

Fact Sheet

SNOWPLOW FOR SMALL EMPLACEMENT EXCAVATOR (SEE)

PROBLEM

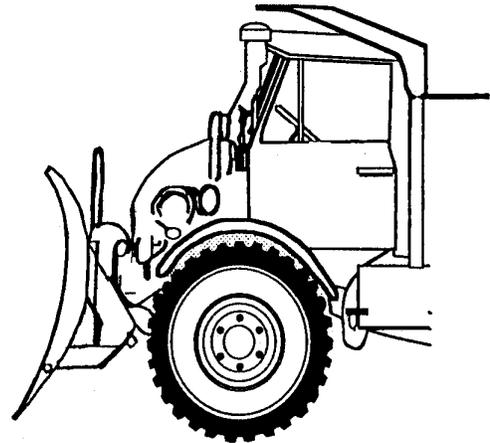
In the past, the Army has not been greatly concerned with snow removal over lines of communication or at support/staging areas. As a result, no engineer vehicles are specifically outfitted to move snow. Existing engineer equipment, such as the SEE with a front-end loader or the Armored Combat Earthmover (ACE) with its bulldozer blade, will not move snow efficiently. Given current events and the winter deployment of troops to Bosnia, 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 to a SEE without any need for modification, and was demonstrated and evaluated on hard surface and gravel roads, trails, and on a field at the U.S. Army/Vermont National Guard Ethan Allen Firing Range training area in Jericho, Vermont. Average snow depth was 8 inches; a 2-foot berm was also plowed.

The plow assembly weighs 215 pounds more than the unloaded bucket loader assembly. This weight difference did not seem to affect vehicle performance. It was found that 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 will attach 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. Tested without tire chains, some minor traction difficulties were observed, but the SEE did not get stuck. Follow-on tests showed that the use of chains provided additional traction, which was significant when plowing uphill, and reduced the incidence of tire spin. The use of chains also provided for increased control when plowing downhill, especially on curves, and while pushing old as well as new snow.



STATUS

Ten snowplows have been shipped to Tuzla, Bosnia, 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) by ordering National Stock Number 3825-01-423-7801; it costs approximately \$6,000.

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