

## Advance needs to be planned



*Research on emissions, adaption values, and broadband oxygen sensors in progress (2011).*

**You could choose to keep doing with your workshop what you have been doing for years as it always went well.**

**Did it?....and does your company still run as well as the first time you got a buzz from what it gave back to you?**

Being busy is not enough; the returns need to be there too, the world and its charge out rates are moving on too.

Being busy is often brought on by stumbling with jobs that do not 'want to be fixed'. These jobs do not just cost money; they also make you lose the confidence you have in yourself and your operation. They make you select certain jobs and pass the rest on, to avoid being hurt again. Downhill slope.

The incredible advance in electronics and general decline in quality means that there will be many more of these 'weird electronic' jobs coming your way.

How would it feel if you could take on any job with the confidence that you are going to do well with the work given to you? Try out the AECS diagnostic seminars; create a team-training plan for 2011. Do it now!

### **Staff retention**

Diagnostics is an incredible important part of your work right now. The right diagnosis first time, quickly and with confidence, will make all your staff proud of being part of your shop whether they are involved with the diagnostic process or not. Too many technicians jump ship as they think that they are stuck in a go nowhere job. That can be crippling for any company.

Advancing your workshop can only be done with skill improvement, correct tooling, and technical back up.

AECS has a complete training plan to advance experienced technicians. We can lift the skill and

## AECS equipment

VTEQ (made in Spain) is a long established brake tester manuf. producing equipment for distributors all over the world, including AECS Ltd in NZ.

We have installed machines throughout New Zealand, prices ranging for small workshops to large dealerships. The VTEQ 2000 analogue brake tester at \$17,000 (+gst, installed, but excl. work on building)

2080 analogue brake tester. NZ install done by AECS Ltd



3080 digital testlane, NZ install done by AECS Ltd

3080 Suspension and brakes inspection test lane at \$32,000 +gst. The 3080 (and 2080) has a testing ability of up to 6 ton axle weight and can test shocks and alignment in one drive through.

Quick, sturdy and reliable!

Sales, Installation and training by AECS Ltd

Check our catalogue for specifications at:

[www.aecs.net](http://www.aecs.net) 06 8749 077

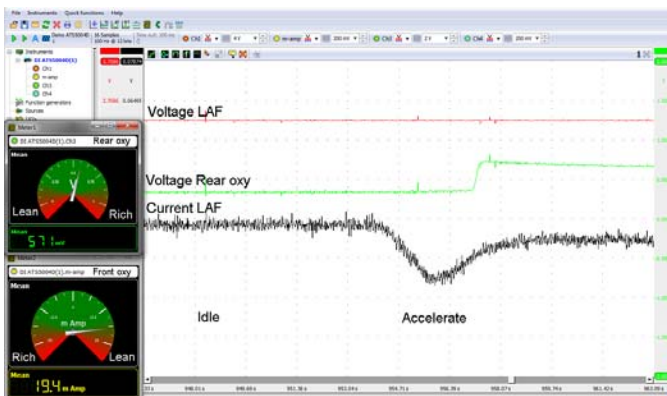
# VTEQ

confidence level of you or your staff to a level, which makes sense in today's workshops.

We have been doing this for more than 10 years now and keep evolving with the industry.

### Modern technology

The development and updating of training modules takes a lot of research. The research we do during the summer period, which is our busiest time of the year. We develop better and quicker diagnostic methods all the time. During the summer, we also test tools on the latest vehicles to see if the tooling falls behind or just needs further developing. Our NZ tool research is used in many countries around the world by equipment manufacturers e.g. VTEQ, Brainbee, AVL and GMTO.



ATS 3 channel scope recording and setting for a LAF oxygen (pre cat) sensor voltage and current, in combination with the rear (after cat) oxygen sensor.

### Rebuilt AED and EMS 1-1

We have just completed another research period. It has been enjoyable.

The AED training seminar has been completely re-written. The core is still the same; it teaches you how to think in diagnostics, with no nonsense approach. The re-written AED now includes for example the relation between wiring problems and adaption value error codes, drive by wire throttle body position sensor inspection, a bit on CAN data bus, the internal of ignition coils and how to read late model wiring diagrams.

The AED has always been our most successful seminar, I can promise you that even if you already have done this one in the past you will enjoy it again as an almost new seminar.

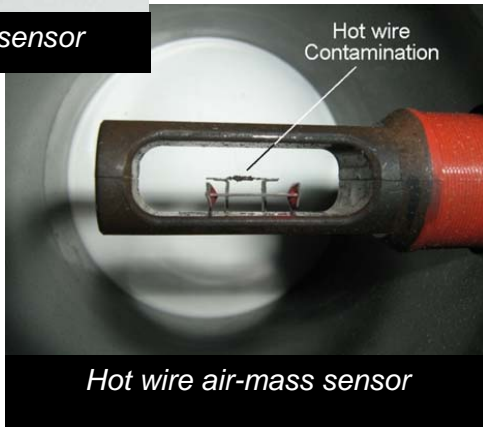
The EMS 1-1 has also been revised. This seminar is still a first line of attack seminar, but is now completely up with the latest state of technology. The training manual went from a 43-page book to a 95-page reference guide. I am very proud of it, and I am sure you will enjoy it! For example, the approach to oxygen sensors has been updated; we deal with 1 volt, 5 volt and a bit of broadband oxygen sensor diagnostics. We have put in many new scope patterns, with explanation, for you as a reference.

The chapter on ignition systems has expanded greatly, and includes the latest ECU ignition fault code setting technologies. Just so, you can understand the relation between certain fault codes and the actual faults.

We have also included the latest air-mass sensors (includes frequency sensors) and common faults plus the effect on the engine's behaviour. The Idle system chapter has also been expanded with more relevant information.



Oxygen sensor



Hot wire air-mass sensor

### Research

During this summer break, I also had the opportunity to do more testing on a brand new common rail vehicle, a brand new Hybrid and a new vehicle with broadband oxygen sensor.

The data and conclusions will all filter through into my training seminars for your advantage.

The experience gained this summer, with the diagnostic tools we supply; we will share with our suppliers in the way of pre-sets and hardware changes. You will get the benefit of that too in due time.

Some of my findings are that the relationship between the different electronic controlled systems in a car have been expanded enormously! For example, when something goes wrong in one system, like the stability control, the gearbox control, airbag and the engine control are all affected. Where do you start when the complaint is only that the engine is not performing well?

### Late breaking news!!

This IS special! We have achieved a major price wind back

The **ATS scope** has dropped in price due to the following set of circumstances:

- 1) favourable exchange rate, 2) a bulk purchase deal, 3) AECS has achieved a higher dealer level, 4) political changes in the factory, and 5) severe economic pressures in the EU.

Use this to your advantage, a super level scope has never been so close within your reach!

- ATS 5000 (2 channel + signal generator) or
- ATS 5004d (4 channel differential scope)

For a staggering low **\$3,470.00**

Expand your existing scope set (multichannel sw), build a set up, or buy a whole set for **\$6,692.00**

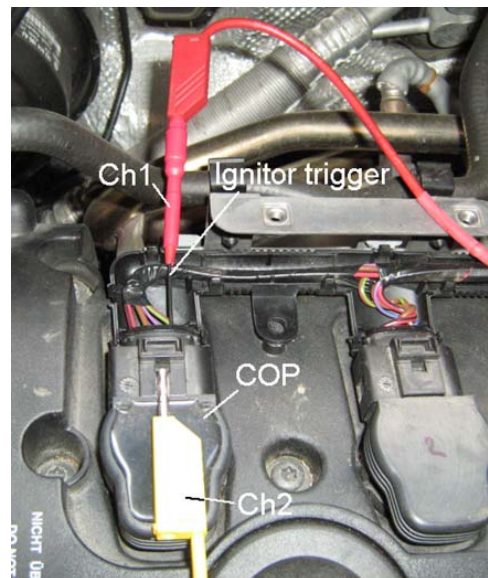
Call us at 06 8749 077 or, check out the spec's at [www.aecs.net](http://www.aecs.net)



ATS 5000 50Mhz Scope

ATS 5004d scope in tool case

Many modern high tech options available, like G sensor, pressure sensor, return flow sensor, AC pressure sensor. Check out our web catalogue, this is a very special



Ignition analyses on 2007 FSI Golf

It is the **logical advanced steps** in diagnostics, which we teach during our seminars.



2010 Camry Hybrid battery for research

### Practical

We have a practical content of our training, as it is not important just knowing how it works, it is important to be able to find and repair faults with brain power.

Next time when you have an employee struggling with a job, please think about the advances he needs to go through each year just to keep up! Don't just complain and say "where do you get good technicians from these days?" get them skilled and tooled up with us at AECS, it works motivational and increases your bottom line!

Put a **2011 training plan together now!** I certainly hope to see you or your staff somewhere in the country soon.

*Herbert*

For **AECS Ltd:**  
H.P. Leijen  
(trainer/research)  
E-Mail: [hpleijen@aececs.net](mailto:hpleijen@aececs.net)



**New Product**

**Revolution in true performance tuning!**

AVL combustion pressure sensor DPM 800.  
Measure e.g. exactly when detonation starts,  
see peak pressure vs crank timing, determine  
mean effective pressure & much more.

*For Diesel and Petrol.*

Factory made customised glow/spark plugs.

## AECS equipment



**Automatic  
air-conditioning station  
for recovering, recycling,  
and  
recharging refrigerant.**

#### Standard Features:

- ▶ Weight scales
- ▶ Heated storage bottle
- ▶ Recovery compressor
- ▶ Vacuum pump
- ▶ Automated solenoid valves
- ▶ Oil separation + injection
- ▶ Filtration and de-acidising
- ▶ Charge volume database
- ▶ Component flushing software
- ▶ Serviced on your premises!
- ▶ AECS technical support.



**Aircon  
Season  
Special**

Standard price is  
\$7,916 + GST.  
Printer in picture is  
optional

**Now!  
\$5690.- + gst**

**Profit from our bulk buying**

If you want to take advantage of this low price, or want to know more about our finance options! Contact the AECS equipment team on **06 8749077**.





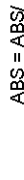


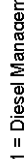
**Only 3 left from this season's container load!**

Idea: Purchase on your Capricorn account!

# AECS 2011 Training calendar

February	March	April	May	June	July	August	Sept	October	November
1	1	1	1	1	1	1	1	1	1
2	2 yes!	2	2	2	2	2	2	2	2
3	3 yes!	3	3 Auckland Scan1	3	3	3 Auckland Aircon	3	3	3 Auckland AED
4	4 yes!	4	4 Auckland Scan1	4	4	4 Auckland Aircon	4	4	4 Auckland EMS 1-4
5	5	5	5 Auckland EMS1-1	5	5	5	5	5	5 Auckland EMS 1-4
6	6 waitangi day	6	6 Auckland EMS1-1	6	6	6	6	6	6
7	7	7	7 Christchurch AED	7	7	7	7	7	7
8	8	8	8 Christchurch AED	8	8	8	8	8	8
9	9	9	9 Christchurch EMS1-1	9	9	9 Private Training	9	9	9
10	10	10	10 Christchurch EMS1-1	10	10	10 Private Training	10	10	10
11	11	11	11 Invercargill DMS1-3	11	11	11	11	11	11
12	12	12	12 Invercargill DMS1-3	12	12	12	12	12	12
13	13	13	13 Christchurch ATS	13	13	13 New Plymouth EMS1-1	13	13	13
14	14	14	14 Christchurch ATS	14	14	14 Palmerston North DMS1-3	14	14	14
15	15	15	15 Christchurch ATS	15	15	15 Palmerston North DMS1-3	15	15	15
16	16	16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18	18	18
19	19	19	19	19	19	19 Hastings ATS	19	19	19
20	20	20	20	20	20	20 Hastings ATS	20	20	20
21	21	21	21	21	21	21 Hastings AED	21	21	21
22	22	22	22	22	22	22 Hastings AED	22	22	22
23	23	23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25	25	25
26	26	26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28	28	28
29	29	29	29	29	29	29	29	29	29
30	30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31	31

Please note: All effort has been made to ensure the training & course dates are correct, however please contact us first before publishing information from this calendar. Ph: 06-874 9077.  
Created 13 Jan 2011 CML

	Sundays		ABS = ABS/ Traction Control Systems seminar
	Public/school Holidays		EMS1-1 = Engine management Systems 1 (module 1) seminar
	Date Changes		EMS1-2 = Engine management Systems 1 (module 2) seminar
	PRIVATE Training		EMS1-4 = Engine management Systems 1 (module 4) seminar (hybrid)
			SCAN1 = Scan Tool diagnostics
			AED = Automotive Electronic Diagnostic seminar
			ABS = ABS/ Traction Control Systems seminar
			EMS1-1 = Diesel Management Systems 1 Module 1 seminar
			EMS1-2 = Diesel Management Systems 1 Module 2 seminar
			EMS1-3 = Diesel Management Systems 1 Module 3 seminar
			AIRCON = Air-conditioning training
			ATS= Comprehensive Scope training
			TBA - To be advised