

tion are considered to be less than the original 1375, due largely to improvements in test technique, and are established at approximately 900 parts per million. Based upon this figure, there is a 70% reduction of total exhaust hydrocarbon emissions due to the installation of these systems. The carbon monoxide standard is based upon existing emissions, and a 60% reduction of carbon monoxide was specified. Again, based upon surveillance data and submission of test emission data from the manufacturers, the 1967 systems do comply with these requirements.

The reason for this reduction in total average emission can be attributed to several factors, one of which is improvements made by manufacturers.

I feel that the efforts of this Board have resulted in a total emission reduction from all vehicles. All manufacturers now consider "emissions" as a major design criterion for engines.

Vivid evidence of this is present today when several manufacturers will present new "controlled engines" for your consideration, which have achieved State standards by considering emissions early in the engine design phase. These "controlled engines" are also less costly to the motorist than present air injection systems.

Of particular importance also is the direction influence that your honorable Board has caused upon the manufacture, assembly and pre-delivery preparation of automobiles in California.

Quality control, assembly upgrading and pre-delivery service have all been improved. The end result is a better vehicle being sold to the motorists of California.

#### *Criteria*

The Board has numerous criteria with which any system must comply, in addition to State standards. These criteria basically relate to the cost and operation of the system when installed on the motor vehicle. Surveillance data, and the letters of representation from officers of each of the corporations, gives assurance that the systems have in the past, and will in the future, continue to comply with the criteria established by this Board. This is not to indicate that there are no problems with the vehicles when in operation by the motoring public. Our surveillance data indicates there have been problems with the operation by the motoring public. However, the data does support fully that these problems have not been great in number. Problems of heat, starting of the vehicle, rough idle, etc., have been present and are being resolved when they appear.

Staff and Board members have driven representative vehicles and found problems present, and others did not. Our public survey of owners of 1965 and 1966 vehicles resulted generally in the same complaints being expressed but perhaps with slightly greater frequency on the 1966 cars equipped with exhaust control systems.

#### *Emissions controlled*

As has been reported periodically, the emissions controlled due to the installation of exhaust control systems on 800,000 1966-model vehicles, have resulted in control of 110,000 gallons of gasoline each day in the State of California, and more than 1600 tons of carbon monoxide each day. This control in conjunction with crankcase emission control results in 400,000 gallons of gasoline each day being kept from the skies of California and in many cases being used by the motorists at a considerable savings. Certainly these accomplishments will increase with the passage of time.

#### *Recommendation*

It is therefore my recommendation as Executive Officer that under the provisions of Section 24386(4) of the Health and Safety Code of the State of California, this Board issue certificates of approval to those manufacturers who have requested certification for their systems or amended certifications to their existing applications as required by Resolution 64-30 which limited the 1966 certification to only one model year.

#### *Exemptions*

It is my pleasure to report that there are no exemptions requested of the MVPCB for 1967 model domestic vehicles. Those vehicle manufacturers and assemblers who had originally requested exemptions such as, ambulances and other specialized equipment have met with the staff, and it has been determined