R5 Rev Limiter OBD - Installation Instructions

R5-2016-OBD

Parts Included	Quantity
OBDII Rev Limiter Control Unit	1
Toggle Switch	1
Toggle Switch Guard	1
Auto Reset Breaker	1
Auto Reset Breaker Cover	1
OBDII Adapter Harness	1

After you have installed the Valve as described in the Valve Installation Instructions, install the Rev Limiter Electrical Kit as detailed on the following pages:

- Install the Control Unit and Toggle Switch
- Set the Rev Limiter
- Test the Rev Limiter Setting
- Turning key off will disable RPM pulse, making the system manual activation if your pulse is taken from an OEM source.

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Step 1: Electrical Installation

1. **DISCONNECT BATTERIES**
2. Mount the Control Unit on the firewall of the engine compartment away from moving parts and heat sources so that it is accessible for set up and testing. Do not tighten the screws until after setup is complete.

3. Connect ground (black) wire and power (red) wire **directly** to the battery. Install supplied auto reset breaker (no fuses) in the power supply wire(red). Use crimp style heat shrink connectors only.

DO NOT CONNECT WIRES TO FACTORY FUSE PANEL. CONNECT POWER AND GROUND WIRES DIRECTLY TO BATTERY. IMPROPER CONNECTIONS WILL VOID WARRANTY.

4. Install toggle switch on the left-hand side of dash if possible, GROUND one side of the switch to the battery. If optional Touchpad is used instead of toggle switch, follow included wiring diagram for connecting.
5. Connect the harness as per the included wiring diagram using crimp style heat shrink connectors only.
6. Connect OBDII to data link connecter.
7. **RECONNECT BATTERIES**

Step 2: CONFIRM KEY ON/OFF DETECTION

1. Turn the ignition key to the **ON** position, but do not start the engine.
2. Verify blue LED stays on for 60 seconds and then goes out.
3. If #2 fails, verify key on input goes to 12V when key is turned on and 0V when key is turned off.
4. Turn key off.

Step 3: Set the Rev Limiter (RPM Upper Limit)

Control Unit: Set Button

Set the Rev Limiter for one of the following, as described below:

- ☐ Variable Throttle
- ☐ Constant Throttle

Setting the Rev Limiter for a Variable Throttle

We recommend setting the shutdown RPM to a minimum of 20% above factory/OEM redline.

5. Turn the ignition key to the **ON** position, but do not start the engine.
6. On the Control Unit, press the **SET** button once. The **GREEN** LED on the front of the unit will illuminate.
7. Start the engine.
8. Raise the engine RPM to ½ (50%) of the desired shutoff RPM.
9. While holding the engine RPM steady, press and release the **SET** button. The **GREEN** LED will flash three (3) times. Setup is now complete.
10. **NOTE:** The **RED** LED will strobe if no signal is detected. If so, check termination points and all connections, and then repeat the above steps.

Setting the Rev Limiter for a Constant Throttle (Welders, Generators, Compressors, etc.)

1. On the Control Unit, press and hold the **SET** button until the **GREEN** LED strobes. Release the button.
2. Start the engine and allow the RPM to level off at the maximum work speed.
3. Press and release the **SET** button. The **GREEN** LED will flash three (3) times. Setup is now complete.
   NOTE: The **RED** LED will strobe if no signal is detected. If so, check the termination points and all connections, and then repeat the above steps.

Step 4: Test the Rev Limiter Setting

Testing the Setting for a Variable Throttle

Control Unit: LED and Test Button

1. Start the engine.
2. On the Control Unit, press the **TEST** button once.
   The **RED** LED on the front of the unit will illuminate.
3. Throttle up the engine. The solenoid on the valve will trip at the setting you made in the previous section.
4. If using a manual-reset valve, reset the valve by turning the blue knob on it 90 degrees clockwise until it locks into position.
5. If using an auto-reset valve, it will automatically reset after the engine reaches and maintains 0 RPM for 17 seconds.

Testing the Setting for a Constant Throttle

1. On the Control Unit, press the **TEST** button once. The **RED** LED on the front of the unit will illuminate.
2. Start the engine. As the engine RPM rises, the solenoid on the valve will trip at 60% of the target RPM.
3. If using a manual-reset valve, reset the valve by turning the blue knob on it 90 degrees clockwise until it locks into position.
4. If using an auto-reset valve, it will automatically reset after the engine reaches and maintains 0 RPM for 17 seconds.

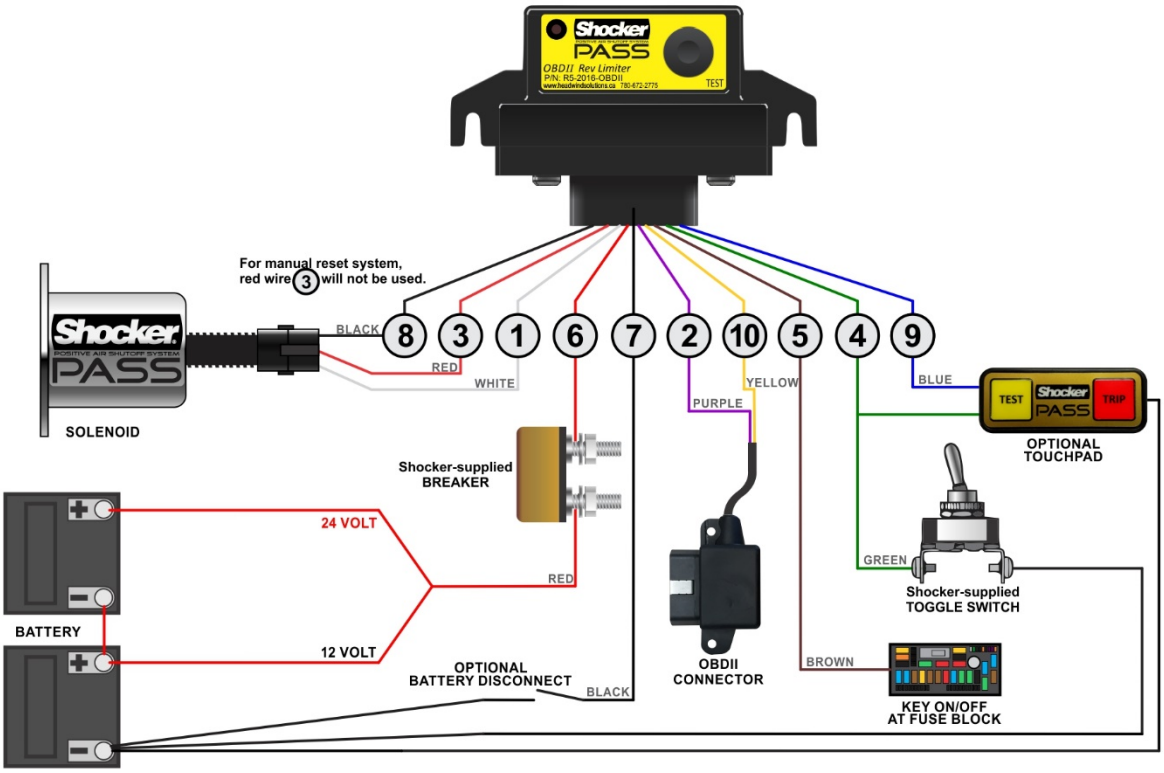
NOTES:

- The Valve will trip 7-10 times when activated by the Toggle Switch or at the preset RPM limit.
- The solenoid will close the valve for 17 seconds after 0 RPM has been reached.

Installation and testing are now complete.
Thank you for choosing Shocker brand products!

Turn page over for wiring diagram.

Wiring Diagram
R5-2016-OBD



Use crimp-type heat shrink connectors. Power and ground MUST be run DIRECTLY to the battery with a minimum of 12 gauge wire. Improper grounding WILL cause damage to the component, voiding warranty.

Pin	Use	AWG #	Color
1	Solenoid Pull-In	12	White
2	OBDII Plug - Purple to Purple on plug	16	Purple
3	Solenoid Hold	12	Red
4	Manual Switch	16	Green
5	Key On/Off Source	16	Brown
6	12-24 V Battery Power (+)	12	Red
7	Battery Ground (-)	12	Black
8	Solenoid Ground	12	Black
9	Optional Touch Pad Remote Test	16	Blue
10	OBDII Plug - Yellow to Yellow on plug	16	Yellow

12 gauge minimum wire must be used for ground and power supply. Do not extend ground and power harness wires; doing so will void the warranty. Order the appropriate wire harness according to the following list:
6' length: WH-0001-R5-6ft
9' length: WH -0001-R5
15' length: WH-0001-R5-GRL
25' length: WH-0001-R5-24V

IMPROPER GROUNDING OR REMOVAL OF DELPHI PLUG CAN CAUSE DAMAGE TO COMPONENTS, VOIDING WARRANTY

CONNECTORS MUST BE RATED 25 AMP MINIMUM.
DO NOT USE: DEUTSCH DT,DTM,DTMH,DTMN.

Headwind Solutions warrants the components of this device for a period of two (2) years from the date of purchase. The customer is responsible for the correct installation, setup and testing of the product, including: a) the location of all components; b) correct wiring connections and wire gauge; c) correct setup and testing of the installed product. This warranty is void if the product is incorrectly installed, set up or tested.

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