

Aztec Trailer, Inc.

WORKSHEET: CHECK DIGIT CALCULATION

B=Ball

U=Utility Trailer

CHARACTER POSITION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
ACTUAL V.I.N	1	A	9	B	U						U	7	1	5				
CONVERTED VALUES																		
MULTIPLIER	8	7	6	5	4	3	2	10	0	9	8	7	6	5	4	3	2	
PRODUCT (VALUES X MULTIPLIER)																		
																		SUM OF PRODUCTS

CONVERSION TABLE LETTERS TO NUMBERS

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

CHECK DIGIT COMPUTATION

SUM OF PRODUCTS (FROM ABOVE)	DIVIDED BY	EQUALS	
		WHOLE NUMBER	DECIMAL
	11		
EXAMPLE			
247	11	22	.4545
BECAUSE THE DECIMAL IS .45, YOU SHOULD CHOOSE THE CHECK DIGIT AS 5, AS SHOWN IN THE CHECK DIGIT TABLE.			

CHECK DIGIT

IF THE DECIMAL IS	THE CHECK DIGIT IS
.09	1
.18	2
.27	3
.36	4
.45	5
.54	6
.63	7
.72	8
.81	9
.90	X
.00	0

CHECK DIGIT CALCULATIONS

CHECK DIGIT

CHARACTER
ACTUAL VIN
CONVERTED VALUES
From TABLE A (below)
MULTIPLIER (X)
PRODUCT
(Value x multiplier)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
8	7	6	5	4	3	2	10	0	9	8	7	6	5	4	3	2

Sum
Of
PRODUCTS

	SUM OF PRODUCTS		WHOLE NUMBER		DECIMAL
	=				
DIVIDED BY 11					

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

ALPHABETIC TO NUMERIC CONVERSION VALUES

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

Table A

NOTE: Numerical characters from actual VIN are used in check digit calculation. Alphabetical characters are converted to numerical, according to TABLE A values.

TABLE B

EXAMPLE:

ABC Trailers, Inc. builds a flat bed standard series trailer with a 16 foot bed length on two axles at a plant in Cleveland, Ohio. What is the VIN coding for this trailer?

Since ABC manufactures less than 500 units per year. SAE assigned ABC a six digit number as follows: 1A9/347. (1A9 goes in columns 1-3 and 347 goes in columns 12-14). ABC has elected to code body type in column 4, series in column 5, length in columns 6 and 7 and number of axles in column 8. (The characters utilized and their placements are determined by the manufacturer, but must include all required attributes for vehicle type). ABC's coding for vehicle attributes are: Type—F=flatbed. U=utility; Series/body type—S=standard. P=special; Length—actual overall bed length in feet (08, 12, 16, etc) and number of axles—1=single, 2=tandem, etc. The letter F designates the 1985 model year and ABC uses the letter C for the location at their only plant in Cleveland.

CHECK DIGIT

CHARACTER
ACTUAL VIN
CONVERTED
FROM TABLE A
MULTIPLIER (X)
PRODUCT
(Value x multiplier)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	A	9	F	S	1	6	2	5	F	C	3	4	7	0	0	1
1	1	9	6	2	1	6	2	0	6	3	3	4	7	0	0	1
8	7	6	5	4	3	2	10	0	9	8	7	6	5	4	3	2
8	7	54	30	8	3	12	20	0	54	24	21	24	35	0	0	2

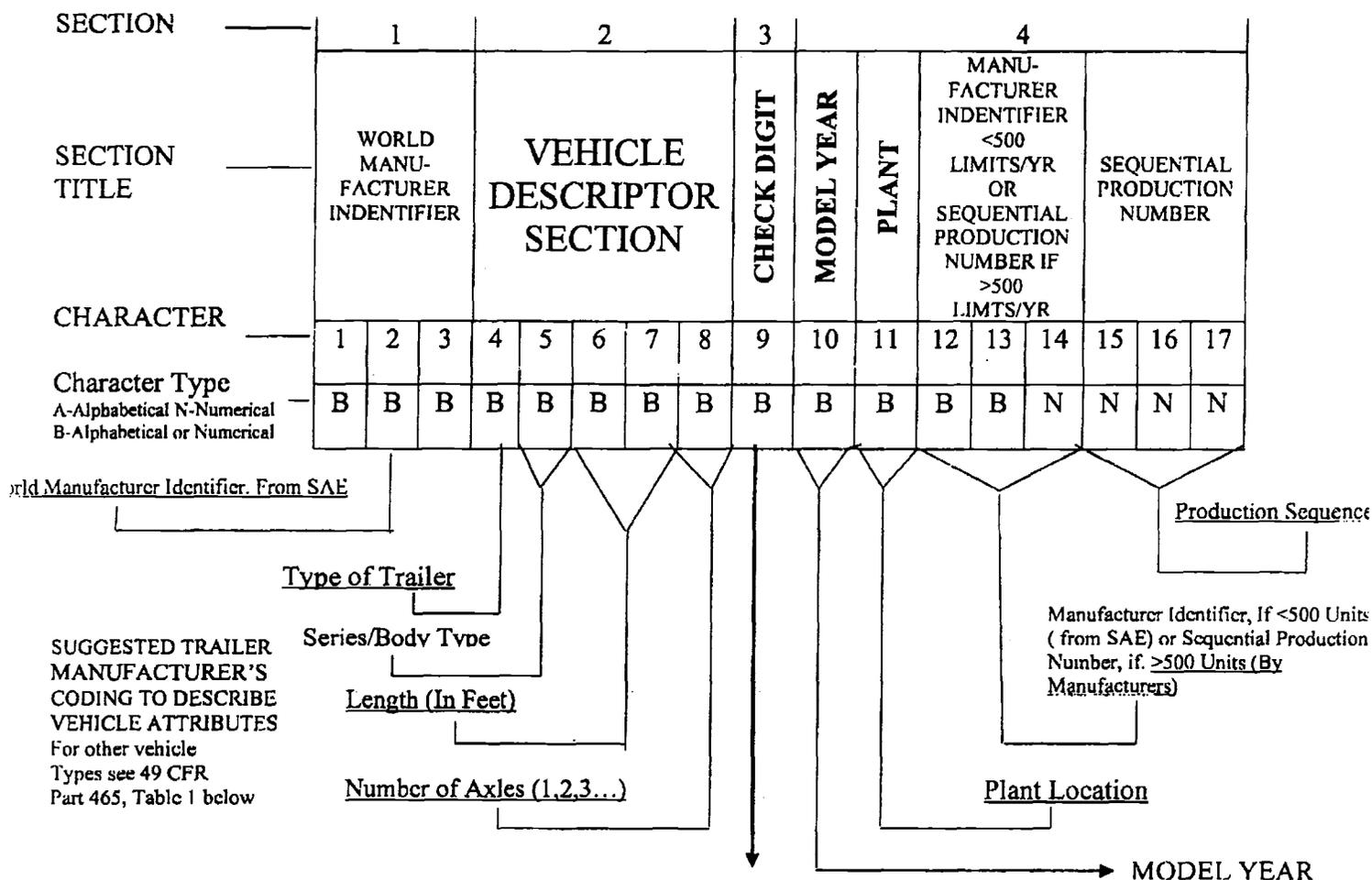
SUM
OF
PRODUCTS

302	SUM OF PRODUCTS		WHOLE NUMBER		DECIMAL
DIVIDED 11 BY		=	27	.	45

Since the check digit calculation for ABC Trailers resulted in a decimal value of .45, Table B shows that the check digit is 5. The value 5, placed in position 9 of the actual VIN, completes the 17 digit VIN requirements.

VEHICLE IDENTIFICATION NUMBER

VEHICLE TYPE: TRAILER



SUGGESTED TRAILER MANUFACTURER'S CODING TO DESCRIBE VEHICLE ATTRIBUTES
For other vehicle Types see 49 CFR Part 465, Table 1 below

Table 1—Type of Vehicle and Information Decipherable

- Passenger car: Line series, body type, engine type, and restraint system type.
- Multi purpose passenger vehicle: Line series, body type, engine type, gross vehicle weight rating.
- Truck: Model or line, series, chassis, cab type, engine type, brake system and gross vehicle weight rating.
- Bus: model or line, series, body type, engine type, and brake system.
- Trailer, including trailer kit: Type of trailer, series, body type, length, and axle configuration.
- Motorcycle: Type of motorcycle, line, engine type, and net brake horsepower.
- Incomplete vehicle: model or line, series, cab type, engine type and brake system

See Check Digit Calculation Sheet

- | | |
|---------|----------|
| F- 1985 | 1 - 2001 |
| G- 1986 | 2 - 2002 |
| H-1987 | 3 - 2003 |
| J- 1988 | 4 - 2004 |
| K- 1989 | 5 - 2005 |
| L- 1990 | 6 - 2006 |
| M- 1991 | 7 - 2007 |
| N- 1992 | 8 - 2008 |
| P- 1993 | 9 - 2009 |
| R- 1994 | A - 2010 |
| S- 1995 | B - 2011 |
| T- 1996 | C - 2012 |
| V- 1997 | D- 2013 |
| W- 1998 | |
| X- 1999 | |
| Y- 2000 | |

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