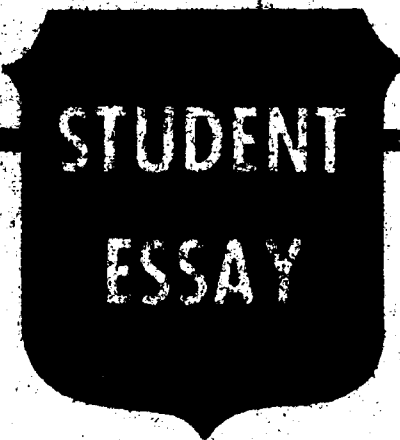


MICROCOPY RESOLUTION TEST CHART
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**SELECTED MAINTENANCE SKILLS IN THE US ARMY RESERVE--
WHY SHORTFALLS EXIST AND WHAT ACTIONS HAVE BEEN TAKEN TO CORRECT THEM**

BY

COLONEL CHARLES D. BENSON

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Clearly, current levels of attrition are having a serious impact on MOS qualification rates. What can be done? Reserve commanders must address the root causes of the problem: poor training, delays in receiving pay, transportation difficulties, and job conflicts. How can the Active Component help? TRADOC and FORSCOM have important programs underway to improve MOS qualification including more effective use of Reserve Forces schools and the addition of regional training centers. In its concluding section the essay reviews these and other initiatives.

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USAWC MILITARY STUDIES PROGRAM PAPER

SELECTED MAINTENANCE SKILLS IN THE US ARMY RESERVE — WHY SHORTFALLS
EXIST AND WHAT ACTIONS HAVE BEEN TAKEN TO CORRECT THEM

An Individual Essay

by

Colonel Charles D. Benson (Author)

Colonel Robert Holden
Project Advisor

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SELECTED MAINTENANCE SKILLS IN THE US ARMY RESERVE--
WHY SHORTFALLS EXIST AND WHAT ACTIONS
HAVE BEEN TAKEN TO CORRECT THEM

Current retention problems in the Reserve Components have focused attention on qualification rates for Military Occupational Specialties (MOS). Last year 32% of the United States Army Reserve's (USAR) enlisted personnel chose to leave their units. While extensive recruiting efforts have replaced the losses, units are left with large numbers of untrained privates. In many companies less than 70% of the enlisted are qualified for their job. Recently, the impact of personnel losses on unit readiness, particularly of Combat Service Support (CSS) companies, has prompted public expressions of concern by former Army Chief of Staff, GEN. Edward C. Meyer and former Assistant Secretary of Defense for Reserve Affairs, James Webb. Within the Army Reserve the issue of retention has crowded out other matters.¹

This essay examines one area of the USAR's logistics capability to determine the extent of personnel shortages and review programs that are underway to fill these vacancies. In the opening portion of the paper, I present data on 12 maintenance specialties: unit positions and the percentage of qualified personnel, individual ready reserve (IRR) strengths, and training and mobilization requirements as determined at headquarters, Department of the Army (DA). Subsequently, the essay looks at the personnel status of nine units in depth, presenting the views of commanders and strength management officers concerning retention ills. The concluding pages review training efforts underway to improve maintenance skills in the USAR.

The extent of the USAR's training problem has been masked by strength figures that show most major commands at or near 100% of authorized strength. In fact strength data vary widely from unit to unit. Among nine companies studied, four exceeded their authorized strength--one company carrying an extra 30 personnel on their roster. At the other end, two units had less than 75% of their required strength. Within these same units, certain specialties fared much better than others; e.g., the 245th Maintenance Company in Wood River, Illinois, has qualified light wheel-vehicle mechanics in 10 of 12 required spaces but only 12 of 28 power-generator equipment repairmen. Acknowledging the wide variances among units, certain facts stand out in reviewing the status of the Army Reserve's maintenance skills. (See Appendix 1.) First, USAR units are unable to fill these MOS to required levels except for light wheel-vehicle mechanics and equipment records and parts specialists. Secondly, only about two-thirds of those individuals serving in maintenance positions are actually qualified. Adding all USAR units together, one of the twelve specialties shows a qualification rate about 70%; half of the MOS fall below 50%.²

While the figures give a bleak picture of individual training readiness, there is a solution at hand. In ten of the twelve MOS, there are more than enough Individual Ready Reservists (IRR) to fill unit vacancies. Power-generator mechanics and chemical-equipment repairmen (52D and 63J) remain a problem even with IRR assets applied. In the other specialties available reservists exceed unit requirements. But other requirements will compete for the IRR pool including active and mobilized Guard units, as well as casualty replacements.³

Judged in the context of the Army's overall personnel needs, how critical are these particular MOS shortages? Only one of the twelve -- power-generator repairmen -- ranked near the top of the level 1 priority list prepared by the DA Deputy Chief of Staff for Operations (DCSOPS). It came in fourth of 220 MOS with a requirement to train 868 ready reservists in 1987. When you consider that only 18,000 HA enlisted were trained in 1986, the size of the allocation gains significance. In fact 521's received the largest number of training quotas. Three other maintenance skills from the study made the "top-fifty" list including light wheel-vehicle mechanics (skill levels 2 and 3), utility equipment repairmen, and track vehicle repairmen. The DCSOPS list emphasizes the importance of the USAF's logistics functions for the Army; among the 50 MOS with the highest training priority, 42 were medical or CSS skills.⁴

A DA Deputy Chief of Staff for Personnel (DCSPEL) study projecting manpower shortages 90 days after a mobilization provides a second assessment of USAF manpower. Understandably, combat MOS require the largest numbers in anticipation of casualty replacements. Among the 12 maintenance skills, only three present a serious deficit numerically: power generator repairmen with a shortfall of 3210, QM and chemical equipment-1276, and wheel vehicle repairmen-930. Two low-density MOS are also significant -- the utilities equipment repair specialty has a deficit of 107 and fuel and electrical systems a shortage of 270. According to the DCSPEL report, the other seven MOS should be at satisfactory levels 90 days into the war.⁵

What generalizations can be drawn from these data? First, maintenance units of the Army Reserve have a serious shortage of qualified personnel.

In hard-skill areas, such as the twelve singled out for this paper, the qualification rate runs about 50%. This situation exists at a time when other USAF specialties show a surplus in assigned personnel. Among six MOS selected at random (infantrymen - 11 P & C, combat engineers - 12i, tactical communications operator - 31v, tank crewman - 19k, bridge crewman - 12C), five are overstrength. MOS qualification rates are correspondingly higher. Secondly, IFF assets provide a source of personnel for most of these vacancies. Third, because of greater shortages in other logistics and medical skills, these 12 maintenance MOS are not among the Army's highest training priorities. The LA staff agrees that we need more repairmen for power generators (52L), utilities equipment (52C), and fuel and electrical systems (63C). Beyond that, LCCPS recommends more training for light wheel-vehicle mechanics to redress an imbalance at the 20 and 30 skill levels. LCCPL's study also recognizes the overall shortage of repairmen for QM and chemical equipment (63C). But what do these data mean in terms of unit readiness? In the next section nine units are examined in some detail.

Maintenance units in the St. Louis area come under the 520th Maintenance Battalion of the 102nd Army Reserve Command (ARCC). At first glance the 102nd's strength figures look good. On 30 September 1986 the ARCC's enlisted ranks stood at 108% of authorized strength, having grown by nearly 500 in the previous year. In the same period, however, the command was experiencing a 35% attrition rate. Of the 1,980 LI leaving the ARCC last year, 510 transferred to another Reserve Component unit or opted for active duty. Approximately the same number requested transfer to the IAF; another

500 were listed as unsatisfactory participants, as they missed nine or more drills during the year. About half of the remainder chose not to reenlist. Setting aside the first group (those who transferred to another Army component or command), the ARCC's attrition rate was about 25%. Why did 1470 enlisted personnel chose to leave the 102nd ARCC last year? Four reasons were most often cited: poor training, delays in receiving pay, transportation difficulties (the service member lived outside a 50-mile radius or had no vehicle), and job conflicts -- the unit affiliation took up too many hours or weekends. Major Denis Cappella, strength management officer for the ARCC, offers a fifth reason: obligated service members can quit without fear of punishment. Whatever the reasons, matters have not improved much in 1987. The first quarter saw ARCC losses of 485 enlisted, an annual attrition rate of 32%.⁶

Within the 520th Maintenance Battalion, there are six detachments and three companies. Of the latter units two show a marginally satisfactory status of qualified personnel, albeit with serious problems in several hard skills. The third is a company in name only. The 424th Light Equipment Maintenance (LEM) Company of St. Charles, Missouri, began operations a year ago and has yet to get on its feet. At 48% of authorized strength, the unit has only one-quarter of its positions filled with a qualified individual. Typically new units in the Army Reserve take several years to gain community recognition and full strength. The 245th (St. Louis) and the 936th Maintenance Companies (Wood River, Illinois) are representative of many LEM logistics units: at 100% strength, with an MOS qualification rate around 75%, and hard-skill levels closer to 50%. The equipment

concentration site at Fort Leonard Wood, Missouri, provides the best means to train, but involves a three-hour drive from St. Louis. Dissatisfaction with weekend training and job conflicts are the two reasons most often given by those leaving the unit.⁷

The qualification figures for the three greater - St. Louis units present a sharp contrast to the AKC's overall strength of 100%. Is the St. Louis Recruiting Battalion at fault for not matching new enlistees against unit requirements? The Army Reserve enlistment sergeant at St. Louis makes a good case for his battalion. In discussing assignments with prospective recruits, the first consideration is geography. In a metropolitan area like St. Louis, a typical recruit has limited access to transportation. Vacancies in suburban St. Charles go unfilled because there is no bus service from other parts of St. Louis and many recruits have no car. A second consideration is test scores -- many applicants simply do not show the aptitude for maintenance specialties. Finally, the individual's desires are taken into account. Since the Army wants a long-term commitment, the recruiting Battalion tries to accommodate the young person's wishes. While Reserve Components units update unit vacancy lists quarterly, the recruiters appear to use these printouts as a secondary tool. Their primary goal is to meet enlistment quotas. If they fill critical shortages in hard-skill specialties, then all the better.⁸

At the Edgemont USAF Center, 20 miles west of downtown Philadelphia, CPT Mark Hudson wrestles with training problems similar to those of his peers in the 102nd AKC. In 1986 Company 1, 157th Support Battalion, lost 33% of its enlisted members. (Hudson is quick to point out that his

attrition rate was 15% below the 157th Infantry Brigade's average.) Although the company's strength is above 50%, barely half of the enlisted are 100% qualified. Currently, 25 members of the unit are attending or awaiting initial entry training; a like number are listed as pending losses. What accounts for the brigade's poor retention? Hudson cites strong dissatisfaction with annual training. For two summers the brigade has undergone rigorous non-stop field duty at Fort Pickett, Virginia, with generous defections at the following drill. The reasons listed by the 102nd ARCC -- training, pay procedures, transportation problems -- apply equally well to Logansport. Since all equipment is maintained by a civilian contractor, the unit must reserve vehicles and generators for weekend maintenance. Many guidance units in the Philadelphia-Baltimore area send personnel to Aberdeen Proving Ground or one of the Pennsylvania depots for weekend training; Hudson participates as little as possible, arguing that such activities work against unit cohesion.⁵

The 517th INF Company at State College, Pennsylvania, reflects the condition of many units located adjacent to large universities -- fluctuating strength in a transient environment. Within the past three years, assigned strength has varied from 63% to 100% with present numbers at 80% of authorization. Among the unit's 102 enlisted, 50 are awaiting basic or advanced individual training; a like number are recent transfers from other units, unqualified in most instances for their new duty assignments. The company has shortages of qualified personnel in most MOS, particularly in the electronics skills. As for support from the Harrisburg Recruiting Battalion, Captain Larry Wolfskill contends that it is simply not there. According to Wolfskill the battalion concentrates its effort on the large metropolitan areas and virtually ignores him.¹⁰

The MOS qualifications rate for the 298th Maintenance Company in Altoona, Pennsylvania, took a nosedive in March 1986 when a TO&E change increased unit strength from 131 to 187. The area recruiting office, reduced from three recruiters to one NCO about the same time, has been hard pressed to fill the unit's attrition losses of 27%, much less find 56 additional servicemen. The shortage is particularly acute in 52L, a specialty that doubled in numbers last year. Training opportunities are available at Tobyhanna Depot for 52Cs and 52Bs as well as electronics repairmen. At Indiantown Gap the regional maintenance training center provides training for 63J's. Although the depressed economy in Altoona stimulates enlistments, the unit loses many of its members to active duty or unit transfers.¹¹

Several conditions contribute to the satisfactory training levels of the 326th Maintenance Battalion in Owings Mills, Maryland. The first is geographic: the battalion's three companies draw on the large population of metropolitan Baltimore for recruits. Perhaps more importantly, the three units are within an hour's drive of the Ordance School at Aberdeen Proving Ground where they receive MOS instruction and recruit maintenance personnel from active duty. A second advantage is continuity -- the three have not changed their organization or location for the past ten years. Third, the battalion pursues a conscious policy of overfilling its ranks. Since 1984 the 818th Maintenance Company (Ft. Leace) has averaged 112% of its authorized strength; the units in Westminster and Hagerstown have done nearly as well. The overstrength has helped the three units maintain MOS qualification levels of 75% to 90%, even though one-quarter of their men are not trained for their duty assignment.¹²

The status of enlisted personnel in the nine units supports several conclusions. First, the unit data mirror the figures in the LARC-27 report (Appendix 1) which show that 25% to 40% of enlisted members are unqualified. (The hard skills are generally found near the upper limit of that range.) What conditions cause such a high percentage of untrained personnel? The answer lies largely with the USAI's attrition rate of 32%. Then why such a high rate? It comes down to a lack of commitment among young service members, no practical way to enforce the service obligation, and inadequate training facilities -- compounded by poor utilization of what is available. A second conclusion emanates from the first: four of the nine units fall well short of mobilization readiness. With less than 50% of their EO qualified, these units can perform, perhaps, half of their intended workload. (A larger survey of Guard and Reserve service support units, undertaken by the Office of the Assistant Secretary of the Army for installations and logistics, produced similar findings.) Ideally, satisfactory levels of EO qualifications are possible with: one, an aggressive recruiting campaign to overfill units by 10% to 20% of enlisted strength; two, proximity to good training facilities; and three, stability in organization and location.

This essay's concluding section reviews Army efforts to improve EO qualification levels in the Reserve Components. The Department of the Army's current "Action Plan for Reserve Components Training" identifies 10 issues, including major initiatives to improve EO training thru Reserve Forces schools and regional training centers. Before looking at these issues in some detail, two recent actions warrant notice. Until recently

NCC training in the Reserve Components has concentrated on developing leadership to the neglect of MOS-specific skills. Last fall the Training and Doctrine Command (TRADOC) moved to correct this situation by adding MOS-related instruction to its reserve NCC courses. Service schools have been tasked to incorporate technical training (skill level 2-4) into NCC courses, where appropriate, by 1990. A second action concerned the retraining of prior service enlistees. Given the limited number of Reserve Components units in most areas, individuals with prior service are usually malassigned. Before 1986 efforts to retrain these individuals at service schools met with little success. Last year, however, in-service recruiters began promoting the Prior Service Training Program with increased vigor. As a result 1060 is qualified for an MOS in their new reserve duty assignment, a marked increase over previous years. Program funding for the future has been assured through the addition of a discrete line item in the DA budget.¹³

For years reserve units have qualified service members through supervisor on-the-job training (SOJT) when no other way seemed available. Never satisfied with this route, TRADOC further restricted its use with the Vice Chief's approval in June 1986. New rules prohibit the qualification of enlistees solely by SOJT, dictating that certification programs include some formal training. Army guidance further precludes the use of SOJT where reserve forces school programs are available. Finally TRADOC has taken important steps to improve the quality of instruction presented by reserve forces schools. An affiliation program linking each Army service school with a half-dozen reserve forces schools provides the means to supervise

training. Service schools will conduct semiannual visits, render evaluations at annual training, and provide technical support throughout the year. The addition of 1475 paid drill spaces has allowed the Reserve Forces schools to expand their curriculum and exercise more flexibility in their offerings.¹⁴

Full implementation of the affiliation plan has been delayed by a lack of funds. At this time service schools are straining to conduct annual visits. The program's potential is evident, however, in the work of the 2076th Reserve Forces school (Wilmington, Delaware). The 2076th has the good fortune to conduct its instruction at Aberdeen Proving Ground, Maryland. Its affiliation with the Ordnance school formalizes a working relationship that dates back to 1978. Last fall 471 enlisted enrolled in one of the school's MOS programs, either to gain or sustain a military skill. Since October the monthly drills have attracted an average of 515 students. Unit personnel arrive on Friday evening and classes end at noon Sunday, after 12 hours of instruction. Students come from as far away as New York City. (The 102nd Maintenance Company of Brooklyn has 68 of its MA enrolled.) Obviously, Pennsylvania and Maryland units are major participants. The 2076th provides instruction in the 44, 45 and 63 series of military specialties -- typically the individual must attend two academic years (October thru May) and two periods of annual training (14 days) to earn the MOS. Students can miss one Aberdeen session per year with make-up training at their USAI center. Having run maintenance MOS classes for years, the 2076th has a strong cadre of instructors. When they need administrative or technical support, the Ordnance school lends a hand.¹⁵

As I indicated earlier, the lack of training areas is a major cause of the Reserve Component's high attrition rate. In the past two years Forces Command has made this problem its second highest training priority, just below the National Training Center. With funds identified in the 1987-91 POM, FCRSCC1 intends to activate 19 sites for combined arms training. In the same timeframe, the National Guard Bureau expects to acquire 19 similar facilities.¹⁶

In support of combat service support training, FCRSCC1 and the Guard Bureau are joining with TRADOC and the Army Materiel Command to establish 23 regional maintenance training sites. These sites will provide transition training on force-mobility equipment and the opportunity to refresh military skills, i.e., sustain rather than award MOS's. The maintenance site at Fort Indiantown Gap, Pennsylvania (IIG) is among the earliest in operation, having started up in September 1986. On a typical weekend IIG hosts 50 to 75 reservists. Of the five-man team at the site, only one is listed as a trainer. He assists unit personnel, while they take the lead in the weekend's activities. Although the Gap has limited equipment -- generators, signal equipment, and an M115 personnel carrier, the opportunity is there for good training.¹⁷

Reserve Forces schools and the Prior Service Training Program add significant numbers to the ranks of qualified reservists. If all 91 schools approached the success of the 2076th, USAR units would add 10,000 qualified enlisted per year. FSI1 has the potential to further increase that sum by 1,500 to 2,000. The ultimate solution, however, is to improve

retention. An attrition rate of 33% last year translated to a loss of over 70,000 service members. Until that number comes down, USAF units will show unsatisfactory levels of MOS qualification.

APPENDIX 1

USAR UNIT PERSONNEL REQUIREMENTS

| <u>MOS</u> | <u>Number Required</u> | <u>Number Assigned</u> | <u>MOS Fill Rate</u> | <u>Number Qualified</u> | <u>% MOS Qualified</u> |
|--|----------------------------|----------------------------|--------------------------|-----------------------------|----------------------------|
| 44B Metal Worker | 824 | 761 | 92.4% | 455 | 59% |
| 44E Machinist | 425 | 393 | 92.4% | 207 | 52% |
| 45K Tank Turret | 214 | 142 | 66.4% | 84 | 40% |
| 45L Arty. Repair | 98 | 72 | 73.5% | 46 | 47% |
| 52C Utilities Equip. Repair | 790 | 634 | 80.3% | 445 | 56% |
| 52D Power Gen. Equip. Repair | 3413 | 3390 | 99.3% | 1304 | 44% |
| 63B Light Wheel Veh. Mechanic | 7232 | 8119 | 112.1% | 3057 | 87% |
| 63G Fuel & Elec. Sys. Repair | 235 | 169 | 71.9% | 98 | 42% |
| 63H Track Veh. Repair | 1335 | 1142 | 86.2% | 697 | 57% |
| 63J M & Chem. Equip. Repair | 1213 | 711 | 58.6% | 374 | 31% |
| 63M Wheel Veh. Repair | 1115 | 734 | 65.8% | 439 | 37% |
| 76C Equip. Rec. & Parts Specialist | 1071 | 711 | 66.4% | 471 | 65% |

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