

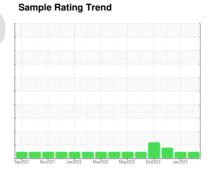
OIL ANALYSIS REPORT



GUAY SON/Yavaros [CONHER] CATERPILLAR Pacifico Ind Azteca MP

Diesel Engine

CHEVRON DELO 400 MULTIGRADE 15W40 (160 LTR)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

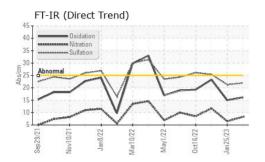
Fluid Condition

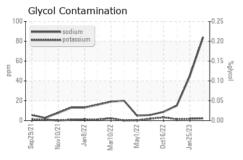
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

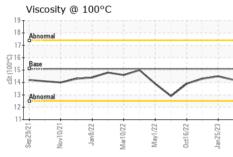
SAMPLE INFORM	IATION	method	limit/base	Ourropt	history1	hiotony?
	IATION		IIIIIIVDase		history1	history2
Sample Number		Client Info		KL0010249	KL0010213	KL0010206
Sample Date	In or a	Client Info		22 Feb 2023	25 Jan 2023	15 Nov 2022
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		100		
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				NORMAL	NORMAL	ABNORMAL
CONTAMINATION	J	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	16	11	33
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	<1	3
Lead	ppm	ASTM D5185m	>40	<1	<1	3
Copper	ppm	ASTM D5185m	>330	20	17	1 90
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
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 239	history1 386	history2 188
	ppm		limit/base			
Boron		ASTM D5185m	limit/base	239	386	188
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	239 2	386 0	188 2
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	239 2 111	386 0 107	188 2 126
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	239 2 111 <1	386 0 107 <1	188 2 126 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	239 2 111 <1 473	386 0 107 <1 471	188 2 126 <1 554
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		239 2 111 <1 473 1371	386 0 107 <1 471 1422	188 2 126 <1 554 1487
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1360	239 2 111 <1 473 1371 871	386 0 107 <1 471 1422 887	188 2 126 <1 554 1487 653
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1360	239 2 111 <1 473 1371 871 1076	386 0 107 <1 471 1422 887 1064	188 2 126 <1 554 1487 653 807
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1360 1480	239 2 111 <1 473 1371 871 1076 2894	386 0 107 <1 471 1422 887 1064 3066	188 2 126 <1 554 1487 653 807 2269
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	1360 1480 limit/base	239 2 111 <1 473 1371 871 1076 2894 current	386 0 107 <1 471 1422 887 1064 3066 history1	188 2 126 <1 554 1487 653 807 2269 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	1360 1480 limit/base	239 2 111 <1 473 1371 871 1076 2894 current	386 0 107 <1 471 1422 887 1064 3066 history1	188 2 126 <1 554 1487 653 807 2269 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	1360 1480 limit/base >25	239 2 111 <1 473 1371 871 1076 2894 current 7 84	386 0 107 <1 471 1422 887 1064 3066 history1 7 45	188 2 126 <1 554 1487 653 807 2269 history2 17 15
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	1360 1480 limit/base >25	239 2 111 <1 473 1371 871 1076 2894 current 7 84 2	386 0 107 <1 471 1422 887 1064 3066 history1 7 45	188 2 126 <1 554 1487 653 807 2269 history2 17 15
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	1360 1480 limit/base >25 >20	239 2 111 <1 473 1371 871 1076 2894 current 7 84 2 NEG	386 0 107 <1 471 1422 887 1064 3066 history1 7 45 2 NEG	188 2 126 <1 554 1487 653 807 2269 history2 17 15 1 NEG
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D2982	1360 1480 limit/base >25 >20 limit/base >3	239 2 111 <1 473 1371 871 1076 2894 current 7 84 2 NEG current 0.2	386 0 107 <1 471 1422 887 1064 3066 history1 7 45 2 NEG history1	188 2 126 <1 554 1487 653 807 2269 history2 17 15 1 NEG history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D5185m	1360 1480 limit/base >25 >20 limit/base >3 >20	239 2 111 <1 473 1371 871 1076 2894 current 7 84 2 NEG current	386 0 107 <1 471 1422 887 1064 3066 history1 7 45 2 NEG history1 0.1	188 2 126 <1 554 1487 653 807 2269 history2 17 15 1 NEG history2 0.4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D7844 *ASTM D7844	1360 1480 limit/base >25 >20 limit/base >3 >20	239 2 111 <1 473 1371 871 1076 2894 current 7 84 2 NEG current 0.2 8.3	386 0 107 <1 471 1422 887 1064 3066 history1 7 45 2 NEG history1 0.1 6.5	188 2 126 <1 554 1487 653 807 2269 history2 17 15 1 NEG history2 0.4 11.7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D2982 *ASTM D7844 *ASTM D7844 *ASTM D7624 *ASTM D7415 *Method	1360 1480 limit/base >25 >20 limit/base >3 >20 >30 limit/base	239 2 111 <1 473 1371 871 1076 2894 current 7 84 2 NEG current 0.2 8.3 21.9 current	386 0 107 <1 471 1422 887 1064 3066 history1 7 45 2 NEG history1 0.1 6.5 21.3 history1	188 2 126 <1 554 1487 653 807 2269 history2 17 15 1 NEG history2 0.4 11.7 25.4 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7624	1360 1480 limit/base >25 >20 limit/base >3 >20 >30	239 2 111 <1 473 1371 871 1076 2894 current 7 84 2 NEG current 0.2 8.3 21.9	386 0 107 <1 471 1422 887 1064 3066 history1 7 45 2 NEG history1 0.1 6.5 21.3	188 2 126 <1 554 1487 653 807 2269 history2 17 15 1 NEG history2 0.4 11.7 25.4

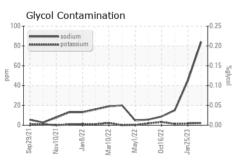


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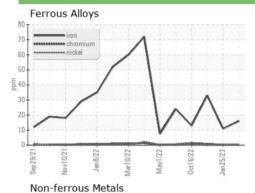


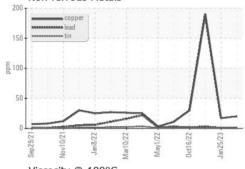


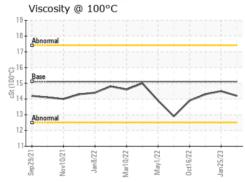
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

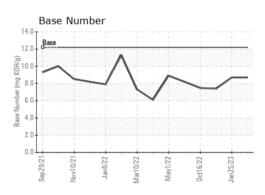
FLUID PROPERTIES		method				history2	
	Visc @ 100°C	cSt	ASTM D445	15.1	14.2	14.5	14.3

GRAPHS













Certificate 12367

Report Id: CONHERKL [WUSCAR] 05789407 (Generated: 05/09/2024 19:27:28) Rev: 1

Laboratory Sample No.

: KL0010249 Lab Number : 05789407

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Unique Number : 10374078

Received **Tested** Diagnosed

: 13 Mar 2023 : 14 Mar 2023

: 14 Mar 2023 - Angela Borella

CONOR JUAREZ 348 HERMOSILLO, MX 83140 Contact: EDUARDO GARCIA

Test Package : FLEET (Additional Tests: Glycol) To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

egarcia.comsa@gmail.com T: (526)622-1581 x:81 F: x:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: EDUARDO GARCIA