

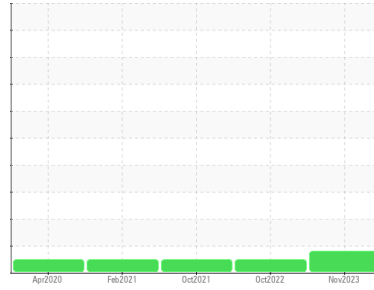


PROBLEM SUMMARY



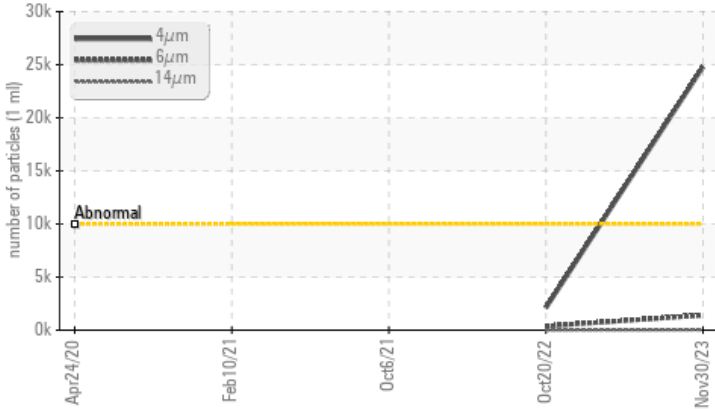
Area
GM Seattle Off Road Shop
 Machine Id
[GM Seattle Off Road Shop] 26-224
 Component
Transmission (Auto)
 Fluid
DIESEL ENGINE OIL SAE 30 (--- GAL)

Sample Rating Trend



COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

| Sample Status | | ABNORMAL | NORMAL | NORMAL |
|-----------------|------------------------|-------------------|----------|----------|
| Particles >4µm | ASTM D7647 >10000 | ▲ 24783 | 2090 | --- |
| Oil Cleanliness | ISO 4406 (c) >20/18/15 | ▲ 22/18/12 | 18/16/12 | 22/18/12 |

Customer Id: GARSEA
 Sample No.: PE0002297
 Lab Number: 06026295
 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Don Baldrige +1
don.b505@comcast.net

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|---------------|--------|------|---------|---|
| Change Fluid | --- | --- | ? | Oil and filter change at the time of sampling has been noted. |
| Change Filter | --- | --- | ? | Oil and filter change at the time of sampling has been noted. |

HISTORICAL DIAGNOSIS

20 Oct 2022 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the fluid. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the fluid is acceptable for the time in service.

view report



06 Oct 2021 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. The water content is negligible. There is no indication of any contamination in the fluid. The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

view report



10 Feb 2021 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. The water content is negligible. There is no indication of any contamination in the fluid. The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

view report



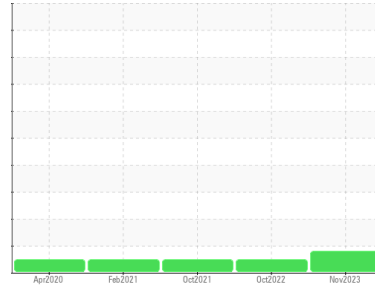
OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area
GM Seattle Off Road Shop
 Machine Id
[GM Seattle Off Road Shop] 26-224
 Component
Transmission (Auto)
 Fluid
DIESEL ENGINE OIL SAE 30 (--- GAL)



DIAGNOSIS

▲ Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

▲ Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the fluid.

Fluid Condition

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

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | PE0002297 | PE0000390 | PE12291133 |
| Sample Date | Client Info | | 30 Nov 2023 | 20 Oct 2022 | 06 Oct 2021 |
| Machine Age | hrs | Client Info | 4665 | 3584 | 2223 |
| Oil Age | hrs | Client Info | 1081 | 3584 | 2223 |
| Oil Changed | Client Info | | Changed | Changed | Not Changed |
| Sample Status | | | ABNORMAL | NORMAL | NORMAL |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.1 | NEG | NEG | NEG |

WEAR METALS

| | method | limit/base | current | history1 | history2 | |
|----------|------------|-------------|-----------|--------------|----------|-----|
| PQ | ASTM D8184 | >50 | 18 | 11 | --- | |
| Iron | ppm | ASTM D5185m | >160 | 12 | 31 | 16 |
| 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 | <1 |
| Aluminum | ppm | ASTM D5185m | >50 | <1 | 1 | 1 |
| Lead | ppm | ASTM D5185m | >50 | <1 | 2 | 2 |
| Copper | ppm | ASTM D5185m | >225 | 49 | 81 | 18 |
| Tin | ppm | ASTM D5185m | >10 | <1 | <1 | 0 |
| Antimony | ppm | ASTM D5185m | | --- | --- | 1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | --- |

ADDITIVES

| | method | limit/base | current | history1 | history2 | |
|------------|--------|-------------|---------|--------------|----------|------|
| Boron | ppm | ASTM D5185m | 250 | 21 | 3 | 2 |
| Barium | ppm | ASTM D5185m | 10 | 0 | 2 | 1 |
| Molybdenum | ppm | ASTM D5185m | 100 | 0 | <1 | 0 |
| Manganese | ppm | ASTM D5185m | | <1 | 1 | --- |
| Magnesium | ppm | ASTM D5185m | 450 | 11 | 9 | 9 |
| Calcium | ppm | ASTM D5185m | 3000 | 2730 | 3204 | 3162 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 822 | 1032 | 1026 |
| Zinc | ppm | ASTM D5185m | 1350 | 904 | 1237 | 1252 |
| Sulfur | ppm | ASTM D5185m | 4250 | 4524 | 10643 | --- |

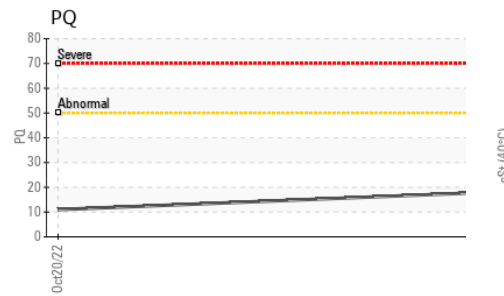
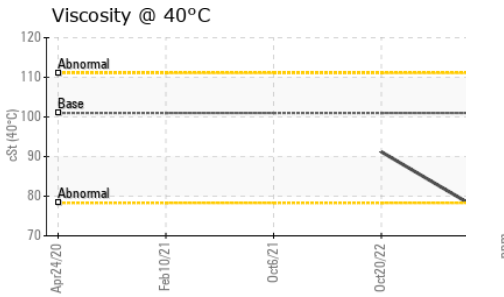
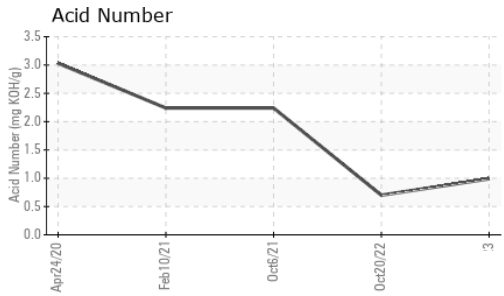
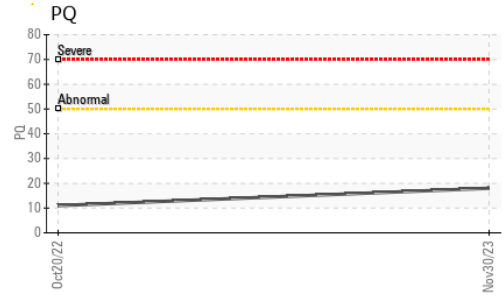
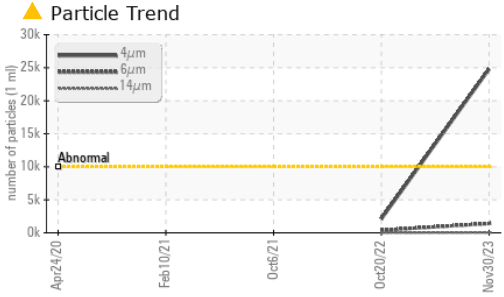
CONTAMINANTS

| | method | limit/base | current | history1 | history2 | |
|-----------|--------|-------------|---------|----------|----------|----|
| Silicon | ppm | ASTM D5185m | >20 | 6 | 11 | 12 |
| Sodium | ppm | ASTM D5185m | >75 | 2 | 0 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 3 | 3 |

FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|----------|----------|
| Particles >4µm | ASTM D7647 | >10000 | ▲ 24783 | 2090 | --- |
| Particles >6µm | ASTM D7647 | >2500 | 1405 | 388 | --- |
| Particles >14µm | ASTM D7647 | >320 | 40 | 22 | --- |
| Particles >21µm | ASTM D7647 | >80 | 12 | 5 | --- |
| Particles >38µm | ASTM D7647 | >20 | 1 | 0 | --- |
| Particles >71µm | ASTM D7647 | >4 | 0 | 0 | --- |
| Oil Cleanliness | ISO 4406 (c) | >20/18/15 | ▲ 22/18/12 | 18/16/12 | 22/18/12 |

OIL ANALYSIS REPORT

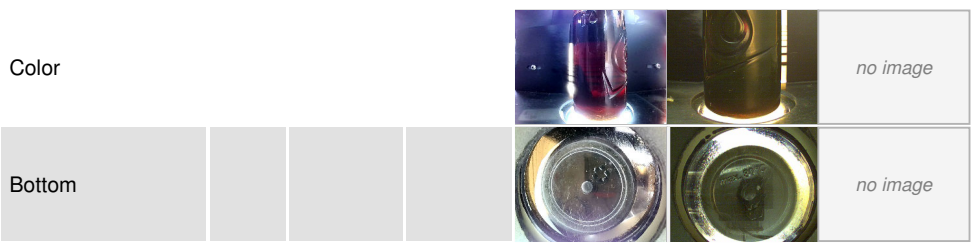


| FLUID DEGRADATION | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.99 | 0.70 | 2.24 |

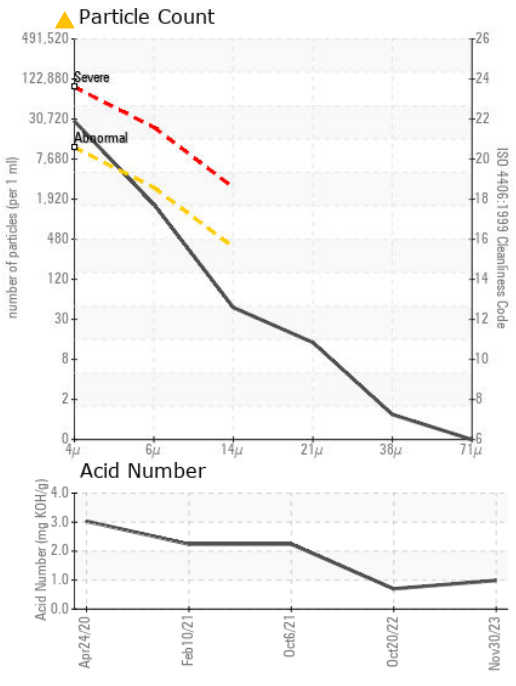
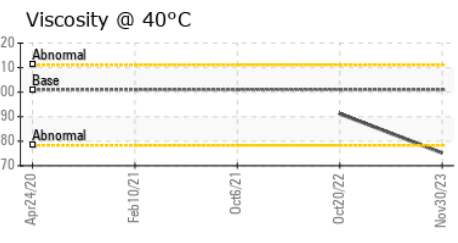
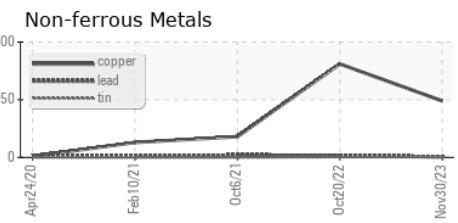
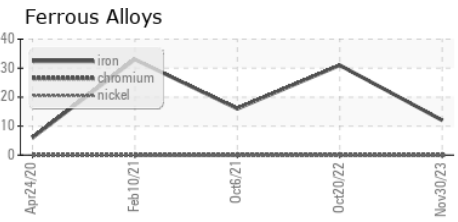
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- |
| Precipitate | scalar | *Visual | NONE | NONE | ---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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|-------------|----------|-----|
| Visc @ 40°C | cSt | ASTM D445 | 101 | 75.2 | 91.2 | --- |

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0002297 **Received** : 06 Dec 2023
Lab Number : **06026295** **Diagnosed** : 07 Dec 2023
Unique Number : 10776086 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: ICP, KV40, PQ, PrtCount, SCREEN)
 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)

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