

Decades of experience providing valving solutions 

# PH2 POWERHALT

AIR INTAKE EMERGENCY SHUT-OFF VALVES by PACBRAKE

# Operator's Guide

OPERATE ▪ TEST ▪ MAINTAIN ▪ TROUBLESHOOT

Helping you achieve optimum results with your PowerHalt Shut-Off Valve

800.663.0096 / [www.pacbrake.com](http://www.pacbrake.com)

 **PACBRAKE**



*Thank you for purchasing Pacbrake's PH2 PowerHalt air intake emergency shut-off valve.*

*This product is designed to provide you years of trouble-free, safe operation, while reducing your operating and maintenance costs.*

*You can be assured while on your work site that we have you covered, keeping you safe and clear of potentially dangerous runaways.*

## HOW THE SHUT-OFF VALVE WORKS

The PH2 shut-off valve is a butterfly style valve mounted in your air intake system which receives a signal from the PowerGuard controller when the engine RPM exceeds an overspeed value.

Automatic kits also include a manual override, Military style toggle switch, that allows an operator to override the PowerGuard controller & manually shutdown the engine. The Military style toggle switch (with safety cover) is designed to allow manual activation of the PH2 Valve and guard against accidental activation of the switch.

### SWITCH - DEFAULT "OFF" POSITION

- The switch is a normally open momentary switch, with Military style guard.

### SWITCH - "ACTIVE" POSITION

- In the event of an engine runaway, lift the safety cover on the switch and "activate" the switch to close the valve and shut down the engine.

***DO NOT ACTIVATE THE MANUAL SWITCH FOR MORE THAN 10 SECONDS —  
Damage to the solenoid may occur.***



# POWERHALT TEST PROCEDURE

## SET-UP PROCEDURE:

1. Go to PowerGuard controller box and take the controller out of the “auto” mode by pressing and holding “TEST” and “SET” buttons (lights will illuminate). Continue holding for 5 seconds or until lights start flashing. You are now in the Set-up/Test Mode.
2. Release both buttons.
3. If no buttons are pressed again within 60 seconds then the controller switches back to “auto” mode.

## TO GO INTO “TEST” MODE (DO SET-UP PROCEDURE, STEPS 1 TO 4 FIRST):

- A. Press and release the “TEST” button for ½ second until the “SET” button turns off.
- B. The “TEST” button starts to flash rapidly.
- C. Controller is in “TEST” mode (it will stay in this mode for 30 seconds before switching back to “auto” mode if step D does not occur).
- D. Bring the vehicle engine RPM up to 50% of the overspeed trip point value (example – engine rated RPM = 2000 + 20% for overspeed protection = 2400, 50% of this is 1200 RPM).
- E. Shut-Off Valve actuates.
- F. Engine shuts off.
- G. The “SET” button illuminates and “TEST” button flashes.
- H. When zero RPM is detected or 5 seconds has elapsed then both buttons turn off.
- I. Controller switches back to “auto” mode and engine will be ready for normal operation.
- J. Once the engine stops, wait 30 seconds, then reset the valve.



## VALVE OPERATION

During Normal Operation "AUTO" mode, the "TEST" light will flash every 5 seconds indicating the magnetic sensor is reading RPM.

## VALVE TESTING

1. Activate the manual switch (no engine running).

***DO NOT ACTIVATE THE MANUAL SWITCH FOR MORE THAN 10 SECONDS — Damage to the solenoid may occur.***

2. View valve and confirm valve has tripped. The reset knob should be in the tripped position. This will have the line direction on the reset knob facing 90° from air flow direction. *(See diagrams on back panel)*
3. Reset the valve. By turning the reset knob clockwise to the open "RUN" position, with the reset knob "line" is parallel with the air flow direction.
4. Start the engine and run at low RPM (preferably at idle).
5. Close the PowerHalt shut-off valve by activating the manual switch. The engine should stop within a few seconds.
  - If the engine does not shutdown. Check all intake piping and hoses for leaks between the valve and intake system.
  - If the system is leak free and your valve still does not shut down the engine, please consult a PowerHalt service representative for support by calling 800.663.0096 or emailing us at [info@pacbrake.com](mailto:info@pacbrake.com)
6. Once the engine stops, wait 30 seconds, then reset the valve.

# VALVE MAINTENANCE

To ensure a trouble-free long life of your PowerHalt shut-off valve, a scheduled maintenance procedure is mandatory. It is highly recommended that you read and understand the requirements for proper valve maintenance below

## MONTHLY REQUIREMENTS

- Inspection of all fasteners to include clamps, nuts, pull cables and support brackets to ensure that they are tight and to the required torque.
- Inspection of all wiring / cable runs to ensure there is no corrosion or vibration wear.
- Visual inspection of all hoses to ensure there is no cracking or damage.

## MONTHLY VALVE ACTIVATION

Monthly activation of the valve to ensure that it stays functional and free moving.

### PROCEDURE:

1. Run engine at low RPM (preferably at idle).
2. Close the PowerHalt shut-off valve by activating the manual switch. The engine should stop within a few seconds.
  - If the engine does not shutdown. Check all intake piping and hoses for leaks between the valve and intake system.
  - If the system is leak free and your valve still does not shut down the engine, please consult a PowerHalt service representative for support by calling 800.663.0096 or emailing us at [info@pacbrake.com](mailto:info@pacbrake.com)

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Damage to the solenoid may occur.***

- Once the engine stops, wait 30 seconds, then reset the valve.

**VALVE CLOSED  
(TRIPPED)**



**VALVE OPEN  
(RUN POSITION)**



***CAUTION: The #1 failure mode of any valve in the market is seizing due to lack of use. As this is a safety device, it is imperative that you employ safety activation testing at a minimum of once per month.***

**PACBRAKE CUSTOMER SUPPORT**

**800.663.0096** (Mon-Fri, 6:30am - 4:30pm)

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