

Machine Id
24
Component
Natural Gas Engine
Fluid
CITGO PACEMAKER GAS ENGINE OIL 1015 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0117274	PCA0112046	PCA0111955
Sample Date		Client Info		08 Jul 2024	03 Jun 2024	04 Dec 2023
Machine Age	hrs	Client Info		175524	174690	170359
Oil Age	hrs	Client Info		2782	1948	324
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

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

CONTAMINATION

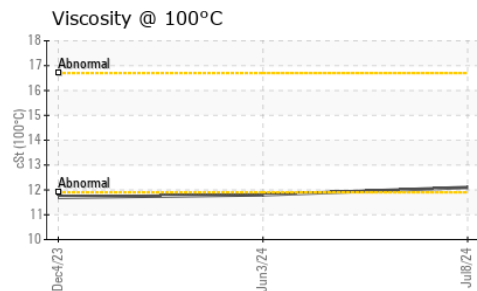
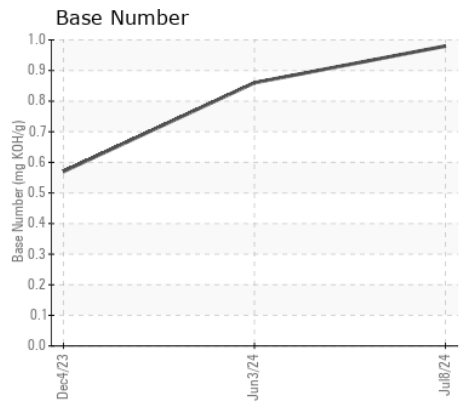
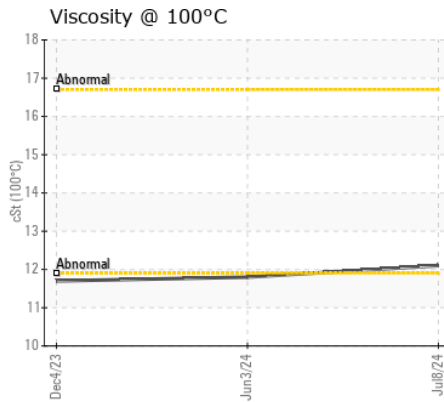
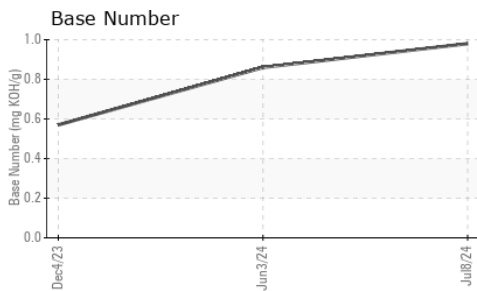
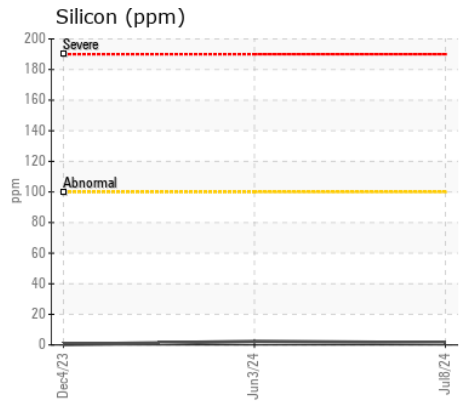
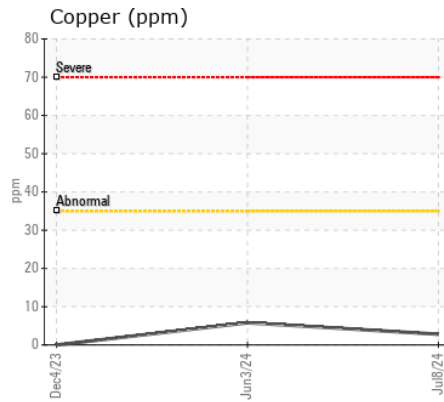
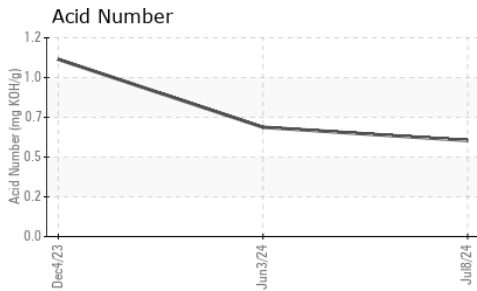
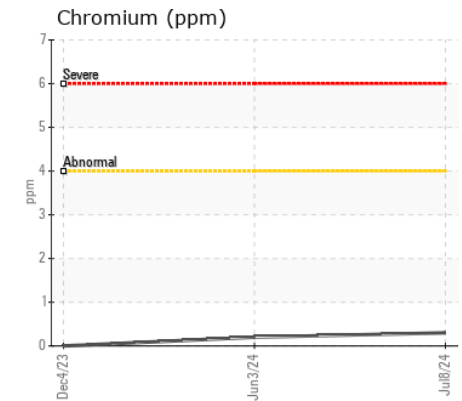
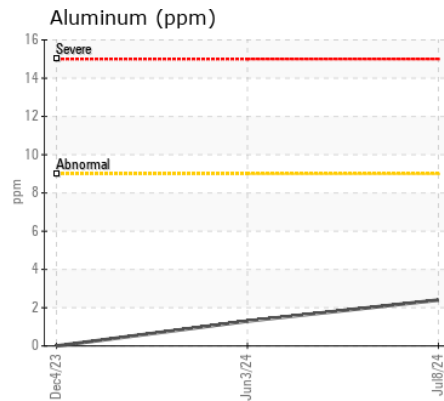
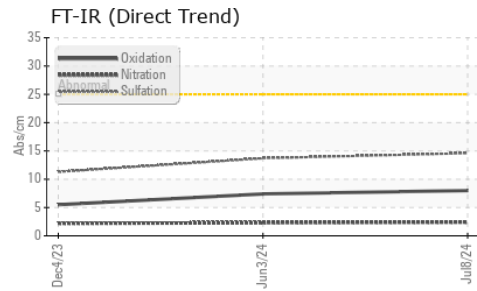
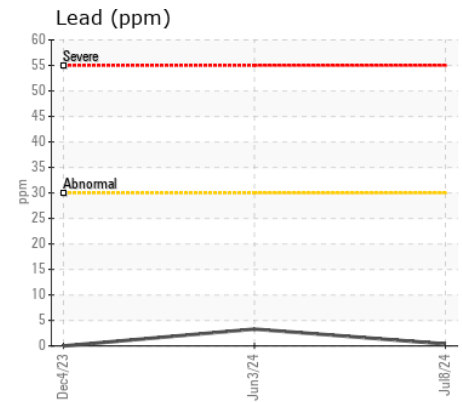
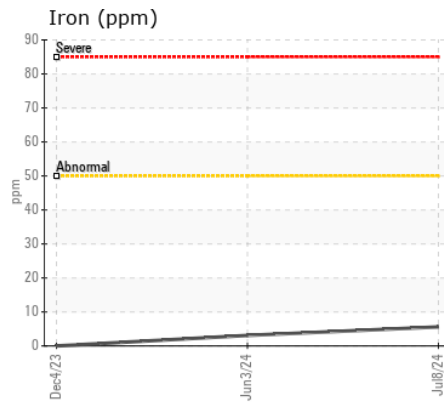
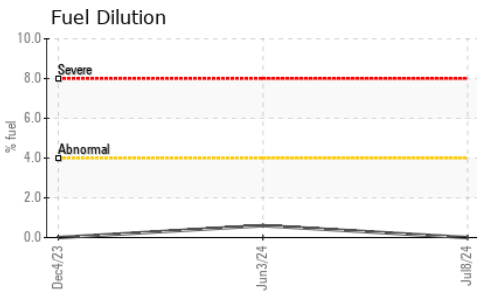
Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	1	2	<1
Potassium	ppm	ASTM D5185m	>20	1	5	0
Fuel	%	ASTM D3524	>4.0	0.0	0.6	0.0
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	2.4	2.3	2.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	14.6	13.7	11.3
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 result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	2	0
Boron	ppm	ASTM D5185m		43	39	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		2	4	0
Manganese	ppm	ASTM D5185m		0	2	0
Magnesium	ppm	ASTM D5185m		2	2	2
Calcium	ppm	ASTM D5185m		47	43	13
Phosphorus	ppm	ASTM D5185m		601	684	643
Zinc	ppm	ASTM D5185m		154	222	407
Sulfur	ppm	ASTM D5185m		624	1185	2051
Oxidation	Abs/.1mm	*ASTM D7414	>25	8.0	7.4	5.5
Acid Number (AN)	mg KOH/g	ASTM D8045		0.58	0.66	1.07
Base Number (BN)	mg KOH/g	ASTM D2896		0.98	0.86	0.57
Visc @ 100°C	cSt	ASTM D445		12.1	11.8	11.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : PCA0117274 Received : 16 Jul 2024
 Lab Number : 06238567 Tested : 17 Jul 2024
 Unique Number : 11127401 Diagnosed : 17 Jul 2024 - Wes Davis
 Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

ENERVEST OPERATING - HAYSIB
 1812 CRANESNEST ROAD
 HAYSIB, VA
 US 24256
 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: