



Area  
**ARTHUR J CARSON**  
Machine Id  
**[ARTHUR J CARSON] 010 556145-10**  
Component  
**Steering**  
Fluid  
**CHEVRON RANDO HDZ 68 (--- GAL)**

**RECOMMENDATION**

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW06100881</b>	MW06035977	MW0053551
Sample Date		Client Info		<b>04 Feb 2024</b>	14 Dec 2023	02 Aug 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	ATTENTION

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>5</b>	2	4
Chromium	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	1
Aluminum	ppm	ASTM D5185m	>5	<b>2</b>	2	<1
Lead	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>50	<b>&lt;1</b>	0	<1
Tin	ppm	ASTM D5185m	>5	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

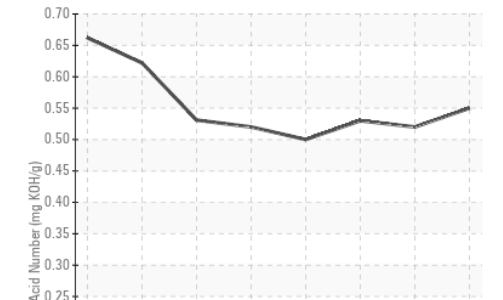
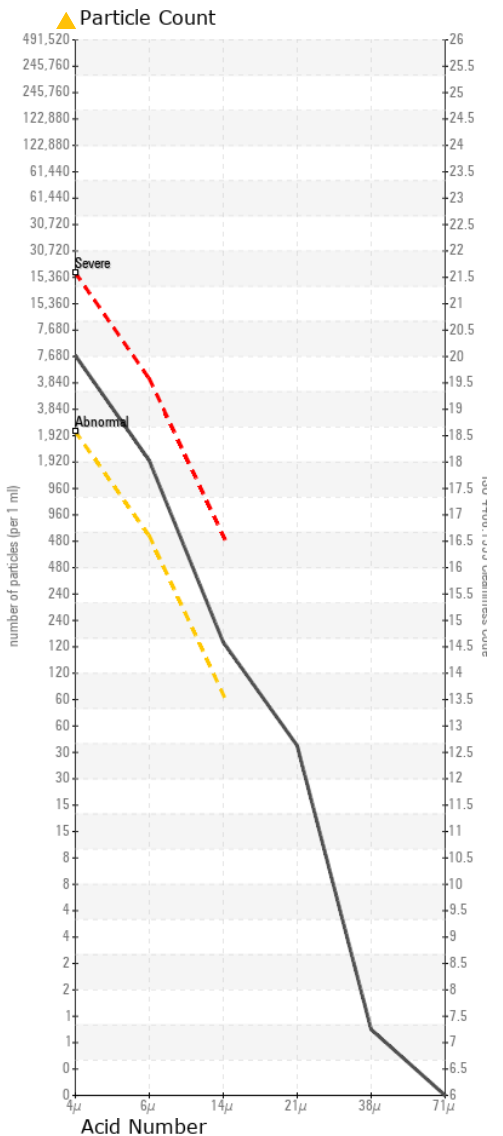
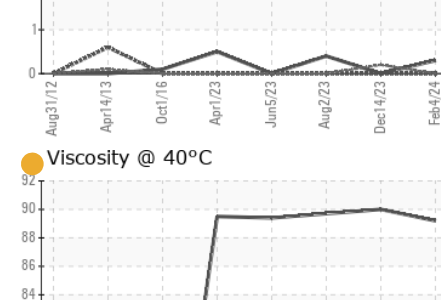
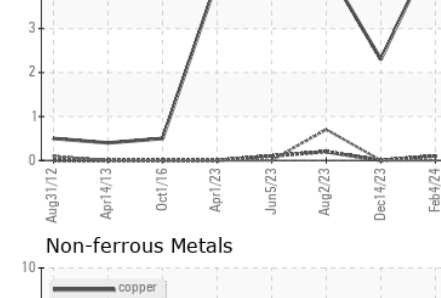
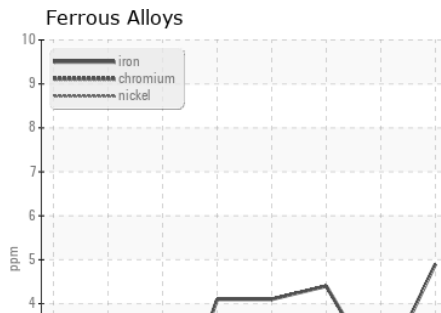
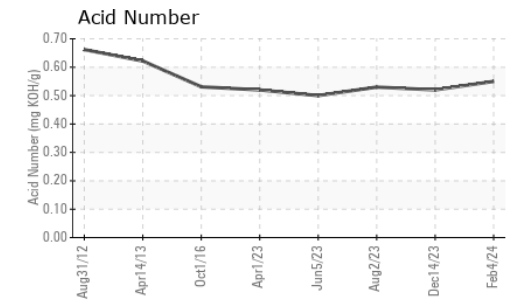
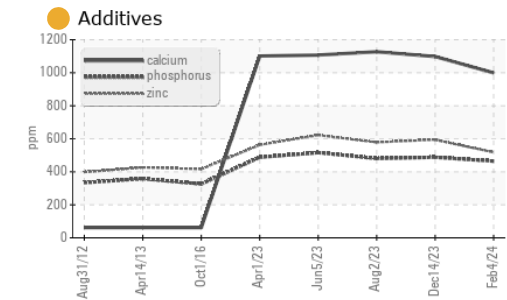
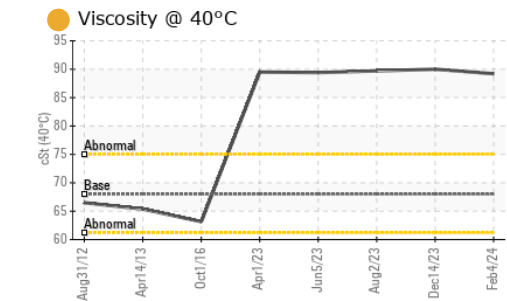
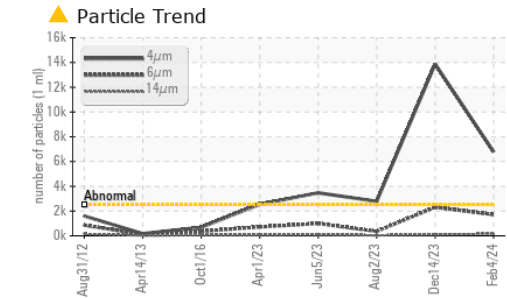
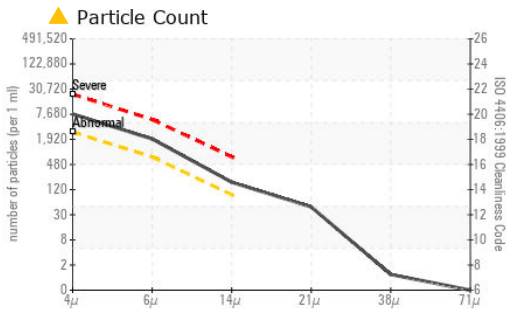
There is a high amount of particulates present in the fluid.

Silicon	ppm	ASTM D5185m	>15	<b>2</b>	2	2
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	2	2
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>2500	<b>▲ 6779</b>	▲ 13871	● 2785
Particles >6µm		ASTM D7647	>640	<b>▲ 1713</b>	▲ 2308	355
Particles >14µm		ASTM D7647	>80	<b>▲ 159</b>	▲ 97	37
Particles >21µm		ASTM D7647	>20	<b>▲ 41</b>	18	11
Particles >38µm		ASTM D7647	>4	<b>1</b>	0	1
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	<b>▲ 20/18/14</b>	▲ 21/18/14	● 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 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>0</b>	2	<1
Boron	ppm	ASTM D5185m	0	<b>● 135</b>	● 140	● 158
Barium	ppm	ASTM D5185m	0	<b>8</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>14</b>	13	14
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	0	<b>7</b>	9	7
Calcium	ppm	ASTM D5185m	75	<b>● 999</b>	● 1098	● 1127
Phosphorus	ppm	ASTM D5185m	275	<b>464</b>	488	480
Zinc	ppm	ASTM D5185m	350	<b>518</b>	594	578
Sulfur	ppm	ASTM D5185m	550	<b>1734</b>	1895	1791
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.55</b>	0.52	0.53
Visc @ 40°C	cSt	ASTM D445	68.0	<b>● 89.2</b>	● 90.0	● 89.7



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW06100881 **Received** : 26 Feb 2024  
**Lab Number** : 06100881 **Tested** : 27 Feb 2024  
**Unique Number** : 10899111 **Diagnosed** : 28 Feb 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)