



Report of the Month

This 2014 Ram 1500 had a problem. What was it?

To learn where the elements are coming from, [click here](#) and scroll down.

UNIT	MAKE/MODEL: VM Motori 3.0L DOHC V-6 EcoDiesel	OIL TYPE & GRADE: Mobil Delvac 1 ESP 5W/40
	FUEL TYPE: Diesel	OIL USE INTERVAL: 1,762 Miles
	ADDITIONAL INFO:	

COMMENTS	DAN: This sample is a really good reminder about how much "stuff" (metal, contamination) carries over in the engine when you do an oil change. There's still a little extra potassium in your Ram's engine oil, and we're pretty sure it's just lingering from before the EGR work was done. This could be a slight ongoing problem, we suppose, but given what we know about the carryover stuff, we kind of doubt it. Wear looks a whole lot better and is still progressing too. If you want to run this oil a little longer, you probably could. But the safer bet would be to drain it.
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ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	1,762	UNIT / LOCATION AVERAGES	1,750	8,000	UNIVERSAL AVERAGES
	MI/HR on Unit	135,318		133,560	131,500	
	Sample Date	11/28/2021		6/3/2021	3/23/2021	
	Make Up Oil Added	0 qts		0 qts	0 qts	
ALUMINUM	4	4	5	18	5	
CHROMIUM	0	0	1	3	1	
IRON	9	9	13	55	23	
COPPER	1	1	2	5	2	
LEAD	0	0	0	0	0	
TIN	0	0	0	0	0	
MOLYBDENUM	41	41	1	6	17	
NICKEL	0	0	0	1	0	
MANGANESE	0	0	0	1	0	
SILVER	0	0	1	1	1	
TITANIUM	0	0	0	1	1	
POTASSIUM	132	132	488	2073	13	
BORON	97	97	9	31	94	
SILICON	10	10	24	14	11	
SODIUM	10	10	42	148	5	
CALCIUM	1126	1126	2044	1924	1747	
MAGNESIUM	807	807	21	87	240	
PHOSPHORUS	1077	1077	883	980	911	
ZINC	1243	1243	955	1030	1047	
BARIUM	0	0	0	0	0	

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	68.6	66-78	74.5	73.9
	cSt Viscosity @ 100°C	12.59	11.9-15.3	14.13	13.97
Flashpoint in °F	475	>410	445	450	
Fuel %	<0.5	<2.0	<0.5	<0.5	
Antifreeze %	POS	0.0	0.08	0.30	
Water %	0.0	<0.1	0.0	0.0	
Insolubles %	0.2	<0.6	0.2	0.3	
TBN					
TAN					
ISO Code					

As Luke referred to in his comments, Chrysler recalled some 2014-2019 Ram 1500s for an EGR cooler problem that causes a coolant leak. After receiving his first report in March 2021, the owner wrote in: "Thank you very much for the in-depth analysis. I got the truck to the dealership and they found that the EGR cooler was bad, and replaced it. They said it was full of coolant!"

His subsequent reports show this Ram improving significantly. The level of coolant drops in his next two samples, and wear levels come down to normal levels. Engine saved!