

Machine Id
580144
Component
Diesel Engine
Fluid
CASTROL 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0100998	PCA0091974	PCA0054489
Sample Date		Client Info		19 Feb 2024	11 Mar 2023	24 Aug 2021
Machine Age	hrs	Client Info		3178	3536	3035
Oil Age	hrs	Client Info		635	400	5
Filter Age	hrs	Client Info		635	400	5
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	6	10	5
Chromium	ppm	ASTM D5185m	>20	0	0	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	2	3	0
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

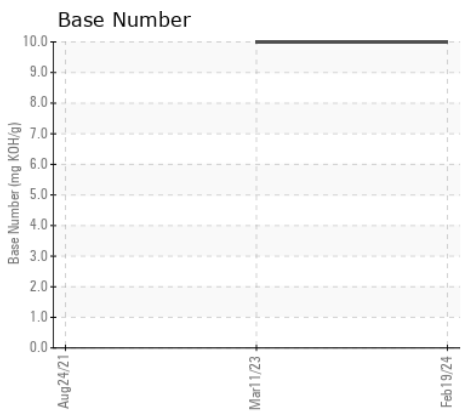
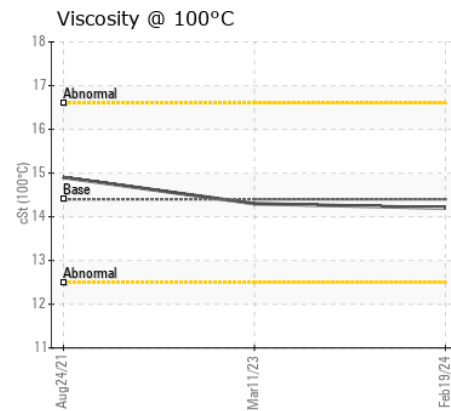
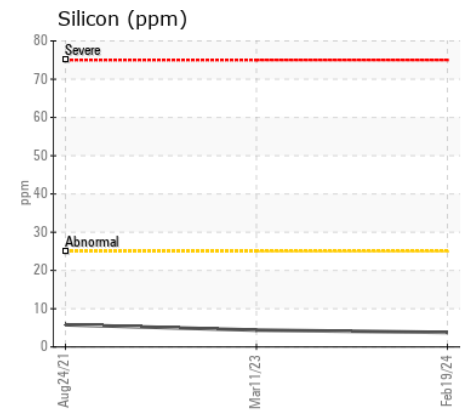
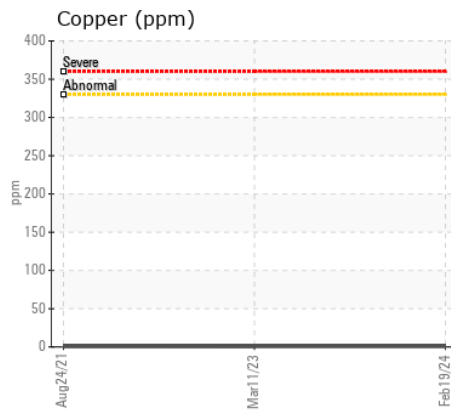
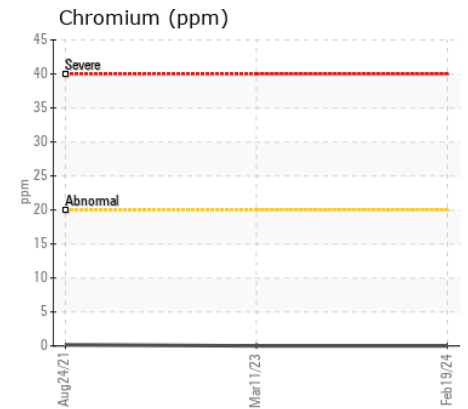
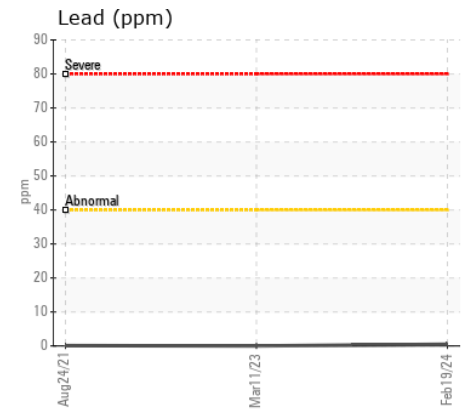
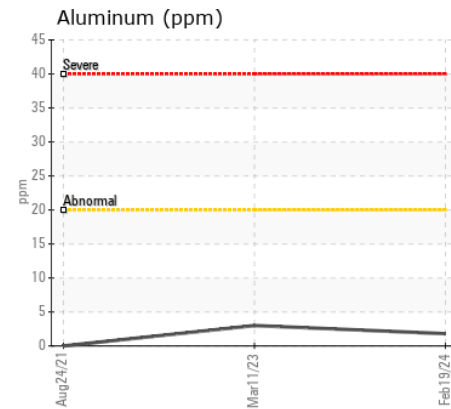
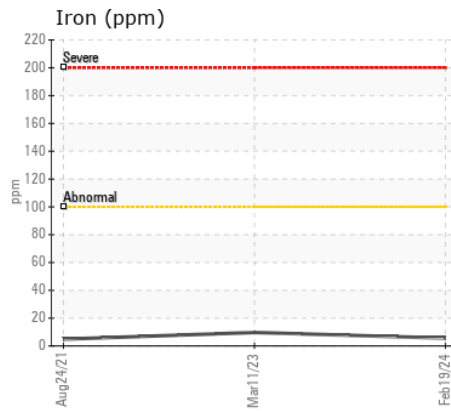
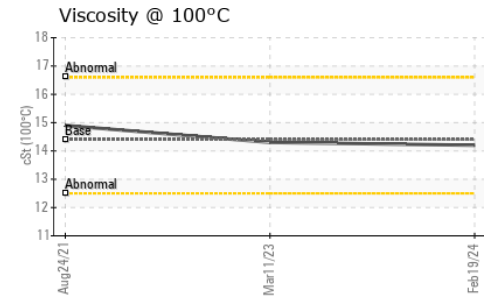
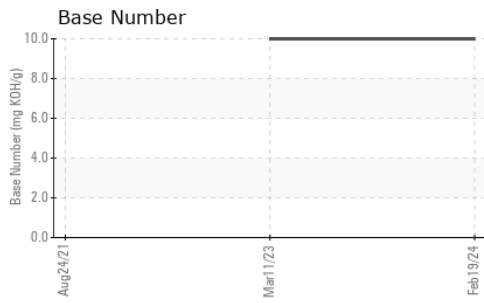
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	4	6
Potassium	ppm	ASTM D5185m	>20	<1	2	<1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	5.6	6.5	4.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.5	19.1	17.2
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	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>406	<1	<1	4
Boron	ppm	ASTM D5185m		133	115	45
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		66	46	82
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		1236	825	922
Calcium	ppm	ASTM D5185m		1087	1333	1144
Phosphorus	ppm	ASTM D5185m		1187	954	1032
Zinc	ppm	ASTM D5185m		1431	1242	1155
Sulfur	ppm	ASTM D5185m		3922	3603	2773
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3	14.9	13
Base Number (BN)	mg KOH/g	ASTM D2896		10.0	10.0	---
Visc @ 100°C	cSt	ASTM D445	14.4	14.2	14.3	14.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0100998 **Received** : 26 Feb 2024
Lab Number : 06099862 **Tested** : 28 Feb 2024
Unique Number : 10898092 **Diagnosed** : 28 Feb 2024 - Don Baldrige
Test Package : MOB 1 (Additional Tests: TBN)

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)

SYNAGRO
 284 BOGER RD
 MOCKSVILLE, NC
 US 27028
 Contact: ROGER AMICK
 ramick@synagro.com
 T: (336)998-7150
 F: (336)998-2155