

**ORG 8047**

<b>TESLA</b>		
<b>Model S – Part 565 Vehicle Identification Number decoder</b>		
Release date <b>March 26<sup>th</sup> 2012</b>	Document Number TS-0000759	Revision <b>01</b>

## Vehicle Identification Number (VIN)

### General

Tesla Motors Model S Vehicle Identification Numbers (VINs) are designed to meet the specifications

1. USA Code of Federal Regulations, Title 49, Part 565 Subpart B

A Tesla Motors VIN consists of 17 digits, numbered from left to right as digits 1 through 17. A digit may be either a capital letter (A-Z excluding I, O, and Q) or a numeric digit (0-9), though some digits are restricted to being alphabetic or numeric.

### World Manufacturer Identifier (WMI)

*Digits 1-3 - Assigned*

Tesla Motors will complete the build of all vehicles in the United States. To facilitate this, Tesla has applied for and received a USA specific WMI from the Society of Automotive Engineers (SAE) in Warrendale, Pennsylvania; the USA specific WMI is:

<b>VIN Digit</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>Value</b>	<b>5</b>	<b>Y</b>	<b>J</b>

This code was assigned to Tesla Motors Inc. by Cathy Douds (WMI Coordinator) of the SAE on 23 of May 2008.

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## Vehicle Descriptor Section (VDS)

*Digits 4-8*

Title 49 of the CFR, Part 565.15(b) specifies that, for a passenger car, the VDS must be decipherable to provide the following information:

- Make
- Line
- Series
- Body type
- Engine type
- Restraint devices and locations

The characters utilized and their placement may be determined by the manufacturer, provided that digit 7 is alphabetic only. The following subsections describe how Tesla Motors encodes these digits.

### **Line / Series**

*Digit 4 – Alpha-numeric*

The following line / series have been assigned:

Line / Series	Digit 4
Model S	S

**Line** means a name that a manufacturer applies to a family of vehicles within a make which have a degree of commonality in construction, such as body, chassis or cab type.

**Series** means a name that a manufacturer applies to a subdivision of a “line” denoting price, size or weight identification and that is used by the manufacturer for marketing purposes.

### **Body Type**

*Digit 5 – Alpha-numeric*

The following body styles have been assigned

**Body type** means the general configuration or shape of a vehicle distinguished by such characteristics as the number of doors or windows, cargo carrying features and the driveline.

Body Type	Digit 5
5 door Hatchback LHD RWD	A

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## Restraint Systems (PC)

*Digit 6 – Alpha-numeric*

Restraint Systems (PC) and GVWR (MPV)	Digit 6
Manual Type 2 USA seat belts, dual front airbags, front/rear side airbags, knee airbags	1

## Charger Type

*Digit 7– Alphabetic*

The following Chargers are assigned,

Charger Type	Digit 7
10 kW Charger	A
20 kW Charger	B
10 kW Charger , w/DC fast charge	C
20 kW Charger , w/ DC fast charge	D

## Motor / Drive-unit & Battery Type

*Digit 8– Alpha - Numeric*

Motor/Drive-unit type	Digit 8
Base A/C Motor, Tier 2 battery (31-40 kWh)	C
Base A/C Motor, Tier 4 battery (51-60 kWh)	G
Base A/C Motor, Tier 7 battery (81-90 kWh)	N
Performance A/C Motor, Tier 7 battery (81-90 kWh)	P

**Battery type** means a fuel source with defined characteristics such as max energy capacity.

**Motor Type** means a power source with specific characteristics such as type and max torque. Performance configuration version comprises motor torque and power increased by up to X% from X to XXX rpm, tunable suspension package, performance tires, forged alloy wheels and Sport/ performance exterior badging and seat detailing.

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## Check Digit

*Digit 9 – Calculated - Alpha-numeric*

Title 49 of the CFR, Part 565.15(c) specifies the following algorithm for calculating this check digit:

1. Assign a value to each alphabetic digit according to this table:

Letter	Value	Letter	Value	Letter	Value
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		

2. Multiply the value of each VIN digit (or its assigned value from step 1) by the Position Weight Factor that corresponds to its position in the VIN, from the following table:

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

3. Add the resulting values together, and divide the result by 11
4. The numerical remainder is the check digit. If the remainder is 10, then the check digit is "X."

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## Vehicle Indicator Section (VIS)]

*Digits 10-17*

### Vehicle Model Year

*Digit 10 – Alpha-numeric*

Title 49 of the CFR, Part 565.15(d(1)) specifies that the model year of the vehicle be encoded according to the following table:

Year	Digit 10	Year	Digit 10	Year	Digit 10	Year	Digit 10	Year	Digit 10
2001	1	2009	9	2017	H	2025	S	2033	3
2002	2	2010	A	2018	J	2026	T	2034	4
2003	3	2011	B	2019	K	2027	V	2035	5
2004	4	2012	C	2020	L	2028	W	2036	6
2005	5	2013	D	2021	M	2029	X	2037	7
2006	6	2014	E	2022	N	2030	Y	2038	8
2007	7	2015	F	2023	P	2031	1	-	-
2008	8	2016	G	2024	R	2032	2	-	-

### Plant of Manufacture

*Digit 11 – Alpha-numeric*

Title 49 of the CFR, Part 565.15(d(2)) specifies that digit 11 identify the plant of manufacture, but the encoding of this digit is up to the manufacturer. Tesla Motors encodes two plants in this digit, allowing for a two-step manufacturing process. The following manufacturing plant combinations have been assigned:

Plant of Manufacture	Digit 11
Tesla - Fremont, CA (FRE)	F
Tesla - Palo Alto, CA (PAO)	P

### Production Series

*Digit 12 – Alpha-numeric*

Tesla Motors uses digit 12 (the most significant digit of those intended to represent the Production Sequence) to represent the production series, according to the following table:

Production type	Digit 12
Alpha Prototype	A
Beta Prototype	B
Release candidate Vehicle	R
Production Vehicle	P
Signature Series Vehicle	S
Founder Series Vehicle	F

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**Production Sequence**

*Digits 13-17 – Numeric only*

Tesla Motors uses sequential numbers in digits 13-17, starting with 00001, directly to represent the production sequence of the vehicle. The Production Sequence numbering does not start at 00001 with each new model year. Rather, the Production Sequence number for the first car of a given model year will be one more than the Production Sequence number of the last car of the previous model year.

In the event that Tesla builds more than 99,999 cars of a given model over the lifetime of that model, the next number after 99,999 will be A0,000, progressing through A9,999, then on to B0,000 and so on up to Z9,999 – but not using the letters I, O or Q along the way

This numbering system allows for up to 329,999 cars of a given model. Should this number be exceeded, the Production Sequence numbering shall start again at 00,000.

**Location and Character height**

1. The VIN is located inside the passenger compartment on the dash-board It is readable, without moving any part of the vehicle, through the vehicle glazing under daylight lighting conditions by an observer having 20/20 vision whose eye-point is located outside the vehicle adjacent to the left windshield pillar.
  - 1.1. Each character in the VIN subject to this paragraph has a height of 4 mm and
  - 1.2. VIN consists of type faced, capital, sanserif Characters.
  
2. The VIN is also marked on the chassis, on the right hand side of the vehicle;
  - 2.1. It is placed in a clearly visible and accessible position in such a way that it cannot be obliterated or deteriorates.
  - 2.2. Height of VIN characters marked on the Chassis is 7mm and a has a depth of 0.3mm
  - 2.3. For US and Canadian vehicles, the VIN of each appears clearly on the Manufacturer’s certification label. This label is permanently affixed to the Driver side B pillar
  - 2.4. The certification label permanently affixed in such a manner that it cannot be removed without destroying or defacing it.
  - 2.5. Lettering on the label is of a color that contrasts with the background of the label.
  - 2.6. The lettering is in English language, lettered in block capitals and numerals not less than three thirty-seconds of an inch high (2.38125mm).
  
3. For EU vehicles, the VIN also appears on the Manufacturer certification label as required
  - 3.1. The Height of characters marked on the manufacturer's plate is 4mm.