



# OIL ANALYSIS REPORT

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



Area  
**GM Seattle Off Road Shop [20220114156]**  
Machine Id  
**[GM Seattle Off Road Shop] 28-224**  
Component  
**Hydraulic System**  
Fluid  
**CASTROL HYPSPIN AWS HYDRAULIC 46 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

| Test          | UOM | Method      | Limit/Abn | Current     | History1 | History2 |
|---------------|-----|-------------|-----------|-------------|----------|----------|
| Sample Number |     | Client Info |           | PE12291016  | ---      | ---      |
| Sample Date   |     | Client Info |           | 03 Nov 2021 | ---      | ---      |
| Machine Age   | hrs | Client Info |           | 11019       | ---      | ---      |
| Oil Age       | hrs | Client Info |           | 11019       | ---      | ---      |
| Oil Changed   |     | Client Info |           | Not Chngd   | ---      | ---      |
| Sample Status |     |             |           | NORMAL      | ---      | ---      |

## WEAR

All component wear rates are normal.

|          |     |               |  |    |     |     |
|----------|-----|---------------|--|----|-----|-----|
| Iron     | ppm | ASTM D5185(m) |  | 16 | --- | --- |
| Chromium | ppm | ASTM D5185(m) |  | 4  | --- | --- |
| Nickel   | ppm | ASTM D5185(m) |  | 1  | --- | --- |
| Titanium | ppm | ASTM D5185(m) |  | 1  | --- | --- |
| Silver   | ppm | ASTM D5185(m) |  | <1 | --- | --- |
| Aluminum | ppm | ASTM D5185(m) |  | 2  | --- | --- |
| Lead     | ppm | ASTM D5185(m) |  | 0  | --- | --- |
| Copper   | ppm | ASTM D5185(m) |  | 9  | --- | --- |
| Tin      | ppm | ASTM D5185(m) |  | 0  | --- | --- |
| Vanadium | ppm | ASTM D5185(m) |  | 0  | --- | --- |

## CONTAMINATION

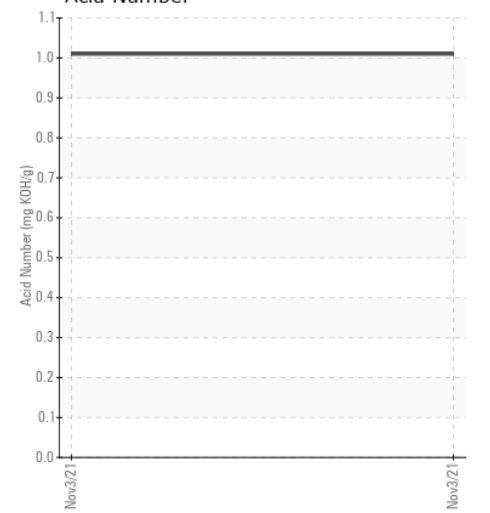
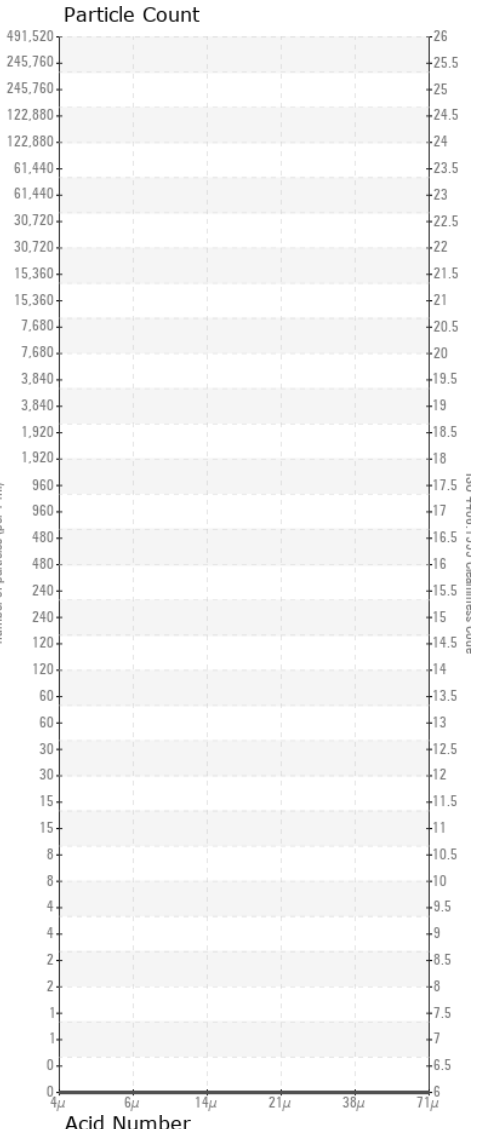
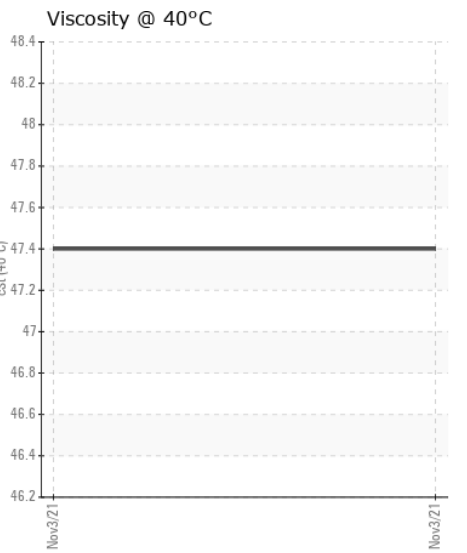
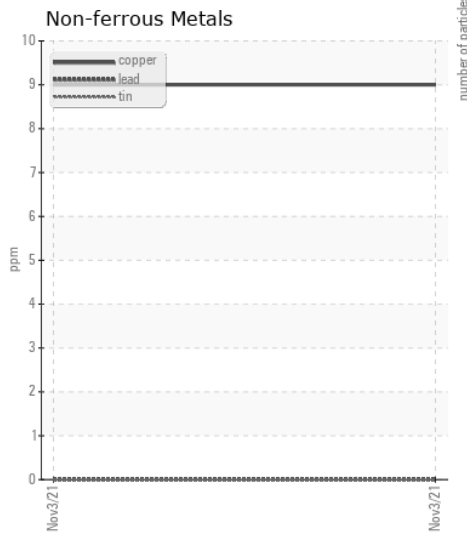
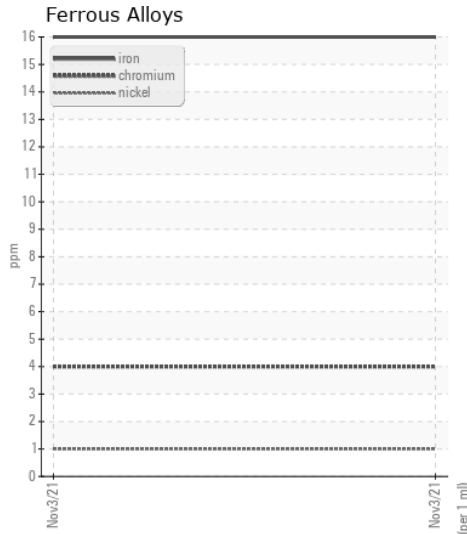
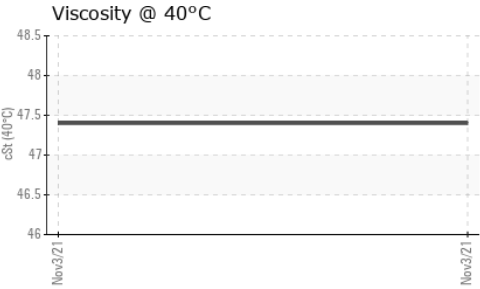
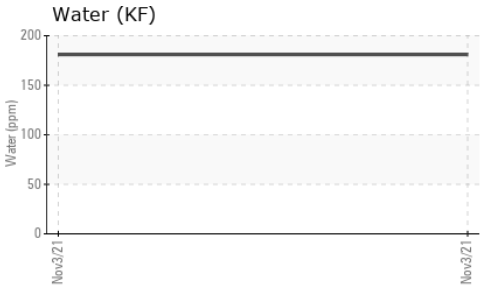
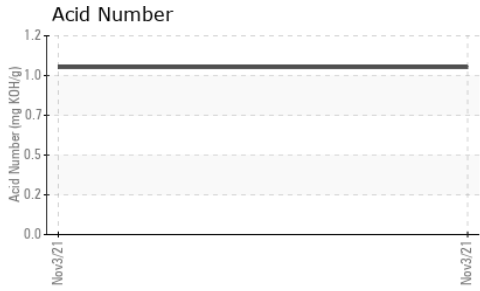
The water content is negligible. There is no indication of any contamination in the oil.

|                 |     |               |  |          |     |     |
|-----------------|-----|---------------|--|----------|-----|-----|
| Silicon         | ppm | ASTM D5185(m) |  | 4        | --- | --- |
| Potassium       | ppm | ASTM D5185(m) |  | 0        | --- | --- |
| ppm Water       | ppm | ASTM D6304*   |  | 181      | --- | --- |
| Oil Cleanliness |     | ISO 4406 (c)  |  | 17/15/11 | --- | --- |

## FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

|                  |          |               |  |      |     |     |
|------------------|----------|---------------|--|------|-----|-----|
| Sodium           | ppm      | ASTM D5185(m) |  | 0    | --- | --- |
| Boron            | ppm      | ASTM D5185(m) |  | 5    | --- | --- |
| Barium           | ppm      | ASTM D5185(m) |  | 0    | --- | --- |
| Molybdenum       | ppm      | ASTM D5185(m) |  | 0    | --- | --- |
| Magnesium        | ppm      | ASTM D5185(m) |  | 62   | --- | --- |
| Calcium          | ppm      | ASTM D5185(m) |  | 613  | --- | --- |
| Phosphorus       | ppm      | ASTM D5185(m) |  | 518  | --- | --- |
| Zinc             | ppm      | ASTM D5185(m) |  | 631  | --- | --- |
| Acid Number (AN) | mg KOH/g | ASTM D974*    |  | 1.01 | --- | --- |
| Visc @ 40°C      | cSt      | ASTM D7279(m) |  | 47.4 | --- | --- |



**Laboratory** : WearCheck -  
**Sample No.** : PE12291016  
**Lab Number** : 12291016  
**Unique Number** : 15270781

**Received** : 14 Jan 2022  
**Tested** : 21 Jan 2022  
**Diagnosed** : 21 Jan 2022 - Wes Davis

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**Test Package** : CONST ( Additional Tests: ICP, KF, KV40, PrtCount, TAN Auto )  
 To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.