



OIL REPORT

LAB NUMBER: L83453

UNIT ID: 12 GX460

REPORT DATE: 12/10/2019

CLIENT ID: [REDACTED]

CODE: 20/32

PAYMENT: [REDACTED]

| | | |
|-------------|--------------------------------------|-------------------------------|
| UNIT | MAKE/MODEL: Toyota 4.6L V-8 (1UR-FE) | OIL TYPE & GRADE: 0W/20 |
| | FUEL TYPE: Gasoline (Unleaded) | OIL USE INTERVAL: 5,311 Miles |
| | ADDITIONAL INFO: | |

| | | |
|---------------|------------|------------|
| CLIENT | [REDACTED] | [REDACTED] |
| | [REDACTED] | [REDACTED] |

COMMENTS BRANDON: This engine has yet to produce a troubling result. Metals are varying by only the smallest of margins from sample to sample, and that degree of consistency only points to healthy wear taking place under the hood. The viscosity read in the 0W/20 range and we didn't find any contamination from fuel or coolant. The latter will show up as high potassium and sodium - these elements are both quite low. Looks like your maintenance plan is covering all the bases!

| ELEMENTS IN PARTS PER MILLION | MI/HR on Oil | 5,311 | UNIT / LOCATION AVERAGES | 5,053 | 4,973 | 5,000 | UNIVERSAL AVERAGES |
|--------------------------------------|-------------------|------------|---------------------------------|-----------|------------|-----------|---------------------------|
| | MI/HR on Unit | 55,311 | | 50,026 | 44,973 | 40,000 | |
| | Sample Date | 11/27/2019 | | 3/11/2019 | 11/24/2018 | 7/23/2018 | |
| | Make Up Oil Added | 0 qts | | 0 qts | 0 qts | 0 qts | |
| ALUMINUM | 3 | 4 | 2 | 5 | 5 | 4 | |
| CHROMIUM | 0 | 0 | 0 | 0 | 0 | 0 | |
| IRON | 5 | 5 | 5 | 5 | 6 | 8 | |
| COPPER | 1 | 1 | 1 | 1 | 2 | 3 | |
| LEAD | 0 | 0 | 1 | 0 | 0 | 0 | |
| TIN | 0 | 1 | 3 | 0 | 0 | 0 | |
| MOLYBDENUM | 128 | 132 | 161 | 156 | 83 | 83 | |
| NICKEL | 0 | 0 | 0 | 0 | 0 | 0 | |
| MANGANESE | 0 | 0 | 0 | 0 | 0 | 1 | |
| SILVER | 0 | 0 | 0 | 0 | 0 | 0 | |
| TITANIUM | 0 | 0 | 0 | 0 | 0 | 2 | |
| POTASSIUM | 0 | 1 | 1 | 0 | 1 | 1 | |
| BORON | 39 | 48 | 51 | 42 | 58 | 39 | |
| SILICON | 6 | 6 | 5 | 7 | 7 | 14 | |
| SODIUM | 4 | 4 | 4 | 6 | 3 | 35 | |
| CALCIUM | 1185 | 1217 | 1297 | 1238 | 1148 | 1723 | |
| MAGNESIUM | 583 | 604 | 487 | 517 | 829 | 357 | |
| PHOSPHORUS | 658 | 679 | 705 | 680 | 673 | 654 | |
| ZINC | 770 | 767 | 813 | 742 | 742 | 761 | |
| BARIUM | 0 | 0 | 0 | 0 | 0 | 0 | |

Values Should Be*

| PROPERTIES | SUS Viscosity @ 210°F | 50.9 | 46-56 | 50.3 | 49.5 | 49.0 |
|-------------------|-----------------------|------|---------|------|------|------|
| | cSt Viscosity @ 100°C | 7.55 | 6.0-9.4 | 7.36 | 7.13 | 6.95 |
| | Flashpoint in °F | 415 | >385 | 415 | 390 | 420 |
| | Fuel % | <0.5 | <2.0 | <0.5 | <0.5 | <0.5 |
| | Antifreeze % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Water % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Insolubles % | 0.2 | <0.6 | 0.3 | 0.2 | 0.2 |
| | TBN | | | | | |
| | TAN | | | | | |
| | ISO Code | | | | | |

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

416 E. PETTIT AVE. FORT WAYNE, IN 46806 (260) 744-2380 www.blackstone-labs.com