

### **OIL ANALYSIS REPORT**

Sample Rating Trend

VISCOSITY

# ROADTECH 2500E 2611300

Middle Gearbox Fluid GEAR OIL ISO 220 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as (GENERIC) GEAR OIL ISO 220, however, a fluid match indicates that this fluid is SAE 80W90 Gear Oil. Please confirm the oil type and grade on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

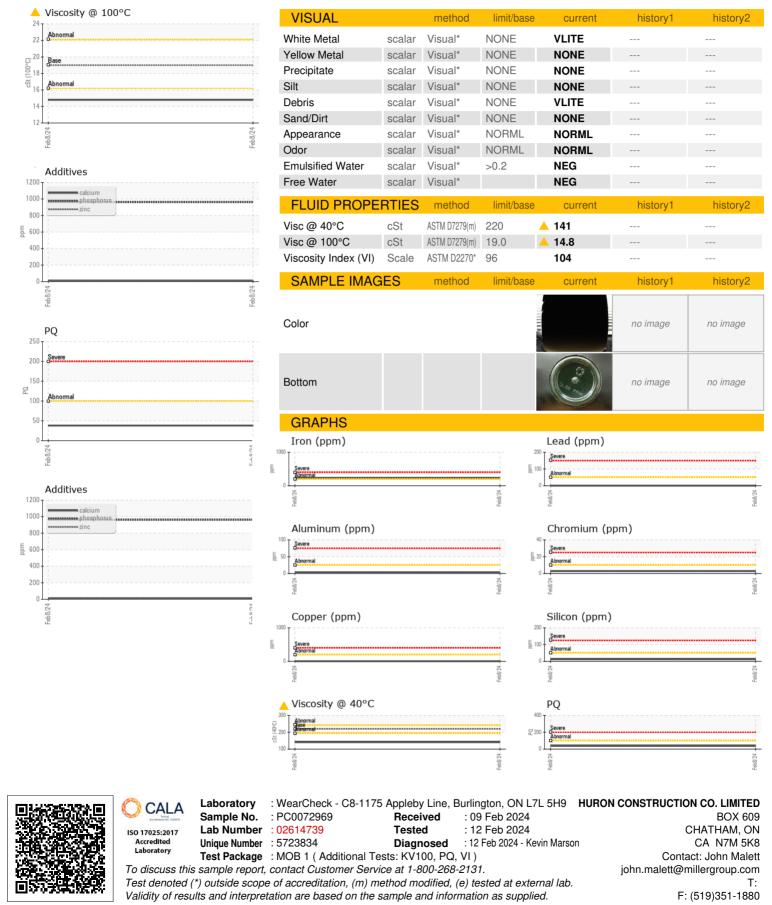
#### Fluid Condition

Viscosity of sample indicates oil is within SAE 80W90 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

|   |  |   |   | Feb2024  |  |                      |
|---|--|---|---|--|--|----------------------|
| SAMPLE INFOR  | MATION   | method  | limit/base  | current  | history1                                       | history2             |
| Sample Number   |  | Client Info   |   | PC0072969  |  |                      |
| Sample Date   |  | Client Info   |   | 08 Feb 2024  |  |                      |
| Machine Age   | hrs  | Client Info   |   | 6533   |  |                      |
| Oil Age   | hrs  | Client Info   |   | 500  |  |                      |
| Oil Changed   |  | Client Info   |   | Changed  |  |                      |
| Sample Status   |  |   |   | ABNORMAL   |  |                      |
| CONTAMINAT  | ION  | method  | limit/base  | current  | history1                                       | history2             |
| Water   |  | WC Method   | >0.2  | NEG  |  |                      |
| WEAR METAL  | .S   | method  | limit/base  | current  | history1                                       | history2             |
| PQ  |  | ASTM D8184*   |   | 38   |  |                      |
| Iron  | ppm  | ASTM D5185(m)   | >200  | 226  |  |                      |
| Chromium  | ppm  | ASTM D5185(m)   | >10   | 3  |  |                      |
| Nickel  | ppm  | ASTM D5185(m)   | >10   | 2  |  |                      |
| Titanium  | ppm  | ASTM D5185(m)   |   | 0  |  |                      |
| Silver  | ppm  | ASTM D5185(m)   |   | 0  |  |                      |
| Aluminum  | ppm  | ASTM D5185(m)   | >25   | 2  |  |                      |
| Lead  | ppm  | ASTM D5185(m)   | >50   | <1   |  |                      |
| Copper  | ppm  | ASTM D5185(m)   | >200  | 1  |  |                      |
| Tin   | ppm  | ASTM D5185(m)   | >10   | 0  |  |                      |
| Antimony  | ppm  | ASTM D5185(m)   | >5  | 0  |  |                      |
| Vanadium  | ppm  | ASTM D5185(m)   |   | 0  |  |                      |
|   |  |   |   | •  |  |                      |
| Beryllium   | ppm  | ASTM D5185(m)   |   | 0  |  |                      |
| Beryllium<br>Cadmium  | ppm<br>ppm   | ASTM D5185(m)<br>ASTM D5185(m)  |   | 0  |  |                      |
|   |  | . /   | limit/base  | -  |  |                      |
| Cadmium<br>ADDITIVES  |  | ASTM D5185(m)   | limit/base  | 0  |  |                      |
| Cadmium   | ppm  | ASTM D5185(m)<br>method   |   | 0<br>current   | <br>history1                                   | <br>history2         |
| Cadmium<br>ADDITIVES<br>Boron<br>Barium   | ppm<br>ppm   | ASTM D5185(m)<br>method<br>ASTM D5185(m)  | 50  | 0<br>current<br>210  | <br>history1<br>                               | <br>history2<br>     |
| Cadmium<br>ADDITIVES<br>Boron<br>Barium<br>Molybdenum   | ppm<br>ppm<br>ppm  | ASTM D5185(m)<br>method<br>ASTM D5185(m)<br>ASTM D5185(m)   | 50<br>15  | 0<br>current<br>210<br>1   | <br>history1<br>                               | <br>history2<br>     |
| Cadmium<br>ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese  | ppm<br>ppm<br>ppm<br>ppm   | ASTM D5185(m)<br>method<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)  | 50<br>15  | 0<br>current<br>210<br>1<br>0  | <br>history1<br><br>                           | <br>history2<br><br> |
| Cadmium<br>ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese  | ppm<br>ppm<br>ppm<br>ppm<br>ppm                                    | ASTM D5185(m)<br>method<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)   | 50<br>15<br>15<br>50  | 0<br>current<br>210<br>1<br>0<br>3   | <br>history1<br><br><br>                       | history2             |
| Cadmium<br>ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm                             | ASTM D5185(m)<br>method<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)  | 50<br>15<br>15<br>50  | 0<br>current<br>210<br>1<br>0<br>3<br>4  | <br>history1<br><br><br>                       | history2             |
| Cadmium<br>ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium   | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm                             | ASTM D5185(m)<br>method<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)  | 50<br>15<br>15<br>50<br>50                                      | 0<br>current<br>210<br>1<br>0<br>3<br>4<br>11  | <br>history1<br><br><br><br>                   | history2             |
| Cadmium<br>ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm               | ASTM D5185(m)<br>method<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)   | 50<br>15<br>15<br>50<br>50<br>350                               | 0<br>current<br>210<br>1<br>0<br>3<br>4<br>11<br>962                                     | <br>history1<br><br><br><br><br>               | history2             |
| Cadmium<br>ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc                                    | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm               | ASTM D5185(m)<br>method<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)  | 50<br>15<br>15<br>50<br>50<br>350<br>100                        | 0<br>current<br>210<br>1<br>0<br>3<br>4<br>11<br>962<br>12                               | <br>history1<br><br><br><br><br><br><br>       | history2             |
| Cadmium<br>ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc<br>Sulfur                          | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm        | ASTM D5185(m)<br>method<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)                                   | 50<br>15<br>15<br>50<br>50<br>350<br>100                        | 0<br>current<br>210<br>1<br>0<br>3<br>4<br>11<br>962<br>12<br>17818                      | <br>history1<br><br><br><br><br><br><br><br>-  | history2             |
| Cadmium<br>ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>Lithium               | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm        | ASTM D5185(m)<br>method<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)                                   | 50<br>15<br>15<br>50<br>350<br>100<br>12500                     | 0<br>current<br>210<br>1<br>0<br>3<br>4<br>11<br>962<br>12<br>17818<br>1                 | <br>history 1<br><br><br><br><br><br><br><br>- | history2             |
| Cadmium<br>ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>Lithium<br>CONTAMINAN | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185(m)<br>method<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m) | 50<br>15<br>15<br>50<br>50<br>350<br>100<br>12500<br>limit/base | 0<br>current<br>210<br>1<br>0<br>3<br>4<br>11<br>962<br>12<br>17818<br>1<br>1<br>current | history1                                       | history2 history2    |



## **OIL ANALYSIS REPORT**



Contact/Location: John Malett - HURCHA