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Part VIII

Environmental Protection Agency

Retrofit/Rebuild Requirements for 1993 and Earlier Model Year Urban Buses; Status of Equipment Certified and Emissions Levels To Be Used by Operators Using Compliance Option 2; Notice

ENVIRONMENTAL PROTECTION AGENCY

[FRL–5547–7]

Retrofit/Rebuild Requirements for 1993 and Earlier Model Year Urban Buses; Status of Equipment Certified and Emissions Levels To Be Used by Operators Using Compliance Option 2

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of availability.

SUMMARY: In the preamble to the final rule regarding retrofit/rebuild requirements for 1993 and earlier model year urban buses (58 FR 21359, April 21, 1993), the Environmental Protection Agency (EPA) stated that it would review retrofit/rebuild equipment that was certified by July 1994, and again by July 1996, and publish the post-rebuild particulate matter emission levels for urban bus engines affected by the program. These post-rebuild levels are used by operators for calculating their fleet emission levels under Option 2. In a previous Federal Register document (59 FR 45626, September 2, 1994), EPA published the post-rebuild PM levels based on equipment that was certified as of July 1994. Today's Federal Register notice fulfills EPA's obligation to review equipment certified by July 1996, and to publish the post-rebuild PM levels.

In addition, today's Federal Register provides notice to transit operators regarding a program inequity that could result between compliance Option 1 and Option 2, if EPA were to certify a 0.10 g/bhphr PM reduction kit that met life cylce cost requirements.

EFFECTIVE DATE: The information of this notice is effective as of August 16, 1996.

ADDRESSES: This notice, as well as other materials relevant to the final rule, is contained in Public Docket A–91–28. This docket is located in room M–1500, Waterside Mall (ground floor), U.S. Environmental Protection Agency, 401 ''M'' Street, S.W., Washington, DC 20460.

Dockets may be inspected from 8:00 am until 5:30 pm, Monday through Friday. As provided in 40 CFR Part 2, a reasonable fee may be charged by the Agency for copying docket materials.

FOR FURTHER INFORMATION CONTACT: Tom Stricker, Engine Programs and Compliance Division (6403J), U.S. Environmental Protection Agency, 401 M Street SW, Washington, D.C. 20460. Telephone: (202) 233–9322.

SUPPLEMENTARY INFORMATION:

I. Background

Section 219(d) of the Clean Air Act requires EPA to promulgate regulations that require certain 1993 and earlier model year urban buses having engines, which are replaced or rebuilt after January 1, 1995, comply with an emission standard or control technology reflecting the best retrofit technology and maintenance practices reasonably achievable. On April 21, 1993, EPA published final Retrofit/Rebuild Requirements for 1993 and Earlier Model Year Urban Buses (58 FR 21359). The Urban Bus Retrofit/Rebuild Program requires affected operators of urban buses to choose between two compliance options. Option 1 establishes particulate matter (PM) emissions requirements for each urban bus in an operator's fleet whose engine is rebuilt or replaced. Option 2 is a fleet averaging program that sets out specific annual target levels for average PM emissions from urban buses in an operator's fleet.

In the final rule, EPA stated that it would review the retrofit/rebuild equipment that was certified by July 1, 1994, and again by July 1, 1996, and publish the post-rebuild PM emission levels for urban bus engines affected by the program. These post-rebuild levels are to be used by operators choosing to comply with Option 2 for calculating their fleet emission levels. In a previous Federal Register notice (59 FR 45626, September 2, 1994), EPA published post-rebuild PM levels based on equipment that was certified as of July 1, 1994. Today's Federal Register notice fulfills EPA's obligation to review equipment certified by July 1, 1996, and to update the post-rebuild PM levels accordingly. The emission levels contained in today's notice must be used by operators using Option 2 for determining their Target Level for the Fleet (TLF) for calendar years 1998 and thereafter. EPA expects transit operators complying with Option 2 will begin taking fleet actions on or after January 1, 1997, to ensure compliance with the TLF beginning in calendar year 1998. Today's publication of the post-rebuild PM levels will provide operators with adequate lead time to begin planning these fleet actions.

II. Review of Certified Equipment and Program Requirements

As of July 1, 1996, no equipment had been certified for any engine models as meeting the 0.10 g/bhphr PM standard for less than the applicable life cycle cost requirement ($7,940 in 1992 dollars). However, equipment had been certified for most engine models as meeting the 25 percent reduction standard for less than the applicable life cycle cost requirement ($2,000 in 1992 dollars). The following paragraph briefly describes the equipment certified by EPA as of July 1, 1996. The reader is directed to the referenced Federal Register cites for more information regarding each certification.

Engelhard Corporation was the first to be granted certification for a technology that provided a 25 percent PM reduction and met life cycle cost requirements (60 FR 28402, May 31, 1995). The technology consists of a catalytic converter-muffler that replaces the original muffler installed on the bus. This equipment triggered program requirements for most two-stroke cycle engines under compliance Option 1. The second certification granted by EPA was also to Engelhard Corporation for its engine upgrade/catalytic converter muffler combination (60 FR 47170, September 11, 1995). This kit consists of a catalytic converter muffler, as well as several ceramic coated engine parts; however, the kit is not certified as meeting life cycle cost requirements. The third certification granted by EPA was to Detroit Diesel Corporation (DDC) for its 6V92TA MUI engine upgrade (60 FR 51472, October 2, 1995). The original certification of this kit was on the basis of providing at least a 25 percent PM reduction. However, EPA recently expanded certification to include the basis of meeting life cycle cost requirements.[1] This certification did not trigger any additional program requirements, because the 25 percent PM reduction standard for the applicable engine models had already been triggered by the first Engelhard certification. The fourth certification granted by EPA was to Cummins Engine Company (Cummins) for its L10 engine upgrade (60 FR 64046, December 13, 1995). This equipment is certified as meeting both the emissions requirements and life cycle cost requirements of the regulations, and as such, it triggered program requirements for most four-stroke cycle engines under compliance Option 1. The fifth certification granted by EPA was to Johnson Matthey for its catalytic exhaust muffler (61 FR 16773, April 17, 1996). The technology consists of an exhaust catalyst that replaces the original muffler on the bus. This equipment is certified as meeting both

[1] This certification approval is documented in a letter from the Director of the Engine Programs and Compliance Division (EPCD) to Detroit Diesel Corporation (DDC), dated June 24, 1996. Publication of this approval in the Federal Register was being processed at the time of today's publication.

the emissions requirements and life cycle cost requirements of the regulations, but did not trigger any additional program requirements, because the 25 percent PM reduction standard for the applicable engine models had already been triggered by the first Engelhard certification. Finally, EPA granted certification to DDC for its engine upgrade kit for use on electronically controlled 6V92TA DDEC II engines.[2] This equipment reduces PM by at least 25 percent, but is not certified to comply with the life cycle cost requirements of the regulations. It does not trigger any additional program requirements.

EPA has reviewed all equipment certified as of July 1, 1996. In accordance with 40 CFR 85.1403(c)(1)(iii)(A), Table 1 lists the post-rebuild PM emission level for engine models affected by program regulations. For those engine models for which equipment was certified by July 1, 1996, as meeting the 25 percent PM reduction standard *and* as meeting the life cycle cost requirements, EPA selected as the post-rebuild level the lowest emission level (greater than 0.10 g/bhphr) certified for such equipment. For those engine models for which no equipment was certified by July 1, 1996, as meeting the emissions requirements and life cycle cost requirements, the post-rebuild level has been selected to be equal to the pre-rebuild level as listed in 40 CFR 85.1403(c)(1)(iii)(A). For engine models with a pre-rebuild PM level below 0.1 g/bhphr, the post-rebuild PM level has been selected to be equal to the pre-rebuild PM level listed in 40 CFR 85.1403(c)(1)(iii)(A).

Transit operators complying with Option 2 must use the post-rebuild PM levels shown in Table 1 to calculate their TLF for calendar years 1998 and thereafter.[3] The determination of whether to use the pre-rebuild emission level or the post-rebuild emission level must be made in accordance with 40 CFR 85.1403(c)(1)(iv).

TABLE A.— CERTIFICATION LEVELS UNDER OPTION 2 FOR CALCULATING TLF IN CALENDAR YEARS 1998 AND THEREAFTER

Engine models	Model year	PM pre-rebuild certification level	PM post-rebuild certification level	Code	Family
DDC 6V92TA MUI	1979–87	0.50	0.30	All	All.
	1988–1989	0.30	0.22	All	All.
DDC 6V92TA DDEC I	1986–89	0.30	0.23	All	All.
DDC 6V92TA DDEC II	1988–91 (w/out PM trap)	0.31	0.23	All	All.
	1992–93 (w/out PM trap)	0.25	0.19	All	All.
	1993 (w/ PM trap)	0.07	0.07	All	All.
DDC Series 50	1993	0.16	0.16	All	All.
DDC 6V71N	1973–87	0.50	0.38	All	All.
DDC 6V71N	1988–89	0.50	0.38	All	All.
DDC 6V71T	1985–86	0.50	0.38	All	All.
DDC 8V71N	1973–84	0.50	0.38	All	All.
DDC 6L71TA	1990	0.59	0.59	All	All.
DDC 6L71TA	1988–89	0.31	0.23	All	All.
DDC 6V71TA DDEC	1990–91	0.30	0.23	All	All.
DDC 8V92TA	1979–87	0.50	0.38	All	8V92TA
	1988	0.39	0.29	All	8V92TA.
DDC 8V92TA–DDEC	1988	0.41	0.31	All	8V92TA-DDEC II.
DDC 8V92TA	1989	0.47	0.35	9E70	KDD0736FW89.
DDC 8V92TA	1989	0.39	0.29	9A90	KDD0736FW89.
DDC 8V92TA	1989	0.34	0.26	9G85	KDD0736FW89.
DDC 8V92TA DDEC	1989	0.41	0.31	1A	KDD0736FZH4.
DDC 8V92TA	1990	0.47	0.35	9E70	LDD0736FAH9.
DDC 8V92TA DDEC	1990	0.49	0.37	1A	LDD0736FZH3.
DDC 8V92TA DDEC	1991	0.25	0.19	1A or 5A	MDD0736FZH2.
DDC 8V92TA DDEC	1992–93	0.21	0.16	1D	NDD0736FZH1 & PDD0736FZHX.
DDC 8V92TA DDEC	1992–93	0.29	0.22	6A	NDD0736FZH 1 & PDD0736FZHX.
DDC 8V92TA DDEC	1992–93	0.20	0.15	5A	NDD0736FZH 1 & PDD0736FZHX.
DDC 8V92TA DDEC	1992–93	0.25	0.19	1A	NDD0736FZH 1 & PDD0736FZHX.
CUMMINS L–10	1985–1987	0.65	0.34	All	All.
	1988–1989	0.55	0.34	All	All.
	1990–1992	0.46	0.34	All	All.
L–10EC	1992	0.25	0.25	All	All.
Cummins L–10 EC w/trap	1993	0.05	0.05	All	All.
Alternatively Fueled Engines	pre-1994	0.10	0.10	All	All.
Other Engines	pre-1988	0.50	0.50	All	All.

[2] This certification approval is documented in a letter from the Director of the Engine Programs and Compliance Division (EPCD) to Detroit Diesel Corporation (DDC), dated June 28, 1996. Publication of this approval in the Federal Register was being processed at the time of today's publication.

[3] Please refer to Section III of today's notice, Potential Inequity Between Compliance Option 1 and Option 2, for additional information regarding future TLF calculations.

TABLE A.— CERTIFICATION LEVELS UNDER OPTION 2 FOR CALCULATING TLF IN CALENDAR YEARS 1998 AND THEREAFTER—Continued

Engine models	Model year	PM pre-rebuild certification level	PM post-rebuild certification level	Code	Family
	1988–1993	Certification level.	Certification level.	All	All.

An urban bus operator choosing to comply with Option 2 must be able to demonstrate that its fleet level attained (FLA) is equal to or less than its TLF. Using the formulas in 40 CFR 85.1403(c)(1) and Table 1 above, operators can calculate their TLF for calendar year 1998 and thereafter. The FLA is calculated using the formula of 40 CFR 85.1403(c)(2) and the certification level of the specific equipment installed on each bus. In order to ensure it is in compliance with its TLF for calendar year 1998,[4] transit operators are expected to begin taking appropriate fleet actions beginning early in calendar year 1997. In order to provide adequate lead time to operators for planning fleet actions, the final rule required EPA to base post-rebuild PM levels on equipment certified as of July 1, 1996.

III. Potential Inequity Between Compliance Option 1 and Option 2

The following provides notice to transit operators and other interested parties that EPA has become aware of a potential inequity between the two compliance options, and discusses the factors which lead to this potential inequity.

Two compliance options are available to transit operators complying with the retrofit/rebuild regulations. Option 1 establishes PM emissions requirements for each urban bus in an operator's fleet whose engine is rebuilt or replaced, and Option 2 is a fleet averaging program that sets out specific annual target levels for average PM emissions from urban buses in an operator's fleet.

In the early stages of developing the urban bus program, EPA contemplated only one compliance program (current compliance Option 1). However, based on public comments, and EPA's desire to offer flexibility to transit operators, an averaging program (compliance Option 2) was added to the program. EPA's intent was that the Option 2 averaging program yield equivalent PM reductions compared to Option 1, for approximately the same cost to transit operators. The equivalency of the two options is programmatically linked because the TLF for Option 2 is dependent upon equipment certified for use under Option 1. To the extent that a transit operator complying with Option 1 is required to use PM reduction technology at the time of engine rebuild or replacement (i.e., to the extent that program requirements are triggered for Option 1), the Option 2 TLF is based on the same equipment. In addition, EPA intended to ensure that transit operators would have equivalent and adequate lead time to plan their compliance strategies, regardless of which option they chose.

Despite EPA's efforts to ensure equivalency of the compliance options, a potential inequity may result if equipment is certified after the post-rebuild PM level revision of today's notice. If equipment is certified as meeting the 0.10 g/bhphr PM standard for less than the life cycle cost requirement ($7,940 in 1992 dollars), transit operators choosing to comply with Option 1 will be required to use such equipment (or other equipment certified as meeting 0.10 g/bhphr) when rebuilding or replacing affected engines beginning six months after the effective date of certification. On the other hand, because today's Federal Register notice does not contain 0.10 g/bhphr as the post-rebuild level for any engine models (excluding those originally certified at or below 0.10 g/bhphr), Option 2 would be substantially less stringent in terms of PM reductions and equipment costs.

During the development of the final rule of April 23, 1993, EPA expected that certification activity under this regulation would be completed by mid-1996. EPA expected industry to seek equipment certification as early as possible after the final rule was promulgated because the population of affected pre-94 model year buses would become smaller each year. Delaying certification would be equivalent to ignoring a portion of the potential market. At the same time, EPA needed to determine when to schedule revisions of post-rebuild PM levels for use under Option 2, such that; (1) the number of revisions were not so numerous as to discourage use of Option 2, and (2) the final revision considered virtually all equipment that would ultimately be certified under this program. EPA determined that two revisions of the post-rebuild PM levels, one in mid-1994 and one in mid-1996, would be sufficient to address both concerns.[5]

Certification activity under this program has substantially lagged behind the schedule anticipated by EPA and upon which the development of the final rule was based. Certification of the first PM reducing equipment was not granted until May 31, 1995, nearly one year *after* the first revision of post-rebuild PM levels. EPA is currently reviewing several notifications of intent to certify (including one intended to trigger the 0.10 g/bhphr PM standard), and expects to receive several more in the next few months. If EPA certifies equipment that triggers the 0.10 g/bhphr PM standard under Option 1 and which creates requirements under Option 1, but not under Option 2, then the two program compliance options would be unequal. EPA is currently reviewing the potential impacts this inequity could have on the retrofit/rebuild program and ways to ensure that PM benefits are not lost as a result of the potential inequity.

EPA stated in the final rule that it expects to publish, as an appendix to the Code of Federal Regulations (CFR), the final post-rebuild PM levels to be used by transit operators choosing to comply with Option 2. EPA will defer publication of this appendix in the CFR until after the rulemaking to add a third post-rebuild PM level revision. The PM levels contained in today's notice must be used in the interim by transit operators for calculating their fleet emissions levels.

[4] An operator choosing to comply with Option 2 must be in compliance with the TLF for a given calendar year beginning the first day of that calendar year. For example, to be in compliance with the TLF for 1998 calendar year, the FLA must be equal to or below the TLF for 1998 beginning January 1, 1998.

[5] See discussion in the preamble to the final rule, 58 Fed. Reg. 21359, April 23, 1993, pp. 21374–5.

Dated: July 31, 1996.

Mary D. Nichols,

Assistant Administrator for Air and Radiation.

[FR Doc. 96–20955 Filed 8–15–96; 8:45 am]

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