

1200 Pennsylvania Ave., NW,  
Washington, DC 20460;  
and

Office of Information and Regulatory  
Affairs, Office of Management and  
Budget, Attention: Desk Officer for  
EPA, 725 17th Street, NW,  
Washington, DC 20503.

Dated: July 1, 2000.

**Oscar Morales,**

*Director, Collection Strategies Division.*

[FR Doc. 00-18026 Filed 7-14-00; 8:45 am]

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## ENVIRONMENTAL PROTECTION AGENCY

[FRL-6736-3]

### Retrofit/Rebuild Requirements for 1993 and Earlier Model Year Urban Buses; Certification of Equipment

**AGENCY:** Environmental Protection  
Agency (EPA).

**ACTION:** Notice of EPA certification of  
equipment provided by Turbodyne  
Systems, Inc.

**SUMMARY:** Today's **Federal Register**  
document announces EPA's decision to  
certify equipment to the 0.10 g/bhp-hr  
standard for the Urban Bus Retrofit/  
Rebuild Program. The equipment is  
provided by Turbodyne Systems, Inc.  
(Turbodyne).

Turbodyne submitted to EPA a  
notification of intent to certify  
equipment, signed November 14, 1997,  
pursuant to the program regulations at  
40 CFR part 85, subpart O. On April 19,  
1999, EPA published a document in the  
**Federal Register** that the Turbodyne  
notification had been received and  
made the notification available for  
public review and comment for a period  
of 45 days (64 FR 19151). EPA has  
completed its review and the Director of  
the Certification & Compliance Division  
has determined that it meets all  
requirements for certification.  
Accordingly, EPA approves the  
certification of this equipment effective  
July 17, 2000.

The equipment consists of the base  
engine components used on the 25%  
reduction retrofit/rebuild kit certified by  
the Detroit Diesel Corporation (DDC),  
components from the 25% retrofit  
catalyst kit certified by Engine Control  
Systems, Ltd. (ECS) and a TurboPac  
supercharger system supplied by  
Turbodyne that supplies additional air  
for combustion during engine  
acceleration. This Turbodyne kit is  
identical to the kit that was certified by  
the Detroit Diesel Corporation on May  
14, 1998 (63 FR 26798) and is applicable

to the same models, and model year  
engines as the DDC kit.

The kit is applicable to 6V92TA urban  
bus engine models made by Detroit  
Diesel Corporation (DDC) from model  
years 1979 to 1989 and equipped with  
mechanical unit injectors (MUI), and  
may be used immediately by transit  
operators in compliance with program  
requirements. The kit is available in  
three horsepower levels (253, 277, and  
294).

EPA has determined that this  
Turbodyne kit complies with the 0.10  
gram per brake horsepower-hour (g/bhp-  
hr) particulate matter (PM) standard for  
the applicable engines. EPA has not  
determined that Turbodyne's  
notification complies with the life cycle  
cost requirements of the program  
regulations because no life cycle costs  
were supplied with the application.

Today's **Federal Register**  
document does not trigger any additional program  
requirements for transit operators. The  
0.10 g/bhp-hr PM level has already been  
triggered for all engines covered by this  
notification.

The notification of intent to certify, as  
well as other materials specifically  
relevant to it, are contained in Category  
XXIII-A of Public Docket A-93-42,  
entitled "Certification of Urban Bus  
Retrofit/Rebuild Equipment." This  
docket is located at the address listed  
below.

Additional details concerning this  
certification, the Turbodyne kit, and  
responsibilities of transit operators, are  
provided below.

**DATES:** Today's **Federal Register**  
document dated July 17, 2000, is the  
certification date for this equipment.  
The 0.10 g/bhp-hr standard was  
triggered on March 14, 1997 (62 FR  
12166) for all engines covered by this  
certification.

**ADDRESSES:** The Turbodyne notification  
of intent to certify, as well as other  
material specifically relevant to it, are  
contained at the U.S. Environmental  
Protection Agency's Public Air Docket  
A-93-42 (Category XXIII-A), Room M-  
1500, 401 "M" Street SW, Washington,  
DC 20460.

Docket items may be inspected from  
8:00 a.m. until 5:30 p.m., Monday  
through Friday. As provided in 40 CFR  
part 2, a reasonable fee may be charged  
by EPA for copying docket materials.

**FOR FURTHER INFORMATION CONTACT:**  
Anthony Erb, Certification &  
Compliance Division (6403J), U.S.  
Environmental Protection Agency, Ariel  
Rios Building, 1200 Pennsylvania  
Avenue, N.W. Washington, D.C. 20460.  
Telephone: (202) 564-9259. Email  
Address: ERB.ANTHONY@EPA.GOV.

## SUPPLEMENTARY INFORMATION:

### I. Description of the Certified Kit

The certified kit described in today's  
**Federal Register** document, is provided  
by Turbodyne. It is certified to the 0.10  
g/bhp-hr standard. It is not required to  
comply with the applicable life cycle  
cost requirements of the program. No  
cost data were provided in the  
notification.

The certification described in today's  
document applies to 1979 through 1989  
model year DDC 6V92TA engines that  
are equipped with mechanical unit  
injectors (MUI) and certified to federal  
emissions standards. It does not apply  
to engines certified to California  
emissions standards. The impact of this  
decision on transit operators is  
discussed in more detail in the "Transit  
Operator Requirements" section below.

The kit, described further below,  
consists of base engine components  
used on the 25% reduction kit certified  
by DDC earlier, a catalytic exhaust  
muffler supplied by Engine Control  
Systems, Ltd. (ECS), and a TurboPac  
supercharger system supplied by  
Turbodyne Systems, Inc. that supplies  
additional combustion air during  
acceleration. The kit is available in three  
horsepower (hp) ratings (253, 277, and  
294 hp). The kit being certified by  
Turbodyne is identical to the kit  
certified by DDC earlier (63 FR 26798).

For retrofit with the Turbodyne kit, an  
engine is rebuilt in accordance with  
standard DDC rebuild procedures, using  
specified engine components. This  
component set essentially includes the  
equipment certified by EPA to provide  
a 25% particulate reduction on October  
2, 1995, at 60 FR 51472. These  
components are provided in two  
separate sets of parts. The first set of  
components is comprised of newly  
manufactured parts, including a gasket  
kit, air inlet hose, cylinder kits (piston  
assemblies and cylinder liners) a by-  
pass valve and a truck type throttle  
delay. The second set of components  
includes Reliabil<sup>TM</sup> remanufactured  
parts, including the fuel injectors,  
camshafts, blower assembly,  
turbocharger, and head assemblies. Kit  
usage is based on engine rotation  
(righthand (RH) or lefthand (LH)),  
engine orientation, right bank cam gear  
mounting (bolt or nut), and engine  
power output based on injector size.  
The only difference from the previously  
certified equipment is the inclusion of  
a truck-style throttle delay, adjustment  
of the throttle delay and injector timing  
settings to improve driveability.  
Additionally, the cylinder kit  
components have been modified to  
improve durability.

The converter is the same as the catalytic converter muffler certified by DDC for the Urban Bus Program as described in the **Federal Register** on May 14, 1998 (63 FR 26798), is a direct replacement for the original equipment muffler, and is designed to fit the specific bus/engine combination. The use of diesel fuel that has been mixed with crankcase oil is prohibited.

The third constituent of the kit consists of an electrically powered supercharger system which is supplied by Turbodyne Systems, Inc. This component set, referred to as the TurboPac™ supplies additional intake air during engine acceleration from low engine speeds. Turbodyne states that in addition to decreasing PM emissions and visible smoke during engine acceleration, the supercharger also improves engine response and vehicle driveability by reducing the fuel modulation during acceleration. The basic system consists of a supercharger blower, a diverter valve, a boost pressure sensor, an electrical control box and power cables, and a throttle switch for detecting the start of the engine acceleration mode. It will be supplied in two kits. One kit includes those components common to all installations. The second kit accommodates the installation requirements of the various engine and vehicle configurations.

To complete an engine rebuild two (2) base engine component kits, one (1) converter muffler kit, and two(2) supercharger kits are required. The specific kits used will depend on the engine/vehicle combination.

There are no differences in the service intervals or maintenance practices for the base engine associated with the installation of the upgrade kit. The converter/muffler requires no regularly scheduled maintenance, only an occasional cleaning if the maximum back pressure of the exhaust system is exceeded. The supercharger does not require scheduled maintenance: however, a visual inspection for air leaks is recommended whenever the engine is serviced.

Standard procedures as described in the service manual for 92 Series engines are to be used when rebuilding the base engines using the candidate equipment. No unique rebuild procedures are required.

Use of the candidate kit is restricted to 6V92TA Detroit Diesel Corporation

engines manufactured from January 1979 through December 1989, equipped with mechanical unit fuel injectors (MUI), and originally certified to meet Federal emission standards. The required fuel is low sulfur (0.05% max by weight) diesel fuel, either number 1 or number 2.

All of the testing presented for this certification was conducted using original equipment "OE" parts, except for the converter muffler and the TurboPac components. EPA has no assurance that engines rebuilt using parts that are not "OE" would comply with the 0.10 g/bhp-hr standard. Therefore, use of engine parts that are not the specified OE parts are not covered by the certification described in today's **Federal Register** document.

Pursuant to 40 CFR 85.1409, Turbodyne will provide a 100,000-mile defect warranty and a 150,000-mile emissions performance warranty for the kit, and all of its components.

EPA's certification of the Engelhard Corporation's ETX™ kit (62 FR 12166; March 14, 1997) triggered the 0.10 g/bhp-hr standard for 1979-1989 6V92TA MUI engines. That kit provided the three power ratings: 253, 277, and 294 hp that are included in this certification. Consequently, the certification of the kit described in today's **Federal Register** document, does not trigger the 0.10 g/bhp-hr standard for engines included in the certification.

**II. Background and Basis for Certification**

In a notification of intent to certify equipment, composed of an initial document signed November 14, 1997 and subsequent documents, Turbodyne applied for certification of the kit under the Environmental Protection Agency's (EPA) Urban Bus Retrofit/Rebuild Program. Engines applicable to the certified kit are 6V92TA urban bus engine models made by Detroit Diesel Corporation (DDC) from model years 1979 to 1989 that are equipped with mechanical unit injectors (MUI) and certified to, or rebuilt to, comply with federal emissions standards. The certifier's principal place of business is: Turbodyne Systems, Inc., 6155 Carpinteria Avenue, Carpinteria, CA 93013.

Using engine dynamometer (transient) testing in accordance with the Federal Test Procedure for heavy-duty diesel engines, Turbodyne demonstrated

compliance with the 0.10 g/bhp-hr particulate matter (PM) emissions standard. This is the same test data that was presented for the DDC certification dated May 14, 1998 as referenced earlier. Engine dynamometer data, shown below in Table A, is the basis for the certification approval of the kit when used on applicable engines. The emissions test data is part of Turbodyne's notification of intent to certify, which is available in the public docket located at the above-mentioned address. All testing was conducted using #2 low-sulfur diesel fuel.

TABLE A.—EXHAUST EMISSIONS SUMMARY

Gaseous and Particulate Test:	g/bhp-hr	
	1989 HDDE Standards	6V92TA MUI with Turbodyne kit
HC .....	1.3	0.1
CO .....	15.5	0.4
NOx .....	10.7	9.8
PM .....	0.60	0.091
BSFC <sup>1</sup> .....	.....	0.464
Smoke Test:	Standards	
ACCEL .....	20%	3.3%
LUG .....	15	2.5
PEAK .....	50	4.2

<sup>1</sup> Brake Specific Fuel Consumption (BSFC) is measured in units of lb/bhp-hr.

The exhaust emissions data presented by Turbodyne is from testing a Detroit Diesel Corporation (DDC) engine model 6V92TA, in accordance with procedures set forth at 40 CFR part 86, subparts N and I. The engine model was tested after being equipped with the Turbodyne kit. The 6V92 engine was tested in one horsepower (hp) rating: 277hp.

The data of Table A demonstrates that for the test engine, when rebuilt with the kit, PM emissions are less than 0.10 g/bhp-hr, and emissions of hydrocarbon (HC), carbon monoxide (CO), NOx and smoke opacity are within applicable federal standards.

This action applies a PM emissions level of 0.10 g/bhp-hr to all 1979 through 1989 DDC 6V92TA MUI urban bus engines, when properly equipped with the Turbodyne kit and when using either diesel fuel #1 or #2. Table B lists the applicable engine models and certification levels associated with the certification announced in today's **Federal Register**.

TABLE B.—CERTIFICATION LEVEL OF TURBODYNE KIT

Engine models	Engine codes	Certification PM level
1979–1989, DDC 6V92TA MUI .....	All certified to meet federal emissions standards.	0.10 g/bhp-hr.

All engines for which the Turbodyne kit is intended to apply are expected to meet the 0.10 g/bhp-hr PM standard because the kit instructs the rebuilder to replace all emissions-related parts during the rebuild with Turbodyne specified parts included in the kit, install the converter muffler and install the TurboPac system. The engine-out emissions level (upstream of the catalyst) is expected to be predictable because all emission-related parts are replaced using the Turbodyne specified emissions-related parts and settings of the kit. As demonstrated by the test engine, the combination of the specified parts, the specified settings of the kit, the converter muffler and the TurboPac system, result in a PM level less than 0.10 g/bhp-hr.

A life cycle cost analysis is necessary only for certification of equipment that is meant to trigger a program emissions standard. Certification of Engelhard Corporation's ETX™ kit triggered the 0.10 g/bhp-hr standard for 6V92TA MUI engines, and made available kits rated at 253, 277, and 294 hp. The Turbodyne certification does not include a cost analysis and one is not necessary for this certification. Turbodyne states that engines equipped with the kit will have no additional maintenance or service requirements.

### III. Summary and Analysis of Comments and Concerns

No comments were received in response to the **Federal Register** document of April 19, 1999 (64 FR 19151). However, comments were received from five commenters on the identical equipment which was certified by DDC earlier. Comments or issues on the earlier DDC certification fell into the following general categories: (A) applicability of the kit; (B) description of the kit; (C) testing demonstration and documentation; (D) life cycle cost analysis; (E) warranty; (F) durability, and (G) in-use experience. All correspondence, comments, and other documentation are located in the public docket at the address above. Interested parties may wish to review these comments which are located in the Public Air Docket A–93–42 (Category XX–A) at the address listed earlier in this document as they would also be relevant to the Turbodyne certification discussed herein due to the fact that the

equipment being certified is identical. The comments were summarized in the **Federal Register** Document that was published on May 14, 1998 announcing DDC's certification of identical equipment.

### IV. Certification

The Agency has reviewed the notification of intent to certify and other information provided by Turbodyne, and finds that the Turbodyne kit described herein:

- (1) complies with the particulate matter exhaust emissions standard of 0.10 g/bhp-hr, without causing the applicable engine families to exceed other exhaust emissions standards;
- (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 Retrofit/Rebuild Requirements for 1993 and Earlier Model Year Urban Buses (40 CFR 85.1401 through 85.1415).

Therefore, today's **Federal Register** document announces certification of the above-described Turbodyne kit for use in the urban bus retrofit/rebuild program as discussed below in section V.

### V. Transit Operator Responsibilities

Today's **Federal Register** document announces certification of the above-described Turbodyne kit, when properly applied, as meeting the 0.10 g/bhp-hr particulate matter standard of the Urban Bus Retrofit/Rebuild Program.

In a **Federal Register** document dated March 14, 1997 (62 FR 12166), EPA announced certification of a retrofit/rebuild kit produced by the Engelhard Corporation (the ETX™ kit). That certification means that urban bus operators using compliance program 1 must use equipment certified to the 0.10 g/bhp-hr standard when rebuilding or replacing applicable 1979 through 1989 model year DDC 6V92TA MUI model engines after September 14, 1997. The certified Turbodyne equipment described in today's document may be used by operators in compliance with the 0.10 g/bhp-hr standard. Operators using compliance program 2 having applicable engines may use the certified Turbodyne kit and claim the

certification PM level from Table B above, when calculating their Fleet Level Attained (FLA). Under program 2, an operator must use sufficient certified equipment so that its actual fleet emission level complies with the target level for its fleet.

As mentioned above, certification of the Engelhard ETX™ kit triggered the 0.10 g/bhp-hr standard for applicable 1979–1989 6V92TA MUI engines. That kit provides three power ratings: 253, 277, and 294 horsepower. Turbodyne will offer this kit in these three power ratings as well: 253, 277, and 294hp.

The kit discussed in today's **Federal Register** document is not applicable to urban bus engines certified to meet California emission standards. Additionally, the 0.10 g/bhp-hr PM standard is not triggered for engines certified to meet California emission standards. Operators of such urban buses, who choose to comply with program 1, are not required to use equipment certified to the 0.10 g/bhp-hr PM standard until the standard has been triggered for such engines. Operators of urban buses having engines certified to meet California emission standards, and who choose to comply with program 2, may not use the kit described in today's document to meet program requirements.

As stated in the program regulations (40 CFR 85.1401 through 85.1415), operators must, beginning January 1, 1995, maintain records for each engine in their fleet to demonstrate that they are in compliance with the requirements of the Urban Bus Retrofit/Rebuild Program. These records include purchase records, receipts, and part numbers for the parts and components used in the rebuilding of urban bus engines.

### Robert D. Brenner,

*Acting Assistant Administrator for Air and Radiation.*

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