To Help Your Engineer Shortage . . .

Reduce Engineer Turnover

Are Your Engineers Truly On Your Management Team?

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There has been a great growth in importance of technology—more than a six-fold increase in research and development expenditures in the last fifteen years. With increased expenditures in scientific fields, it necessarily follows that a larger fraction of our working force must become engaged in technical pursuits.

It would be well to "consolidate and improve our position" with the present engineering work force and make plans to reduce turnover among engineers. Engineers are again in extremely short supply and perhaps you can keep your engineers from answering the siren call of a competitor's raiding crew.

Personnel turnover is costly for all types of employees. It can be particularly costly among engineers. And if conditions are such that engineers are in short supply, engineering turnover can be disastrous. There are a number of steps which companies can take to reduce turnover in this area. Not only will these steps result in substantial savings, but also they may make the job of filling future engineering requirements less burdensome or may even eliminate the problem altogether.

It is, perhaps, ironical that companies which spend thousands of dollars to promote good employee and industrial relations and are most cognizant of their personnel problems, fail to recognize the rather unique status of their engineers. In most companies, engineers are included in "management," but it is more definition than actuality. An important tenet of good employee relations is that the importance of the individual to the company be recognized. Other than paying high starting salaries for new engineers, in many companies manage-

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ment seems to be unable to get across its viewpoint to the engineers. Management wants the engineer to consider himself on the management team. But it does not always treat him as part of the team fully informing him, as it very often does its administrative personnel, of its policies and decisions. Fundamental to holding engineers in the company is to get him to think as a part of management.

Perhaps one reason this problem exists is the novel position which the engineer occupies. To restrict him with time and money factors, as all other management personnel are, may reduce his creativeness. He may be a member of management for many years without actually "supervising" anyone or anything. By training and temperament, most engineers are prone to make prolonged investigations into every aspect of a problem—studying every angle and weighing every factor—when management often must make immediate decisions based only on data at hand. As a quasi-professional, the engineer often finds himself advising management, but separated from the controlling function.

To get the engineer to think of himself as part of management, he must be trained as a manager. Trained as a leader, the engineer can become an excellent executive. More important, however, is the fact that several scientific people have said that broadening the training of an engineer to include subjects outside his field makes him a better *engineer*, stimulates his imagination and creativeness, and gives him incentive and hope. Far from creating dissatisfaction with his lot, management training often convinces the engineer of his importance to the company and reinforces his desires to continue engineering work—at the same time improving his administrative, human and leadership skills, which, in any event, no matter what his future in the company, will be helpful. Management training shows the engineer where he fits into the overall scheme of things and inevitably helps him become a better engineer.

Management's communications are at the root of its relationships with engineers. Communications are, and always will be, largely an art rather than a science. Too often, all emphasis on communicating is put on the importance of "getting along with people," and superficial things such as facial expressions, tonal inflections, and other characteristics of speaking and writing (to give communications) and listening and reading (to receive communications). Basically, however, good communications depend upon common understanding. Here again, training engineers in management methods will provide a two-way street for better communication between engineers and other management personnel.

The purpose of management training for engineers must be clearly understood. Its primary objective is not to transform engineers into executives—not to force a transition at a time when engineers are wanted as engineers. Rather, the objective of management training of engineers is to improve communications, broaden engineering outlooks, grant status and recognition, and weld the engineer into the management team. Just as a music appreciation course need not make participants into musicians, so a management training course need not make executives. But, as an

interesting by-product, exposure of engineers to management training will usually pinpoint a number of potential new executives, and stimulate some engineers to develop executive capability.

Last summer, at a Management Development Seminar at Cornell University, the subject of management training for engineers was discussed intensively. Training representatives of a number of major industrial companies in the country were present. Many of them said that their engineers were the least receptive to management training of any group in the company. In fact, after a few management training sessions had been held, most engineers tried to find an excuse not to attend.

Again we must consider the engineer —his training, experience and temperament. To subject engineers to the supervisory development activities currently in effect in most companies is simply refusing to face the fact that engineers are different. We must remember that the engineer is accustomed to dealing with things that can be measured quantitatively. The intangible nature of leadership, human skills and communications is too unrealistic to the practical-minded engineer, and he will refuse to grasp it. The solution: Work up to these things gradually. Give the engineer *functional* training in business subjects where there is quantitative measurement. Show him the practical uses of financial and business statements, take him through the fundamentals of accounting and cost-finding, let him delve into corporate financial policy and business organization.

After he has been exposed to the more exact or scientific areas of management, he will more readily accept training in the more intangible areas of human relations, leadership, motivation, sales, communications and the like. In this way he will come to understand management better and management will find it easier to understand him. Nothing will go further toward licking the problem of engineering turnover than to have the engineer make the "first team" in management.

The improvement of the managerial skills of engineers is only one part of a two-pronged attack which can be made on engineering turnover. The other will be to give increased status to engineers as engineers. Two well-known industrial giants, one in the oil industry and the other in diversified manufactures, have created a line of progression for engineers outside of the regular management hierarchy. Top engineers can earn as much as $27,000 a year without acquiring *any* administrative or supervisory duties. These companies believe that the contribution these men make to the success of the company is equal to that made by their top middle management group, and so pay them accordingly. In these companies, appraisal techniques separate those engineers with management potential from those who are obviously unsuited for top *management* posts—the latter are routed up a "technologist's" ladder, where they receive the salary, recognition and other "psychic income" benefits that their counterparts in management receive.

Can companies afford to embark on this two-pronged attack to relieve the shortage of engineers? There is really only one way to find the answer: Determine how much your engineering turnover costs.