REPORT TO

THE GENERAL ASSEMBLY OF VIRGINIA

AS DIRECTED BY

SENATE JOINT RESOLUTION NO. 147 SESSION OF 1975

MADE BY

THE DIVISION OF MOTOR VEHICLES

REPORTED TO

THE GOVERNOR

AND

GENERAL ASSEMBLY OF VIRGINIA

SENATE DOCUMENT NO. 4

REPORT TO THE GENERAL ASSEMBLY OF VIRGINIA

SENATE JOINT RESOLUTION NO. 147 SESSION OF 1975

Directing the Division of Motor Vehicles to study the feasibility of using the value, as well as the weight of a motor vehicle as the basis for determining registration fees.

. . . .

Patron. . . . . .Mr. DuVal

. . . .

Referred to the Committee on Rules

. . . .

WHEREAS, the present registration fee for motor vehicles is determined by the weight of such vehicle; and

WHEREAS, the Internal Revenue Service has ruled that ad valorem taxes may be deducted as an itemized deduction for federal income tax purposes; and

WHEREAS, basing the registration fee for motor vehicles on the value of such vehicle would qualify for such deduction; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, that the Division of Motor Vehicles is requested to study the feasibility of using the value (--, as well as the weight,) of a motor vehicle as the basis for determining registration fees.

The Division shall complete its study and report to the Governor and General Assembly no later than ~~November~~ October one, nineteen hundred seventy-five.

Introduction:

Senate Joint Resolution #147, passed February 6, 1975, directed DMV to study the feasibility of using the value, as well as the weight, of a motor vehicle in determining the registration fee. The primary purpose of the change in method of fee determination was to make registration fees eligible as tax deductions under Federal Internal Revenue definitions.

To adequately explore the effects of any alteration in fee calculations, several different approaches were outlined and revenue, cost, training and other factors relating to each were determined.

To begin the study, assumptions were made concerning vehicles to be included, valuation basis, and maximum and minimum registration fees. These assumptions were:

1. The use of vehicle value as well as weight as a feasible means of fee calculation.

2. The ad valorem tax will be limited to private use vehicles, i.e., those identified by passenger series tags.

3. The ad valorem calculation will be based on the National Automobile Dealer's Association's Used Car Guide value as of January each year.

4. The average selling price as published will be used, regardless of vehicle condition or equipment.

5. The weight of the vehicle will determine the base fee.

6. The minimum fee paid will not be less than $10. The maximum fee paid will not exceed the current fee on the vehicle. (i.e. $15 or $20 depending on weight.)

After preliminary work was begun, the following additions and/or alterations were made to the assumptions:

1. No maximum or minimum fee would be set.

2. The wholesale price listed by NADA will be the basis for ad valorem calculations.

3. Heavy vehicles will pay more than light vehicles for registration because of higher fuel consumption.

4. Vehicles with large engines (high horsepower ratings) will pay more than vehicles with small engines for registration because of higher fuel consumption.

5. Weight alone is a valid determiner of fuel use and can be used in such a manner as to give a deductible registration fee.

The change was made from retail selling price to wholesale value because it is believed to be a more acceptable base for taxation from the private citizen's viewpoint.

The last three items were added to evaluate the effectiveness of incorporating fuel use deterents in the registration fee without destroying the tax base of the fee.

Five differing methods of calculating the registration fee were studied in detail. These five are:

I. Calculations of the ad valorem tax will be based on (1.) a percentage of the selling price with the percentage rate decreasing to 15% at five years after manufacture; (2.) a base weight rounded to thousand pounds.

II. Calculation of the ad valorem tax will be based on (1.) a percentage of the wholesale price, and (2.) a base weight rounded to thousand pounds.

III. Calculations of the ad valorem tax will be based on a percentage of the selling price with the percentage rates decreasing to 1% at 10 years after manufacture.

IV. Calculation of the fees will be based solely on weight with fees increasing in 100 pound increments. An additional flat charge of $3 will be included to cover administrative and plate costs.

V. Calculations of the fee will be based on weight and fuel consumption as determined by horsepower.

The following data concerning vehicles was used in all determinations:

-Number of vehicles by weight class (Table I page 17)

-Number of vehicles by year of manufacture (Table II page 18)

-Average selling price per vehicle (Table III page 19)

Discussion:

Of the five methods proposed (and admittedly there can be more), the simpliest to implement in terms of personnel training and computer systems, with the least adverse impact on the revenue collected would be Method IV, using the ½¢ per pound, or the 20¢/hundred pound rate. The manual calculations involved in determining the fee are simple, the data needed to do the calculation is available on the forms presented for licensing and no extensive tables or supportive equipment is essential to the proper calculation of the fee. There should be no refunds from this type of license fee as the entire fee could be construed as a license tax. The elimination of refunds in itself would eliminate extensive clerical and computer services loads and would increase the available funds by approximately 10% of the total title and registration fees. Refunds for license fees in 1972-73 alone totaled more than $700,000.

Methods I and III use the retail selling price as the basis for taxation with a percentage reduction after the first year of manufacture or initial year of registration in the state. Again, it would be necessary to establish a minimum license fee as well as a maximum fee. The owners of new cars would be taxed at maximum and thus pay a smaller share of the actual tax paid proportional to the value of their vehicle. Owners of older vehicles would pay at minimum after approximately 5 years. This type of taxation would do little to encourage the purchase of new, more efficient models of vehicles, but conversely, with a maximum of $20 as a license fee, it would do little to discourage it either.

Method III extends the tax life to 10 years for the purpose of exploring the tax reduction rate and its effect. Again, at approximately 5 years, the minimum would have to be invoked to retain the revenue level and not much would be accomplished in extending the calculation any further.

Method V would be extremely difficult to properly administer.. The major problem being in determining and collecting valid base data for the fee calculations. Fuel consumption ratings appear to be principally subjective in that they depend not only on the manufacturer of the motor, but also on the equipment added to the vehicle, the size of the tires, axle/transmission type, and most of all, on the driving habits of the individual using the vehicle.

The calculations needed to determine taxes based on fuel consumption are not simple. They require pencil and paper activity for those individuals not having access to automated fee checking. Because of this they would be subject to great probability of error, particularly for the vehicle license agents for the Division of Motor Vehicles.

To maintain the current level of revenue collection from license issue and retain the current general fee levels, it would be necessary to adversely tax the small, light-weight vehicles. Minimum as well as maximum fees would have to be established, and the small car owners would be paying a larger share proportionally of the total fee revenue.

Since there is no feasible way of policing the actual horsepower rating of all of the vehicles in the state, any vehicle licensed prior to implementation of such a fee would always be presented as the smallest possible engine permitted by the vehicle manufacturer. New car registrations would be changed to require the manufacturer horsepower ratings be reported for tax purposes. This data would then be retained on the Vehicle File for the life of the vehicle. While this addresses the problem of verifying horsepower ratings for new cars, it does not address the problem of determining engine changes which the citizen may undertake at his option.

These three suggested methods would probably reduce the number and the use of vehicle license agents by the Division of Motor Vehicles because the information necessary to calculate the taxes would not readily be available. Calculations of this type are complicated and not readily accomplished without mechanical electronic assistance.

Conclusions:

The basic question is "what are the advantages of changing the fee calculation structure?"

The proposal here is to provide the individual citizen with an additional income tax deduction. According to the Virginia Department of Taxation, the percentage of tax returns which were itemized as opposed to taking standard deductions for the years 1972-74 are:

1972	Standard Deductions	58.46%
	Itemized Deductions	41.54%
1973	Standard Deductions	63.6 %
	Itemized Deductions	36.34%
1974	Standard Deductions	67.44%
	Itemized Deductions	32.56%

This gradually reducing number of itemized tax returns is not unexpected in light of the policies of the Internal Revenue Service and the Virginia Department of Taxation to eliminate complex itemized filing for as many citizens as possible. Using Federal guidelines for itemizing deductions and gradually increasing the standard deduction so that more citizens can use it to their advantage has helped eliminate itemization and extensive record-keeping and subsequently reduced the paperwork required within the Department of Taxation while providing better citizen service.

Methods I, II, III, and IV are certainly feasible and not too expensive in terms of time and effort to implement. They will produce the desired result of making the license fee a tax. They will not increase the revenue to the highway fund nor will they increase the fees paid by the citizen to license his vehicle. Method V is least acceptable from the standpoint of recognizable built-in error potential in the calculations of the fees. The termination of refunds for unused portions of the license year would facilitate internal handling of funds by clerical and computer services greatly. Methods I, III and V additionally increase the workload of the vehicle license agent, possibly requiring additional compensation to him for his extra work and equipment.

In view of the fact that there are not benefits other than a somewhat nebulous one which would allow the citizen to include his $15 - $20 license fee in his itemized tax deductions, changing the calculations of fee structures at this time does not appear to be in line with stated economy measures in effect throughout state government.

*Preliminary figures through
May 6, 1975

Methodology:

Method I: The calculation of the ad valorem tax will be based on (1.) a percentage of the retail price with the percentage rates decreasing to 15% at five years after manufacture; (2.) a base weight rounded to thousand pounds.

Using the vehicle totals as determined in Table I it appears that 53.3% of the affected vehicle population registered and currently licensed fall in the new to five year old category.

The average selling price for vehicles from Table II is $4,686.73 for new vehicles; $1,871.12 for originally titled used vehicles, and $1,067.16 for transferred used vehicles.

Establishing the tax base so that new vehicles are taxed at 100% of retail value, and used vehicles at 50% the first year after manufacture; 40% the second year; 30% the third year; 20% the fourth year and 15% the fifth and each succeeding year after manufacture with the actual tax rate 2% of the established base gives a calculation as follows:

New vehicle

$4,686.73 x 100% x 2% = $ 93.74 tax

Used vehicle

1st year	$1871.12 x 50% x 2% =	$	18.72 tax
2nd year	1871.12 x 40% x 2% =	$	14.97
3rd year	1871.12 x 30% x 2% =	$	11.23
4th year	1871.12 x 20% x 2% =	$	7.45
5th year	1871.12 x 15% x 2% =	$	5.61

Dollar values were arbitrarily assigned the weight ranges as follows:

0-1000 pounds	$ 3.00
1001-2000 pounds	4.00
2001-3000 pounds	5.00
3001-4000 pounds	6.00
4001-5000 pounds	7.00
5001-6000 pounds	8.00
6001-7000 pounds	9.00
7001-8000 pounds	10.00
8001-9000 pounds	11.00
9001-10,000 pounds	12.00

Thus a new vehicle weighing 4600 pounds would have a registration fee of:

New vehicles	$93.74 + $7.00 = $100.74*	New vehicle
Used vehicles (assuming the	$18.72 + $7.00 = $ 25.72*	1 year old
same weight)	$14.97 + $7.00 = $ 21.97*	2 years old
	$11.23 + $7.00 = $ 18.23	3 years old
	$ 7.45 + $7.00 = $ 14.45	4 years old
	$ 5.61 + $7.00 = $ 12.61	5 years old and older

There are two immediate problems:

1. The fees for the new and one and two year old vehicles are too high, they exceed the $20 maximum.

2. The average retail value tax for vehicles 1-4 years old is too low.

The average selling price of used vehicles in the 1-4 year category should range in the $2,000 - $3,000 value range, while the computation was based on the average selling price of all used vehicles purchased during April, 1975, without regard to the age of the vehicle. In a similar manner the tax computed on vehicles over 5 years old would be relatively lower.

Changing the average retail selling price for used vehicles as follows gives a more realistic representation of tax.

1 year	$3,600 x 50% x 2% = $36.00
2 years	$3,000 x 40% x 2% = $24.00
3 years	$2,500 x 30% x 2% = $15.00
4 years	$2,000 x 20% x 2% = $ 8.00
5 years	$1,000 x 15% x 2% = $ 3.00

Again assuming a 4600 pound vehicle the average registration fee per vehicle would be:

1 year	$36.00 + $7.00 = $43.00*
2 years	$24.00 + $7.00 = $31.00*
3 years	$15.00 + $7.00 = $22.00*
4 years	$ 8.00 + $7.00 = $15.00
5 years	$ 3.00 + $7.00 = $10.00

Using current registration fees the projected revenue for 1975 would be $33,667,200. Using DMV calculated average selling prices and no maximum or minimum the projected tax for 1975 would be $29,676,465.

*The 1, 2, and 3 year old fees exceed the $20 maximum.

This tax must then be adjusted by the weight fee of an additional $12,245,670 for a total of $41,922,135 or $8,255,235 more than current registration fees.

Adjusting the tax to provide no tax greater than $20 (not counting the weight fee) would give $24,398,732 or adjusted by the weight fees $36,644,403. (Maximum fee could be $32.00.)

Adjusting the tax to provide no tax greater than $20 and none less than $10 would give: $30,823,293 or adjusted by the weight fee $43,068,964.

The implementation of this method of fee calculation would require changes in the vehicle automated services programs which currently calculate and check these fees.

Programming costs to convert the computer system would be:

Programs affected: 15 @ 5 tests per program ($564/test)	$8,460.00
Manhours (programmer) 450 @ $7/hr.	$3,150.00
Manhours (analyst) 250 @ $9/hr.	$2,250.00

Total cost of conversion: $13,860.00

Minimum time to convert:	5 months
Cost of printing fee schedules:	$ 40.00
Minimum time for printing:	12 weeks
Cost of training personnel, 2 hr. sessions/person @ $7/hr. for 250 people	$ 3,500.00

Total: $17,400.00

It is assumed only the tax portion of the total cost (as opposed to weight fees) would be income tax deductible for those individuals who itemize their income tax deductions.

Also essential to this method are a table of fees, a standard NADA Used Car Guide, a NADA New Car Guide at the beginning of each manufacture year, and the old registration card for any cars previously licensed and being renewed. These items would be needed by personnel without automated support, especially the vehicle license agents throughout the state.

The calculations to derive the license fees are not complex, but it appears highly unlikely that any typical branch office or vehicle license agent personnel would have handy all of the necessary items to manually calculate the fees without the assistance of the automated system.

Method II: Using base weight rounded to thousand pounds and adding a 2% tax on the established wholesale value of the vehicle.

Using this method of calculating an added tax to registration and licensing, creates the following situations:

Large car/new model - high base/weight rate; high tax rate;
Large car/model not more than 5 years old - high base/weight rate; moderate tax rate;
Large car/old model - high base/weight rate; low tax rate;
Medium car/new model - moderate base/weight rate; high tax rate
Medium car/model not more than 5 years old - moderate base/weight rate; moderate tax rate;
Medium car/old model - moderate base/weight rate; low tax rate;
Small car/new model - low base/weight rate; high tax rate;
Small car/model not more than 5 years old - low base/weight rate; moderate tax rate;
Small car/old model - low base/weight rate; low tax rate.

Using the above conditions; arbitrarily assign the following base/weight dollar value:

0-1000 pounds	$ 3.00
1001-2000 pounds	4.00
2001-3000 pounds	5.00
3001-4000 pounds	6.00
4001-5000 pounds	7.00
5001-6000 pounds	8.00
6001-7000 pounds	9.00
7001-8000 pounds	10.00
8001-9000 pounds	11.00
9001-10,000 pounds	12.00

Using this structure, a used 1974 Lincoln Continental which weighs 5366 pounds and has a listed wholesale value of $5,750.00 in the April, 1975 NADA Used Car Guide would have a registration licensing fee of:

$8.00 + $115.00 for a total fee of $123.00

The same car if licensed new (1975 wholesale value $9,656) would cost:

$8.00 + $193.12 for a total of $201.12

Of these projected licensing fee amounts $8 would not be tax deductible under the existing statutes, but the ad valorem tax $115 and $193.12 respectively, would be.

If the same tax-base/weight structure is used on a small car such as a Chevrolet Vega, the following costs are calculated:

 1975 Vega wholesale value of $2,799 and weighing 2415 pounds, would be $5 + $55.98 for a total fee of $60.98.

 1974 Vega wholesale value of $1,700 and weighing 2369 pounds, would be $5 + $34 for a total fee of $39.00.

 1971 Vega wholesale value of $775 and weighing 2190 pounds, would be $5 + $15.50 for a total fee of $20.50.

The data for estimation of actual revenues collected is not available for Virginia as we do not maintain records by weight related to age and model. A rough estimate based on NADA values for wholesale and retail prices indicates that wholesale price could be estimated at roughly 75% of retail price. Using this figure and the calculations developed in Method I gives:

a.	Estimated prices (no maximum or minimum)	$22,257,348.00
	weight fees	$12,245,671.00
		$34,503,019.00
b.	Estimated prices ($20 maximum)	$18,299,049.00
	weight fees	$12,245,671.00
		$30,544,720.00
c.	Estimated prices ($20 maximum $10 minimum)	$23,117,469.00
	weight fees	$12,245,671.00
		$35,363,140.00
d.	Current registration fees	$33,667,200.00

Implementation of this method of fee calculation would be the same change and materials itemized in Method I for an approximately total cost of $17,400.00.

It is assumed all of this amount would be income tax deductible as a tax to those individuals who itemize their income tax deductions.

Calculated tax based on the retail sales price of the vehicle (new),
decreasing by 50% the first year after manufacture; 40% the second year
after manufacture; 30% the third year after manufacture; 20% the fourth
year after manufacture; 10% the fifth year after manufacture; 8% the
sixth year; 6% the seventh year; 4% the eighth year; 2% the ninth year;
and 1% the tenth and each succeeding year thereafter that the vehicle
is registered.

Each vehicle registered will have to carry the new car price, or not
being available, the current NADA book value (retail) for the vehicle.
Tax will be based on the NADA value not the selling price which the
person declares in the titling.

Using counts obtained during the May 8, 1975 vehicle renewal run, it
appears that roughly 10% of the vehicles are in each of the categories
one year and four years old; roughly 13% of the vehicles are in each
of the categories two and three years old; and the remaining 54% are
spread rather evenly over each of the other year categories at 6% per
year under ten years old and the remaining 18% over ten years old.

Using the April, 1975 monthly totals, the new vehicle selling price is
$4,686.73, and the average used vehicle selling price is $1,871.12
for original titles and $1,067.16 for used vehicles title transfers.

Income Computation
Retail Sales Price Method

Age	Valuation Factor*	Vehicles**	Revenue from 2% tax	Average tax
New	100%	71,447	$ 6,697,056	$ 93.73
1 year old	50%	272,005	5,089,540	18.71
2 years old	40%	337,148	5,046,755	14.97
3 years old	30%	313,867	3,523,697	11.23
4 years old	20%	260,354	1,948,614	7.48
5 years old	10%	243,589	911,568	3.74
6 years old	8%	237,310	710,457	2.99
7 years old	6%	207,598	466,129	2.25
8 years old	4%	172,622	256,357	1.49
9 years old	2%	182,882	136,878	0.75
10 years & older	1%	512,670	191,853	0.37
Total:		2,811,429	$ 24,978,904	$ 8.88

*New autos computed on May, 1975 reported value, average $4,686.73
Used autos computed on May, 1975 reported value, average $1,871.12

**As of April, 1975

The tax computed on the 1, 2, 4, and 5 year old vehicles is admittedly low. The average selling price of vehicles in this age category should certainly range in the 2,000 - 3,000 value range, while the computation was based on the average selling price of all used vehicles purchased during the month of April, 1975, without regard to the age of the vehicle. In a similar manner, the tax computed on vehicles over 6 years old is probably high, but it is of such small amounts that the change would be relatively insignificant. A more accurate representation of the tax based on the value at 1, 2, 3, and 4 years after manufacture would be:

1 year old	@ $3,600	$36.00
2 years old	@ $3,000	$24.00
3 years old	@ $2,500	$15.00
4 years old	@ $2,000	$ 8.00

The weight fees would remain as under Method II and would add $12,245,679 in revenue for a total estimated revenue of $37,224,575 or $3,557,375 more than under current laws.

The implementation costs for changes and materials would remain relatively the same as Method I and Method II ($17,400.00).

It is assumed the tax portion only would be deductible on individual income tax returns of those who itemize such returns.

METHOD IV

Calculation of the fees will be based solely on weight with fees increasing in 100 pound increments. An additional flat fee of $3 will be included to cover administrative and plate costs, because lighter vehicles would not otherwise return the out-of-pocket cost of licensing.

Three different variations of price per pound were used as a sample of the type of revenue and tag fee that could be expected from this method of fee computation.

Fees were computed on weight to 100 pounds (vehicle weighing 1815 pounds was considered to be 1900 pounds).

Rates were computed at one-half cent per pound, one quarter-cent per pound, and 20 cents per hundred pounds.

Using one-quarter cent per pound, the maximum fee of $20 was reached at the 8000 pound level well out of the range of most private vehicles. At one half cent per pound, the $20 cutoff was reached at 4000 pounds in the range where 26% of the vehicles are found to be. At twenty cents per hundred pounds the $20 cutoff was at 10,000 pounds which is the upper level of weight class of private vehicles.

Of the three sample calculations, the half cent per pound came closest to giving the same revenue as is currently projected from the current fees of $15 and $20. Estimated revenue this year from vehicle licenses was: $33,667,200

½¢/lb.	calculation based on 2,099,428 veh.	$33,680,823
¼¢/lb.	calculation based on 2,099,428 veh.	$16,840,412
20¢/100 lb.	calculation based on 2,099,428 veh.	$21,778,974

In addition to the weight fees used, a $2 plate fee ($1.00 for each plate), and a $1 registration fee were added to the total weight fee.

With the weight revenues the addition of the registration and plate fees added a total of $6,298,284 to the revenue. The totals were then:

Estimated 1975 revenues	$33,667,200
½¢/lb.	$39,979,107
¼¢/lb.	$23,138,696
20¢/100 lbs.	$28,077,258

based on 2,099,428 vehicle registrations for:

$1 Fee	$ 2,099,428
$2 Fee	$ 4,198,896
Total:	$ 6,298,284

To implement this method of fee calculation would require changes in programming of the vehicle automated services programs which calculate and check these fees.

Also required would be a table of correct fees for all branch office and agent personnel who might have to issue license registrations without benefit of the computer system. The calculations to derive the license fees are not complex, and it would not be unreasonable to expect that most personnel would be able to determine the fees without much effort, even without the use of a fee table.

Programming costs to convert the computer system would be:

Programs affected: 12 @ 3 tests per program	$1,542.00
Manhours (programmer) 232 @ $7/hr.	$1,624.00
Manhours (analyst) 120 @ $9/hr.	$1,080.00
Total cost of conversion:	$4,246.00
Minimum time to convert:	3 months
Cost of printing 150 fee schedules @ 25¢/schedule	$ 37.50
Minimum time for printing and training	3 months

Fees are not normally income tax deductible items.

METHOD V

Calculations of the fee will be based on fuel consumption as determined by horsepower per 1000 pounds of weight.

In order to incorporate the fuel consumption of the vehicle as part of the licensing fee it is necessary to know the rated <u>taxable</u> horsepower of the vehicle.

The manufacturer of each American vehicle lists two horsepower ratings for each engine option which he will install in the vehicle models offered for sale. However, there is no restraint on the driving public as a whole to prevent them from indiscriminately switching from one engine style/size to another within the same vehicle. Since this does not alter the vehicle identification, there is no external check which DMV personnel could make to verify that the engine which was standard (if there is such a standard) was in fact in use in the vehicle.

Maintaining the maximum fees of $15 and $20 and still keeping the license revenue at present levels effective reverses the intentions of the method described in that persons with small cars, those weighing 2,000 - 3,000 lbs. and having small engines (i.e., Vega, Pinto, Volkswagen), would be penalized with higher rates per horsepower per thousand pounds of vehicle weight. Minimum fees would have to be established somwhere in the range of $12. The calculation would look something like this.

Chevrolet:
Impala: 8 cylinder, weight - 4200 pounds, formula - HP x .1 x 4 = Fee
           HP - 57.8   (57.8 x .1 x 4) = $23.12
              - 54.4   (54.4 x .1 x 4) = $21.76
              - 51.2   (51.2 x .1 x 4) = $20.48
           Max. fee on all = $20.00

Vega: 4 cylinder, weight - 2300 pounds, formula - HP x .1 x 2 = Fee
           HP - 19.6   (19.6 x .1 x 2) = $3.92
                               (19.6 x .3 x 2) = $11.76
           Min. fee = $12.00

Dodge:
Dart: 8 cylinder, weight - 3000 pounds, formula = HP x .1 x 3 = Fee
           HP - 51.2   (51.2 x .1 x 3) = $15.36
              - 52.2   (52.2 x .1 x 3) = $15.66
              - 57.8   (57.8 x .1 x 3) = $17.34
              - 48.9   (48.9 x .1 x 3) = $14.67
              - 42.2   (42.2 x .1 x 3) = $12.66
           Max. fee = $15.00 Min. fee = $12.00

           6 cylinder, weight - 3000 pounds, formula - HP x .1 x 3 = Fee
           HP - 27.7   (27.7 x .1 x 3) = $ 8.31
                               (27.7 x .2 x 3) = $16.62
                               (27.7 x .3 x 3) = $24.93
           Max. fee = $15.00 Min. fee = $12.00

<u>Chrysler:</u>
<u>Newport:</u> 8 cylinder, weight - 4430 pounds, formula - HP x .1 x 5 = Fee

HP - 60.3	(60.3 x .1 x 5) = $30.15
- 59.7	(59.7 x .1 x 5) = $29.85
- 57.8	(57.8 x .1 x 5) = $28.90
- 51.2	(51.2 x .1 x 5) ± $25.60

Max. fee = $20.00

Assuming that there would be an interest in calculating the fees based on this type of data, the major drawback is that there is no one place which can be readily accessed other than the general descriptions in the NADA Used Car Guide which indicates what the horsepower rating of the vehicle <u>MAY</u> be, even this is no indicator of what it may <u>ACTUALLY</u> be.

The calculations are time consuming and would require multiple tables of rates and weights and those persons not having access to the automated system would have to manually calculate them. It is highly unlikely that vehicle license agents have either the time or inclination to sit down and calculate fees of this complexity.

Programming costs to institute would be the same as Method III: $5,304.00

Printing costs:	$ 40.00
Training cost: 250 people/2 hrs/$7/hr.	$3,500.00
	$3,540.00
TOTAL:	$8,844.00

The amount of revenue involved in this type of fee calculation could not be estimated as there are currently no available figures at DMV of the horsepower/ weight ratios of vehicles.

The use of this change as an income tax deduction for the individual would depend on what part is termed a tax as opposed to a fee.

Table I

COMMONWEALTH OF VIRGINIA

NUMBER OF POWERED VEHICLES BY WEIGHT CLASS

WEIGHT CLASS	NUMBER OF VEHICLES	WEIGHT CLASS	NUMBER OF VEHICLES
1500 and below	5,743	4001 to 4100	79,527
1501 to 1600	12,019	4101 to 4200	76,819
1601 to 1700	36,256	4201 to 4300	74,302
1701 to 1800	41,215	4301 to 4400	53,057
1801 to 1900	33,532	4401 to 4500	33,465
1901 to 2000	38,817	4501 to 4600	26,582
2001 to 2100	30,596	4601 to 4700	24,209
2101 to 2200	35,970	4701 to 4800	18,601
2201 to 2300	31,309	4801 to 4900	18,459
2301 to 2400	48,778	4901 to 5000	9,022
2401 to 2500	49,500	5001 to 5100	10,036
2501 to 2600	40,408	5101 to 5200	4,676
2601 to 2700	49,494	5201 to 5300	2,051
2701 to 2800	58,823	5301 to 5400	2,060
2801 to 2900	62,047	5401 to 5500	446
2901 to 3000	68,897	5501 to 5600	287
3001 to 3100	75,227	5601 to 5700	221
3101 to 3200	82,945	5701 to 5800	168
3201 to 3300	94,667	5801 to 5900	144
3301 to 3400	92,473	5901 to 6000	329
3401 to 3500	102,838	6001 to 6100	136
3501 to 3600	117,517	6101 to 6200	168
3601 to 3700	141,997	6201 to 6300	201
3701 to 3800	95,175	6301 to 6400	175
3801 to 3900	103,096	6401 to 6499	247
3901 to 4000	110,933	6500 and above	3,768
TOTAL:	2,099,428		

NOTE: Distribution of passenger vehicles by weight is:

3000 pounds and below	26%
3001 to 3999 pounds	48%
4000 to 6500 pounds	26%

Table II

COMMONWEALTH OF VIRGINIA

NUMBER OF POWERED VEHICLES BY YEAR OF MANUFACTURE

LICENSED IN MAY, 1975

TOTAL	2,811,492
1975	71,447
1974	272,005
1973	337,148
1972	313,867
1971	260,354
1970	243,589
1969	237,310
1968	207,598
1967	172,622
1966	182,882
All Others	512,670

Table III

COMMONWEALTH OF VIRGINIA

AVERAGE SELLING PRICE FOR VEHICLE BY AGE

	DMV Average*	**Estimated
1975	$ 4,686.73	$ -
1974		3,600.00
1973		3,000.00
1972	1,871.12*	2,500.00
1971		2,000.00
1970 & Older		1,500.00

*DMV Average is the average reported selling price of all used cars sold during April, 1975, without regard to age of vehicle.

**Estimated selling prices were taken by a sample of retail prices for medium size cars in the April, 1975 National Automobile Dealers Association Used Car Guide.

Table IV

Bibliography:

"Annual Auto Issue", Consumer Reports, April, 1975.

"Car Licenses: Some States, $100 and Up", Richmond News Leader,
   April 23, 2975.

"Department of Transportation Long-Term Revenue Estimates", State of
   California, Department of Finance, Division of Audits, January, 1975.

Dickey, John V. "Methodology for Assessing the Impact of Various Transportation
   Taxes", Center for Urban and Regional Studies, VPI and SU, Blacksburg, Va.,
   March, 1975.

Dickey, John V. "The Impact of External Growth Factors on Future Population
   Growth in the Washington SMSA", Center for Urban and Regional Studies,
   VPI and SU, Blacksburg, Va., March, 1975.

"57th Engineering Specifications and Statistical Issue", Automative Industries,
   April, 1975.

Leavitt, Helen, "Superhighway-Superhoax", Ballantine Books, 1970.

Legislative Statistics - Vehicle Services Administration, Virginia DMV,
   January, 1975.

Lubman, Melvin - "The Psychologist and the Automobile", VCU Magazine,
   March, 1975.

"Mid-Sized Cars", Consumer Reports, March, 1975.

Mills, J. P., "Monthly Traffic Trends: Virginia Department of Highways",
   March, 1975.

Myrdal, Gunnar, "Political Factors in Economic Assistance", Scientific American,
   Vol. 226, #4, April, 1972.

Polk's Motor Vehicle Reciprocity, Size and Weight Manual, April, 1975.

Polk's Motor Vehicle Registration Manual, March, 1975.

"Population", Chemical and Engineering News, October, 1968.

Raab, Linda and Daniel, Thomas, "The Virginia Highway Construction and
   Maintenance Fund", Virginia Transportation and Research Council,
   Charlottesville, Va., October, 1974.

Rankin, Woodrow, "Assumptions and Base Data Used to Plot 1974-85 Gasoline
   and Diesel Fuel Use", Highway Users Federation, January, 1975.

"Special Report on National Energy Policy Development", Virginia Energy
   News, Virginia Energy Office, April, 1975.

"Technology Notes", Footnotes to the Fu ure, Futermics, Inc., Washington, D.C.,
   Vol. 5, No. 2, January, 1975.

"The Highway Fact Book", Highway Users Federation, Washington, D.C.,
   January, 1975.

"Trends and Forecasts, 1975", Administrative Management, January, 1975.

"Used Car Guide", NADA, Washington, D.C. April, 1975.

"Virginia Facts and Figures, Division of Industrial Development, Commonwealth
   of Virginia, January, 1975.