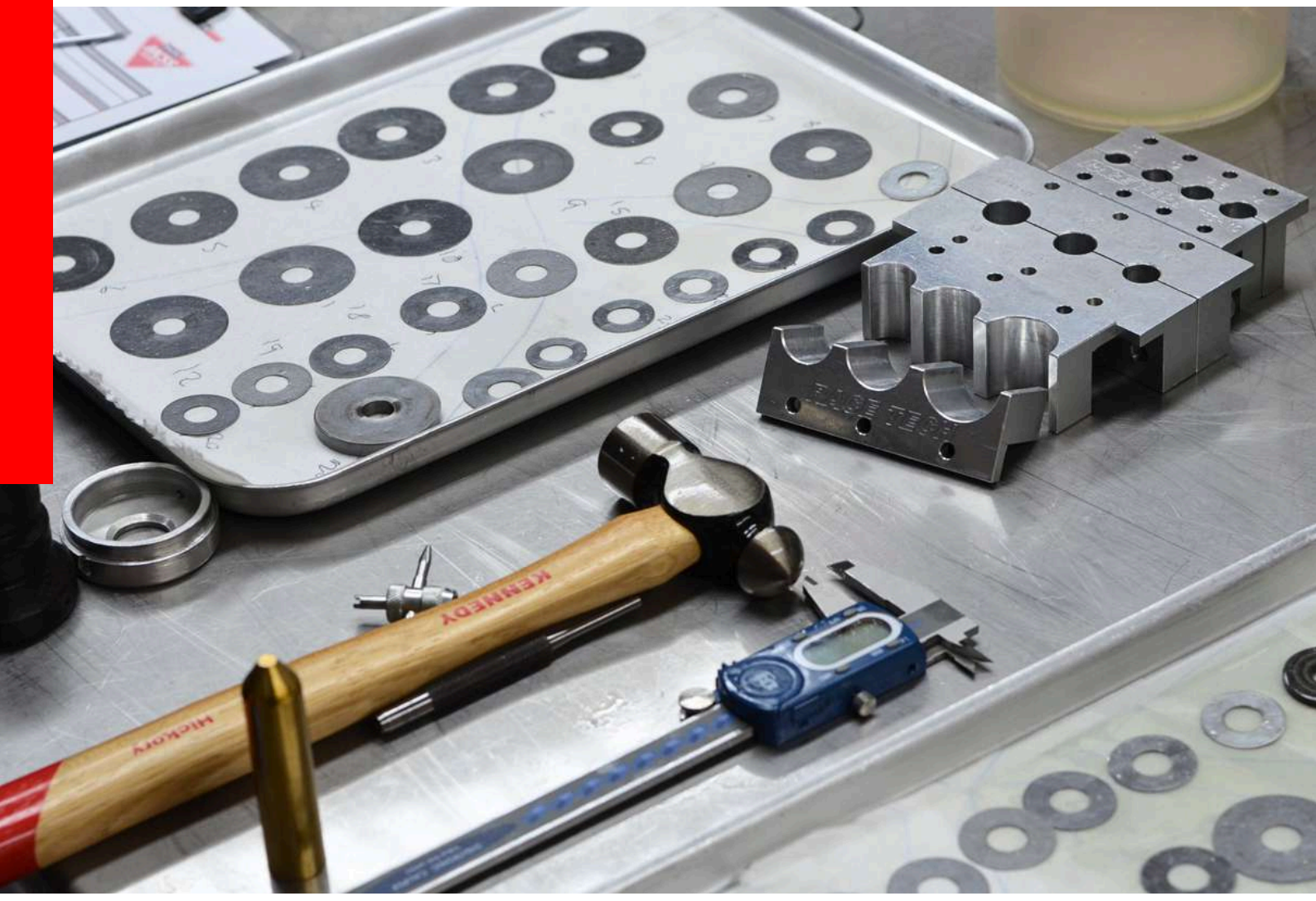
Reactive SUSPENSION
MCSS
MOTORCYCLE SUSPENSION SCHOOL

PROSPECTUS & COURSE GUIDE

2027



MOTORCYCLE SUSPENSION SCHOOL

Motorcycle Suspension School is the UK's only suspension training facility, with a range of courses to suit beginners and professionals. The courses allow you to get hands on experience in a purpose built workshop, putting into practice the skills learned, under the guidance of a trained professional. To ensure you get the most out of these courses, they have been designed to take a day to complete. Courses can be taken individually or over consecutive days. The courses suit a range of learning abilities and practical skill levels. Whilst formulas are used to prove theories, those put off by the thought of a day of maths need not be worried.





Motorcycle Suspension School has been passing its extensive knowledge to students since 2013. Gareth has experience in WSB, BSB, and provides consultancy work for tyre manufacturers, race teams, and multi-national component suppliers. This makes Motorcycle Suspension School the best place to develop and expand your practical skills and knowledge in suspension.

"At this unique institute, students learn skills that would normally be held back for business purposes. We believe that the more people educated in the discipline, the better! The courses have helped people to establish businesses in the suspension industry. University students have found that the skills learned have helped increase their employ-ability.

Racers who have undertaken the set-up course have drastically improved their lap times. Furthermore, home mechanics who have taken the servicing courses can now perform safe maintenance on their own machines."

Gareth Evans



FORK SERVICING COURSE





A course covering all aspects of Road and Off-Road Forks:

Course Content:

• The theory behind fork technology, springs, damping, oil and how dampers work.
• A full analysis of individual fork components and function.
• How to strip and service cartridge and damper rod forks.
• Why stock forks perform badly, the need for modifications.
• Modifications for damper rod forks.
• Piston kit installation on cartridge forks.
• Fork adjusters and set-up.

Who is the Course for?

• Those who want an advanced knowledge of servicing and modifying forks, for all disciplines, road and off-road.
• Home mechanics who want to maintain their own forks, racers who want to modify their forks.
• Race team technicians.
• Dealers that wish to offer an advanced suspension service to their customers.

Course Timetable

• 09:00 Fork design and function
• 10:00 Component function and maintenance
• 11:00 Break
• 11:15 Maintenance tasks, stripping and measurement
• 12:00 Practical work on stripping and rebuilding cartridges
• 13:00 Lunch
• 13:30 Workshop Practice
• 15:00 Break
• 15:15 Workshop Practice
• 17:00 Finish

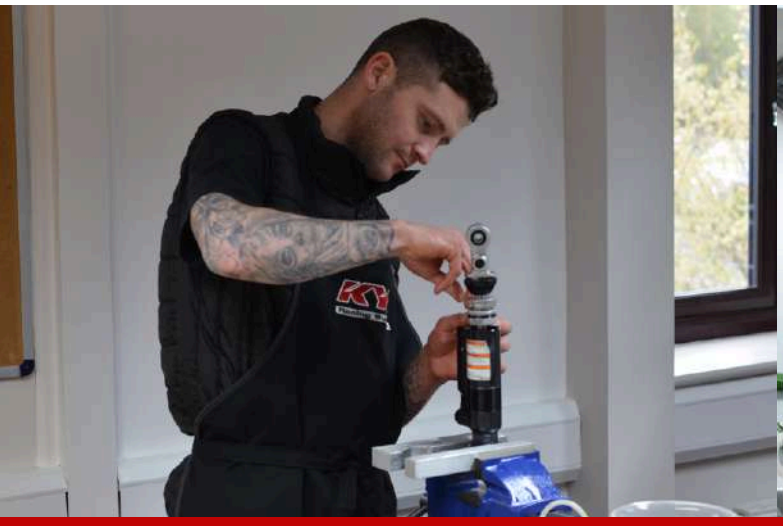
Course timetables are for reference only. The courses progress at the same pace as the students learning. Therefore, students shouldn't worry about asking too many questions, as your understanding is more important.

Course Cost:

• £332.96 including VAT

BOOK HERE

SHOCK SERVICING COURSE





A course covering all aspects of Road and Off-Road Shocks:

Course Content

• The theory behind shock technology, springs, damping, oil and how dampers work.
• A full analysis of individual shock components and function.
• How to strip and service different types of shock, twin tube, PDS, stock and aftermarket.
• Why stock shocks perform badly, the need for modifications.
• Modifications for stock shocks
• Shock adjusters and set-up.

Who is the Course for?

• Those who want an advanced knowledge of servicing and modifying shocks.
• Home mechanics who want to maintain their own shocks, racers who want to modify their shocks.
• Race team technicians.
• Dealers that wish to offer an advanced suspension service to their customers.

Course Timetable

• 09.00 Shock design and function
• 10:00 Component function and maintenance
• 11:00 Break
• 11:15 Maintenance tasks stripping and measurement
• 12:00 Workshop practice
• 13:00 Lunch
• 13:30 Workshop practice
• 15:00 Break
• 15:15 Workshop practice
• 17:00 Finish Course timetables are for reference only.

The courses progress at the same pace as the students learning. Therefore, students shouldn't worry about asking too many questions, as your understanding is more important.

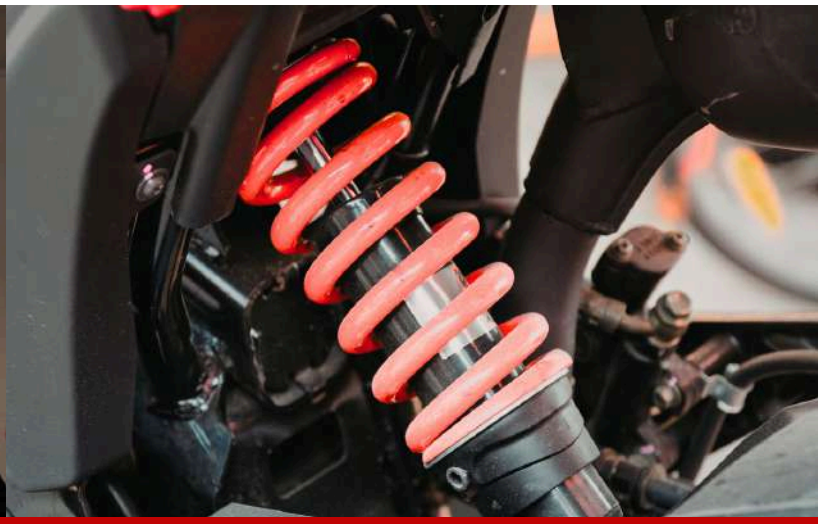
Course Cost:

• £332.96 including VAT

BOOK HERE

BIKE SET-UP COURSE





Course Content

• Adjuster function and operation
• Sag: the purpose of sag, how to measure it and set it for rider weight.
• Stiction: how to measure for stiction, the implications of too much stiction.
• Geometry: how geometry effects the handling of the motorcycle, how to adjust it.
• Linkage design: how linkages effect chassis dynamics.
• Chassis dynamics: how to adjust the suspension and geometry to do what you want.
• Tyres: how tyres generate grip, how to get the most from the tyre.

Who is the course for?

• Road and off-road riders
• Racers and track day riders
• Businesses wanting to offer a set-up service

Course timetable

• 9:00 Adjusters
• 9:30 Measuring and adjusting sag, stiction effects
• 10:00 Geometry
• 11:00 Break
• 11:15 Linkages
• 11:45 Geometry and chassis tuning
• 12:00 Tyres
• 13:00 Lunch

Course timetables are for reference only. The courses progress at the same pace as the students learning. Therefore, students shouldn't worry about asking too many questions, as your understanding is more important.

Book Here

Cost £193.62 including VAT

BOOK HERE

MASTER TECHNICIAN COURSE





Course Content

• Fork & shock practical work.
• Springs, damping, oil and how dampers work.
• A full analysis of individual components and their function.
• Friction and stiction.
• Response time.
• Advanced fork & shock theory, base valves, mid-valves, big piston, twin-tube, 25 and 30mm, closed chamber.
• Separate function forks, Pneumatic spring forks
• Piston and rod size and implications.
• Piston Design.
• Valving, cavitation, pressure balancing.
• Hysteresis
• Chassis dynamics and grip
• Tuning for terrain

Who is the Course for?

• Road and off-road riders
• Racers and track day riders
• Businesses wanting to offer a full suspension service

Course timetable

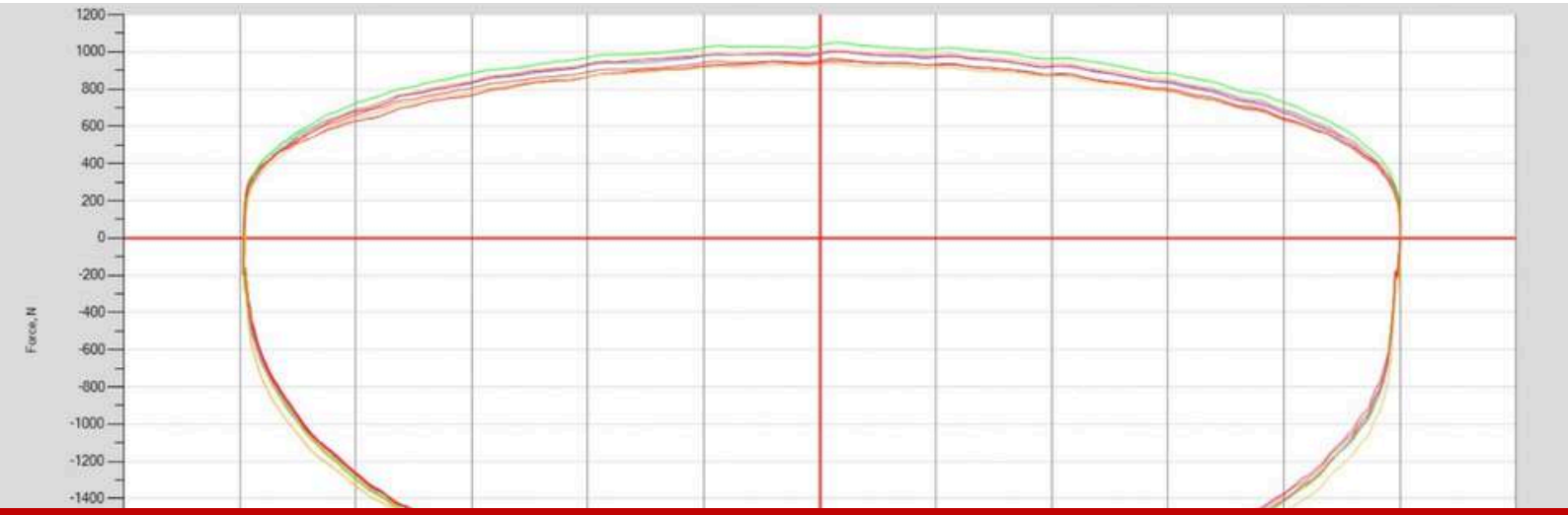
• Monday: Fork theory and cartridge servicing practical work.
• Tuesday: Road and off-road full fork servicing practical work.
• Wednesday: Shock Theory and shock servicing practical work.
• Thursday: Advanced fork and shock theory and tuning.
• Friday: Bike Set-UP.
• Saturday: Exam.

Cost

• £1774.27 including VAT

BOOK HERE

ADVANCED DYNO TESTING SEMINAR



About the Course

The Dyno Seminar provides an excellent opportunity for individuals with limited or no experience with dyno testing to learn the fundamentals. Open to all, the course fosters a collaborative environment where professionals from diverse fields—such as automotive, mountain bike, and motorcycle suspension engineering—can exchange ideas and insights to advance their understanding and techniques.

If you've recently acquired a dyno and would like guidance on its operation and capabilities, this seminar is designed to help you get the most out of your equipment.

Course Content

- Damper design and operation.
- Pressure differentials.
- Friction and stiction.
- Response time.
- Piston design effects.
- Cavitation and hysteresis
- Dyno operation and design
- Interpreting graphs Who is the course for?
- Those wanting an advanced knowledge of dyno testing
- Suspension component supply chain engineers
- University students
- Damper technicians of all disciplines

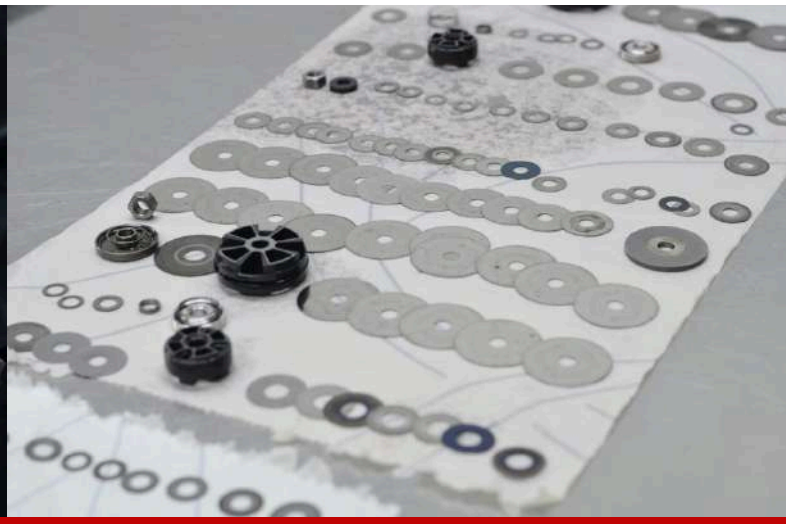
Course Cost

- £323.40 including VAT

TBC

THE COMPLETE PROGRAM





Course Content

- Hands-On Fork & Shock Work
- Springs, Damping & Oil Dynamics
- Component Function Analysis
- Friction & Stiction Effects
- Response Time Optimization
- Advanced Fork & Shock Theory
- Specialized Fork Systems
- Piston & Rod Design
- Valving Techniques
- Chassis Dynamics & Grip
- Terrain-Specific Tuning
- Damper Design Fundamentals
- Pressure Dynamics in Dampers
- Friction & Stiction Control
- Damper Response Time
- Piston Design Effects
- Cavitation & Hysteresis Diagnosis
- Dyno Operation & Setup
- Dyno Data Interpretation
- Chamber Pressure Fundamentals
- Reservoir Pressures
- Compression & Rebound Pressures
- Pressure Differential Analysis
- Force Calculation Principles
- Pressure Balancing Techniques

Who is the Course for?

The Complete Program is designed primarily for long-haul attendees, but is open to anyone seeking the most comprehensive suspension training available.

Cost

• £2310 including VAT

TBC



"...If you want to get into suspension then this is the course to do, you won't go far wrong by self investing in your own development and learning for yourself the truth about this subject..."

FACILITIES

The Workshop

You will be learning in a purpose built workshop, fully equipped for fork and shock servicing. This is the perfect place to learn and develop your skills, with individual workstations and tool boxes. Furthermore, you needn't worry about making the inevitable amount of mess, as the workshop was designed to withstand this. We also have a spacious lecture area, which is used for presentations and the theory side of the courses. There is also a comfortable relaxation room upstairs for tea, coffee, and lunch.





Clothing

The fork and shock service courses are hands-on practical courses, it is impossible not to get oily during the procedures undertaken. There are oil resistant aprons for students to use, these often though don't give the full body protection that can sometimes be necessary. It is recommended that you wear old clothing, or bring a full boiler suit with you. We would also recommend you bring your own safety footwear, or old stout shoes, that you're quite happy to spill oil over.

Health and Safety

Please note that the courses undertaken at Reactive Suspension are undertaken at your own risk. We have taken advice on the insurance necessary to run these courses and unfortunately taking out insurance to cover all eventualities would have at least tripled the course fees. Our public liability insurance covers you for anything that may happen that is our responsibility, but we trust our students to work sensibly with consideration for themselves and the others in the group. We have a full risk assessment document that we can send you a copy of should you wish to see it and you will be given training in the correct procedures to carry out the work safely. Safety glasses, goggles, gloves etc. will be provided for your use. We will gladly refund the course fees if you are not happy with this arrangement but we would much rather run the courses under this arrangement than not at all.

Lunch

A buffet lunch will be provided. Please contact us if you have any dietary requirements. Tea and coffee will be available all day



ALUMNI & REVIEWS

"Great fun and learned an enormous amount over four days. The more you bring to this course the more you'll get out. Gareth does an impressive job of catering to different interests and experience and effortlessly creates [no nonsense] environment very conducive to learning. The course is very well structured for theory, technological history and practical application. That said the real value for money is when Gareth answers specific questions with examples from his own experience. All learners benefit from questions raised by each other. You simply cannot get that from anywhere else... You don't just learn rules of thumb, you come away understanding why what works, works. Facilities are excellent and the food was a treat. Would highly recommend it to seasoned race professionals and enthusiastic road amateurs alike. Also...the lemon drizzle cake was superb."

Ben Rich



"the real value for money is when Gareth answers specific questions with examples from his own experience... you simply cannot get that from anywhere else..."

"Gareth's course is written from his experience as a Suspension Engineer/Technician working for Major teams in Superbikes, but in a way that is easy to digest without being overly heavy on any maths, in this world keeping things simple really matters. Gareth also has an engineering background and helps you to understand the engineering logic required to get along in this field. There is no [nonsense] that you may get from other places, no selling of the topic as a dark art as some suspension tuners will blag, it is kept to the point and will arm you with the knowledge on which you must have to build your own experience and ethics which will allow you to work with Suspension in a Professional level. If you want to get into suspension then this is the course to do, you won't go far wrong by self investing in your own development and learning for yourself the truth about this subject."

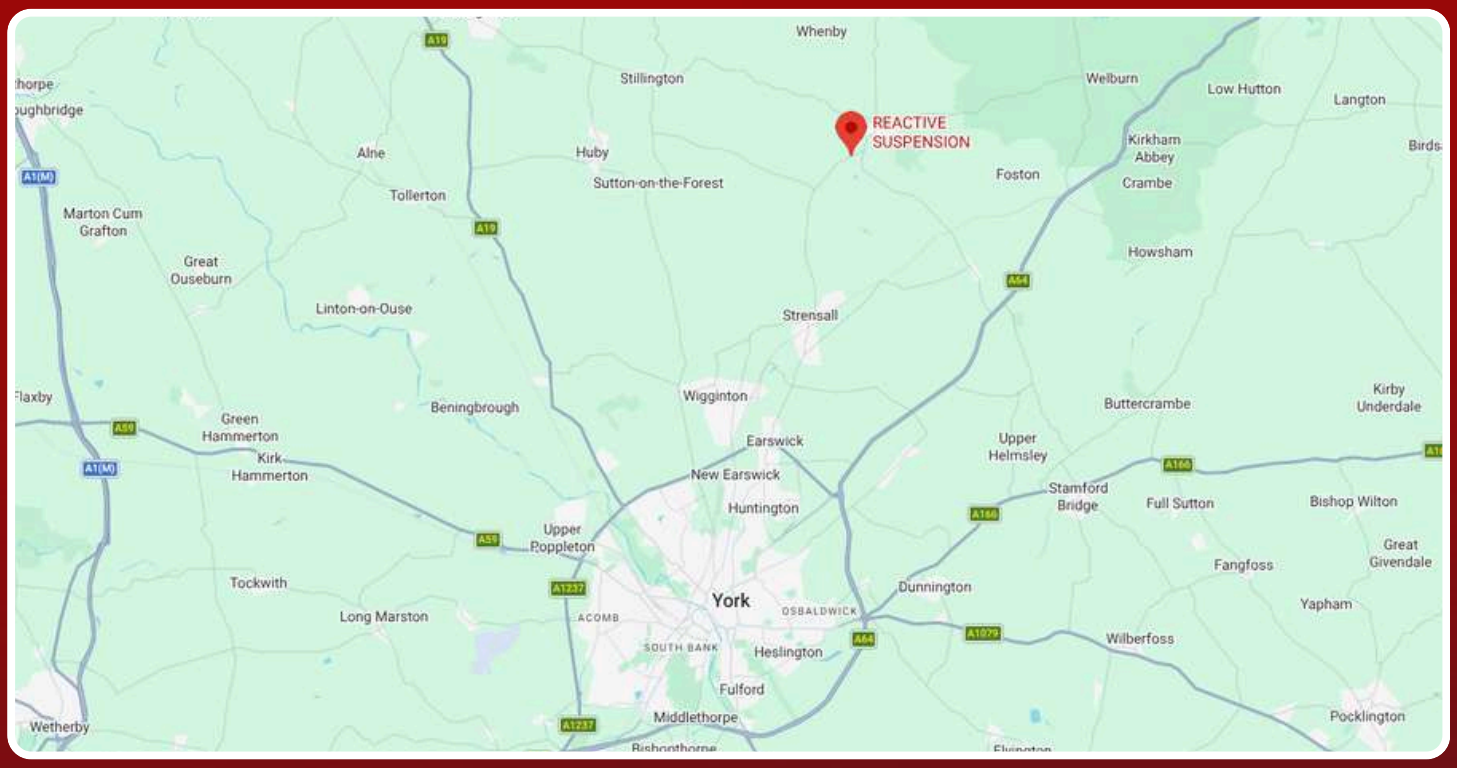
Mark Standley



"I really enjoyed my time and I learned a lot. [Gareth] explained the subject matter in a very practical and easily understandable way, which is a reflection of [his] deep knowledge of the subject, not just in theoretical terms but in every day application."

Frank Nolan

HOW TO FIND US





Address:
Reactive Suspension,
Unit 38 Alan Farnaby Way,
Sheriff Hutton, York,
YO60 6PG.

By car:

Leave the A1237 York ring road at the roundabout signposted for Earswick and Strensall. Travel approximately 3 miles to Strensall. Carry on past the army barracks and turn left at the mini roundabout. When you're on the main street, turn left at the Ship Inn, the road is signposted to Sherif Hutton. Travel 3.5 miles to Alan Farnaby Way which is on the left hand side before you reach the village. Loop around the estate and the Suspension School is on the right at the end of the road.

By Train/Bus:

Unfortunately there isn't any public transport from York to Sheriff Hutton. There is a Taxi rank at the station for those wishing to travel by taxi, companies often charge a surcharge for traveling outside of the York ring road.
York Station Taxis: 01904 623332.



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