



MOBILE OIL ANALYSIS REPORT

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|---------------|---------------|
| CONTAMINATION | NORMAL |
| OIL CONDITION | NORMAL |
| WEAR | NORMAL |

29041 - Diesel Engine

Unit Make : 2004 AUTOCAR

Unit Model : EXPEDITOR

Comp Make : CUMMINS

Comp Model : ISL 310

Serial No : H201467

Cust. Ref No. : {n/a}

Stub No. : KL-MF007071

Date Rec'd : Jul 18, 2011

Sample Date : Jun 25, 2011

Diagnostician : Don Baldrige

RECOMMENDATION

Resample at the next service interval to monitor.

| Sample Date | 10/09/09 | 09/01/10 | 02/17/11 | Current | UOM |
|---------------|----------|----------|----------|---------|-----|
| Time on Unit | 10978 | 1355 | 2016 | 2520 | hrs |
| Time on Oil | 1543 | 1355 | 2016 | 504 | hrs |
| Time on Fltr | 1543 | 1355 | 661 | 504 | hrs |
| Oil Maint. | not chg | n/a | not chg | not chg | --- |
| Filter Maint. | not chg | not chg | changed | changed | --- |

CONTAMINATION

There is no indication of any contamination in the component.

| Sample Date | 10/09/09 | 09/01/10 | 02/17/11 | Current | Abn |
|-------------|----------|----------|----------|---------|------|
| Silicon | 6.3 | 5.2 | 5.2 | 8.3 | 15 |
| Fuel (%) | <2.0 | <2.0 | <2.0 | <2.0 | --- |
| Glycol | --- | --- | --- | --- | 0.02 |
| Water (%) | <0.1 | <0.1 | <0.1 | <0.1 | 0.1 |
| Soot (%) | 3.6 | 0.4 | 2.1 | 2.5 | --- |
| >4µm(c) | --- | 282 | --- | --- | --- |
| >6µm(c) | --- | 153 | --- | --- | --- |
| >14µm(c) | --- | 26 | --- | --- | --- |
| >21µm(c) | --- | 8 | --- | --- | --- |
| >38µm(c) | --- | 1 | --- | --- | --- |
| >70µm(c) | --- | 0 | --- | --- | --- |
| ISO 4406(c) | --- | 14/12 | --- | --- | --- |

OIL CONDITION

Oil Type: 10 GAL of CHEVRON DELO 400 MULTIGRADE 15W40

The condition of oil is suitable for further service.

| Sample Date | 10/09/09 | 09/01/10 | 02/17/11 | Current | Base |
|-------------|----------|----------|----------|---------|------|
| Potassium | 1.2 | 0.0 | 1.3 | 12 | |
| Boron | 79 | 234 | 135 | 71 | |
| Barium | 0.0 | 0.1 | 0.3 | 0.0 | |
| Calcium | 1719 | 1651 | 1758 | 1766 | |
| Magnesium | 551 | 258 | 225 | 192 | |
| Molybdenum | 45 | 42 | 40 | 34 | |
| Sodium | 2.6 | 11 | 4.4 | 5.5 | |
| Phosphorus | 1000 | 934 | 802 | 916 | |
| Sulfur | 3525 | 3115 | 2503 | 2860 | |
| Zinc | 1342 | 1095 | 1038 | 1093 | |
| Visc@100°C | 15.98 | 14.74 | 14.43 | 15.47 | 14.4 |
| TBN | 7.57 | 7.86 | 7.81 | 8.47 | |

WEAR

All component wear rates are normal.

| Sample Date | 10/09/09 | 09/01/10 | 02/17/11 | Current | Abn |
|-------------|----------|----------|----------|---------|-----|
| PQ | --- | --- | --- | --- | --- |
| Iron | 67 | 19 | 63 | 87 | --- |
| Nickel | 0.3 | 0.2 | 0.9 | 0.1 | --- |
| Chromium | 4.1 | 0.6 | 3.1 | 4.1 | --- |
| Titanium | 0.1 | 0.2 | 0.0 | 0.3 | --- |
| Copper | 3.9 | 1.5 | 3.3 | 4.9 | --- |
| Aluminum | 3.8 | 3.0 | 3.2 | 4.0 | --- |
| Tin | 0.9 | 0.0 | 0.7 | 0.0 | --- |
| Lead | 4.6 | 0.0 | 1.3 | 1.2 | --- |