



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
4547
 Component
Diesel Engine
 Fluid
CITGO CITGUARD 600 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0891576	WC0891561	WC0891588
Sample Date		Client Info		02 Jul 2024	03 Apr 2024	18 Jan 2024
Machine Age	hrs	Client Info		723315	705129	689993
Oil Age	hrs	Client Info		17000	15000	15000
Filter Age	hrs	Client Info		17000	15000	15000
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	15	16	14
Chromium	ppm	ASTM D5185m	>20	<1	1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	4	2
Lead	ppm	ASTM D5185m	>40	1	1	1
Copper	ppm	ASTM D5185m	>330	4	1	1
Tin	ppm	ASTM D5185m	>15	0	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

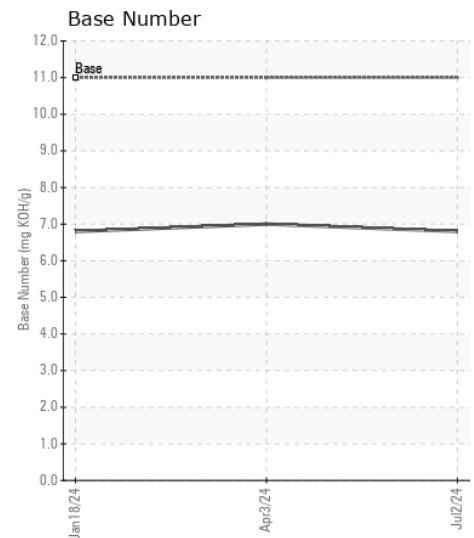
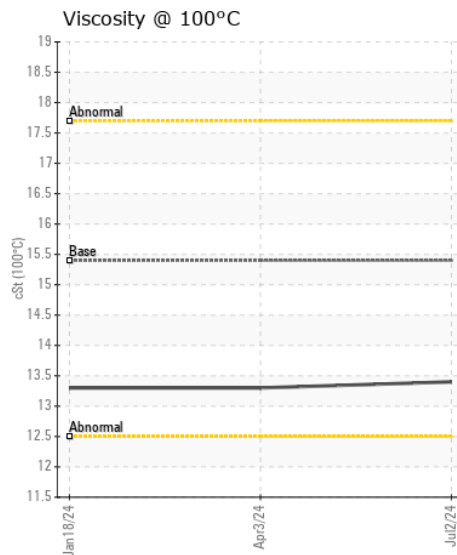
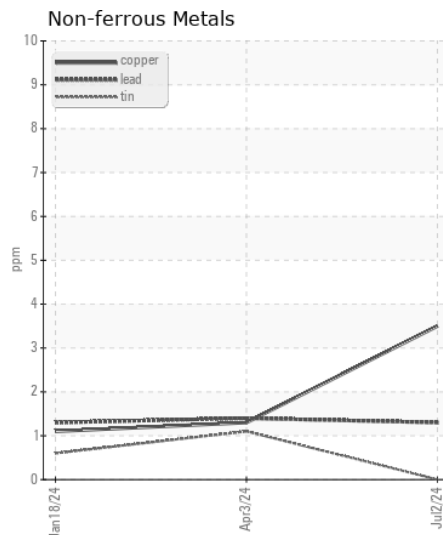
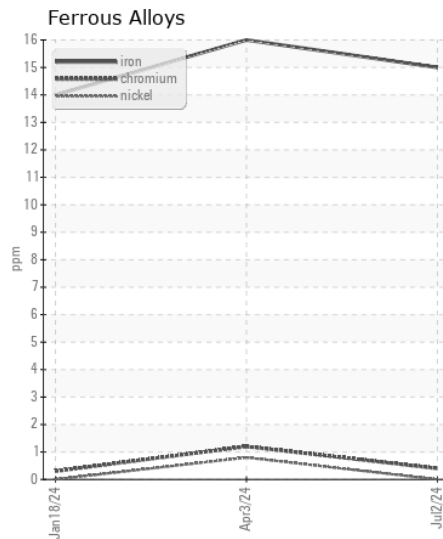
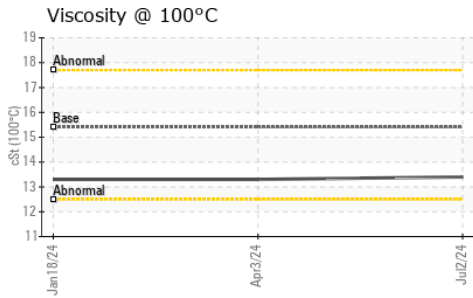
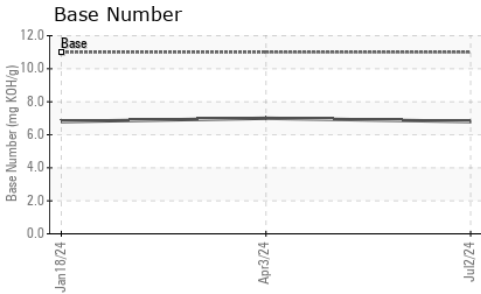
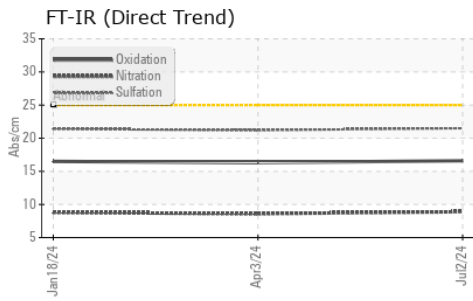
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	6	5
Potassium	ppm	ASTM D5185m	>20	3	4	4
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	0.4	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	8.9	8.6	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.5	21.2	21.4
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		2	2	0
Boron	ppm	ASTM D5185m	13	16	51	53
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	57	69	75	72
Manganese	ppm	ASTM D5185m		<1	1	0
Magnesium	ppm	ASTM D5185m	825	493	417	369
Calcium	ppm	ASTM D5185m	1100	2104	1910	1738
Phosphorus	ppm	ASTM D5185m	933	1150	1104	925
Zinc	ppm	ASTM D5185m	1089	1441	1358	1264
Sulfur	ppm	ASTM D5185m	2769	3965	3638	3420
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.6	16.3	16.5
Base Number (BN)	mg KOH/g	ASTM D2896	11.0	6.8	7.0	6.8
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	13.3	13.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0891576
Lab Number : 06230988
Unique Number : 11114481
Test Package : FLEET

Received : 08 Jul 2024
Tested : 10 Jul 2024
Diagnosed : 10 Jul 2024 - Wes Davis

OMNISOURCE SE - JOHNSON CITY
 500 RAVINE DR
 JOHNSON CITY, TN
 US 37601

Contact: BRANDON IRISH
 brandon.irish@omnisource.com

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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