



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
Mobile Fleet
 Machine Id
7102 7102
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0947800	WC0918623	WC0861914
Sample Date		Client Info		14 Jun 2024	11 Mar 2024	29 Dec 2023
Machine Age	hrs	Client Info		1523	1294	1092
Oil Age	hrs	Client Info		479	250	339
Filter Age	hrs	Client Info		479	250	339
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	>51	43	39	46
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	3	3	5
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	3	2	3
Lead	ppm	ASTM D5185m	>26	0	0	0
Copper	ppm	ASTM D5185m	>26	2	3	12
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

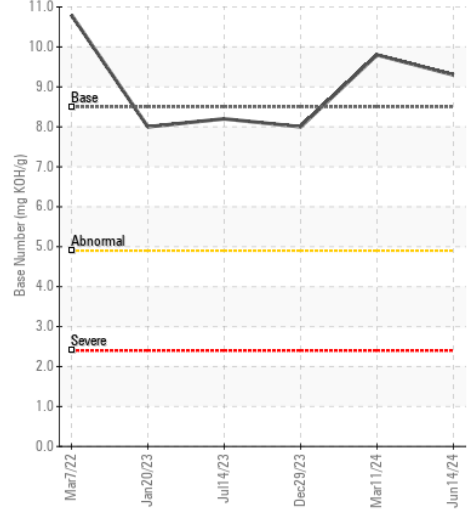
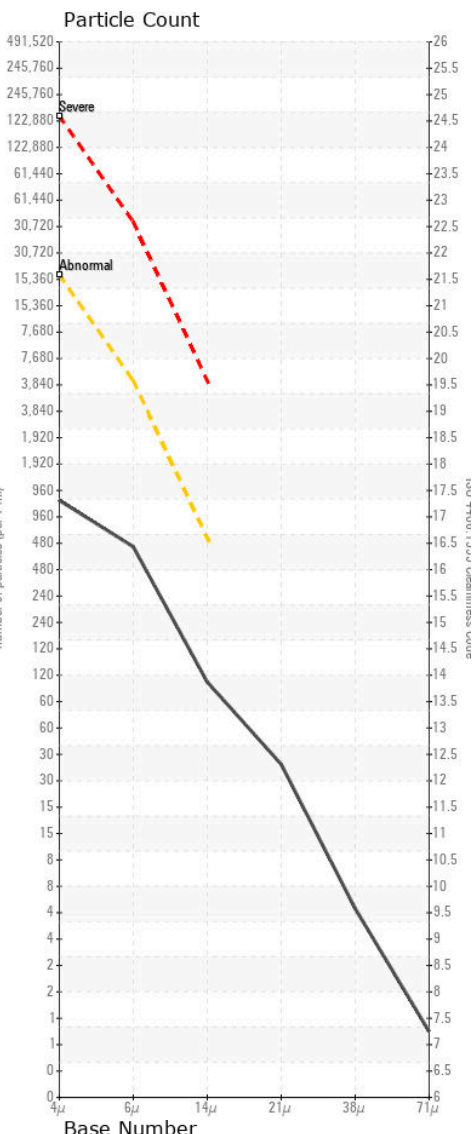
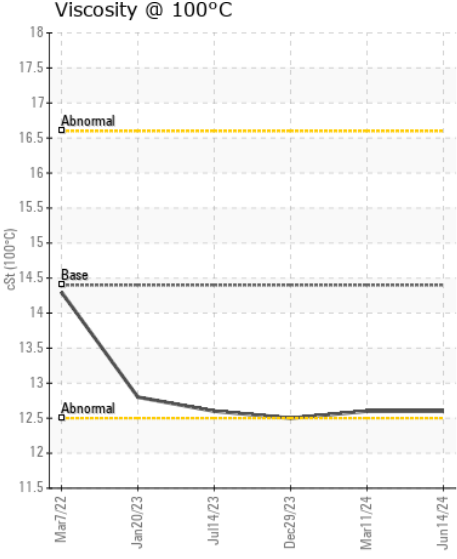
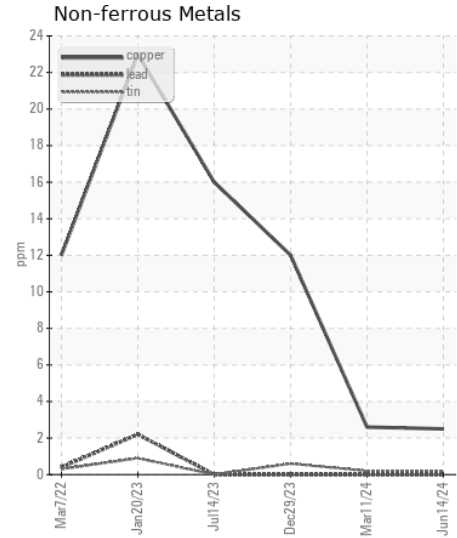
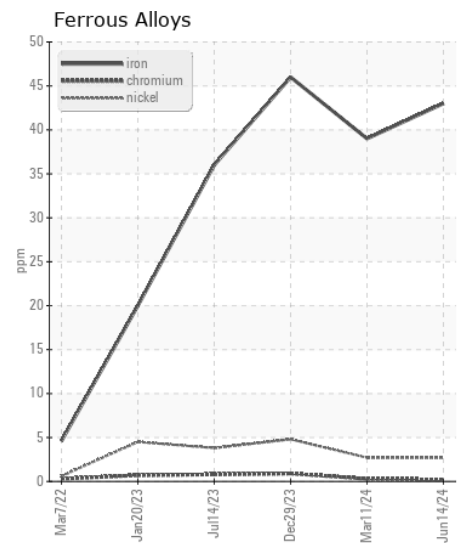
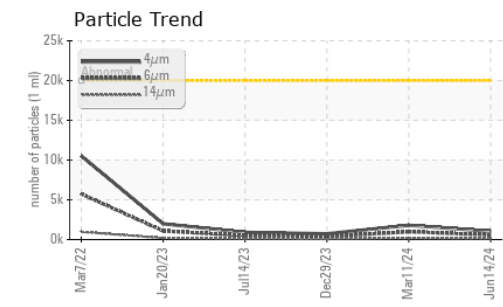
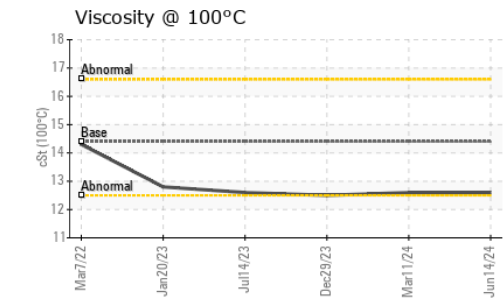
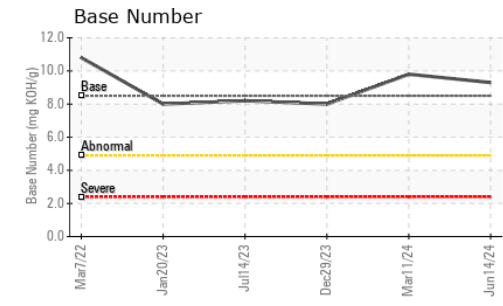
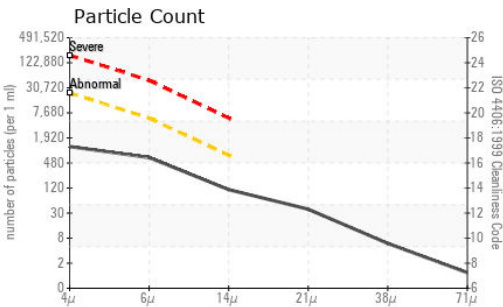
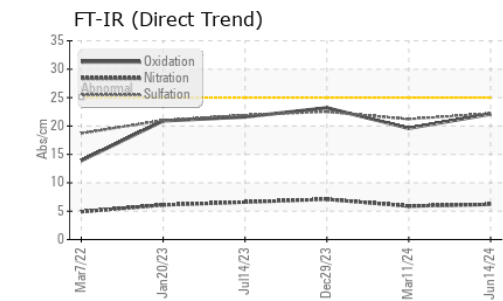
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	6	5	4
Potassium	ppm	ASTM D5185m	>20	6	6	10
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	6.2	5.9	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.2	21.2	22.5
Particles >4µm		ASTM D7647	>20000	1044	1801	731
Particles >6µm		ASTM D7647	>5000	569	981	398
Particles >14µm		ASTM D7647	>640	97	167	68
Particles >21µm		ASTM D7647	>160	33	56	23
Particles >38µm		ASTM D7647	>40	5	9	4
Particles >71µm		ASTM D7647	>10	1	1	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	17/16/14	18/17/15	17/16/13
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	>0.21	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	>158	3	<1	3
Boron	ppm	ASTM D5185m	250	47	50	38
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	44	47	53
Manganese	ppm	ASTM D5185m		1	<1	2
Magnesium	ppm	ASTM D5185m	450	520	486	618
Calcium	ppm	ASTM D5185m	3000	1641	1593	1451
Phosphorus	ppm	ASTM D5185m	1150	769	700	798
Zinc	ppm	ASTM D5185m	1350	907	885	991
Sulfur	ppm	ASTM D5185m	4250	2899	2494	2433
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.1	19.6	23.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.3	9.8	8.0
Visc @ 100°C	cSt	ASTM D445	14.4	12.6	12.6	12.5



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0947800 **Received** : 19 Jun 2024
Lab Number : 06214515 **Tested** : 20 Jun 2024
Unique Number : 11087379 **Diagnosed** : 21 Jun 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PrtCount, 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)

CAROLINA SUNROCK
 PO BOX 25
 BUTNER, NC
 US 27509
 Contact: Leigh Dennis
 rdennis@thesunrockgroup.com
 T: (919)575-4505
 F: (919)575-0162