Web Based Training Catalogue
2012

Graz
Austria

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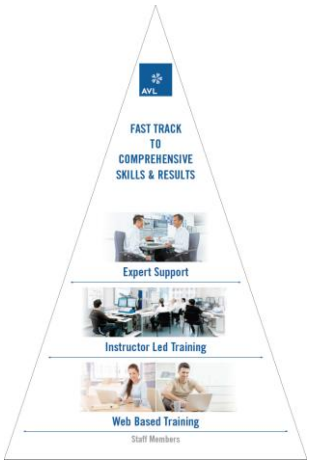
FAST TRACK TO
COMPREHENSIVE
SKILLS.

TRAINING
EQUIPPING PEOPLE FOR ENGINE AND POWERTRAIN TESTING

Engine / Powertrain development is taking place in an extremely challenging and competitive environment. Fast time-to-market requirements, increasing complexity and strong cost pressure are setting the stage for development projects. Success largely depends on the people who can make it happen. Their motivation and skills set are the key.
If project team members are not optimally trained on the testing tools or shown the methodical approach to take, projects may not be completed in terms of time and quality and usually result in cost overruns.

AVL's TRAINING program equips for competent, safe and reliable engine / powertrain testing.

The AVL Training Philosophy
Different user groups receive their base education by means of Web-Based Training. This provides them with the required base information to get going. From there they can move on to more specific education based on their job requirements, allowing staff members to specialize. Dedicated expert support activities provides knowledge enhancement based on the customer's specific testing tasks.



Web-Based Training
This self-managed learning represents an innovative and modern approach to prepare individual staff for working with new equipment and technologies or using certain functionality for the first time without taking them out from their working environment.
However, it is also an optimal way to educate larger team structures, possibly distributed over various locations or countries, and make them familiar with specific knowledge for sustained quality and coherence in testing.

Instructor-led Training

Training classes are conducted either at the customer site or at one of the global AVL Skills Centers. Professional trainers well equipped class rooms and simulators for practical exercises as well as real test equipment guarantee efficient knowledge transfer and fast learning.

Available training classes:

Product Training courses allow staff to develop knowledge to understand and utilize AVL test systems for engine / power train testing.
Technology Seminars for staff to understand existing and new technologies, testing topics as well as legislative demands for engine / powertrains.

Web-Based Training courses and instructor-led Training can easily be made available to customer education centers for integration in their training catalogues.

Benefits

- Sustained build-up of knowledge in the operation of AVL testing equipment
- Fast track to comprehensive skills to meet testing goals
- Avoided loss of time due to measurement setup and control errors

For Web-Based Training:

- Ensured basic competence of all staff
- High level of staff availability for daily operation (no absence for training)
- Lean training budgets (no travel cost)

Financial Aspects

Return on this effective training investment is immediate. E.g. avoiding the additional costs associated with a 2-week time delay in a development project would already pay for the education of a small team of operators and testing engineers

References

- > 1600 training days per year for products and technologies at customer sites or AVL Skills Centers
- > 500 trainees per year from almost all engine and powertrain companies

Customer statements

- Expectations met to 100%
- Professional trainers - excellent expertise and know-how of trainers
- Interesting discussions and exchange of experiences
- Well-structured and consistent training content

www.avl.com/training

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WEB BASED TRAINING

TT01A.00

WEB TRAINING: OPERATING PUMA OPEN

TT03EA001W.01

The trainee has theoretical knowledge to operate an engine test bed based on the automation system PUMA Open and is well informed about basic elements to create automatic testruns.
By consecutive self managed practical exercises on a real PUMA Open the trainee is able to use the test system.

Training Content (web based training)

- Explanation of the PUMA Basic functions (operating steps, data acquisition, limit monitoring, engine monitoring)
- Operating the PUMA Open Test Bed in manual and automatic mode
- Selection of various parameter sets
- Execution of measurement requests
- Display and storage of measurement results
- Parameterization of typical automatic test sequences
- Performing manual and automatic tests
- Result handling: Visualisation of measurements (temperature, pressure, emission)

Notes

- Training class is conducted in English (documentation, learning, assessment)
- See demo classes for free www.avl.com/training

Prerequisites

- Trainee
- Basic knowledge of the operation of an unit under test
- Knowledge of PC's and Windows
- Web access
- Email Account
- Browser: Internet-Explorer 7.0 or higher, Firefox 2.0 or higher
- Cookies and JavaScript have to be activated
- Flash Player minimum 7.0

Scope of Supply

Each consisting of:

- 24 hours Web account for one trainee over 12 weeks
- AVL Certificate for registered trainee

WEB TRAINING: OPERATING BOBCAT

TT03EA002W.01

The trainee has theoretical knowledge to operate Bobcat.
By consecutive self managed practical exercises on a real Bobcat the trainee is able to use the test system.

Training Content (web based training)

- System overview hardware / software
- Explanation of the Bobcat functions
- Operating steps
- Data acquisition
- Limit monitoring
- Engine monitoring
- Operating Bobcat in manual and automatic mode

Notes

- Training class is conducted in English (documentation, learning, assessment)
- See demo classes for free www.avl.com/training

Prerequisites

- Trainee
- Basic knowledge of the operation of an unit under test
- Knowledge of PC's and Windows
- Web access
- Email Account
- Browser: Internet-Explorer 7.0 or higher, Firefox 2.0 or higher
- Cookies and JavaScript have to be activated
- Flash Player minimum 7.0

Scope of Supply

Each consisting of:

- 24 hours Web account for one trainee over 12 weeks
- AVL Certificate for registered trainee

WEB TRAINING: AVL FUEL EXACT

TT04AA008W.01

The participant is able to commission, operate and to maintain the AVL FuelExact. By consecutive self managed practical exercises on a real AVL FuelExact the trainee is able to use the test system.

Training Content (web based training)

- Basic knowledge of fuel consumption measurement
- Safety requirements
- Test bed requirements
- System setup (hydraulic and electric installation)
- Measurement principle of the PLU 121 flow meter
- Measurement principle of the density meter
- Operating principle
- Operation via PC by using the AVL Device Control Software (DCS)
- Explanation of interfaces
- Check and change of system specific parameters
- Drain and fill the instrument
- Maintenance schedule
- Simple maintenance work

Notes

- Training class is conducted in English (documentation, learning, assessment)
- See demo classes for free www.avl.com/training

Prerequisites

- Trainee
- Basic knowledge of the operation of an unit under test
- Knowledge of PC's and Windows
- Web access
- Email Account
- Browser: Internet-Explorer 7.0 or higher, Firefox 2.0 or higher
- Cookies and JavaScript have to be activated
- Flash Player minimum 7.0

Scope of Supply

Each consisting of:

- 24 hours Web account for one trainee over 12 weeks
- AVL Certificate for registered trainee

WEB TRAINING: AVL FUEL MASS FLOW METER

TT04AA006W.01

The trainee has theoretical knowledge to operate the Fuel Mass Flow Meter, to perform measurements and to carry out simple maintenance. By consecutive self managed practical exercises on a real Fuel Mass Flow Meter the trainee is able to use the test system.

Training Content (web based training)

- Basic knowledge of fuel consumption measurement
- Measurement principle
- System setup (hydraulic and electric installation)
- Operation via PC
- Explanation of interfaces
- Simple maintenance work

Notes

- Training class is conducted in English (documentation, learning, assessment)
- See demo classes for free www.avl.com/training

Prerequisites

- Trainee
- Basic knowledge of mechanics, hydraulics and measurement techniques
- General test bed knowledge
- Web access
- Email Account
- Browser: Internet-Explorer 7.0 or higher, Firefox 2.0 or higher
- Cookies and JavaScript have to be activated
- Flash Player minimum 7.0

Scope of Supply

Each consisting of:

- 24 hours Web account for one trainee over 12 weeks
- AVL Certificate for registered trainee

WEB TRAINING: AVL FUEL BALANCE

TT04AA002W.01

The participant is able to commission, operate and to maintain the AVL Fuel Balance. By consecutive self managed practical exercises on a real AVL Fuel Balance the trainee is able to use the test system.

Training Content (web based training)

- Basic knowledge of fuel consumption measurement
- Safety requirements
- Test bed requirements
- System setup (hydraulic and electric installation)
- Measurement principle
- Operating principle
- Operation via PC
- Explanation of interfaces
- Check and change of system specific parameters
- Drain and fill the instrument
- Maintenance schedule
- Simple maintenance work

Notes

- Training class is conducted in English (documentation, learning, assessment)
- See demo classes for free www.avl.com/training

Prerequisites

- Trainee
- Basic knowledge of the operation of an unit under test
- Knowledge of PC's and Windows
- Web access
- Email Account
- Browser: Internet-Explorer 7.0 or higher, Firefox 2.0 or higher
- Cookies and JavaScript have to be activated
- Flash Player minimum 7.0

Scope of Supply

Each consisting of:

- 24 hours Web account for one trainee over 12 weeks
- AVL Certificate for registered trainee

WEB TRAINING: AVL FUEL CONS. KMA4000

TT04BA015W.01

The trainee has theoretical knowledge to operate the Fuel Consumption System KMA 4000, to perform measurements and to carry out simple maintenance. By consecutive self managed practical exercises on a real KMA 4000 the trainee is able to use the test system.

Training Content (web based training)

- Basic knowledge of the fuel consumption measurement
- Measurement principle
- System setup (hydraulic and electric installation)
- Check and change of important system parameters
- Operation via PC
- Simple maintenance work
- Explanation of interfaces

Notes

- Training class is conducted in English (documentation, learning, assessment)
- See demo classes for free www.avl.com/training

Prerequisites

- Trainee
- Basic knowledge of mechanics, hydraulics and measurement techniques
- General test bed knowledge
- Web access
- Email Account
- Browser: Internet-Explorer 7.0 or higher, Firefox 2.0 or higher
- Cookies and JavaScript have to be activated
- Flash Player minimum 7.0

Scope of Supply

Each consisting of:

- 24 hours Web account for one trainee over 12 weeks
- AVL Certificate for registered trainee

WEB TRAINING: INDICOM EVALUATION

TT04BA006W.01

The trainee has theoretical knowledge to evaluate standard indicating measurements. By consecutive self managed practical exercises on a real indicating measurement instrument the trainee is able to use the test system.

Training Content (web based training)

- Evaluation: Creating a line diagramm including a result table
- Calculation of results by means of CalcGraf
- Data comparison on the example of pressure curves
- Data Export during a report into ASCII - file

Notes

- Training class is conducted in English (documentation, learning, assessment)
- See demo classes for free www.avl.com/training

Prerequisites

- Trainee
- Knowledge of PC's and Windows
- Skills for indicating data
- Basic knowledge regarding indicating
- Web access
- Email Account
- Browser: Internet-Explorer 7.0 or higher, Firefox 2.0 or higher
- Cookies and JavaScript have to be activated
- Flash Player minimum 7.0

Scope of Supply

Each consisting of:

- 24 hours Web account for one trainee over 12 weeks
- AVL Certificate for registered trainee

WEB TRAINING: AVL MICRO SOOT SENSOR

TT05DA009W.01

The trainee has theoretical knowledge to operate the Micro Soot Sensor, to perform measurements and to carry out simple maintenance. By consecutive self managed practical exercises on a real Micro Soot Sensor the trainee is able to use the test system.

Training Content (web based training)

- Basic knowledge of emissions measurement
- Measurement principles, device design and different measurement procedures
- Installation of Sampling Probe and Sampling Line
- Operation via PC
- Explanation of interfaces
- Simple maintenance
- Overview about options

Notes

- Training class is conducted in English (documentation, learning, assessment)
- See demo classes for free www.avl.com/training

Prerequisites

- Trainee
- Basic knowledge of mechanics, hydraulics and measurement techniques
- General test bed knowledge
- Web access
- Email Account
- Browser: Internet-Explorer 7.0 or higher, Firefox 2.0 or higher
- Cookies and JavaScript have to be activated
- Flash Player minimum 7.0

Scope of Supply

Each consisting of:

- 24 hours Web account for one trainee over 12 weeks
- AVL Certificate for registered trainee

WEB TRAINING: AVL PARTICLE COUNTER

TT05DA010W.01

The participant is able to commission, operate and to maintain the AVL Particle Counter. By consecutive self managed practical exercises on a real AVL Particle Counter the trainee is able to use the test system.

Training Content (web based training)

- Basic knowledge of particle counting
- Why particle counting (legislative requirements)
- Safety requirements
- Test bed requirements
- System setup (electric installation, pneumatic connections, compressed air supply, use of Butanol)
- Measurement principle
- Operating principle
- Operation by DUI (Device User Interface: Laptop/PC)
- Check and change of system specific parameters
- Maintenance schedule
- Maintenance activities

Notes

- Training class is conducted in English (documentation, learning, assessment)
- See demo classes for free www.avl.com/training

Prerequisites

- Trainee
- Basic knowledge of the operation of an unit under test
- Knowledge of PC's and Windows
- Web access
- Email Account
- Browser: Internet-Explorer 7.0 or higher, Firefox 2.0 or higher
- Cookies and JavaScript have to be activated
- Flash Player minimum 7.0

Scope of Supply

Each consisting of:

- 24 hours Web account for one trainee over 12 weeks
- AVL Certificate for registered trainee

WEB TRAINING: AVL SMOKE METER

TT05DA003W.01

The trainee has theoretical knowledge to operate the AVL Smoke Meter, to perform measurements and to carry out simple maintenance. By consecutive self managed practical exercises on a real AVL Smoke Meter the trainee is able to use the test system.

Training Content (web based training)

- Basic knowledge of particulate measurement
- Installation of Sampling Probe and Sampling Line
- Measurement principles and different measurement procedures
- Operation via PC
- Explanation of important parameters
- Sampled volume check (using Volume Tester)
- Reflectometer head check (using Reflectance Standards)
- Leak check
- Overview about options for the AVL Smoke Meter

Notes

- Training class is conducted in English (documentation, learning, assessment)
- See demo classes for free www.avl.com/training

Prerequisites

- Trainee
- Basic knowledge of mechanics, hydraulics and measurement techniques
- General test bed knowledge
- Web access
- Email Account
- Browser: Internet-Explorer 7.0 or higher, Firefox 2.0 or higher
- Cookies and JavaScript have to be activated
- Flash Player minimum 7.0

Scope of Supply

Each consisting of:

- 24 hours Web account for one trainee over 12 weeks
- AVL Certificate for registered trainee

WEB TRAINING: AVL OPACIMETER

TT05DA002W.01

The participant is able to commission, operate and to maintain the AVL Opacimeter. By consecutive self managed practical exercises on a real AVL Opacimeter the trainee is able to use the test system.

Training Content (web based training)

- Basic knowledge of opacity measurement
- Safety requirements
- Test bed requirements
- System setup (electric installation, pneumatic connections, compressed air supply)
- Measurement principle
- Operating principle
- Operation by using the instrument controller IC 4210
- Check and change of system specific parameters
- Maintenance and calibration schedule
- Simple maintenance work
- Leak check, linearity check
- Perform a calibration

Notes

- Training class is conducted in English (documentation, learning, assessment)
- See demo classes for free www.avl.com/training

Prerequisites

- Trainee
- Basic knowledge of the operation of an unit under test
- Knowledge of PC's and Windows
- Web access
- Email Account
- Browser: Internet-Explorer 7.0 or higher, Firefox 2.0 or higher
- Cookies and JavaScript have to be activated
- Flash Player minimum 7.0

Scope of Supply

Each consisting of:

- 24 hours Web account for one trainee over 12 weeks
- AVL Certificate for registered trainee

WEB TRAINING: AVL FUEL TEMP. CONTROL

TT06AA003W.01

The trainee has theoretical knowledge and to maintain the Fuel Temperature Control. By consecutive self managed practical exercises on a real Fuel Temperature Control the trainee is able to use the test system.

Training Content (web based training)

- Basic knowledge of fuel conditioning
- Operating principle
- System setup (hydraulic and electric installation)
- Check and change of system specific parameters
- Operation via PC
- Simple maintenance work
- Explanation of interfaces

Notes

- Training class is conducted in English (documentation, learning, assessment)
- See demo classes for free www.avl.com/training

Prerequisites

- Trainee
- Basic knowledge of mechanics, hydraulics and measurement techniques
- General test bed knowledge
- Web access
- Email Account
- Browser: Internet-Explorer 7.0 or higher, Firefox 2.0 or higher
- Cookies and JavaScript have to be activated
- Flash Player minimum 7.0

Scope of Supply

Each consisting of:

- 24 hours Web account for one trainee over 12 weeks
- AVL Certificate for registered trainee

WEB TRAINING: FUEL CONDITIONING COMPACT

TT06AA003W.02

The participant is able to operate and to maintain the Fuel Conditioning COMPACT.

Training Content (web based training)

- Basic knowledge of fuel conditioning
- Operating principle
- System setup (hydraulic and electric installation)
- Check and change of system specific parameters
- Operation via PC
- Simple maintenance work
- Explanation of interfaces

Notes

- Training class is conducted in English (documentation, learning, assessment)
- See demo classes for free www.avl.com/training

Prerequisites

- Trainee
  - Basic knowledge of the operation of an unit under test
  - Knowledge of PC's and Windows
- Web access
  - Email Account
  - Browser: Internet-Explorer 7.0 or higher, Firefox 2.0 or higher
  - Cookies and JavaScript have to be activated
  - Flash Player minimum 7.0

Scope of Supply

Each consisting of:

- 24 hours Web account for one trainee over 12 weeks
- AVL Certificate for registered trainee