

# Lubricant Analysis Report

North America: +1-877-808-3750  
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0	1	2	3	4
NORMAL		ABNORMAL		CRITICAL

Overall report severity based on comments.

Account Information		Component Information		Sample Information	
Account Number: 122750-0001-0000 Company Name: ARCH OIL COMMENTS Contact: Address:  Phone Number:		Component ID: #5909   MERCEDES BENZ S212 Secondary ID: 220CDI, 223HP Component Type: DIESEL ENGINE Manufacturer: MERCEDES BENZ Model: <a href="#">Information Requested</a> Application: AUTOMOTIVE Sump Capacity: 6 L		Tracking Number: D2330149807 Lab Number: Z-361203 Lab Location: Poznan Data Analyst: JUK Sampled: 02-Nov-2023 Submitted: 28-Oct-2023 Received: 07-Nov-2023 Completed: 10-Nov-2023	
Filter Information		Miscellaneous Information		Product Information	
Filter Type: FULLFLOW Micron Rating: 0		Miscellaneous: #8296, oils mix 2.5L Castrol EDGE 0W-40 R		Product Manufacturer: RAVENOL Product Name: EURO VI TRUCK Viscosity Grade: SAE 10W40	
Comments	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Viscosity is SLIGHTLY LOW. Causes include contamination, incorrectly identified viscosity grade, or adding a different viscosity grade to the component. TITANIUM SOURCES may be alloy metal from rolling element type BEARINGS, SHAFTS, as a contaminant from coatings/paint, or as a lubricant additive. Please provide COMPONENT MODEL number to compare data to the correct standards for this component.				

	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	21	1	0	1	3	0	0	0	0	0	11	3	0	0	84	1	0	0	321	308	2286	1	867	977
2	41	2	3	10	6	0	0	0	0	0	16	2	3	0	67	0	0	0	254	264	2366	0	881	998
3	24	1	1	5	3	0	0	0	0	0	8	2	4	5	73	1	0	0	311	204	2053	0	1030	1178

Sample #	Sample Information							Contaminants			Fluid Properties					
	Date Sampled	Date Received	Lube Time	Unit Time	Lube Change	Lube Added	Filter Change	Fuel Dilution	Soot	Water	Viscosity 40°C	Viscosity 100 °C	Acid Number	Base No. D4739	Oxidation	Nitration
			km	km		L		%	%	%	cSt	cSt	mg KOH / g	mg KOH / g	abs / cm	abs / 0.1mm
1	17-Jun-2022	08-Dec-2022	9700	131300	Yes	0	Yes	1.4 - GC	0.2 - E2412	<.1 - FTIR		11.2	2.31	6.91	11	8
2	15-Apr-2023	05-May-2023	10808	142108	No	0	No	1.6 - GC	0.1 - E2412	<.1 - FTIR	66.7	11.0	2.36	6.98	12	8
3	02-Nov-2023	07-Nov-2023	10000	153500	Yes	0	Yes	1.1 - GC	0.1 - E2412	<.1 - FTIR	74.0	12.2	3.53	7.18	15	7

Particle Count (particles/mL)											Additional Testing	
Sample #	ISO Code	> 4	> 6	> 10	> 14	> 21	> 38	> 70	> 100	Test Method	Viscosity Index	
	Based On 4/6/14	particles / mL	particles / mL	particles / mL	particles / mL	particles / mL	particles / mL	particles / mL	particles / mL		Index Number	
1	/ /											
2	/ /										157	
3	/ /										163	

Comments are advisory only and are based on the assumption that the sample and data submitted are valid. Results relate 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. Viscosity is MODERATELY LOW. Causes include contamination, incorrectly identified viscosity grade, or adding a different viscosity grade to the component. Please provide COMPONENT MODEL number to compare data to the correct standards for this component. Lubricant and filter change acknowledged.
	2	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Cylinder region metals (pistons, rings, liners etc.) are at a MODERATE LEVEL; Viscosity is MODERATELY LOW. Causes include contamination, incorrectly identified viscosity grade, or adding a different viscosity grade to the component. Aluminum is at a MINOR LEVEL; ALUMINUM sources in ENGINES include pistons, block and components (intake manifold, head, bearing caps), thrust bearings, main/rod bearing overlay or backing, alumina silica, or contamination from grease. Please provide COMPONENT MODEL number to compare data to the correct standards for this component.

