



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

Area  
**DALE A HELLER**  
Machine Id  
**[DALE A HELLER] 010 624201-10**  
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>MW06186648</b>	MW0058850	MW0049442
Sample Date		Client Info		<b>01 May 2024</b>	01 Nov 2023	01 May 2023
Machine Age	hrs	Client Info		<b>74655</b>	70500	66032
Oil Age	hrs	Client Info		<b>0</b>	70500	66032
Filter Age	hrs	Client Info		<b>0</b>	0	3960
Oil Changed		Client Info		<b>N/A</b>	N/A	Not Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	Not Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	ATTENTION

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>2</b>	<1	2
Chromium	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Lead	ppm	ASTM D5185m	>10	<b>2</b>	0	1
Copper	ppm	ASTM D5185m	>50	<b>21</b>	19	19
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

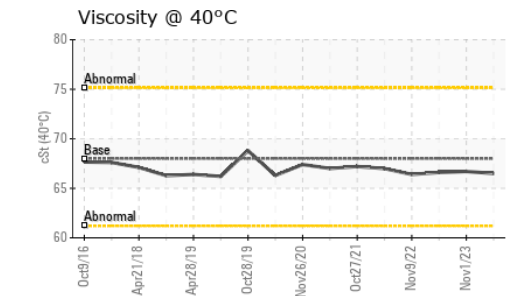
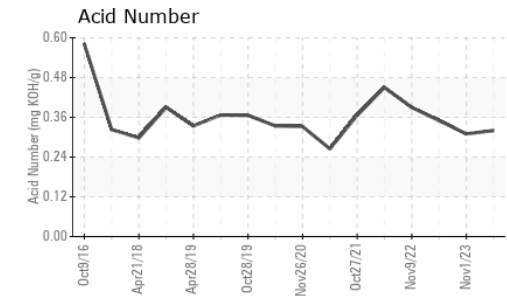
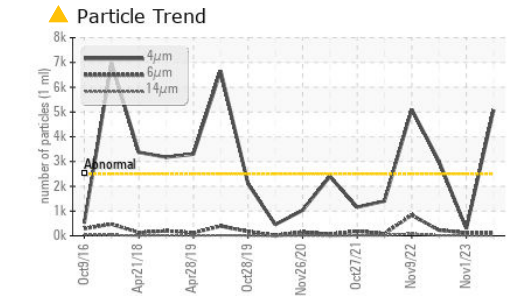
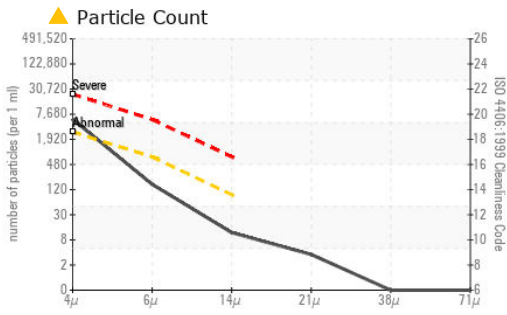
There is a high amount of silt (particulates < 6 microns in size) present in the fluid.

Silicon	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	<1
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>2500	<b>5079</b>	290	3015
Particles >6µm		ASTM D7647	>640	<b>142</b>	117	228
Particles >14µm		ASTM D7647	>80	<b>10</b>	13	14
Particles >21µm		ASTM D7647	>20	<b>3</b>	5	3
Particles >38µm		ASTM D7647	>4	<b>0</b>	0	1
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	<b>20/14/10</b>	15/14/11	19/15/11
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>1</b>	<1	0
Boron	ppm	ASTM D5185m	0	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m	0	<b>0</b>	0	<1
Calcium	ppm	ASTM D5185m	75	<b>47</b>	42	47
Phosphorus	ppm	ASTM D5185m	275	<b>389</b>	343	354
Zinc	ppm	ASTM D5185m	350	<b>494</b>	403	448
Sulfur	ppm	ASTM D5185m	550	<b>1115</b>	967	985
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.32</b>	0.31	0.35
Visc @ 40°C	cSt	ASTM D445	68.0	<b>66.5</b>	66.7	66.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW06186648  
**Lab Number** : 06186648  
**Unique Number** : 11043400  
**Test Package** : MAR 2 ( Additional Tests: PrtCount )

**Received** : 21 May 2024  
**Tested** : 23 May 2024  
**Diagnosed** : 23 May 2024 - 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)

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