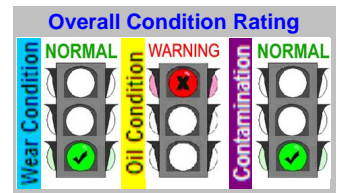


C Code : 32001  
 U Name :  
 S  
 T  
 O Address : 100/58  
 M 28th Fl., North Sathorn Rd.  
 E Khwaeng Silom, Khet Bangrak  
 R  
 Site :  
 Location :  
 Test code : 802

Unit ID : **PMWK E00913 Pump**  
 Unit Type : Pump  
 Unit Make : Wheatley  
 Unit Model : (not given)  
 Oil type / Viscosity : CASTROL DURATEC L SAE 40  
 Oil System Capacity : 30 Liters



**Notes (Finding, Evaluation, Interpretation, Suggestion and Recommendation)**

X- Viscosity and/or other tests indicate that the oil tested is probably not the same grade of oil as indicated on the sample information form. Recommend change oil and flush system with clean oil to remove contamination, if the oil from this sample is still in use in this component.

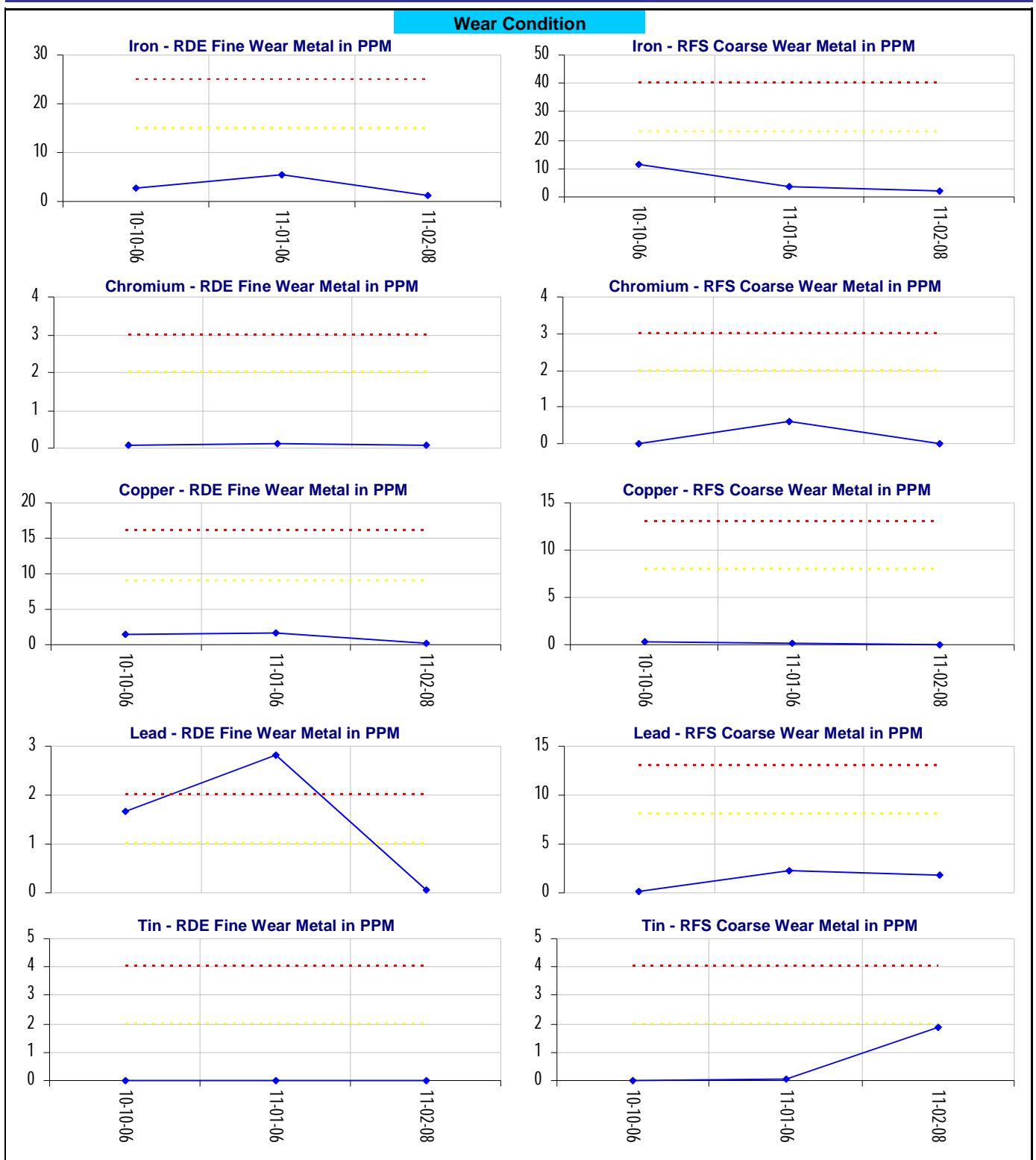
Somchai J / Andy Silton

|                     |               |           | Current Sample |            |           | Previous Sample |           |            | Baseline and Alarm Limit |            |           |                                                          |           |           |           |            |  |
|---------------------|---------------|-----------|----------------|------------|-----------|-----------------|-----------|------------|--------------------------|------------|-----------|----------------------------------------------------------|-----------|-----------|-----------|------------|--|
| Condition History   |               |           | Wear           | Oil        | Cont.     | Wear            | Oil       | Cont.      | Wear                     | Oil        | Cont.     | Alarm Limit                                              |           |           |           |            |  |
|                     |               |           | N              | W          | N         | C               | C         | N          | N                        | C          | W         | Alarm Limit Matrix -Set Name (Equipment type / oil type) |           |           |           |            |  |
|                     |               |           | 154235         |            |           | 152242          |           |            | 146338                   |            |           | Pump General Castrol Duratec L (Exterran)                |           |           |           |            |  |
| Lab ID              |               |           | 918632         |            |           | 917438          |           |            | 920929                   |            |           |                                                          |           |           |           |            |  |
| Bottle ID           |               |           | 08-Feb-11 *    |            |           | 06-Jan-11       |           |            | 06-Oct-10 *              |            |           |                                                          |           |           |           |            |  |
| Date Sampled        |               |           | 2262           |            |           | 1509            |           |            | 3600                     |            |           |                                                          |           |           |           |            |  |
| Oil Hours (Kms)     |               |           | 13055          |            |           | 12302           |           |            | 10540                    |            |           |                                                          |           |           |           |            |  |
| Unit Hours (Kms)    |               |           |                |            |           |                 |           |            |                          |            |           |                                                          |           |           |           |            |  |
| Oil Added (Liters)  |               |           |                |            |           |                 |           |            |                          |            |           |                                                          |           |           |           |            |  |
| Filters Hours (Kms) |               |           |                |            |           |                 |           |            |                          |            |           |                                                          |           |           |           |            |  |
| Test Method         |               |           | Result         |            |           |                 |           |            |                          |            |           |                                                          |           |           |           |            |  |
| Wear Condition      |               |           | RDE fine       | RFS coarse | RDE fine  | RFS coarse      | RDE fine  | RFS coarse | RDE fine                 | RFS coarse | RDE fine  | RFS coarse                                               | RDE fine  |           |           | RFS coarse |  |
| Wear Element        |               |           | Method         | Unit       | Method    | Unit            | Method    | Unit       | Method                   | Unit       | Method    | Unit                                                     | U-Caution | U-Warning | U-Caution | U-Warning  |  |
| Iron                | D-6595        | PPM       | 1.1            | 2.1        | 5.4       | 3.8             | 2.8       | 11.2       | 0                        | >15        | >25       | >23                                                      | >40       |           |           |            |  |
| Chromium            | D-6595        | PPM       | 0.1            | 0.0        | 0.1       | 0.6             | 0.1       | 0.0        | 0                        | >2         | >3        | >2                                                       | >3        |           |           |            |  |
| Lead                | D-6595        | PPM       | 0.1            | 1.8        | 2.8 W     | 2.3             | 1.7 C     | 0.2        | 0                        | >1         | >2        | >8                                                       | >13       |           |           |            |  |
| Copper              | D-6595        | PPM       | 0.2            | 0.1        | 1.6       | 0.1             | 1.4       | 0.2        | 0                        | >9         | >16       | >8                                                       | >13       |           |           |            |  |
| Tin                 | D-6595        | PPM       | 0.0            | 1.9        | 0.0       | 0.1             | 0.0       | 0.0        | 0                        | >2         | >4        | >2                                                       | >4        |           |           |            |  |
| Aluminum            | D-6595        | PPM       | 0.0            | 0.5        | 1.0       | 1.3             | 0.5       | 0.0        | 0                        | >1         | >2        | >2                                                       | >4        |           |           |            |  |
| Nickel              | D-6595        | PPM       | 0.0            | 0.0        | 0.4       | 0.2             | 0.0       | 0.0        | 0                        | >1         | >2        | >2                                                       | >3        |           |           |            |  |
| Silver              | D-6595        | PPM       | 0.0            | 0.0        | 0.0       | 0.1             | 0.0       | 0.0        | 0                        |            |           |                                                          |           |           |           |            |  |
| Molybdenum          | D-6595        | PPM       | 0.0            | 0.0        | 0.0       | 1.1             | 0.1       | 0.1        | 0                        |            |           |                                                          |           |           |           |            |  |
| Titanium            | D-6595        | PPM       | 0.0            | 0.0        | 0.0       | 0.0             | 0.0       | 0.0        | 0                        |            |           |                                                          |           |           |           |            |  |
| Oil Condition       |               |           | RO             | L-Warning  | L-Caution | U-Caution       | U-Warning | RO         | L-Warning                | L-Caution  | U-Caution | U-Warning                                                |           |           |           |            |  |
| Viscosity @ 40°C    | D-445         | cSt       |                |            |           |                 |           | 12.6       | <11.3                    | <12        | >13.2     | >13.9                                                    |           |           |           |            |  |
| Viscosity @ 100°C   | D-445         | cSt       | 17.0 X         |            | 11.5 C    |                 | 11.3 C    | 6.9        |                          |            | >8.6      | >10.4                                                    |           |           |           |            |  |
| Oxidation           | FTIR          | Abs       | 3.9            |            | 8.1       |                 | 6.7       | 7.5        |                          |            | >9.3      | >11.3                                                    |           |           |           |            |  |
| Nitration           | FTIR          | Abs       | 4.7            |            | 7.3       |                 | 7.0       | 1.00       |                          |            | >1.2      | >1.5                                                     |           |           |           |            |  |
| TAN                 | D-974         | mg KOH/g. |                |            |           |                 |           |            |                          |            |           |                                                          |           |           |           |            |  |
| TBN                 | D-4739        | mg KOH/g. |                |            |           |                 |           |            |                          |            |           |                                                          |           |           |           |            |  |
| Contamination       |               |           | RO             | L-Warning  | L-Caution | U-Caution       | U-Warning | RO         | L-Warning                | L-Caution  | U-Caution | U-Warning                                                |           |           |           |            |  |
| Water               | T-H2O CheckTM | % (Wt.)   | 0.031          |            | 0.058     |                 | 0.070 C   | 0.020      |                          |            | >0.06     | >0.1                                                     |           |           |           |            |  |
| Sodium              | D-6595        | PPM       | 1              |            | 8         |                 | 8         | 12         |                          |            |           |                                                          |           |           |           |            |  |
| Silicon             | D-6595        | PPM       | 0.3            | 0.8        | 3.6       | 4.0             | 2.3       | 8          | >15                      | >18        | >5        | >8                                                       |           |           |           |            |  |
| Additive Element    |               |           | RO             | L-Warning  | L-Caution | U-Caution       | U-Warning | RO         | L-Warning                | L-Caution  | U-Caution | U-Warning                                                |           |           |           |            |  |
| Boron               | D-6595        | PPM       | 28 X           |            | 123       |                 | 134       | 152        |                          |            |           |                                                          |           |           |           |            |  |
| Magnesium           | D-6595        | PPM       | 1              |            | 6         |                 | 8         | 11         |                          |            |           |                                                          |           |           |           |            |  |
| Calcium             | D-6595        | PPM       | 73 X           |            | 1052      |                 | 1134      | 1071       |                          |            |           |                                                          |           |           |           |            |  |
| Barium              | D-6595        | PPM       | 0              |            | 0         |                 | 0         | 0          |                          |            |           |                                                          |           |           |           |            |  |
| Phosphorus          | D-6595        | PPM       | 209 X          |            | 201       |                 | 216       | 253        |                          |            |           |                                                          |           |           |           |            |  |
| Zinc                | D-6595        | PPM       | 21 X           | 15         | 252       | 9               | 288       | 342        |                          |            |           |                                                          |           |           |           |            |  |
| Additional Test     |               |           | RO             | U-Caution  | U-Warning | U-Caution       | U-Warning | RO         | U-Caution                | U-Warning  | U-Caution | U-Warning                                                |           |           |           |            |  |
| Flash Point         | D-3828        | °C        |                |            |           |                 |           |            |                          |            |           |                                                          |           |           |           |            |  |
| Viscosity Index     | D-2270        |           |                |            |           |                 |           |            |                          |            |           |                                                          |           |           |           |            |  |

Note: Alarm Limits are variable and dependent upon dataset size and to be used as general guideline.  
 No Sign or **N** : NORMAL, **C** or **C** : CAUTION (first level warning limit), **W** or **W** : Warning (second level warning limit)  
 U-Caution : Upper CAUTION Level, L-Caution : Lower CAUTION Level, First Level Alarm Alert Limit in Upper Level and/or Lower Level  
 U-Warning : Upper WARNING Level, L-Warning : Lower WARNING required Level, Second Level Alarm Alert Limit in Upper Level and/or Lower Level  
 Baseline will be data of either "The new oil" or "Reference oil" or "Oil specification".  
 Accuracy of interpretation and recommendation are based on representatives sample and information supplied.  
 TNO = The new oil, RO = Reference oil, OS = Oil Specification  
 No warranty is expressed or implied for this report.

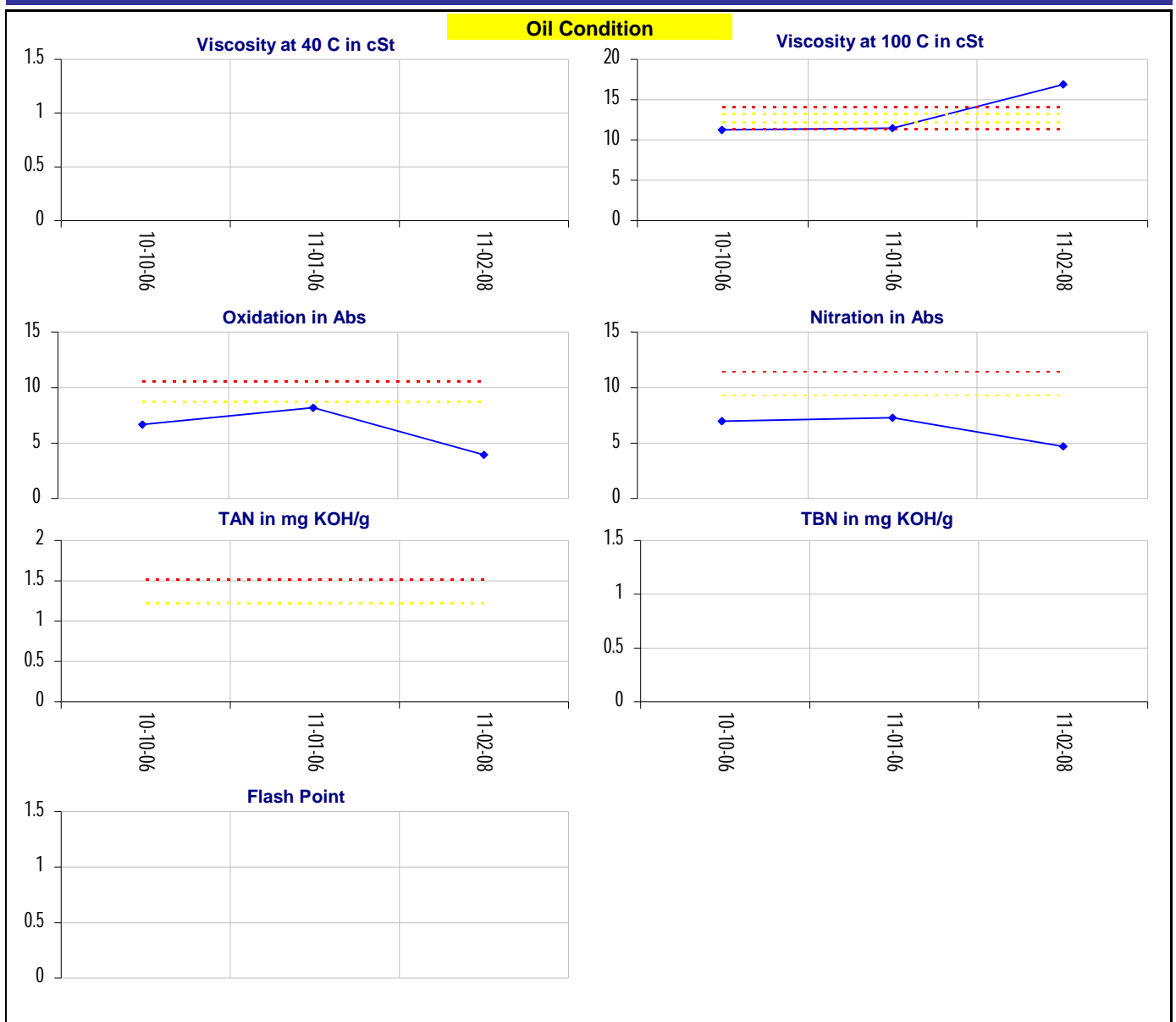
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