



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR A934C-HD-LI C-49 (S/N 045168-1006)
Component
Hydraulic System
Fluid
CHEVRON RANDO HD 46 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0899812	WC0819350	WC0739203
Sample Date		Client Info		27 Feb 2024	26 Jun 2023	26 Sep 2022
Machine Age	hrs	Client Info		27156	26065	24774
Oil Age	hrs	Client Info		1091	1291	1998
Filter Age	hrs	Client Info		0	0	1998
Oil Changed		Client Info		Not Changed	Changed	Changed
Filter Changed		Client Info		Not Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<1	<1	0
Chromium	ppm	ASTM D5185m	>5	0	0	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>2	0	<1	0
Lead	ppm	ASTM D5185m	>4	0	0	0
Copper	ppm	ASTM D5185m	>10	<1	<1	0
Tin	ppm	ASTM D5185m	>2	0	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

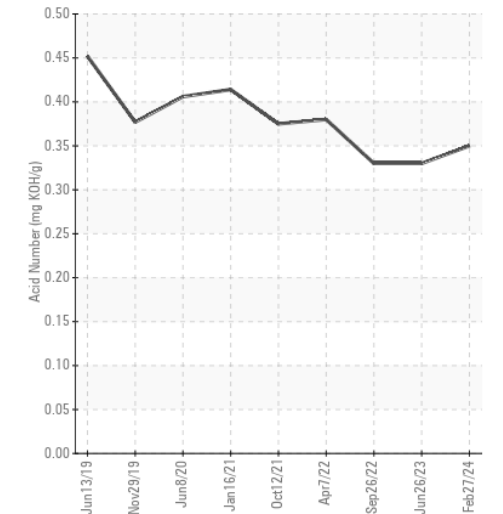
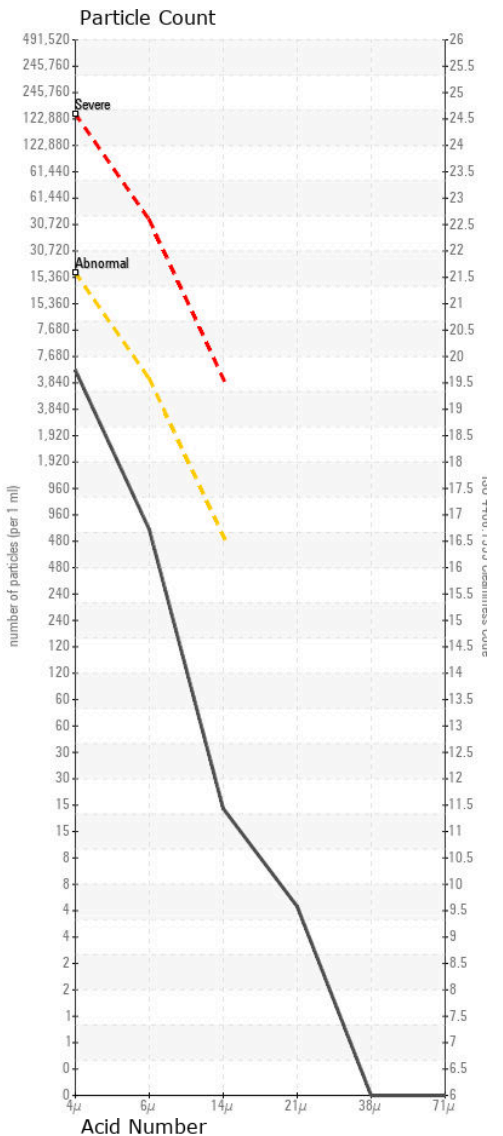
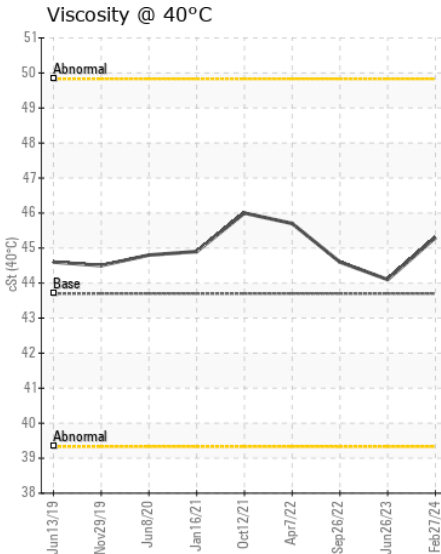
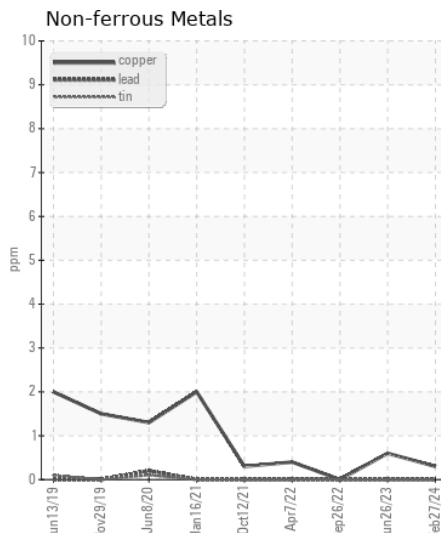
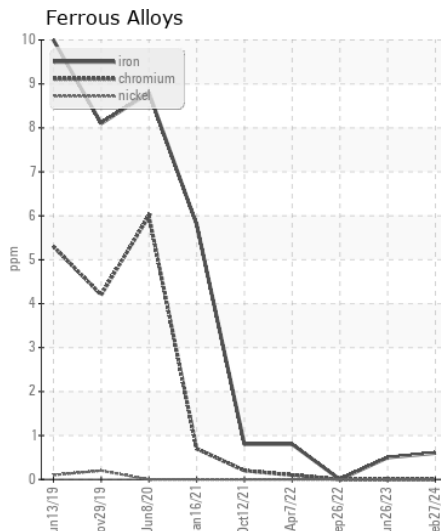
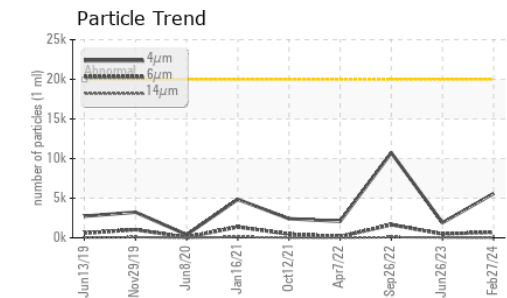
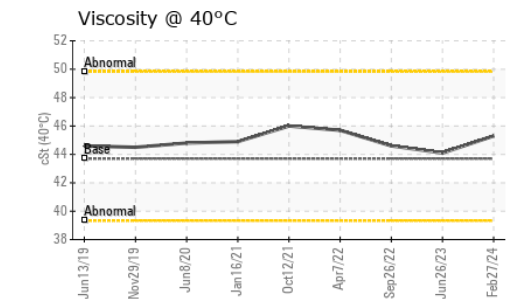
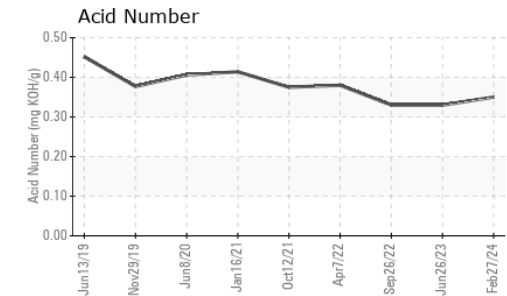
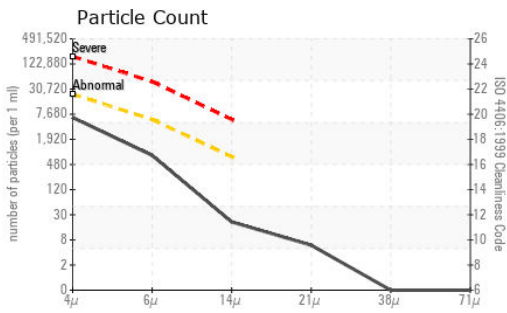
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185m	>17	<1	<1	0
Potassium	ppm	ASTM D5185m	>20	0	<1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	5593	1908	10730
Particles >6µm		ASTM D7647	>5000	695	481	1657
Particles >14µm		ASTM D7647	>640	18	37	82
Particles >21µm		ASTM D7647	>160	5	8	13
Particles >38µm		ASTM D7647	>40	0	0	1
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	20/17/11	18/16/12	21/18/14
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	>0.1	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	<1	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		0	4	<1
Calcium	ppm	ASTM D5185m		53	81	57
Phosphorus	ppm	ASTM D5185m		321	350	332
Zinc	ppm	ASTM D5185m		430	436	422
Sulfur	ppm	ASTM D5185m		823	1054	1009
Acid Number (AN)	mg KOH/g	ASTM D8045		0.35	0.33	0.33
Visc @ 40°C	cSt	ASTM D445	43.7	45.3	44.1	44.6



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0899812
Lab Number : 06105119
Unique Number : 10903349
Test Package : CONST
Received : 29 Feb 2024
Tested : 01 Mar 2024
Diagnosed : 01 Mar 2024 - Wes Davis

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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)