

81-02-512



INTERNATIONAL HARVESTER

n-96-01

II-A-1085

May 29, 1981

Mr. Kenneth Feith
Standards and Regulations Division
Office of Noise Abatement and Control
Crystal Mall, Building 2
1921 Jefferson Davis Highway
Arlington, Virginia 20460

Dear Mr. Feith:

SUBJECT: Your May 5th Letter to J. Patrick Kaine on
Vehicle Costs, Etc.

In our submission to E.P.A. on October 2, 1980, International Harvester provided estimated per vehicle costs to E.P.A. based on a typical vehicle scenario of 10 units covering various vehicle configurations, engine differences, etc. The results were presented as the consumer cost increase to convert a typical chassis from an 83 dB(A) level to an 80 dB(A) level. The values reported were: Medium Duty Gas - \$120.00 per chassis; Medium Duty Diesel - \$360.00 per chassis; and Heavy Duty Diesel - \$515.00 per chassis. As noted in the presentation booklet presented at our combined staff meeting of December 18, 1980, these costs covered:

1. Vehicle purchase price increase only.
2. Did not include increased operating or maintenance costs.
3. Were amortized over a 3-year period.
4. Were in 1981 dollars with capital expense inflated at an annual rate of 12%.
5. Had minimal turbocharging cost effect reflected in Medium Duty Diesel cost.

A recent reanalysis of these costs using the same basis but covering a more expanded usage base resulted in the following estimated cost values:

| | |
|--------------------|----------|
| Medium Duty Gas | \$142.00 |
| Medium Duty Diesel | \$387.00 |
| Heavy Duty Diesel | \$379.00 |

The Medium Duty values increased basically due to more firm vendor cost quotes; whereas, the Heavy Duty Diesel decreased due primarily to a much broader model coverage base. Again, the Medium Duty Diesel value is perhaps understated and should be higher since the turbocharging cost effect is still undefined. If diesel engine turbocharging is necessitated due to the 80 dB(A) Regulation, then the added cost for a Medium Duty Diesel could reach as high as \$1400.00 per unit.

In my letter to Mr. Hawkins of December 23, 1980, page 4 lists the approximate percentage cost breakdown of the various components, i.e. engine, fan clutch, exhaust, etc., in the Medium Duty Gas/Diesel and Heavy Duty Diesel classifications.

This data can be used to approximate the cost effect of major component changes within a model classification. A copy of the December 23rd letter is attached for your reference.

In regard to questions 2 and 3 of your letter, the subject is extremely complex and difficult to discuss in concrete terms unless one talks of a specific chassis, engine, exhaust system, etc. Complex matrix structures are used in the design, test and production stages because of the many variables to be considered. In our combined staff meeting of December 18th, we attempted to make generalizations and discuss these complexities. The presentation booklet described the general changes necessary by major components. Additionally, copies of the specific changes necessary on three typical, high-production usage vehicles (one medium gas, one medium diesel and one heavy diesel), were provided to Dr. Timothy Barry the first week in January.

Messrs. Ron Mercer and Dwight McAfee have also discussed these issues in some detail with Dr. Barry this past week.

We hope this additional information is helpful in your consideration of our request for withdrawal of the 80 dB(A) Medium and Heavy Truck Noise Standard.

Sincerely,



F. L. Krall
Manager, Technical Legislation

lw
cc: L. A. Abbott (WH)



INTERNATIONAL HARVESTER

December 23, 1980

Mr. David G. Hawkins
Assistant Administrator
U. S. Environmental Protection Agency
Washington, D.C. 20460

Subject: Petition for Reconsideration -
1982 Medium and Heavy
Truck Noise Emission
Regulation.

Dear Mr. Hawkins:

A meeting was held on December 18, 1980 with combined EPA and IH staff representation to discuss and clarify the various aspects and questions raised in your November 18, 1980 letter to International Harvester Truck Group President Mr. J. Patrick Kaine. A copy of the presentation is attached for your information. During the meeting, several other requests were made for further clarification of the issues presented in our second submission to Mr. Costle dated October 2, 1980. The answers to these additional issues follow.

1. Additional Cost Items

It was noted in the December 18, 1980 meeting that the IH reported National Economic Impact values included only the vehicle purchase price increase to the consumer in constant 1981 dollars. As such, several additional cost items, as mentioned in the petition submissions and in the meeting, must be considered in an aggregate analysis of the economic effect.

(A) Transmission Cover Cost Effect

As noted in the December 18 meeting, our current analysis suggests an approximate additional \$2.8 to \$3.5 million dollar impact to the economy due to the added usage of transmission covers. This was not previously included in the EPA Background Document.

(B) Inflationary Impact

The National Economic Impact values were as previously noted in constant 1981 dollars. Therefore, the anticipated inflationary increases for the years 1982, 1983, and 1984

should be included. This would represent an additional accumulative impact of over \$40 million for the three year period noted.

(C) Fuel Loss

The economic impact of the fuel lost due to weight increase of the 80 dB(A) components was likewise not included in our National Economic Impact values. As reported previously, IH estimated the fuel lost economic impact based on the sales weighted, 10 typical vehicle scenario to be \$1,785,000 in 1982, \$2,482,000 in 1983 and \$2,973,100 in 1984. We now believe these values to be fairly conservative but necessary additions to an overall analysis. The fuel losses noted here do not include losses due to engine backpressure and air restriction increases.

(D) Increased Maintenance Costs

The initial EPA Background Document did not consider the transmission cover issues. As such, the EPA maintenance cost analysis did not account for this situation. International Harvester has determined that an additional service time of one-half hour is required to remove and replace the proposed transmission cover. This factor should be added to the complete analysis.

(E) Other Items

The following items will represent further economic increases due to the 80 dB(A) regulation but, due to time constraints, were not analyzed by IH.

- (a) Increased Operational Costs due to the lost revenue effect of vehicle weight increase because of the 80 dB(A) abatement components.
- (b) Lost performance costs due to engine back pressure and air restriction increases.

2. GVW Classifications

In reference to the vehicle classification differences between the EPA Background Document and the IH submissions, the following information is provided. This data classifies US Industry Retail Sales projection in a GVW category for the years 1982, 1983, and 1984.

Calendar Year
U.S. Industry Retail Sales Projections (000)

| <u>Classification</u> | <u>1982</u> | <u>1983</u> | <u>1984</u> |
|-----------------------|-------------|-------------|-------------|
| GVW Class 8 | | | |
| Heavy | 145.9 | 166.2 | 184.7 |
| Med XB Gas | 3.0 | 2.8 | 2.3 |
| MRD | <u>15.1</u> | <u>18.8</u> | <u>22.3</u> |
| Total | 164.0 | 187.8 | 209.3 |
| GVW Class 7 | | | |
| Med XB Gas | 26.6 | 24.9 | 20.3 |
| MRD | <u>53.8</u> | <u>66.8</u> | <u>79.1</u> |
| Total | 80.4 | 91.7 | 99.4 |
| GVW Class 5,6 | | | |
| Med XB Gas | 29.5 | 27.7 | 22.6 |
| MRD | <u>6.8</u> | <u>8.5</u> | <u>10.0</u> |
| Total | 36.3 | 36.2 | 32.6 |

Key

MED = Medium Duty
 XB = Except Bus
 MRD = Mid Range Diesel

The above data excludes buses as noted. The previous data as described in our December 18 meeting did include buses based on the scenario that many of the items released for production in the base truck models would also be included in the bus packages. The above data is a calendar year analysis; whereas, the previously presented data was based on our corporate fiscal year.

3. Component Cost Breakdown

The following analysis represents an approximate breakdown of the various components of the IH cost per unit values presented in our October 8, 1980 submission.

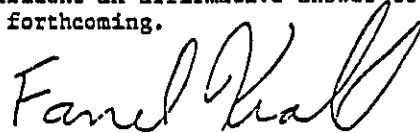
Percentage Analysis
83 dB(A) to 80 dB(A)
10 Typical Vehicle Scenario

| | <u>Med. Duty</u> <u>Gas</u> | <u>Med. Duty</u> <u>Diesel</u> | <u>Heavy Duty</u> <u>Diesel</u> |
|--------------------|--------------------------------|-----------------------------------|------------------------------------|
| Reported Cost/Unit | \$120 | \$360 | \$515 |
| Cost Component: | | | |
| (a) Engine | --- | 21% | 8% |
| (b) Fan Clutch | 64% | --- | 4% |
| (c) Sump Covers | --- | 17% | 29% |
| (d) Exhaust | 11% | 9% | 13% |
| (e) Shielding | 25% | 38% | 15% |
| (f) Transmissions | --- | 15% | 31% |
| Total | 100% | 100% | 100% |

4. Deadlines

As noted in our December 18th meeting, the next critical commitment date is February 1st 1980. After February 1, tooling commitments will be made to our suppliers to ensure adequate lead time for production. If an affirmative decision is made prior to February 1, 1980 to withdraw the 1982 80 dB(A) regulation, the deferred costs to International Harvester are estimated to be \$6,520,000. These costs include tooling expenditures, engineering costs, manufacturing start up expenses and obsolescence factors for both the Truck and Engine Divisions of International Harvester. In addition, an affirmative response to our petition will avoid significant consumer cost increases in an already severely overburdened economy.

We believe the above information, that was presented in our combined staff meeting of December 18, has effectively answered your questions relative to our second submission. We thank you for the opportunity to meet with your staff and are confident an affirmative answer to our petition will be expeditiously forthcoming.


F. L. Krall
Manager, Technical Legislation
International Harvester Company
(219/4616623)

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cc: Henry Thomas, EPA

Attachment