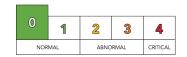


Lubricant Analysis Report

North America: +1-877-458-3315



Overall report severity based on comments.

Additional Testing

| | | Overall report seventy based on comments. | | | | | |
|---|--|---|--|--|--|--|--|
| Account Information | Component Information | Sample Information | | | | | |
| Account Number: OILANA-7501-8827 | Component ID: 08 R320 CD1 E | Tracking Number: 15211S03495 | | | | | |
| Company Name: MARC HANNA | Secondary ID: | Lab Number: E-540922 | | | | | |
| Contact: | Component Type: DIESEL ENGINE | Lab Location: Edmonton | | | | | |
| Address: 703 ROBERT FERRIE DRIVE | Manufacturer: MERCEDES BENZ | Data Analyst: RMF | | | | | |
| KITCHENER, ON CA Phone Number: 226-240-0774 | Model: OM642 Application: AUTOMOTIVE | Sampled: 11-Sep-2016 Submitted: 12-Sep-2016 | | | | | |
| Filone Number: 220-240-0774 | Sump Capacity: 10 L | Received: 20-Sep-2016 | | | | | |
| | | Completed: 22-Sep-2016 | | | | | |
| Filter Information | Miscellaneous Information | Product Information | | | | | |
| Filter Type: FULLFLOW Micron Rating: 0 | | Product Manufacturer: AMSOIL Product Name: AFL EUROPEAN CAR FORMULA Viscosity Grade: SAE 5W40 | | | | | |
| Comments Data indicates no abnormal find consideration. | ings. Resample at normal interval. Oil is suitable | e for continued use. Your note was taken into | | | | | |

| | CONSTRUCTOR CONTRACTOR | | | | | | | | | | | | | | | | | | | | | | | |
|----------|--|----------|--------|----------|--------|------|-----|---------|------------------|----------|---------------------------|--------|-----------|----------|------------|----------|-----------------------|---------|-------|-----------|---------|--------|------------|------|
| | Wear Metals (ppm) | | | | | | | | itamin als (p | | Multi-Source Metals (ppm) | | | | | n) | Additive Metals (ppm) | | | | | | | |
| Sample # | . | Chromium | Nickel | Aluminum | Copper | Lead | Tin | Cadmium | Silver | Vanadium | Silicon | Sodium | Potassium | Titanium | Molybdenum | Antimony | Manganese | Lithium | Boron | Magnesium | Calcium | Barium | Phosphorus | Zinc |
| 1 | 26 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 7 | 2 | 4 | 0 | 71 | 1 | 0 | 0 | 201 | 17 | 1771 | 0 | 789 | 923 |
| 2 | 9 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 2 | 0 | 6 | 0 | 0 | 0 | 78 | 11 | 1738 | 0 | 738 | 864 |
| 3 | 18 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 5 | 2 | 0 | 0 | 8 | 0 | 0 | 0 | 74 | 13 | 1717 | 0 | 755 | 872 |

| | | Sampl | e Inforr | mation | | | | Contaminants | | | | Fluid Properties | | | | | |
|--------|-------------|-------------|-----------|-----------|----------|---------------|-----------|------------------|-------|------------|-------------------|--------------------|----------------|----------------|-----------|---------------|--|
| # aldu | e Sampled | e Received | Lube Time | Unit Time | e Change | Lube Added | er Change | Fuel Dilution | Soot | Water | Viscosity 40°C | Viscosity 100°C | Acid Number | Base Number | Oxidation | Nitration | |
| San | Dat | Date | km | km | Lub | L | Filte | % Vol | % Vol | % Vol | cSt | cSt | mg KOH/g | mg KOH/g | abs/cm | abs/0.1 mm | |
| 1 | 20-Jun-2016 | 27-Jun-2016 | 10110 | 109737 | No | 0 | No | <1 - Estimate | <.1 | <.1 - FTIR | | 12.3 | | 4.48 | 29 | 9 | |
| 2 | 07-Aug-2016 | 12-Aug-2016 | 4500 | 115164 | Yes | 10 | Yes | <1 - Estimate | <.1 | <.1 - FTIR | | 13.5 | | 6.05 | 9 | 8 | |
| 3 | 11-Sep-2016 | 20-Sep-2016 | 10070 | 120655 | No | 0 | No | <1 - Estimate | <.1 | <.1 - FTIR | | 13.4 | | 5.38 | 11 | 9 | |

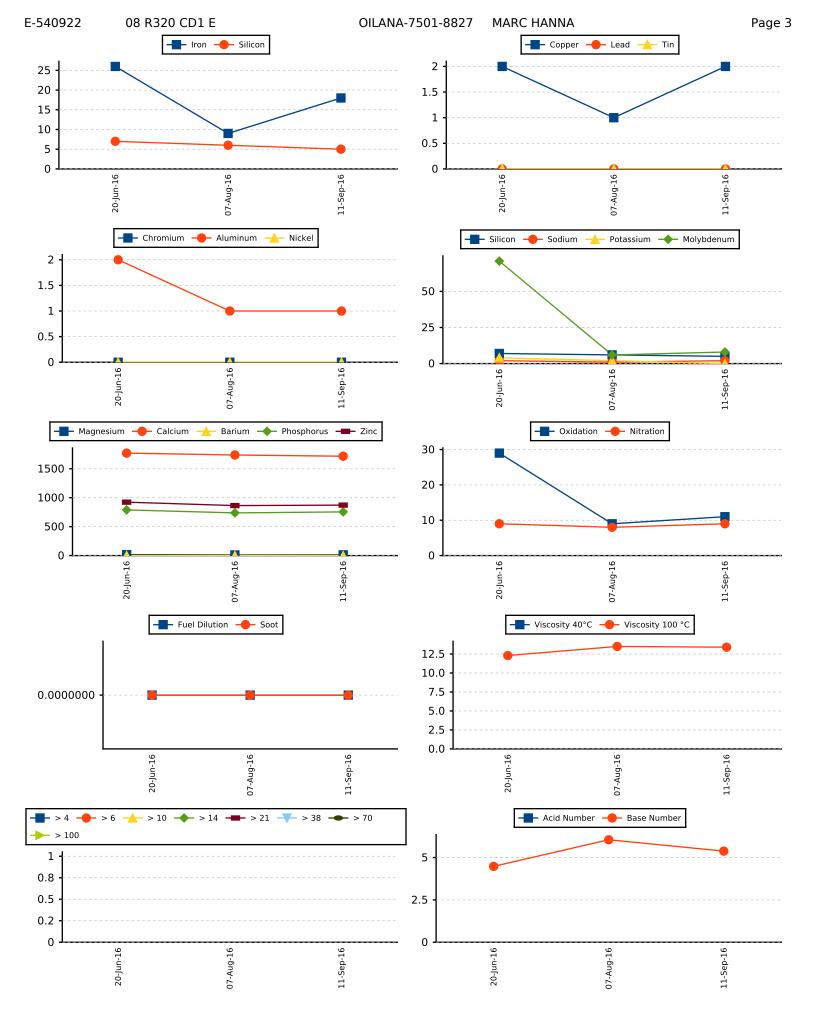
| | Particle Count (particles/mL) | | | | | | | | | | | | |
|----------|--------------------------------|-----------|-----------|------------|------------|------------|------------|------------|-------------|----------------|---|--|--|
| Sample # | ISO Code Based On 4/6/14 | > 4 µm | > 6 µm | > 10 µm | > 14 µm | > 21 µm | > 38 µm | > 70 µm | > 100 µm | Test Method | | | |
| 1 | // | | | | | | | | | | | | |
| 2 | // | | | | | | | | | · | 1 | | |
| 3 | // | | | | | | | | | |] | | |

Comments are advisory only and are based on the assumption that the sample and data submitted are valid. Missing fluid or component information limits the evaluation. No warranty is expressed or implied.

Historical Comments

Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Calcium is slightly high for this lubricant. Your note was taken into consideration. Sample information has been added or tests have been rerun or additional testing was added and the report has been regenerated.

Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Flagged additive levels are lower than expected for the lubricant that is identified. (This does not imply that the lubricant does not meet proper API, SAE or ISO classifications.). Lubricant and filter change acknowledged. Sample information has been added or tests have been rerun or additional testing was added and the report has been



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