



AT POWER'S NEW
MITSUBISHI EVO
4-9 SEMI-INTEGRATED
DRY SUMP KIT.



“There’s a New Sheriff in Town”



Colin Dorward – 3 times Super Lap Scotland Champion – (2015-2016 and 2017)

THE STORY SO FAR...

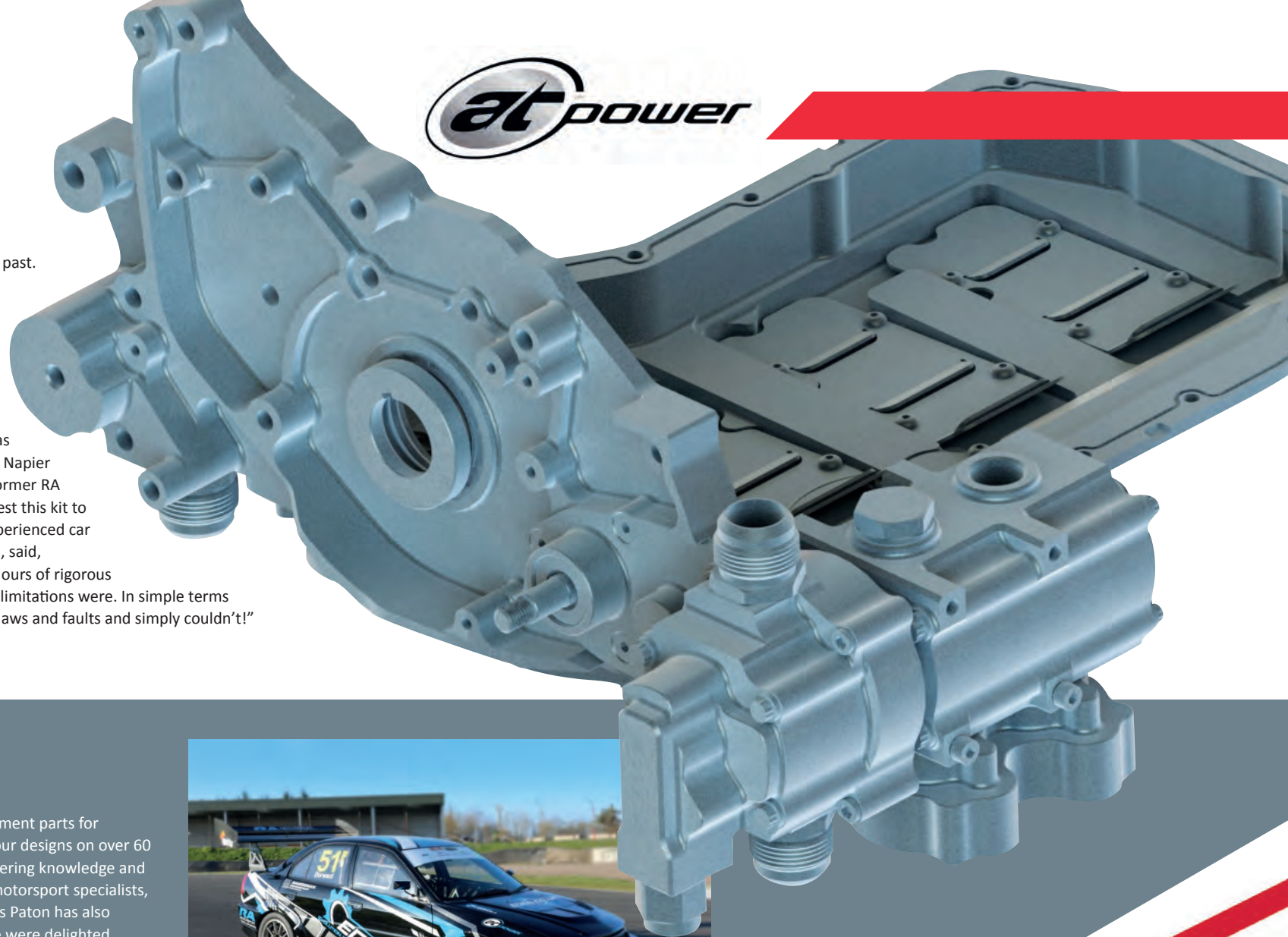
When Colin Dorward called in for a coffee with Andy Napier from U8 Performance Centre, he saw something shiny and sparkly in the workshop. It was the New AT Power EVO 4-9 Dry sump kit. He was so impressed by the design that he forfeited racing in 2018 and set about re-designing his whole car, based on this new kit. Colin's background has always been about racing. Starting early, at 5 years old, in the mini stock championship. He's tried just about every motorsport you can imagine. With a pure desire to win, he recently completed his 250th lap of the Nürburgring. And, with over 100 competitive track days at Hockenheim ring Spa, Yas Marina, Zandvoort, Singapore Kyalami and just about every UK circuit, it's fair to say he knows his way around a track. So, what better person to put this new dry sump kit to the test.

“WHEN DRIVING TO YOUR LIMIT,
IT IS REASSURING TO KNOW THE KIT
YOU ARE USING WILL MATCH IT”



THE RESULTS...

Colin has owned 10 EVO's in his past. His passion for these cars grew and grew. He set about taking on the Super Lap Scotland series with immediate success. His new venture of utilising AT Power's Evo sump kit has already seen a dramatic improvement. Colin has been working closely with Andy Napier from U8 Performance Centre, former RA Motorsport Developments, to test this kit to destruction. Andy, who is an experienced car builder and racing driver as well, said, "I put this car through over 60 hours of rigorous dyno sessions to see where the limitations were. In simple terms there aren't any. I tried to find flaws and faults and simply couldn't!"



THE FACTS...

AT Power manufacture development parts for motorsport use only. We base our designs on over 60 years of mechanical and engineering knowledge and work closely with race teams, motorsport specialists, engine builders and tuners. Russ Paton has also had his in-put as well, which we were delighted to welcome. Russ has over 20 years Evo mapping experience and has tuned some of the most powerful Evo's in the country. This Evo kit is based on 6 years of designing, manufacturing and delivering high quality dry sump kits and oil pumps for a wide range of engines and customers. This latest offering is by far the best we have created and we believe is the future of modern day - oil management technology for racing.



UK Manufacturer

SPEC OF COLIN'S CAR

AET TURBOS:

Borg Warner EFR 8374

AUTOMEK:

Geometry setup and corner weighting's

C-TEC PERFORMANCE ENGINE:

Stroker 2.3 Litre
Turbo kit and manifold
Horsepower 800
Torque 550 ft lbs
Boost Pressure 2.2 bar max

CLARK MOTORSPORT:

Samsonas 5 speed dog engagement sequential transmission, running the following ratios:

I 3,000
II 2,000
III 1,470
IV 1,110
V 0,870
FD 4,308

This transmission is rated to over 1200Nm of torque and has proved itself to be very reliable and long lasting.

Front Cusco plated differential with uprated viscous unit.

Rear Cusco plated differential.
Carbon prop shaft

McLeod MAG Force 200mm Twin plate ceramic clutch kit rated to 900lb/fts of torque with custom aluminium flywheel.

Engine oil used is Rock Oil 10W 60 Carbon

MCF Ultra Lite 6 point HANS Harness

WED Sport TC105N Wheels 17X 9J

Performance Cermaic .11 Compound Brake pads

Lifeline 4.0 Electric Extinguisher system

Koyo Aluminium radiator

Various OEM Mitsubishi parts

ECOSSE CARS & COMMERCIALS:

Paint, graphics and aero work.

ECU MASTER:

PMU 16
CAN Keypad 12

RALLYTECH:

Carbon fibre doors, bonnet & boot lid

REVERIE:

Carbon fibre aero wing
Carbon fibre splitter

RUSS PATON, ROLLING ROAD SERVICES LTD:

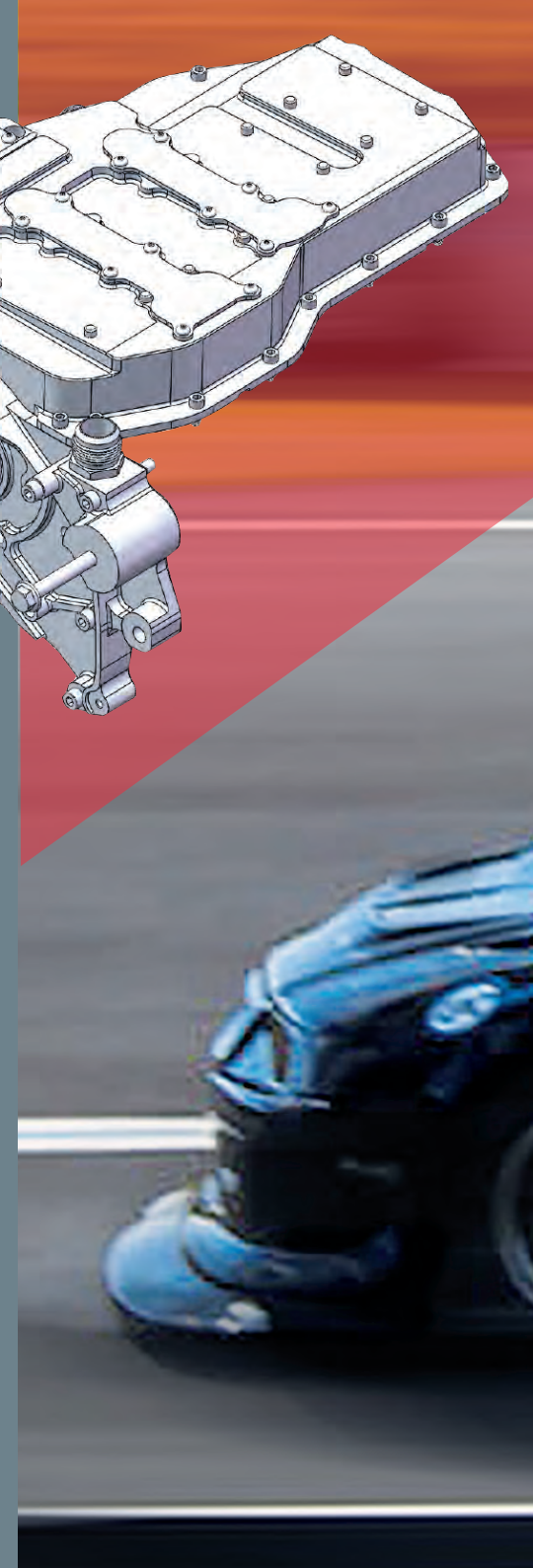
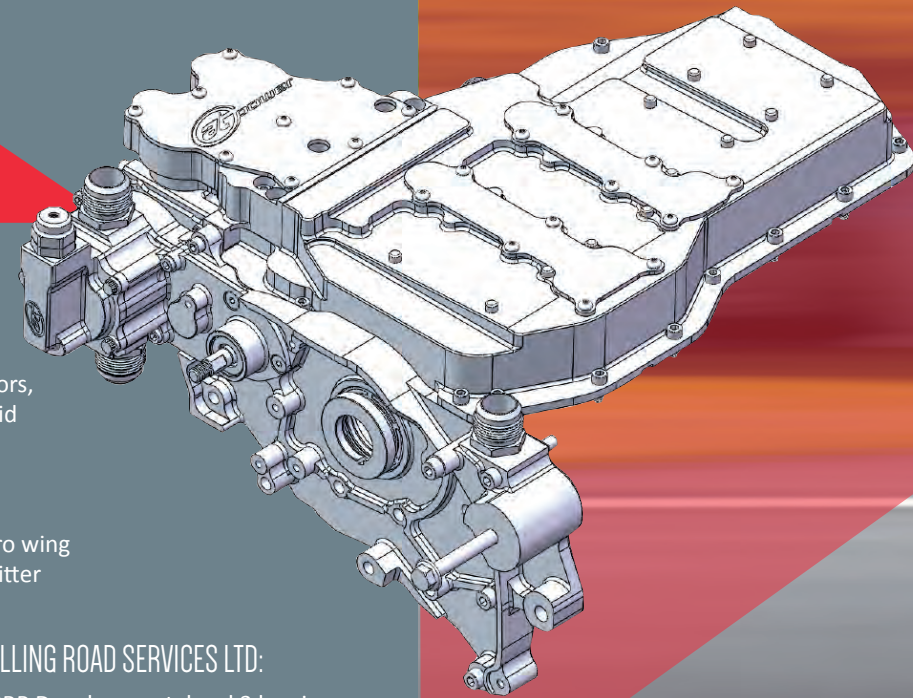
Motec M150 GPRP Development, level 3 logging & traction control.
Motec C127 Dash.

OMEGA DESIGNS:

Billet uprights all round (including all associated control arms)

TRACK FORMULA:

4 Channel Digital Wireless Kit
Paddle Shift System featuring a XAP EShift 2 with optional Position Sensor
Evo Chassis Fitting Kit for XAP to Samsonas Lever
Supplied custom Nitron R1 Coilovers
Carbon Wheel Plate
Paddles & Levers
R35 Ignition Coils
Mil-Spec Injector & Ignition Harness
AP Racing Pro 5000 R Rear Brake Kit
Bosch Motorsport M5 Clubsport ABS System.



“

*AT POWER'S NEW SUMP TECHNOLOGY HAS TRANSFORMED
MY CAR'S PERFORMANCE. THEIR SUPPORT AND GUIDANCE
HAS BEEN HONESTLY REFRESHING*

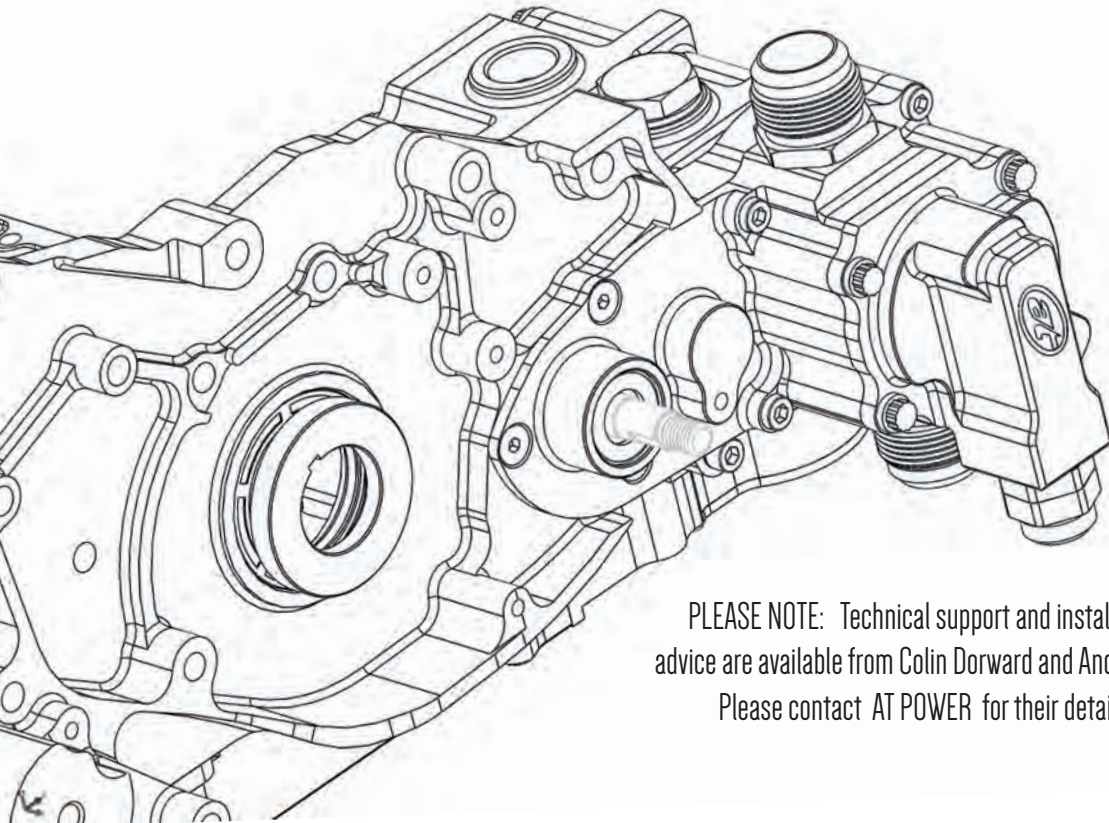
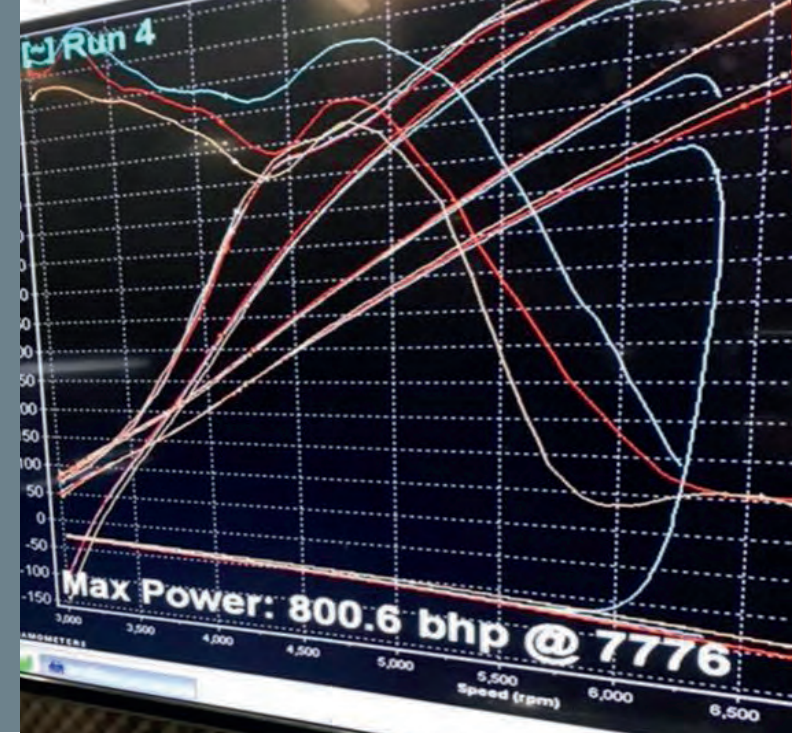
”



TECHNICAL DETAILS

MITSUBISHI EVOLUTION 4-9 SEMI INTEGRATED - DRY SUMP KIT *FOR THE SERIOUS RACER*

The AT Power Dry sump system is designed to prevent oil starvation, lower oil temperature and free up more horsepower. A standard wet sump system can cause oil starvation due to the oil sloshing around during race conditions, the oil can become heavily aerated and pushed to one side during racing thus starving vital components of oil. AT Power's dry sump system removes the oil from the pan and into a remote oil tank, increasing oil capacity. With the oil being drawn from the pan, the crankcase pressure can be reduced which limits drag on the crankshaft and lowers piston resistance which in turn, improves horsepower. With the addition of an oil cooler, the system will reduce oil temperature and improve engine life.



PLEASE NOTE: Technical support and installation advice are available from Colin Dorward and Andy Napier. Please contact AT POWER for their details.

FEATURES

- AT Power's dry sump system is fully CNC machined from Aerospace 6082-T6 grade aluminium. It is then anodised silver to provide oxidation protection.
- The kit has been designed to eliminate the need for oil lines from the sump to the scavenge part of the pump.
- The overall depth of the pan has been reduced to an incredible 56mm.
- The pressure pump has been integrated into the front cover and driven through a unique internal gear drive which utilizes the existing OEM drive pulley.
- No additional drive pulley and belt are required, eliminating the risk of the belt coming off during a race.

ADDITIONAL PARTS REQUIRED TO COMPLETE THE DRY SUMP SYSTEM.

- Remote oil tank
- Oil lines and fittings
- Oil cooler
- New bespoke Exhaust down pipe
- Remote oil filter



TEST RESULTS

AT POWER DRY SUMP KIT

One of the major benefits from fitting a dry sump system is to maintain good oil pressure during racing. It is also to increase Horsepower and prevents cavitation and oil starvation at high RPM.

The **AT Power** kit has only been tested to 8000 RPM on a race car that is running 800 HP and 550 ftlbs of torque, which comes from a 2.3ltr Stroker engine. As you will see the oil flow is very consistent in comparison to the wet sump system. The **AT Power Dry Sump System** has been designed to run up to 10,000 RPM however, has not been tested at this speed.

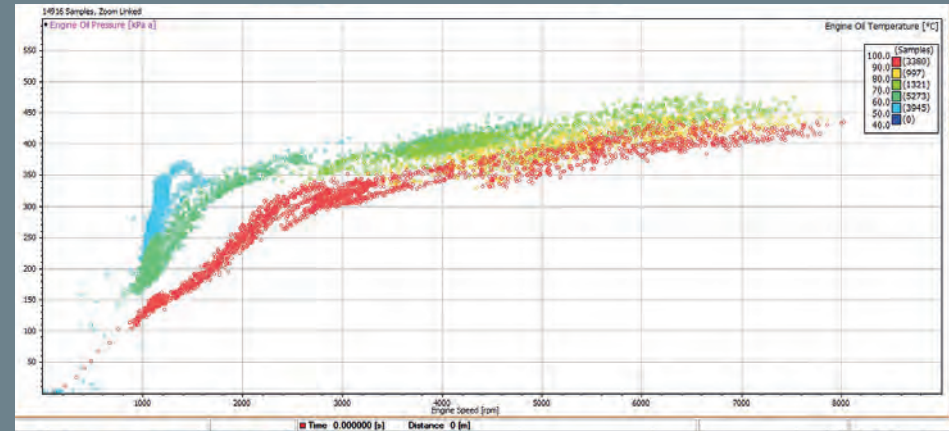
The primary advantage of a dry sump system is that it can make more power by creating a crank case vacuum which will reduce the resistance to the pistons, thus allowing more power to be transmitted to the crank.

With the oil being removed from the bottom of the engine and stored in a remote oil tank, better weight distribution can be achieved. The remote oil tank should have a de-aeration system, improving the quality of the oil lubricating the engine. With this system, an oil cooler should be used which will also reduce wear on essential components and increase the life of the engine.

AT Power's pumps have been designed to reduce internal clearances to a minimum, which improves efficiency. With a unique dual ported design, **AT Power's** pumps can run at higher speeds and reduce cavitation at those higher speeds, limiting the air in the oil and improving engine lubrication.

The following details were taken to show the difference a dry sump can make. Test carried out at Knockhill Race Circuit on alternative weekends.

AT POWER - EVO DRY SUMP KIT - KNOCKHILL CLOCKWISE



VERSES

OEM - WET SUMP KIT - KNOCKHILL CLOCKWISE

