

### Instructors:

**Steve Hollon:** Over 25 years of operator experience. 10 years active duty, 14 years reserve in the Navy Seabees. Currently holds Advanced Equipment Operator status with the Seabees. Has been an equipment operator for underground utility installations, road building, subdivision and commercial developments and a finish Motor Grader and Bulldozer operator for asphalt companies. Certified instructor for: Trenching and shoring, OSHA Regulations, Rough Terrain and Warehouse Forklifts, Excavators, Backhoe Loaders, Skidsteer Loaders, Front End Loaders, Motor Graders, Scrapers, Off-Road Dump Trucks, and Bulldozers.

**Steve Higgins:** Vocational Education instructor has attended Lansing Community College Truck program. Has 20 years experience in the Heavy equipment operating and repair field.

**Elmer Monroe:** has over 30 years of technical and operational experience.

### Program Personnel

**Jon Hoffman-** General Service Manager

**Steve Higgins-** Training Director

**Steve Hollon-** Operator/Technical Trainer

### Mission Statement:

To provide the best educational and hands on heavy equipment operation training and try to give our trainees the tools to succeed into today's construction work force.



REV. 01/03/06



## AIS Training Center

AIS Training Center Volume 5, May 2006

## Heavy Equipment Technician & Operator Training



[WWW.AISEQUIP.COM](http://WWW.AISEQUIP.COM)

**Level 1. Orientation and Certification**

- A one day orientation on operation and maintenance.
- For experienced operators who have to show proof of training or require orientation to a specific machine.
- A hands-on demonstration of employer required operations.
- Upon satisfactory completion of the training, with trainee receiving 80% or higher on his or her written and hands-on test, they will receive a certificate from the AIS Training Center.

**Level 2. Intermediate Training**

- For the operator with limited experience.
  - This is a three day class.
- This training is to learn advanced operational techniques.
  - A thorough orientation to the machine.
- Upon satisfactory completion of the training, with trainee receiving 80% or higher on his or her written and hands-on test, they will receive a certificate from the AIS Training Center.

**Level 3. Novice Training**

- This is a 5 day class.
  - This class is for the person with little or no operating experience.
- The student will develop basic operating skills for the particular machine.
- Gain experience in performing machine pre-inspections and maintenance
  - Upon satisfactory completion of the training, with trainee receiving 80% or higher on his or her written and hands-on test, they will receive a certificate from the AIS Training Center.



**General Information and Registration Form**

- Classes can be tailored to your specific needs and time frame.
- Dates and classes are subject to change. Please call the AIS Training Center at 517-321-8000 and ask for Steve Higgins.
- All classes held at the AIS Training Center in Lansing from 8:00 am until 5:00 pm.
  - Directions to AIS and motel information upon request.
  - AIS provides all educational materials and lunch.
  - Register as soon as possible to guarantee your position.
  - Please print or type information on registration form.
  - One registration per form. (copies may be made)
- Questions? Contact Steve Higgins at: 517-321-8000- Fax 517-321-9686
  - Return registration fee ( payable to AIS) With registration form to:

**AIS Training Center**  
**3600 N. Grand River Ave.**  
**Lansing, MI 48906**  
**Attn. Steve Higgins**

**Registration form**

Course title \_\_\_\_\_

Course date \_\_\_\_\_

Registrant's Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

**Refund Policy**

All tuition and fees paid by the applicant shall be refunded if the applicant is rejected by the school before enrollment. An application fee of not more than \$25 may be retained by AIS if the applicant is denied. All tuition and fees paid by the applicant shall be refunded if requested within 3 business days after signing a contract with the school. All refunds shall be returned within 30 days. Once the 3 business days have elapsed the following refund policy will apply:

AIS reserve the right to deny a refund but instead provide more training to the student until he/she is satisfied. Money refunded will be at the discretion of the AIS training director.

This agreement between the \_\_\_\_\_  
and AIS Construction Equipment Corp. located at 3600 N.  
Grand River Ave. Lansing, MI 48906 is  
effective \_\_\_\_\_(date) and ending \_\_\_\_\_(date)

The intent of this agreement is to confirm financial  
authorization through the \_\_\_\_\_,  
to enroll eligible participants in the AIS Heavy Equipment  
Operation Program towards a certificate of completion.  
The following participant shall be enrolled for such services.

This agreement will outline specific services and outcomes in  
coordination with \_\_\_\_\_

**NAME and  
LOCATION:** **AIS Construction Equipment**  
Heavy Equipment Operation  
3600 N. Grand River AVE  
Lansing, MI 48906  
517-321-8000  
Fax. 517-321-9686

**SCHEDULE:** 5 days per week, 40 hours of instruction  
Days 8AM to 5PM

**CLASS SIZE:** To provide student with enough lab and equipment operation to  
meet their needs we are limited to eight students per session.

## **AIS OPERATOR TRAINING CLASS DESCRIPTION AND FEES**

### Rough terrain and warehouse forklift certification. Level - 1.

- A one-day orientation on operation, safety, and maintenance.
- For experienced operators who have shown proof of training or require orientation to a specific machine.
- A hands -on demonstration of employer required operations.
- Upon satisfactory completion of training, with trainee receiving 80% or higher on his or her written and hands- on test, they will receive a certificate from AIS Training Center.
- Operator- 8 Clock hours. Cost: \$ 900.00

### Bulldozer Level -1.

- A one-day orientation on operation, safety, and maintenance.
- For experienced operators who have shown proof of training or require orientation to a specific machine.
- A hands -on demonstration of employer required operations.
- Upon satisfactory completion of training, with trainee receiving 80% or higher on his or her written and hands- on test, they will receive a certificate from AIS Training Center.
- Operator- 8 Clock hours. Cost: \$ 900.00

### Bulldozer Level - 2.

- For this operator with limited experience.
- This is three-day class.
- This training is to learn advanced operational techniques.
- A thorough orientation to the machine.
- Upon satisfactory completion of the training, with trainee receiving 80% or higher on his or her written and hands-on test, they will receive a certificate from the AIS Training Center.
- Operator- 24 clock hours. Cost: \$1800.00

### Bulldozer level -3.

- This is a 5-day class.
- This student will develop basic operating skills for the particular machine.
- Gain experience in performing machine pre-inspections and maintenance.
- Upon satisfactory completion of the training, with trainee receiving 80% or higher on his or her written and hands-on test, they will receive a certificate from the AIS Training Center.
- Operator - 40 clock hours. Cost:\$2800.00

### Hydraulic Excavator level -1.

- A one-day orientation on operation, safety, and maintenance.
- For experienced operators who have shown proof of training or require orientation to a specific machine.
- A hands -on demonstration of employer required operations.
- Upon satisfactory completion of training, with trainee receiving 80% or higher on his or her written and hands- on test, they will receive a certificate from AIS Training Center.
- Operator- 8 Clock hours. Cost: \$ 900.00

Hydraulic Excavator level-2.

- For this operator with limited experience.
- This is three-day class.
- This training is to learn advanced operational techniques.
- A thorough orientation to the machine.
- Upon satisfactory completion of the training, with trainee receiving 80% or higher on his or her written and hands-on test, they will receive a certificate from the AIS Training Center.
- Operator- 24 clock hours. Cost: \$1800.00

Hydraulic Excavator level-3.

- This is a 5-day class.
- This student will develop basic operating skills for the particular machine.
- Gain experience in performing machine pre-inspections and maintenance.
- Upon satisfactory completion of the training, with trainee receiving 80% or higher on his or her written and hands-on test, they will receive a certificate from the AIS Training Center.
- Operator - 40 clock hours. Cost:\$2800.00

Backhoe loader level-1.

- A one-day orientation on operation, safety, and maintenance.
- For experienced operators who have shown proof of training or require orientation to a specific machine.
- A hands -on demonstration of employer required operations.
- Upon satisfactory completion of training, with trainee receiving 80% or higher on his or her written and hands- on test, they will receive a certificate from AIS Training Center.
- Operator- 8 Clock hours. Cost: \$ 900.00

Backhoe loader level-2.

- For this operator with limited experience.
- This is three-day class.
- This training is to learn advanced operational techniques.
- A thorough orientation to the machine.
- Upon satisfactory completion of the training, with trainee receiving 80% or higher on his or her written and hands-on test, they will receive a certificate from the AIS Training Center.
- Operator- 24 clock hours. Cost: \$1800.00

Backhoe loader level-3.

- This is a 5-day class.
- This student will develop basic operating skills for the particular machine.
- Gain experience in performing machine pre-inspections and maintenance.
- Upon satisfactory completion of the training, with trainee receiving 80% or higher on his or her written and hands-on test, they will receive a certificate from the AIS Training Center.
- Operator - 40 clock hours. Cost: \$2800.00

Wheel Loader level -1.

- A one-day orientation on operation, safety, and maintenance.
- For experienced operators who have shown proof of training or require orientation to a specific machine.
- A hands -on demonstration of employer required operations.
- Upon satisfactory completion of training, with trainee receiving 80% or higher on his or her written and hands- on test, they will receive a certificate from AIS Training Center.
- Operator- 8 Clock hours. Cost: \$ 900.00

**AIS TRAINING CENTER BILLING POLICY**

Payments for classes can be made by credit card, cash, money order and/or check.

Please make checks out to:

**AIS Construction Equipment**

3600 N. Grand River Ave.

Lansing, MI 48906

517-321-8000

Attn: Steve Higgins

Payments must be made at the beginning of class

(Government agencies will receive an invoice and be expected to pay within 30 days)



### Code of conduct for students

Student must be on time for class in the morning and when returning for breaks and lunches.  
Must practice safe machine operation and tool operation at all times.  
Participate in lab exercises and equipment operation hands on to receive a grade.

### Reasons for dismissal from the class and program

After 2ND warning of unsafe operation of equipment or lab exercise the student will be dismissed. If a student attends class while under the influence of drugs and or alcohol the student will be dismissed from the program. If a student causes intended damage to lab tools, instructor or another student, equipment or property of AIS the student will be warned 1st offense and dismissed from the program on the 2nd offense. Student must wear long pants, work boots above the ankle, safety glasses, hearing protection and hard hats during equipment operation. And wear appropriate clothing for the weather outside. Students must wear work boots, long pants and safety glasses while he or she is in the lab working. Any time a student does not show up on a lab day and dates of equipment operation this will effect his or her grade. It is very hard to repeat lab exercises, within reason, the instructor may be able to help a student make up for lab or equipment operation. Any student that is absent more than two days during the program must be dropped and picked up at that spot the next time the program is offered.

### GRADING

Students are graded on written tests, labs and equipment hands on.

The grading scale is as follows:

A	94-100	C	73-76
A-	90-93	C-	70-72
B+	87-89	D+	67-69
B	83-86	D	63-66
B-	80-82	D-	60-62
C+	77-79	E	0-59



#### Wheel Loader level-2.

- For this operator with limited experience.
- This is three-day class.
- This training is to learn advanced operational techniques.
- A thorough orientation to the machine.
- Upon satisfactory completion of the training, with trainee receiving 80% or higher on his or her written and hands-on test, they will receive a certificate from the AIS Training Center.
- Operator- 24 clock hours. Cost: \$1800.00

#### Wheel Loader level-3.

- This is a 5-day class.
- This student will develop basic operating skills for the particular machine.
- Gain experience in performing machine pre-inspections and maintenance.
- Upon satisfactory completion of the training, with trainee receiving 80% or higher on his or her written and hands-on test, they will receive a certificate from the AIS Training Center.
- Operator - 40 clock hours. Cost: \$2800.00

#### Trenching and shoring level-1.

- A one-day orientation on operation, safety, and maintenance.
- For experienced operators who have shown proof of training or require orientation to a specific machine.
- A hands -on demonstration of employer required operations.
- Upon satisfactory completion of training, with trainee receiving 80% or higher on his or her written and hands- on test, they will receive a certificate from AIS Training Center.
- The program includes the scope and application of subpart P - Excavator Standard; definitions; general requirements; requirements for protective systems soil classification; and handling an OSHA inspection. Each participant receives a training manual that includes a complete copy of the Excavation Standard.
- Operator- 8 Clock hours. Cost: \$ 900.00

#### Evaluation/re-evaluation class Level-1.

- A one-day orientation on operation, safety, and maintenance.
- For experienced operators who have shown proof of training or require orientation to a specific machine.
- A hands -on demonstration of employer required operations.
- Upon satisfactory completion of training, with trainee receiving 80% or higher on his or her written and hands- on test, they will receive a certificate from AIS Training Center.
- Operator- 8 Clock hours. Cost: \$ 900.00

## AIS CONSTRUCTION EQUIPMENT TECHNICIAN COURSE DESCRIPTIONS & FEES

### Basic Hydraulics

Complete hydraulic system overview uses on today's heavy equipment. Technician will be taught the basics of oils used, Pascal's Law, safety, and common components on a basic hydraulic system. Perform disassembly and assembly of reservoirs, hoses, gear, vane and piston pumps, control valves and cylinders. Technician will gain a basic knowledge of all these components. The last day technician will perform some basic hydraulic testing and adjusting. 5 day class\* Must pass final test with an 85% or higher.

-Repair 40 clock hours. Cost : \$975.00

### PM Tune- Up (Formerly Advanced Hydraulics)

This is for the technician that has had Dash 6, Dash 5 and Dash 7 Komatsu excavator training. Technician will be taught in more detail the load sensing system used on Komatsu excavators. Technician will perform Komatsu excavator PM Tune-ups. \*\*This is for the advanced technicians who have taken Basic Hydraulics or equivalent. \*\*Good refresher course for tech who took Dash 6 and Dash 7 classes before.

-Repair 40 clock hours. Cost: \$975.00

### Basic Electrical

Complete basic knowledge of electrical systems used in the heavy equipment industry. Technician will be taught Ohm's law and how to perform calculations. Be introduced to relays, fuses, batteries, diodes, capacitors, and resistors and know how to properly test them. Technician will perform basic testing on starting and charging systems. Learn how to properly use a multi-meter to perform testing. 5 day class \* Must pass final test with 85% or higher to continue on.

-Repair 40 clock hours. Cost: \$975.00

### Applied Electrical

Technician will spend time troubleshooting with a multi-meter. Learn and understand complete starting and charging circuits. Great emphasis will be taught on troubleshooting accurately and efficiently starting and charging circuits. Technician will troubleshoot electrical systems that use relays and sending units using the Komatsu breakout box.

-Repair 40 clock hours. Cost: \$975.00

### Basic Diesel Engine Rebuild

This is for technician will very little experience on diesel engines. Technician will go through complete structure and function of a diesel engine. Will disassemble a diesel engine and become familiar with all components. Will learn how to measure all components and determine if they can be reused. Assemble complete engine, go through complete assembly instructions, the "do's and don'ts of assembly". 5 day class.

- Repair 40 clock hours. Cost: \$ 975.00

### Diesel Fuel Systems

Learn basic overview of the diesel engine that pertains to AIS. Perkins, Komatsu and Cummins engine will be the main topics. Go through structure and function of these diesel engines. Will be taught about the different types of fuel systems used on these three different manufacturer engines. Last day will be troubleshooting. Class designed around and mid level technician familiar with diesel engines. 5 day class

-Repair 40 clock hours. Cost: \$975.00

### Diesel Fuel Systems

Learn basic overview of the diesel engine that pertains to AIS. Perkins, Komatsu and Cummins engine will be the main topics. Go through structure and function of these diesel engines. Will be taught about the different types of fuel systems used on these three different manufacturer engines. Last day will be troubleshooting. Class designed around and mid level technician familiar with diesel engines. 5 day class

-Repair 40 clock hours. Cost: \$975.00

### Power Trains (Formerly Torque Converter and Transmissions)

Technician will be taught the basics of torque converters and their structure and function. Will learn structure and function of the JCB synco-shuttle and powershift transmissions, Komatsu countershaft loader transmissions, Komatsu planetary and countershaft bulldozer transmissions. Technician will disassemble and assemble a synco-shuttle, powershift, and bulldozer countershaft and wheel loader countershaft. Perform basic testing on all of the discussed transmissions. This is not a rebuilding class. \*This is a great class for an experienced technician that has knowledge that AIS may have just hired. It will give them a fast update of what type of transmissions AIS uses. 5 day class.

-Repair 40 clock hours. Cost: \$975.00

### Troubleshooting Strategies.

This class is for a technician who needs to brush up on his troubleshooting. Technicians will be given problems to diagnose on all types of models, manufacturers and systems. Student will be taught how to properly diagnose and troubleshoot systems when not much knowledge is known about them. Great concentration will be on common troubleshooting steps, how to properly write down information and how to find information. 5-day class.

-Repair 40 clock hours. Cost: \$975.00

## Heavy Equipment Operation Training

### **The AIS program will consist of the following:**

- AIS will provide operation training on forklifts, backhoes, and wheel loaders, excavators, motor graders and bulldozers.
- AIS will provide the equipment for these classes. 2 students per piece of equipment.
- Students will be responsible for their own transportation to the AIS Facility.
- Classes will run from 8:00 AM to 5:00 PM, a 1/2 an hour lunch will be given at 12 PM and a 15 minute break at 10:15 AM and 2:30 PM every day.
- Students must be able to read and write, lift at least 40 lbs, and climb on and off equipment.
- AIS reserves the right to dismiss any student that is regularly unsafely operating equipment, disrupting class, and/or intoxicated on alcohol or drugs.
- AIS does not provide placement assistance
- Students must pass a written test with 80% or higher on each piece of equipment to receive certification.
- Students also must pass each of the repair sessions with an 80% or higher.
- Catalog class credit may be allowed from previous training at the discretion of the training director.