

U.S. Navy MB-1 Crash Truck Biederman Motors & Marmon Harrington



Naval Air Development Center Warminster USN 71-00870, Marmon-Harrington

MB-1 Biederman Motors USN 71-00495 – 71-00533. 38 units

Marmon-Harrington USN 71-00804 – 71-00900, USN 71-00930 – 71-00954. 120 units

Total units 158.

The MB-1 was built on a 6 X 6 chassis powered with a 320-HP engine. Its gross weight is approximately 36,000 lbs. consisting of 1000 gals of water and 65 gals of foam concentrate. It can reach a speed of 45 mph in 33 seconds and obtain a top speed of 64 mph.

The feature of this truck is its twin independent foam making systems each generating 3,000 gpm of high quality fire fighting foam. When properly used it can cover an aircraft fuselage with an insulating layer of foam and extinguish tremendous areas of aircraft fuel spillage.

The normal operating crew for the MB-1 consists of a driver, two turret operators, and two handline men who also serve as rescue men. The turret men ride inside the body in order to start the pump engines and mount to the turret positions. Handline men ride either in the cab or in the body.

Two identical foam maker systems are provided, one of the port side, and the other on the starboard side of the vehicle. The front pump operates the port system, and the rear pump engine operates the starboard system. The function of these systems is to meter foam concentrate and water in the proper proportion and mechanically agitate the resulting 6 percent foam solution in egg-beater fashion, drawing air into the mixture to produce a relatively high expansion foam. Both systems are completely independent, so that both may be placed into operation when maximum discharge is needed, or either system maybe separately operated.

The turret nozzles used are also of special design. All foam is fully formed before it reached the nozzle so it act merely as a foam distributor. It is of interest to note that a turret pressure of only 9 psi is required to obtain this long range stream. A feature of the turret nozzles is their infinitely variable pattern adjustment, from a solid stream, 3,000 gallons of foam with a range up to 180 feet, to a wide dispersed pattern for close in work. This feature enable the turret operator to focus constantly on the target with less maneuvering of the truck. Overhead sighting from the top deck enables the operator to place foam where it will be most effective.

Foam flow is turned on and off by a convenient controller located in front of the turret operator. By means of remote air pressure control the water and foam concentrate valves are opened and the pump engine throttle advanced to the proper speed. When foam is no longer needed, the controller is returned to the "off" position. An intermediate position produces a water-only turret discharge and is used for flushing purposes after making foam. The foam flow from each turret is controlled independently from the other.

The handline pump system supplies the handline nozzles and the under truck nozzles with an effective fire fighting foam. It is an independent system from the two large foam-maker systems, and this auxiliary handline pump is controlled from the driver's seat. The handline nozzles do a good job of extinguishing smaller fires because they are flexible and easy to handle and are of use chiefly for mop-up operations. The under truck nozzles are intended for protection of the truck and the fuel tank when operating in a fire area.

An extension ladder is conveniently attached to the starboard side, outside the body, and a pike pole and door opener on the port side. Two CO2 portable extinguishers are mounted forward inside the bus doors. There are also racks located on top of the truck to store spare 5-gallon foam cans. An independent air-cooled gasoline engine driven generator provides electrical power for light, radio, etc., during standby operations.



Test Vehicle USN 71-00495 Biderman Motors



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