

MILLERCARE SAMPLE ANALYSIS

Customer: Richard Sharp

Address: Hayton

Contact: Richard Sharp

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Oil Condition



Registration Number

NH05 LEF

Vehicle Make

Renault

Vehicle Model

Clio

Oil Type

Engine oil

Product Name

5w40 engine oil

Date of Sampling

22-Jun-24

Vehicle Mileage

Mileage on this oil

~1500

Lab Sample Number

59027

Date Received in Lab

01-Jul-24

Appearance

Brown, Clear

Density @ 15.5°C (g/ml)

0.832

Viscosity @ 100°C (cSt)

11.6

Viscosity @ 40°C (cSt)

Calcium (%)

0.141

Zinc (%)

0.097

Sulphur (%)

Phosphorus (%)

TBN mgKOH/g)

Nitration

n/a

Oxidation

n/a

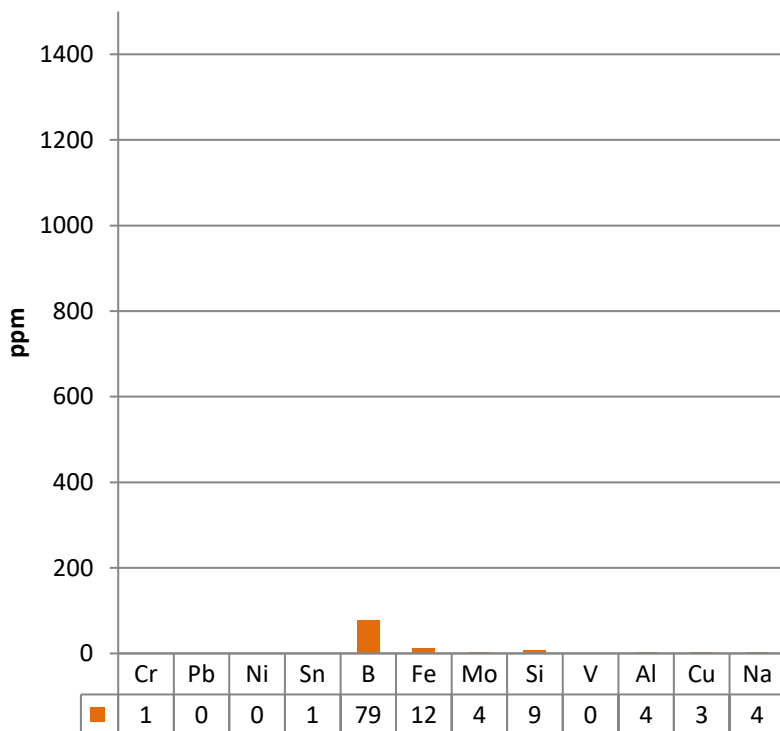
Water (ppm)

Fuel Dilution (%)

Soot (%)

0.1

Wear Metals



Diagnostic/Action

The viscosity is acceptable. Wear Metals are at a satisfactory level.

Report Date:

05/07/2024

Analyst:

Mike Winn

Comments are advisory only and based on information received

Source of Metals

Metal	Engine	Transmission	Gear	Hydraulic
Chrome (Cr)	Rings, Liners, Exhaust Valves, Shaft Plating, Stainless Steel Alloy	Roller Bearings	Roller Bearings	Shaft
Lead (Pb)	Main and Rod Bearings, Bushings, Lead Solder	Bushings (Bronze Alloy)	Bushings (Bronze Alloy)	Bushings (Bronze Alloy)
Nickel (Ni)	Valve Plating, Steel Alloy from Crankshaft, Camshaft	Steel Alloy from Roller Bearings and Shaft	Steel Alloy from Roller Bearings and Shaft	N/A
Tin (Sn)	Piston Flashing, Bearing Overlay, Bronze Alloy, Babbit Metal along with Copper and Lead	Bearing Cage Metal	Bearing Cage Metal, Lube Additive	N/A
Boron (B)	Additive, internal coolant leak, brake fluid contamination	N/A	N/A	N/A
Iron (Fe)	Cylinder Liners, Rings, Gears, Crankshaft, Camshaft, Valve Train, Oil Pump Gear, Gudgeon Pins	Gears, Disks, Housing, Bearings, Brake Bands, Shaft	Gears, Bearings, Shaft, Housing	Rods, Cylinders, Gears
Molybdenum (Mo)	Ring Plating, Lube Additive, Coolant Inhibitor	Lube Additive, Coolant Inhibitor	Lube Additive, Coolant Inhibitor, Grease Additive	Lube Additive, Coolant Inhibitor
Silicon (Si)	Dirt, Seals and Sealants, Coolant Inhibitor, Lube Additive (15 ppm or less)	Dirt, Seals and Sealants, Coolant Inhibitor, Lube Additive (15 ppm or less)	Dirt, Seals and Sealants, Coolant Inhibitor, Lube Additive (15 ppm or less)	Dirt, Seals and Sealants, Coolant Inhibitor, Lube Additive (15 ppm or less)
Vanadium (V)	From Heavy Bunker Type Diesel Fuels	N/A	N/A	N/A
Aluminum (Al)	Pistons, Thrust Bearings, Turbo Bearings, Main Bearings (Cat.)	Pumps, Thrust Washers	Pumps, Thrust Washers	Bearings, Thrust Plates
Copper (Cu)	Lube Coolers, Main and Rod Bearings, Bushings, Turbo Bearings, Lube Additive	Brushings,Clutch Plates (Auto / Powershift), Lube Collers	Bushings, Thrust Plates	Bushings, Thrust Plates, Lube Coolers
Sodium (Na)	Lube Additive, Coolant Inhibitor, Salt Water Contamination, Wash Detergents	Lube Additive, Coolant Inhibitor, Salt Water Contamination, Wash Detergents	Lube Additive, Salt Water Contamination, Airborne Contaminate	Lube Additive, Coolant Inhibitor, Salt Water Contamination, Airborne Contaminate
Calcium (Ca)	Detergent Dispersant Additive, Airborne Contaminant at some sites, Contaminant from Water	Detergent Dispersant Additive, Airborne Contaminant at some sites, Contaminant from Water	Detergent Dispersant Additive, Airborne Contaminant at some sites, Contaminant from Water	Detergent Dispersant Additive, Airborne Contaminant at some sites, Contaminant from Water
Zinc (Zn)	Anti-wear additives, brass alloys, galvanizing, bearings	Anti-wear additives, brass alloys, galvanizing, bearings	Anti-wear additives, brass alloys, galvanizing, bearings	Anti-wear additives, brass alloys, galvanizing, bearings