

**Environmental Protection Agency**

**Part 60, Subpt. IIII, Table 7**

**TABLE 6 TO SUBPART IIII OF PART 60—OPTIONAL 3-MODE TEST CYCLE FOR STATIONARY FIRE PUMP ENGINES**

[As stated in § 60.4210(g), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

Mode No.	Engine speed <sup>1</sup>	Torque (percent) <sup>2</sup>	Weighting factors
1 .....	Rated .....	100	0.30
2 .....	Rated .....	75	0.50
3 .....	Rated .....	50	0.20

<sup>1</sup> Engine speed: ±2 percent of point.

<sup>2</sup> Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.

**TABLE 7 TO SUBPART IIII OF PART 60—REQUIREMENTS FOR PERFORMANCE TESTS FOR STATIONARY CI ICE WITH A DISPLACEMENT OF ≥30 LITERS PER CYLINDER**

[As stated in § 60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:]

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary CI internal combustion engine with a displacement of ≥30 liters per cylinder.	a. Reduce NO <sub>x</sub> emissions by 90 percent or more.	i. Select the sampling port location and the number of traverse points;  ii. Measure O <sub>2</sub> at the inlet and outlet of the control device;  iii. If necessary, measure moisture content at the inlet and outlet of the control device; and,  iv. Measure NO <sub>x</sub> at the inlet and outlet of the control device.	(1) Method 1 or 1A of 40 CFR part 60, appendix A.  (2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A.  (3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see § 60.17).  (4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see § 60.17).	(a) Sampling sites must be located at the inlet and outlet of the control device.  (b) Measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurements for NO <sub>x</sub> concentration.  (c) Measurements to determine moisture content must be made at the same time as the measurements for NO <sub>x</sub> concentration.  (d) NO <sub>x</sub> concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	b. Limit the concentration of NO <sub>x</sub> in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;  ii. Determine the O <sub>2</sub> concentration of the stationary internal combustion engine exhaust at the sampling port location; and,  iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and,	(1) Method 1 or 1A of 40 CFR part 60, appendix A.  (2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A.  (3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see § 60.17).	(a) If using a control device, the sampling site must be located at the outlet of the control device.  (b) Measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurement for NO <sub>x</sub> concentration.  (c) Measurements to determine moisture content must be made at the same time as the measurement for NO <sub>x</sub> concentration.

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[As stated in § 60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder.]

For each	Complying with the requirement to	You must	Using	According to the following requirements
	c. Reduce PM emissions by 60 percent or more.	iv. Measure NO <sub>x</sub> at the exhaust of the stationary internal combustion engine.  i. Select the sampling port location and the number of traverse points; ii. Measure O <sub>2</sub> at the inlet and outlet of the control device;  iii. If necessary, measure moisture content at the inlet and outlet of the control device; and  iv. Measure PM at the inlet and outlet of the control device.	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see § 60.17).  (1) Method 1 or 1A of 40 CFR part 60, appendix A.  (2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A.  (3) Method 4 of 40 CFR part 60, appendix A.  (4) Method 5 of 40 CFR part 60, appendix A.	(d) NO <sub>x</sub> concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.  (a) Sampling sites must be located at the inlet and outlet of the control device. (b) Measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurements for PM concentration. (c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration. (d) PM concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points; ii. Determine the O <sub>2</sub> concentration of the stationary internal combustion engine exhaust at the sampling port location; and iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and iv. Measure PM at the exhaust of the stationary internal combustion engine.	(1) Method 1 or 1A of 40 CFR part 60, appendix A.  (2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A.  (3) Method 4 of 40 CFR part 60, appendix A.  (4) Method 5 of 40 CFR part 60, appendix A.	(a) If using a control device, the sampling site must be located at the outlet of the control device. (b) Measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurements for PM concentration. (c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration. (d) PM concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.