



OPERATION AND MAINTENANCE MANUAL

PGB18-4 POSITIVE PRESSURE VENTILATOR

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This manual covers the description, operation and maintenance of your Gasoline powered Positive Pressure Ventilator.

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SPECIFICATIONS

18" POSITIVE PRESSURE VENTILATOR with Honda 5.5 hp 4 cycle gasoline engine

INTENT: It is the intent of these specifications to provide for the purchase of an 18" Positive Pressure Ventilating Fan equipped with a Honda engine that will discharge no less than 15,000 cfm when tested to AMCA Standard 240. Fans that fail to meet these specifications will not be considered.

SIZE: The fan shall come equipped with a fiberglass reinforced polypropylene blade having a nominal diameter of 18 inches. The overall design shall be suitable for use under a variety of emergency conditions and shall be delivered according to the specifications as set forth herein.

DIMENSIONS: With the handle in the down position the dimensions of the fan, including frame, wheels and shroud, shall not exceed 21-1/4" high x 21" wide x 20" deep. Weight shall not exceed 80 pounds dry weight.

ENGINE: The fan shall be powered by an unmodified Honda 4 cycle overhead valve engine. It shall come equipped with a ball bearing PTO and generate 5.5 horsepower at 3600 rpm. A transistorized ignition system shall be supplied. Carburetor shall be of the gravity float type. Fuel tank capacity shall be .95 US gallons (3.6 liters). Oil capacity shall be .53 US quarts (0.6 liters). The engine shall be mounted on a steel mount fabricated for the purpose that shall be welded to the sides of the frame. The engine shall be fully warranted by Honda for a period of 1 year from the date of purchase. The fan manufacturer shall certify that the engine can be serviced at any Authorized Honda repair facility. The design of the fan shall be such that under full load it shall not exceed the rpm as recommended by Honda, and that the usual and customary operation of the fan under emergency conditions shall not function in any way contrary to the engine manufacturer's recommendations such as would subject it to undue wear or damage.

BLADE: An 18" diameter multi-wing blade design incorporating a cast aluminum hub complete with fiberglass reinforced polypropylene arms shall be supplied. The arms shall be easily removed for replacement if necessary.

FRAME: The entire engine and fan shall be surrounded on the back and each side by a welded frame assembly. All welds are to be ground smooth. The frame shall be constructed of no less than 1" x 16 gauge steel tubing providing protection from excessive damage during handling and use under emergency conditions. Height of the frame shall be such that a horizontal frame member shall stretch from one side of the frame to the other, offering additional protection on the top of the engine. A folding "T" handle of the same size tubing shall be provided in the rear center of the horizontal frame members. The Fire Fighter Friendly "T" handle handgrips shall be large enough so that the machine can be easily gripped and moved while wearing heavy duty fireman's gloves. A locking mechanism shall be provided to retain the handle in the up or down position. The side frame cross members shall permit easy access for lifting and transporting the machine. There shall be two rubber bumpers affixed to the center of the "T" handle which shall act as dampeners when the engine is running and the handle is in the down position. A shovel or "D" type handle shall not be accepted as meeting these specifications. Two sets of rubber shock absorbers shall also be provided under the frame providing a three point mounting system.

VENTURI: A steel shroud shall be mounted at the front of the fan completely surrounding the fan blade. The shroud shall act as a venturi and direct the flow of air from the fan. Two cadmium plated OSHA approved finger guards shall be installed, one on the intake and one on the discharge side of the fan blade. The guards shall be securely fastened to the shroud in such a manner that vibration will not cause them to come loose.

WHEELS, TIRES & AXLE: The fan shall be equipped with wheel assemblies having two 8" pneumatic tires to provide smooth and easy maneuverability. Each tire shall be supplied with an inner tube and fill valve and shall be mounted on steel wheels having ball hubs. These wheel assemblies shall then be mounted on a 1/2" diameter full width stainless steel axle for stability, low maintenance and long life. Designs that do not include a full width axle shall not be considered as meeting these specifications. The wheels shall be located inside the frame to prevent accidental damage or wheel misalignment when in use. Special tools shall not be required to remove or repair the

wheels, tires or axles. With the handle in the down position the wheels shall not touch the ground when operating on a level plane.

TILT MECHANISM: In order to insure that the fan will provide the maximum performance and coverage, a sliding tilt mechanism permitting a minimum of a 40° arc shall be provided and to allow for locking the tilt in any position within the range. The design shall incorporate a mechanism that tilts only the motor, fan blade and shroud while keeping the frame stationary. This will insure that the proper setback will be maintained during operation. An easily accessible friction lock with a knurled knob shall be provided to secure the tilt mechanism. Ratchet or foot operated mechanisms shall not be deemed to meet these specifications.

FINISH: The complete frame assembly as well as the shroud shall be finished in smooth red powder coated enamel paint. The engine shall retain the original Honda finish. The blades shall not have any finish applied.

OPTION 1*: If so designated as a part of these specifications the Honda Oil Alert feature shall be provided with the engine.

OPTION 2*: If so designated by these specifications a digital tachometer/hour meter shall be supplied and installed. It shall be mounted in a convenient place on the frame and be easily read.

OPTION 3*: If so designated by these specifications a 10' long x 1-1/2" diameter high temperature (400° F.) exhaust extension hose shall be supplied. The hose shall come equipped with a stainless steel strain relief. There shall also be a stainless steel collar provided that can be mounted to the Honda exhaust and shall have a push button lock for easy attachment or removal of the hose assembly. The discharge end of the hose shall have a cuff molded on that will allow a second 10' length of hose to be added. NOTE: A maximum of (2) 20' lengths of hose are permitted without affecting the performance of the engine.

OPTION 4*: If so designated by these specifications a second 10' x 1-1/2" diameter high temperature (400° F.) exhaust extension hose shall be supplied with a cuff molded on to the intake end to accommodate the discharge end of another piece of similar hose, permitting quick and secure attachment of the two pieces together.

WARRANTY: The manufacturer shall warranty the fan to be free of defects in workmanship and materials for a period of one year from the date of purchase. The engine shall have a separate warranty from Honda. All appropriate paperwork for the service and maintenance of the engine shall be included upon delivery.

*The purchaser must specify which options, if any, are to be included in this specification.

2. SAFETY PRECAUTIONS

- Do not modify the ventilator in any way
- Ventilators shall be operated only by trained personnel
- Never operate the ventilator without proper safety guards in place
- Do not tilt ventilator beyond angle provided by tilt mechanism
- Do not operate ventilator on unsteady or unstable surfaces
- Wear appropriate safety protection
- Do not wear loose clothing
- Remove any objects, prior to start up, that may be sucked through ventilator
- Caution – engine exhaust gases are poisonous – never operate in confined areas
- Do not operate in explosive environments
- Do not use the ventilator for other than its intended purposes

3. RECEIPT & PREPARATION FOR OPERATION

- Tighten all fasteners and inspect for possible damage caused in shipping
- Fill oil reservoir with recommended oil to levels indicated in Honda Engines Owner Manual

- Fill gasoline tank with unleaded fuel as per Honda Owners Manual recommendations
- Inspect guards to ensure operators safety
- Remove any loose objects that may be drawn into ventilator

4. OPERATION

Refer to Honda Engines Owners Manual with respect to the following:

- Check oil levels
- Check air filter
- Check and refuel as required
- Familiarize yourself with Engine control features and locations

Some PPVs are equipped with an Oil Alert system to prevent engine damage as a result of low oil levels. The Oil Alert System is designed to automatically shut the engine off to avoid engine damage. Care must be taken to avoid automatic shut off when operating PPVs on an incline.

Refer to Honda Engine Owners Manual for correct start up and shut off procedures.

5. MAINTENANCE

- Maintenance should be performed by trained personnel
- Prior to any maintenance ensure that the ventilator has come to a complete stop then remove spark plug wire as a safety precaution

General Maintenance

- PPV impeller must be clean and free from any material build up to ensure smooth vibration free operation
- Inspect guards to ensure they are undamaged and securely installed
- Inspect and tighten all nuts, bolts and fasteners
- Rotate blade to ensure it will not contact any part of PPV.

For Honda Engine Maintenance please refer to Honda Engine Owners Manual.

7. WARRANTY AND LIMITATION OF LIABILITY

If the product sold hereunder are defective at the time of delivery in material or workmanship and written notice is given to Seller within one year after shipment, Seller, at its option will repair or replace the products, give Buyer an equitable credit, or refund the purchase price for such products determined by Seller to be defective, provided that the products shall not been altered or repaired after shipment to Buyer by anyone except Sellers authorized employees. SELLER'S TOTAL RESPONSIBILITY SHALL NOT EXCEED THE SALES PRICE OF THE DEFECTIVE PRODUCTS. TRANSPORTATION TO RETURN DEFECTIVE PRODUCTS IS TO BE PREPAID. If Buyer fails to give such notice within one year after shipment, any claims for breach of warranty by Seller shall be barred. Products manufactured by others but furnished by Seller are limited to original manufacturer's warranty. Leader Fan Industries Limited assumes no liability for resultant damages, labour and service charges of any kind arising from the use of its products. On equipment furnished by Leader Fan Industries Limited but manufactured by others, such as motors, the warranty will be honored by the manufacturer hereof.