

Pingel® Electric Speed Shifter Kit for 2008 Can-Am Spyder #76700 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 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. **We strongly recommend that you bench test this unit following the directions included on the separate page.** 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 Electric 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.

Disconnect negative battery cable before attempting any work on Motorcycle.

INSTALLATION OF DUAL BUTTON HANDLEBAR CONTROL BRACKET:

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.

Route the wires from the dual button control neatly along the handlebar and along the frame to above the rear fender. Secure the wires along the route with the provided wire ties.

INSTALLATION OF CONTROL MODULE AND FUSED WIRE HARNESS:

The mounting location of the control module is above the rear fender. The control module is supplied with Velcro to install on the bottom of the box to secure it. The wire assembly previously run from the handlebar control will now be connected to the control module. The handlebar connector has four pins and should be connected to the appropriate receptacle from the control module.

The large 4-pin connector coming from the control module should be connected to the large 4-pin connector from the fused wire harness. The small 3-pin connector on the fused harness will not be used on this kit. There are three 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 large red and black wires should be cut to the shortest length needed to reach the battery posts which will give maximum power for the Electric Speed Shifter kit. Note: leave the small red wire as long as possible until the next step. Solder the ring terminals provided onto the cut ends of the large red and black wires then attach the red to the positive battery post, the black will be connected to the negative at the end of the installation. The small red lead can be connected to the orange wire which is located below the battery. See figure 2. Cut the small red wire to proper length and use a blue quick tab connector provided to make this connection (soldering is preferred).



INSTALLATION OF SHIFT ARM BRACKET:

Remove the rubber sleeve from the stock gearshift pedal. (WD-40 sprayed inside the sleeve will make removal easier). Remove the stock gearshift pedal. Insert the Pingel shift peg bracket into the hole vacated by the stock gearshift pedal and rotate it approximately as shown in figure 3. Lightly tighten the retaining bolt at this time as adjustment will be required further on. Install the stock rubber sleeve onto the Pingel shift peg bracket.



Figure 4

INSTALLATION OF ELECTRIC SHIFT CYLINDER BRACKET:

Remove the left upper and lower body panels. Remove the nut that retains the rear left motor mount bolt which is located just under the exhaust pipe, see figure 4. Note: This motor mount bolt has its head in a pocket on the engine and may be held in place with a screwdriver. Insert the 10mm x 40mm HHCS with the lock washer through the inner cylinder support bracket then place the 1" aluminum spacer onto the HHCS. Mount this assembly to the cylinder case utilizing the lower empty hole and recently removed motor mount bolt, see figure 4. Reinstall the motor mount nut and tighten. Apply thread locker onto the 3/8-16 x 1" SHCS and tighten them through the outer shift cylinder support bracket and into the threaded holes in the inner shift cylinder support bracket so the bracket is positioned as shown in figure 5.



Figure 5

INSTALLATION OF ELECTRIC SHIFT CYLINDER AND UP/DOWN ADJUSTMENT:

Install the shift cylinder onto the shift cylinder support bracket using the Pingel clamp and (2) 1/4-20 x 3/4" SHCS. Leave these bolts loose for now, as adjustment will be needed next. Note: The next procedure may require two people. Pull and hold the shift lever to the full up shift position and while holding the rod end in its most inward position check that there is clearance from the rod end to the Pingel shift arm bracket as shown in figure 7. Rotate the Pingel shift arm bracket until there is 1/16" clearance then tighten the retaining bolt on the stock shift arm bracket. Again pull and hold the shift lever to the full up shift position and while holding the rod end in its most inward position move the shift cylinder in the clamp until the hole in the rod end aligns with the hole in the shift arm bracket, then tighten the two bolts of the Pingel clamp. Note: You may need to roll the motorcycle back and forth to be certain that it is fully in gear.



Figure 6

ADJUSTMENT OF ELECTRIC SHIFT CYLINDER FOR NO SHAFT BIND:

The rod end on the shift cylinder must be located in the middle of its side play left to right. If the rod end does not line up correctly, you can either add one or more thin 1/4" flat washer(s) to the existing washer(s) to move the rod end away from the shift arm lever, or remove one or more of the thin flat 1/4" washer(s) to move the rod end closer to the shift arm lever. Install the supplied 1/4-28 x 1-1/8" BHSCS through the rod end of the shift cylinder, the 1/4" washer(s), the Pingel shift arm bracket and tighten on the 1/4-28 locknut as shown in figure 6. This step is important because if there is any bind in the linkage system the shifter will not work correctly.

ROUTING SHIFT CYLINDER CABLE:

Route the electric cable from the shift cylinder to the control module located above the rear fender. Attach the cable by pushing the connector into the receptacle on the control module. Secure all wires away from heat and moving parts with the supplied wire ties.

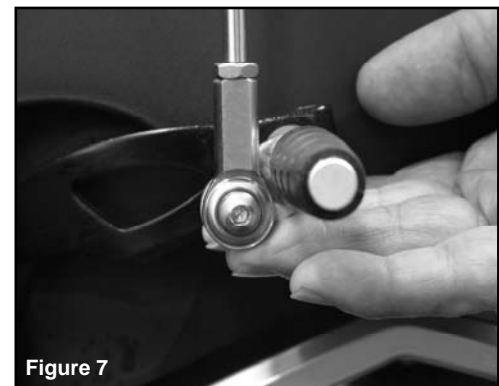


Figure 7

COMPLETING INSTALLATION:

Your Electric Speed Shifter kit installation should now be complete. Reconnect negative battery cable and the shifter ground 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. Although this kit is designed for the use of the clutch, Upshifting and downshifting may be able to be done without the use of the clutch. The operator may slightly rotate the right handgrip back as the upshift button is pressed to make the shift. Downshifting can be accomplished by simply pressing the button. We have found this procedure to work on our test Spyder. Note: It is the liability of the operator to decide whether or not to use the clutch.

Be certain that all of the round connectors are properly coupled and tight. If the motorcycle is not shifting 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). Also, check that one of the pins has not moved off to the side of their respective sockets when pushing the plug together.

FINE ADJUSTING CYLINDER:

If shifting up or down is not achieved, you may need to readjust the up/down positioning of the cylinder and/or readjust the cylinder for no bind as explained earlier in the instructions.

After fine adjustment has been 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 of the shift cylinder location.

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 and cause missed shifts. 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.

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

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!

Items Included: 2008 Can-Am Spyder

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|---|-------------------------------|
| 1 - Inside shift cylinder support bracket | 4 - ¼" washers |
| 1 - Outside shift cylinder support bracket with cylinder clamp (threaded) | 1 - ¼-28 locknut |
| 1 - Cylinder clamp (through-holes) | 2 - Ring terminals |
| 1 - Shift cylinder | 1 - Blue quick tab connector |
| 1 - 10mm x 1.50mm x 40mm HHCS with lock washer | 10- Wire ties |
| 2 - 3/8-16 x 1" SHCS | 1 - Tube torque-thread locker |
| 1 - Fused wiring harness | 1 - Spare 40-amp fuse |
| 1 - 1" aluminum spacer | 1 - Control module |
| 1 - Pingel shift arm bracket | |
| 1 - ¼-28 x 1-1/8" BHSCS | |

Bolt style abbreviations:

BHSCS = Button head socket cap screw
 FSHCS = Flat head socket head cap screw
 HHCS = Hex head cap screw
 LSHS = Low head socket head screw
 SHCS = Socket head cap screw

Thank you for purchasing a Pingel Enterprise, Inc. product.

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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.

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