VIN DECODER GUIDE

How to use a **VIN decoder**: decode any VIN number position by position, find the year, engine, trim and plant, read brand VINs from BMW to Ford, compare the **Carfax VIN decoder**, and know where to buy the full vehicle history.

Free	17	$14.99
VIN decoder at carcheckervin.com	real VINs decoded with NHTSA data	full VIN report when you need history

CarCheckerVIN

www.carcheckervin.com/vin-decoder

Free VIN decoder · VIN lookup · Vehicle history reports

START HERE

ABOUT THIS VIN DECODER GUIDE

A **VIN decoder** turns the 17 characters stamped on every modern vehicle into plain facts: who built it, where, in which model year, with which body, engine and safety equipment. This guide shows you how to **decode a VIN** yourself and how to get the most out of a free online **VIN number decoder**.

It is published by **CarCheckerVIN (carcheckervin.com)**, which runs a free VIN decoder and sells full vehicle history reports. Every example VIN in this guide was decoded with the National Highway Traffic Safety Administration's free vPIC database, the same manufacturer-reported data behind most decoders. The example VINs have valid check digits; their serial numbers are illustrative. Rules come from the federal VIN regulation, 49 CFR Part 565.

Contents

Where to decode & where to buy 3
1. What is a VIN decoder? 4
2. How a VIN decoder works 5
3. Decode a VIN position by position 6
3b. Positions 1–3: the WMI decoder 7
3c. Positions 4–8: the VDS 8
3d. Position 9: check digit calculator 9
3e. Position 10: VIN year chart 10
3f. Positions 11–17: plant & serial 11
4. 17 real VINs, decoded 12
4b. What the examples teach 13
5. What a VIN decoder can tell you 14
6. Engine, trim, options & paint code 15
7. Window sticker & build sheet 16
8. Brand VIN decoders: BMW to GM 17
8b. More brand VIN decoders 18
9. Motorcycle, trailer, RV & truck 19
10. Classic car VIN decoder 20
11. Carfax VIN decoder & others 21
11b. Decoder vs history report 22
12. VIN decoder API & bulk decoding 23
13. Decoder errors, explained 24
14. Decode to catch fraud 25
Glossary 26
Frequently asked questions 27
Sources & free VIN decoder 28

FREE VIN DECODER

Decode a VIN while you read

Paste any 17-character VIN into **carcheckervin.com/vin-decoder** to see the year, make, model, trim, engine, transmission, drive type and assembly plant, plus a free preview of the vehicle's history records. No card, no sign-up. A full vehicle history report is $14.99.

How to use this guide

Buying a used car

Read Chapters 1, 4, 11b and 14, then decode every car you're considering before you buy a report.

Owner or mechanic

Chapters 3, 6 and 8 cover engine codes, trims, paint codes and brand decoders for ordering the right parts.

Dealer or developer

Chapter 12 covers the free NHTSA VIN decoder API, batch decoding and bulk reports.

BUYER'S SHORTCUT

WHERE TO DECODE A VIN & WHERE TO BUY THE REPORT

Decoding a VIN is free. Finding out what *happened* to the vehicle is not. Here is where to do each, so you never pay for what you can get free, or trust a free decode for what it can't tell you.

OUR PICK

CarCheckerVIN · www.carcheckervin.com

- **Free VIN decoder:** year, make, model, trim, engine, drive, plant
- **Free history preview** for the same VIN, with no credit card
- **Full vehicle history report: $14.99**, no subscription
- **Packs:** 3 for $35.99, 5 for $54.99, 10 for $89.99 ($9 a report)
- Title brands, odometer readings, owners and NMVTIS title records
- Liens, impounds, total-loss records and auction sales with photos
- Recalls, service records, factory specs and market value
- Decode by VIN, by U.S. license plate, or a whole list of VINs

Decode a VIN free at carcheckervin.com/vin-decoder →

Free VIN decoders vs paid VIN reports

Where	Cost	Best for
CarCheckerVIN decoder	Free; report $14.99	Specs plus a free preview of history, then the full report when you're serious
NHTSA vPIC decoder	Free	Official manufacturer-reported specs, plant and check-digit validation
Carfax VIN decoder & report	Report $44.99 (widely quoted)	Deep service history; free on many dealer listings
Parts-store decoders	Free	Matching parts to your exact engine and trim

Which one do you need?

Just a VIN decoder…
…when you own the car and need the engine size, trim or plant, when you're ordering parts, or when you want to check that an ad matches the VIN.

A history report…
…when you're about to buy. A decoder can't show salvage titles, rolled-back mileage, liens or auction damage. Buy a report at carcheckervin.com/vehicle-history-report.

Comparing several cars? Decode them all free, then buy reports only for your shortlist; a 5-pack costs less than one Carfax. Dealers get wholesale pricing, bulk API access and white-label reports at carcheckervin.com/dealers.

CHAPTER 1

WHAT IS A VIN DECODER?

A **VIN decoder** is a tool that reads a vehicle identification number and translates each section into the facts it encodes. It answers one question precisely: *what is this vehicle, exactly as it left the factory?*

VIN decoder, VIN lookup, VIN check: the difference

Term	What it does	Example output
VIN decoder	Translates the 17 characters using the manufacturer's coding	2019 Toyota Camry, 2.5L 4-cyl, built in Georgetown, Kentucky
VIN lookup / VIN search	Decodes the VIN and searches records linked to it	Specs plus title, recall and history summary
VIN check	Looks for problems in the vehicle's records	Salvage brand, total loss, odometer issue
Vehicle history report	A dated timeline of everything on record	Titles, owners, mileage, liens, auctions, service

What a VIN number decoder reads

Directly from the VIN

- Manufacturer and country code (WMI)
- Model, series, body and engine (VDS)
- Whether the VIN is valid (check digit)
- Model year (position 10)
- Assembly plant (position 11)
- Production sequence number

From the manufacturer's data

- Trim level, or a range of possible trims
- Engine displacement, cylinders and fuel
- Drive type and transmission style
- Gross vehicle weight rating (GVWR) class
- Airbags and other safety equipment
- Plant city, state and country

Is a VIN decoder free?

Yes. A basic **free VIN decoder** needs nothing but public manufacturer data, which NHTSA publishes. You should never pay just to decode a VIN. What costs money is history: title, mileage, owner and damage records gathered from states, insurers and auctions. That's the vehicle history report.

Who uses VIN decoders

Buyers decode a VIN to confirm a listing is honest about the year, trim and engine. **Owners** decode to order the right parts, filters and fluids. **Mechanics** decode to look up repair procedures. **Insurers and lenders** decode to price and finance the right vehicle. **Dealers** decode whole auction lists before bidding. **Tax filers** can use the decoded assembly plant to confirm where a new vehicle was built.

CHAPTER 2

HOW A VIN DECODER WORKS

There is no universal formula that turns “CM826” into “Accord EX-V6”. Every manufacturer writes its own code for characters 4 through 8, and a decoder works by matching the VIN against each manufacturer's published patterns.

Where decoders get their data

Federal rules (49 CFR 565.16) require manufacturers to send NHTSA the information needed to decipher their VINs before they sell vehicles. NHTSA loads it into **vPIC**, the Product Information Catalog and Vehicle Listing, and publishes it free at vpic.nhtsa.dot.gov, along with a public API and downloadable standalone databases. Most free decoders, including CarCheckerVIN's, start from that manufacturer-reported data. Paid data providers add extra layers such as factory option lists, prices and colors.

What happens when you press “Decode”

1. **Validate.** Check the length (17), banned letters (I, O, Q) and the check digit in position 9.
2. **Identify the maker.** Look up the World Manufacturer Identifier in positions 1–3, or 1–3 plus 12–14 for small manufacturers.
3. **Find the model year.** Read position 10 and, for light vehicles, use position 7 to pick the right 30-year cycle.
4. **Match the patterns.** Compare positions 4–8 (and sometimes others) against that maker's patterns for that year to get model, body, engine, restraints and GVWR.
5. **Decode the plant.** Translate position 11 using the maker's plant list.
6. **Report what’s certain and what isn’t.** If a pattern matches several trims, a good decoder shows the range (for example “L/LE/SE/XLE”) instead of guessing.

Why two VIN decoders can disagree

- **Different data sources.** NHTSA data is official but basic; commercial data adds options and prices.
- **Update timing.** New models appear when the maker files its codes. NHTSA's decoder now accepts model years up to two years in the future.
- **Trim ambiguity.** Many VINs don't encode the trim uniquely, so one decoder lists a range and another picks one.
- **Mid-year changes.** A change in engine or equipment partway through a model year can depend on the serial number.

BEST PRACTICE

When precision matters (an engine part, an insurance claim, a purchase) decode the VIN with two sources, for example **carcheckervin.com/vin-decoder** and NHTSA's vPIC, and check the door-jamb label on the vehicle itself.

CHAPTER 3

DECODE A VIN POSITION BY POSITION

Here is a full-size pickup's VIN decoded with NHTSA's vPIC database: a 2013 Ford F-150 with four-wheel drive and a 3.5-liter V6, built in Dearborn, Michigan.



Position	Value	Section	Decoded meaning
1	`1`	Country code	United States (part of the WMI)
2–3	`FT`	Manufacturer / type	“1FT”: Ford, truck
4–8	`FW1ET`	Vehicle descriptor (VDS)	F-150 pickup, 4WD, 6-cylinder 3.5 L gasoline engine, GVWR Class 2F (7,001–8,000 lb)
9	`9`	Check digit	Valid: NHTSA reports “VIN decoded clean”
10	`D`	Model year	2013 (position 7 is a letter, so the 2010–2039 cycle applies)
11	`F`	Plant	Dearborn, Michigan
12–17	`C10312`	Sequence	Production number (illustrative in this example)

The three sections in one sentence each

WMI · 1–3
Who made it, and their registered country and vehicle type.

VDS · 4–9
What it is: model, body, engine, restraints, GVWR, plus the check digit.

VIS · 10–17
Which one it is: model year, plant and serial number.

Try the same breakdown on your own car at **carcheckervin.com/vin-decoder**. The rest of this chapter takes each section in turn.

Where to find the VIN you want to decode

Read the VIN through the windshield at the lower driver's-side corner of the dashboard, or from the certification label on the driver's door jamb. It's also printed on the title, registration and insurance card. Decode the number from the car itself, not from an ad: listings are where most typos happen. See all the locations at **carcheckervin.com/where-is-the-vin-number-on-a-car**.

POSITIONS 1–3: THE WMI DECODER

The World Manufacturer Identifier names the maker. Its first character is a country or region code: usually where the vehicle was assembled, but not always. Always confirm the build location with the plant code in position 11.

Region by first character

1st character	Region
A–H	Africa (e.g. South Africa: AA–AH)
J–R	Asia (J Japan, K Korea, L China)
S–Z	Europe (S UK, V France/Spain, W Germany, Y Sweden/Finland, Z Italy)
1–5	North America (1, 4, 5 USA; 2 Canada; 3 Mexico)
6–7	Oceania, plus newer U.S. series such as 7SA
8–9	South America

When the first character misleads

Our decodes include a 2016 BMW 328i with a German "WBA" WMI that NHTSA lists as built in **Rosslyn, South Africa**, and a 2015 Mercedes-Benz C300 with "WDD" built in **East London, South Africa**. The WMI identifies the manufacturer; the plant code tells you where the car was made.

WMIs in our 17 decodes

WMI	Maker & type	Plant decoded
1FT	Ford truck	Dearborn, MI
1GC	Chevrolet truck	Fort Wayne, IN
1G1	Chevrolet car	Kansas City, KS
1HG	Honda car	Marysville, OH
1C4	Jeep / Chrysler MPV	Detroit, MI
1N4	Nissan car	Smyrna, TN
4T1	Toyota car	Georgetown, KY
2T3	Toyota MPV	Cambridge, ON
3VW	Volkswagen car	Puebla, Mexico
5YJ	Tesla	Fremont, CA
5UX	BMW SUV	Greer, SC
5NP	Hyundai car	Alabama
WBA	BMW car	Rosslyn, S. Africa
WDD	Mercedes-Benz car	East London, S. Africa
JF2	Subaru MPV	Ota, Gunma, Japan
KND	Kia MPV	Gwangju, S. Korea

WMIs are assigned by SAE International on NHTSA's behalf in the U.S. A manufacturer that builds fewer than 1,000 vehicles a year uses **9** as the third character, and positions 12–14 complete its identifier: common on small trailer and specialty builders.

Look up any WMI

To identify an unfamiliar WMI, decode the full VIN or use NHTSA's free vPIC tools, which include a WMI lookup listing the manufacturer, vehicle type and country registered for those three characters. If a WMI returns no manufacturer at all, recheck the first three characters: an unknown WMI on a modern road vehicle usually means a typo.

POSITIONS 4–8: THE VEHICLE DESCRIPTOR

Characters 4 through 8 are the heart of every decode. The VIN rule tells manufacturers *what* to encode here; each maker decides *how*.

What the VIN rule requires in the VDS

Vehicle type	Attributes the VDS must identify (49 CFR 565.15)
Passenger cars	Make, line, series, body type, engine type, and restraint system type
MPVs (SUVs, vans)	Make, line, series, body type, engine type, and gross vehicle weight rating (GVWR)
Trucks	Model or line, series, chassis, cab type, engine type, brake system, and GVWR
Motorcycles	Line, engine type, and net brake horsepower
Trailers	Type of trailer, body type, length, and axle configuration

Real VDS codes, decoded

VIN start	VDS	What NHTSA's decoder returns
`1FT FW1ET`	`FW1ET`	Ford F-150 pickup, 4WD, 3.5 L V6 gasoline, GVWR 7,001–8,000 lb
`1GC UYDED`	`UYDED`	Chevrolet Silverado LT pickup, 4WD, 5.3 L V8, automatic
`4T1 B11HK`	`B11HK`	Toyota Camry sedan, 2.5 L 4-cylinder, trim L/LE/SE/XLE
`5YJ 3E1EA`	`3E1EA`	Tesla Model 3 sedan, battery electric (BEV)
`5UX CR6C5`	`CR6C5`	BMW X5 xDrive40i SUV, AWD, 3.0 L 6-cylinder
`JF2 SKAEC`	`SKAEC`	Subaru Forester SUV, AWD, 2.5 L 4-cylinder, CVT
`1HG CV1F3`	`CV1F3`	Honda Accord Sport sedan, 1.5 L 4-cylinder, CVT

The engine code

On many Ford, GM and Stellantis vehicles, the **8th character is the engine code**, which is why parts counters ask for it. Other makers spread engine information across several VDS positions. A **VIN decoder engine** lookup translates whichever scheme the maker uses into displacement, cylinders and fuel.

Restraints and weight class

For cars, the VDS records the restraint system (airbag configuration). For SUVs, vans and trucks it records the GVWR class, such as Class 1C (4,001–5,000 lb) or Class 2F (7,001–8,000 lb): useful for towing, registration and commercial rules.

BY BRAND

See how each maker uses positions 4–8 on CarCheckerVIN's brand decoder pages, for example **/vin-decoder/ford**, **/vin-decoder/chevrolet** and **/vin-decoder/toyota**.

POSITION 9: THE CHECK DIGIT CALCULATOR

Every VIN decoder starts by recalculating the check digit. If the math fails, the VIN was mistyped or isn't genuine. Here's the calculation on our Tesla Model 3 example, `5YJ3E1EA2KF317000`.

The letter values

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

Value × weight, position by position

Pos.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
VIN	5	Y	J	3	E	1	E	A	2	K	F	3	1	7	0	0	0
Value	5	8	1	3	5	1	5	1	–	2	6	3	1	7	0	0	0
Weight	8	7	6	5	4	3	2	10	0	9	8	7	6	5	4	3	2
Product	40	56	6	15	20	3	10	10	0	18	48	21	6	35	0	0	0

The result

Sum of products: **288**. Divide by 11: 288 = 26 × 11 + **2**. The remainder, 2, must equal position 9, and it does: the 9th character of `5YJ3E1EA2KF317000` is 2. A remainder of 10 is written as **X**.

Do it in a spreadsheet

Put each character's value in one row, the weights 8, 7, 6, 5, 4, 3, 2, 10, 0, 9, 8, 7, 6, 5, 4, 3, 2 in the next, then use `=MOD(SUMPRODUCT(row1,row2),11)`. Any result of 10 means X.

A VIN check digit calculator tells you…

- **Typo caught:** almost any single wrong character changes the result.
- **Random VIN exposed:** an invented number fails about 10 times in 11.
- **But not cloning:** a VIN copied from a real car passes perfectly.
- **Imports:** many European-market VINs don't use a check digit at all.

AUTOMATIC

CarCheckerVIN's decoder validates the check digit before decoding, and tells you when a VIN doesn't add up so you can fix the typo: **carcheckervin.com/vin-decoder**.

Check digit questions

What if position 9 is an X?

That's normal. It means the remainder was 10. Roughly one VIN in eleven ends up with an X check digit.

Why does position 9 have a weight of 0?

So the check digit never counts toward its own calculation. Only the other 16 characters decide it.

CHAPTER 3 CONT.

POSITION 10: THE VIN YEAR CHART

To find a car's year from its VIN, read the 10th character and look it up below. Codes repeat every 30 years, so for cars and light trucks the 7th character tells you which column to use.

Code	7th = digit	7th = letter	Code	7th = digit	7th = letter	Code	7th = digit	7th = letter
A	1980	2010	L	1990	2020	Y	2000	2030
B	1981	2011	M	1991	2021	1	2001	2031
C	1982	2012	N	1992	2022	2	2002	2032
D	1983	2013	P	1993	2023	3	2003	2033
E	1984	2014	R	1994	2024	4	2004	2034
F	1985	2015	S	1995	2025	5	2005	2035
G	1986	2016	T	1996	2026	6	2006	2036
H	1987	2017	V	1997	2027	7	2007	2037
J	1988	2018	W	1998	2028	8	2008	2038
K	1989	2019	X	1999	2029	9	2009	2039

Never used in position 10: I, O, Q, U, Z and 0. The 7th-character rule applies to passenger cars, MPVs and trucks with a GVWR of 10,000 lb or less.

Three examples from our decodes

VIN	7th	10th	Model year
1FTFW1**E**T9**D**FC10312	E (letter)	D	2013
4T1B11**H**K8**K**U123456	H (letter)	K	2019
1HGCM8**2**63**3**A004352	2 (digit)	3	2003

Bold characters are positions 7 and 10.

Model year vs. build date

The model year is the maker's designation; a 2027 model can roll off the line in 2026. The exact month and year of manufacture are on the door-jamb certification label.

Heavy trucks & trailers

Vehicles over 10,000 lb GVWR, trailers and motorcycles don't use the 7th-character rule, so check the title or the certification label when a year code could mean two decades.

Recent model years at a glance

R = 2024 **S = 2025** **T = 2026** **V = 2027** **W = 2028** **X = 2029** **Y = 2030** Note there's no U: it's skipped, along with Z and 0, so the year codes can't be confused with other characters.

POSITIONS 11–17: PLANT CODE & SERIAL

The 11th character tells you which factory built the vehicle, but only in that manufacturer's own code. The same letter means different plants at different companies, which is exactly why you need a decoder.

Plant codes from our real decodes

11th	Vehicle	Plant (per NHTSA vPIC)
F	2013 Ford F-150	Dearborn, Michigan
F	2019 Tesla Model 3	Fremont, California
F	2020 Chevrolet Malibu	Kansas City, Kansas
C	2015 Jeep Grand Cherokee	Detroit, Michigan
C	2021 Toyota RAV4	Cambridge, Ontario, Canada
C	2020 Nissan Altima	Smyrna, Tennessee
A	2003 & 2020 Honda Accord	Marysville, Ohio
U	2019 Toyota Camry	Georgetown, Kentucky
Z	2020 Chevrolet Silverado	Fort Wayne, Indiana
L	2019 BMW X5	Greer, South Carolina
N	2016 BMW 328i	Rosslyn, South Africa
R	2015 Mercedes-Benz C300	East London, South Africa
M	2019 Volkswagen Jetta	Puebla, Mexico
H	2019 Subaru Forester	Ota, Gunma, Japan
7	2017 Kia Soul	Gwangju, South Korea

“F” means three different plants at Ford, Tesla and Chevrolet; “C” means three more at Jeep, Toyota and Nissan.

Why the plant matters

The plant can affect parts (some components differ by factory), recall coverage (some recalls cover one plant's production), and paperwork. A federal deduction for interest on new-vehicle loans (tax years 2025–2028) requires final assembly in the United States, and NHTSA's decoder page explains how to find a vehicle's build plant and country. Check current IRS guidance for the rules.

Positions 12–17: the serial

The production sequence number is assigned as vehicles are built. It makes the VIN unique, and some makers use it to mark running changes: a part may fit “from serial 123456 onward”. For small manufacturers, positions 12–14 are part of the manufacturer code and only 15–17 are sequential.

CHAPTER 4

17 REAL VINS, DECODED

Every row below was decoded in November 2026 with NHTSA's vPIC VIN decoder, and every one came back “VIN decoded clean”. Serial numbers are illustrative; the check digits are valid.

VIN	Year, make, model, trim	Engine & drive	Body & plant
1FTFW1ET9DFC10312	2013 Ford F-150	3.5 L V6 gas, 4WD	Pickup · Dearborn, MI
1GCUYDED2LZ123456	2020 Chevrolet Silverado LT	5.3 L V8 gas, 4WD, auto	Pickup · Fort Wayne, IN
1G1ZD5ST6LF123456	2020 Chevrolet Malibu LT	1.5 L 4-cyl gas, FWD	Sedan · Kansas City, KS
4T1B11HK8KU123456	2019 Toyota Camry L/LE/SE/XLE	2.5 L 4-cyl gas, 4×2, auto	Sedan · Georgetown, KY
2T3P1RFV1MC123456	2021 Toyota RAV4 XLE	2.5 L 4-cyl gas, 4WD, auto	SUV · Cambridge, ON
5YJ3E1EA2KF317000	2019 Tesla Model 3	Battery electric, auto	Sedan · Fremont, CA
1HGCM82633A004352	2003 Honda Accord EX-V6	3.0 L V6 gas, auto	Coupe · Marysville, OH
1HGCV1F31LA123456	2020 Honda Accord Sport	1.5 L 4-cyl gas, 4×2, CVT	Sedan · Marysville, OH
5UXCR6C57KLL12345	2019 BMW X5 xDrive40i	3.0 L 6-cyl gas, AWD, auto	SUV · Greer, SC
WBA8E9G58GNT12345	2016 BMW 328i	2.0 L 4-cyl gas	Sedan · Rosslyn, South Africa
WDDWF4KB8FR123456	2015 Mercedes-Benz C300	2.0 L 4-cyl gas, AWD	Sedan · East London, S. Africa
1C4RJFAG6FC123456	2015 Jeep Grand Cherokee Laredo	3.6 L V6 gas, 4WD	SUV · Detroit, MI
JF2SKAEC7KH123456	2019 Subaru Forester Premium	2.5 L 4-cyl gas, AWD, CVT	SUV · Ota, Gunma, Japan
3VWC57BU3KM123456	2019 Volkswagen Jetta S/SE/R-Line	1.4 L 4-cyl gas, auto	Sedan · Puebla, Mexico
1N4BL4BV8LC123456	2020 Nissan Altima S	2.5 L gas, 4×2	Sedan · Smyrna, TN
KNDJP3A50H7123456	2017 Kia Soul Plus	2.0 L 4-cyl gas, 4×2, auto	MPV · Gwangju, S. Korea
5NPD84LF8LH123456	2020 Hyundai Elantra SEL/Value/Limited	2.0 L 4-cyl gas, FWD, CVT	Sedan · Alabama

The Honda Accord appears twice (2003 and 2020) to show how one nameplate's VIN changes across generations. “Auto” = automatic transmission; details left out were not returned by the decoder.

YOUR TURN

Decode your own VIN the same way, free, at **carcheckervin.com/vin-decoder**, then preview its history records before you buy.

How to read a decode result

- **Series vs. trim:** “Series” is the maker's internal grouping; “Trim” is the name on the badge or window sticker.
- **Body class:** NHTSA's standard body names, such as Sedan/Saloon, Pickup, Coupe, or SUV/MPV.
- **GVWR class:** the weight band, such as Class 1C (4,001–5,000 lb); it matters for towing and registration.
- **Drive type:** 4×2, FWD, RWD, AWD or 4WD, exactly as the manufacturer reported it.

WHAT THE EXAMPLES TEACH

Seventeen decodes are enough to show how VIN decoding really behaves: what it nails, where it hedges, and where you need another source.

1. Make, model, year and plant are always certain

Every decode returned an exact year, make, model and plant. These are the facts to compare against a listing first. If an ad says “2014” and the 10th character decodes to 2013, the listing is wrong.

2. Trim is often a range

The Camry decoded as “L/LE/SE/XLE”, the Jetta as “S, SE, R-Line” and the Elantra as “SEL, Value Edition & Limited”. The VIN narrows the trim but doesn't always pin it down, because several trims can share one VDS pattern. To prove the exact trim, use the window sticker (Chapter 7) or the equipment on the car.

3. The country code isn’t the build country

The German-coded BMW 328i and Mercedes C300 were built in South Africa, the Toyota RAV4 (WMI 2T3, Canada) in Ontario, and the Volkswagen Jetta (3VW, Mexico) in Puebla. Read the plant, not just the first character, when origin matters.

4. Some fields come back empty

The Ford returned no transmission style; the Nissan returned no cylinder count; the Tesla returned no engine at all, correctly, because it's electric. Blank fields mean the manufacturer didn't encode that detail for that pattern, not that something is wrong with the car.

5. The same nameplate changes its code

Accord	2003	2020
VDS	`CM826`	`CV1F3`
Engine	3.0 L V6	1.5 L 4-cyl
Body	Coupe	Sedan
Gearbox	Automatic	CVT
Plant	A · Marysville	A · Marysville

Manufacturers rewrite their VDS codes with each generation, so a code that means one thing in 2003 means nothing in 2020. That's why a decoder matches patterns *by model year*, and why decoding by hand from an old chart often goes wrong.

The takeaway

Trust a VIN decoder for identity: year, make, model, engine family, plant. Verify trim and options with the window sticker. And remember that no decoder tells you about the car's *past*. For that you need a vehicle history report, such as CarCheckerVIN's $14.99 report.

CHAPTER 5

WHAT A VIN DECODER CAN TELL YOU

Free VIN decoders draw on manufacturer data; premium decoders add build data. Here is what to expect from each, and what no VIN decoder can show.

Specs by VIN

Identity

- Year, make, model
- Series and trim (or range)
- Body class and doors
- Vehicle type

Powertrain

- Engine cylinders and liters
- Fuel type, hybrid or EV
- Transmission style
- Drive type (FWD, 4WD, AWD)

Build & safety

- Plant city and country
- GVWR class
- Airbag locations
- Safety technology fitted

Free vs. premium decode

Information	Free decoder (NHTSA-based)	Premium / build data
Year, make, model, plant	✓	✓
Engine, fuel, drive, body	✓	✓
Exact trim	sometimes	usually
Factory options & packages	–	✓
Original MSRP	–	✓
Exterior / interior color codes	–	often
Window sticker recreation	–	supported brands

What no VIN decoder can show

- Accidents, damage and insurance claims
- Salvage, flood, rebuilt or lemon title brands
- Odometer readings and rollbacks
- Liens, repossessions and impounds
- Number of owners or how the car was used
- Service and repair history
- Owner names or addresses (protected by federal privacy law)
- Aftermarket changes made after it left the factory

Decoded ≠ checked

A perfect decode only proves the VIN is a real, valid number for that kind of car. A salvage-title car with a rolled-back odometer decodes exactly like a clean one. Before buying, add a history check: CarCheckerVIN shows a free preview of the records for any VIN, and the full report is $14.99.

Next: how to get the details a basic decoder leaves out, such as engine code, options and paint code.

CHAPTER 6

ENGINE, TRIM, OPTIONS & PAINT CODE BY VIN

Owners and buyers usually want four details a quick decode doesn't fully settle: the exact engine, the exact trim, the factory options and the paint code.

Engine by VIN

A **VIN decoder engine** lookup returns the engine family: cylinders, displacement and fuel. On many Ford, GM and Stellantis models the 8th character is a dedicated engine code. For parts, also note the engine code on the engine itself or on the emissions label under the hood. Two engines of the same size can take different parts.

Trim by VIN

When a decoder returns a range such as “LE/SE/XLE”, narrow it down with equipment the trims don't share: wheel size, seat material, sunroof, badges. The window sticker settles it for good.

Options by VIN

Factory packages (towing, technology, sport, cold-weather) are generally *not* encoded in the 17 characters. They come from the manufacturer's build record. A **VIN decoder with options** pulls that record, typically as a recreated window sticker or build sheet.

Paint code by VIN

The paint code isn't one of the 17 characters. Look for it on the **door-jamb label** (often marked “PNT”, “C/TR” or “EXT PNT”), the service parts label in the trunk or glovebox, or the window sticker. A **VIN decoder paint code** lookup with build data, or a dealer parts desk with your VIN, can confirm it.

Where each detail actually lives

Detail	In the VIN?	Best source
Engine family	Yes (VDS)	Any VIN decoder
Exact engine code	Often (8th on many US makes)	Decoder + engine/emissions label
Trim level	Partly	Window sticker; equipment on the car
Options & packages	No	Build sheet / window sticker by VIN
Paint & trim colors	No	Door-jamb or service parts label
Build month & year	No	Door-jamb certification label
Tire size & pressures	No	Tire placard on the door jamb

FREE TOOLS

Decode specs at **carcheckervin.com/vin-decoder** and look up a factory window sticker at **carcheckervin.com/free-window-sticker-by-vin** for options, packages and the original price.

Parts tip: give the parts counter the full 17-character VIN, not just year, make and model. Mid-year changes and engine variants mean two cars with the same model name can need different parts, and the VIN settles which.

CHAPTER 7

WINDOW STICKER & BUILD SHEET BY VIN

The most complete decode of any vehicle is its original window sticker, which spells out everything the VIN can't. Many brands can reproduce it from the VIN.

The Monroney label

Federal law (the Automobile Information Disclosure Act of 1958) requires a price label, known as the **Monroney label**, on every new car offered for sale. It lists:

- Make, model, trim and VIN
- Engine and transmission
- Standard equipment
- Every factory option and package, with prices
- Destination charge and total MSRP
- EPA fuel economy and environment ratings
- NHTSA safety ratings, when the model is rated
- Final assembly point
- Parts-content information (often printed alongside it)

Build sheet vs. window sticker

	Window sticker	Build sheet
Audience	Buyers	The factory line
Shows	Options in plain English, prices, MPG, ratings	Component, paint and trim codes
Best for	Proving trim and options; pricing a used car	Restoration; exact parts matching
Get it by VIN	Supported brands, via online lookups	Some brands; enthusiast and dealer channels

Why it's worth looking up

Buying

Two cars that look the same can differ by a $3,000 package. The sticker shows which one has it, and lets you check the ad's claims option by option.

Selling

Attach the original sticker to your listing. Buyers trust a car whose equipment they can verify, and you'll price it correctly.

WINDOW STICKER BY VIN

Look up a free window sticker at **carcheckervin.com/free-window-sticker-by-vin** and learn every line of the label at **carcheckervin.com/monroney-label**.

How to get a window sticker by VIN

1. Decode the VIN first to confirm the make, model and year.
2. Enter the VIN in a window sticker lookup for that brand; support varies by make and model year.
3. Compare the sticker's options with the car and the ad, line by line.

CHAPTER 8

BRAND VIN DECODERS: BMW, FORD, TOYOTA, GM

Every make writes its own VDS, so brand-specific decoders exist for the popular makes. Here's what's distinctive about the biggest ones.

BMW VIN DECODER

BMW

BMW cars built in Germany and South Africa commonly start with `WBA` (M models often `WBS`), and SUVs from the Spartanburg-area plant in Greer, South Carolina start with `5UX` or `5YM`. BMW parts catalogs and dealers often identify a car by the **last seven characters** of its VIN. Because BMWs are ordered with long option lists, owners decode to recover the factory options and build data. Our decodes: a 2019 X5 xDrive40i (Greer) and a 2016 328i (Rosslyn). Free at **carcheckervin.com/vin-decoder/bmw**.

FORD VIN DECODER

Ford & Lincoln

Ford trucks usually start `1FT`, cars `1FA`, SUVs `1FM`, and Mexican-built cars `3FA`. On many Ford models the **8th character is the engine code**, and the VDS separates cab and drive configurations on trucks. Our F-150 example decoded as 4WD with a 3.5 L V6, built in Dearborn. Free at **carcheckervin.com/vin-decoder/ford** and **carcheckervin.com/ford-vin-lookup**.

TOYOTA VIN DECODER

Toyota & Lexus

U.S.-built Toyota cars often start `4T1`, U.S. trucks and SUVs `5TD` or `5TF`, Canadian-built models `2T`, and Japanese-built models `JT`. Toyota decodes often return a **trim range**: our Camry came back "L/LE/SE/XLE". Free at **carcheckervin.com/vin-decoder/toyota** and **/vin-decoder/lexus**.

CHEVY & GM VIN DECODER

Chevrolet, GMC, Buick, Cadillac

GM WMIs begin with `1G` for U.S. builds (`1G1` Chevrolet car, `1GC` Chevrolet truck, `1GT` GMC truck), `2G` for Canada and `3G` for Mexico. On many GM vehicles the **8th character is the engine code**, and the window-sticker option codes (RPOs) are on the glovebox or trunk label. A **Chevy truck VIN decoder** is especially useful because Silverado and Sierra VDS codes encode cab and drive. Free at **/vin-decoder/chevrolet**, **/vin-decoder/gmc** and **/buick-vin-decoder**.

STELLANTIS VIN DECODER

Jeep, Ram, Dodge & Chrysler

Stellantis U.S. vehicles commonly start `1C` (for example `1C4` on Jeep SUVs and `1C6` on Ram trucks), with `2C` for Canada and `3C` for Mexico. On many models the **8th character is the engine code**. Our 2015 Grand Cherokee Laredo decoded with a 3.6 L V6 and 4WD, built in Detroit. Free at **/vin-decoder/jeep**, **/jeep-vin-lookup** and **/vin-decoder/dodge**.

MORE BRAND VIN DECODERS

Use a brand-specific VIN decoder when you need maker details: trim names, engine variants, or the right parts catalog. CarCheckerVIN has a free decoder page for each of these makes.

Make	Common WMIs	Decoding notes	Free brand decoder
Mercedes-Benz	`WDD, WDC, 4JG, W1K`	Some U.S. sedans were built in South Africa	/vin-decoder/mercedes-benz
Honda	`1HG, 2HG, 5FN, JHM`	VDS shows model, body and transmission	/vin-decoder/honda
Jeep	`1C4, 1J4`	Engine code commonly 8th	/vin-decoder/jeep
Dodge / Ram	`2C3, 1C6, 3C6`	Ram trucks also built in Mexico (3C6)	/vin-decoder/dodge
Subaru	`JF1, JF2, 4S3, 4S4`	Japan (JF) and Indiana (4S) builds	/vin-decoder/subaru
Tesla	`5YJ, 7SA`	EVs: no engine fields; motor and battery vary	/vin-decoder/tesla
Volkswagen	`WVW, 3VW, 1VW`	Germany, Mexico and Tennessee builds	/vin-decoder/volkswagen
Nissan	`1N4, 5N1, JN1`	Tennessee, Mississippi and Japan builds	/vin-decoder/nissan
Hyundai	`KMH, 5NP`	Korea and Alabama builds	/vin-decoder/hyundai
Kia	`KNA, KND, 5XY`	Korea and Georgia builds	/vin-decoder/kia
Audi	`WAU, WA1`	Cars and SUVs use separate WMIs	/vin-decoder/audi
Porsche	`WP0, WP1`	WP0 cars, WP1 SUVs	/vin-decoder/porsche
Mazda	`JM1, JM3`	Japan builds; some in Alabama and Mexico	/vin-decoder/mazda
Harley-Davidson	`1HD`	Motorcycle VDS includes engine type	/vin-decoder/harley-davidson

WMIs listed are common examples, not complete lists; manufacturers hold many WMIs and add new ones as plants open.

Brand decoder or universal decoder?

A universal VIN decoder (NHTSA's, or CarCheckerVIN's main decoder) handles every make with the manufacturer's own data, so for most people it's all you need. Brand pages help when you want the maker's naming, engine variants and common decoding questions explained for that make.

Every make is listed at **carcheckervin.com/brand-vin-lookup**.

CHAPTER 9

MOTORCYCLE, TRAILER, RV & HEAVY TRUCK DECODERS

The 17-character VIN covers every on-road vehicle class since 1981, but the VDS encodes different things for each, and the VIN sits in different places.

Motorcycle VIN decoder

A motorcycle's VDS records the line, engine type and net brake horsepower. The VIN is stamped on the **steering head** and printed on a frame label; the crankcase number is an engine number, not the VIN. A **Harley VIN decoder** reads Harley-Davidson's 1HD VINs for model family and engine. Start at **carcheckervin.com/motorcycle-vin-lookup** or **/vin-decoder/harley-davidson**.

Trailer VIN decoder

For trailers, the VDS encodes trailer type, body type, length and axles. Small builders put **9** in position 3, so positions 12–14 identify the maker. Find the VIN on the tongue or front frame rail. Homemade trailers get a state-assigned VIN. See **carcheckervin.com/trailer-vin-lookup**.

RV VIN decoder

A motorhome has two identities: the **chassis VIN** from the chassis maker, used for titles, recalls and history, and the coach builder's serial number for the living quarters. Decode the chassis VIN for the engine and GVWR; ask the coach maker about floor plan and appliances. Travel trailers and fifth-wheels carry a single trailer VIN. More at **carcheckervin.com/rv-vin-lookup**.

Heavy trucks & equipment

Trucks over 10,000 lb GVWR use the full 17-character VIN, and their VDS records chassis, cab, engine, brakes and GVWR class. They don't use the 7th-character model-year rule, so check the title for the year. Off-road construction and farm equipment usually carries a manufacturer **product identification number (PIN)** instead of a road VIN.

Boats: the HIN

Boats use a 12-character **Hull Identification Number** under U.S. Coast Guard rules (33 CFR Part 181), usually on the upper starboard corner of the transom: a three-character Manufacturer Identification Code, a five-character hull serial, and four characters for the production date and model year. A car VIN decoder won't read it.

> **Check the frame, not just the paperwork**
> Motorcycles and trailers are stolen and re-papered more easily than cars. Decode the VIN on the frame and compare it with the title and any frame labels before you buy.

Where the VIN is, by vehicle type

Vehicle	Where to read the number you decode
Car, SUV, light truck	Dashboard (through the windshield) and the driver's door-jamb label
Motorcycle	Steering head stamping and frame label
Trailer	Tongue or front frame rail plate or sticker
Motorhome	Chassis VIN on the dashboard and door frame

CHAPTER 10

CLASSIC CAR VIN DECODER (PRE-1981)

Before the 1981 model year, each manufacturer used its own vehicle numbering, typically 5 to 13 characters long. A modern 17-character decoder can't read these numbers; a **classic car VIN decoder** uses make-specific charts.

What older numbers usually encode

Formats varied by maker and decade, but pre-1981 serial numbers commonly packed in some of the following: a division or make code, a series or model code, a body style code, an engine code, a year digit, a plant code and a sequential number. The order and meaning changed often, sometimes every few years, so the decoding chart must match the exact make and year.

How to decode a classic VIN

1. Find every number on the car: the VIN or serial plate, the body or trim tag, and engine and transmission stampings.
2. Identify the make, model and approximate year from the title and the car itself.
3. Use a decoding chart for that make and year, from factory literature, a marque club or a reputable restoration reference.
4. Cross-check: the body tag, engine codes and serial number should tell a consistent story.
5. For valuable cars, get documentation (build sheets, dealer invoices, registry records) or an expert inspection.

The extra plates

Body / trim tag

Many classics carry a firewall or cowl tag with body style, paint, interior trim and build date codes. It's often more informative than the serial number.

Engine & drivetrain stampings

Partial serial numbers stamped on the engine or transmission show whether the drivetrain is original ("numbers-matching").

Build sheets

Original factory paperwork, sometimes found under seats or behind panels, lists every option code.

Clones and tributes

High-value classics are often copied: a base model dressed up as a rare performance version. The serial plate, body tag and drivetrain codes must agree, and a rare version should be backed by documentation. A seller's word, or a reproduction tag, isn't proof.

Start with CarCheckerVIN's guide at **carcheckervin.com/classic-car-vin-decoder**. For vehicles from 1981 on, the standard **VIN decoder** applies.

Where to find classic decoding data

- **Factory literature:** dealer data books, shop manuals and parts catalogs for the exact year
- **Marque clubs and registries:** many keep production records and decoding charts for their models
- **Manufacturer heritage programs:** some automakers sell certificates or build records for older vehicles

CHAPTER 11

CARFAX VIN DECODER & OTHER DECODERS COMPARED

Many brands offer a “VIN decoder”, but they're built for different jobs. Some exist to sell a report, some to sell parts, and some just to decode. Here's how the best-known options compare.

CARFAX VIN DECODER

Carfax

Carfax's VIN lookup confirms the vehicle and leads into its paid vehicle history report, which is widely quoted at **$44.99** for a single report. A Carfax report's strength is service and maintenance history from its large network of shops. Many dealer listings include a free Carfax. The decoder side is a doorway to the report; if you only need specs, a free decoder does the same job. Compare at **carcheckervin.com/carfax-vin-decoder**.

OFFICIAL · FREE

NHTSA vPIC VIN decoder

The government decoder at vpic.nhtsa.dot.gov shows exactly what the manufacturer reported: specs, plant and a check-digit verdict. No history, no options, no prices, and nothing to sell. Use it as the tie-breaker when two sources disagree.

CAR-SHOPPING SITES

Edmunds and other shopping decoders

Car-shopping sites decode a VIN to show the model's specs, ratings and pricing tools, such as trade-in appraisals, to help you buy or sell. They're useful for valuation; they aren't history reports.

PARTS RETAILERS

AutoZone and other parts-store decoders

Parts stores decode your VIN to match parts to your exact engine and trim. Ideal for ordering filters, brakes or sensors; not designed for checking a car before you buy it.

CARCHECKERVIN.COM

CarCheckerVIN VIN decoder

A free decoder (year, make, model, trim, engine, drive, plant) joined to a free preview of the vehicle's history records, so you can see whether title brands, odometer readings, liens or auction records exist before you pay anything. The full report is $14.99: **carcheckervin.com/vin-decoder**.

VIN DECODER VS. VEHICLE HISTORY REPORT

The most expensive mistake in used-car buying is treating a clean decode as a clean car. Here's how the two tools differ, and where to buy the one that protects you.

	VIN decoder	Vehicle history report
Question answered	What is this vehicle?	What has happened to it?
Data	Manufacturer specifications	State titles, insurers, auctions, lenders, service shops
Shows title brands	No	Yes
Shows mileage history	No	Yes
Shows liens & auctions	No	Yes (CarCheckerVIN: with photos)
Price	Free	$14.99 at CarCheckerVIN; Carfax widely quoted at $44.99

Where to buy a vehicle history report

CarCheckerVIN: $14.99

Decode free, preview the records free, then unlock the full report: title brands and NMVTIS title records, odometer readings, owners, liens and impounds, insurance total-loss records, auction sales with photos, recalls, service records and market value. Packs bring it down to $9 a report. **carcheckervin.com/vehicle-history-report**

Carfax: about $44.99

Strongest on service records, and often free on dealer listings: ask the dealer for the link. Many buyers screen cars with cheaper reports first, then decide whether the final car needs a Carfax. See **how much is a Carfax report** and **how to get a free Carfax report**.

A buyer's sequence that saves money

1. **Decode every car free** and drop any whose decoded year, trim or engine doesn't match the ad.
2. **Run the free checks:** NHTSA recalls, NICB VINCheck and the CarCheckerVIN history preview.
3. **Buy a $14.99 report** on the two or three cars that pass.
4. **Inspect the winner** with an independent mechanic, and add a Carfax only if its service history matters to you.

CARFAX ALTERNATIVE

Looking for a cheaper Carfax alternative? Compare options at **carcheckervin.com/alternatives-to-carfax** and **carcheckervin.com/cheap-carfax**.

CHAPTER 12

VIN DECODER API & BULK DECODING

Dealers, fleets, insurers and developers decode VINs by the hundred. A **VIN decoder API** does it automatically: send VINs, get structured specs back.

NHTSA's free vPIC API

NHTSA publishes a free API for the same manufacturer data as its VIN decoder. Its main VIN methods:

Method	What it does
`/vehicles/DecodeVin/`	Decodes one VIN into a list of variables and values
`/vehicles/DecodeVinValues/`	Decodes one VIN into a single flat record, easier for spreadsheets
`/vehicles/DecodeVINValuesBatch/`	Decodes a batch of up to **50 VINs** per request

Useful details

- Results come back as JSON, XML or CSV.
- **Partial VINs** work: use "*" for unknown characters, and the check digit isn't required.
- Adding the model year to the request improves accuracy.
- Every response includes an error code and text (Chapter 13).

Play by the rules

- NHTSA applies **automated traffic rate control**; send batches, not floods of single requests.
- For heavy use, download NHTSA's standalone vPIC database and decode locally.
- Cache results: a VIN's factory specs never change.

Commercial VIN decoder data

Commercial providers sell decoding data that adds factory options, prices, colors and standardized trim names on top of the manufacturer basics, which is useful for dealer listings and insurance rating. If you need history at volume rather than specs, look for a provider that sells reports in bulk.

FOR DEALERS & FLEETS

Bulk decoding and reports from CarCheckerVIN

Paste or drop a list of VINs on the carcheckervin.com homepage to decode and preview several vehicles at once. For inventory volumes, CarCheckerVIN offers wholesale report pricing, bulk API access and white-label reports at carcheckervin.com/dealers.

What a decode response looks like

```
VIN: "5YJ3E1EA2KF317000"
ModelYear: "2019"    Make: "TESLA"    Model: "Model 3"
BodyClass: "Sedan/Saloon"    ElectrificationLevel: "BEV (Battery Electric Vehicle)"
PlantCity: "FREMONT"    PlantState: "CALIFORNIA"    PlantCountry: "UNITED STATES (USA)"
ErrorCode: "0"    ErrorText: "0 - VIN decoded clean. Check Digit (9th position) is correct"
```

An excerpt from NHTSA's DecodeVINValuesBatch response for our Tesla example; the full record has well over 100 fields.

CHAPTER 13

VIN DECODER ERRORS, EXPLAINED

When a VIN decoder complains, it's usually telling you something useful. These are the messages NHTSA's decoder returns, captured from real tests, and what to do about each.

Code	NHTSA message	What it means / what to do
`0`	"VIN decoded clean. Check Digit (9th position) is correct"	All good: the VIN is valid and fully decoded.
`1`	"Check Digit (9th position) does not calculate properly"	Usually a typo. Re-read the VIN from the car; check for S/5, B/8 and Z/2 mix-ups. If the VIN on the car itself fails, investigate further.
`6`	"Incomplete VIN"	Fewer than 17 characters. Find the missing one, often dropped at the start or the end.
`11`	"Incorrect Model Year – Position 10 does not match valid model year codes"	Position 10 holds a character never used for years (I, O, Q, U, Z, 0). Fix the typo.

Tested November 2026: we changed one character of a valid VIN (code 1), dropped the last character (code 6), and truncated it to 9 characters (codes 6 and 11).

Other reasons a decode looks wrong

"No results" for a brand-new model

Decoders depend on the maker filing its codes. NHTSA's decoder accepts model years up to two years ahead, but a very new model can still decode partially for a while.

A range of trims

Not an error: the VIN pattern covers several trims. Use the window sticker.

Decodes to a different car

If a valid VIN decodes to a model that isn't the car in front of you, stop. It may be a typo in the listing, or a VIN plate taken from another vehicle (Chapter 14).

Pre-1981 or imported vehicles

Older serials and some grey-market imports won't decode in a 17-character decoder, and many European VINs fail the check digit by design.

The five-second fix list

- Count the characters: there must be exactly 17.
- Replace any O with 0 and any I with 1; there is no Q in a VIN.
- Read the VIN from the car, not from the ad.
- Decode with a second tool, such as **carcheckervin.com/vin-decoder** or NHTSA's vPIC.

When the VIN on the car itself fails

If you've copied the VIN straight from the dashboard and the door label, both match, and the check digit still fails on a North American vehicle, don't buy until it's explained. Ask for the title and import papers, compare hidden VIN locations, and have a state VIN inspection or a police VIN verification done.

CHAPTER 14

USE A VIN DECODER TO CATCH FRAUD

A VIN decoder is a surprisingly good fraud detector, if you compare its answer with the vehicle itself. Mismatches are the clue.

Six decoder checks before you buy

1. **Model year matches the ad.** Sellers sometimes “round up” a year. Position 10 doesn't lie.
2. **Engine matches what’s under the hood.** A V6 badge on a car whose VIN decodes to a four-cylinder is a problem, or a swap you need to know about.
3. **Body and drive match.** A decoded 4×2 truck with a 4×4 badge, or a sedan VIN on a coupe, points to a mismatch.
4. **Plant fits the door label.** The door-jamb certification label names the manufacturer and build date; they should be consistent with the decoded plant and year.
5. **Every VIN location agrees.** Decode the dashboard VIN, the door-jamb VIN and the title VIN. All three must be identical.
6. **The check digit passes.** A VIN on the car that fails the check digit (with no typo) is a serious red flag on a North American vehicle.

What a decoder can’t catch

VIN cloning

Thieves copy the VIN of a real, legally registered car of the same model onto a stolen one. The cloned VIN decodes perfectly, because it is a real VIN. Only a history report (showing the same VIN registered somewhere else at the same time), hidden VIN locations and an inspection reveal it.

Title washing & rollbacks

A salvage brand removed by retitling in another state, or a rolled-back odometer, leaves the VIN untouched. NMVTIS title data and odometer histories in a vehicle history report are what expose them.

DECODE + CHECK

Decode free and preview the history at **carcheckervin.com/vin-decoder**. If the preview shows title brands, odometer issues or liens, the $14.99 full report shows the details.

If you suspect VIN fraud

- Walk away before paying, and keep the ad, messages and photos
- Report it to local police and your state's motor vehicle agency
- Report insurance-related fraud to the NICB through its website
- If you already bought the car, contact your state attorney general

REFERENCE

VIN DECODER GLOSSARY

Build sheet
The factory's production record of a vehicle's components, paint and trim codes.

Certification label
The door-jamb label showing the manufacturer, build month and year, GVWR and VIN.

Check digit
VIN position 9; a value calculated from the other 16 characters to catch errors.

Chassis VIN
The VIN of a motorhome's chassis, used for title, recall and history searches.

Decode
To translate a VIN's characters into the facts they encode.

Engine code
A character (often the 8th on many U.S. makes) identifying the engine fitted.

GVWR class
Gross vehicle weight rating band, such as Class 1C (4,001–5,000 lb).

HIN
Hull Identification Number: a boat's 12-character identifier.

Model year
The manufacturer's year designation, in VIN position 10; not the build date.

Monroney label
The federally required new-car window sticker.

NHTSA
National Highway Traffic Safety Administration: runs the VIN rule and the vPIC decoder.

Numbers-matching
A classic car whose engine and drivetrain stampings match its serial number.

Partial VIN
A VIN with unknown characters, decodable in vPIC using "*".

PIN
Product identification number, used on off-road equipment instead of a road VIN.

Plant code
VIN position 11; the assembly plant, coded differently by each manufacturer.

RPO codes
GM's regular production option codes, listed on a label in many GM vehicles.

Serial / sequence number
VIN positions 12–17; the vehicle's production number.

Trim range
A decode result listing several possible trims for one VIN pattern.

VDS
Vehicle Descriptor Section: positions 4–8, plus the check digit.

VIN
Vehicle Identification Number: 17 characters, model year 1981 onward.

VIN decoder
A tool that translates a VIN into specifications.

VIS
Vehicle Identifier Section: positions 10–17 (year, plant, serial).

vPIC
NHTSA's Product Information Catalog and Vehicle Listing: the official decoding database and API.

WMI
World Manufacturer Identifier: positions 1–3.

AALA label
The American Automobile Labeling Act parts-content label: U.S./Canadian parts share and engine and transmission origin.

Drive type
The driven wheels as reported by the maker: FWD, RWD, AWD, 4WD or 4×2.

Restraint system
Airbag and belt configuration encoded in the VDS for passenger cars.

Short VIN
The last seven VIN characters, used by some makers (notably BMW) to identify a vehicle.

ANSWERS

VIN DECODER FAQ

Is a VIN decoder free?

Yes. Decoding uses public manufacturer data. CarCheckerVIN and NHTSA both decode free; only history reports cost money.

How do I decode a VIN number?

Enter all 17 characters into a decoder such as carcheckervin.com/vin-decoder, or read it by hand: positions 1–3 maker, 4–8 vehicle details, 9 check digit, 10 year, 11 plant, 12–17 serial.

How do I find the year from a VIN?

Read the 10th character and use the VIN year chart on page 10. For cars and light trucks, a letter in position 7 means 2010 or later.

Can a VIN decoder tell me the options?

Not from the 17 characters alone. Factory options come from the build record, usually through a window sticker lookup.

Can I find the paint code by VIN?

The paint code isn't in the VIN. It's on the door-jamb or service parts label, or a dealer can look it up from your VIN.

What does the 8th digit of a VIN mean?

It's part of the vehicle descriptor. On many Ford, GM and Stellantis vehicles it's the engine code.

Can a VIN decoder tell if a car is stolen?

No. For theft records, run NICB's free VINCheck, and buy a history report before purchase.

Do two VIN decoders ever disagree?

Yes, usually on trim, because data sources differ. Make, model, year and plant should always agree.

Can I decode a VIN by license plate?

Yes. A plate lookup finds the VIN first; try carcheckervin.com/license-plate-lookup.

Is the NHTSA VIN decoder accurate?

It shows what manufacturers report to NHTSA, which makes it the official reference for specs and plant. It doesn't include history, options or prices.

Is there a free Carfax VIN decoder?

Carfax's VIN lookup leads into its paid report, widely quoted at $44.99. For free decoding, use NHTSA or CarCheckerVIN; for history, CarCheckerVIN's report is $14.99.

Can a VIN decoder show accidents?

No. Accidents, title brands and mileage come from a vehicle history report, not a decoder.

Why does my VIN show several trims?

Several trims share the same VIN pattern. The window sticker or the car's equipment settles it.

Can I decode a 13-digit or older VIN?

Pre-1981 serials need a make-specific classic decoder; standard 17-character decoders can't read them.

Is there a VIN decoder API?

Yes. NHTSA's vPIC API is free and decodes up to 50 VINs per batch; dealers can get bulk reports at carcheckervin.com/dealers.

Does a VIN decoder work on electric cars?

Yes. EVs use the same 17-character VIN; decoders show electrification level instead of an engine.

How accurate is a free VIN decoder?

For identity, very: it's the manufacturer's own data. For options and trim, confirm with the window sticker.

Where do I buy a report after decoding?

At carcheckervin.com: preview free, then $14.99 for the full vehicle history report, or from $9 each in packs.

FREE VIN DECODER

Decode any VIN in seconds.

Year, make, model, trim, engine and plant, free, plus a free preview of the vehicle's history. Full report $14.99.

carcheckervin.com/vin-decoder →

Scan to decode a VIN free

Sources

- 49 CFR Part 565, Vehicle Identification Number requirements
- NHTSA vPIC VIN decoder and API (vpic.nhtsa.dot.gov); 17 VINs decoded Nov 2026
- NHTSA, VIN Decoder: plant of manufacture (nhtsa.gov/vin-decoder)
- Automobile Information Disclosure Act of 1958 (15 U.S.C. § 1231 et seq.)
- 33 CFR Part 181, Hull identification numbers
- U.S. DOJ / BJA, NMVTIS (vehiclehistory.bja.ojp.gov)
- Carfax price: independent pricing listings, 2026
- CarCheckerVIN prices: carcheckervin.com/pricing, Nov 2026

How we made this guide: written by CarCheckerVIN with AI assistance, from the public sources listed above; figures, prices and links checked November 2026.

More free tools at carcheckervin.com

VIN lookup
Free VIN check
License plate lookup
Recall check
Window sticker by VIN
NMVTIS VIN check
Brand VIN lookup
Carfax VIN check
Vehicle history report

General information, not legal or tax advice. Decoded data is manufacturer-reported; record coverage varies by vehicle. Carfax is a trademark of Carfax, Inc.; other names are trademarks of their owners. CarCheckerVIN is independent and not affiliated with them. © 2026 CarCheckerVIN

CarCheckerVIN