

#2:

n-96-01

II-A-1103

MACK PETITION

DNAC -81-02

NOISE
EMISSIANS
STANDARDS #2

Received 11/25/80

1 - ~~Walter M. May~~
? a. Elkins

MACK TRUCKS, INC.
EXECUTIVE OFFICES

WALTER M. MAY
EXECUTIVE VICE PRESIDENT-ENGINEERING

November 7, 1980

BOX M
ALLENTOWN, PENNSYLVANIA 18105
AREA CODE (215) 439-3241

The Honorable Douglas M. Costle
Administrator
U. S. Environmental Protection Agency
401 M Street, S. W.
Washington, D. C. 20460


Dear Mr. Costle: Subject: Petition for Reconsideration -
1982 Medium & Heavy Truck Noise Emission Reg.

Attached is a statement by Mack Trucks, Inc. which is basically in support of International Harvester's "Petition for Reconsideration of the 1982 Medium & Heavy Truck Noise Emission Regulation."

We echo International Harvester's concern that the increased stringency in sound emission will probably contribute much more to the inflationary forces than it will to public health. Certainly great strides have been made in reducing heavy duty truck sound levels; however, there is a serious concern that further reductions in sound levels measured at 35 m.p.h. will be masked by sound emanating from unregulated sources at normal highway speeds, especially from the tires.

It is our opinion that it is in the best interest of the U. S. to suspend the 1982 regulation at least until a complete review, based entirely on heavy trucks built to meet the current 83 dB (A) regulation, is completed.

Yours very truly,



Walter M. May
Exec. Vice President
Product & Engineering

LFD:ao

cc: Mr. Neil Goldschmidt, Secretary, Dept. of Transportation



RECORDED
NOV 9 1980
REGULATORY
OMSAPC

#2



MACK TRUCKS, INC.
One of The Signal Companies 

November 7, 1980

Mr. Douglas M. Costle, Administrator
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Dear Mr. Costle:

Subject: Noise Emission Standards
Affecting Heavy Duty Trucks

Mack Trucks, Inc., a manufacturer of heavy duty diesel trucks of 26,000 pounds GVWR and greater, requests a review of impending noise emission standards affecting heavy duty trucks, in light of changes in ambient sound levels since the Federal Noise Standard was first proposed.

Our basic questions are:

- (a) Will further reduction of the allowable sound level of newly manufactured trucks have a beneficial effect on today's community sound levels?
- (b) And if so, will the reduction in sound levels have enough of a beneficial health effect to justify the associated costs?

We have recently noted that individuals in the Environmental Protection Agency, on more than one occasion, have been quoted as stating that trucks are the number one noise problem in the United States today. We believe that such statements are erroneous generalizations. The perception of noise associated with heavy duty trucks that has occasioned these statements is likely to be the sounds emanating from pre-regulation vehicles, poorly maintained vehicles, jouncing body components, e.g., endgates, of empty trucks/trailers passing over rough roads (cracks, uneven pavement, potholes) and/or tires at speeds over 35 mph.

The average new truck sound level is already below 83 dB (A).
Our calculations, using the actual sound levels recorded in our

Subject: Noise Emission Standards
Affecting Heavy Duty Trucks

production verification (PV) reports and annual production figures, indicate that the average Mack chassis sound level has been approximately 80 dB(A) during the four Mack model years the Standard has been in effect. However, this estimate does not imply that compliance with the 80 dB(A) Standard will be easy.

In order to assure compliance with a noise standard on a production basis, and thus minimize the potential for expensive recalls, we feel that we must design for 2 dB(A) under the Standard; therefore, for the 80 dB(A) Standard, we must design the chassis for a sound level of 78 dB(A). Of our 60 currently active EPA categories for the 1981 model year, 58 of them are production verified over this projected minimum design standard. As the Noise Standard is lowered, each individual sound source is quieted to the point where, instead of making a change to one part to reduce the overall sound level 1 dB(A), we must make a change to several parts to obtain the same result. In other words, the more the Standard is lowered, the more difficult (costly) it is to reach.

At this stage of our development program, we have determined that our vehicles will require some combination of the following improvements in order to assure compliance with the 80 dB(A) Standard:

1. More efficient mufflers, which certainly will be larger and/or heavier
2. Additional underhood/undercab sound absorbing material
3. Side shields to effectively eliminate "the engine from "the line of sight", when viewed from the side of the chassis

already covered in IH letter

It should be noted that approximately 99% of our chassis are now equipped with fan clutches, and therefore, this component no longer offers an additional source of sound reduction, nor can its effect on fuel economy be credited against the added cost of meeting the 80 dB(A) Standard. Mack Trucks, Inc. made viscous drive fans standard on our Maxidyne (high torque rise) engines in 1976 and on the bulk of the remaining engines in 1978. Approximately 99.5% of the engines in our chassis are now turbocharged, a factor that also contributes to lowered sound levels. It appears that we may have to give special attention to the sound levels produced by the transmissions installed in our chassis. Since our development work to date has concentrated only on Mack powered vehicles, which account for approximately 91% of our production, additional and at this time undetermined sound level treatments may be required to assure

Subject: Noise Emission Standards
Affecting Heavy Duty Trucks

that Mack vehicles, powered by vendor supplied power trains, comply with the Standard.

~~As of this date, we have no doubt that we can comply with the 80 dB(A) Standard; however, we do question if the lower level will be justified by a beneficial effect on public health at an acceptable cost/benefit ratio. In order to assure our compliance with the 1982 Standard, we estimate that as much as \$400 to \$500 per chassis will have to be passed on to our customers in the form of increased vehicle prices. It should be noted that this additional expense must necessarily be passed along to the consuming public in the form of increased costs for goods and services.~~

~~Our greatest concern with the improvements required for compliance with the 1982 Standard has to do with the necessity of the increased use of sound barriers. Generally speaking, these barriers will be a further step toward completely encapsulating the engine and transmission. They will reduce accessibility to serviceable components, result in additional maintenance costs, and could impose additional loads on cooling systems. Although the Quiet Truck Programs of the EPA and the United Parcel Service can provide some data on the effects of the barriers, these programs only take into consideration one type of operation, that being the long-haul truck-tractor/semitrailer. Construction trucks (dump, concrete mixer, etc.) certainly will present problems not encountered with highway chassis. However, the most disturbing consequence of the increased use of barriers is the possible reduction in vehicle preventive maintenance. We believe that human nature dictates that the more difficult a component is to reach, the less the likelihood a person will attempt to reach it.~~

Additionally, side shields, by design, are located along the frame rails. Unfortunately, so are many other components. On highly customized heavy duty vehicles (built to meet specific application requirements), standardization of side shields does present a problem. The less standardization we have, the greater the cost of the vehicle.

~~Also of concern is the fact that the required larger mufflers may encroach on the available space for cab entrance and egress.~~

This discussion of noise control and its economic viability brings to mind another facet of the Federal noise program that achieves questionable results. Effective October 1, 1980, newly manufactured truck mounted solid waste compactors were required to not exceed a sound level average of 79 dB(A) at a distance of 23 feet. This standard does not appear to be consistent with the current or 1982 "Chassis Noise Standard". When the compactor chassis

Mr. Douglas M. Costle, Administrator
U.S. Environmental Protection Agency

Page 4
November 7, 1980

Subject: Noise Emission Standards
Affecting Heavy Duty Trucks

is stationary and the compactor operating, Federal regulations specify that the sound level average cannot exceed 79 dB(A) at 23 feet; yet once the compacting cycle is over, the operator can put the transmission in gear and accelerate away from the site while producing a Federally allowed sound level not to exceed 83 dB(A) at 50 feet. 83 dB(A) at 50 feet is approximately equivalent to 89 dB(A) at 23 feet. That is an increase of 10 dB(A) at 23 feet and is perceived as 68% louder. Even if we consider the future 80 dB(A) at 50 feet "Chassis Standard", effective in 1982, the increase will still be 7 dB(A) at 23 feet (79 dB(A) versus 86 dB(A)), perceived as 55% louder. In light of these differences, the "Packer Standard" appears to be overly stringent and its cost effectiveness seems very questionable.

From the documents supporting the "Packer Standard", we received the impression that the Agency believes that little, if anything, would have to be done to an 83 dB(A) bare chassis in order to conform to the "Packer Standard". Unfortunately, we have learned that the engine in our vehicles is still a major sound source even at low speeds. It appears that most of our "1982 sound package" will be required in order to conform to the "Packer Standard". Just as with other Federal regulations relating to vehicle operation, we feel that we, the chassis manufacturer, must apply the necessary sound treatment because we warrant the chassis and are most cognizant of what can and cannot be done because of engine cooling, transmission heat, etc.

In summary, Mack Trucks, Inc. would appreciate the Agency's review of the actual source(s) and level(s) of the alleged truck noise problem. We believe that any regulation developed several years before its effective date must be thoroughly reevaluated just prior to its effective date, in order to take into consideration unanticipated changes in economic factors and the actual effectiveness of previous regulations. By doing this, inflationary and non-cost effective regulations can be revised or eliminated. Although the cost of almost everything has increased since the 1982 Standard was promulgated, all costs have not necessarily risen at the same rate. Neither the trucking industry nor the consuming public that they serve should have to bear the costs of ineffective regulations. We believe that the 1982 Noise Standard must be reevaluated to assure that it will provide the results it was developed to achieve, while maintaining an acceptable cost/benefit ratio.

Very truly yours,
Thomas F. Brown
Thomas F. Brown
Executive Engineer-
Vehicle Regulations