

## NEW JERSEY AND NEW YORK MOSQUITO CONTROL EXECUTIVES WITNESS DEMONSTRATION OF "JEEP-A-TRENCH" EXCAVATOR

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Through the efforts of Mr. Oliver Stivers, Salt Marsh Field Supt., Essex County Mosquito Extermination Commission, and Mr. William Thom, Asst. Supt. Middlesex County Mosquito Extermination Commission, serving as a special committee of the Associated Executives of Mosquito Control Work in New Jersey, arrangements were made for a demonstration on September 23, 1948, at the Newark, New Jersey Meadows, of the new excavating machine "Jeep-A-Trench" manufactured by the Auburn Machine Works, Inc., 2023 Harney Street, Omaha, Nebraska. The demonstration was conducted by representatives of the Newark, New Jersey Willys distributor, and was attended by representatives of the Bergen, Hudson, Morris, Essex, Union, Middlesex, Somerset, and Mercer County (N. J.) Mosquito Control Commissions, and by representatives of the Nassau County, New York Mosquito Control Board, the New York office of the U.S.P.H.S. Communicable Disease Center, and the New Jersey Agriculture Experiment Station.

The demonstration was held in an area of salt marsh, diked and dewatered by electric pumps of the Essex County Mosquito Extermination Commission. The marsh was very dry, and more than ordinarily firm. The machine operated very well, cutting a 10" wide x 4' deep ditch at a rate of about 5 feet per minute. The ditch has vertical sides, and the spoil is deposited on both banks.

This new excavator was developed primarily for the use of utility companies and others in installing pipe lines, conduits, cables, etc. It is therefore to be expected that there are many situations in mosquito control where it would be unsuitable. However, under suitable operating conditions, it appears to be an efficient tool, for one-man operation.

The unit is attached to the draw bar and frame of the 4-wheel drive civilian type Jeep, and driven from the power take-off. The cutters which do the ditch cutting are attached to a roller chain, the successive cutters being on alternate sides of the chain. Screw conveyors carry the spoil material away from the ditch. A hand wheel at the side raises or lowers the digging column, to a maximum depth

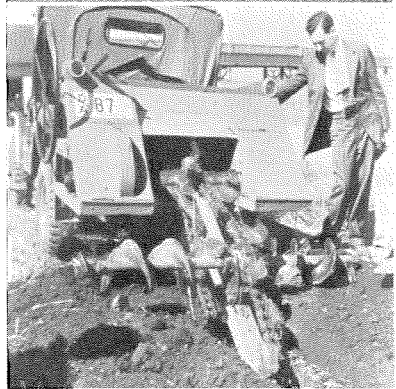


FIG. 1 (Above). "Jeep-A-Trench" ditching unit mounted on civilian Jeep. Digging unit in travel position.

FIG. 2 (Below). Close-up view of digging unit showing digging chain, cutters, and conveyor screws which carry spoil away from ditch.

of 5 feet. Interchangeable digging cutters are available for ditches 6", 8", 10" or 14" wide.

Forward motion is provided by a ratchet device, which transmits power to all 4 wheels, through special gearing. The regular transmission is in neutral gear while the excavator is operating.

Total weight of the Jeep with the excavator attached is 4,400 lbs., and the price quoted was \$3,850 complete.

Some of the apparent limitations of this type equipment in mosquito work are:

- (1) It can dig only vertical wall ditches.
- (2) It can be used only in areas where the terrain is firm enough to support a heavily-laden Jeep.

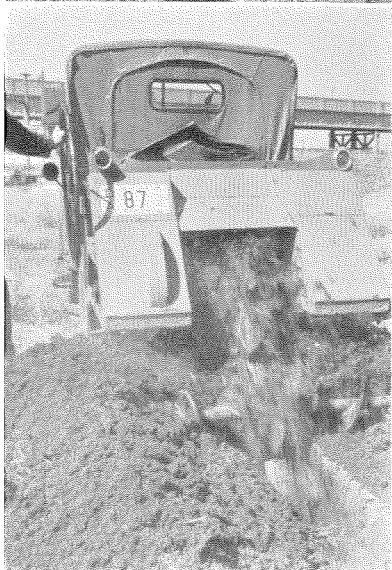
It is suggested that for many areas, a crawler tractor would be a more suitable vehicle upon which to mount such a unit.

- (3) Because of the type excavating cutters used, it is thought that this machine would not be suitable for cleaning old ditches where the material to be moved is very soft, wet, and "soupy."

Apparent advantages of this new unit are that it is relatively light, easily portable, and it adds still more to the utility of the Jeep which has already proved so useful in the mosquito control field.

FIG. 3 (Below). Digging unit in operation.

FIG. 4 (Above). Ditch with vertical sides 10 inches wide by 4 feet deep, dug at the rate of 5 feet per minute in firm, dry sod on Essex County marsh.



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