

ANDERSON HOUSE OFFICE BUILDING, ROOM 327

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***The Michigan New Jobs  
Training Program (MNJTP)***  
Testimony to the  
House Committee on  
Workforce, Trades, and Talent

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President, Jackson College

# **Testimony House Committee on Workforce, Trades, and Talent**

**December 2, 2021**

Chairman Griffin and members of the committee, good morning, my name is Daniel Phelan and I serve as president of Jackson College. I come before you today to speak about the effectiveness, practical use, and the application of the Michigan New Jobs Training Program (MNJTP). Further, I respectfully come to you today to request your assistance in making the program an even more effective tool in the State's economic development tool chest by increasing the program's operating cap from \$50 million to \$100 million. But first, some context.

Jackson College is one of the State's 28 public community colleges chartered in Jackson County, though we also have campuses in Lenawee and Hillsdale Counties. The College

serves about 6,000 unduplicated credit students each year, as well as another 10,000 people in various continuing education, contract training, and performing arts activities throughout the College district. The College is governed by a locally elected 7-member Board of Trustees who not only chart the course for the College, but also ensure the administration of its policies through me, the College President, now serving in my 21<sup>st</sup> year at the College.

The most recent labor and economic development data for our tri-county service region incorporates numerous types of large and small businesses and industries including steel production, manufacturing, food product development, retail, finance, energy production, health care, and education. Prior to the onset of COVID, the area's employment level totaled over 94,000 workers, 45% of whom were between the ages of 45 and 65, with the region's average earnings per job at

\$50,560. As of September 2021, the Jackson County labor force is comprised of over 71,000 workers with employment at 4.7 percent, with non-farm wages averaging \$56,300 – a solid family-sustainable wage.

I came to Jackson College in the early part of 2001 with work experiences in a few other mid-western community colleges located in Iowa and Kansas, which included the creation and implementation of an economic development incentive program similar to MNJTP. In point of fact, I must humbly disclose that I am the one responsible for bringing the idea to Michigan, which resulted in the Michigan New Jobs Training Program. To that end, I bring a unique perspective to this discussion regarding the value of this program, its success in other states and other community colleges, as well as its success here in Michigan.

As you know, Public Acts 359 and 360 of 2008 created the Michigan New Jobs Training Program (MNJTP). This program, designed as an economic development incentive, authorizes community colleges to engage in a contractual relationship with employers that are creating new jobs and/or expanding operations in Michigan for the purpose of funding job training. The MNJTP provides flexible funding to meet a variety of training and development needs. The assistance ranges from highly specialized and customized training to basic skill development for new jobs.

From the program's operational perspective, eligible employers reach out to their local community college and submit an application. The college subsequently conducts a due diligence assessment of the company's viability and employment growth intentions. The college then works with the employer to identify training needs for the new jobs (which

must be compensated at 175% of the state's minimum wage), develop a training plan, and calculate the needed financial support to fund training through a diversion of the Michigan unemployment tax. Preliminary agreements are used to "set the clock," in order to lock in the date from which new employees can be counted for the project, and training expenses may be reimbursed to the company. This first level agreement is preliminary in nature and either the college or the employer can decide not to proceed. The advancement of the project's "final agreement" requires approval by the college's Board of Trustees. Thereafter, the college administers the training program, the training funds, and ensures that the employer needs are being met, and that the expectations of the State are achieved. Ultimately, the employer benefits through reduced costs of staff expansion, training for new employees, deployment of training programs

customized to the uniqueness of the company, increased productivity and employee satisfaction, and the improvement of quality, profitability, and ideally, customer satisfaction.

As noted previously, project proceeds can fund highly specialized customized training that can be provided by the company itself, through the community college, by courses from public or private training institutions, or another preferred provider, which allows the employer to find the best training program at the most desirable cost. Program funds can also provide for online courses, skill assessment, testing and certification, training facilities, equipment, materials and supplies, development of the training curriculum and customized support materials, as well as a modest administrative expense for the College's handling of the program. At Jackson College, employers tell us that they are pleased to work with the College to be able to have access to

essential training support for their new employees. Consider a few testimonies, this one from Laura Wright from Technique, Inc in Jackson, a “Rapid Prototype Stampings and Laser Cutting Services” supplier to over 200 industries, including automotive, aerospace, defense, NASCAR, medical and appliance manufacturers throughout North America and abroad. She notes:

*Jackson College has taken on new and exciting training options related to Industry 4.0 programs that match the needs of our training requirements in Prototype Technician, CNC Machining and Programming, Robotic Welding Programming, and High-Level CAD design jobs. The Michigan New Jobs Training Program is a natural fit to assist with training plans for these newly added position and expansion of operations in high technical Industry 4.0 fields, thus increasing the diversity of our workforce.*

Similarly, Becky Dorian of Lomar Machine and Tool, Inc. had this to say about the deployment of the program and its effectiveness:

*Our perception of the (MNJTP) program has been overwhelmingly positive. We greatly value the open*



*communication offered, including the clear explanation of the program, and willingness to answer questions. The guidance and resources have given us a great deal of confidence and made the ongoing process simple and straightforward. This program has allowed Lomar to remain competitive in our field by offsetting training costs across a number of divisions...MNJTP has allowed for great success in addressing our greatest concerns at this time: recruiting and developing new employees for our skilled and dynamic workplace...Most significantly, due to the programs ability to save costs in training, we were able to justify the purchase of a Quality/CMM software upgrade, making staggering advancements with our ERP software and scheduling program, as well as assisting with Lomar's ability to sponsor apprenticeship candidates.*

[Note: letters of support from these companies appear at the end of this written testimony]

To ensure this kind of response from employers, and to help ensure high quality program outcomes, the College has trained its department employees to ensure that each project is closely monitored, and that our reporting to the Michigan Treasury Department is thorough and accurate.

From the perspective of having helped to develop and administer similar programs in two other states, I believe that

the Michigan program has numerous advantages over those states. For example, bond indebtedness is not required for the Michigan program, indeed, funds are diverted directly to the community college and then drawn down for the training program plan. The Michigan program also is flexible in design and implementation over other states. That said, I would note one glaring limitation of the Michigan program that does not exist in the other states: Michigan has a \$50 million dollar bond cap. This financing limitation impedes the State's community colleges' ability to serve existing and new companies in the following ways:

1. The College cannot be timely in establishing training project because the cap has been reached in Michigan. Essentially, the program has a "rolling cap" with colleges required to wait for months until a sufficient number of training projects have concluded so as to create enough 'headroom' to issue additional MNJTP contracts. This creates uncertainty for the employer as to the availability of training funding.

2. As a practical matter, and to be fair to all community colleges in the State, and to keep some level of contracts moving throughout the State, the community college presidents agreed to a deployment structure wherein funding allocations are limited to \$500,000 increments. In working with our employers, particularly larger employers, this funding level is insufficient to meet their needs and ends up being only a modest contribution to the overall economic development support in our region.
  
3. Because of funding limits and the timing of fund availability, the College is occasionally placed in the unenviable position of choosing which companies will get funding and which ones will have to wait until the next round of funding.

If the MNJTP effort could have the \$50 million dollar cap increased to \$100 million dollars, we believe that the three aforementioned limitations go away as there would likely be sufficient capacity throughout the State such that MNJTP would be a meaningful contributor to the State's expansion.

When we sit down with new or expanding employers in our region, the number one priority on employer's mind is the availability of labor, the availability educational providers to deliver essential worker training, and funding support. Yet, when we begin speaking about the program, we cannot be definitive on the timing of the training support, and we can only offer up to \$500,000 when it does arrive months down the road. This is simply untenable and limits the full strength of a program of this type.

I respectfully request the recalibration of the Michigan New Jobs Training Program to reflect a \$100 million-dollar annual cap for the economic benefit of this State, and the education of its citizens.

Thank you for allowing me to speak with you today.

# MICHIGAN NEW JOBS TRAINING PROGRAM

Local economic development initiative serving employers since 2008. Authorizes community colleges to temporarily capture the state income tax withholding associated with newly hired workers to pay for training.



EMPLOYERS SERVED  
TO DATE

266



PROJECTED NEW JOBS  
UNDER CONTRACT

30,947



NEW JOBS MUST PAY  
AT LEAST

175%

of Michigan Minimum Wage



**NO RESTRICTION**  
on employer size or  
industry, and funds can be  
used for a **BROAD RANGE  
OF TRAINING** (from short-  
term contract training to  
certificates and degrees).

## BENEFITS OF PROGRAM

- Employers have “skin in the game” since they must **hire employees and create new jobs FIRST**, before getting the benefit of free training.
- Program **eliminates the skills gap**; the training delivered to the new employees is *exactly* what the employers require. Most of the training funded by the MNJTP is company-specific training.
- This is a **local program** (individual community colleges work directly with employers and local economic development to support job creation).



## SUNSET & PROGRAM CAP

MCCA supports extending the program's December 31, 2023 sunset and increasing the program cap to \$100 million (MNJTP obligations cannot exceed \$50 million at any point). Since the program was authorized in 2008, a cumulative \$57,823,255 in income tax withholdings have been diverted in support of all existing MNJTP contracts to date.





135 Main Street, Horton, MI 49246 \ 517-563-8136 \ [www.lomar.com](http://www.lomar.com)

### **Michigan New Job Training Program**

Lomar Machine and Tool Company is sincerely appreciative of the MNJTP and its significant impact on our company over the past five years. Our six manufacturing facilities all located in southwest Michigan are equipped with specialized capital equipment and a skilled workforce that can meet a number of opportunities worldwide. MNJTP has allowed for great success in addressing our greatest concerns at this time: recruiting and developing new employees for our skilled and dynamic workplace as well as offering further training opportunities to our current dedicated employees to keep up with the drastic advancements in technology our industry continues to enjoy.

COVID-19 had significant impact on our business over the past two years and Lomar took this opportunity to actively pursuing new markets such as the electric vehicle and charging markets. This is the future of our industry and a perfect complement to our traditional operations. As we gain solid footing in this area and regaining our growth in our traditional markets, our projected sales will allow for substantial year over year business expansion. In preparation for this expansion, we made substantial capital investment in 2020 and 2021. Lomar is now prepared for Michigan's revitalization and the projected production requirements in our sector. Our partnership with Jackson College and the MNJTP program will ensure our success in building the outstanding workforce in our new phases as it has so significantly in the past few years.

As we continuously redefine roles, processes and skills within Lomar, MNJTP has been instrumental in allowing us the ability to promote dedicated staff into new positions that require a significant amount of training as well as hiring talented individuals throughout every division of our company. Our robust pool of expertly skilled and dedicated employees is a direct result of the MNJTP program.

Lomar has used MNJTP to focus on the development of our apprentices and journeymen employees. As the heart of our company and products, these graduates, current enrollees and those seeking to be recommended for the program have long been the focus for our training efforts. We are proud to report that an Apprentice Committee has been formed within Lomar to ensure a prestigious, streamlined and intensive experience in this apprentice program and beyond. Our journeyman employees are well rounded, dedicated employees who are able to take on numerous challenges and offer assistance to lead and problem solve with employees throughout the company. Our company relies heavily on the skilled instructors and staff to ensure a capable and knowledgeable workforce. Lomar has been fortunate to employ a strong group of motivated learners who are anxious to participate in this program. The proficiencies of past graduates, retention statistics and the efficiencies gained all result in better quality products and a more competitive company. The opportunity to allow additional employees to begin this program is important to the progression of our growing organization, the





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advancement of new employees and the insurance that Lomar remains an industry standard in qualified machinists in our area.

In preparation for roles outlined in our current succession plan, we were excited to offer a Team Building and Communication training by a well-established local trainer on site at Lomar this year through MNJTP funds. We have also partnered with Michigan State University to bring their world-class Supply Chain research and instruction to our company through a certificate program. Lomar was fortunate to also utilize MSU's Supervisory Leadership certificate program which includes Management Essentials, Leadership Essentials and Analytical Skills with funding through MNJTP. Two employees will be gaining the well-established Dale Carnegie training for Leadership and Communication skills this year. A number of managers and leaders at Lomar had the opportunity to focus on self-development and communication skills through the six week Boaz Power program. We are humbled to realize how instrumental these courses have been in developing a dynamic company culture that cultivates leaders in every position within the company. Forward thinking, collaborative team players is key for our highly innovative industry and the successful implementation of our goals.

As we pursue new markets and navigate unfamiliar economic environments, our sales team has required significant training. We were grateful to find the well proven Sandler Training in Ann Arbor, Michigan. This program has drastically changed how our sales team is structured and our approach to existing and new customers. We are very thankful to have had the opportunity to learn this methodology and look forward to furthering our relationship with this training provider.

The State of Michigan's assistance in providing such a number of trainings to Lomar was instrumental to the success of our business in past two challenging years. We look forward to positioning our company for growth, achievements of goals and a critical restructuring of the company to provide our customers with the best products and services in the industry. We appreciate our representatives offering support to our skilled workers and complex business needs. In our varied partnerships we are developing enduring businesses that are highly sought after for employees and customers, in turn creating a stronger community for all. The future is bright for our industries and we recognize a number of opportunities for our skilled workforce and capital equipment in a variety of markets. Together we are truly able to accomplish incredible ambitions!

Best Regards,

Rebecca Dorian  
Training and Grant Coordinator





## Training Equipment Purchase Request and Partnership with Jackson College Proposal

MNJTP #105

Technique, Inc., is a participating employer with the Michigan New Jobs Training Program and would like to request the purchase of specific equipment, in partnership with Jackson College, to assist Technique (and others) with their learning and development goals of new and incumbent workers.

Technique founded in 1991 began with one machine in a small garage and now, 30 years later to a multimillion-dollar manufacturer housed within three state-of-the-art manufacturing facilities in Jackson County Michigan, where employees use the latest in equipment and technology to perform work of high complexity.

Technique continues to invest in Jackson County and has now established the full operations of the following manufacturing facilities in Jackson, Michigan.

**Technique, Inc. 1500 Technology Drive** where we manufacture products from within a newer state-of-the-art, high-tech facility. We are a "Rapid Prototype Stampings and Laser Cutting Services" supplier to all industries, including automotive, aerospace, defense, NASCAR, medical and appliance manufacturers. Technique serves well over 200 customers throughout North America as well as internationally. We do things no one else in the world can do.

**Technique Exhaust, 2029 Micor Drive** where we manufacture high horsepower exhaust systems and locomotive exhaust systems, prototyping the same.

**Technique Specialty Center, 2427 Research Drive** where we are manufacturing specialty products for consumers ([www.pitproducts.com](http://www.pitproducts.com) and [www.bigsteelerack.com](http://www.bigsteelerack.com)).

Technique has seen growth year over year since its conception in 1991, adding over 90 workers to payroll in 2021, on the heels of a worldwide pandemic.

Although the hiring of 90 employees may seem successful, the skill set of the new hires were and are of concern. Well over half of those newly hired employees do not have the basic skill set that would bring immediate value to their hire and roll at Technique. Most manufacturers find this not surprising as Michigan has over 8,000 open jobs. The No.1 topic that we all in manufacturing hear is that EVERYONE is having a hard time finding the help that is needed. Hiring unskilled workers will not keep Technique as a leader in high tech manufacturing. This is why training is so critical.

Based on the current labor market shortage and the fact that in 15 years, 48% of skilled workers in Michigan will retire, Technique had to ask these internal questions. "Is the labor shortage due to lack of skilled workers or the lack of wages being paid that would, potentially, draw more workers to the skilled trades workforce, or is it the result of both"?

Knowing that Technique has 75 new hires that will require extensive training and development to become skilled technicians and with the need to **hire 50 more employees within the next 8-12 months**, at a rate above the national average, we are seeking efforts to strengthen the future workforce by adhering to a philosophy of "**earn while you learn**" approach to employee development.

We believe at Technique that businesses whose goals are to survive and prosper in this present day diverse and egressed economy has found it imperative to invest in ongoing training and development to

improve proficiencies in productions as well as to acquire the greatest return in investment of our workforce. Employees are concerned about their own productivity and are increasingly aware of the accelerated obsolescence of knowledge and skills in their turbulent environment. We want all of our employees aligned for career growth and the only way to do that is through effective training and development opportunities.

What we offer at Technique is like no other company. We offer the opportunity for the employee to master their trade by providing very specialized and extensive, high tech, advanced manufacturing training opportunities and apprenticeships. We believe that the rapid advancement in technology is driving the skillset and the skills gap that Technique and other employers are faced with.

To be successful in this fast-paced industry, we need to grow and innovate continuously, pursue sustained development, and cope with rapid changes, hence, we need to strengthen or expand the knowledge base, skills, and abilities of our employees. For this purpose, education and training must be incorporated into a systematic and formal system if the goals of the employees and of the company are to be attained.

Pipeline of talent is diminishing. Reports in 2008 there were 127,000 high school grads were in the State of Michigan. This number has declined every year since then, this year we are going to have just under 100,000. This information is from the Capital news Service April 9, 2021. In addition, the article references that despite the declining numbers of high school graduates, a higher percentage are going into trades such as manufacturing. The article continued that raise question to the cost of obtaining a college degree at \$50,000-\$1000,000 of debt, whereas people are starting to question whether there's fair value in taking on that type of debt before they even get started in their career. Together (Technique and Northwest Schools partnership in STEM related programs), we show students another path that does not put them in debt and give the students a career that utilizes their hands, their mind, and their creativity! Additionally, Technique partners with other local high schools, career centers, colleges, and technical training centers by aiding with equipment purchases, mentorships, job shadows, curriculum development for STEM related competency-based learning offerings to students. We provide work-based learning opportunities, job shadowing and regular tours of Technique. These efforts are critical to engage students in this career field.

Earn while you learn model. We encourage apprenticeship programs, skilled training certification opportunities and college programs of study all to enhance the employee's skill set and satisfaction in their career of choice. These program offering courses are either during the day, in the evening or online. Employees work generally 40 + hours per week, earning, then attending classes to improve their skills. As those skill improve, and they have time in service, their pay will increase and generally in four years, or as an example they will attain a journeyman status. Having achieved a 4-year journeyman status is a \$60,000-\$70,000 training investment, similar to a 4-year degree. These learning and development opportunities we hope will attract a more diverse pipeline of candidates entering careers in manufacturing. Aiming to bring more minorities, women, youth, and veterans into the trades. We need not only a pipeline of talent going into the trades, but also more diversity. The answer to this is to strengthen the partnership with area high schools and continue to offer a robust learning and development opportunity for career growth. Our entry level wage for an apprentice is \$18.00 per hours, with full benefits including retirement savings plan.

Challenges of attracting talent: Referencing an article written by Michigan Works, Southeast published in the Jackson Magazine, August 2021; The employment climate has become the most job-seeker friendly markets in decades. Those looking for employment are currently able to take advantage of new tools to attract talent, such as employers providing bonuses for accepting a job offer, adding to their benefit

package. Increasing wages, and offering a competitive training program to prospects, all to encourage you to work for them. Not all employers are able to offer these types of incentives.

Accordingly, to a 2020 study conducted by Lorman, 76% of millennials believe professional development opportunities are one of the most important aspects of company culture. Generation Z also value the opportunity for lifelong learning. The 2 largest populations in the workforce are demanding incentives through employer investments in professional development opportunities.

Technique, Inc., like most Michigan Manufactures are being dealt the hand to hire unskilled workers and do whatever it takes to provide those employees with advancement opportunities to enhance their skill set through learning and development. To provide those that are skilled, newly hired, or incumbent workers with the opportunity for continuous learning and development to enhance their skill set leading to job enrichment and higher wages. This is key to our continued success and the reason for this grant funding request.

The facts are this, skilled labor isn't available here locally to fill the number of positions that are required to be filled by Technique and other manufacturers. We must train unskilled workers to prosper in this environment. For this learning and development opportunity to be successful, we need a partnership with Jackson College to offer the specific training that is required to, not only those currently working in manufacturing, but high school students that are looking to enter into this high-tech career choice. We want this training partnership to be an extension to what is currently in place at high schools, career centers and manufacturers own internal training programs.

Technique, Inc is planning to add new highly skilled positions (with unskilled labor) and expand operations that will increase economic development in the City of Jackson, and the Jackson County area associated in Blackman Twp and surrounding areas. These added positions will require a variety of training and employee development that require new skills and competencies beyond traditional training services provided through present agencies or solutions.

Jackson College has taken on new and exciting training options related to Industry 4.0 programs that match the needs of our training requirements in Prototype Technician, CNC Machining and Programming, Robotic Welding Programming and High-Level CAD design jobs. The Michigan New Jobs Training program is a natural fit to assist with training plans for these newly added positions and expansion of operations highly technical Industry 4.0 fields, thus increasing the diversity of our workforce.

We are proposing to utilize Michigan New Job Training Funds from Technique #105 training grant and purchase equipment to house at Jackson College and fulfilled through a partnership with Jackson College's Industry 4.0 certification programs include Production Technician Certificate and Industrial Systems Certificate (<https://www.jccmi.edu/degree/industry-4-0-associate-in-applied-science/>).

These include new curriculum with a focus on robotics, automation, and the Industry Internet of Things (IIOT). IIOT brings together information technology and operational technology to create highly technical certifications in the fields of Production and Industrial systems.

Trainee's will have the availability to take the International Certifications recognized by Manufacturing Skill Standards Council (MSSC) include the Certified Production Technician.

Amatrol is an independent training provider that Jackson College has collaborated with MSSC to deliver courses related to four Critical Work functions: Safety, Quality Practices & Measurement, Production & Processes and Maintenance Awareness. The specific features and benefits of which are:

- Increased computer skills

- Develops Machine operation skills through computer-based simulations
- Increases access for a diverse workforce through online delivery
- Provides individualized instruction with support from a certified instructor
- Enables greater training capacity through virtual delivery options

The training partnership with Jackson College and Technique, Inc requires the purchase of portable equipment that weaves together the full Amatrol online virtual training program with hands on on-site learner activities. This means that fully functioning highly technical portable equipment trainers will need to be purchased to fulfill the learner activities so that trainees will reach success in their plans and progress.

**These portable trainers will cover the following areas:**

- Portable Measurement Tools Learning Systems
- Pegasus Simulation Software – Robotics
- Mechanical Systems 1 Learning System
- Skill Boss Smart Factory – Allen Bradley
- Hand Tool package – Skill Boss
- Interface kit required
- Robotics 1 Learning System
- Robotics 2 Learning System

Total Cost for required equipment, installation, and training = \$71,368.00

# WORLD-CLASS SKILLS TRAINING

Amatrol offers a comprehensive, in-depth selection of portable training solutions, including Motor Drives, PLCs, Hydraulics and Pneumatics, Mechanical Drives, and more. These learning systems provide portable alternatives that feature all of the skills of our traditional learning systems, but with a remarkably small footprint. Our portables allow learners to gain hands-on skills with real-world, industrial components and include Amatrol's world-class multimedia curriculum.

ELECTRICAL	
ACDC Electrical (800-ACDC1)	ACDC Voltage and Current Principles, Resistance, Inductance, and Capacitance, Circuit Protection, Sources and Safety
Relay Control (800-EC1) and Relay Control Troubleshooting (800-EC1T)	Control Logic and Logic Elements, Control Circuit Design, Relay Operation and Applications, Time Delay Relay Applications, Machine Schematics of Circuits
Motor Control (800-MC1) and Motor Control Troubleshooting (800-MC1T)	Control Motor Logic and Wiring, Troubleshooting, Reversing Motor Control and Adjustable Speed Drives, Measuring Electronics and System Design
ELECTRONICS	
AC Motor Drives (800-DRV1) and (800-DRV1F)	Introduction to AC Drives, 2 and 3 Wire Motor Control, DC Injection Braking and AC Drive Voltage Line Starting, 0-Curve Acceleration
Electronic Sensors (800-SEN1)	Electronic Sensor Advantages and Capabilities, Inductive, Capacitive, Magnetic Reed Relays, Sensor Measurements and Applications
Power and Control Electronics (800-ELE1)	Power Supply, Filter and Regulator, Diodes and Thermal Energy Control, Antilog Amplifier and 555 Timer (Timing), 5555 State Space and Power Control
PLC - Allen Bradley (800-PAB3A), (800-PAB3AF), and (800-PAB3AF)	Advances Plus Terminal Operation and Application Setup, PLC Program Operation, and Programming, Program Control, Ladder and Data Instructions, Analog Inputs and Outputs
PLC - Siemens (800-P611) and (800-P611F)	PLC Operation and Programming and I/O Point Operation, Built-in Operating and I/O Application Setting, Priority Control, Speed Motor Control, Variable Speed Motor Control and Stepper Motor Control
FLUID POWER	
Basic Hydraulics (800-BH1)	Hydraulic Power Systems and Circuits, Principles of Hydraulics - Pressure and Flow, Hydraulic Speed Control and Pressure Control Circuits, Pneumatic Feeding Valves and Manufacturing
Pneumatics (800-PN1)	Pneumatic Power Systems and Circuits, Pressure and Flow and Checkered Control Valves, Air Logic and Pneumatic Maintenance, Flow Control and Com Valve Applications
Pneumatic Troubleshooting (800-PTB1)	Pneumatic Troubleshooting Concepts, Air Preparation and Regulator Troubleshooting, Troubleshooting Circuits and Pneumatic Systems, Machine Sequence Faults
MECHANICAL	
Mechanical Drives (800-ME1)	Spill Speed, Torque and Power Measurement, Power Conversion Systems and Shaft Alignment, Introduction to V-Belt Drives and Chain Drives, Spur Gear Drives, Installation and Analysis
PROCESS CONTROL	
Process Control - Level & Flow (800-PC1) and Process Control Troubleshooting - Level & Flow (800-PC1T)	Process Control Concepts, Instrument Tags, Spring and Instrumentation Diagrams, Loop Construction, Flow Control Elements, Level Measurement, Liquid Level Control, Methods of Automatic Control, Static Flow Measurement and Control, Control Loop Performance
QUALITY ASSURANCE	
Measurement Tools (800-ME2)	Dial Measurements, Measurement Comparison, OMI and Digital Caliper Applications, Dimensional Gauging and Data Collection
Precision Gauging (800-PG1)	Basic Measurement and Comparison, OMI and Digital Caliper Applications, Introduction to Gauging & Reamer and Die, In-Go Gauging

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PROFESSIONAL EQUIPMENT GROUP



## PORTABLE TRAINING SYSTEMS

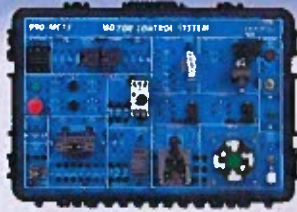
COMPLETE TRAINING SOLUTIONS THAT ARE  
PORTABLE, FLEXIBLE, EASY TO TRANSPORT, & QUICK TO SET UP



# DEVELOP CAREER-READY SKILLS UTILIZING PORTABLE SYSTEMS



## Motor Control



**FAULTPRO**  
Equipment-Based Fault Troubleshooting

## Evaluate and Expand Skills

Amatrol's portables address a range of training areas and fully measure authentic skills. FaultPro, offered on select systems, builds invaluable troubleshooting skills.



## World-Class Curriculum, Easy-to-Use Hardware

The convenient size of Amatrol's training systems allows for sharing between locations. Portables are available for a variety of topic areas, including fluid power, electronics, automation systems, and mechanical drives.



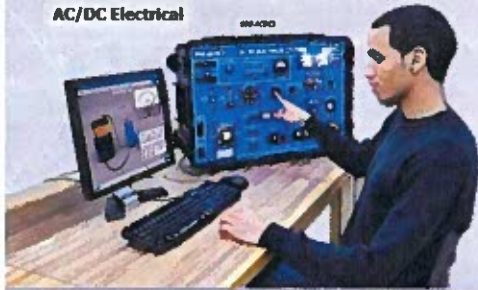
## Programmable Logic Controllers



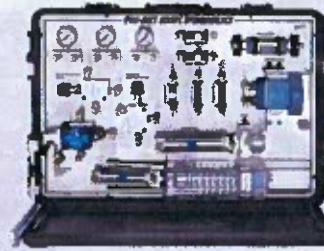
## Utilize Full Spectrum of Learning Tools

Amatrol's portable training systems don't sacrifice learning outcomes for portability. They offer both hands-on-training and interactive multimedia designed to complement various learning styles.

## AC/DC Electrical



## Basic Hydraulics



## Comprehensive Training

Amatrol's portables provide a variety of built-in applications, addressing the same skills training as larger counterparts.



**More Than 20 Portable Learning Systems Available**