

OIL ANALYSIS REPORT

CRANE - T LANGE T LANGE

Component **Port Genset** Elui

CHEVRON DELO 400 LE 15W40 (5 GAL)

Recommendation

Resample at the next service interval to monitor.

Wear

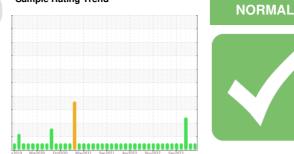
All component wear rates are normal.

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.





Sample Rating Trend

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0892613	WC0785597	WC0785583
Sample Date		Client Info		24 Jan 2024	15 Dec 2023	15 Nov 2023
Machine Age	hrs	Client Info		36320	35843	250
Oil Age	hrs	Client Info		230	1005	250
Oil Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	NORMAL	SEVERE
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	<1.0	<1.0	• 16.1
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<1	4	4
Chromium	ppm	ASTM D5185m	>4	0	0	0
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	4	2	2
Lead	ppm	ASTM D5185m	>17	0	<1	0
Copper	ppm	ASTM D5185m	>70	0	<1	<1
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 387	history1 320	history2 255
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	387	320	255
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	387 0	320 0	255 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	387 0 117	320 0 127	255 0 107
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	387 0 117 <1	320 0 127 0	255 0 107 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	387 0 117 <1 655	320 0 127 0 712	255 0 107 0 601
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		387 0 117 <1 655 1457	320 0 127 0 712 1700	255 0 107 0 601 1438
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1200	387 0 117 <1 655 1457 686	320 0 127 0 712 1700 769	255 0 107 0 601 1438 652
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1200 1300	387 0 117 <1 655 1457 686 836	320 0 127 0 712 1700 769 921	255 0 107 0 601 1438 652 779
Boron Barium Molybdenum 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 ASTM D5185m ASTM D5185m	1200 1300 3200 limit/base	387 0 117 <1 655 1457 686 836 2486	320 0 127 0 712 1700 769 921 2711	255 0 107 0 601 1438 652 779 2252
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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	1200 1300 3200 limit/base	387 0 117 <1 655 1457 686 836 2486 current	320 0 127 0 712 1700 769 921 2711 history1	255 0 107 0 601 1438 652 779 2252 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1200 1300 3200 limit/base >25	387 0 117 <1 655 1457 686 836 2486 2486 current 5	320 0 127 0 712 1700 769 921 2711 2711 history1 6	255 0 107 0 601 1438 652 779 2252 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1200 1300 3200 limit/base >25	387 0 117 <1 655 1457 686 836 2486 2486 current 5 <	320 0 127 0 712 1700 769 921 2711 history1 6 1	255 0 107 0 601 1438 652 779 2252 history2 5 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1200 1300 3200 limit/base >25 >20	387 0 117 <1 655 1457 686 836 2486 2486 current 5 <1 2	320 0 127 0 712 1700 769 921 2711 history1 6 1 0	255 0 107 0 601 1438 652 779 2252 history2 5 1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1200 1300 3200 limit/base >25 >20	387 0 117 <1 655 1457 686 836 2486 <u>current</u> 5 <1 2 2 <u>current</u> 0.1	320 0 127 0 712 1700 769 921 2711 history1 6 1 0 0 history1	255 0 107 0 601 1438 652 779 2252 history2 5 1 0 0 history2 0.2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1200 1300 3200 limit/base >25 >20 limit/base	387 0 117 <1 655 1457 686 836 2486 2486 current 5 <1 2	320 0 127 0 712 1700 769 921 2711 history1 6 1 0 <i>history1</i> 0.2	255 0 107 0 601 1438 652 779 2252 history2 5 1 0 0 history2
Boron Barium Molybdenum 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	1200 1300 3200 limit/base >25 >20 limit/base	387 0 117 <1 655 1457 686 836 2486 current 5 <1 2 current 0.1 4.6	320 0 127 0 712 1700 769 921 2711 history1 6 1 0 history1 0.2 6.1	255 0 107 0 601 1438 652 779 2252 history2 5 1 0 0 history2 0.2 6.5
Boron Barium Molybdenum 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 D7844 *ASTM D7844	1200 1300 3200 limit/base >25 >20 limit/base >20 >30 limit/base	387 0 117 <1 655 1457 686 836 2486 Current 5 <1 2 Current 0.1 4.6 22.2 Current	320 0 127 0 712 1700 769 921 2711 history1 6 1 0 history1 0.2 6.1 22.8 history1	255 0 107 0 601 1438 652 779 2252 history2 5 1 0 0 history2 0.2 6.5 20.5 history2
Boron Barium Molybdenum 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	1200 1300 3200 limit/base >25 >20 limit/base	387 0 117 <1 655 1457 686 836 2486 current 5 <1 2 current 0.1 4.6 22.2	320 0 127 0 712 1700 769 921 2711 history1 6 1 0 history1 0.2 6.1 22.8	255 0 107 0 601 1438 652 779 2252 history2 5 1 0 0 history2 0.2 6.5 20.5

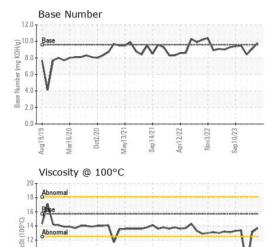


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OIL ANALYSIS REPORT



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	TIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.7	13.7	13.1	▲ 8.3
GRAPHS						
Ferrous Alloys						
iron chromium nickel						

