



OIL REPORT

LAB NUMBER:
 REPORT DATE: 4/10/2019
 CODE: 20/32

UNIT ID:
 CLIENT ID:
 PAYMENT: CC: MC

| | | |
|-------------|----------------------------------|--|
| UNIT | MAKE/MODEL: Lycoming O-540-J3C5D | OIL TYPE & GRADE: Phillips XC (A/C) 25W/60 |
| | FUEL TYPE: Gasoline (Leaded) | OIL USE INTERVAL: 17 Hours |
| | ADDITIONAL INFO: Cessna 182RG | |

| | |
|---------------|--|
| CLIENT | |
|---------------|--|

COMMENTS It's good that the oil filter was free of metal, but there's a lot of metal present in the oil. Aluminum shows piston wear and chrome is from rings. Iron shows a lot of steel wear. The fact that this was a short oil run compared to averages makes wear even higher on a per-hour basis. Universal averages show typical wear levels for this type of engine after about 35 hours on the oil. If the engine sat, corrosion is probably a factor. How were compressions? Was a borescope performed during the pre-buy? Check back in 10 hours.

| ELEMENTS IN PARTS PER MILLION | UNIT / LOCATION AVERAGES | | UNIVERSAL AVERAGES |
|-------------------------------|--------------------------|-----------|--------------------|
| | UNIT | LOCATION | |
| MI/HR on Oil | 17 | 2 | |
| MI/HR on Unit | 1,039 | 28 | |
| Sample Date | 4/3/2019 | 6/15/2006 | |
| Make Up Oil Added | | | |
| ALUMINUM | 42 | 27 | 7 |
| CHROMIUM | 12 | 9 | 5 |
| IRON | 208 | 144 | 29 |
| COPPER | 6 | 6 | 6 |
| LEAD | 6165 | 3393 | 5130 |
| TIN | 0 | 1 | 1 |
| MOLYBDENUM | 0 | 0 | 1 |
| NICKEL | 4 | 3 | 2 |
| MANGANESE | 2 | 1 | 0 |
| SILVER | 0 | 0 | 0 |
| TITANIUM | 0 | 0 | 0 |
| POTASSIUM | 0 | 0 | 1 |
| BORON | 0 | 0 | 1 |
| SILICON | 10 | 9 | 5 |
| SODIUM | 0 | 0 | 1 |
| CALCIUM | 8 | 5 | 21 |
| MAGNESIUM | 4 | 8 | 6 |
| PHOSPHORUS | 7 | 6 | 564 |
| ZINC | 5 | 4 | 5 |
| BARIUM | 0 | 0 | 0 |

Values Should Be*

| PROPERTIES | UNIT | LOCATION | UNIVERSAL |
|-----------------------|-------|-----------|-----------|
| SUS Viscosity @ 210° | 104.2 | 105-125 | 88.5 |
| cSt Viscosity @ 100°C | 21.34 | 21.5-26.3 | 17.61 |
| Flashpoint in °F | 465 | >465 | 465 |
| Fuel % | TR | <1.0 | <0.5 |
| Antifreeze % | - | - | - |
| Water % | 0.0 | 0.0 | 0.0 |
| Insolubles % | 0.5 | <0.6 | 0.3 |
| TBN | | | |
| TAN | | | |
| ISO Code | | | |

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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