

Pingel® Electric Speed Shifter Kit for 2001-2015 Honda 1800 & Valkyrie 2014-2015

Designed for Street Use

#77000 Installation Instructions

This kit is not designed for a trike which has more rotating mass than a two wheel motorcycle, that rotating mass and over all weight of the vehicle keeps more pressure on the gears than a two wheel motorcycle. Consequently you may need to use the button with the hand clutch to get it to shift. This kit is designed for speed and comfort. If you are incapable of shifting manually this kit is not designed for you as it will not shift into neutral.

***Read all instructions thoroughly, look at photos and all components before attempting installation.
This product is not designed or intended to be used as an assistive device for any particular disability.***

All the components of this Electric Speed Shifter Kit have been assembled and tested as a unit before leaving our factory and have been found to be in working order at the time of shipping. Installation of this kit requires detailed knowledge of the motorcycle model, its electronics and mechanics. It is assumed that the installer has access to the proper tools and a working knowledge of them, test equipment (such as a volt meter), and factory service manuals. The following instructions must be read in their entirety and any questions should be answered prior to attempting installation. Incorrect installation will result in damage to Shifter components. If after reading the instructions you do not feel comfortable installing the kit, please find a qualified technician to do the installation. Installation time is 4-6 hours.

Disconnect negative battery cable before attempting any work on motorcycle.

INSTALLATION OF DUAL BUTTON HANDLEBAR CONTROL:

To install the dual button handlebar control, simply pull the flange end of the grip away from the left handlebar switch far enough to insert the dual button handlebar control onto the handlebar as shown in figure 1. Tighten the screws located on the backside of the dual button control.



Figure 1

This handlebar control bracket is set up to route the wires externally, but may also have its wires routed internally through the handlebars. This is accomplished by feeding the black cable up through the hole on the center of the bracket and then through a hole in the handlebars.

Route the wires from the dual button control neatly along the handlebar and under the fuel tank to behind the left side cover where the fuse panel is located. Secure the wires along the route with the provided wire ties.

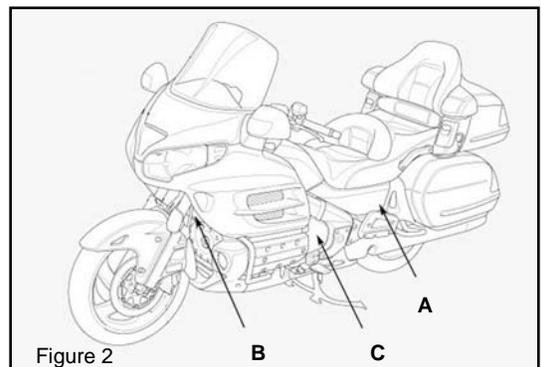


Figure 2

INSTALLATION OF CONTROL MODULE AND WIRE HARNESS:

The mounting location of the control module is behind the left side cover where the fuse box is located, (A) figure 2. The control module is supplied with Velcro on the bottom of the module to secure it. The wire assembly previously run from the handlebar control will now be connected to the control module. The handlebar connector has 4 pins and should be connected to the appropriate receptacle from the control module.

The large 4-pin connector coming from the control module will be connected to the large 4-pin connector from the fused wire harness. The small 3-pin connector on the fused harness is used for the electronic engine kill module. There are 3 loose wires coming from the fused wire harness; the black (negative) and large red (positive) go directly to the battery, the small red is for switched 12v+ power. The small red lead can be connected to any 12v+ switched wire or to the threaded auxiliary post next to the fuse panel, (A) figure 3, that supplies switched 12v+. Cut the small red wire to proper length and use the blue quick tab connector provided to make this connection (soldering is preferred) or attach a ring terminal if using the threaded auxiliary posts. The large red and black battery wires can also be cut to proper length and then solder on the ring terminals provided. Attach the soldered on ring terminals to the battery posts, black to the negative and large red to the positive.

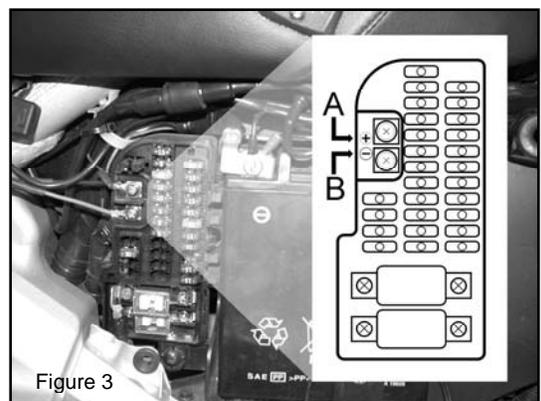


Figure 3

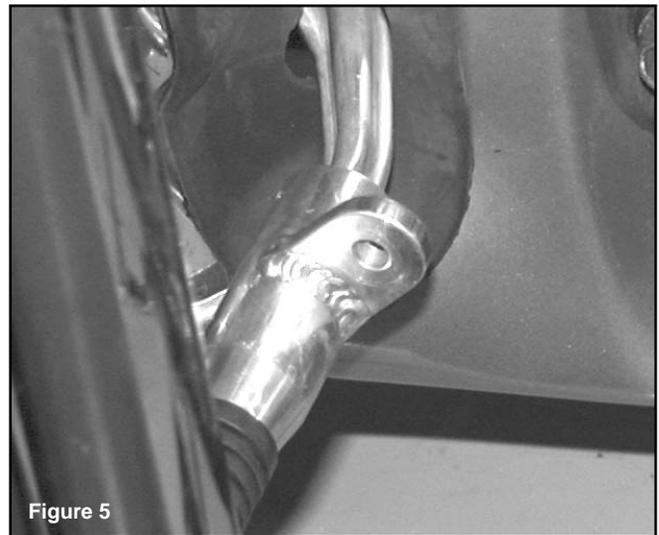
The electronic engine kill module is also mounted under the left side cover. See the instruction sheet included with the electronic engine kill module. Note for kill module installation: Access to the coils is achieved by removing the center inner fairing located directly behind the front tire, see (B) figure 2.

INSTALLATION OF ELECTRIC SHIFT CYLINDER:

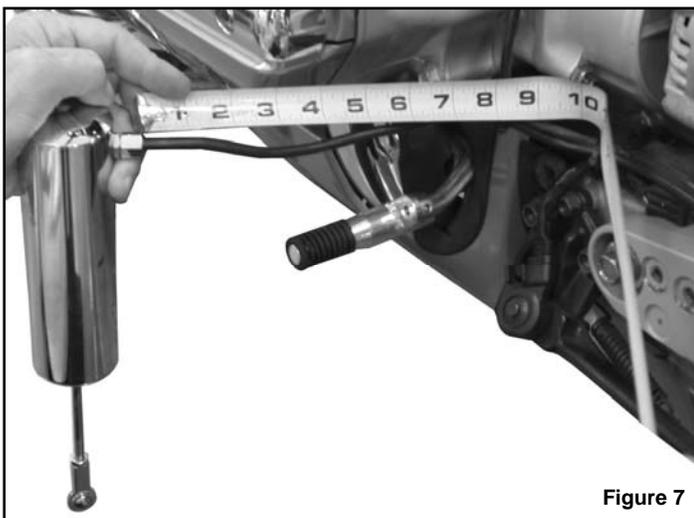
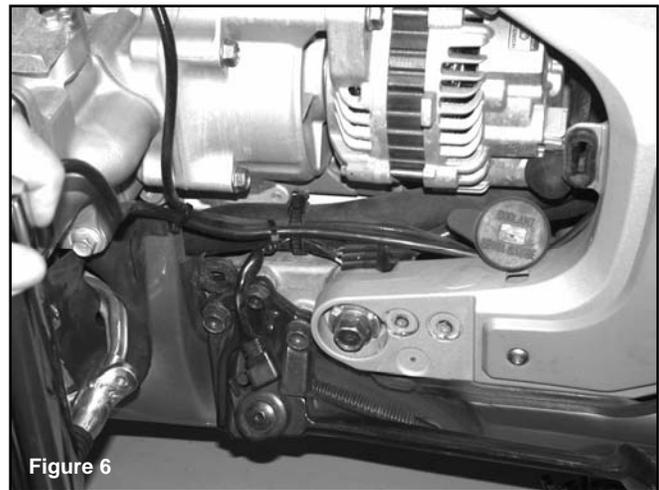
Remove the rubber sleeve from the stock gearshift pedal. (WD-40 sprayed inside the sleeve will make removal easier) Slide the Pingel shift peg bracket over the stock gearshift pedal and orient it as shown in figure 5. The bracket must be placed exactly as shown or the shifter will not operate properly. The Pingel shift peg adapter has five set screws; four that align with the grooves in the stock gearshift pedal and one where the rubber sleeve was. These five set screws must have thread locker applied and be tightened evenly. Install the stock rubber sleeve onto the Pingel shift peg bracket.



Remove the left side engine cover, (C) in figure 2. Route the shift cylinder cable as shown in figure 6 using the supplied cable ties. Leave ten inches of cable between the last tie location and the shift cylinder as shown in figure 7. This extra length is necessary for the shifter to operate properly after the cover is replaced. Replace the left side engine cover; make sure the cable is positioned to exit at the front of the cover as shown in figure 6.



Remove the two bolts that secure the left foot peg bracket, figure 4. Mount the shift cylinder support bracket by inserting the supplied 8mm x 50mm socket head cap screws through the bracket from the Pingel logo side, followed by the supplied spacers (with taper pointing towards the motorcycle) and the stock footpeg bracket. Apply thread locker to the bolts and install the assembly to the motorcycle frame at the original footpeg location, holding the bracket forward while tightening.



Install the shift cylinder onto the shift cylinder support bracket using the Pingel clamp, see figure 8, and the two supplied 1/4-20 x 3/4" socket head cap screws. Just snug these bolts for now, as adjustment will be needed later. The rod end on the shift cylinder should be able to go past the point of mounting in each direction sidewise. The point of mounting is that flat surface upon which the rod end bolts to the Pingel shift peg bracket allowing for the three thin flat 1/4" washers also. It is imperative that there is no side pressure or tension on the electric shift cylinder shaft when it meets its flat surface upon the Pingel shift peg bracket when it is bolted as this would take away valuable power from the electric shift cylinder resulting in binding and missed shifts. If the rod end does not line up correctly, you can either add another thin 1/4" flat washer to the existing washers to move the rod end away from the shift peg bracket, or remove one or more of the thin flat 1/4" washers to move the rod end closer to the shift peg bracket. Install the 1/4-28 x 1" button head socket cap screw through the rod end of the electric shift cylinder, the 1/4" flat washers and the Pingel shift peg bracket tab. Install the locknut on the backside and tighten, see figure 9.



Figure 8

Before adjusting the shift cylinder up and down, make certain the motorcycle transmission is in neutral. While holding the shift cylinder housing, loosen the two screws on the clamp. Find the line in the center of the cylinder shaft. Adjust the cylinder housing up or down so the line in the shaft is even with the plastic bushing located on the bottom of the cylinder housing, as shown in (A) Figure 10. With the shift cylinder in the correct position, tighten the two bolts of the Pingel clamp.



Figure 9

Route the remaining electric cable from the shift cylinder to the control module located near the fuse box and attach it to the appropriate connector. Secure all wires away from heat and moving parts with the supplied wire ties.

Your Electric Speed Shifter kit installation should now be complete. Reconnect negative battery cable. In the interest of safety this is the recommended starting procedure: To arm the electric shifter, make sure the motorcycle is in neutral and pull in the clutch lever, then start the engine. With the clutch lever pulled in, push either button on the handlebar control and hold it for five seconds; release the clutch lever slowly (in case the motorcycle is accidentally in gear). The system is now turned on and will shift when either button is pressed. When the key is turned off, the power to the control module is disengaged so this procedure must be performed every time the motorcycle is turned back on. Pull in the clutch lever and check shifter movement by pushing either button on the handlebar control. With the clutch lever still in, push the down shift button numerous times while watching the tachometer. You should notice a drop in rpm when the button is pushed. If the motorcycle has no tachometer, you should be able to listen for a noticeable drop in rpm when the button is pushed. This process verifies the ignition kill module is working.

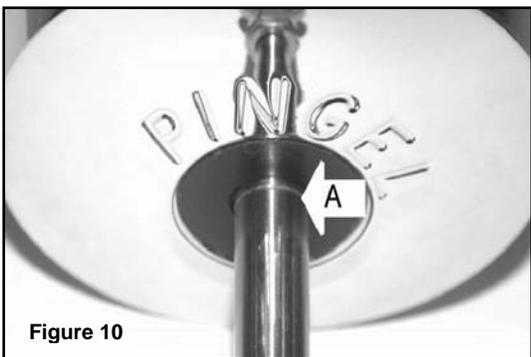


Figure 10

Test ride motorcycle. If shifting up or down is not achieved, loosen the Pingel clamp on the shift cylinder and adjust it up or down 1/16" to 1/8" at one time. Retighten the Pingel clamp and test ride the motorcycle. This adjustment is fastidious and patience is required. When the final adjustment is made, remove each clamp bolt and apply thread locker to the end threads, but remove only one clamp bolt at a time so as not to lose your adjustment.

Be certain that all of the round connectors are properly coupled and tight. Do this by aligning the two raised portions on the outside of each connector and pushing them firmly together. If the motorcycle is not shifting or the kill module is not working, check that these plugs are properly seated and that the internal connector pins are making good contact with their sockets (i.e. no pins are bent) as this is the most common problem for the ignition not killing.

Helpful Operating Tips:

Here is an example of what we found works for us: on the up shift do not drop the RPM to make a shift occur, this will not help. RPM must be kept up to make a shift occur. Use soft acceleration and shift at 10 MPH or less, into 2nd gear, 20 MPH into 3rd gear, 30 MPH into 4th gear and 40 MPH into 5th as recommended by Honda. We do this with the electronic kill module set at 150 milliseconds. You may want more or less kill time depending on your riding style. Down shifting will require a **WICK** of the throttle (a quick on/off of the throttle approximately 1/8") especially with a trike. This kit is not designed for a trike which has more rotating mass than a two wheel motorcycle, that rotating mass and over all weight of the vehicle keeps more pressure on the gears than a two wheel motorcycle. Consequently you may need to use the button with the hand clutch to get it to shift.

Note: Downshifting on a corner while leaning the bike may cause loss of control unless the clutch is used to ease into the downshift.

Items Included: #77000 Honda 1800

- | | |
|---|--|
| 1 - Shift cylinder support bracket with cylinder clamp (threaded) | 1 - Shift cylinder |
| 1 - Cylinder clamp (through-holes) | 3 - Ring terminals |
| 2 - 8mm x 1.25mm x 45mm stainless SHCS | 5 - Blue quick tab connector |
| 1 - Fused wiring harness | 10- Wire ties |
| 2 - 8mm stainless washers | 1 - Tube torque-thread locker |
| 1 - 7/8" handlebar dual button control assembly | 1 - 40-amp fuse |
| 1 - Control module | 1 - Electronic engine kill module |
| 1 - ¼-28 x 1" button head | 1 - Electronic engine kill module wire leads |
| 4 - ¼" washer | 2 - Tapered spacers |
| 1 - ¼-28 half-width locknut | 5 - 10-24 x ¼" socket set cup point |
| 1 - Pingel shift peg bracket | |

Note: in the wire harness we have installed one 40-amp fuse for constant power. A spare 40-amp fuse is also supplied.

Prolonged repeated operation of the shifter (actuating the shifter repeatedly in rapid succession beyond normal use) can discharge the motorcycle battery and damage the shift cylinder and/or the control module. The normal battery takes 30-60 minutes to recharge after starting the motorcycle so use the shifter sparingly in this time.

This unit is not waterproof. Do not subject it to pressure washing or extreme moisture.

Installation of the Electric Speed Shifter Kit still maintains OEM Shifting.

Pingel recommends that after the installation of this kit, there should be an alternative method of shifting.

If you have any questions please call 608-339-7999

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THANK YOU for purchasing a PINGEL ENTERPRISE, INC., product. View our entire product line at www.pingelonline.com



Dear Valued Customer,

Pingel Enterprise, Inc. would like to take this opportunity to thank you for purchasing one of our Electric Speed Shifter Kits.

We would also like to know what you think of the product and how your installation went. Your assistance can help us overcome any technical issues that other installers may experience. You can reach us toll free at 1-888-474-6435 or email us at info@pingelonline.com.

We are also requesting photos of your installation. Your photos may be selected for publication in the Pingel catalog or at www.pingelonline.com. Photos may be submitted by emailing them to info@pingelonline.com. When submitting a photo, please include the motorcycle model and year.

Thank you again for your purchase!