Lubricant Analysis Report

Oil Analyzers INC.

North America: +1-877-458-3315

0	1	2	3	4
NORMAL		ABNORMAL		CRITICAL

Overall report severity based on comments.

Account Information	Component Information	Sample Information
	Equipment ID: 2018 JEEP E Secondary ID: Component Type: UNLEADED GASOLINE ENGINE Manufacturer: JEEP Model: GRAND CHEROKEE Application: UNKNOWN Sump Capacity: 6 qt	Tracking Number: 25139L26692 Lab Number: I-222990 Lab Location: Indianapolis Data Analyst: FLG Sampled: 17-Dec-2025 Submitted: 17-Dec-2025 Received: 19-Dec-2025 Completed: 23-Dec-2025
Filter Information	**Miscellaneous Information**	**Product Information**
Filter Type: Information Requested Micron Rating: 0		Product Manufacturer: RED LINE Product Name: HIGH PERFORMANCE MOTOR OIL Viscosity Grade: SAE 0W40

Comments	Check for source of FUEL LEAK. Fuel is at a SIGNIFICANT LEVEL. Fuel dilution may be caused by component faults related to injectors, ignition/timing or excessive blow-by. Additional causes include heavy throttle application, engine lugging, frequent short trips, and excessive idling. FUEL DILUTION reduces the viscosity of the lubricant which decreases FILM STRENGTH and LUBRICITY and may lead to increased wear. Please provide the APPLICATION (transportation, off-highway, gas/oil field, industrial, marine, mining, automotive, etc.) for a more thorough analysis. Lubricant and filter change acknowledged. Your note was taken into consideration.

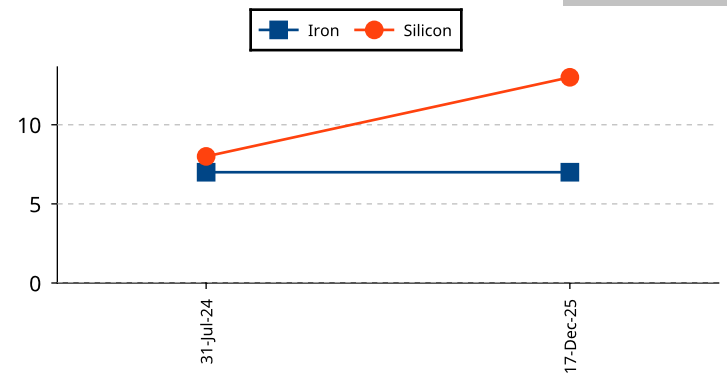
	Wear Metals (ppm)										Contaminant Metals (ppm)			Multi-Source Metals (ppm)						Additive Metals (ppm)				
Sample #	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
1	7	1	0	2	1	0	0	0	0	0	8	4	0	0	240	0	0	0	78	513	1349	0	694	786
2	7	1	0	6	2	0	0	0	0	0	13	9	8	0	396	0	0	0	82	277	2020	0	1028	1118

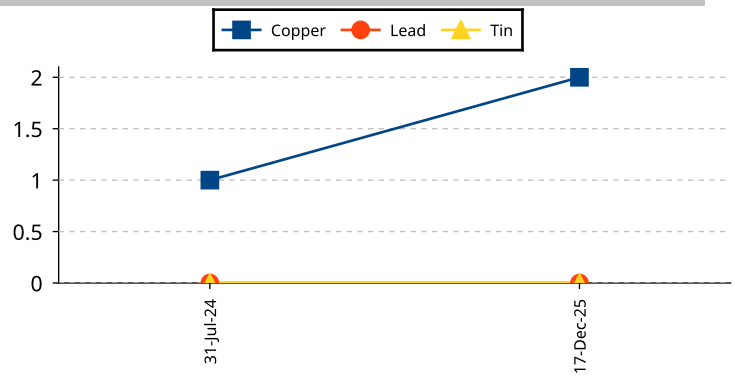
	Sample Information							Contaminants			Fluid Properties					
Sample #	Date Sampled	Date Received	Lube Time mi	Unit Time mi	Lube Change	Lube Added qt	Filter Change	Fuel Dilution %	Soot %	Water %	Viscosity 40°C cSt	Viscosity 100 °C cSt	Acid Number mg KOH / g	Base No. D4739 mg KOH / g	Oxidation abs / cm	Nitration abs / 0.1mm
1	31-Jul-2024	02-Aug-2024	2000	95469	Yes	0	Yes	1.5 - GC	<.1	<.1 - FTIR		8.0		4.23	8	8
2	17-Dec-2025	19-Dec-2025	3250	104973	Yes	0	Yes	3.6 - GC	<.1 - E2412	<.1 - FTIR		12.9		3.65	85	13

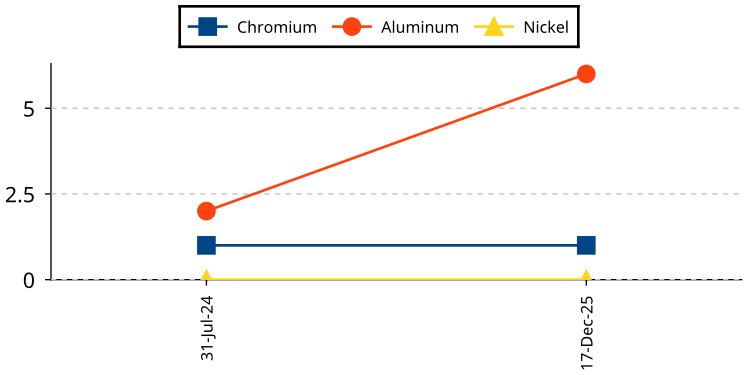
	Particle Count (particles/mL)										Additional Testing
Sample #	ISO Code Based On 4/6/14	> 4 particles / mL	> 6 particles / mL	> 10 particles / mL	> 14 particles / mL	> 21 particles / mL	> 38 particles / mL	> 70 particles / mL	> 100 particles / mL	Test Method	
1	/ /										
2	/ /										

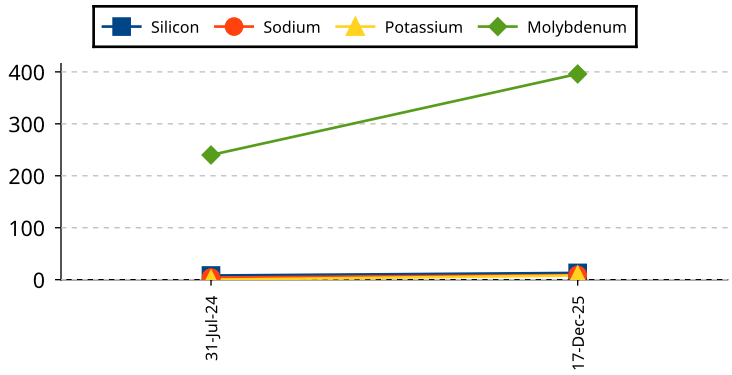
Comments are advisory only and are based on the sample information provided by the customer being valid. Results related only to the items tested. Missing fluid or component information limits the evaluation. No warranty is expressed or implied. Measurement uncertainty available upon request.

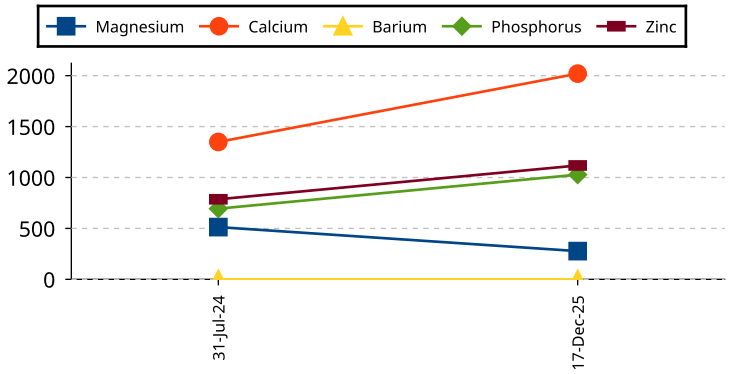
Historical Comments	1	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. FUEL DILUTION is at a MINOR LEVEL. Please provide missing application and sump information. Lubricant and filter change acknowledged.

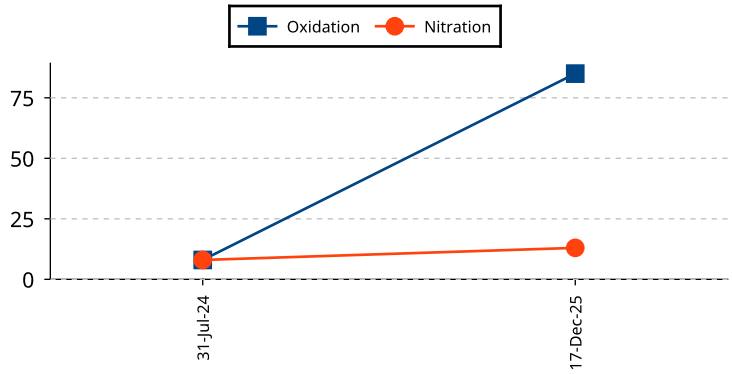

Iron
Silicon
10
5
0
31-Jul-24
17-Dec-25

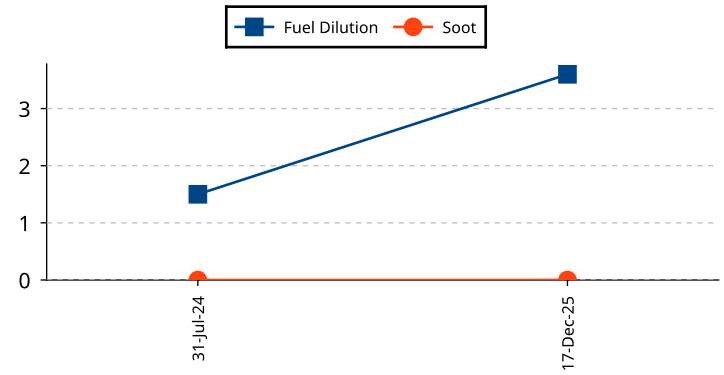

Copper
Lead
Tin
2
1.5
1
0.5
0
31-Jul-24
17-Dec-25

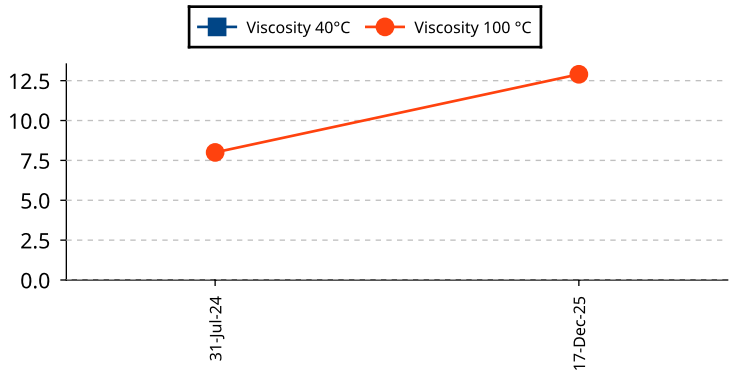

Chromium
Aluminum
Nickel
5
2.5
0
31-Jul-24
17-Dec-25

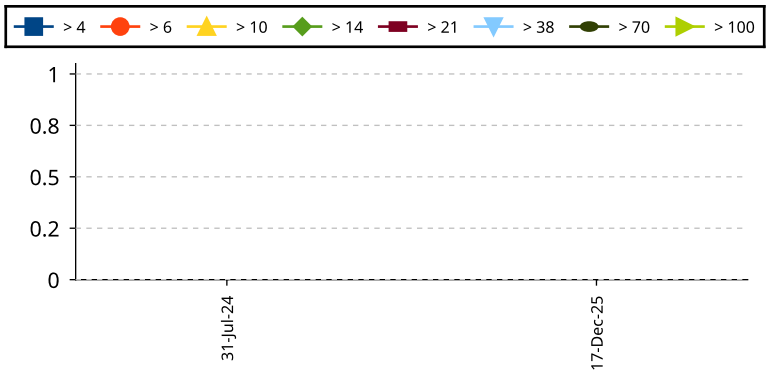

Silicon
Sodium
Potassium
Molybdenum
400
300
200
100
0
31-Jul-24
17-Dec-25

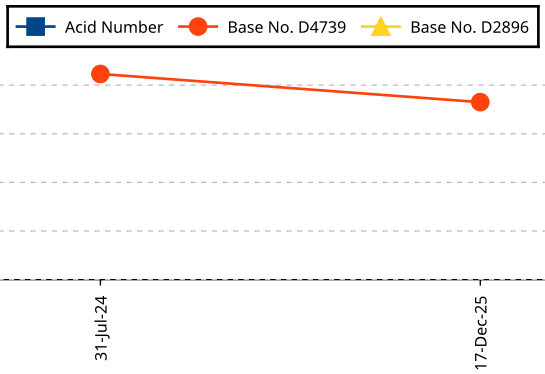

Magnesium
Calcium
Barium
Phosphorus
Zinc
2000
1500
1000
500
0
31-Jul-24
17-Dec-25


Oxidation
Nitration
75
50
25
0
31-Jul-24
17-Dec-25


Fuel Dilution
Soot
3
2
1
0
31-Jul-24
17-Dec-25


Viscosity 40°C
Viscosity 100 °C
12.5
10.0
7.5
5.0
2.5
0.0
31-Jul-24
17-Dec-25


> 4
> 6
> 10
> 14
> 21
> 38
> 70
> 100
1
0.8
0.5
0.2
0
31-Jul-24
17-Dec-25


Acid Number
Base No. D4739
Base No. D2896
4
3
2
1
0
31-Jul-24
17-Dec-25