

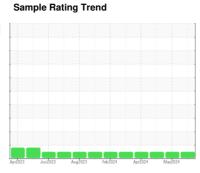
OIL ANALYSIS REPORT

GOLDEN BEAR LGL

MRC-284

Natural Gas Engine

TULCO LUBSOIL GEO XL LOW ASH 40 (--- GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

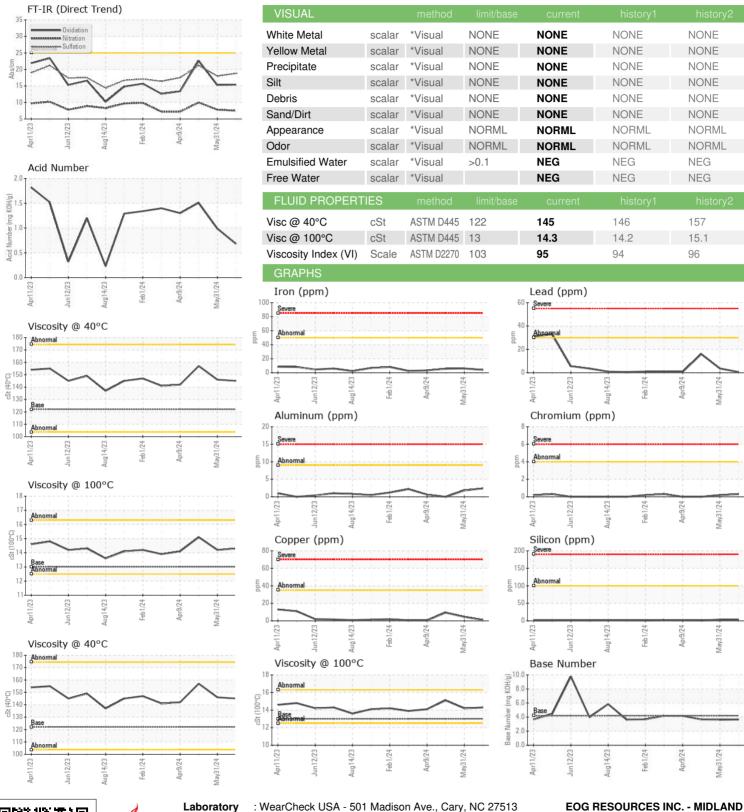
Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

GAL)		Apr2023	Jun2023 Aug2023	Feb 2024 Apr 2024 Mi	ny2024	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		TO60002283	TO60002269	TO60002465
Sample Date		Client Info		02 Jul 2024	31 May 2024	07 May 2024
Machine Age	hrs	Client Info		19094	18365	17794
Oil Age	hrs	Client Info		0	1	1
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	V	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	4	6	6
Chromium	ppm	ASTM D5185m	>4	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	2	0
Lead	ppm	ASTM D5185m	>30	<1	4	16
Copper	ppm	ASTM D5185m	>35	1	4	9
Tin	ppm	ASTM D5185m	>4	0	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 29	history1 42	history2 61
	ppm					
Boron	• •	ASTM D5185m		29	42	61
Boron Barium	ppm	ASTM D5185m ASTM D5185m	100	29 0	42	61 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	100	29 0 <1	42 0 4	61 0 0
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	100	29 0 <1 0	42 0 4 2	61 0 0 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	100	29 0 <1 0 7	42 0 4 2 10	61 0 0 <1 10
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	100 1 10 1150	29 0 <1 0 7 1351	42 0 4 2 10 1526	61 0 0 <1 10 1555
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	100 1 10 1150 290	29 0 <1 0 7 1351 287	42 0 4 2 10 1526 309	61 0 0 <1 10 1555 305
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 ASTM D5185m ASTM D5185m	100 1 10 1150 290 272 1900 limit/base	29 0 <1 0 7 1351 287 351	42 0 4 2 10 1526 309 369	61 0 0 <1 10 1555 305 385
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	100 1 10 1150 290 272 1900 limit/base	29 0 <1 0 7 1351 287 351 2889	42 0 4 2 10 1526 309 369 3524	61 0 0 <1 10 1555 305 385 3596
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	100 1 10 1150 290 272 1900 limit/base	29 0 <1 0 7 1351 287 351 2889 current	42 0 4 2 10 1526 309 369 3524 history1	61 0 0 <1 10 1555 305 385 3596 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	100 1 10 1150 290 272 1900 limit/base >+100	29 0 <1 0 7 1351 287 351 2889 current	42 0 4 2 10 1526 309 369 3524 history1	61 0 0 <1 10 1555 305 385 3596 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	100 1 10 1150 290 272 1900 limit/base >+100	29 0 <1 0 7 1351 287 351 2889 current 2 4 3	42 0 4 2 10 1526 309 369 3524 history1 4 6 6	61 0 0 <1 10 1555 305 385 3596 history2 1 7 <1
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 method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	100 1 10 1150 290 272 1900 limit/base >+100 limit/base	29 0 <1 0 7 1351 287 351 2889 current 2 4 3	42 0 4 2 10 1526 309 369 3524 history1 4 6 6	61 0 0 <1 10 1555 305 385 3596 history2 1 7 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	100 1 10 1150 290 272 1900 limit/base >+100 limit/base	29 0 <1 0 7 1351 287 351 2889 current 2 4 3	42 0 4 2 10 1526 309 369 3524 history1 4 6 6	61 0 0 <1 10 1555 305 385 3596 history2 1 7 <1
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 method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	100 1 10 1150 290 272 1900 limit/base >+100 limit/base	29 0 <1 0 7 1351 287 351 2889 current 2 4 3	42 0 4 2 10 1526 309 369 3524 history1 4 6 6	61 0 0 <1 10 1555 305 385 3596 history2 1 7 <1 history2
Boron Barium Molybdenum 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 method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415 method	100 1 10 1150 290 272 1900 limit/base >+100 >20 limit/base	29 0 <1 0 7 1351 287 351 2889 current 2 4 3 current 0 7.5 18.8 current	42 0 4 2 10 1526 309 369 3524 history1 4 6 6 history1 0 7.8 18.0 history1	61 0 0 <1 10 1555 305 385 3596 history2 1 7 <1 history2 0 10.0 21.2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m MEthod *ASTM D5185m *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D78144 *ASTM D7624 *ASTM D7415 method *ASTM D7414	100 1 10 1150 290 272 1900 limit/base >+100 >20 limit/base	29 0 <1 0 7 1351 287 351 2889 current 2 4 3 current 0 7.5 18.8 current	42 0 4 2 10 1526 309 369 3524 history1 4 6 6 6 history1 0 7.8 18.0 history1 15.3	61 0 0 <1 10 1555 305 385 3596 history2 1 7 <1 history2 0 10.0 21.2 history2 22.6
Boron Barium Molybdenum 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 method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415 method	100 1 10 1150 290 272 1900 limit/base >+100 >20 limit/base	29 0 <1 0 7 1351 287 351 2889 current 2 4 3 current 0 7.5 18.8 current	42 0 4 2 10 1526 309 369 3524 history1 4 6 6 history1 0 7.8 18.0 history1	61 0 0 <1 10 1555 305 385 3596 history2 1 7 <1 history2 0 10.0 21.2 history2



OIL ANALYSIS REPORT







Certificate 12367

Laboratory Sample No.

Lab Number

: TO60002283

: 06238553 Unique Number : 11127387 Test Package : MOB 2 (Additional Tests: KV40, VI)

Received : 16 Jul 2024 **Tested** Diagnosed

: 17 Jul 2024 : 17 Jul 2024 - Wes Davis

5509 CHAMPIONS DRIVE MIDLAND, TX US 79706 Contact: HERMAN GARZA

herman_garza@eogresources.com

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.

T: (432)686-3600 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

Report Id: EOGMID [WUSCAR] 06238553 (Generated: 07/17/2024 23:42:16) Rev: 1