



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR 944B-HD C-41 (S/N 022530-744)
Component
Hydraulic System
Fluid
CHEVRON RANDO HD 68 (150 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0879512	WC0828411	WC0755570
Sample Date		Client Info		29 Jan 2024	04 Aug 2023	06 Dec 2022
Machine Age	hrs	Client Info		39252	37154	36254
Oil Age	hrs	Client Info		938	290	1655
Filter Age	hrs	Client Info		938	0	0
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>60	0	<1	<1
Chromium	ppm	ASTM D5185m	>40	<1	0	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>5	0	<1	0
Lead	ppm	ASTM D5185m	>5	<1	0	0
Copper	ppm	ASTM D5185m	>15	<1	<1	<1
Tin	ppm	ASTM D5185m	>5	<1	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

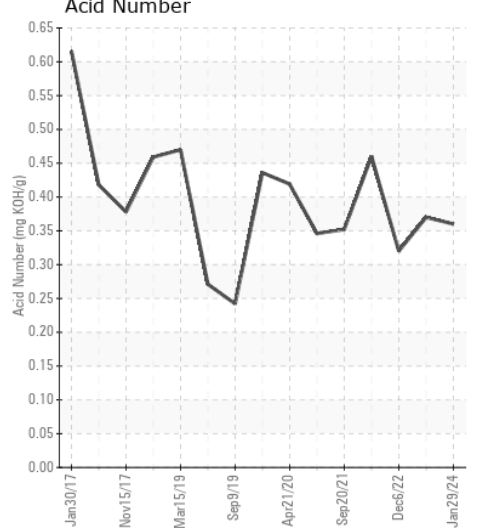
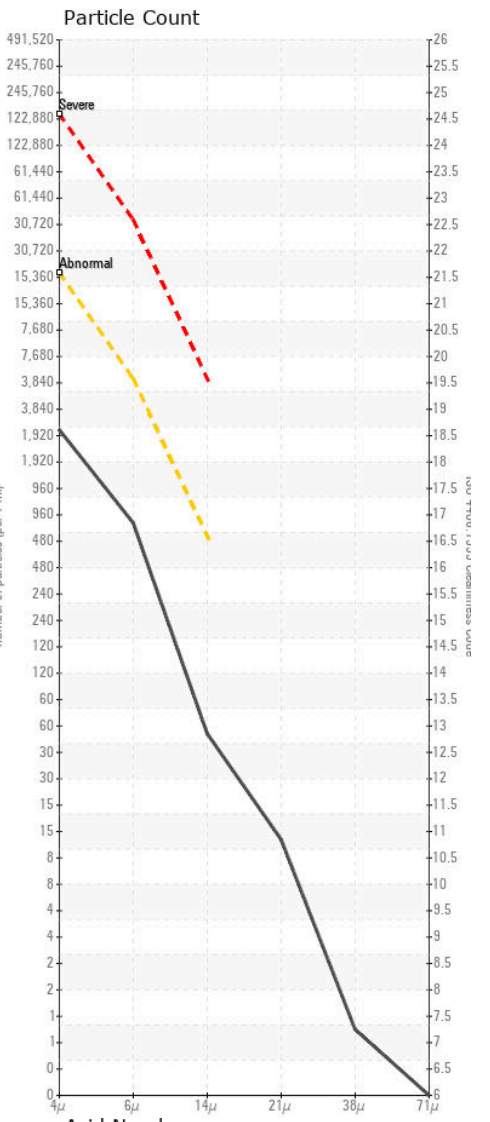
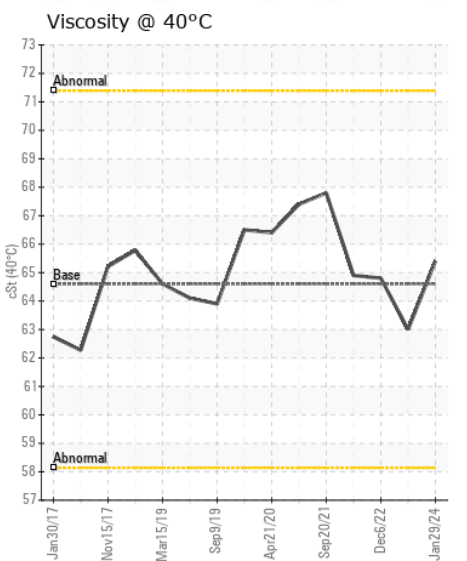
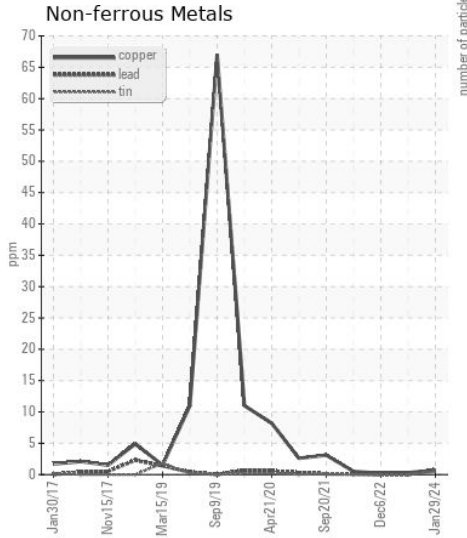
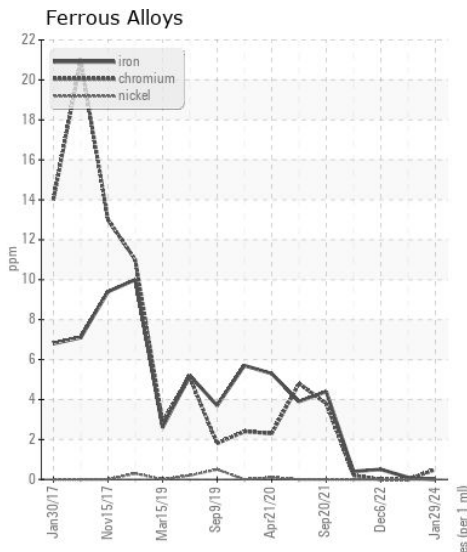
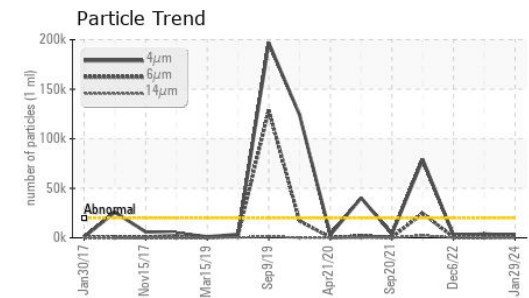
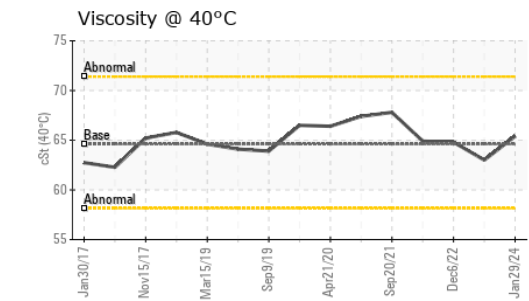
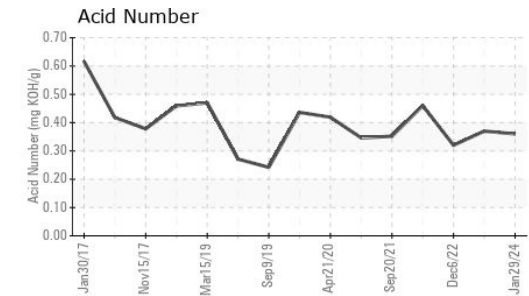
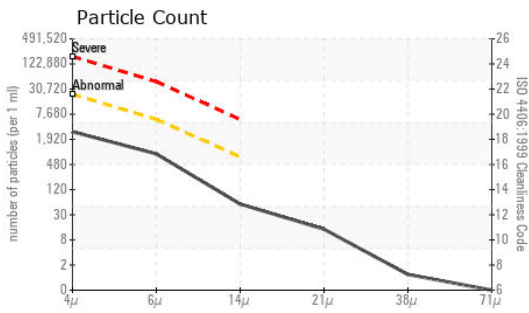
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185m	>15	0	0	0
Potassium	ppm	ASTM D5185m	>20	0	0	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	2558	3922	2444
Particles >6µm		ASTM D7647	>5000	756	220	505
Particles >14µm		ASTM D7647	>640	48	4	25
Particles >21µm		ASTM D7647	>160	12	1	4
Particles >38µm		ASTM D7647	>40	1	0	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	19/17/13	19/15/9	18/16/12
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	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		<1	<1	<1
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		0	2	0
Calcium	ppm	ASTM D5185m		7	94	66
Phosphorus	ppm	ASTM D5185m		330	397	355
Zinc	ppm	ASTM D5185m		421	488	449
Sulfur	ppm	ASTM D5185m		935	1228	1145
Acid Number (AN)	mg KOH/g	ASTM D8045		0.36	0.37	0.32
Visc @ 40°C	cSt	ASTM D445	64.6	65.4	63.0	64.8



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0879512 **Received** : 01 Feb 2024
Lab Number : 06076808 **Diagnosed** : 02 Feb 2024
Unique Number : 10858899 **Diagnostician** : Wes Davis
Test Package : CONST

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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)