



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

Current
Machine Id
IC 16-19

Component
Forward Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 10W30 (17 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0849411	WC0693103	WC0693088
Sample Date		Client Info		02 Jan 2024	18 Aug 2023	07 Feb 2023
Machine Age	mls	Client Info		60985	54704	48843
Oil Age	mls	Client Info		6281	5861	6303
Filter Age	mls	Client Info		6281	5861	6303
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>90	18	17	25
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	8	11	22
Lead	ppm	ASTM D5185m	>40	<1	0	1
Copper	ppm	ASTM D5185m	>330	1	1	1
Tin	ppm	ASTM D5185m	>15	<1	<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

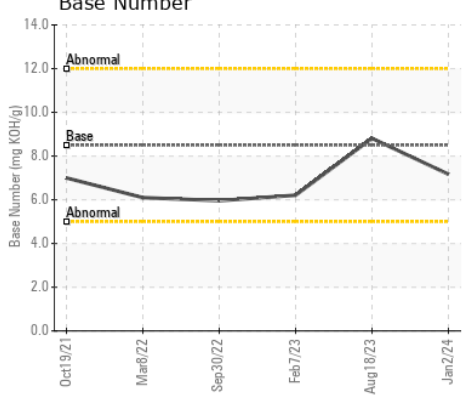
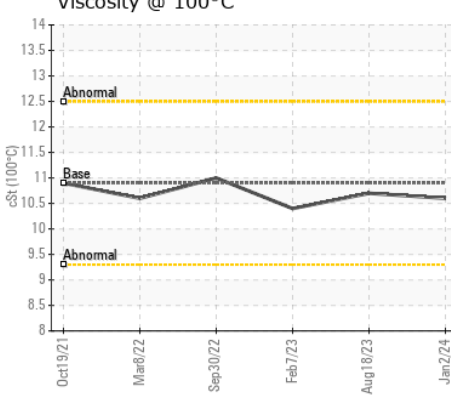
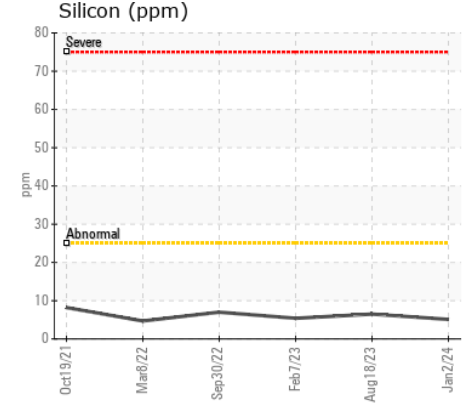
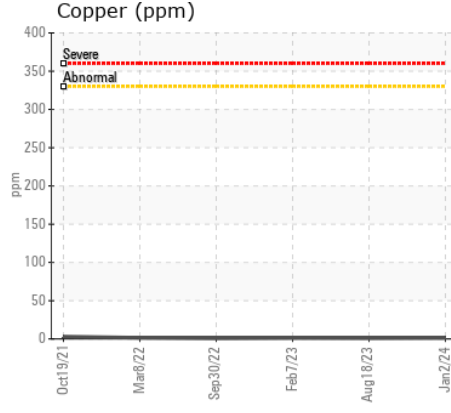
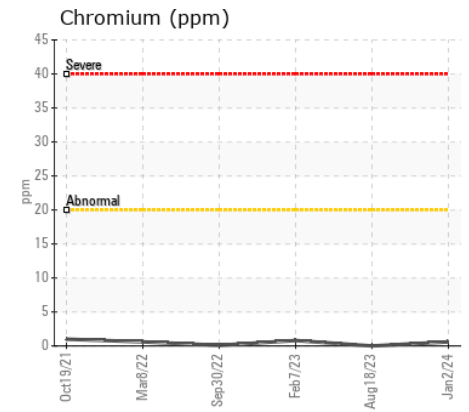
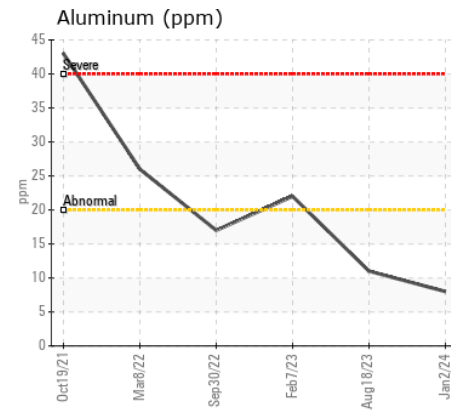
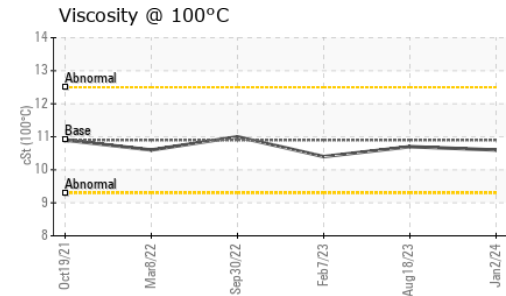
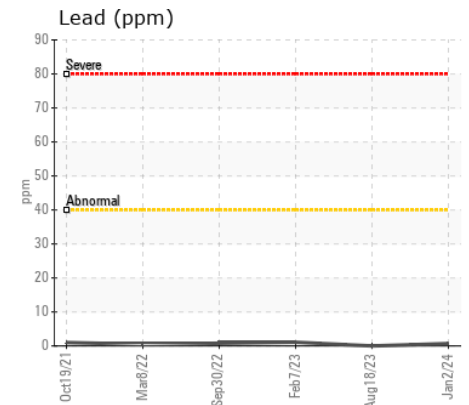
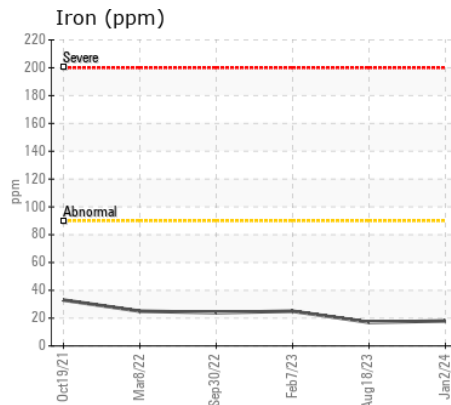
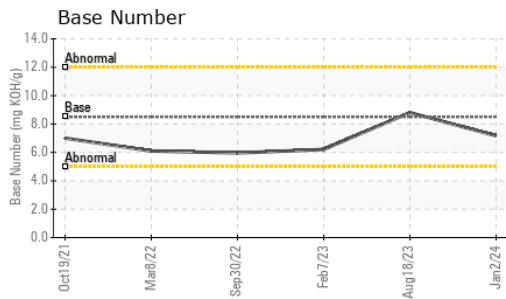
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	6	5
Potassium	ppm	ASTM D5185m	>20	16	18	36
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.4	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	8.1	8.2	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.2	19.4	22.2
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		0	3	3
Boron	ppm	ASTM D5185m	250	3	1	2
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	3	2	6
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	450	15	16	36
Calcium	ppm	ASTM D5185m	3000	2393	2388	2450
Phosphorus	ppm	ASTM D5185m	1150	813	920	905
Zinc	ppm	ASTM D5185m	1350	1106	1096	1168
Sulfur	ppm	ASTM D5185m	4250	3638	4251	3736
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.0	11.9	12.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.17	8.81	6.21
Visc @ 100°C	cSt	ASTM D445	10.9	10.6	10.7	10.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0849411 **Received** : 08 Jan 2024
Lab Number : 06055043 **Diagnosed** : 10 Jan 2024
Unique Number : 10820992 **Diagnostician** : Wes Davis
Test Package : MOB 2

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Certificate L2367
 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)