dealerships. Manufacturers may require that tool and equipment manufacturers to whom such information is provided agree to ensure that such information remains proprietary.

EPA recognizes that manufacturers cannot exert sufficient control over tool and equipment manufacturers to ensure that generic tools and equipment properly incorporate diagnostic information. Therefore, the Agency will not hold manufacturers responsible for the tools and equipment produced by other companies.

As discussed in the section on reprogramming, manufacturers may sell their own reprogramming tools to independent technicians, rather than having such information provided by aftermarket tool and equipment companies, if the price of such tools is reasonable.

Manufacturers may, if they wish, also sell their enhanced diagnostic equipment and/or provide the information necessary to build reprogramming tools to aftermarket tool and equipment companies. The sale of manufacturer enhanced diagnostic equipment for a reasonable cost would be sufficient to comply with the requirements for enhanced diagnostic information under these regulations.

Vehicle manufacturers are required to make emission-related diagnostic and service information utilized by aftermarket tool and equipment companies available to such companies no later than the date of model introduction. This will allow adequate time for such companies to incorporate the information into generic tools and make it available to independent technicians in a timely manner. Revised information is required to be provided to aftermarket tool and equipment companies as it becomes available.

EPA Decision: Manufacturers are required to 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 emission-related parts, components and systems.

In the alternative, manufacturers may sell their enhanced diagnostic equipment to aftermarket technicians for a reasonable price. The sale of manufacturer enhanced diagnostic equipment for a reasonable cost would be sufficient to comply with the requirements for enhanced diagnostic information under these regulations.

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 believes that such information should be provided at the time of model introduction. This will allow adequate time for its incorporation into tools and equipment.

J. Recalibration/Reprogramming

Statement of Proposal: EPA proposed that, consistent with the Act, "all information" needed to make emissionrelated repairs be made available to the automotive service industry, including recalibration information. An engine calibration is the set of instructions the computer module uses for operating many of the engine systems (e.g., fuel and ignition). These instructions are made up of preset values and algorithms that are located in a computer chip. Recalibration is the act of revising the preset values and/or algorithms for an existing engine calibration in a particular vehicle model/engine configuration. Reprogramming is the act of installing a "new" engine calibration (i.e., a recalibration) into the module of a specific vehicle.

Summary of Comments: Manufacturers asserted several reasons why they should not be required to make available recalibration information or reprogramming capability: (1) Recalibrations are saleable parts and not "information" within the meaning of section 202(m)(5) of the CAA; (2) reprogramming is not a repair action; (3) reprogramming is not "necessary" information; (4) reprogramming is not "emission-related"; (5) recalibration and reprogramming information are proprietary information protected under section 208; (6) the CAA does not require manufacturers to make available engine calibration information for aftermarket parts manufacturers to effectively design emission-related parts; (7) providing reprogramming capabilities to independent technicians would impair the manufacturer's ability to maintain tamper resistant systems; (8) independent technicians would be unable to understand the intracacies of each of the different manufacturer systems; and (9) the potential for problems, such as increased emissions, poor vehicle performance, and warranty and recall liability that could result from the release of recalibration information. Manufacturers asserted that aftermarket service providers could take vehicles to franchised dealerships to have them reprogrammed.

In contrast, the automotive aftermarket unanimously cited the need for independent technicians to have the

capability to perform reprogramming. They commented that any procedure that has the effect of limiting the ability of independent technicians to make repairs is contrary to the CAA and Congressional intent. They further questioned EPA's authority to allow recalibration information to be within the exclusive province of dealers on the basis that that was not the intent of Congress. According to the commenters, if the aftermarket is not allowed to perform reprogrammings, the aftermarket will gradually be removed from performing emission-related repairs, including driveability repairs.

Some commenters stated that the only useful information to aftermarket parts manufacturers would be access to underlying recalibration information. APAA commented that engine calibration information is required for the effective production and testing of replacement parts. The Specialty Equipment Manufacturer's Association (SEMA) asserted that although aftermarket parts manufacturers would not necessarily need direct access to manufacturer proprietary information, some type of secure access to manipulate calibrations in developing and testing aftermarket parts will be essential to the survival of the independent parts and service industry. They argued that by not allowing such access, EPA would put some people out of business by eliminating the ability to make modifications to vehicles.

Aftermarket comments asserted that the marginal risk of tampering could be addressed by various methods, including restricting how recalibrations are performed (e.g., using a modem link to receive recalibration information) or specifying qualifications which all technicians must meet to obtain recalibration data.

Analysis of Comments: EPA disagrees with the commenters that recalibration information is a part. There are several reasons for the Agency's position on this issue. First, service people do the reprogramming, not parts departments. Second, one doesn't need to order the "part," it is in the diagnostic machine and just needs to be downloaded. Third, there are no parts cost for "installation," only service costs. Fourth, entering a recalibration does not physically change a vehicle, only the data (information) on the computer. Fifth, in their comments, manufacturers refer to recalibrations as "information." ¹³ Sixth, parts can be sent to a mechanic via, e.g., UPS, as they

¹³ For example, Chrysler Corporation Response to EPA Request for Supplemental Comments on OBD Systems, June 28, 1992, and Ford Motor Company Written Comments, July 31, 1992.