



OIL ANALYSIS REPORT

Sample Rating Trend

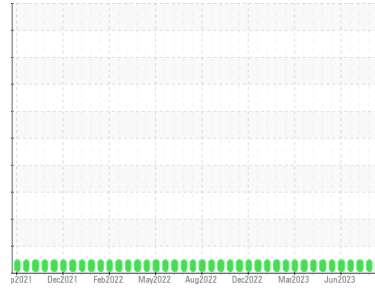
NORMAL



Machine Id
BULK SHELL MORLINA S3 BA 220

Component
New (Unused) Oil

Fluid
SHELL MORLINA S3 BA 220 (--- GAL)



DIAGNOSIS

Recommendation

This is a baseline read-out on the submitted sample. (Customer Sample Comment: Bulk oil)

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-----------------|--------------------|-------------|-------------|
| Sample Number | Client Info | WC0775142 | WC0775121 | WC0775134 |
| Sample Date | Client Info | 28 Aug 2023 | 21 Jul 2023 | 07 Jul 2023 |
| Machine Age | hrs Client Info | 0 | 0 | 0 |
| Oil Age | hrs Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | N/A | N/A | N/A |
| Sample Status | | NORMAL | NORMAL | NORMAL |

WEAR METALS

| method | limit/base | current | history1 | history2 |
|--------------|----------------|----------|----------|----------|
| Iron ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Chromium ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Nickel ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Titanium ppm | ASTM D5185m | 0 | <1 | 0 |
| Silver ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Aluminum ppm | ASTM D5185m >5 | 0 | 0 | <1 |
| Lead ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Copper ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Tin ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Vanadium ppm | ASTM D5185m | 0 | <1 | 0 |
| Cadmium ppm | ASTM D5185m | 0 | 0 | 0 |

ADDITIVES

| method | limit/base | current | history1 | history2 |
|----------------|-------------|-------------|----------|----------|
| Boron ppm | ASTM D5185m | 0 | 0 | 0 |
| Barium ppm | ASTM D5185m | 0 | 0 | 0 |
| Molybdenum ppm | ASTM D5185m | 0 | 0 | 0 |
| Manganese ppm | ASTM D5185m | 0 | <1 | 0 |
| Magnesium ppm | ASTM D5185m | 0 | 2 | <1 |
| Calcium ppm | ASTM D5185m | 9 | 22 | 27 |
| Phosphorus ppm | ASTM D5185m | 15 | 26 | 18 |
| Zinc ppm | ASTM D5185m | 8 | 13 | 15 |
| Sulfur ppm | ASTM D5185m | 6787 | 7730 | 7763 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 |
|---------------|-----------------|--------------|----------|----------|
| Silicon ppm | ASTM D5185m >15 | 2 | 1 | 2 |
| Sodium ppm | ASTM D5185m | 0 | 0 | 0 |
| Potassium ppm | ASTM D5185m >20 | <1 | <1 | <1 |

FLUID DEGRADATION

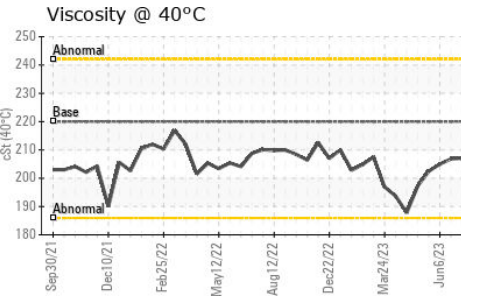
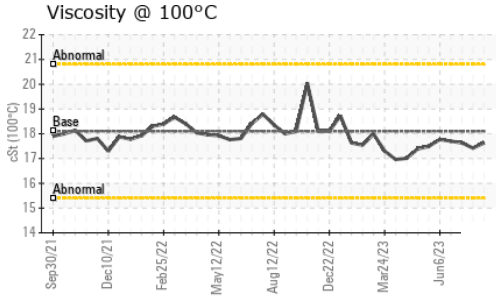
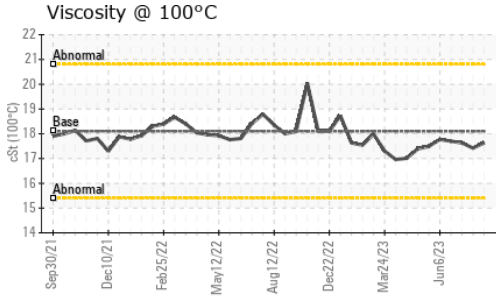
| method | limit/base | current | history1 | history2 |
|---------------------------|-----------------|--------------|----------|----------|
| Acid Number (AN) mg KOH/g | ASTM D8045 0.05 | 0.052 | 0.072 | 0.066 |

VISUAL

| method | limit/base | current | history1 | history2 |
|-------------------------|---------------|--------------|----------|----------|
| White Metal scalar | *Visual NONE | NONE | NONE | NONE |
| Yellow Metal scalar | *Visual NONE | NONE | NONE | NONE |
| Precipitate scalar | *Visual NONE | NONE | NONE | NONE |
| 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 | NEG | NEG | NEG |
| Free Water scalar | *Visual | NEG | NEG | NEG |



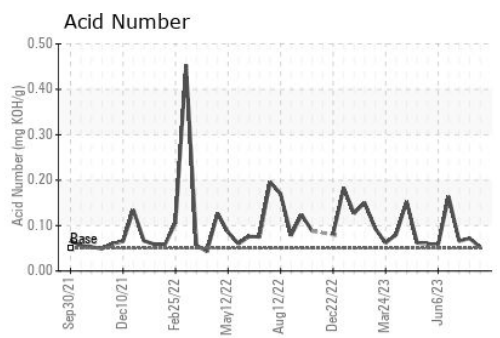
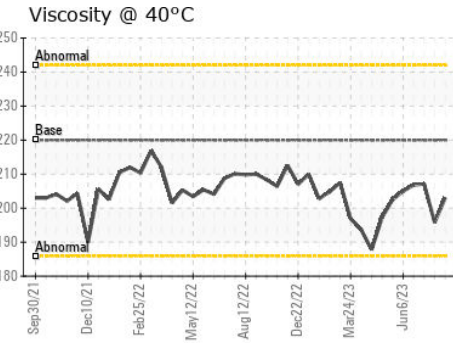
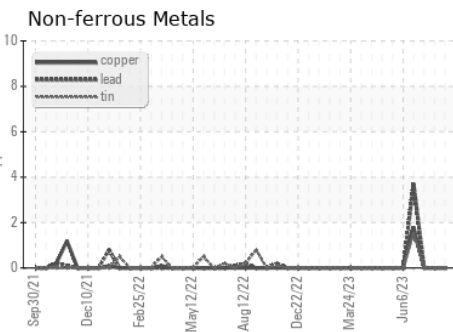
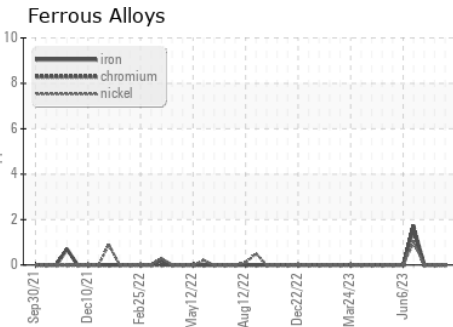
OIL ANALYSIS REPORT



| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|----------------------|-------|------------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 220 | 203.0 | 195.8 | 207.1 |
| Visc @ 100°C | cSt | ASTM D445 | 18.1 | 17.63 | 17.42 | 17.63 |
| Viscosity Index (VI) | Scale | ASTM D2270 | 95 | 93 | 95 | 91 |

| SAMPLE IMAGES | | method | limit/base | current | history1 | history2 |
|---------------|--|--------|------------|---------|----------|----------|
| Color | | | | | | |
| Bottom | | | | | | |

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0775142 **Received** : 30 Aug 2023
Lab Number : 05938480 **Diagnosed** : 13 Sep 2023
Unique Number : 10629092 **Diagnostician** : Doug Bogart
Test Package : MOB 2 (Additional Tests: FT-IR, KF, KV100, PrtCount, VI)

EDL NA Recips-Morgantown
 Morgantown Powerstation, 950 Shiloh
 Morgantown, PA
 US 19543
 Contact: ARON GUNN
 aron.gunn@edlenergy.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - 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)