Imagine a portrait of pure roadster: It reveals itself to you like a subject’s innermost character; no curve of its profile is incidental. What has been laid bare for viewing, put forth for contemplation, is a redefinition of rear-powered euphoria—a quickening flush against air, an electrifying rasp, a revelation unfurled in a flickering blur. From the moment you set eyes on it, something is awakened in you. A yearning you didn’t know you had. And should you finally be introduced, face to face, it can be answered.

PONTIAC SOLSTICE

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From the moment the Solstice concept came to be, every line captured an outpouring of roadster essence and raw desire. The directive that followed was equally powerful and pure: Build the concept car. Four words that hurtled Solstice from auto show darling to production model in a scant 27 months, within millimeters of its original dimensions, and faithful to its celebrated core.
Solstice’s nose suggests a decisiveness, a carefully
drafted compound focus on an unflinching
gaze. No cloud impinges on white sheets of metal
underneath. The lamps and hexagonal grille
set flush within its taut skin. The tires charting its
outermost edges. The devilishly low-slung
stance. The indulgent brow of its hood. And all
boldly derived from the gentlest of curves.
UNBLINKING

Staring unabashedly, Solstice’s expressive halogen headlamps are integrated into the reverse-hinged clamshell hood (an unlatched view is on Plate 10). Side marker lamps are literally sculpted into the lip of its wheel wells; its rear taillamps house specially designed reflectors, simplifying any notion of added marker lenses and bulbs. All told, its lamps are yet another provocative affirmation of a true roadster, where a purposeful less is decidedly more.
Weatherproofed and stitched with a headliner and rear windshield glass, Solstice’s premium Haartz® canvas roof serves as a centerpiece in the relationship of driver to roadster—setting in motion the tactile, almost ritualized interaction with a manually operated soft top. Just a press of a button within the key fob or glove box initiates the process; a pop of a latch, and the roof effortlessly folds away into the deck lid without a trace. Top stowed, Solstice’s high belt-line and rear aero fairings naturally curb wind buffeting and turbulence (consider the windscreen accessory a worthy aftermarket personalization, but hardly a necessity). And when inclement weather rolls in, the roof’s closing promises a ceremony all its own.
In the past, the complex undulations of Solstice’s concept car were the exclusive province of small batch, hand-hammered exotics; no production process could flawlessly mimic them. Their replication demanded the ingenuity of hydroforming.

Where traditional stamping presses metal between a positive and negative die, hydroforming employs a single die and an enclosed water chamber. Water pressure evenly distributes force across the steel sheet, faithfully coaxing Solstice’s intricate, arresting curves, the sort capable of creating a ripple effect across an entire industry.
Inspired by the motorcycle, Solstice’s hooded gauges curb reflection in a ride just as open to the stars. The oversized analog readouts telegraph information at a glance, for the spirited driver or motorcyclist, such immediacy is crucial. Yet hardly just an aesthetic nod, a motorcycle’s connection to the road also became a powerful metaphor in the way Solstice should behave. That oneness with machine, the same intuitiveness and linear control were unfailing pursuits, each guiding the engineering of the sensation behind its wheel.
The intent was for Solstice to seem instantly familiar behind the wheel, second nature almost, a carefully engineered extension of one’s self. Beckoning the hand with its ideal placement, Solstice’s gearshift ushers its custom-tailored Aisin® 5-speed manual gearbox through short, precise throws. Calibrated for enthusiasts, its stock feel is surprisingly effortless for even a novice to master. Across the gears, ratios provide just the right rpm dip between shifts during maneuvers, allowing for swift acceleration.

Careful attention was also paid to pedal placement: Throttle and brake are set to precisely the proper height and distance to allow enthusiasts the enjoyment of heel-toe driving. This leaves the clutch noticeably untouched (an arrangement thoughtfully tuned for the prevailing whims of a Sunday driver). Still, for those who would prefer to delegate a gear shift’s responsibilities, Solstice’s equally stirring optional 5-speed 5L40E electronically controlled automatic transmission* is a willing proxy.

The highly refined power rack-and-pinion steering ratio is 16.4:1—in essence, just 2.7 turns lock-to-lock. Its painstaking tuning transforms steering wheel movement into linear response in concert with the wheels. The result is a direct, connected connection between driver and road, one communicating a distinct on-center feel, superb driver feedback, and a delicious predictability behind the wheel.

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*Available early 2006.

Simplified into a nearly instinctual arrangement of controls, its standard six-speaker sound system can be outfitted with a premium 225-watt Monsoon option featuring a subwoofer tucked behind the passenger seat and its sternum-thump of concert-quality bass tones. The streamlined, bow-tie configuration also offers an optional six-disc in-dash CD changer, no adapter required.
A study in contrasts, Ebony cloth [a] offsets a matte Black bolster against a textured seat [b]. Light real leather appointed now to above the beltline in Ebony [e], or taking a modern turn on the two-tone center stack in Steel [c] and Sand [d]. This graphic two-toned theme serves not only as a seating design cue, but becomes a language repeated on the doors and instrument panel, an enduring collection of dark against light.
Roadster staple, Solstice’s highly bolstered bucket seats supply much-needed lateral support, cradling occupants in place during performance maneuvers. These contoured buckets also provide a welcome ease of entry and exit—generally, not a roadster staple.

Set within the passenger cushion is a highly sophisticated sensing system, gathering information on an occupant’s weight and size to determine whether the dual-stage air should deploy at full or low capacity—if at all—in order to provide the best protection. Load-limiters in the seatbelt system further diminish the peak force acting against the chest wall, and pretensioners show far greater manners in taking up slack. And well ahead of current U.S. standards, seatbacks also have higher head restraints, gracefully echoing the sweep of the aerofencing.
Once upon a time, the raising of a roadster's bonnet could elicit a gasp or with a fanfare in the days of the real roadster, with its reverse-hinged panel that made such a droll sound. Peering under the hood also displays an appreciation toward reliability valued in tradition, of performance, as in its engine's zero-management camshaft chain-drive system or coil-on-plug ignition.

Furthermore, platinum-tipped spark plugs can fire up to 100,000 miles before replacement is suggested; coolant is designed to last up to five years or 150,000 miles, whichever arrives first. And, depending on driving conditions, its automatic transmission fluid could easily endure for the life of the vehicle. All of which should prompt a few gasps as well.

*Maintenance needs vary with different uses and driving conditions. See the Owner's Manual for more information.
Prowess without a perplexing learning curve pays the definition of Solstice’s engine. Its all-aluminum, 177-horsepower, longitudinally mounted 2.4 liter Ecotec conveys an assured politeness at low speeds, and, at high revs, another realm of potency entirely. Variable Valve Timing (VVT) alters the typically fixed relationship of intake and exhaust camshafts to dispatch 90 percent of its peak torque throughout an enthusiast’s range — from 2200 to 6200 rpm.

Harnessing airflow with four valves per cylinder — and upping the size of those valves — means better engine breathing and higher output across the spectrum. Electronic Throttle Control (ETC) replaces throttle cable with electronics and algorithms for remarkably precise engine—and vehicle—response. Rpm-based versus speed-based, it tailors throttle behavior to be more deliberate or unfettered as input demands.

Advanced engineering engages the oil system as a cooling mechanism: Pistons are bathed by a continuous spray from oil jets, increasing engine stamina by this targeted reduction of operating temperature. One final colorful attribute? Furnishing 0-60 in a stirring 7.2 seconds.
FIVE SPOKES, INFINITE FACETS

are well suited—some would say poised—for autocross or competitive grassroots racing (certainly, .90g lateral grip* on the skidpad is another decisive draw). Available as a performance option, the limited-slip differential typically divides power equally to Solstice’s rear wheels. Yet on compromised surfaces like snow, gravel, or ice, it sends power to the one with greatest traction. Even the sheer act of slowing down is capably overseen: Power-assisted, dual-diagonal ventilated front and solid rear disc brakes translate dynamic driver feedback with fade resistance, a linear feel, and minimal pedal travel. The upshot? Solstice’s truly impressive stopping distance: * from 60 mph to idle in a mere 116.5 feet.

Harnessing the inherent lightness of its standard five-spoke 18-inch aluminum wheels (shared upper/lower control arms and knuckles of forged and cast aluminum, respectively), Solstice’s unsprung weight is downsized, which helps to keep its wheels firmly planted and provide a tangible sense of control.

Tucked tightly into its arches—literally flush with these—its compound and built-up edges of its standard low-profile tires bound to habitat superior all-season performance on the most challenging of surfaces.

But a tire is only as good as what it’s attached to, and predictably, during performance maneuvers, precision-formed Bilstein® coil-over monotube shocks help maintain Solstice’s full damping characteristics and assured wheel control. Such legendary coil-overs allow the four-wheel fully independent Short/Long Arm (SLA) modified double-wishbone suspension to devote undivided attention to optimizing ride quality, handling, and steering all while isolating road noise. Even its production settings...

*GM testing on closed course.
ANATOMY OF A ROADSTER

Shaped for consistent thickness and no formative welds, Solstice’s hydroformed steel frame rails define the length of its architecture, laying the groundwork for superb stiffness. Fused to these is an enclosed center tunnel, which provides staunch resistance to torsional forces. But then, borrowing assembly processes of luxury supercars, modular components like its windshield header and dash assembly, rear bulkhead, and racing-inspired fiberglass-reinforced composite trunk tub are bonded in place with advanced structural adhesives. (Such architecture allows Solstice body panels to be as expressive as possible, too, because they needn’t serve a dual purpose of supplying rigidity.)

The result? An exceptional strength-to-weight ratio, outstanding bending and torsional rigidity, and what can only be characterized as an unforgettable experience behind a wheel.
Well before assembly, Solstice’s body panels are nested in their eventual configuration over a “birdcage” buck to receive one of seven paint colors. This process ensures consistency in finish and coloration, even in temperamental shades of metallic. Once affixed to roadster, silver-coated accents of Solstice’s underlying architecture are designed to peek through at the windshield header and rear tulip panel creating an instant foil to any color—except, of course, Cool, a silver against which it seamlessly melds (its color chip is at the end of this book).
QUIET REVELATION

Not so distant a memory, exercising a performance roadster demanded suitable earplugs and, with its still-deafening roar, a complete cessation of dialogue with a passenger. Thankfully, with its soft top secured, Solstice’s cabin tone hovers at a level comparable to many of its fixed-roof competitors. The secret behind this—after a world-class roadster structure—was painstaking assessment of noise, vibration, and harshness.

Strategically placed acoustic baffles and barriers around gaps, adding up to high-frequency vibrations soaking up sound and making smooth deviations, and sound and dust was firmly mineral. All engine vibrations were isolated by custom-molding attachments. The driveshaft stands not only foam-filled, but secured with a special joint to subvert vibrations to the cockpit; the rear differential is mounted with specially fitted bushings. The 5-millimeter door glass is, for noise, a final blow, heightening the Solstice experience (and communication) throughout.
The honeycomb of Solstice’s grille appears again in forms. A 2.5-inch high-flow stainless steel exhaust and rear fascia. The visual gesture is as much an allusion to sound, fore and aft: the engine and exhaust note were meticulously studied in acoustic labs, then tuned to weave the various tones of the mechanics into one. The outcome is a voice that spells precision, and technology, across the rpm range, rounding out the roadster’s lush visceral experience. And begging one question to anybody in earshot: What kind of machine is breathing here?
THAT MAGNETISM

Within its balanced, expressive design also lie performance’s affirmation. Solstice tips the scales near 50/50 front-to-rear weight distribution, a true performance standard. Its light weight and broad stance also create the perfect platform to express this sedan’s core: its mastery of precise, adrenalin pumping, fast-pulse-elevated sportscar prowess. In automotive parlance, this is an ideal center of gravity — in technical terms, a low polar moment of inertia. To decipher: A roadster that exhibits overall maneuverability, utter responsiveness in handling and steering.

Even test drives of unfinished prototypes allude to this scintillating Solstice quality. As AUTOMOBILE recounted, “The chassis is a peach...At Goodwood, it was really impressive, turning into corners with minimal understeer and roll, staying flat and neutral all the way through!” And MOTOR TREND lauded Solstice’s “taut, almost hydraulic sense on center.”

Your assessment awaits.
To capture the colors that once made national symbols out of pigments—varying the competitive proportions of an oil-country—painted red, blue, and buttery green were necessities; much time was spent in the color lab finding the spot-on hues of each. A nod to competitive aspirations of an entire country—a perfect red, blue, and hunter green were to cap the colors that once made national symbols out of pigments—carrying the product for any reason, or to start and end model years.

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All body and sheet metal components are warranted for six years/100,000 miles, whichever comes first:

- No charge for most warranty repairs
- Cosmetic corrosion resulting from defects
- Towing to your nearest Pontiac dealership
- Tires
- The complete vehicle

Covered for six years/100,000 miles, whichever comes first:

- Rust-through corrosion
- Cosmetic corrosion resulting from defects
- Towing to your nearest Pontiac dealership
- Tires
- The complete vehicle

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