



# OIL REPORT

LAB NUMBER: S474193

UNIT ID: 21 X7-FD

REPORT DATE: 10/9/2026

CLIENT ID:

CODE: 44/1,193

PAYMENT:

|      |                    |                  |                   |                  |
|------|--------------------|------------------|-------------------|------------------|
| UNIT | EQUIP. MAKE/MODEL: | Differential BMW | OIL TYPE & GRADE: | Differential Oil |
|      | FUEL TYPE:         |                  | OIL USE INTERVAL: | 42,000 Miles     |
|      | ADDITIONAL INFO:   |                  |                   |                  |

|        |            |
|--------|------------|
| CLIENT | PHONE      |
|        | FAX:       |
|        | ALT PHONE: |
|        | EMAIL:     |

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| COMMENTS | BRAD: This sample from the front differential contains excess metal and silicon, but given this is the factory fill, most of that can be chalked up to residual wear-in and assembly sealer/lube material and normal accumulation. The results should improve with each oil change and eventually look more like universal averages on the right, which are based on ~33,900-mile intervals. There's no water contamination and a slightly low flashpoint isn't usually worrisome in this application. Insolubles are at their limits, so it was a good time to change the oil. Check back after a similar run. |
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| ELEMENTS IN PARTS PER MILLION | MI/HR on Oil          | 42,000    | UNIT /<br>LOCATION<br>AVERAGES |  |  |  |  |  | UNIVERSAL<br>AVERAGES |
|-------------------------------|-----------------------|-----------|--------------------------------|--|--|--|--|--|-----------------------|
|                               | MI/HR on Unit         | 42,000    |                                |  |  |  |  |  |                       |
|                               | Sample Date           | 9/15/2026 |                                |  |  |  |  |  |                       |
|                               | Make Up Oil Added     |           |                                |  |  |  |  |  |                       |
|                               | ALUMINUM              | 14        |                                |  |  |  |  |  | 2                     |
|                               | CHROMIUM              | 5         |                                |  |  |  |  |  | 2                     |
|                               | IRON                  | 410       |                                |  |  |  |  |  | 201                   |
|                               | COPPER                | 2         |                                |  |  |  |  |  | 2                     |
|                               | LEAD                  | 0         |                                |  |  |  |  |  | 0                     |
|                               | TIN                   | 0         |                                |  |  |  |  |  | 1                     |
|                               | MOLYBDENUM            | 0         |                                |  |  |  |  |  | 20                    |
|                               | NICKEL                | 1         |                                |  |  |  |  |  | 1                     |
|                               | MANGANESE             | 27        |                                |  |  |  |  |  | 10                    |
|                               | SILVER                | 0         |                                |  |  |  |  |  | 0                     |
|                               | TITANIUM              | 0         |                                |  |  |  |  |  | 0                     |
|                               | POTASSIUM             | 2         |                                |  |  |  |  |  | 2                     |
|                               | BORON                 | 177       |                                |  |  |  |  |  | 187                   |
|                               | SILICON               | 282       |                                |  |  |  |  |  | 44                    |
| PROPERTIES                    | SODIUM                | 6         |                                |  |  |  |  |  | 5                     |
|                               | CALCIUM               | 22        |                                |  |  |  |  |  | 49                    |
|                               | MAGNESIUM             | 2         |                                |  |  |  |  |  | 53                    |
|                               | PHOSPHORUS            | 560       |                                |  |  |  |  |  | 1970                  |
|                               | ZINC                  | 14        |                                |  |  |  |  |  | 78                    |
|                               | BARIUM                | 10        |                                |  |  |  |  |  | 2                     |
|                               | Values<br>Should Be*  |           |                                |  |  |  |  |  |                       |
|                               | SUS Viscosity @ 210°F | 41.8      |                                |  |  |  |  |  |                       |
|                               | cSt Viscosity @ 100°C | 4.74      |                                |  |  |  |  |  |                       |
|                               | Flashpoint in °F      | 300       | >340                           |  |  |  |  |  |                       |
|                               | Fuel %                | -         |                                |  |  |  |  |  |                       |
|                               | Antifreeze %          | -         |                                |  |  |  |  |  |                       |
|                               | Water %               | 0.0       | 0.0                            |  |  |  |  |  |                       |
|                               | Insolubles %          | 0.6       | <0.6                           |  |  |  |  |  |                       |
|                               | TBN                   |           |                                |  |  |  |  |  |                       |
|                               | TAN                   |           |                                |  |  |  |  |  |                       |
|                               | ISO Code              |           |                                |  |  |  |  |  |                       |

\* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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