m) >50	<b>0</b>	---	---
Copper	ppm	ASTM D5185(m) >155	<b>2</b>	---	---
Tin	ppm	ASTM D5185(m) >10	<b>0</b>	---	---
Antimony	ppm	ASTM D5185(m)	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	<b>30</b>	---	---
Barium	ppm	ASTM D5185(m)	<b>&lt;1</b>	---	---
Molybdenum	ppm	ASTM D5185(m)	<b>171</b>	---	---
Manganese	ppm	ASTM D5185(m)	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185(m)	<b>395</b>	---	---
Calcium	ppm	ASTM D5185(m)	<b>1047</b>	---	---
Phosphorus	ppm	ASTM D5185(m)	<b>585</b>	---	---
Zinc	ppm	ASTM D5185(m)	<b>640</b>	---	---
Sulfur	ppm	ASTM D5185(m)	<b>1508</b>	---	---
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	---	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >30	<b>13</b>	---	---
Sodium	ppm	ASTM D5185(m) >400	<b>29</b>	---	---
Potassium	ppm	ASTM D5185(m) >20	<b>2</b>	---	---
Fuel	%	ASTM D7593* >4.0	<b>13.8</b>	---	---
Glycol	%	ASTM D7922*	<b>0.0</b>	---	---

## INFRA-RED

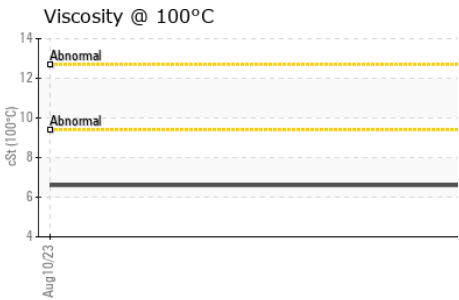
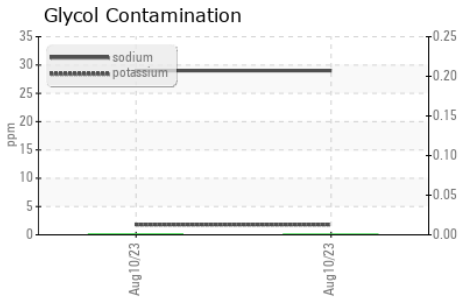
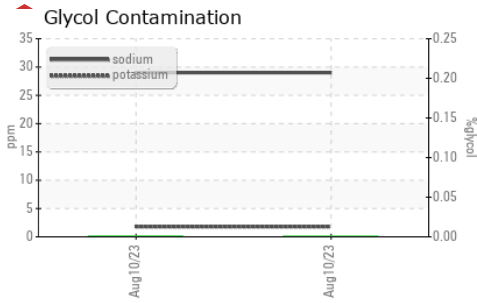
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	<b>0</b>	---	---
Nitration	Abs/cm	ASTM D7624* >20	<b>9.5</b>	---	---
Sulfation	Abs/.1mm	ASTM D7415* >30	<b>18.4</b>	---	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414* >25	<b>10.9</b>	---	---



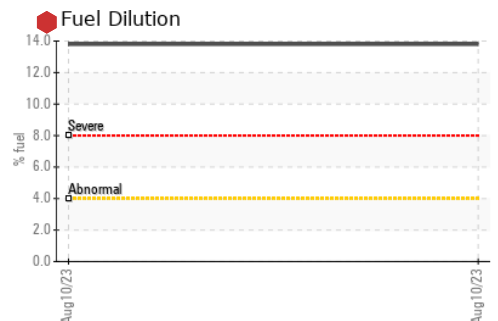
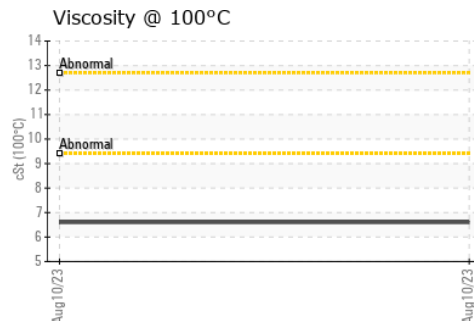
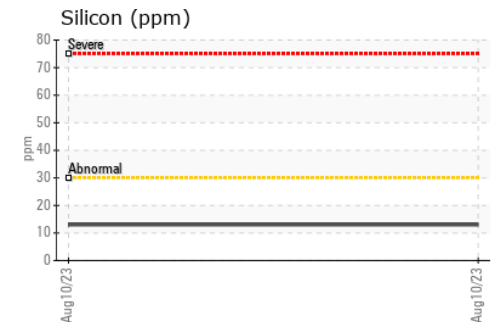
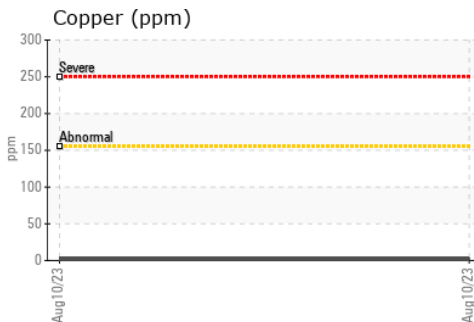
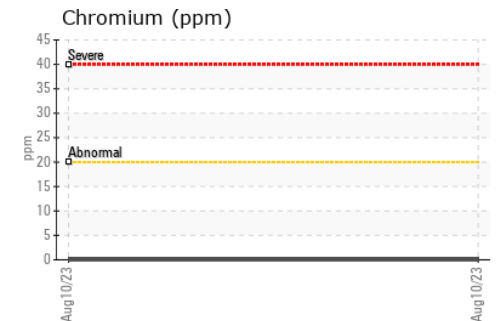
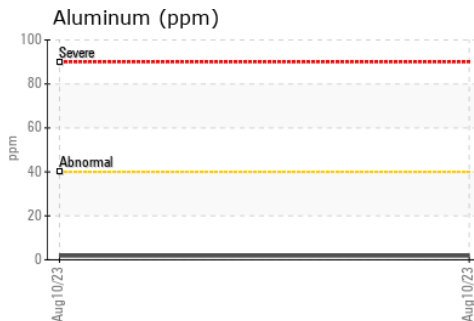
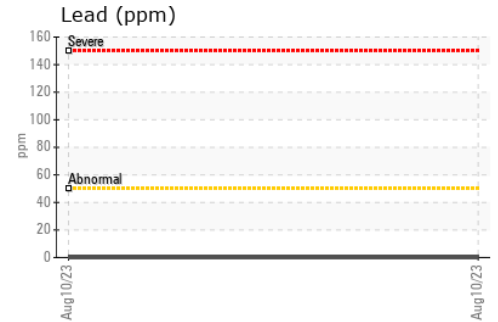
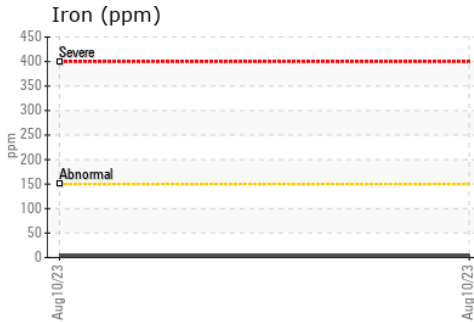
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	---
Free Water	scalar	Visual*		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	6.6	---	---

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0847696 **Received** : 14 Aug 2023  
**Lab Number** : 02575689 **Diagnosed** : 15 Aug 2023  
**Unique Number** : 5620740 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, Glycol, PercentFuel )

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.

**Ray Donadel**  
 4418 Hill Street  
 Newtonville, ON  
 CA L0A 1J0  
 Contact: Ray Donadel  
 wrazor99@hotmail.com  
 T: (905)767-6003  
 F: