

OIL ANALYSIS REPORT

Sample Rating Trend

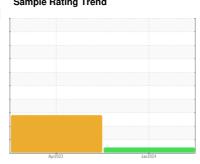
VISCOSITY

INTERNATIONAL 441418

Component

Diesel Engine

MOBIL DELVAC 1300 SUPER15W40 (20 QTS)





Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the

▲ Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

TS)			Apr2023	Jan 2024		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		IL0030573	IL0026564	
Sample Date		Client Info		04 Jan 2024	27 Apr 2023	
Machine Age	hrs	Client Info		32269	0	
Oil Age	hrs	Client Info		32269	0	
Oil Changed		Client Info		N/A	N/A	
Sample Status				ATTENTION	ABNORMAL	
CONTAMINATION	٧	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	53	68	
Chromium	ppm	ASTM D5185m	>20	3	4	
Nickel	ppm	ASTM D5185m	>2	0	<1	
Titanium	ppm	ASTM D5185m	>2	<1	<1	
Silver	ppm	ASTM D5185m	>2	0	0	
Aluminum	ppm	ASTM D5185m	>20	74	89	
Lead	ppm	ASTM D5185m	>40	0	<1	
Copper	ppm	ASTM D5185m	>330	10	74	
Tin	ppm	ASTM D5185m	>15	<1	<1	
Vanadium	ppm	ASTM D5185m		<1	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	ASTM D5185m	0	current 7	24	history2
Boron Barium	ppm			7 <1	•	,
Boron	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	7 <1 63	24 2 53	
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	7 <1 63 2	24 2 53 5	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0	7 <1 63 2 974	24 2 53 5 761	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	7 <1 63 2 974 1041	24 2 53 5 761 1208	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	7 <1 63 2 974 1041 1005	24 2 53 5 761 1208 653	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	7 <1 63 2 974 1041 1005 1214	24 2 53 5 761 1208 653 880	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	7 <1 63 2 974 1041 1005	24 2 53 5 761 1208 653	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	7 <1 63 2 974 1041 1005 1214	24 2 53 5 761 1208 653 880 2270 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0	7 <1 63 2 974 1041 1005 1214 3246 current	24 2 53 5 761 1208 653 880 2270 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 	7 <1 63 2 974 1041 1005 1214 3246 current 11	24 2 53 5 761 1208 653 880 2270 history1 26 4	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 	7 <1 63 2 974 1041 1005 1214 3246 current 11 3 186	24 2 53 5 761 1208 653 880 2270 history1 26 4 283	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 	7 <1 63 2 974 1041 1005 1214 3246 current 11	24 2 53 5 761 1208 653 880 2270 history1 26 4	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 	7 <1 63 2 974 1041 1005 1214 3246 current 11 3 186	24 2 53 5 761 1208 653 880 2270 history1 26 4 283	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 limit/base >25 >20 >3.0	7 <1 63 2 974 1041 1005 1214 3246 current 11 3 186 <1.0	24 2 53 5 761 1208 653 880 2270 history1 26 4 283 2.5	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 limit/base >25 >20 >3.0	7 <1 63 2 974 1041 1005 1214 3246 current 11 3 186 <1.0 current	24 2 53 5 761 1208 653 880 2270 history1 26 4 283 2.5 history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 0 limit/base >25 >20 >3.0 limit/base >6	7 <1 63 2 974 1041 1005 1214 3246 current 11 3 186 <1.0 current 0.4	24 2 53 5 761 1208 653 880 2270 history1 26 4 283 2.5 history1 0.4	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	0 0 0 0 0 limit/base >25 >20 >3.0 limit/base >6 >20	7 <1 63 2 974 1041 1005 1214 3246 current 11 3 186 <1.0 current 0.4 8.0	24 2 53 5 761 1208 653 880 2270 history1 26 4 283 2.5 history1 0.4 10.2	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	0 0 0 0 0 limit/base >25 >20 >3.0 limit/base >6 >20 >30	7 <1 63 2 974 1041 1005 1214 3246 current 11 3 186 <1.0 current 0.4 8.0 20.6	24 2 53 5 761 1208 653 880 2270 history1 26 4 283 2.5 history1 0.4 10.2 19.4	history2 history2



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