

FULLTHAW

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ROUNDTITLE

The one thing we can count on seeing at every SEMA Show is improvement. It was truly impressive to see new hardware and products on display from the aftermarket despite a tough economy. There were many impressive builds from the outrageous mid-engine V8 Genesis Coupe by Rhys Millen to the Canadian-built Super Cuda powered by a twin turbo V10 topping out at 208 mph. We even saw a couple of past PAS Magazine features with enough tweaks to consider them fresh... but then there was K&N, who took one of their former features and tore it up to create this Time Attack assassin.

K&N Engineering Inc. of Riverside, California is famous the world over for providing performance filters

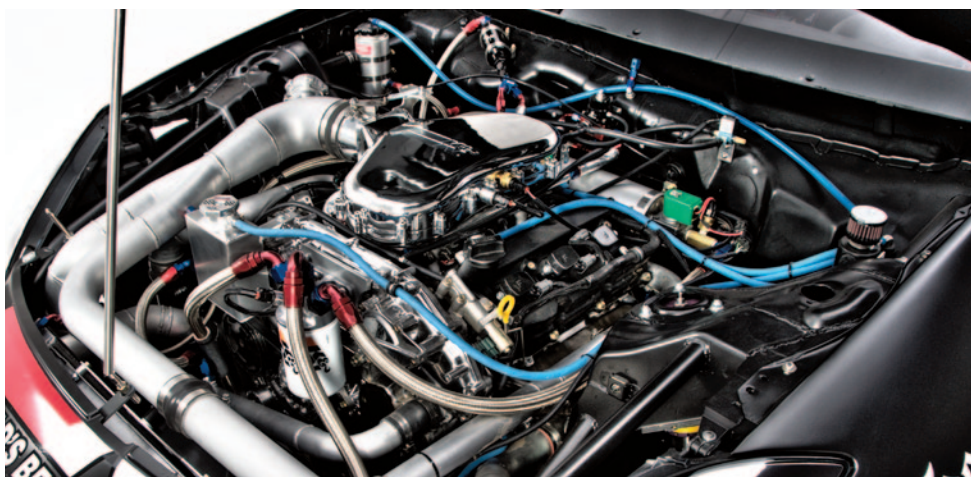
with effective filtration for anything that moves. Their dominance in the marketplace means that they have the funds to do just about anything they want. K&N has a substantial facility that houses a serious skunk works boasting a huge shop and R&D area where the magic happens. Our friends at K&N gave us the inside scoop on this G35 and, had we not heard it directly from them, we'd never have believed it.

This particular G is actually one that K&N has had in their line-up since 2003. The most recent round of modifications was not only the most extreme, but represented the third time this car would be totally transformed. The final version you see here was purpose built to make a serious statement on the road course, well ahead of the pack. >>





POWERHOUSE //
A Jim Wolf Technologies (JWT) system was selected featuring the quick-spooling Garrett GT30 turbos. Air is hauled in with a K&N Series 69 intake and flows around the engine with custom intercooler piping by K&N.

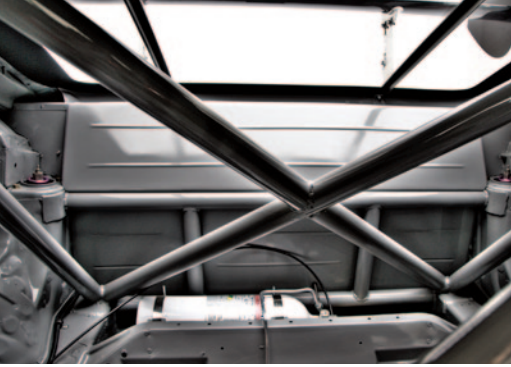


The project got underway by completely stripping the vehicle, sandblasting it and seam welding the chassis. All of the metal was removed forward of the strut towers and replaced with tubing for weight reduction and to set the stage for custom wizardry. The block was machined, balanced and blueprinted before the cylinders were plugged with CP Pistons slugs. The pistons were bolted up to Pauter forged Chromoly rods pushing a knife-edged crankshaft. The heads were ported and polished then filled with SuperTech stainless steel intake valves and Inconel exhaust valves. The assembly was then bolted back with ARP studs sandwiching Cometic headgaskets.

The twin turbo system was a major consideration for a critical balance of response and power. A Jim Wolf Technologies (JWT) system was chosen featuring quick-spooling Garrett GT28 turbos. Air is hauled in with a K&N custom intake and flows around the engine with custom intercooler piping by K&N. The compressed air is chilled with twin Bell intercoolers, before heading through an Accufab throttle body and custom K&N plenum. Any excess air is vented by a monster TIAL blow-off valve to prevent surge on the high RPM compressor wheels. To fuel the fire, K&N technicians added a custom fuel system using an Aeromotive S1000 pump, fuel pressure regulator and RC Engineering 750cc injectors. Post combustion, the fumes are channeled into JWT downpipes connected to a custom stainless steel exhaust built by K&N.

After the AEM wideband was installed and the AEM EMS standalone connected, the G was >>





FOOTWORK //

A set of KW Suspension Competition coilovers were selected for ride height and dampening tweaks. A Speedway Engineering front sway was installed to eliminate roll and upper control arms were installed to play with the rear camber.

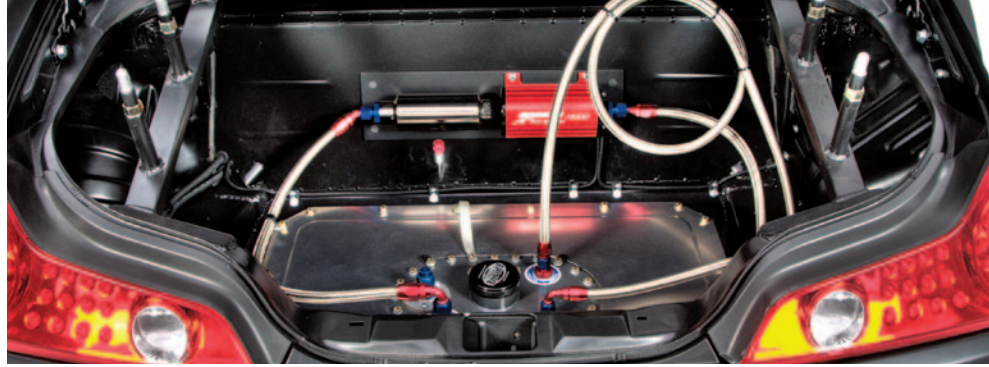
fired up. The tuning commenced on the K&N dyno and the final numbers had the K&N crew feeling pumped. The car put down a respectable 512 whp with 440 lb-ft. of instant response to rocket out of the corners and keep pulling until it was time to brake. More jam meant that the driveline needed a boost and K&N pulled no punches by installing Tilton gear. A Tilton 5-inch triple plate sintered metallic clutch was installed along with a Tilton ultra lightweight flywheel. But the clutch didn't get installed into the questionable Infiniti 6-speed box but rather a Tremec Dodge Viper tranny modified to fit. The power is transmitted from there through an Inland Empire Driveline aluminum driveshaft, a Quaife LSD and Driveshaft Shop stage 5 axles.

Since the build was meant to be used on the track, the running gear was carefully selected and tuned. A set of KW Suspension Competition coilovers were selected for ride height and dampening tweaks. A Speedway Engineering front sway was installed to eliminate roll and STILLEN upper control arms were installed to play with the camber. Additionally, rear

trailing arms, toe arms and custom lower control arms were designed and fabricated by K&N. To maintain rigidity, some SPL Parts differential bushings and solid sub-frame mounts.

K&N didn't cut any corners on the grip gear. The team selected Volk RE30s in matte black measuring 18 x 9.5-inches up front, and 18 x 10-inches in the rear. Lurking behind the spokes are StopTech ST45 4-piston calipers with 355 mm floating rotors. Clamping down on the rotors are Hawk Competition pads pushed by hydraulics filled with Motul RBF600.

During the extensive chassis modification a Red-line Time Attack-spec cage was added. The multi-point cage adds to the rigidity of the car and ramps up the safety for the driver. A pair of Sparco Pro 2000 racing seats were added and draped with Sparco 5-point harnesses. A Sparco Competition 260 steering wheel handles the drive inputs and a B&M shifter was added to bang the next gear. To relay engine vitals, a Racepack IQ3 Datalogger Dash replaced the cluster, allowing the team to dissect the numbers. >>





SLIPSTREAM //
Seibon was contacted to pitch in with their carbon fiber: hood, fender, trunk and even doorskins to shave off precious pounds. A G-Stream adjustable carbon fiber wing was added for downforce along with a Competition Performance front splitter to reduce lift.

Up next were some of the more important considerations in order to reduce weight and to manage the air flow to keep it glued to the track. Seibon was contacted to pitch in with their carbon fiber: hood, fender, trunk and even doorskins to shave off precious pounds. A G-Stream adjustable carbon fiber wing was added for downforce along with a Competition Performance front splitter to reduce lift. Before Race Design plastered on the vinyl, the pivotal piece was the Viral Sport front bumper, which Cabrera informs us is the only one in existence

With the right team, the funds and the facilities, the K&N crew was sure to build a monster. Although a wealth of aftermarket parts exists, K&N decided to fabricate a lot of items to showcase their capabilities right down accessories like the billet battery tie down! They have certainly outdone themselves with this build and if they contract a ringer behind the wheel, they should do some damage in 2010. Whether it is Redline Time Attack or any other track event, look for the G35 to cause a ruckus in Unlimited RWD. **PAS**

THE ESSENTIALS
OWNER K&N ENGINEERING INC.
LOCATION RIVERSIDE, CALIFORNIA
VEHICLE 2003 INFINITI G35
POWER 512WHP/440LB-FT

FOR MORE CONTENT VISIT ONLINE
PASMAG.COM
Speed Overload
 See the K&N G35 in on track in pictures and video

ENGINE

Nissan 3.5L VQ35DE

ENGINE MANAGEMENT

Performance Electronics

DRIVETRAIN

Tilton 5-inch Triple Plate Sintered Metallic Racing Clutch
 Tilton Performance Nissan Lightweight Flywheel
 Tremec T56 Dodge Viper 6-spd with Adapter Plate and QuickTime Steel Bell Housing
 Driveshaft shop Level 5 Axles
 Inland Empire Driveline Service Custom Aluminum Driveshaft
 Quaife LSD

ENGINE MODIFICATIONS

SuperTech Stainless Steel Black Nitride intake Valves
 Inconel 751 Nickel Base Exhaust Valves
 Jim Wolf Technologies Twin Turbo System
 Custom K&N Intake System with Custom Inter-cooler Plumbing
 Accufab 75mm Throttle Body
 K&N CNC Billet Plenum Design Intake Manifold
 Aeromotive Regulator
 Jim Wolf Technologies Camshafts
 Bell Custom Twin Intercoolers
 TIAL Blow off Valve

RC Engineering 750CC Injectors
 Pauter 4340 Vacuum Chrome Moly Forged Connecting Rods
 96mm CP Forged Pistons
 CP Plasma Moly Ductile Iron Piston Rings
 Cometic Head Gasket
 ARP Head Studs
 Jim Wolf Technologies Cast Turbo Manifold
 Jim Wolf Technologies Downpipe
 Custom K&N Exhaust

WHEELS, TIRES, BRAKES

Rays Engineering Volk Wheels RE30 in Flat Black
 F: 18x9.5-inch
 R: 18x10-inch
 Stop Tech ST45 4-Piston Calipers
 355mm 2-Piece Rotors
 Hawk Competition Pads
 XRP Stainless Steel Braided Lines

SUSPENSION

KW Automotive Competition Coilover System
 KW Automotive Custom Springs
 Speedway Engineering Sway Bar
 STILLEN Upper Control Arms
 K&N Rear Trailing Arms
 K&N Toe Arms
 K&N Custom lower control Arms
 SPL Parts Differential Bushings
 TEIN inner and out tie rods

EXTERIOR

Viral Sport Front bumper
 Seibon Carbon Fiber Fenders
 Seibon Carbon Fiber hood
 Seibon Carbon Fiber Doors
 Seibon Carbon Fiber Trunk
 G-Stream comp 800 Wing
 Competition Performance Products Front Carbon Fiber Splitter
 Carbon Fiber Rear 3/4 Windows
 Custom Graphics by Race Design

INTERIOR

Racepack IQ3 Dash and Data Logger
 B&M Shifter
 Sparco Competition 260 Steering Wheel
 Competition Roll Cage

SHOUTOUTS

K&N Engineering Inc.
 KW Suspension
 SPL Parts
 Motul Lubricants
 Sparco USA
 Optima Batteries
 Rays Engineering
 Volk Wheels
 Mackin Industries