



OIL ANALYSIS REPORT

WEAR	ATTENTION
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
1224
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 5W40 (--- QTS)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

Sodium and/or potassium levels are high. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. Light fuel dilution occurring.

FLUID CONDITION

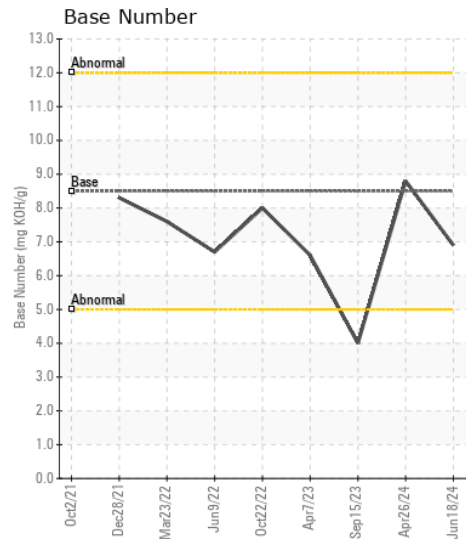
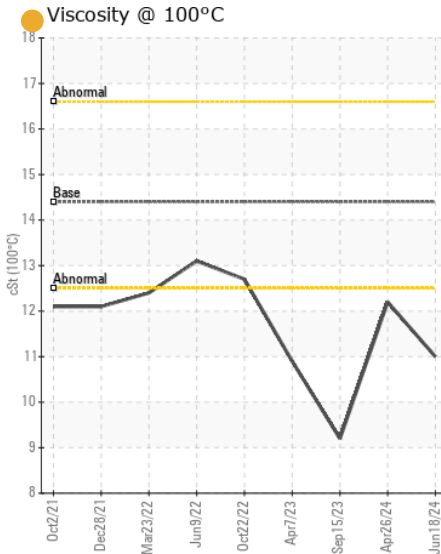
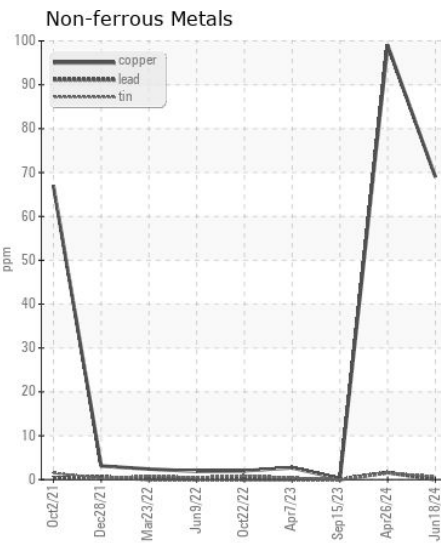
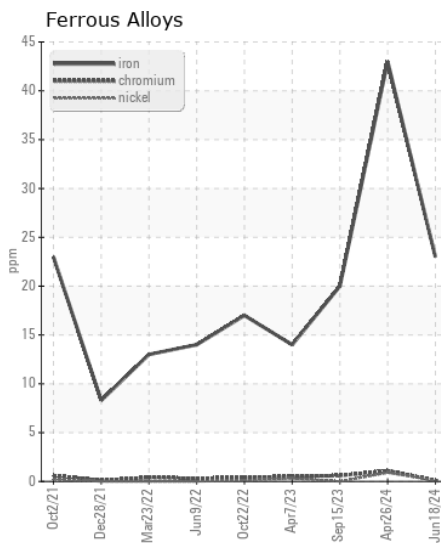
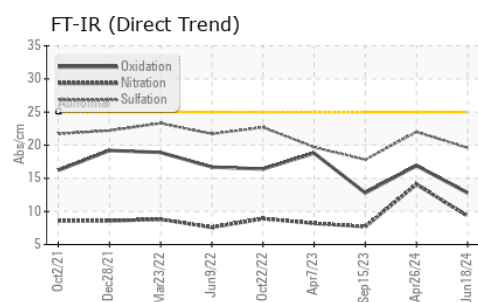
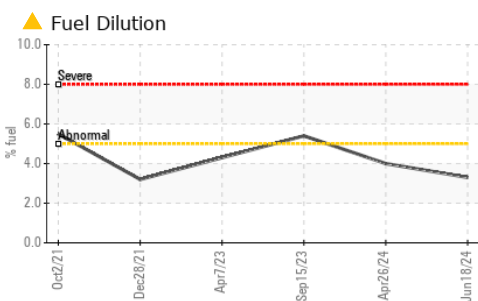
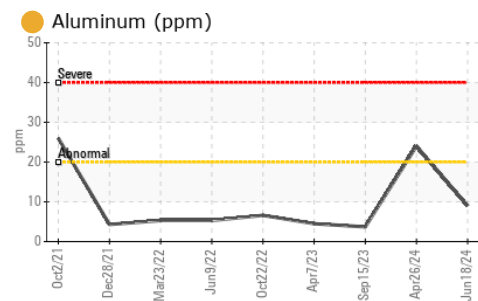
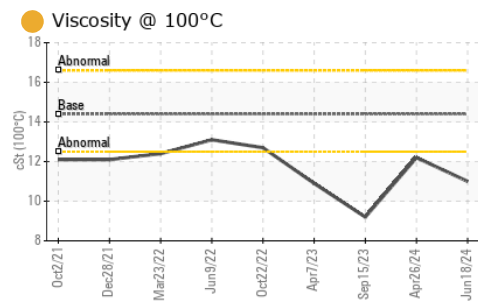
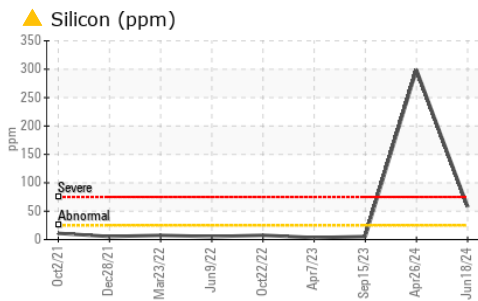
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0924452	WC0924531	WC0846487
Sample Date		Client Info		18 Jun 2024	26 Apr 2024	15 Sep 2023
Machine Age	mls	Client Info		110511	102136	85954
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	SEVERE	ABNORMAL

Iron	ppm	ASTM D5185m	>100	23	43	20
Chromium	ppm	ASTM D5185m	>20	<1	1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	9	24	4
Lead	ppm	ASTM D5185m	>40	0	2	0
Copper	ppm	ASTM D5185m	>330	69	99	<1
Tin	ppm	ASTM D5185m	>15	<1	2	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185m	>25	58	299	5
Potassium	ppm	ASTM D5185m	>20	32	56	6
Fuel	%	ASTM D3524	>5	3.3	4.0	5.4
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.7	0.6
Nitration	Abs/cm	*ASTM D7624	>20	9.3	14.1	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6	22.0	17.8
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

Sodium	ppm	ASTM D5185m	>44	262	1390	<1
Boron	ppm	ASTM D5185m	250	9	61	42
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	16	93	120
Manganese	ppm	ASTM D5185m		<1	2	<1
Magnesium	ppm	ASTM D5185m	450	32	128	384
Calcium	ppm	ASTM D5185m	3000	2110	1953	1077
Phosphorus	ppm	ASTM D5185m	1150	838	1047	495
Zinc	ppm	ASTM D5185m	1350	1018	1149	700
Sulfur	ppm	ASTM D5185m	4250	3705	3764	1982
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.8	16.9	12.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.9	8.8	4.0
Visc @ 100°C	cSt	ASTM D445	14.4	11.0	12.2	9.2



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0924452 **Received** : 19 Jun 2024
Lab Number : 06214495 **Tested** : 24 Jun 2024
Unique Number : 11087359 **Diagnosed** : 24 Jun 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, Glycol, PercentFuel, 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)

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