

Machine Id
Smith Ridge 1
Component
Natural Gas Engine
Fluid
CITGO PACEMAKER GAS ENGINE 1700 SERIES 40W (--- GAL)

RECOMMENDATION

We recommend that you drain the oil and perform a filter service on this component if not already done. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0117266	PCA0117262	PCA0117195
Sample Date		Client Info		09 Jul 2024	04 Jun 2024	02 May 2024
Machine Age	hrs	Client Info		188161	187336	186556
Oil Age	hrs	Client Info		187381	780	237
Filter Age	hrs	Client Info		0	0	237
Oil Changed		Client Info		Not Chngd	Not Chngd	Changed
Filter Changed		Client Info		Not Chngd	Not Chngd	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	6	6	3
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	2	<1
Lead	ppm	ASTM D5185m	>30	25	14	11
Copper	ppm	ASTM D5185m	>35	4	7	5
Tin	ppm	ASTM D5185m	>4	<1	1	1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

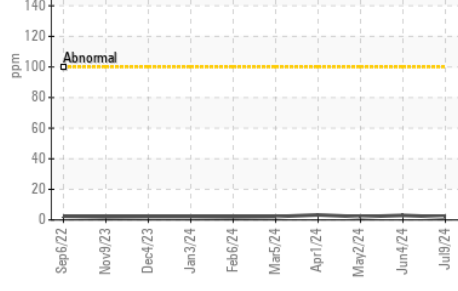
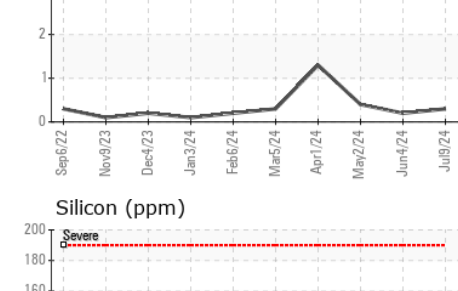
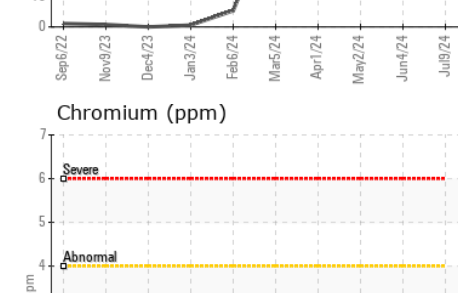
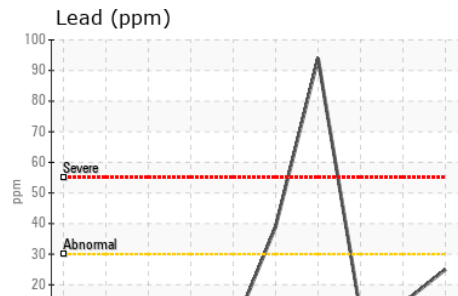
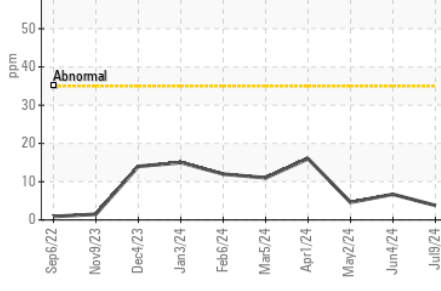
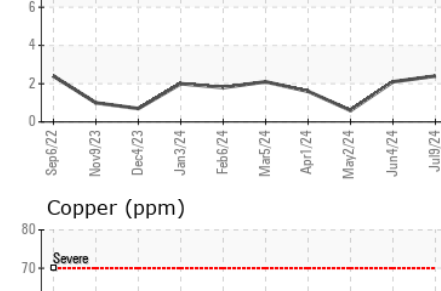
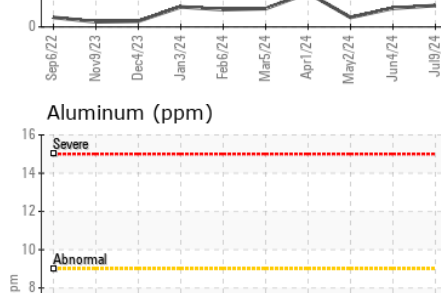
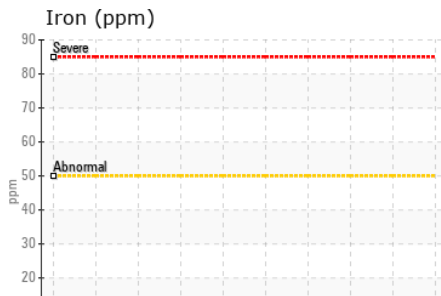
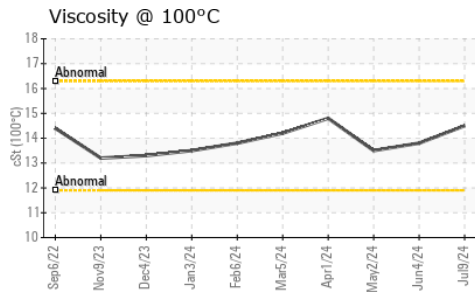
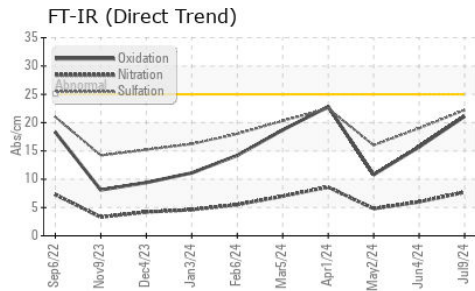
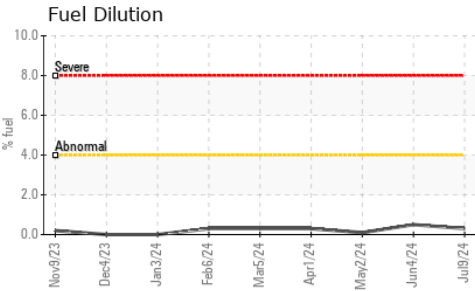
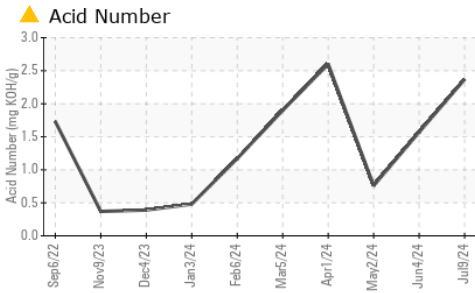
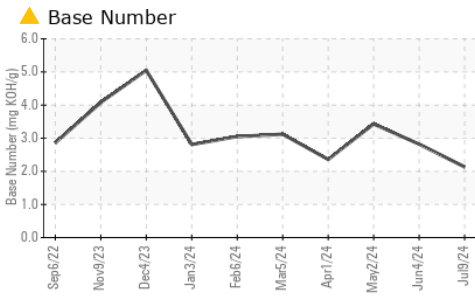
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	2	3	2
Potassium	ppm	ASTM D5185m	>20	2	5	2
Fuel	%	ASTM D3524	>4.0	0.3	0.5	0.1
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	7.7	6.0	4.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.2	19.0	16.0
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	>0.1	NEG	NEG	NEG

FLUID CONDITION

The BN level is low. The AN level is at the top-end of the recommended limit. The oil is no longer serviceable.

Sodium	ppm	ASTM D5185m		<1	3	0
Boron	ppm	ASTM D5185m		<1	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		1	4	2
Manganese	ppm	ASTM D5185m		0	2	<1
Magnesium	ppm	ASTM D5185m		10	12	8
Calcium	ppm	ASTM D5185m		1506	1589	1366
Phosphorus	ppm	ASTM D5185m		320	349	303
Zinc	ppm	ASTM D5185m		418	435	363
Sulfur	ppm	ASTM D5185m		2360	3075	2867
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.1	15.7	10.8
Acid Number (AN)	mg KOH/g	ASTM D8045		▲ 2.37	1.57	0.76
Base Number (BN)	mg KOH/g	ASTM D2896		▲ 2.13	2.82	3.43
Visc @ 100°C	cSt	ASTM D445		14.5	13.8	13.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0117266 **Received** : 16 Jul 2024
Lab Number : 06238557 **Tested** : 17 Jul 2024
Unique Number : 11127391 **Diagnosed** : 18 Jul 2024 - Doug Bogart
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

ENERVEST OPERATING - SMITH RIDGE
 2305 SMITH RIDGE
 MCCLURE, VA
 US 24269
 Contact: Service Manager

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)

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F: