

Lingenfelter Performance Engineering  
Supercharger Valet Mode Switch for C5 Corvette with an Automatic Transmission

Thank you for purchasing the Supercharger Valet Mode Switch for a C5 Corvette with a manual transmission.

#### A. Bill of Materials

Part Description	Part Number
Lock and Key Mechanism (comes with 2 keys and a jam nut)	LPE - POWERKEY
Vacuum Reservoir	10067563
Vacuum Solenoid	1997222
Black Vacuum Hose	HT-21503-10
Wiring Harness for Automatic	LN - SC03 HARNESS
Two Rivets (silver)	
Brass T for Vacuum Hose	
Rubber Grommet	
Conduit Clip (Black)	
Lock Piece (Blue)	
Connector (White)	
Coil of Wire Loom (Possibly already on wiring harness)	

#### B. Required Tools

Rivet Gun	Electrical Tape
Standard & Metric Socket Sets	Metal File or similar tool
Scissors / Hose Cutters	Torque Wrench
Razor Blade	Needle Nose Pliers
Drill with 1/4, 7/16, 5/8, 7/8, 1 inch bits	5/16" size Standard Wrench
Phillips and Flathead screwdrivers	Metric Wrenches (7, 10, 13, 15mm in diameter)
Metal Drill Bit that is 3/8 in diameter	

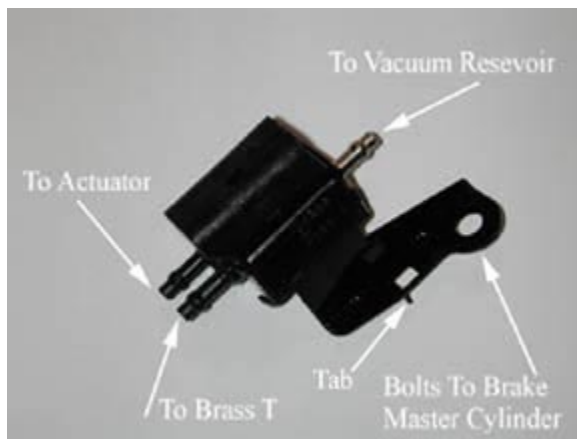
#### C. Installation Procedure

Caution: Remember to set the parking brake before performing any work on your car. You will need to open the hood and allow the car to cooled down before beginning installation. See page 6 for a diagram of the wiring harness.

##### Mounting the Vacuum Reservoir (10067563)

1. Take out the windshield washer fluid bottle from passenger side by removing the two 10-mm nuts holding it in place.
2. Remove the clutch master cylinder reservoir by popping out the two push clips that attach it to the bracket.
3. The vacuum reservoir is going to be mounted upside-down on the cowl wall with the Amp opening on the top and the Main opening on the bottom.
4. Mount the reservoir using a rivet gun and two 3/16-in rivets, making sure it is not in contact with the hood release or clutch master cylinder reservoir bracket.
5. Replace the clutch master cylinder reservoir by snapping the two push clips back into place.





### Installing the Vacuum Solenoid

1. Flatten tab on the vacuum solenoid.
2. Drill out hole on bracket of vacuum solenoid to 7/16 in.



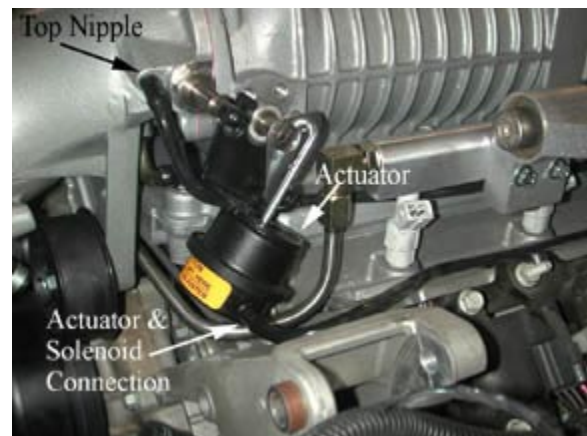
1. Remove 15-mm nut that is closest to the left-side fender on brake master cylinder.
2. Place vacuum solenoid on bolt of the brake master cylinder and then fasten with nut, making sure to torque the nut to 21-ft-lb.

### Connections with Black Vacuum Hose (HT-21503-10)



1. Connect vacuum hose from the nipple labeled Amp on the reservoir to the top nipple on the solenoid. Do this by routing the hose to the solenoid, making sure there are no kinks. Route the hose to length needed, cut, and attach. Save the remaining hose for upcoming steps.
2. Connect a segment of vacuum hose (roughly 5 or 6-in) to the nipple labeled Main on the reservoir. Then, on the other end of the hose segment, attach the Brass "T" (1064X4).
3. Connect vacuum hose from one outlet of the brass "T" to the port on the bottom of the vacuum solenoid closest to the left fender. Route to length needed, cut, and attach.

1. On the other outlet of the brass "T," attach vacuum hose. Then route the hose to the top nipple on the supercharger. Route to length needed, cut, and attach.  
NOTE: Supercharger top nipple has tubing attached to it initially that connects it to the actuator. Cut that tubing off with a razorblade or similar tool, making sure not to damage or break off the nipple on the actuator.
2. Connect vacuum hose from the second port (the one on the engine side) on the bottom of the vacuum solenoid. Then route the hose to the nipple on the actuator. Route to length needed, cut, and attach.



## Removing Battery Shield, Battery, and Routing Wires



1. Remove the battery shield.
2. Remove the battery. You will need a 5/16 inch wrench and a 13 mm socket with extension

## Preparing the Interior of Vehicle for Installation

1. In the inside of the vehicle, remove the passenger-side kick panel that is underneath the glove box.
2. Remove the floor mat.
3. Remove the panel at the front of the floorboard to gain access to wiring under dash.
4. Holding on to both sides of the glove box, squeeze gently to let the glove box assembly hang lower than usual.
5. Measure a spot on the left side panel of the glove box down 3 ¼ inches and 1 ¼ inches over from the left side of the panel. This will be the center for the hole for the Key Switch. Use a small drill to make a hole at this point. The drill will make two holes, one hole in the glove box panel and one hole in the plastic directly behind the glove box. These two holes will now be lined up for later drilling and installation.
6. Unfasten glove box by removing the 7-mm bolt outside the right-side panel, removing three 7-mm bolts across the top of the glove box, and taking out two plugs in the back bottom of the glove box which give access to two 10-mm bolts.

NOTE: If glove box contains airbag switch, then it is important that you do not unplug the electrical connections in the back of the switch (May cause activation of airbag), but rather just reach back behind the switch, pop it out of its holding bracket, and let switch hang freely.

7. Pull the glove box out being careful not to pull too hard because there is a light connection on the backside of the glove box that needs to be unplugged.







#### Installing the Harness inside the Vehicle

1. Bring the rpm module wiring harness to the interior of the vehicle.
2. Route the Power Tap connector end behind the main harness and reconnect into the port beside the body control module.
3. Make sure the red connector coming out of the loom is routed up to where it can be connected to the key switch (which will be in the glove box panel) at a later time.

#### Locating and Disconnecting Power Tap Wires

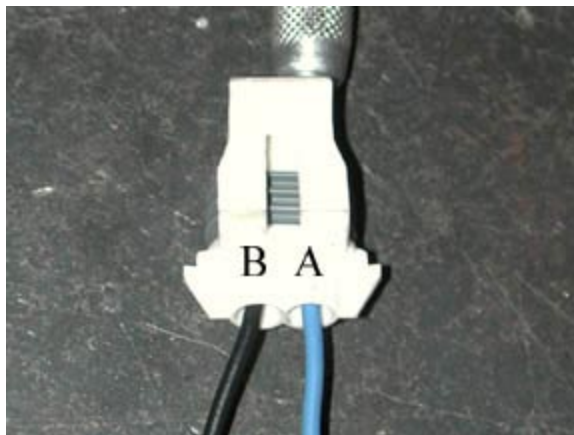
1. Inside the vehicle under the dash, locate additional power tap and ground wires. These three wires (yellow, orange, and black) are usually taped together and tucked behind the body control module. Detach these wires from their plug and cut the tape in order to separate the wires from the harness. Place these wires to the side. On the 2004 model, this wire set is non-existent. If this is the case, please flip to the back page now.



#### Routing Solenoid Wires to the Vacuum Solenoid

1. Drill a 3/8-in hole slightly above the main harness into the firewall. As you can see from the picture, the hole is almost between the two harnesses.
2. Remove wire loom from solenoid wires if installed because the solenoid wire will not fit through the grommet.
3. Push the 1/4-in Rubber Grommet (9600K25) into the hole.
4. From the inside, feed the loose ends of the 7-ft black and blue solenoid wires through the hole in the firewall until you get to the wire loomed part of the harness.

1. Snap the Black wire terminal into the B-side of the connector, and snap the Blue wire terminal into the A-side of the connector.
2. Now that the connector is assembled, you can add wire loom to the wires.
3. Cover the blue and black wires with the 3/8-in Wire Loom (1784).
4. Use electrical tape to tape up the wire loom to ensure that it will stay fastened together, making sure to fasten both the end of the wire loom next to the firewall and the end of the wire loom close to the connector.
5. Route the wires under the piece of foam that is at the back corner of the battery base, along with the starter power and ground wires that are already routed in the same manner.
6. Route the wires up and behind the supercharger and out the other side.





#### Repining, Wire Looming, and Connecting Connector for Vacuum Solenoid (12101857)

1. Install the Connector into the top the vacuum solenoid in the appropriate port.
2. You can now return the windshield washer fluid bottle to its original position.



#### Installing the Key Switch

1. Locate the glove box you removed earlier.
2. Drill a 5/8-in hole at the hole that was drilled out previously.
3. Using a file or similar tool, file down the right and left sides of the circular hole until they are flat. These flats are needed so the lock will not rotate in the hole as the key is turned.
4. Make sure the key lock will fit securely in the hole and install the lock by tightening the jam nut so that the lock mechanism will not rotate in the hole.



5. Drill a 7/8-in or 1-in hole (Does not really matter, as long as the back of the key switch will extend through) in the back panel behind glove box.
6. With this positioning of the Key Switch, the OFF position is when the key is in the initial upright position (terminal 1) and the ON position is when the key is turned towards the right (terminal 3) .



## Wiring the Key Switch into the Vehicle and Finishing Up

1. Inside the vehicle, feed the key connector in RPM switch harness above the power tap connector through the hole you recently drilled on the back panel behind glove box. Plug into key.
2. Fasten the glove box back into place, making sure to plug in the glove box light and carefully pop the air bag switch (if you have one) back into place.
3. Tuck wires away for a nice clean look.
4. Replace the panel at the front of floorboard, kick panel, floor mat, battery, and battery shield.



In the case that you do not have the set of Power Tap wires because your Corvette is a 2004 model, follow these instructions. Three wires must be routed to the places shown on the wiring schematic that is included. As you can see from the diagram three of the wires are red. These are the wires that show up in the 1997-2003 models, but are absent in the 2004 models even though some wiring diagrams may tell you otherwise. These wires will need to be created and connected to the fuse box and Splice Pack directly. This can be accomplished by installing a terminal onto the end of the wires and directly inserting this wire into the fuse box socket as specified by the diagram. If anything is unclear, please call back LPE and a mechanic may be able to assist you.

## Cigar Lighter/Auxiliary Outlets Schematics

