

STEP FUNCTION OF SUPPLY CAPACITY

Figure C.1 depicts how consolidating support equipment affects supply capacity. Suppose, for example, that repair shops operate 24 hours per day with unconstrained personnel availability. In this case, the primary support limitation becomes the number of test sets. If these strings were to operate independently, then one squadron would need a whole string even if it needed only 75 percent capacity of the string, because strings cannot be separated into units

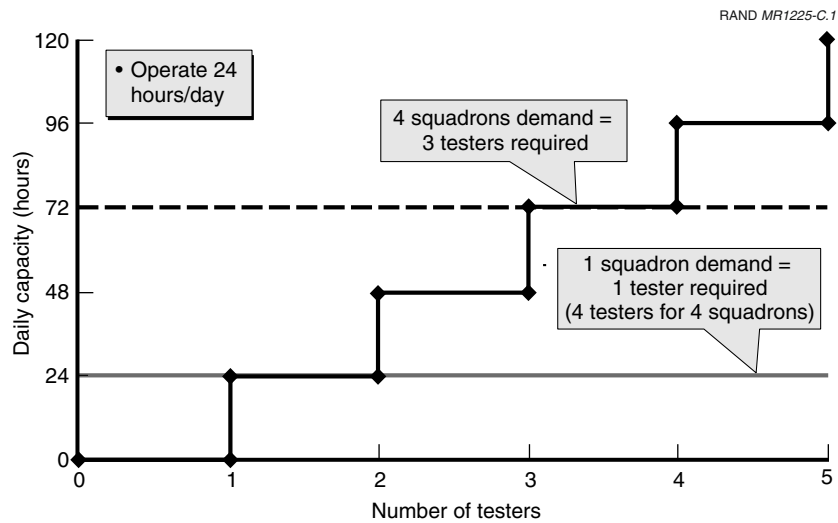


Figure C.1—Supply Capacity Increases with Consolidation

smaller than one. Four independently supported squadrons thus would require four sets of repair equipment.

If, however, the strings supporting these four squadrons were to be collocated, then only three strings, not four, would be required, because the 75 percent string capacity needed by each of the four squadrons could be met by three collocated strings running continuously.

Support capacity is further enhanced by increased uptime per group of collocated sets. As the number of collocated strings increases, their average availability increases as well. Another benefit to collocation is lower repair capability uncertainty once a test set becomes non-mission capable. If a single string at an FOL breaks down during the peak flying period, the availability of support equipment spare parts (for repair) becomes critical. Furthermore, supply system capabilities may also be stressed during surge operations. In a high demand with low resource availability scenario, assured equipment performance becomes extremely critical. Collocation does not eliminate the possibility of equipment failure, but it does provide more certainty that minimum repair capability can be maintained at all times—the chances of all collocated test sets failing at the same time are very low.