# BMW M3 E36 - 3.2 litre S52 Engine

# RGM Stage 1

This conversion consists of:

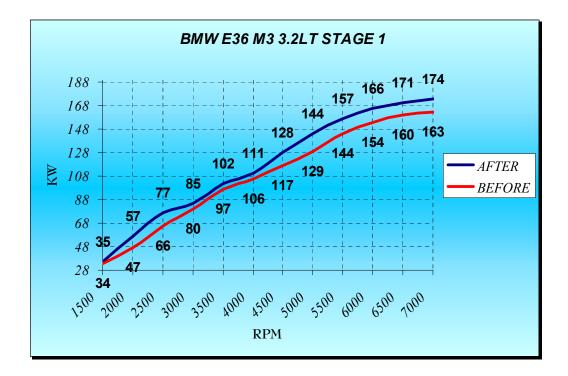
- \* RGM complete stainless steel performance exhaust system. Tubing diameter is 57mm, unless used in conjunction with the supercharger conversion then the system will be manufactured to 63mm.(excludes manifold)
- \* Re-programming of the engine electricals by means of a unichip, thus optimizing both ignition timing and fuel delivery. Road speed govender will also be removed and an optional rev limiter shift will be available.
- \* RGM's performance air filter does not need to be disposed of as it is a panel type and serviceable.

Performance gain will be from 228kw – 255kw

This conversion will take 2 days to complete.

Cost of this conversion is R 9600.00 incl. vat

6 months / 20 000 km warranty, unless otherwise stated.



## **RGM Stage 2**

- \* The stage 2 conversion includes all in stage 1, as well as, performance cylinder head, inlet and exhaust camshafts. These are fitted with higher lift and more duration.
- \* Power output will be increased to 285 kw as opposed to the standard 228 kw.

This conversion will take approximately 10-15 working days to complete.

Cost of this conversion is R 39 800.00 incl. vat

6 months / 20 000 km warranty, unless otherwise stated.

#### RGM carbon fibre cold air induction kit

Not suitable when using a supercharger.

The kit consists of:

RGM carbon fibre housing and filter

RGM Aircraft grade induction piping

RGM Spoiler or bumper mounted large alley air intakes (available in silver or black anodized)

Cost in kit form Cost installed R 4000.00 incl. vat R 5130.00 incl. vat

All of these options below apply to the BMW E36 3.0 & 3.2

## RGM Competition light weight flywheel and racing clutch assembly

Recommended on option 1 and essential when using the following competition products, unfortunately the standard clutch assembly cannot hold up.

Cost R 8778.00 incl. vat

#### RGM High flow ally air intake chamber (pleunum chamber)

Recommended with option 1 for improved throttle response due to a smaller area, and a must when using the more powerful T – trim supercharger.

Cost R 6270.00 incl. vat

#### **RGM** supercharge options

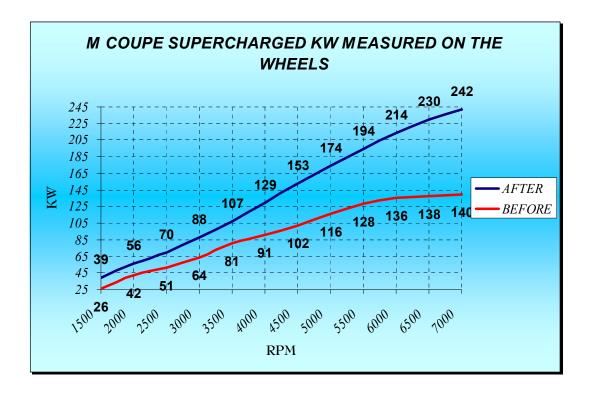
The structure of the conversion starts off with a base supercharger installation, which is very impressive and then moves on to the more extreme performance components. These components and component costs are added to the base conversion. The base conversion is known as option 1.

### Supercharged conversion option 1

This conversion consists of the following:

- Vortech centrifugal supercharger with a special impeller for RG Motorsport only.
- Intercooler and pipes of highest quality polish aluminium with blue silicone hose couplers.
- 6 special high flow 42-pound injectors.
- RG Motorsport brackets and pulleys, which are driven by a Gilmore belt. All
  components are made from high quality B51 aircraft aluminium, and then
  anodized. Driven surfaces are hard anodized, for wear resistance, to ensure
  durability over a long period.
- The engine's compression is lowered to 8.5:1 by means of a stainless steel decompression plate. The bottom end of the engine is not opened unless recommended with high mileage.
- A unichip is fitted, as well as, a M.A.P. sensor. Also included, is a boost rising rate fuel regulator allowing us to set each conversion up for maximum engine out-put.
- Stainless steel performance free flow exhaust system, throaty but still conservative in 63mm.
- All oil cooler pipes and supercharger oil feed pipes are stainless steel braided
- Teflon pipes.
- An additional fuel pump is fitted and located on the left chassis leg.
- The power will be increased to an amazing **360 kw** and torque that knocks you back into your seat.

Cost R 78,758.00 incl. vat



# **RGM Supercharged conversion option 2**

Please note when using this T-trim supercharger, it is a must that you include our clutch assembly as well as the alley air intake chamber and RGM/ARP cylinder head studs and aquamist water injection.

The main difference of this conversion is the use of the Vortech T-Trim supercharger and not the SC -Trim unit. This unit will produce more boost 1.2 bar as opposed to 0.95 bar at this altitude and has an extremely high C.F.M. flow rate. With this option the engine will produce approximately 390kw on the engine and as tested will produce 400bhp on the wheels at sea level.

The cost of the T-trim supercharger conversion is		R 85,318.00 incl. vat
RGM Heavy-duty cylinder head studs and nuts		R 9 085.00 incl. vat
RGM Ally air intake chamber		R 6 270.00 incl. vat
RGM Competition lightweight flywheel and clutch assembly		R 8 778.00 incl. vat
RGM/Aquamist water injection		R 5 700.00 incl. vat
	TOTAL for option 2	R 115 151.00 incl. vat

### **RGM Performance cylinder head**

It is highly recommended that whilst the cylinder head is off for the decompression process, that the cylinder head be gas flowed (ported), including 3 angle valve seats. Undercut valve stems & swirl polished. This will increase all round performance.

Cost when done in conjunction with supercharging R 6 840.00 incl. vat

### RGM full race high performance bottom end engine block assembly

After many years of trial and testing we are able to offer the full package:

The existing engine block is machined and modified to house the RGM/JE forged pistons, with high quality total seal piston rings. Conrods are Carrillo purposely manufactured to RGM specifications.

The block is also instep machined for the newly machined cooper rings to be housed. This assembly will also include an upgraded RGM high performance oil pump. The assembly is also totally balanced and blue printed in every way and means. Compression ration of this assembly is 8.8-1

Cost

R 87 780.00 incl. vat

# **RGM high performance fuel supply**

Designed from all our racing experience, the standard BMW fuel supply cannot sustain the flow rate of fuel required. This totally new fuel supply system is suitable for the extremely high performance engine.

The main fuel supply is taken from a new location on the bottom of the standard fuel tank in the direction of gravity into a billet fuel filter into a newly mounted high-pressure fuel pump which is mounted on the back side of the differential. From this pump a large diameter feed pipe continues towards the engine compartment into a 2<sup>nd</sup> purpose built high flow fuel filter. The fuel is then pumped into the engine compartment to a fuel distribution block, where it feeds the main injector rail, extra injectors and nitrous if used.

All fuel lines are Good ridge braided Teflon and all fittings are lightweight red & blue Good ridge.

This is a must when using the T-trim supercharger and RGM Nos installation.

Cost R 19 950.00 incl. vat

RGM/Sax drag re-valvable rear shock absorbers R 7 980.00 incl. vat

**RGM/Sax rear lower control arms (billet alley)** R 4 560.00 incl. vat

### **RGM Competition racing clutch & flywheel assembly**

This clutch and flywheel assembly has been purposely designed and developed to withstand 570 BHP=425kw. This kit consists of 1 clutch plate that has 6 copper button segments. The centre plate is manufactured from a Domex compound material with en19 drive hub centre. The flywheel is manufactured from en19 material. The material is then Niterided to improve wear resistance. This kit also comes with a pressure plate, lock plate as well as new flywheel bolts, pressure plate bolts and thrust bearing.

The cost of the kit

R 8 778.00 incl. vat

### RGM pro racing duel clutch & flywheel assembly

This competition assembly has been totally designed, tested and certified to withstand 750 BHP=560kw

The kit consists of 2 clutch plates of each having six copper button segments. Centre plates are manufactured from a Domex compound material with EN 19 drive splined centres. The flywheel is manufactured from EN19 material as well as the

floated disc between the two clutch centres, material is then niterided to improve wear resistance. The pressure plate is purposely designed with more clamping load. This upgrade is sold either in kit form with all bots as well as thrust bearing, or installed.

Cost R 20 143.00 incl. vat

#### **Version 2 air intake chamber**

High flow alley air intake designed to improve equal distribution of boost air pressure to all cylinders. (Highly recommended when using RGM Nos installation with high boost supercharger)

R 7 900.00 incl. vat

### **Upgrade Pulley Set**

These 45mm crank pulley, idler pulleys and top supercharger pulley have been purposely designed to reduce supercharger belt breakage. Research has shown that supercharger belt breakage is increased when using the higher boosting Vortech V1 – T-trim unit.

R 5 244.00 incl. vat

# 2 x RGM/Vortech race bypass valves

1 x to be fitted on the supercharger

1 x to be fitted onto the new alley plenum chamber

R 11 324.21 incl. vat

#### **RGM** brake upgrade

This upgrade is for the front only

The installation consists of:

- 2 x RGM designed billet aluminium 6082 super light 4 pot brake callipers
- 2 x RGM 225mm directional vented and slotted brake discs with billet machined aircraft 6082 aluminium centre brake bells
- 2 x RGM HE7075 aircraft grade billet aluminium brake calliper anchors

Set of Good ridge racing Teflon braided brake pipes

Bottle of race brake fluid

Fastening kit = All components are of the highest quality tensile strength and stainless steels

1 x RGM street/race compound brake pad set

Kits are currently available in the following anodized colours

Bright Gold

Matt Silver

**Bright Silver** 

Cost of kit form R 19 000.00 incl. vat Cost installed R 19 950.00 incl. vat

#### **RGM short shift kit**

The short shift kit allows less movement and more direct gear shifting as well as reduced distance between gears.

All components are manufactured from stainless steel as well as B51 aircraft alley. There is an option of 4 different gear knobs with the installation

Cost installed R 3 705.00 incl. vat

### **RGM six speed gearbox conversion**

This six-speed gearbox is original BMW components and the only modification will be to the prop shaft. (The propshaft is shortened and then balanced)

Cost R 49 750.00 incl. vat

### **RGM spoiler air intakes**

Alley air intake for left and right side fitted to front spoiler.

Cost in kit form R 2508.00 incl. vat Cost installed R 2800.00 incl. vat

### RGM/SAX full racing suspension

This unique suspension is ride height adjustable coil over designed for front and rear.

Cost of kit R 23 950.00 incl. vat Cost installed R 24 950.00 incl. vat

### In addition:

Adjustable front camber plates Rear cam adjustable lower control arms.

Total installation price R 26 950.00 incl. vat Total installation price R 27 950.00 incl. vat

### **Nitrous oxide installation**

The full Nitrous Oxide installation consists of the following: 10.5lb Nitrous bottle
Electric blanket
Cockpit mounted Nos gauge
Electronic module controlling Nos on/off and safety
Double solenoids
Soft plume 90° Nos fogger nozzle
Nos filter (all components are genuine Nos)

Performance improvement will be no less than 35% on the wheels. With all our experience this is definitely the safest and most reliable way of fitting Nos.

The cost of this conversion is R25 000.00 incl. vat

Approximately 5 days to install.

There is NO warranty what-so-ever on a Nitrous installation. Booking is essential.