

**Items Supplied >**

1 – FRONT & 1 – REAR HEADPIPE / HEATSHIELD  
1 – EXHAUST MOUNTING BRACKET  
1 – MUFFLER ASSEMBLY  
1 – EXHAUST VALVE ACTUATOR BRACKET  
1 – EXHAUST VALVE ACTUATOR SOLENOID CAM  
5 – CLAMP, HS 24; 4 - CLAMP, HS 32; 2 - CLAMP 27-61  
2 – SPACER, ALUMINUM; 2 – WASHER, 1/4" & 5/16" FLAT  
2 – BOLT, 6 mm x 50 mm; 2 – NUT, 6 mm; 2 – NUT, 5/16"  
4 – BOLT, FLANGE 5/16" X 5/8"; 2 – BOLT 1/4" 20 X 3/8"

**Application(s) >**

SUZUKI M109 1800 cc 2006 & 2010

**Instruction Manual >**

3221

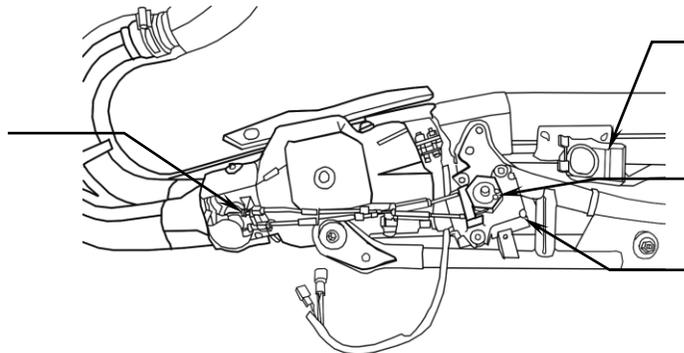
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**ATTENTION: READ ALL INSTRUCTIONS CAREFULLY AND COMPLETELY BEFORE INSTALLING YOUR NEW EXHAUST SYSTEM, AVOIDING TO DO SO MAY RESULT IN DAMAGE TO YOUR MOTORCYCLES COMPONENTS. PRIOR TO INSTALLATION, MAKE SURE YOUR STOCK HEADPIPE GASKETS ARE IN GOOD CONDITION. IF YOU HAVE ANY DOUBTS AS TO THEIR CONDITION, REPLACE THEM.**

1. Remove the seat and right side fairing cover (with M109 insignia), behind the fuel tank. To remove the fairing, release the plastic peg on top by pushing the center inward and pulling the fairing upwards until the peg releases, remove the M6 button head bolt at the bottom of the fairing. Pull the fairing outward from the rear and upward near the plastic peg to release it. Once it is free from all plastic pegs pull it forward to release it from the bottom of the fuel tank.
2. Remove the right side cover above the exhaust-mounting bracket secured by one M6 button head bolt, retain bolt for later. Remove the chrome steel cover above the exhaust secured by two remaining bolts, retain bolts for reinstallation of cover.
3. Locate the exhaust valve actuator solenoid and harness and disconnect the black 3-prong electrical connector and white 2-prong electrical connector.
4. Remove the socket head bolts securing exhaust flanges to cylinder heads, set these fasteners aside for later use in reassembly. Support the weight of the exhaust system and remove the 2, 8 mm bolts and one 8 mm nut securing the exhaust mounting bracket and exhaust assembly. Keep these fasteners for use later. Remove the stock exhaust system as one complete unit; this includes the stock exhaust bracket, headpipes and muffler, exhaust valve solenoid and cables.
5. The exhaust valve actuator solenoid must now be removed from the stock exhaust-mounting bracket. To perform this, loosen the two nuts securing each cable to the exhaust valve cable-mounting tab, Position A in Figure 1. Make enough slack in the cables so that the ends of the cables' threaded sheath may be disengaged from the end of the mounting tab. Now remove the two M6 hex head bolts securing the solenoid to the stock exhaust bracket. The stock exhaust mounting bracket, headpipes and muffler and exhaust valve solenoid cables will not be used anymore with the your new Cobra Exhaust System.

**\* Cobra® recommends you always wear a helmet while riding. Please never operate your motorcycle while under the influence of alcohol and/or drugs. Enjoy the new look of your motorcycle and please ride safely.**

POS. A, LOOSEN CABLES AT THIS TAB TO CREATE SLACK TO DISENGAGE FROM SOLENOID



DUST COVER REMOVED

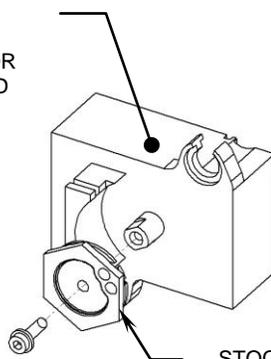
DISENGAGE CABLE BARRELS FROM CAM HERE

EXHAUST VALVE SOLENOID, UNBOLTED FROM EXHAUST MOUNT AND TURNED OVER WITH DUST COVER REMOVED FOR CLARITY

**FIGURE 1: EXHAUST REMOVED FROM M109**

6. Remove the dust cover from the solenoid to expose the rotating cam and cables. **DO NOT TRY TO ROTATE THE CAM RELATIVE TO THE ACTUATOR SOLENOID TO REMOVE THE CABLES; DOING SO MAY DAMAGE THE INTERNAL COMPONENTS OF THE SOLENOID.** To remove the cables from the cam, use the slack in the cables obtained in Step 5 to disengage the cable barrels from the cam, see Figure 1. **THE DUST COVER WILL NOT BE REINSTALLED.**
7. Now prepare the exhaust valve actuator solenoid for reuse. **SECURELY HOLD THE CAM TO PREVENT IT FROM ROTATING IN THE SOLENOID. WHILE PREVENTING THE CAM FROM ROTATING,** remove the 10 – 32 flange bolt securing it, see Figure 2. Replace the cam with the Cobra supplied cam, **BE SURE TO PREVENT THE CAM FROM ROTATING WHEN REINSTALLING THE BOLT, OTHERWISE DAMAGE MAY OCCUR TO THE SOLENOID,** see Figure 3. Torque to factory specifications.
8. After installing the cam preassemble the exhaust valve solenoid with the supplied Cobra parts as shown in Figure 3. Insert the two supplied 6 mm x 50 mm bolts through the supplied exhaust valve actuator bracket, aluminum spacers, solenoid, supplied flat washers, and supplied 6mm lock nut. Once the assembly is complete and bolts are tightened set aside for later installation.
9. Loosen the right footpeg assembly and move it out of the way to help ease exhaust installation.

EXHAUST VALVE ACTUATOR SOLENOID

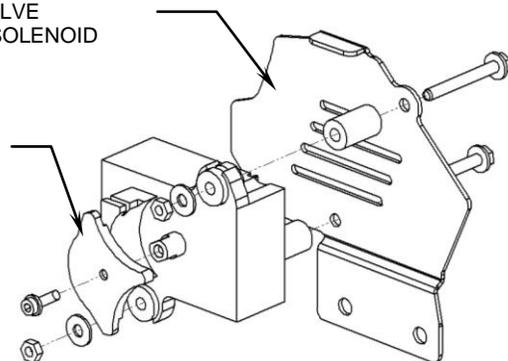


STOCK CAM TO BE REMOVED – DO NOT ROTATE IN SOLENOID

**FIGURE 2**

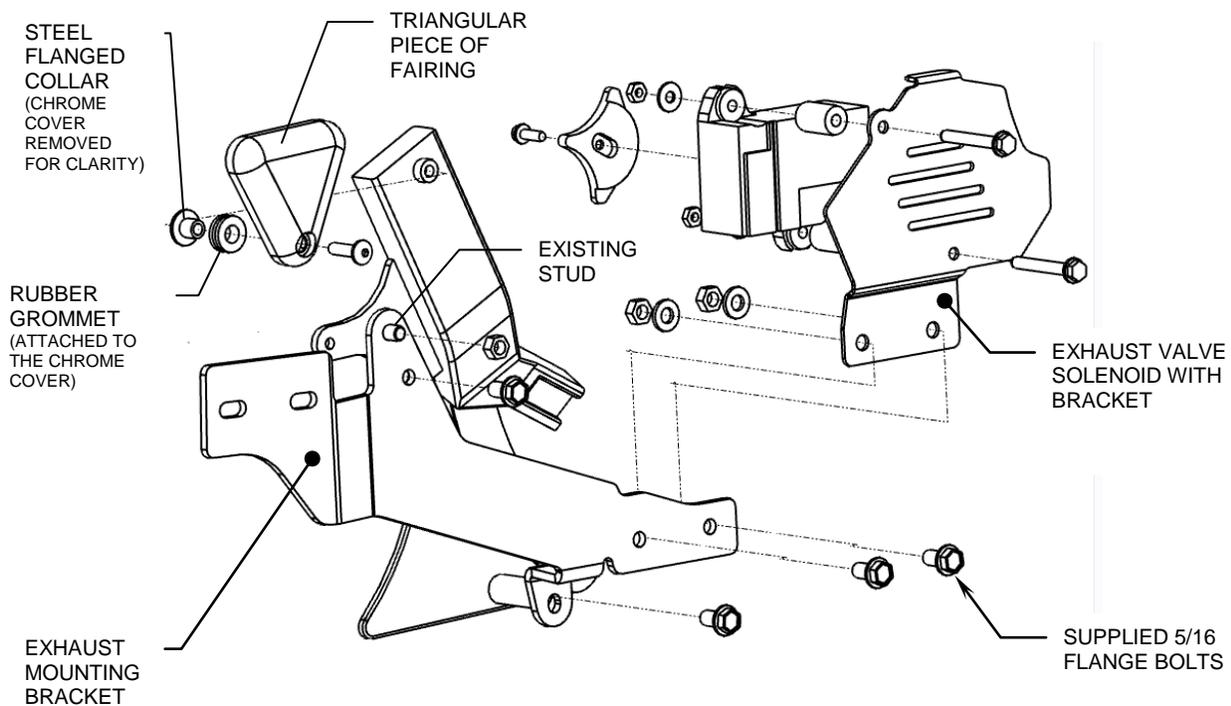
EXHAUST VALVE ACTUATOR SOLENOID BRACKET

COBRA SUPPLIED CAM, SLOTTED SIDE INWARD – DO NOT ROTATE WHEN TIGHTENING

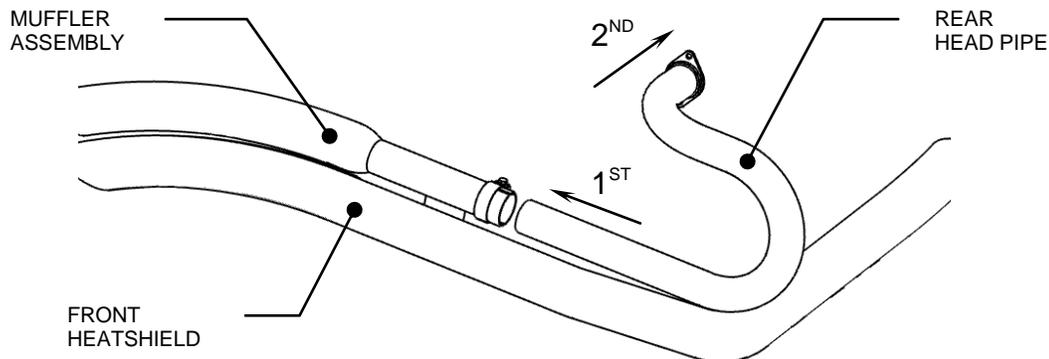


**FIGURE 3**

10. Install the exhaust mounting bracket onto the existing stud in the frame member; see Figure 4. Install the stock 8 mm nut and two original 8 mm flange bolts into the exhaust bracket, tighten to factory specifications. Mate the preassembled exhaust valve solenoid and bracket to the inside of the exhaust mounting bracket using two 5/16" flange bolts inserted from the outside and two 5/16" washers and nuts from the inside, see Figure 4. Reconnect the black 3-prong connector and white 2-prong connector to the exhaust valve solenoid. Tighten to proper torque specs.
11. Install only the front head pipe onto the motorcycle using the supplied Cobra flange and stock socket head bolts. **DO NOT TIGHTEN.**
12. Remove the muffler assembly from the box and slide two supplied 27 - 61MSC clamps onto the muffler tubes. Slide the muffler onto the front head pipe by tapping it onto the head pipe with your hand as you push the muffler forward making sure the muffler slides as far forward as possible. Secure the muffler to the exhaust-mounting bracket using the supplied 5/16-18 bolts but **DO NOT TIGHTEN.**
13. On the front and rear heatshields unscrew the remaining hose clamps and feed the tail end of the clamp through the clips on the inside. The screw end of the hose clamps should be accessible for tightening but not visible when the heatshields are mounted to the pipes.
14. Install the front heatshield, first slide the rear portion of the heatshield over the muffler, continue to slowly slide it forward pushing the front of the shield gently into place between the frame and motor (Hint: Spread the hose clamps apart slightly to make it easier to slide them over the rear of the exhaust and head pipe area.) Leave the heatshield clamps loose.

**FIGURE 4**

15. Push the rear head pipe into the muffler assembly. Rotate the head pipe toward the motor and into the port. Insert the stock allen bolts but **DO NOT TIGHTEN**. See Figure 5.

**FIGURE 5**

16. Install the rear heatshield the same way as the front heatshield. Refer to step # 14.
17. Make sure the front of the muffler assembly is parallel to the headpipes (this is critical) then fully tighten the following in order; muffler assembly to the exhaust mounting bracket, head pipe flanges to the motor (slowly tighten opposing bolt) and muffler clamps. (NOTE: If the muffler clamps are slid to far up the muffler or past the slots, the clamps will not tighten.)
18. Align heatshields and tighten the heatshield clamps.
19. Reinstall the steel chrome cover to the frame using the existing two M6 bolts. Reinstall the small plastic fairing above the exhaust mounting bracket, and secure with M6 button head bolt. Reinstall the right side fairing removed in Step 1, and secure the fairing and steel chrome cover with the stock M6 button head bolt, see Figure 4. Reinstall the seat once all body panels have been secured in place.
20. Reinstall the right footpeg assembly with the stock bolts and tighten to factory specs.
21. Make sure all the components (brackets, headpipes, and heatshields) have been tightened appropriately and chrome is cleaned before starting the motorcycle.

**IMPORTANT:** Cobra highly recommends using a Fi2000 Fuel Management System to help eliminate lean conditions and popping sounds. Cobra Part# 92-0845 for Fi2000 & 92-1845 for Fi2000R. For California models only use Part# 92-1845-50.

**\*Before starting your engine remove all fingerprints from chrome with a quality wax or chrome polish.**

California does not allow the use of aftermarket exhaust systems that remove original equipment catalysts, (except for racing use only) unless the Air Resources Board has issued an Executive Order for that system.