

This press pack accompanied the UK launch of the third generation Camry estate in July 1992. The model's history can be tracked using the Timeline feature on the third generation Camry archive web page. More information about the Camry range can be obtained from the press office.



FOR IMMEDIATE RELEASE

July, 1992

Press Information

US-MADE ESTATES JOIN CAMRY LINE-UP

Toyota's standard setting Camry executive saloons have now been joined by two big, practical Estate versions using the same mechanical components. But while the saloons are made in Japan, the Camry Estates are being produced at Toyota's Kentucky plant in the United States.

The Georgetown, Kentucky plant is now exporting Camry Estates to Canada and Japan as well as Europe. The car becomes the first Toyota to be built only in the US and it is also the only US-made Toyota to be built with right hand drive for export. About 40,000 Camry Estates will be built there this year with a 75 per cent North American content.

Competing head on with Europe's leading estate cars, the Camry Estate is available as a 2.2 GL with manual or automatic transmission or a 3.0 V6 GX with automatic transmission only. The acknowledged luxury, smoothness and refinement of the saloons are carried over to the Estate versions with huge gains in space, practical load carrying capacity and two additional rear facing seats which are ideal for children. The 2.2 GL Estate is priced at £19,020 and the 3.0 V6 GX is £23,495.

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Sitting at the top of Toyota's passenger car range, the Camry was developed to achieve new levels of quietness, comfort, spaciousness and refinement. The saloon versions went on sale last September, replacing the previous 2.0 litre and 2.5 litre V6 engined saloons and estates.

All new Camry models are more aerodynamic but larger for more leg, shoulder and headroom. Dimensions are increased throughout and the Camry is longer and wider than the previous model. No increase in height and a lower ground clearance give more headroom in the saloon while the Estates are also taller to accommodate more people and luggage.

In addition to ample space for five the Camry Estate has two rear facing seats, providing accommodation for seven. Trimmed in fabric, these seats are easy to stow into the flat floor for maximum carrying capacity or will comfortably and safely seat two children. Like the Camry saloons, the Estate cars also have 60/40 split rear seats to take care of the biggest loads. With all seats folded, there is a massive 843 litres capacity.

The rear wrap-around door is huge to give the biggest possible entrance area for people, pets and cargo. The large rear window is kept clean by a pair of washer-linked wipers.

Specifications are similar to the saloon Camrys. While the V6 GX has roof rails and air conditioning as standard, the GL has

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an electric tilt and slide sunroof and no roof rails. 205/65
tyres are fitted on both Estates and the 2.2 Estate gets larger
disc brakes to cope with heavy loads.



Press Information

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THE NEW TOYOTA CAMRYS

Introduction and Background

In 1987, when the 2.0 litre Camry was launched as a range of saloons and estates with GLi and executive specifications, there was immediate recognition of very good value family motoring with high levels of comfort, ample passenger and luggage space, outstanding equipment levels (especially on the Executives) and good performance and fuel economy.

The 2.0 litre, four cylinder 3S-FE engine was the first of a new generation of Toyota 16-valve twin cams developed specifically for family car use. Maximum power of 126 bhp was available at 5600 rpm with a healthy 132 lb ft of torque at 4400 rpm and a very flat torque curve. Designed to make driving easier, the 3S-FE's low down torque did not demand high revs or frequent gear-changing and displayed quite different characteristics to engines of similar capacity used in Toyota's sports car range.

The 3S-FE also had a unique camshaft drive system with belt drive of the inlet cam and the exhaust cam being driven by the inlet cam via a scissors gear. This enabled engineers to achieve a remarkably compact cylinder head assembly with an unusually acute angle between the valves. Like previous Camry models, the engine drove the front wheels.

The previous model Camry had a line-up in January 1987 of a 2.0 GLi saloon with manual or auto transmission, a 2.0 GLi Executive with auto transmission only, a 2.0 turbo diesel-engined saloon and a 2.0 GLi Estate with manual or auto transmission.

An Executive version of the Estate was added to the range in October 1987 and the diesel saloon was dropped early in 1988. In March 1988, a four wheel drive version of the Executive saloon joined the line-up but early in 1989 this and the Executive saloon were dropped to make way for a very different Camry.

The Camry V6 GXi had an even more impressive 'Executive' specification and a new 2.5 litre V6 engine to head the Toyota saloon car range. The 2VZ-FE featured 24 valves and four camshafts and used the compact scissors gear drive system in each cylinder head. This was the newest of the 'family car' range of engines with 158 bhp at 5800 rpm and 152 lb ft torque at 4600 rpm. It was available as an automatic only.

But the most outstanding aspect of the Camry V6 GXi was its benchmark quietness and smoothness - a sign of things to come.

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This was achieved by paying special attention to the elimination of noise, vibration and harshness. The V6 cylinder block was particularly rigid and a dual mode damper was fitted to the crankshaft pulley. Ladder-type integrated bearing caps helped counteract any bending vibration of the crankshaft and meticulous assembly meant reduced tolerances.

Other measures to reduce noise and vibration included a special timing belt with hydraulic automatic tensioning, the use of sandwich damper panels, rubber dampers and bushes and an air intake incorporating two resonators. Foam rubber noise suppression material and new engine mountings, including a fluid hydraulic type, also contributed to the smooth and serene progress of the V6 Camry.

In 1990, leather trim and upholstery were added to the standard Camry V6 GXi package.

Volumes and Prices

In 1990, 218,183 Camrys were produced at Toyota's Kentucky plant in the United States (and there are plans for expansion), but all Camry saloons marketed in Britain are manufactured at the Tsutsumi plant in Toyota City which has been in operation since the end of 1970.

The new Toyota Camrys...4

The Camry started life in 1980 and, to the end of 1990, 2,175,270 had been produced. (Domestic production in 1990 was 198,578.)

The model first arrived in the UK in 1983 and volume has been as follows:

1983	3528
1984	3449
1985	3128
1986	1795
1987	4177
1988	3596
1989	3247
1990	1981
1991	1099

This gives a total UK volume of 26,000 to the end of 1991.

In the first full year (1992) of the new Camry model, Toyota (GB) expects to sell 3000 Camrys, 800 of which should be V6 3.0 litre models.

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Press Information

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THE NEW CAMRY

The Concept and Development Goals

This latest Camry has been designed and developed with the European market very much in mind, and although it bears a passing resemblance to the Camry available in the Japanese domestic market, it is a very different car.

When designing and engineering a new car, Toyota engineers like to identify their goals by creating special slogans which act as constant reminders throughout the development process. For the new Camry, chief engineer Kasaku Yamada and his team worked with four concept slogans covering four main areas:

Exterior - beauty that exudes richness and pleasure.

Interior - relaxing, comfortable spaciousness.

Safety - inherent safety to foster confidence.

Performance - an extra margin of power and ability.

It was intended to firmly establish Toyota in the upper medium saloon market and to enhance the marque's reputation for quality, reliability and customer satisfaction. While striving to achieve these goals, four areas were of supreme importance to Yamada's team.

1. Styling - they aimed for contemporary styling, both inside and out with the right balance of individual looks and elegance with a hint of sportiness.
2. Comfort - roominess and ride comfort were to be improved to ensure the safe and comfortable accommodation of up to five adults.
3. Engine power - greater power outputs were essential while not sacrificing fuel economy and driveability.
4. NVH - the constant need to eliminate noise, vibration and harshness was always emphasised.

The creation of a larger body, coupled with excellent detail and packaging gave designers the freedom to produce a rounded flowing body style with substantially increased interior space. The design also sets it apart from the rest of the Toyota range.

THE NEW CAMRY IN MORE DETAIL

The new Camry is a completely new car; nothing is carried over from the previous model. The saloon is 205 mm longer than the previous model on a 20 mm greater wheelbase at 2620 mm. It is also 60 mm wider, but retains the same height with a 20 mm lower ground clearance. The Estate is 270 mm longer, 58 mm wider and 90 mm higher.

All this adds up to more passenger and luggage space with a 5 mm increase in cabin length, a 70 mm increase in width and a 10 mm increase in height. There is significantly more knee room in the rear and greater shoulder room throughout. Boot capacity increases from 17.8 cu ft to 18.3 cu ft in the saloon.

The exterior styling reflects good aerodynamics and the distinctive elegance of European tastes. The Camry is not simply a 'Europeanised' version of the model available in Japan; it has been designed and developed with Europe in mind and the wide body and larger engines are not available on the Japanese domestic market.

Without seeking to break records, and whilst retaining sufficient passenger space, the stylists have achieved a coefficient of drag of 0.31 (0.32 on the V6 with wider tyres) as against the 0.35 of the previous model. Flush surfaces and exemplary fit and finish show typical Toyota attention to detail.

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On the road, a quieter and smoother car in this class would be hard to find.

Owners expect good performance as part of the executive package and the Camry offers a choice of a 2.2 litre in-line four-cylinder 5S-FE engine giving 134 bhp or a 3.0 litre V6 3VZ-FE powerplant developing 185 bhp - and Toyota engineers have made these engines quieter and more vibration-free than ever. (The previous model used a 2.0 litre four-cylinder and a 2.5 litre V6 developing 126 bhp and 158 bhp respectively).

The larger body and greater power of the new Camrys dictated a complete revision of the suspension. Independent MacPherson struts are used all-round with L-arms at the front and dual link trailing arms at the rear. Some of the significant technical improvements include larger coil spring offset to reduce shock absorber friction, and subframes front and rear for less vibration and greater suspension rigidity. Speed sensitive power steering is standard and so too is an anti-lock (ABS) disc brake system.

The new Camry is also a safer car. Not only because of its improved performance, but because of its passenger crash protection including side impact beams. Inertia reel seatbelts are fitted, plus a lap belt for the middle rear seat passenger.

EXTERIOR STYLING

The new Toyota Camry has now evolved into an executive saloon with distinctive styling.

The styling was developed from three major considerations:

- * Sleeker, more efficient aerodynamics
- * Increased interior space and luggage capacity
- * A form that imparts an image of advanced technology and active performance

The body has an overall wedge shape: low in front, high in the rear. In cross section, it is wide at the base with a rounded roof line. The low centre of gravity is immediately apparent.

AERODYNAMICS

Aerodynamics are assisted by the smoothness of the outer skin, the air dam incorporated into the front bumper, and the boot lid spoiler where fitted. The doors are pushed over the sill panels to improve aerodynamics and give the car a more stable appearance. Simulations with a super-computer and full-size wind tunnel tests helped Toyota refine the body until the coefficient of drag (Cd) was an efficient 0.31 - a significant improvement when compared with the 0.35 Cd of the previous model.

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EXTERIOR COMPONENTS

Highlights of the exterior include wrap-around headlamp/indicator lamp combinations that fit smoothly into the surface of the body for better aerodynamics; bumpers and mouldings that present an integrated look with colour co-ordination and a smooth transition to the body lines, and a dynamic character line that flows across the waistline to the front end. Door panels offer a smooth, high-quality appearance. Aerodynamically contoured door mirrors are at the waistline, right and left. Typical of Toyota's attention to detail is the fuel cap holder on the inside of the fuel filler flap.

THE INTERIOR

The elegance of the interior of the new Camry can be sensed immediately. It is measurably larger, offering more leg room, more shoulder room and more head room. In fact, in this wide, made-for-export model, all interior dimensions are roomier.

The interior is designed with curves and rounded trim to give the occupants a feeling of being enfolded in elegant surroundings. The interior dimensions are:

Cabin length:	1910 mm
Cabin width:	1495 mm
Cabin height:	1170 mm
Leg room:	Front - 1105 (+15) mm Rear - 890 (+15) mm/894 (+19) mm Estate
Shoulder room:	Front - 1442 (+62) mm Rear - 1425 (+60) mm/1422 (+51) mm Estate
Head room:	Front - 976 (+6) mm/996 (+26) mm Estate Rear - 943 (+8) mm/986 (+51) mm Estate

The boot of the new larger Camry saloon is 0.517 litres, VDA standard, even more volume than the previous model. Glovebox capacity is up from 6.5 litres to 8.5 litres.

Some of the details that make more efficient use of interior space include moving the driver's pedals forward and the rear seat backs backward to effectively increase the overall length of the cabin. Convex front seat backs increase knee room. Lowered

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floors and seats make more headroom. Seat rails attached to the centre tunnel and the sill panels give more foot room for rear passengers.

The seats in the new Camry have been specially designed for the best possible fit and feel with comfort over long distances of paramount importance. Firm support is provided for the hips and thighs, leaving freedom for shoulder movement.

The driver's seat on 2.2 GL models features 6-way adjustment, and upholstery is in fine, but hardwearing fabric. The V6 has leather upholstery as standard and the driver's seat has seven adjustments including lumbar support.

In all models, the rear seats have fold-down backs with a 60/40 split. These fold-down seats have a centre armrest and can provide access to the boot from inside the car. But like other Toyotas, the seat backs can also be locked in position for better boot security. The additional two rear facing seats in Estate versions are intended for children and can be folded neatly away. They are trimmed in cloth. The rear hatch door features a special child protector lock.

Three-point seatbelts are standard equipment front and rear, except the centre rear seatbelt, which is two-point.

THE COCKPIT

The cockpit is designed and laid out according to ergonomic

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principles. All major controls and switches are within easy reach of the driver, and most are illuminated for easier night operation. Specifically, climate control and audio knobs and switches are situated 100 mm closer to the driver for convenience. They were designed for pleasant tactile feel and satisfying, sharp operation. Power window controls have a main panel for the driver located in the armrest. Each passenger position also has its power window button.

Door lock buttons are located in the same console as the power window controls. When the driver unlocks his (or the front passenger) door from the outside, all door locks are disengaged. When he locks the door with his key, all door locks are engaged at the same time.

The analogue instrument cluster provides excellent legibility. It comes with speedometer and tachometer as standard equipment. For models with automatic transmission, the shift lever position indicator lights are located in the centre of the instrument cluster, between the speedometer and the tachometer.

Tilt adjustable steering wheels are standard on all Camrys and are leather covered.

CLIMATE CONTROL

Ventilation, heating and cooling have been upgraded. The air flow at 100 km/h is 250 m³/h, up from 213 m³/h. The heater's

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air flow is now 420 m³/h compared with 330 m³/h before. The V6 GX air conditioner has more compressor capacity, 4600 kcal/h cooling capacity and a maximum air flow of 530 m³/h.

CRUISE CONTROL

Cruise control is fitted to the V6 GX. The controls are on a switch located beneath the steering wheel in a position that allows it to be operated without the driver having to take his hand from the steering wheel.

CAR AUDIO

Camry audio systems offer six speaker (eight in the Estate) hi-fi sound in the V6 GX and four speakers (six in the Estate) in 2.2 GL models. They are all equipped with an anti-theft system, and have RDS tuning and traffic information systems. All Camrys have electric aerials.

The audio system in the V6 features acoustic control tuning and additional cassette tape facilities, including skip and repeat functions.

The 2.2 litre Camry has two 16 cm full-range speakers in the front and two 6 x 9 inch full-range speakers in the back. The V6 has two additional 2.5 cm tweeters. In the Estates, two additional 2.5 cm tweeters are fitted in the rear for a total of six speakers in the 2.2 and eight in the V6.

THE POWER TRAIN

NEW 5S-FE ENGINE

Toyota is the most experienced mass producer of multi-valve engines in the world, (engines with more than two valves per cylinder), having produced more than 11,763,000 as of December 1990 - 80 per cent of all Toyota petrol engines now sold in the world have multi-valve heads.

The 5S-FE engine is a 2.2 litre in-line 4-cylinder twin-cam with four valves per cylinder and electronic fuel injection. It was designed for family car use rather than for high-end performance as has been the case with many 4-valve engines.

The increased displacement boosts the 5S-FE's output to 134 bhp, up from 126 bhp in the previous 3S-FE engine. The engine's twin-cam aluminium head is tuned for fatter, low-to-mid-range torque and superior fuel economy. Although the engine's combustion chambers have been completely re-shaped, they are still a very compact pentroof configuration with centred plugs. The shallow roof sets the valves at a very acute included angle, which is accommodated by driving the exhaust cam from the intake cam with a scissors gear. The cams act directly on the valve stems. The result is a very compact head and a very quick burn. The crankshaft is of forged iron. (Cast iron in the previous 3S-FE).

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The intake ports have been re-designed and the valve lift increased, which further improves low-to-medium torque output. Also, the air cleaner has twice the volume of the previous model, which reduces both intake noise and intake air resistance.

The engine's new stainless steel exhaust manifolds were chosen for their high resistance to heat, which allows the engine to run on lean mixtures at high revs. Thus fuel economy during high-speed cruising is enhanced. Other engineering that helped boost power included re-engineering of the block, crankshaft and pistons.

* Knock Control

The knock control system consists of sensors in the cylinders to send signals to the engine management computer if knocking should occur. The computer commands a slight delay in ignition timing if a knock is sensed, but advances it if there is no knock. The system allows the engine to burn the leanest possible air-fuel mixture for the operating conditions.

* Quiet Operation

Quietness is vital to an executive saloon. There are three major ways in which the 5S-FE engine has been silenced:

- With balance shafts to counteract crankshaft vibration.

Two balance shafts are fitted in housings located at the bottom of the cylinder block. The No 1 shaft is driven at twice the speed of the crankshaft by a drive gear on the No 3 counterweight of the crankshaft. The No 2 balance shaft is driven from the No 1 shaft at the same speed and in the same direction as the crankshaft is rotating.

The balance shafts eliminate secondary inertia in the engine by creating an imbalanced inertial force acting in the opposite direction from that of the engine. This reduces engine noise.

- With hydraulic engine mounts to absorb vibration.

The engine mounts' dynamic damping effect occurs as hydraulic fluid is forced through the orifices in the mounts. They are especially effective at low frequencies and absorb engine vibrations well. A torque rod is also used on one side of the engine.

- With a larger air cleaner.

The air cleaner and resonator unit for 5S-FE engines are twice as large as before: 10.2 litres compared with 5.2 litres previously. It reduces air intake sound and resistance.

* Engine Management

The 5S-FE engine has several electronic control systems, including EFI, ESA, ISC, fuel pump control and EGR cut-off control.

- Electronic Fuel Injection.

The 5S-FE engine's EFI system consists of a D-type air flow sensor and a 2-group type fuel injection system that injects fuel for two cylinders at a time.

- Electronic Spark Advance.

This ESA system adjusts the ignition timing according to commands from the ECU (electronic control unit). Several sensors feed information to the ECU. If the knock sensor indicates the probable occurrence of knocking, the ECU will command the ESA system to retard the timing to suppress knocking.

- Idle Speed Control.

This ISC system uses a rotary solenoid valve to control fast idle and idle speeds. This is important, for instance, if an air conditioning system is operating.

- Fuel pump control.

The engine management ECU also controls the action of the fuel pump to assure the proper supply of fuel at all times.

- EGR Cut-off control.

When the engine is under light load or when the temperatures are low, the EGR system is cut off to increase power.

- Fail-safe and diagnosis.

When a malfunction occurs, the ECU diagnoses and memorises the failure. A test function has been added to the system. If the malfunction is major, the fail-safe system takes over control of engine management functions.

NEW 3VZ-FE ENGINE

The 3VZ-FE is a 3.0 litre V6 with four valves per cylinder and electronic fuel injection. Replacing the previous 2.5 litre 2VZ-FE V6, it offers more power and torque across the entire rpm range. Besides increased displacement, improvements in the 3VZ-FE include: more upright, smaller diameter intake ports for increased efficiency; a 9-balance crankshaft; an electronically-

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controlled hydraulic cooling fan; ACIS (Acoustic Control Induction System) for higher power output across the range; a 2-way exhaust system that reduces back pressure; an air-assisted fuel system that promotes fuel atomization; a sequential multi-point fuel injection system that improves response; an oxygen sensor in each cylinder bank to improve air-fuel ratio control; a knock sensor in each cylinder bank; and a test mode added to the diagnostic system. A steel crankshaft is fitted rather than an iron crank as in the previous 2VZ-FE.

Five systems have been incorporated to boost engine power and torque.

* ACIS

A variable induction valve is placed in the partition of the surge tank to be opened and closed in response to the throttle angle and the engine rpm. Opening the valve increases the length of the surge tank; closing shortens it. This ability to vary the surge tank length helps fatten torque in low-to-mid ranges and increase power in the high rpm ranges.

* An air-assist fuel injection system

The air assist fuel injection system is a Toyota first. The system has an air by-pass to the main injector nozzle. It controls the supplementary intake air flow to the injectors with an ISCV (Idle Speed Control Valve) so that fuel can be more

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efficiently atomized when injected. Thus, when a vacuum is created in the intake manifold, air is fed to the injector, promoting finer fuel misting. The system reduces hydrocarbon emissions, improves fuel economy and stabilises idling.

* A sequential injection system

This system injects fuel into each cylinder separately, once every two revolutions (or at the beginning of each compression stroke). Injection timing and duration are computer controlled to match engine speed and operating conditions, giving outstanding response even at high revolutions.

* A 2-sensor knock-control system

The 2-sensor system makes it possible to effectively control knocking at the upper rev limit and to achieve optimum power output.

* A 2-way exhaust control system

The 2-way exhaust control system changes the exhaust gas passage and decreases back pressure by opening the control valve according to the engine condition. This reduces noise at low engine speeds and decreases back pressure at high engine speed.

THE TRANSAXLES

Both 5-speed manual and 4-speed automatic transmissions are available, depending on choice of models. The electronic control, automatic transaxles have an overdrive ratio fourth gear and lock-up clutch for quiet operation and better fuel economy. Equal-length drive shafts avoid torque steer and promote straight-line stability.

THE CHASSIS

The suspension of the new Camry is basically the same as before, but it has been laid out and tuned especially for these vehicles. The ride has been enhanced by reducing bound/rebound friction and great rigidity enhances stability.

FRONT SUSPENSION

The front suspension is MacPherson strut with lower L-arms. Stability is enhanced by improved anti-roll bars, lower L-arm, and a subframe member bracing the anchor ends of the L-arms.

The negative camber angle enhances lane changing and cornering performance. The steering link is positioned to minimise toe change with the suspension's bound/rebound action. And the ride has been improved with new lower arm bushings that ensure better fore-and-aft compliance.

* Anti-dive geometry

The lower L-arm and new stabiliser bar position improve the anti-dive geometry, bringing the instantaneous centre forward to reduce the tendency of the car to dive when braking.

REAR SUSPENSION

The rear suspension is also MacPherson strut. It consists of dual transverse links that anchor to a subframe, trailing

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rods, shock absorber/coil spring struts, and an anti-roll bar that attaches to the strut housing with ball-jointed anti-roll bar link.

The longer transverse links help ensure stability and the wider span between them improves lateral stability. New ball bushings enhance lateral rigidity and improve overall stability.

THE STEERING

Power steering is standard on all new Camrys. The gearbox is time-proven rack-and-pinion.

THE BRAKES

Braking capacity has been tuned to the size and power of the model. The system is served by a large master cylinder and tandem brake booster. On all Camry models, disc brakes are used throughout with ventilated discs at the front. The split dual-diagonal brake lines ensure braking capacity even if one line happens to leak.

All Camrys now have LSPV (Load Sensing Proportioning Valves) for greater braking efficiency and stable braking under any load condition.

* Anti-lock Braking System (ABS)

ABS is standard for all Camrys. The system judges when wheel lock is about to occur during braking and acts to prevent that from happening. It constantly extrapolates an estimated vehicle speed from the speed of the wheels. This estimated speed and the wheel speed are used to control the brakes.

When the brakes are applied, the tyres start to slip. The system judges when lock will occur from the degree of slip, and reduces hydraulic pressure to prevent wheel-lock. Because the wheels continue to roll, but at a slower speed than the vehicle's velocity, directional stability and steerability - and thus driver control of the vehicle - are maintained.

The Camry's ABS is a 4-sensor, 3-channel system. It consists of speed sensors on all four wheels, an ABS relay unit, an actuator unit and an ECU (Electronic Control Unit). The 3-channel system controls the front wheels independently and the rear wheels simultaneously.

THE BODY

The body of the new Camry was designed and built for:

- Rigidity
- Low noise and vibration
- Less susceptibility to corrosion
- Smooth exterior surfaces

RIGIDITY

Strategically placed reinforcements are used to enhance body rigidity. Specifically, these include reinforcements running from the floor to the roof at the front pillars, floor-to-roof reinforcements at the centre pillar, front side member reinforcements, radiator upper support, front spring support reinforcements, package tray bracket reinforcement, rear side member and sill panel reinforcements, and more. In addition, high-tensile steel sheet is used for the bonnet, the boot, the doors and other places to reduce weight without reducing strength and rigidity.

LOW NOISE AND VIBRATION

Besides the measures taken with the suspension, the body of the new Camry is insulated and sound-proofed with resin-covered asphalt sheets on the floors, dash insulator, and anti-vibration sandwich panelling for the front floor tunnel and the rear wheel housings.

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Rubber bushings on the front and rear subframes also absorb noise and vibration. The front subframe carries three engine mountings, the lower suspension arms and the steering gear. The rear also carries the lower suspension arms.

The cradle subframe that supports engine and transaxle reduces noise, as do the hydraulic engine mounts front and rear (for 5S-FE engines). The flush body surface also cuts wind noise.

ANTI CORROSION MEASURES

Rust-proofing at Toyota can be divided into four measures:

- Anti-corrosion materials.
- Hemming and other measures to protect raw edges and joints.
- Phosphate bath and cathodic full-dip primer.
- Anti-chip undercoating.

These measures are complemented by baked enamel finish coats and resin wing liners.

* Anti-corrosion materials

The new Camry has extensive galvanealed and galvanized sheeting throughout. Specifically, galvanealed sheets are used for bonnet, boot lid, wings, doors, rear quarter panels, and boot interiors. Conventional galvanized sheet is used for all parts of the engine bay, for the wheel housings and other areas.

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* Hemming and Sealants

Hemming adhesives, sealers and wax fillers fight rust by preventing water from getting to bare metal, especially the raw edges of panels.

* Phosphate Bath and Cathodic Primer

The phosphate bath leaves a rust-resistant layer of zinc phosphate on the white body and the cathodic full-dip primer forms another highly corrosion-resistant layer to double the protection.

* Anti-chip Undercoating

Semi-flexible PVC undercoatings have the resilience needed to resist chipping when hit by pebbles and gravel. These coatings are 0.5 mm thick on the underbody and 1.0 mm at the panel joints to protect the lower areas against chipping.

SMOOTH BODY EXTERIOR

The basic wedge shape and pinched front and rear areas are complemented by the flush surface of the body. Windscreen lines, centre pillars, back window lines, quarter pillar joints, centre pillar/window joints and front pillar/window joints are all as flush as possible.

The body...4

Not only does this smooth surface look good, but it also improves aerodynamics. The flush engine undercover panel and wheel well liners improve aerodynamics too.

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Press Information

TOYOTA CAMRY ESTATE

Technical Specifications

DIMENSIONS

Body	Five door estate
Length	4795 mm
Width	1770 mm
Height	1470 mm (2.2)/1495 mm (3.0)
Wheelbase	2620 mm
Track front/rear	1545 mm/1490 mm
Overhang front/rear	970 mm/1205 mm
Ground clearance	130 mm (2.2)/135 mm (V6)

WEIGHTS

Kerbweight	1415 kg (2.2 GL manual)
	1435 kg (2.2 GL auto)
	1565 kg (V6 GX)
Gross vehicle weight	2095 kg (2.2 GL)
	2150 kg (V6 GX)

FUEL TANK CAPACITY 70 litres

BOOT CAPACITY (VDA) 0.533 cubic metres (18.8 cu ft) with rear seat up
0.843 cubic metres with rear seats down

TURNING CIRCLE 10.6 m (2.2 GL)
11.0 m (V6 GX)

TOWING CAPACITY 1500 kg (with brakes)
500 kg (no brakes)

ROOF LOAD 100 kg (V6) with roof rails
70 kg (2.2) with bar rack

Toyota Camry Estate - technical specifications...2

ENGINE

Type	5S-FE (2.2 GL) 4 cylinder 3VZ-FE (V6 GX) 6 cylinder
Valve mechanism etc	4 valves per cylinder, double overhead camshafts. 2.2 GL is a 16 valve twin cam, V6 GX has four cams and 24 valves. 5S-FE has five main bearings; 3VZ-FE has four
Bore and stroke	87 mm x 91 mm (2.2 GL) 87.5 mm x 82 mm (V6 GX)
Capacity	2164 cc (2.2 GL) 2959 cc (V6 GX)
Compression ratio	9.8:1 (2.2 GL) 9.6:1 (V6 GX)
Fuel system	Electronic fuel injection, L-Jetronic 3VZ-FE, D-Jetronic 5S-FE
Fuel type	95 RON unleaded only
Maximum power	134 bhp at 5400 rpm (2.2 GL) 185 bhp at 5400 rpm (V6 GX)
Maximum torque	145 lb ft at 4200 rpm (2.2 GL) 188 lb ft at 4400 rpm (V6 GX)

ELECTRICS

Battery	12 Volt, 80 Amp hr
Alternator	12 Volt, 70 Amps (2.2) 80 Amps (V6)
Starter	1.4 kW
Ignition	Transistorised

TRANSMISSION

Clutch	Single dry plate diaphragm spring hydraulic
Transaxle type	S53 (2.2 GL manual) A140E (2.2 GL auto 4-speed), electronic control A540E (V6 GX auto 4-speed), electronic control

Toyota Camry Estate - technical specifications...3

Ratios	S53	A140E	A540E
1st	3.285	2.810	2.810
2nd	2.041	1.549	1.549
3rd	1.322	1.000	1.000
4th	1.028	0.706	0.734
5th	0.820	-	-
Reverse	3.153	2.296	2.296
Counter gear	-	0.945	1.027
Final drive	3.944	4.176	3.933

SUSPENSION

Front Independent MacPherson struts, coil springs, gas pressurised double action dampers and torsion anti-roll bar

Toe-in 0.0
 Camber -0°34'
 Caster 0°47'
 King pin angle 12°59'
 Turning angle 22°
 Spring rate 25.5 N/mm (V6) 23.5 N/mm (2.2)
 22.5 N/mm (2.2 auto)
 Anti-roll bar 23 mm dia

Rear Independent MacPherson struts, coil springs, gas pressurised double acting dampers and torsion anti-roll bar

Spring rate 22.5-29.5 N/mm non-linear
 Anti-roll bar 17 mm (V6) 16 mm (2.2) dia

STEERING

Power assisted rack and pinion
 Ratio:
 17.4:1 (2.2 GL) - 3 turns lock to lock
 15.9:1 (V6 GX) - 2.7 turns lock to lock

BRAKES

Front Ventilated discs, 275 mm dia
 Rear Solid discs, 288 mm dia

Anti-lock brake systems (ABS) on both models

Parking brake Drum
 Power assistance Tandem 7" x 9" vacuum.
 LSPV proportioning valve

WHEELS AND TYRES

V6 GX 205/65 R15 Dunlops on 15 x 6JJ alloys
 2.2 GL 205/65 R15 Dunlops on 15 x 6JJ steels

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PERFORMANCE

Maximum speed	121 mph (2.2 GL manual)		
	115 mph (2.2 GL auto)		
	130 mph (V6 GX)		
0-60 mph	10.2 secs (2.2 GL manual)		
	12.3 secs (2.2 GL auto)		
	9.2 secs (V6 GX)		
0-400 m	17.5 secs (2.2 GL manual)		
	18.4 secs (2.2 GL auto)		
	17.1 secs (V6 GX)		
Fuel consumption	2.2 GL (man)	2.2 GL (auto)	V6 GX
Urban (litres/100 km)	25.9 mpg (10.9)	23.9 mpg (11.8)	19.6 mpg (14.4)
56 mph (litres/100km)	40.4 mpg (7.0)	41.5 mpg (6.8)	32.5 mpg (8.7)
75 mph (litres/100 km)	30.1 mpg (9.4)	31.0 mpg (9.1)	25.4 mpg (11.1)

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Press Information

TOYOTA CAMRY - SALOONS AND ESTATES

Standard Equipment

	2.2 GL	V6 GX
EXTERIOR		
Electric aerial	◆	◆
Tinted glass and laminated screen	◆	◆
Headlamp washers	-	◆
Twin rear fog lamps	◆	◆
Front and rear mudguards	◆	◆
Colour co-ordinated body parts	◆	◆
Alloy wheels	-	◆
Roof rails (Estates only)	-	◆
 INTERIOR		
Stereo radio (RDS) and cassette	(4 spks)	(6 spks)
Additional speakers in Estates	2	2
Remote fuel flap release	◆	◆
Remote boot release (saloons only)	◆	◆
Electric windows	◆	◆
Electric door mirrors	◆	◆
Tilt and slide electric sunroof (not V6 Estate)	◆	◆
Front seat height adjust	◆	◆
Lumbar support	-	◆
Digital clock	◆	◆
Leather upholstery	-	◆
Leather steering wheel	◆	◆
Air conditioning	-	◆
60/40 split rear seats	◆	◆
Panel lighting rheostat	◆	◆
Headrests front and rear	◆	◆
Front map lights	◆	◆
Inertia reel belts front and rear	◆	◆
Adjustable seatbelt anchors	◆	◆
2 additional rear facing seats (estates only)	◆	◆

MECHANICAL

Cruise Control	-	◆
Anti-lock (ABS) brakes	◆	◆
Speed prop power steering	◆	◆
Tilt adjustable column	◆	◆
Central locking	◆	◆
Headlamp level adjustment	◆	◆
Catalytic converter (3-way)	◆	◆
Spare wheel and tyre (estates only) space saver	◆	◆
Security alarm system (estates only)	◆	◆
Twin rear wash wipe (estates only)	◆	◆