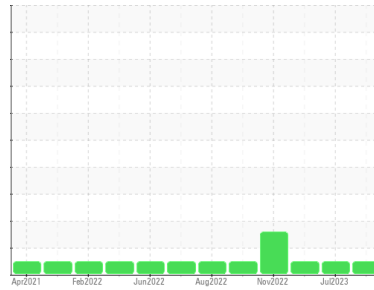




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**ALMEDA PIPELINE PUMP 4 820PM18401**

Component  
**Natural Gas Engine**

Fluid  
**MOBIL PEGASUS 805 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2    |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info |             | <b>RP0026947</b>   | RP0026913   | RP0026929   |
| Sample Date   | Client Info |             | <b>19 Sep 2023</b> | 13 Jul 2023 | 07 Feb 2023 |
| Machine Age   | hrs         | Client Info | <b>0</b>           | 0           | 0           |
| Oil Age       | hrs         | Client Info | <b>0</b>           | 0           | 0           |
| Oil Changed   | Client Info |             | <b>Filtered</b>    | N/A         | N/A         |
| Sample Status |             |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## WEAR METALS

|          | method | limit/base      | current      | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >50 | <b>13</b>    | 14       | 14       |
| Chromium | ppm    | ASTM D5185m >4  | <b>&lt;1</b> | <1       | <1       |
| Nickel   | ppm    | ASTM D5185m >2  | <b>&lt;1</b> | <1       | 0        |
| Titanium | ppm    | ASTM D5185m     | <b>&lt;1</b> | <1       | <1       |
| Silver   | ppm    | ASTM D5185m >3  | <b>0</b>     | 0        | 0        |
| Aluminum | ppm    | ASTM D5185m >9  | <b>5</b>     | 2        | 3        |
| Lead     | ppm    | ASTM D5185m >30 | <b>2</b>     | 2        | 2        |
| Copper   | ppm    | ASTM D5185m >35 | <b>4</b>     | 3        | 3        |
| Tin      | ppm    | ASTM D5185m >4  | <b>1</b>     | <1       | 1        |
| Vanadium | ppm    | ASTM D5185m     | <b>0</b>     | <1       | 0        |
| Cadmium  | ppm    | ASTM D5185m     | <b>0</b>     | 0        | 0        |

## ADDITIVES

|            | method | limit/base       | current     | history1 | history2 |
|------------|--------|------------------|-------------|----------|----------|
| Boron      | ppm    | ASTM D5185m 80   | <b>6</b>    | 5        | 4        |
| Barium     | ppm    | ASTM D5185m      | <b>0</b>    | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185m      | <b>11</b>   | 11       | 10       |
| Manganese  | ppm    | ASTM D5185m      | <b>1</b>    | <1       | <1       |
| Magnesium  | ppm    | ASTM D5185m      | <b>74</b>   | 78       | 73       |
| Calcium    | ppm    | ASTM D5185m 1020 | <b>1413</b> | 1496     | 1364     |
| Phosphorus | ppm    | ASTM D5185m 220  | <b>400</b>  | 415      | 385      |
| Zinc       | ppm    | ASTM D5185m 230  | <b>447</b>  | 465      | 429      |

## CONTAMINANTS

|           | method | limit/base        | current    | history1 | history2 |
|-----------|--------|-------------------|------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >+100 | <b>3</b>   | 3        | 3        |
| Sodium    | ppm    | ASTM D5185m       | <b>3</b>   | 1        | 1        |
| Potassium | ppm    | ASTM D5185m >20   | <b>9</b>   | 9        | 9        |
| Water     | %      | ASTM D6304 >0.1   | <b>---</b> | 0.024    | ---      |
| ppm Water | ppm    | ASTM D6304 >1000  | <b>---</b> | 245.0    | ---      |

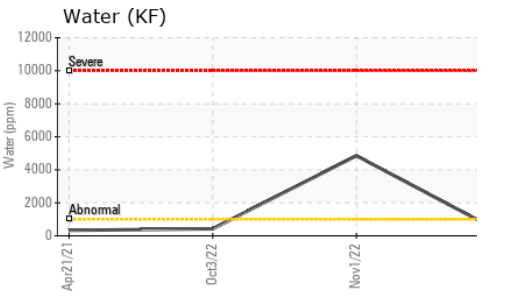
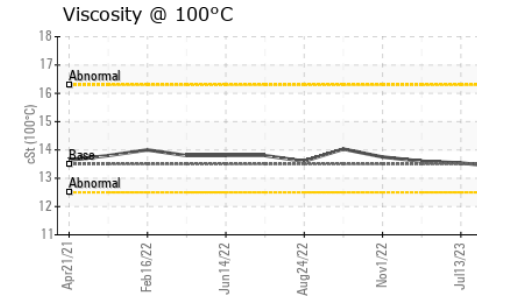
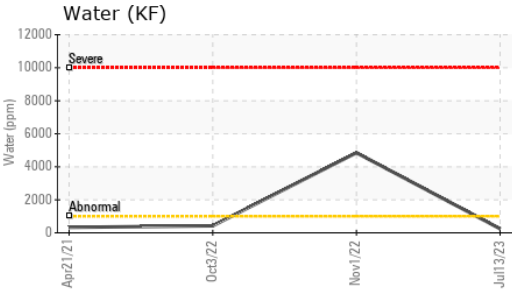
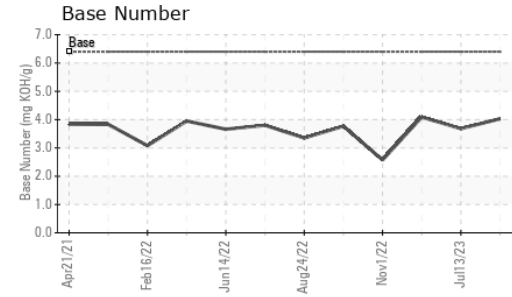
## INFRA-RED

|           | method   | limit/base      | current     | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot %    | %        | *ASTM D7844     | <b>0</b>    | 0        | 0.1      |
| Nitration | Abs/cm   | *ASTM D7624 >20 | <b>9.2</b>  | 9.3      | 9.6      |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | <b>18.3</b> | 19.0     | 19.0     |

## FLUID DEGRADATION

|                  | method   | limit/base      | current     | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation        | Abs/.1mm | *ASTM D7414 >25 | <b>15.2</b> | 15.8     | 15.5     |
| Acid Number (AN) | mg KOH/g | ASTM D8045 1.0  | <b>1.25</b> | 1.40     | ---      |
| Base Number (BN) | mg KOH/g | ASTM D2896 6.4  | <b>4.03</b> | 3.68     | 4.09     |

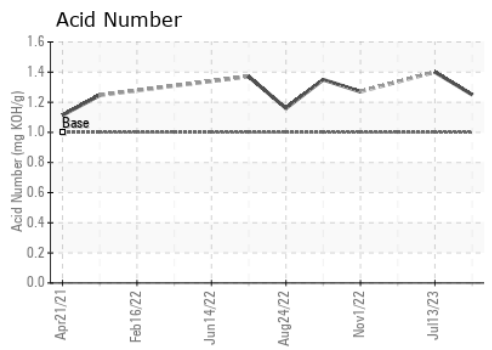
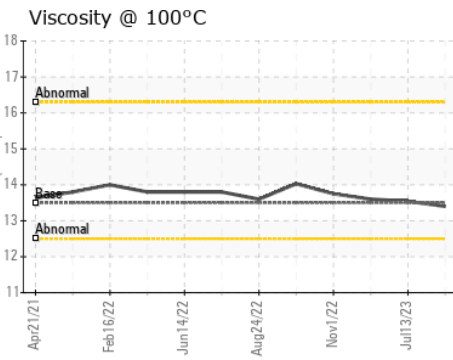
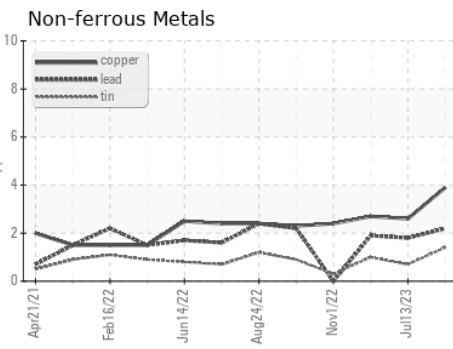
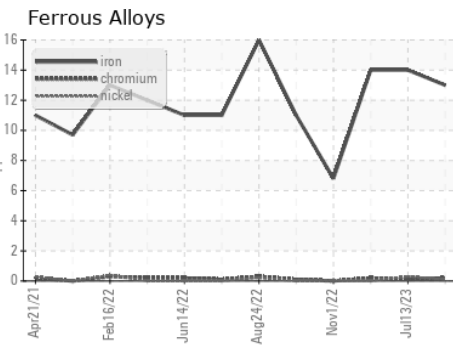
# OIL ANALYSIS REPORT



| VISUAL           | method | limit/base | current | history1     | history2 |
|------------------|--------|------------|---------|--------------|----------|
| White Metal      | scalar | *Visual    | NONE    | <b>NONE</b>  | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | <b>NONE</b>  | NONE     |
| Precipitate      | scalar | *Visual    | NONE    | <b>NONE</b>  | NONE     |
| Silt             | scalar | *Visual    | NONE    | <b>NONE</b>  | NONE     |
| Debris           | scalar | *Visual    | NONE    | <b>NONE</b>  | NONE     |
| Sand/Dirt        | scalar | *Visual    | NONE    | <b>NONE</b>  | NONE     |
| Appearance       | scalar | *Visual    | NORML   | <b>NORML</b> | NORML    |
| Odor             | scalar | *Visual    | NORML   | <b>NORML</b> | NORML    |
| Emulsified Water | scalar | *Visual    | >0.1    | <b>NEG</b>   | NEG      |
| Free Water       | scalar | *Visual    |         | <b>NEG</b>   | NEG      |

| FLUID PROPERTIES | method | limit/base | current | history1    | history2 |
|------------------|--------|------------|---------|-------------|----------|
| Visc @ 100°C     | cSt    | ASTM D445  | 13.5    | <b>13.4</b> | 13.54    |

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0026947 **Received** : 25 Sep 2023  
**Lab Number** : 05959946 **Diagnosed** : 29 Sep 2023  
**Unique Number** : 10661159 **Diagnostician** : Jonathan Hester  
**Test Package** : IND 2 ( Additional Tests: FT-IR, KV100, TBN )

**ENTERPRISE PRODUCTS - MORGAN'S POINT**  
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 T: (713)575-4112  
 F:

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)