



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

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

Machine Id
HONDA BLUELINE PLATFORM E-223
 Component
Gasoline Engine
 Fluid
TRC PRO-SPEC SYNTHETIC 10W30 (4 QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|-------------|-------------|-------------|
| Sample Number | | Client Info | | TR06148928 | TR05876328 | TR05763027 |
| Sample Date | | Client Info | | 10 Apr 2024 | 22 May 2023 | 31 Jan 2023 |
| Machine Age | hrs | Client Info | | 1753 | 1140 | 711 |
| Oil Age | hrs | Client Info | | 200 | 500 | 300 |
| Filter Age | hrs | Client Info | | 200 | 500 | 300 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | MARGINAL | SEVERE | SEVERE |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|------|------|------|
| Iron | ppm | ASTM D5185m | >150 | 19 | 14 | 28 |
| Chromium | ppm | ASTM D5185m | >20 | 2 | 1 | 5 |
| Nickel | ppm | ASTM D5185m | >5 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >40 | 2 | 4 | 5 |
| Lead | ppm | ASTM D5185m | >50 | 0 | <1 | 1 |
| Copper | ppm | ASTM D5185m | >155 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185m | >10 | 0 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

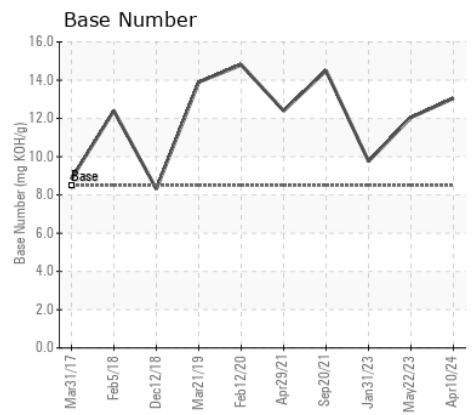
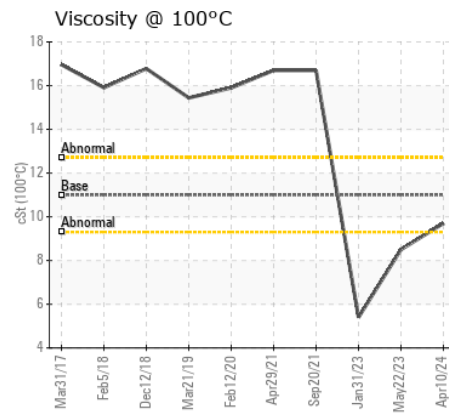
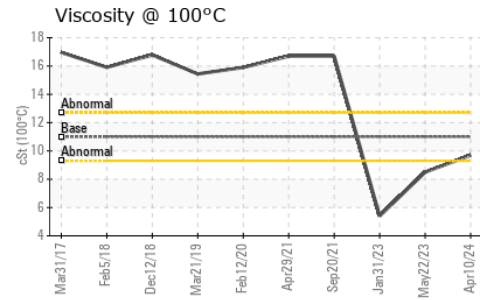
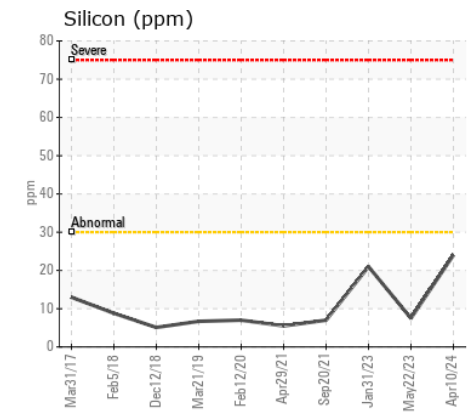
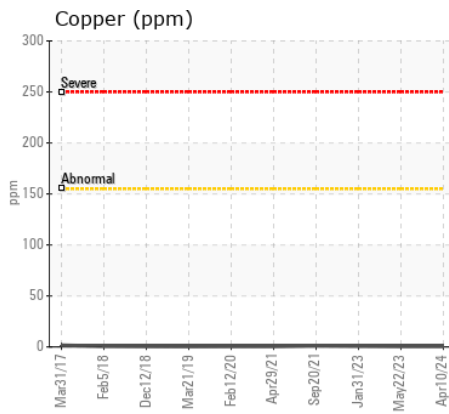
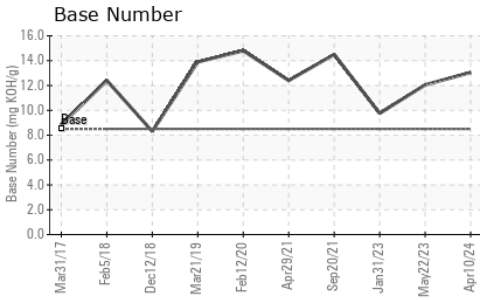
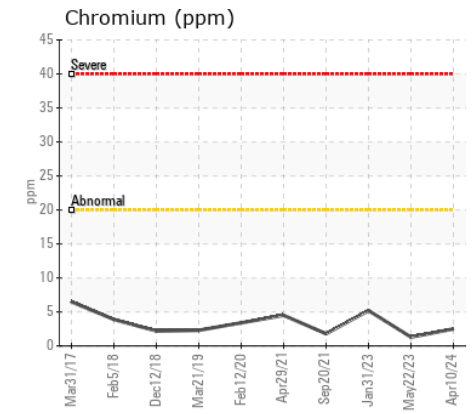
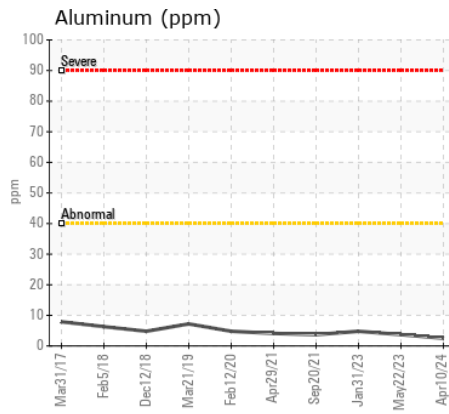
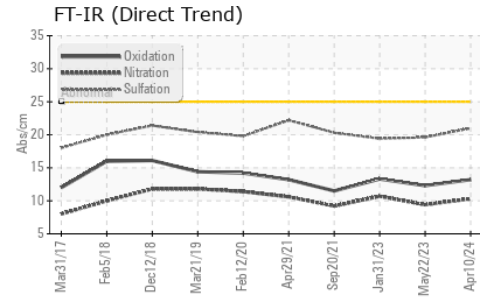
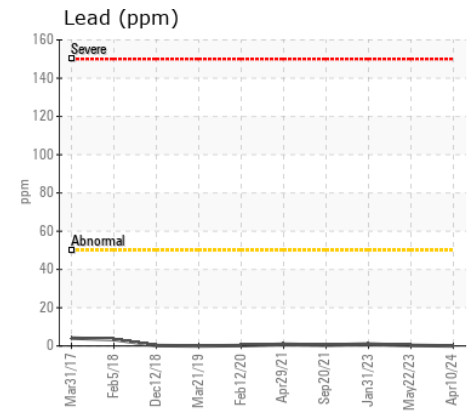
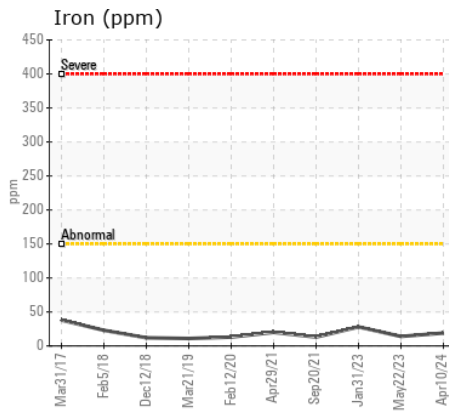
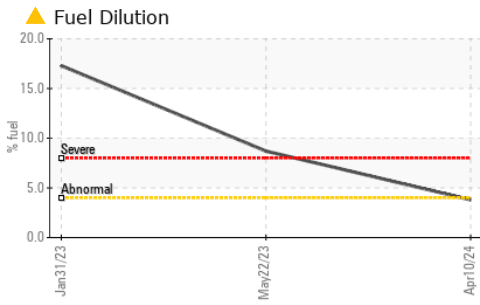
Light fuel dilution occurring. No other contaminants were detected in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|-------|-------|--------|
| Silicon | ppm | ASTM D5185m | >30 | 24 | 8 | 21 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 3 | 2 |
| Fuel | % | ASTM D3524 | >4.0 | ▲ 3.8 | ▲ 8.7 | ▲ 17.3 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | | 0.1 | 0.1 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.3 | 9.4 | 10.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 21.0 | 19.6 | 19.4 |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | NEG |

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

| | | | | | | |
|------------------|----------|-------------|------|-------|-------|-------|
| Sodium | ppm | ASTM D5185m | >400 | 11 | 1 | 4 |
| Boron | ppm | ASTM D5185m | | 0 | 5 | 11 |
| Barium | ppm | ASTM D5185m | | 0 | 2 | 0 |
| Molybdenum | ppm | ASTM D5185m | 400 | 2 | 4 | 7 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 600 | 17 | 31 | 34 |
| Calcium | ppm | ASTM D5185m | 150 | 4073 | 4050 | 3167 |
| Phosphorus | ppm | ASTM D5185m | 800 | 823 | 881 | 649 |
| Zinc | ppm | ASTM D5185m | 900 | 1001 | 1067 | 818 |
| Sulfur | ppm | ASTM D5185m | | 4098 | 4424 | 3644 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 13.2 | 12.3 | 13.3 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | 13.05 | 12.05 | 9.76 |
| Visc @ 100°C | cSt | ASTM D445 | 11 | 9.7 | ▲ 8.5 | ▲ 5.4 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06148928
Lab Number : 06148928
Unique Number : 10979006
Test Package : MOB 2 (Additional Tests: PercentFuel)

Received : 15 Apr 2024
Tested : 17 Apr 2024
Diagnosed : 17 Apr 2024 - Don Baldrige

CHERRY HILL FARMS
 PO BOX 308
 SANTAQUIN, UT
 US 84655
 Contact: JOHN AAGARD

To discuss this sample report, contact Customer Service at 1-800-827-0711.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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F: