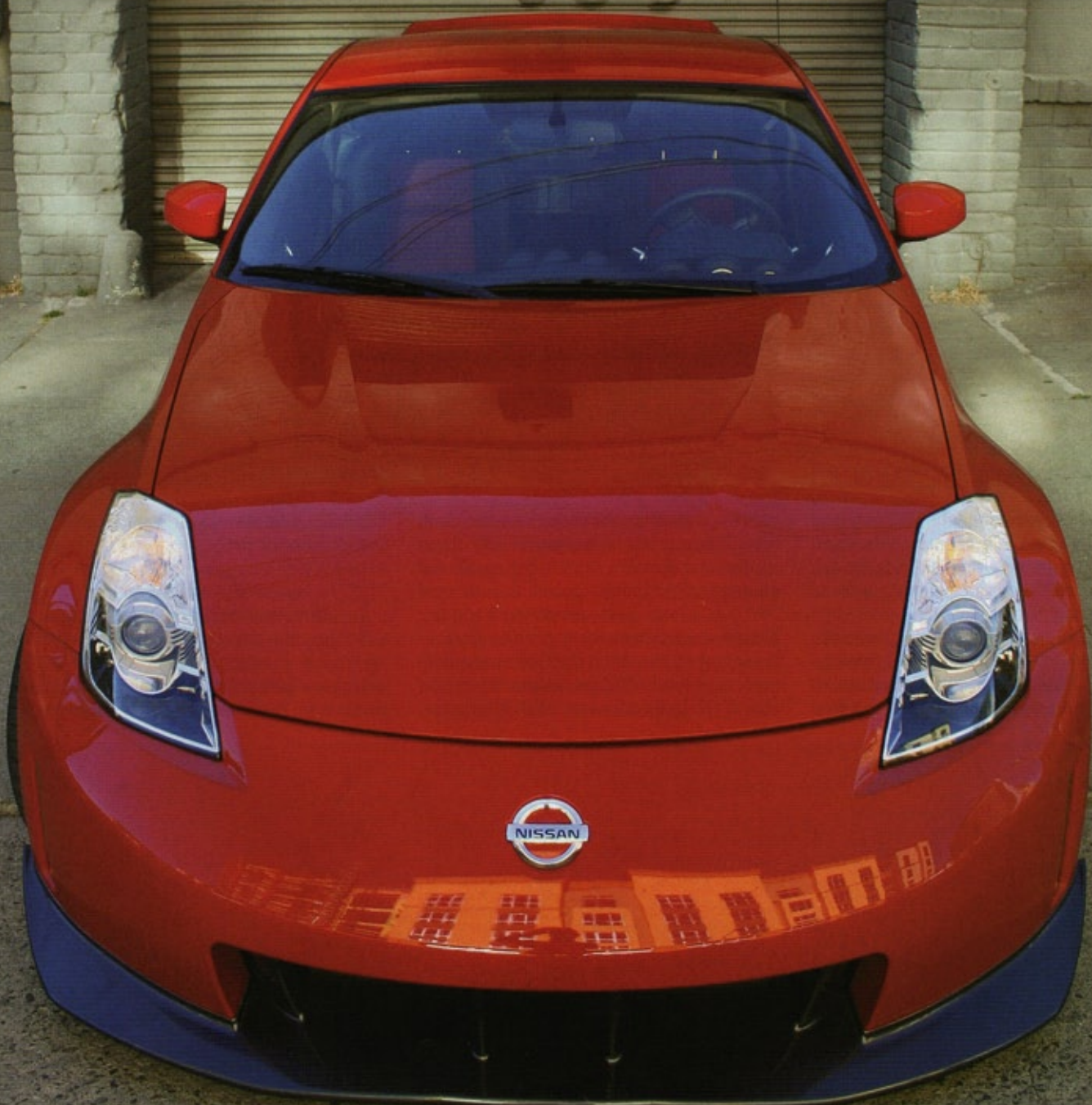


# FACTORY TUNED

Nissan has offered Nismo performance upgrades for its 350Z for several years, but these parts were dealer-installed. The 2007 Nismo 350Z, on the other hand, comes straight off the assembly line.

by JEFF GLENN   photography by THE AUTHOR and DITO MILIAN





Nissan Z-car fans won't need to break out their decoder rings to identify detail changes to the latest performance version of the 350Z. Cruising downtown Oakland, California proved that even the sports-car novice could tell something was up with the new limited-edition Nismo 350Z, at least judging by the head turns, gentle nods and waves from onlookers. With a body kit inspired by Nissan's Super GT race car, it's hard to miss.

The Nismo Z looks more ready to rumble than any 350 to date. The 2007 hood bulge—common to all '07 Zs—blends well with a more sloping front bumper that extends aggressively toward the ground. A race-worthy front splitter, which looks like it might double as a small critter guillotine, juts forward from the bottom; the raised center section and wedge profiling at the corners makes it look especially trick. A rocker panel extension rides along the sides, the rear deck wears a wing and the extended rear bumper houses a large diffuser. A pair of Fast and Furious-spec exhaust tips cap things off.

The aero kit significantly reduces the coefficient of lift without increasing the coefficient of drag; the Nismo 350Z shares a CD of 0.29 with the standard and Grand Touring models. The front splitter is designed to direct most of the air that would otherwise flow under the car to the sides, while the rear diffuser pulls out what gets through. Fortunately, the new panels add no appreciable weight; the 3,352-pound Nismo model tips the scales within 10 pounds of the base car, and 50 pounds lighter than the Grand Touring version.

The car sits atop Rays 9 x 18 and 10 x 19-inch forged alloy wheels with 245/40R18 Bridgestone RE050 fronts and 265/35R19 rears. The same rubber and wheels come on the Grand Touring model, but the Nismo's alloys are painted gunmetal gray and sport Nismo badging.

There are a couple of details on the inside that differentiate the Nismo model from the rest of the 350Z lineup. There's red stitching on the steering wheel and on the door



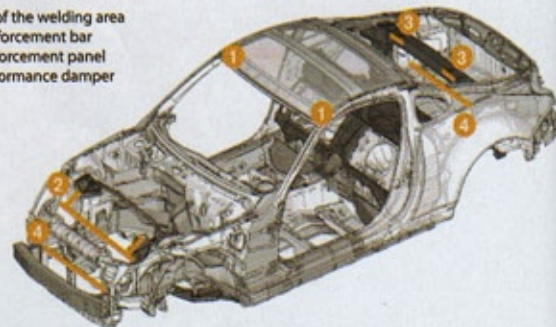
panels, as well as red inserts on the cloth seats. More subtle is the special gray-faced tachometer. Finally, there's the numbered plaque just behind the gearshift; ours read "00," as it was a pre-production model. Nissan was hesitant about giving a production number, but said it shouldn't exceed 10 percent of total 350Z production for model year 2007. It did tell us the MSRP, however:

\$38,070. Add \$80 if you want the Nismo-branded floor mats.

The last 350Z we drove on track was a 2006 Anniversary Edition. While fine for most street situations, this model's upgraded Brembo brakes and 18-inch wheel/tire package were challenged when pushed to the limit around Thunderhill



1. Expansion of the welding area
2. Added reinforcement bar
3. Added reinforcement panel
4. Added performance damper







Raceway Park. The car seemed particularly hampered by its narrow front tires (225/45R18), which resulted in excessive understeer, and the brakes faded.

We returned to Thunderhill during a Hooked On Driving track-day event to see if Nissan had addressed these shortcomings with the Nismo model. Within a lap, it was apparent this Z turns in better and under-

steers significantly less. The Nismo still works the fronts hard, and can be coaxed into a push, but unlike its predecessor, it stays on the intended arc and doesn't stop turning when the fronts hit the limit.

Twenty millimeters of additional tire width up front doesn't sound like enough to transform a plowing front end and, sure enough, there's more to the story. Welds

added to the unibody around the upper rear window area and elsewhere have increased the Nismo Z's overall torsional stiffness between 3 and 5 percent. On top of that, Nismo engineers focused on the front section of frame around the radiator core and engine, adding gussets, welds and a reinforcement brace that boost the front section's torsional stiffness by 40 percent vertically and 60 per-



Clockwise from left: Damper quells unibody resonance; Nissan really sweated the details when it came to the Nismo 350Z's structure; aggressive front splitter fights lift; no mere dealer-installed applique; secondary engine bay brace stiffens up front end, while engine is same 306-hp 3.5-liter V6 found in the rest of the 350Z lineup; rear wing works in conjunction with diffuser to reduce lift, but exhaust tips are just eye candy.



cent horizontally. Flex was addressed at the A-pillars with more MIG welds, and across the boxed rear strut brace with an added panel welded into the corners of the structure.

The stiffer unibody alone makes for sharper turn-in and a more communicative platform, but the Nismo Z was also treated to suspension enhancements. The spring rates were increased by 35 percent and the shock valving was adjusted accordingly. The front anti-roll bar wasn't changed, but the rear was beefed up by 37 percent.

As things went back and forth in development between unibody and suspension tuning, Yamaha body dampers were added across the front radiator support and rear

chassis area (in front of the spare tire between the rear shock towers) to absorb body vibrations and control the resonance. Basically, they prevent the tweaked Nismo chassis from vibrating like a tuning fork. These trick shocks are related to the (now banned) mass damper system Yamaha developed for Honda's F1 chassis.

**T**he Nismo 350Z is powered by the latest, higher revving version of the VQ-series V6, which is shared across the model range. The engine takes advantage of new air intakes and throttle bodies for better breathing at high rpm. In addition, the compression ratio was bumped from 10.3:1

to 10.6:1 and the redline raised from 7,000 to 7,500 rpm. Larger crankshaft pins and journals were fitted to keep vital engine parts inside the motor at such speeds.

Continuously variable valve control on the intake side and electromagnetic valve timing control on the exhaust help broaden the engine's powerband. Nissan claims 90 percent of the 268 lb-ft of torque is available between 2,000 and 7,000 rpm, while the horsepower peak of 306 hp is reached at 6,800 rpm.

While not all that noticeable on the road, the new engine's added flexibility is definitely appreciated on the track. Five hundred additional revs might not seem like much, but they kept us from having to upshift in some





Opposite: Nismo Z exhibited far less understeer than the last 350Z we had at Thunderhill Raceway Park; it was also about 2 seconds a lap faster. Below left: Each car is fitted with a commemorative plaque. Bottom: Rays forged alloy wheels and Brembo brakes are shared with Grand Touring model.

spots, most notably between Thunderhill's long apex of Turn 2 and the off-camber Turn 3. There's enough power to rotate the car around, but not so much that it's impossible to commit to full throttle. The traction control doesn't let you go far enough, however, and we quickly hit the defeat button after it abruptly cut power in one of the slower corners. The limited-slip differential nicely takes up the slack, making the rear end easy to control with the throttle. Thankfully, Nissan left its Vehicle Dynamic Control (VDC) safety net off the Nismo, in keeping with the model's performance character.

Too bad Nissan didn't fit the Nismo Z with the motor from the Japanese-market-only Nismo Type 380RS, a limited-edition 350Z which shares the U.S.-spec cars' bodywork and suspension mods. Displacing 3.8 liters, this V6 has an output of 350 horsepower and 293 lb-ft of torque. The Nismo chassis could definitely handle more power.

The combination of stiffer chassis, slightly more rubber and additional motor flexibility paid dividends at Thunderhill. The Nismo shaved nearly 2 seconds off the Anniversary Edition's time. That '06 car, which sported a 300-horsepower V6 (just 6 hp down on the Nismo), turned a 2:13.9 and hit 116 mph at the end of the straight in cool conditions, while the Nismo ran 2:12.1 and touched 120 mph in blazing heat. With the same track temperature, the gap would have been even larger. It was also interesting to note that the brakes provided better pedal feel and were less fade-prone than before, despite Nissan claiming no changes in this department.

While the chassis improvements were noticeable (and quantifiable) on the track, they feel amplified on the street. In the twisties, the front end is more alive and eager to follow inputs, making the whole car feel lighter on its feet. There's an effortless-ness to the Nismo Z's handling that is absent from the other 350Z models.

When schlepping around town and on the freeway, the Nismo's stiff ride definitely reminds you of the fact that it's the most aggressive Z on offer. But the suspension isn't bone jarring; the Nismo rides better than a Mitsubishi Evo or a Subaru STI. We'd have no problem driving this Z every day; actually, we'd look forward to it. The Nismo 350Z is easily the best, and most desirable, Z-car since the 300ZX Turbo. ●

