



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
620
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 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		WC0609079	WC0609075	WC0609072
Sample Date		Client Info		24 Jun 2023	08 Apr 2023	31 Dec 2022
Machine Age	hrs	Client Info		3167	2697	2102
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
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	75	89	95
Chromium	ppm	ASTM D5185m	>20	4	3	4
Nickel	ppm	ASTM D5185m	>4	<1	1	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	11	19	22
Lead	ppm	ASTM D5185m	>40	<1	0	1
Copper	ppm	ASTM D5185m	>330	6	7	6
Tin	ppm	ASTM D5185m	>15	1	1	2
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

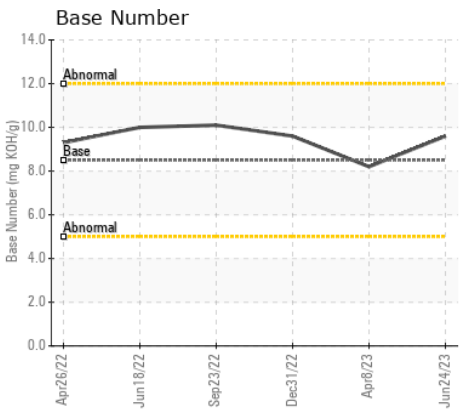
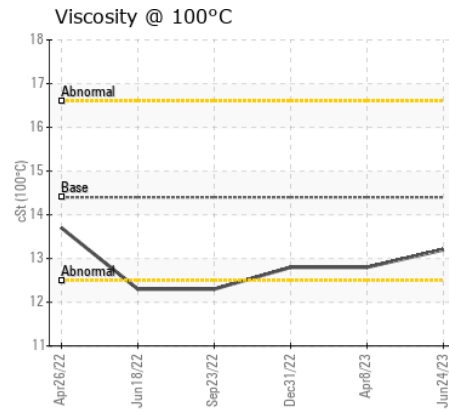
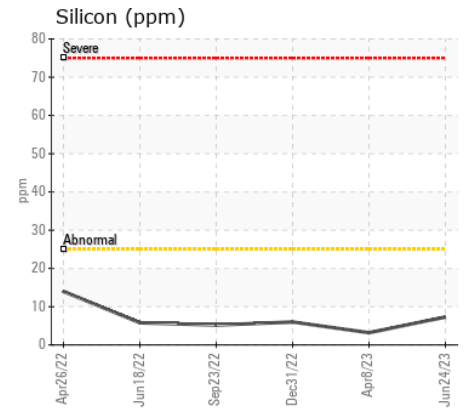
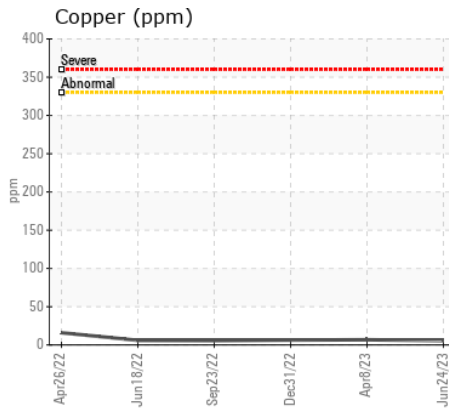
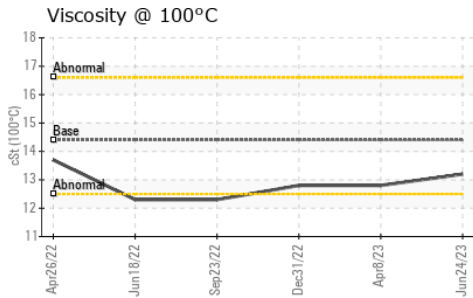
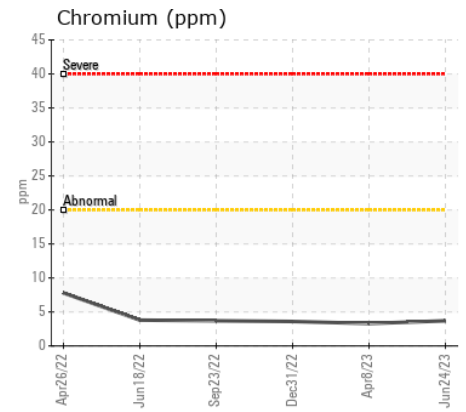
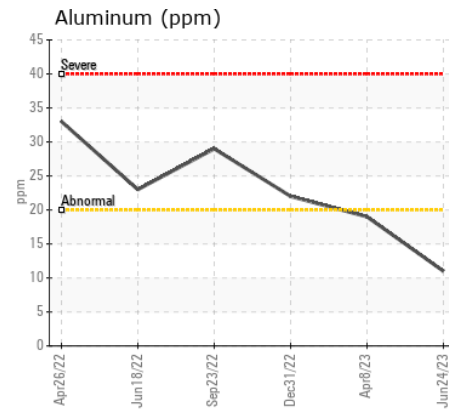
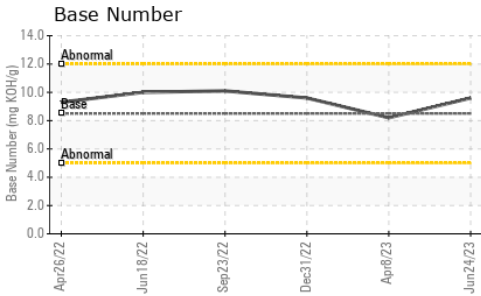
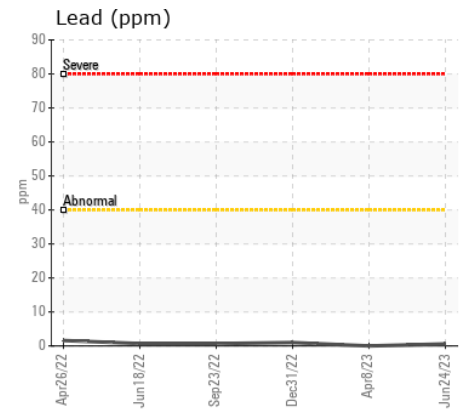
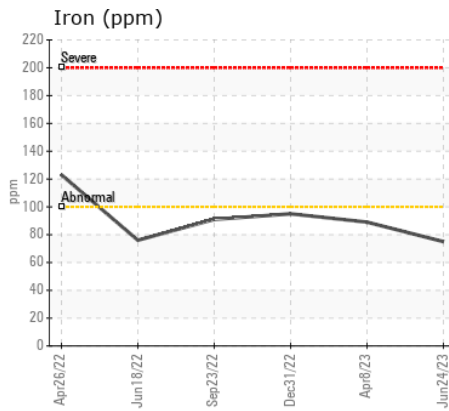
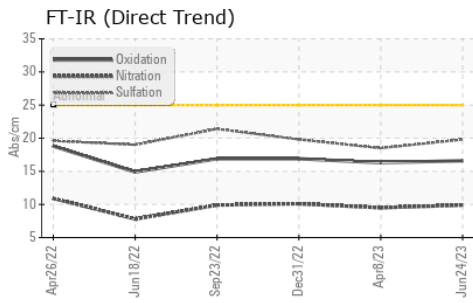
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	3	6
Potassium	ppm	ASTM D5185m	>20	14	31	47
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	0.6	0.6	0.6
Nitration	Abs/cm	*ASTM D7624	>20	9.9	9.5	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.8	18.5	19.8
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	>158	2	2	2
Boron	ppm	ASTM D5185m	250	2	3	2
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	66	70	67
Manganese	ppm	ASTM D5185m		1	2	2
Magnesium	ppm	ASTM D5185m	450	1032	1027	1016
Calcium	ppm	ASTM D5185m	3000	1180	1205	1182
Phosphorus	ppm	ASTM D5185m	1150	1099	1116	1037
Zinc	ppm	ASTM D5185m	1350	1363	1376	1334
Sulfur	ppm	ASTM D5185m	4250	3090	3786	3497
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.6	16.3	16.9
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.6	8.2	9.6
Visc @ 100°C	cSt	ASTM D445	14.4	13.2	12.8	12.8



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0609079 **Received** : 18 Oct 2023
Lab Number : 05982902 **Tested** : 19 Oct 2023
Unique Number : 10700197 **Diagnosed** : 19 Oct 2023 - Wes Davis
Test Package : MOBCE (Additional Tests: TBN)

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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)