



Machine Id
SIGNET LEGEND - STEERING

Component
Starboard Hydraulic System

Fluid
CHEVRON RANDO HDZ 46 (--- 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		MW0064241	MW05461190	MWM701211
Sample Date		Client Info		11 Jan 2024	14 Dec 2021	19 Nov 2019
Machine Age	hrs	Client Info		25918	0	0
Oil Age	hrs	Client Info		1118	0	0
Filter Age	hrs	Client Info		1118	0	0
Oil Changed		Client Info		Not Changed	N/A	Changed
Filter Changed		Client Info		Not Changed	N/A	Changed
Sample Status				ATTENTION	SEVERE	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	0	3	1
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>10	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	<1	<1
Lead	ppm	ASTM D5185m	>20	0	<1	0
Copper	ppm	ASTM D5185m	>20	1	<1	<1
Tin	ppm	ASTM D5185m	>10	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

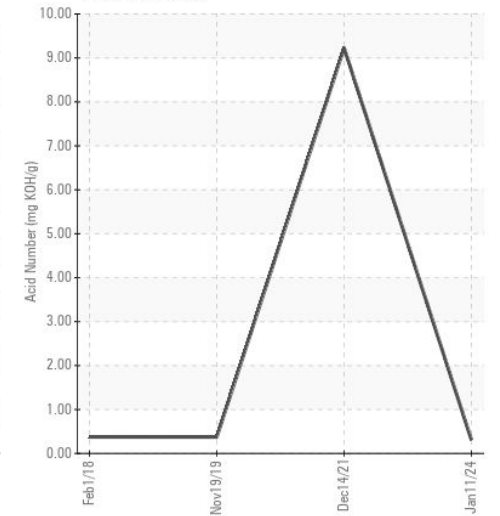
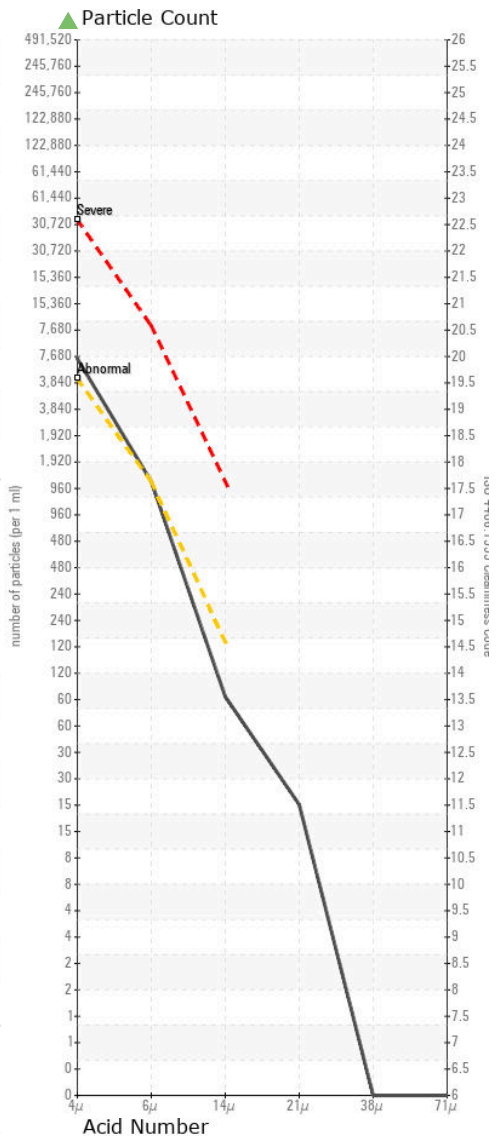
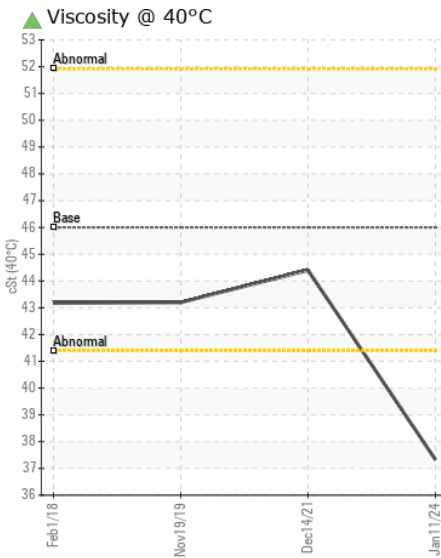
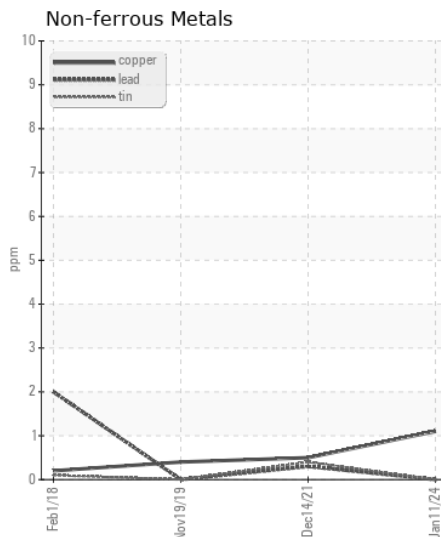
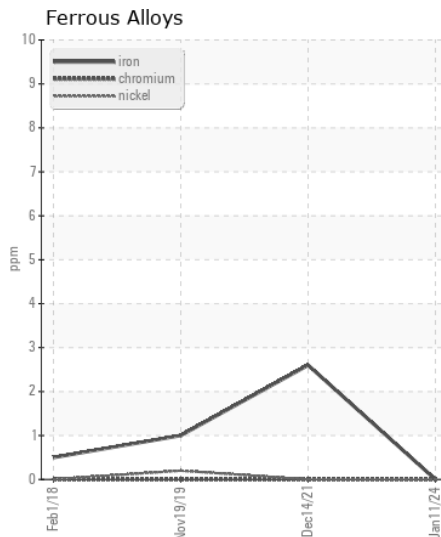
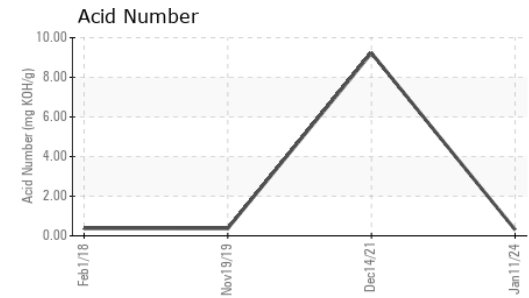
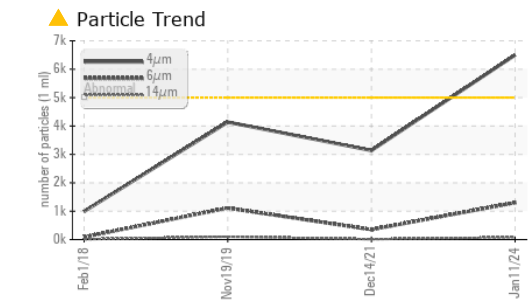
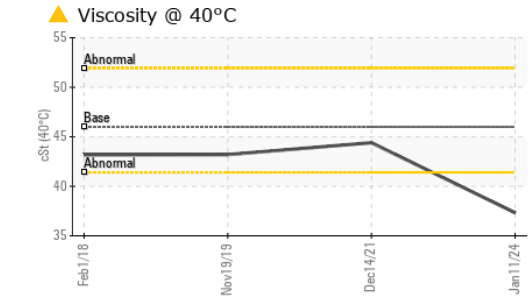
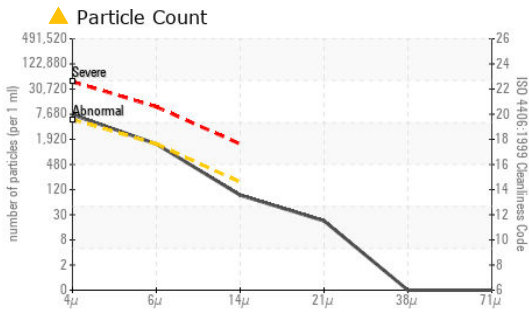
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>15	0	<1	<1
Potassium	ppm	ASTM D5185m	>20	0	0	0
Water		WC Method	>0.05	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 6499	3138	4137
Particles >6µm		ASTM D7647	>1300	▲ 1301	352	1111
Particles >14µm		ASTM D7647	>160	78	12	102
Particles >21µm		ASTM D7647	>40	19	3	32
Particles >38µm		ASTM D7647	>10	0	0	3
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 20/18/13	19/16/11	19/17/14
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	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	>0.05	NEG	NEG	NEG

FLUID CONDITION

The oil viscosity is lower than normal. The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m		0	<1	<1
Boron	ppm	ASTM D5185m		0	4	<1
Barium	ppm	ASTM D5185m		0	0	<1
Molybdenum	ppm	ASTM D5185m		0	<1	0
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		0	7	1
Calcium	ppm	ASTM D5185m		40	58	52
Phosphorus	ppm	ASTM D5185m		312	208	333
Zinc	ppm	ASTM D5185m		389	15	425
Sulfur	ppm	ASTM D5185m		674	1732	672
Acid Number (AN)	mg KOH/g	ASTM D8045		0.31	9.227	0.374
Visc @ 40°C	cSt	ASTM D445	46.0	▲ 37.33	▲ 44.4	▲ 43.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0064241 **Received** : 19 Jan 2024
Lab Number : 06065539 **Diagnosed** : 24 Jan 2024
Unique Number : 10836921 **Diagnostician** : Don Baldrige
Test Package : MAR 2

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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