### **Mack T-11 Fuel Requirements**

The Mack T-11 Test shall use a fuel meeting the PC-9-HS specification located on the TMC website, and that has been approved for use through the process defined by the Mack/Volvo Surveillance Panel for acceptance.

Due to the high level of sulfur content compared to the majority of fuel commercially available in the marketplace, only suppliers that have been approved through the panel's process are considered acceptable for use. Since the PC-9-HS sulfur requirement of 400-500ppm, it is expected that fuel for the test will be produced as a batch process rather than a continuous production stream. The fuel supplier shall conduct a full COA analysis for each batch produced.

An individual lab may not bring a new fuel supplier into use, even following the criteria noted in the approval process, without the notification and review of the Surveillance Panel.

#### Introduction of a New Fuel Source or Transition between Fuels

A "New Fuel Source" shall be considered a change in the supplier that a lab is using.

## Fuel Usage

- a. A candidate test on a calibrated stand must use fuel from the same supplier as the successful calibration test on that stand
- b. Each test stand may utilize a different fuel, provided each stand and fuel pair have meet the calibration criteria noted below

#### 2. New Fuel Introduction Process

- a. A fuel that has been approved by the Surveillance Panel for use with the Mack T-11 may calibrate on a new fuel for a stand with the following process
  - i. Notify the TMC that a New Fuel will be utilized
  - ii. One operationally valid calibration tests with no Critical Parameter Level 2 e<sub>i</sub> alarms must be conducted on the New Fuel using TMC assigned reference oil
  - iii. If the first test has a Critical Parameter level 2 e<sub>i</sub> alarm, but does not exceed level 3 e<sub>i</sub> alarms, a second test may be run and considered acceptable for calibration as long as a Critical Parameter level 3 e<sub>i</sub> alarm is not exceeded for the second test as well.

## 3. Transition Between Approved Fuels

- a. If a laboratory desires to switch between two previously approved fuels on a stand, this must occur as part of the calibration process for a particular stand.
- b. A fuel that has been approved for testing at one laboratory does not automatically gain acceptance at a second. Each laboratory must consider the fuel to be a New Fuel and follow the appropriate introduction process for each stand
- c. The source tank must be addressed in one of two ways;
  - i. Fully drained and cleaned if the tank's previous contents were not an approved fuel for the test
  - ii. At 5% or less of overall capacity of an approved fuel prior to refilling with the new fuel that is to be used for the calibration test
- d. A previously approved and utilized fuel may be brought back into use for a stand with a single calibration test based on normal calibration criteria

# LTMS Assumptions

The above criteria assumes the following;

- Transition the T11 to a Stand-based LTMS system
- Ei values used in LTMS