

Chrysler Pacifica Designed, Defined with Safety in Mind

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Early in vehicle development, the all-new 2004 Chrysler Pacifica was assigned the internal code, "The Protector."

"The Protector' is really about the driver and his or her responsibility for getting everybody home safely," said Mike Donoughe, Vice President, Family Vehicle Product Team. "Chrysler Pacifica provides the tools the driver needs to fulfill that role. The first-class seating position, cockpit-style controls, all-wheel-drive and sport-sedan handling help the driver avoid accidents. If a crash does occur, safety systems such as the three-row side curtain air bags help keep occupants safe."

"We set stringent internal safety targets right from the beginning of development and carried them all the way through production," Donoughe added.

"Chrysler Pacifica is one of world's first vehicles to offer a three-row side curtain air bag that will be standard equipment on the vehicle which goes on sale in the spring of 2003. The ceiling-mounted side curtain air bag deploys downward and provides full-side window coverage. The air bag was tested to the voluntary standards set by the industry's Side Air Bag Technical Working Group. In addition, Chrysler Group engineers also used the "pole test," which mimics accidents such as hitting a telephone pole or tree, to evaluate the side air bag sensing system. These types of accidents may be severe because the crash forces are concentrated in a relatively small area of the vehicle."

"Chrysler Pacifica meets Chrysler engineers' strict criteria for handling and stability. The unique sports tourer package is designed with a wide track for optimal handling and stability. Although the Chrysler Pacifica is taller than most passenger cars, its suspension, steering and ride are calibrated to achieve sport sedan cornering and handling qualities. Additionally, knowledge was shared across the DaimlerChrysler family to ensure that the Chrysler Pacifica's rear suspension incorporates "best practices" in technology and design."

"Chrysler Pacifica does not share components, but it does share a common rear suspension design architecture with the Mercedes-Benz E-Class," Donoughe said. "Not only did we benefit from adopting the suspension design, but Chrysler Pacifica also benefited from undergoing development testing in the DaimlerChrysler Driving Simulator in Berlin."

"Mercedes was the first automaker to adapt aerospace simulation technology for automotive development. The driving simulator enables engineers to drive a car when it exists only as a collection of computer data. Consequently, engineers are able to test the engine, transmission, suspension and brakes before the first prototype is built. This technology also evaluates traction control and center of gravity to optimize the vehicle's handling performance."

Chrysler Pacifica's advanced restraint system encompasses the seat belts, air bags and sensors to optimize occupant protection in the event of a crash. In addition to the side curtain air bag, Chrysler Pacifica also provides the first Chrysler Group inflatable knee blocker. Located just below the steering column, the knee blocker helps to reduce potential leg injuries in a crash. It also aids in appropriately positioning the driver to get the full safety benefit of the total restraint system.

Enhanced multi-stage driver and passenger air bags deploy at various levels based on the severity of the crash. Two charges in the air bag module are triggered separately. A minor impact will trigger a low-power deployment while a severe impact will deploy a more high-powered discharge in order to optimize occupant protection. The sophisticated driver air bag works in conjunction with the energy-absorbing steering wheel, patented steering column and inflatable knee blocker to provide supplemental restraints in frontal or near-frontal impacts.

Seat belts are the first line of defense against injury in a crash. Chrysler Pacifica is equipped with front seat belt pretensioners and constant force retractors. Both are located within the seat belt retractor system and activated simultaneously with air bag deployment. Pretensioners tighten the seat belt to keep the occupant in place while

constant force retractors minimize the load to reduce upper body injuries from the excessive force of the seat belt when it presses against the body.

"Loaded with safety and security features, Chrysler Pacifica was designed to give drivers and other occupants peace of mind," said Donoughe. "All drivers want to safeguard their families on the road and Chrysler Pacifica assists in that mission."

Following are safety technology and features in alphabetical order for the all-new 2004 Chrysler Pacifica:

- **All-wheel-drive:** Combines front-wheel and rear-wheel-drive by transferring engine power to all four wheels. It provides the pulling power of front-wheel-drive and the pushing power of rear-wheel-drive for superior traction, control and acceleration.
- **Body Structure:** Crush beads and stiffeners engineered into the vehicle body help absorb the energy, while preserving the integrity of the vehicle compartment. These reinforcements provide additional protection in an offset-type impact.
- **Child Seat Anchor System:** Lower Anchors and Tethers for Children (LATCH) eases installation of compatible aftermarket child seats.
- **Constant Force Retractors (CFR):** Seat belts include a mechanical device designed to distribute the force of a seat belt according to the load or force exerted on it. CFRs are engineered to force-limit the belt system, and gradually release seat belt webbing in a controlled manner during a severe crash.
- **Enhanced Accident Response System (EARS):** Makes it easier for emergency personnel to identify the vehicle and reach the occupant as system turns on the interior lighting and unlocks the doors after air bag deployment.
- **Exclusive Energy-Absorbing Steering Column:** A patent-pending steering column designed with collapsible straps absorbs more energy, potentially reducing chest injuries in a collision.
- **Front Crush Sensors:** Two sensors located below the headlamps measure the severity of the impact and relay crash information to safety systems in the occupant compartment.
- **Inflatable Knee Blocker (driver side only):** Pacifica is the first Chrysler Group vehicle to offer this feature. The knee blocker inflates in conjunction with air bag deployment. It potentially increases leg protection in an impact and helps to position the driver relative to the air bag.
- **Multi-stage Air Bags:** Multi-stage air bags deploy at three different rates depending on the severity of a crash. In low-severity collisions, the air bag deploys with less force, and the force is increased during severe collisions.
- **Pretensioners:** During a collision, seat belt pretensioners electronically sense a severe crash and immediately remove slack from the seat belts which reduces the forward movement of the occupant's head and torso.
- **Side Curtain Air Bags:** Chrysler Pacifica is one of the first vehicles to offer side curtain air bags that provide full-length coverage for all three rows of seats. The side curtain extends protection to all outboard passengers. Both side curtain air bags have their own impact sensor in order to trigger the air bag on the side where the impact occurs.
- **Three-point Lap/Shoulder Belt:** All six seating positions feature a three-point restraint system, which maximizes the effectiveness of the seat belt in certain collisions.
- **Tire Pressure Monitoring System:** The advanced system monitors the pressure inside each tire and alerts the driver to improper tire pressure conditions.

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