

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

HS-9 (S/N TDSH233L1731F) Component

Refrigeration Compressor

CHEVRON REFRIGERATION OIL WF 68 (150 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 component.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

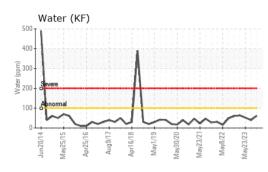


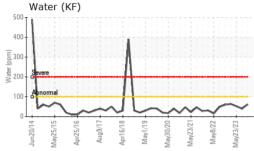


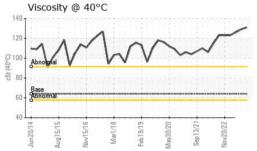
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0864159	WC0831594	WC0779558
Sample Date		Client Info		12 Nov 2023	11 Aug 2023	23 May 2023
Machine Age	hrs	Client Info		187451	185981	175151
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>8	11	15	14
Chromium	ppm	ASTM D5185m	>2	0	0	0
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>3	0	0	0
Lead	ppm	ASTM D5185m	>2	0	0	0
Copper	ppm	ASTM D5185m	>8	0	<1	<1
Tin	ppm	ASTM D5185m	>4	<1	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1 0	history2 0
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	0	0	0
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	0 0	0 0	0 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1 <1	0 0 0	0 0 0
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0 <1	0 0 0 <1	0 0 0 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1 <1	0 0 <1 <1	0 0 0 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1 <1 <1	0 0 <1 <1 0	0 0 <1 0 0 3 30
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	limit/base	0 0 <1 <1 <1 <1 1	0 0 <1 <1 0 1	0 0 <1 0 0 3
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	limit/base	0 0 <1 <1 <1 <1 1 26	0 0 <1 <1 0 1 41	0 0 <1 0 0 3 30
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		0 0 <1 <1 <1 <1 1 26 229	0 0 <1 <1 0 1 41 162 history1 <1	0 0 0 <1 0 0 3 3 30 262
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	limit/base	0 0 <1 <1 <1 1 26 229 Current	0 0 <1 <1 0 1 41 162 history1	0 0 <1 0 0 3 30 262 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	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	limit/base	0 0 2 3 3 4 1 3 4 1 2 6 229 229 229 229 20 20 20 20 20 20 20 20 20 20 20 20 20	0 0 2 3 3 4 1 4 1 6 2 4 1 2 1	0 0 0 <1 0 0 3 30 262 history2 <1 1 0
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	limit/base >15 >20	0 0 0 <1 <1 <1 1 26 229 current <1 0	0 0 0 <1 <1 0 1 41 162 history1 <1 2	0 0 0 <1 0 0 3 30 262 history2 <1 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >15 >20	0 0 2 3 3 4 1 3 4 1 2 6 229 229 229 229 20 20 20 20 20 20 20 20 20 20 20 20 20	0 0 2 3 3 4 1 4 1 6 2 4 1 2 1	0 0 0 <1 0 0 3 30 262 history2 <1 1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >15 >20 >0.01	0 0 0 <1 <1 <1 26 229 <u>current</u> <1 0 0 0 0 0.006	0 0 0 <1 <1 0 1 41 162 history1 <1 2 1 0.003	0 0 0 <1 0 0 3 3 30 262 history2 <1 1 1 0 0 0.005



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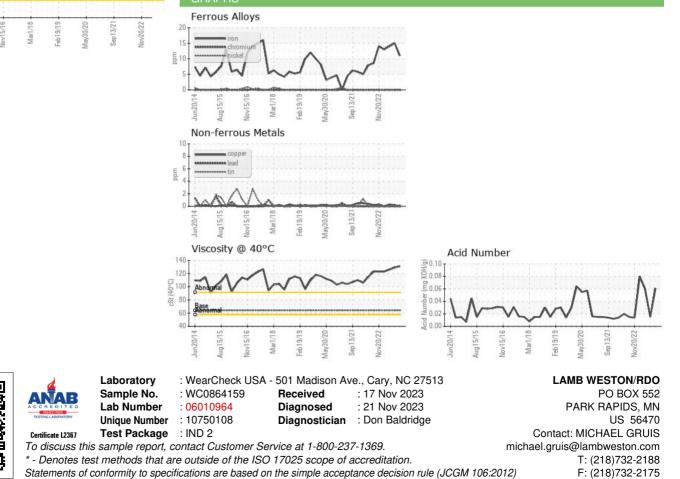




VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.01	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	64.0	131	129	126
SAMPLE IMAGES	S	method	limit/base	current	history1	history2
Color						

Bottom





Contact/Location: MICHAEL GRUIS - LAMPAR