



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
HITACHI ZX135US5N EX-70 (S/N HCMDAF60H001100170)
 Component
Diesel Engine
 Fluid
UNITED OIL DURALENE (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DC06211014	DC06211015	DC0030473
Sample Date		Client Info		06 Jun 2024	04 Jun 2024	15 Aug 2023
Machine Age	hrs	Client Info		6800	6800	6243
Oil Age	hrs	Client Info		0	557	500
Filter Age	hrs	Client Info		0	557	500
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	43	7	11
Chromium	ppm	ASTM D5185m	>20	1	0	<1
Nickel	ppm	ASTM D5185m	>4	0	0	2
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	2
Aluminum	ppm	ASTM D5185m	>20	5	6	13
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	50	2	4
Tin	ppm	ASTM D5185m	>15	4	0	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

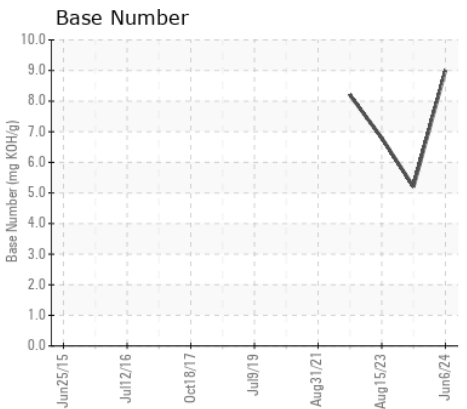
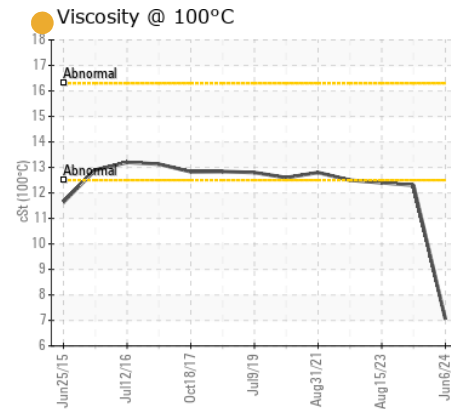
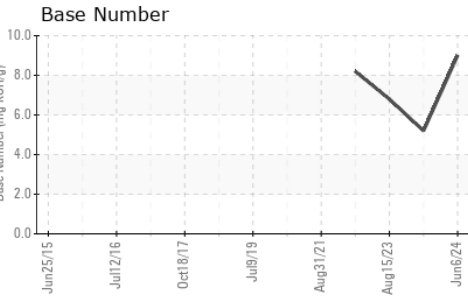
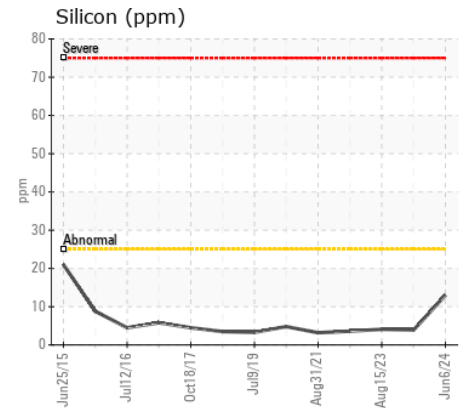
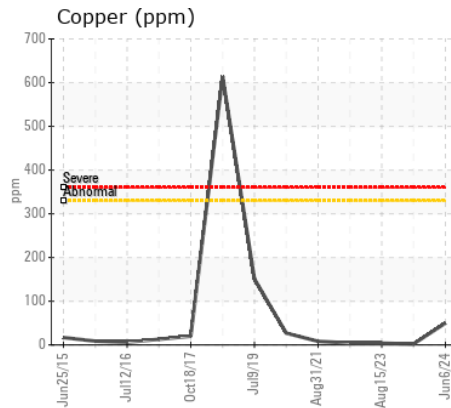
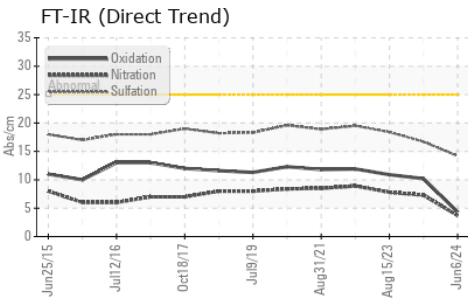
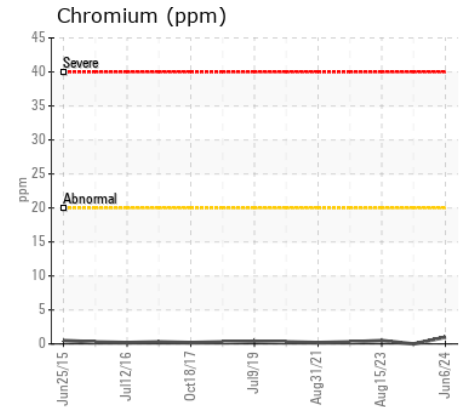
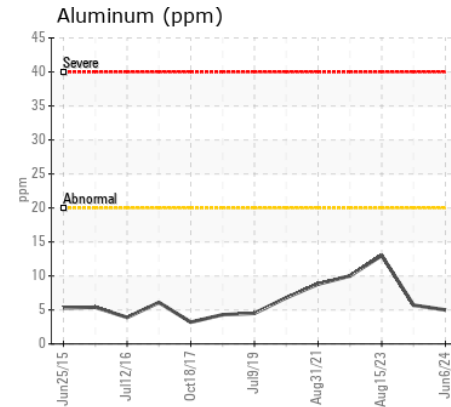
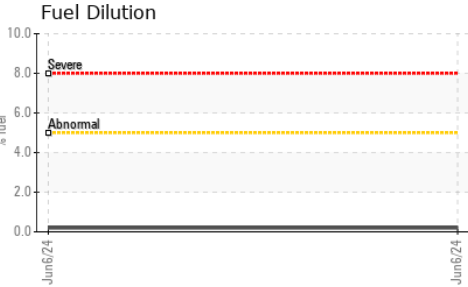
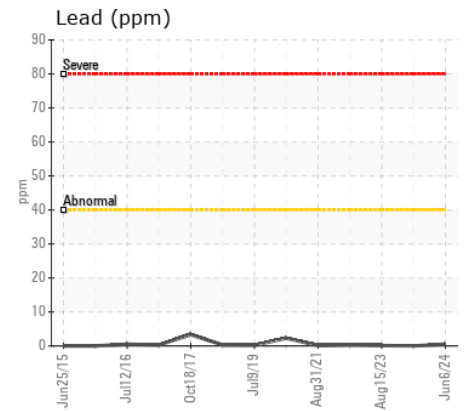
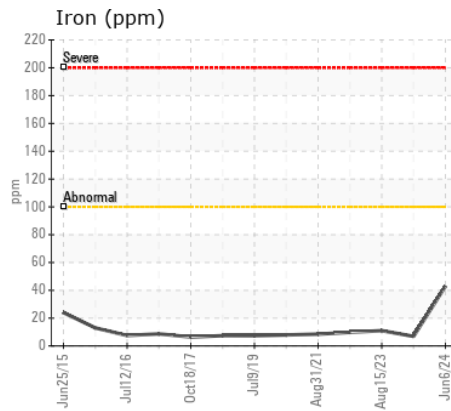
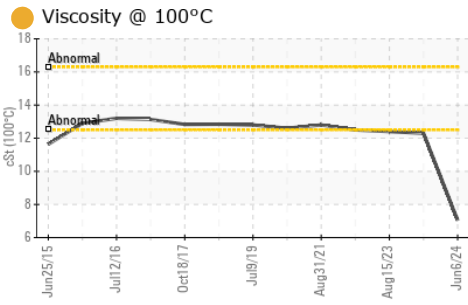
Fuel content negligible. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>25	13	4	4
Potassium	ppm	ASTM D5185m	>20	2	1	2
Fuel	%	ASTM D3524	>5	0.2	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	3.7	7.3	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	14.2	16.7	18.4
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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		7	2	0
Boron	ppm	ASTM D5185m		82	4	1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		5	2	3
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		27	39	44
Calcium	ppm	ASTM D5185m		2531	2200	2365
Phosphorus	ppm	ASTM D5185m		947	849	884
Zinc	ppm	ASTM D5185m		1184	1077	1078
Sulfur	ppm	ASTM D5185m		3212	4017	4181
Oxidation	Abs/.1mm	*ASTM D7414	>25	4.3	10.2	10.9
Base Number (BN)	mg KOH/g	ASTM D2896		9.0	5.2	6.8
Visc @ 100°C	cSt	ASTM D445		7.05	12.3	12.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DC06211014 **Received** : 14 Jun 2024
Lab Number : 06211014 **Tested** : 21 Jun 2024
Unique Number : 11083878 **Diagnosed** : 21 Jun 2024 - Sean Felton
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN)

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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)