

LIFE'S A DRAG



*DAYS SEEMED LIKE WEEKS as **Martin Musial** anticipated delivery of the first Mitsubishi Lancer Evolution VIII to the Chicago land area, as the icon that was the EVO was finally hitting North American shores and he could not wait...*

We had a few years of experience tuning and building the 4G63 but the new platform had everything; handling, looks, and power. Within hours of delivery, we arrived at the only local dealership to purchase the first Lancer Evolution VIII in Chicago. Of course we were promised 'sticker price' but, when we arrived, the price magically went up a few thousand Dollars for the "Chicago package", basically a dealer markup for a hot new car. What could we do? We NEEDED this car! With a pathetically small down payment and five years of financing we drove our silver angel from the lot.

This car was our saviour. It would be what I would establish and grow my company on. Up until that point, we had only been in business for two years and were still struggling in every which way to remain in business. Once in our hands, we used our combined talents to develop a series of performance packages that would establish us quickly as a tuner powerhouse.

Less is More

Originally, we never had intentions of turning our 2003 EVO VIII into a full-out drag car. The first year we used it to develop our turbo kit, intercooler, intake manifold and other products. Our R&D was meticulous and slow. While others were pumping out product without testing, we were on the fifth revision of our intake manifold and testing runner taper angle for its effect on horsepower.

Today, we've speeded-up this process considerably, by using computer simulations and rapid

prototyping, but back then all we had was good old trial and error and hard graft. After a year of product development, we our EVO was making almost 600 wheel horsepower on our all-wheel-drive dyno. The EVO was still a complete street car, with very little to no weight removed; in this trim it would turn the quarter mile in 10.5 seconds at 137mph. Some of the key components were our GT35 Turbo Kit, Built Engine, AMS VSR Intake Manifold, Race Front Mount Intercooler and of course our tuning.

Around late 2004, I realized that as a company we need to exploit the other strengths of the Mitsubishi EVO platform, not just its horsepower. The brakes, suspension, and chassis are amazing and this four door saloon in standard trim puts most sports cars to shame. Where else to prove the overall capability of the EVO but on the 2005 Car & Driver One Lap of America, a transcontinental race, in which about 100 competitors race on 10 different tracks across America in one week. >>



COVER STORY ▶▶

>> It's a hugely gruelling event that challenges man and machine to breaking point. No support vehicles are allowed, so we were forced to pack our spares and supplies in a small trailer that was towed behind the EVO. With very minimal track experience, we did the best we could for suspension and chassis set-up. The car possessed plenty of power (600+bhp) but it was heavy and not completely sorted out.

Early Success

We had run each race, packed our things and then driven 500-miles on average to the next race venue. Even with a boost controller failure that led to 50psi of boost and a blown head gasket, we nursed the car the last few events to a 7th place overall finish. This was not bad for a Drag EVO with just mildly upgraded suspension. That it was in the company of modified Porsche 996s, Audi TT's, Dodge Vipers, Turbocharged Z06 Corvettes and other supercars, just added to its giant-killing appeal. >>



SPC Horsham

Sussex Performance Cars

UNDER NEW MANAGEMENT

www.sussexperformancecars.co.uk Tel: 01403 257257

Unit 4 Deacons Trading Est, Nightingale Road, Horsham, West Sussex, RH12 2NW



ROLLING ROAD

2400 BHP / 4 WD | Wideband AFR Measurement | Unique Traction Control System

WE ALSO OFFER

Engine Mapping | Shoot Out Days | Power Runs | Fault Diagnostics
Full Service Facilities | Vehicle Repairs | Engine Build Facilities | Valve Seat Cutting
Cylinder Head Porting | Camshaft Reprofilng | Crankshaft Grinding
Crankshaft Balancing | Flow Bench Testing | One-off Fabrications



TEST YOUR VEHICLE'S PERFORMANCE BOOK NOW
ROLLING ROAD FROM £90 PER HOUR*

>> On top of trying out Road Racing and Time Attack in 2005, we were still hell-bent on breaking the quarter-mile record of 9.77 seconds set by the Turbotrix Drag EVO. Realising that 600whp wasn't enough, we set our goals on 1000whp. Yup. That's right. 1-0-0-0-wheel-horses. Development began on a turbo kit based around the Garrett GT42R turbo.

The intention was not to sell these kits in any quantity but to offer a few racers a "one-off" product. Right away the potential was pushed to 800 and then over 900whp with this new turbo kit. At the same time I started to experiment with different cam designs from several manufacturers and found even more power. To support this type of potency, we worked on an engine program that would provide a reliable and capable power unit. We worked up a 2.0-litre based drag engine that could take 10,000 rpm and contain over 40 psi of boost. The hard job was experimenting with different ring manufacturers, working with piston companies and getting other small details sorted out that really added up to a successful engine development programme.

Dressed-up for Drag

Riding on Nitto drag radials, we clicked off our first 9.0-second pass with a 9.92 @ 145mph, with our new found power. With some more tweaking and fitting a set of street legal drag tyres, we whittled down the time to a 9.41 @ 156 mph securing the title of World's Quickest and Fastest EVO VIII back in 2005. Our Drag EVO was at this point was still a street-driven car. It had a full interior, carpets, glazing and steel doors. In fact, we drove it two hours each way to a Mitsubishi Factory-sponsored car show the weekend after breaking the record.

After a summer of our EVO performing double duty as a Drag and Road Racing car, we appreciated that, to compete in Time Attack events, we needed to build a dedicated EVO. It wasn't until late 2005, when we split the company into separate Drag and Road Racing programmes.

We had the first taste of solid 9.0-second passes and the power to go over 150mph in the quarter mile but we wanted to go even faster. In 2006, the AMS Drag EVO was once again dedicated to straight line performance and we started to incorporate design changes targeted for quicker quarter mile passes. First we focused on reducing weight to help keep driveline stress to a minimum and reduce the ET's (Elapsed Times). This led to our lightweight parts program.

We developed a lightweight brake kit and other lightweight chassis components that made ride and noise harsher but reduced weight significantly. A great example was our carbon-fibre and Kevlar roof. Working closely with a composite race shop, we introduced >>



ENTER
TO WIN \$1,000
IN THE AMS VIDEO CONTEST



HOME OF THE 8 SECOND 1400 HP DRAG EVO VIII

WWW.AMSPERFORMANCE.COM

PARTS - INSTALLATION - TUNING - ENGINEERING - FABRICATION - RACE PREPARATION

EVOLUTION X *performance specialist*



VISIT OUR WEBSITE FOR A FULL LINE OF EVO X PERFORMANCE PRODUCTS
& FIND A U.K. DEALER NEAR YOU

COMING SOON FROM AMS

EVO X TURBO KIT - SUBARU TURBO KIT - EVO VIII-IX F1-i INTAKE MANIFOLD - EVO CAMS - EVO CNC CYLINDER HEAD

COVER STORY ▶▶

>> a strong but light composite sandwich core roof that removed almost 20lbs from the car. At the same time, the rest of the car went on a serious diet with lightweight seats, bumper supports removed and left a minimalistic interior along with other composite body panels.

Secondly, we refined our power combination, rethinking the engine specifications and finding every bottleneck for the horsepower. The engine changed from a 2.0 to a 2.1-litre. Based on a bigger bore 2.4-litre unit, we destroyed the new block with custom rod lengths and pistons. This combination not only increased displacement slightly, it increased the maximum engine speed capacity due to the internal geometry. In addition, the intercooler was upgraded from an air-to-air unit to a more efficient air-to-liquid type.

We also used the opportunity to develop a new version of our VSR intake manifold with a larger plenum for drag style applications. Finally, new 280-degree duration high lift camshafts and a slightly upgraded turbo pushed the new combination past the 1000whp barrier. The additional 100 horsepower and weight reduction pushed our trap speed to 165mph and we hit our first 8.0-second pass with an 8.97 in the 2006 race season.

In 2007, every time the car went out, the boost got a little higher and small changes were made to evolve to the next tier of performance. On June 24th 2007, the AMS drag EVO set a new record of 8.56 seconds at over 168 mph, a record that is yet to be beaten by any new generation EVO.

For 2008, we elected to spend most of the year developing more horsepower and some additional aerodynamic aids. Current power is up to 1130whp and with the new drag wing and sealed front fascia we hope to hit 180mph in the quarter mile. We're putting the finishing touches on the car now and we'll be hitting the drag strip to better our times once again.





WORLD'S QUICKEST EVO 8

Best 1/4 Mile: 8.56
Best Mph: 171 mph
1130 All Wheel Horsepower

Engine:

- AMS 2.1L Race Short Block
- AMS Spec Aluminum Rods
- AMS Spec Ross Pistons
- AMS/TMS Headstuds
- AMS CNC Head
- AMS Race Cams
- Fidanza Cam Gears

Fuel:

- AMS Twin Fuel Rails w/ 8 AMS 1000cc

Injectors:

- AMS Fuel System

Body:

- AMS Drag Wing and Aero Work
- AMS Carbon-fibre Roof
- AMS Carbon-fibre Doors

Intake/Intercooler/Cooling:

- Precision Turbo Air-to-Water

Intercooler:

- 2 Tial B-OVs
- AMS Twin Rail VSR Race Intake

Manifold:

- AMS Small Radiator Kit

Engine Management/Electronics:

- AEM EMS
- AEM UEGO Gauge & Controller
- AEM Serial Gauge
- Autometer Oil Pressure Gauge
- Autometer Shift Light
- Autometer 5" In-Dash Tach
- AMS light-weight battery

Suspension/Rims/Tyres:

- 15" Rota Wheels
- Mickey Thomson ET Drag Slicks
- AMS Custom Rear Coilovers
- AMS Trailing Arm Bushings
- AMS/Wilwood F&R Racing Brakes

Drivetrain:

- AMS/Exedy Triple-Plate Push Style Carbon-Carbon Clutch
- CTG C/F Driveshaft
- DSS Stage V F&R Axles
- AMS HD Rear Differential Kit

Safety/Interior/Exterior:

- AMS NHRA Approved Roll Cage
- RCI 5 point harness
- Diest Fire Suppression System
- Stroud Window Net
- Stroud Parachute
- Custom Graphics by Sticker Dude Designs

Turbo:

- AMS Custom 321 Stainless Header
- Garrett GT42R Turbo
- Tial 44mm Wastegate

Transmission:

- Shepherd Racing Trans & Transfer Case