§ 86.158–00 Supplemental Federal Test Procedures; overview.

The procedures described in §§ 86.158–00, 86.159–00, 86.160–00, and 86.162–00 discuss the aggressive driving (US06) and air conditioning (SC03) elements of the Supplemental Federal Test Procedures (SFTP). These test procedures consist of two separable test elements: A sequence of vehicle operation that tests exhaust emissions with a driving schedule (US06) that tests exhaust emissions with a driving schedule (US06) that
§ 86.158-08 Supplemental Federal Test Procedures; overview.

The procedures described in §§86.158-08, 86.159-08, 86.160-00, and 86.162-00 discuss the aggressive driving (US06) and air conditioning (SC03) elements of the Supplemental Federal Test Procedures (SFTP). These test procedures consist of two separable test elements: A sequence of vehicle operation that tests exhaust emissions with a driving schedule (US06) that tests exhaust emissions under high speeds and accelerations (aggressive driving); and a sequence of vehicle operation that tests exhaust emissions with a driving schedule (SC03) which includes the impacts of actual air conditioning operation. These test procedures (and the associated standards set forth in subpart S of this part) are applicable to light-duty vehicles and light-duty trucks.

(a) Vehicles are tested for the exhaust emissions of THC, CO, NOX, CH4, and CO2. For diesel-cycle vehicles, THC is sampled and analyzed continuously according to the provisions of §86.110.

(b) Each test procedure follows the vehicle preconditioning specified in §86.132-00.

(c) US06 Test Cycle. The test procedure for emissions on the US06 driving schedule (see §86.159-08) is designed to determine gaseous exhaust emissions from light-duty vehicles and light-duty trucks while simulating high speed and acceleration on a chassis dynamometer (aggressive driving). The full test consists of preconditioning the engine to a hot stabilized condition, as specified in §86.132-00, and an engine idle period of 1 to 2 minutes, after which the vehicle is accelerated into the US06 cycle. A proportional part of the diluted exhaust is collected continuously for subsequent analysis, using a constant volume (variable dilution) sampler or critical flow venturi sampler.

(d) SC03 Test Cycle. The test procedure for determining exhaust emissions with the air conditioner operating (see §86.160-00) is designed to determine gaseous exhaust emissions from light-duty vehicles and light-duty trucks while simulating an urban trip during ambient conditions of 95 °F, 100 grains of water/pound of dry air (approximately 40 percent relative humidity), and a solar heat load intensity of 850 W/m². The full test consists of vehicle preconditioning (see §86.132-00 paragraphs (o) (1) and (2)), an engine key-off 10 minute soak, an engine start, and operation over the SC03 cycle. A proportional part of the diluted exhaust is collected continuously during the engine start and the SC03 driving cycle for subsequent analysis, using a constant volume (variable dilution) sampler or critical flow venturi sampler.

(e) The emission results from the aggressive driving test (§86.159-00), air conditioning test (§86.160-00), and a FTP test (§86.130-00 (a) through (d) and (f)) (conducted on a large single roll or equivalent dynamometer) are analyzed according to the calculation methodology in §86.164-00 and compared to the applicable SFTP emission standards in subpart A of this part (§§86.108-00 and 86.109-00).

(f) These test procedures may be run in any sequence that maintains the applicable preconditioning elements specified in §86.132-00.