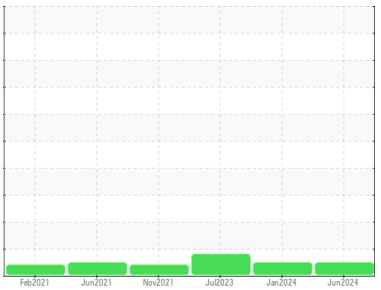
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
## BUSCH VAR-M912 (S/N 152121)
Component
**Pump**
Fluid
**USPI VAC 100 (--- 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. The amount and size of particulates present in the system are acceptable.

**Fluid Condition**
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 | | **USPM37786** | USPM30858 | USPM27917 |
| Sample Date | | Client Info | | **01 Jun 2024** | 29 Jan 2024 | 18 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 | ATTENTION |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >90 | **4** | 2 | 2 |
| Chromium | ppm | ASTM D5185m | >5 | **0** | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >5 | **<1** | 0 | <1 |
| Titanium | ppm | ASTM D5185m | >3 | **0** | <1 | 0 |
| Silver | ppm | ASTM D5185m | >3 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >7 | **1** | 1 | <1 |
| Lead | ppm | ASTM D5185m | >12 | **0** | <1 | 0 |
| Copper | ppm | ASTM D5185m | >30 | **<1** | <1 | 0 |
| Tin | ppm | ASTM D5185m | >9 | **<1** | <1 | 0 |
| Antimony | ppm | ASTM D5185m | | **---** | --- | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

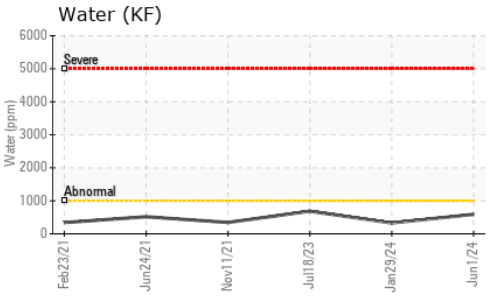
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 0 | **<1** | 0 | 0 |
| Barium | ppm | ASTM D5185m | 0 | **0** | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | 0 | **0** | <1 | 0 |
| Manganese | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 0 | **<1** | <1 | <1 |
| Calcium | ppm | ASTM D5185m | 0 | **0** | <1 | 0 |
| Phosphorus | ppm | ASTM D5185m | 1800 | **1067** | 958 | 1174 |
| Zinc | ppm | ASTM D5185m | 0 | **9** | 11 | 10 |
| Sulfur | ppm | ASTM D5185m | 0 | **383** | 477 | 689 |

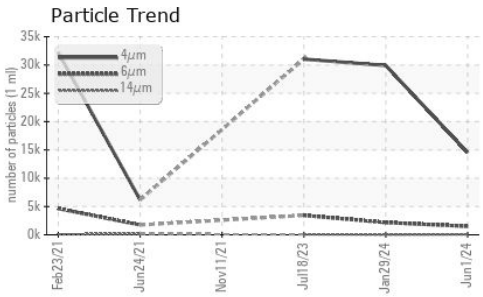
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >60 | **8** | 5 | 7 |
| Sodium | ppm | ASTM D5185m | | **2** | 0 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | **3** | 2 | 0 |
| Water | % | ASTM D6304 | >.1 | **0.059** | 0.032 | 0.068 |
| ppm Water | ppm | ASTM D6304 | >1000 | **591** | 328 | 685.5 |

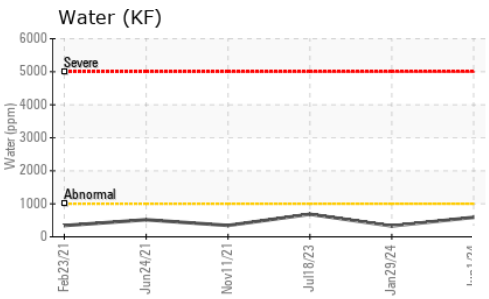
| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | | **14524** | 29917 | 31037 |
| Particles >6µm | | ASTM D7647 | >2500 | **1502** | 2167 | 3439 |
| Particles >14µm | | ASTM D7647 | >320 | **69** | 29 | 64 |
| Particles >21µm | | ASTM D7647 | >80 | **13** | 6 | 12 |
| Particles >38µm | | ASTM D7647 | >20 | **2** | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >4 | **1** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >--/18/15 | **21/18/13** | 22/18/12 | 22/19/13 |

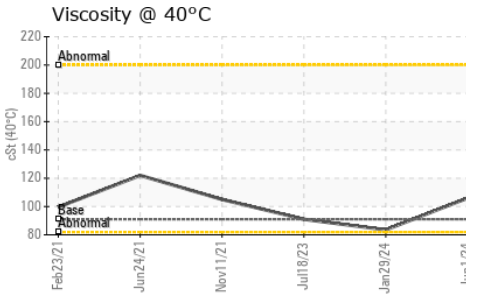
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.05 | **0.11** | 0.07 | 0.138 |

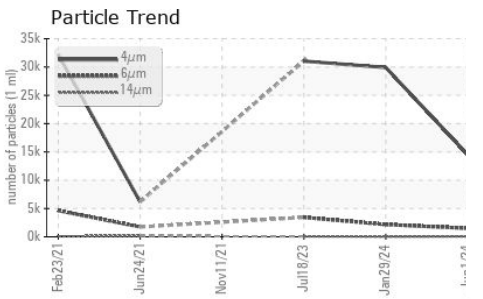
# OIL ANALYSIS REPORT



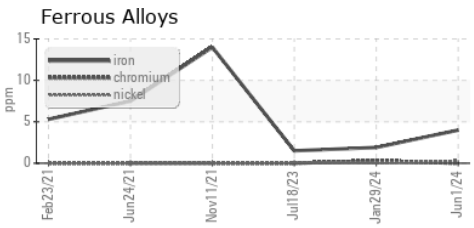



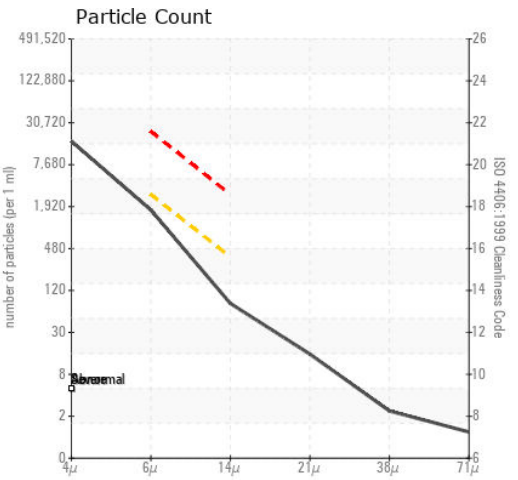

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | **LIGHT** | LIGHT | 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 | >.1 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

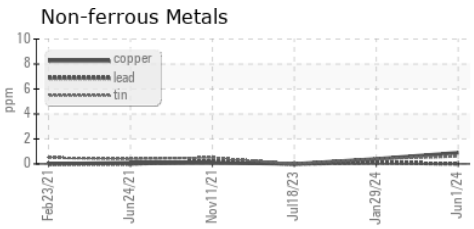
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 91 | **106** | 83.5 | 91.0 |

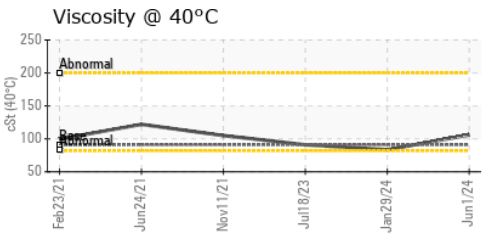
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

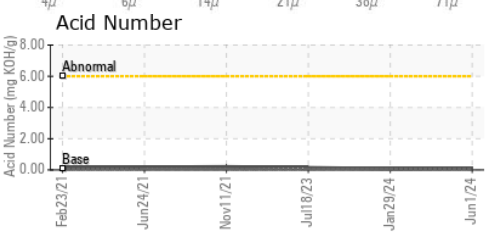
## GRAPHS




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : USPM37786
**Lab Number** : 06214048
**Unique Number** : 11086912
**Test Package** : IND 2

**Received** : 18 Jun 2024
**Tested** : 21 Jun 2024
**Diagnosed** : 21 Jun 2024 - Doug Bogart

**TYSON-Emporia-USP**
2101 West Sixth
Emporia, KS
US 66801
Contact: SERVICE MANAGER
T: (620)343-3640
F: (620)340-1253

*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)*