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MODIFICATION OF HOMELITE MIST BLOWER MODEL 24B-4A, SERIAL NO. 311700

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The Orange County Vector Control District has used the Homelite® Model 24B-4A Mist Blower for many of its varied spraying operations for years. These units have performed the mist blower functions admirably over the years, however, wear and tear and lack of available parts have all but curtailed the operation of these units. Homelite Mist Blower Model 24B-4A has been out of production for many years and no parts were available from Homelite Corporation or any other source as far as could be determined. Our problem is engine failure.

Prior to the modification, a study was conducted as to availability of mist blowers and their cost. Upon receiving this information, it was determined that modification could be accomplished at considerable savings to the District.

Modification of the available blower unit was accomplished by installation of a new engine. Research as to the type of engine was conducted and the final selection was the Honda® Model G80 BQ, 8 Hp., 4 stroke heavy duty electric starter engine, which possessed the specifications for this type of application.

The Homelite Engine Assembly was removed from the blower assembly and the Honda Model G80 BQ, 8 Hp engine adapted for blower operation of the mist blower impeller system. The entire Homelite engine was removed with shaft and fan assemblies. The

modified fan housing and Honda engine were installed at the opposite side of the fan housing. An engine frame support was manufactured to support the Honda engine. This was necessary to install the engine from the opposite side of the housing as the Homelite engine rotated in the clockwise rotation and the engines presently available only rotate counterclockwise and at various RPM's. Some engines were available with automatic centrifugal reversible clutch but at a reduced RPM of 2,600 clockwise. A desired 3,600 RPM is to be maintained for adequate air velocity at the 5 in. outlet. The Honda G80-BQ, 8 Hp was selected for the following reasons: Adequate Hp. maximum output 8.0 Hp/4,000 RPM, rated output 6.0 Hp/3,600 RPM, weight 67 pounds, electrical starter with diode charge coil circuit for charging of battery system, and quietness of operation muffler system.

The power take-off shaft of Model G80-BQ is 4-15/64 inches × 1 inch in diameter. This shaft adequately meets specifications for remachining of the impeller to the shaft assembly. The impeller was modified by a local machine works to fit the 1 in. drive shaft of the Honda G80-BQ, 8 Hp engine. It was keyed and locked with Allen head lock screws.

Intake air is sucked in from the opening where the Homelite engine was previously installed. A fine mesh screen has been installed to prevent any foreign objects entering the air intake opening.

Honda Model G80-BQ, 8 Hp engine was purchased from a local Honda dealer. Cost of the modification was as follows:

Honda Engine G80-BQ, 8 Hp	$315.88
Machine impeller rework	182.32
Window lift for blower rotation	15.00
Chain #35 roller chain	15.80
Socket P/N M-5924GSL	2.30
Chain sprocket 35B18-FX1	3.95
Engine mounting pads— ea. P/N 2-2150 GSL	21.40
Toggle switch P/N CH-551844	2.15
Hour meter P/N SW 15001	17.25
	$576.05

Parts for the Honda G80-BQ engine are readily available at most small engine suppliers, lawn mower repair shops, and Honda Motor Cycle and small power plant sales and service.

The modified mist blower has been utilized this past season in control of mosquitoes in street drains, catch basins, and freeway drainage areas with long underground drainage. Adulticiding of mosquitoes has been accomplished with the addition of a Spiratube TD-S® nylon tubing to the blower nozzle affording the operator ease of directing the mist to areas requiring spraying.

THE OCCURRENCE OF TENSAW VIRUS IN CENTRAL ALABAMA (BUNYAMWERA GROUP)

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The Bunyamwera group of arboviruses was established by Casals and Whitman in 1960 and presently is represented by 18 viruses, each with a limited geographic distribution, which appear in most parts of the world (Murphy et al. 1968, Int. Cat. of Arboviruses 1975). The group is named for the Bunyamwera virus which was isolated and described by Smithburn et al. (1946) in Africa. Tensaw virus, a member of the Bunyamwera group, was first isolated in 1960 by Sudia et al. (1968) from a pool of *Anopheles crucians* Wiedemann collected along the Tensaw River between Mobile and Bay Minette (Balwin County) Alabama, (Chamberlain et al. 1969). The name Tensaw was given

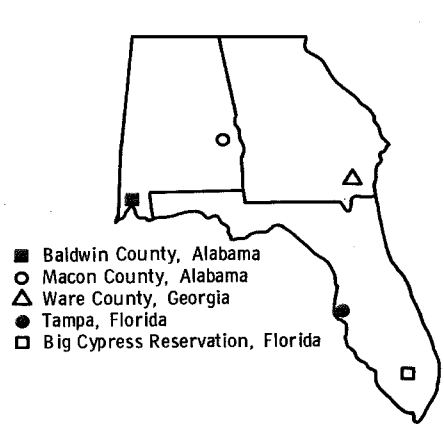

Fig. 1. Locations where Tensaw virus has been isolated from mosquitoes in the U.S.