

INTRODUCTION

The limited-edition Integra Type R Sports Coupe has been developed to maximize the sporty car's dynamic capabilities and further emphasize Acura's belief that driving is its own reward. There were three primary targets during the development process: performance, handling and control, and an exciting driving experience. Engineering teams, which included racing veterans from the Formula One ranks, incorporated the dynamic essence of true race cars while developing the Type R, and thoroughly carried the "driving pleasure" theme through every stage of development. Not surprisingly, a heavy emphasis was placed on the Type R's performance on the racetrack during development, all in an effort to deliver an exciting car with exceptional acceleration, braking and handling capabilities.

CONCEPTS AND GOALS

The Integra Type R Sports Coupe was designed to achieve:

- Quick response and acceleration through its high-revving VTEC engine;
- Outstanding cornering response thanks, in part, to a lower center of gravity and track-tuned suspension to enable linear cornering with minimal understeer;
- Enhanced braking performance with larger-capacity, fade-resistant brakes designed to withstand severe racetrack test conditions;
- Unique styling and exclusive features such as a Type R-exclusive rear wing spoiler, 5-bolt alloy wheels and Type R graphics.

OVERVIEW

The limited production model first joined the Acura Integra line-up in 1997 and was an overnight sensation. Like its fellow Integra models, the Type R features numerous technological innovations that maximize performance and handling, and provide high levels of safety, durability and efficiency. However, it goes a step further by embodying the spirit and technological achievements demonstrated in Formula One racing. Thus, it is clear that engineers placed a heavy emphasis on the performance characteristics of the Type R during development.

Key performance features that differentiate the Type R include:

- 195-horsepower 1.8-liter dual overhead cam 16-valve VTEC inline 4-cylinder engine that is among the highest rated normally aspirated mass-produced engines in terms of horsepower per liter;
- Hand-polished intake and exhaust ports and single-port intake manifold;
- An exhaust system with a larger diameter to allow larger volume flow;
- Overall vehicle weight reduced by 33 lbs. (15 kg);
- Torque-sensitive helical limited slip differential;
- Lower overall vehicle height (by 15 mm) and aerodynamic refinements that result in 30% less lift (Cl) and 1% less drag (Cd);
- Racetrack-calibrated suspension and high-performance tires;
- Larger disk brakes with performance-oriented calipers;
- Refined Anti-Lock Braking System (ABS);
- Reinforced unit body structure.

A number of other features were added to heighten the sporty appeal of the Type R, including:

- Chin spoiler, wing-type rear spoiler, and body-colored side sills;
- Lightweight aluminum alloy wheels;
- Sport-style seats;
- Leather-wrapped steering wheel and aluminum shifter knob;
- Special serial number plate affixed to the center console;
- Carbon fiber-like instrumentation design with amber illumination;
- “Type R” graphics.

OVERVIEW (continued)

In the true spirit of racing, a select number of comfort and convenience features on the Integra Type R have been eliminated in an effort to minimize the vehicle's overall weight. These include items such as a sunroof, vanity mirrors, and cruise control. Other items that have been eliminated for weight considerations include dashboard insulator, transmission mount, drive shaft and shifter dynamic damper, and melt-sheet for the floor stamping.

Key safety features of the Type R include:

- Standard driver's and front passenger's Supplemental Restraint System (SRS) air bags on all models;
- 3-point seat belts;
- Projector beam headlights;
- Front and rear crumple zones;
- Side-impact protection.

Like other 2000 Integra models, the Type R receives new standard features:

- 100,000-mile tune-up intervals;
- A vehicle immobilizer anti-theft system;
- An On-board Vapor Recovery System—one year earlier than required by regulation.

In addition, the Type R has several other changes for 2000:

- Air conditioning is fitted as standard equipment;
- Championship White has been replaced by exterior colors Flamenco Black Pearl and Phoenix Yellow.

OVERVIEW

The Integra Type R features an advanced 1.8-liter, 195-horsepower, dual overhead cam, 16-valve inline 4-cylinder engine equipped with the Variable Valve Timing and Lift Electronic Control (VTEC) system pioneered in the Acura NSX.

Its additional horsepower, which is 25 more than the 170-horsepower Acura Integra GS-R, is the result of key technological achievements such as:

- High-compression, low-friction pistons;
- High-performance camshafts and valve gear;
- Larger throttle body and single-port intake manifold;
- Hand-polished intake and exhaust ports;
- High-volume induction and exhaust system.

The engine also features Programmed Fuel Injection (PGM-FI), a highly rigid crankshaft with eight full balance weights, a crankshaft reinforcing bridge, an oil cooling system and oil jet piston cooling, twin-spring intake and exhaust valves, a highly rigid integrated aluminum die-cast engine stiffener, and a number of other technologies to increase performance while maintaining reliability and durability, along with smooth operation.

To get the most out of the engine's added horsepower, the Type R also features a close-ratio, 5-speed manual transmission and a limited slip differential. The development emphasis was placed on dramatically increasing performance at high rpm. This emphasis resulted in an engine with a significantly different character than the Integra GS-R, further reinforcing the Type R's image of a limited production, ultra-high-performance sports coupe.

Putting out 195 horsepower at 8000 rpm, and 130 lbs-ft of torque at 7300 rpm, the Type R engine is one of the most powerful normally aspirated mass-produced automobile engines per liter ever produced (108 horsepower per liter).

ENGINE BLOCK AND CRANKSHAFT

The Type R utilizes a pressure die cast aluminum alloy block with cast-iron cylinder liners for light weight and maximum rigidity. Its highly rigid crankshaft is made of forged, high-strength steel with eight full balance weights to reduce vibration at high rpm by 20 percent. The journals of the crankshaft also feature a special micro-polished surface finish for reduced friction and increased durability.

SURFACE-ORIENTED CRYSTAL BEARING MATERIAL

The use of a surface-oriented crystal bearing material was pioneered in Formula One racing and has been adapted for use in the Type R engine. Unlike the surface of conventional bearing material, the crystal bearing surface has molecules oriented into a pyramid shape. This surface traps a layer of oil and holds it far better than conventional bearing surfaces, reducing friction and enhancing reliability.

PISTONS AND CONNECTING RODS

Exclusive pistons and connecting rods have been developed for the Type R. The high-pressure die cast piston crown has been reshaped to increase the compression ratio to 10.6:1 and valve pockets deepened to accommodate the increased valve lift and duration of the Type R. The piston skirt is coated with molybdenum to minimize friction and allow it to withstand high-rpm operation, while specially designed oil paths have been machined into the underside of the piston to provide additional lubrication to the piston pin.

Extreme care was taken in the forging and machining of the connecting rods to ensure each engine of a precisely matched set of connecting rods. As in the GS-R, the rods are constructed of special high-strength steel for a rigid yet lightweight component. Extremely accurate machining of the Type R connecting rod minimizes variation between parts. Connecting rod bolt elongation has been strictly controlled for uniform fastening force. This is achieved through manual assembly of each and every connecting rod for the Type R, and the result is a significant reduction of fastening force variance.

The combination of lightweight pistons and connecting rods helps to reduce reciprocating inertia and enhance throttle response significantly.

OIL JET PISTON COOLING

To help ensure long-term durability and reliability, the Type R engine uses an oil jet cooling system. A jet of pressurized engine oil is directed to the underside of the piston to help dissipate the extreme heat generated during sustained high rpm operation. This technology has proven itself in Formula One and other top-level racing engines.

CYLINDER HEAD, VALVES AND CAMSHAFTS

Cylinder head design for the Type R is a double overhead camshaft, four-valves-per-cylinder configuration, which incorporates the exclusive VTEC system. The Type R engine utilizes the latest combustion technology to provide a combination of fuel efficiency and power. Because of the low surface-to-volume area of the chamber, minimal surface area is exposed to the heat of combustion and more heat is retained in the expanding gases, resulting in increased thermal efficiency. And the generous “squish” area around the combustion chamber yields increased gas turbulence for faster flame propagation, and even better efficiency.

Extensive modifications of the cylinder head were undertaken to improve performance. This also involves hand-polishing of the intake and exhaust ports near the valve seat area. In addition to hand polishing the ports to improve flow, special lightweight intake valves are also fitted. These valves feature a thinner shaft to reduce weight and increase flow. The head of the valve is also lightened to further reduce valvetrain weight. These modifications net a 12 percent weight reduction of the intake valves, allowing the engine to rev higher. These lighter intake valves help extend the rpm range of the Type R engine by an additional 200 rpm.

Special high-performance dual intake valve springs with an oval-shaped cross section are utilized to allow the use of high-performance camshafts for increased flow at high rpm. The unique oval shape allows a stronger valve spring to be fitted in the same area as a conventional spring. Conventional dual high-performance valve springs are used on the exhaust valves. Camshafts fitted to the Integra Type R are longer duration with higher lift to help increase engine breathing and top-end horsepower. At high engine speeds, valve lift on the intake side is increased by 0.9 mm, and on the exhaust side by 1.1 mm, compared to the GS-R. The valve timing is extended an additional 10 degrees on the intake side and 8 degrees on the exhaust side.

VARIABLE VALVE TIMING AND LIFT ELECTRONIC CONTROL (VTEC) SYSTEM

The Variable Valve Timing and Lift Electronic Control (VTEC) system, first pioneered in the Acura NSX, works similar performance magic in the Integra Type R. As the performance of the NSX has already amply demonstrated, VTEC is an innovative solution to an age-old automotive engineering problem. It elegantly solves the trade-off between tuning an engine for either high-end horsepower or low-end torque. With VTEC, Acura engineers no longer have to compromise between the two. VTEC-equipped engines can have the best of both.

The VTEC system uses three cam lobes and three corresponding rocker arms for each pair of valves. The VTEC system operates on both the intake and exhaust valves. The two outer cam lobes have a profile that optimizes low-speed torque and response. The middle lobe has a high-lift, longer-duration profile that is designed to optimize high-end horsepower.

The changeover point between low lift and high lift in the Type R is 5700 rpm (compared to 4400 rpm on the GS-R), for excellent midrange torque. This makes the Type R engine responsive under all operating conditions, and especially when going from part-throttle, steady-state cruising to full throttle.

THROTTLE BODY/ INTAKE MANIFOLD/ AIR INTAKE

In the interests of high rpm, high output and weight reduction, the Type R utilizes a large-diameter throttle body and exclusive single-port intake manifold. Compared to the GS-R, the throttle bore has been increased by 2 mm to 62 mm and the intake runners have increased 7 mm in diameter from 35 mm to 42 mm to dramatically increase intake flow, especially at high rpm.

The cast aluminum intake manifold features a large-diameter, single intake runner for each cylinder with a short, direct path to the cylinder head for maximum high-rpm efficiency. The single-port design also results in a 3.2 kg weight savings. Also, the fuel injectors point almost directly toward the center of the intake valves, helping to reduce fuel condensation on the intake port walls and improving driveability and engine response. To ensure a large amount of cool, fresh intake air, the air inlet has been moved from the engine compartment to an area behind the left-front fender.

EXHAUST SYSTEM

A major contributor to the Type R's ability to generate 195 horsepower from only 1.8 liters displacement is its highly efficient exhaust system. The exhaust flow rate has been increased by 30 percent over the Integra GS-R model thanks to a number of improvements. Starting with a large-diameter Tri-Y header system, the individual head pipes gently converge into a tapered collector to provide smooth flow with minimum obstruction. The stainless steel header connects to a free-flowing exhaust system with significantly increased pipe diameters, the addition of a third exhaust chamber, and a performance-oriented muffler with a large NSX-style exhaust tip.

ENGINE OIL COOLER

To maintain optimum engine oil temperature, the Type R features an aluminum oil cooler for maximum heat dissipation and thermal efficiency. The aluminum cooler is mounted on the engine block.

5-SPEED MANUAL TRANSMISSION

The main design goals of the Type R close-ratio transmission were to take full advantage of the additional high-rpm power and provide smooth, seamless shifting.

The close-ratio transmission used in the Type R model features different ratios, bearing design, and clutch than the GS-R. The changes were necessary to handle the higher output of the Type R engine and to extract maximum acceleration and performance from the 195 horsepower engine.

Like other Integra models, the Type R features a short-stroke shift linkage of exceptional rigidity. The system approaches the quality feel and short stroke of the Acura NSX shift linkage system.

For improved throttle response, the Type R utilizes a special lightweight flywheel coupled with a heavy-duty, hydraulically actuated clutch.

The Type R also employs a uniquely integrated aluminum die-cast engine stiffener for improved engine-to-transmission fastening rigidity to cope with additional engine output and high rpm. Vibration is reduced 22% compared to the traditional separate fore and aft fastening systems.

The Type R, like all Integra models, features equal-length halfshafts, which virtually eliminate torque steer.

HELICAL LIMITED-SLIP DIFFERENTIAL

Working in combination with a suspension setting designed to further improve front-wheel grip, the Type R adopts a torque-sensitive helical type limited slip differential for both improved traction and reduced understeer in high-cornering load situations. The helical gear generates repelling force in proportion to driving torque. This repelling force, in turn, pushes the pinion gear toward the differential gear casing, thus limiting the differential effect. Compared to viscous coupling-type limited slip differentials, helical limited slip differentials offer a more responsive, proactive torque transfer. This allows improved traction not only when exiting tight corners, but also when on slippery or uneven (undulated) road surfaces.

100,000 MILE TUNE-UP INTERVAL

The Type R's first scheduled tune-up is required at 100,000 miles; during that time only routine inspections and fluid changes are required. Long-wearing platinum-tipped spark plugs are the principal technical change for 2000 that makes this longevity possible. Careful design and engineering of the VTEC valvetrain allows the 1.8-liter in-line four engine to reliably maintain proper valve tappet clearances without inspection until the scheduled first tune-up.

ON-BOARD VAPOR RECOVERY SYSTEM

An On-board Vapor Recovery System is standard—one year earlier than required by regulation.

OVERVIEW

The Type R continues the enviable Integra tradition of providing a fully independent, 4-wheel double-wishbone suspension for sporty handling. The Type R was developed with all-out performance in mind when it comes to cornering, braking and overall handling, and underwent some of the most rigorous racetrack testing ever conducted for a production automobile. The engineering team designed the Type R suspension to deliver highly responsive handling characteristics and provide the driver with high-quality feedback, excellent traction, high cornering limits, reduced body roll, and minimal understeer.

This was made possible in the Type R by:

- Reducing the ride height of the vehicle by 15 mm to lower the center of gravity;
- Spring/shock combinations that offer a firm ride and precise handling;
- Larger disc brakes with refined ABS modulator;
- Increased body rigidity;
- High-performance tires.

FRONT SUSPENSION

The components of the front suspension are an L-shaped lower control arm, an upper control arm, a coil-over shock absorber, a stabilizer bar and a performance rod. The engineering team also specified the use of an aluminum shock tower bar to complement the 24 mm stabilizer bar that is equipped with ball joints instead of rubber bushings. The lightweight aluminum tower bar ties together the tops of the front damper housings. The performance rod is designed to act as an A-arm cross brace to stiffen the front lower subframe. The tower bar and performance rod are designed to enhance the rigidity of the suspension system to maximize handling and suspension precision.

The front suspension uses coil over, gas-pressurized damper assemblies fitted with the Honda Progressive Valve (HPV) unit for progressive damping action. The spring and damping rates have been greatly increased to improve performance handling. Front spring rate has been increased by 22 percent, with a 115 percent increase in compression damping, and a 70 percent increase in rebound damping. Additionally, the damper mounting bushing stiffness has been increased five-fold.

In order to enhance stability while braking in a straight line or cornering, the L-shaped lower control arm has been equipped with specially tuned compliance bushings. These bushings allow the lower control arm to impart a toe-out condition on the front wheels. Allowing the wheels to toe out while braking in a corner enhances stability and allows the vehicle to track more precisely.

FRONT SUSPENSION (continued)

The engineering team has also tailored the suspension to take the full benefit of negative scrub geometry, especially when braking on a split-friction surface. Under this condition, the suspension tends to maintain greater directional stability by countering the forces that would normally tend to steer the vehicle in the direction of the side with the lower traction coefficient. By balancing these forces, the Type R tends to brake with maximum stability.

REAR SUSPENSION

The rear double-wishbone suspension components consist of upper and lower control arms, a trailing arm, a coil-over shock absorber and a stabilizer bar. The spring on the Type R has been changed from a straight-rate to a progressive-rate spring, increasing force across the entire range. Damping rates for the rear suspension have also been increased with compression damping settings in the progressive-valve unit increasing by 66 percent, and rebound damping going up 31 percent. The diameter of the stabilizer bar has been greatly increased from 13 mm to 22 mm to help reduce body roll. To enhance rear wheel stability, the bearing span within the rear-wheel hub has also been increased by 10 mm.

HIGH-RIGIDITY BRAKE CALIPERS AND ANTI-LOCK BRAKING SYSTEM (ABS)

Like all Integra models, the Type R features 4-wheel disc brakes with ventilated rotors at the front and solid rotors at the rear. For maximum rigidity of the braking system and to provide a short pedal stroke, the front brake calipers are large, stout units that have a higher resistance to flexing and “spread” under severe braking conditions.

The Type R, with its larger brake discs (front: 262 mm to 282 mm; rear: 239 mm to 260 mm) and larger calipers, also uses a refined ABS system, which is 12.3 lbs lighter than the GS-R. This lightweight system functions with minimal pedal kickback during ABS operation in hard braking situations.

TORQUE-SENSING ROTARY VALVE STEERING GEAR

The Type R, like all Integras, features an innovative, torque-sensing rotary valve power-assisted steering gear design that is lighter and more compact than conventional power steering systems. Instead of modulating power assistance to the steering rack in accordance with road speed, this system varies power assist by a combination of engine rpm and the amount of torque generated between the pavement and the tire when the steering wheel is turned. The advantage of this system is that it exercises more precise control over the amount of power assist provided. It also provides more linear steering with regard to lateral loads encountered while cornering.

WHEELS AND TIRES

The Type R is equipped with exclusive Bridgestone Potenza RE010 performance tires, similar to those found on the NSX, for greater cornering force, better response, and excellent road feel. These tires have been specifically developed to work in concert with the Type R's suspension calibrations, to provide excellent traction, stability, controllability and predictable handling behavior.

The Type R's exclusive aluminum wheels have a 5 mm greater offset than the GS-R. The 6.0 JJ x 15 alloy wheels also feature a large, five-bolt lug pattern for increased rigidity.

OVERVIEW

The goals for the Type R structure were to provide a strong, rigid platform to ensure a long, durable service life, create a stable base for the suspension, and to provide carefully designed front and rear crumple zones to minimize cabin intrusion in a collision. The ultimate focus for the Type R was to minimize weight while enhancing the rigidity of the body structure and to optimize the aerodynamic effectiveness of the body.

Key improvements include:

- Improved body rigidity by adding performance rods in the front and rear, and body reinforcements in several key areas;
- Aerodynamic enhancements, such as a new chin spoiler and wing-type rear spoiler, and lower overall vehicle height;
- Overall reduction in vehicle weight.

A large percentage of the vehicle mass is near the center of the vehicle for enhanced transient response and handling. The Type R also has a large greenhouse for maximum visibility, as well as a large cabin that is roomy yet intimate with an enhanced feeling of a sports-oriented coupe.

AERODYNAMICS

The aerodynamic goal for the Integra was to achieve greatly improved high-speed driving performance. The primary focus was to balance the forces that would allow for improved front and rear downforce, low turbulence, minimal wind roar in crucial areas such as the windows, excellent flow-through ventilation, and to provide optimum resistance to crosswinds while maintaining a low drag coefficient. This was achieved through extensive wind-tunnel testing with scale models, mockups and prototype vehicle bodies. It also involved extensive racetrack testing, and the use of the Cray supercomputer. One important detail of the aerodynamic package is the one-piece, integral bumper assembly. This unit not only gives the Integra a clean, modern appearance, but its flowing, one-piece construction eliminates gaps between the bumper and the body that tend to produce turbulence and disrupt laminar airflow over the hood.

To achieve maximum aerodynamic efficiency, the Type R also includes a new chin spoiler and a new wing-type rear spoiler, and the vehicle is 15 mm lower in overall height than the Integra GS-R. These contribute to a 30 percent reduction in the coefficient of lift over the Integra GS-R, and a 1 percent improvement in its drag coefficient.

ANTI-CORROSION MEASURES

To enhance corrosion protection, virtually every panel of the Type R is constructed of double-sided galvanized steel. The only significant panel that does not use galvanized steel is the roof. After assembly, the body in white is treated to an electro-deposition process that bonds a rust-inhibiting primer coating to the metal. Electro-deposition draws this coating into minute crevices, helping to ensure a barrier against rust-producing moisture. A moisture-resistant wax is also injected into hidden body cavities, to help prevent corrosion that might otherwise form from condensation.

BODY RIGIDITY

Rigidity clearly has an impact on a number of critical areas. Any suspension, for instance, no matter how finely calibrated or advanced in design, will be unable to perform properly if the body flexes and bends under loading. Rigidity also contributes significantly to crash protection, and to the build quality perceived in areas like the small gaps between panels and openings.

Developed using the latest computer modeling and Finite Element Analysis techniques, the rigidity of the Type R has been greatly improved in several areas. A new, larger aluminum front tower bar replaces the steel bar on the GS-R, and the addition of performance rods to the rear frame end and rear suspension lower arm add additional strength. Key components that have been reinforced include the rear wheel housing, rear pillar upper garter, rear roof rail upper, rear wheel arch extension, rear lower arm bracket, and rear damper gusset.

INTEGRAL BUMPERS

With its signature Integra four-headlight design, the Type R's fully integrated bumper and lighting accomplishes a number of objectives. In addition to providing a clean, modern and aerodynamic appearance, it reduces the number of components and the weight of the front facias, enhances the anti-corrosion performance of the entire front end, resists minor dents and flying debris better and, in case of a minor collision, helps reduce damage that might otherwise be transmitted to the front fenders.

The choice of polypropylene for front and rear bumper material was made based on its properties of resilience to minor damage and because of the material's inherent recyclability. Due to the unique formulation of pigments and medium, the painted bumper resists the fading that was commonly associated with synthetic plastic bumpers. The front and rear bumpers of the Type R resist damage up to a 5-mph collision.

VISIBILITY

One of the design priorities of the body was to provide the driver with as much visibility as possible. As a result of extensive engineering, which was able to create thin but strong pillars, and a compact engine, which contributes to a low cowl, the Type R offers 298.9 degrees of visibility.

PIN-GUIDE DOOR SASH

The Type R uses a pin-guide sash system for the door glass, like all Integra Coupes. A pin, which is bonded to the rear inside edge of the door glass, slides in a channel designed into the window sash. The pin holds the window captive against the sash and forms a tight seal to enhance the rigidity of the glass and resist the negative air pressure that builds up at the side of the vehicle at high road speeds. The system also allows tighter tolerances between the glass and the molding, and contributes to better aerodynamics and reduced levels of wind noise.

PROJECTOR BEAM HEADLIGHTS

A key element of the Type R's styling is the signature separated four-headlight design. The individual lights have a near-flush look, improving styling and smoothing aerodynamic flow over the front bumper.

For enhanced illumination and a modern look, the engineers specified projector beam lamps for low-beam use. Compared to conventional units, these lamps reach 13 feet farther and illuminate an area 20% greater while the high beams, which use improved halogen lamp technology, reach 125 feet farther and illuminate an area 2.5 times greater.

CRUMPLE ZONES

As mentioned earlier, the Type R provides a high degree of structural rigidity to enhance crash protection. At the front and rear, the Type R has been designed with deformable crumple zones. These are designed to deform in a controlled manner, absorb the impact energy and help prevent deformation of the passenger compartment.

DUAL AIR BAG SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

A driver and front passenger air bag Supplemental Restraint System (SRS) is standard equipment. The driver's air bag is located in the steering wheel hub, while the passenger's air bag is located on top of the dash. Both air bags are triggered simultaneously by means of three impact sensors located in the passenger compartment. To ensure maximum reliability, the sensors use gold-plated electrical connectors. As in all Acura automobiles, the front passenger air bag is designed to deploy upward along the windshield and then back toward the occupant. This provides a large cushion to help protect the front passenger.

THREE-POINT SEAT BELTS

The dual front air bags are designed to work in conjunction with the 3-point seat belts. For easy access, the front buckles are attached to the driver's and front passenger's seats.

SIDE-IMPACT PROTECTION

To help minimize injury to the occupant in a side-impact collision, the Integra features door intrusion beams as well as energy-absorbing pads in the doors.

For additional protection, there are polypropylene pads located at hip level on both front doors. These pads substantially reduce the energy transmitted to occupants in the event of an accident.

SECURITY/IMMOBILIZER SYSTEM

A special electronically coded key prevents the car from being started, even if a mechanical duplicate of the proper key shape is used. A transponder built into the key signals the immobilizer control unit that the key is genuine. If the car is hot-wired, or an unauthorized key is used, it simply will not start. This system is a substantial deterrent to theft.

OVERVIEW

Since its original introduction, the Integra has always been a driver's car. Every element of the vehicle, from the engine to the design and location of major and minor function controls, has been tailored specifically to make the driving experience safe, efficient and enjoyable. The interior architecture, seats and controls, and the spatial relationship between the driver and the controls of the Integra, have all been tailored to keep driver and passengers comfortable, relaxed and keenly aware of the environment around the vehicle.

INTERIOR

The cabin space has been designed to divide the cabin longitudinally, providing the driver and front-seat passenger with a discrete space separated by the center console. The interior space has been created like that of a sports car. It is simple, attractive, ergonomically designed and provides ease of operation. The dash sweeps around the driver and front passenger and the cabin provides exceptional space and comfort.

The Integra Type R features a leather-wrapped steering wheel and an aluminum shifter knob as standard equipment for increased comfort and feel.

SEATING

The front seats feature fore/aft and rake adjustment, in addition to a driver's seat lumbar adjustment for proper back support. The deeply bolstered seat has three different densities of foam in its construction to help provide proper anatomical support for the driver's comfort, even after many hours behind the wheel. The Type R's exclusive upholstery scheme offers a racing-oriented feel and high traction with the center portion working to hold the driver in place while providing excellent breathability.

The rear seats are designed to keep the occupants at a comfortable position with regard to back rake and angle of the bottom cushion. The rear seats are equipped with two 3-point seat belts.

INSTRUMENT PANEL

In order to enhance readability and allow the driver to absorb vital information quickly, the Type R features a combination meter with analog instrumentation on an exclusive carbon fiber-like texture with amber illumination. The large, white-on-black instruments are recessed in a binnacle that helps block out glare.

The instrument panel includes a speedometer, tachometer and gauges for fuel and engine temperature. Indicator lights are also provided for oil pressure, battery-charging condition, high beams, brake status, SRS diagnostic check, door-ajar indicator, seat belt indicator, check engine, ABS status check and low-fuel indicator. The panel also features a maintenance reminder, which tells the driver when scheduled maintenance is due.

STANDARD AIR CONDITIONING

In response to customer demand, a compact and efficient air conditioning system is now standard equipment on the 2000 Type R. This system is equipped with a lightweight aluminum condenser core which also helps enhance corrosion resistance, and the system is charged with the environmentally friendlier, non-CFC refrigerant R134a.

AUDIO SYSTEM

Like all Integras, the Type R features an AM/FM stereo/CD sound system with six speakers designed to provide a high level of fidelity and acoustic clarity. It features a pair of 1.3-inch tweeters and 6-inch coaxial front speakers mounted in the front doors, and a pair of 6-inch rear speakers.

ENVIRONMENTAL MEASURES

In an effort to address environmental concerns, all Integras feature a number of components that are recycled or can be recycled at the end of the vehicle's service life. The bumpers, for instance, are made of recyclable material and can be recycled if damaged. All the plastic components that can be recycled are labeled as such and can be reconstituted into usable products when the vehicle is dismantled.