



POWER DEMON INSTALLATION INSTRUCTIONS



The Power Demon is comprised of two parts. One part is the 4 Level Temperature Controller Assembly that is mounted on the right side of the handlebar where it replaces the brake perch clamp. The second part is the Accessory Jack Assembly that is mounted on the standard horn bracket and is a source for two 12 VDC accessories. The accessory items, like a heated vest, plug into one of the two DC Jacks and the temperature is regulated by the 4 Level Temperature Controller.

!!Warning!! A Service Manual is required to install this kit. The rider's safety depends upon the correct installation of this kit. If the procedure is not within your capabilities or you do not have the correct tools, have your Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury.

Components: This 'POWER DEMON' Kit includes the 4 Level Temperature Controller, the Accessory Jack Assembly, mounting bracket and screws, electrical wires, connectors, rubber grommet, wire ties, heat shrink tubing, a 2.5mm DC plug and a plastic snake to assist in the installation.

Tools: A pliers and wire cutter, a small straight blade screw driver, T25 and T27 TORX drives, a 1/2" wrench and **safety glasses**. If the wires are going to be installed inside of the handlebar, the following tools will also be required. A 3/8" Drill Motor, 5 sharp drills from 3/32" to 5/16" or a step drill, a hammer, a center punch and a round file.

WARRANTY AND DAMAGE: This product has a 1 (one) year Limited Warranty. The warranty does not cover misuse of this product or operation outside of the design specifications. Symtec, Inc. WILL NOT be responsible for damages made to products that are not installed properly. Symtec, Inc. products have recommended installation instructions that are written to provide proper guidelines for product installations. Warranties WILL NOT be honored on broken items or damaged electronics due to shorting or pinched wires.

Installation:

A. **Open or remove the seat according to the service-manual instructions.**

!!! Warning !!! Warning

To protect against shock and accidental start-up of the vehicle, disconnect the battery cables, negative cable first, before proceeding. Inadequate safety precautions could result in death or serious injury.

!!! Warning !!! Warning

Always disconnect the negative battery cable first. If the positive battery cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion that could result in death or serious injury.

B. **Disconnect the battery, negative cable first, according to the service-manual instructions.**

C. **Installing the 4 Level Temperature Controller:**

1. Using a T27 TORX drive head, remove the half of the clamp that secures the brake perch assembly to the handlebar and discard. The Power Demon Controller will replace this clamp. Separate the brake lever assembly from the handlebar and move it away from the bar. Remember to insert a spacer between the rear brake light switch and the lever to keep the switch from being broken.
2. Hold the 4 Level Power Demon Controller where it would be mounted to the brake lever assembly and push the cable on top of the wire bundle that runs into the Switch Housing. This is done so the cable is not pinched when the Power Demon Controller is attached to the brake lever assembly. A pinched wire can create a short that will prevent the unit from working.
3. Fit the Brake Lever Assembly against the Switch Housing and the handlebar. Attach the 4 Level Power Demon Controller to the Brake Lever Assembly with the screws removed from the clamp in Step 1. Do not tighten the screws until it is assured the cable or wires will not be pinched between the Controller Housing and the Brake Lever perch when they are tightened together.
4. **Note! Tighten the screws that hold the Controller to the Brake Lever Assembly but do not over tighten because it can damage the Controller. Tighten the screws to 50 to 60 in-lbs. It is important to tighten the screws equally on each side so the gap is the same between the Housing and the Brake Lever Assembly. When tight, there should be a small gap of about 1/32" on each side. If you do not have a torque wrench, hand tighten with a TORX screwdriver handle which is equivalent to about 30 in-lbs. Then use a small 1/4" socket handle and tighten the screws another 1/4 turn. Press on the Brake Lever Assembly to assure it does not move.**
5. Route the cable from the 4 Level Power Demon Controller along with the wire bundle from the Switch Housing to the yoke area of the motorcycle, then using the plastic snake from the kit route it under the gas tank back to the battery area. The plastic snake can be pushed from the front to the rear or from the rear to the front which ever works best. Then attach the

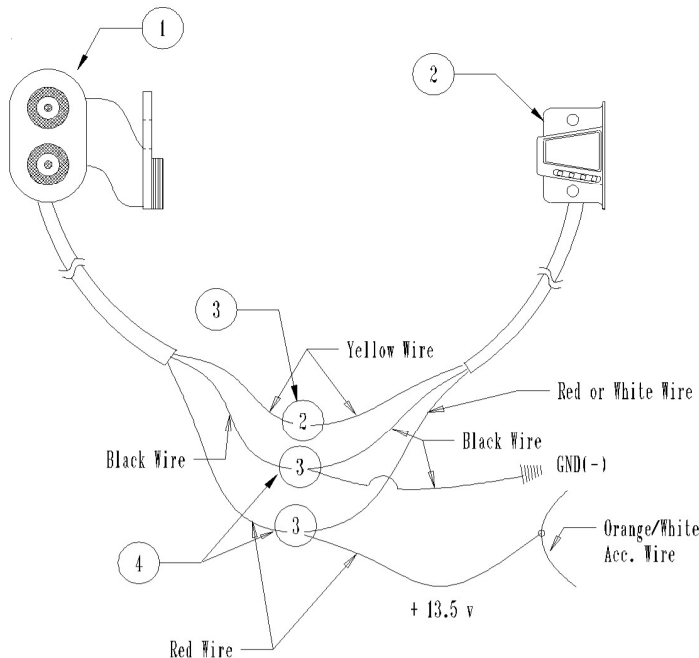
cable wires to the hole in the snake and pull the cable back near the battery where the electrical connections will be made to the DC power and the cable that will come from the Accessory Jack Assembly.

6. If there is a desire to run the wires inside of the handlebar, a hole needs to be drilled in the bottom of the handlebar to route the cable from the Controller. The location of the hole should be in the groove or recess on the bottom of the handlebar at the point where the brake lever assembly meets the Switch Housing. The Switch Housing should be removed from the handlebar. Start by punching a hole location with a center punch to pierce the chrome. **Use safety glasses that completely cover the eyes to protect from steel chips while drilling!** Start with a small drill like a 3/32" size to make the initial hole. Then use progressively larger drills or a step drill to increase the hole size to 5/16". After the hole is drilled use a round file or deburring tool to remove the sharp edges.
7. Run the plastic snake through the new hole down to the bottom hole in the center of the handlebar. Next slide the rubber grommet onto the cable and move it up the cable so it is close to the Controller. Attach the wires in the cable to the plastic snake and pull them through the handlebar and out the bottom center hole. With a small screwdriver, install the small rubber grommet on the cable into the hole that was drilled in the handlebar. The hole will not be round so the grommet needs to be worked into position. Be careful not to push the grommet into the inside of the bar. Finish by routing the cable back to the battery area.
8. If the motorcycle has the extended or ape type handlebars it is possible an additional length of wire will need to be added to the three wires. If an additional length is added there are 3 pieces of heat shrink tubing in the Kit to cover the splice areas for insulation.

D. Installation of the Accessory Jack Assembly:

1. Attach the Mounting Bracket to the Accessory Jack Assembly with the 2 screws and lock washers in the separate bag. Place the 'X' on the Mounting Bracket against the 'X' on the Accessory Jack Assembly. It is important to add the lock washers and tighten securely because of the vibration.
2. The Accessory Jack Assembly is installed behind the horn cover on the same mounting stud. The 1/2" nut should be removed and the horn cover lifted off so the mounting bracket of the Accessory Jack Assembly can be placed on the same threaded stud. When installed, the DC Jacks should be facing the rear of the motorcycle.
3. It is suggested that a thread lock material or lock washer be used when reinstalling the Horn Cover and nut over the Accessory Jack Assembly.
4. The cable from the Accessory Jack Assembly should be routed above the engine and frame and under the gas tank back to the battery area. The cable ties should be used to assure the cable does not touch the exhaust system or hot parts of the engine. The plastic snake that is included in the kit can be used to help pull the cable under the gas tank and through the frame so it can be routed to the battery area where the wires will be connected.
5. The cable wires from the Accessory Jack Assembly will be connected to the motorcycle power and the wires from the 4 Level Controller. The following wire diagram and description will detail the electrical connections for the Power Demon.

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Materials:

1. DC Jack Assembly, P/N 220168
2. Four Level Switch, P/N 410065
3. Two wire 3M connectors, P/N 37045
4. Three wire 3M connectors, P/N 37044

The Power Demon can control up to a 200 watt or 14 amp load that is plugged into it, so it should not be connected to the motorcycle headlight circuit. Your dealer or a service manual should be consulted to assure the charging system for the various motorcycle models have the capacity to handle the demand of the various accessories utilized.

6. The wire connections would typically be done in the battery area. Use one of the small connectors from the parts bag, with 2 holes to connect the two yellow wires. Push the wires into the holes so they extend as far as possible into the connector. The wires can be viewed from one side of the clear plastic. With the wires pushed to the end, take a pliers and push the yellow cap down completely flat. This will pierce the wires and make the connection and some moisture resistant grease will be pushed out of the connector. The cap needs to be pushed down completely so the grease comes out of the connector otherwise it will not make the electrical connection. Wipe off the grease and pull on the wires to make sure they are connected. If they are not connected there is one extra connector, or the wires will need to be stripped and a small wire nut added or solder the wires.
7. Next use the connectors with 3 small holes to connect the other wires. One connector will be used to connect the red wire from the Accessory Jack cable, the red hook up wire from the Kit, and the red or white wire from the Controller Cable. Push the wires into the connectors to the end and using a pliers push the red cap down to pierce the wires and make the connection. It is very important that the wires are pushed to the top of the connectors and that the red cap is pressed down completely flat. Grease will also need to be pushed out to assure a good connection. Wipe off the grease and pull on the wires to assure a good connection. The other connector will be used to connect the black wire from the Accessory Jack Cable, the black hook up wire from the Kit, and the black wire from the Controller. Use the same process as connecting the red wires.
8. The final connections are to the electrical system of the motorcycle. The black hook up wire should be connected to the ground circuit by using one of the red splice connectors in the Kit and splicing to a ground wire or using the ring terminal connector and attaching the black wire to the ground on the negative post of the battery. The red hook up wire should be connected to the accessory circuit of the motorcycle so power is turned on and off with the switch. A red splice connector in the Kit should be used to connect the red hook up wire to the orange wire with the white stripe or it could be connected to the accessory circuit by utilizing the 4 pin Deutch Accessory plug near the battery.
9. Reconnect the battery cables **!!Warning!! Always connect the positive battery cable first.**
10. Turn on the accessories switch and check that the Power Demon is wired properly by pressing the button on the Controller and confirm that the LED's light on the Controller and around the DC Jacks. A heated accessory should also be plugged into the one of the DC Jacks and confirm that it gets warm.

Operation:

The Power Demon will provide 4 levels of heat to the accessories that are plugged into the DC Jacks. There are multiple sizes of the DC plugs on the market, but the Power Demon requires the 2.5mm type. There is one 2.5mm plug and cable included in the kit. It might be necessary to add this plug to some accessories to provide power.

With the motorcycle power switch ON, press the button on the Controller ONCE and the Yellow light or LED shows that the lowest level of heat is selected.

Press the button a second time and the Orange light or LED will indicate the next higher level of heat has been selected.

Pressing the button a third or fourth time will select higher levels of heat for colder conditions.

Pressing the button a fifth time will shut off all of the lights and the power.

Holding the button down for 3 seconds will lower the intensity of the LED's for night operation. Holding it down again for 3 seconds will adjust the LED's for daytime use.

****NOTE: When plugging in the heated accessories, the cable should be first looped around the mounting bracket of the Accessory Jack Assembly to assure the plugs stay connected while riding.**



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