



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area  
**DALE A HELLER**  
Machine Id  
[DALE A HELLER] 012 624201-12  
Component  
**Auxiliary Steering**  
Fluid  
**CHEVRON RANDO HDZ 68 (--- GAL)**

**RECOMMENDATION**

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0049572</b>	MW06186649	MW0058464
Sample Date		Client Info		<b>28 May 2024</b>	01 May 2024	01 Nov 2023
Machine Age	hrs	Client Info		<b>75300</b>	74655	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ATTENTION

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>3</b>	2	<1
Chromium	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m		<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>5	<b>2</b>	0	0
Lead	ppm	ASTM D5185m	>10	<b>2</b>	2	0
Copper	ppm	ASTM D5185m	>50	<b>22</b>	22	19
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

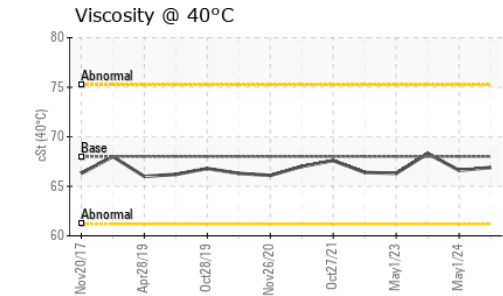
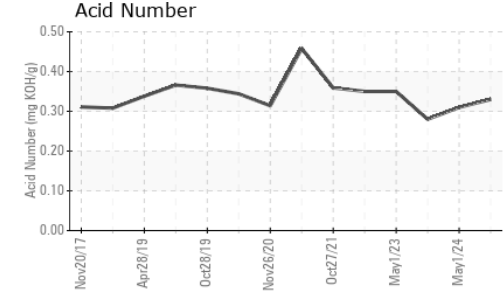
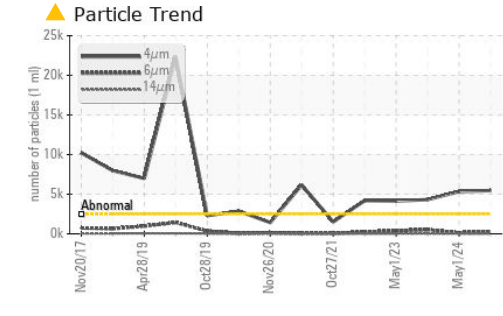
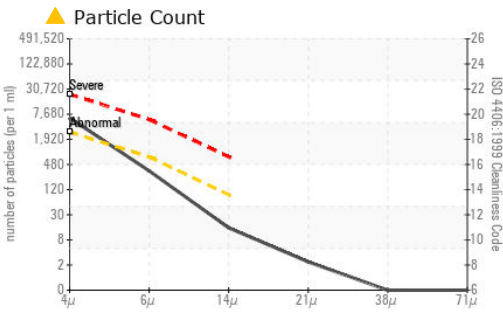
There is a high amount of silt (particulates < 6 microns in size) present in the fluid.

Silicon	ppm	ASTM D5185m	>15	<b>1</b>	<1	0
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	0	0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>2500	<b>▲ 5456</b>	▲ 5336	● 4317
Particles >6µm		ASTM D7647	>640	<b>297</b>	131	513
Particles >14µm		ASTM D7647	>80	<b>13</b>	6	23
Particles >21µm		ASTM D7647	>20	<b>2</b>	2	5
Particles >38µm		ASTM D7647	>4	<b>0</b>	0	0
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	<b>▲ 20/15/11</b>	▲ 20/14/10	● 19/16/12
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

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

Sodium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Boron	ppm	ASTM D5185m	0	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	0
Calcium	ppm	ASTM D5185m	75	<b>47</b>	49	42
Phosphorus	ppm	ASTM D5185m	275	<b>394</b>	402	341
Zinc	ppm	ASTM D5185m	350	<b>488</b>	517	405
Sulfur	ppm	ASTM D5185m	550	<b>1030</b>	1169	968
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.33</b>	0.31	0.28
Visc @ 40°C	cSt	ASTM D445	68.0	<b>66.9</b>	66.6	68.3



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0049572  
**Lab Number** : 06210700  
**Unique Number** : 11083564  
**Test Package** : MAR 2 ( Additional Tests: PrtCount )

**Received** : 14 Jun 2024  
**Tested** : 18 Jun 2024  
**Diagnosed** : 18 Jun 2024 - Angela Borella

**INGRAM BARGE**  
 900 S 3RD ST  
 PADUCAH, KY  
 US 42003

Contact: JUSTIN WHEELER  
 justin.wheeler@ingrambarga.com

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)

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