Lubricant Analysis Report

Cummins Sales and Service

North America: +1-866-211-7420

0	1	2	3	4
NORMAL		ABNORMAL		CRITICAL

Overall report severity based on comments.

Account Information	Component Information	Sample Information
	Component ID: 22 RAM	Tracking Number: 21111G52817
	Secondary ID: 2022 Ram 2500	Lab Number: S-237063
	Component Type: DIESEL ENGINE	Lab Location: Salt Lake City
	Manufacturer: CUMMINS	Data Analyst: JAS
	Model: 6.7L TURBO	Sampled: 08-Oct-2024
	Application: AUTOMOTIVE	Received: 10-Oct-2024
	Sump Capacity: 12 qt	Completed: 11-Oct-2024
Filter Information	**Miscellaneous Information**	**Product Information**
Filter Type: FULLFLOW		Product Manufacturer: AMSOIL
Micron Rating: 20		Product Name: ADO HEAVY DUTY SYN DIESEL OIL
		Viscosity Grade: SAE 5W40

Comments Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. COPPER is most likely LEACHING into the oil via the OIL COOLER core tubing. This typically DOES NOT REQUIRE MAINTENANCE ACTION unless there is evidence of COOLANT in the oil. Iron is at a MINOR LEVEL. IRON SOURCES in engines can be cylinder liners, iron pistons, hardened steel camshafts, crankshafts, gears, hardened rocker arms, valve bridges,alloyed steel cam follower rollers, etc. Lubricant and filter change acknowledged.

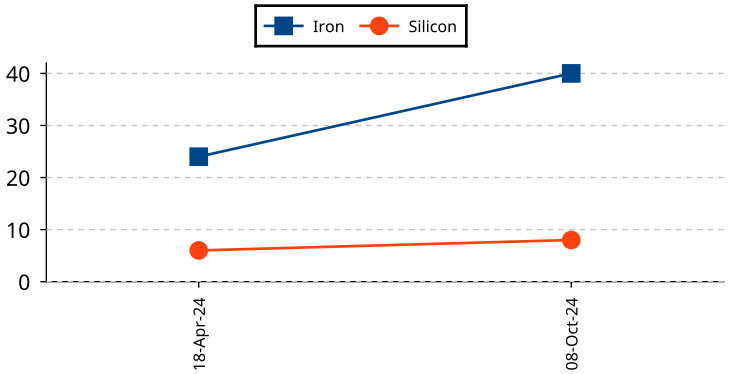
	Wear Metals (ppm)										Contaminant Metals (ppm)			Multi-Source Metals (ppm)						Additive Metals (ppm)				
Sample #	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
2	40	1	0	2	254	0	0	0	1	0	8	3	1	0	3	1	1	0	5	31	2403	0	965	1125
1	24	0	0	1	16	0	0	0	0	0	6	2	2	0	4	1	0	0	12	32	2247	0	938	1044

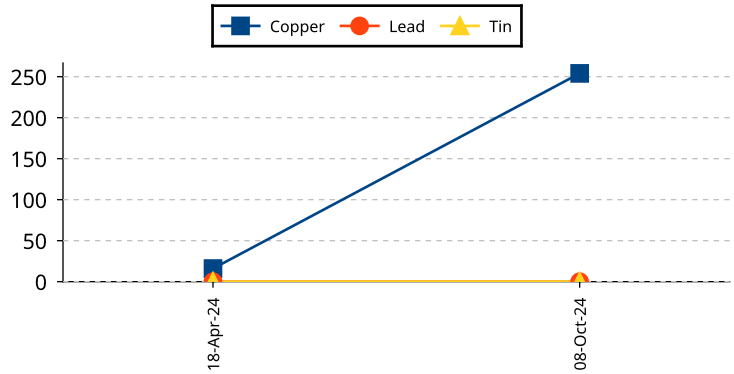
	Sample Information							Contaminants			Fluid Properties					
Sample #	Date Sampled	Date Received	Lube Time mi	Unit Time mi	Lube Change	Lube Added qt	Filter Change	Fuel Dilution %	Soot %	Water %	Viscosity 40°C cSt	Viscosity 100 °C cSt	Acid Number mg KOH / g	Base No. D4739 mg KOH / g	Oxidation abs / cm	Nitration abs / 0.1mm
2	08-Oct-2024	10-Oct-2024	5400	14715	Yes	0	Yes	<2 - Estimate	0.1 - E2412	<.1 - FTIR		13.5		4.01	10	9
1	18-Apr-2024	23-Apr-2024	2391	11706	No	0	No	<2 - Estimate	<.1	<.1 - FTIR		13.8		5.30	8	6

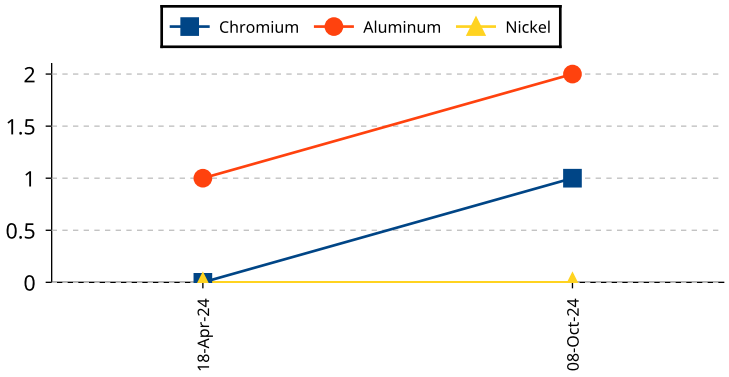
	Particle Count (particles/mL)										Additional Testing
Sample #	ISO Code Based On 4/6/14	> 4 particles / mL	> 6 particles / mL	> 10 particles / mL	> 14 particles / mL	> 21 particles / mL	> 38 particles / mL	> 70 particles / mL	> 100 particles / mL	Test Method	
2	/ /										
1	/ /										

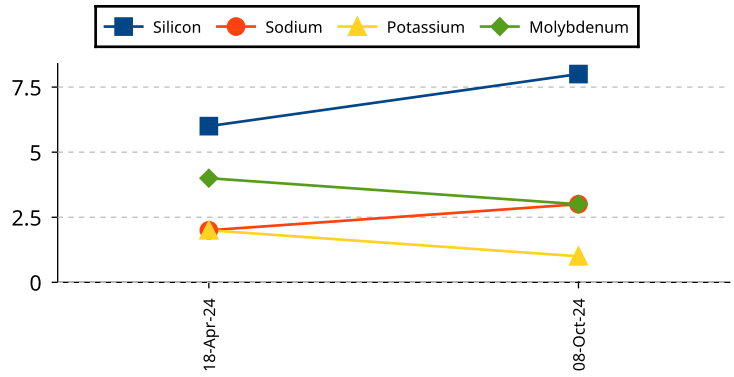
Comments are advisory only and are based on the sample information provided by the customer being valid. Results related only to the items tested. Missing fluid or component information limits the evaluation. No warranty is expressed or implied. Measurement uncertainty available upon request.

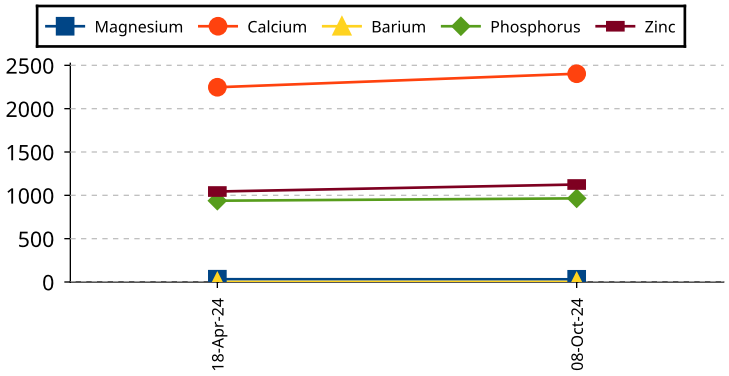
Historical Comments	1	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Magnesium is slightly high for this lubricant.

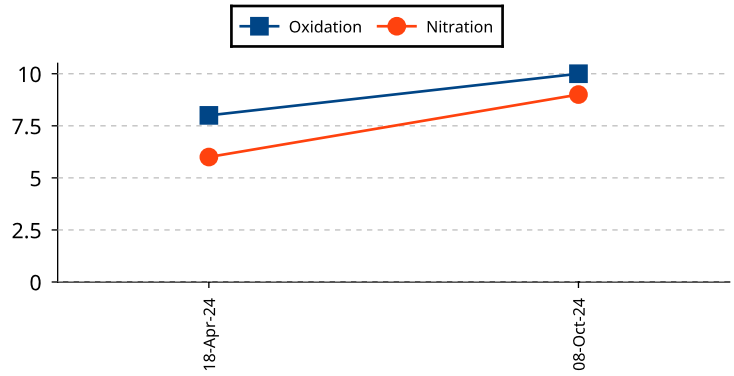

Iron
Silicon
40
30
20
10
0
18-Apr-24
08-Oct-24

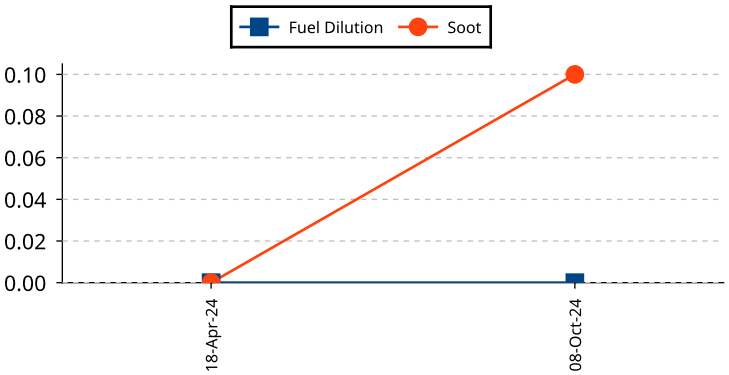

Copper
Lead
Tin
250
200
150
100
50
0
18-Apr-24
08-Oct-24

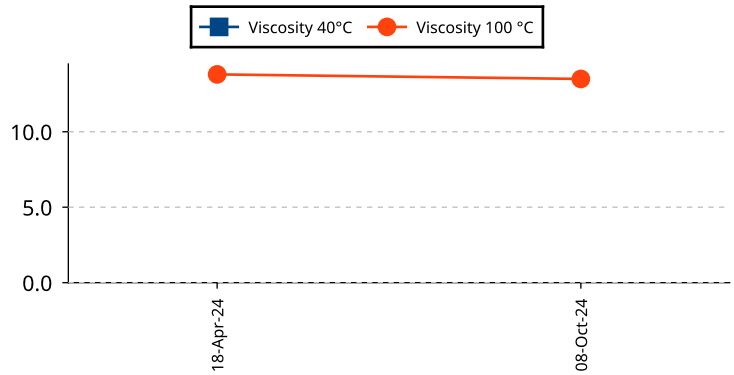

Chromium
Aluminum
Nickel
2
1.5
1
0.5
0
18-Apr-24
08-Oct-24

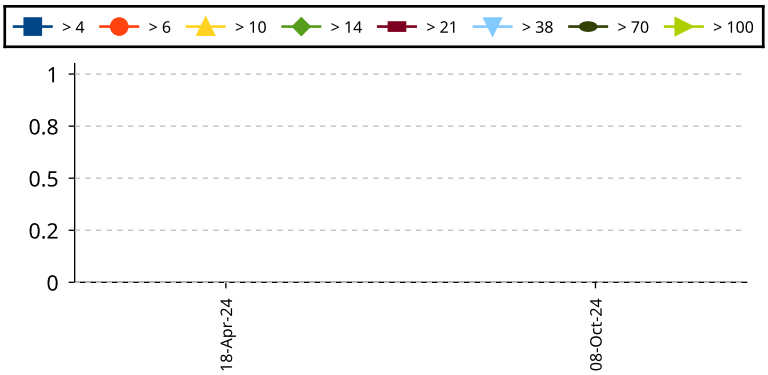

Silicon
Sodium
Potassium
Molybdenum
7.5
5
2.5
0
18-Apr-24
08-Oct-24

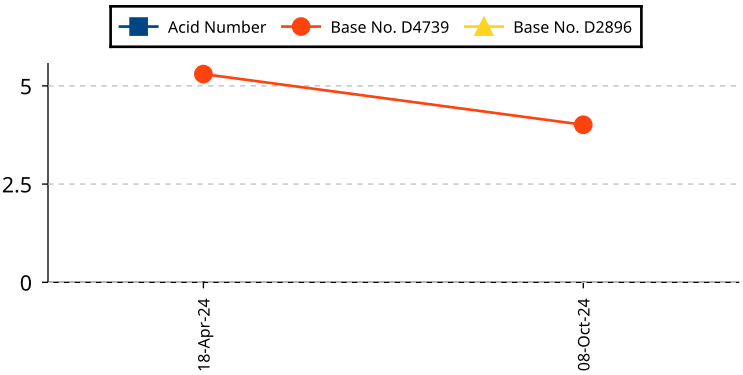

Magnesium
Calcium
Barium
Phosphorus
Zinc
2500
2000
1500
1000
500
0
18-Apr-24
08-Oct-24

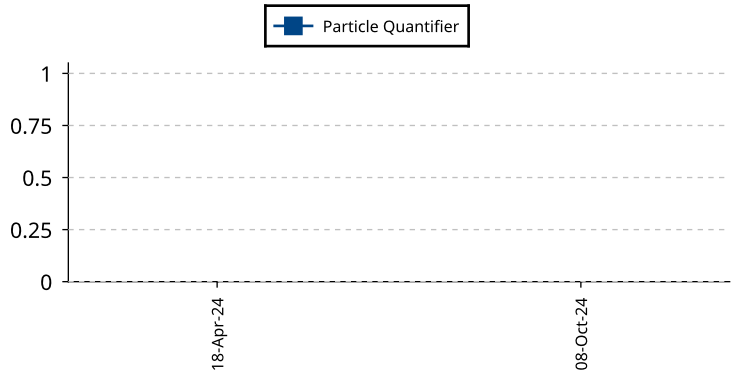

Oxidation
Nitration
10
7.5
5
2.5
0
18-Apr-24
08-Oct-24


Fuel Dilution
Soot
0.10
0.08
0.06
0.04
0.02
0.00
18-Apr-24
08-Oct-24


Viscosity 40°C
Viscosity 100 °C
10.0
5.0
0.0
18-Apr-24
08-Oct-24


> 4
> 6
> 10
> 14
> 21
> 38
> 70
> 100
1
0.8
0.5
0.2
0
18-Apr-24
08-Oct-24


Acid Number
Base No. D4739
Base No. D2896
5
2.5
0
18-Apr-24
08-Oct-24


Particle Quantifier
1
0.75
0.5
0.25
0
18-Apr-24
08-Oct-24