

OIL ANALYSIS REPORT

Sample Number

hrs

hrs

Sample Date

Machine Age

Oil Changed

Oil Age

Area MONTGOMERY HINO 226052

Diesel Engine Fluid

PETRO CANADA DURON SHP 15W40 (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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.



| Sample Status | | | | NORMAL | NORMAL | |
|---------------|-----|-------------|------------|---------|----------|----------|
| CONTAMINAT | ION | method | limit/base | current | history1 | history2 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | |
| Water | | WC Method | >0.2 | NEG | NEG | |
| Glycol | | WC Method | | NEG | NEG | |
| WEAR METAL | S | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >100 | 32 | 24 | |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | |
| Nickel | ppm | ASTM D5185m | >4 | <1 | 0 | |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | |
| Aluminum | ppm | ASTM D5185m | >20 | 15 | 12 | |
| Lead | ppm | ASTM D5185m | >40 | 6 | 10 | |
| Copper | ppm | ASTM D5185m | >330 | 2 | 3 | |
| Tin | ppm | ASTM D5185m | >15 | <1 | 1 | |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | 0 | 3 | 41 | |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | |
| Molybdenum | ppm | ASTM D5185m | 60 | 69 | 111 | |
| Manganese | ppm | ASTM D5185m | 0 | 1 | <1 | |
| Magnesium | ppm | ASTM D5185m | 1010 | 1011 | 541 | |
| Calcium | ppm | ASTM D5185m | 1070 | 1205 | 1480 | |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1113 | 930 | |
| Zinc | ppm | ASTM D5185m | 1270 | 1365 | 1146 | |
| Sulfur | ppm | ASTM D5185m | 2060 | 3620 | 3597 | |
| CONTAMINAN | TS | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >25 | 21 | 14 | |
| Sodium | ppm | ASTM D5185m | | 4 | 1 | |
| Potassium | ppm | ASTM D5185m | >20 | 5 | 5 | |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|------------------|----------|-------------|------------|---------|----------|----------|
| Soot % | % | *ASTM D7844 | >3 | 1.6 | 1.1 | |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 15.5 | 13.8 | |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 25.2 | 29.2 | |
| FLUID DEGRAD | DATION | method | limit/base | current | history1 | history2 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 24.8 | 26.3 | |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 8.6 | 6.6 | |



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