March 12, 1985

Dear Light-Duty Manufacturer: CD-85-03 (LD)

Subject: 1986 Model Year Fuel Economy Procedures

On April 6, 1984 EPA published a final rule implementing changes to the fuel economy labeling program (Ref: 49 FR 13832, "Revisions to Improve Fuel Economy Labeling and the Fuel Economy Data Base"). EPA also published an advisory circular (A/C) which discussed general policies applicable to the fuel economy labeling and compliance programs (Ref: A/C No. 83A). These rules and policies require that some program changes be implemented beginning with the 1986 model year; most notably, the manufacturer self-calculation of label values and elimination of separate California labels.

Enclosed with this letter are the following documents designed to aid you in your 1986 model year program.

Enclosure 1 - "1986 Fuel Economy Supplementary Information" contains the fuel cost, Gas Guzzler Tax schedule, and fuel economy range information necessary to print the fuel economy labels.

Enclosure 2 -"Timetable" contains the timetable for inclusions of label values in the 1986 model year Gas Mileage Guide.

Enclosure 3 - "Fuel Economy Data Sheets" specifies new data reporting procedures resulting from the rulemaking and includes new fuel economy information formats, and instructions for their use.

Please direct any further questions on these subjects to your certification team.

Sincerely yours,

Robert E. Maxwell, Director
Certification Division
Office of Mobile Sources

Enclosures

Enclosure 1

1985 Fuel Economy Supplementary Information

1986 Annual Fuel Cost

Fuel cost estimates for 1986 are based on 15,000 annual vehicle miles and an interim fuel cost of $1.25/gallon for regular unleaded gasoline, $1.35/gallon for premium unleaded gasoline, and $1.20/gallon for diesel fuel. The fuel cost will be calculated using the adjusted combined mpg (the .55/.45 weighting of the adjusted city and highway FE's, then rounded to a whole mpg).

Fuel Economy Ranges

The publication of the initial ranges as required by 40 CFR 600.314-86(d) will occur at the same time the Guide is released for publication. These ranges shall be applied to all vehicles manufactured more than 15 days after the ranges are available [40 CFR 600.306-86(b)].

Pursuant to 40 CFR 600.314-86(d) we will publish an updated version of all the ranges early in February 1986. This corresponds to the historical date of the second edition of the Guide. All vehicles must be labeled with the updated ranges within 15 days.

Labels issued after release of the initial or updated ranges should include the latest available range of fuel economy for that class of vehicle. After the ranges are initially available, the computer issued receipt will contain the ranges. The receipt will he automatically generated for manufacturers electronically transmitting FE data; other manufacturers can obtain this receipt from your certification team representative after the FE data has been entered. Separate ranges of adjusted city and highway FE values will be given.

Release Date

EPA will consider manufacturer-calculated label values as confidential until the release date specified by the

manufacturer. The release date should be the date of introduction or press release or inclusion in the fuel economy Guide, whichever is earlier.

1986 Gas Mileage Guide

It is EPA's intention to include in the Guide all manufacturers' approved label values received before August 19 and, to the extent possible, all label values received before the Guide is sent to DOE on August 30. If the manufacturer wishes to exclude a model type from the Guide, he should explain the basis for his request to EPA. Otherwise, all release dates of labels received before the Guide compilation date should have a release date of August 30, or earlier.

Gas Guzzler Tax

If, according to your calculations, one or more of your model types are subject to the Gas Guzzler Tax, those model types are noted by the word "Guzzler" in the engine description section of the enclosure entitled "1985 Fuel Economy Guide." This term will also appear in the Gas Mileage Guide and will reference an explanatory text.

The total amount of tax is determined by the Internal Revenue Service (IRS). The manufacturer is responsible to IRS for reporting and paying the Gas Guzzler Tax. The tax shown in the table below must be used on the label unless the manufacturer has been granted an alternative tax rate schedule. However, IRS may audit your records and make their own determination about your tax liability. If IRS determines a different tax rate after the model year, you will not he required to relabel unsold vehicles.

Use the following table to determine your tax liability for "Guzzler" model types.

MPG* is at least:	TAX
21.5 but < 22.5	$ 500
20.5 but < 21.5	$ 650

19.5 but < 20.5	$ 850
18.5 but < 19.5	$1,050
17.5 but < 18.5	$1,300
16.5 but < 17.5	$1,500
15.5 but < 16.5	$1,850

MPG* is at least:	TAX
14.5 but < 15.5	$2,250
13.5 but < 14.5	$2,700
12.5 but < 13.5	$3,200
< 12.5	$3,850

*Combined unadjusted model type fuel economy

Enclosure 2

Timetable

This enclosure is the timetable for including data in the 1986 Gas Mileage Guide and for the calculation and release of updated fuel economy ranges:

A. Gas Mileage Guide

	Task	Significant Dates	Responsibility
I.	Submit fuel economy data vehicle package for those vehicle configurations intended to be included in the calculation of model type fuel economy values for the Guide.	July 17	Manufacturer

II. Complete all fuel economy testing pertaining to general label values for all model types to be included in the Guide.	August 1	Manufacturer
III. Complete emission certification requirements for all model types to be included in the Guide.	August 19	Manufacturer
IV. Notify EPA of self-approval of all general label fuel economy values for all model types to be included in the Guide.	August 19	Manufacturer

Task	Significant Dates	Responsibility
V. Compile a list (for each manufacturer) of descriptions, fuel economy values, etc., of all model types to be included in the Guide and transmit to manufacturers for their review.	August 19	EPA
VI. Complete review of all information provided in "V" above and notify EPA of necessary corrections or concurrence.	August 29	Manufacturer

B. Fuel Economy Ranges

	Task	Significant Dates	Responsibility
I.	Release to manufacturers the fuel economy ranges to be used on fuel economy labels.	August 30	EPA
II.	Ranges required to be included on labels as of this date.	September 15	Manufacturer

EPA will convey the necessary information to DOE on August 30, 1985. DOE has not yet determined whether a second edition of the Gas Mileage Guide will be published.

Enclosure 3

A. Introduction.

These instructions are being issued to explain the fuel economy (FE) forms and processes for the 1986 model year under the provisions of the FE FRM and the revised general FE policies explained in Advisory Circular No. 83A.

This guideline includes instructions and formats for submitting general label and manufacturer's average information. Manufacturers are encouraged to provide complete and accurate submissions using the formats and instructions detailed in this guideline. Preferably the information should be submitted on keypunched data cards or electronically transferred.

Prior to the self-calculation of a general label or manufacturers average request the manufacturer must have completed the following items:

Breakdown of product line into basic engines
Determination of car lines
Classification of car lines
Label format approval
Submit any necessary engine code equivalency requests
Submit any necessary data substitution requests
Complete testing of all associated test vehicles
Complete certification of the associated family

Assure that all EPA computer information is correct including test disposition assignments

B. Data Cards

Data for a basic engine consist of a card 1, card 2's, card 4's, card 5's and card 6's. If the data is for CAFE, a total sales card should be submitted, at least once, for each compliance category.

Total Sales Card : Applicable for CAFE data only, the card is to provide manufacturer-compiled total sales figure for each compliance category which will be used by EPA's computer program to make sure that all the sales data (card 5) have been accounted for.

Card 1 : This card provides information on the basic engine.

Card 2 : This card provides model type general label information as calculated and approved by manufacturer.

Card 4 : This card provides information on test data that should be used for the general label/model type fuel economy calculation.

Card 5 : This card provides subconfiguration level sales

data by each carline.

Card 6 : This card provides transmission configuration information.

C. Data Entry Procedures for Fuel Economy Data Submissions

2. New Entry Submission

Submission of a card deck consisting of a card 1, card 2's, card 4's, card 5's and card 6's represents a new entry for the basic engine for which fuel economy General Labels have been self-approved.

a. Leave the PROC CODE (column 4 on card 1) field blank to indicate the data set is for a new basic engine.

b. Fill out the rest of the fields on card 1 and the rest of

the cards according to the field-by-field instructions provided in this package.

Note: After EPA has audited your calculation and generated a letter for the data sets(indexes), reprocessing of these indexes is not allowed for the following PROC CODE of "M", "R", "I" and "D". If EPA does not audit the index calculations, the Release Date is then used to determine whether or not to allow corrections to the data set. If the release date has passed, reprocessing can only occur for the cards 1,4,5 and 6's.

2. Reprocess submission

This should be used to correct/update fuel economy calculation reports for a basic engine if any changes/corrections are made to the supporting data bases (vehicle information, manufacturer's test, EPA test and car line information) after the basic engine data has been entered into the EPA's fuel economy system. Errors in the input data that was previously submitted cannot be corrected using this procedure but the input data itself must be replaced as explained in the "Replace Submission" procedure.

a. Enter "M" in the PROC CODE (column 4 in card 1) field to indicate that the index is to be reprocessed.

b. Fill in the key fields: The Manufacturer Code and the Index Number on card 1 to identify the basic engine index which is to be reprocessed.

c. The other fields need not be filled out and the rest of the cards should not be filled out for this procedure.

3. Replace submission

This procedure should be used to replace the data for a basic engine index which has errors in it. It removes the old data and calculation results from the data base and processes accompanying data into the same area in the data base as the old data.

a. Enter "R" in PROC CODE (column 4 on card 1) field to indicate that the accompanying data is to replace the old one.

b. Fill out the rest of the fields on card 1 and other cards

as if they were for a new basic engine.

4. Insert submission

This procedure is used to add additional data cards (card 2, 4, 5 and/or 6) to a basic engine data already in the EPA's fuel economy data base.

a. Enter "I" in PROC CODE field (column 4 on card 1).

b. Fill in the key fields: The Manufacturer Code and the Index Number on card 1 to identify the data set of the basic engine to which the following cards are to be added.

c. Fill out any of the cards (2, 4, 5 and/or 6) that are to be added to the basic engine.

Note: When inserting new cards, the fields which link one card with another such as the TRANS LINK, DVC and RLC should be checked to verify that proper combinations are used.

5. Delete submission

This is used to totally remove all the information for a basic engine from EPA's data base for fuel economy system.

a. Enter "D" in PROC CODE field (column 4 on card 1).

b. Fill out the key fields: The Manufacturer Code and the Index Number to identify the basic engine data to be deleted.

Note: If card 2 data is affected, i.e., added, deleted or changed, a "Y" should be put in column 5 (field name "CD 2 CHANGE") on card 1 to ensure the reissuance of the receipt letter which will be generated with each basic engine data that is received and processed by EPA's programs.

D. Error Checking Performed During General Label Data Processing

To ensure that data as error free as possible is passed to the label calculation program, each set of basic engine data is sent through a preprocessor program. The preprocessor makes sure that all key fields on the input sheets have been entered and that no alphabetic characters have been entered into

numeric fields. It also makes sure that all the necessary cards (i.e., card 1, 2, 4, 5 and 6), information linking card 4 & 5(DVC, RLC) and card 5 & 6(Trans Link Code) and other essential data have been entered. If the preprocessor detects such a mistake the data will not be sent to the main label calculation program but will be rejected and stored in an error file which is referred to as the flush file . Manufacturers should resubmit the data that has been sent to the flush file either as a new data set or with the Process Code "R".

If the preprocessor finds no error, the data continues on to the main label calculation program for further processing. Additional check of the data takes place in the program and error conditions are grouped into two categories, i.e., 'WARNING' and 'ERROR'. If any 'ERROR' messages are generated for a basic engine, the label letter can not be issued for the index. 'WARNING' message in an index wll leave the issuance of the letter to the discretion of EPA's certification team member.

All the error and warning messages that may be generated by the fuel economy programs are included in the attachment.

E. Electronic Submission of Fuel Economy Data

Manufacturers are encouraged to electronically submit FE information. A computer account on the U of M's MTS computer system is required to electronically transmit data. Contact John Hendon for information about obtaining an account.

To electronically transmit data the manufacturer must create two computer files named 1236W-6 and 1236R-6 on the account. These files must be permitted with "Full" access to account "SAQR". Completed card images are placed in 1236W-6. The EPA computer program will process information in this file , empty and truncate it each evening. Error messages and receipts will be placed in 1236R-6. This file will not be emptied by EPA each day.

F. TyPes of Labels

There are three types of labels that are possible for the 1986 model year. Original general label values, unique label values and recalculation of label values due to running changes. The processing procedures are explained below for each type of label.

Original General Label

The normal processing procedures explained in these instructions are to be used.

Unique Labels

The normal processing procedures are to be used plus the unique label usage as noted on the card 1.

Recalculation of Label Values due to Running Changes

Under the provision of 40 CFR 600.314-86 manufacturers will be required to relabel vehicles whenever a running change adds a base level, adds an axle ratio which is 10 percent (or more) larger than the largest axle ratio tested, adds a road-load horsepower, or adds a larger equivalent test weight. The following procedures should be used.

1. The "Recalc" field should have an appropriate reason entered: 1, 2, 3, or 4.

2. The "Relabel Option" field should be completed showing the manufacturer's intention to relabel with a higher FE value if the recalculated FE goes up by 1.0 mpg.

3. The index number used should be the index number of the index being relabeled.

4. The sales volumes should be revised.

5. All model types included in the original index (including model types which will not need to be recalculated but are in overlapping base levels with model types that require recalculation) should be submitted in the recalculation index. Cards associated with both base levels and model types that are not part of the recalculation need not be resubmitted at the manufacturer's option.

6. Enter a suppression code 9 on all Card 5's that are associated with model types that will not be recalculated.

7. Enter the running change number which triggers the recalculation on a comment card.

The recalculation will result in relabeling if the new fuel economy for either the city or highway test cycle is 1.0 mpg or more lower or 1.0 mpg higher and the manufacturer has elected to relabel (enter "1" in Recalc field).

G. Manufacturer Self Calculation of Label Values

For the present time, EPA intends to make routine audits of many manufacturer's self-calculated label values. To facilitate those audits, manufacturers should submit all the information described in these instructions (Cards 1, 2, 4, 5, and 6) five days before the vehicles are offered for sale.

EPA is not considered in receipt of the information until it is successfully entered into EPA's computer data base. The receipt will be issued electronically in the manufacturer's report file (1236R-6). If manufacturers are not electronically submitting their self-approved label values, the receipt can be obtained from the certification team person once the computer forms have been correctly completed and entered.

The manufacturer is responsible to correct all errors that prevent receipt generation prior to EPA accepting manufacturer calculated label values. The errors that prevent receipt generation are listed later in the enclosure, but they can be generally categorized as major errors or improper field entries. Errors that are caused by data base inconsistencies are allowed past this initial screening. At a later point in time, when EPA audits your calculation, we may require that all errors be resolved by the manufacturer.

H. Use of Data Generated by a Different Manufacturer

In order to maintain security of EPA's data base, each data set will be checked to determine if the manufacturer code entered on card 1 matches the manufacturer code of the manufacturer submitting the data. Manufacturers are only allowed to enter fuel economy data with their own manufacturer code.

In special situations, one manufacturer may be allowed to use test data or carline code numbers of another manufacturer (e.g. Dodge Colt is entered by Mitsubishi). EPA must be informed of all these exceptions. The manufacturer whose data is to be used by another manufacturer must supply written permission to EPA. Unless such written permission has been received, only test data and carline numbers associated with the requesting manufacturer will be

processed.

I. Field-by-Field Instructions

The next several pages give instructions regarding the format and content of general label and manufacturer's average information submittals. If this information is not electronically submitted, it should be submitted on keypunched computer cards. If that is not possible, the information should be written on the format pages provided in the enclosure.

The data cards for each index (instructions for numbering indexes are included later in this guideline) should be ordered having the

CAFE sales input card (Card FS) (if a CAFE submittal), then the Card 1, Card 2's, Card 4's, Card 5's, and Card 6's in that order for each index submitted.

Total Sales Card -Corporate Average FE

Information on this card is not applicable to general label fuel economy calculations and should not be submitted with general label data.

Cols 1 - 2 CARD IDENT (Card Identification)

Enter "FS". This field identifies the card as the CAFE sales data card.

Cols 3 - 4 MODEL YEAR

Enter applicable FE model year.

Cols 5 - 7 MFR CODE (Manufacturer Code)

Enter 3-digit mfr code from the back of the Vehicle Information Data Sheet. Right justify.

Col 8 COMPLIANCE CATEGORY

Enter one of the following:

1 for Domestic Passenger Cars,
2 for Import Passenger Cars,
3 for Domestic 2-wheel Drive Trucks,
4 for Import 2-wheel Drive Trucks,
5 for Domestic 4-wheel Drive Trucks,
6 for Import 4-wheel Drive Trucks,

7 for Domestic Combined Light Duty Trucks,
8 for Import Combined Light Duty Trucks.

Cols 9 -15 SALES

Total sales for the compliance category. Right justify.

Card 1 - Basic Engine Information

Cols 1 - 3 MFR (Manufacturer Code)

Enter the appropriate three-digit manufacturer code listed on the back of the VI Sheet. Right justify.

Col 4 PROC CODE (Process Code)

Enter one of the following codes.
' '(blank) for new data
'R' to replace existing data for a basic engine index
'M' to reprocess existing data for a basic engine index
'I' to insert additional cards to existing index
'D' to delete a basic engine index

Col 5 CD 2 CHANGE (Card 2 Change)

(For GENERAL LABEL only): If the PROC CODE is other than blank or "D", indicate whether there are any changes to card 2's or new card 2's are being added.
"Y" for yes
"N" or blank for no

Cols 6 - 8 INDEX NO (Index Number)

Enter 1 through 99 to uniquely identify a specific set of data under a basic engine. Manufacturers with mfr codes 10 through 40 may use numbers 1 through 999. Right justify.

Cols 10 -12 CID (Cubic Inch Displacement)

Enter engine displacement in cubic inches. Right justify.

Cols 14 -15 # OF CYL (Number of Cylinders)

Enter number of cyliners/rotors. Right justify.

Col 17 CYCLE (Combustion Cycle)

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   Specify combustion cycle.
     "G" = Gasoline
     "D" = Diesel
     "R" = Rotary

Col    19       FI (Fuel Injection)

   Enter type of fuel injection:
     "S" = Single point (i.e., Throttle body)
     "M" = Multi-point (i.e., Ported. Direct)

Cols   20 -21  # OF VENTURI (Number of Venturies)

   Enter number of venturies. Right justify.

Col    23       V TYPE (Vehicle Type)

   Specify vehicle type:
     "C" = Car
     "T" = Truck

Col    25       CAT (Catalytic Converter)

   Indicate whether or not catalytic converter is used:
     "Y" or blank = Yes (Default)
     "N" = No

Col    26       FFS (Feedback Fuel System)

   Indicate whether or not FFS(Feedback Fuel System) is used.
     "Y" = yes
     "N" = No (Default )

Col    27       VAR DISP (Variable Displacement)

   Indicate if the engine is of variable displacement:
     "Y" = Yes
     "N" = No (Default )

Col    28       TURBO (Turbocharger)

   Indicate if the engine is turbo-charged:
     "Y" = Yes
     "N" = No (Default )

Col    29       S-CHARGE (SuPercharger)
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Indicate whether the engine is super-charged:
"Y" = Yes
"N" = No (Default)

Col 31 POLICE

Indicate if the basic engine is only for police application:
"Y" = Yes
"N" = No (Default)

Col 35 FI DESC (Fuel Injection Descriptor)

Indicate whether the Fuel Economy Guide should contain the specific type of fuel injection system specified in FI (col 19) field. This is only necessary when the manufacturer produces basic engines distinguished only by multi-point vs. single-point fuel injection.
"Y" = Yes

"N" = No (Default)

Col 37 RECALC (Recalculation)

(For GENERAL LABEL only):
" " or "N" for new data,
"1" recalc due to addition of base level,
"2" recalc due to addition of axle ratio greater than the largest tested in previous index,
"3" recalc due to addition of road load horsepower 10% higher than the highest (tested or untested) in previous index,
"4" recalc due to addition of a higher equivalent test weight.

Col 39 RELABEL

(For GENERAL LABEL only):
"Y" when relabeling is desired if FE value increases by 1.0 MPG.
"N" if relabeling is not wanted

Col 41 UNIQUE LABEL

(For GENERAL LABEL only): The unique labelling information is described in 40CFR600.207-86(a)(2).

Indicate whether this basic engine is for a unique label.
"Y" = Yes
"N" = No (Default)

Col 43 COMP CAT (Compliance Category)

(For CAFE only), Enter:
1 for Domestic Passenger Cars,
2 for Import Passenger Cars,
3 for Domestic 2-wheel Drive Trucks,
4 for Import 2-wheel Drive Trucks,
5 for Domestic 4-wheel Drive Trucks,
6 for Import 4-wheel Drive Trucks,
7 for Domestic Combined Light Duty Trucks,
8 for Import Combined Light Duty Trucks

Cols 45 -47 APP STD (Applicable Standard)

(For CAFE only): Enter the CAFE standard for the mfr and compliance category.

Cols 53 -58 RELEASE DATE

(For GENERAL LABEL only): Enter the date when the label information may be released to the public. Release dates after the Guide date may not be entered for labels approved before that date without EPA permission.

Cols 60 -69 ENGINE BLOCK DESCRIPTOR

When the parameters listed on the card 1 are not sufficient to distinguish between different basic engines, use appropriate descriptors: e.g., (M-ENG), (GM-BUICK), etc. Enclose the descriptors with parentheses. Left justify.

Col 80 (Card type)

Enter '1'.

1 2

Card 2 - Manufacturer FE Calculation(For General Label only)

Cols 1 - 5 CARLINE (Carline Code)

Enter 5-digit carline code from Car/Truck Line information system.

Col 8 GUZZLER EXEMPT

If a model has been exempted from gasoline guzzler tax, specify the reason for the exemption:
N (blank) -Not exempt (Default)
1 -GVWR > 6000 lbs
2 -Emergency vehicle
3 -IRS alternate rate schedule

Cols 10 -13 OPT DISP (Optional Displacement)

Engine displacement to be used as the advertised displacement if other than CID. Right justify.

Col 14 UNITS (Optional Displacement Unit)

Enter "C" for cubic centimeters or "L" for liter for optional displacement.

Cols 16 -17 TRANS(Transmission)

Enter C4, M3, B3 (model with both C4 and M3), C5, M4, B4 (model with both C5 and M4), M5, A3, L3, A4, L4, S2, S3, S4 or S5 for transmission installed.

Col 19 DRIVE SYS (Drive System)
Enter drive system code:
4 = 4-wheel drive
F = 2-wheel drive, Front
R = 2-wheel drive, Rear

Col 21 O/D(Overdrive Code)

Enter overdrive code:
1 = no gear ratio < 1
2 = Top gear ratio < 1
3 = Electrically operated O/D
4 = Computer controlled automatic electronic overdrive
5 = Computer controlled automatic electronic overdrive with lock-out switch

Col 23 SIL (Shift Indicator Light)

State whether equipped with shift indicator light:
Y = Yes
N = No

Col 24 ENG MGMT (Engine Management System)

Indicate whether equipped with engine management system:
Y = Yes
N = No
L = Yes, but with lock-out feature

Col 25 # MODES (Number of Modes)

Enter number of modes if a multi-mode system

Col 27 VAR LOCKUP PT (Variable Lockup Point)

Enter number of lockup rpm ranges:
V = Continuously variable
1 -9 = number of discrete lockup rpm ranges

Col 28 DECLUTCHING/FREEWHEELING

Specify whether equipped with declutching/freewheeling mechanism other than part of an engine management system:
Y = Yes
N = No
L = Yes, but with lock-out feature

Cols 35 -40 UNROUNDED UNADJUSTED CITY FE (Model Type)

Enter model type city FE to 4 places to the right of decimal point.

Cols 42 -47 UNROUNDED UNADJUSTED HWY FE (Model Type)

Enter model type highway FE to 4 places to the right of decimal point.

Cols 49 -54 UNROUNDED UNADJUSTED COMB FE (Model Type)

Enter model type combined FE to 4 places to the right of decimal point.

Cols 56 -57 GUIDE CTY (City Label Value)

Enter adjusted model type city FE rounded to whole number. Right justify.

Cols 59 -60 GUIDE HWY (Highway Label Value)

Enter adjusted model type highway FE rounded to whole number.

Right justify.

Cols 62 -63 GUIDE CMB

Enter adjusted model type combined FE rounded to whole number. Right justify.

Cols 65 -68 ANNUAL FUEL $

Enter annual fuel cost based on adjusted-combined-rounded model type fuel economy and 15,000 miles of driving per year. Right justify.

Cols 70 -77 APPROVAL DATE

Date when the self-approval was made.

Col 80 (Card type)

Enter "2"

Card 4 - Light Duty Test Data Information Sheet

Cols 1 - 3 DVC (Data-Vehicle Code)

Enter a unique number (1 -49) within a basic engine for a group of tests representing a configuration. Right justify.

Cols 4 -19 VEHICLE ID (Vehicle Identification)

Enter vehicle identification as it exists in the EPA data base. Left justify.

Col 20 LINK

Enter any alphanumeric code if the card is continuation from the previous card, i.e., same VID and version. The initial and all the the continuation cards should have a same code.

Cols 21 -26 CITY TEST#

Right justify. Enter the test number associated with all data approved by EPA for use in fuel economy calculations.

NOTE: If a specific test vehicle is tested under several different conditions(e.g., tests with different tires, tests to represent M-5 and M-4 transmissions, tests at different power absorption unit settings, etc.,), use different card 4's.

Cols 28 -33 CITY TEST#

Same as above

Cols 35 -40 CITY TEST#

Same as above

Col 42 AVE CODE CITY

Enter an alphanumeric code to a group of card 4's whose tests are to be weighted and averaged into a single fuel economy value. The code for each group must be unique within the basic engine index.

Cols 44 -46 CITY WEIGHTING

If the "AVE CODE CITY" is entered, enter the weighting factor to be applied to the city fuel economy(ies) on this record.

NOTE: The weighting factors of vehicles to be averaged together must sum to 1.00.

Cols 50 -55 HWY TEST#

Right justify. Enter the highway test number. See instruction for 'CITY TEST#'.

Cols 57 -62 HWY TEST#

Same as above

Cols 64 -69 HWY TEST#

Same as above

Col 71 AVE CODE HWY

Enter an alphanumeric code to a group of card 4's whose tests are to be weighted and averaged into a single fuel economy value. The code for each group must be unique within the basic engine index.

Cols 73 -75 HWY WEIGHTING

If the "HWY WEIGHTING" is entered, enter the weighting factor to be applied to the highway fuel economy(ies) on this record.

NOTE: The weighting factors of vehicles to be averaged together must sum to 1.00.

Col 77 SUPP CODE (General Label only)

Enter a numeric code here for data suppression:

2 = for use by Certification team only

5 = Police vehicle

9 = For cards previously used in another index but used here to support calculation for new model type introduction. Or for cards previously used but used again as a data substitution.

Cols 78 -79 RLC

Enter a unique number (1 -49) to identify a RLC/ETW (road load horsepower/equivalent test weight) grouping. This number should be unique within a DVC which is entered in columns 1 -3. Right justify,

Col 80 (Card type)

Enter "4".

Card 5 - Manufacturer Sales Input

Heading MANUFACTURER

Enter the name of the manufacturer submitting the request, not the company that will market the vehicle. This information does not apply to data to be submitted electronically or in 80-column punched card decks.

Cols 1 - 5 CARLINE

Enter 5-digit carline code from Car/Truck Line information system.

Col 8 GUZZLER EXEMPT

(For GENERAL LABEL only): If a model has been exempted from gasoline guzzler tax, specify the reason for the exemption:

N (blank)	-Not exempt (Default)
1	-GVWR > 6000 lbs
2	-Emergency vehicle
3	-IRS alternate rate schedule

Cols 10 -13 OPT DISP (Optional Displacement)

Engine displacement to be used as the advertised displacement if other than CID. Right justify.

Col 14 UNITS (Optional Displacement Unit)

Enter "C" for cubic centimeters or "L" for liter for optional displacement.

Cols 16 -17 TRANS (Transmission Code)

Enter C4, M3, C5, M4, M5, A3, L3, A4, L4, S2, S3, S4 or S5 for transmission installed.

Cols 19 -20 TRANS LINK CODE (Transmission Link Code)

Enter a numeric code that would point to the "TRANS LINK CODE" on card 6 to describe the transmission configuration. Right justify.

Cols 22 -25 IWT (Inertia Weight Class)

Enter inertia weight class in pounds. Right justify.

Cols 26 -29 ETW (Equivalent Test Weight)

Enter equivalent test weight within the inertia weight class. Right justify.

Cols 31 -44 ENGINE CODE

Enter engine code. Left justify.

Cols 45 -47 AXLE RATIO

Enter the axle ratio, rounded to two decimal places.

Cols 49 -51 RLHP (Road Load Horsepower)

Enter road load horsepower from the application for certification.

Cols 53 -58 SALES

Enter sales projections (actual sales for CAFE) for this car line/vehicle configuration/equivalent test weight/ road load horsepower combination. Right justify.

Cols 60 -71 ENGINE FAMILY

Enter the engine family name for this carline/DVC/RLC combination. Left justify.

Col 72 FUEL USAGE

Enter fuel type :
"R" for regular unleaded,
"P" for premium unleaded,
"D" for diesel

Col 73 ALT (Altitude Code)

Indicate the altitude of the area the car line/vehicle configuration /equivalent test weight/road load horsepower combination will be sold:
"1" for low altitude only,
"2" for high altitude only,
"3" for all altitudes

Col 74 SUPP CODE (Suppression Code)--(For GENERAL LABEL only :

Enter a suppression code if this model type is not to appear on FE GUIDE :
"2" For use by Certification team only
"5" if police vehicle
"9" if used previously in another index

Cols 75 -77 DVC (Data-Vehicle Code)

Enter a unique number (001 -999) within a basic engine for a

group of sales cards representing a configuration. Right justify.

Cols 78 -79 RLC (Road Load Code)

Enter a unique number (1 -99) to identify a RLC/ETW (road load horsepower/equivalent test weight) grouping. This number should be unique within a DVC which is entered in columns 1 - 3. Right justify.

Col 80 (Card type)

Enter "5".

Card 6 - Transmission Information

Cols 1 - 2 TRANS LINK CODE (Transmission Link Code)

Enter a numeric code (up to two digits) that would link this card 6 with transmission information to the card 5. Right justify.

Cols 4 - 5 TRANS (Transmission Code)

Enter C4, M3, C5, M4, M5, A3, L3, A4, L4, S2, S3, S4 OR S5 for transmission installed.

Col 7 DRIVE SYS (Drive System)

Enter drive system codes:
4 = for 4-wheel drive
F = for 2-wheel drive, Front
R = for 2-wheel drive, Rear

Col 9 O/D (Overdrive Code)

Enter overdrive code:
1 = no gear ratio < 1
2 = Top gear ratio < 1
3 = Electrically operated O/D
4 = Computer controlled automatic electronic overdrive
5 = Computer controlled automatic electronic overdrive with lock-out switch.

Col 11 SIL (Shift Indicator Light)

State whether equipped with shift indicator light:
Y = Yes
N = No

Col 12 ENG MGMT SYS (Engine Management System)

Indicate whether equipped with engine management system:
Y = Yes
N = No
L = Yes, but with lock-out feature

Col 13 # MODES (Number of Modes)

Enter number of modes if a multi-mode system

Cols 14 LOCKUP OVERRIDE

State whether equipped with Lockup override system:
Y = Yes
N = No

Cols 15 VAR LOCKUP PT (Variable Lockup Point)

Enter number of lockup rpm ranges:
V = Continuously variable
1 -9 = number of discrete lockup rpm ranges

Col 16 DECLUTCHING/FREEWHEELING

Specify whether equipped with declutching/freewheeling mechanism other than part of an engine management system.
Y = Yes
N = No
L = Yes, but with lock-out feature

Col 20 GEAR RANGE #

Number each range (starting at 1) of gear ratios if multi-mode transmission. May be left blank if normal single range transmission. For computer controlled overdrive (codes 4 or 5) or electrically operated O/D (code 3), enter "N" and the normal gear ratios (O/D not engaged) and "O" and the O/D gear ratios (O/D engaged).

Col 21 -24 GEAR RATIOS lST

Enter the gear ratio in 1st gear.

Col 26 -29 GEAR RATIOS 2ND

Enter the gear ratio in 2nd gear.

Col 31 -34 GEAR RATIOS 3RD

Enter the gear ratio in 3rd gear, if so equipped.

Col 36 -39 GEAR RATIOS 4TH

Enter the gear ratio in 4th gear, if so equipped.

Col 41 -44 GEAR RATIOS 5TH

Enter the gear ratio in 5th gear, if so equipped.

Col 46 -49 GEAR RATIOS 6TH

Enter the gear ratio in 6th gear, if so equipped.

Col 50 LOCKUP RANGE #

Number each range (starting at 1) of lock-up RPM if transmission has multiple distinct ranges of lock-up RPMs. This field may be left blank for simple single range lock-up transmissions or non-lock-up transmissions. If the transmission has a continuously variable, user selectable lockup, or

computer controlled lock-up transmission, enter the range of RPM's. Use "L" for low end, "H" for high end.

Col 51 -54 LOCK-UP RPM 1ST

Enter the RPM at which the transmission locks up in 1st gear, if applicable. Right justify.

Col 56 -59 LOCK-UP RPM 2ND

Enter the RPM at which the transmission locks up in 2nd gear, if applicable.

Col 61 -64 LOCK-UP RPM 3RD

Enter the RPM at which the transmission locks up in 3rd gear, if applicable.

Col 66 -69 LOCK-UP RPM 4TH

Enter the RPM at which the transmission locks up in 4TH gear, if applicable.

Col 71 -74 LOCK-UP RPM 5TH

Enter the RPM at which the transmission locks up in 5TH gear, if applicable.

Col 76 -79 LOCK-UP RPM 6TH

Enter the RPM at which the transmission locks up in 6TH gear, if applicable.

Col 80 (Card type)

Enter "6".

J. Description of Key Fields

Index No (Card 1, Column 6-8)

Each basic engine data is grouped into a unique index. The criteria for distinguishing basic engines is explained in Advisory Circular No. 83A. EPA computer programs for fuel economy calculation allow two-wheel drive (2WD) and four-wheel drive (4WD) vehicles, front-wheel drive and rear-wheel drive vehicles,

vehicles equipped with electronic overdrive transmission, and vehicles equipped with shift indicator lights to be grouped into the same index number.

Each set of data for a basic engine must have an index number assigned. The index number is a three-digit number used to identify each unique data set used in fuel economy calculations. The fuel economy data retrieval and reporting programs all use the index number in conjunction with the 3-digit manufacturer code to identify the data set to be used and the computer report to be produced. This index number is assigned by the manufacturer according to the general conventions outlined later in this guideline.

A different method of assigning the index number is used for GM, Ford, Chrysler, and AMC than is used for the rest of the industry and are identified as major manufacturers. This is because of the structure of the manufacturer code designations and the larger number of indexes required for the major manufacturers.

Major Domestic Manufacturer's Light-Duty Vehicle Index Numbers:

LDV --NNN

LDV (For gas vehicles) or LDDV (For diesel vehicles)

N	N	N
Displacement	Basic Engine	0 = Original
Use only values o -7 8 -9 reserved for LDT		1 = 1st Revision 2 = 2nd Revision Etc.

Major Domestic Manufacturers' Light-Duty Truck Index Numbers:

LDT -NNN

LDT (For gas trucks) or LDDT (For diesel trucks)

N	N	N
8-9	Displacement	Basic Engine

All Other Manufacturers' Light-Duty Vehicle Index Numbers:

LDV-0NN

LDV (For gas vehicles) or LDDV (For diesel vehicles)

N	N
Displacement	Basic Engine

Use only values
O -7; 8 -9
reserved for LDT

All Other Manufacturers' Light-Duty Truck Index Numbers:

LDT -0NN

LDT (For gas trucks) or LDDT (For diesel trucks)

N	N
8-9	Basic Engine

Enter this code on Card 1 (e.g., LDV-010).

The values for the displacement digit are assigned in increasing order, with the number one representing the smallest displacement. In the case of General Motors the displacement digit represents different Divisions (i.e., Chevrolet, Buick, etc.), and the remaining two digits signify Displacement and Basic Engine.

The computer will use this information plus the manufacturer number to make a five-digit code which consists of the manufacturer number plus the last two digits of the index number. In the case of the major manufacturers the trailing zero of the manufacturer number is deleted and the remaining two digits plus the full three-digit index number comprise the five-digit code. This five-digit code is called the basic engine index.

Engine Block Descriptors (Card 1, Columns 60-69)

Engine block descriptors are used when the parameters listed on

the card 1 are not sufficient to distinguish between different basic engines. Several examples of acceptable descriptors are listed below.

Engine Block Descriptor	Explanation
(M-ENG)	One of two 5.8L Ford truck engines

(W-ENG)	One of two 5.8L Ford truck engines
(GM-BUICK)	Engine produced by GM-Buick Motor Division
(GM-CHEV)	Engine produced by GM-Chevrolet Motor Division
(GM-OLDS)	Engine produced by GM-Oldsmobile Motor Division
(GM-PONT)	Engine produced by GM-Pontiac Motor Division

Data Vehicle Code (DVC)

The DVC is a three-digit code used to identify each unique vehicle configuration within an index and to link the information on the Card 4's and Card 5's (a particular tested configuration should have the same DVC on both Card 4's and 5's).

Within an index, the Card 5's should be divided into separate vehicle configurations. All entries that have the same displacement, transmission (Card 6), engine code, and axle ratio are grouped together. When making this grouping C4 (Creeper four-speed) and M3 transmission are considered identical. Each grouping will receive a unique DVC (within that index) according to the following restrictions:

DVC of 001 -499: A test vehicle represents some portion of this configuration.

DVC of 501 -999: No portion of this configuration is represented by a test vehicle.

The car line, equivalent test weight (ETW), and road-load horsepower (RLHP) may vary within a configuration, causing multiple cards within a DVC grouping.

If any of the ETW's or RLHP's within that configuration are tested, then the DVC is assigned a number between 001 and 499.

Once the DVC's have been assigned to the configuration groupings on the Card 5's, the same DVC is assigned to the analogous tested configuration on the Card 4's. It is possible to have more than one Card 4 with the same DVC, providing the vehicles match Card 5's in that DVC grouping.

When engine code equivalency has been granted by EPA, those equivalent engine codes should be treated as identical and they should receive the same DVC.

Road-Load Code (RLC)

The RLC is a two-digit code used to identify each unique subconfiguration within a configuration and to link the information on the Cards 4's and Card 5's (a particular tested subconfiguration should have the same RLC on both Cards 4's and 5's).

Within a configuration (DVC) the Card 5's should be further divided into separate vehicle subconfigurations. All entries that have the same ETW and RLHP within the DVC are grouped together. Each grouping will receive a unique RLC (within that configuration or DVC) according to the following restriction:

RLC of 01 -49	A test vehicle represents this subconfiguration, (it has the same ETW and RLHP).
RLC of 51 -99	This subconfiguration has no test vehicle representing it.

The car line may vary within a configuration resulting in multiple cards with the same RLC. It is possible to have an untested RLC

within a tested DVC if that ETW -RLHP combination has no data representing it.

Once the RLC's have been assigned to the Card 5's, the same RLC is assigned to the analogous tested subconfiguration on the Card 4's.

Suppression Codes

The suppression codes are used to prevent recalculation of model type values and to prevent the printing of certain label values in the Gas Mileage Guide and to prevent inclusion of the vehicle on the test car list.

Suppression codes can be used on Card 4's (in column 77) and/or Card 5's (in column 74), depending on the type of suppression needed. The codes and uses are:

Code 1 Indicates high-altitude-only model type. This code not used since the 1979 model year, was only entered on Card 5's.

Code 2 Used in response to a manufacturer's request of confidentiality. This code, used on all Cards 5's within the model type, suppresses printing of the model type label value in Gas Mileage Guide. It could be used for police-only model, for a model type that may never be sold (a contingency plan). Explain the situation on the Comment card.

Code 5 Used on police-only basic engine's sales projection data (card 5's) and test vehicles representing those sales (Card 4's). Refer to Advisory Circular No. 83A for the definition of police-only basic engines.

Code 9 This code, the most widely used, is entered on either Card 4's or Card 5's, depending on the specific case. It is used when information on the card has been previously used in a calculation as a data substituted vehicle version, or revision, etc. The following examples will help illustrate the applications of suppression code 9.

1. If a new model type is introduced part way through the model year, the general label calculations for

it will often include data which were used in previous general label calculations (previous index). To prevent the previous label values from being recalculated as part of the new index and resulting in duplicate entries in the Guide and Test Car List, a suppression code 9 is entered on all previously used Cards 4's and 5's in the new index. (Note that the new Card 5's in the new index may have different sales.) The label values for the new model will be calculated normally, while any existing label values will remain unchanged.

2. If a specific vehicle version is used as a data substitution for another vehicle, a second Card 4 must be completed for the represented subconfiguration

A suppression code 9 is used on the second Card 4 to prevent the vehicle from being printed twice on the Test Car List. For example, if a vehicle is to be tested at both 5,000 lbs. and 4,500 lbs., the manufacturer can run a test for the vehicle at 5,000 lbs. and use these test results to represent the 4,500 lbs. vehicle also. The Card 5's would be entered for, say, the Ajax Wagon at 5,000 lbs. with DVC 001 and the Ajax Sedan at 4,500 lbs. with DVC 002. The respective Cards 4's would have DVC 001 at 5,000 lbs. with the test numbers, and a dummy Card 4 with DVC 002 at 4,500 lbs., the same test numbers(s), and a suppression code 9 in field 77. The suppression code in this case would prevent the same vehicle version from appearing twice on the Test Car List or in the Gas Mileage Guide. The same methods can be used for handling RLC's when substituting subconfigurations.

Comment Card(s)

Each index should contain at least one Comment card. A Comment card is a special Card 4 that has three asterisks in the DVC field. Up to 9 comment cards may be entered in each index. With the exclusion of the astericks in columns 1 to 3 and the card

number (4) in column 80, the balance of the card may be used for free-form comments.

The minimum required information on the comment card is a descriptor of the basic engine (displacement/fuel system/special descriptor, e.g., 350/FI/FFS) and mention of any engine code equivalencies or data substitutions. Other comments should be added to clarify the index.

Transmission Information (Card 6)

For most manufacturers, only a small number of transmission information cards (Card 6) will be required to be completed since a single Card 6 will be linked to multiple Card 5's. A separate Card 6 should be entered for each combination of parameters listed on the card offered in that index.

Transmission Link Code

This code is used to link the transmission information (Card 6) with the manufacturer sales input information (Card 5). The code may be any numeric entry between 01 and 99 but must be uniquely assigned within the index.

P008 ** ERROR P008 ** COL xx -xx INVALID MFR CODE
XXXXXXX (field name) XXXXXXXXXX
The program was able to match the input MFR CODE with any known manufacturer.

P009 ** ERROR P009 ** COL xx -xx INDEX TOO LARGE
XXXXXXX (field name) XXXXXXXXXX
For MFR CODES greater than 40, the INDEX Number must be in the range of 1 -99 .

P010 * WARNING P010 * COL xx -xx FIELD BLANKED
XXXXXXX (field name) XXXXXXXXXX
If the transmission code is not LOCKUP, the VAR LOCKUP POINT field will be blanked if a value was entered.

P011 * WARNING P011 * COL xx -xx BLANK DEFAULTED TO '1'
XXXXXXX (field name) XXXXXXXXXX
If the transmission code is LOCKUP, the VAR LOCKUP POINT field will be defaulted to '1' if no value was entered.

P012 ** ERROR P012 ** COL xx -xx CITY/HWY TEST MISMATCH
XXXXXXX(field name)XXXXXXXXXX
A City test number was entered in a Highway test number field (or vice-versa).

P013 ** ERROR P013 ** COL xx -xx INVALID CERT DISPOSITION
XXXXXXX (field name) XXXXXXXXXX
A test was entered which did not have a Cert Disposition of 1 or 2.

P014 ** ERROR P014 ** COL xx -xx INVALID FE DISPOSITION
XXXXXXX(field name)XXXXXXXXXX
A test was entered which did not have a FE Disposition of 1.

P015 ** ERROR P015 ** COL XX -XX INVALID CERT/FE DISP
XXXXXXX (field name) XXXXXXXXXX
A test was entered which did not have a Cert Disposition of 1 of 2 and an FE Disposition of 1.

P016 ** ERROR P016 ** COL xx -xx INVALID TEST NUMBER
XXXXXXX(field name)XXXXXXXXXX
A test was entered which could not be located in the Certification's Data Base File 1200D or 1202D-MFR.

P017 * WARNING P017 * COL xx -xx BLANK DEFAULTED TO YES
XXXXXXX (field name)XXXXXXXXXX
If the CATALYST Field (col 25, Card 1) is entered blank,
a 'Y' will be entered into that field

P018 * WARNING P018 * COL xx -xx BLANK DEFAULTED TO NO
XXXXXXX(field name)XXXXXXXXXX
If the VARIABLE DISPLACEMENT, TURBO, S-CHARGE, POLICE,
FI DESC, RELABEL, or UNIQUE LABEL fields are entered
blank, a 'N' will be entered into that field.

P019 ** ERROR P019 ** COL xx -xx BOTH TURBO AND S-CHARGE
ARE INVALID XXXXX(field name)XXXXXXXXXXXXX
The TURBO field (col 28, card 1, and the SUPER-CHARGE field
(col 29, card 1) cannot both by 'Y' (Yes) and/or 'C' (Yes,
with
Charge Air Cooling).

P021 ** ERROR P021 ** COL xx -xx TEST MFR DOES NOT MATCH
THE CARD 1 MFR XXXXX(field name)XXXXXXXXXXXXX
The Mfr Code on Card 1 is not authorized to use data by
the test manufacturer on Card 4.

P023 ** ERROR P023 ** COL xx -xx TEST VID DOES NOT MATCH
THE CARD 4 VID XXXXX(field name)XXXXXXXXXXXXX
The VID on Card 4 does not match the VID on the indicated
test.

P025 ** ERROR P025 ** COL xx -xx USE OF CARLINE IS NOT
ALLOWED FOR CARD 1 MFR XXXXX(field name)XXXXXXXXX
The Mfr Code on Card 1 is not authorized to use the
indicated carline.

P045 ** ERROR P045 ** COL xx FIELD SHOULD BE BLANK
A blank column (blacked out on the input forms) has data
in it. Possible shifted data.

P050 ** ERROR P050 ** INDEX=XXXXX ERROR IN ERROR FLAG FIELD
OR ISSUE DATE STORED IN 1236D-6DATE. REQUEST FOR
PROCESSING OF THE INDEX IS REJECTED.
An error has been detected in the Certification Data Base
file 1236D-6DATE. If this error message should appear on
the report, please notify the Certification Team Member
or the Certification Computer Support Section.

P051 ** ERROR P051 ** INDEX=XXXXX DOES NOT EXIST IN THE DATA

BASE 1236D-6DATE. REQUEST IGNORED.
For other than new data, this error message indicates a problem in the Certification Data Base. If this is new data, insure that the Process Code is blank.

P052 ** ERROR P052 ** INDEX=XXXXX NOT ON 1230D-6 OR 1230D-6FLUSH, SKIPPING TO NEXT INDEX.
This error message indicates incomplete information for this index exists in the Certification Data Base. Please notify the Certification Team Member or the Computer Support Section of this error message. If this is new data, insure that the Process Code is blank.

P053 ** ERROR P053 ** THIS INDEX ALREADY ON 1229W-6, SKIPPING TO THE NEXT INDEX.
XXXXXXXXXXXXXXX(Card 1)XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
This error message indicates duplicate Index Numbers are in the input set (i.e., more than one Basic Engine have been entered with the same Index Number).

P060 ** ERROR P060 ** INDEX=XXXXX LABEL LETTER HAS BEEN ISSUED AND THE INDEX HAS NOT BEEN CLEARED FOR REPROCESS OR REPLACEMENT. REQUEST IGNORED.
The Label Letter has been issued and the Certification Team Member must clear the index prior to the reprocessing or replacing the index.

XXXXXXXXXXXXXXX(Card 1)XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
P070 ** ERROR P070 ** A CARD 1 HAS BEEN IDENTIFIED BUT APPEARS TO HAVE BEEN SHIFTED RIGHT.
THIS CARD AND THE REMAINDER OF THE CARDS TO THE NEXT CARD 1 WILL BE DELETED FROM THE INPUT SET.
CHECK THE PREVIOUS DATA SET FOR COMPLETENESS.
SKIPPING TO THE NEXT CARD 1.
It appears that data on a card has been shifted right so that a "1" appears in column 80 with other data beyond column 80. This card and the remainder of cards to the next card 1 will be skipped. The previous data set in the input stream may be incomplete.

XXXXXXXXXXXXXXX(Card l)XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
P080 ** ERROR P080 ** INPUT MFR CODE ON ABOVE CARD 1 IS NOT ALLOWED TO BE SUBMITTED FROM THIS SOURCE. PROCESSING TERMINATED.

The MFR Code on Card 1 does not match a Manufacturer Code authorized to be submitted for this processing session. The preprocessor determines the Manufacturer originating the processing session and determines whether the data of a different manufacturer may be included in the processing session.

XXXXXXXXXXXXXXX(Card 1)XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

P081 ** ERROR P081 ** INPUT MFR OR INDEX CODE IS INVALID.
SKIPPING TO THE NEXT INDEX.
The input MFR CODE and/or the INDEX NUMBER could not be identified as being valid.

P082 ** ERROR P082 ** INDEX=XXXXX 1230D-6 INDICATES THAT THE INDEX ALREADY EXISTS IN THE DATA BASE.
SKIPPING TO THE NEXT INDEX.
For new data, this error message indicates that data already exists in the Data Base for this index number.

P083 ** ERROR P083 ** INDEX=XXXXX COULD NOT BE FOUND IN THE DATA BASE. SKIPPING TO THE NEXT INDEX.
This error message indicates that, for Process Codes "M" (Reprocess) and "I" (Insert), data for the indicated index could not be located.

P090 ** ERROR P090 ** INDEX=XXXXX THE RECORDS TO BE ADDED WERE DELETED FROM THE INPUT SET DUE TO ERROR(S).
THE INDEX REMAINS UNCHANGED.
This error message indicates that for Process Code "I", errors were detected in the cards to be added. These cards were not entered into the system. This index, in the system, remains unchanged.

P091 ** ERROR P091 ** THE DATA WAS DELETED FROM THE INPUT SET DUE TO ERRORS IN CALCULATING THE INDEX.
The Basic Engine Index could not be calculated from the MFR CODE and INDEX NUMBER on card 1, therefore the data was not processed.

P100 ** ERROR P100 ** INDEX=XXXXX CITY/HIGHWAY AVERAGE CODE SET MISMATCH ....REQUEST DENIED.
A card 4 has a combination of City and Highway Codes that do not exactly match another card 4's City and Highway Average Code combination (i.e., the City Average Codes match, but the Highway Average Codes do not, or vice versa).

P101 * WARNING P101 * CITY AVERAGE CODE BLANKED ON A CARD 4
(AVERAGE CODE ONLY ON ONE CARD)
If only one card 4 has an average code (either city or highway) it will be blanked.

P102 ** ERROR P102 ** INDEX=XXXXX CITY AVERAGE CODES ENTERED
WITHOUT WEIGHTING FACTORS.
If a City Average Code is entered, the City Weighting Factor must also be entered.

P103 ** ERROR P103 ** INDEX=XXXXX CITY WEIGHTING FACTORS ON CARD 4'5
DO NOT ADD TO 1.0
The City Weighting factors for a City Average Code must add to 1.0. The code grouping may not be correct.

P104 * WARNING P104 * HIGHWAY AVERAGE CODE BLANKED ON A CARD 4
(AVERAGE CODE ONLY ON ONE CARD)
If only one card 4 has an average code (either city or highway) it will be blanked.

P105 ** ERROR P105 ** INDEX=XXXXX HIGHWAY AVERAGE CODES ENTERED
WITHOUT WEIGHTING FACTORS.
If a Highway Average Code is entered, the Highway Weighting Factor must also be entered.

P106 ** ERROR P106 ** INDEX=XXXXX HIGHWAY WEIGHTING FACTORS ON
CARD 4'S DO NOT ADD TO 1.0
The Highway Weighting factors for a Highway Average Code must add to 1.0. The code grouping may not be correct.

P120 ** ERROR P120 ** INDEX=XXXXX NO CARD 4'S IN THE DATA SET.
REQUEST DENIED.
An index must contain at least one Card 4.

P121 ** ERROR P121 ** INDEX=XXXXX NO CARD 5'S IN THE DATA SET.
REQUEST DENIED.
An index must contain at least one Card 5.

P122 ** ERROR P122 ** INDEX=XXXXX NO CARD 6'S IN THE DATA SET.
REQUEST DENIED.
An index must contain at least one Card 6.

P130 ** ERROR P130 ** INDEX=XXXXX CARD 1 HAS A DIESEL COMBUSTION
CYCLE DESCRIPTOR AND A CARD 5 HAS A GAS ENGINE FAMILY.

The Cycle Descriptor (col 17) on Card 1 must match all Engine Families identified on Card 5's.

P131 ** ERROR P131 ** INDEX=XXXXX A CARD 5 HAS A DIESEL ENGINE FAMILY WITHOUT A DIESEL COMBUSTION CYCLE DESCRIPTOR ON CARD 1

The Cycle Descriptor (col 17) on Card 1 must match all Engine Families identified on Card 5's.

P140 ** ERROR P140 ** INDEX =XXXXX A DVC-RLC COMBINATION ON A CARD 4 DOES NOT MATCH A COMBINATION ON ANY CARD 5'S

All DVC-RLC combinations on Card 4's must have a corresponding DVC-RLC combination on at least one Card 5.

ERROR MESSAGES
(Generated by main calculation programs)

NOTE: An asterisk in the leftmost margin identify the errors which will not allow the receipt of the data to be generated.

ERROR code — TEXT (in capital letters) and DESCRIPTION (in italics)

* 201 *ERROR, ERCD=201: INDEX=XXXXX NO CITY OR HIGHWAY FE FOR CONFIGURATION. 0'S ARE ASSIGNED.
No valid city or highway fuel economy for configuration was calculated due to errors.

* 202 *ERROR, ERCD=202: INDEX=XXXXX THERE ARE NO VALID TESTS (CITY AND HWY). THE TESTS ARE EITHER VOID OR NON-EXISTENT. SKIPPING TO NEXT INDEX.
There is no configuration with positive fuel economy due to errors in card 4, card 5, test or vehicle level data.

* 203 *ERROR, ERCD=203: INDEX=XXXXX CARD 5 CARLINE=XXXXX ILLEGAL CLASS CODE. XX
Class code has not been entered in Car/Truck line data base (1263D-ACRTRK) for the carline code.

* 204 *ERROR, ERCD=204 INDEX=XXXXX CARD 5 CARLINE=XXXXX CLASS CODE=XX MISSING INTERIOR VOLUME DIMENSIONS.
No interior volume dimensions exist for the carline in 1263D-ACRTRK (Car/Truck line data base) file.

* 205 *ERROR, ERCD=205: INDEX=XXXXX MORE THAN 200 CARD 5S IN MODEL TYPE. CARLINE= XXXXX DISP= XXX TRANSM.=XX OD.= X
Program is designed for up to 200 card 5 data for a model type. If more than 200 cards have to be used, program will have to be modified.

* 206 *ERROR, ERCD=206: INDEX=XXXXX CAN NOT FIND BASE LEVEL. IW= XXXX SALES=XXXXXX. REMAINING CARLINES IN MODEL TYPE NOT PROCESSED.
In the process of computing model level fuel economies, corresponding base level data cannot be found in the base level calculation results.

* 207 *ERROR, ERCD=207: INDEX=XXXXX ILLEGAL CARLINE CODE XXXXX IN CARD 5 FILE
Record for the indicated carline code does not exist in the

carline file 1263D-ACRTRK or the last two digits of the carline code are zeros.

* 208 *ERROR, ERCD=208: INDEX=XXXXX DATA ERROR IN BASE LEVEL FE CALCULATION. DIVIDE BY ZERO.
Error is causing a number to be divided by zero where computation for base level fuel economy is taking place.

* 209 *ERROR, ERCD=209: INDEX=XXXXX END OF FILE IN READING CARD 5 FILE(1231W-Y-2) AT LINE NUMBER XXXXXX.XXX
No card 5 file record at the indicated line number while reading the file for model type fuel economy calculation.

* 210 *ERROR, ERCD=210: INDEX=XXXXX ERROR IN CONF FE CALCULATION, DIVIDE BY ZERO.
Error is causing a number to be divided by zero where the computation for configuration fuel economy is taking place.

* 211 *ERROR, ERCD=211: INDEX=XXXXX ERROR IN MODEL FE CALCULATION. DIVIDE BY ZERO.
Error is causing a number to be divided by zero where the computation for model type fuel economy is taking place.

* 213 *ERROR, ERCD=213: INDEX=XXXXX DATA ERROR. ALL CARD 5S OF MODEL TYPE HAVE 0 SALES. THE MODEL TYPE NOT PROCESSED. TRANS. =X. CARLINE = XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Model type with the indicated transmission code and carline name does not have any sales.

* 301 *ERROR, ERCD=301: INDEX=XXXXX CARD FIVE IWT OF XXXX NOT CORRECT FOR ITS ETW OF XXXX DVC=XXX
Inertia weight on card 5 is different from the inertia weight class defined for the equivalent test weight on the same card.

302 *ERROR, ERCD=302: INDEX=XXXXX CHARACTER(S) IN NUMERIC FIELD IN ETW/IWT FILE FOR ETW= XXXX DVC=XXX
Error in file 1200D-EQTWTS in columns 11-15. Character data in the field for inertia weight class field.

* 303 *ERROR, ERCD=303: INDEX=XXXXX ILLEGAL EQUIVALENT TEST WEIGHT XXXX DVC=XXX
Equivalent test weight on card 5 is not defined.

* 304 *ERROR, ERCD=304: INDEX=XXXXX CARD FIVE ROAD LOAD HP MISMATCH

```
            XX.X VS. XX.X DVC=XXX  RLC=XX
        Different road load horsepower figures within a same DVC/RLC.

* 305   *ERROR, ERCD=305: INDEX=XXXXX CARD FIVE INERTIA WEIGHT
             MISMATCH: XXXX VS. XXXX  DVC=XXX
        Different inertia weights within a same configuration.

  307   *WARNING, ERCD=307: INDEX=XXXXX CARD FIVE ENG. CODE MISMATCH:
                          XXXXXXXXXXXXXX VS. XXXXXXXXXXXXX  DVC=XXX
        Different engine codes within a same configuration.

* 308   *ERROR, ERCD=308: INDEX=XXXXX CARD FIVE AXLE RATIO MISMATCH:
              X.XX VS. X.XX DVC=XXX
        Different axle ratios within a same configuration.

  309   *ERROR, ERCD=309: INDEX=XXXXX, CARD FIVE TRANSMISSION
             MISMATCH: XX VS. XX  DVC=XXX
        Different transmission codes within a same configuration.

  310   *WARNING, ERCD=310: INDEX=XXXXX CARD 5 TRANS-LINK CODE
               MISMATCH: XX VS. XX. DVC=XXX
        Different transmission link codes within a same
configuration.

* 312   *ERROR, ERCD=312: INDEX=XXXXX UNTESTED CONFIG. INERTIA WEIGHT
             MISMATCH:  XXXX VS.  XXXX DVC=XXX
        Different inertia weights within a same untested configu-
        ration.

  314   *WARNING, ERCD=314: INDEX=XXXXX UNTESTED CONFIG. ENGINE CODE
               MISMATCH:XXXXXXXXXXXXXX VS.XXXXXXXXXXXXX DVC =XXX
        Different engine codes within a same untested configuration.

* 315   *ERROR, ERCD=315: INDEX=XXXXX UNTESTED CONFIG. AXLE RATIO
               MISMATCH: X.XX VS. X.XX DVC =XXX
        Different axle ratios within a same untested configuration.

* 316   *ERROR, ERCD=316: INDEX=XXXXX UNTESTED CONFIG. TRANSMISSION
             MISMATCH:XX VS.XX DVC =XXX
        Different transmission codes within a same untested
        configuration.

  317   *ERROR, ERCD=317: INDEX=XXXXX UNTESTED CONFIG. TRANS-LINK
             MISMATCH: XX VS. XX DVC=XXX
        Different overdrive code within a same untested
configuration.
```

* 318 *ERROR, ERCD=318: INDEX=XXXXX NO TESTED MODELS SOLD FOR
BASIC ENGINE XXXXXXXXXXXXXXX(HAS UNTESTED MODEL SALES)
There are no card 5s with DVC(columns 75-77) greater than 0 and less than 500 that has non-zero sales.

* 319 *ERROR, ERCD=319: INDEX=XXXXX CARD 4 HAS NO CARD 5 WITH MATCHING RLC, DVC=XXX RLC= XX ZERO SALES ON CARD 5 PROBABLE OR CARD 5S WITH SAME DVC SEPARATED INTO TWO OR MORE BASE LEVEL GROUPS DUE TO NON-MATCHING CONFIGURATION PARAMETERS.
Card 5s with the DVC and RLC in question have no sales or they are grouped with a base level different from what the current DVC belongs to because of errors in inertia weight, transmission code or overdrive code.

* 321 *ERROR, ERCD=321: INDEX=XXXXX DVC=XXX EPA TEST RESULT NOT FOUND FOR TEST # XXXXXX
The EPA test number given on card 4 does not exist in the EPA test data base 1200D.

* 322 *ERROR, ERCD=322: INDEX=XXXXX DVC=XXX MANUF. TEST NOT FOUND, TEST # XXXXXX
The manufacturer test number given on card 4 does not exist in mfrs test data base 1202D-MFR.

* 327 *ERROR, ERCD=327: INDEX=XXXXX TEST DATA/CARD FOUR VEH. ID MISMATCH:XXXXXXXXXXXXXXX VS. XXXXXXXXXXX, TEST # XXXXXX
Vehicle ID in tests data base (1200D or 1202D-MFR does not match the vehicle ID entered on card 4.

328 *ERROR, ERCD=328: INDEX=XXXXX TEST DATA/CARD 5 HIGH ALTITUDE CODE MISMATCH: XX VS. XX. TEST # XXXXXX.
The high altitude code in the test data base does not match the one entered on card 5.

* 329 *ERROR, ERCD=329: INDEX=XXXXX FUEL ECON. ZERO OR LESS, TEST # XXXXXX, CONFIGURATION XXX
Fuel economy from the test is recorded as zero or less in the test data base. The error should be corrected.

330 *ERROR, ERCD=330 INDEX=XXXXX DVC=XXX TEST#=XXXXXX
TEST ACTIVE YEAR XX NOT EQUAL TO LABEL YEAR XX FOR PASSENGER VEHICLES (CANNOT CARRYOVER BEYOND 79)
Test is on a vehicle version with active year 79 or earlier that is different from the model year for which general label

is being generated. Vehicle type is passenger car for which emission standards and data submission requirements have changed starting 1980 model year. If tests for passenger cars were performed for 1979 or earlier model year, they cannot be used for 1980 or later model year labelling. The tests have to be resubmitted as new tests according to the new precision requirements for emissions:

HC -3 places to the right of decimal pt.(2 places before 1980)

CO -2 places (1 place before 1980)

NOX -2 places (no change)

EVAP -2 places (no change)

* 331 *ERROR, ERCD=331: INDEX=XXXXX DVC=XXX TEST#=XXXXXX
ACTIVE YEAR XX NOT EQUAL TO LABEL YEAR XX FOR TRUCKS
(CANNOT CARRYOVER BEYOND 83)

Test is on a vehicle version with active year 83 or earlier. Vehicle type being processed is truck for which emission standards and data submission requirements have changed starting 1984 model year. If tests for trucks performed for 1983 or earlier model year are to be used for 1984 or later model year they have to be resubmitted as new tests according to the new precision requirements for emissions:

HC -3 places to the right of decimal pt.(2 places before 1984)

CO -1 place (no change)

NOX -2 places (no change)

EVAP -2 places (no change)

* 332 *ERROR, ERCD=332: INDEX=XXXXX ACTIVE YR NOT XX AND NO CARRY-OVER TO XX TEST # XXXXXX CONFIGURATION XXX SKIPPED***

The vehicle identified by the internal vehicle number and version number on the test data base is not active for the current model year.

* 333 *ERROR, ERCD=333: INDEX=XXXXX DVC=XXX TEST#= XXXXXX NO RECORD FOUND WITH THE VEHICLE AND VERSION NUMBER GIVEN ON TESTS
FILE.

Vehicle record does not exist in VI data base at the line number indicated by internal vehicle number and version number identified i the test record. Please bring this to the attention of the Computer Support Section.

334 *WARNING, ERCD=334: INDEX=XXXXX TESTS ON DIFFERENT VERSIONS
OF A VEHICLE, VEH. ID:XXXXXXXXXXXXXXXX,
DATE: MM/DD/YY, DVC =XXX
Test numbers given for a vehicle are on different versions
of the vehicle within a configuration.

* 335 *ERROR, ERCD=335: INDEX=XXXXX DVC=XXX NO VALID TEST RESULTS
FOR VEHICLE, VEH. ID= XXXXXXXXXXXXXXXX
None of the test numbers given for the vehicle can be found
in test data bases 1202D-MFR or 1200D.

* 336 *ERROR, ERCD=336 INDEX=XXXXX DVC=XXX VEHICLE MFR XXX IS
DIFFERENT FROM LABEL MFR XXX AND THE DIFFERENCE IS NOT
ALLOWED.
Manufacturer requesting the label is using a vehicle which
belongs to a different manufacturer and the alternate mfr
codes file 1005D-ALTMFR does not indicate that this is
allowable.

337 *ERROR, ERCD=337: INDEX=XXXXX DVC=XXX VEHICLE MFR IS
DIFFERENT FROM LABEL MFR XXX AND ITS VALIDITY CANNOT
BE CHECKED DUE TO ERROR IN READING 1005D-ALTMFR AT
LINE # XXXXXX
Manufacturer requesting the label is using a vehicle which
belongs to a different manufacturer but the record for
the vehicle manufacturer in 1005D-ALTMFR has characters in
numeric field. The 1005d-ALTMFR record must have all the
manufacturer codes who may use the manufacturer's vehicle
tests for labelling. This is a system problem and the
Computer
Support Section should be notified about this condition.

* 338 *ERROR, ERCD=338: INDEX=XXXXX DVC=XXX VEHICLE MFR XXX IS
DIFFERENT FROM LABEL MFR XXX AND ITS VALIDITY CANNOT BE
CHECKED AS THE RECORD IS NOT IN 1005D-ALTMFR AT
LINE # XXXXXX
Manufacturer requesting the label is using a vehicle which
belongs to another manufacturer but there is no record
in 1000D-ALTMFR for the vehicle manufacturer which would
have identified other manufacturers who may use its vehicles
for labelling. A letter from the manufacturer whose vehicles
may be used by another manufacturer must be sent to the
Certification Division stating which manufacturers may use
their data.

339 *ERROR, ERCD=339: INDEX=XXXXX EQUIVALENT TEST WEIGHT ON CARD

5
> ETW ON VI: CARD 5=XXXX VS. VI=XXXX,
DVC = XX, RLC = XX
Equivalent test weight on card 5 is greater than
the one in the VI or Tests data base.

340 *ERROR, ERCD=340: INDEX=XXXXX ROAD LOAD ON CARD 5 > ROAD LOAD
ON VI. CARD 5=XX.X VS. VI=XX.X DVC=XXX RLC=XX
Road load horsepower on card 5 is greater than that in VI
data base.

* 341 *ERROR, ERCD=341: INDEX=XXXXX INVALID TRANSMISSION CONFIGU-
RATION IN VI. TRANS CONF =XX: VEH. ID: XXXXXXXXXXXXXXXX
Transmission configuration stored in VI data base does
not exist in codes data base 1001D. This is a system problem
and the Computer Support Section should be notified of this
problem.

343 *ERROR, ERCD=343: INDEX=XXXXX INERTIA WEIGHT ON CARD 5
> IWT IN VI: CARD 5=XXXXX VS. VI=XXXXX,
VEH. ID = XXXXXXXXXXXXXXXX
Inertia weight submitted on card 5 in columns 26-29 is
greater
than the one in the vehicle information data base.

344 *ERROR, ERCD=344: INDEX=XXXXX VI SPEC/CARD 1 DISPLACEMENT
MISMATCH: VI=XXXX VS. CARD 5=XXXX,
VEH. ID = XXXXXXXXXXXXXXXX
Displacement submitted on card 1 in columns 10-12 does not
match the one in the vehicle information data base.

345 *WARNING, ERCD=345: INDEX=XXXXX VI SPEC/CARD 5 ENGINE CODE
MISMATCH: VI=XXXXXXXXXXXXXX VS. CARD 5=XXXXXXXXXXXXX
VEH. ID = XXXXXXXXXXXXXXXX
Engine code in VI data base doe snot match the engine code
entered on card 5.

346 *WARNING, ERCD=346: INDEX=XXXXX VI SPEC/CARD 5
ENGINE FAMILY MISMATCH: VI=XXXXXXXXXXXXXXX VS.
CARD 5=XXXXXXXXXXXXXXX VEH. ID = XXXXXXXXXXXXXXX
Engine family name in VI data base does not match the engine
family entered on card 5.

347 *ERROR, ERCD=347: INDEX=XXXXX VI SPEC/CARD 5 AXLE RATIO
MISMATCH, VI= X.XX VS. CARD 5= X.XX,
VEH. ID = XXXXXXXXXXXXXXX

Axle ratio on VI data base does not match the axle ratio entered on card 5.

348 *WARNING, ERCD=348: INDEX=XXXXX VI SPEC/CARD 5 TRANSMISSION MISMATCH: VI=XX VS. CARD 5=XX, VEH. ID = XXXXXXXXXXXXXXX
Transmission code in VI data base does not match the transmission code entered on card 5.
base.

349 *WARNING, ERCD=349: INDEX=XXXXX VI SPEC/CARD 6 OVERDRIVE CODE MISMATCH: VI=XX VS. CARD 6=XX, VEH. ID = XXXXXXXXXXXXXXX
Overdrive code in VI data base does not match the overdrive code entered on card 5.

* 350 *ERROR, ERCD=350: INDEX=XXXXX DVC=XXX NO TEST VEHICLES
No usable vehicles were found on card 4s for the configuration:
no card 4s or errors in card 4s, e.g. wrong RLC.

* 351 *ERROR, ERCD=351: INDEX=XXXXX DVC=XXX MORE THAN 60 TESTS FOR CONFIGURATION.
The program is designed to handle up to 60 city and 60 highway
tests for a given configuration. If more than 60 tests have to
be used for a configuration, programs will need to be modified.

* 500 *ERROR, ERCD=500: INDEX=XXXXX MORE EPA DEFINED MODELS THAN INPUT ON CARD 2'S
The number of model types identified by EPA's computer program
based on cards 1, 4, 5 and 6 is more than the number of models
submitted by manufacturer on card 2.

* 501 *ERROR, ERCD=501: INDEX=XXXXX MORE CARD 2'S THAN EPA DEFINED MODELS FROM OTHER CARDS
The number of model types submitted by manufacturer on card 2 is more than the number of model types identified by EPA's program based on cards 1, 4, 5 and 6.

502 *WARNING, ERCD=502: INDEX=XXXXX CARD 2 MPG VALUES ARE LOWER THAN EPA DEFINED MODEL VALUES
Fuel economy values of model types submitted by manufacturers on card 2 are lower than the MPG values calculated by EPA's

computer program based on cards 1, 4, 5 and 6.
If this condition remains beyond the release date, the card 2 MPG values will be used as the official MPG values.

503 *WARNING, ERCD=503: INDEX=XXXXX CARD 2 MPG VALUES ARE HIGHER THAN EPA DEFINED MODEL VALUES
Fuel economy values of model types submitted by manufacturers on card 2 are higher than the MPG values calculated by EPA's computer program based on cards 1, 24, 5 and 6.
If this condition remains beyond the release date and the EPA has confirmed the index, the EPA values calculated using the the card 4, 5, and 6's will be used as the official MPG values.