

SUPERIOR ...
BY EVERY STANDARD
OF COMPARISON

600 East Wayne Street
P.O. Box 1981
Lima, OH 45802
Phone 419/222-1501

B 8/4/87 ndg

ORIGINAL

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18 pgs

July 9, 1987



**SUPERIOR
COACHES**

National Highway Traffic Safety Administration
Attn: Patti Gardner, Program Analyst, Room 5307
Office of Vehicle Safety Standards, NRM-11
400 Seventh Street, S.W.
Washington, D.C. 20590

Dear Patti:

Enclosed is a copy of our Export VIN Construction Manual. The second section (VDS) has been updated to incorporate the engine displacement and the restraint systems of the listed vehicles. This should bring it in line with the reporting requirements of MVSS 115 as mentioned in your letter of June 9, 1987.

Sincerely,

Donald H. Cox

Donald H. Cox

DC:sm

cc: Frank Norris, Jr.
Ron Benedict
Joe Bunn
Gordon Misch
Dewayne Thompson

A SPECIALTY VEHICLE GROUP COMPANY • BUILDERS OF THE WORLD'S FINEST SPECIALTY VEHICLES
S & S COACH COMPANY CAR CRAFT COMPANY COMPLIMENT VANS ARMBRUSTER/STAGEWAY LIMOUSINES

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EXPORT VEHICLE
VIN CONSTRUCTION

Revised 7/8/87

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EXPORT VEHICLE VIN CONSTRUCTION

Each Vehicle Identification Number (VIN) shall consist of seventeen (17) characters.

A check digit shall be part of each VIN. The check digit shall appear in position nine (9) of the VIN on the vehicle and on any transfer documents containing the VIN and prepared by the manufacturer to be given to the first owner for purposes other than resale.

Each character in each VIN shall be one of the Arabic or Roman letters set forth in Table I.

TABLE I

Numbers:

1234567890.....

Letters:

ABCDEFGHIJ KLMNPRSTUVWXYZ.....

ALL SPACES PROVIDED FOR IN THE VIN MUST BE OCCUPIED BY A CHARACTER SPECIFIED IN TABLE I

The seventeen (17) characters of the VIN are arranged in four (4) sections.

<u>First Section</u>	<u>Second Section</u>	<u>Third Section</u>	<u>Fourth Section</u>
<u>000</u> WMI	<u>00000</u> VDS	<u>0</u> CHECK	<u>00000000</u> VIS

WMI - World Manufacturer Identifier - characters for this section are assigned to us by Society of Automotive Manufacturers (SAE) and consists of three (3) characters.

VDS - Vehicle Description Section - consists of five (5) characters. Alphabetic numeric characters of the manufacturer's choice. This section identifies the general attributes of the vehicle. Table II Car Line/Series, positions 4-5. Table III Body Type/restraint system, positions 6-7. Table IV Engine Codes, position 8.

CD - Check Digit - consists of one numeric character, developed by mathematical computation.

TABLE II
 MAKE/CAR LINE
 VIN - POSITION #4 & #5

VIN CODE	MAKE	CAR LINE			
		CADILLAC	BUICK	MERCEDES	LINCOLN
SC	SUPERIOR COACHES	C			
AC	ARMBRUSTER/STAGEWAY	C			
AM	ARMBRUSTER/STAGEWAY			M	
AL	ARMBRUSTER/STAGEWAY				L
AB	ARMBRUSTER/STAGEWAY		B		
SM	SUPERIOR COACHES			M	

TABLE III
 BODY TYPE/RESTRAINT SYSTEM
 VIN - POSITION #6 & #7

VIN CODE	BODY TYPE	RESTRAINT	
		MANUAL	
F1	FUNERAL CAR	1	
G1	FIRST CALL	1	
L1	LIMOUSINE	1	
N1	SKI CRUISER	1	

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TABLE IV
ENGINE CODES
VIN - POSITION #8

VIN CODES	DISP. LITRES	CAR LINE
B	2.3	MERCEDES
C	2.5	MERCEDES
D	3.0	MERCEDES
E	4.2	MERCEDES
F	5.6	MERCEDES
G	4.1	CADILLAC FWD
H	5.0	BUICK RWD
J	5.0	LINCOLN RWD

VIS - Vehicle Indicator Section - This is the last section of the VIN and consists of eight (8) characters; the last four shall be numeric. The first character of the VIS indicates the model year of the vehicle, see Table V. The second character indicates the manufacturing plant, see Table VI.

The third, fourth and fifth characters are assigned by SAE to manufacturers of less than 500 vehicles (Armbuster Stageway) per year. The sixth, seventh and eighth characters are the manufacturers sequential numbers.

The third through eighth characters of the VIS for manufacturers of over 500 vehicles per year (Superior Coaches) are the sequential numbers of the vehicles.

TABLE V

Year	Code	Year	Code	Year	Code	Year	Code
1971	1	1981	B	1991	M	2001	1
1972	2	1982	C	1992	N	2002	2
1973	3	1983	D	1993	P	2003	3
1974	4	1984	E	1994	R	2004	4
1975	5	1985	F	1995	S	2005	5
1976	6	1986	G	1996	T	2006	6
1977	7	1987	H	1997	V	2007	7
1978	8	1988	J	1998	W	2008	8
1979	9	1989	K	1999	X	2009	9
1980	A	1990	L	2000	Y	2010	A

TABLE VI

NEOX, INC. PLANT CODE
VIN POSITION #11

- 1 - SUPERIOR COACHES - LIMA, OH (FUNERAL CARS)
- 2 - ARMBRUSTER STAGEWAY - LIMA, OH (LIMOUSINES)
- 3 - ARMBRUSTER STAGEWAY - FT. SMITH, ARK. (LIMOUSINES)

CHECK DIGIT PROCEDURE

POSITION #9

A check digit shall be provided as part of each vehicle identification number. The check digit shall occupy the ninth position in the vehicle identification number and appear as part of the number on the vehicle and on any documents containing the vehicle identification number.

The check digit is determined by carrying out the mathematical computation as follows:

- 1) Assign to each number in the vehicle identification number its actual mathematical value and assign to each letter the value specified in the Table VII.
- 2) Multiply the assigned value for each position in the vehicle identification number by the weight factor specified in Table VIII.

TABLE VII

A = 1	J = 1	T = 3
B = 2	K = 2	U = 4
C = 3	L = 3	V = 5
D = 4	M = 4	W = 6
E = 5	N = 5	X = 7
F = 6	P = 7	Y = 8
G = 7	R = 9	Z = 9
H = 8	S = 2	

TABLE VIII

POSITION AND WEIGHT FACTOR			
1ST	8	10TH	9
2ND	7	11TH	8
3RD	6	12TH	7
4TH	5	13TH	6
5TH	4	14TH	5
6TH	3	15TH	4
7TH	2	16TH	3
8TH	10	17TH	2
9TH	0		

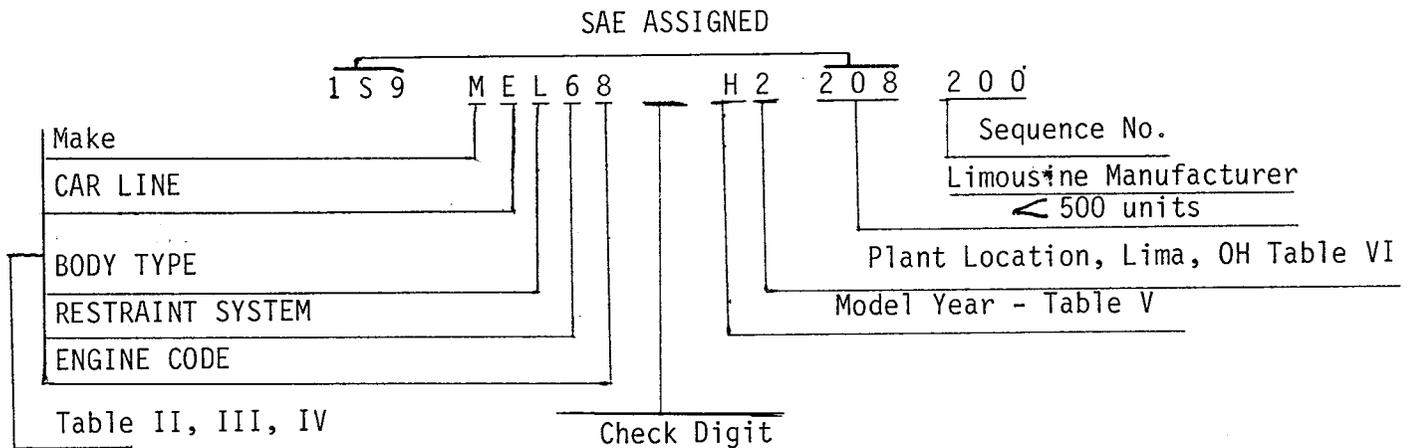
- 3) Add the resulting products and divide the total by eleven (11).
- 4) The remainder is the check digit which appears in the ninth position of the VIN. Decimal remainders equal the check digit as shown below:

WITH CALCULATOR

.09 = 1	.54 = 6
.18 = 2	.63 = 7
.27 = 3	.72 = 8
.36 = 4	.81 = 9
.45 = 5	.90 = x
	.00 = 0

EXAMPLE

Armbruster Stageway - European Limousine



POSITION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
VIN	1	S	9	A	M	L	1	C	---	H	2	2	0	8	2	0	0	
VALUE	1	2	9	1	4	3	1	3		8	2	2	0	8	2	0	0	
Multiply By WT FACTOR		8	7	6	5	4	3	2	10	0	9	8	7	6	5	4	3	2
ADD PRODUCTS		8	14	54	5	16	9	2	30	0	72	16	14	0	40	8	0	0
DIVIDE BY 11		296 ÷ 11 = 26.90 = x check digit enter in position 9 in VIN																

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Further examples of VIN's are charted below for Armbruster Stageway Limousine Ski Cruiser, Superior Coaches Funeral Coach and Superior Coaches First Call Car. In each case the first sequence number assigned to that type of vehicle was used in the calculation of the VIN check digit.

ARMBRUSTER STAGEWAY - SKI CRUISER

VIN	1	S	9	A	M	N	1	C	H	2	2	0	8	5	0	0		
VALUE	1	2	9	1	4	5	1	3	0	8	2	2	0	8	5	0	0	
FACTOR	8	7	6	5	4	3	2	10	0	9	8	7	6	5	4	3	2	
PRODUCT	8	14	54	5	16	15	2	30	0	72	16	14	0	40	20	0	0	= 306

$306 \div 11 = 27.81 = 9$ check digit, enter in position 9 in VIN

SUPERIOR COACHES - FUNERAL CAR

VIN	4	1	S	S	M	F	1	C	H	1	0	0	3	7	0	0		
VALUE	4	1	2	2	4	6	1	3	8	1	0	0	3	7	0	0		
FACTOR	8	7	6	5	4	3	2	10	0	9	8	7	6	5	4	3	2	
PRODUCT	32	7	12	10	16	18	2	30	0	72	8	0	0	15	28	0	0	= 250

$250 \div 11 = 22.72 = 8$ check digit, enter in position 9 in VIN

SUPERIOR COACHES - FIRST CALL CAR

VIN	4	1	S	S	M	G	1	C	H	1	0	0	3	3	0	0		
VALUE	4	1	2	2	4	7	1	3	8	1	0	0	3	3	0	0		
FACTOR	8	7	6	5	4	3	2	10	0	9	8	7	6	5	4	3	2	
PRODUCT	32	7	12	10	16	21	2	30	0	72	8	0	0	15	12	0	0	= 237

$237 \div 11 = 21.54 = 6$ check digit, enter in position 9 in VIN

ARMBRUSTER STAGEWAY - LIMOUSINE

VIN	1	S	9	A	C	L	1	G	H	3	2	0	8	0	9	5		
VALUE	1	2	9	1	3	3	1	7	8	3	2	0	8	0	9	5		
FACTOR	8	7	6	5	4	3	2	10	0	9	8	7	6	5	4	3	2	
PRODUCT	8	14	54	5	12	9	2	70	0	72	24	14	0	40	0	27	10	= 371

$371 \div 11 = 33.72 = 8$ CHECK DIGIT ENTER IN POSITION 9 IN VIN

SUPERIOR . . .
BY EVERY STANDARD
OF COMPARISON

600 East Wayne Street
P.O. Box 1981
Lima, OH 45802
Phone 419/222-1501



**SUPERIOR
COACHES**

March 27, 1987

Administer, National Highway
Traffic Safety
400 Seventh Street, S. W.
Washington, D. C. 20590

Attn: VIN Coordinator

Dear Sir:

Superior Coaches and Armbruster/Stageway, companies of NEOAX, Inc. plan to build funeral cars and limousines, for export, converting the following domestic vehicles: Cadillac, Buick and Lincoln. In addition to above, they also plan to convert Toyota vehicles for export.

A revised page 2 of our VIN Construction Manual is enclosed. It reflects these additions.

A page 6 is being added to the manual showing the construction of the VIN of the Cadillac limousine which is in the process of build. As the other makes are started the first VIN for each will be added to this sheet.

Sincerely,


Donald H. Cox

DHC:db

cc: Frank Norris, Jr.
Ron Benedict (2 copies)
Gordon Misch
Joe Bunn
Dewayne Thompson

Enclosure

A SPECIALTY VEHICLE GROUP COMPANY • BUILDERS OF THE WORLD'S FINEST SPECIALTY VEHICLES
S & S COACH COMPANY CAR CRAFT COMPANY COMPLIMENT VANS ARMBRUSTER/STAGEWAY LIMOUSINES

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TABLE II

Value	Letters	Identification	Position in VIN
1	A	Cadillac FWD*	4th Position
2	B	Buick FWD*	4th Position
3	C		
4	D	Lincoln RWD*	4th Position
5	E	European	5th Position
6	F	Funeral Car	6th Position
7	G	First Call Car	7th Position
8	H	Model Year	10th Position
1	J		
2	K		
3	L	Limousine	6th Position
4	M	Mercedes	4th Position
5	N	Ski Cruiser	7th Position
7	P	11 Passenger*	8th Position
9	R		
2	S		
3	T	Toyota*	4th Position
4	U		
5	V		
6	W		
7	X		
8	Y		
9	Z		

VIS - Vehicle Indicator Section - This is the last section of the VIN and consists of eight (8) characters; the last four shall be numeric. The first character of the VIS indicates the model year of the vehicle, see Table III. The second character indicates the manufacturing plant, see Table IV.

The third, fourth and fifth characters are assigned by SAE to manufacturers of less than 500 vehicles (Armbruster Stageway) per year. The sixth, seventh and eighth characters are the manufacturers sequential numbers.

The third through eighth characters of the VIS for manufacturers of over 500 vehicles per year (Superior Coaches) are the sequential numbers of the vehicles.

*Added 3/19/87
 *FWD - Front Wheel Drive
 *RWD - Rear Wheel Drive

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ARMBRUSTER STAGEWAY EUROPEAN LIMOUSINE - CADILLAC FWD

VIN	1	S	9	A	E	L	6	P	5	H	3	2	0	8	0	9	5	
VALUE	1	2	9	1	5	3	6	7	0	8	3	2	0	8	0	9	5	
FACTOR	8	7	6	5	4	3	2	10	0	9	8	7	6	5	4	3	2	
PRODUCT	8	14	54	5	20	9	12	70	0	72	24	14	0	40	0	27	10	= 379

$379 \div 11 = 44.45 = 5$ CHECK DIGIT, ENTER IN POSITION 9 IN VIN

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Bmt

**SUPERIOR ...
BY EVERY STANDARD
OF COMPARISON**

600 East Wayne Street
P.O. Box 1981
Lima, OH 45802
Phone 419/222-1501

January 21, 1987



**SUPERIOR
COACHES**

Administrator, National Highway
Traffic Safety
400 Seventh Street, S. W.
Washington, D.C. 20590

Attn: VIN Coordinator

Dear Sir:

Superior Coaches and Armbruster Stageway are converting dropped shipped vehicles from European dealers.

Superior Coaches converts the vehicles into Funeral Cars for European use. Armbruster Stageway converts the vehicles into limousines for European use.

Both of above are companies of NEOAX, Inc.

Enclosed is a copy of the Mercedes VIN Construction Manual prepared for those people in the two companies that will use the VIN on documents and the vehicles plate.

The document contains the VIN for the first vehicle of each of the four types that will be converted by these companies.

In the event that some item has been overlooked please contact me.

Sincerely,

Donald H. Cox

Donald H. Cox

DHC:db

cc: Frank Norris, Jr.
Ron Benedict
Gordon Misch
Joe Bunn
Dewayne Thompson

Enclosure

A SPECIALTY VEHICLE GROUP COMPANY • BUILDERS OF THE WORLD'S FINEST SPECIALTY VEHICLES
S & S COACH COMPANY CAR CRAFT COMPANY COMPLIMENT VANS ARMBRUSTER/STAGEWAY LIMOUSINES

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MERCEDES VIN
CONSTRUCTION

MERCEDES VIN CONSTRUCTION

Each Vehicle Identification Number (VIN) shall consist of seventeen (17) characters.

A check digit shall be part of each VIN. The check digit shall appear in position nine (9) of the VIN on the vehicle and on any transfer documents containing the VIN and prepared by the manufacturer to be given to the first owner for purposes other than resale.

Each character in each VIN shall be one of the Arabic or Roman letters set forth in Table 1.

TABLE I

Numbers:

1234567890.....

Letters:

ABCDEFGHIJKLMNPRSTUVWXYZ.....

ALL SPACES PROVIDED FOR IN THE VIN MUST BE OCCUPIED BY A CHARACTER SPECIFIED IN TABLE I

The seventeen (17) characters of the VIN are arranged in three (3) sections.

<u>First Section</u>	<u>Second Section</u>	<u>Third Section</u>
<u>000</u>	<u>000000</u>	<u>00000000</u>
WMI	VDS	VIS

WMI - World Manufacturer Identifier - characters for this section are assigned to us by Society of Automotive Manufacturers (SAE) and consists of three (3) characters.

VDS - Vehicle Description Section consists of six characters. Alphabetic or numeric characters of the manufacturers choice. This section identifies the general attributes of the vehicle. Table II lists the letters used in the VIN, the value assigned to each letter, the identification and position in the VIN of each letter used in the VIN by the manufacturer.

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TABLE II

Value	Letters	Identification	Position in VIN
1	A		
2	B		
3	C		
4	D		
5	E - European		5th Position
6	F - Funeral Car		6th Position
7	G - First Call Car		7th Position
8	H - Model Year		10th Position
1	J		
2	K		
3	L - Limousine		6th Position
4	M - Mercedes		4th Position
5	N - Ski Cruiser		7th Position
7	P		
9	R		
2	S		
3	T		
4	U		
5	V		
6	W		
7	X		
8	Y		
9	Z		

VIS - Vehicle Indicator Section - This is the last section of the VIN and consists of eight (8) characters; the last four shall be numeric. The first character of the VIS indicates the model year of the vehicle, see Table III. The second character indicates the manufacturing plant, see Table IV.

The third, fourth and fifth characters are assigned by SAE to manufacturers of less than 500 vehicles (Armbruster Stageway) per year. The sixth, seventh and eighth characters are the manufacturers sequential numbers.

The third through eighth characters of the VIS for manufacturers of over 500 vehicles per year (Superior Coaches) are the sequential numbers of the vehicles.

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TABLE III

Table — Characters used for designating the year

Year	Code	Year	Code	Year	Code	Year	Code
1971	1	1981	B	1991	M	2001	1
1972	2	1982	C	1992	N	2002	2
1973	3	1983	D	1993	P	2003	3
1974	4	1984	E	1994	R	2004	4
1975	5	1985	F	1995	S	2005	5
1976	6	1986	G	1996	T	2006	6
1977	7	1987	H	1997	V	2007	7
1978	8	1988	J	1998	W	2008	8
1979	9	1989	K	1999	X	2009	9
1980	A	1990	L	2000	Y	2010	A

TABLE IV

NEOAX, INC. PLANT CODE
VIN POSITION #11

- 1 - SUPERIOR COACHES - LIMA, OH (FUNERAL CARS)
- 2 - ARMBRUSTER STAGEWAY - LIMA, OH (LIMOUSINES)
- 3 - ARMBRUSTER STAGEWAY - FT. SMITH, ARK. (LIMOUSINES)

CHECK DIGIT PROCEDURE

POSITION #9

A check digit shall be provided as part of each vehicle identification number. The check digit shall occupy the ninth position in the vehicle identification number and appear as part of the number on the vehicle and on any documents containing the vehicle identification number.

The check digit is determined by carrying out the mathematical computation as follows:

- 1) Assign to each number in the vehicle identification number its actual mathematical value and assign to each letter the value specified in the Table II.
- 2) Multiply the assigned value for each position in the vehicle identification number by the weight factor specified in the following table.

POSITION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
VIN	1	S	9	M	E	L	6	8	---	H	2	2	0	8	2	0	0
VALUE	1	2	9	4	5	3	6	8		8	2	2	0	8	2	0	0
Multiply By WT FACTOR	8	7	6	5	4	3	2	10	0	9	8	7	6	5	4	3	2
ADD PRODUCTS	8	14	54	20	20	9	12	80	0	72	16	14	0	40	8	0	0

DIVIDE BY 11 $367 \div 11 = 33.36 = 4$ check digit enter in position 9 in VIN

Further examples of VIN's are charted below for Armbruster Stageway Limousine Ski Cruiser, Superior Coaches European Funeral Coach and Superior Coaches European First Call Car. In each case the first sequence number assigned to that type of vehicle was used in the calculation of the VIN check digit.

ARMBRUSTER STAGEWAY EUROPEAN LIMOUSINE - SKI CRUISER

VIN	1	S	9	M	E	L	N	0		H	2	2	0	8	5	0	0
VALUE	1	2	9	4	5	3	5	0	0	8	2	2	0	8	5	0	0
FACTOR	8	7	6	5	4	3	2	10	0	9	8	7	6	5	4	3	2
PRODUCT	8	14	54	20	20	9	10	0	0	72	16	14	0	40	20	0	0 = 447

$447 \div 11 = 40.63 = 7$ check digit, enter in position 9 in VIN

SUPERIOR COACHES - FUNERAL CAR - EUROPEAN COACH

VIN	4	1	S	M	E	F	0	0		H	1	0	0	3	7	0	0
VALUE	4	1	2	4	5	6	0	0		8	1	0	0	3	7	0	0
FACTOR	8	7	6	5	4	3	2	10	0	9	8	7	6	5	4	3	2
PRODUCT	32	7	12	20	20	18	0	0	0	72	8	0	0	15	28	0	0 = 232

$232 \div 11 = 21.09 = 1$ check digit, enter in position 9 in VIN

SUPERIOR COACHES - FUNERAL CAR - EUROPEAN FIRST CALL CAR

VIN	4	1	S	M	E	F	G	0		H	1	0	0	3	3	0	0
VALUE	4	1	2	4	5	6	7	0		8	1	0	0	3	3	0	0
FACTOR	8	7	6	5	4	3	2	10	0	9	8	7	6	5	4	3	2
PRODUCT	32	7	12	20	20	18	14	0	0	72	8	0	0	15	12	0	0 = 230

$230 \div 11 = 20.90 = x$ check digit, enter in position 9 in VIN

POSITION AND WEIGHT FACTOR			
1ST	8	10TH	9
2ND	7	11TH	8
3RD	6	12TH	7
4TH	5	13TH	6
5TH	4	14TH	5
6TH	3	15TH	4
7TH	2	16TH	3
8TH	10	17TH	2
9TH	0		

- 3) Add the resulting products and divide the total by eleven (11).
- 4) The remainder is the check digit which appears in the ninth position of the VIN. Decimal remainders equal the check digit as shown below:

WITH CALCULATOR

.09 = 1	.54 = 6
.18 = 2	.63 = 7
.27 = 3	.72 = 8
.36 = 4	.81 = 9
.45 = 5	.90 = X
	.00 = 0

EXAMPLE

Armbruster Stageway - European Limousine 6-Door, 8 Passenger

