



## MANAGING HIRING:

### ***How Testing Can Ease the Burden of Hiring Maintenance Workers***

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Dr. Ramsay is also a licensed psychologist and a Diplomate in Industrial and Organizational Psychology from the American Board of Professional Psychology. He is the author of several guides to hiring and management and has more than 30 years of human resources work experience.

Finding a way to fully staff your maintenance department is becoming a major challenge facing organizations these days. Several factors are causing shortages in the labor supply: new plant construction necessitates additional employees, normal attrition must be dealt with, and the replacement of an aging work force is a very real need.

Many employers have labor agreements which allow employees to retire after 30 years of service and find that the average age of their maintenance workforce is in the mid- to high-fifties. When they look toward the future, 50 percent of their maintenance workforce may be eligible for retirement over the next five years. As such, it is important for maintenance managers be aware of and be prepared for the need to select good employees. How then do you choose the right person for the job when a vacancy exists?

This paper's objective is to give you insight into a hiring process that will help you select the best candidates and show you the steps necessary to develop a training program. Specifically, we will discuss how testing can be utilized to assess candidates.

### ***Hiring Journey-level Workers***

Replacement of those skilled and experienced mechanics and electricians can be a real problem. The most attractive option is to hire journey-level workers who already have the skills to perform such work. Certain skills are required for journey-level persons, they must have completed a training program *and* have relevant experience.

## **Internal Candidates**

Some employers are required to offer openings internally before outside recruitment can take place. Current employees should be advised that vacancies exist so that they may apply or bid for the job.

## **External Candidates**

If an internal job posting does not produce the best person for the job, a search for external candidates must be undertaken. An employer should put serious thought into the type of "Help Wanted" advertisement that is placed for an opening. Ads should reflect the key elements that are important to the employer, which may include the ability to work shifts or weekends, *and* job related skills required such as knowledge of motors, electrical maintenance, HVAC, mechanical maintenance, hydraulics and/or pneumatics. Number of years of experience necessary should also be defined. The goal is to accurately describe the job requirements so that those candidates who do not meet these requirements will not apply. Clearly stating the needs and expectations of the company at the beginning of the process will eliminate the time and effort used to screen out unsuitable candidates.

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Many applicants use the internet in their job searches. It can be very useful to post vacancies on the internet as well as in local and area newspapers. In general, a wider recruitment will result in more applicants. When looking for candidates with specific skills care should be taken to recruit in locations where candidates are most likely to have the skills, knowledge, and abilities required. Often recruitment near military bases or at technical schools can be successful.

## ***Finding the Best Applicant***

The process of hiring is actually a series of steps that predict a person's job performance. It involves narrowing down the group of prospective candidates until the best applicant is chosen.

## **Review the Applications**

Recruiters should make a first "cut" of the applications, selecting those candidates whose education and/or experience, most closely mirrors the skills that are needed. Candidates who are marginal can be set aside for a more thorough examination at a later time if necessary. Eliminate

those applicants whose qualifications are not suitable. It is better to continue to advertise, by reusing the same resources at a later date, or branching out to different sources, rather than compromise on an applicant who will not be able to do the job.

## **Time to Talk**

Start by conducting telephone interviews with the top external candidates. In these telephone interviews, a series of general questions is asked by the employer to clarify relevant information given by the job seeker on the resume or application. The company's expectation about work schedules and wages is discussed, and the potential employee is asked about current availability. At the completion of the telephone interviews, the applicants should be rated on a scale from 1 to 10. This same information should also be generated on the internal candidates. To conserve time and resources, only the top candidates would be called in for a face-to-face interview.

## **Time to Meet**

Interviewers should make a list of necessary knowledge, skills, and abilities based upon the job description. Once the skill set for the job has been defined, the indicators for those skills are discussed. Key questions may then be devised for use in the interview. Use of these key questions in a pre-designated sequence, presented in a convenient and orderly way, allows the recruiter to more clearly focus on the answers of the applicants. Responses can then be compared across interviewees.

*Behavioral interviewing is valuable to an employer by highlighting an applicant's work-related and real life experiences.*

Many organizations use "behavioral interviews" in which applicants are asked to describe occasions when they may have:

- Set a goal and achieved it
- Trained a junior person to perform a task
- Operated a specified machine
- Repaired an electrical system
- Interacted with operators to diagnose a problem

It is expected that past successes predict future success. This type of interview is valuable to the employer in that both work-related and real life experiences can be considered. It is usually best to rate the responses of candidates on a rating form so they may be objectively evaluated.

## ***Assessing the Needed Skill Set***

*The use of a test increases the likelihood that poorly skilled candidates will be identified.*

It is very important that the candidates have the basic skills (reading, writing, and arithmetic) to be able to learn. In addition, they must also have the basic technical skills that are required (e.g. an understanding of basic AC/DC theory for electricians or knowledge of hydraulics and pneumatics for mechanics). But how do you measure what skills and abilities your candidates have? One answer is the administration of tests. The use of a test increases the likelihood that poorly skilled candidates will be identified.

The first question a recruiter might ask is “How do I find a test that will tell me whether or not a candidate has the knowledge and skills necessary for the job?” Internet searches have become one of the best sources of finding information. Using your favorite search engine you can simply type in “Maintenance Tests” or “Mechanical Aptitude Test”. By reviewing the results of your online search, you will be able to determine what is available and what companies can provide you with a suitable test.

### ***What if the skills required at my company are unique?***

Let's say you have reviewed the test descriptions of published tests and cannot find one that meets all of your needs. Do you give up? Do you have to give up on the idea of testing? Do you have to rely on just the interview process to evaluate your candidates? Is there another answer?

Companies that have very large work forces, multiple job titles or jobs that have unique combinations of skills and abilities may find that “off-the-shelf” testing does not meet their needs. You need an objective measure to evaluate candidates, but the tests that are available aren't “just right”. The best answer to this dilemma is development of a custom-designed test. A review of the knowledge, skills and abilities of the job would be conducted along with an analysis of the importance of these activities. Test categories would match the knowledge areas of the job and the number of test questions in each category would be proportionally related to importance of job activities.

## ***We have tried to hire qualified employees with no luck. What now?***

*The shortage of qualified workers has made it important to have training programs in place.*

What if, after testing both internal and external candidates, you still cannot find anyone fully qualified to do the job?

Currently there is a shortage of qualified electrical and mechanical workers. When qualified workers are not found, the next most attractive option is to hire the best qualified *trainees* you can find. The maintenance manager of any facility has as first priority the smooth running operation of the organization. But often the individual employee and/or trainee assigned to a maintenance job may not be equal to the task at hand. The situation where maintenance mechanics possess vastly differing capabilities can happen in any plant. One reason that this situation could occur would be in a facility which has many differing job titles. Although a Millwright or Mechanical Technician would be required for maintenance work, the plant may have promoted a Welder or other specialist to a vacancy. Another cause could be replacement of an aging workforce with employees trained or experienced in different areas. This could result in some incumbents being fully skilled while others are knowledgeable or skilled only in their original craft.

*When hiring unqualified workers, it is beneficial to have an individualized development plan which reflects the knowledge, skills and abilities that the employee is expected to develop.*

How can the dilemma of developing fully trained maintenance workers be resolved? Trainees must have either training or experience in the relevant craft. Give them hands-on and classroom training for one to two years so they develop the requisite skills. It is also beneficial to have an individualized development plan which reflects the knowledge, skills and abilities that the employee is expected to develop. This can become an evaluation factor to indicate performance goals. A good starting point is a training needs analysis. Information should be gathered from incumbents, supervisors and consumers of maintenance services (engineering or production or other business units.) Data may be gathered by interview or survey, online or in person. Because the various parties may have different perspectives, their opinions might differ considerably as to what training is needed. Our firm and others have trainee-level tests for such a purpose.

*The use of tests is an excellent means of determining a worker's deficient areas.*

We have found paper-and-pencil test scores correlate at about .70 with job performance for a sample of 250 workers. This means that those who do well on a paper-and-pencil test also are rated highly by their supervisors. This is important to know because many companies want to use tests to predict job performance and tests that have been shown to correlate with job performance are good predictors.

The final information the company needs before beginning training is a list of areas where local workers had shown deficiencies and a suggested priority list of areas for which training is recommended. After diagnosing the current levels of knowledge, the process of developing new maintenance trainees into fully qualified employees can begin.

### ***Determining Training Strategies***

A tabulation can be made of the information by the various departments or units. Decisions must be made as to whether or not training is to be generic or equipment specific. Frequently projects begin with generic assessments and then over time proceed to equipment-specific sessions. For the generic training, the local community or technical college can be a great resource. As the company determines that training needs are linked to specific equipment, a vendor-sponsored and -run training session should be scheduled. Many organizations are eager to provide training that is specifically needed or matched to equipment and processes at the facility.

### ***Developing an Apprenticeship Program***

The most time-consuming and costly method to replace maintenance workers is to conduct an apprenticeship training program. The benefit is that you may use existing workers who have good discipline and attendance records and who understand the production processes from their present jobs. The disadvantage is that these programs take three to four years and are costly to conduct with respect to instructors and materials for training.

For this method, as is all of these options, certain skills are required. An apprentice must have basic skills such as reading, arithmetic, and problem-solving. Before beginning a training program, you should be assured that the candidates for training have the requisite skills to learn what they are being offered. This may be accomplished by the use of diplomas or certifications. But caution should be used, as these are only as good as the curricula at the institution granting them.

Another useful approach is to use assessments of reading, arithmetic, measuring, and problem solving. These are available and should be selected at the same level as the material in the instruction. For example, a reading test administered to assess eligibility for an apprentice program

should be at the same reading level as the training material. If measuring using a ruler is an important job activity, then a measuring test evaluating that ability will be useful. Bottom line is that to be a successful apprentice certain skills are necessary and a good way to determine if a candidate has these skills is to test.

### ***Meeting the Challenge***

Companies across the country are faced with the task of identifying the most qualified workers to staff their maintenance departments. In the best case scenario, you will be able to find individuals who already have the skills needed to perform the required duties.

Even if you cannot find fully capable employees, you must be able to predict who will be most successful in a training or apprenticeship program.

Please visit [www.ramsaycorp.com](http://www.ramsaycorp.com) to see how testing can help you meet the challenge.