## V. RAMP SAFETY AND GROUND SUPPORT

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The average ramp is a community of relationships and its success depends on how well these relationships function. Managers have to orchestrate a great deal of activity in a small area around a magnificently expensive piece of equipment in a limited amount of time. Their job requires planning, precision, and predictability. But, because people perform these tasks, management must walk a tight rope of insisting upon group perfection while giving credence to individual needs. People like knowing what is expected of them, but they hate being told what to do.

This isn't unique to ground support, it is the premise around which a mountain of organizational management theory is built. But what makes this dichotomy particularly problematic is when people (usually those considered to be at the lower end of the organizational structure) are not considered to be a corporate resource and therefore employment longevity is not a corporate goal. Who cares if the tow tractor driver quits? He/she's just a manual laborer. We'll find another. In today's business climate, that may be true. This year's bottom line has little room for future returns. But the problem with that kind of thinking in ground support is that these manual laborers are indeed critical to the corporate image, corporate performance, and even corporate disaster.

So, while it is true that it doesn't take a brain surgeon to handle luggage, every person who services an aircraft must continually pay attention to detail even when the task has become rote and the execution boring. That's not easy. And in order to get an individual to think while performing these repetitive tasks, management has to provide incentives.

But do airlines/ground handling companies want to make that investment? To help answer that question, in 1997 the publisher of "GSE Today" conducted an informal survey among ramp operation managers around the world to determine the employment practices of airlines, ground handlers, and fixed base operators. How they hired and retained ground crews. How much training they provided. What kind of benefits they offered. Were salaries adequate. With this information in hand, the relationship between a company's attitude toward employee longevity and the longevity of its ground support equipment (GSE) could be evaluated. If an airline can keep its people longer, will it also be able to keep its GSE longer?

Even though the survey was informal and would not stand up to the scrutiny of high statistical standards, a multitude of countries were represented and, obviously, much thought had been put into answering the questionnaire. As expected, the responses showed significant differences between cultures and geography, but provided a considerable amount of interesting information.



Figure 1 - Does Employee Longevity Impact the Length of Time Equipment Lasts?

The charts in Figure 1 seem to answer the question of whether or not the length of time an employee remains on the job affects the length of time GSE lasts in service. According to the survey, it does. A company that has an average employment life for ground crew of less than a year can expect only 32% of its GSE to last over 10 years whereas companies that keep employees for over 5 years can expect 68% of its equipment to last over ten years.

On the other end of the spectrum, companies that average less than a year for employees can expect 18% of its equipment to last less than 5 years, and companies with employees staying longer than 5 years can expect only 5% of its equipment to give up before it is five years old. For the purposes of this survey, equipment is defined as vans/ scooters, baggage carts, loaders, service carts, air starts, ground power units (GPUs), maintenance lifts, deicers, tow tractors, containers, and pushbacks. (Vans/scooters had the shortest life span of under 5 years and pushbacks had the longest with an average life of 10 to 20 years.)

An interesting point about these numbers is that equipment longevity doesn't significantly improve until the average length of employment reaches "over five years". This can be seen in the equipment "lasts-over-ten-years" category where there is at least a 37% difference between companies whose employees leave before five years and companies whose employees stay.

The cost of equipment is not the only thing to decrease as the length of employment increases. The cost of soliciting, interviewing, and training new hires also decreases. The average number of people who must be interviewed in order to fill a ground crew position is 8.5 for those companies that keep employees less than five years. For the over-five-year companies, the average number of applicants to be interviewed per position is 6. The 2.5 person difference can become a significant number when several hundred positions have to be filled annually.

The "GSE Today" survey also tried to determine why one company kept an employee when another didn't. When asked whether or not their companies encouraged employees to stay with the company, 91% of the survey respondents from companies whose employees stay more than 5 years said yes, whereas only 60% of the companies whose employees leave before the end of a year said yes. Conversely, only 9% from the former group said their companies discouraged longevity while 40% from the latter group discouraged longevity.

The overwhelming reason given for how a company demonstrates encouragement for ground crew to stay was through a benefits package. (Figure 2) Salary was not mentioned once as an enticement although it was the number one reason employees quit. (Figure 3) Perhaps a conclusion can be drawn that in order to attract an employee who has the potential to stay longer than five years, a benefits package that reflects longevity should be offered from the beginning. However, in order to keep such an employee, salary increases must also be forth coming.



One interesting note was that the only group that offered free travel privileges as a benefit was the group of companies that retain employees more than 5 years. A simple idea, but when competing with other industries for employees at the same pay, travel is the one benefit unique to the airline business - and probably an item the ordinary ground crew member couldn't afford any other way.

What are similar paying jobs for entry level ground crew positions? The job sited most often was in fast food--not really comparable in responsibility or potential danger to both employee and employer assets. The next most mentioned jobs were factory worker and truck driver.

Concerning prerequisites required of job applicants, the over-five-year group required more than the other groups. (Figure 4) For example, 27% of these companies require applicants to have previous aviation experience, 47% require an academic degree, and 20% a technical degree. For those companies that retain ground crew for less than a year, 33% require an academic degree and the other 67% mentioned having no requirements other than the standard security checks.

## A. Airside Safety

When David Hinson, ex-FAA Administrator, addressed the issues of air carrier safety in one of his final speeches, he complimented the industry's record. "In the entire history of U.S. aviation, there have been 12,600 commercial passenger fatalities. This is the approximate number of people who lose their lives every four months on U.S. highways." He also praised the industry's data collection abilities. "When the B-747 was introduced in 1969, its flight recorder tracked just five categories of data, inscribed by moving needles on a roll of tinfoil which advanced at one-tenth of an inch per minute. Now we can record up to 200 categories of data on magnetic tape or computer chips at a rate of 64 times a second. (The B-777 dumps data at 128 times a second)."

Data concerning ramp accidents isn't quite as prolific or available. There is a handbook on aviation ground operations safety produced by the U.S. National Safety Council, but it was published in 1988 and is currently out of print. The Airports Council Int. (ACI) offers the second edition of its Apron Safety Handbook which was published in 1996. This manual provides instructional material and suggested guidelines to promote safety awareness, including apron design, markings, standard operating procedures (everything from apron cleanliness to powerback procedures and signals), licensing and training, safety awareness initiatives, and accident reporting procedures. It is comprehensive, well presented and illustrated, and easy to understand. It also points out that most ramp accidents to the airline industry is hard to come by, it is estimated at several billion U.S. dollars, a figure that could move an airline from red ink to black ink without compromising passenger safety or services.

The U.K.'s Civil Aviation Authority has also published a manual called Airside Safety Management (March 1995). This handbook is also very comprehensive and is presented as a training manual with instructor's notes, objectives, and tests. It covers airside safety management, the management of health and safety of people airside, airside planning, vehicle operation and driving, aircraft movements, training for safety, and performance management. As a management training tool, it is informative and complete.

However, neither manual offers statistics about the frequency and circumstances of ramp accidents. In his speech, Hinson pointed out that data not only gives clues to the causes of accidents, but acts as a guide in deciding how to handle similar incidents in the future. "Data from the crash of a Delta flight near Dallas during a summer thunderstorm in 1985 are now part of several training programs for airline pilots and helped set the FAA's policy on wind shear," he said. "Such data are also used to program simulators." Ground support activities don't benefit from the same emphasis on data collection. Although clearly ground support accidents don't require the same intensity of investigation or data gathering, finding out trends in the causes (be it equipment failure or time pressure) should be of great interest to bottom line managers.

The "GSE Today" survey asked managers how many ramp accidents occurred per 1,000 flight departures. 75% of the respondents claimed not to have had any accidents. However, they did know what caused ramp accidents. The predominant factor cited is working under the time pressure (65%). Lack of motivation among crew members was mentioned 45% of the time, inadequate training/inexperienced crew was mentioned 35% of the time, and GSE failure was mentioned only 13% of the time.

Several organizations (including ACI and IATA) are encouraging data collection and analysis of ramp accidents but occurrences and causes are not continually reported to a central location and analyzed in a standard format. The U.S. NASA operates an Aviation Safety Reporting System which collects and publishes incident and accident reports from sources which are kept confidential. While the NASA ASRS encourages reporting from ground personnel, the system's primary source of information is flight crews, even when reporting ground incidents. The Flight Safety Foundation has also been gathering information on ramp safety. Its findings, like those of most other organizations, are complicated by the bureaucratic process. Ground accidents, that do not endanger an aircraft, are classified as industrial accidents and may not ever be reported to anyone involved with aviation safety.

In summary, the "GSE Today" survey and all the other data available put hard number proof to the conclusion that common sense lead us to in the first place. Improvements in safety will also produce reductions in operating cost, enhanced airline reliability and longer equipment life. Selection, training and retention of dedicated employees pay off on the ramp as they do almost everywhere else.

General Publications will continue to publish articles on this and related subjects in "GSE Today" and will work with any and all organizations to gather and disseminate information that can improve the process and assist the global industry. In that regard the opportunity to contribute to the work of the Royal Aeronautical Society is greatly appreciated.