



Area  
**ARTHUR J CARSON**  
Machine Id  
[ARTHUR J CARSON] 010 556145-10  
Component  
**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>MW06176060</b>	MW06100881	MW06035977
Sample Date		Client Info		<b>03 Apr 2024</b>	04 Feb 2024	14 Dec 2023
Machine Age	hrs	Client Info		<b>0</b>	0	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	ABNORMAL

**WEAR**

All component wear rates are normal.

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

**CONTAMINATION**

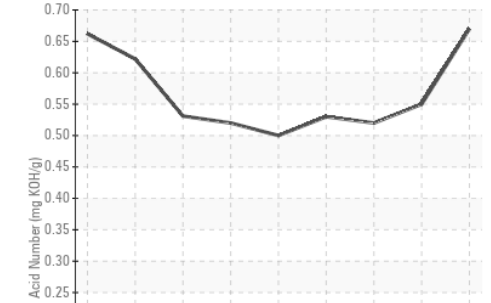
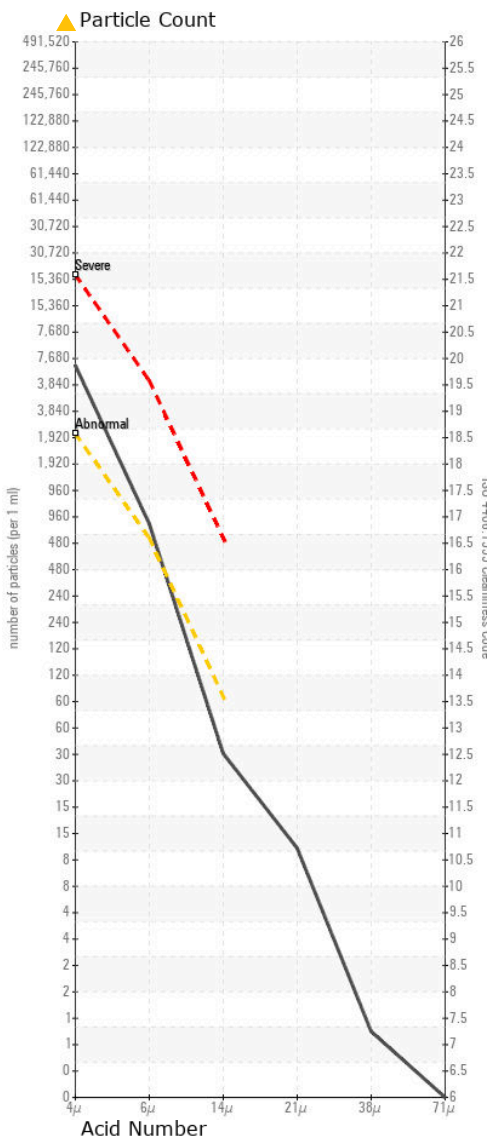
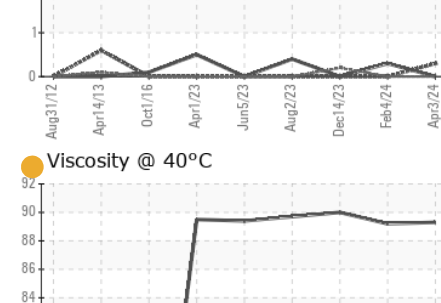
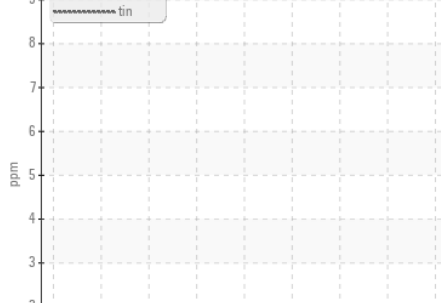
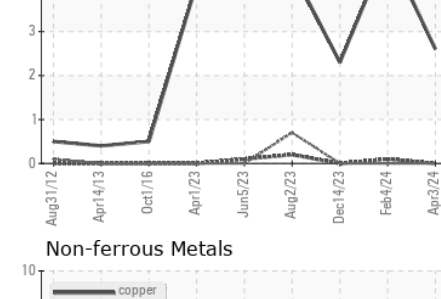
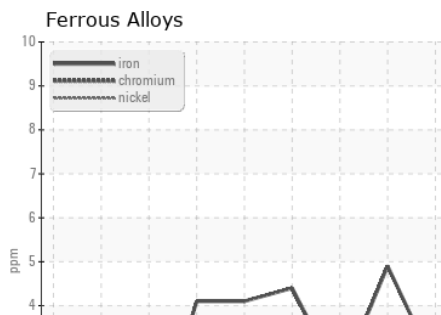
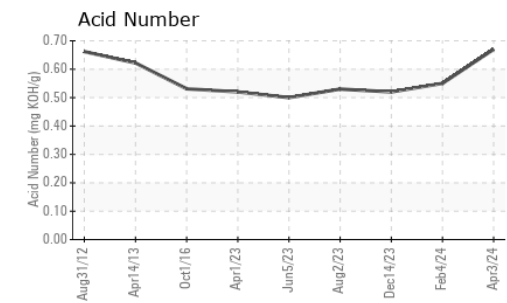
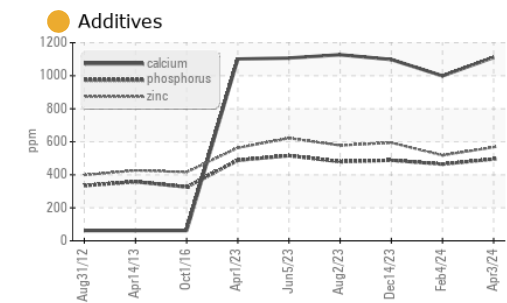
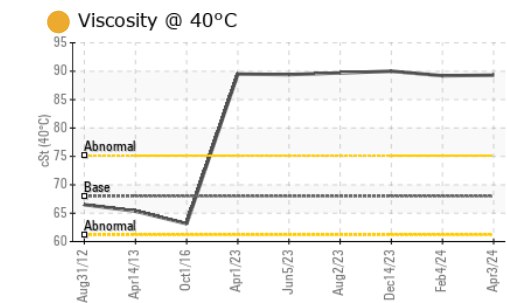
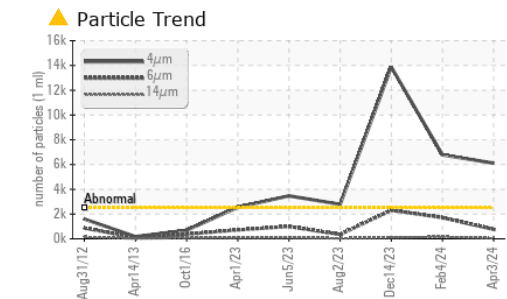
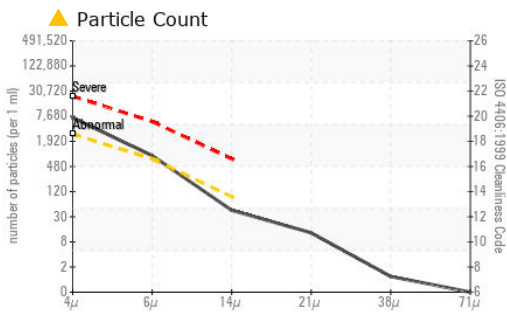
There is a high amount of silt (particulates < 14 microns in size) present in the fluid.

Silicon	ppm	ASTM D5185m	>15	<b>2</b>	2	2
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	2
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>2500	<b>▲ 6111</b>	▲ 6779	▲ 13871
Particles >6µm		ASTM D7647	>640	<b>● 768</b>	▲ 1713	▲ 2308
Particles >14µm		ASTM D7647	>80	<b>38</b>	▲ 159	▲ 97
Particles >21µm		ASTM D7647	>20	<b>11</b>	▲ 41	18
Particles >38µm		ASTM D7647	>4	<b>1</b>	1	0
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	<b>▲ 20/17/12</b>	▲ 20/18/14	▲ 21/18/14
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 fluid viscosity is higher than normal. This plus the additive levels indicates the addition of a different brand, or type of oil. Confirm oil type. The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m		<b>2</b>	0	2
Boron	ppm	ASTM D5185m	0	<b>● 136</b>	● 135	● 140
Barium	ppm	ASTM D5185m	0	<b>0</b>	8	0
Molybdenum	ppm	ASTM D5185m	0	<b>13</b>	14	13
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	0	<b>9</b>	7	9
Calcium	ppm	ASTM D5185m	75	<b>● 1111</b>	● 999	● 1098
Phosphorus	ppm	ASTM D5185m	275	<b>495</b>	464	488
Zinc	ppm	ASTM D5185m	350	<b>567</b>	518	594
Sulfur	ppm	ASTM D5185m	550	<b>● 2115</b>	1734	1895
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.67</b>	0.55	0.52
Visc @ 40°C	cSt	ASTM D445	68.0	<b>● 89.3</b>	● 89.2	● 90.0



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW06176060 **Received** : 10 May 2024  
**Lab Number** : 06176060 **Tested** : 14 May 2024  
**Unique Number** : 11022113 **Diagnosed** : 14 May 2024 - Don Baldrige  
**Test Package** : MAR 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)