

## Pingel<sup>®</sup> Electric Speed Shifter Kit for 1989-2000 Honda 1500

### Designed for Street Use

# #77001 Installation Instructions

***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 All 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 voltmeter), 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 Speed 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 2-3 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.

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 1

#### **INSTALLATION OF CONTROL MODULE AND WIRE HARNESS:**

The mounting location of the control module is above the battery located behind the right side cover, see 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. 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.

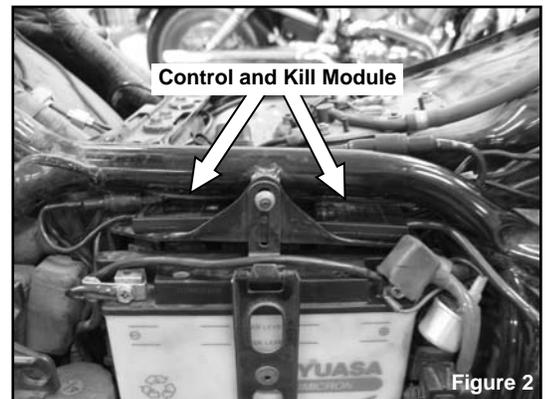


Figure 2

The electronic engine kill module is also mounted above the battery located behind the right 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 air box from the carburetors. The coils are under the air box.

**INSTALLATION OF ELECTRIC SHIFT CYLINDER:**

Remove the rubber sleeve from the stock gearshift pedal (WD-40<sup>®</sup> sprayed inside the sleeve will make removal easier). Remove the bolt that retains the stock shift lever and slide the shift lever off of the shift shaft. Slide the Pingel shift peg bracket over the stock gearshift pedal, as shown in figure 3, and drill a 1/4" hole through the stock shift lever using the Pingel shift lever bracket as a template. Put the 1/4-20 x 1" socket head cap screw through the hole of the Pingel shift lever and the stock shift lever and secure it with the 1/4-20 locknut. Reinstall the shift lever onto the shift shaft and tighten the retaining bolt back onto the stock shift peg. Install the stock rubber sleeve onto the Pingel shift peg bracket.



Figure 3

Remove the left side foot peg by removing the cotter pin, washer and retaining pin. Install the Pingel foot peg extension bracket by inserting it into the opening where the stock foot peg was located. Install the supplied 8mm x 45mm socket head cap screw through the bracket and loosely install the 8mm locknut, do not tighten, see figure 4. Remove the 1/4-20 x 1/2" set screw, (A) figure 5, and apply thread locker, then reinsert and tighten it. The 8mm bolt and locknut can now be securely tightened. Reinstall the stock foot peg into the Pingel foot peg extension using the original retaining pin, washer and cotter pin. Install the Pingel shift cylinder support bracket onto the Pingel footpeg extension bracket using the supplied 5/16-24 x 7/8" socket head cap screws with locknuts and tighten, see (A) figure 6.

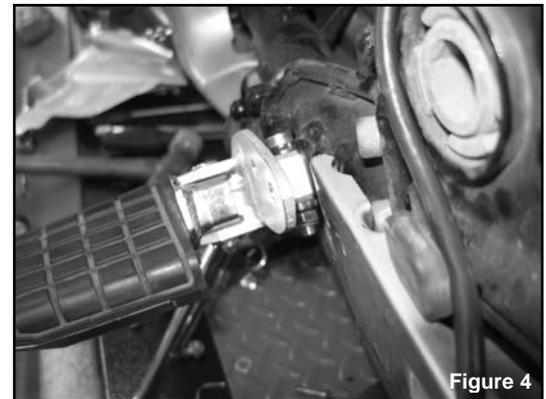


Figure 4

Install the shift cylinder onto the shift cylinder support bracket using the Pingel clamp, see (B) figure 6, 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 1/4-20 locknut on the backside and tighten, see figure 7.

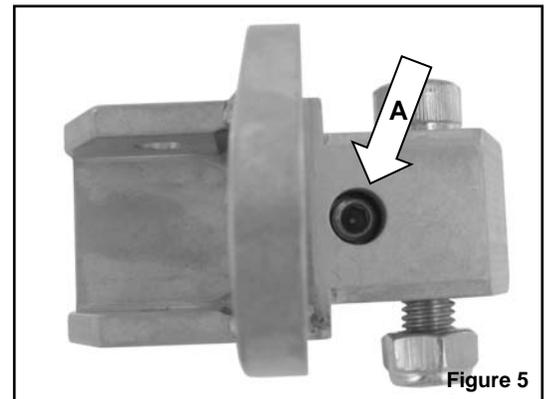


Figure 5

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 groove in the center of the cylinder shaft. Adjust the cylinder housing up or down so the groove in the shaft is even with the plastic bushing located on the bottom of the cylinder housing, as shown in (A) Figure 8. With the shift cylinder in the correct position, tighten the two bolts of the Pingel clamp.

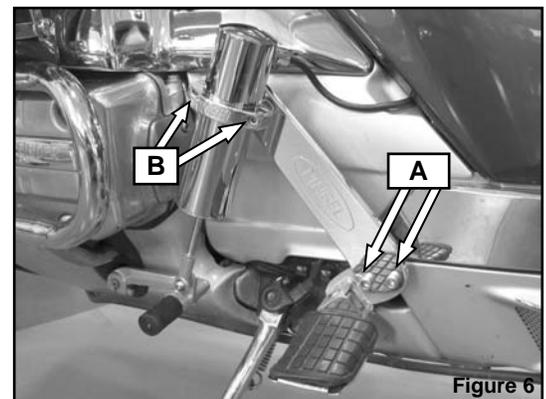
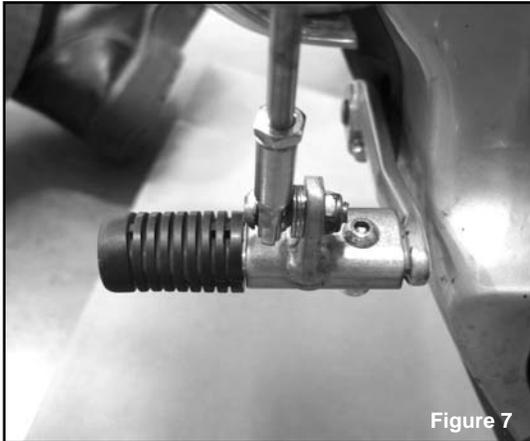


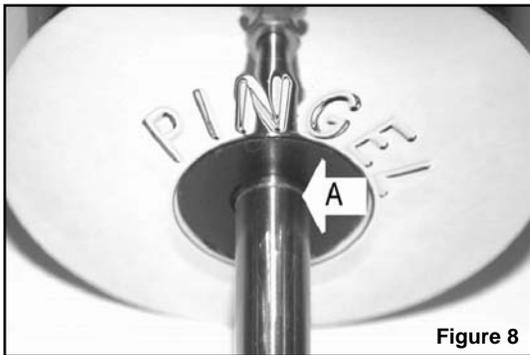
Figure 6

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

The 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.



It will only be necessary to use the clutch when starting, stopping and finding neutral. Upshifting and downshifting will not require the use of the clutch. The operator can use the clutch manually without harm to any components, especially during downshifting to avoid “chirping” the rear tire.



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.

**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.**

**Helpful Operating Tips:**

Here is an example of what we found works for us: Do not drop the RPM to make a shift occur, this will not help. RPM must be kept up to make a shift occur. When traveling at lower speeds, twist the throttle on slightly when hitting the shift button to make a smoother shift. When downshifting, a slight crack of the throttle helps to smoothly go into lower gears, also if there is no load on the transmission a simple push of the button should be sufficient. Street riding may require the electronic kill module to be set to a longer kill time.

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

**Be certain that all of the round connectors are properly coupled and tight. 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).**

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

Installation of Electric Speed Shifter Kit still maintains OEM Shifting.

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

***Thank You for Purchasing a Pingel Enterprise, Inc. Product***

## Items Included: Honda 1500

- |   |  |
|---|--|
| 1 - Shift cylinder support bracket with cylinder clamp (threaded) | 1 - ¼-20 x 1" button head                    |
| 1 - Pingel footpeg extension bracket                              | 1 - ¼-20 locknut                             |
| 1 - Cylinder clamp (through-holes)                                | 1 - Pingel shift peg bracket                 |
| 1 - 8mm x 45mm SHCS   | 1 - Shift cylinder                           |
| 1 - 8mm locknut   | 3 - Ring terminals                           |
| 2 - 5/16-24 x 7/8" SHCS   | 5 - Blue quick tab connector                 |
| 2 - 5/16-24 locknut   | 10 - Wire ties                               |
| 1 - Fused wiring harness  | 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 |
| 5 - ¼" washer   | 1 - ¼-20 x ½" socket set cup point           |
| 1 - ¼-28 half-width locknut                                       |  |

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

**Dear Valued Customer,**

**Pingel Enterprise, Inc. would like to take this opportunity to thank you for purchasing one of our All Electric 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](mailto: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](http://www.pingelonline.com). Photos may be submitted by emailing them to [info@pingelonline.com](mailto:info@pingelonline.com). When submitting a photo, please include the motorcycle model and year.**

**Thank you again for your purchase!**

### LIMITED WARRANTIES/LIABILITIES

Pingel Enterprise, Inc. assumes no responsibility or liability for damage or injury of any kind arising out of the use or misuse of any products. Pingel Enterprise, Inc.'s sole responsibilities with respect to products sold are to provide the following limited warranty:

**Pingel Products:** Pingel Enterprise, Inc. warrants to the original purchaser that the product shall be free from defects in parts and workmanship under normal use for 30 days from date of purchase. Pingel Enterprise, Inc.'s obligation under this warranty is limited to the repair or replacement of any part found to be defective when returned postpaid to the factory. The product must be returned with evidence of date and place of purchase, and detailed description of the problem. The warranty will not apply if the product has been installed incorrectly, repaired, or damaged by modification, misuse, negligence or accident. The repair or replacement of such part, as needed, is your sole and exclusive remedy. No refunds will be given. Pingel Enterprise, Inc. makes no other warranty, expressed or implied with respect to its products and specifically disclaims any implied warranties of merchantability or fitness of any product for a particular purpose and except as herewith stated assumes no liability with respect to the product.

**Dispute Resolution:** All disputes, claims or controversies of any kind that may arise between you and Pingel Enterprise, Inc. shall be brought in the state court located in Adams County, Wisconsin. You agree that the sole venue and jurisdiction for such disputes shall be the above named court and hereby submit to the jurisdiction of that court.

**THANK YOU** for purchasing a PINGEL ENTERPRISE, INC., product. View our entire product line at [www.pingelonline.com](http://www.pingelonline.com)

