

- The area colleges in Iowa train rather than teach;
- They don't just tell you how, they show you how;
- Instructors are experienced practitioners of the trade not textbook learners;
- They use the IDOTs equipment; and
- They used our tools and programs.

Management also learned from these courses. The instructor in the mechanics schools identified some tools that could be added to the inventory to help the mechanics do their job. IDOT furnishes the mechanics with all the tools they need. The new tools were not expensive, but they were tools that the instructor had found by experience to be useful.

In summary, IDOT uses a wide variety of training aids. The area college is quickly becoming a very important part of the training program. It is a resource that should not be overlooked by anyone with training needs.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION MECHANIC APPRENTICESHIP PROGRAM

*John Burns, North Carolina Department of
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The increased use of on-board electronic control devices and their related systems presents a challenge to every equipment operation. To keep NCDOTs work force at current manning levels with well-trained input, we have established an apprenticeship program certified by the North Carolina Department of Labor (NCDOL) and the U.S. Department of Labor (USDOL).

Apprenticeship establishes a formal training program that, through classroom training and on the job training (OJT) under the supervision of a journeyman mechanic, produces an individual at the journeyman level, trained according to our unique job requirements. Though certified by NCDOL, local program control is designed to require 3-1/2 years for completion.

The first step is to establish standards of apprenticeship. The proposed program includes, as a minimum:

- The work process or OJT description;
- Formal instruction identification and schedule; and
- A wage schedule.

The work process includes the plan for hours an apprentice will spend while obtaining OJT. Areas of OJT are broken down into engine overhaul, light equipment, truck, welding and various component rebuilding.

Apprentices rotate through assignments, one per area on a 6 month cycle. Supervisors are urged to ensure meaningful job assignments that will benefit the apprentice and provide increased shop productivity.

Related classroom training describes a minimum of 144 hours of instruction per year for certification. This can be provided by a community college, manufacturer or the DOT training department. Our schedule currently requires 272 hours of instruction per year. Along with scheduled technical courses, we have included math, first responder first aid, oral and written communications and human relations.

A spinoff advantage to the apprentice training program is the opportunity it provides for field and depot mechanics to attend the same classes. In the technical college system, course expenses rarely exceed \$35.00 per student. Courses provided by the industry may be no cost, if local, or require only travel and per diem expense.

Our training coordinator works closely with community colleges in designing courses and selecting instructors. Classes range from 40 to 80 hours in length. The NCDOL requires that apprentices receive compensation of at least 50 percent of a journeyman mechanic. They desire that apprentices receive a pay raise every six months if progressing satisfactorily. The sponsor must appoint a six (6) member committee and one (1) supervisor of apprentices to handle day to day program management. The Supervisor of Apprentices assists the committee in administering the program including being responsible for records and serving as guidance counselor for apprentices. NCDOTs program is off to a good start. We expect to expand to include traffic services signal technicians and other shop trades soon.

Retention of apprentices is a concern. All successful apprentices will be offered positions as they become available. The length of the program serves to promote retention with 3-1/2 years toward retirement, the accumulated sick leave, annual leave and additional benefits recognized as reasons for remaining with the DOT. NCDOT was surprised at the number and quality of applicants. Most came from students graduating from high school and technical college vocational programs. Individuals leaving the armed forces also provide motivated candidates.