



AHV IV Vibrator Maintenance Training

(ION Part Number: 1019-010006)

Course Information

Course Description:

Students will discuss the theory of Vibroseis operation, energy sources, data acquisition, vehicle construction and location of major components. In depth discussion of the electrical, hydraulic, and drive system, covering operations, adjustments, calibration and maintenance.

Prerequisites:

An understanding and familiarity with personal computers and seismic data acquisition/collection methods. Three years experience in troubleshooting and repairing mechanical and hydraulic systems. Advanced training in proportional hydraulics or equivalent work experience is preferred.

Course Fee: \$5000.00 per person (see [Terms and Conditions](#))

Facility: Stafford, TX USA

Duration: 10 days

Scheduling: Please send request to training@iongeo.com



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Land Imaging Systems
Training Group**

Daily Modules for AHV-IV Vibrator Maintenance Training

Day One

1. Vibroseis Theory of Operation
 - Vibroseis Theory
 - Energy Sources
 - Data Collection & Geophones
 - Force Mass & Acceleration
2. Vibrator Vehicle
 - Vibrator Vehicle Construction
 - PLS (PreLoad Series) Theory
 - Vibrator Vehicle Specification Sheet
 - Major Components
 - Frame and General Assembly
 - Engine/Pump Package
 - Drive Train
 - Vibrator and Lift Assemblies
3. Locate Major Components as discussed in class on the Vibrator Vehicle

Day Two

1. Introduction to Basic Electricity and Electronics
2. Introduction to AC Circuits
3. Reading Electrical and Electronic Schematics
4. Locate Major Components as discussed in class on the Vibrator Vehicle



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Day Three

1. Vehicle Electrical System
2. DDEC III Engine Protection System
3. Vibrator Control System
4. Locate Major Components as discussed in class on the Vibrator Vehicle

Day Four

1. Fundamental of Hydraulics
2. Reading Hydraulic Schematics Basics
3. Basic Vehicle Theory of Operation
4. Locate Major Components as discussed in class on the Vibrator Vehicle

Day Five

1. Relationship between Auxiliary, Vibrator and Drive Hydraulics Systems
2. Auxiliary Hydraulic System Theory and Maintenance
3. Auxiliary Manifold
4. Locate Major Components as discussed in class on the Vibrator Vehicle

Day Six

1. Drive System Theory and Maintenance
2. Locate Major Components as discussed in class on the Vibrator Vehicle

Day Seven

1. Vibrator System Theory and Maintenance
2. Reaction Mass
3. Vibrator Maintenance and Repair



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Day Eight

1. Settings, Adjustment and Calibration
2. Engine Maintenance

Day Nine

1. Hydraulic System Troubleshooting

Day Ten

1. Air-conditioning Operation
2. Legal and Environmental Considerations
3. Recommended Lubrication and Fluid Changes
4. Contamination
5. Course Summary and Q&A
6. Final Exam
7. Course Evaluation



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1.1 Training

1.1.1 Definitions

1.1.1.1 One (1) “training day” means eight (8) hours of instruction time per student, including breaks.

1.1.1.2 One “unit” of training is equal to ten (10) training days.

1.1.2 Terms and Conditions

1.1.2.1 The purchase of one (1) unit of training is equal to ten (10) days of training for one (1) individual.

1.1.2.2 Training units may be used after delivery of the system to Buyer, but will expire one (1) year after system delivery.

1.1.2.3 Class size will be limited to a maximum of eight (8) students and require a minimum of four (4) students unless otherwise agreed to in writing by Buyer and Seller.

1.1.2.4 The training location will be agreed to by Buyer and Seller. The training location is required to, at all times, meet reasonable health and safety conditions. If, in the instructor’s opinion, a location selected by the Buyer at any time fails to satisfy the above conditions, the instructor may postpone the class until such time that the location satisfies the above conditions.

1.1.2.5 The Buyer will be responsible for all travel related expenses (including but not limited to airfare, lodging, meals, and local transportation) of their personnel attending training at any ION facility unless agreed to in writing by Buyer and Seller.

1.1.2.6 If Buyer requests that training be made available at Buyer’s site, Buyer will be responsible for travel and lodging expenses for the Seller’s instructor. Buyer will also be responsible for portal-to-portal charges and wage expenses for Seller’s instructor if travel is required outside of the standard ION workday and workweek.

1.1.2.7 Seller’s training classes delivered at the Buyer’s site will be performed at such times to conform to the standard ION workday and workweek unless agreed to in writing by Buyer and Seller. Buyer will be responsible for wage expenses for Seller’s instructor if training is required outside of the standard ION workday and workweek.

1.1.2.8 Training will be conducted in English. If a translator is required, the Buyer will be responsible for providing, at Buyer’s expense, a translator for the duration of the training.



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- 1.1.2.9 If buyer requests documentation in any language other than English, the Buyer will be responsible for all costs associated with the translation of said documentation.
- 1.1.2.10 Additional training days may be purchased from ION. The current price per training day as of 07/01/07 is \$500.00. This price is subject to change without prior notification.
- 1.1.2.11 Buyer has the right to cancel any confirmed class or attendance of any prior registered student up to ten (10) business days prior to class start date with no charge to Buyer. If Buyer cancels the confirmed class or attendance of any registered student within ten (10) days prior to class start date, Buyer will pay 50% of the standard course cost per seat cancelled in cash.
- 1.1.2.12 Seller has the right to cancel any confirmed class up to ten (10) business days prior to class start date with no charge to Seller. If Seller cancels a confirmed class within ten (10) business days or misses the confirmed class date, Seller will deliver the subsequent class at 50% of the standard course cost to Buyer. If Seller is forced to cancel a confirmed class for reasons outside of Seller's control, such as weather, acts of terrorism, labor disputes, emergencies, fire, laws or regulations, or other reasons, Seller may cancel any confirmed class at any time at no charge to Seller.