

## **OIL ANALYSIS REPORT**

#### Sample Rating Trend

#### NORMAL

### Area CRANE - T LANGE T LANGE

#### Component Port Genset Fluid CHEVRON DELO 400 LE 15W40 (5 GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

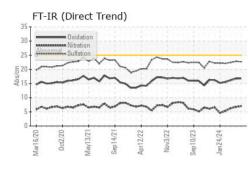
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

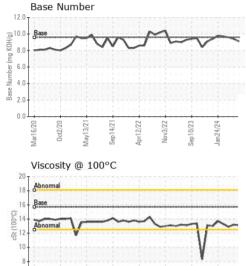
020 0ct2020		Sep2021	Nov2022	Sep2023	Jan 2024	
11111	19 19 19 19					
				1111		
					1.1.1.1.1.1	
					1.1.1.1.1.1.1	

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0892633	WC0892644	WC0785601
Sample Date		Client Info		06 May 2024	08 Apr 2024	09 Mar 2024
Machine Age	hrs	Client Info		37415	37043	52109
Oil Age	hrs	Client Info		250	250	250
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method	7 011	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	6	11	4
Chromium	ppm	ASTM D5185m	>4	<1	2	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m	5	<1	2	<1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	4	8	5
Lead	ppm	ASTM D5185m	>17	0	0	0
Copper	ppm	ASTM D5185m	>70	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	<1	<1
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		425	491	342
Barium	ppm	ASTM D5185m		0	1	<1
	ppin			-		
Molybdenum	ppm	ASTM D5185m		136	195	130
Molybdenum Manganese		ASTM D5185m ASTM D5185m		136 <1	195 2	130 <1
Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		136 <1 712	195 2 993	130 <1 648
Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		136 <1 712 1736	195 2 993 2351	130 <1 648 1555
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1200	136 <1 712 1736 792	195 2 993 2351 1024	130 <1 648 1555 684
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1300	136 <1 712 1736 792 934	195 2 993 2351 1024 1283	130 <1 648 1555 684 851
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1300 3200	136 <1 712 1736 792	195 2 993 2351 1024 1283 3757	130 <1 648 1555 684 851 2524
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1300	136 <1 712 1736 792 934	195 2 993 2351 1024 1283	130 <1 648 1555 684 851
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	1300 3200 limit/base	136 <1 712 1736 792 934 3113 current 6	195 2 993 2351 1024 1283 3757 history1 9	130 <1 648 1555 684 851 2524 history2 6
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1300 3200 limit/base >25	136 <1 712 1736 792 934 3113 current 6 2	195 2 993 2351 1024 1283 3757 history1 9 4	130 <1 648 1555 684 851 2524 history2 6 2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	1300 3200 limit/base >25	136 <1 712 1736 792 934 3113 current 6	195 2 993 2351 1024 1283 3757 history1 9	130 <1 648 1555 684 851 2524 history2 6
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1300 3200 limit/base >25	136 <1 712 1736 792 934 3113 current 6 2	195 2 993 2351 1024 1283 3757 history1 9 4	130 <1 648 1555 684 851 2524 history2 6 2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1300 3200 limit/base >25 >20	136 <1 712 1736 792 934 3113 current 6 2 0	195 2 993 2351 1024 1283 3757 history1 9 4 3	130 <1 648 1555 684 851 2524 history2 6 2 2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1300 3200 limit/base >25 >20 limit/base	136 <1 712 1736 792 934 3113 current 6 2 0 0	195 2 993 2351 1024 1283 3757 history1 9 4 3 3	130 <1 648 1555 684 851 2524 history2 6 2 2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1300 3200 limit/base >25 >20 limit/base	136 <1 712 1736 792 934 3113 <u>current</u> 6 2 0 <u>current</u> 0.3	195 2 993 2351 1024 1283 3757 history1 9 4 3 3 history1 0.1	130 <1 648 1555 684 851 2524 history2 6 2 2 history2 0.2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1300 3200 imit/base >25 >20 imit/base >20	136 <1 712 1736 792 934 3113 current 6 2 0 0 current 0.3 7.0	195 2 993 2351 1024 1283 3757 history1 9 4 3 3 history1 0.1 6.7	130 <1 648 1555 684 851 2524 history2 6 2 2 history2 0.2 6.2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1300 3200 limit/base >25 >20 limit/base >20 >20 >30	136 <1 712 1736 792 934 3113 <u>current</u> 6 2 0 <u>current</u> 0.3 7.0 22.7	195 2 993 2351 1024 1283 3757 history1 9 4 3 history1 0.1 6.7 22.8	130 <1 648 1555 684 851 2524 history2 6 2 2 history2 0.2 6.2 2 2.4
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7415	1300 3200 imit/base >25 >20 imit/base >20 >30 imit/base	136 <1 712 1736 792 934 3113 current 6 2 0 current 0.3 7.0 22.7 current	195 2 993 2351 1024 1283 3757 history1 9 4 3 history1 0.1 6.7 22.8 history1	130 <1 648 1555 684 851 2524 history2 6 2 2 history2 0.2 6.2 22.4 history2



# **OIL ANALYSIS REPORT**





Apr12/22

May13/21 Sen14/21

Mar16/20

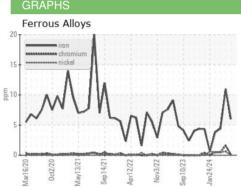
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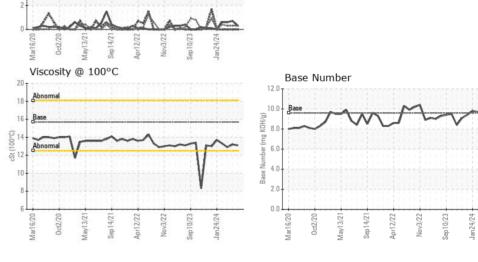
mdd

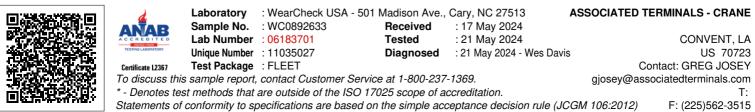
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.7	13.1	13.2	12.9



Non-ferrous Metals

ead





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