This press pack accompanied the UK introduction of the third generation Camry in September 1991. Changes to the model can be tracked using the Timeline feature on the Camry archive page. Additional assets and information relating to the Camry range may be obtained from the Toyota press office if required.



**Press Information** 

FOR IMMEDIATE RELEASE

September, 1991

THE NEW TOYOTA CAMRY

Quietness, comfort, spaciousness and refinement are among the

outstanding features of the new Toyota Camry which goes on sale

on Wednesday, October 16. Competing strongly in the large

executive saloon class at the top of the Toyota range, the new

Camry has been developed specially for overseas markets.

There are two new Camry models to replace the previous 2.0

litre saloons and estates and the 2.5 V6 engined saloon. A new

aerodynamic body shell is larger than the previous car for more

leg, shoulder and headroom. Dimensions are increased throughout

and the Camry is longer, wider, has a lower ground clearance, but

no increase in height. The boot is bigger too.

Under the bonnet the Camry gives a choice of two new engines

- a 134 bhp 2.2 litre four-cylinder unit and a 185 bhp 3.0 litre

76. Both are fuel injected, computer controlled double overhead

camshaft engines with four valves per cylinder. They have been

developed specially for family car use with plenty of torque

throughout the new range without sacrificing fuel economy. The

2.2 will achieve 127 mph and the V6 134 mph, yet at 56 mph, they

can record 43.5 mpg and 32.8 mpg respectively.

They have also been designed to run as quietly as possible and special measures have been incorporated into both engines - including balance shafts in the 2.2 - to ensure smooth and vibration-free running.

The Camry 2.2 GL will be available with five-speed manual transmission or as a four-speed electronic-controlled automatic. Equipment levels are high with electric windows, mirrors and sunroof, central locking, power steering and a four-speaker RDS radio/cassette system. The manual version is priced at £17,519.89 and the automatic at £18,359.99 including car tax and VAT.

The Camry V6 GX is possibly the smoothest and quietest car in its class and comes with four-speed electronic automatic transmission only. The equipment list is even longer with the addition of leather upholstery and trim, air conditioning, cruise control, a six-speaker audio system and alloy wheels. Price is £22,325.00 also inclusive of car tax and VAT. ABS (anti-lock) brakes are standard on all new Camrys.

Like the rest of the Toyota range, all Camrys are covered by a three-year or 60,000 miles warranty and RAC membership.

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For further information, please contact: Simon Small,

Tel: 0737 768585.



**Press Information** 

FOR IMMEDIATE RELEASE

September, 1991

THE NEW TOYOTA CAMRY

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

Toyota (GB) Ltd. The Quadrangle Redhill Surrey RHI 1PX Telephone: Redhill (0737) 768585 Facsimile: Redhill (0737) 771728 Telex: 946414 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. 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

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

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 |

This gives a total UK volume of 24,901 to the end of 1990.

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.

The new model line-up and price structure is:

## Toyota Camry 2.2 GL manual

£

| Basic   | 13,764.00 |
|---------|-----------|
| Car tax | 1,146.54  |
| VAT     | 2,609.34  |
| Total   | 17,519.89 |

## Toyota Camry 2.2 GL automatic

£

| Basic   | 14,424.00 |
|---------|-----------|
| Car tax | 1,201.52  |
| VAT     | 2,734.47  |
| Total   | 18,359,99 |

## Toyota Camry V6 GX (auto only)

£

| Basic   | 17,539.00 |
|---------|-----------|
| Car tax | 1,461.00  |
| VAT     | 3,325.00  |
| Total   | 22,325.00 |

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For further information, contact: Simon Small, Tel: 0737 768585.

**TOYOTA** 

Press Information

FOR IMMEDIATE RELEASE

September, 1991

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

Toyota (GB) Ltd. The Quadrangle Redhill Surrey RH1 1PX Telephone: Redhill (0737) 768585 Facsimile: Redhill (0737) 771728 Telex: 946414 quality, reliability and customer satisfaction. While striving to achieve these goals, four areas were of supreme importance to Yamada's team.

- Styling they aimed for contemporary styling, both inside and out with the right balance of individual looks and elegance with a hint of sportiness.
- 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 new car 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.

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.

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. 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.

### 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 coordination 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. Aerodynmically 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

Shoulder room: Front - 1442 (+62) mm

Rear - 1425 (+60) mm

Head room: Front - 976 (+6) mm Rear - 943 (+8) mm

The boot of the new larger Camry 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 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.

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 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 m $^3$ /h, up from 213 m $^3$ /h. The heater's air flow is now 420 m $^3$ /h compared with 330 m $^3$ /h before. The V6 GX air conditioner has more compressor capacity, 4600 kcal/h cooling capacity and a maximum air flow of 530 m $^3$ /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 hi-fi sound in the V6 GX and four speakers 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  $\times$  9 inch full-range speakers in the back. The V6 has two additional 25 cm tweeters.

#### 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).

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-

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 multipoint 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

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 stabliser 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

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. For Camrys with V6 engines, for example, the front brakes have 15 inch discs. The system is served by a large master cylinder and tandem brake booster. On both 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. 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 galvanealled and galvanized sheeting throughout. Specifically, galvenealled 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.

## \* 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.

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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For further information, contact: Simon Small,

Tel: 0737 768585.



### TOYOTA CAMRY

## **Press Information**

### TECHNICAL SPECIFICATIONS

#### DIMENSIONS

| Body                | Four door saloon     |
|---------------------|----------------------|
| Length              | 4725 mm              |
| Width               | 1770 mm              |
| Height              | 1400 mm              |
| Wheelbase           | 2620 mm              |
| Track front/rear    | 1545 mm/1500 mm      |
| Overhang front/rear | 970 mm/1135 mm       |
| Ground clearance    | 150 mm               |
| Angle of approach   | 20°                  |
| Angle of departure  | 19°                  |
| Cd                  | 0.31 (2.2) 0.32 (V6) |
|                     |                      |

#### WEIGHTS

| Kerbweight           | 1395 kg (2.2 GL manual)<br>1415 kg (2.2 GL auto)<br>1515 kg (V6 GX) |
|----------------------|---|
| Gross vehicle weight | 1820 kg (2.2 GL)<br>1930 kg (V6 GX)                                 |

FUEL TANK CAPACITY

70 litres

BOOT CAPACITY

0.517 cubic metres (18.3 cu ft) (VDA)

TURNING CIRCLE

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

TOWING CAPACITY

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

### ENGINE

Туре

5S-FE (2.2 GL) 4-cylinder 3VZ-FE (V6 GX) 6-cylinder

Valve mechanism etc

Toyota (GB) Ltd.
The Quadrangle Redhill Surrey RH1 1PX
Telephone: Redhill (0737) 768585
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Telex: 946414

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 @ 5400 rpm (2.2 GL) 185 bhp @ 5400 rpm (V6 GX) Maximum torque 145 lb ft @ 4000 rpm (2.2 GL) 188 lb ft @ 4400 rpm (V6 GX) ELECTRICS 12 Volt, 80 Amp hr 12 Volt, 70 Amps (2.2) 80 Amps (V6) Battery Alternator 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

electronic control

A540E (V6 GX auto 4-speed),

| Rá | atios        | 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 | 200 SAN | _     |
|    | 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

## Toyota Camry technical specifications...3

Toe-in 0.0

Camber -0.53°

Caster 1.25°

King pin angle 12.93°

22° Turning angle

Spring rate 23.5 N/mm (V6) 22.5 N/mm (2.2)

Anti-roll bar 23 mm dia

Independent MacPherson struts, coil Rear

> springs, gas pressurised double acting dampers and torsion anti-

roll bar

Spring rate 20.6 N/mm

Anti-roll bar 16 mm (V6) 15 mm (2.2) dia

STEERING Power assisted rack and pinion

> Ratio: 17.4:1 (2.2 GL), 3.1 turns

lock to lock 2.7 turns 15.9:1 (V6 GX),

lock to lock

BRAKES

Front Ventilated discs, 275 mm dia (V6)

255 mm dia (2.2)

Solid discs, 288 mm dia (V6) Rear

269 mm dia (2.2)

(Anti-lock brake systems (ABS) on both models)

Parking brake Drum

Power assistance Tandem 7" x 9" vacuum.

LSPV proportioning valve

WHEELS & TYRES

205/65 R15 Dunlops on 15 x 6 JJ alloys V6GX

195/70 R14 Dunlops on 14 x 5.5 JJ steels 2.2 GL

PERFORMANCE

Maximum speed 127 mph (2.2 GL manual)

121 mph (2.2 GL auto)

134 mph (V6 GX)

## Toyota Camry technical specifications...4

42.8mpg(6.6)

33.6mpg(8.4)

32.8mpg(8.6)

26.9mpg(10.5)

| 0-60 mph                 | 11.6 secs     | (2.2 GL manual)<br>(2.2 GL auto)            |               |
|--------------------------|---------------|---|---------------|
|                          | 8.8 secs      | (V6 GX)                                     |               |
| 0-400 m                  |               | (2.2 GL manual)<br>(2.2 GL auto)<br>(V6 GX) |               |
| Fuel consumption         | 2.2 GL(man)   | 2.2 GL(auto)                                | V6 GX         |
| Urban<br>(litres/100 km) | 26.6mpg(10.6) | 23.7 mpg (11.9)                             | 19.8mpg(14.3) |

43.5 mpg(6.5)

33.2mpg(8.5)

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For further information, contact Simon Small, Tel: 0737 768585.

56 mph

75 mph

(litres/100 km)

(litres/100 km)

# TOYOTA CAMRY

# Equipment Specification

|                                   | 2.2 GL       | V6 GX        |
|-----------------------------------|--------------|--------------|
| Exterior                          |              |              |
| Electric aerial                   | *            | *            |
| Tinted glass and laminated screen | *            | *            |
| Headlamp washers                  | _            | *            |
| Rear spoiler                      | _            | *            |
| Twin rear fog lamps               | *            | *            |
| Front and rear mudguards          | *            | *            |
| Colour co-ordinated body parts    | *            | *            |
| Interior                          |              |              |
| Stereo radio (RDS) & cassette     | (4 speakers) | (6 speakers) |
| Remote boot & fuel flap releases  | *            | *            |
| Electric windows                  | *            | *            |
| Electric door mirrors             | *            | *            |
| Tilt & slide electric sun-roof    | *            | *            |
| Front seat height adjust          | *            | *            |
| Lumbar support                    | -            | *            |
| Digital clock                     | *            | *            |
| Leather upholstery                | _            | *            |
| Leather steering wheel            | *            | *            |
| Air conditioning                  | _            | *            |
| 60/40 split rear seats            | *            | *            |
| Panel lighting rheostat           | *            | *            |
| Head-rests front & rear           | *            | *            |
| Front map lights                  | *            | *            |
| Inertia reel belts front & rear   | *            | *            |
| Adjustable seatbelt anchors       | *            | *            |
| Mechanical                        |              |              |
| Cruise control                    | _            | *            |
| Anti-lock (ABS) brakes            | *            | *            |
| Speed prop power steering         | *            | *            |
| Tilt adjustable column            | *            | *            |
| Central locking                   | *            | *            |
| Headlamp level adjustment         | *            | *            |
| Catalytic converter (3-way)       | *            | *            |
| Full size spare wheel & tyre      | *            | *            |

<sup>\*</sup> Standard equipment