OIL ANALYSIS REPORT

MAR I — WEAR CHECK

WEAR	**NORMAL**
CONTAMINATION	**ABNORMAL**
FLUID CONDITION	**NORMAL**

Machine Id
PORT STEERING (S/N 115841-080001)
Component
Port Steering
Fluid
CASTROL HYSPIN AWH-M ISO 32 (800 LTR)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MAR 2 test kits, this testkit includes AN to determine the suitability of the fluid for continued use. (Customer Sample Comment: System flushed and new oil added.)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0787199**	WC0787174	WC0787170
Sample Date		Client Info		**22 Feb 2024**	30 Nov 2023	07 Mar 2023
Machine Age	hrs	Client Info		**34406**	0	0
Oil Age	hrs	Client Info		**34406**	0	1
Filter Age	hrs	Client Info		**600**	0	1
Oil Changed		Client Info		**Not Changd**	Not Changd	Changed
Filter Changed		Client Info		**Changed**	None	Changed
Sample Status				**ABNORMAL**	SEVERE	SEVERE

WEAR

All component wear rates are normal.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185(m)	>60	**2**	6	2
Chromium	ppm	ASTM D5185(m)	>12	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>6	**0**	<1	0
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>4	**<1**	<1	<1
Lead	ppm	ASTM D5185(m)	>12	**0**	<1	<1
Copper	ppm	ASTM D5185(m)	>30	**<1**	<1	<1
Tin	ppm	ASTM D5185(m)		**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE

CONTAMINATION

There is a moderate concentration of dirt present in the fluid.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Silicon	ppm	ASTM D5185(m)	>10	⚠ **15**	▲ 52	▲ 43
Potassium	ppm	ASTM D5185(m)	>20	**<1**	1	1
Water		WC Method		**NEG**	NEG	NEG
Silt	scalar	Visual*	NONE	**NONE**	VLITE	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*		**NEG**	NEG	NEG

FLUID CONDITION

The fluid is no longer serviceable due to the presence of contaminants.

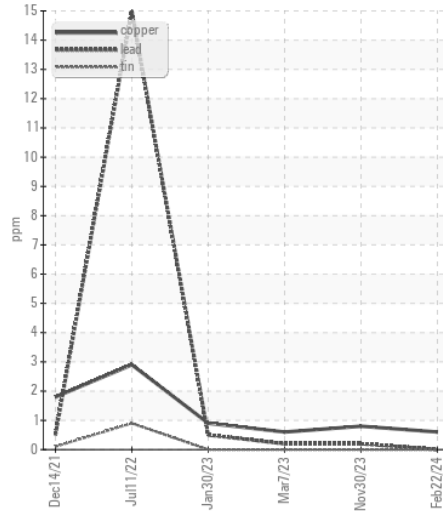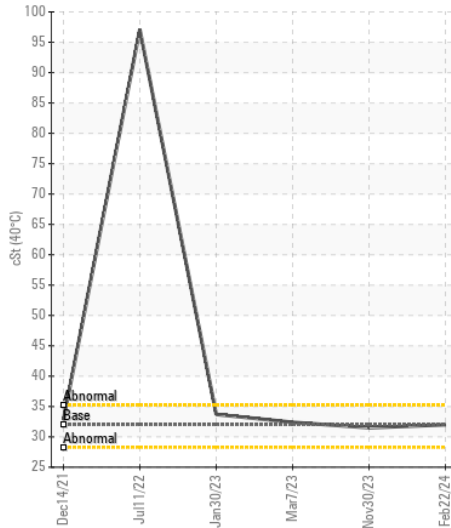| Test	UOM	Method	Limit/Abn	Current	History1	History2
Sodium	ppm	ASTM D5185(m)		**<1**	<1	<1
Boron	ppm	ASTM D5185(m)		**0**	0	<1
Barium	ppm	ASTM D5185(m)		**0**	0	0
Molybdenum	ppm	ASTM D5185(m)		**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)		**<1**	<1	<1
Calcium	ppm	ASTM D5185(m)		**70**	45	49
Phosphorus	ppm	ASTM D5185(m)		**421**	390	415
Zinc	ppm	ASTM D5185(m)		**328**	459	450
Sulfur	ppm	ASTM D5185(m)		**3325**	4034	3786
Visc @ 40°C	cSt	ASTM D7279(m)	32.0	**32.0**	31.5	32.4

Silicon (ppm)
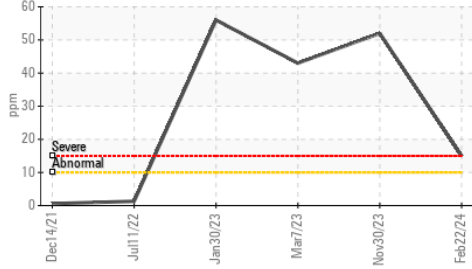
Viscosity @ 40°C

Ferrous Alloys
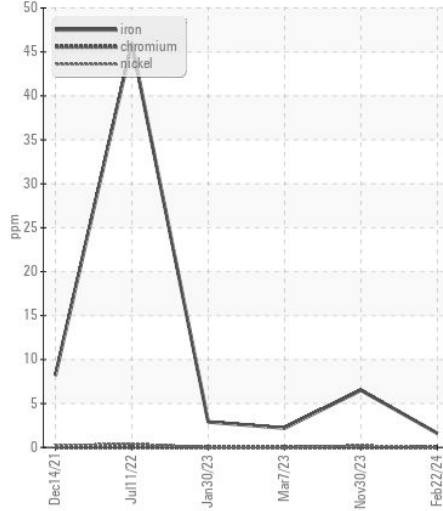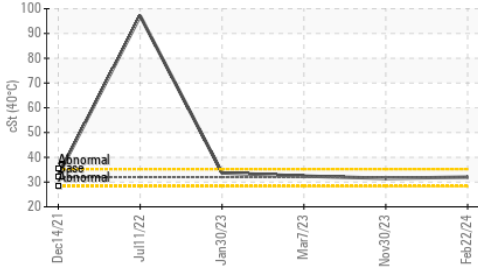
Non-ferrous Metals

Viscosity @ 40°C