

AUTOMOTIVE TECHNICIAN TRAINING

DIGITAL UNIVERSITY PRESS

In association with:

BOSCH



Snap-on®

To support:

automotive skills

IMI

THE INSTITUTE OF THE MOTOR INDUSTRY



ATT Update on DVD

All current and new users should now have the Automotive Technician Training material on DVD. This brings with it, two main advantages:

Firstly, it is much easier to install on individual computers or networks. All you need to do is make one folder and 'empty' the DVD contents into it!

Secondly, it now means that we can structure the material in a more convenient way. To this end the content is now structured as units that match the Automotive Skills NVQ units. Each of these in turn is split into outcomes that contain a number of learning sections. The order of these sections is a scheme of work—all you need to do is allocate an appropriate time!

Questions, handouts, worksheets, assignments and so on, all link to this new structure.

New material has been added to cover all three generic units and there are new sections on completing job cards and other associated subjects.

All in all, ATT just got even better! If you are an existing user please tell others, if you are not yet a user then please let me know and I will arrange a free demonstration so you can see what you are missing!

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STOP PRESS

Tom Denton

DigitalUP is pleased to be working to support the sector skills council as well as the awarding bodies. We are working closely with the Automotive Skills units for the supply of our automotive training material.

This will allow us to produce even more content whilst ensuring that it matches the AS units (and of course the City & Guilds and IMI units) —and meets your training needs—and fits your budget!

Early stages at the moment, but watch the new learning wheel as it develops at:

www.autotraining.co.uk

Light Vehicle
Heavy Vehicle
Body & Paint
Motorcycle
Management
Parts

Light Vehicle Technicians

Click this button for the most comprehensive set of multimedia learning material for cars and vans. It covers all the main MR units and most of the VF units.

This is available on CD/DVD at present and more will soon be presented on line. The material is ideal for NVQ and Technical Certificate courses with qualifications from City & Guilds and the IMI. Over 5000 learning screens and 1600 multiple-choice questions - and that's just for starters!

New Automotive Sensors



Steering angle sensors (Source: Bosch Media)

“...the angular velocity sensor... works on the Coriolis principle. It uses the inertial moment of a vibrating mass in a rotating system...”

Bosch presents the new DRS MM3 generation of sensors, in which several sensor elements can be individually combined and placed together – in a cluster – on a single printed circuit board within one housing. The micromechanically fabricated elements measure angular velocity and linear acceleration. The flexible cluster structure means that the sensor elements can always be precisely adapted to the customer's requirements and to the equipment level of the vehicle. The new MM3 generation of sensors thus always provides the precisely correct data required for the growing number of safety and convenience systems in modern automobiles. Bosch began series production in the first half of 2005.

With its new sensor

cluster, the world-famous automotive components supplier and electronics expert Bosch is entering new territory. The flexible construction allows the detection of angular velocity and acceleration for different paths of force in the vehicle, depending on the customer's precise requirements for the system. The sensor cluster is suitable for highly dynamic and highly precise systems such as the Electronic Stability Program (ESP®) or Rollover Prevention, but also for Hill Hold Control and Active Steering. Each of these systems requires a range of different sensor signals which can all be individually represented thanks to the capability of the DRS MM3 sensor generation to be individually configured. The sensor signals are transmitted via a standard CAN interface and are thus available for all other functions and systems in the vehicle.

For the system of measurement Bosch relies on the tried and tested micromechanical processes. The metering element of the angular velocity sensor is fabricated by the surface micromechanics technique and works on the Coriolis principle *. It uses the inertial moment of a vibrating mass in a

rotating system. The angular velocity sensor element is very resistant to mechanical failures and vibration thanks to its high operating frequency, its all-digital evaluation electronics and its closed loop control.

The metering element for the linear transverse and longitudinal acceleration uses the capacitive change in the micromechanical structures to measure vehicle acceleration. The high resolution of signal detection and processing and the excellent noise behaviour of the sensor allow a wide measurement range even under low transverse acceleration conditions. (Bosch)

* The Coriolis effect is an apparent deflection of a freely moving object as observed from a rotating frame of reference. The effect can be accounted for in the rotating frame by the introduction of a force called the Coriolis force which then balances the equations of the apparent motion. The effect is named after Gaspard-Gustave Coriolis. (TD, taken from Wikipedia)

Automotive Diagnostics Kit

The 2-channel version of the Pico Automotive Diagnostics Kit is an inexpensive car diagnostic tool suitable for use on any type of modern automotive vehicle.

This powerful and flexible automotive diagnostic tool connects to, and is powered by, the USB port of your PC. It has been designed to be easy-to-use, and so is equally suitable for both novice and expert users.

Among the accessories included in the kit is the Pico 600A current clamp which can be used to display starter current waveforms, charging currents and for performing relative compression tests. A Pico 60A current clamp — ideal for measuring the current drawn by smaller devices, such as fuel injectors and fuel pumps — is also included.

For more information please visit:

www.picotech.co.uk

(DigitalUP training material, available online soon, will show how to use this excellent piece of kit for diagnostic work. TD)

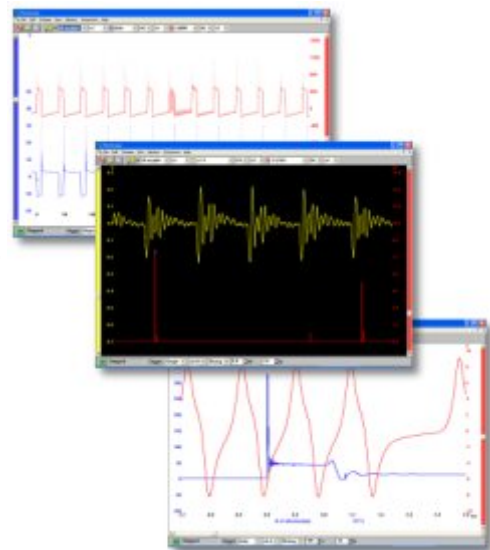


Automotive scope kit (Source: Pico Automotive)

“This powerful and flexible automotive diagnostic tool connects to, and is powered by, the USB port of your PC”

The 2-Channel Automotive Kit (PP280) contains the following items:

- PicoScope 3223 automotive oscilloscope
- 600A AC/DC current clamp
- 60A DC current clamp
- 20:1 attenuator
- 2 x Multimeter probes (1 black, 1 red)
- 2 x Small crocodile clips (1 black, 1 red)
- 2 x Dolphin clips (1 black, 1 red)
- Insulation piercing probes
- Acupuncture probe set
- 2 x TA000 BNC to 4 mm test leads
- 2 x Secondary ignition pickup leads
- 2-pin break out lead
- Automotive software CD
- Quick start guide
- Sturdy carry case



PicoScope waveforms (Source: Pico Automotive)

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WE ARE ON THE WEB:
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As the leading provider of automotive training blended learning systems in the UK and USA, Digital University Press (DUP) specialise in the creation of electronic training materials for the automotive education sector and automotive industry.

Working with world class automotive companies DUP has a substantial training resource that comprises over 7000 screens of learning coupled with a 1500 page workbook, 10,000 image database, 300 worksheets, and 1,500 randomly generated multiple-choice questions. Having control over this intellectual property allows DUP to be-spoke and re-brand but, most importantly, respond to clients in a timely and cost effective way.

Alan Church is the managing director of DUP with the team being led by Tom Denton the UK best selling automotive author.

ATT Online

Have you visited www.autotraining.co.uk yet?

If so have you let other staff and students know so they can create a login and get access to even more automotive material?

This new resource is just starting development so keep checking back. Using this online delivery method will allow DUP to roll out updated material even more quickly. It also means that students (and staff) can access it from anywhere, anytime.

At the moment it is all FREE so what are you waiting for!