



OIL ANALYSIS REPORT

| | |
|-----------------|--------|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |

Machine Id
16-GAUF-01-001-M (S/N KNDUP131956680587)

Component
TOYOTA SIENNA 2014 Gasoline Engine

Fluid
GASOLINE ENGINE OIL SAE 5W20 (6 LTR)

#3 #2

RECOMMENDATION

Resample at the next service interval to monitor.

| | | | | | | |
|----------------|-----|--|--|--------------------|-------------|-----|
| Sample Number | | | | WC994119 | WC972848 | --- |
| Sample Date | | | | 28 Jul 2017 | 04 Feb 2017 | --- |
| Machine Age | kms | | | 103435 | 86316 | --- |
| Oil Age | kms | | | 17119 | 10851 | --- |
| Filter Age | kms | | | 17119 | 10851 | --- |
| Oil Changed | | | | Not Changd | Not Changd | --- |
| Filter Changed | | | | Not Changd | Not Changd | --- |
| Sample Status | | | | NORMAL | NORMAL | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|-----------|-----|------------|------|------------|-----|-----|
| Iron | ppm | ASTM D5185 | >150 | 7.5 | 5.3 | --- |
| Chromium | ppm | ASTM D5185 | >20 | 0.3 | 0.1 | --- |
| Manganese | ppm | ASTM D5185 | | 0.6 | 0.5 | --- |
| Nickel | ppm | ASTM D5185 | >5 | 0.1 | 0.0 | --- |
| Titanium | ppm | ASTM D5185 | | 0.0 | 0.0 | --- |
| Silver | ppm | ASTM D5185 | >2 | 0.0 | 0.0 | --- |
| Aluminum | ppm | ASTM D5185 | >40 | 3.6 | 3.2 | --- |
| Lead | ppm | ASTM D5185 | >50 | 0.5 | 0.4 | --- |
| Copper | ppm | ASTM D5185 | >155 | 11 | 5.8 | --- |
| Tin | ppm | ASTM D5185 | >10 | 0.0 | 0.0 | --- |
| Vanadium | ppm | ASTM D5185 | | 0.0 | 0.0 | --- |

CONTAMINATION

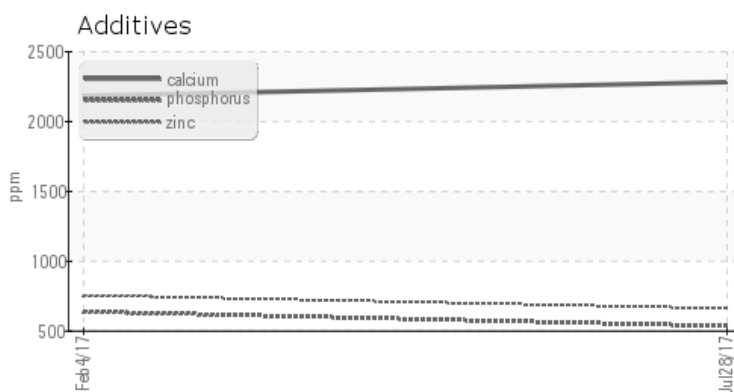
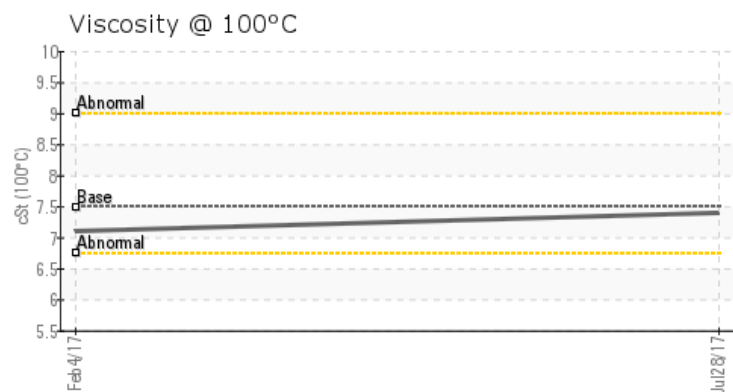
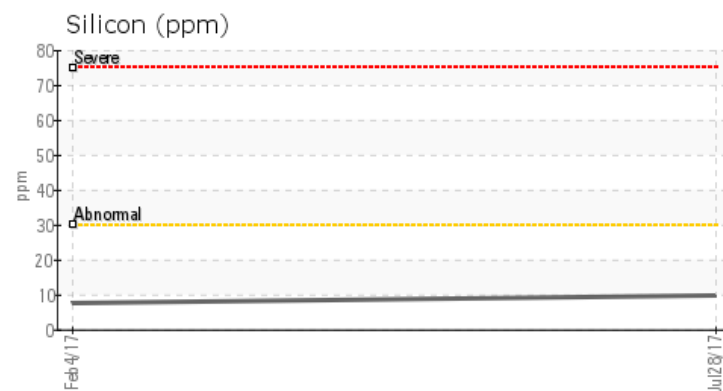
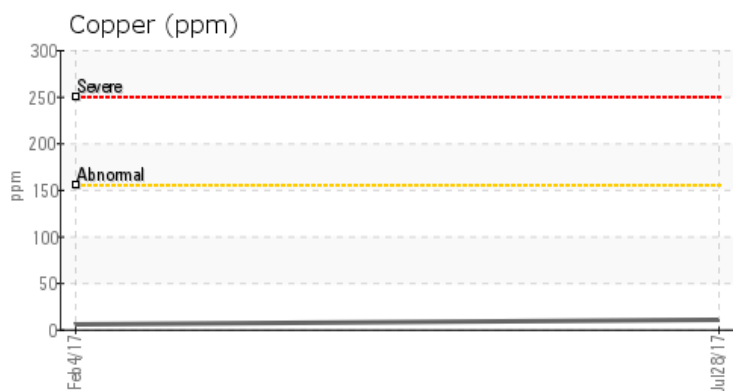
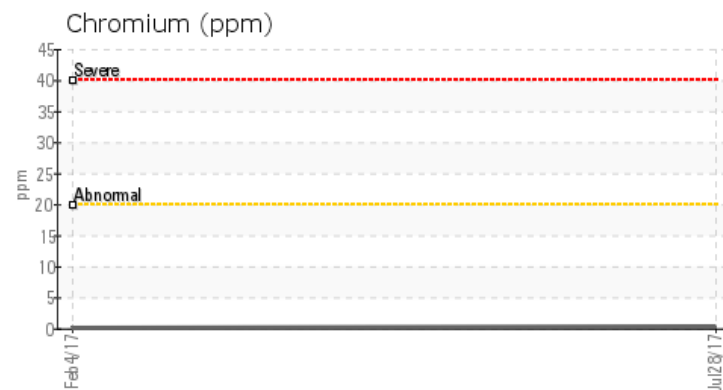
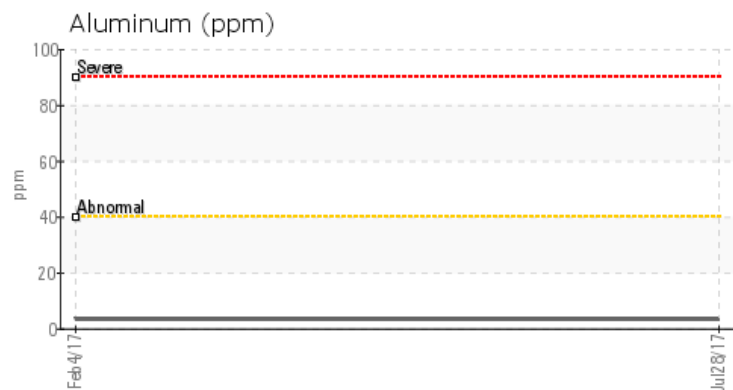
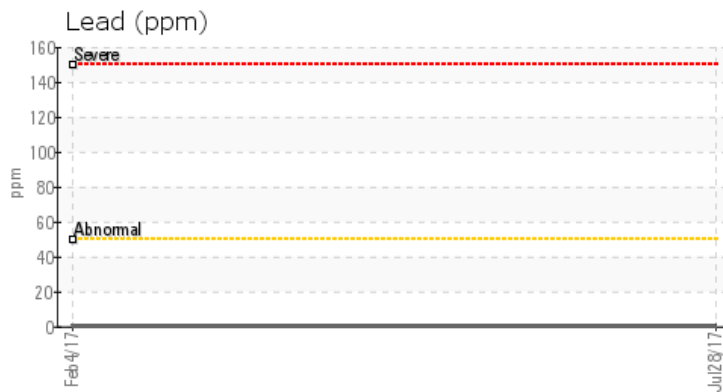
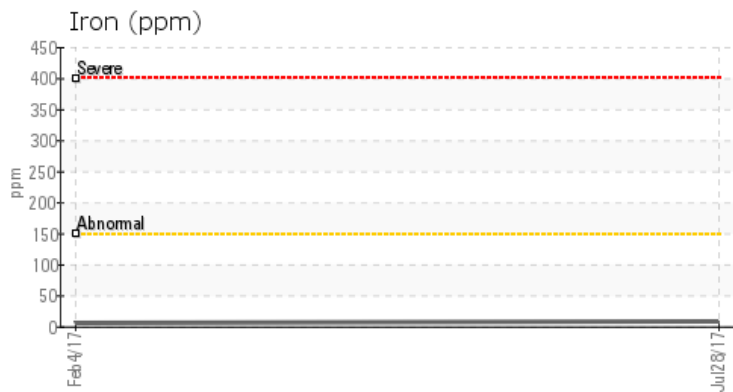
There is no indication of any contamination in the component.

| | | | | | | |
|------------------|--------|------------|------|------------|-----|-----|
| Silicon | ppm | ASTM D5185 | >30 | 9.7 | 7.6 | --- |
| Potassium | ppm | ASTM D5185 | >20 | 1.7 | 0.9 | --- |
| Soot % | % | ASTM D7686 | | 0 | 0 | --- |
| Nitration (PA) | % | ASTM D7624 | >100 | 55 | 49 | --- |
| Sulfation (PA) | % | ASTM D7415 | >100 | 70 | 58 | --- |
| Emulsified Water | scalar | Visual | >0.2 | NEG | NEG | --- |

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

| | | | | | | |
|----------------|-----|------------|------|-------------|------|-----|
| Sodium | ppm | ASTM D5185 | | 2.9 | 1.0 | --- |
| Boron | ppm | ASTM D5185 | 75 | 0.4 | 0.2 | --- |
| Barium | ppm | ASTM D5185 | 5 | 0.1 | 0.1 | --- |
| Molybdenum | ppm | ASTM D5185 | 100 | 43 | 78 | --- |
| Magnesium | ppm | ASTM D5185 | 12 | 10 | 8.5 | --- |
| Calcium | ppm | ASTM D5185 | 2100 | 2280 | 2175 | --- |
| Phosphorus | ppm | ASTM D5185 | 650 | 532 | 635 | --- |
| Zinc | ppm | ASTM D5185 | 850 | 658 | 752 | --- |
| Sulfur | ppm | ASTM D5185 | 2500 | 2796 | 2654 | --- |
| Oxidation (PA) | % | ASTM D7414 | >100 | 60 | 46 | --- |
| Visc @ 100°C | cSt | ASTM D7279 | 7.5 | 7.4 | 7.1 | --- |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC994119 **Received** : 11 Aug 2017
Lab Number : **02162984** **Diagnosed** : 11 Aug 2017
Unique Number : 4550046 **Diagnostician** : Wes Davis
Test Package : MOB 1

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To discuss diagnosis or test data, contact Technical Support at 1-800-268-2131.
 To change component or sample information, contact Customer Service at 1-800-268-2131.