

# Mower/Litter Remover

**An example** of how NASA technical assistance can solve developmental problems encountered by industrial firms and offer significant improvement to the end product is contained in the experience of The Burg Corporation, Sylacauga, Alabama.

The Burg Corporation manufactures the Vac-N-Bag, a tractor-drawn combination grass mower/litter remover for manicuring lawns, parks areas, highway medians and other areas. On the same pass, the machine cuts the grass, collects the grass cuttings and sucks up all litter in the passed-over area. The Vac-N-Bag can operate as a litter gatherer on dirt, asphalt and concrete, and it runs forward and backward (no need to turn around in tight places). It has a generously-sized refuse bag that is small enough for single-operator handling and Burg also offers an optional large container for leaf collection.

In developing the prototype machine, Burg produced a workable vehicle but company officials sought a way of getting more power out of the suction system. Company president Cecil Thornburg sought help from Marshall Space Flight Center (MSFC) by submitting a problem statement and request for assistance. Engineers of MSFC's Turbomachinery Branch reviewed the Vac-N-Bag's suction system and devised a way of guiding heavier items of trash to a point where suction was greatest, thereby insuring trash pickup. MSFC also suggested changes to the impeller and the exhaust port.

The MSFC recommendations were enthusiastically accepted and incorporated in a modified version of the Vac-N-Bag, and Burg's Cecil Thornburg reported to MSFC a "vast improvement" in the machine's performance. The modifications were adopted for the Burg Model II Vac-N-Bag, now in production and in service with a number of highway departments, city governments and park authorities. One user—Childersburg (Alabama) Department of Parks and Recreation—reported a halving of work time by vacuuming trash and clippings while cutting grass.



*A Burg Corporation employee demonstrates the Vac-N-Bag, a machine that sucks up litter while mowing grass.*



*An accessory allows hosing up debris from gutters, shrubbery and picnic areas.*