



Test Monitoring Center

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T-10 INFORMATION LETTER 04-2
Sequence No. 7

September 17, 2004

ASTM consensus has not been obtained on this information letter. An appropriate ASTM ballot will be issued in order to achieve such consensus.

TO: Mack Mailing List

SUBJECT: T-10 with Ultra-low Sulfur Diesel Fuel

At the September 10, 2004 Mack Surveillance Panel meeting, a motion was approved to add information regarding the European Automobile Manufacturer's Association use of the T-10 test procedure with an alternate fuel. Accordingly, Appendix X1, detailing the fuel specification for a T-10 test on ultra-low sulfur diesel fuel, has been added to Test Method D 6987. This appendix is attached.

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Attachment

c: ftp://ftp.astmtmc.cmu.edu/docs/diesel/mack/procedure_and_ils/T-10/il04-2.pdf

Distribution: Email

APPENDIXES

(Nonmandatory Information)

X1. T-10 with Ultra-Low Sulfur Diesel Fuel (ULSD)

X1.1 The European Automobile Manufacturers Association (ACEA) uses results from T-10 tests run on ultra-low sulfur diesel fuel, designated by ACEA as the T-10 ULSD. Ranges for such a fuel are provided in Table X1.1. This test method makes no attempt to quantify precision or discrimination between results for T-10 tests run with this or any other alternate fuel.

Table X1.1 ULSD Fuel Specification

| Property | Specification | Test Method |
|----------------------------------|-------------------------|--------------------------|
| Additives | Lubricity additive only | |
| Distillation Range, °C | | |
| 90% | 293 – 332 | ASTM D 86 |
| Specific Gravity | 0.840 – 0.855 | ASTM D 4052 |
| API Gravity | 34 – 37 | ASTM D 4052 |
| Corrosion, 3 h at 50 °C | 1 max | ASTM D 130 |
| Sulfur, mass ppm | 7 – 15 | ASTM D 5453 |
| Flash Point, °C | 54 min | ASTM D 93 |
| Pour Point, °C | -18 max | ASTM D 97 |
| Cloud Point, °C | Report | ASTM D 2500 |
| Viscosity at 40 °C, cSt | 2.0 – 2.6 | ASTM D 445 |
| Ash, weight % | 0.005 max | ASTM D 482 |
| Carbon Residue on 10% Bottoms | 0.35 max | ASTM D 524 |
| Net Heat of Combustion | Report | ASTM D 3338 |
| Water and Sediment, volume % | 0.05 max | ASTM D 2709 |
| Total Acid Number | 0.05 max | ASTM D 664 |
| Strong Acid Number | 0 max | ASTM D 664 |
| Cetane Index | Report | ASTM D 976 |
| Cetane Number | 43 – 47 | ASTM D 613 |
| Accelerated Stability, mg/100 mL | 1.5 max | ASTM D 2274 |
| Composition | | |
| Aromatics, wt % | 26 – 31.5 | ASTM D 5186 |
| Olefins, vol % | Report | ASTM D 1319 |
| Saturates, vol % | Report | ASTM D 1319 |
| SLBOCLE, g | 3100 min ⁴ | ASTM D 6078 ⁴ |

⁴ May be altered to be consistent with CARB or ASTM diesel fuel specifications.