intermediaries (e.g., publishers of nonmanufacturer service manuals) with emission-related information. However, EPA anticipates that manufacturers will continue to provide such intermediaries with information as they have in the past.

FedWorld will make available a telephone number that aftermarket service providers can call to obtain a printed copy of the index. Since information can be downloaded without charge, EPA expects that some trade publications and associations may offer subscribers or members a printed copy if they provide a self-addressed stamped envelope.

No waivers will be granted for any of the requirements related to FedWorld. Since EPA believes that FedWorld provides an adequate means of monitoring the information being made available, manufacturers are not required to submit a plan for distributing information as part of their certification requirements.

E. Enhanced Diagnostic Information

All emission-related data stream information made available to manufacturer franchised dealers (or others in the service industry) is required to be made available to equipment and tool manufacturers. Vehicle manufacturers can, in the alternative, make such information available to independent technicians through provision of vehicle manufacturer equipment and tools. Beginning on January 1,1997, a manufacturer can only provide bidirectional control to its dealerships if it has provided equipment and tool manufacturers with information to make diagnostic equipment with the same bidirectional control capabilities available to the dealerships, or provided such capabilities directly to independent technicians through provision of their own tools. Manufacturers are required to make bi-directional control information available for all MYs beginning with MY 1994, if such information is provided to their dealerships. However, for MYs 1994-1996, where a manufacturer can prove that safeguards for bi-directional controls are only installed in tools, not in vehicle on-board computers, then that manufacturer may receive a waiver from producing bi-directional controls for vehicles prior to the 1997 MY. However, no such waiver is available for other types of data stream information.

This rulemaking does not require a manufacturer to supply any emissionrelated information to aftermarket service providers that it does not make available to its authorized dealerships or other third parties. For example, functional control strategies and waveform information are not required to be made available to aftermarket service providers except to the extent they are made available to authorized dealerships.

F. Enhanced Diagnostic Tools

Manufacturers are required to either make available to aftermarket tool and equipment companies any and all information, except calibrations and recalibrations, needed to develop and manufacture generic tools that can be used by independent technicians to diagnose, service and repair emissionrelated parts, components and systems or they may sell their own diagnostic tools and equipment to independent technicians if the price of such tools is reasonable (e.g., competitively priced with aftermarket tools that would perform the same functions).

As to emission-related diagnostic and service information utilized by aftermarket tool and equipment companies that make generic tools which perform the same or similar functions as those provided by manufacturers to their dealerships, the Agency is requiring that such information be provided at the time of model introduction. This should allow adequate time for its incorporation into tools and equipment by aftermarket tool and equipment companies.

G. Recalibration/Reprogramming

Effective December 1, 1997, manufacturers are required to:

(1) make available to independent technicians all emission-related reprogramming events (including driveability reprogramming events that may affect emissions) that were issued prior to December 1, 1997 by manufacturers and made available to dealerships for MYs 1994 through 1997; and

(2) for reprogramming events that are issued on or after December 1, 1997, make available to independent technicians all emission-related reprogramming events (including driveability reprogramming events that may affect emissions) issued by manufacturers for 1994 and later MY vehicles at the same time they are made available to dealerships.

For all vehicles, reprogramming need not be provided for any recalibrations performed prior to vehicles entering the stream of commerce (i.e., sale to first purchaser).

If a manufacturer can demonstrate, to the satisfaction of the Administrator, that hardware would have to be retroactively installed on vehicles to meet security measures implemented by the manufacturer, the manufacturer may request a waiver from the reprogramming requirements for MYs 1994 through 1996.

EPA is providing manufacturers until December 1, 1997, to adopt and implement security measures, such as encryption or other measures, that address tampering concerns and concerns regarding proprietary information. This leadtime also provides manufacturers an opportunity to work out logistical issues related to making reprogramming available to the potentially large numbers of independent facilities that may be interested in receiving this capability. Though EPA is allowing security measures to be implemented by manufacturers, such measures are not being required by these regulations. EPA believes that manufacturers are best able to determine the extent to which the release of this information will endanger the proprietary nature of the underlying information and/or potentially lead to tampering.

Manufacturers are required to either offer for sale at a competitive market price a reprogramming tool that interfaces with the vast majority of generic portable computers or make available to aftermarket tool and equipment companies information that would enable them to manufacture such a tool. In addition, manufacturers are responsible for assuring that those independent service providers who elect not to purchase reprogramming services have access to reprogramming services at a reasonable cost and in a timely manner.

Any method adopted by a manufacturer by which reprogramming is made available to independent technicians cannot impose a significant burden on independent technicians beyond that experienced by dealerships. For example, manufacturers can sell reprogramming tools directly to independent technicians or enter into agreements with aftermarket tool companies whereby the manufacturers provide the tool companies with the information necessary to build reprogramming tools. In conjunction with one of these options, manufacturers could transmit reprogramming events directly to independent technicians by modem from a main frame computer or provide them with CD ROMs. In formulating its method of making reprogramming available to independent technicians, a manufacturer may request to meet with EPA to discuss whether the method comports with the requirements of this rule.