

COMMENTS

Report of the Month

Check out the oil from a 1936 Cat bulldozer! To learn where the elements are coming from, <u>click here</u> and scroll down.

MAKE/MODEL:	Cat	D4
FUEL TYPE: D	iesel	
ADDITIONAL INFO:		1936 Cat RD-4 Bulldozer/Crawler

OIL TYPE & GRADE: Diesel Engine Oil OIL USE INTERVAL: Hours

Holy cow, that YouTube video was wild! The engine in this rescued Cat doesn't look great - as expected for oil that's been sitting the better part of 50 years. We put up averages for Cat's D4 engine though that's not likely an exact match for this engine type. This is a lot of metal in comparison, but what would be really interesting is the next sample - does wear improve? Aluminum (pistons) isn't bad, but iron (cylinders/shafts), copper (brass/bronze parts), lead (bearings) are high. Coolant is present (sodium/potassium) and 3.5% fuel. The TBN is low at 1.6.

	MI/HR on Oil								
	MI/HR on Unit	8,100	UNIT / LOCATION						UNIVERSAL
	Sample Date	4/10/2022	AVERAGES	in Mare				Sec. 1	AVERAGES
	Make Up Oil Added					the offer at	77.		
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ELEMENTS	POTASSIUM	19				1800 15 M	Call Starting		2
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Μ	SILICON	11							12
<u> </u>	SODIUM	25				-			11
	CALCIUM	2509						T	2063
	MAGNESIUM	13							326
	PHOSPHORUS	447							1030
	ZINC	384		6.	Party Print Parkan				1188
	BARIUM	496		FIRST	Cobbiel	THE REAL PROPERTY OF			1
	Values								
			Should Be*		1202			And the second second	-
	SUS Viscosity @ 210°F	63.6				1:	752	NOT THE REAL	
	cSt Viscosity @ 100°C	11.22		Selles 1	The second second	A second second			
IES	Flashpoint in °F	380	>415			1 attended	Carlos I		
ROPERT	Fuel %	3.5	<2.0			11/20		- Aller	
	Antifreeze %	?	0.0	and the second			A LES STREAM		
	Water %	POS	0.0		A PARTIE		1 2 (O belle)	A AND A A	
	Insolubles %	0.2	<0.6	and the second sec	- 35	A P - 1	/		
	TBN	1.6	>1.0		Alection	C. C.			
	TAN								
	ISO Code								
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We left the comments on this sample since they're pretty self-explanatory. The owner told us, "This oil came from a longneglected 1936 Caterpillar RD-4 bulldozer/crawler. This machine was rescued from its 40-50 year resting place in a hedgerow in South Dakota and is undergoing a complete restoration. To the best of our knowledge, the machine was used as an agricultural crawler from 1937-1970 when it was parked, and has been sitting ever since. The owner and I thought it would be interesting to get samples on the lubricants in the tractor at the time of rescue." Note that the additive package is quite different from what you find in engine oil nowadays. This video shows the pan coming off and gives us a good look inside the engine. The whole thing is interesting, but to see the pan come off forward to about 12 min: https://youtu.be/R-bf0W6M5RU