

## OIL REPORT

LAB NUMBER: UNIT ID:
REPORT DATE: 11/1/2016 CLIENT ID:
CODE: 44/685 PAYMENT:

EQUIP. MAKE/MODEL: Toyota 1.8L 4-cyl (2ZR-FXE)

FUEL TYPE: Gasoline (Unleaded)

ADDITIONAL INFO:

OIL TYPE & GRADE: Mobil 1 EP 0W/20

OIL USE INTERVAL: 19,405 Miles

PHONE: FAX:

ALT PHONE: EMAIL:

OMMENTS

This was the longest run yet for your Prius, and it looks like it handled it very well. There isn't any sign of poor wear in these numbers, and we're extremely impressed to find iron just 2 ppm higher than the universal averages value. Keep ir mind that those averages are based on a much shorter interval of about 9,400 miles, so after 19,405 miles on this fill, it's safe to say this engine is wearing among the best 2ZR-FXE engines we've tested. The TBN shows enough active additive to try 21,000 miles or so, if you'd like. If not, this is a good interval too. Very nice report!

|                | MI/HR on Oil      | 19,405     |                                | 15,224    | 14,068    | 11,928    | 9,707      |           |
|----------------|-------------------|------------|--------------------------------|-----------|-----------|-----------|------------|-----------|
|                | MI/HR on Unit     | 196,348    | UNIT /<br>LOCATION<br>AVERAGES | 176,943   | 161,719   | 147,651   | 135,723    | UNIVERSAL |
|                | Sample Date       | 10/20/2016 |                                | 2/25/2016 | 8/27/2015 | 4/16/2015 | 11/16/2014 | AVERAGES  |
| 5              | Make Up Oil Added | 3.6 qts    |                                | 2.6 qts   | 3 qts     | 1.5 qts   | 1 qt       |           |
| N <sub>O</sub> |                   |            |                                |           |           |           |            |           |
| Ĭ              | ALUMINUM          | 3          | 3                              | 3         | 2         | 3         | 2          | 5         |
| MIL            | CHROMIUM          | 0          | 0                              | 0         | 0         | 0         | 0          | 0         |
| 2              | IRON              | 12         | 9                              | 10        | 10        | 7         | 6          | 10        |
| 2              | COPPER            | 0          | 0                              | 0         | 0         | 0         | 0          | 1         |
| <b>L</b>       | LEAD              | 0          | 0                              | 0         | 0         | 0         | 1          | 0         |
| S              | TIN               | 0          | 0                              | 1         | 0         | 1         | 0          | 1         |
|                | MOLYBDENUM        | 77         | 80                             | 85        | 83        | 81        | 76         | 107       |
| AR             | NICKEL            | 0          | 0                              | 0         | 0         | 0         | 0          | 0         |
| Δ              | MANGANESE         | 0          | 0                              | 0         | 0         | 0         | 0          | 0         |
| Z              | SILVER            | 0          | 0                              | 0         | 0         | 0         | 0          | 0         |
|                | TITANIUM          | 0          | 0                              | 0         | 0         | 0         | 0          | 2         |
| LS.            | POTASSIUM         | 1          | 1                              | 2         | 0         | 2         | 1          | 2         |
| Z              | BORON             | 43         | 46                             | 45        | 47        | 47        | 48         | 37        |
| EME            | SILICON           | 8          | 8                              | 9         | 9         | 7         | 8          | 12        |
|                | SODIUM            | 5          | 5                              | 7         | 5         | 4         | 5          | 21        |
| H              | CALCIUM           | 1011       | 1092                           | 1189      | 1064      | 1138      | 1056       | 1893      |
|                | MAGNESIUM         | 753        | 803                            | 885       | 808       | 800       | 767        | 258       |
|                | PHOSPHORUS        | 539        | 594                            | 666       | 569       | 589       | 609        | 651       |
|                | ZINC              | 684        | 721                            | 766       | 723       | 730       | 704        | 765       |
|                | BARIUM            | 0          | 0                              | 0         | 0         | 0         | 0          | 0         |

Values Should Be\*

|    | SUS Viscosity @ 210°F | 53.3 | 46-57   | 52.2 | 50.1 | 51.0 | 51.1 |  |
|----|-----------------------|------|---------|------|------|------|------|--|
|    | cSt Viscosity @ 100°C | 8.26 | 6.0-9.7 | 7.93 | 7.31 | 7.59 | 7.60 |  |
| ကျ | Flashpoint in °F      | 415  | >385    | 390  | 375  | 385  | 425  |  |
| Ħ  | Fuel %                | <0.5 | <2.0    | <0.5 | 0.5  | TR   | <0.5 |  |
| H. | Antifreeze %          | 0.0  | 0.0     | 0.0  | 0.0  | 0.0  | 0.0  |  |
| 4  | Water %               | 0.0  | 0.0     | 0.0  | 0.0  | 0.0  | 0.0  |  |
| 2  | Insolubles %          | 0.3  | <0.6    | 0.3  | 0.3  | 0.3  | 0.3  |  |
| 4  | TBN                   | 2.8  | >1.0    | 3.4  | 3.8  | 4.2  | 4.3  |  |
|    | TAN                   |      |         |      |      |      |      |  |
|    | ISO Code              |      |         |      |      |      |      |  |

\* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE