# NHTSA Technical Note DOT HS-802 002

# LIFE SAVING POTENTIAL OF GREATER SABELY BELT USAGE



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LIFE SAVING POTENTIAL OF GREATER SAFETY BELT USAGE

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BY

# KATHY PAPPAS JATRAS

#### NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION RESEARCH AND DEVELOPMENT OFFICE OF STATISTICS AND ANALYSIS MATHEMATICAL ANALYSIS DIVISION

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The Mathematical Analysis Division Technical Note series consists of short technical notes, significant statistical information with brief interpretation or analysis, and other mathematical or statistical results that are of sufficient interest to merit a brief informal exposition and low-cost dissemination.

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#### PURPOSE

The two purposes of this report are the following:

- to describe and document a standardized procedure for examining the effect of safety belt usage upon traffic fatalities in the United States
- and (2) to make estimates for calendar year 1975 based on the above procedure and the fatal accident reporting system file (FARS).

#### DESCRIPTION OF PROCEDURE

In order to examine the effect of safety belt usage on traffic fatalities it is necessary to define two formulas that (1) would estimate the hypothetical number of traffic fatalities at zero seat belt usage rates and (2) would estimate the hypothetical number of traffic fatalities at different assumed hypothetical seat belt usage rates.

(1) The hypothetical number of traffic fatalities that would have occurred in 1975 had there been no seat belt usage is given by the following equation:

(A)  $DZ = \frac{AD}{1 - (LU \cdot LE + LSU \cdot LSE)}$ 

where DZ = fatalities at seat belt usage zero

AD = estimated actual fatalities.

LU = lap belt usage rate.

LSU = lap/shoulder belt usage rate.

LE = lap belt effectiveness rate.

- LSE = lap/shoulder belt effectiveness rate.
- (2) The following equation generates the hypothetical number of traffic fatalities that would have occurred in 1975, based on an assumed hypothetical usage rate:

(B)  $DV = (DZ) [1 - (LE \cdot X + (LSE \cdot Y)]$ 

where DV = fatalities at the designated usage rate. (X = hypothetical lap belt usage rate, Y = lap/ shoulder belt usage rate).

DZ ( LE ) same as in formula (A) LSE )

#### ESTIMATES FOR CALENDAR YEAR 1975

Background

At any given time a sample of automobiles on the roads will include varying numbers of representatives of different year models. Different model years are equipped with different standard equipment, and seat belt usage rates are different for different year models. For this reason data and results examining seat belt use and effectiveness are distinguished by model year. Seat belts were not mandatory in passenger cars prior to the 1964 model. Beginning with the 1964 model lap belts only were installed by mandate. In the 1968 year model the shoulder belt for the front outboard position became an additional requirement to the lap belt. The 1973 model cars utilized a continuous buzzer that could only be deactivated by the fastening of the seat belt. In the 1974 models the continuous buzzer was replaced by the interlock system whereby the car could not be started unless the proper sequence, involving the fastening of the seat belt, were followed. Moreover, beginning in 1974 the shoulder harness was permanently fastened to the lap belt, forming a three point system. The belts were equipped with inertia reels and locking retractors which improved their comfort and convenience. In the 1975 year models the interlock was discarded in favor of a buzzer which stopped after eight seconds even with the belt unfastened.

#### Input Assumptions

The National Highway Traffic Safety Administration (NHTSA) Fatal Accident Reporting System (FARS) currently contains information on approximately 90.9% of the fatal accidents occurring in the United States in the year 1975. At the time the data for this report were taken from FARS (April 5, 1976), the file contained records of 36,066 fatal accidents involving 40,915 fatalities that occurred in that year.

Of these 40,915 fatalities 32,932 were the occupants of traffic vehicles. The distribution of these 32,932 occupant fatalities according to type of vehicle is as follows:

22,835 - occupants of passenger cars

2,835 - riders of motorcycles

35 - occupants of buses

4,794 - occupants of trucks

112 - occupants of recreational vehicles

In the reports on the remaining 1,842 occupant fatalities the information on vehicle classification was unavailable.

Of the 22,835 fatalities who were the occupants of passenger cars, 20,976 were occupants of cars of model years 1964-1976. Data on seat belt use is available on passenger cars for model years 1964-1976. Therefore this report focuses on the above-mentioned 20,976 fatalities among occupants of passenger cars for these model years.

Definition of Terms and Tables

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(1) "Belt Usage" (Table 1) displays assumed values of belt usage. The figures are given by model year and divided into categories of belt use: lap belt only as opposed to lap and shoulder belt. As an example: in the 1973 model cars involved in accidents in 1975, it is assumed that 30% of these occupants wore only lap belts at the time of the accident. Five percent of the occupants wore lap and shoulder belts at the time of the accident.

#### TABLE 1

#### SEAT BELT USAGE IN PASSENGER CARS IN 1975

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Model Year	Lap Belt	Lap/Shoulder Belt
1976	10%*	30%*
1975	10%*	30%*
1974	10%*	40%*
1973	30%*	5%*
1968-1972	10%**	6%**
1964-1967	15%**	0%**
Pre 1964	0%	0%

\*Donald W. Reinfurt, Claudio Z. Silva, Yosef Hochberg. A Statistical Analysis of Seat Belt Effectiveness in 1973-75 Model Cars Involved in Towaway Crashes. DOT HS-801 833, National Technical Information Service Springfield, Va., February, 1976.

\*\*Albert Westefeld Benjamin M. Phillips. Safety Belt Interlock System Usage Survey. DOT HS-801 957, National Technical Information Service, Springfield, Va., August 1976.

(2) "Belt Effectiveness" (Table 2) refers to the percentage of reduction in fatalities attributed to the use of seat belts. The table displays the different effectiveness of lap belts and lap and shoulder belts.

# TABLE 2

#### SEAT BELT EFFECTIVENESS RATES\*

Model Year	Lap Belt	Lap/Shoulder Belt
1964-1976	40% fatality reduction	60% fatality reduction

\*NHTSA RD Estimates.

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(3) Estimated Actual Deaths (Table 3) refers to the number of traffic fatalities that actually occurred in 1975. Data is given by model year of the vehicle involved and are from the FARS file.

#### TABLE 3

#### DISTRIBUTION OF ESTIMATED ACTUAL TRAFFIC FATALITIES BY MODEL YEAR IN 1975\*

Model Year	Number of Fatalities- FARS	Estimated Total** Fatalities 1975
1076	72	7ġ
1970	12	13
1975	991	1,090
1974	2,126	2,339
1973	2,286	2,515
1972	2,067	2,274
1971	1,890	2,079
1970	1,972	2,169
1969	2,035	2,239
1968	1,901	2,091
1967	1,665	1,832
1966	1,690	1,859
1965	1,367	1,504
1964	914	1,006
Total	20,976	23,076

\*FARS 1975 file 90.9% complete

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\*\*These numbers are adjusted from the 90.9% complete FARS file to estimate 100% of the total fatalities in 1975 - refer to results p.10. (4) Table 4 describes the apportionment between lap belt and lap/shoulder belt usage based on the total designated usage rates. The total assumed percentages (60%, 80%, 100%) are divided between lap belt usage and lap/ shoulder belt usage in a given model year in proportion to the availability of equipment in that model year. As an example: in the 1964 models all of the seat belts were of the lap type, so the total designated percent of belt use (60, 80, or 100) is of the lap type. In contrast, in the 1974 models only 15% of the belt use was lap, therefore the remaining 85% of the total designated use (60, 80, 100) was of the lap/shoulder Therefore, for that year the apportionment of type. the total belt usage is in the ratio of 15 to 85 for each total designated percent (60,80, 100).

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#### TABLE 4

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# ASSUMED USAGE RATES

Model Year		60%	8	0%	۱	00%
	Lap	Lap/ Shoulder	Lap	Lap/ Shoulder	Lap	Lap/ Shoulder
1976	15%	45%	15%	65%	15%	85%
1975	15%	45%	15%	65%	15%	85%
1974	15%	45%	15%	65%	15%	85%
1973	54%	6%	74%	6%	<b>94</b> %	6%
1972	54%	6%	74%	6%	94%	6%
1971	54%	6%	74%	6%	94%	6%
1970	54%	6%	74%	6%	94%	6%
1969	54%	6%	74%	6%	94%	6%
1968	54%	6%	74%	6%	94%	6%
1967	60%	0%	80%	0%	100%	0%
1966	60%	0%	80%	0%	100%	0%
1965	60%	0%	80%	0%	100%	0%
1964	60%	0%	80%	0%	100%	0%

Based on: 1964-1967 - only lap available 1968-1973 - 6% lap/shoulder remaining - lap 1974-1976 - 15% lap remaining - lap/shoulder

#### Results and Tables

At the time of data retrieval the FARS file was 90.9% complete. Therefore, in order to estimate a 100% complete file all numbers from the FARS file have been increased by 9.1% (each number was divided by .909).

(5) Table 5 gives a comparison between the number of traffic fatalities in 1975 with actual, current seat belt usage and the number of traffic fatalities that would have occurred had there been no use of seat belts. The former, in the second column, is the same as Table 3 (actual deaths). The latter, in the third column, is generated by formula A using appropriate data from Tables 1, 2, and 3. The fourth column can be used to estimate the number of lives saved by the use of seat belts in 1975. The estimate is obtained by subtracting column 2 from column 3.

# TABLE 5

ESTIMATED ACTUAL DEATHS TO PASSENGER VEHICLE OCCUPANTS IN 1975 VERSUS THOSE THAT WOULD HAVE OCCURRED HAD THERE BEEN NO BELT USAGE

Model Year	Actual* Deaths	Deaths at O Usage	Lives Saved
1976	- 79	102	23
1975	1,090	1397	307
1974	2,339	3248	909
1973	2,515	2958	443
1972	2,274	2461	187
1971	2,079	2250	171
1970	2,169	2348	179
1969	2,239	2422	183
1968	2,091	2263	172
1967	1,832	1948	116
1966	1,859	1978	119
1965	1,504	1599	95
1964 Total	<u>1,006</u> 23,076	<u>1069</u> 26047	<u>63</u> 2971

\*FARS File

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(2) Table 6 compares two hypotheticals: The number of fatalities that would have occurred had no seat belts been used in 1975 against the number of fatalities that would have occurred had the use been equal to each of the designated percents (60, 80, 100).

Table 6a compares 0% belt usage with 60% belt usage, Table 6b with 80% usage, and Table 6c with 100% usage.

In each table column 2 is generated by the use of formula A and Tables 1, 2, and 3. Column three of each table is generated by the use of both formulas A and B and tables 1, 2, 3, and 4. The last column in each table represents the estimated number of lives that would be saved by the designated levels of hypothetical seat belt usage. This is obtained by subtracting column 3 from column 2.

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# TABLE 6a

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Model Year	Deaths at Usage = 0%	Deaths at Usage = 60%	Diff. Between
1976	102	67	35
1970	102		
1975	1397	936	461
1974	3248	2176	1072
1973	2958	2212	746
1972	2461	1840	621
1971	2250	1683	567
1970	2348	1756	592
1969	2422	1812	510
1 <b>96</b> 8	2263	1692	571
1967	1948	1481	467
1966	1978	1503	475
1965	1599	1216	383
1964	1069	<u> </u>	_256
Total	26047	19191	6856

# HYPOTHETICAL DEATHS TO PASSENGER VEHICLE OCCUPANTS IN 1975 AT SEAT BELT USAGE ZERO VERSUS 60% USAGE RATES

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# TABLE 6b

# HYPOTHETICAL DEATHS AT SEAT BELT USAGE ZERO VERSUS 80% USAGE RATES

Model Year	Usage Rate = 0%	Usage Rate = 80%	Diff. Between Col. 2 & 3
1976	102	55	47
1975	1397	768	629
1974	3248	1787	1461
1973	2958	1976	982
1972	2461	1644	817
1 <del>9</del> 71	2250	1503	747
1970	2348	1568	780
1969	2422	1618	804
1968	2263	1512	751
1967	1948	1325	623
1966	1978	1344	634
1965	1599	1087	512
1964	1069	<u> </u>	_342
Total	26047	16919	9128

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# TABLE 6c

# HYPOTHETICAL DEATHS AT SEAT BELT USAGE ZERO VERSUS 100% USAGE RATES

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Model Year	Usage Rate = 0%	Usage Rate = 100%	Diff. Between Col. 2 & 3
1976	102	43	59
1975	1397	601	796
1974	3248	1396	1852
1973	2958	1739	1219
1972	2461	1447	1014
1971	2250	1322	928
1970	2348	1380	968
1969	2422	1425	997
1968	2263	1330	933
1967	1948	1168	780
1966	1978	1186	792
1965	1599	959	640
1964 Total	<u>1069</u> 26047	<u> </u>	<u>428</u> 11400

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(3) Table 7 compares the number of traffic fatalities in 1975 with current seat belt use and the hypothetical number of fatalities that would have occurred had the use been equal to each of the designated percentages (60, 80, 100).

Table 7 a compares estimated actual deaths with current belt use to 60% use, Table 7b to 80% use, and Table 7c to 100% use.

In each table column two is the same as Table 3 (estimated actual traffic fatalities in 1975 - FARS). The third columns are, respectively, the same as the third columns in Tables 6a, 6b, and 6c. The last column in each table represents the number of lives that would have been saved by the designated levels of seat belt use compared to actual use. This is obtained by subtracting column 3 from column 2.

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# TABLE 7a

ESTIMATED ACTUAL DEATHS VERSUS DEATHS THAT WOULD HAVE OCCURRED AT 60% BELT USAGE RATES

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Model Year	Actual Deaths	Usage = 60%	Diff. Between Col. 2 & 3
1976	79	67	12
1975	1090	936	154
1974	2339	2176	163
1973	2515	2212	303
1972	2274	1840	434
1971	2079	1683	396
1970	2169	1756	413
1969	2239	1812	427
1968	2091	1692	399
1967	1832	1481	351
1966	1859	1503	356
1965	1504	1216	288
1964	1006	<u>    813  </u>	<u>    193    </u>
Total	23076	19191	3885

# TABLE 7b

ESTIMATED ACTUAL DEATHS VERSUS DEATHS THAT WOULD HAVE OCCURRED AT 80% BELT USAGE RATES

Model Year	Actual Deaths	Usage = 80%	Diff. Between Col. 2 & 3
1976	79	55	24
1975	1090	768	322
1974	2339	1787	552
1973	2515	1976	539
1972	2274	1644	630
1971	2079	1503	576
1970	2169	1568	601
1969	2239	1618	621
<b>`196</b> 8	2091	1512	579
1967	1832	1325	507
1966	185 <b>9</b>	1344	515
1965	1504	1087	417
1964	1006	<u> </u>	279
Total	23076	16919	6157

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# TABLE 7c ·

# ESTIMATED ACTUAL DEATHS VERSUS DEATHS THAT WOULD HAVE OCCURRED AT 100% BELT USAGE RATES

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Model Year	Actual Deaths	Usage = 100%	Diff. Between Col. 2 & 3
1976	79	43	36
1975	1090	601	489
1974	2339	1396	943
1973	2515	1739	776
1972	2274	1447	827
1971	2079	1322	757
1970	2169	1380	789
1969	2239	1425	814
1968	2091	1330	761
1967	1832	1168	664
1966	1859	1186	673
1965	1'504	959	545
1964	1006	641	365_
Total	23076	14647	8429

(4) Table 8 is a graphic representation of the numbers of fatalities, estimated or hypothetical, generated in the previous tables.

The first bar is the estimated number of deaths at seat belt usage zero, the second at actual usage, the third at 60% usage, the fourth at 80% usage, and the fifth at 100% usage.

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SEAT BELT USAGE RATES

#### CONCLUSIONS

In the year 1975 traffic fatalities would have been 12.88% higher had there been no seat belt usage.

In comparison to a zero percent usage rate fatalities would have been reduced 26.32% if seat belt usage had been 60%.

In comparison to a zero percent usage rate fatalities would have been reduced 35.05% if seat belt usage had been 80%.

In comparison to zero percent usage rate fatalities would have been reduced 43.78% if seat belt usage had been 100%.

In the year 1975 traffic fatalities could have been reduced from the number of estimated actual fatalities by 16.83% had there been 60% seat belt usage.

In the year 1975 traffic fatalities could have been reduced from the number of estimated actual fatalities by 26.68% had there been 80% seat belt usage.

In the year 1975 traffic fatalities could have been reduced from the number of estimated actual fatalities by 36.54% had there been 100% seat belt usage.

#### APPENDIX

#### APL PROGRAMS

Program (1) performs the algorithm given by equation (1) (A)  $DZ = \frac{AD}{1 - (LU \cdot LE + LSU \cdot LSE)}$ 

Program (2) performs the algorithm given by equation (2) (B)  $DV = (DZ) (1 - LE \cdot X + LSE \cdot Y)$ 

The input M for both programs (1) and (2) is an n x r matrix where the first row is the estimates of actual deaths by model year, the second row is the safety belt usage rates for lap belts by model year, the third row is the safety belt usage rates for lap/shoulder belts by model year, the fourth row is the safety belt effectiveness rates for lap belts by model year, the fifth row is the safety belt effectiveness rates for lap/shoulder belts by model year, the sixth row is the assumed hypothetical safety belt usage rates for the lap belt by model year, the seventh row is the assumed hypothetical safety belt usage rates for the lap/shoulder belts by model year, and the eight row is the model years.

The output P for both programs (1) and (2) is a set of tables. An example for program (1) follows the program. Examples for program (2) follow the program. PROGRAM (1)

<pre>V P+LIVESSAVED M [1] TAD++/W[1;] [2] 'TOTAL ACTUAL DEATHS ARE: '; 6 0 VTAD [3] D+1-(M[2;]×M[4;])+M[3;]×M[5;] [4] D2+M[1;]1D [5] 'DEATHS AT SEAT BELT USAGE ZERO PER MODEL YEAR ARE: '; 7 1 VDZ [6] TD2++/DZ [7] 'TOTAL DEATHS AT SEAT BELT USAGE ZERO IS: '; 8 1 VTDZ [8] LS+02-M[1;] [9] 'LIVES SAVED PER NODEL YEAR ARE: '; 6 1 VLS [10] TLS++/LS [11] 'TOTAL LIVES SAVED IS: '; 8 1 VTLS [12] PS+TLS+TAD [13] 'PEKCENT OF LIVES SAVED IS: '; 5 2 V(100×PS) [14] MM-M[8;],M[1;],M[2;],M[3;],M[4;],M[5;],DZ,LS [15] MMMH 8 13 ONM [16] MMMT+QNMM [17] NL-(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1)VMMMT [17] NL-(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1)VMMMT [17] NL-(6 0 8 0 6 2 8 2 8 2 8 2 12 1 10 1)VMMMT [17] NL+(6 0 VTAD [22] EL2+' '.6 0 VTAD [24] EL23+' '.6 0 VTAD [24] EL23+' '.6 0 VTAD [24] EL23+' '.6 1 VTDZ [29] EL28+' '.7 1 VTDS [30] FL27+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28 [31] NL2+WL1,[1] EL2T [32] NL2+WL1,[1] MI2</pre>		VLIVESSAVEDLUJV
<pre>[1] TAD++/M[1;] [2] 'TOTAL ACTUAL DEATHS ARE: '; 6 0 \TAD [3] D+1-(M[2;]*A(U;])+M[3;]*M[5;] [4] D2+M[1;]+D [5] 'DEATHS AT SEAT BELT USAGE ZERO PER MODEL YEAR ARE: '; 7 1 \DZ [6] TUZ++/DZ [7] 'TOTAL DEATHS AT SEAT BELT USAGE ZERO IS: '; 8 1 \TDZ [8] LS+UZ-M[1;] [9] 'LIVES SAVED PER NODEL YEAR ARE: '; 6 1 \LS [10] TLS++/LS [11] 'TOTAL LIVES SAVED IS: '; 8 1 \TLS [11] 'TOTAL LIVES SAVED IS: '; 8 1 \TLS [12] FS+TLS:TAD [13] 'PERCENT OF LIVES SAVED IS: '; 5 2 \(100 \text{PS}) [14] MM+H[8;],M[1;],M[2;],H[3;],M[4;],M[5;],DZ,LS [15] MNM+ 8 13 pMM [16] MMM+WAMM [17] NL+(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1)\MMMT [18] TITLS+' MD AD URL URLS BEWLU BEWLSU DZ LS ' [19] T4+ 4 68 p(136p' '),TITLE,68p' ' [20] ELI+' ' [21] EL2+' ' [22] EL2+' ' [22] EL2+' ' [22] EL2+' ' [23] EL2+' ' [24] EL2+' ' [25] EL2+' ' [25] EL2+' ' [26] EL2+' ' [27] EL26+' ' [28] EL27+' ', 8 1 \TDZ [29] EL28+' ', 7 1 \TLS [30] FL27+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28 [31] NL2+HL1,[1] ELT [32] PTH [1] NL2</pre>	V	P+LIVESSAVED M
<pre>[2] 'TOTAL ACTUAL DEATHS ARE: '; 6 0 *TAD [3] D+1-(M[2;]×M[4;])+M[3;]×M[5;] [4] D2+M[1;]±D [5] 'DEATHS AT SEAT BELT USAGE ZERO PER MODEL YEAR ARE: '; 7 1 *DZ [6] TD2++/DZ [7] 'TOTAL DEATHS AT SEAT BELT USAGE ZERO IS: '; 8 1 *TDZ [8] LS+DZ-M[1;] [9] 'LIVES SAVED PER NODEL YEAR ARE: '; 6 1 *LS [10] TLS++/LS [11] 'TOTAL LIVES SAVED FER NODEL YEAR ARE: '; 6 1 *LS [12] FS+TLS:TAD [13] 'PERCENT OF LIVES SAVED IS: '; 8 1 *TLS [14] MM+H[8;].M[1;].M[2;].H[3;].M[4:].M[5;].DZ.LS [15] MMH+ 8 13 DMM [16] MMH+WNMM [17] NL+(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1)*MMMT [18] TITLE+' MD AD URL URLS BEWLU BEWLSU DZ LS ' [19] T4+ 4 68 p(136p' ').TITLE.68p' ' [20] ELI+' ' [21] NL1+NL.[1] ELI [22] EL2+' '. 6 0 *TAD [24] EL23+' '. [25] EL2++' '. [26] EL2++' '. [27] EL26+' '. [28] EL27+' '. 8 1 *TDZ [29] EL28+' '. 7 1 *TLS [30] EL27+EL21.EL22.EL23.EL24.EL25.EL26.EL27.EL28 [31] NL2+HL1.[1] ELT</pre>	[1]	$TAD \leftarrow +/M[1;]$
<pre>[3] D+1-(M[2;]*M[4;])+M[3;]*M[5;] [4] D2+M[1;]+D [5] 'DEATHS AT SEAT BELT USAGE ZERO PER MODEL YEAR ARE: '; 7 1 *DZ [6] TD2++/DZ [7] 'TOTAL DEATHS AT SEAT BELT USAGE ZERO IS: '; 8 1 *TDZ [8] LS+DZ-M[1;] [9] 'LIVES SAVED PER MODEL YEAR ARE: '; 6 1 *LS [10] TLS++/LS [11] 'TOTAL LIVES SAVED IS: '; 8 1 *TLS [12] FS+TLS+TAD [13] 'PERCENT OF LIVES SAVED IS: '; 5 2 *(100×PS) [14] M×+V[8], M(1;], M[2;], M[3;], M[4+;], M[5;], DZ, LS [15] MNN+ 8 13 0MM [16] M×MT+NNMM [16] M×MT+NNMM [16] M×MT+NNMM [17] NL+(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1)*MMMT [18] TITLE+' MD AD URL URLS BEWLU BEWLSU DZ LS ' [19] TY+ 4 68 p(136p''), TITLE, 68p'' [20] ELI+'' [21] NL1+NL,[1] ELI [22] EL2+' ', 6 0 *TAD [24] EL23+' ' [26] EL25+' ' [27] EL26+' ', 8 1 *TDZ [29] EL28+' ', 7 1 *TLS [30] EL27+EL21, EL22, EL23, EL24, EL25, EL26, EL27, EL28 [31] NL2+HL1,[1] ELT</pre>	[2]	'TOTAL ACTUAL DEATHS ARE: '; 6 0 VTAD
<pre>[4] D2-M[1;]+D [5] 'DEAHTS AT SEAT BELT USAGE ZERO PER MODEL YEAR ARE: '; 7 1 \DZ [6] TD2++DZ [7] 'TOTAL DEATHS AT SEAT BELT USAGE ZERO IS: '; 8 1 \DZ [8] LS+DZ-M[1;] [9] 'LIVES SAVED PER MODEL YEAR ARE: '; 6 1 \LS [10] TLS++LS [11] 'TOTAL LIVES SAVED IS: '; 8 1 \DZ [13] 'PERCENT OF LIVES SAVED IS: '; 5 2 \(100 \PS)) [14] MM+\[8],N[1;],N[2;],M[3;],M[4;],M[5;],DZ,LS [15] MM+ &amp; 13 OMM [16] MMT+\NMM [17] NL+(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1)\UMMMT [18] TITLE+' MD AD URL URLS BEWLU BEWLSU DZ LS ' [19] TY+ 4 68 p(136p' '),TITLE.68p' ' [20] ELI+'</pre>	[3]	D+1-(M[2;]×M[4;])+M[3;]×M[5;]
<pre>[5] 'DEATHS AT SEAT BELT USAGE ZERO PER MODEL YEAR ARE: '; 7 1 \DZ [6] TDZ++/DZ [7] 'TOTAL DEATHS AT SEAT BELT USAGE ZERO IS: '; 8 1 \TDZ [8] LS+UZ-M[1;] [9] 'LIVES SAVED PER MODEL YEAR ARE: '; 6 1 \LS [10] TLS++/LS [11] 'TOTAL LIVES SAVED IS: '; 8 1 \TLS [12] PS+TLS+TAD [13] 'PERCENT OF LIVES SAVED IS: '; 5 2 \(100 \PS)) [14] MM+M[8;],M[1;],M[2;],M[3;],M[4;],M[5;],DZ,LS [15] MMM+ 8 13 pMM [16] MMMT+\NMM [17] NL+(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1)\TMMMT [18] TTLE+' MD AD URL URLS BEWLU BEWLSU DZ LS ' [19] TY+ 4 68 p(136p' '),TITLE.68p' ' [20] ELI+'</pre>	[4]	DZ+M[1;]÷D
<pre>[6] TDZ++/DZ [7] 'TDTAL DEATHS AT SEAT BELT USAGE ZERO IS: ': 8 1 \TDZ [8] LS+DZ-M[1;] [9] 'LIVES SAVED PER NODEL YEAR ARE: ': 6 1 \LS [10] TLS++/LS [11] 'TOTAL LIVES SAVED IS: ': 8 1 \TLS [12] FS+TLS:TAD [13] 'PERCENT OF LIVES SAVED IS: ': 5 2 \(100 \PS) [14] MM++&amp;[8;],N[1;],N[2;],N[3;],N[4:],M[5;],DZ,LS [15] MNM+ 8 13 pNM [16] MMH+ \NNH [17] NL+(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1)\MMMT [18] TITLE+' MD AD URL URLS BEWLU BEWLSU DZ LS ' [19] TY+ 4 68 p(136p''),TITLE,68p'' [20] EL1+'' [21] NL1+NL,[1] ELI [22] EL21+' ' 6 0 \TAD [24] EL23+' ' 6 0 \TAD [24] EL23+' ' 8 1 \TDZ [26] EL2++' ', 8 1 \TDZ [27] EL26+' ' ', 8 1 \TDZ [28] EL27+' ', 8 1 \TDZ [29] EL27+' ', 8 1 \TDZ [29] EL27+' ', 8 1 \TDZ [30] EL27+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28 [31] NL2+NL1,[1] EL2T</pre>	[5]	'DEATHS AT SEAT BELT USAGE ZERO PER MODEL YEAR ARE: ': 7 1 ▼D2
<pre>[7] 'TOTAL DEATHS AT SEAT BELT USAGE ZERO IS: '; 8 1 \TDZ [8] LS=DZ=M[1;] [9] 'LIVES SAVED PER MODEL YEAR ARE: '; 6 1 \TDS [10] TLS++/LS [11] 'TOTAL LIVES SAVED IS: '; 8 1 \TLS [12] F\$=TLS=TAD [13] 'PERCENT OF LIVES SAVED IS: '; 5 2 \(100 \XPS)) [14] MM=+M[8;],M[1;],M[2;],M[3;],M[4;],M[5;],DZ,LS [15] MNM= 8 13 DMM [16] MMMT+\NMM [16] MMMT+\NMM [17] NL=(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1)\TMMMT [18] TITLE+' MD AD URL URLS BEWLU BEWLSU DZ LS' [19] TY+ 4 68 P(136p''),TITLE,68p'' [20] ELI+'</pre>	[6]	<i>TDZ</i> ← + / <i>DZ</i>
<pre>[8] LS+DZ-M[1;] [9] 'LIVES SAVED PER NODEL YEAR ARE: '; 6 1 vLS [10] TLS++/LS [11] 'TOTAL LIVES SAVED IS: '; 8 1 vTLS [12] FS+TLS:TAD [13] 'PERCENT OF LIVES SAVED IS: '; 5 2 v(100×PS) [14] MM+M[8;],W[1;],W[2;],W[3;],W[4;],M[5;],DZ,LS [15] MMM+ 8 13 pMM [16] MMM+ 8 13 pMM [17] NL+(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1)vMMMT [18] TITLE+' MD AD URL URLS BEWLU BEWLSU DZ LS ' [19] T4+ 4 68 p(136p''),TITLE.68p'' [20] ELL+'</pre>	[7]	'TOTAL DEATHS AT SEAT BELT USAGE ZERO IS: ': 8 1 TTDZ
<pre>[9] 'LIVES SAVED PER NODEL YEAR ARE: '; 6 1 VLS [10] TLS++/LS [11] 'TOTAL LIVES SAVED IS: '; 8 1 VTLS [12] FS+TLS+TAD [13] 'PERCENT OF LIVES SAVED IS: '; 5 2 V(100×PS) [14] MM+N[8;],M[1;],M[2;],M[3;],M[4;],M[5;],D2,LS [15] MNM+ 8 13 DMM [16] MNM+NMM [17] NL+(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1)VMMMT [18] TITLE+' MD AD URL URLS BEWLU BEWLSU DZ LS [19] TY+ 4 68 P(136P''),TITLE,68P'' [20] ELI+' [21] NL1+NL,[1] ELI [22] EL2+' ', 6 0 VTAD [24] EL23+' ', [ [25] EL2+' ', 8 1 VTDZ [29] EL26+' ', 7 1 VTLS [30] EL27+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28 [31] NL2+NL1,[1] ELZ [32] ML2+NL1,[1] ELZ [33] NL2+NL1,[1] ELZ [34] ML2+NL1,[1] ELZ [35] ML2+NL1,[1] ELZ [36] ML2+NL1,[1] ELZ [37] ML2+NL1,[1] ELZ [38] ML2+NL1,[1] ELZ [39] ML2+NL1,[1] ELZ [30] ML2+NL1,[1] ML2 [30] ML2+NL11,[1] ML2 [30] ML2+NL11 ML2 [30] ML2</pre>	[8]	LS+DZ-M[1;]
[10] $TLS++/LS$ [11] 'TOTAL LIVES SAVED IS: '; 8 1 $\forall TLS$ [12] $FS+TLS+TAD$ [13] 'PERCENT OF LIVES SAVED IS: '; 5 2 $\forall$ (100×PS) [14] $MN+M[8;],M[1;],M[2;],M[3;],M[4;],M[5;],DZ,LS$ [15] $MNM+$ 8 13 $\rho MM$ [16] $MNM+ \delta$ 13 $\rho MM$ [17] $NL+(6 \ 0 \ 8 \ 0 \ 8 \ 2 \ 8 \ 2 \ 8 \ 2 \ 12 \ 1 \ 10 \ 1) \forall MMMT$ [18] $TITLE+' MD AD URL URLS BEWLU BEWLSU DZ LS$ [19] $TM+ 4 \ 68 \ \rho(136\rho''), TITLE, 68\rho''$ [20] $ELI+'$	[9]	'LIVES SAVED PER MODEL YEAR ARE: ': 6 1 VLS
<pre>[11] 'TOTAL LIVES SAVED IS: '; 8 1 \TLS [12] FS+TLS:TAD [13] 'PERCENT OF LIVES SAVED IS: '; 5 2 \(100 \PS) [14] MM+M[8;],M[1;],M[2;],M[3;],M[4;],M[5;],DZ,LS [15] MNM+ 8 13 pMM [16] MMMT+&amp;NMM [17] NL+(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1)\MMMT [18] TITLE+' MD AD URL URLS BEWLU BEWLSU DZ LS ' [19] TY+ 4 68 p(136p' '),TITLE.68p' ' [20] ELI+'</pre>	[10]	<i>TLS++/LS</i>
[12] $PS+TLS$ ; $TAD$ [13] 'PERCENT OF LIVES SAVED IS: '; 5 2 $\forall$ (100×PS) [14] $MM+M[8;],M[1;],M[2;],M[3;],M[4;],M[5;],DZ,LS$ [15] $MMM+8$ 13 $pMM$ [16] $MMMT+NMM$ [17] $NL+(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1) \forall MMMT[18] TITLE+' MD AD URL URLS BEWLU BEWLSU DZ LS '[19] TY+4 68 p(136p''), TITLE, 68p''[20] ELI+'[21] NL+NL,[1] ELI[22] EL21+' '[23] EL22+' ', 6 0 \forall TAD[24] EL23+' '[25] EL24+' '[26] EL25+' '[27] EL26+' '[28] EL27+' ', 8 1 \forall TDZ[29] EL28+' ', 7 1 \forall TLS[30] EL27+EL21, EL22, EL23, EL24, EL25, EL26, EL27, EL28[31] NL2+NL1,[1] EL27$	[11]	TOTAL LIVES SAVED IS: ': 8 1 TLS
<pre>[13] 'PERCENT OF LIVES SAVED IS: '; 5 2 *(100×PS) [14] MM+M[8;],M[1;],M[2;],M[3;],M[4;],M[5;],DZ,LS [15] MMM+ &amp; 13 pMM [16] MMM+ NMMM [17] NL+(6 0 &amp; 0 &amp; 2 &amp; 2 &amp; 2 &amp; 2 &amp; 2 &amp; 1 &amp; 1 &amp; 1) *MMMT [18] TITLE+' MD AD URL URLS BEWLU BEWLSU DZ LS ' [19] TY+ 4 &amp; 68 p(136p''),TITLE,68p'' [20] ELI+'</pre>	[12]	PS+TLS:TAD
<pre>[14] MM+M[8;],M[1;],M[2;],M[3;],M[4;],M[5;],DZ,LS [15] MMM+ 8 13 pMM [16] MMMT+&amp;NMM [17] NL+(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1) *MMMT [18] TITLE+' MD AD URL URLS BEWLU BEWLSU DZ LS ' [19] T V+ 4 68 p(136p''),TITLE,68p'' [20] ELI+' [21] NL1+NL,[1] ELI [22] EL21+' ' [23] EL22+' ', 6 0 *TAD [24] EL23+' ' [25] EL24+' ' [26] EL25+' ' [27] EL26+' ' [28] EL27+' ', 8 1 *TDZ [29] EL28+' ', 7 1 *TLS [30] EL27+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28 [31] NL2+NL1,[1] EL2T</pre>	[13]	'PERCENT OF LIVES SAVED IS: ': 5 2 ▼(100×PS)
<pre>[15] MNN+ 8 13 pMM [16] MNMT+&amp;NMM [17] NL+(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1)*MMMT [18] TITLE+' MD AD URL URLS BEWLU BEWLSU DZ LS ' [19] T 4+ 4 68 p(136p''),TITLE,68p'' [20] ELI+'</pre>	[14]	MM + M[8;], M[1;], M[2;], M[3;], M[4;], M[5;], DZ, LS
<pre>[16] MAMT+&amp;NMM [17] NL+(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1) *MMMT [18] TITLE+' MD AD URL URLS BEWLU BEWLSU DZ LS ' [19] TY+ 4 68 p(136p''),TITLE,68p'' [20] ELI+'</pre>	[15]	<i>MMM</i> + 8 13 <i>pMM</i>
$ \begin{bmatrix} 17 \end{bmatrix} NL + (6 \ 0 \ 8 \ 0 \ 8 \ 2 \ 8 \ 2 \ 8 \ 2 \ 8 \ 2 \ 12 \ 1$	[16]	MAMT+QMMM
[18] $TITLE+'$ MD AD URL URLS BEWLU BEWLSU DZ LS ' [19] $TY+$ 4 68 $\rho(136p''), TITLE, 68p''$ [20] $ELI+'$	[17]	NL+(6 0 8 0 8 2 8 2 8 2 8 2 12 1 10 1) VMMMT
<pre>[19] T V+ 4 68 p(136p' '),TITLE,68p' ' [20] ELI+' [21] NL1+NL,[1] ELI [22] EL21+' ' [23] EL22+' ', 6 0 VTAD [24] EL23+' ' [25] EL24+' ' [26] EL25+' ' [27] EL26+' ' [28] EL27+' ', 8 1 VTDZ [29] EL28+' ', 7 1 VTLS [30] EL2T+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28 [31] NL2+NL1,[1] EL2T [32] P+TW [1] NL2</pre>	[18]	TITLE+' MD AD URL URLS BEWLU BEWLSU DZ LS'
$\begin{bmatrix} 20 \end{bmatrix} ELI+' \qquad \\ EL1+' \qquad \\ \begin{bmatrix} 21 \end{bmatrix} NL1+NL, \begin{bmatrix} 1 \end{bmatrix} ELI \\ \begin{bmatrix} 22 \end{bmatrix} EL21+' & ' \\ \begin{bmatrix} 23 \end{bmatrix} EL22+' & ', & 6 & 0 & \forall TAD \\ \begin{bmatrix} 24 \end{bmatrix} EL23+' & ' & \\ \begin{bmatrix} 25 \end{bmatrix} EL24+' & ' \\ \begin{bmatrix} 26 \end{bmatrix} EL25+' & ' \\ \begin{bmatrix} 27 \end{bmatrix} EL26+' & ' \\ \begin{bmatrix} 28 \end{bmatrix} EL27+' & ', & 8 & 1 & \forall TDZ \\ \begin{bmatrix} 29 \end{bmatrix} EL28+' & ', & 7 & 1 & \forall TLS \\ \begin{bmatrix} 30 \end{bmatrix} EL2T+EL21, EL22, EL23, EL24, EL25, EL26, EL27, EL28 \\ \begin{bmatrix} 31 \end{bmatrix} NL2+NL1, \begin{bmatrix} 1 \end{bmatrix} EL2T \\ \begin{bmatrix} 22 \end{bmatrix} EL27+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL27 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \end{bmatrix} EL28 \\ \begin{bmatrix} 22 \end{bmatrix} EL28+' & \begin{bmatrix} 11 \\ EL28+' & EL28+' & EL28+' \\ EL28+' & EL28+' & EL28+' & EL28+' \\ EL28+' & EL28+' & EL28+' & EL28+' & EL28+' & EL28+' \\ EL28+' & EL28$	[19]	TV+ 4 68 p(136p' '), TITLE, 68p' '
<pre>[21] NL1+NL,[1] ELI [22] EL21+' ' [23] EL22+' ', 6 0 TAD [24] EL23+' ' [25] EL24+' ' [26] EL25+' ' [27] EL26+' ' [28] EL27+' ', 8 1 TDZ [29] EL28+' ', 7 1 TLS [30] EL27+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28 [31] NL2+NL1,[1] EL2T [32] P+TH [1] NL2</pre>	[20]	ELI+1
<pre>[22] EL21+' ' [23] EL22+' ', 6 0 TAD [24] EL23+' ' [25] EL24+' ' [26] EL25+' ' [27] EL26+' ' [28] EL27+' ', 8 1 TDZ [29] EL28+' ', 7 1 TLS [30] EL2T+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28 [31] NL2+NL1,[1] EL2T [32] P+T% [1] NL2</pre>	[21]	NL1+NL,[1] ELI
<pre>[23] EL22+' ', 6 0 TAD [24] EL23+' ' [25] EL24+' ' [26] EL25+' ' [27] EL26+' ' [28] EL27+' ', 8 1 TDZ [29] EL28+' ', 7 1 TLS [30] EL2T+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28 [31] NL2+NL1,[1] EL2T [32] P+TH [1] NL2</pre>	[22]	EL21+' '
<pre>[24] EL23+' ' [25] EL24+' ' [26] EL25+' ' [27] EL26+' ' [28] EL27+' ', 8 1 ▼TDZ [29] EL28+' ', 7 1 ▼TLS [30] EL2T+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28 [31] NL2+NL1,[1] EL2T [32] P+TH [1] NL2</pre>	[23]	EL22+' '. 6 0 FTAD
<pre>[25] &amp;L24+' ' [26] EL25+' ' [27] EL26+' ' [28] EL27+' ', 8 1 \TDZ [29] EL28+' ', 7 1 \TLS [30] EL2T+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28 [31] NL2+NL1,[1] EL2T [32] P+TH [1] NL2</pre>	[24]	EL23+1
<pre>[26] EL25+' ' [27] EL26+' ' [28] EL27+' ', 8 1 \TDZ [29] EL28+' ', 7 1 \TLS [30] EL2T+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28 [31] NL2+NL1,[1] EL2T [32] P+TK [1] NL2</pre>	[25]	<i>EL</i> 24+1 1
<pre>[27] EL26+' ' [28] EL27+' ', 8 1 ▼TDZ [29] EL28+' ', 7 1 ▼TLS [30] EL2T+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28 [31] NL2+NL1,[1] EL2T [32] P+TH [1] NL2</pre>	[26]	EL25+'
[28] EL27+' ', 8 1 ▼TDZ [29] EL28+' ', 7 1 ▼TLS [30] EL2T+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28 [31] NL2+NL1,[1] EL2T [32] P+TH [1] NL2	[27]	EL26+ 1 1
[29] EL28+' ', 7 1 ▼TLS [30] EL2T+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28 [31] NL2+NL1,[1] EL2T [32] P+TK [1] NL2	[28]	EL27+' '. 8 1 TDZ
<pre>[30] EL2T+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28 [31] NL2+NL1,[1] EL2T [32] P+TH [1] NL2</pre>	[29]	$EL28+1$ 1, 7, 1, $\Psi TLS$
[31] NL2 + NL1, [1] EL2T $[32] P+TH [1] NL2$	[30]	EL2T+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28
$\begin{bmatrix} 3 \\ 2 \end{bmatrix} \xrightarrow{p_{\pm} \pi H} \begin{bmatrix} 1 \\ 1 \end{bmatrix} NL2$	[31]	NL2+NL1.[1] EL2T
	[32]	P+T14.[1] NL2

PROGRAM (2)

```
25
      VLIVESSAVEDC[[]]V
    ▼ P+LIVESSAVEDC M
[1]
     TAD++/M[1;]
[2]
     'TOTAL ACTUAL DEATHS ARE: '; 6 0 VTAD
[3]
      U+1-(&[2;]×M[4;])+N[3;]×M[5;]
[4]
      DZ+#[1:]+D
[5]
      'DEATHS AT SEAT BELT USAGE ZERO PER MODEL YEAR ARE: ': 7 1 VDZ
[6]
      TDZ++/DZ
[7]
      'TOTAL DEATHS AT SEAT BELT USAGE ZERO IS: ': 8 1 VTDZ
[8]
      LS+DZ-M[1:]
[9]
     'LIVES SAVED PER MODEL YEAR ARE: '; 6 1 VLS
[10] TLS-85 YUL
[11] 'TOTAL LIVES SAVED IS: ': 8 1 TLS
[12] PS+TLS+TAD
[13] 'PERCENT OF LIVES SAVED IS: '; 5 2 #(100×PS)
[14] DVXY+DZ\times(1-((0.4\times M[6;])+(0.6\times M[7;])))
[15] 'DEATHS WITH A VARYING SEAT BELT USAGE RATE PER MODEL YEAR ARE: '; 8 1 VDVXY
[16] TDVXY + + / DVXY
[17] 'TOTAL DEATHS WITH VARYING SEAT BELT USAGE RATES IS: ': 9 1 VTDVXY
[18] DVXYA+M[1;]-DVXY
[19] 'DIFFERENCE BETWEBN ACTUAL DEATHS AND THOSE WITH VARYING BELT USAGE RATES PER MODEL YEAR ARE: '; 7 1 VDVXYA
[20] TDXYA+TAD-TDVXY
[21] 'TOTAL DIFFERENCE BETHEEN ACTUAL DEATHS AND THOSE WITH VARYING BELT USAGE RATES IS: ': 8 1 VTDXYA
[22] PDA+TDXYA+TAD
[23] 'PERCENT DIFFERENCE BETWEEN ACTUAL DEATHS AND THOSE WITH VARYING USAGE RATES IS: '; 5 2 V(100×PDA)
[24] DVXYO+DZ-DVXY
[25] 'DIFFERENCE BETWEEN DEATHS WITH USAGE RATE ZERO AND THOSE WITH VARYING RATES PER MY ARE: ': 6 1 VDVX10
[26] TDXYO+TDZ-TDVXY
[27] 'TOTAL DIFFERENCE BETWEEN DEATHS WITH ZERO USAGE RATE AND THOSE WITH VARYING RATES IS: '; 8 1 VTDXYO
[28] PDO+TDXYO+TDZ
[29] 'PERCENT DIFFERENCE BETWEEN DEATHS WITH VARYING USAGE RATES AND THOSE WITH ZERO USAGE RATE IS: '; 5 2 V(
      100×PD0)
[30] NM+M[8;],M[1;],M[2;],M[3;],M[4;],M[5;],M[6;],M[7;],DZ,LS,DVXY,DVXYA,DVXYO
[31] NMM+ 13 13 pMM
[32] MAMT+QMMM
[33] NL+(6 0 8 0 8 2 8 2 8 2 8 2 9 2 9 2 12 1 10 1 10 1 10 1 10 1) TMMMT
[34] TITLE+' MD
                      AD
                             URL
                                      URLS BEWLU BEWLSU
                                                                VRL
                                                                        VRLS
                                                                                                         DVXY
                                                                                                                 DVXY
                                                                                   DZ
                                                                                               LS
           DVXYO'
      A
[35] TH+ 4 116 p(232p' ').TITLE.116p' '
[36] EL1+'
          ----!
[37] NL1+NL,[1] EL1
[38] EL21+'
                 .
[39] EL22+ ', 6 0 VTAD
[40] BL23+'
[41] EL24+'
[42] EL25+'
                   .
[43] EL26+'
[44] EL27+'
[45] EL28+'
[46] EL29+'
               •, 8 1 ▼TDZ
[47] EL210+'
              ', 7 1 ▼TLS
              1, 8 1 ▼TDVXY
[48] EL211+'
               •, 7 1 ▼TDXYA
[49] EL212+"
[50] EL213+*
               . 7 1 VTDXYO
[51] EL2T+EL21,EL22,EL23,EL24,EL25,EL26,EL27,EL28,EL29,EL210,EL211,EL212,EL213
[52] NL2+NL1, [1] EL2T
[53] P+TM.[1] NL2
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AN EXAMPLE OF THE OUTPUT FOR PROGRAM (1)

LIVESSAVED IM TOTAL ACTUAL DEATHS ARE: 20976 DEATHS AT SEAT BELT USAGE ZERO PER MODEL YEAR ARE: 92.3 1270.5 2952.8 2689.4 2237.0 2045.5 2134.2 2202.4 2057.4 1771. 3 1797.9 1454.3 972.3 TOTAL DEATHS AT SEAT BELT USAGE ZERO IS: 23677.2 LIVES SAVED PER MODEL YEAR ARE: 20.3 279.5 826.8 403.4 170.0 155.5 162.2 167.4 156.4 106.3 107.9 87.3 58.3 TOTAL LIVES SAVED IS: 2701.2 PERCENT OF LIVES SAVED IS: 12.88

MD	AD	URL	URLS	BEWLU	BEWLSU	DZ	LS
1976	72	.10	.30	.40	.60	92.3	. 20.3
1975	991	.10	.30	.40	.60	1270.5	279.5
1974	2126	.10	.40	.40	.60	2952.8	826.8
1973	2286	.30	.05	.40	.50	2683.4	403.4
1972	2067	.10	.06	.40	.60	2237.0	170.0
1971	1890	.10	.06	.40	.60	2045.5	155.5
1970	1972	.10	.06	.40	.60	2134.2	162.2
1969	2035	.10	.06	.40	.60	2202.4	167.4
1968	1901	.10	.06	.40	.60	2057.4	156.4
1967	1665	.15	.00	.40	.60	1771.3	106.3
1966	1690	.15	.00	.40	.60	1797.9	107.9
1965	1367	.15	.00	.40	.60	1454.3	87.3
1964	914	.15	.00	.40	.60	972.3	58.3
	20976			•		23677.2	2701.2

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EXAMPLE 1 OF THE OUTPUT FOR PROGRAM (2)

LIVESSAVEDC IM

LIVESSAVEDC IN TOTAL ACTUAL DEATHS ARE: 20976 DEATHS AT SEAT BELT USAGE ZERO PER MODEL YEAR ARE: 92.3 1270.5 2952.8 2689.4 2237.0 2045.5 2134.2 2202.4 2057.4 1771. 3 1797.9 1454.8 972.3 TOTAL DEATHS AT SEAT BELT USAGE ZERO IS: 23677.2 LIVES SAVED PER MODEL YEAR ARE: 20.3 279.5 826.8 403.4 170.0 155.5 162.2 167.4 156.4 106.3 107.9 87.3 58.3 TOTAL LIVES SAVED IS: 2701.2 PERCENT OF LIVES SAVED IS: 12.88 DEATHS WITH A VARYING SEAT BELT USABE RATE PER MODEL YEAR ARE: 61.8 851.2 1978.4 2011.7 1673.3 1530.0 1596.4 1647.4 1538.9 1346.2 1366.4 1105.2 739.0 TOTAL DEATHS WITH VARYING SEAT BELT USAGE RATES IS: 17445.8 DIFFERENCE BETWEEN ACTUAL DEATHS AND THOSE WITH VARYING BELT USAGE RATES PER MODEL YEAR ARE: 10.2 139.8 147.6 274. 3 393,7 360.0 375,6 387.6 362.1 318.8 323.6 261.8 175.0 TOTAL DIFFERENCE BETWEEN ACTUAL DEATHS AND THOSE WITH VARYING BELT USAGE RATES IS: 3530.2 PERCENT DIFFERENCE BETYEEN ACTUAL DEATHS AND THOSE WITH VARYING USAGE RATES IS: 16.83 DIFFERENCE BETWEEN DEATHS WITH USAGE RATE ZERO AND THOSE WITH VARYING RATES PER MY ARE: 30.5 419.3 974.4 677.7 563.7 5 15.5 537.8 555.0 518.5 425.1 431.5 349.0 233.4 TOTAL DIFFERENCE BETWEEN DEATHS WITH ZERO USAGE RATE AND THOSE WITH VARYING RATES IS: 6231.3

PERCENT DIFFERENCE BETWEEN DEATHS WITH VARYING USAGE RATES AND THOSE WITH ZERO USAGE RATE IS: 26.32

MD	AD	URL	URLS	Bewlu	BEWLSU	<b>V</b> RL	VRLS	DZ	LS	DVXY	DVXYA	DVXYO
1976	72	.10	.30	.40	.60	.15	.45	92.3	20.3	61.8	10.2	30.5
1975	991	.10	.30	.40	.60	.15	.45	1270.5	279.5	851.2	139.8	419.3
1974	2126	.10	.40	.40	.60	.15	.45	2952.8	826.8	1978.4	147.6	974.4
1973	2286	.30	.05	.40	.60	.54	•06	2689.4	403.4	2011.7	274.3	677.7
1972	2067	.10	.06	.40	.60	.54	.06	2237.0	170.0	1673.3	393.7	563.7
1971	1890	.10	.06	.40	.60	.54	.06	2045.5	155.5	1530.0	360.0	515.5
1970	1972	.10	.06	.40	.60	.54	.06	2134.2	162.2	1596.4	375.6	537.8
1969	2035	.10	.06	.40	.60	.54	.06	2202.4	167.4	1647.4	387.6	555.0
1968	1901	. 10	.06	.40	.60	.54	.06	2057.4	156.4	1538.9	352.1	518.5
1967	1665	.15	.00	.40	.60	.60	.00	1771.3	106.3	1346.2	318.8	425.1
1956	1690	.15	.00	.40	.60	.60	.00	1797.9	107.9	1366.4	323.6	431.5
1965	1367	.15	.00	.40	.60	.60	.00 .	1454.3	87.3	1105.2	261.8	349.0
1964	914	.15	.00	.40	.60	.60	.00	972.3	58.3	739.0	175.0	233.4
	20976							23677.2	2701.2	17445.8	3530.2	6231.3

#### EXAMPLE 2 OF THE OUTPUT FOR PROGRAM (2)

LIVESSAVEDC IM80 TOTAL ACTUAL DEATHS ARE: 20976 DEATHS AT SEAT BELT USAGE ZERO PER MODEL YEAR ARE: 92.3 1270.5 2952.8 2689.4 2237.0 2045.5 2134.2 2202.4 2057.4 1771. 3 1797.9 1454.3 972.3 TOTAL DEATHS AT SEAT BELT USAGE ZERO IS: 23677.2 LIVES SAVED PER MODEL YEAR ARE: 20.3 279.5 826.8 403.4 170.0 155.5 162.2 167.4 156.4 106.3 107.9 87.3 58.3 TOTAL LIVES SAVED IS: 2701.2 PERCENT OF LIVES SAVED IS: 12.88 DEATHS WITH A VARYING SEAT BELT USAGE RATE PER MODEL YEAR ARE: 50.8 698.8 1624.0 1796.5 1494.3 1366.4 1425.5 1471.2 1374.3 1204.5 1222.6 988.9 661.2 TOTAL DEATHS WITH VARYING SEAT BELT USAGE RATES IS: 15379.1 DIFFERENCE BETWEEN ACTUAL DEATHS AND THOSE WITH VARYING BELT USAGE RATES PER MODEL YEAR ARE: 21.2 292,2 502.0 489. 5 572.7 523.6 546.4 563.8 526.7 460.5 467.4 378.1 252.8 TOTAL DIFFERENCE BETHEEN ACTUAL DEATHS AND THOSE WITH VARYING BELT USAGE RATES IS: 5595.9 PERCENT DIPFERENCE BETWEEN ACTUAL DEATHS AND THOSE WITH VARYING USAGE RATES IS: 26.68 DIFFERENCE BETWEEN DEATHS WITH USAGE RATE ZERO AND THOSE WITH VARYING RATES PER MY ARE: 41.5 571.71328.7 892.9 742.7 6 79.1 708.6 731.2 683.0 566.8 575.3 465.4 311.1

TOTAL DIPPERENCE BETHEEN DEATHS WITH ZERO USAGB RATE AND THOSE WITH VARYING RATES IS: 8298.1 PERCENT DIPPERENCE BETHEEN DEATHS WITH VARYING USAGE RATES AND THOSE WITH ZERO USAGE RATE IS: 35.05

MD	AD	URĹ	URLS	BEWLU	BBWLSU	VRL	VRLS	DZ	LS	DVXY	DVXYA	DVXYO
1976	72	.10	.30	.40	.60	.15	.65	92.3	20.3	50.8	21.2	41.5
1975	991	.10	.30	.40	.60	.15	.65	1270.5	279.5	698.8	292.2	571.7
1974	2126	.10	.40	.40	.60	.15	.65	2952.8	826.8	1524.0	502.0	1328.7
1973	2286	.30	.05	.40	.60	.74	.06	2689.4	403.4	1796.5	489.5	892.9
1972	2067	.10	.06	.40	.60	.74	.06	2237.0	170.0	1494.3	572.7	742.7
1971	1890	.10	.06	.40	.60	.74	.06	2045.5	155.5	1366.4	523.6	679.1
1970	1972	.10	.06	.40	.60	.74	.06	2134.2	162.2	1425.6	546.4	708.6
1969	2035	.10	.06	.40	.60	.74	.06	2202.4	167.4	1471.2	563.8	731.2
1968	1901	.10	.06	.40	.60	.74	.06	2057.4	156.4	1374.3	526.7	683.0
1967	1665	.15	.00	.40	.60	.80	.00	1771.3	106.3	1204.5	460.5	565.8
1966	1690	.15	.00	.40	.60	.80	00	1797.9	107.9	1222.6	467.4	575.3
1965	1367	.15	.00	.40	.60	.80	.00	1454.3	87.3	988.9	378.1	465.4
1964	914	.15	.00	.40	.60	.80	.00	972.3	58.3	661.2	252.8	311.1
	20976							23677.2	2701.2	15379.1	5596.9	8298.1

# EXAMPLE 3 OF THE OUTPUT FOR PROGRAM (2)

DEATHS AT SEAT BELT USAGE ZERO PER MODEL YEAR ARE: 92.3 1270.5 2952.8 2689.4 2237.0 2045.5 2134.2 2202.4 2057.4 1771. 3 1797.9 1454.3 972.3 TOTAL DEATHS AT SEAT BELT USAGE ZERO IS: 23677.2 LIVES SAVED FER MODEL YEAR ARE: 20.3 279.5 826.8 403.4 170.0 155.5 162.2 167.4 156.4 106.3 107.9 87.3 58.3 TOTAL LIVES SAVED IS: 2701.2 PERCENT OF LIVES SAVED IS: 12.88 DEATHS WITH A VARYING SEAT BELT USAGE RATE PER MODEL YEAR ARE: 39.7 546.3 1269.7 1581.4 1315.4 1202.7 1254.9 1295.0 1209.7 1062.8 1078.7 872.6 583.4 TOTAL DEATHS WITH VARYING SEAT BELT USAGE RATES IS: 13312.3 DIFFERENCE BETWEEN ACTUAL DEATHS AND THOSE WITH VARYING BELT USAGE RATES PER MODEL YEAR ARE: 32.3 444.7 856.3 704. 6 751.6 687.3 717.1 740.0 691.3 602.2 611.3 494.4 330.6 TOTAL DIFFERENCE BETWEEN ACTUAL DEATHS AND THOSE WITH VARYING BELT USAGE RATES IS: 7663.7

PERCENT DIFFERENCE BETWEEN ACTUAL DEATHS AND THOSE WITH VARYING USAGE RATES IS: 36.54 DIFFERENCE BETWEEN DEATHS WITH USAGE RATE ZERO AND THOSE WITH VARYING RATES PER MY ARE: 52.6 724.21683.11108.0 921.6 8

42.7 879.3 907.4 847.6 708.5 719.1 581.7 388.9 TOTAL DIFFERENCE BETWEEN DEATHS WITH ZERO USAGE RATE AND THOSE WITH VARYING RATES IS: 10364.9 PERCENT DIFFERENCE BETWEEN DEATHS WITH VARYING USAGE RATES AND THOSE WITH ZERO USAGE RATE IS: 43.78

LIVESSAVEDC IMTOO TOTAL ACTJAL DEATHS ARE: 20976

MD	AD	URL	URLS	Bewlu	B <b>ew</b> lsu	VRL	VRLS	DZ	LS	DVXY	DVXYA	DVXYO
1976	72	.10	.30	.40	.60	.15	.85	92.3	20.3	39.7	32.3	52.6
1975	991	.10	.30	.40	.60	.15	.85	1270.5	279.5	546.3	444.7	724.2
1974	2126	.10	.40	.40	.60	.15	.85	2952.8	826.8	1269.7	856.3	1683.1
1973	2286	.30	.05	.40	.60	.94	.06	2689.4	403.4	1581.4	704.6	1108.0
1972	2067	.10	.06	.40	.60	.94	.06	2237.0	170.0	1315.4	751.6	921.6
1971	1890	.10	.06	.40	.60	.94	.06	2045.5	155.5	1202.7	687.3	842.7
1970	1972	.10	.06	.40	.60	.94	.06	2134.2	162.2	1254.9	717.1	879.3
1969	2035	.10	.06	.40	.60	.94	.06	2202.4	167.4	1295.0	740.0	907.4
1968	1901	.10	.06	.40	.60	.94	.06	2057.4	156.4	1209.7	691.3	847.6
1967	1665	.15	.00	.40	.60	1.00	. 00	1771.3	106.3	1062.8	602.2	708.5
1966	1690	.15	.00	.40	.60	1.00	.00	1797.9	107.9	1078.7	611.3	719.1
1965	1367	.15	.00	.40	.60	1.00	.00	1454.3	87.3	872.6	494.4	581.7
1964	914	.15	.00	.40	.60	1.00	.00	972.3	58.3	583.4	330.6	388.9
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	20976							23677.2	2701.2	13312.3	7663.7	10364.9