



OIL REPORT

LAB NUMBER: E17676

UNIT ID: MINI COOPER S

REPORT DATE: 6/25/2010

CLIENT ID: 41725

CODE: 20/286

PAYMENT: CC: MC

| | | |
|-------------|---|----------------------------------|
| UNIT | MAKE/MODEL: Cooper, Mini 1.6L 4-cyl Turbo | OIL TYPE & GRADE: Mobil 1 10W/30 |
| | FUEL TYPE: Gasoline (Unleaded) | OIL USE INTERVAL: 5,000 Miles |
| | ADDITIONAL INFO: | |

| | | |
|---------------|----------------------|----------------------------------|
| CLIENT | RICHARD SPERRY | PHONE: (443) 474-4713 |
| | 4727 BARTHOLOW RD | FAX: |
| | ELDERSBURG, MD 21784 | ALT PHONE: |
| | | EMAIL: richardsperry@comcast.net |

COMMENTS RICHARD: For a brand new engine wear looks pretty good. We usually see a lot more metal than this in a new engine, but we're not complaining. Universal averages show typical wear levels for this type of engine after about 7,600 miles on the oil. You ran 5,000 miles, and though wear was a little higher than average, it's probably due to the engine wearing in. The air and oil filters were up to the task, and the low viscosity isn't from fuel dilution so we don't think it's a problem. The TBN was 3.8 showing plenty of active additive left; less than 1.0 is too low. Try 7,000 next. Nice.

| ELEMENTS IN PARTS PER MILLION | MI/HR on Oil | 5,000 | UNIT / LOCATION AVERAGES | | | | | UNIVERSAL AVERAGES |
|--------------------------------------|-------------------|----------|---------------------------------|--|--|--|------|---------------------------|
| | MI/HR on Unit | 6,800 | | | | | | |
| | Sample Date | 06/11/10 | | | | | | |
| | Make Up Oil Added | 0 qts | | | | | | |
| ALUMINUM | 6 | 6 | | | | | 5 | |
| CHROMIUM | 1 | 1 | | | | | 1 | |
| IRON | 43 | 43 | | | | | 34 | |
| COPPER | 14 | 14 | | | | | 15 | |
| LEAD | 1 | 1 | | | | | 2 | |
| TIN | 0 | 0 | | | | | 0 | |
| MOLYBDENUM | 162 | 162 | | | | | 152 | |
| NICKEL | 1 | 1 | | | | | 1 | |
| MANGANESE | 7 | 7 | | | | | 7 | |
| SILVER | 0 | 0 | | | | | 0 | |
| TITANIUM | 0 | 0 | | | | | 0 | |
| POTASSIUM | 7 | 7 | | | | | 4 | |
| BORON | 62 | 62 | | | | | 55 | |
| SILICON | 17 | 17 | | | | | 14 | |
| SODIUM | 7 | 7 | | | | | 9 | |
| CALCIUM | 2181 | 2181 | | | | | 2219 | |
| MAGNESIUM | 210 | 210 | | | | | 179 | |
| PHOSPHORUS | 733 | 733 | | | | | 779 | |
| ZINC | 872 | 872 | | | | | 951 | |
| BARIUM | 0 | 0 | | | | | 0 | |

Values Should Be*

| | | | | | | | |
|-------------------|-----------------------|------|----------|--|--|--|--|
| PROPERTIES | SUS Viscosity @ 210°F | 55.4 | 58-68 | | | | |
| | cSt Viscosity @ 100°C | 8.88 | 9.7-12.7 | | | | |
| | Flashpoint in °F | 410 | >365 | | | | |
| | Fuel % | <0.5 | <2.0 | | | | |
| | Antifreeze % | 0.0 | 0.0 | | | | |
| | Water % | 0.0 | 0.0 | | | | |
| | Insolubles % | 0.3 | <0.6 | | | | |
| | TBN | 3.8 | | | | | |
| | TAN | | | | | | |
| | ISO Code | | | | | | |

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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