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Employer and Training Needs: Report 07 Diesel Mechanics

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Report Number Seven



DIESEL MECHANICS

EMPLOYER AND TRAINING NEEDS

PREPARED FOR METROPOLITAN TECHNICAL COMMUNITY COLLEGE



Center for Applied Urban Research

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at omaha 

DIESEL MECHANICS

by

Margaret A. Hein

DIESEL MECHANICS

Purpose of the Study

The purpose of this study is to determine the employer and training needs in metropolitan Omaha for diesel mechanics.

Diesel Mechanics Program

Currently Metropolitan Technical Community College does not have a program dealing specifically with the heavy duty diesel engine. Programs are offered at Southeast Technical Community College (Milford) and Iowa Western Community College.

Study Design and Execution

To determine the target population, an exploratory study of the field of diesel engines was done. The CAUR researcher interviewed individuals employed in the various facets of the field. From this initial investigation, the listings under five headings in the telephone directory were sampled. These headings were: Truck Repairing and Service, Truck Dealers, Trucking - Motor Freight, Trucking - Liquid or Dry Bulk, and Trucking - Local Cartage.

A survey instrument was constructed and interviews were conducted primarily with service managers in the various types of firms. The findings of this study are summarized here, with conclusions about the employer and training needs related to diesel mechanics.

Research Findings

Local Cartage. Several interviews were done with these firms. They do not do their own repair work and therefore were not in a position to comment on the specific needs of training and employment. Their input was of value because they own or lease diesel equipment and gasoline equipment. In the future these firms will increase their use of diesel power equipment, through conversion or replacement. The present number of diesel trucks operated by these firms varied from 100 percent to only 5 percent. The feeling was that equipment will have to go to diesel

because it is so much cheaper to run. Service on diesel equipment had not been a problem for any of the firms interviewed.

Employment. The number of individuals employed specifically as diesel mechanics varied greatly depending on the type and size of the firm, ranging from three to 45 mechanics. Only one had 45, a couple had over 20, and most ranged from nine to 12 persons who were specifically diesel specialists. Most of the firms had additional service help. Beginning wage for a journeyman diesel mechanic was \$9.00 and \$5.00 for other service workers who were not yet considered journeyman mechanics.

When asked if their firms would be creating any new jobs in this category in the next three years, the majority said yes, one said no because they always maintained a stable number of employees and had no intention of expanding, and a few said it totally depended on the economy. The new jobs would be due to an increase in demand and the normal growth and expansion of the businesses. The present state of the economy prompted mixed reactions from these businesses. Two of the larger employers were down several mechanics because of layoffs, but they anticipated an improvement in the next three years. A large firm which did only diesel engine work predicted a 15 percent increase in the number of people they would be needing. The reaction was the same when asked if they anticipated that the need for employees in this category would increase, decrease, or remain about the same in the next three years. As one service manager said, "As long as there are trucks on the road we'll be fixing them."

The respondents were also asked about the relationship of openings and demand for trained people in the metropolitan area at large rather than their own specific firms. Again the majority of responses indicated that there were more job openings than trained people to fill them. However, two of the responses indicated that currently there were more diesel mechanics than jobs because of recent layoffs due to the slowing of the economy.

Applicants. When asked the question, "When there is a job opening, do you have too many, too few, or about the right number of qualified applicants?" the responses were evenly divided between too few and the right number. "There are too many in a bad economy - too few in a good economy," was the consensus.

Applicants often lacked experience, both in diesel engines and also in general mechanical experience on the rest of the truck systems. Most of the respondents specified diesel experience as lacking in applicants, but a strong feeling was noted about attitudes and aptitudes of the employees. Common sense, desire to work, and mechanical aptitude were frequently mentioned. The firms which serviced the whole truck felt strongly about flexibility on the part of the mechanics but expressed the need for specialists in diesel. The diesel mechanic needs to know each of the three major engines used, Caterpillar, Cummins, and Detroit.

Skills and Knowledge Required. The diesel mechanic needs to be able to analyze engine complaints and noise and be familiar with the various kinds of diesel engines. One needs to have a math background for measuring and be able to read and interpret instructions. Mechanical aptitude is an absolute necessity. The student can learn the theory and basics but must be mechanically inclined. With the exception of the engine shops, the unanimous response was that the mechanic must be able to do the whole truck front to back, including engine, air conditioner, transmission, gear train, rear end, and electrical. Eighty percent of the work is minor repair, diagnosis, and component change. Again attitude was emphasized. The mechanic "needs to know when he doesn't know how to do something and be able to say so."

Type of education and training. The most frequent response to "What type of education/training is the best preparation for this job?" was two years at a technical community college. Several respondents felt that three to five years of training and experience were necessary. The courses at Milford were mentioned several times as being the type that would be helpful. One respondent felt that 600 hours of hands-on experience should be required for diesel engine work. Again the emphasis was on the whole truck rather than limiting the education to engine work only. Practical experience in the form of on-the-job training or cooperative work experience was emphasized. Working on a truck with heavy use is different from using a model. One respondent felt all the training should be done at the training center, but others recommended actual experience at no cost to the employer.

Basic theory and trouble shooting must be offered since that is usually what has to be done on equipment which is getting heavy use.

Need for Program at Metro Tech. With one exception all of the respondents felt a diesel mechanic program should be offered in the Omaha area. The one negative response expressed a need for mechanics trained in the areas of transmission, electrical, and rear end work. Some interviewees also restated that all phases of work were needed to train and prepare a good mechanic properly.

Job Outlook. With the exception of the economic impact, respondents felt that the job potential for well-trained, experienced diesel mechanics was very good. Positions are available outside of the urban area in working with such agricultural equipment as tractors.

Summary

The potential employers of diesel mechanics in the Omaha area are the large trucking firms, dealerships, and service and repair companies. Knowledge of the three major types of diesel engines and experience plus mechanical aptitude are of primary importance. For most of the employers, knowledge of the other mechanical systems of a truck is also a necessity. Trucking, like most other businesses, is dependent on the economy of the country but will continue to be a necessity in the future. Local truck lines are converting to diesel power because it is more economical so the proportion of these vehicles will be increasing. A minimum of two years training is preferred with additional time spent in cooperative work experience or on-the-job training. The program at Milford was recommended several times with the qualifier that their equipment is out of date, and it is necessary to keep up with current trends due to the variety of engines and the constant change in them. Frequently mentioned was the necessity for an employee to have mechanical ability and the proper attitude and desire to work. The local service managers want and need properly trained personnel who are aware of their capabilities and willing to continue to learn through experience.