

# Machine Id **WMC** omponent **Starboard Genset** CHEVRON URSA SUPER PLUS 40 (--- GAL)

# RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

### WEAR

All component wear rates are normal.

# CONTAMINATION

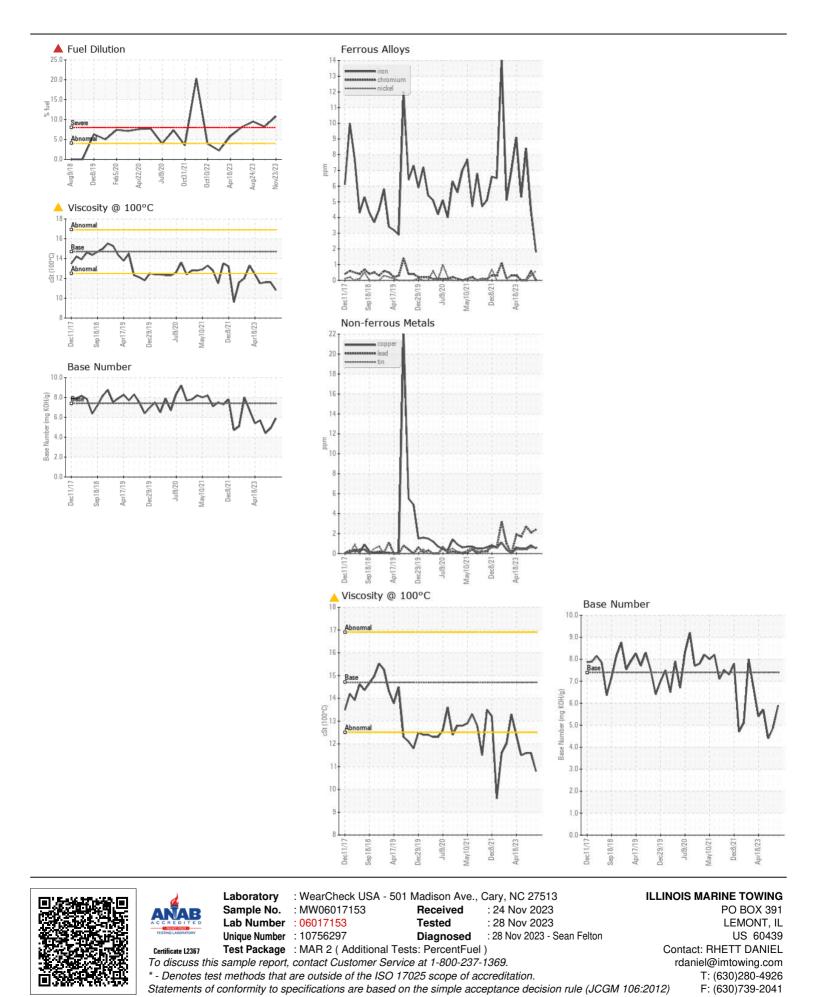
There is a high amount of fuel present in the oil.

## **FLUID CONDITION**

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW06017153	MW05981738	MW05934665
Sample Date		Client Info		23 Nov 2023	16 Oct 2023	24 Aug 2023
Machine Age	hrs	Client Info		51722	51193	50638
Oil Age	hrs	Client Info		529	560	880
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	ABNORMAL	SEVERE
Iron	ppm	ASTM D5185m	>50	2	4	8
Chromium	ppm	ASTM D5185m	>4	0	<1	0
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	2	3	<1
Lead	ppm	ASTM D5185m	>17	2	2	3
Copper	ppm	ASTM D5185m	>70	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
				_		
Silicon	ppm	ASTM D5185m	>25	5	4	10
Potassium	ppm	ASTM D5185m	>20	1	2	<1
Fuel	%	ASTM D3524	>4.0	<b>10.8</b>	<b>8</b> .2	<b>9</b> .5
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.8	8.2	11.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.6	24.2	28.4
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	>0.1	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		2	0	2
Boron	ppm	ASTM D5185m		242	306	254
Barium	ppm	ASTM D5185m		0	10	0
Molybdenum	ppm	ASTM D5185m		88	68	85
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		441	240	412
Calcium	ppm	ASTM D5185m		1317	1754	1385
Phosphorus	ppm	ASTM D5185m	1000	628	591	822
Zinc	ppm	ASTM D5185m	1090	712	726	1059
Sulfur	ppm	ASTM D5185m	1030	2180	2453	3162
Oxidation	Abs/.1mm	*ASTM D5105111	>25	32.9	2433	37.1
Base Number (BN)	mg KOH/g	ASTM D7414 ASTM D2896		5.9	4.9	4.4
Visc @ 100°C		ASTM D2090 ASTM D445	7.4 14.7			4.4
visc @ 100°C	cSt	AS I IVI D445	14./	10.8	11.6	0.11 A

#### WEAR NORMAL CONTAMINATION **SEVERE FLUID CONDITION ABNORMAL**



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