UNCONFIRMED MINUTES OF THE
ASTM SEQUENCE T-6, T-7, AND T-8 SURVEILLANCE PANEL MEETING

Held at the Westin Harbour Castle Hotel
Toronto, Ontario, Canada
June 22, 1998

1. Call to Order

1.1. This meeting of the sequence T-6, T-7, and T-8 surveillance panel was called to order at 1:00 p. m. on June 22, 1998. The attendance list is shown as attachment 1. The agenda is shown as attachment 2.

2. Approval of Minutes from the previous meetings

2.1. Jeff Clark commented that item 4.3 of the minutes of the meeting on March 3, 1998 should say “Jeff proposed using the **2** parameter LTMS constants for the LTMS system for both tests”.

2.2. The minutes of the meeting on March 3, 1998 were approved without further comments.

2.3. The minutes of the conference call meeting on May 21 were approved without comments.

3. Scope and Objectives (Charlie Passut)

3.1 There was some discussion about the possibility of combining the Mack T-9 task force and the Mack T-6, T-7, and T-8 surveillance panel. The group felt that it was up to the chairman of the Maintenance Tests group, Mark Sutherland, to decide on this matter.

4. Rotational Viscosity Task Force (Herman George, Attachment 3)

4.1. Herman George, chairman of the ASTM D02.07 task force on Rotational Viscosity Measurements, presented some of the findings of his task force. A comparison of viscosity measurements was done using used oils from a Mack T-8 test on TMC 1004 reference oil. For kinematic viscosity measurements the shear rate is not very well controlled which may cause higher variability. Rotational viscosity may result in higher viscosity levels for soot laden oils in the soot content range where they no longer behave as Newtonian fluids. The C-value was used to

indicate how well the soot was dispersed in the oil. C-values close to 1 are found when the viscosity is low and the soot is well dispersed. The task force will do more work to find out what the repeatability and reproducibility of the C-value measurements are.

4.2. All measurements will be done using commercially available controlled stress rheometers. One major advantage of this type of device is that the sample preparation is part of the measurement protocol, which guarantees that the shear history of the sample is identical for each measurement.

5. CPD Report (Gary Tietze, Attachment 4)

5.1. Gary reported on the inventory of Mack T-8 parts. He mentioned that there are 6 cylinder heads in stock. Gary proposes to reduce this number to 4. This will be further discussed at the next meeting.

5.2. TEI has replaced the EOL Plus Mack Bulldog oil with EOM Mack Bulldog oil. A motion to accept this change was passed unanimously.

6. TMC Report (Jeff Clark, attachment 5)

6.1. The invalid test summary showed that some reference tests hit the 250 hour soot window but missed the window for 300 hour soot content.

6.2. The aborted tests rate for the period of Oct. ’97 to Apr. ’98 was a little higher than for the previous period. This can be explained because there were fuel flow control problems which have been solved. For the current period the rate seems to be back to normal.

6.3. The pooled precision for Viscosity Increase at 3.8% soot seems to be deteriorating. The reference oil target for TMC 1004-3 will be recalculated as soon as 20 test results have been reported.

6.4. The fuel supply system diagram for the Mack T-9 engine test stand has been modified recently. This change should also be incorporated in the Mack T-8 test procedure. A motion to change the fuel supply diagram in the Mack T-8 procedure was accepted unanimously.

6.5. Jeff reported on the outcome of the viscosity measurement workshop. The objective of the workshop was to standardise the kinematic viscosity measurement procedure, which will be used as long as the rotational viscosity measuring procedure is not available. A motion to accept the recommendations from the workshop, as outlined in the TMC information letter, passed unanimously.

7. D-3945 Replacement (Charlie Passut)

7.1. Charlie Passut brought up the issue of replacement of the D-3945 method with the ASTM D-6278 method. It was stated that the D-6278 method has the same severity level but is more precise than the D-3945 method. The difference is that D-6278 defines the injector opening pressure to a tighter range. A motion to accept this replacement, effective the day of the meeting, was accepted unanimously.

8. T-6 / T-7 Replacement (HDEOCP Request)

8.1. At the last meeting (March 3, 1998) the surveillance panel discussed the issue of offering the industry an alternative to the Mack T-7 test. This alternative T-7 test, which is called the T-7A test, is based on a 150 hour Mack T-8 test. The viscosity increase between 100 and 150 hour will be measured and expressed in a viscosity increase in cSt/hr. A proposed limit for this alternative T-7 test would be 0.2 cSt/hr maximum. The surveillance panel will request the HDEOCP to consider their proposal (Attachment 6) at the next HDEOCP meeting.

9. Report to B.02 (Charlie Passut, Attachment 7)

The chairman shared a report prepared for presentation at the B.02 meeting. The report contains an overview of membership, meetings held and the engine test activity levels along with a summary of the highlights of the work of the surveillance panel.

10. Old / New Business

10.1 Greg Shank brought up the issue of invalidating a test with flaked piston rings. According to Greg, the criteria for invalidating a test need to be updated because in theory a laboratory can base the decision to invalidate a test on the test result. The current guideline is that a test, which is interrupted because there are indications that the rings may be flaked, is invalidated if the rings are indeed flaked. If flaking is observed at the end of a test during which no abnormal oil consumption, blowby and crankcase pressure were observed, that test is considered valid.

11. Next Meeting

11.1 The next meeting will be September 10, 1998, in Richmond, Virginia.