

# Fact Sheet

## SMALL EMPLACEMENT EXCAVATOR (SEE) SNOWPLOW

### PROBLEM

In the past, the Army was not greatly concerned with snow removal over lines of communication or at support/staging areas. As a result, no engineer vehicles are specifically outfitted to move snow. Existing engineer equipment, such as the Small Emplacement Excavator (SEE) with a front-end loader, or the Armored Combat Earthmover (ACE) with its bulldozer blade, do not move snow efficiently. Given current events and the winter deployment of troops to Bosnia and Kosovo, engineer equipment that can be outfitted to plow snow has been identified as a requirement by HQ, V Corps, and HQ, USAREUR.

### SOLUTION

CRREL obtained a snowplow designed and manufactured for the SEE by the Schmidt Engineering & Equipment Company. The plow mounts fairly easily without any need for modification, and was demonstrated and evaluated on hard surface and gravel roads, trails, and on a field at the Ethan Allen Firing Range training area in Jericho, Vermont. Average snow depth varied from 6 to 20 inches.

The plow assembly weighs 215 pounds more than the unloaded bucket loader assembly; this weight difference does not affect vehicle performance. The bucket hydraulic controls should be operated in float position and the trip edge may need to be periodically reset (by lifting the blade) when plowing on rough surfaces. If plowing cross-country terrain containing frozen tuft grass or similar obstructions, the plow should be kept three to four inches above the ground.

This plow attaches to the same connection points used for the SEE front-end bucket, using the same two bolts and four quick-disconnect hydraulic lines. The plow has hydraulic angle control and a trip edge that folds back and allows the plow to ride over obstacles up to four inches high. The existing SEE bucket controls operate the snowplow. When tested without tire chains, some minor traction difficulties were observed, but the SEE did not get stuck. Follow-on tests showed that using chains provided additional traction, which was significant when plowing uphill, and reduced the incidence of tire spin. Chains also provided increased control when plowing downhill, especially on curves, and while pushing old as well as new snow.

### STATUS

One snowplow is located at Fort Leonard Wood, Missouri; another is at Fort Drum, New York. Seventeen plows were shipped to Bosnia in 1996 (two have since been relocated to Kosovo) to clear roadways, parking lots, billeting areas, and landing sites. The snowplow is available through the Defense Construction Supply Center in Columbus, Ohio (614-692-2743) (National Stock Number 3825-01-423-7801). The cost is approximately \$9000.

### POINT OF CONTACT

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*SEE tractor with Schmidt "Wausau" brand snowplow.*

