

OIL ANALYSIS REPORT

Area **Nickelson** Sany SY365 SY036MCB00618

Diesel Engine CITGO 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

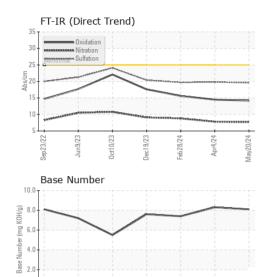
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| Sample Number Client Info PCA0115565 PCA0115501 LW0000 Sample Date Client Info 20 May 2024 04 Apr 2024 28 Feb Machine Age hrs Client Info 3112 2845 2576 Oil Age hrs Client Info 3112 2845 2576 Oil Changed Client Info Not Changd Not Changd Not Changd Not Changd Sample Status Client Info Not Changd Not Changd Not Changd Not Changd Glyool method limit/base current history1 history1 history1 Water WC Method >0.2 NEG NEG NEG Myter WC Method >0.2 NEG NEG NEG Mickel ppm ASTM D5185m >100 5 4 5 Chromium ppm ASTM D5185m >40 <1 | | | | | | | |
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| Water WC Method >0.2 NEG NEG NEG NEG Glycol WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history1 hist Iron ppm ASTM D5185m >100 5 4 5 Chromium ppm ASTM D5185m >20 <1 | CONTAMINAT | ION | method | limit/base | current | history1 | history2 |
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| Chromium ppm ASTM D5185m >20 <1 <1 <1 Nickel ppm ASTM D5185m >4 0 <1 | WEAR METAL | S | method | limit/base | current | history1 | history2 |
| Nickel ppm ASTM D5185m >4 0 <1 0 Titanium ppm ASTM D5185m <3 | ron | ppm | ASTM D5185m | >100 | 5 | 4 | 5 |
| Titanium ppm ASTM D5185m <1 1 0 Silver ppm ASTM D5185m >3 <1 | Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
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| Manganese ppm ASTM D5185m <1 <1 0 Magnesium ppm ASTM D5185m 621 595 597 Calcium ppm ASTM D5185m 621 595 597 Calcium ppm ASTM D5185m 1432 1377 1542 Phosphorus ppm ASTM D5185m 996 1009 1060 Zinc ppm ASTM D5185m 1200 1155 1225 Sulfur ppm ASTM D5185m 3718 3641 3654 CONTAMINANTS method limit/base current history1 hist Silicon ppm ASTM D5185m >25 5 5 4 Sodium ppm ASTM D5185m >20 4 4 3 Potassium ppm ASTM D5185m >20 4 4 1 INFRA-RED method limit/base current history1 hist Soot % % *ASTM D78 | Barium | | ASTM D5185m | | 0 | <1 | 0 |
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| Calcium ppm ASTM D5185m 1432 1377 1542 Phosphorus ppm ASTM D5185m 996 1009 1060 Zinc ppm ASTM D5185m 1200 1155 1225 Sulfur ppm ASTM D5185m 3718 3641 3654 CONTAMINANTS method limit/base current history1 hist Silicon ppm ASTM D5185m >25 5 5 4 Sodium ppm ASTM D5185m >25 5 5 4 INFRA-RED method limit/base current history1 hist Soot % % *ASTM D7844 >3 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 7.7 7.8 8.8 | Vanganese | ppm | ASTM D5185m | | <1 | <1 | 0 |
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| Nitration Abs/cm *ASTM D7624 >20 7.7 7.8 8.8 | INFRA-RED | | method | limit/base | current | history1 | history2 |
| | Soot % | % | *ASTM D7844 | >3 | 0.1 | 0.1 | 0.1 |
| Sulfation Abs/.1mm *ASTM D7415 >30 19.6 19.8 19.7 | | | | | | | |
| | Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.6 | 19.8 | 19.7 |
| FLUID DEGRADATION method limit/base current history1 hist | FLUID DEGRA | DATION | method | limit/base | current | history1 | history2 |
| Oxidation Abs/.1mm *ASTM D7414 >25 14.2 14.5 15.6 | Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 14.2 | 14.5 | 15.6 |
| Base Number (BN) mg KOH/g ASTM D2896 8.1 8.3 7.4 | Base Number (BN) | mg KOH/g | ASTM D2896 | | 8.1 | 8.3 | 7.4 |

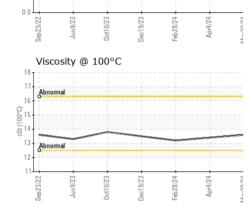
Sample Rating Trend

NORMAI



OIL ANALYSIS REPORT





| | VISUAL | | method | limit/base | current | history1 | history2 | | | | | | |
|---|--|-------------|-------------------------|--|-------------------------|--------------------------|-------------------------|--|--|--|--|--|--|
| | White Metal | scalar | *Visual | NONE | NONE | NONE | NONE | | | | | | |
| | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE | | | | | | |
| honor | Precipitate | 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 | | | | | | |
|)/24 | Appearance | scalar | *Visual | NORML | NORML | NORML | NORML | | | | | | |
| May20/24 | Odor | scalar | *Visual | NORML | NORML | NORML | NORML | | | | | | |
| - | Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | NEG | | | | | | |
| | Free Water | scalar | *Visual | 20.L | NEG | NEG | NEG | | | | | | |
| | FLUID PROPE | RTIES | method | limit/base | current | history1 | history2 | | | | | | |
| | Visc @ 100°C | cSt | ASTM D445 | | 13.6 | 13.4 | 13.2 | | | | | | |
| | GRAPHS | | | | | | | | | | | | |
| | Iron (ppm) | | | 100 | Lead (ppm) | | | | | | | | |
| 10 | 250 200 Severe | 1 | 1 1 | 80 | Severe | | | | | | | | |
| VG/UC-W | 150 | | | | | | | | | | | | |
| W | Abnormal | | | 4(| Abaranal | 1 1 | | | | | | | |
| | 50 - | | | 20 | , | | | | | | | | |
| | | _ | | | | | | | | | | | |
| | Sep 23/22 Jun9/23 Oct10/23 | Dec19/23 | Feb28/24 Apr4/24 | | Sep23/22 Jun9/23 | 0ct10/23 Dec19/23 | Feb28/24 Apr4/24 | | | | | | |
| | Sep2 Jun Oct1 | Dec1 | Feb2 Apr | May20/24 | Sep2 Jun | Oct1 Dec1 | Feb28/24 Apr4/24 | | | | | | |
| | Aluminum (ppm) | Chromium (p | opm) | | | | | | | | | | |
| | | | | 50 | 1 | | | | | | | | |
| | 40 - Severe | | | 40 |) - Severe | | | | | | | | |
| | a 20 - Abnormal | | | E 30 |) | | | | | | | | |
| VG/UC | abnormal | | | ² 20 | Abnormal | | | | | | | | |
| 2 10· 2 0· | 10 | | | 10 |) | | | | | | | | |
| | | | 4 4 | | | | 4 4 4 | | | | | | |
| | Sep 23/22 Jun9/23 Oct10/23 | Dec19/23 | Feb28/24 Apr4/24 | May20/24 | Sep 23/22 Jun 9/23 | 0ct10/23 Dec19/23 | Feb28/24 Apr4/24 | | | | | | |
| | | De | Fe / | Ma | | | Fe / | | | | | | |
| | Copper (ppm) | | | Silicon (ppm) |) | | | | | | | | |
| 300- 토 200- 0- 18- 18- 18- | Abitoimat | | | | | 1 I 1 I | | | | | | | |
| | | | | 60 | | | | | | | | | |
| | Ē200 | | | 튭.40 | Abnormal | | | | | | | | |
| | 100 | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | |
| | Sep 23/22 - Jun 9/23 - Oct1 0/23 - | Dec19/23 - | Feb28/24 - Apr4/24 - | | Sep23/22 - Jun9/23 - | 0ct10/23 . Dec19/23 . | Feb28/24 - Apr4/24 - | | | | | | |
| | Sep2 Jun Oct1 | Dec1 | Feb2 Apr | May20/24 | Sep2 | 0ct1 Dec1 | Febź Api | | | | | | |
| | Viscosity @ 100°C | | | | | | | | | | | | |
| | 18 Abnormal | | | (B)HO3 8.0 (B)HO3 8.0 | | | | | | | | | |
| | 10+ | | | j 8.0 B | | | | | | | | | |
| | ් 00 14- ද්ය Abnormal | | | ے 6.0 تو | | | | | | | | | |
| | 경 12 Abnormal | | | 4.0 | | | | | | | | | |
| | | | | 88 2.0 89 | | | | | | | | | |
| | | /23 - | /24 - | | | 123 | 124 - | | | | | | |
| | Sep23/22 Jun9/23 Oct10/23 | Dec19/23 | Feb28/24 Apr4/24 | May20/24 | Sep 23/22 Jun 9/23 | 0ct10/23 Dec19/23 | Feb28/24 Apr4/24 | | | | | | |
| | | | | 2 | ., | | | | | | | | |
| ratory | : WearCheck USA - 501 | Madiso | n Ave., Cary | , NC 27513 | | CHICAGO M | IACHINERY INC | | | | | | |
| ole No. | : PCA0115565 | | 3142 | EAST LINCOL | | | | | | | | | |
| | : 06188762 | Teste | | 4 May 2024 | | | LYNWOOD, I | | | | | | |
| Number | : 11045514 | Diagn | nosed · 24 | May 2024 - W | les Davis | | US 60411-772 | | | | | | |



Test Package : MOB 1 (Additional Tests: TBN) Certificate L2367 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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Report Id: THOLYN [WUSCAR] 06188762 (Generated: 05/24/2024 14:17:53) Rev: 1

Submitted By: Mike Korbelik

Contact: Mike Korbelik

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