

OIL ANALYSIS REPORT

CTL74 Machine Id CTL 74 EDGE TRIMMER REDUCER B/S

Gearbox Fluid

ESSO SPARTAN EP 220 (2 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

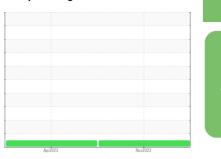
All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

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



Sample Rating Trend

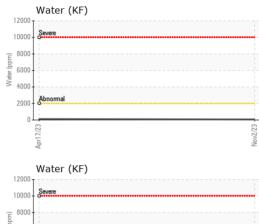


NORMAL

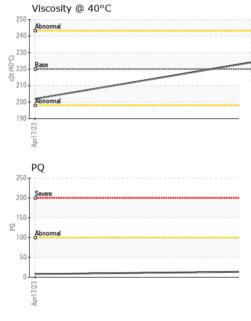
| SAMPLE INFORM | IATION | method | limit/base | current | history1 | history2 |
|------------------|---------------|-------------|------------|-------------|-------------|----------|
| Sample Number | | Client Info | | RP0038599 | RP0029626 | |
| Sample Date | | Client Info | | 02 Nov 2023 | 17 Apr 2023 | |
| Machine Age | mths | Client Info | | 2 | 2 | |
| Oil Age | mths | Client Info | | 2 | 0 | |
| Oil Changed | | Client Info | | N/A | Not Changd | |
| Sample Status | | | | NORMAL | NORMAL | |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| PQ | | ASTM D8184 | | 14 | 8 | |
| Iron | ppm | ASTM D5185m | >200 | <1 | 1 | |
| Chromium | ppm | ASTM D5185m | >15 | <1 | 0 | |
| Nickel | ppm | ASTM D5185m | >15 | 0 | 0 | |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | |
| Silver | ppm | ASTM D5185m | | 0 | 0 | |
| Aluminum | ppm | ASTM D5185m | >25 | 2 | 0 | |
| Lead | ppm | ASTM D5185m | >100 | 0 | 0 | |
| Copper | ppm | ASTM D5185m | >200 | 0 | <1 | |
| Tin | ppm | ASTM D5185m | >25 | 0 | 0 | |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | .5 | 17 | 1 | |
| Barium | ppm | ASTM D5185m | | 19 | 0 | |
| Molybdenum | ppm | ASTM D5185m | 0 | <1 | 1 | |
| Manganese | ppm | ASTM D5185m | | 0 | <1 | |
| Magnesium | ppm | ASTM D5185m | 0 | 6 | 8 | |
| Calcium | ppm | ASTM D5185m | 1.7 | 11 | 34 | |
| Phosphorus | ppm | ASTM D5185m | 250 | 209 | 166 | |
| Zinc | ppm | ASTM D5185m | .3 | 14 | 44 | |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >50 | 2 | 2 | |
| Sodium | ppm | ASTM D5185m | | 0 | <1 | |
| Potassium | ppm | ASTM D5185m | >20 | <1 | <1 | |
| Water | % | ASTM D6304 | >0.2 | 0.006 | 0.011 | |
| ppm Water | ppm | ASTM D6304 | >2000 | 61.8 | 112.7 | |
| FLUID DEGRADA | | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.75 | 0.39 | 0.20 | |



OIL ANALYSIS REPORT







| | VISUAL | | method | limit/base | current | history1 | history2 |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------|-----------------------------------------------|
| | White Metal | scalar | *Visual | NONE | NONE | NONE | |
| | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | |
| | Precipitate | scalar | *Visual | NONE | NONE | NONE | |
| | Silt | scalar | *Visual | NONE | NONE | NONE | |
| | Debris | scalar | *Visual | NONE | NONE | LIGHT | |
| | Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | |
| Nov2/23 | Appearance | scalar | *Visual | NORML | NORML | NORML | |
| 2 | Ouoi | scalar | *Visual | NORML | NORML | NORML | |
| | Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | |
| | Free Water | scalar | *Visual | | NEG | NEG | |
| | FLUID PROPER | TIES | method | limit/base | current | history1 | history2 |
| | Visc @ 40°C | cSt | ASTM D445 | 220 | 224 | 202 | |
| | SAMPLE IMAGE | ES | method | limit/base | current | history1 | history2 |
| . ESZZVON | Color | | | | | | no image |
| | Bottom | | | | | | no image |
| | GRAPHS | | | | | | |
| | Ferrous Alloys | | | | PQ | | |
| | 10 8 iron | | | 220 | | | |
| | contraction of the second seco | | | 200 | Severe | | |
| | | | | 180 | 1 | | |
| | 2 | | | 160 | | | |
| | | | n | 140- Si | | | |
| | Apr17/23 | | | EZ/Z^ON 120- | | | |
| *************************************** | | -1- | | ~ 문 100- | Abnormal | | |
| | Non-ferrous Meta | ais | | | | | |
| | 8 - copper | | | 60 | | | |
| | E 6 | | | | | | |
| | ⁶ 4 | | | 40 | | | |
| | 2 | | | 20 | 1 | | |
| | | | ······· | 0 | 53 | | |
| | Apr17/23 | | | Nov2/23 | Apr17/23 | | |
| | Viscosity @ 40°C | | | | Acid Number | | |
| | 250 240 | | | <u>s</u> ^{2.50} | Τ ; | | |
| | | | | ₩ 2.00 | Abnormal | | |
| | © 230 - Base | | | E 1.50 ອ | - | | |
| | 8 210 | | | (2.50) (6)HOX 2.00) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1.50) (1. | Base | | |
| | 200 - Abnormal | | | | | | |
| | Apr17/23 | | | Nov2/23 | 7/23 | | |
| | Apr1 | | | Nov | Apr17/23 | | |
| Laboratory Sample No. Lab Number Unique Number | : WearCheck USA - : RP0038599 : 05998088 r : 10726448 | 501 Madia Received Diagnos Diagnos | d : 03 ed : 06 | ry, NC 27513 Nov 2023 Nov 2023 s Davis | O | UTOKUMPU ST | AINLESS US HWY 43 CALVERT, A US 3651 |

Submitted By: DALE ROBINSON