

Encyclopedia of
Luxury Vehicles



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WORLD TECHNOLOGIES

Table of Contents

Chapter 1 - Introduction to Luxury Vehicle

Chapter 2 - Acura ZDX

Chapter 3 - Audi V8

Chapter 4 - BMW 7 Series (E23)

Chapter 5 - Bugatti Royale

Chapter 6 - Chevrolet Monte Carlo

Chapter 7 - Honda Legend

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Chapter- 1

Introduction to Luxury Vehicle

Luxury vehicle is a marketing term for a vehicle that provides luxury — pleasant or desirable features beyond strict necessity—at increased expense.

The term suggests a vehicle with greater equipment, performance, construction precision, comfort, design ingenuity, technological innovation, or features that convey brand image, cachet, status, or prestige—or any other *discretionary* feature or combination of features.



A Duesenberg, "one of the greatest luxury cars" with custom body by Willoughby

Automobile manufactures market specific makes and models that are targeted at particular socio-economic classes, and thus "social status came to be associated more with a particular vehicle than ownership of a car per se." Therefore, automakers

differentiate among their product lines in "collusion" with the car-buying public. While a high price is the most frequent factor, it is "styling, engineering, and even public opinion which cars had the highest and lowest status associated with them."

Every era in automobile history has had "a group of car marques and models that have been expensive to purchase, due to their alleged superiority of their design and engineering". Aimed at wealthy buyers, such automobiles might be generically be termed *luxury cars*." This term is also used for unique vehicles produced during "an era when luxury was individualistic consideration, and coachwork could be tailored to an owner like a bespoke suit." Although there is considerable literature about specific marques, there is a lack of systematic and scholarly work that "analyzes the luxury car phenomenon itself."

In contemporary usage, the term may be applied to any vehicle type— including sedan, coupe, hatchback, station wagon, and convertible body styles, as well as to minivans, crossovers, or sport utility vehicles and to any size vehicle, from small to large—in any price range.

Though widely used, the term luxury is broad and highly variable. It is a perceptual, conditional and subjective attribute and may be understood differently by different people: "What is a luxury car to some... may be 'ordinary' to others."

Global references



Italian Isotta-Fraschini Tipo 8A S LeBaron Boattail Roadster was a 1930s luxury car.

According to the European Commission, the "luxury vehicle" segment is classified as F-segment. However, the boundaries between the traditional segments are increasingly becoming blurred and diluted as features once exclusive to luxury vehicles become standard equipment on even small cars.

- **ACRIS** is a code system used by many car rental companies in the US for classifying vehicles (but not brands or marques). The system includes **Luxury** and **Premium** categories.
- **Australia** In Australia, for taxation purposes a luxury car is defined as a passenger car whose value exceeds a certain threshold.
- **Germany:** In Germany the term "Upper class" (German: *Oberklasse*) is used.
- **Russia:** Russian markets use the term "representative class vehicle" (Russian: автомобиль представительского класса, also translated as "luxury vehicle").
- **United States** Consumer Guide's categorization which sorts luxury vehicles by size acknowledges that there can be considerable price variations within a class; for instance the Lincoln Town Car has a relatively low MSRP (Manufacturer's Suggested Retail Price) compared to the BMW 7 Series, Lexus LS, or Mercedes-Benz S-Class.

Luxury Car Segments, according to MSRP

Price	\$15k — \$20k	\$20k — \$30k	\$30k — \$40k	\$40k — \$50k	\$50k — \$60k	\$60k — \$70k	\$70k — \$80k	\$80k — \$90k	\$90k — \$100k	\$100k or more
		\$29k	\$38k	\$40k		\$60k				
Luxury car manufacturers			Entry-level		Mid-level		High-end			Ultra

Luxury market segments

Premium compact segment

The premium compact segment is relatively new, having been initiated by several European brands in the mid-2000s, and constitute the least expensive offerings in their lineups. These cars are targeted at a niche market of young customers who have a more refined taste in their automobiles and the means to pay for them. By offering a smaller, lighter, more fuel-efficient, and less expensive vehicle, this serves to introduce a younger customer to the luxury marque, in hopes of retaining the coveted customer loyalty. This includes the Audi A3, BMW 1 Series, and Mercedes-Benz B-Class.

Premium compacts may share components with mass market cars from the marque's parent company (the A3), and/or have less sophisticated platforms compared to upmarket vehicles in the lineup (such as the B-Class). The body style tends to be a hatchback or compact wagon, previously associated with economy cars but regaining popularity in the

United States for its afforded utility. The luxury branding and style, high-quality interior materials, wide range of convenience features, and performance powertrains are key to distinguishing them from mass market equivalents (one mistake made by the Cadillac Cimarron) and making these appeal to consumers.

The classification varies, for instance Consumer Guide Automotive in the US considers the Audi A3 and A4 as part of the premium compact segment due to similar size and MSRP, though these are known in Europe as a small family car and a compact executive car, respectively.

Entry-level luxury/compact executive cars

The entry-level luxury category is also known as the compact executive car in Britain and (*Mittelklasse* in German). In the US, this segment mostly includes the bottom vehicles in the line-up of luxury brands as well as the top-of-the-line models of some non-luxury brands.

Compact executive cars tend to have complex powertrain and mechanical layouts, resulting in increased cost and reduced interior passenger and trunk space, compared to mass market compact cars. However, material and building quality is higher, there are exclusive features not found on mass market cars, there is better handling and performance, and the nameplate itself is part of the value proposition.

Compact executive cars include the Volvo S60, BMW 3 Series, and Mercedes-Benz C-Class which particularly emphasize sporty handling. Other vehicles such as the Lexus ES and Acura TL are also considered entry-level luxury as well, though they do not fall under European luxury classifications as they are larger and not sold there, indeed these began as badge-engineered versions of the Toyota Camry and Honda Accord, respectively.

Recently, the entry-level luxury has been very competitive, and there has been price-overlapping with well-equipped non-luxury cars. The bestselling vehicles of the marque are frequently compact executive cars, such as the BMW 3 Series that makes up 40% of the vehicles that BMW sells worldwide.

Mid-luxury/executive cars

The mid-luxury segment are commonly referred to as executive cars in Britain, *Obere Mittelklasse* in German, and *Grandes Routières* in French. Examples include the Volvo S80, BMW 5 Series, and Mercedes-Benz E-Class

Although having similar dimensions to mid-size cars and large family cars, executive cars have lower sales volumes and higher development costs (for better performance and amenities), thus executive cars are usually positioned as premium vehicles, as base trims with less equipment and smaller engines are not sold in U.S. and Canadian markets. Also due to the problem of steep depreciation, especially concerning cars from less prestigious

brands, most executive cars are produced by marques that specialize in larger/more expensive vehicles.

Vehicles in this segment include the mid-range models of several luxury car manufacturers. There are also some flagship sedans in this segment, such as the Acura RL and Infiniti M37/56. Executive cars such as the BMW 5 Series are crucial to a luxury automaker's bottom line, and although not the highest-selling model, they generate a significant amount of profits due to the lucrative technology options.

High-end luxury/full-size luxury cars

Also known as full-size luxury cars, grand saloons, or premium large cars, while "Oberklasse" is used in Germany. Many of these are the marque's showcases for the newest automotive technology. Several nameplates also offer long-wheelbase versions that offer additional rear legroom and amenities. Full-size luxury cars sold in Canada and the U.S. typically have mid-displacement V8 engines, though recently some marques have offered a V6 but without much success.

Vehicles in this category include some of the models from the flagship lines of luxury car brands. Examples include the Audi A8, Jaguar XJ, Volkswagen Phaeton, BMW 7 Series, and Mercedes-Benz S-Class.

Ultra-luxury cars



Maybach 62, an ultra-luxury Mercedes-Benz automobile

R.L. Polk and Company, a global automotive information and marketing firm that provides solutions to automotive and related industries, has defined the term "super luxury" segment for luxury cars costing more than \$100,000 USD. This bracket includes the entire lineup of Rolls Royce, Bentley, Aston Martin, Maybach, and Maserati. The top-performing 12-cylinder variants of flagship cars from Audi, BMW, Jaguar and Mercedes-Benz are often included here.

There are ultra-high performance cars from "exotic brands" that also exceed the \$100,000 USD mark, but would not necessarily be categorized as luxury automobiles, such as the offerings from Ferrari, Lamborghini and Porsche.

Luxury SUV/Crossover

The luxury-type sport utility vehicle (SUV) segment is not a recent development. This marketing category was created with Kaiser Jeep's 1966 Super Wagoneer as the first true luxury four-wheel drive (4x4) vehicle. It was the first SUV to offer a V8 engine, automatic transmission, and luxury car trim and equipment in a serious off-road model. The Super Wagoneer was "a pioneer that blazed a trail for today's luxury SUVs". It came with long list of standard equipment that included bucket seating with center console, air conditioning, seven-position tilt steering wheel, a vinyl roof, as well as "Antique Gold" trim panels on the body sides and tailgate. After American Motors Corporation (AMC) purchased Jeep, the vehicles were upgraded and refined, including features such as an optional electric sliding steel sun roof, "possibly the first offered on an SUV". The late-1970s Jeep Wagoneer Limited "set the sport-utility market on its ear ... was the most luxurious four-wheeler anyone had ever seen."

The SUV models generated higher-profit-margins than ordinary automobiles, and automakers introduced new luxury models during the late 1990s. For some manufacturers, luxury SUVs were the first SUV models they produced. Some of these models were not traditional SUVs based on light truck as they are classified as crossovers. SUVs from non-luxury brands had experienced a surge in popularity through early 2000s, causing the traditional luxury marques to follow.

SUVs from the luxury marques grew at almost 40 percent to more than 430,000 vehicles, excluding SUV-only brands like Hummer and Land Rover, while luxury car sales in the U.S. during 2003 suffered a 1% decline, and non-luxury SUV sales were flat. By 2004, 30 percent of major luxury brands' U.S. sales are now SUVs. Luxury brands in particular led the development of crossover SUVs (as opposed to body-on-frame SUVs), making it one of the fastest growing segments in the market, as the forecast for 2002 was approximately 240,000 vehicles and that could double by 2006. Research data showed luxury SUV buyers are compared those vehicles to SUVs of mass market brands, and not shopping around luxury cars, thus the SUV is becoming the key to bringing new customers to the luxury dealerships.

Certain luxury SUVs use body-on-frame underpinnings, often being badge-engineered versions of their non-luxury counterparts, and retaining the rugged off-road and towing

capabilities. Examples include the Lexus LX and Lincoln Navigator, which are the premium versions of the Toyota Land Cruiser and Ford Expedition, respectively.

Other luxury SUVs are crossovers using unibody construction, often sharing the platform with compact executive and executive cars. For example, the Infiniti FX is based upon the Nissan FM platform that also underpins other Infiniti cars. Audi and BMW developed crossovers to compete in the SUV segment as they did not have an existing body-on-frame vehicle in their lineup. The Lexus RX was the earliest luxury crossover on the market, and it has since been the best-selling luxury vehicle in the US, so it has inspired similar competitors from rival marques. While early luxury crossovers released in the late 1990s have resembled traditional boxy SUVs, recent offerings have prioritized sportiness over utility — such as the Infiniti FX and BMW X6.

Characteristics



A Spanish luxury car brand was Hispano-Suiza, here is twelve cylinder J12

Luxury cars tend to offer a higher degree of comfort than their mainstream counterparts, common amenities include genuine leather upholstery and polished "woodgrain-look" dashboards. Compared to mainstream vehicles, luxury cars have traditionally emphasized comfort and safety. Luxury vehicles are also a status symbol for conspicuous consumption.

Contemporary luxury cars also offer higher performance and better handling, which is often known as sport luxury. However in Europe, where large-displacement engines are often heavily taxed and many luxury buyers shy away from conspicuous consumption, brands offer buyers the option of removing exterior engine-identifying badges.

Forbes noted that the reputation of luxury marques enables them to continually introduce many new safety technologies and comfort amenities, such as anti-lock brakes, electronic stability control and DVD entertainment systems, before they trickle down to mass market cars. Numerous "smart car" features are largely only found on luxury cars as of 2009.

The rear-wheel drive with longitudinal engines (FR) is a common layout of luxury cars. European marques like Mercedes-Benz, BMW, and Jaguar have almost never adopted front-wheel drive and retained a lineup mostly or entirely made up of FR cars. Japanese brands such as Lexus and Infiniti also have predominantly FR lineups. The FR layout, while more expensive than the FF, has been retained by these luxury manufacturers as it allows for higher performance engines (particularly the straight-6, V8, and other engine configurations with more cylinders), better handling, and a smoother ride.

American manufacturers also largely followed the FR for their luxury brands (as well as their mass-market cars of the time). However, due to the Arab Oil Embargo of 1973 and the 1979 fuel crises, began eliminating their FR platforms in favor of the more economical front wheel drive transverse engine layout (FF). Chrysler went 100% FF by 1990 and GM's Cadillac and Buick brands for the US were entirely FF by 1997. One of the few notable holdouts was Ford's Lincoln Town Car and Lincoln LS.

In the 21st century, as part of the revamp of its design and image, Cadillac did return most of its lineup (sedans, roadsters, crossovers and SUVs) to have rear- and all-wheel-drive, the only exceptions being the front-wheel drive Cadillac BLS (which is not sold in North America) and the Cadillac DTS. Chrysler returned its full-size cars to this layout with the Chrysler 300. Ford's Lincoln retained the longtime FR platform for the Town Car, intended for use as a limousine and chauffeured car, but newer offerings such as the MKZ and MKS will use newer FF platforms shared with mainstream Ford vehicles, with all-wheel drive as an option.

History and sales



Rolls-Royce Phantom II Continental is a British luxury car

In the United States luxury market, Cadillac and Lincoln had been long the best-selling and second best-selling luxury brands until 1998, when they had been overtaken by Japanese and German brands. Since the 2000s, with the Cadillac CTS, the marque has seen a resurgence in sales and brand value. Ford's Lincoln, which had seen sales fall as a result of an aging lineup, has attempted to return that luxury marque to competitiveness, by releasing new models such as the Lincoln MKS, as well as divesting itself of its other Premier Automotive Group brands. Mercedes-Benz and BMW were the top-selling luxury import until 1991, when they were overtaken by Lexus. Since 2000, Lexus has been the number-one-selling luxury car marque in the U.S., holding that title ever since.

Since the 1980s, a host of new manufacturers have entered the luxury market to challenge the traditional players. The three major Japanese auto manufacturers, Honda, Toyota, and Nissan, created their respective luxury brands particularly for the US. As a result of voluntary export restraints imposed in 1981, these manufacturers were limited to a number of vehicles they could export. While these companies did somewhat sidestep this by establishing US production facilities for mass market vehicles, their home factories soon begun producing higher-priced cars as they carried a greater profit margin per car. Acura was launched in 1986, while Lexus and Infiniti were unveiled in 1989. By 1992, these three divisions had sales of over US \$3.5 billion, using lower prices and innovation to steal market share from both domestic (Cadillac, Lincoln) and the European (Mercedes, Volvo, BMW, and Jaguar) luxury car makers. Hyundai had recently released the Genesis and plans to launch the Equus, hoping to repeat the same strategy of undercutting their established competitors.

The Late-2000s recession was the first time since the Great Depression of the 1930s that the luxury car market suffered considerably, something not seen in previous economic downturns. Many such customers had seen their net worth decline following the collapse in financial markets and real-estate values. For instance, some of the steepest dropoffs had come at the high end, including the BMW 7 Series and Rolls Royce Phantom, and Mercedes-Benz had unexpectedly dropped starting price of its all-new 2010 E-Class. The unusually sharp decline in luxury car sales have led observers to believe that there is a fundamental shift and reshaping of the luxury automotive market, with one industry official suggesting that the marques no longer command the premiums that they used to, and another saying that conspicuous consumption was no longer attractive in poor economic conditions. Additionally, mainstream brands have been able to offer amenities and devices such as leather, wood, and anti-lock brakes, previously found only on luxury cars, as the costs decline.

However, luxury vehicle sales have not collapsed as much as their non-luxury counterparts. Luxury vehicle marques generally benefited from financially healthier dealerships, better leasing and certified pre-owned programs and loyal customers, so sales are expected to rebound more quickly than mass market cars. Others note that there is growing interest in luxury vehicles from emerging markets such as China and Russia. Also, the entry-level luxury segment has been very competitive, and there has been price-overlapping with well-equipped non-luxury cars. For instance, in Canada, several luxury manufacturers set sales records in August 2009, due mostly to aggressive incentives on entry-level luxury vehicles. In September 2009, BMW, Mercedes-Benz, Lexus and Audi all saw their Canadian sales increase by more than 10 per cent compared to a year earlier, despite overall Canadian auto sales being down 3.5 per cent compared to September 2008. The head of Mercedes-Benz Canada suggested that the brand "has been able to attract 'middle-class' consumers even during the recession because of the sense that owning a Mercedes comes with 'membership in a club'." BMW Canada's chief said luxury cars continued to be attractive, "I think due to new product offensives and due to new design and due to the fact that we are the benchmark in all areas when it comes to fuel efficiency... that together stimulates a lot of the market". BMW has managed to remain profitable in 2009 while other competitors were posting losses, by scaling down production quickly to avoid cash burn through bloated inventories.

Since March 2010, BMW is the best-selling luxury vehicle manufacturer by sales, ahead of rivals Audi AG (NSU.XE) and Daimler AG's (DAI.XE) Mercedes-Benz marque.

Car classification					
American English	British English	Euro Car Segment	Euro NCAP 1997 - 2009	Euro NCAP	Examples
Microcar	Microcar, Bubble car				Isetta, Smart Fortwo
Subcompact car	City car	A-segment mini cars	Supermini	Passenger car	Fiat 500, Daewoo Matiz,

	Supermini	B-segment small cars		Peugeot 107, Toyota iQ
Compact car	Small family car	C-segment medium cars	Small family car	Ford Fiesta, Volkswagen Polo, Ford Figo, Opel Corsa, Peugeot 207
Mid-size car	Large family car	D-segment large cars	Large family car	Ford Focus, Opel Astra, Toyota Auris, Volkswagen Golf, Chevrolet Cruze
Entry-level luxury car	Compact executive car			Ford Mondeo, Opel Insignia, Volkswagen Passat, Chevrolet Malibu, IKCO Samand
Full-size car	Executive car	E-segment executive cars	Executive car	Alfa Romeo 159, BMW 3 Series, Lexus IS, Volvo S60, Audi A4, Cadillac CTS
Mid-size luxury car				Ford Crown Victoria, Holden Commodore, Toyota Crown, Chrysler 300C, Chevrolet Impala
Full-size luxury car	Luxury car	F-segment luxury cars	-	Lexus GS, BMW 5 Series, Jaguar XF, Lincoln LS, Audi A6, Volvo S80, Cadillac CTS
				Audi A8, Maserati

				Quattroporte, Lincoln Town Car, Mercedes S- Class, Cadillac DTS
Sports car	Sports car		-	Chevrolet Corvette, Porsche 911, Ferrari 458 Italia, Nissan Z-car, Lamborghini Gallardo
Grand tourer	Grand tourer		-	Jaguar XK, Ferrari 612 Scaglietti, Maserati GranTurismo
Supercar	Supercar	S-segment sport coupes	-	Bugatti Veyron, Ferrari Enzo, Pagani Zonda
Convertible	Convertible		-	BMW 6 Series, Mercedes CLK, Volvo C70, Volkswagen Eos, Chevrolet Camaro
Roadster	Roadster		Roadster sports	Roadster Elise, Mazda MX-5, Porsche Boxster, Ford Toune Connect, Peugeot Partner, Škoda Roomster
-	Leisure activity vehicle			Ford Toune Connect, Peugeot Partner, Škoda Roomster
		M-segment multi purpose cars	Small MPV	MPV Opel Meriva, Fiat Idea, Citroen C3 Picasso
-	Mini MPV			
Compact minivan	Compact MPV, Midi			Mazda5, Opel Zafira,

		MPV						Ford C-Max, Volkswagen Touran, Peugeot 5008
Minivan		Large MPV				Large MPV		Chrysler Town and Country, Ford Galaxy, Honda Odyssey, Peugeot 807
Mini SUV		Mini 4x4						Daihatsu Terios, Mitsubishi Pajero iO, Suzuki Jimny, Jeep Wrangler
Compact SUV		Compact 4x4				Small Off-Road 4x4		BMW X3, Ford Escape, Honda CR- V, Toyota RAV4, Chevy Equinox, Jeep Liberty
-		Coupé SUV	J-segment sport utility cars (including off- road vehicles)			-	Off- roader	Isuzu VehiCROSS, SsangYong Actyon, BMW X6
Mid-size SUV								Ford Explorer, Jeep Grand Cherokee, Volkswagen Touareg, Chevrolet Tahoe
Full-size SUV		Large 4x4				Large Off-Road 4x4		Cadillac Escalade EXT, Chevrolet Suburban, Range Rover, Toyota Land Cruiser, Jeep Commander
Mini pickup truck	Pick-up	-				Pick-up	Pickup	Chevrolet Montana, Fiat Strada, Volkswagen

Mid-size
pickup
truck

Full-size
pickup
truck

Full-size
Heavy Duty
pickup
truck

Saveiro
Chevrolet
Colorado,
Ford Ranger,
Mitsubishi
Triton/L200,
Nissan
Navara

Dodge Ram,
Ford F-150,
GMC Sierra,
Nissan Titan,
Toyota
Tundra

Chevrolet
Silverado,
Ford Super
Duty

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Chapter- 2

Acura ZDX

Acura ZDX



Manufacturer	Acura
Production	2010–
Assembly	Alliston, Ontario, Canada
Class	Mid-size crossover wagon
Body style(s)	5-door fastback
Layout	Front engine, all-wheel drive
Engine(s)	3.7L J37A5 V6
Transmission(s)	6-speed automatic
Wheelbase	108.2 in (2,748 mm)
Length	192.4 in (4,887 mm)
Width	78.5 in (1,994 mm)
Height	62.8 in (1,595 mm)

Related

Acura MDX

Honda Pilot

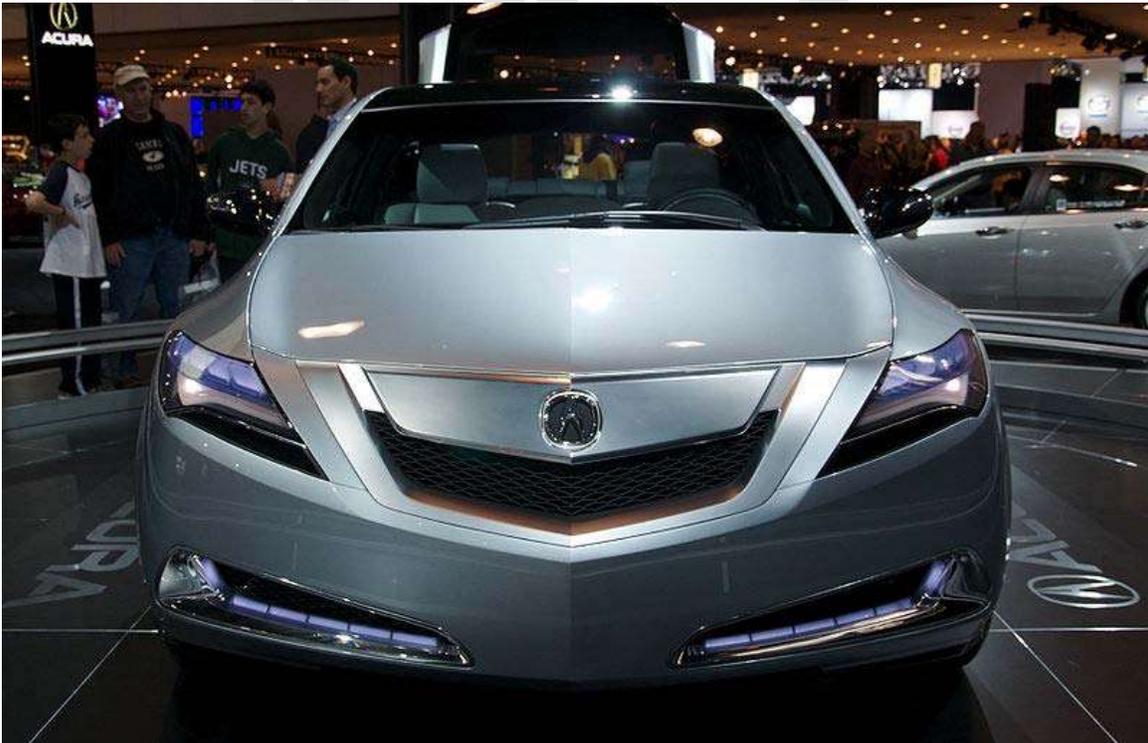
The **Acura ZDX** is a mid-size luxury crossover developed by Honda for its upmarket brand Acura. The car was originally scheduled to be called the Acura MSX. The ZDX debuted at the 2009 New York International Auto Show on April 8, 2009. The vehicle was also the first to be completely designed at Acura's southern California design studio.





The car has been said to be a "new level of prestige for Acura." It features Acura's first six speed automatic transmission, advanced ventilated seats, as well as other luxury appointments. Although the ZDX shares a similar profile with the Honda Accord Crosstour, the two vehicles are not mechanically related; the latter being based on the Honda Accord while the ZDX is based on the Honda Pilot/Acura MDX.

Concept version



Five teaser shots, released by Acura between March 16–20, 2009, indicated a coupe-like sloping roofline akin to that of the BMW X6, which led many observers to believe that is its direct competitor. After the announcement about naming the vehicle ZDX, Acura added the words "Luxury Four-Door Sports Coupe" to the caption for each picture. Moreover, it did not state the vehicle as a crossover or an SUV.

Production version

The announced version includes the 3,664 cc (3.664 L; 223.6 cu in) SOHC VTEC V6 all-aluminum engine rated 300 bhp (220 kW) at 6300 rpm and 270 lb·ft (366 N·m) at 4500 rpm, 6-speed automatic transmission, Super Handling All-Wheel Drive (SH-AWD), 19-inch, 7-spoke alloy wheels, panoramic glass roof with movable sunshades, hand-stitched leather interior, HandsFreeLink Bluetooth connectivity, power tailgate, and a high-powered audio system with CD player, AM/FM/XM Satellite Radio and USB audio interface with iPod integration. Sales began in winter 2009.



2010 Acura ZDX

Technology Package adds the Navigation System with voice recognition, an Acura/ELS Surround premium audio system and a new multi-view rear camera. Advance Package adds blind spot monitoring system, Collision Mitigating Braking System (CMBS), and Adaptive Cruise Control (ACC).

United States Environmental Protection Agency (EPA) fuel consumption estimates for all models are 16 mpg-US (15 L/100 km; 19 mpg-imp) in the city, 22 mpg-US (11 L/100 km; 26 mpg-imp) on the highway and 19 mpg-US (12 L/100 km; 23 mpg-imp) combined.

Colors and pricing

2010 ZDX Color	ZDX Base Package	ZDX Technology Package	ZDX Advance Package
Aspen White Pearl	Taupe	Taupe, Sumatra	Taupe, Sumatra
Palladium Metallic	Ebony, Taupe	Ebony, Taupe	Ebony, Taupe
Crystal Black Pearl	Ebony, Taupe	Ebony, Taupe, Umber	Ebony, Taupe, Umber
Dark Cherry Pearl	N/A in Base	Ebony, Taupe	Ebony, Taupe
Grigio Metallic	Ebony, Taupe	Taupe, Sumatra, Umber	Taupe, Sumatra, Umber
Ionized Bronze Metallic	N/A in Base	Ebony, Umber	Ebony, Umber
2010 MSRP	US\$ 45,495 / C\$ 45,995	US\$ 49,995 / C\$ 51,995	US\$ 56,045 / C\$ 57,995

All ZDX models are subject to a \$860 destination and handling fee (U.S.).

Sales

Calendar year US sales

2009	79
2010	3,259

Chapter- 3

Audi V8

Audi V8



1993 Audi V8 quattro (US)

Manufacturer	AUDI AG
Production	October 1988–November 1993
Assembly	Neckarsulm, Germany Tokyo, Japan (AMA)
Successor	Audi A8
Class	Full-size luxury car
Body style(s)	4-door saloon (sedan)
Layout	longitudinal front engine, quattro permanent four-wheel drive

Platform	Volkswagen Group D1 (aka D11)
Engine(s)	3.6 L <i>PT</i> V8 4.2 L <i>ABH</i> V8
Transmission(s)	4-speed <i>ZF 4HP24A</i> automatic 5-speed manual (3.6 V8) 6-speed manual (4.2 V8)
Wheelbase	2,702 mm (106.4 in) 3,020 mm (118.9 in) (LWB)
Length	4,861 mm (191.4 in) 5,190 mm (204.3 in) (LWB)
Width	1,814 mm (71.4 in)
Height	1,420 mm (55.9 in)
Curb weight	1,712 kg (3,774 lb) 1,785 kg (3,935 lb) (LWB)



1993 Audi V8 quattro (US)





The **Audi V8 (Typ 4C)** is a large luxury four-door, five-seat saloon (sedan), built by Audi AG at its Neckarsulm plant in Germany from October 1988 to November 1993, as the company's range-topping flagship model. It was the first car from the Audi marque to use its namesake engine configuration - a V8 engine, and first Audi car to combine quattro system with an automatic transmission.

Factory production commenced in October 1988, and ceased in November 1993, although sales of completed vehicles continued in 1994.

The Audi V8 was replaced by the Audi A8 in 1994, although the A8 would not be sold in North America until the 1997 model year.

Overview

The Audi V8 car featured as standard 32 valve, twin double overhead camshaft (2xDOHC) V8 engine, 'trademark' quattro permanent four-wheel drive system and four-speed electronically controlled ZF 4HP24A automatic transmission with option of a five-speed (later in production six-speed) manual transmission.

Notable is also that Audi V8 had 2 sides galvanised body, with 10 year anti-perforation warranty (against corrosion).



The Audi V8 was specifically designed to be a top of the range 'flagship' car, having as standard what is traditionally treated as an optional features like leather seating, and Audi's famous quattro 4wd. However, this was reversed with the introduction of Audi D2 A8, where the base model was equipped with the V6 engine providing much smaller power, front-wheel drive, also diesel engines were introduced, quattro as well as any luxury amenities like leather seats became paid options.



The Audi V8 created a new 'elevated' image for its company, Audi AG, providing a credible alternative to the then established competitors. In that matter, this car was a real cornerstone in developing the history of the Audi marque as we know today.

Today, the Audi V8 has a cult following in many countries, and many examples are in the hands of enthusiasts who appreciate the quality and performance offered by what has turned out to be a durable and well-built car.

Body style

The car body style of the Audi V8 resembled the *Typ 44* Audi 100 and 200 models, and was based on a stretched version of the Volkswagen Group C3 automobile platform, known either as the D1 or D11 platform. The Audi V8 differed from the Audi 100/200 in having a unique grille attached to the hood, bumpers, headlights, all-red rear lights, extended wheelbase, wider track, pronounced fenders, completely different interior and in that only alloy wheels were offered, at either 15", 16" or 17" size.

Northern American version differs from version for other makets in that red plastic in taillights is extended, because of the smaller size of licence plate. Headlights are different too; in markets excluding USA/Canada they are made of glass bended around car corners, where in the US and Canada version the pieces at corners are made of plastic and they're accommodating position lights.

In addition to the standard length model, there was also long wheelbase (LWB), ('Lang' in German) version of the standard V8 model (refer to the infobox for differences in dimensions). It was assembled at Steyr-Daimler-Puch factory in Graz.

A one-off experimental Avant (estate) version was built for the wife of former Audi CEO Ferdinand Piech. This could be seen at the Audi Forum museum at Ingolstadt in Germany.

Powertrain

Powertrain detail of the Audi V8 ultimately featured one of two all-new, all-aluminium alloy engines – both petrol engines, and both in V8 configuration with thirty two valves (four valves per cylinder) with dual valve springs, and four overhead camshafts (2xDOHC). These new designs would set the pattern for future Audi-developed Volkswagen Group V8 engine. As well as using an all-aluminium alloy for the cylinder block (when the established material was grey cast iron), the camshafts were driven using a hybrid method. A rubber/kevlar toothed timing belt, driven from the front of the crankshaft drives just one of the overhead camshafts per cylinder bank - the exhaust camshafts in each cylinder head. The inlet camshafts are then driven via a simplex roller chain from the exhaust camshaft - the right bank, comprising cylinders 1-4 at the rear of the engine, and the left bank (cylinders 5-8) at the front of the engine, immediately behind the timing belt. This method effectively reduced the complexity of the valve gear drive timing belt layout (known to be very complex on DOHC V engines), and as a result, required fewer components (idler rollers and guides) - leading to slightly easier (and therefore cheaper) maintenance of the timing belt and associated components. The actual intervals for changing the timing belts do vary - the 3.6 V8 (PT) requires changing every 90,000 kilometres (60,000 mi), whereas the 4.2 V8 (ABH) goes longer between intervals at 120,000 kilometres (75,000 mi). A thermostatically controlled electric cooling fan also became standard, replacing the engine-driven viscous fans on earlier cars. This not only provided forced airflow for the engine coolant radiator, but also for the smaller engine oil cooler too.

Audi's now proven 'trademark' quattro permanent (or semi-permanent, dependent on gearbox type) four-wheel drive system was the only offering for the driveline. This normally distributes the engine torque as a 'default' 50:50 between front and rear axles, but can automatically dynamically apportion up to a bias of 20:80 to 80:20 front and rear. The automatic transmission utilises a hydraulically controlled multi-plate clutch to apportion drive between front and rear axles, whereas the manual transmission variants utilise a Torsen type 1 Torque Sensing centre differential.

The rear axle final drive unit (parts code prefix: 017, identification codes: AFV, AXZ) contains a Torsen type 1 Torque Sensing differential, instead of the more common hypoid open differential. It remains the only production Audi with the much sought after third generation quattro system.

Engines

Both available engines use a Bosch Motronic fully-electronic engine control unit (ECU), with cylinder bank selective knock control, dual-barrel throttle valve, lambda mixture control via intake air volume metering and exhaust gas temperature sensor, and require unleaded petrol. Fuel is delivered to the combustion chambers via eight intake manifold-sited electronic fuel injectors, fed from two common fuel rails (one per cylinder bank), and are sequentially 'fired' or activated in accordance with the engine firing order. It is important to note though - whilst the 3.6 V8 is able to use 95 RON (91 AKI) fuel, for the 4.2 V8, the more expensive 98 RON (93 AKI) 'SuperPlus' unleaded is required in order to achieve the quoted power outputs. The use of 95 RON in the 4.2 V8 will result in a lower power output, as well as increased fuel consumption.

3.6

From initial launch of the Audi V8, the only offering was the 3.6 litre powerplant which displaced 3,562 cubic centimetres (217.4 cu in). This V8 engine was DIN-rated with a maximum motive power output of 184 kilowatts (250 PS; 247 bhp) at 5,800 revolutions per minute (rpm), and generated a torque turning force of 340 newton metres (251 ft·lbf) at 4,000 rpm. 3.6 cars have no 'V8' badges, or 3.6 emblems.

4.2

In August 1991, Audi introduced a 4.2 litre engine, displacing 4,172 cubic centimetres (254.6 cu in), to complement the choice of the existing 3.6 litre V8. This shared many components from the 3.6 V8, and this 4.2 unit was identical to the V8 used in the Audi C4 S4 (aka *Ur-S4*), sharing the same rated outputs and ABH identification code. Like the 3.6 V8 model, the existing four-speed automatic gearbox remained available. However, a new six-speed manual gearbox replaced five speed manual. This powerplant is identified by chrome 'V8' badges on the front grille and at trunk lid, where in some cars also '4.2 quattro' badge is present. Note the Audi V8 never had the quattro rectangular emblem on grille as opposed to the later Audi cars.

Details and performance

As opposed to its successor, Audi A8, the Audi V8 doesn't feature electronic speed limiter.

Transmissions

A choice of transmissions were offered.

Automatic

A ZF Friedrichshafen-sourced four-speed 4HP24A automatic transmission with a torque converter (parts code prefix: 018, identification codes: AKD, AYU, AZG) was available

throughout the V8 production run. Automatic transmission has three modes: "S" - Sport; "E" - Economic and "M" - Manual operation. Sport mode is changing gears at higher rpm than Economic, Manual mode allows driver to chose gear using lever.

Manual

There were also two manual transmission offerings – for the 3.6: a five-speed manual gearbox (parts code prefix: 016, identification code: AWW), or later for the 4.2, a six-speed manual (parts code prefix: 01E, identification codes: CBM, CBN). Both manual transmission variants used a 240 millimetres (9.4 in) single-plate clutch.

Details

transmission type	identification		gear ratios							
	parts code	ID codes	1st	2nd	3rd	4th	5th	6th	reverse	final drive
4-speed automatic	018	AKD, AYU, AZG	2.480	1.480	1.000	0.728	—	—	2.086	4.111
5-speed manual	016	AWW	3.500	1.889	1.231	0.903	0.730	—	2.200	4.111
6-speed manual	01E	CBM, CBN	3.500	1.889	1.320	1.034	(CBM), 0.857 0.806 (CBN)	(CBM), 0.730 0.684 (CBN)	2.750	4.111

Steering, brakes, wheels

The Audi V8 came equipped with rack and pinion power assisted steering (PAS) as standard. An electronically controlled variable assisted 'servotronic' version was also available.

It was fitted with a high performance brake system, which included radially ventilated disc brakes front and rear. The fronts were rather unusual - designed by ATE and sized at 310 millimetres (12.2 in) in diameter by 25 millimetres (0.98 in) thick, but mounted the caliper inside the disc - and often coined the phrase "UFO brakes". The fronts also incorporated electronic brake pad wear sensors. The rears were 269 millimetres (10.6 in) by 20 millimetres (0.79 in), and incorporated a cable-operated parking brake. A Bosch Anti-lock Braking System (ABS) was also standard.

Standard roadwheels were 7.5J x 15 H2 ET35 'aero' style light alloy wheels shod with 215/60 R15 steel belted radial tyres. An optional multi-spoke BBS-sourced (with Audi centre-cap badge) alloy wheels were also available, in either 8.0J x 16, or 8.0J x 17 sizes. Ronal sourced wheels also were available in later years of production (Europe only).

Features



Audi V8 interior

The Audi V8 came standard with a range of usually optional features; including BOSE audio system with eight speakers, walnut wood trim, leather interior, also front and rear heated seats. The only paint finishes available were pearlescent or metallic. Some available colors included pearl white, lagoon blue (teal), blue mica, tornado red, black, amongst others. The lists below details other notable standard and optional features.

Production figures

model	built
V8 3.6	16,648
V8 4.2	4,645
V8 3.6 LWB 111	
V8 4.2 LWB 160	
Total	21,564

It used to be highly priced automobile, but today it's very affordable, and because of that it's being often mistreated e.g. in German tv series Alarm für Cobra 11 – Die

Autobahnpolizei a couple of V8's were destroyed, which may lead to the point when they become very rare.

Motorsport



Audi V8 DTM

Audi developed a Group A competition version of the Audi V8 for entry into the Deutsche Tourenwagen Meisterschaft (DTM) (German Touring Car Championship) auto racing series equipped with 309 kW (420 PS; 414 bhp), later 340 kW (462 PS; 456 bhp), 3.6 V8 engine and 6-speed manual transmission, and began racing with it in 1990 with Schmidt MotorSport (SMS) running the operation, and Hans-Joachim Stuck, Walter Röhrl and Frank Jelinski driving. In the 1990 DTM season all off the three teams claimed together the entire podium (1st, 2nd and 3rd places) at Hockenheimring race. Stuck won the title, and the following year, Audi added a second team to the mix, Audi Zentrum Reutlingen (AZR). SMS continued with Stuck and Jelinski, while AZR raced with Frank Biela and Hubert Haupt. Biela gave Audi another crown in 1991, but was unable to defend the title in 1992.

For the 1992 season, Audi had changed their engines to use a 180° flatplane crankshaft, which they said had been re-forged and bent from the original 90° crossplane part as used in production model. The DTM organisers found this highly modified crankshaft deviated from original homologated standard crankshaft, and therefore deemed it illegal. Audi subsequently withdrew from the championship.

During its presence at DTM the Audi V8 competed with much smaller and about 300 kg (661 lb) lighter Mercedes 190, BMW M3, and slightly smaller Opel Omega 3000. None of those cars was equipped with a V8 engine or 4 wheel drive.

Interesting fact is that those DTM cars retained walnut wood trim on doors and dashboard. They are currently preserved and are exhibited in Audi Forum museums in Ingolstadt and Neckarsulm, racing on occasion at special events.

WWT

Chapter- 4

BMW 7 Series (E23)

BMW 7-Series (E23)



Manufacturer	BMW
Production	1977–1986 285,029 built
Predecessor	BMW E3
Successor	BMW E32
Body style(s)	4-door saloon
Layout	FR layout
Engine(s)	2.5–3.4 L I6
Transmission(s)	Manual 4-speed 5-speed Automatic

	3-speed
	4-speed
Wheelbase	2,795 mm (110.0 in)
Length	4,860 mm (191 in)
Width	1,800 mm (71 in)
Height	1,430 mm (56 in)
Curb weight	1,530 kg (3,400 lb)–1,670 kg (3,700 lb)
Designer	Paul Bracq





The **BMW E23** is the first BMW 7 Series luxury car, produced by the German automaker BMW. Replacing the BMW E3 large sedan, the E23 was produced for ten years from 1977 to 1987 and was replaced by the BMW E32 7 Series in 1986.

Design and features

All E23 7 Series models (with the exception of the 745i) were built with the 12-valve M30 six-cylinder engine as used in the older E3 and E9 cars. Although most E23 engines were fuel-injected, two models (the 728 and 730) were available with a Solex four-barrel carburetor until 1979, when they were replaced by the fuel-injected 728i. Early fuel-injected models used the Bosch L-jetronic system while later models used the more advanced digital Bosch Motronic system.





The E23 7 series cars were very upscale and sophisticated for their time. They were the first BMWs fitted with service interval indicators, a 'check control' that alerted the driver to various system faults, and complex climate control systems. On-board computers and anti-lock braking system (ABS) were optional on early models but later became standard features. Also, later models (1985–1986) offered an optional driver's air bag. A variety of options included leather upholstery, several types of wood trim, power seats, seat heaters, and power windows and mirrors. Four-speed and five-speed manual gearboxes were available (depending on the year) and an automatic transmission was also available.

A minor styling update in 1983 affected the 'nose' of the car (the front 'kidney' grilles, valance/spoiler, bumpers etc.) as well as the dashboard and instrument panels which received updates plus (in the UK) the 735i received the Motronic 3430 cc engine (replacing the 3453 cc) and rear suspension modifications as well as numerous other minor changes. In the US, 1984 saw the arrival of the optional 4 speed automatic transmission (replacing the 3 speed unit previously offered), upgraded wood trim above the glove compartment and on the ashtray (previously plastic in all US models), electrically adjustable power seats and larger Michelin TRX radials with special TRX wheels (later standard on all 1985–1987 735i/L7 models) on the 5 speed manual models.

Notable versions

745i

The 745i was a special high-performance model offered in left-hand-drive European markets between 1979 and 1986. It was originally fitted with a specially-prepared 3.2 L type-M30 six cylinder engine and a turbocharger producing 10 psi of boost, BMW engine code M102.





In 1984 the engine grew to 3.4 L, BMW engine code M106, produced 6 psi intake pressure, and produced the same power output as the M102. These cars were all built with automatic transmissions (although there is documentation supporting how the ECU was modified at the factory to work with Getrag 5 speeds) and could be ordered with exotic options such as heated front and rear power reclining seats, auto-on aux interior

gasoline fired heaters, leather covered cellular telephones, front and rear seat heaters, rear-armrest radio control, water buffalo hide upholstery, and burl wood trim. The water buffalo interior model was the Executive trim option, while the High Line trim package offered ivory leather interior trim including a leather dash board, sun visors, headliner, and other leather bits not offered on the Executive.

BMW designated this particular model as 745i instead of 732i Turbo due to the theoretical assumption that the turbocharged motors have about 1,4 times more power than naturally aspirated motors. Thus, 3,2-litre (3210cc) turbocharged motor has "power equivalent" of 4,5-litre (4494cc) motor without forced induction.

South African 745i

A 745i without turbocharger was built specifically for the South African market. The right-hand-drive version was not possible with the turbocharged motor due to the proximity of turbocharger in the right-hand side of engine bay. Instead, it was fitted with the detuned version of 286 hp (213 kW) dual-camshaft 24-valve M88/3 M1 Motorsport engine with a Bosch ML-Jetronic fuel injection system. This particular motor was also fitted to the first-generation M5 and M635CSi. A production run of 209 South African 745i was built from 1984 to 1986: 192 were built with automatic gearbox and 17 with 5-speed manual gearbox.

BMW South Africa ran one of these 745i models in Class A of the South African Modified Saloon Car Championship, the only BMW-Sanctioned motor sport application in the history of BMW 7-series cars.

North America and Japan

Only the 733i, 735i, and L7 were offered in these markets. As usual, BMW sold only upscale versions in these markets, usually including leather upholstery, cruise control, wood trim, power windows, power sunroof, and other options as standard. North American versions were fitted with larger bumpers (to comply with Federal standards), smaller sealed beam headlights, and various forms of emissions equipment that were not found on European-market cars. The engines used in these markets had lower-compression pistons and thus were less powerful than European-market versions. Some features such as ABS were available in markets outside North America before they were fitted on American models. Many turbocharged 745i models made their way into America during the height of the grey market in the mid-1980s.

The L7 was a more luxurious version of the 735i for the American market only. It featured special leather upholstery with leather dashboard and door padding (rather than wood trim), a power glass Moonroof. and a variety of optional features as standard. All L7 models were built with automatic transmissions and a standard driver's air bag. The L7 was the first BMW sold in North America with a driver's side airbag.

Models



BMW E23

The following models were produced in this series:

Model	Engine	Power				Torque			Built
		PS	kW	hp	at rpm	N·m	ft·lbf	at rpm	
725†	2494 cc I6	150	110	148	5800	208	153	4000	1977–1979
728	2788 cc I6	170	125	168	5800	233	172	4000	1977–1979
728i	2788 cc I6	184	135	181	5800	235	173	4200	1979–1986
730	2985 cc I6	184	135	181	5800	255	188	3500	1977–1979
732i	3205 cc I6	196	144	193	5500	279	206	4500	1979–1986
733i	3205 cc I6	197	145	194	5500	279	206	4300	1977–1979

735i	3453 cc I6	218	160	215	5200	304	224	4000	1979–1982
735i	3430 cc I6	218	160	215	5200	304	224	4000	1982–1986
745i	3205 cc I6	252	185	249	5200	374	276	2600	1980–1982
745i	3430 cc I6	252	185	249	4900	374	276	2200	1983–1986

North America and Japan

733i	3210 cc I6	179	132	177	5500	266	196	4000	1978–1979
733i	3210 cc I6	176	129	174	5200	255	188	4200	1980–1981
733i	3210 cc I6	184	135	181	6000	264	195	4000	1982–1984
735i/L7	3430 cc I6	185	136	182	5400	290	210	4000	1985–1987 1986–1987 (L7)

South Africa

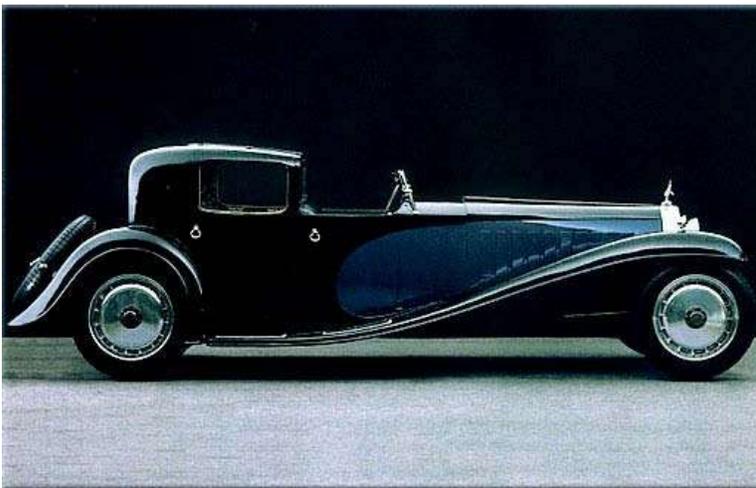
745i	3453 cc I6	286	210	282	6500	340	250	4500	198?–198?
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Note: ‡ For government agencies and on special order only

Chapter- 5

Bugatti Royale

Bugatti Type 41



Bugatti Type 41 (Royale) Coupé Napoleon

Manufacturer	Bugatti
Also called	Bugatti Royale
Production	1927-1933 (6 produced)
Class	Luxury car
Layout	FR layout
Engine(s)	12,763 cc (12.7 L) (779 cu in.).straight-8
Transmission(s)	3-speed manual
Wheelbase	~4.3 m (169.3 in)

Length ~6.4 m (252.0 in)

Curb weight ~3,175 kg (7,000 lb)





The **Bugatti Type 41**, better known as the **Royale**, was a large luxury car with a 4.3 m (169.3 in) wheelbase and 6.4 m (21 ft) overall length. It weighed approximately 3175 kg (7000 lb) and used a 12.7 L (12763 cc/778 in³) straight-8 engine.

For comparison, the Royale is about as heavy as a large modern commercial pickup truck, such as a Ford Super Duty F-450, but it is about 10% longer. When compared to the modern Rolls-Royce Phantom, it is about 20% longer, and more than 25% heavier.

Ettore Bugatti planned to build twenty-five of these cars, and sell them to royalty. But even European royalty was not buying such things during the Great Depression, and Bugatti was able to sell only three of the six made. Today a Bugatti Royale is both one of the largest and rarest cars in the world.





Design

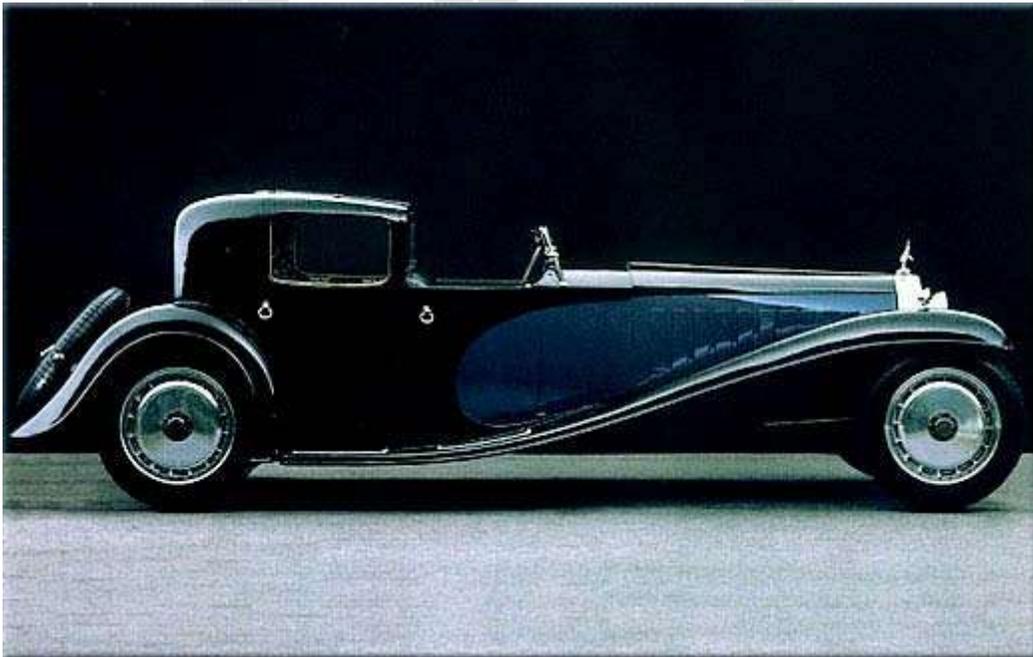


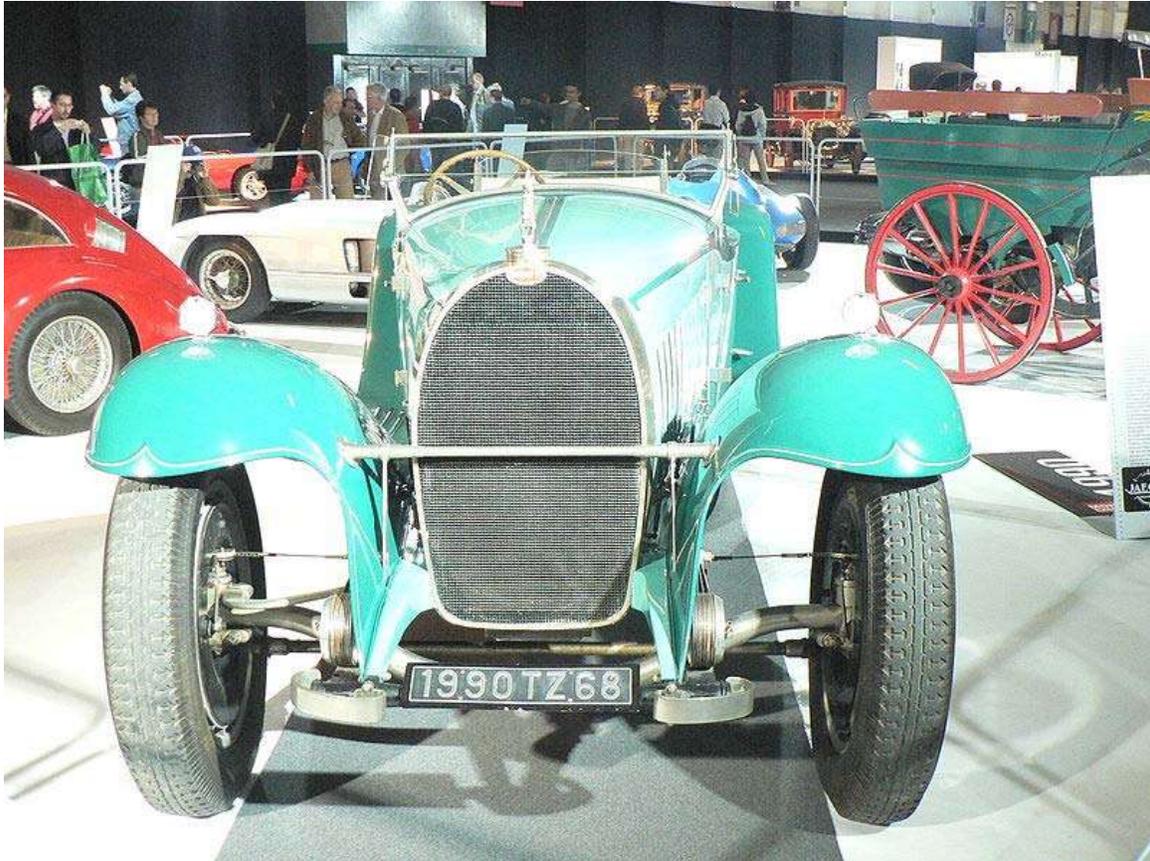
Type 41 radiator cap

Crafted by Ettore Bugatti, the Type 41 is said to have come about because he took exception to the comments of an English lady who compared his cars unfavourably with those of Rolls-Royce.

The prototype had a near 15-litre capacity engine. The production version, its stroke reduced from 150 mm (5.9 in) to 130 mm (5.1 in) had a displacement of 12.7 litres. The engine was built around a single huge block, and at (apx. 4.5 ft (1.4 m) long x 3.5 ft (1.1

m) high), is one of the largest automobile engines ever made, producing 205 to 223 kW (275 to 300 hp). Its eight cylinders, bored to 125 mm (4.9 in) and with a stroke length of 130 mm (5.1 in), each displaced more than the entire engine of the contemporary Type 40 touring car. It had 3 valves per cylinder (two inlet:one exhaust) driven by a centrally positioned single overhead camshaft. Nine bearings were specified for reliability, but only a single custom carburettor was needed. The engine was based on an aero-engine design that had been designed for the French Air Ministry, but never produced in that configuration.





The chassis was understandably substantial, with a conventional semi-elliptic leaf spring suspension arrangement at the front. At the rear the forward facing Bugatti quarter-elliptics were supplemented by a second set facing to the rear. Massive brake shoes were mechanically operated via cable controls: the brakes were effective but without servo-assistance required significant muscle power from the driver. The car's cast "Roue Royale" wheels measured 610 mm (24 inches) in diameter.

Reflecting some tradition based fashions of the time, the driver was confronted by a series of knobs of whalebone, while the steering wheel was covered with walnut.

All Royales were individually bodied. The radiator cap was a posed elephant, a sculpture by Ettore's brother Rembrandt Bugatti.

Production

In 1928 Ettore Bugatti asserted that "this year King Alfonso of Spain will receive his Royale", but the Spanish king was deposed without taking delivery of a Royale, and the first of the cars to find a customer was not delivered until 1932. The Royale with a basic chassis price of \$30,000, was launched just as the world economy began to sour into the 1930s Great Depression. Six Royales were built between 1929 and 1933, with just three sold to external customers. Intended for royalty, none were eventually sold to any royals,

and Bugatti even refused to sell one to King Zog of Albania, claiming that "*the man's table manners are beyond belief!*"

All six production Royales still exist (the prototype was destroyed in an accident in 1931), and each has a different body, some having been rebodied several times.

41.110 - Coupe Napoleon



Chassis no.41.110, known as the *Coupe Napoleon*, at home in the Musée National de l'Automobile de Mulhouse

- The first car is chassis number 41.110
- Known as the *Coupe Napoleon*
- This car was fitted with the larger 14.7 litre prototype engine

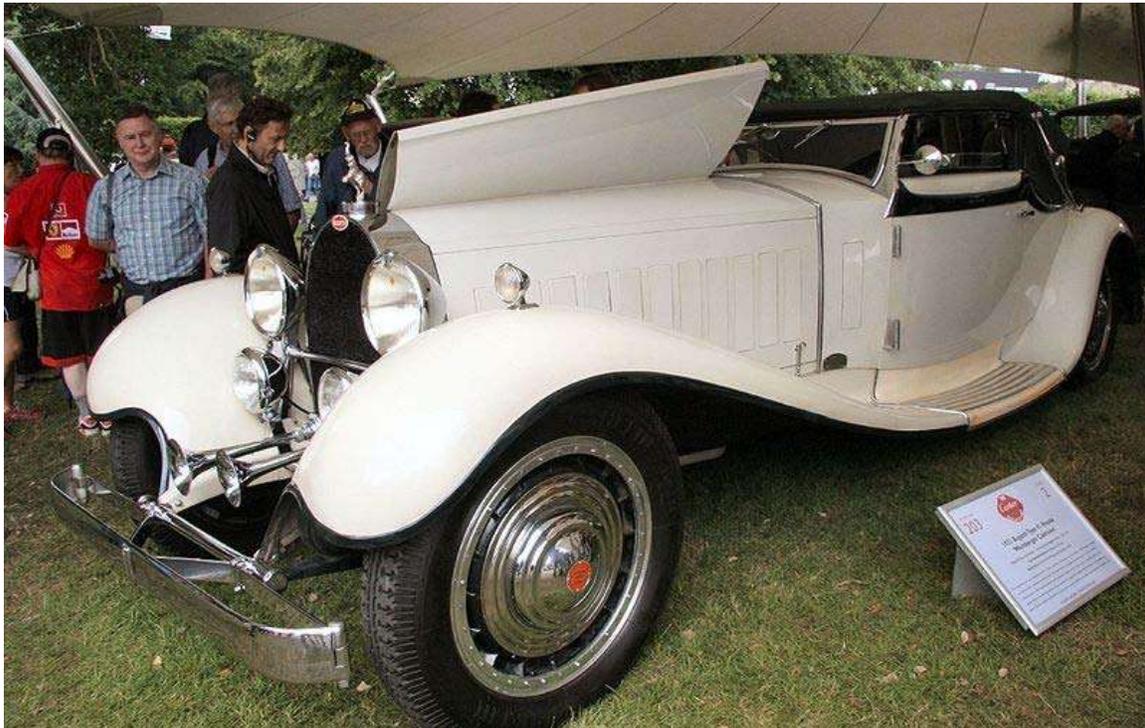
- The Coupe Napoleon was used by Ettore Bugatti, and in his later life became his personal car. It remained in the family's possession, housed at their Ermenonville chateau until financial difficulties enforced its sale in 1963. It subsequently passed into the hands of Bugatti obsessive Fritz Schlumpf.
- It originally had a Packard body. It was rebodied by Paris coach builder Weymann as a two door fixed head coupe. The Weymann body was replaced after the car was crashed by Ettore Bugatti who in 1930 or 1931 fell asleep at the wheel travelling home from Paris to Alsace necessitating a major rebuild.
- At various stages it was also fitted with other bodies.

- Bricked up with 41.141 and 41.150 during World War II at the home of the Bugatti family in Ermenonville, to avoid being commandeered by the Nazis.
- Sold by L'Ebe Bugatti in the early 1960s to the brothers Schlumpf
- Resides in the Musée National de l'Automobile de Mulhouse, alongside 41.131 that the Schlumpf brothers had acquired from John Shakespeare.

41.111 - Coupe de Ville Binder

- The second car built, but the first to find a customer, is chassis no.41.111
- Known as the *Coupe de Ville Binder*
- Sold in April 1932 to French clothing manufacturer Armand Esders. Ettore's eldest son, Jean, fashioned for the car a dramatic two-seater open body with flamboyant, full-bodied wings and a dickey seat, but no headlamps. In this form it became known as the *Royale Esders Roadster*.
- Purchased by the French politician Paternotre, the car was rebodied in the Coupe de Ville style by the coach builder Henri Binder. From this point onwards, known as the *Coupe de Ville Binder*
- Never delivered to the King of Romania due to World War 2, it was hidden from the Nazis by storing it in the sewers of Paris
- Briefly found its way to the United Kingdom after World War 2, and was then acquired by Dudley C Wilson of Florida in 1954. On his death in 1961 it passed to banker Mills B Lane of Atlanta before in 1964 taking up residence in The Harrah Collection at Reno, Nevada.
- Sold in 1986 to Californian collector, home builder, and Air Force Reserve Major General William Lyon, he offered the car during the 1996 Barrett-Jackson Auction by Private treaty sale, where he refused an offer of \$11 million; the reserve was set at \$15 million.
- In 1999, the new owner of the Bugatti brand, Volkswagen AG, bought the car for a reputed \$20 million. Now used as a brand promotion vehicle, it travels to various museums and locations

41.121 - Cabriolet Weinberger



Chassis no.41.121, Bugatti Type 41 Royale 'Weinberger Cabriolet' 1931

- The third car is chassis no.41.121
- Known as the *Cabriolet Weinberger*
- Sold in 1932 to German obstetrician Josef Fuchs, who specified coach builder Ludwig Weinberger of Munich to build him an open cabriolet. Painted black with yellow, the car was delivered to Dr Fuchs in May, 1932.
- As political tensions rose in pre-war Germany, Fuchs, relocated to Italy, then Japan; before permanently relocating to New York around 1937, bringing the Royale with him.
- Admired in Dr Fuchs ownership by Charles Chayne, later CEO of General Motors. Chayne later found the car in a scrap yard in New York, buying it in 1946 for \$400.
- Chayne modified the car to make it more road usable, with the completed car featuring from 1947 onwards: a brand new intake manifold with four carburetors, instead of the original single carb setup; a new paint scheme of oyster white with a dark green trim and convertible roof
- In 1957, after running the car for ten years, Chayne donated the car to the Henry Ford Museum, located in Dearborn, Michigan, where it still resides. The associated placard, in its entirety, reads: "*1931 Bugatti Royale Type 41 Cabriolet, Ettore Bugatti, Molsheim, France, Body by Weinberger, OHC, in-line 8 cylinder, 300 horsepower, 779 cu.in. displacement, 7,035 lb (3,191 kg). Original price: \$43,000, Gift of Charles and Esther Chayne.*"

41.131 - Limousine Park-Ward



Chassis no.41.131, known as the *Limousine Park-Ward*, at home in the Musée National de l'Automobile de Mulhouse

- The fourth car is chassis no.41.131
- Known as the *Foster* car or *Limousine Park-Ward*
- sold to Englishman Captain Cuthbert W. Foster, heir to a large department store in Boston USA, through his American mother, in 1933. Foster had a limousine body made for the car by Park Ward, created in the style of a 1921 Daimler he had once owned.
- Acquired in 1946 by British Bugatti dealer Jack Lemon Burton who was forced to replace the huge tires with ones from an artillery piece, necessitating the need to remove the skirting from the fenders.
- Sold in 1956 to American Bugatti collector John Shakespeare, becoming part of the largest collection of Bugattis at that time.
- Facing financial problems, in 1963 Shakespeare sold his entire car collection, and he found a willing buyer in Fritz Schlumpf
- Part of the Schlumpf Collection
- Resides in the Musée National de l'Automobile de Mulhouse, alongside 41.110 that the brothers Schlumpf had acquired from the Bugatti estate.

41.141 - Kellner car

- The fifth car is chassis no.41.141

- Known as the *Kellner* car
- Unsold, it was kept by Bugatti
- Bricked up with 41.110 and 41.150 during World War II at the home of the Bugatti family in Ermenonville, to avoid being commandeered by the Nazis.
- Sold together with 41.150 by L'Ebe Bugatti in 1950 to American Le Mans racer Briggs Cunningham, in return for US\$3000, plus a couple of new General Electric refrigerators, then unavailable in post-war France.
- After closing his museum in 1986, in 1987 the car was sold direct from Briggs Cunningham's collection by Christie's for £5.5 million or \$9.7 million U.S. at the Royal Albert Hall, to Swedish property tycoon Hans Thulin
- The car was also offered for auction in 1989 by Kruse in Las Vegas where Ed Weaver bid the car to \$11.5 million, which was declined by Thulin, reserve was \$15 million. On collapse of his empire, Thulin sold the car in 1990 for a reported \$15.7 million to Japanese conglomerate the Meitec Corporation, and it resided in their modern building basement before being offered for sale for £10million by Bonhams & Brooks by private treaty in 2001.
- Ownership is presently unknown, but it has been shown in recent years by Swiss broker Lukas Huni.

41.150 - Berline de Voyage

- The sixth car is chassis no.41.150
- Known as the *Berline de Voyage*
- Unsold, it was kept by Bugatti
- Bricked up with 41.110 and 41.141 during World War II at the home of the Bugatti family in Ermenonville, to avoid being commandeered by the Nazis.
- Sold together with 41.141 by L'Ebe Bugatti in 1950 to American Le Mans racer Briggs Cunningham, in return for US\$3000, plus a couple of new General Electric refrigerators, then unavailable in post-war France.
- On their arrival in the United States, Cunningham sold 41.150, which found its way into The Harrah Collection. The car was then sold at the 1986 Harrah auction where Jerry J. Moore paid \$6.5 million for it, he kept it for 1 year and then sold it to Tom Monaghan for £5.7 million (US\$8.1 million).
- In 1991, Tom Monaghan, founder of Domino's Pizza, sold 41.150 for US\$8,000,000, which was actually less than the £5.7 million (US\$8.1 million) for which he purchased it in 1987 from Jerry J. Moore.
- The car was sold to the Blackhawk Collection in Danville, California, where it has been on display at various times.

Replica cars



The brothers Schlumpf replica of the *Royale Esders Coupe* on display at the 2006 Paris Motor Show



250'Replica of Coupe Napoleon, made for the French film Rebus with American V8 engine' while resident in the Sinsheim Auto & Technik Museum

In light of the rarity of the Type 41 and its associated price, it is unsurprising that some replicas have been made.

The Schlumpf brothers so liked the original Dr Armand Esders coupe body on chassis 41.111, using original Bugatti parts they had a replica made of the car. It now resides with the two originals they purchased at the Musée National de l'Automobile de Mulhouse.

The late Tom Wheatcroft commissioned Ashton Keynes Vintage Restorations to build an exact replica of Bugatti's personal car, the *Coupe Napoleon* (chassis number 41.110), for his Donington Grand Prix Collection in England. It has since been sold and left the collection. So good was the replica, that when the *Kellner* car needed a replacement piston, its then Japanese owners commissioned South Cerney Engineering part of AKVR to provide a replacement.

On May 24, 2008, His Royal Highness Prince Joachim of Denmark on the day of his wedding to Princess Marie (formerly Marie Cavallier) had Wheatcroft's replica waiting outside Møgeltønder Church to drive the newly married couple to Schackenborg Manor.

The much smaller Panther De Ville (produced between 1974 and 1985) consciously resembled the Type 41.

80th anniversary

In 2007 to celebrate the Royale's eightieth anniversary, five of the six cars were on display at the Goodwood Festival of Speed.

WWT

Chapter- 6

Chevrolet Monte Carlo

Chevrolet Monte Carlo



Manufacturer	General Motors
Production	1970–1988 1995–2007
Predecessor	Chevrolet Lumina coupe (1990–1994)
Successor	Chevrolet Camaro (fifth generation)
Class	Personal luxury car

The **Chevrolet Monte Carlo** is an American-made two-door coupe introduced for model year 1970, and manufactured over six generations through model year 2007.

First generation

First generation



Production	1970–1972
	Flint, Michigan
	Baltimore, Maryland
Assembly	Kansas City, Missouri
	Van Nuys, California
	Oshawa, Ontario, Canada
Body style(s)	2-door coupe
Layout	FR layout
Platform	A-body
	350 CID <i>Turbo-Fire</i> V8
Engine(s)	400 CID <i>Turbo-Fire</i> V8
	402 (aka 400) CID <i>Turbo-Jet</i> V8
	454 CID <i>Turbo-Jet</i> V8
Transmission(s)	4-speed manual
	2-speed automatic
Wheelbase	116 in (2997 mm)
Related	Oldsmobile Cutlass Supreme
	Pontiac Grand Prix

1970

The Monte Carlo was originally created as Chevrolet's counterpart to the then new G-body Pontiac Grand Prix, which had been introduced for model year 1969. For the 1968 model year, GM had instituted a split-wheelbase policy for its A-body intermediate cars: 112 in (2845 mm) for two-door models, 116 in (2946 mm) for sedans and 121 in for station wagons. The Grand Prix was a two-door coupe riding a special 118 in (2997 mm)

version of the A-platform (known as the "G-body "). Rather than add the extra length within the body to increase passenger space (as was customary on sedans) the G-body (also known as the A-body Special) spliced the extra length between the firewall and the front wheels, creating an unusually long hood. The look was very successful, and the new Grand Prix greatly outsold its larger, B-body predecessor despite higher prices.

The Monte Carlo was conceived by Elliot M. (Pete) Estes, general manager of Chevrolet, and Chevrolet's chief stylist, Dave Hollis. They modeled the styling on the contemporary Cadillac Eldorado, although much of the body and structure were shared with the Chevrolet Chevelle (firewall, windshield, decklid, and rear window were the same). New exterior styling featured concealed windshield wipers.

A mid-1990s article in the magazine *Chevrolet High Performance* stated that the first generation Monte Carlo was known to Chevrolet management under the working name *Concours* (a usual practice was that all Chevrolet model development names started with a "C"). At one point, the proposal called for a formal coupe, sedan, and convertible. It has been noted that the sedan resembled a full-size Oldsmobile 98 prior to the use of the GM G platform with at least one photo showing the pull-up door handles that would be introduced on the 1970½ Camaro and 1971 Vega and full-sized Chevys, but not appear on Monte Carlos until the second-generation model debuted in 1973.

Though the Monte Carlo was developed at Chevrolet under the leadership of Pete Estes, it was formally introduced in September, 1969 by John Z. DeLorean, who succeeded Estes as Chevrolet's general manager earlier in the year after previously heading the Pontiac division, where he led the development of the similar-bodied 1969 Grand Prix introduced the previous model year.

The standard powertrain was the 350 CID (5.7 L) Chevrolet "Turbo-Fire" small-block V8 with a two-barrel carburetor, rated at 250 hp (186 kW) (gross) at 4500 rpm and 345 ft·lbf (468 N·m) of torque at 2800 rpm, mated to a column-mounted 3-speed Synchro-Mesh manual transmission. Front disc brakes were standard equipment. The dashboard was basically identical to the Chevelle except for fake wood trim, according to Hollis a photographic reproduction of the elm trim used by Rolls-Royce, and higher grade nylon (or vinyl) upholstery and deep-twist carpeting were used. Base priced at US\$3,123, the Monte Carlo cost \$218 more than a comparable Chevelle Malibu.

Various options were available. A two-speed Powerglide automatic transmission (on 350 CID engines only), three-speed Turbo-Hydramatic, or a four-speed manual; most Monte Carlos carried the Turbo-Hydramatic. Variable-Ratio Power Steering, power windows, Four Season Air Conditioning, power seats, Rallye wheels, Strato bucket seats, center console, full instrumentation, and various other accessories were also available, bringing the price of a fully equipped Monte Carlo to more than \$5,000.

Optional engines included the four-barrel carbureted Turbo-Fire 350 CID small block V8, rated at 300 hp (224 kW) at 4800 rpm and 380 ft·lbf (515 N·m) at 3200 rpm, the Turbo-Fire 400 (400 CID/6.5 L) with a two-barrel carburetor, rated at 265 hp (198 kW) at

4800 rpm and 400 ft·lbf (542 N·m) at 3800 rpm, and the Turbo-Jet 400 (402 CID/6.6 L) with a four-barrel carburetor, rated at 330 hp (246 kW) at 4800 rpm and 410 ft·lbf (515 N·m) at 3200 rpm). Note that the two Chevrolet 400 CID V8s offered this year were actually two different designs. The two-barrel carbureted Turbo-Fire 400 was a Small Block Chevrolet V8 engine, similar, but very different internally, to the 350, while the Turbo-Jet 400 was a slightly enlarged version of the 396 CID big block V8 and had an actual displacement of 402 CID.

The most *sporty* and powerful option was the Monte Carlo SS 454 package. Priced at \$420, it included a standard Turbo-Jet 454 of 454 CID (7.4 L) with a four-barrel carburetor, rated at 360 hp (269 kW) at 4800 rpm and 500 ft·lbf (678 N·m) of torque at 3500 rpm. It also included heavy-duty suspension, wider tires, "SS 454" badging, and an automatic load-leveling rear suspension. The Turbo-Hydramatic transmission (with a 3.31 rear axle) was a mandatory option with the SS package, although it still cost \$222 extra. Weighing only a bit more than a comparably equipped Chevelle SS 454, the Monte Carlo SS was quite a fast car, although it accounted for less than 3% of Monte Carlos sold in 1970.

A labor strike at Chevrolet's Flint, Michigan assembly plant (where most Monte Carlo production was scheduled) during the early months of the 1970 model year immediately following the car's introduction on September 18, 1969 limited overall model-year sales to 159,341; short of the projected 185,000. During those early months, Monte Carlos were in short supply, with full-scale production not happening until February 1970, leaving many would-be buyers disappointed after going to their Chevrolet dealers and finding no Monte Carlos in stock. However, once full production got underway, Monte Carlos sold briskly and mostly at full list price (usually being ordered with many extra-cost options), making it a very profitable model for Chevrolet and its dealership networks. SS 454s, however, did not sell so well in 1970, with only 3,823 of the 1970 Monte Carlos being the most *sporty* and powerful model in the range.

1971

The 1971 model year saw only modest styling changes. Inside, the SS model got new "European symbol knobs", and a four-spoke steering wheel became optional. 1971 Monte Carlo also saw the addition of a stand-up hood ornament. Mechanically, it was largely unchanged, although the small-block Turbo-Fire 400 two-barrel engine was dropped. Other engines had compression ratios lowered to allow the use of regular leaded, low-lead, or unleaded gasoline, per a GM corporate edict. Engine ratings fell to 245 hp (183 kW) for the base Turbo-Fire 350 CID (5.7 L) two-barrel, 270 hp (201 kW) for the Turbo-Fire 350-4V, and 300 hp (224 kW) for the Turbo-Jet 400. The SS 454 engine was actually raised to a nominal 365 gross hp (272 kW) despite the reduction in compression ratio. This increase in horsepower was a result of the 454 engine using the more aggressive camshaft from the 390 hp 454 used in the 1970 Chevrolet Corvette and full-sized sedans.

Chevrolet listed both gross and SAE net horsepower figures in 1971 with the impending change to SAE net ratings in 1972. The ratings compared as follows:

Engine	Carburetor	Gross HP	Net HP
Turbo-Fire 350 CID V8	2-bbl	245 hp	165 hp
Turbo-Fire 350 CID V8	4-bbl	270 hp	175 hp
Turbo-Jet 400 CID V8	4-bbl	300 hp	260 hp
Turbo-Jet 454 CID V8	4-bbl	365 hp	285 hp

There has been no documented case of a 1971 Monte Carlo SS car with the 425 hp (317 kW) LS-6 version of the 454, with solid valve lifters and a longer-duration camshaft, previously found in the 1970 Chevelle SS 454 (where it was rated at 450 hp (336 kW)); however, they did come with an LS5 454. The Turbo Hydramatic officially remained the only transmission for the SS, but a heavy-duty clutch option on the order form **suggests** that it may have been possible to special-order a 454 LS-6 with a four-speed manual transmission (the four-speed wasn't listed officially as an "SS" option but was available as an RPO in regular Monte Carlos with the 350 and 400 engines). The exact number of such combinations, **if any**, is unknown since they were not officially listed as factory options but **possibly** assembled through Chevrolet's "Central Office Production Order" (COPO) process that had previously made possible model/engine combinations not officially available. However, there has never been a documented case of such a combination. Chevrolet records indicate that the factory only installed the LS-6 installations in Corvettes that year.

The SS 454 package would be discontinued after this year following production of only 1,919 units, but the 454 CID V8 engine would remain optional in Monte Carlos through 1975. The reason given for discontinuing the SS was that the Monte Carlo was marketed as a luxury vehicle instead of a muscle car. The SS nameplate would be resurrected 12 years later. Yet, at the same time that the Monte Carlo SS was judged a failure in the marketplace and discontinued, the Monte's reputation as a performance car on the race track was gaining strength because Ford and Chrysler were ending their factory-backed racing support due to declining muscle car sales and the need to divert dollars to meet costly Federal safety and emission regulations (General Motors' official policy had prohibited factory racing efforts since 1963). As factory support ended at Ford and Chrysler, the stock-car racing mantle switched to independent teams and sponsors, who overwhelmingly chose Chevrolets over Ford and Chrysler products due to Chevy's much greater availability and affordability of over-the-counter racing parts through the Chevy dealer network. And the Monte Carlo was considered the best suited Chevrolet model for stock car racing by most NASCAR teams due to its 116 in (2,900 mm) wheelbase (only one inch above NASCAR's minimum requirements at that time, the Chevelle 2-doors had a shorter 112 inch wheelbase) and long-hood design which placed the engine further back in the chassis than most other vehicles for better weight traction. Thus the Monte Carlo became Chevy's standard-bearer for NASCAR from 1971-1989.

Like its 1970 predecessor, production of the 1971 Monte Carlo also got off to a slow start due to a labor strike, this time a 67-day corporate-wide walkout that coincided with the introduction of the 1971 models in September, 1970, leaving dealerships with only a small shipment of 1971 models (built before the strike) in stock until the strike was settled in mid-November, 1970 and then slow-going in reaching normal production levels until around January 1, 1971. Model-year production ended at 128,600 including the 1,919 SS models.

1972

A Cadillac-like egg-crate grille similar to the 1971 Chevrolet Caprice and a metal rear trim molding highlighted the changes to the 1972 Monte Carlo, the final year for the first generation design. The SS was dropped, but a new Monte Carlo Custom option appeared as a one-year only offering that included a special suspension and other items previously included with the SS option. Unlike the departed SS package, it was available with any engine on the roster. The Monte Carlo Custom badging was similar to the Impala Custom.

The engines were largely unchanged, but an industry-wide switch to SAE net hp numbers led to a reduction in the rated power of all Chevrolet engines. Chevrolet did not list gross horsepower figures for 1972. Compared to 1971 figures, only the 402 and 454 had a decrease in power. The new ratings for the Monte Carlo were:

- 350 CID (5.7L), two-barrel: 165 hp
- 350 CID (5.7L), four-barrel: 175 hp
- 402 CID (6.6L), four-barrel: 240 hp
- 454 CID (7.4L), four-barrel: 270 hp

In California, which had emissions standards more stringent than federal law, the 4-barrel carbureted 350 was the standard and only available engine. Also, the only transmission offered in California was the Turbo Hydramatic.

For 1972, the four-speed manual transmission was discontinued from the option list as a line in the Monte Carlo brochure describing its market position as a personal luxury car stated *"Sorry, no four-on-the-floor."* The standard three-speed manual and optional two-speed Powerglide automatic transmissions were offered only with the base 350 CID two-barrel engine, with the three-speed Turbo Hydramatic also available with this engine and a mandatory option with each of the optional engines.

Mechanically, the most significant change was that variable-ratio power steering became standard equipment for the first time.

Interior trim was relatively unchanged from 1971 other than the availability of all-vinyl upholstery with the standard bench seat in addition to the optional Strato bucket seats. Cloth interiors were also offered with both bench and bucket seats.

Monte Carlo was a very popular seller during the 1972 model year as production increased significantly to 180,819 to set a new record in the final year for the first-generation G-body. Monte Carlo and other Chevrolet models were promoted as part of a new ad campaign in which Chevys in print and broadcast ads were featured at various tourist attractions and sites around the United States under the tagline "Chevrolet: Building a Better Way To See The USA."

Second generation

Second generation



Production	1973–1977
Assembly	Flint, Michigan
Body style(s)	2-door coupe
Layout	FR layout
Platform	A-body
Engine(s)	350 CID V8 400 CID V8 454 CID V8 305 CID V8
Transmission(s)	3-speed manual 3-speed automatic
Related	Buick Regal Oldsmobile Cutlass Supreme Pontiac Grand Prix

1973

A redesigned Monte Carlo was introduced alongside other GM intermediates. Like other GM mid-size cars, the 1973 Monte Carlo was no longer a hardtop, but a pillared coupe with rear side opera windows and frameless door glass. Prominent styling features included dual headlights flanking an egg-crate grille with a Monte Carlo emblem in front and vertical taillights above the bumper. The front bumper was a large federally mandated 5 mph (8.0 km/h) bumper that was among the required 1973 federal safety standards for all passenger cars sold in the U.S. with the 5 mph (8.0 km/h) requirement extended to rear bumpers on 1974 models. Also new was a double-shell roof for improved noise reduction and rollover protection along with the flush-mounted pull-up exterior door handles first introduced on the 1970½ Camaro and 1971 full-sized Chevrolets and Vegas.

The separate body-on-frame construction carried over for 1973, as was the basic all-coil suspension.

For improved ride and handling, the 1973 Monte Carlo featured a number of innovations (for a large American car) such as standard radial-ply tires, Pliacell shock absorbers, high-caster steering, and front and rear anti-roll bars (previously offered only with the SS package). The standard Monte Carlo with manual transmission, retained "traditional" steering and bias-ply tires, but the radial-tuned system was included when the automatic transmission was ordered, earning the **Monte Carlo S** label.

A new model for 1973 was the **Monte Carlo Landau**, which was basically an "S" with a rear quarter Landau vinyl roof, Turbine II wheels and driver and passenger-side sport mirrors.

The interior of the 1973 Monte Carlo featured an all-new, wraparound cockpit-style instrument panel, similar to that found in some contemporary Pontiacs, Oldsmobiles and Buicks, in which gauges and various instruments were centered within easy reach of the driver. The simulated burl elm trim was retained. A split bench seat was standard, but "Strato Bucket" seats of a new design were optional, along with a floor console featuring an equally-new shifter with knob and button similar to Pontiac's Rally Sports Shifter replacing the Buick-like horseshoe shifter of previous years, and storage compartment. The bucket seats were of a one-piece high-back design with built-in headrests, and could swivel some 90 degrees to permit the driver and front passenger easier entry and exit. Cloth and vinyl trims were offered with both the bench and bucket seats.

The standard engine was a 145 (net) hp (108 kW) 350 CID (5.7 L) Turbo-Fire V8. Optional engines included a 175 (net) hp (128 kW) 350 CID V8 with a four-barrel carburetor and a four-barrel carbureted 454 CID Turbo-Jet V8 rated at 245 (net) hp (183 kW).

The 1973 Monte Carlo was named *Motor Trend's* "Car of the Year", due to its new styling and emphasis on Euro-style ride and handling. The 1973 Monte Carlo set a new sales record for Chevrolet, with nearly 250,000 sold for the model year.

The success of the Monte Carlo and Pontiac's similar Grand Prix led to several new personal luxury cars from competitors, including subsequent Mercury Cougar, the Ford Torino Elite, the Chrysler Cordoba and restyled Dodge Charger, and even high-line versions of the AMC Matador, which got a swoopy new coupe design for 1974.

1974



1974 Chevrolet Monte Carlo

The 1974 Monte Carlo received only minor detail changes from its 1973 predecessor, most notably a revised grille in the front and taller and slimmer vertical taillights in the rear, along with a relocated license plate and larger 5 mph (8.0 km/h) rear bumper.

The base Monte Carlo with manual transmission, standard suspension and bias-ply tires was discontinued, leaving only the "S" and "Landau" models equipped with radial-ply tires and upgraded suspensions along with standard power steering and front disc brakes.

A three-speed manual transmission was listed as standard equipment on 1974 "S" and "Landau" models equipped with the standard 350 CID V8, and an automatic transmission was a required option with the larger 400 and 454 CID V8s. However, a number of sources indicate that Chevrolet built virtually all 1974 Monte Carlos with the Turbo Hydra-Matic transmission.

The standard 350 CID Turbo-Fire V8 was again rated at 145 hp (108 kW) with two-barrel carburetor in 49 states. For Californians, the standard engine was a 350 Turbo-Fire V8 with a four-barrel carburetor rated at 160 hp (120 kW) that was not offered in the

other 49 states. Reappearing on the Monte's option list for the first time since 1970 was a 400 CID Turbo-Fire small block V8 rated at 150 hp (110 kW) with a two-barrel carburetor (not offered in California) or 180 hp (134 kW) with a four-barrel carburetor. The top engine was again the 454 CID Turbo-Jet big block V8 rated at 235 hp (183 kW).

Despite the Arab Oil Embargo of late 1973 and early 1974 that greatly cut into sales of standard and intermediate-sized cars in favor of smaller compacts and imported subcompacts, the Monte Carlo went the other way on the sales charts by setting a new sales record this year of over 300,000 units despite the long lines at gas stations and record-high gasoline prices. The Monte Carlo continued to lead in intermediate personal luxury car sales with the Grand Prix placing second and the arrival of new competitors this year, including an upsized Mercury Cougar, Ford Torino Elite and AMC's Matador coupe. Chrysler would introduce its entries in this field for 1975 including the Chrysler Cordoba and redesigned Dodge Charger.

1975



1975 Chevrolet Monte Carlo

The 1975 Monte Carlo received only minor styling changes from the 1974 model, including a new grille with the Monte Carlo emblem moved to the center section and new vertically shaped taillights with horizontal louvers.

All models received catalytic converters to meet the latest federal and California emission requirements that included bonuses such as improved fuel economy and drivability, along with longer spark plug and muffler life, but required more expensive and lower-octane unleaded gasoline.

Engines were carryover from 1974 except for the addition of GM's High Energy electronic ignition being made standard equipment. However, power ratings for all

engines were decreased due to the addition of the catalytic converter. The 454 CID V8 no longer offered on California cars, leaving the 400 CID four-barrel the top engine in the Golden State. The base 350 CID two-barrel was rated at 145 hp (108 kW) (standard in 49 states), the 350 CID 4-barrel was rated at 155 hp (116 kW) (available only in California), the 400 CID 4-barrel 175 hp (130 kW), and the 454 CID 4-barrel 215 hp (160 kW) (now equipped with single exhaust). A three-speed manual transmission was standard equipment with the base 350 CID V8 used in 49 states and California-only 350 four-barrel V8. The Turbo Hydra-Matic optional and a required option for the 400 and 454 V8s. Chevrolet sources, however, report that virtually all 1975 Monte Carlos were equipped with the Turbo Hydra-Matic transmission, which became standard equipment for 1976.

New for 1975 was a Custom interior option that included a plusher cloth 50/50 bench seat with recliner on passenger side and lower door panel carpeting. The standard interior still consisted of a bench seat with knit-cloth and vinyl or all-vinyl upholstery. The swiveling Strato bucket seats plus console and floor shifter were still optional with knit cloth or vinyl upholstery. Also, white all-vinyl interiors were available for the first time this year with either bench or bucket seats with contrasting colors for carpeting and instrument panels including black, red, blue and green.

Sales dropped off a bit from 1974's record-setting pace due to higher prices resulting from the addition of the catalytic converter, double-digit inflation and new competition from Chrysler's Cordoba and Dodge's Charger SE. Monte Carlo production ended up at around 250,000 units but would rebound to set a new record in 1976.

A 1975 Monte Carlo was featured that year in a Chevrolet TV ad with the patriotic theme of America's favorites including "Baseball, Hot Dogs, Apple Pie and Chevrolet".

1976



1976 Chevrolet Monte Carlo

A new crosshatch grille and vertically mounted rectangular headlamps, along with reshaped taillights identified the 1976 Monte Carlo (the reshaped taillight pattern was later incorporated into the fourth generation Monte Carlo). Under the hood, a new 140 hp (104 kW) 305 CID 2-barrel V8 became the standard engine with the 145 hp (108 kW) 350 2-barrel V8 and 175 hp (130 kW) 400 CID V8 both optional. California cars got a 165 hp (123 kW) 350 4-barrel as the base engine (not available in 49 states), and could be equipped with the 400 4-barrel V8. The big-block 454 CID V8 was discontinued from the option list this year. The Turbo Hydramatic transmission became standard equipment on all 1976 Monte Carlos.

Interior trims remained the same as 1975 with both base and Custom levels, but the instrument panel and steering wheel featured a new rosewood trim replacing the burlled elm of previous years. A new option was a two-toned "Fashion Tone" paint combination.

Monte Carlo sales hit an all-time record with production of 353,272 units this year. 191,370 "S" Coupes were made. 161,902 Landau Coupes (\$293 more)

1977



1977 Chevrolet Monte Carlo

A revised grille with the Monte Carlo "Knight's Crest" emblem moved to a stand-up hood ornament and revised taillight lenses marked the 1977 Monte Carlo, which was the last year for the 1973-vintage design before the introduction of a downsized 1978 Monte Carlo. Engine offerings were reduced to two engines for 1977. The base engine for 49 states was the 140 hp (100 kW) 305 CID 2-barrel V8 and the 170 hp (130 kW) 350 4-barrel V8 was optional (standard in California). The 400 cubic inch V8 was dropped as an engine option. The Turbo Hydra-matic transmission was included standard equipment.

Interior trim received only minor revisions this year with upholstery choices including cloth, velour and vinyl in both base and Custom trims.

This model year marks the only time in history when an intermediate model was larger in every dimension than a full-sized model, as the B-body Chevrolet Caprice/Impala had already been redesigned and downsized for 1977.

Third generation

Third generation



Production	1978–1980
Assembly	Flint, Michigan
Body style(s)	2-door coupe
Layout	FR layout
Platform	A-body
Engine(s)	231 CID <i>Buick V6</i> 200 CID <i>Chevrolet 90-degree</i> 229 CID <i>Chevrolet 90-degree V6</i> 267 CID <i>Small-Block V8</i> 305 CID <i>Small-Block V8</i>
Transmission(s)	4-speed manual 3-speed automatic 3-speed manual

1978

All GM intermediate-sized cars including the Monte Carlo were downsized for the 1978 model year in response to the 1973 Arab Oil Embargo and CAFE requirements. The 1978 model was 700-800 lb lighter and some 15 in shorter than the 1977 model. The 1978 model also had more interior and trunk space than the earlier 1977 model. The engines offered in previous years were dropped in favor of a standard 231 CID V6 built by Buick or an optional Chevrolet 305 CID V8. The three-speed manual transmission reappeared for the first time in several years as standard equipment on the base model with the V6 engine, and the automatic was optional. The optional V8 and all Landau models came standard with the automatic. A four-speed manual transmission with floor shifter was

optional with the 305 V8, the first time a four-speed manual was offered on the Monte Carlo since 1971.

1979

Only minor trim changes were made to the 1979 Monte Carlo, which included a slightly redesigned grille, tail lights & front park lights. Mechanical changes included a new Chevrolet-built 200 CID V6 (the ancestor of the Vortec 4300) as the standard engine for the base Monte Carlo in 49 states while the Buick 231 CID V6 remained standard on base models in California and all Landau models. A new 125 hp (93 kW) 267 CID V8 became optional and the 140 hp (100 kW) 305 CID V8 continued as an option but was joined by a 160 hp 235 lb·ft (319 N·m) version with a four-barrel carburetor. The same transmissions were carried over from 1978, including a standard three-speed manual and optional four-speed manual, or an optional three-speed Turbo Hydramatic automatic. This would be the last year that Chevrolet would offer manual transmissions on the Monte Carlo due to extremely low buyer interest.

A 1979 Monte Carlo was used by Michael Platt and Bill Matix during the 1986 FBI Miami shootout. A 1979 Monte Carlo, modified to a lowrider, was also heavily featured in the 2001 movie Training Day. The car was owned by the main character Detective Alonzo Harris, played by actor Denzel Washington.

1980

The car had a mild frontal restyle, with quad headlights and amber indicators mounted beneath. The metric 200 3-speed automatic transmission became standard on all models and a new Chevrolet-built 229 CID V6 with 2-barrel Rochester carburetor replaced both the 200 CID V6 of 1979 and the Buick engine offered on all 1978 models and the 1979 Landau as the standard engine in 49 states (California cars still got the Buick engine). A new option for 1980 was Buick's turbocharged version of the 231 CID V6 rated at 170 hp (130 kW). Other optional engines included 267 and 305 CID versions of the Chevrolet small-block V8 with up to 155 hp (116 kW). There were a total of 13,839 turbo Monte Carlo's for 1980. (Rachel fogle) (Joseph Wigginton)

Fourth generation

Fourth generation



Production	1981–1988
Assembly	Arlington, Texas Pontiac, Michigan
Body style(s)	2-door coupe
Layout	FR layout
Platform	A-body (1981) G-body (1982–1988)
Engine(s)	3.8 L (229 CID) <i>Chevrolet 90-degree V6</i> 3.8 L (231 CID) <i>Buick V6</i> 4.3 L (262 CID) <i>Chevrolet 90-degree V6</i> 4.4 L (267 CID) <i>Small-Block V8</i> 5.0 L (305 CID) <i>Small-Block V8</i> 5.7 L (350 CID) <i>LF9 diesel V8</i>
Transmission(s)	3-speed <i>TH-350</i> 4-speed <i>200-4R</i> automatic Or Saginaw Standard For Mexican Version
Wheelbase	108.0 in (2743.2 mm)
Length	200.4 in (5090.2 mm) (LS) 202.4 in (5141 mm) (SS)
Width	71.8 in (1823.7 mm)
Height	54.4 in (1381.8 mm) (LS) 54.9 in (1394.5 mm) (SS)
Curb weight	3,212 pounds (1,457 kg) (LS)

3,239 pounds (1,469 kg) (SS)

Buick Regal

Related Oldsmobile Cutlass Supreme

Pontiac Grand Prix

1981

The body was restyled with the other GM mid-size formal coupes (Oldsmobile Cutlass Supreme, Pontiac Grand Prix, Buick Regal). It featured a smoother profile than the previous models and new vertical taillights similar to the 1973-1977 models. Engine offerings were carried over, including the standard 229 CID Chevrolet V6 (231 CID Buick V6 in California) an optional 267 CID V8 (not available in California), a 305 CID V8 in the base and Landau models, and a turbocharged 170 hp (130 kW) 231 CID Buick V6 in the Monte Carlo Turbo. There were a total of 3,027 Monte Carlo Turbos for 1981. This would make the Monte Carlo Turbo one of the rarest Monte Carlo's built, even rarer than the 1987 Monte Carlo SS Aerocoupe. The Monte Carlo Turbo appeared slightly different than other Monte Carlos that year because in addition to the turbo motor it also was equipped with a small hood scoop on the left side of the hood. It also had Turbo 3.8 badges with Chevrolet bowtie on the sides of the hood scoop, on the trunk lid, and on the right side of the dash. An automatic transmission, power steering and power front disc brakes were standard equipment. While this car was considered by some to be much better looking (and appeared more aerodynamic) than its Buick Regal, Pontiac Grand Prix, and Olds Cutlass cousins, only one team tried to make a go of it in NASCAR cup racing. While the big Monte Carlo was the dominant body style in the late 1970s, winning 30 or so races, the downsized (and cleaned-up) 1981 body would only take three checked flags in the 1981 and 1982 seasons when it was run.

1982

Only mild revisions were made on the 1982 Monte Carlo. All engines, except for the turbocharged 231 CID V6, which was discontinued along with the Monte Carlo Turbo model, were carried over from 1981. New for 1982 were the additions of a 260 CID V6 and an Oldsmobile 350 CID V8, both of which were diesel engines. With the introduction of GM's new mid-size platform that saw the introduction of the Buick Century, Chevrolet Celebrity, Oldsmobile Cutlass Ciera and Pontiac 6000, the chassis designations were shuffled up. The new mid-size cars were designated as A-body cars, whereas the cars previously designated as A-bodies were now called G-bodies. A black exterior was not offered in 1982 and also not available in 1982 for the first time in Monte Carlo history was a sportier interior option with Strato bucket seats and console, as only the standard notchback bench or optional 55/45 bench were offered this year.

1983

Receiving only minor updates, the '83 Monte Carlo gained a revised grille and interior trim patterns. The standard engine continued to be the 229 in³ V6, and the 165 hp 305 in³ V8 was optional. The Super Sport Package, Z65 was once again made an option in 1983. The Monte Carlo SS was reintroduced in 1983, following twelve years of being discontinued. One of the last carbureted, rear-wheel drive 'muscle cars', the Monte Carlo SS featured European body color-coding, a new front fascia, a rear spoiler and a V8.

1984

The SS was a hit not only in the car-buying public, (starving for some power after the hefty emissions regulations of the late 1970s) but also in NASCAR competition, where it continued to be a winning body style after the 1984 season successes. Production picked up, and 112,730 sport coupes were sold as 1985 year model coupes. An additional 24,050 had the SS option (with an 180 hp (130 kW) 305 V8 that saw a 5 hp (3.7 kW) boost from the previous year), having an asking price of US\$10,700. The Monte Carlo SS was available with Strato bucket seats and floor console as extra-cost options for the first time in place of the standard split bench seat with armrest (the Strato buckets also returned as an option on the regular Monte after a two-year absence). The regular Monte Carlo came standard with a 125 hp (93 kW) 229 CID V6 (231 CID V6 for California) and a 165 hp (123 kW) 305 V8 was optional. Available for the last year in a base Monte Carlo was the 350 CID diesel engine, and there were only 168 manufactured. All engines for 1984 got the three-speed automatic transmission with the exception of three SSs at the end of the 1984 production run that received the Turbo Hydramatic 200-R4 transmission with overdrive.

In 1984, there were a limited number of Monte Carlo SSs made in Mexico, for Mexico sale. The differences are many in the Mexican to US/Canadian SSs. There was no rear spoiler. The rims are 14" checker style, an option on the base Monte Carlos in the US. The side mirrors are different style and black. The interior is that of a Grand Prix, in blue. The engine is a 350, 265 hp (198 kW) (unconfirmed) and 350 lb·ft (475 N·m) of torque (unconfirmed), and got a 4-speed manual with Hurst shifter. Additional Information about the Mexican SS

1985

T-tops were re-introduced (discontinued after the 1982 model year), and additional SS colors (Black, maroon and silver in addition to white), pinstriping, and options were made available. The (later to be highly sought after) medium blue ("gun metal") color for the SS was dropped. A four-speed automatic overdrive transmission, the Turbo Hydramatic 200-R4, with a revised sport rear axle ratio containing 3.73:1 gears became standard on the SS. Gone for good were the 229 CID V6 and 350 CID V8 diesel engines. Introduced in place of the 229 CID V6 was a 262 CID (4.3 L) V6 (RPO LB4) that was fuel-injected with throttle-body fuel injection. The V-8's were fitted with computer controlled quadrajet carburetors.

1985 Chevrolet Monte Carlo

The 1985 Chevrolet Monte Carlo, Chevy's rear-wheel-drive personal-luxury car, got more power, but for the first time since 1981, no diesel engine was offered in the Monte Carlo..

In the 1985 Chevrolet Monte Carlo base model, the previously standard 3.8 L Chevy V-6 gave way to a larger 4.3 L V-6 with throttle-body fuel injection. That brought along 20 extra horsepower, for a new total of 130.

The optional 5.0 L V8 likewise gained some ponies, via a jump in compression ratio. It jumped from 150 horsepower to 165. The High Output 5.0 L V8 in the 1985 Chevrolet Monte Carlo SS remained at 180 horsepower.

The V-6 and base V8 could be backed by either a three- or four-speed automatic transmission, but the H.O. V8 in the SS came only with the four-speed this year. Though the base coupe carried on visually unchanged, the SS was a different story. Previously offered only in white or dark blue metallic, color choices were expanded to include silver, maroon, and black. "Removable glass roof panels" (T-tops) came on board as a midyear option.

Despite its aging design, nearly 120,000 Monte Carlos found eager buyers in 1985. Though the total was down somewhat from 1984, the SS model saw sales climb from 24,050 to 35,484, a sure sign that performance was making a comeback. The 1985 monte carlo ss also came stock with a 35 millimeter sway bar which added extra support for the high performance rear end.

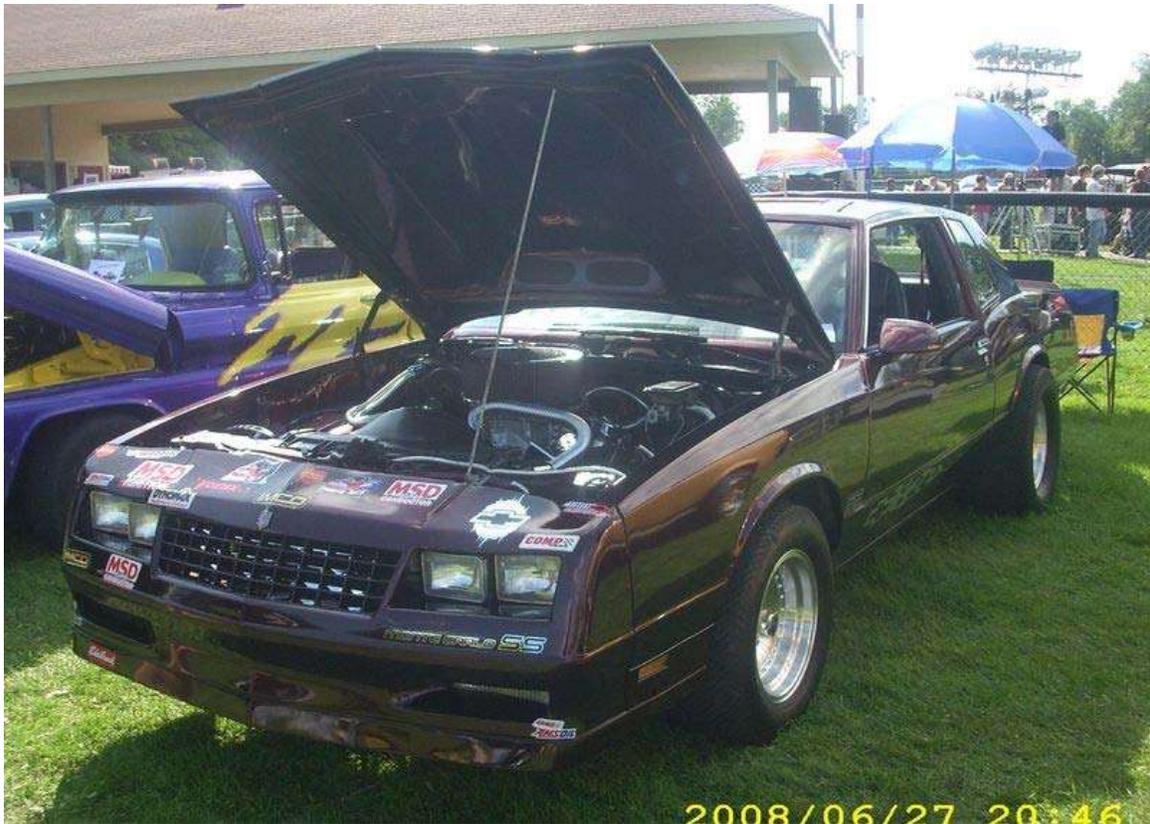
Color choices for the 1985 Chevy Monte Carlo SS expanded from two to five, including this maroon hue.

1985 Chevrolet Monte Carlo Facts

Model

Weight range (lbs.)
Price range (new)
Number built

3,139-3,385
\$9,540-\$11,380
119,057



1986 Chevrolet Monte Carlo SS

1986

For 1986, there were four distinct body styles available. The base model Sport Coupe was still available with the same general body panels that it had since 1981, but featured new "aero" side mirrors similar to those on Camaros and Chevrolet Corvette of the 1980s. New for the 1986 model year was a Luxury Sport model that had a revised front fascia, new "aero" side mirrors, and an updated sleek-looking rear fascia. The LS front fascia included "Euro" headlamps with removable bulbs in a glass composite headlamp housing, versus the smaller sealed beam glass headlights of previous years. The rear bumper of the LS no longer had a "notch" between the bumper and trunk, and the taillights wrapped around so that they were visible from the sides of the car. The Super Sport model for 1986 incorporated the "aero" mirrors, yet still utilized the prior year's styling for the rear bumper.

Also new this year was the Aerocoupe model. The Aerocoupe was created by modifications to the Super Sport body, including a more deeply sloped rear window and a shorter trunk lid sporting a spoiler that lay more flat than previous Super Sports. Only 200 Aerocoupes were sold to the public, which happened to be the exact number NASCAR officials required for road model features to be incorporated into the racing cars. 1986 Monte Carlo SS Aerocoupe Registry & Information

1987

In 1987, Chevrolet eliminated the Sport Coupe version of the Monte Carlo, leaving the LS, SS, and Aerocoupe. The Super Sport incorporated the "smoothed" rear bumper and tail lamps first introduced on the 1986 Luxury Sport. The Aerocoupe made up 6,052 of the 39,251 total Super Sports that were produced that year. 39,794 Luxury Sports were produced in 1987.

1988



1987–1988 Monte Carlo LS

This was the last year for the fourth-generation Monte Carlo. The 1988 models were actually built in late 1987, with only 16,204 SSs made for an asking price of US\$14,320. Appearance and mechanicals were similar to the 1987 model. The SS model came from the factory with 180 hp (130 kW). The 1988 model only came with the lay-down style spoiler, unlike the 1987 model, which came with either the lay-down or stand-up type spoiler. The Aerocoupe did not return, as Chevrolet had unveiled plans to produce the Lumina and race that body style in NASCAR. The new Lumina body style was much more aerodynamic and negated the need for a "sleeker" version of the Monte Carlo SS. The Lumina coupe was introduced as a 1990 model as a Monte Carlo replacement. Total production numbers for the final year of the rear-wheel drive Monte Carlo was 30,174 — almost half of the 1987 numbers.

The final G-body Monte Carlo - a silver SS coupe — was produced on December 12, 1987. Total SS production for '88 was 16,204.

Fifth generation

Fifth generation



Production	1995–1999
Assembly	Oshawa, Ontario, Canada
Body style(s)	2-door coupe
Layout	FF layout
Platform	W-body 1.5 Gen
Engine(s)	1995-99 3.1 L (~189 cu in) <i>3100</i> V6 1995-97 3.4 L (~207 cu in) <i>LQ1</i> DOHC V6 1998-99 3.8 L (~232 cu in) <i>L36</i> V6
Transmission(s)	4-speed automatic overdrive
Wheelbase	107.5 in (2730.5 mm)
Length	200.7 in (5097.8 mm)
Width	72.5 in (1841.5 mm)
Height	53.8 in (1366.5 mm)
Related	Chevrolet Lumina

1995–1999

For the 1995 model year, the mid-size Lumina was split into two models with the sedan continuing as the Lumina and the coupe reviving the Monte Carlo nameplate for its fifth generation. The new car rode on an updated W-body chassis shared with the Lumina, Pontiac Grand Prix, Oldsmobile Cutlass Supreme, Oldsmobile Intrigue, Buick Century and Buick Regal, and by its nature was the first front-wheel drive Monte Carlo. In 1995, the LS was \$16,770 and the Z34 was \$18,970. All 1995-2007 Monte Carlo's were built in Oshawa, Ontario, Canada. Unlike Monte Carlos of previous years, the distinctive bulges to the front fenders and rear quarter panels were gone.

A special run of 400 1995 Z34's were made called the Monte Carlo Brickyard 400 Pace Car. The \$2195 option included Interior Ornamentation, Embroidered Leather 45/55 Seating with Full Floor Console, an Aero Wing Spoiler, and an Accent Stripe Package.



1997 Monte Carlo LS interior

For its four year run, the Monte Carlo was available in two trims, the LS and the Z34. Appearances were largely identical between the two models. Styling changes consisted mainly of the special red-colored badging on the Z34, the real difference being under the hood. LS models were powered by the 3.1 L 3100 V6 putting out 160 hp (120 kW) at 5000 rpm (119 kW) and 185 ft·lbf (251 N·m) while Z34's featured a more powerful 3.4 L

DOHC V6 engine with 215 hp (160 kW) and 220 ft·lbf (298 N·m). Aside from minor equipment changes, the fifth generation remained virtually unchanged during its life (In 1998, the 3.4 L was replaced with the 3800 Series II, a simpler engine).

All Z34 models came with 16-inch alloy wheels, optional on LS models in place of the standard 15-inch steel wheels with bolt-on wheel covers. 1998–1999 Z34 models received redesigned 16-inch wheels, though the older style alloys remained on the LS.

Though derided by some for its indistinct lines (called the 'Lumina Carlo') and its front-wheel drive drivetrain, the fifth generation sold well enough for Chevrolet to continue the line with a more original redesign in 2000. The 1995 bodystyle was also a favorite on the NASCAR circuit and enjoyed considerable success at the track.

This generation of the Monte Carlo was the last 2-door vehicle featuring 6-passenger seating, although bucket seats were available as an option with a floor mounted shifter.

Production totals

Year	Total	Z34	LS
1995	100,938	39,628	61,310
1996	65,447	15,384	30,063
1997	70,929	11,756	59,173
1998	69,390	20,688	48,702
1999	69,779	16,031	53,748
Total production	376,483	103,487	252,996

Models

Model	Years	Engine	Power	Torque
LS	1995–1999	3.1 L <i>3100</i> V6	160 hp (119 kW)	185 ft·lbf (251 N·m)
	1995	3.4 L <i>LQ1</i> DOHC V6	210 hp (157 kW)	215 ft·lbf (291 N·m)
Z34	1996–1997		215 hp (160 kW)	220 ft·lbf (298 N·m)
	1998–1999	3.8 L <i>L36 3800</i> V6	200 hp (149 kW)	225 ft·lbf (305 N·m)

Sixth generation

Sixth generation



Production	2000–2007
Assembly	Oshawa, Ontario, Canada
Body style(s)	2-door coupe
Layout	FF layout
Platform	GM W platform
Engine(s)	3.4 L <i>LA1</i> V6 3.8 L <i>L36</i> V6 3.8 L <i>L67</i> SC V6 3.5 L <i>LZE</i> V6 3.9 L <i>LZ9</i> V6 5.3 L <i>LS4</i> V8
Transmission(s)	4-speed 4T65-E automatic
Wheelbase	2000–05: 110.5 in (2806.7 mm) 2006–07: 110.5 in (2806.7 mm)
Length	2000–05: 197.9 in (5026.7 mm) 2006–07: 196.7 in (4996.2 mm)
Width	2000–05: 72.7 in (1846.6 mm) 2006–07: 72.9 in (1851.7 mm)
Height	2000–05: 55.2 in (1402.1 mm) 2006–07: 55.8 in (1417.3 mm)

	Buick Century
	Buick Park Avenue
	Buick Regal
Related	Chevrolet Camaro
	Oldsmobile Intrigue
	Pontiac Grand Prix
	Chevrolet Impala

2000–2005

For 2000, Chevrolet not only again called upon GM Motorsports for design inspiration, but also to Monte Carlos of the past. Among the traits carried over from older Monte Carlos were the stylized wheel flares, vertically oriented tail lamps, and a stylized rear bumper. Another classic trait for 2000 was the return of the "Knight" badging, as well as a full gauge cluster, not seen on the Monte Carlo since 1988. In addition, Chevrolet stylist added a slight "hump" on the rear trunk, similar; although smaller than a Lincoln Mark; but, nonetheless, adding a distinct mark that stayed with Monte Carlo until its demise. From the NASCAR circuit came the aerodynamic styling and duck tail spoiler

2006–2007

The 2006 Monte Carlo (and the companion Impala sedan) was introduced at the 2005 Los Angeles Auto Show. The base engine was a 3.5 L V6 producing 210 hp (156 kW). The most notable news, though, was the *SS* model's use of the Generation IV small-block V8 — the first V8 since the 1988 model. The 5.3 L V8 produced 303 hp (226 kW), which raised some eyebrows considering it was being placed in a front wheel drive car. The interior for 2006 was mildly redesigned.

The Monte Carlo ceased production at Oshawa Car Assembly Plant #1 on June 19, 2007, following an announcement in February 2007 of its demise. General Motors has released this statement: On Tuesday, June 19, 2007, the last two 2007 Chevrolet Monte Carlo models rolled off the line at the Oshawa Assembly Plant. The last two models were identical "SS" models with Precision Red exterior paint; Silver Rally Stripes; and Ebony Nuance leather interior. The two models features the "SS" 5.3 L V8 Engine with its "best in class" rated 303 hp (226 kW); 18" polished aluminum wheels; heated exterior mirrors; and AM/FM/CD and XM Radio"



Refreshed 6th-generation Monte Carlo

The final Monte Carlo off the production line will be retained by GM for their Heritage Center collection. The second-to-last Monte off the line, the last "saleable" unit, was auctioned off on August 15, at Manheim's Statesville Auto Auction in Statesville, North Carolina. The winning bid went to Fred Simon, owner of Simon Chevrolet in Woonsocket, RI where it is on display on the dealership floor for the public to enjoy. This unit was at the Indianapolis Motor Speedway over the weekend of July 27–29 for the 2007 Allstate 400 at the Brickyard. While there, it was signed by all the current Team Chevrolet drivers who were active in the NASCAR Sprint Cup Series.

Models

Model	Years	Engine	Power	Torque
<i>LS</i>	2000–2005	3.4 L <i>LA1</i> V6	180 hp (134 kW)	205 ft·lbf (278 N·m)
<i>SS</i>	2000–2004	3.8 L <i>L36</i> V6	200 hp (149 kW)	225 ft·lbf (305 N·m)
<i>LT</i>	2005	3.8 L <i>L36</i> V6	200 hp (149 kW)	225 ft·lbf (305 N·m)
<i>SS Supercharged</i>	2004–2005	3.8 L <i>L67</i> supercharged V6	240 hp (179 kW)	280 ft·lbf (380 N·m)
<i>LS-LT</i>	2006–2007	3.5 L <i>LZE</i> V6	211 hp SAE (157 kW)	214 ft·lb (290 N·m)
<i>LT-LTZ</i>	2006 only	3.9 L <i>LZ9</i> V6 (2006	240 hp SAE	245 ft·lb

		only)	(179 kW)	(332 N·m)
SS	2006– 2007	5.3 L <i>LS4</i> V8	303 hp SAE (226 kW)	323 ft·lb (438 N·m)

Trim levels consisted of the LS, LT, and SS, the latter being the first front-wheel drive SS in the Chevrolet lineup. The former used a 3.4 L OHV V6, while the latter got the 3.8 L V6. A Supercharged *SS* model was added for 2004 and 2005, though the naturally-aspirated *SS* continued as well, but was relabeled as *LT*.

The LT model was available with the 3.9 L engine in 2006. For 2007 the LTZ model was dropped along with the engine in favor of utilizing the Flex Fuel 3.5 L as the exclusive engine for non-SS models.

Production totals

Year	Units
2000	64,347
2001	71,268
2002	70,781
2003	71,129
2004	64,771
2005	37,143
2006	32,567
2007	10,889
Total production	422,895

Chapter- 7

Honda Legend

Honda Legend



Manufacturer	Honda Acura RL (1996-present) Acura Legend (1985-1995)
Also called	Daewoo Arcadia (1991-1994)
Production	1985-present
Assembly	Saitama, Sayama, Japan Cowley, Oxfordshire, England
Class	Mid-size luxury car / Executive car (UK)
Body style(s)	4-door sedan 2-door coupé

The **Honda Legend** is a mid-size luxury car made by the Japanese automaker Honda. It was the result of Project XX, a joint agreement started in November 1981 with the Austin Rover Group of Great Britain and was mechanically related to the Rover 800 series.

When the Legend made its appearance into the market, rival companies in Europe, Japan and North America took notice, and quickly introduced or revised current products that could be compared to it. Toyota began development in 1983 with the F1 project, the code name for a secret flagship sedan effort that became the Lexus LS, and Nissan updated their premium flagship the President initially introduced in 1966. In 1990 the Mitsubishi Diamante joined the Mitsubishi Debonair (introduced in 1964), and in 1988 Lincoln took a new approach to the venerable Continental offering for the first time a front wheel drive sedan with a V6 engine. General Motors introduced the GM H platform (FWD), Audi took a fresh approach to the 100 and in 1994 introduced the A6, and BMW introduced the BMW 5 Series (E34) in 1988.

Honda introduced the Legend as a flagship sedan to compete with the popular JDM Nissan Cedric / Nissan Gloria twins, and the Toyota Crown. In North America, the Legend competed with larger rear wheel drive V8 sedans Lexus LS, Infiniti Q45, Cadillac Sedan de Ville, Lincoln Town Car, and the large German sedans, however, the Legend was packaged to compete in the slightly smaller Executive car class, such as the Mercedes-Benz E-Class, Lexus ES, Infiniti J30, Alfa Romeo 164, and the Volvo 940 sold at the time.

The Legend was initially a four-door sedan, with a two-door coupé added later. It was the model which launched Honda's upscale Acura brand in the United States. Honda was inspired by the word "legend" to create the first Honda vehicle with a V6.

The first and second-generation Honda Legend was known as the Acura Legend in North American markets from 1986–1995, and in 1996 the third-generation was renamed as the Acura RL, while the Legend name is still used in Japan and other markets.

The Legend hardtop coupe was introduced to compete with the Nissan Leopard coupe, the Toyota Soarer, and Mazda Cosmo and shared many mechanicals with the Rover 800 coupe.

Recently there is some market based pressure for Honda to upgrade the engine from a V6 to a V8, as products identified as Acura have the same refinement and engine efficiency as the top line Legend/RL. There is speculation that Honda has developed both a V8 and V10 engine used in racing models, but no decision has been made to actually install any engine larger than a V6 into the Honda flagship as of yet.

First generation (KA1-KA6, 1985-1990)

First generation



Also called	Acura Legend
Production	1985–1990
Layout	Front-engine, front-wheel drive layout
Engine(s)	2.5 L C25A V6 2.7 L C27A V6 2.0 L C20A V6 (Japan) 2.0 L C20AT V6 turbo (Japan)
Transmission(s)	5-speed manual 4-speed automatic
Wheelbase	Sedan: 108.7 in (2761 mm) Coupe: 106.5 in (2705 mm)
Length	Sedan 189.4 in (4811 mm) '86-'88 Sedan 190.6 in (4841 mm) '89-'90 Sedan (Japan): 184.6 in (4689 mm) Coupe: 188 in (4775.2 mm)
Width	Sedan 68.3 in (1735 mm) '86-'88 Sedan 68.9 in (1750 mm) '89-'90 Sedan (Japan): 66.7 in (1694 mm) Coupe: 68.7 in (1745 mm)

Height	Sedan: 54.7 in (1389 mm)
	Coupe: 53.9 in (1369 mm)
Related	Honda Accord
	Honda Vigor
	Rover 800

The first-generation Legend, introduced to Japan October 22, 1985, was the first production Honda vehicle to offer only a SOHC V6 engine worldwide. The Legend was a result of a joint venture with Britain's Austin Rover Group called Project XX that started in November 1981 with the Austin Rover-Honda XX letter of intent signed by the two companies to replace the Rover SD1 and to provide a luxury vehicle for Honda, and was codenamed as HX. The Rover Company had a long established reputation as a luxury car in the United Kingdom and Europe, demonstrated with the Rover P6, and Honda wanted to introduce a luxury car for both domestic Japanese and both the European and North American markets. Rover also wanted to return to the American market when previously they had reportedly sold only 1,500 cars in 1971, and a brief return in 1980, selling 800 Rover SD1s by offering the Sterling which was also a result of the ARG-Honda partnership. The development work was carried out at Rover's Canley, Coventry plant and Honda's Tochigi Prefecture development centre. The European market Legend was produced by Austin-Rover alongside the 800 in the former Morris Plant Oxford in Cowley, Oxfordshire. US-market Legends were built in Japan.

Japanese market

Honda wanted to expand its model range above the Honda Accord, and offer a premium level sedan that would appeal to wealthy middle-aged customers who were the traditional buyers of the Toyota Crown and Nissan Cedric/Gloria. When the Legend was introduced worldwide, the optional equipment list was very minimal as commonly identified equipment regarded as luxury in nature was included as standard equipment, leaving the only option the choice between a manual or automatic transmission.

The major mechanical difference between the Legend and the Toyota and Nissan sedans was that the Legend was front wheel drive, which Honda stated was "quite simply the most logical means to the ends the engineers desired: a true luxury car with a low, aerodynamic hood; a spacious interior with a nearly flat floor, and the superior traction that results from placing the engine and drivetrain transversely over the drive wheels." This provided the Legend with a 63/37 front to rear weight distribution ratio. Efforts to minimize torque steer were achieved by the half shafts and the angles of the joints at the ends of those shafts being equalized, helping the Legend to accelerate in a straight line.

The Japanese-spec Legend was offered with three trim levels; the V6Xi with the 2.5 L C25A V6 engine, with the slightly shorter and narrower V6Gi and V6Zi using the 2.0 L C20A V6. The V6Gi had the same level of equipment and luxury features as the V6Xi, whereas the V6Zi had reduced content and a lower price. The V6 engines were available

with electronic, multi-port sequential fuel injection Honda called Programmed Fuel Injection, or PGM-FI and a variable length intake manifold on the smaller 2.0 L V6. The engine was upgraded to the C27A 2.7 L displacement and added the variable length intake manifold as a major engine improvement. Transmission selections were either a four speed automatic transaxle with a computer controlled lockup torque converter, or a five speed manual transaxle.

The Legend offered many Honda "firsts", such as a driver side airbag, vehicle speed sensitive power assist rack and pinion steering, anti-lock brakes, seat belt pre-tensioners with Emergency Locking Retractors (called E.L.R.), a choice of 100% wool or cloth moquette upholstery, and "TCS" Traction control, the first car to use traction control on a front wheel drive vehicle. Attention was given to make sure the Legend was quiet, so Honda used computer simulation using NASTRAN, a stress analysis program created by NASA, helping the car achieve a drag coefficient of 0.32 and an interior noise level of 63dB (measured while the vehicle was travelling at 100 km/h (62.1 mph) using a manual transmission in 5th gear), and by using triple seals around the tops of door openings.

The Legend was introduced with a double wishbone suspension for the front wheels, and a modified Chapman strut with trailing arm rear suspension Honda called "RF (Reduced Friction) Strut Rear Suspension" with progressive rate rear coil springs that stiffen as they compress to combine smooth ride and good handling. The rear coil spring was separate from the strut and positioned so that vertical pressure was supported by the lower control arm. The term Reduced Friction referred to the minimizing of forces that create friction in the shock absorbers, providing more efficient damping for the full suspension stroke. The rear suspension was upgraded to double wishbone starting with the 1988 model year worldwide.

In order for the sedan to comply with Japanese vehicle size requirements and reduced tax liability, the car with the 2.0 L V6 was slightly shorter and narrower for Japanese buyers by reducing the extension of the front and rear bumper covers, and reducing the overall width to 1,695 mm (66.7 in). This also offered an alternative to the traditional Crown and Cedric/Gloria customer base due to the sedan being in the smaller size classification and reduced tax liability but with a comparable level of luxury equipment found in the larger cars, and the same amount of interior space due to the front wheel drive powertrain, with a wheelbase advantage of 30 mm (1.2 in) over the Cedric / Gloria and Crown. To address the issue of durability, the Legend was manufactured as a Monocoque sedan instead of a four door hardtop, a bodystyle still offered at the time by Toyota and Nissan on the Crown and Cedric/Gloria. The slightly smaller bodystyle also allowed the Legend to compete with the upscale Toyota Cresta and Chaser and the Nissan Laurel.

Notable owners of the first year Legend were Soichiro Honda the founder of Honda, Satoru Nakajima, Tyrrell Racing F1 driver in 1990, and Ayrton Senna. The Legend V6Xi was used as the pace car for the Suzuka Circuit for 1986.

"Wing Turbo" version

In 1989, Honda upgraded the C20A V6 engine used exclusively in the KA5 series Legend with a variable geometry turbocharger calling it the "Wing Turbo" to address the modest power available from the previous engine with variable length intake manifold used in earlier models. The turbocharger compressor housing had four vanes surrounding the turbine wheel on the air intake side that would fluxuate based on engine load and transmission gearing above 2,000 RPM to allow for increased airflow into the engine as needed. The turbo compressor could generate as much as 450mmHg amount of pressure, and was paired with a water cooled intercooler installed inside the intake plenum between the cylinder banks to produce 140 kW (190 PS; 188 bhp) net at 6000 rpm and a maximum torque of 24.6 kg·m (241 N·m; 178 ft·lbf) at 3500 rpm. The turbo was installed just above the automatic transmission unit; a 5-speed manual transmission was not offered. This engine was only offered in Japan using the shortened sedan bodystyle, labeled as "2.0 Ti Exclusive" and "2.0 Ti". The engine was used for just one year, due to the introduction of the second generation Legend in 1990 with the much larger C32A V6, and as such Wing Turbo sedans are extremely rare. Much of the research on this engine contributed to the VTEC C30A V6 engine used in the 1990 Honda NSX. The Legend Turbo can be identified as sharing the front grille with the all new 1990 Honda Ascot with a "turbo" badge attached to the grille on the bottom right hand side.

North American market

When the Legend was introduced, Honda's newly established luxury car division just for the Legend was called Acura, using the advertising slogan "Precision Crafted Automobiles", and the Acura Legend was offered with one factory installed option, the choice of transmission used, and one trim level. In the 1986 sales brochure, the Legend's full name used was "Legend Touring Sedan". The vehicle was virtually identical to the Japanese market V6Zi in terms of luxury equipment offered, but the same size as the V6Xi using the same 2.5 V6 engine and the longer overall length to comply with United States crash standards. The Technics supplied 80W four speaker cassette tape stereo offered the ability to customize equalizer settings with four memory positions, and was equipped with a dual diversity antenna, meaning it had a conventional power antenna and an embedded antenna in the front window. One of the novelty items was a simple volume control rocker switch and a pre-set radio station channel selector installed on the instrument binnacle within reach of the right hand; the opposite side of the instrument binnacle had a button to open, tilt or close the standard equipped glass moonroof with sun shade. The North American Legend was not offered some of the items offered in Japan, such as automatic, one touch climate control, and 100% wool cloth interior. Blue interior was shared with Japan and North America, but brown was not offered in North America, and "Sand Gray" was offered instead. Exterior colors were matched to only one interior color choice and leather was not offered on either the steering wheel or upholstery, unusual for a luxury car of the time.

European market

The Honda Legend was introduced for the 1987 model year and was virtually identical in equipment offered and vehicle dimensions to the North American model, with one trim designation called the V6-2.5i. This means very few options were available other than the choice of transmission, and an air conditioning system identical to the North American version. The Europeans were offered an optional "Special Equipment Pack" that offered cruise control, aluminium alloy wheels, a driver's seat with power lumbar support, height, fore/aft and reclining adjusters, adjustable rear headrests, a 4 speaker stereo system provided by Philips and headlight wipers. Front and rear mud flaps were standard in undisclosed countries but not all. The radio volume control rocker switch and preset radio scan button installed on the instrument binnacle was not offered.

Legend coupe and other changes



Honda Legend coupe

The Legend Coupe was introduced February 6, 1987, which shared the double wishbone suspension and powertrain setup from the moderately improved sedan for the 1987 model year. Incidentally, the Japanese coupe was both longer and wider, which increased its tax liability, yet it had a shorter wheelbase by 2.2 in (56 mm).

Starting with the introduction of model year 1988, the trim level "Exclusive" was introduced, offering genuine wood trim on the dashboard and center console with a very large selection of available wood type and hues to choose from, automatic headlights, headlight washer/wipers, separate rear passenger climate control, and chrome-plated power folding mirrors and door handles with infrared remote keyless entry. October 14, 1988 saw a minor restyle offered for the interior and dashboard, to provide a more luxurious appearance in comparison to the Nissan and Toyota uplevel sedans the Legend was competing with. Due to the success Honda had with the Legend, it served as an inspiration for the Subaru Legacy with which it shares many visual resemblances and dimensions both inside and out.

Engine specifications

Engine	Displacement (cc) / bore×stroke	Horsepower	Torque
C20A V6 SOHC 24 valve PGM-FI	1,996cc / 82.0×63.0	145 PS (107 kW; 143 hp) @6300rpm	172 N·m (127 lb·ft) @5000rpm
C20A turbo V6 SOHC 24 valve PGM-FI	1,996cc / 82.0×63.0	190 PS (140 kW; 190 hp) @6000rpm	241 N·m (178 lb·ft) @3500rpm
C25A V6 SOHC 24 valve PGM-FI	2,493cc / 84.0×75.0	165 PS (121 kW; 163 hp) @6000rpm	211 N·m (156 lb·ft) @4500rpm
C27A V6 SOHC 24 valve PGM-FI	2,675cc / 87.0×75.0	180 PS (130 kW; 180 hp) @6000rpm	226 N·m (167 lb·ft) @4500rpm

Second generation (KA7/KA8, 1990-1996)

Second generation



Also called	Acura Legend Daewoo Arcadia
Production	1991–1995
Layout	Mid-engine, front-wheel drive layout
Engine(s)	3.2 L C32A V6 4-speed automatic
Transmission(s)	5-speed manual 6-speed manual
Wheelbase	Coupe: 111.4 in (2830 mm) Sedan: 114.6 in (2911 mm)
Length	Sedan: 194.9 in (4950 mm)

	Coupe: 192.5 in (4890 mm)
Width	71.3 in (1811 mm)
	1991-92 Coupe: 53.5 in (1359 mm)
Height	Sedan: 55.1 in (1400 mm)
	1993-95 Coupe: 53.7 in (1364 mm)
Related	Honda Accord Honda Inspire Honda Vigor Honda Ascot



Daewoo Arcadia



Honda Legend coupe (Europe)

The second generation model was introduced October 24, 1990, and continued to offer both a sedan and coupé. The Rover 800 was not updated to the new platform, and instead continued with the old XX platform. In Japan, this Legend was also known as the "Super Legend" due to the much larger 3.2 C32A engine, which was now the only engine offered in the Legend. The Type I engine was rated at 215 PS (158.1 kW; 212.1 bhp), and the Type II was rated at 235 PS (172.8 kW; 231.8 bhp) and included with the touring system. This Legend benefited from much of the research and testing done for Honda's new mid-engined high performance sports car, the Honda NSX, and the Legend was used as a test platform for new NSX technologies and research. Honda introduced a passenger side airbag on this model, and used off-set collision testing to improve collision performance and safety. Trim level designations were changed to "Alpha" for the top level vehicle, and "Beta" for the lower grade. No other trim levels were offered. The "Alpha" was very well equipped, offering ABS, leather or 100% wool moquette upholstery, projector beam headlights, and dual-zone air conditioning. The rear end appearance of the sedan was adopted from the first generation Legend coupe, as the first generation sedans appearance was very similar to the first generation Subaru Legacy, and Honda wanted to visually align the appearance of both the Legend coupe and sedan with the Ferrari competitor Honda NSX. The customer base served by the slightly smaller first generation Legend was now offered the completely revised CB5 series Honda Vigor and Honda Inspire sold at different Japanese Honda retail sales locations *Honda Clio* and *Honda Verno*.



Honda Legend Alpha Touring coupe (Japan)

The Japanese Domestic Market version of the 1990 Legend (2nd generation) was the second vehicle offered with a navigation system called the Electro Gyroator (first being the 1981 Honda Accord), although it was not satellite-based and instead relied on a gas gyroscope. September 29, 1992 saw an upgrade to the "Alpha" trim level, called the Touring Series, which added the Honda Progressive Damper suspension system, and included upgraded calipers for the front and rear disc brakes, and increased the wheel size to 16 inches. A Luxman premium sound system was added to the options list. The transmission selections were reduced to a 4 speed automatic transmission only for Japan, and a 5 speed manual transmission was offered for vehicles exported, with a 6 speed manual transmission later offered as well. The prefectural police department of Aomori used "Beta" sedans with the Type II engine for traffic monitoring.

American actor Harrison Ford did commercials in Japan for the Legend.

The second-generation Legend was also manufactured by Daewoo in South Korea from 1994 to 1999 under the name of **Daewoo Arcadia**, for the southeast Asian market, replacing the Daewoo Imperial.

Third generation (KA9, 1996-2004)

Third generation



Also called	Acura 3.5RL
Production	1996–2004
Layout	Mid-engine, front-wheel drive layout
Engine(s)	3.5 L C35A V6
Transmission(s)	4-speed automatic 6-speed manual
Wheelbase	114.6 in (2911 mm)
Length	1996-1998:195.1 in (4956 mm) 1999-2001:196.6 in (4994 mm) 2002-2004:196.7 in (4996 mm)
Width	1996-1998:71.3 in (1811 mm) 1999-2001:71.4 in (1814 mm) 2002-2004:71.7 in (1821 mm)
Height	1996-1998:54.5 in (1384 mm) 1999-2001:56.5 in (1435 mm) 2002-2004:54.5 in (1384 mm)
Related	Honda Accord (USA-spec) Honda Inspire Honda Saber

The third generation Legend appeared February 14, 1996, continuing the Honda tradition of front wheel drive, and increasing the engine displacement to 3.5 L with the horsepower remaining at 215 PS (158.1 kW; 212.1 bhp). The actual Honda internal platform code for this vehicle is E-KA9. In an attempt by Honda to dispute the call for the Legend to be offered with a V8 to be considered a premium level luxury car, this generation had a wheelbase that compared to the Infiniti Q45 at 2,830 mm (111.4 in) with a length at 5,056 mm (199.1 in) and the Lexus LS at 2,850 mm (112.2 in) wheelbase and 4,996 mm (196.7 in) length.

The trim level "Exclusive" returned as the upper level car, with the standard grade vehicle known as "Euro", with the more performance tuned suspension. The wood trim used was more upscale for the "Exclusive" vehicle with a lower grade wood used on the "Euro". Both vehicles were very well equipped. The instruments used were simplified from previous versions, but 100% wool moquette upholstery was still offered, along with optional leather. The Luxman premium sound system was still available. The styling was said to more closely resemble Mercedes-Benz and a transponder key security system was offered.

September 21, 1998 saw a minor styling change, with the front grille cutting into the front bumper, providing a more prominent front grille. Emphasis was increased on providing a luxurious sense of style, both inside and out. Side impact airbags now complemented the dual front airbags as standard equipment.

September 24, 1999 saw the engine meet emissions regulations to comply with California LEV requirements.

June 19, 2003 saw the interior updated, and maple wood was offered for interior decoration. Electro-luminescent instruments were offered, as well as a higher grade of leather interior.

The third-generation Legend was released in 1996, and the third-generation model was offered as a sedan only. A mid-term facelift came in 1999. The Legend went on sale in Australia starting with the 1997 model year.

In the USA market, when the Legend coupe was discontinued, they were offered the Acura CL 2 door coupe that was based on the American market Honda Accord coupe so as to continue offering a top level 2 door vehicle.

North American model

In 1996, the replacement for the Acura Legend was introduced as the Acura 3.5RL. Known internally as "KA9", officially, RL originally stood for "Road Luxury." Acura dropped the Legend moniker because market research showed that consumers knew Acura products by their model names, "Legend" and "Integra", and did not necessarily associate the names with the manufacturer, Acura. In an effort to associate the model with the manufacturer, Acura changed the model names of its offerings to alpha-numeric

designators used by many manufacturers at the time. 3.5RL thus indicated the displacement of the engine and the model designator. Acura also named the rest of its line with such alpha numerics as the 2.5TL and 3.2TL or the 3.2CL. Acura believed that no one would know what a "3.5RL" was, and people would naturally identify their cars as an "Acura 3.5RL", a strategy that seemed to be working so well with archrival Lexus, which was marketing not an "LS 400" but the "Lexus LS 400". Parenthetically, by the time the Acura 3.5RL was introduced, the top of the Japanese car luxury heap was no longer the Acura line-up but those cars sold by Lexus, and to a lesser extent, Infiniti.

The very first Acura 3.5RL rolled off the assembly line on January 4, 1996. The 1996 Acura 3.5RL was introduced to lackluster reviews. The automotive world had been expecting a true competitor to the Lexus LS to emerge. The 3.5RL fell short and was continuing to drop in sales until it was finally redesigned for the 2005 model year. The main problems holding back the car seemed to be the lack of an option of a V8 powerplant and rear-wheel drive. So in 1996, laying to rest predictions of a VTEC V8 powerplant, the 3.5RL was powered by a 3.5 L V6 engine, derived from the previous Legend's 3.2 L unit. The engine provided 210 hp (later 225 hp).

Of particular note, in the 3.5RL, was the continuation of longitudinally mounted V6 engine. This meant that the center-line of the V6 was mounted in-line with the car's axis, and not transversely (i.e., 90 degrees offset from the vehicle axis) like most other front-wheel drive cars. This longitudinal placement allowed for a smaller turning radius and easy in-town maneuverability, as well as 56/44 front/rear weight distribution.



1999–2004 Acura 3.5RL

In 1999, the 3.5RL received a front and rear facelift that included the addition of newer xenon HID headlamps and integrated foglights along with new bumpers and hood. The suspension and chassis were stiffened, and new alloy wheels were offered. For safety, driver and front passenger side airbags were added. The Acura 3.5RL was back in the fold and sales increased.

In 2000, a larger navigation system screen was added. Along with that larger screen was the conversion to easy-to-replace DVD map databases. In 2002, another subtle change was given to the 3.5RL with painted lower trim and mudflaps along with redesigned alloys and a newer, sportier suspension setup. Perhaps more important was the engine which now was upgraded to produce 225 hp (168 kW) and 231 lb·ft (313 N·m) of torque along with more insulation in the engine compartment as well as the fact that OnStar was added in 2002. The 2003 and 2004 RL's received clear turn signals in the rear lights, another new wheel design, as well as various interior upgrades including new color schemes. For 2004, the navigation system came as standard as well as a redesigned center console and chrome door lock pulls. Absent a major redesign in 8 years, however, the 3.5RL's sales slipped to their lowest levels in the 2004 model year. Acura and dealers both provided generous incentives on the final models.

The 1996–2004 3.5RL's engine was the last in the Honda and Acura lineup not to use VTEC, Honda's variable valve timing system. This 3.5 L 90 degree V6 engine was internally designated as the C35A, and the last of the Honda C engine V6 engines used in Honda and Acura lineups, being replaced by the newer Honda J engine 60 degree V6 engines. The 2004 RL was also the last Acura to use the numeric designator (i.e., 3.5) for its engine displacement.

Fourth generation (KB1, 2004-current)

Fourth generation



Also called	Acura RL
Production	2004–current

Layout	Front-engine, four-wheel drive layout
Engine(s)	2005-08: 3.5L <i>J35A</i> 290 hp (220 kW) 2009: 3.7L 300 hp (220 kW)
Transmission(s)	5-speed automatic with sequential sport shift
Wheelbase	2005-09: 110.2 in (2799 mm)
Length	2005-08: 193.6 in (4917 mm) 2009: 195.8 in (4973 mm)
Width	2005-9: 72.7 in (1847 mm)
Height	2005-08: 57.1 in (1450 mm) 2009: 57.2 in (1453 mm)
Related	Honda Accord (USA-spec) Honda Odyssey Honda Inspire Honda Elysion

The swoopier fourth-generation Honda Legend was launched on October 7, 2004 and became Japan's Car of the Year for 2004–5, marking the fourth time in five years that Honda has taken the award. The new car has a 300 PS (221 kW; 296 hp) engine and available in the Japanese market Honda Legend an intelligent night-vision system with automatic pedestrians detection in or approaching the vehicle's path. The newly designed J35A 3.5 L V6 was changed from a 90 degree "v" to a 60 degree, and added VTEC to improve efficiency. The horsepower no longer complied with Japanese auto industry self imposed horsepower restrictions, and the engine was capable of 300 PS (220.6 kW; 295.9 bhp). Honda began to expand the Acura division into Mexico, Hong Kong, and China. Plans to introduce the Acura brand in Japan haven't been formally announced, relying on speculation. This generation Legend shares large sedan duties with the Honda Inspire, known in North America as the Honda Accord starting with model year 2003 (series UC1) and continuing with the series CP3 sedan.

Honda introduced four wheel drive technology on the Legend, called SH-AWD, which earned Honda the Japan Car of the Year, and Mosuto 2005 Annual RJC technology of the Year award. Select-Shift was introduced on the 5 speed automatic transmission.

VTEC technology was introduced on this vehicle for the first time. M-TEC was added by the MUGEN division, called the M1 package.

September 15, 2005 saw a mild body restyle, which included a rear backup camera.

The Akita and Kumamoto Prefectures adopted this Legend as the official car for local senior government officials.

The Legend received a Mid-Model Change (MMC) for the 2009 model year.

The Honda Legend offered some additional optional safety features, including Lane Keeping Assistance System (LKAS), Intelligent Night Vision with the world's first pedestrian detection feature, and a standard pop-up hood for pedestrian safety. The LKAS could actually make small steering adjustments to keep a car in lane so long as the radius of the turn was more than 220 meters, which was the legal minimum in Japan. The LKAS would relinquish control at the slightest steering input so the driver had control at all times. The night vision system uses a separate heads up type display on the center of the windshield. Far infrared cameras do not require a light source, and the software is able to detect human like figures, surround the image with a red box and give audible caution tones. The pop-up hood uses a series of sensors that can detect a pedestrian-like object being thrown onto the hood. An actuator will pop the hood up at the rear, close to the base of the windshield, 10 cm (4 inches) to help minimize pedestrian injuries, especially head trauma. All markets feature energy absorbing hood and fender supports and deformable windshield wiper pivots to minimize pedestrian injury.

In October 2010, it is reported that Brake Defect from Honda Honda Legend were delivered to customers before the problem is discovered. Honda says that it doesn't know how many of its vehicles have suffered a faulty brake system. The U.S. Honda outfit says it will replace the faulty seal and, if leaking has occurred, the brake booster will be replaced as well. At least some owners in the UAE, Saudi Arabia and other GCC countries are likely affected. Honda told that no stop-sale is issued.

North American Acura Model

A new generation car, known internally as "KB1", was launched in late 2004 for the 2005 model year. Still without the much-rumored V8 engine, it features a sophisticated all-wheel drive system Acura calls "Super Handling All-Wheel Drive" (SH-AWD). It integrates active differentials with the all-wheel drive system and traction control to improve handling, similar to the "ATTS" system featured on the 1997 Honda Prelude *SH*. At the time of its introduction, the Acura RL's SH-AWD was unique among all wheel drive systems because not only could it vary traction from front to back, but also side to side in rear using a technique called torque vectoring, becoming the first such system. The RL can direct up to 70% of available torque to the rear wheels, and up to 100% of that available rear torque can be directed to just one wheel. In combination with a specially designed planetary gear set which can over-drive the rear wheels up to 5% greater speed than the front wheels, the torque direction to one wheel, or torque vectoring, can have a steering effect. As the car speeds around a curve, torque vectored to the outside rear wheel will pull the rear end around the curve faster, just as paddling the outside oar of a row boat faster than the inside oar will cause the row boat to turn.

The first-generation RL was powered by a 225 hp (168 kW) 90° C-series V6 non-VTEC engine. The second-generation RL uses a newer design 60° J-series 3.5 L V6 SOHC VTEC engine delivering 300 hp (224 kW; later revised to 290 hp (220 kW) due to new SAE testing procedures). To give the car a more sporty feel, the car features drive-by-wire throttle control and a five-speed sequential sport shifting automatic transmission with shift paddles mounted on the steering wheel. As with the first-generation Acura RL, the second-generation Acura RL uses premium unleaded fuel rated at 91 (R+M)/2 octane.

A first for the RL is the use of aluminum 4-piston front brake calipers over 12.6-inch cast-iron ventilated front rotors. These multi-piston calipers are extremely rigid, and are derived from racing applications. In the rear, 12.2-inch cast-iron ventilated discs attach to their hub with lightweight aluminum collets and are gripped by one-piston aluminum brake calipers. The RL was equipped with a unique five spoke 17-inch alloy wheel with Michelin Pilot HX MXM 4 245/50-R-17 98V all season grand touring tires. These wheels were one inch larger in diameter, and the tires 20 mm wider in section than those found on the first-generation Acura RL.

New features found on the 2005 RL include an keyless entry system which allows the driver to both lock and unlock the car by touching the door handle, without having to use the remote control, and a keyless start system. A new 260 watt, ten speaker Bose DVD-Audio 5.1 sound system equalized for the RL cabin features several Bose technologies. Bose AudioPilot is a noise compensation technology which analyzes background environmental cabin noise, uses an algorithm based on cabin acoustics to boost certain portions of the musical signal so that it may be heard more clearly above environmental sound "clutter" without any apparent change in volume. Bose Centerpoint processes stereo and matrix surround sound recordings to allow play through the 5.1 sound system even though the source may only be a stereo sound track. Bose Active Noise Cancellation (ANC) rounds out the suite. Always on, whether the stereo is on or not, ANC takes input from two microphones placed in the cabin to analyze drivetrain related low end frequencies entering the cabin. The ANC sends information to the sound system to create precisely shaped and timed reverse phased audio signal from the door speakers and the subwoofer. The result is a dramatic reduction of engine and exhaust noise.

XM Satellite Radio, integrated Bluetooth hands-free technology for wireless phone use, voice recognition technology with over 560 voice commands to control navigation system and displays, wireless phone, audio system, heating and ventilation controls round out the cabin's technological features. Heating and air conditioning systems were also tied into a solar sensor and GPS positioning so that cabin temperature would stay constant in a mixed sun and shade situation. Based on sun position and cabin orientation, additional cooling air would be automatically added to the sunny side of the car to keep that occupant comfortable while not freezing out the occupant on the shady side.

The Alpine Electronics DVD-based navigation system is integrated with an 8 inch LCD display and a multi use Interface Dial, which can act like a mouse moving up down left right, like a knob, scrolling through preset menus, and a selector by clicking. Unlike many in-car navigation systems, the Alpine DVD based navigation unit allows the driver

to change destinations and routes "on the fly" while driving, rather than being locked out unless the car is park. The deeply integrated voice recognition system works with the navigation system and can also recognize city and street names. Also unique at the time was two way communication via AcuraLink satellite communication. Using a facility of XM Radio service, the system can send a variety of messages to the car including service appointment reminders (appointments first made via Internet) or important messages such as recall notices. The use of OnStar is carried over from the previous generation RL. Use of digital/analog trimode (two digital bands and one analog band) technology allows the 2005 RL OnStar technology to survive the planned 2007 phase out of the analog OnStar to all digital OnStar service in 2007.

Other new features include the Active Front Lighting System, in which the high intensity discharge headlamps swivel with the steering up to twenty degrees, offering improved night cornering vision. Light emitting diodes (LED) replace traditional incandescent lighting is used for many rear tail and brake as well as in the side mirror housing integrated turn signals, and many interior cabin lights.



2007 Honda Legend

The 2005 RL was also the first Honda vehicle to use the *Advanced Compatibility Engineering* (ACE) body structure, which is now proliferating throughout every newly-introduced Honda and Acura vehicle design. The ACE structure features extensive use of high-tensile steel and lightweight aluminum components in a front-mounted polygonal main frame, designed engage vehicles of differing size and weight in a frontal collision and spread the forces through multiple structural pathways, while preventing or minimizing cabin deformation. In practical terms, this means in an SUV versus ACE structure car collision, there is a greater chance that the ACE body structure will engage

with the SUV's frame and dissipate collision forces around the passenger compartment. In more conventional non-ACE car structures, the SUV frame has a much greater chance of missing or over-riding the conventional car's major structural components and a greater chance of deforming the passenger compartment.

The 2005 RL car structure features extensive use of somewhat "exotic" materials for a car at this price point including aluminum alloy hood, front fenders, trunk lid and frame, front and rear subframes, suspension arms, front knuckles and bumper beams. Magnesium is used in the intake manifold, and the two-piece center drive shaft is made of a carbon reinforced composite. The new RL features extensive aerodynamic design treatment including details such as an industry first flush side glass, as well as underbody covers and diffusers to reduce lift, resulting in a very low drag coefficient of 0.29.

2005 RL Exterior Colors 2005 RL Interior Colors

Premium White Pearl	Parchment, Ebony
Opulent Blue Pearl	Ebony, Taupe
Redondo Red Pearl	Parchment, Ebony
Meteor Silver Metallic	Ebony, Taupe
Nighthawk Black Pearl	Parchment, Ebony
Lakeshore Silver Metallic	Ebony, Taupe
Celestial Silver Metallic	Ebony, Taupe
Desert Mist Metallic	Parchment, Ebony
2005 RL Retail Price	US \$49,100



2006 Honda Legend

For **2006**, the Acura RL was also offered in a second trim level, the optional 'Technology Package' which included three new features adaptive cruise control (ACC), Collision

Mitigation Braking System, and Michelin PAX System run-flat tires on unique PAX 235 mm x 460 mm A ("A" for asymmetric) aluminum alloy wheels with unique 245-680R460A Michelin Pilot HX MXM 4 all season grand touring type radials designed for the Michelin PAX System. The metric sized, run flat Michelin PAX System wheels and tires are equivalent to 18" x 9" wheels and 245/45-R18 conventional tires. The previously standard color-matched mud guards were deleted in 2006. All 2006 models had a slight change to the navigation system that also allowed the installation of an optional rearview camera. MSRP increased by just \$200 for the equivalent 2005 model.

2006 RL Exterior Colors	2006 RL Interior Colors
Premium White Pearl	Parchment, Ebony
Opulent Blue Pearl	Ebony, Taupe
Redondo Red Pearl	Parchment, Ebony
Carbon Gray Pearl	Ebony, Taupe
Meteor Silver Metallic	Ebony, Taupe
Nighthawk Black Pearl	Parchment, Ebony
Lakeshore Silver Metallic	Ebony, Taupe
Celestial Silver Metallic	Ebony, Taupe
Desert Mist Metallic	Parchment, Ebony
2006 RL Base Package	US\$ 49,300
2006 RL Technology Package	US\$ 53,100
(ACC/CMBS/PAX)	

For **2007**, the Acura RL was offered in three trim levels, detailed in the table below, including a "standard" or "base" package, a newly defined "Technology Package" and the highest level trim, the "Technology Package with CMBS/PAX".

Base Model cars were well equipped, but deleted certain features such as the Navigation System, Adaptive Front Lighting System (AFS), and substituted plastic for wood trim.

Technology Package cars were essentially the same as the 2005 and 2006 standard models, coming with Navigation, AFS, while also adding as standard equipment, a rear backup camera and a 3.5mm stereo input jack for Apple iPod and other mp3 type devices.

Technology Package plus CMBS/PAX had no 2005 equivalent, and was most similar to the 2006 Technology Package, because it included ACC/CMBS and PAX technologies. While the label "CMBS/PAX" might appear to indicate ACC was dropped as a feature, in reality, ACC an extension of the CMBS system, and so was included.

As noted above mp3 audio player feature (really any device with a 3.5 mm headphone jack) was added to all trim levels. An integrated rearview camera was added to the top two trim levels. An integrated rearview camera could be added to the non-navigation

Base model as a dealer installed option. The Base model optional rearview camera installed in the same manner and position as on the 2006 models, being mounted dead center of the trunk trim, and having a new trunk release button installed to the right of center (passenger side). The difference is subtle, but the factory rearview camera installation on the Technology Package and the Technology Package with CMBS/PAX is to left of center (driver side) of the trunk release.

In 2005 and 2006, all models came standard with "genuine curly maple wood dashboard trim". With the introduction of three trim levels, the genuine curly maple wood dashboard trim now only appeared on the two higher level cars, Technology Package with CMBS/PAX. OnStar was deleted as a feature from all trim levels. Colors were added and deleted. MSRP increased by just \$100 from the roughly equivalent 2006 trims.

2007 RL Exterior Colors

Premium White Pearl
 Opulent Blue Pearl
 Redondo Red Pearl
 Carbon Gray Pearl
 Platinum Frost Metallic
replaces Celestial Silver and Meteor Silver
 Nighthawk Black Pearl
 Lakeshore Silver Metallic
 Desert Mist Metallic

2007 RL Interior Colors

Parchment, Ebony
 Ebony, Taupe
 Parchment, Ebony
 Ebony, Taupe
 Ebony, Taupe
 Parchment, Ebony
 Ebony, Taupe
 Parchment, Ebony

2007 RL Base Package

US\$ 45,780

2007 RL Technology Package

US\$ 49,400

2007 RL Technology + ACC/CMBS/PAX

US\$ 53,200

2007 RL	2007 RL with Technology Package (in addition to the base package)	2007 RL with Technology and ACC/CMBS/PAX Packages (in addition to the Technology Package)
290 horsepower (220 kW)	Acura Navigation System with Voice Recognition	Collision Mitigation Braking System (CMBS)
3.5-liter, 24-valve, SOHC VTEC V-6 aluminum-alloy engine	Rearview camera	Adaptive Cruise Control (ACC)
Super Handling All-Wheel Drive (SH-AWD)	AcuraLink satellite communication system with real-time traffic	Michelin PAX Run-Flat Technology
Acura/Bose 10-speaker Surround Sound System	GPS-linked, solar-sensing, dual-zone, dual-mode automatic climate control system	

XM Satellite Radio	Active Front Lighting System (AFS)
Keyless Access System	Genuine curlywood maple interior trim

The **2008** Acura RL continues unchanged in the US market from the 2007 model. Colors were added and deleted. MSRP increases \$500 in each trim:

2008 RL Exterior Colors

- Premium White Pearl
- Opulent Blue Pearl
- Redondo Red Pearl
- Carbon Gray Pearl
- Platinum Frost Metallic
- Nighthawk Black Pearl
- Lakeshore Silver Metallic
- Desert Mist Metallic

2008 RL Interior Colors

- Parchment, Ebony
- Taupe, *(Ebony is dropped)*
- Parchment, *(Ebony is dropped)*
- Ebony, Taupe
- Ebony, Taupe
- Parchment, Ebony
- Ebony, Taupe
- Parchment, *(Ebony is dropped)*

2008 RL Base Package

US\$ 46,280

2008 RL Technology Package

US\$ 49,900

2008 RL Technology + ACC/CMBS/PAX

US\$ 53,700

In Canada, the 2008 Acura RL is available with two different models, Base and Elite Package. The Elite Package adds Collision Mitigation Braking System (CMBS), Active Front Lighting System (AFS), Adaptive Cruise Control (ACC), heated and cooled ventilated front seats and burlled maple wood trim.

2005-2008 A-Spec Performance Package

For the 2005-2008 models, Acura offered an A-Spec package for the RL. The package consisted of two performance upgrades, which were dealer installed, and several appearance package upgrades. The package was first announced at a late 2004 Specialty Equipment Market Association (SEMA) trade show in Las Vegas. It should be noted that the A-Spec package for sale was distinctly different from the Acura RL A-Spec Concept Vehicle announced and shown as a striking dark red one-of-a-kind custom creation in early 2005 at the Detroit Auto Show.

The performance upgrades came in the form of A-Spec sport suspension upgrade, and A-Spec 18 inch alloy wheels, which allowed the use of more sporty lower profile tires.

The A-Spec sport suspension changed out the four springs and dampers (shocks) assemblies. The A-Spec suspension featured lowering springs (approximately 0.75 inch) and revalved dampers. The ride stiffness increased, but not overly so, and handling improved with less body roll, more controlled cornering and enhanced feel.

Reportedly the suspension stiffness was not to same level as the much stiffer A-Spec sport suspension upgrade in the Acura TL, in keeping with the two different missions of the cars, luxury for the RL, luxury sport for the TL. Acura RL A-Spec suspension geometry remained the same as the stock Acura RL suspension alignment specifications.

The other performance upgrade was the A-Spec 18x8 inch alloy wheels, a 10 spoke lighter weight design (about the same weight as the 5 spoke 17x8 inch OEM wheels). Recommended tires were either 245/45-18 sized Michelin Pilot Sport PS2 ultra high performance summer tires or Michelin Pilot Sport A/S ultra high performance all-season tires. Alternatively, less sport oriented, Michelin Pilot HX MXM4 Grand Touring All Season tires were also available in the same size. Typical of Acura optional wheels, the 55 mm offset of the stock 17x8 inch wheels was maintained so that suspension geometry could remain untouched.

The A-Spec appearance package consisted of a front air dam, side skirts, rear bumper air diffuser and a subtle trunk decklid lip style spoiler, all designed to give the car a more aggressive "aero" look. The parts came pre-painted from the factory to match factory colors. All parts were dealer installable.

Interestingly, if the dealer installed the A-Spec parts at the time of purchase, the original new car warranty of four years/50,000 miles would apply. If installed after purchase, the normal one year/12,000 mile parts warranty would apply.

A-Spec options were not offered for the 2009 mid model change. There is a widely held belief that the A-Spec suspension should have been the standard suspension on the Acura RL, and that the stock suspension was too soft, and hampered the very capable chassis and drivetrain. Interestingly the 2009 mid model change incorporated a revised stiffer suspension and 18x8 inch wheels as standard, equipped with lower profile 245/45-18 size tires. More aggressive "aero" look body work was also incorporated as standard, but a revised trunk decklid spoiler was made available as a dealer installed option.

2009 Mid Model Change (KB2)

For the 2009 model year, the RL received an extensive mid-model change (MMC), and made its introduction at the Chicago Auto Show on February 6, 2008, billed as "the most extensive Acura MMC ever". The new sedan was designated KB2 in the VIN codes, differentiating it from the 2005–2008 KB1 chassis VIN code. The revised sedan was released on July 1, 2008 to dealerships. The engine is upgraded to 3.7L with 300 hp (220 kW). While on paper, the engine may seem to be the same unit as shared with the Acura MDX, it is actually a variant that introduces for the first time ever on a SOHC Honda V6, an implementation of the Honda VTEC variable valve train technology on the *exhaust* side for improved horsepower and torque. Heretofore, all previous SOHC Honda V6 with VTEC used the technology on the intake side only. The engine emissions has been improved to meet the stricter U.S. Environmental Protection Agency (EPA) TIER 2 – BIN 5 and California Air Resources Board ULEV-2 standards. Implementation of the

SH-AWD was adjusted for earlier intervention and a greater rear wheel bias for better handling dynamics.

The MMC RL suspension was upgraded with higher rate coil springs, larger diameter anti-sway bars and stiffer bushings all around. The MMC RL sports a new larger front anti-sway bar of hollow construction, 30 mm diameter overall with a 6.5 mm wall thickness and a larger rear solid anti-sway bar, 19 mm diameter solid. The pre-MMC models sported a solid 29 mm front and 17 mm rear sway bar.

Standard 18" x 8" seven spoke alloy wheels with 245/45-18 tires replace the previous years' 17" x 8" five spoke offerings for not only the base and tech package models, but also for the highest trim ACC/CMBS equipped model. Previous years' ACC/CMBS equipped models were equipped with [Michelin PAX System] run flat tires on 18 inch equivalent (460 mm diameter) five spoke wheels. Unlike the previous years (2005–2008), there is no A-Spec offering, which included a body kit, suspension, wheels and badging.

Changes to the interior include more comfortable front seats and slightly increased rear leg room. The passenger front seat now has the same full 10-way power control as the driver's seat and both front seats feature active head restraint systems and six levels of cooling ventilation, as well as heated surfaces. Controls for heating and air-conditioning have been simplified and additional individual vent control is available to driver and passenger. The shift gear no longer has a gated sequence, but goes straight down to match the new ones used for the current Acura TSX and Acura TL. The steering wheel and shift gear top are now trimmed with wood to emphasize the RL's upscale luxury feel over its other two sedan siblings.

Additional insulation, improved acoustic isolation windshield design, and a new implementation of the active noise cancellation system (ANC) combine to make the car's interior more quiet over a variety of different conditions. Whereas the pre-MMC models ANC was set to cancel out low frequency boominess from the engine and exhaust, the MMC system, called Active Sound Control, has been extended in range to cancel some higher frequency road and tire noise as well. Unlike its predecessor ANC, Active Sound Control is now linked to throttle position and engine rpm to provide a more quiet cockpit during normal cruising, but will allow more of the new "3.7L's muscular sound" to be heard during higher rpm, higher speed excursions.

An additional microphone as well as some switchable directionality has been added to the HFL (Hands Free Link) and Voice Activated Navigation and Convenience controls. The new microphone system provides more accurate system "understanding" of the driver voice only when the systems are in command mode. Extraneous sounds, such as other voices in the cabin and wind noise are better distinguished and filtered out by the dual microphone system. Directionality is removed when an HFL voice call is established so that all passengers may participate in the phone call as in the pre-MMC model. The new dual microphone system uses real estate that was previously used in the 2005 and 2006 models for OnStar control electronics. Voice recognition commands have been increased to over 700, up from 560 previously.

The DVD based navigation system improves on previous XM satellite linked traffic flow reporting to include rerouting based on current traffic conditions and new continuously updated real time weather reporting. The DVD Audio capable 10 speaker sound system remains, but integration with the audio system is improved with the addition of Bluetooth stereo and a USB port that allows integration and operation of Apple iPod and other MP3 type devices. Also new is the ability to display iPod or other MP3 device (such as a USB flash memory device) folder and playlist information on the car's 8-inch central navigation display screen.

New shifter and center console arrangements have been added including a Sport mode. The steering wheel paddle shifters have been reprogrammed for faster response, and the paddle shifters can now be operated in both Drive and Sport Mode. In pre-MMC models, the gear selector had to be put in manual mode for the paddle shifters to operate.

The 2009 RL is slightly longer in its exterior dimensions by 2.2 inches (56 mm). The height is up a scant 0.1 inches (2.5 mm), while the width, track and wheelbase remain the same. The front end including the hood and the rear, including the trunkline have been revised along with redesigned headlights and taillights. One of the most controversial features of the 2009 RL may be its "Power Plenum" grill design, the first of three similar designs that have been recently revealed in the new-second generation 2009 Acura TSX, and the fourth-generation 2009 Acura TL.

Curb weights have increased. The MMC Base weighs in at 4083 lbs, the Technology Package weighs in at 4085 lbs, and the ACC/CMBS with no PAX now weighs in at 4110. The equivalent 2006 pre-MMC Technology Package weighed in at 4012 lbs, and the pre-MMC with ACC/CMBS/PAX weighed in at 4074 lbs.

The 2009 Acura RL continues to offer three trim levels in the US market. MSRP increases by \$500 over the 2008 model for each trim. For 2009, the Michelin PAX Run Flat Tire system is no longer offered in combination with the CMBS/ACC package. ACC is now featured alongside CMBS as part of the package name, after a two year hiatus. In reality, ACC was always included as a part of the CMBS. Colors were added and deleted.

2009 RL Exterior Colors

Alberta White Pearl *replaces* Premium White Pearl
 Crystal Black Pearl *replaces* Nighthawk Black Pearl
 Opulent Blue Pearl
 Redondo Red Pearl
 Grigio Metallic *replaces* Carbon Gray Pearl
 Platinum Frost Metallic
 Silver Jade Metallic *replaces* Lakeshore Silver Metallic
 Tuscan Beige Metallic *replaces* Desert Mist Metallic

2009 RL Interior Colors

Parchment, Ebony
 Parchment, Ebony
 Ebony, Taupe
 Parchment, Ebony
 Parchment, Ebony
 Ebony, Taupe
 Ebony, Taupe

2009 RL Base Package

US\$ 46,680

2009 RL Technology Package

US\$ 50,300

2009 RL Technology + ACC/CMBS

US\$ 54,100

The **2010 Acura RL** continues with few changes, in the US market from the 2009 model. Colors were added and deleted. MSRP increases \$150 in each trim:

2010 RL Exterior Colors

Alberta White Pearl

Crystal Black Pearl

Opulent Blue Pearl

Redondo Red Pearl *is dropped*

Grigio Metallic

Platinum Frost Metallic

Silver Jade Metallic

Tuscan Beige Metallic *is dropped***2010 RL Interior Colors**

Parchment, Ebony

Parchment, Ebony

Taupe, (*Ebony is dropped*)

Parchment, Ebony

Ebony, Taupe

Ebony, Taupe

2010 RL Base Package US\$ 46,830**2010 RL Technology Package** US\$ 50,450**2010 RL Technology + ACC/CMBS** US\$ 54,250

The **2011 Acura RL** appears to be set for production with some additional features, according to the Summer 2010 Acura Style magazine, a limited distribution publication for Acura owners, and later confirmed by the popular Honda and Acura product website "Temple of VTEC". New features and color combinations are reported by Temple of VTEC to be: Six-speed automatic transmission, power folding mirrors, rear backup/parking sensors.

The six-speed automatic transmission, which was first introduced on the 2010 Acura ZDX, is a genuinely new feature. Power folding mirrors have been available, in other than the North American market, since the 2004 introduction in Japan. Parking/backup sensors have been available in the North American market as a dealer installed option since the second generation Acura RL introduction in late 2004. A host of other features have also been available since the car's introduction in 2004, some of which are detailed in the Safety section below.

2011(?) RL Exterior Colors

Alberta White Pearl

Crystal Black Pearl

Graphite Luster Metallic

Forged Silver Metallic

Pomegranate Pearl

Opulent Blue Pearl *is dropped***2011(?) RL Interior Colors**Ebony, Seacoast (*Seacoast is added; Parchment is dropped*)Ebony, Taupe (*Taupe is added, Parchment is dropped*)

Ebony, Taupe

Ebony, Taupe

Seacoast

Grigio Metallic *is dropped*

Platinum Frost Metallic *is dropped*

Silver Jade Metallic *is dropped*

2011 RL Base Package US\$ TBD

2011 RL Technology Package US\$ TBD

**2011 RL Technology +
ACC/CMBS** US\$ TBD

Unconfirmed by Temple of VTEC, but discussed in the Acura Style magazine as additional 2011 revisions are a "next-generation grill design", "dramatic 18-inch wheels", "revised lower rear bumper detailing" and a "newly available Light Orchid Interior". It would appear, based on a 2011 RL color chart received by Temple of VTEC, that the "Light Orchid" interior color has been renamed to "Seacoast".

Reception

The second-generation 2005 Acura RL appeared on *Car and Driver's* Ten Best list for 2005. The car also garnered an CNET.com "Editor's Choice" Award for Top Tech Car.

The SH-AWD all-wheel drive system was lauded by *Popular Science* as one of the best automotive innovations of 2004, and earned the 2005 "Tech Car of the Year" from CNET.com. Subsequent moves by both Audi and BMW to design and market their own versions of torque vectoring all wheel drive systems bear out the innovative nature of the SH-AWD design.

While critically acclaimed, sales have not met expectations. Regarding sales of Japanese luxury flagships during the first six months of 2010, Acura has sold only 872 RLs, compared to 5,650 Lexus LS and 6,602 Infiniti M sedans. Enthusiasts and dealers said that the RL was not competitive because it is smaller, uses front-wheel drive, and lacks a V8 option, compared to its larger rivals in the mid-luxury segment that are rear-wheel drive and have a V8 available.

Some have suggested that the initial price of the RL is perceived to be out of its bracket. As the new RL offered more features and performance than the base version of its luxury competition's (i.e., the base six-cylinder BMW 5 Series), Honda Japan suggested that it could charge more, though Honda Canada disagreed. The RL's initial MRSP was \$69,500 CAD, more than the six-cylinder BMW 525i and close to that of the V8-powered BMW 545i. At the RL's price point, most consumers expected a V8, furthermore they did not perceive Acura as being on par with its German rivals and expected more value from the Japanese marque. The damage from Honda Japan's alleged hubris was done, perhaps giving the RL an unfavorable impression that could not be removed, even though Honda Canada has since reduced the RL's price. In 2009, the new generation of the Acura TL was released and it is expected to offer tough competition to the RL, as the TL has essentially the same engine, the SH-AWD system, and many of the RL's features for only \$44,900 CAD.

In October 2010, the Acura RL has been named as one of *Consumer Reports* most reliable cars, one of among 5 Honda models (Acura TL with front-wheel drive; Acura RL luxury car; Honda CR-V small SUV; Acura RDX small upscale SUV, and Honda Ridgeline compact pickup truck) named as most reliable in various categories.

WWT