

12 VOLT ELECTRIC BLOWER

DESCRIPTION AND OPERATION

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side, block the unit so that vibration will not cause it to move toward the manhole opening.

2.03 *Never lower a blower hose into a manhole or leave it in a manhole unless the blower is operating.* Failure to have the blower operating may be a contributory cause of an explosion.

2.04 *Do not operate or store this blower in a manhole.*

2.05 *Always remove the blower hose from a manhole before the blower is turned off.*

3. DESCRIPTION

3.01 The blower consists of a metal housing containing a direct drive axial flow fan, airfoil shaped, and driven by a 1/8 HP, 12V dc, 15 amp electric motor.

3.02 The fan and motor are enclosed in a metal housing containing both air inlet and outlet openings (Fig. 1). This inlet opening is protected by a wire mesh screen.

3.03 The housing has four neoprene pads mounted on the bottom and a carrying handle on top. The bottom section is designed to serve as storage for the 10-foot electric power cord furnished with the blower. The power cord is equipped with a Hubbell No. 9758 two-prong "T" plug to prevent accidental plugging into a conventional power source. Under no circumstances shall the blower cord be modified for operation directly across the battery terminals or from the cigar lighter receptacle.

3.04 The blower delivers 500 cubic feet per minute (CFM) at 3,300 RPM through 15 feet of 8-inch diameter blower hose. The blower weighs approximately 17 pounds.

4. OPERATION

4.01 Place blower on a firm level base at least three feet from the manhole opening and in

1. GENERAL

1.01 This section covers the description and use of the 12V DC Electric Blower intended for use in ventilating manholes or similar underground areas on a short term basis not to exceed one hour. This lightweight blower is designed to be powered by a 12V truck battery.

1.02 This section is being reissued to correct the part number in 5.01.

1.03 The operator should be familiar with the following sections prior to using the blower.

SECTION	TITLE
620-140-501	Testing and Ventilating Manholes
649-510-115	Blower Hoses

2. SAFETY PRECAUTIONS

2.01 Place the blower so it will not be subject to damage, obstruct traffic, or present a hazard to pedestrians.

2.02 On sloping ground, avoid placing the blower on the upgrade side of the manhole opening. If it is necessary to place the blower on the upgrade

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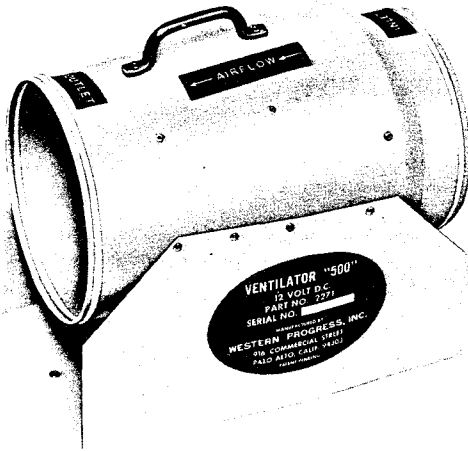


Fig. 1—12 Volt Blower

accordance with the safety precautions in Part 2 of this section.

4.02 Attach the blower hose to the air outlet of the blower by slipping the end of the hose which is equipped with a strap type clamp over the air outlet and pull the strap tight to hold the hose in place.

4.03 Connect the power cord to the power source to start the blower.

4.04 Let the blower run for one minute with the hose out of the manhole. Check the end of the hose to see that the blower is operating properly and that the hose is securely attached to the air outlet.

4.05 Lower the blower hose into the manhole and adjust the position of the blower so that the hose will run directly into the manhole without unnecessary bends. The optimum position of the output end of the blower hose is on the cable rack or other support at the midpoint of a side wall, with the hose opening directed toward an end wall.

4.06 *In no instance shall the blower be attached to or operated from the body of the vehicle.*

5. MAINTENANCE

5.01 Check length of brushes every 200 hours of operation or once a month whichever occurs sooner. When length approaches minimum safe length (3/16 inch) remove and replace with new brushes, No. 227136.

5.02 No other maintenance should be performed in the field. The blower shall be returned for repairs in accordance with local instructions.

6. SPECIAL INSTRUCTIONS

6.01 At the front of the vehicle, mount a nonmetallic electrical outlet box equipped with a Hubbell 5552-D, 20 ampere receptacle. The power cord on the blower utilizes a Hubbell 9758, two pronged "T" plug that is compatible with this receptacle. Under no circumstances should the power cord be equipped with alligator clips or modified to obtain power directly from the truck battery or cigar lighter. Run a 10-gauge, 600-volt wire along chassis frame to engine compartment and mount a 12-volt 20 ampere circuit breaker near starter solenoid. Using solderless wire connectors, connect one side of circuit breaker to starter solenoid and connect the other side to wire from electrical outlet receptacle. Wire used in making electrical installation should be kept as short as possible to avoid excess voltage.

Caution: *Do not make electrical connections to alternator.*

Connect other side of outlet receptacle to battery ground. As a difference in ground potential may exist, we recommend that a 10-gauge wire be connected directly to same ground as battery grounding cable. At manholes not accessible to the truck, the blower may be operated by means of a 12-gauge, 600 volt extension cord equipped with proper male and female connectors. The use of an extension cord permits maximum flexibility and does allow the truck to be used as a barricade for manhole protection. The blower should always be placed on the down traffic side of the manhole when being used. Extension cords in excess of 25 feet should be avoided.

6.02 The blower is equipped with a 12 volt, 15 amp dc motor. Due to large ampere requirements and to assure blower output at 500 CFM, the truck engine must be kept running when the blower is being used.

Note: The vehicle alternator and battery ratings should be checked to make certain

that the blower load on top of the lights, heater, etc, do not exceed the capacity of the system. It may be necessary to increase the alternator or battery capacity.