

# **OIL ANALYSIS REPORT**

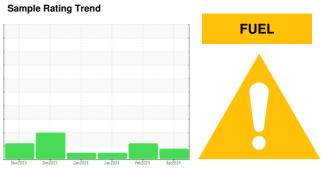




CATERPILLAR AD30 TRK227 (S/N 100016191)

Diesel Engine

**DIESEL ENGINE OIL SAE 15W40 (--- GAL)** 



## DIAGNOSIS

### Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

### Wear

All component wear rates are normal.

## Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

### **Fluid Condition**

The condition of the oil is acceptable for the time in service.

AE 15W40 ( G						
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0925833	WC0884557	WC0899942
Sample Date		Client Info		09 Apr 2024	18 Feb 2024	19 Jan 2024
Machine Age	hrs	Client Info		0	1691	1271
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				MARGINAL	ABNORMAL	NORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	22	33	35
Chromium	ppm	ASTM D5185(m)	>20	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	0	0	0
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<1	2	2
Lead	ppm	ASTM D5185(m)	>40	<1	4	11
Copper	ppm	ASTM D5185(m)	>330	4	50	277
Tin	ppm	ASTM D5185(m)	>15	0	<1	1
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
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Beryllium	ppm	ASTM D5185(m)		0	0	0
•	ppm ppm	ASTM D5185(m) ASTM D5185(m)		0	0	0
-		. ,	limit/base			
Cadmium  ADDITIVES		ASTM D5185(m)	limit/base	0	0	0
Cadmium  ADDITIVES  Boron	ppm	ASTM D5185(m)  method		o current	0 history1	0 history2
Cadmium  ADDITIVES  Boron  Barium	ppm	ASTM D5185(m)  method  ASTM D5185(m)	250	current	0 history1 31	0 history2 35
Cadmium  ADDITIVES  Boron  Barium  Molybdenum	ppm ppm	ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)	250 10	0 current 38 0	0 history1 31 0	0 history2 35 0
Cadmium  ADDITIVES  Boron  Barium  Molybdenum  Manganese	ppm ppm ppm ppm	ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)	250 10	0 current 38 0 38	0 history1 31 0 39	0 history2 35 0 39
Cadmium  ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium	ppm ppm ppm ppm ppm	ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)	250 10 100	0 current 38 0 38	0 history1 31 0 39	0 history2 35 0 39
Cadmium  ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium	ppm ppm ppm ppm	ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)	250 10 100 450	0 current 38 0 38 <1 498	0 history1 31 0 39 0 496	0 history2 35 0 39 0 487
Cadmium  ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)  method  ASTM D5185(m)	250 10 100 450 3000	0 current 38 0 38 <1 498 1692	0 history1 31 0 39 0 496 1682	0 history2 35 0 39 0 487 1620
Cadmium  ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)  method  ASTM D5185(m)	250 10 100 450 3000 1150	0 current 38 0 38 <1 498 1692 711 840	0 history1 31 0 39 0 496 1682 725 841	0 history2 35 0 39 0 487 1620 711 825
Cadmium  ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)  method  ASTM D5185(m)	250 10 100 450 3000 1150	0 current 38 0 38 <1 498 1692 711	0 history1 31 0 39 0 496 1682 725	0 history2 35 0 39 0 487 1620 711
Cadmium  ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur	ppm	ASTM D5185(m)  method  ASTM D5185(m)	250 10 100 450 3000 1150	0 current 38 0 38 <1 498 1692 711 840 2034	0 history1 31 0 39 0 496 1682 725 841 2057	0 history2 35 0 39 0 487 1620 711 825 1995
Cadmium  ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINANTS	ppm	ASTM D5185(m)  method  ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250	0 current 38 0 38 <1 498 1692 711 840 2034 <1	0 history1 31 0 39 0 496 1682 725 841 2057 <1	0 history2 35 0 39 0 487 1620 711 825 1995 <1
Cadmium  ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINANTS  Silicon	ppm	ASTM D5185(m)  method  ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250	0 current 38 0 38 <1 498 1692 711 840 2034 <1 current	0 history1 31 0 39 0 496 1682 725 841 2057 <1 history1	0 history2 35 0 39 0 487 1620 711 825 1995 <1 history2
Cadmium  ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINANTS  Silicon  Sodium	ppm	ASTM D5185(m)  method  ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250 limit/base >25	0 current 38 0 38 <1 498 1692 711 840 2034 <1 current 3	0 history1 31 0 39 0 496 1682 725 841 2057 <1 history1 5	0 history2 35 0 39 0 487 1620 711 825 1995 <1 history2 5
Cadmium  ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINANTS  Silicon  Sodium  Potassium	ppm	ASTM D5185(m)  method  ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250    limit/base	0 current 38 0 38 <1 498 1692 711 840 2034 <1 current 3	0 history1 31 0 39 0 496 1682 725 841 2057 <1 history1 5	0 history2 35 0 39 0 487 1620 711 825 1995 <1 history2 5
Cadmium  ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINANTS  Silicon  Sodium  Potassium	ppm	ASTM D5185(m)  method  ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250    limit/base	0 current 38 0 38 <-1 498 1692 711 840 2034 <-1 current 3 2 <-1	0 history1 31 0 39 0 496 1682 725 841 2057 <1 history1 5 2 <1	0 history2 35 0 39 0 487 1620 711 825 1995 <1 history2 5 2 <1
Cadmium  ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINANTS  Silicon  Sodium  Potassium  Fuel  INFRA-RED	ppm	ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250  limit/base >25 >158 >20 >5	0	0 history1 31 0 39 0 496 1682 725 841 2057 <1 history1 5 2 <1 ▲ 5	0 history2 35 0 39 0 487 1620 711 825 1995 <1 history2 5 2 <1 <1.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Fuel	ppm	ASTM D5185(m)  method  ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250  limit/base >25 >158 >20 >5  limit/base >3	0	0 history1 31 0 39 0 496 1682 725 841 2057 <1 history1 5 2 <1 ▲ 5 history1	0 history2 35 0 39 0 487 1620 711 825 1995 <1 history2 5 2 <1 <1.0 history2



# **OIL ANALYSIS REPORT**





CALA ISO 17025:2017 Accredited Laboratory

Laboratory

Sample No. Lab Number : 02628355 Unique Number : 5761487

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : WC0925833 : 12 Apr 2024

Received Tested

: 15 Apr 2024 Diagnosed Test Package : MOB 1 ( Additional Tests: PercentFuel )

: 15 Apr 2024 - Wes Davis

Agnico Eagle Canada 1350 Government Rd. W, MACASSA COMPLEX Kirkland Lake, ON CA P2N 3J1

Contact: Mike Campbell mike.campbell@agnicoeagle.com

T: (705)567-5208 F: (705)567-5221

To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.

Validity of results and interpretation are based on the sample and information as supplied.

Contact/Location: Mike Campbell - KIR370KIR