



WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Machine Id
SIGNET MISCHIEF
Component
Starboard Steering
Fluid
CHEVRON RANDO HD 46 (70 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		MW0059755	MW0059780	MW0045601
Sample Date		Client Info		10 Jan 2024	02 Oct 2023	05 Jul 2023
Machine Age	hrs	Client Info		18488	18164	17889
Oil Age	hrs	Client Info		1255	933	659
Filter Age	hrs	Client Info		1255	933	659
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	0	4	3
Chromium	ppm	ASTM D5185m	>15	0	0	0
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>5	0	0	<1
Lead	ppm	ASTM D5185m	>10	0	<1	0
Copper	ppm	ASTM D5185m	>50	3	3	3
Tin	ppm	ASTM D5185m	>5	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

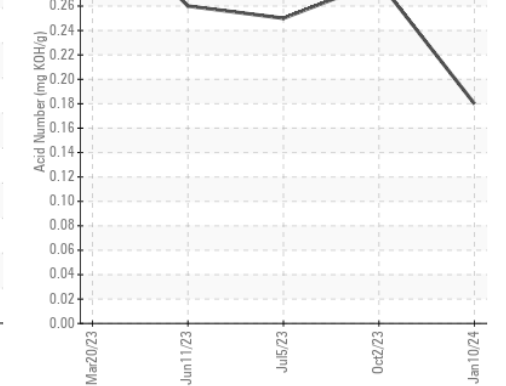
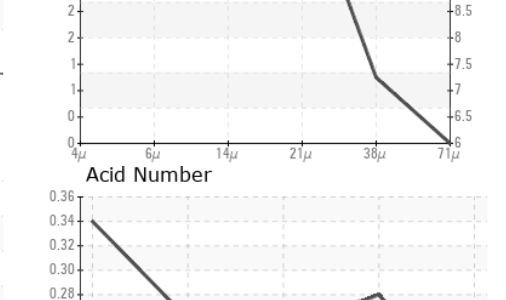
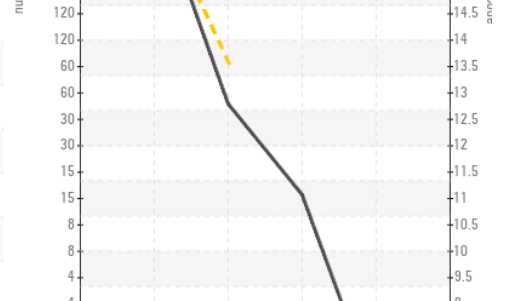
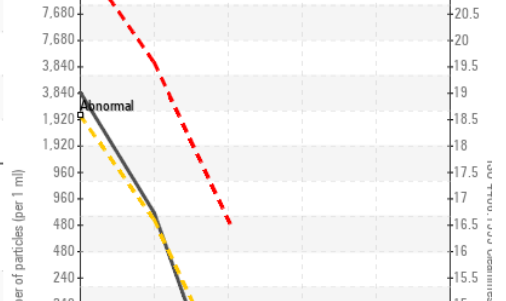
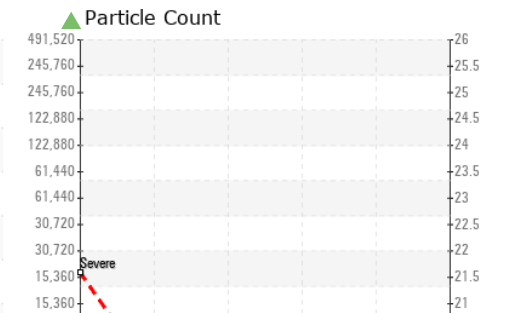
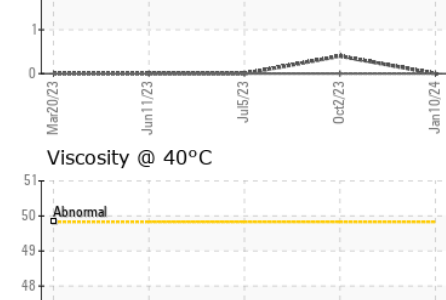
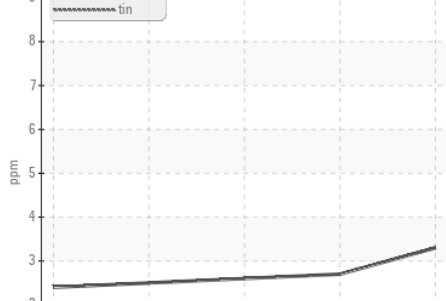
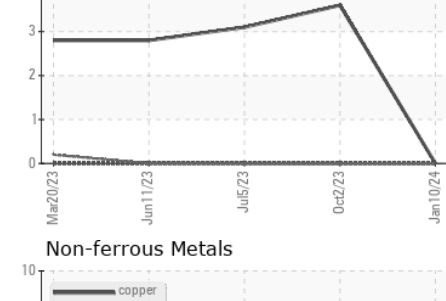
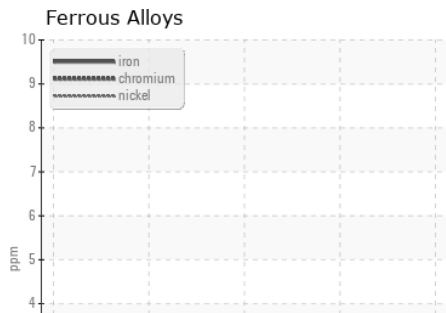
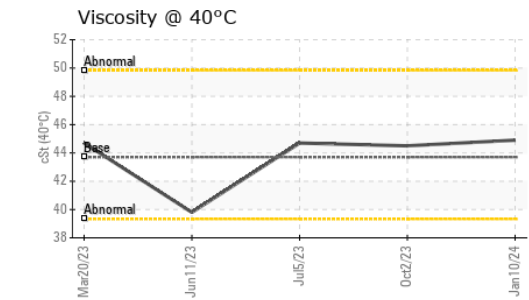
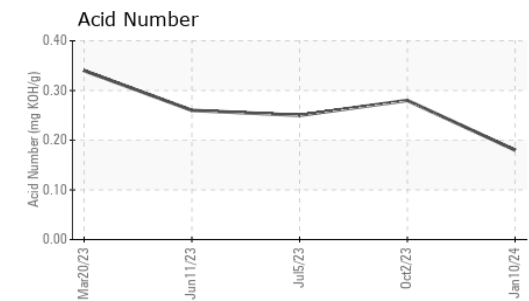
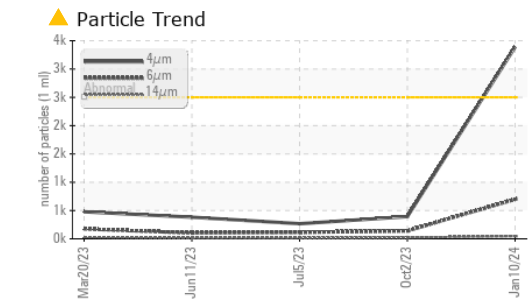
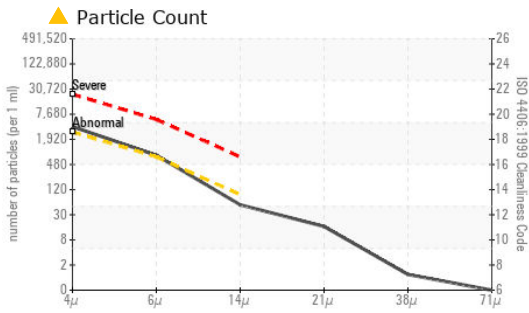
There is a moderate amount of silt (particulates < 14 microns in size) present in the fluid.

Silicon	ppm	ASTM D5185m	>15	0	0	<1
Potassium	ppm	ASTM D5185m	>20	0	<1	0
Water		WC Method	>0.2	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>2500	▲ 3390	393	267
Particles >6µm		ASTM D7647	>640	▲ 699	141	115
Particles >14µm		ASTM D7647	>80	46	22	12
Particles >21µm		ASTM D7647	>20	14	6	3
Particles >38µm		ASTM D7647	>4	1	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	▲ 19/17/13	16/14/12	15/14/11
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	>0.2	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the fluid is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		0	0	<1
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	<1
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		3	4	2
Calcium	ppm	ASTM D5185m		38	40	41
Phosphorus	ppm	ASTM D5185m		319	331	343
Zinc	ppm	ASTM D5185m		322	357	358
Sulfur	ppm	ASTM D5185m		699	829	980
Acid Number (AN)	mg KOH/g	ASTM D8045		0.18	0.28	0.25
Visc @ 40°C	cSt	ASTM D445	43.7	44.9	44.5	44.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0059755 **Received** : 19 Jan 2024
Lab Number : 06065544 **Diagnosed** : 23 Jan 2024
Unique Number : 10836926 **Diagnostician** : Don Baldrige
Test Package : MAR 2 (Additional Tests: PrtCount)

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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