

OIL ANALYSIS REPORT







MLU-1 Component Outboard Pump

CHEVRON REGAL OIL R&O 32 (--- GAL)

| D | ΙΛ | | | | 124 | |
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Machine Id

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

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 mistory1 mistory2 | | | Apr2023 | Aug2023 | Nov2023 Feb2024 | May2024 | |
|--|-------------------|----------|-------------|------------|-----------------|-------------|-------------|
| Sample Date | SAMPLE INFORM | 1ATION | method | limit/base | current | history1 | history2 |
| Sample Date | Sample Number | | Client Info | | RP0036045 | RP0036123 | RP0032106 |
| Oil Age hrs Client Info 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Sample Status method limit/bass current history1 history2 Iron ppm ASTM D5185m >90 4 74 7 Chromium ppm ASTM D5185m >90 4 74 7 Chromium ppm ASTM D5185m >5 <1 | | | Client Info | | 23 May 2024 | 19 Feb 2024 | 08 Nov 2023 |
| Oil Changed Status Client Info N/A N/A N/A N/A WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >90 4 74 7 Chromium ppm ASTM D5185m >5 <1 | Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| NORMAL ATTENTION NORMAL | Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| WEAR METALS | Oil Changed | | Client Info | | N/A | N/A | N/A |
| Iron | Sample Status | | | | NORMAL | ATTENTION | NORMAL |
| Chromium ppm ASTM D5185m >5 <1 | WEAR METALS | | method | limit/base | current | history1 | history2 |
| Nickel | Iron | ppm | ASTM D5185m | >90 | 4 | 7 4 | 7 |
| Titanium | Chromium | ppm | ASTM D5185m | >5 | <1 | <1 | 0 |
| Siliver | Nickel | ppm | ASTM D5185m | >5 | <1 | 0 | 0 |
| Aluminum | Titanium | ppm | ASTM D5185m | >3 | <1 | 0 | <1 |
| Lead ppm ASTM D5185m >12 <1 | Silver | ppm | ASTM D5185m | >3 | 1 | 0 | 0 |
| Copper ppm ASTM D5185m >30 2 7 3 Tin ppm ASTM D5185m >9 1 1 0 Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m <1 0 0 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m <1 <1 0 0 Magnesium ppm ASTM D5185m 78 59 80 2 Calcium ppm ASTM D5185m 0 <1 5 5 Phosphorus ppm ASTM D5185m 2 8 2 2 Zinc ppm ASTM D5185m 2 3 <1 1 1 | Aluminum | ppm | ASTM D5185m | >7 | 1 | 0 | 1 |
| Tin ppm ASTM D5185m >9 1 1 0 Vanadium ppm ASTM D5185m <1 | Lead | ppm | ASTM D5185m | >12 | <1 | 0 | 0 |
| Vanadium ppm ASTM D5185m <1 | Copper | ppm | ASTM D5185m | >30 | 2 | 7 | 3 |
| Vanadium ppm ASTM D5185m <1 | | | ASTM D5185m | >9 | 1 | 1 | 0 |
| ADDITIVES | Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Boron | Cadmium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Barium | ADDITIVES | | method | limit/base | current | history1 | history2 |
| Molybdenum ppm ASTM D5185m <1 | Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese ppm ASTM D5185m <1 | Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Magnesium ppm ASTM D5185m 78 59 80 Calcium ppm ASTM D5185m 0 <1 5 Phosphorus ppm ASTM D5185m 2 8 2 Zinc ppm ASTM D5185m <1 8 4 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >60 3 <1 1 Sodium ppm ASTM D5185m >20 <1 0 1 Vater %6 ASTM D5185m >20 <1 0 1 Water %6 ASTM D6304 >.1 0.028 0.010 0.019 ppm Water ppm ASTM D6304 >.1 0.028 0.010 0.019 ppm Water ppm ASTM D6304 >.1 0.028 0.010 0.019 ppm Water ppm ASTM D6304 >.1 0.028 0.010 0.019 < | Molybdenum | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Calcium ppm ASTM D5185m 0 <1 | Manganese | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Phosphorus ppm ASTM D5185m 2 8 2 Zinc ppm ASTM D5185m <1 | Magnesium | ppm | ASTM D5185m | | 78 | 59 | 80 |
| Zinc ppm ASTM D5185m <1 | Calcium | ppm | ASTM D5185m | | 0 | <1 | 5 |
| CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >60 3 <1 1 Sodium ppm ASTM D5185m 2 4 2 Potassium ppm ASTM D6304 >.1 0.028 0.010 0.019 Water % ASTM D6304 >.1 0.028 0.010 0.019 ppm Water ppm ASTM D6304 >.1000 289 105 198 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.37 0.30 0.31 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE Visual NONE NONE NONE NONE Visual NONE NONE NONE | Phosphorus | ppm | ASTM D5185m | | 2 | 8 | 2 |
| Silicon ppm ASTM D5185m >60 3 <1 | Zinc | ppm | ASTM D5185m | | <1 | 8 | 4 |
| Sodium ppm ASTM D5185m 2 4 2 Potassium ppm ASTM D5185m >20 <1 0 1 Water % ASTM D6304 >.1 0.028 0.010 0.019 ppm Water ppm ASTM D6304 >1000 289 105 198 FLUID DEGRADATION method limit/base current bistory1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.37 0.30 0.31 VISUAL method limit/base current bistory1 history2 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE <td< th=""><th>CONTAMINANTS</th><th></th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></td<> | CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Potassium ppm ASTM D5185m >20 <1 0 1 Water % ASTM D6304 >.1 0.028 0.010 0.019 ppm Water ppm ASTM D6304 >1000 289 105 198 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOHg ASTM D8045 0.37 0.30 0.31 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE 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 NORML | Silicon | ppm | ASTM D5185m | >60 | 3 | <1 | 1 |
| Water%ASTM D6304>.10.0280.0100.019ppm WaterppmASTM D6304>1000289105198FLUID DEGRADATION method limit/base current history1history2Acid Number (AN)mg KOH/gASTM D80450.370.300.31VISUALmethod limit/base current history1history2White Metal scalar *Visual NONE NONE NONE NONE NONE NONE NONEYellow Metal scalar *Visual NONE NONE NONE NONE NONE NONENONE NONE NONE NONE NONESilt scalar *Visual NONE NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE NONE NONE NON | Sodium | ppm | ASTM D5185m | | 2 | 4 | 2 |
| ppm WaterppmASTM D6304>1000289105198FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2Acid Number (AN)mg KOH/gASTM D80450.370.300.31VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.1NEGNEG | Potassium | ppm | ASTM D5185m | >20 | <1 | 0 | 1 |
| FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.37 0.30 0.31 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE LIGHT LIGHT NONE Sand/Dirt scalar *Visual NONE 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 | Water | % | ASTM D6304 | >.1 | 0.028 | 0.010 | 0.019 |
| Acid Number (AN) mg KOH/g ASTM D8045 0.37 0.30 0.31 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE LIGHT LIGHT NONE Sand/Dirt scalar *Visual NONE 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 | ppm Water | ppm | ASTM D6304 | >1000 | 289 | 105 | 198 |
| 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 | FLUID DEGRADATION | | 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 | Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.37 | 0.30 | 0.31 |
| Yellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONELIGHTLIGHTNONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.1NEGNEGNEG | VISUAL | | method | limit/base | current | history1 | history2 |
| 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 | White Metal | 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 | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debrisscalar*VisualNONELIGHTLIGHTNONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.1NEGNEGNEG | Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.1NEGNEGNEG | Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.1NEGNEGNEG | Debris | scalar | *Visual | NONE | LIGHT | LIGHT | NONE |
| Odorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.1NEGNEGNEG | Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Emulsified Water scalar *Visual >.1 NEG NEG NEG | Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| | Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| | Emulsified Water | scalar | *Visual | >.1 | NEG | | |

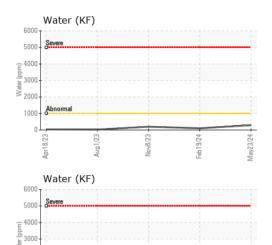
Submitted By: Service Manager

NEG

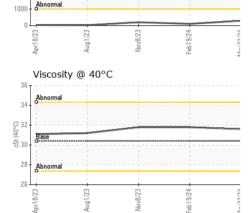
scalar *Visual

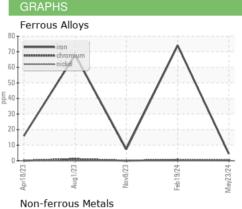


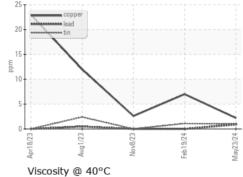
OIL ANALYSIS REPORT

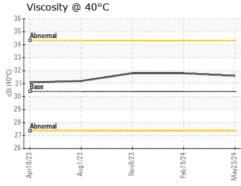


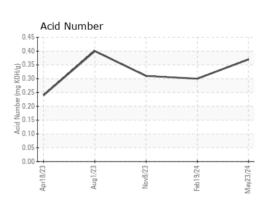
















Certificate 12367

Laboratory Sample No.

: RP0036045 Lab Number : 06194098 Unique Number : 11056221 Test Package : IND 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 29 May 2024

Tested : 30 May 2024 Diagnosed : 31 May 2024 - Angela Borella

126 FIRE TOWER RD SPEARSVILLE, LA US 71277

Contact: Service Manager

ENERGY TRANSFER - SPEARSVILLE

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)

Report Id: ENESPA [WUSCAR] 06194098 (Generated: 05/31/2024 09:31:53) Rev: 1

Submitted By: Service Manager

T:

F: