



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
IRIG [5719510]
 Machine Id
IRIG-DK-TD-2201 IRIG-DK-TD-2201 TOP DRIVE
 Component
Gearbox
 Fluid
CHEVRON MEROPA 68 (12 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		HLC0002739	HLC0001957	HLC0001174
Sample Date		Client Info		09 Jun 2023	08 Dec 2022	04 Jan 2022
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Not Changd	N/A
Filter Changed		Client Info		N/A	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	4	11	19
Chromium	ppm	ASTM D5185m	>15	0	0	<1
Nickel	ppm	ASTM D5185m	>15	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	<1	2	3
Lead	ppm	ASTM D5185m	>100	0	0	0
Copper	ppm	ASTM D5185m	>200	<1	2	3
Tin	ppm	ASTM D5185m	>25	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

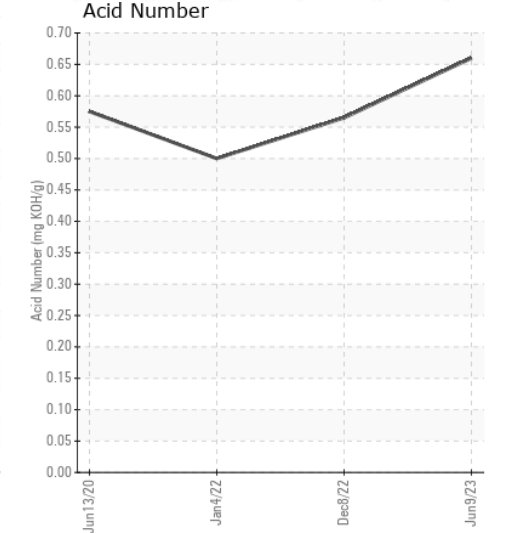
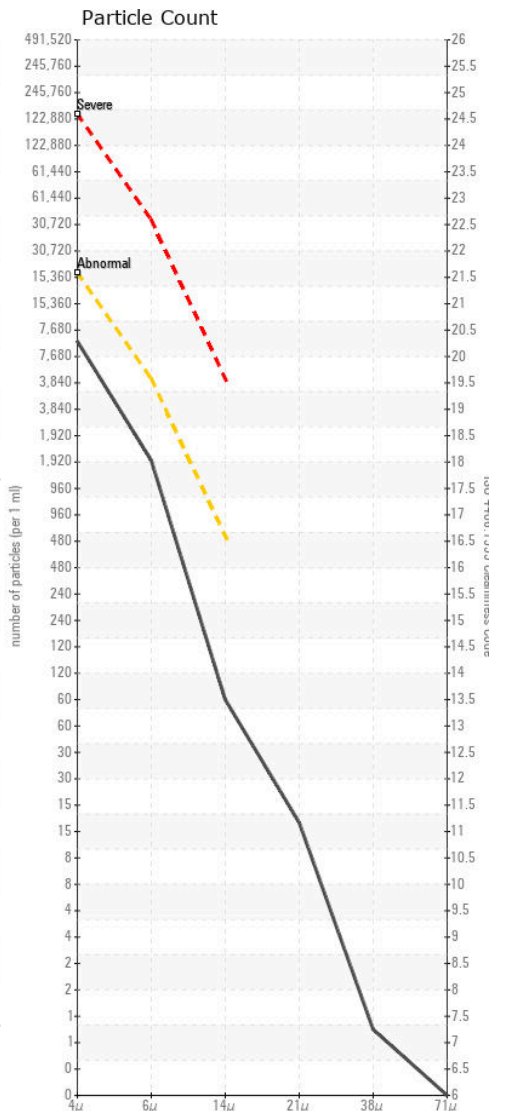
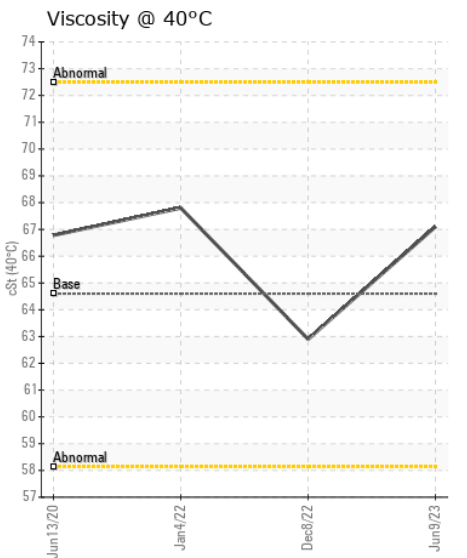
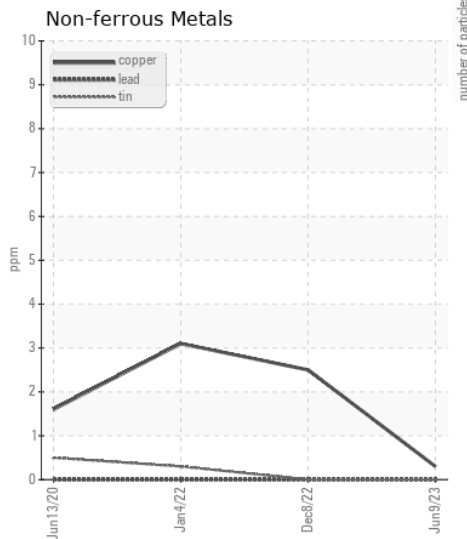
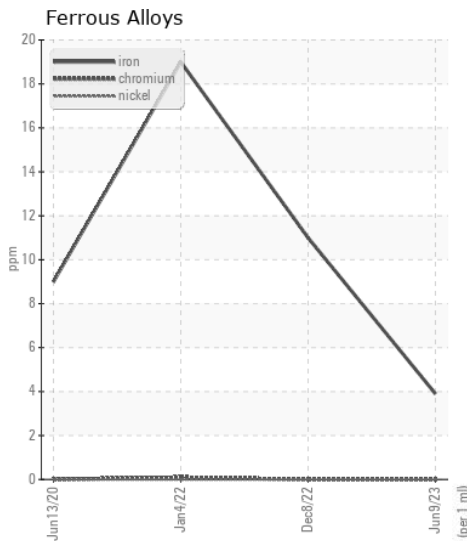
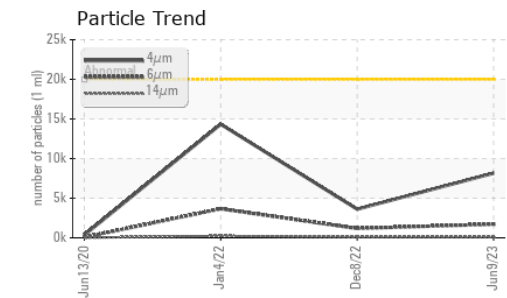
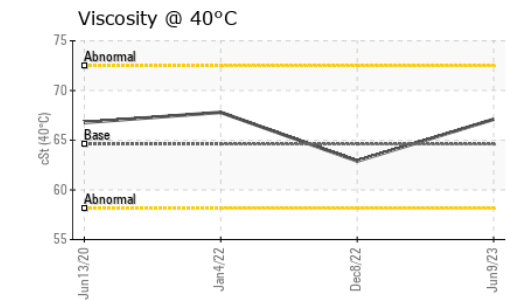
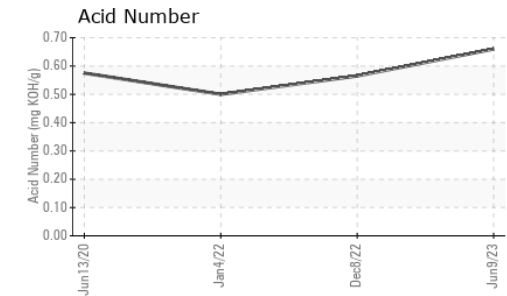
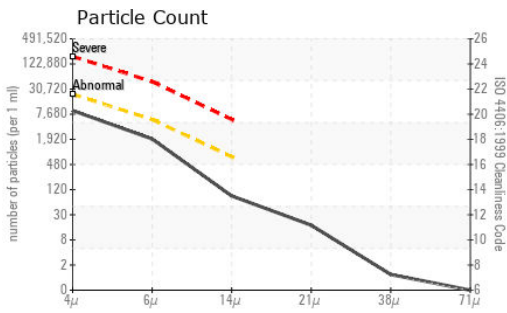
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>50	2	5	6
Potassium	ppm	ASTM D5185m	>20	<1	0	0
Water		WC Method	>0.2	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	8164	3614	14334
Particles >6µm		ASTM D7647	>5000	1715	1181	3666
Particles >14µm		ASTM D7647	>640	75	88	238
Particles >21µm		ASTM D7647	>160	15	16	56
Particles >38µm		ASTM D7647	>40	1	1	2
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	20/18/13	19/17/14	21/19/15
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	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	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		3	2	2
Boron	ppm	ASTM D5185m	0	29	11	17
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0	<1
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	0	4	<1	6
Calcium	ppm	ASTM D5185m	0	7	16	19
Phosphorus	ppm	ASTM D5185m	200	240	257	254
Zinc	ppm	ASTM D5185m	100	13	12	16
Sulfur	ppm	ASTM D5185m	3500	6270	5688	5058
Acid Number (AN)	mg KOH/g	ASTM D8045		0.66	0.565	0.50
Visc @ 40°C	cSt	ASTM D445	64.6	67.1	62.9	67.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HLC0002739 **Received** : 10 Jul 2023
Lab Number : 05894360 **Diagnosed** : 12 Jul 2023
Unique Number : 10550170 **Diagnostician** : Don Baldrige
Test Package : IND 2 (Additional Tests: PrtCount)

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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)