



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
HITACHI 002108
 Component
Diesel Engine
 Fluid
CASTROL VECTON 15W40 CK4 (5 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

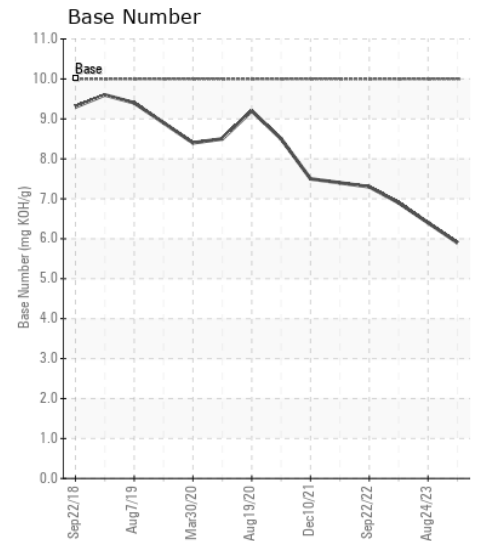
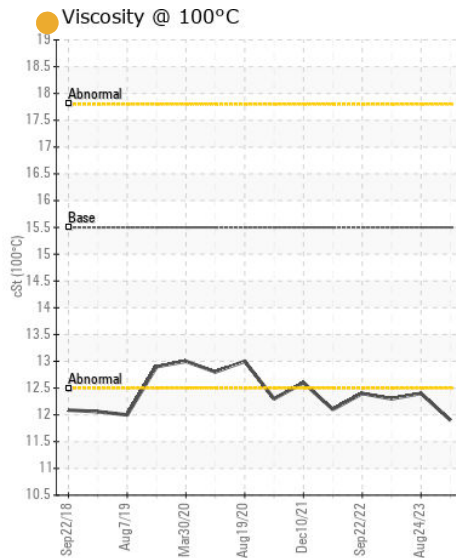
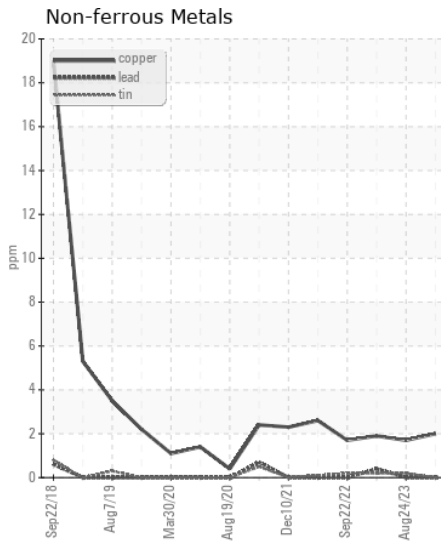
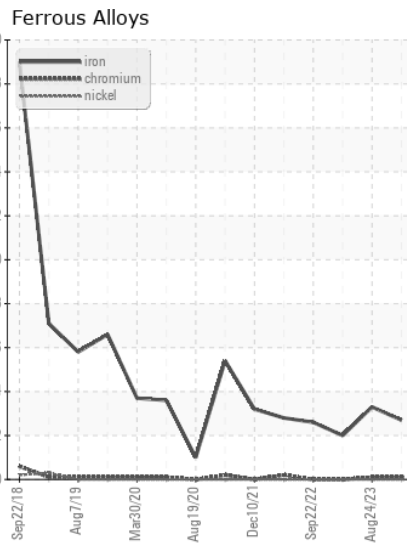
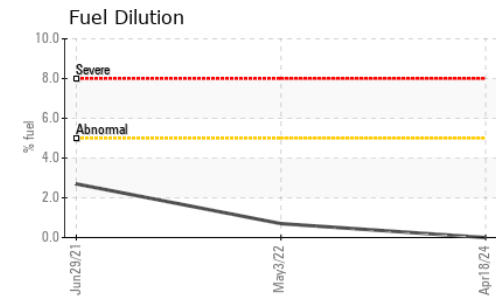
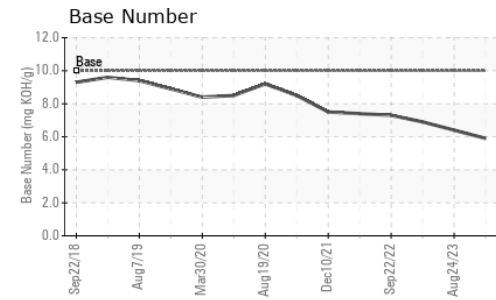
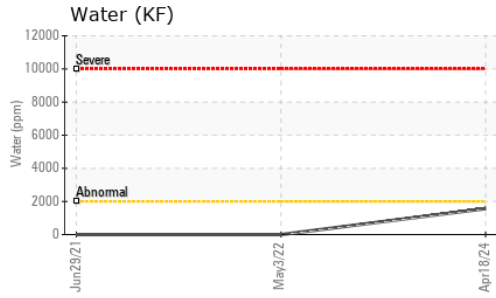
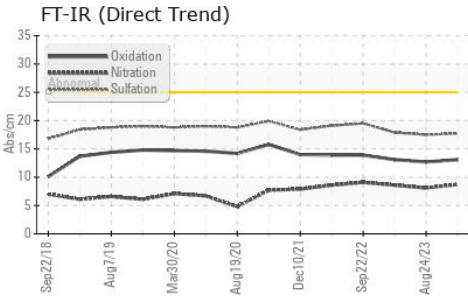
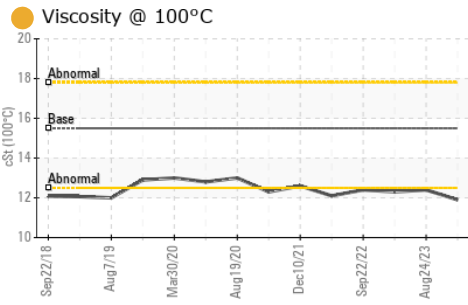
CONTAMINATION

There is no indication of any contamination in the oil.

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		WC0856282	WC0823852	WC0757969
Sample Date		Client Info		18 Apr 2024	24 Aug 2023	06 Feb 2023
Machine Age	hrs	Client Info		7594	6940	6416
Oil Age	hrs	Client Info		654	524	595
Filter Age	hrs	Client Info		654	524	595
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	3	3	2
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	4	3	2
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	2	2	2
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
Silicon	ppm	ASTM D5185m	>25	4	4	4
Potassium	ppm	ASTM D5185m	>20	2	0	2
Fuel	%	ASTM D3524	>5	<1.0	<1.0	<1.0
Water	%	ASTM D6304	>0.2	0.157	---	---
ppm Water	ppm	ASTM D6304	>2000	1570	---	---
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.7	8.1	8.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.7	17.5	17.9
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	MODER	LIGHT	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	0.2%	NEG	NEG
Sodium	ppm	ASTM D5185m		2	3	2
Boron	ppm	ASTM D5185m		60	85	58
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		85	90	79
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m		92	101	86
Calcium	ppm	ASTM D5185m		2151	2196	1926
Phosphorus	ppm	ASTM D5185m		982	1073	929
Zinc	ppm	ASTM D5185m		1157	1247	1120
Sulfur	ppm	ASTM D5185m		4003	4426	3764
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.1	12.7	13.1
Base Number (BN)	mg KOH/g	ASTM D2896	10	5.9	6.4	6.9
Visc @ 100°C	cSt	ASTM D445	15.5	11.9	12.4	12.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0856282
Lab Number : 06158282
Unique Number : 10993705
Test Package : CONST (Additional Tests: FuelDilution, Glycol, KF, PercentFuel, TBN)

Received : 23 Apr 2024
Tested : 25 Apr 2024
Diagnosed : 25 Apr 2024 - Jonathan Hester

CJ MILLER LLC
 2903 DEDE RD
 FINKSBURG, MD
 US 21048

Contact: JOE ROSS
 jross@cjmillerllc.com
 T: (410)239-8006
 F: (410)239-1051

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)