

V. Certification

EPA has reviewed this application, along with comments received from interested parties, and finds the ETX Plus kit described in the Engelhard application and other relevant documents:

(1) Complies with a PM emissions standard of 0.10 g/bhp-hr, without causing the applicable engine families to exceed other applicable emission requirements;

(2) Will not cause an unreasonable risk to the public health, welfare or safety;

(3) Will not result in any additional range of parameter adjustability; and

(4) Meets other requirements necessary for certification under the Urban Bus Rebuild Requirements (40 CFR Sections 85.1401 through 85.1415).

EPA hereby certifies this kit for use in the Urban Bus Retrofit/Rebuild Program. The equipment, the ETX Plus™ Emissions Rebuild Kit, may be used immediately by urban bus operators subject to the Urban Bus Rebuild Requirements.

VI. Urban Bus Operator Responsibilities

Today's **Federal Register** document announces certification of the above-described Engelhard kit, when properly applied, as meeting the 0.10 g/bhp-hr PM standard of the Urban Bus Rebuild Requirements, for urban bus engines certified as meeting either federal and California emissions standards. Affected urban bus operators that choose to comply with compliance program 1 are required to use this or another kit that is certified to meet the 0.10 g/bhp-hr PM standard, for any engines listed in Table 2 which are rebuilt or replaced after the applicable deadline, as discussed below.

The 0.10 g/bhp-hr PM standard was triggered on September 21, 1998. As described in a **Federal Register** notice on September 21, 1998 (63 FR 50225), EPA certified the ETX-2002™ Emissions Rebuild Kit supplied by the Engelhard Corporation. The ETX kit applies to 1988 through 1993 model year Detroit Diesel Corporation 6V92TA DDEC II engines having electronic fuel control and rated at either 253 or 277 horsepower (hp). That certification means that transit operators using compliance program 1 must use rebuild kits certified to the 0.10 standard when rebuilding or replacing the applicable engines after March 22, 1999 (that is, 6 months after September 21, 1998).

The September 21, 1998 **Federal Register** notice states that certification of Engelhard's ETX kit, as it applies to engines of model years 1988 through

1990, is conditional pending demonstration by Engelhard that any replacement engine control module (ECM) or any replacement ECM program used in conjunction with the kit would not adversely impact the emissions of NO_x. In a letter dated March 2, 1999, to Engelhard, EPA stated that the conditional status was removed and that the ETX kit can be used by transit operators in compliance with the requirement of the rebuild program. In a letter dated March 29, 1999 from EPA's Assistant Administrator for Enforcement and Compliance Assurance to Santa Clara Valley Transportation Authority, EPA stated that due to confusion surrounding the conditional certification, it will not take action against an operator who does not install 0.10 kits between March 22, 1999 and May 21, 1999. Further, EPA stated in the letter that it will extend this period of no action past May 21, 1999, if the general counsel for a bus operator certifies in writing to EPA that it has exercised due diligence since September 21, 1998, to procure the necessary 0.10 kits, but could not obtain them in time to begin installing 0.10 kits by May 22, 1999. In no event will the period of no action be longer than September 1, 1999. A copy of this letter is located in docket XXV-A located at the above address.

Urban bus operators who choose to comply with compliance program 2 may use the certified Engelhard kit, and those who use this kit may claim the respective PM certification level from Table 2 when calculating their Fleet Level Attained (FLA).

Urban bus operators must be aware of their responsibility for maintenance of records pursuant to 40 CFR Sections 85.1403 through 85.1404. The ETX Plus kit may not include, depending upon model year of the applicable engine, fuel injectors, engine camshafts, cylinder kits, or ECM software. As stated in the Urban Bus Rebuild Requirements (40 CFR 85.1401 through 85.1415), operators should maintain records for each engine in their fleet to demonstrate that they are in compliance with the Urban Bus Rebuild Requirements beginning on January 1, 1995. These records include purchase records, receipts, and part numbers for the parts and components used in the rebuilding of urban bus engines. Urban bus operators must be able to demonstrate that all components used in the rebuilding of engines are in compliance with program requirements. In other words, urban bus operators must be able to demonstrate that all required components of the kit certified

in today's **Federal Register** document are installed on applicable engines.

Dated: September 8, 2000.

Robert Perciasepe,

Assistant Administrator for Air and Radiation.

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ENVIRONMENTAL PROTECTION AGENCY

[FRL-6870-3]

Retrofit/Rebuild Requirements for 1993 and Earlier Model Year Urban Buses; Certification of Equipment on the Basis of Life Cycle Cost Criteria

AGENCY: Environmental Protection Agency (EPA)

ACTION: Notice of certification by EPA of equipment on the basis of compliance with the life cycle cost criteria of the Urban Bus Rebuild Requirements.

SUMMARY: In accordance with 40 CFR 85.1407(c), this notice announces the decision of EPA to expand the certification of certain equipment to include compliance with the life cycle cost criteria of the Urban Bus Rebuild Program (40 CFR Part 85, Subpart O).

A **Federal Register** notice dated December 3, 1998 (63 FR 66798) announced that EPA certified the JM CCT™ Upgrade Kit to comply with the 0.10 g/bhp-hr particulate matter (PM) standard of the Urban Bus Rebuild Program. The kit is applicable to 1985 through 1993 model year Detroit Diesel Corporation (DDC) 6V92TA DDEC II urban bus engines having electronic control of fuel injection. That certification is not based on the optional compliance with life cycle cost criteria of the program.

In documents dated January 26, 1999, JM provided life cycle cost information to EPA for the CCT kit, as it applies to engines of model years 1988 through 1993. A **Federal Register** notice (64 FR 11864) dated March 10, 1999, announced that EPA had received the cost information and made it available for public review, and asked for public comment. EPA has reviewed JM's life cycle cost information as well as the comments received, and with today's **Federal Register** notice is expanding certification of the JM equipment to include compliance with the life cycle cost criteria.

Today's **Federal Register** notice announces that JM's certification is expanded to include compliance with the life cycle cost criteria, and would therefore serve to "trigger" the 0.10 g/

bhp-hr standard for the applicable engines, if necessary. This is discussed below in additional detail.

The impact of today's action on urban bus operators is discussed further below.

Category XXI of Public Docket A-93-42, entitled "Certification of Urban Bus Retrofit/Rebuild Equipment" contains JM's notification of intent to certify, the new cost information, as well as other materials specifically relevant to it. This docket is located at the address below.

DATES: The date of today's **Federal Register** notice, September 15, 2000, is the effective date of certification by EPA of the CCT kit described herein, for compliance with the applicable life cycle cost criteria of the urban bus rebuild program. This certification will obligate JM to offer the equipment meeting the 0.10 g/bhp-hr standard within the specified life cycle cost limits discussed below. The impact of today's action on urban bus operators is discussed below.

FOR FURTHER INFORMATION CONTACT: William Rutledge, Certification and Compliance Division (6403J), U.S. Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue NW, Washington, DC 20460. Telephone: (202) 564-9297. Email Address: rutledge.william@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Program Background

On April 21, 1993, EPA published final Retrofit/Rebuild Requirements for 1993 and Earlier Model Year Urban Buses (58 FR 21359). The retrofit/rebuild program is intended to reduce the ambient levels of particulate matter (PM) in urban areas and is limited to 1993 and earlier model year (MY) urban buses operating in metropolitan areas with 1980 populations of 750,000 or more, whose engines are rebuilt or replaced after January 1, 1995. Operators of the affected buses are required to choose between two compliance options: Program 1 sets particulate matter emissions requirements for each urban bus engine in an operator's fleet which is rebuilt or replaced; Program 2 is a fleet averaging program that establishes specific annual target levels for average PM emissions from urban buses in an operator's fleet. In general, to meet either of the two compliance options, operators of the affected buses must use equipment that has been certified by EPA.

A key aspect of the program is the certification of retrofit/rebuild equipment. Emissions requirements under either of the two compliance options depend on the availability of

retrofit/rebuild equipment certified for each engine model. To be used for Program 1, equipment must be certified as meeting a 0.10 g/bhp-hr PM standard or, if equipment is not certified as meeting the 0.10 standard, as achieving a 25 percent reduction in PM. Equipment used for Program 2 must be certified as providing some level of PM reduction that would in turn be claimed by urban bus operators when calculating their average fleet PM levels attained under the program. For Program 1, information on life cycle costs must be submitted in the notification of intent to certify in order for certification of the equipment to initiate (that is, to "trigger") program requirements. To trigger program requirements, the certifier must guarantee that the equipment will be available to all affected operators for a life cycle cost of \$7,940 or less at the 0.10 PM level, or for a life cycle cost of \$2,000 or less for the 25 percent or greater reduction in PM emissions. Both of these values are based on 1992 dollars and are increments above costs associated with a standard rebuild. If EPA determines that the life cycle cost limit is met, then certification is based on "life cycle cost" in addition to reducing PM emissions.

Under program 2, operators calculate their average fleet emissions using specified engine PM emission levels (as well as other factors).

The 0.10 g/bhp-hr PM standard was triggered on September 21, 1998. As described in a **Federal Register** notice on September 21, 1998 (63 FR 50225), EPA certified the ETX-2002™ Emissions Rebuild Kit supplied by the Engelhard Corporation. The ETX kit applies to 1988 through 1993 model year Detroit Diesel Corporation 6V92TA DDEC II engines having electronic fuel control and rated at either 253 or 277 horsepower (hp). That certification means that transit operators using compliance program 1 must use rebuild kits certified to the 0.10 standard when rebuilding or replacing the applicable engines after March 22, 1999 (that is, 6 months after September 21, 1998).

The September 21, 1998 **Federal Register** notice states that certification of Engelhard's ETX kit, as it applies to engines of model years 1988 through 1990, is conditional pending demonstration by Engelhard that any replacement engine control module (ECM) or any replacement ECM program used in conjunction with the kit would not adversely impact the emissions of NO_x. In a letter dated March 2, 1999, to Engelhard, EPA stated that the conditional status was removed and that the ETX kit can be used by transit operators in compliance with the

requirement of the rebuild program. In a letter dated March 29, 1999, EPA stated that due to confusion surrounding the conditional certification, it will not take action against an operator who does not install 0.10 kits between March 22, 1999 and May 21, 1999. Further, EPA stated in the letter that it will extend this period of no action past May 21, 1999, if the general counsel for a bus operator certifies in writing to EPA that it has exercised due diligence since September 21, 1998, to procure the necessary 0.10 kits, but could not obtain them in time to begin installing 0.10 kits by May 22, 1999.

Certification of the JM CCT kit as complying with the life cycle cost criteria will not establish new requirements for operators. This is discussed further in Section V below.

II. Information Concerning Cost and Availability

EPA announced certification of the JM CCT Upgrade Kit in the **Federal Register** on December 3, 1998 (63 FR 66798). That certification is based on compliance with the 0.10 standard, but without determination of compliance with the optional life cycle cost criteria. That certification was described as "conditional" for some engine applications, pending a demonstration that any replacement ECM or ECM program used in conjunction with the certified kit would not adversely impact the emissions of NO_x in comparison to the ECM or ECM program that is replaced. DDC provided information that allowed EPA to remove the conditional status of the certification. Therefore, in a letter to JM dated March 2, 1999, EPA removed the conditional status and stated that the CCT Kit can be used by bus operators in compliance with requirements of the Urban Bus Rebuild Program.

In documents signed January 26, 1999, JM provided life cycle cost information in a revised section 6 of their notification of intent to certify the CCT Upgrade Kit. JM presents data in support of their claim that the life cycle cost of the CCT kit is less than \$7,940 (in 1992 dollars) incremental to the cost of a standard rebuild. A **Federal Register** notice (64 FR 11864) dated March 10, 1999, announced that EPA had received the cost information and was making it available for public review and public comment.

III. Summary and Analysis of Comments

Detroit Diesel Corporation (DDC), the original manufacturer of the bus engines to which the CCT kit applies, was the

only party to provide comments. The following summarizes DDC's comments, JM's responses to the comments, and EPA's position on the issues raised by the comments.

a. DDC notes that JM states that the cost of the reprogramming, if ECM reprogramming is necessary, would be included in the price of the kit. However, JM does not explain how DDC distributors and dealers, who would be doing the reprogramming, would be compensated for the reprogramming if the reprogramming fee is paid to JM as part of the kit price. The reprogramming fee is typically collected by the distributor when the service is performed.

In response, JM states that it intends to reprogram ECMs at its facilities at Stewart & Stevenson (a DDC distributor as well as JM distributor). JM's payment for reprogramming will be by JM to Stewart & Stevenson and will remain imbedded in the price of those kits that require the ECM program (that is, the certification word code, CWC) to be changed.

Regarding DDC's point, EPA requested JM to include the price of the reprogramming in the purchase price of the kit to insure that the price of the kit includes all components that are not part of a standard rebuild (it is thereby accounted for in the life cycle cost analysis). In this way, bus operators will not be faced with the potential for additional costs above the purchase price of the kit, for an emission-related component.

b. DDC also states that JM should identify those engines that will receive ECM reprogramming. Further, DDC believes that the ECM reprogramming costs should be shown separately from the CCT hardware costs.

JM states that all 1985 through 1990 model year engines, and any 1991 through 1993 model year engine with a CWC other than 259, 260, 261, 262, 263, or 264, will be required to upgrade its CWC. Also, as noted previously, EPA requested JM to include the price of the reprogramming in the purchase price of the kit.

c. DDC notes that JM's test of the CCT kit consisted of a cold-start test followed by two hot-start tests. To calculate the fuel consumption (that is, brake specific fuel consumption, BSFC, measured in units of pounds of fuel per brake-horsepower-hour) of the CCT kit, JM combined the cold-start test with the second hot-start test, and completely ignored the first hot-start test, even though it is valid. DDC states that it sees no justification for ignoring the valid first hot-start test. DDC states that the first hot-start test should be used (in

conjunction with the cold-start test), unless JM provides some sound rationale for bypassing it.

In reply, JM states that after a cold-start test, the test laboratory routinely conducts two hot-start tests in the event that the first is invalid. JM contends that, because the second hot-start is a valid test, it can be used to calculate the fuel consumption.

EPA notes that it is not improper to use the second hot-start test if the first test is not valid. However, in this situation, the first test has been presented as valid and, was used by JM to demonstrate compliance with the 0.10 standard in its certification application dated March 6, 1998. EPA notes that it is consistent with the regulations governing the transient test procedure to use the first hot-start test. 40 CFR 86.1327-90 ("Engine dynamometer test procedures; overview") establishes the basic sequence for the transient engine test, and 86.1330-90 shows a diagram of the overall test sequence. Section 86.1336-84 ("Engine starting, restarting, and shutdown") provides direction for re-running the hot-cycle when the test sequence is impacted by engine stalls and malfunctions in the required test equipment. In no case are there provisions in the Part 86 test procedures for the arbitrary selection of hot-start cycles. Use of a valid first hot-start test is consistent with EPA's procedures in other, new engine, test programs (for example, during selective enforcement audits). Therefore, EPA is using the first hot-start with the cold start test to determine the composite fuel consumption of engines equipped with the CCT kit. For the purposes of the analysis discussed below, the fuel consumption value of engines equipped with the CCT kit is 0.489 lb/bhp-hr.

d. DDC notes that JM presents baseline fuel consumption data for 1991 through 1993 model year engines. After comparing this to the fuel consumption for the CCT kit, JM notes a 0.4 percent difference, but dismisses the difference as being "within accepted experimental error." DDC notes that the urban bus regulation (40 CFR 85.1404) does not include provisions for "rounding off" or ignoring differences that may be the result of testing uncertainty. DDC states that the BSFC difference reflected by the actual test data is the best estimate of the fuel consumption impact of the CCT kit, and must be used in computing the life cycle cost.

In response, JM states that a fuel consumption difference of 0.4 percent is within the "experimental" error of the test cells at the laboratory. JM also states that it is following the customary

practice of EPA in rounding down numbers.

EPA has no customary practice of "rounding down" test data. Additionally, DDC is correct in that the program regulation does not address rounding of numbers or ignoring differences when assigned to "experimental" (that is, test-to-test) error. However, the issue specifically related to the 0.4 percent is no longer relevant because the fuel consumption value determined by EPA for the CCT kit, as discussed previously, is not the value based on the second hot-start test as JM presents in its analysis. The impact of any difference in fuel consumption, of course, remains relevant with regard to determining the life cycle cost of the kit. EPA is not familiar with any analyses of the test-to-test error of the laboratory at which the testing was conducted.

EPA believes that it is reasonable to determine (and apply) the fuel consumption impact to one-tenth of a percentage point. This is consistent with the practice used during the certification process of the Engelhard ETX kit. The impact of fuel consumption is discussed below in the section titled "EPA Determination of Life Cycle Cost".

e. JM separately evaluates the fuel consumption impact of its kit on 1990 model year engines because the NO_x standard for the 1990 model year dropped from 10.7 to 6.0 g/bhp-hr. JM states that it is accepted in industry that reductions in NO_x are achieved at the expense of fuel consumption. For evaluating the impact, JM cites original DDC new engine certification data to establish a baseline fuel consumption for 1990 model year engines, and compares this data with the fuel consumption of the CCT kit to determine the impact of the CCT on these engines. DDC notes that in 1990, it only produced engines configured to operate on diesel fuel #1, and to compare this data with data run with the CCT using diesel fuel #2, as JM has done, results in a biased and inappropriate comparison because the energy content of diesel #1 is about 1 percent higher than diesel #2. Therefore, DDC states that it is appropriate to correct the 1990 baseline fuel consumption upward by 1 percent to correct for fuel type differences before making the fuel consumption evaluation.

In response, JM recognizes the accuracy of DDC's statement and concurs that the 1990 model year engine's baseline fuel consumption should be increased by 1 percent.

EPA notes that the comment and response by JM are no longer specifically relevant. While in general it appears to be reasonable to determine the impact of fuel consumption based on grouping together those engines having the same NO_x standard (such as the 1988 California engines and 1990 federal engines), EPA does not rely on the specific test data from the original DDC new engine certification. The impact of fuel consumption is discussed below in the section titled "EPA Determination of Life Cycle Cost".

f. JM also separately evaluates the fuel consumption impact of its kit on 1988 and 1989 model year California engines because the NO_x standard in California for those years is 6.0 g/bhp-hr, and JM states that it is a widely accepted fact in the industry that there is a trade off between NO_x and fuel consumption. JM notes that the fuel consumption of the 1988 and 1989 model year California engines would have been comparable to the 1990 model year federal engine because all had the same 6.0 g/bhp-hr NO_x standard. For evaluating the impact, JM did not develop baseline data, but instead cites data supplied by Engelhard Corporation in its application for certification of its ETX kit. Engelhard tested a 1988 6V92TA DDEC II California configuration to establish a baseline fuel consumption for the 1988–1989 California engines of 0.481 lb/bhp-hr. JM compares this data with the fuel consumption of the CCT kit to determine the impact of the CCT kit on these engines. DDC notes that the original DDC certification testing of the 1988 California 6V92 DDEC engine rated at 277 horsepower yielded fuel consumption of 0.462 lb/bhp-hr.

In response, JM argues that the fuel consumption of 0.481 lb/bhp-hr, developed for Engelhard using a 1988 California engine, is more "real life" than DDC's value of 0.462 lb/bhp-hr for the same engine, and therefore appropriate for evaluating the impact of its CCT kit.

While DDC has not provided any background information on its test of the 1988 California certification engine, EPA expects that it was conducted in a DDC test cell in 1987. However, EPA believes that it is reasonable to compare data that is developed at the same laboratory. Therefore, to determine the fuel consumption impact, EPA is relying on the 0.481 lb/bhp-hr (developed for Engelhard) because it was conducted at the same test laboratory (Southwest Research Institute, SwRI) as the CCT test. The impact of fuel consumption is discussed below in the section titled "EPA Determination of Life Cycle Cost".

g. DDC notes that for the urban bus rebuild certification of their own 25 percent reduction kit for 6V92 DDEC engines, they provided fuel consumption values of 0.449 and 0.470 lb/bhp-hr for 1988 and 1991 model year engines, respectively. While both of these values are lower than the corresponding values developed by JM, the fuel consumption penalty (from the 1988 to 1991 model year) is about 5 percent in both cases (actually 4.7 percent based on EPA calculation). DDC states that the fuel consumption penalty that JM develops for the impact of the CCT kit on 1988 and 1989 model year federal engines appears appropriate, but when additional differences between the CCT kit and the 1991 baseline are accounted for, DDC believes that the actual fuel consumption penalty is approximately 6.5 percent.

JM responded that it stands by its analysis that shows there is no fuel consumption penalty associated with upgrading a 1991 model year DDEC engine to a CCT Upgrade Kit configuration, and would agree to use DDC's 5 percent penalty for upgrading 1988 and 1989 model year engines to the CCT kit configuration.

EPA notes that the specific fuel consumption penalty of 4.7 percent (to which DDC and JM refer as 5 percent), is based on comparing data from 1988 and 1991 model year engines that DDC developed for its original new engine certification. However, the data do not represent engine configurations of the same horsepower, and neither test represents actual use of the CCT kit. To calculate the fuel consumption penalty for the CCT kit, EPA believes that it is reasonable to compare data from the testing conducted for JM on the CCT kit and the engine rebuilt to a 1991 model year configuration. Both tests were conducted for JM using engines of the same horsepower (277 Hp) in the same test cell of the same laboratory. As discussed later in the section titled "EPA Determination of Life Cycle Cost," our analysis shows that a 6.5 percent fuel consumption penalty is appropriate.

IV. EPA Determination of Life Cycle Cost

Section 85.1403(b)(1)(ii) describes the elements that must be considered when analyzing life cycle cost of equipment, including equipment purchase price, incremental fuel cost, installation costs, maintenance costs, and costs of any fuel additives required. To trigger the 0.10 g/bhp-hr standard, the life cycle cost of equipment can be no more than the limit of \$7,940 (in 1992 dollars),

incremental to the cost of a standard rebuild.

In this section, EPA analyzes the life cycle costs using a methodology similar to that described in both the **Federal Register** notice of March 14, 1997 (62 FR 12166), which describes the certification of Engelhard's ETX kit applicable to DDC's 6V92TA engines with mechanical unit injectors (MUI), and the **Federal Register** notice of September 21, 1998 (63 FR 50225), which describes the certification of Engelhard's ETX kit applicable to DDC's 6V92TA engines with electronic unit injectors (DDEC).

The analysis first determines the cost of a "weighted" rebuild because the kit is used in conjunction with a standard rebuild and contains parts that are typically replaced during a standard rebuild. The weighted rebuild considers that all operators do not rebuild engines the same way, and therefore reflects, on a weighted basis, that some operators rebuild using non-original equipment parts and some operators rebuild certain components in-house. For the weighted rebuild, cost information is "corrected" to a 1992 time-frame, which is the time period for which the life cycle cost limit of \$7,940 of the regulation is based. EPA then uses the cost of a weighted rebuild for determining an offset for the parts supplied in the CCT kit (that is, JM's first supply option) that are typically replaced during a standard rebuild. The offset is then added to any additional installation costs and fuel penalty, to determine a maximum purchase price such that the life cycle cost of the equipment meets the life cycle cost limit. In other words, in order to comply with the life cycle cost criteria, the maximum purchase price, when added to the fuel consumption penalty and additional installation cost, and offset for parts in the CCT kit, can be no more than \$7,940 (in 1992 dollars), incremental to the cost of a standard rebuild. In the final step, the maximum purchase price in 1992 dollars is converted to current value using the appropriate consumer price indices.

A. Cost of a Weighted Rebuild

The life cycle cost analysis is based on JM's first supply option, as described in the December 3, 1998 **Federal Register** notice, because only one supply option needs to comply with the life cycle cost criteria and, the first supply option provides virtually all emissions-related components typically replaced during a standard rebuild. In the first supply option, JM is to provide the following parts: CEM II catalytic muffler, patented engine camshafts, CCT cylinder kits, 0.015 offset key, fuel

injectors, 40T blower gear, turbo charger, blower assembly, blower bypass valve, and if necessary, the ECM program. The cylinder heads and gasket kit are not included with the CCT kit because these parts, although typically replaced during a standard rebuild, are the same regardless of model year.

JM notes that the CCT kit is sold to complement a standard engine rebuild. The balance of the specified parts for the standard rebuild (excluding

standard cams) can be acquired from traditional DDC parts sources. A cost offset is provided in the analysis for the parts in the CCT kit that are normally replaced during a standard engine rebuild. The costs for the parts normally replaced during a standard engine rebuild has been previously determined for certification of the Engelhard's ETX kit (63 FR 50225; September 21, 1998).

As explained in the September 21, 1998 **Federal Register**, for the

determination of the cost of a weighted rebuild, EPA assumes that some parts used in the rebuild of some engines are original equipment (OE) parts, others are non-OE parts, and that some transits re-manufacture certain components in-house. Table 1 below summarizes the cost of a weighted rebuild as presented in the September **Federal Register**, and indicates the parts costs that are offset because they are provided in the CCT kit for the first supply option.

TABLE 1.—PARTS NORMALLY REPLACED DURING STANDARD REBUILD
[1992 dollars]

| Items | Weighted rebuild ¹ | Parts offset by CCT kit |
|------------------------|-------------------------------|-------------------------|
| 1—Cylinder Kit | 1,540 | 1,540 |
| 2—Gasket Kit | 147 | |
| 3—Fuel Injectors | 1,450 | 1,450 |
| 4—LB Camshaft | 606 | 606 |
| 5—RB Camshaft | 519 | 519 |
| 6—Blower Ass'y | 302 | 302 |
| 7—Turbo Ass'y | 424 | 424 |
| 8—Heads Ass'y | 1,079 | |
| 9—ECM Program | (²) | (²) |
| Totals | 6,067 | 4,841 |

¹ As determined on September 21, 1998 (63 FR 50225) in conjunction with certification of the Engelhard ETX kit for DDEC engines.

² Not required.

EPA received no comments regarding the costs related to the standard or weighted rebuild. Therefore, EPA continues to use the costs from the **Federal Register** notice developed for the Engelhard certifications indicated above. There may be uncertainties and assumptions involved with this "weighted" approach, but EPA believes that, based on the available information,

the cost of a standard rebuild of a DDC 6V92TA DDEC engine is best approximated by the weighted rebuild costs shown above in Table 1, for the purposes of determining the maximum purchase price for the CCT Upgrade Kit.

B. Incremental Fuel Cost

Life cycle costs can be impacted by the fuel consumption associated with

the use of retrofit equipment using diesel fuel. A review of test data is used to determine any fuel consumption penalty. As noted above, EPA gives preference to data developed for JM, based on engines of 277 horsepower, and tested at the same laboratory. Table 2 below lists the test data that is used to make the determination of incremental fuel cost for the CCT kit.

TABLE 2.—BASELINE AND CCT FUEL CONSUMPTION DATA

| Engine description (Hp) | NO _x level/NO _x Std | Test laboratory | Tested for | Test date | BSFC ¹ | BSFC penalty (percent) |
|---------------------------|---|---------------------|------------|-------------|-------------------|------------------------|
| CCT Kit (277) | 5.0/5.0 | SwRI, cell 16 | JM | 01/07/98 .. | 0.489 | |
| 1991 50-state (277) | 4.9/5.0 | SwRI, cell 16 | JM | 02/13/98 .. | 0.483 | 1.2 |
| 1988 Calif (277) | 5.5/6.0 | SwRI, cell 7 | Engelhard | 02/19/97 .. | 0.481 | 1.7 |
| 1988 fed (277) | 8.4/10.7 | SwRI, cell 16 | JM | 03/05/97 .. | 0.459 | 6.5 |

¹ Brake-specific fuel consumption measured in units of pounds of fuel per brake horsepower-hour (lb/bhp-hr).

EPA determines the fuel consumption impact of the CCT kit on three test engines, each complying with a distinct NO_x exhaust emission standard. The NO_x standard for all 1991 through 1993 model year engines is 5.0 g/bhp-hr. The standard for 1988 through 1990 California engines and 1990 federal engines is 6.0 g/bhp-hr. The standard for 1988 and 1989 federal engines is 10.7 g/bhp-hr. Data provided by JM with its

application for certification dated March 6, 1998, indicate that CCT-equipped engines comply with the 5.0 g/bhp-hr NO_x standard and therefore the CCT kit can be used on engines originally certified to comply with any of the noted standards. EPA recognizes that the available fuel consumption data is limited, but believes it adequate for the purpose of determining the life cycle cost analysis.

As discussed above, EPA is using the first hot-start in conjunction with the cold-start test, to determine the fuel consumption of the engine equipped with the CCT kit. Therefore, the purposes of this analysis, the fuel consumption of CCT-equipped engines is taken as 0.489 lb/bhp-hr.

The test of the engine configured to a 1991 model year configuration indicates a baseline fuel consumption of 0.483 lb/

bhp-hr. Therefore, EPA calculates that the CCT kit, on 1991 through 1993 model year engines, increases fuel consumption by 1.2 percent.

EPA believes that it is reasonable to determine the impact of fuel consumption on all engines meeting the same 6.0 g/hp-hr NO_x standard, which includes the 1988 through 1990 California engines and the 1990 federal engines. JM did not conduct a baseline test on an engine that was designed to 6.0 g/bhp-hr NO_x standard. However,

data available from testing a 1988 model year California engine at Southwest Research Institute for Engelhard, indicates a baseline value of 0.481 lb/bhp-hr for engines designed to the 6.0 g/bhp-hr standard. Therefore, EPA calculates that the CCT kit, on 1988 through 1990 California engines and 1990 federal engines, increases fuel consumption by 1.7 percent.

The test conducted for JM on the 1988 model year federal engine indicate a baseline fuel consumption of 0.459 lb/

bhp-hr. Comparing this value with the CCT fuel consumption of 0.489 lb/bhp-hr, indicates a fuel consumption penalty of 6.5 percent when upgrading a 1988 model year engine to the CCT kit.

The impacts on fuel consumption are summarized below in Table 3 along with the increased life cycle fuel costs calculated pursuant to the formula prescribed at 40 CFR 85.1403(b)(1). The impact of the fuel consumption penalty on life cycle costs is included in the summary below.

TABLE 3.—FUEL CONSUMPTION IMPACT OF CCT UPGRADE KIT
[1992 dollars]

| Applicable engine model year | NO _x Standard (g/bhp-hr) | Fuel consumption impact (percent) | Fuel penalty per 40 CFR 85.1403(b)(1) (in 1992 \$) |
|---------------------------------------|-------------------------------------|-----------------------------------|--|
| 1991–1993 50-state | 5.0 | 1.2 | 338 |
| 1988–1990 Calif & 1990 50-state | 6.0 | 1.7 | 479 |
| 1988–1989 fed | 10.7 | 6.5 | 1,831 |

C. Installation Costs

As defined at 40 CFR 85.1403 (b)(1)(ii)(B), the installation cost of certified equipment is “the labor cost of installing the equipment on an urban bus engine, incremental to a standard rebuild, based on a labor rate of \$35 per hour” (in 1992 dollars). JM states that the labor required to rebuild an engine will be the same for a standard rebuild and the CCT kit, with the exception of the additional labor required for installation of the CEM II catalytic muffler. The CEM II installation is essentially identical to the replacement of an OE muffler, and will not exceed 2 hours labor. Using the labor rate of \$35.00 per hour, as specified at 40 CFR 85.1403, the two hours is valued at \$70

(in 1992 dollars) and is incremental to the cost of a standard rebuild.

D. Maintenance Costs

JM states that the CCT kit requires no maintenance for the CEM II and no additional maintenance above and beyond normal DDC maintenance requirements for a standard rebuild. EPA has no information to conclude that any additional maintenance is necessary for the CEM II catalyst muffler, or would increase life cycle costs. Therefore, no additional maintenance costs are listed for the CCT kit.

E. Costs of Fuel Additives

No fuel additives are required for the CCT kit.

F. Total Life Cycle Cost

As noted previously, the regulation at 40 CFR 85.1403 requires that the life cycle cost be no more than \$7,940 (in 1992 dollars) incremental to the cost of a standard rebuild, for equipment that triggers the 0.10 g/bhp-hr standard. Table 4 below itemizes the life cycle cost elements determined above for the CCT kit for each of the following groups of applicable engines: 1991 through 1993 model year 50-state engines, 1988–1990 model year California and 1990 model year federal engines, and 1988–1989 model year federal (49-state) engines. The maximum purchase price shown in Table 4 is determined by adjusting the life cycle cost ceiling for the parts offset, installation cost, and fuel penalty.

TABLE 4.—SUMMARY OF LIFE CYCLE COSTS FOR THE CCT KIT
[1992 dollars]

| | Applicable engine model year | | |
|---|------------------------------|----------------------------|---------------|
| | 1991–1993 50-state | 1988–1990 Calif & 1990 fed | 1988–1989 fed |
| Maximum Purchase Price | 12,373 | 12,232 | 10,880 |
| Offset for CCT parts normally replaced during a std rebuild | (4,841) | (4,841) | (4, 841) |
| Installation Cost | 70 | 70 | 70 |
| Fuel Penalty | 338 | 479 | 1,831 |
| Total Life Cycle Cost | 7,940 | 7,940 | 7,940 |

Table 4 displays the maximum purchase prices for the CCT kits, in 1992 dollars. The total life cycle cost is the sum of the listed items. An “offset” (that is, a credit) is provided to the life cycle cost of the CCT kit because certain

components provided in the kit offset costs for parts which otherwise are replaced during a standard engine rebuild. The values for the individual rebuild parts that are offset by the CCT kit parts, are listed previously in

conjunction with the determination of a weighted rebuild and itemized in Table 1. To determine the incremental life cycle cost, these “offset” costs are subtracted, as shown in Table 4. As shown in the table, the total incremental

life cycle cost is no more than the ceiling specified in the program regulations, \$7,940 in 1992 dollars. Current values of the maximum purchase prices are discussed below.

G. Current Maximum Purchase Price for the CCT Upgrade Kit

Table 6 below shows the maximum purchase price (in 1992 dollars) as

determined above. The current (August 1999) maximum purchase prices are also shown in Table 6, and are calculated using a multiplicative ratio of Consumer Price Indices (CPI). Table 5 below lists the relevant CPIs. The average CPI for 1992 is 140.3, as specified by the program regulation. The August 1999 CPI, for all items and all urban consumers, is 167.1. These CPI

values are provided by the U.S. Department of Labor, Bureau of Labor Statistics.

TABLE 5.—CONSUMER PRICE INDICES

| Average CPI for | CPI |
|-------------------|-------|
| 1992 | 140.3 |
| August 1999 | 167.1 |

TABLE 6.—CURRENT MAXIMUM CCT KIT PURCHASE PRICE

| Applicable engine model year | 1992 maximum purchase price | August 1999 maximum purchase price |
|----------------------------------|-----------------------------|------------------------------------|
| 1991–1993 50-state | \$12,373 | \$14,736 |
| 1988–1990 Calif & 1990 fed | 12,232 | 14,569 |
| 1988–1989 fed | 10,880 | 12,958 |

JM, in a letter to EPA dated October 22, 1999, guarantees to make CCT Upgrade kits available to all affected urban bus operators for no more than the maximum August 1999 purchase prices shown in Table 6.

V. Impact on Transit Operator

Today's **Federal Register** notice announces that the JM CCT Upgrade Kit is certified to comply with the optional life cycle cost criteria of the Urban Bus Rebuild Program. EPA has reviewed the available information and comments received to determine that there is adequate demonstration of compliance with the life cycle cost criteria of 40 CFR 85.1403(b) and 85.1407(a).

Affected urban bus operators who choose to comply with compliance program 1 are currently required to use equipment certified to meet the 0.10 g/bhp-hr PM standard. As discussed above, this current requirement has been previously triggered by certification of equipment supplied by the Engelhard Corporation.

The Johnson Matthey CCT kit has already been certified to comply with the 0.10 g/bhp-hr standard and can be used by all operators towards compliance with the current urban bus program requirements. Operators that choose to comply with compliance program 2 and use this equipment would claim the PM certification level for the CCT kit (0.10 g/bhp-hr) when calculating their Fleet Level Attained (FLA).

If the current trigger of the 0.10 g/bhp-hr standard becomes ineffective, then certification of JM's CCT Upgrade Kit on the basis of life cycle cost would trigger program requirements for bus operators that have chosen to comply with program 1, to use equipment certified to the 0.10 g/bhp-hr standard when

applicable engines are rebuilt or replaced. The requirement would be effective for any applicable engine rebuilt or replaced six months after September 15, 2000.

Dated: September 8, 2000.

Robert Perciasepe,

Assistant Administrator for Air and Radiation.

[FR Doc. 00–23776 Filed 9–14–00; 8:45 am]

BILLING CODE 6560–50–U

ENVIRONMENTAL PROTECTION AGENCY

[OPPTS–140286; FRL–6741–7]

Access to Confidential Business Information by SecTek Incorporated

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: EPA has authorized its contractor SecTek, Incorporated of Herndon, Virginia access to information which has been submitted to EPA under all sections of the Toxic Substances Control Act (TSCA). Some of the information may be claimed or determined to be confidential business information (CBI).

DATES: Access to the confidential data submitted to EPA under all sections of TSCA occurred as a result of an approved waiver dated August 2, 2000, which requested granting SecTek immediate access to all sections of TSCA CBI. This waiver was necessary to allow SecTek to maintain the day-to-day operations of all security hardware, access controls, and alarm equipment.

FOR FURTHER INFORMATION CONTACT: Barbara A. Cunningham, Acting Director, Environmental Assistance Division (7408), Office of Pollution

Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460; telephone number: (202) 554–1404, TDD: (202) 554–0551; e-mail address: TSCA-Hotline@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Does this Notice Apply to Me?

This action is directed to the public in general. This action may, however, be of interest to “those persons who are or may be required to conduct testing of chemical substances under the Toxic Substances Control Act (TSCA).” Since other entities may also be interested, the Agency has not attempted to describe all the specific entities that may be affected by this action. If you have any questions regarding the applicability of this action to a particular entity, consult the technical person listed under **FOR FURTHER INFORMATION CONTACT**.

II. How Can I Get Additional Information, Including Copies of this Document or Other Related Documents?

Electronically. You may obtain electronic copies of this document, and certain other related documents that might be available electronically, from the EPA Internet Home Page at <http://www.epa.gov/>. To access this document, on the Home Page select “Laws and Regulations”, “Regulations and Proposed Rules,” and then look up the entry for this document under the “**Federal Register**—Environmental Documents.” You can also go directly to the **Federal Register** listings at <http://www.epa.gov/fedrgstr/>.

III. What Action is the Agency Taking?

Under contract number 68–W–00–104, contractor SecTek, Incorporated of 208 Eden St., Suite 201, Herndon, VA, will assist the Office of Pollution