



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
SUSAN JOHNSON
Machine Id
[SUSAN JOHNSON] 010 569359-10
Component
Steering
Fluid
CHEVRON RANDO HDZ 68 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0058736	MW0051586	MW0035501
Sample Date		Client Info		30 Jul 2023	18 Apr 2023	30 Jan 2023
Machine Age	hrs	Client Info		0	0	37296
Oil Age	hrs	Client Info		0	0	37296
Filter Age	hrs	Client Info		0	0	4525
Oil Changed		Client Info		Not Chngd	N/A	Not Chngd
Filter Changed		Client Info		Not Chngd	N/A	Not Chngd
Sample Status				NORMAL	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	0	<1	<1
Chromium	ppm	ASTM D5185m	>15	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>5	<1	0	2
Lead	ppm	ASTM D5185m	>10	<1	<1	<1
Copper	ppm	ASTM D5185m	>50	10	11	12
Tin	ppm	ASTM D5185m	>5	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

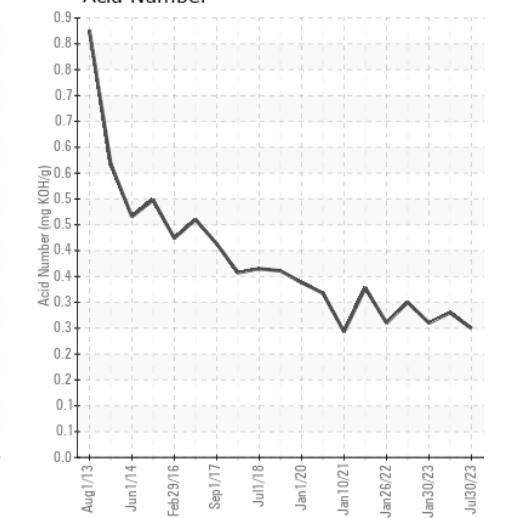
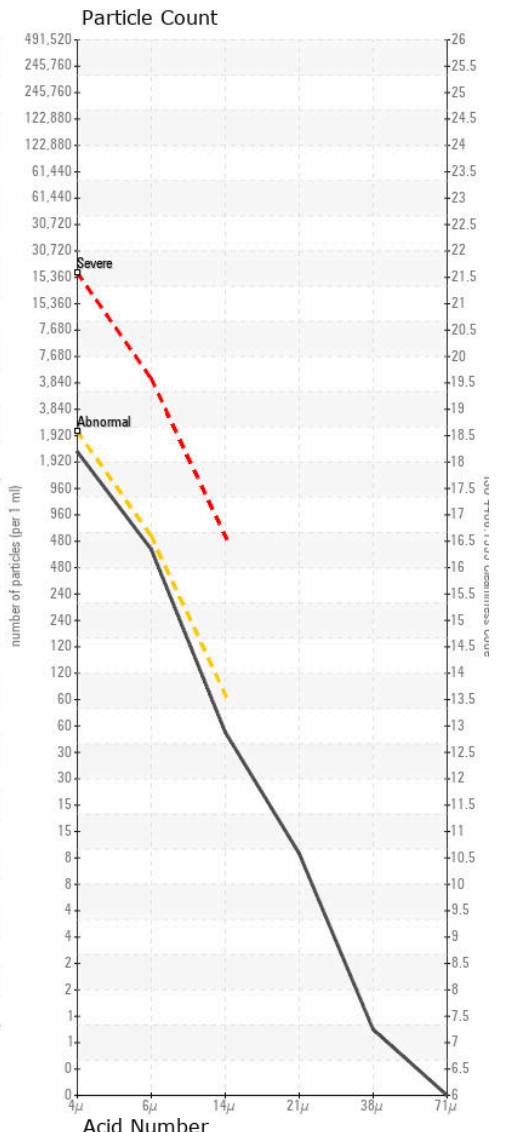
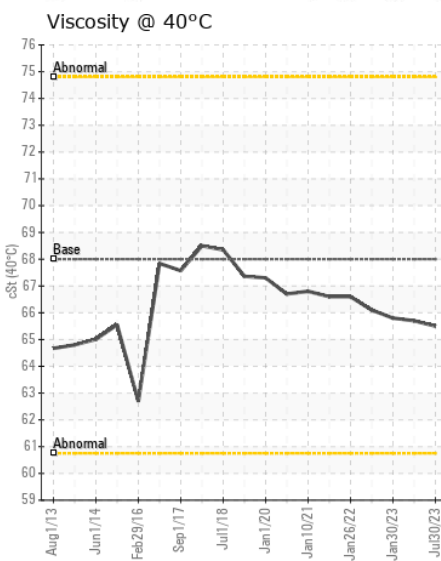
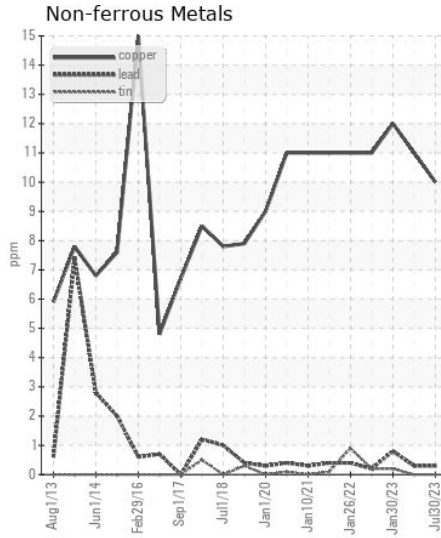
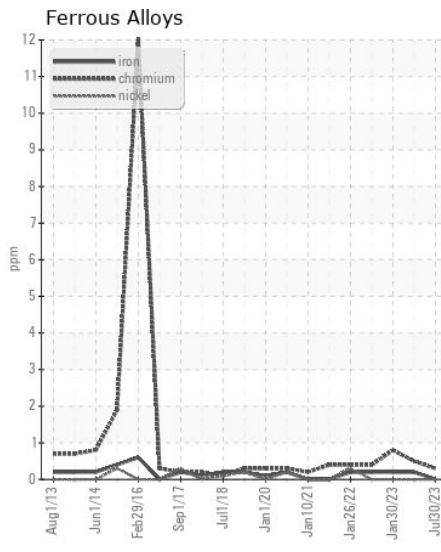
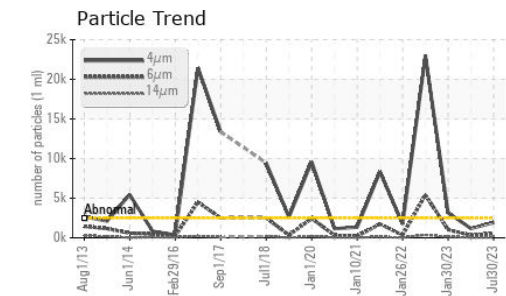
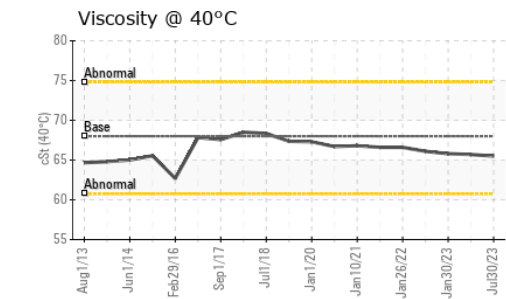
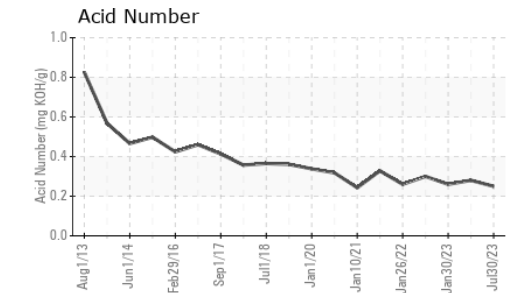
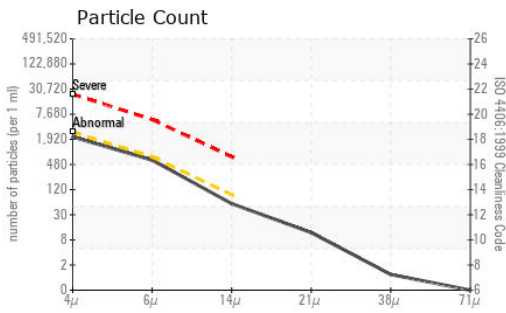
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>15	<1	<1	7
Potassium	ppm	ASTM D5185m	>20	<1	<1	0
Water		WC Method	>0.2	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>2500	1920	1175	3162
Particles >6µm		ASTM D7647	>640	536	300	1019
Particles >14µm		ASTM D7647	>80	49	36	120
Particles >21µm		ASTM D7647	>20	10	7	41
Particles >38µm		ASTM D7647	>4	1	0	3
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	18/16/13	17/15/12	19/17/14
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	>0.2	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		0	0	0
Boron	ppm	ASTM D5185m	0	0	0	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0	0
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m	0	0	<1	<1
Calcium	ppm	ASTM D5185m	75	38	38	38
Phosphorus	ppm	ASTM D5185m	275	397	350	375
Zinc	ppm	ASTM D5185m	350	458	429	441
Sulfur	ppm	ASTM D5185m	550	1138	956	971
Acid Number (AN)	mg KOH/g	ASTM D8045		0.25	0.28	0.26
Visc @ 40°C	cSt	ASTM D445	68.0	65.5	65.7	65.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0058736
Lab Number : 05925431
Unique Number : 10605378
Test Package : MAR 2 (Additional Tests: PrtCount)

Received : 15 Aug 2023
Tested : 16 Aug 2023
Diagnosed : 17 Aug 2023 - Jonathan Hester

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)

INGRAM BARGE
 900 S 3RD ST
 PADUCAH, KY
 US 42003
 Contact: GLENN ELLIS
 glen.ellis@ingrambarge.com
 T: (270)415-4467
 F: (615)695-3697