



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR R954H DV C-35 (S/N 000369-569)
Component
Diesel Engine
Fluid
CONOCO PHILLIPS GUARDOL ECT 15W40 (6 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0849500	WC0920282	WC0879517
Sample Date		Client Info		13 Jun 2024	25 Mar 2024	08 Feb 2024
Machine Age	hrs	Client Info		49078	48678	48381
Oil Age	hrs	Client Info		1953	297	254
Filter Age	hrs	Client Info		1953	297	254
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	19	21	16
Chromium	ppm	ASTM D5185m	>5	<1	1	<1
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m		85	97	98
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>15	3	4	2
Lead	ppm	ASTM D5185m	>30	7	6	2
Copper	ppm	ASTM D5185m	>125	<1	2	2
Tin	ppm	ASTM D5185m	>5	<1	1	<1
Vanadium	ppm	ASTM D5185m		<1	2	1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

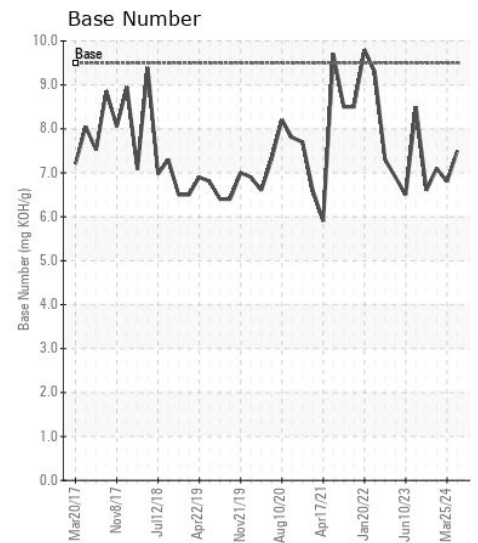
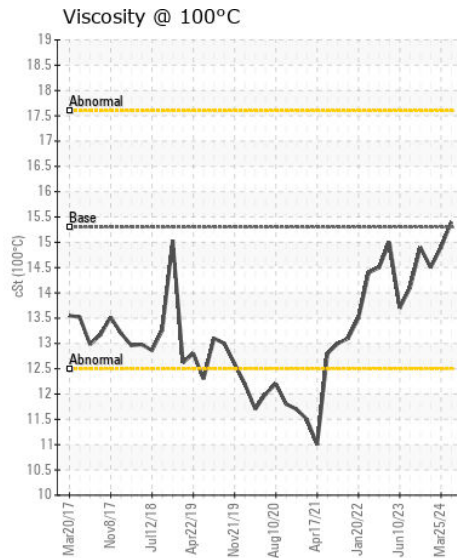
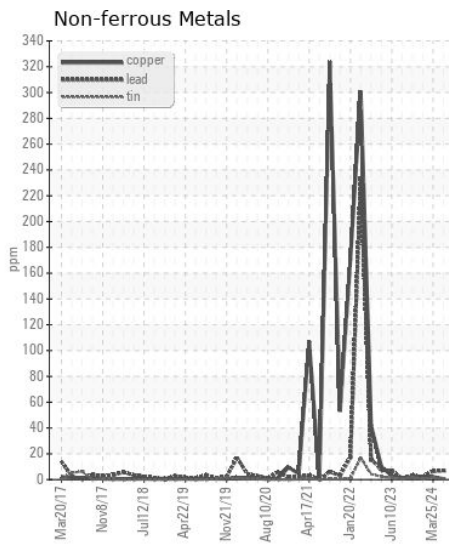
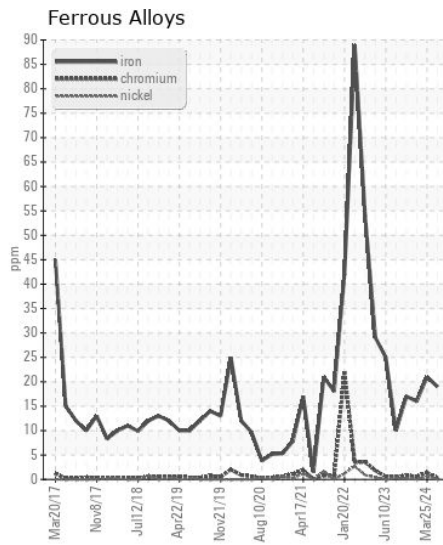
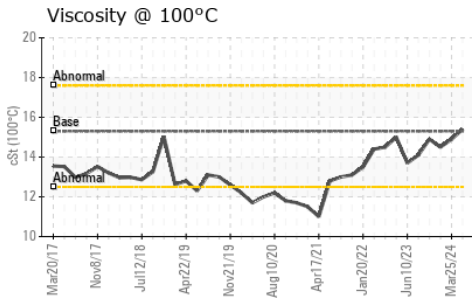
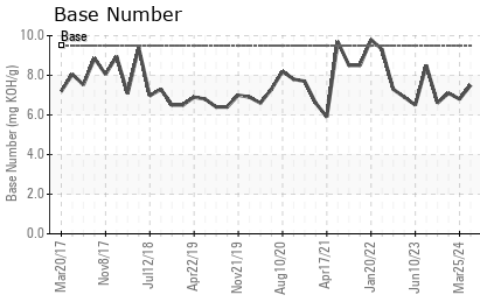
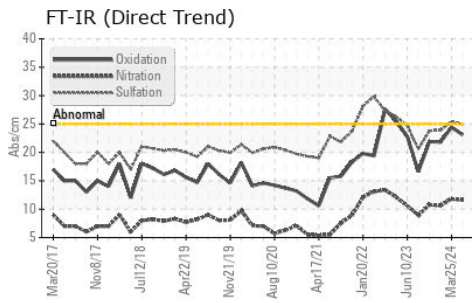
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	8	11	7
Potassium	ppm	ASTM D5185m	>20	5	5	4
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	0.3	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	11.6	11.8	10.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.0	25.4	23.9
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		5	6	1
Boron	ppm	ASTM D5185m	85	82	113	128
Barium	ppm	ASTM D5185m		0	0	12
Molybdenum	ppm	ASTM D5185m		2	4	2
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	350	460	461	429
Calcium	ppm	ASTM D5185m	1800	1946	1975	1913
Phosphorus	ppm	ASTM D5185m	1000	1096	1069	1116
Zinc	ppm	ASTM D5185m	1100	1339	1337	1274
Sulfur	ppm	ASTM D5185m	3500	4576	3913	4601
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.1	24.4	21.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.5	7.5	6.8	7.1
Visc @ 100°C	cSt	ASTM D445	15.3	15.4	14.9	14.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0849500 **Received** : 19 Jun 2024
Lab Number : 06214452 **Tested** : 20 Jun 2024
Unique Number : 11087316 **Diagnosed** : 20 Jun 2024 - Wes Davis
Test Package : CONST (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)