

# ■ GSX-R1000 AFTERMARKET EXHAUST ■

## EXHAUST CONTROL SYSTEM (EXCS) SELF DIAGNOSIS FUNCTION

The OEM exhaust system on a GSX-R1000K1 is equipped with an exhaust control valve (EXCV). The EXCV is connected by cables to the exhaust control valve actuator (EXCVA). The EXCVA is controlled by signals from the ECM. The ECM is also equipped with a self diagnostic function to warn the operator if there is an exhaust control system (EXCS) malfunction.

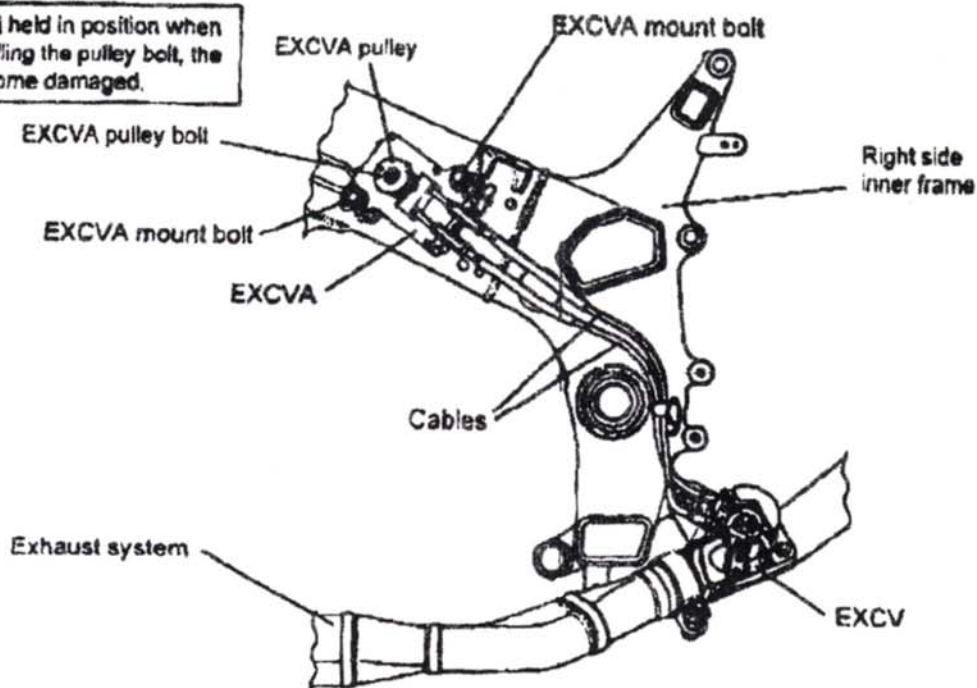
Complete aftermarket exhaust systems are not designed to accommodate the EXCS. When the standard exhaust system is replaced by an aftermarket system, the operator will be warned of a malfunction if the EXCS self diagnostic function is not disabled. When the self diagnostic function is activated, the FI lamp will illuminate and the LED will flash between the temperature and FI letters. When in the dealer mode, code c46 will be displayed. To eliminate the EXCS self diagnostic function when installing a complete aftermarket exhaust system on a GSX-R1000K1, follow the procedures described below.

## INSTALLATION PROCEDURE

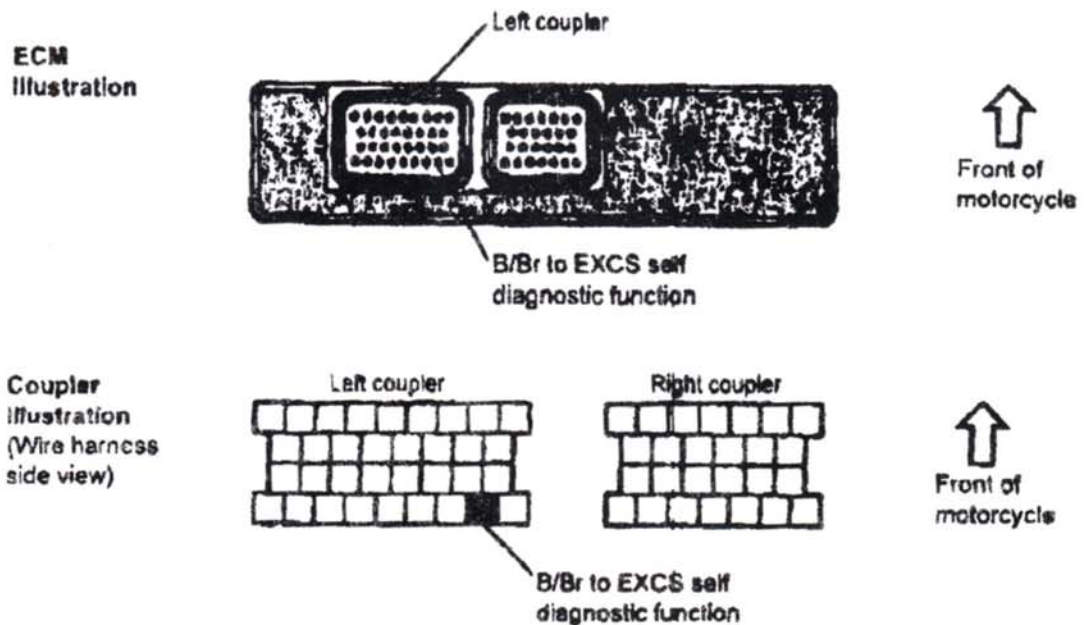
- 1) Remove the seats and bodywork. Lift and support the fuel tank.
- 2) Connect the Mode Select Switch (09930-82710) to the dealer mode coupler located at the left side of the tail section.
- 3) Turn the Mode Select Switch ON, then turn the ignition switch ON. This will cause the EXCVA to turn to the adjustment position. Turn the ignition switch OFF and disconnect the Mode Select Switch. The adjustment position must be selected at this step to make it easier to reinstall the EXCVA if the OEM exhaust is reinstalled at a later date.
- 4) Disconnect the two EXCVA couplers and unbolt the EXCVA from the frame.
- 5) Hold the EXCVA pulley with an adjustable wrench and remove the pulley mounting bolt.

### Caution

If the pulley is not held in position when removing or installing the pulley bolt, the EXCVA may become damaged.



- 6) Turn in the EXCVA cable adjusters to gain slack in the cables. Disconnect the cables from the EXCVA and pulley. The cables may be left connected to the EXCV and removed with the exhaust system.
- 7) Remove the OEM exhaust system and install the aftermarket exhaust system according to the manufacturers instructions.
- 8) Locate the B/Br wire relating to the EXCS self diagnostic function at the left side ECM coupler. The location is illustrated below.




- 9) Remove the couplers from the ECM.
- 10) On one side of the left (larger) coupler you will notice a rectangular white plastic push piece. The other side of the coupler has two smaller white plastic push pieces. Press the larger white push piece inward until it makes a click sound. This will cause the two smaller push pieces to move outward and allow you to remove the B/Br pin from the coupler. After the B/Br pin is removed from the coupler, press the smaller two white push pieces back into the coupler until it makes a click sound. This will lock the pins into position.

**Note**

Other B/Br wires can also be found in the ECM couplers. Be sure to only remove the B/Br pin that is positioned according to the illustration above. Removing another B/Br wire from the ECM will cause a malfunction unrelated to the EXCS.

- 11) Insulate the removed B/Br coupler pin with electrical tape to prevent contact to other wires, connections or ground. Reconnect the couplers to the ECM.
- 12) Lower the fuel tank and reinstall the bodywork and seats.

The motorcycle may now be operated in a normal fashion without the EXCS self diagnosis function. Should the owner decide to reinstall the OEM exhaust system, the coupler pin may be reinserted into the ECM and the EXCVA may be reinstalled to the frame. Refer to the instructions for installing the EXCVA and adjusting the cables in chapter 4 of the GSX-R1000 Service Manual. 

## ■ AFTERMARKET EXHAUST **GSX-R1000K2**

### **ENGINE CONTROL SYSTEM CHANGE**

In Master Tech volume 01-2 (May 2001), we discussed how to remove the EXCS (Exhaust Control System) from the GSX-R1000K1 for the purposes of installing an aftermarket exhaust system. Due to changes to the 2002 Engine Control System, the procedure for the GSX-R1000K2 is slightly different.

### **EXHAUST CONTROL SYSTEM (EXCS) SELF DIAGNOSIS FUNCTION**

The OEM exhaust system on a GSX-R1000K2 is equipped with an exhaust control valve (EXCV). The EXCV is connected by cables to the exhaust control valve actuator (EXCVA). The EXCVA is controlled by signals from the ECM. The ECM is also equipped with a self diagnostic function to warn the rider if there is an exhaust control system (EXCS) malfunction.

Complete aftermarket exhaust systems are not designed to accommodate the EXCS. If the standard exhaust system is replaced by an aftermarket system, the operator will be warned of a malfunction if the EXCS self diagnostic function is not disabled. When the self diagnostic function is activated, the FI lamp will illuminate and the LED will flash between the temperature and FI letters. When in the dealer mode, code C46 will be displayed. To eliminate the EXCS self diagnostic function when installing a complete aftermarket exhaust system on a GSX-R1000K2, follow the procedures described below.

## PROCEDURE

- 1) Remove the seats and bodywork. Lift and support the fuel tank.
- 2) Connect the Mode Select Switch (09930-82710) to the dealer mode coupler located at the left side of the tail section.
- 3) Turn the Mode Select Switch ON, then turn the ignition switch ON. This will cause the EXCVA to turn to the adjustment position. Turn the ignition switch OFF and disconnect the Mode Select Switch. The adjustment position must be selected at this step to make it easier to reinstall the EXCVA if the OEM exhaust is reinstalled at a later date.
- 4) Disconnect the two EXCVA couplers and unbolt the EXCVA from the frame.
- 5) Fabricate a jumper coupler and connect it to the wire harness side of the EXCVA motor. This will connect the B/R and R/B wires together.

*Black w/Tr  
Red Tracer*

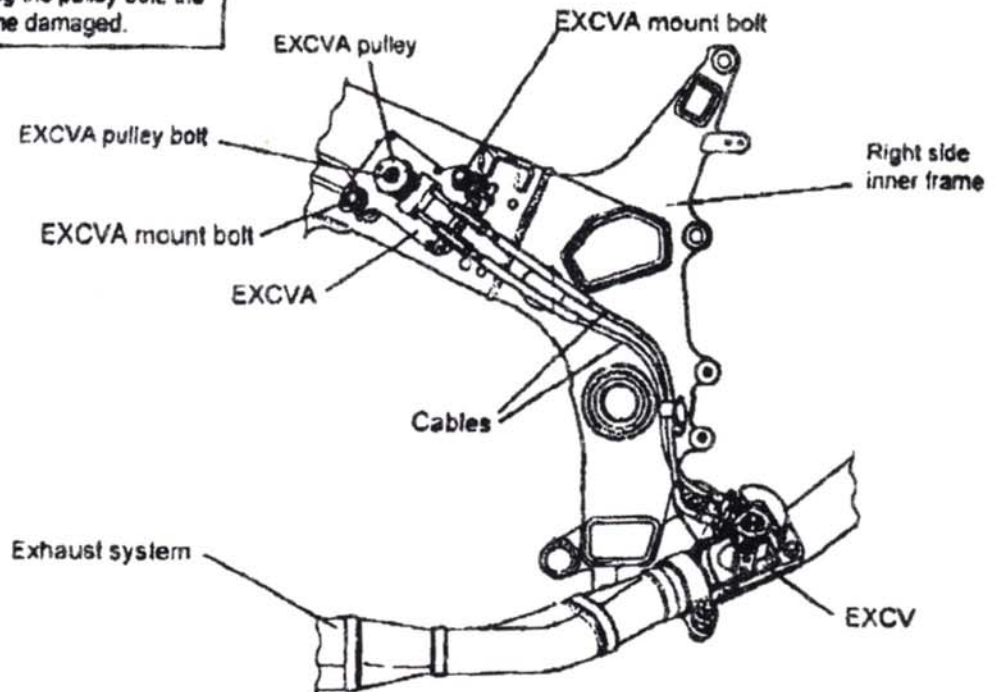
*Red w/Tr  
Black Tracer*



- 6) Hold the EXCVA pulley with an adjustable wrench and remove the pulley mounting bolt.

### Caution

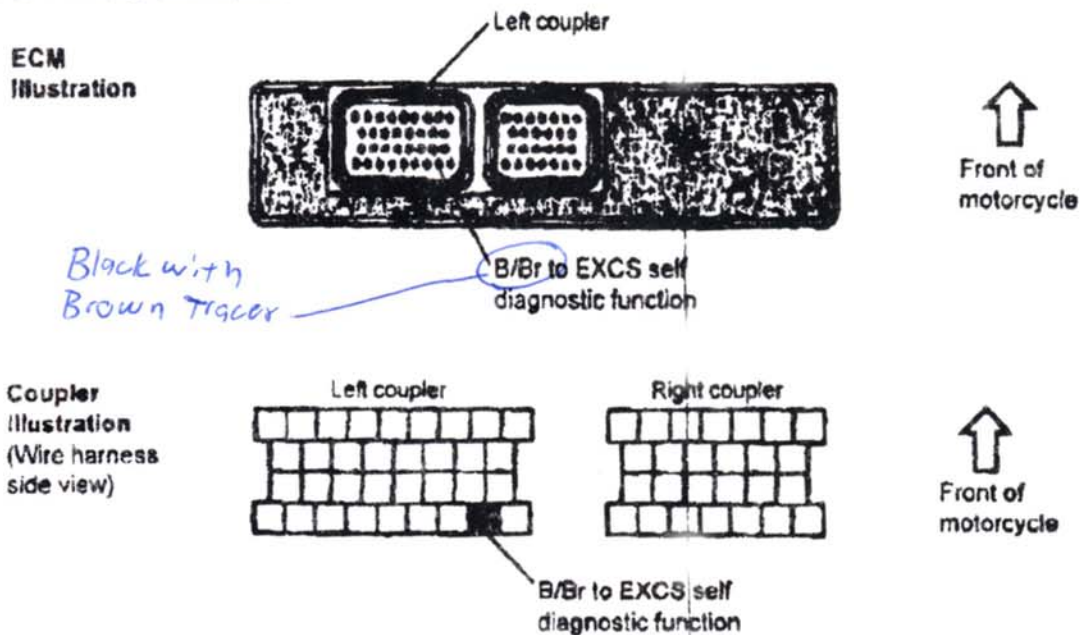
If the pulley is not held in position when removing or installing the pulley bolt, the EXCVA may become damaged.



7) Turn in the EXCVA cable adjusters to gain slack in the cables. Disconnect the cables from the EXCVA and pulley. The cables may be left connected to the EXCV and removed with the exhaust system.

8) Remove the OEM exhaust system and install the aftermarket exhaust system according to the manufacturers instructions.

9) Locate the B/Br wire relating to the EXCS self diagnostic function at the left side ECM coupler. The location is illustrated below.



10) Remove the couplers from the ECM.

11) On one side of the left (larger) coupler you will notice a rectangular white plastic push piece. The other side of the coupler has two smaller white plastic push pieces. Press the larger white push piece inward until it makes a click sound. This will cause the two smaller push pieces to move outward and allow you to remove the B/Br pin from the coupler. After the B/Br pin is removed from the coupler, press the smaller two white push pieces back into the coupler until it makes a click sound. This will lock the pins into position.

**Note**

Other B/Br wires can also be found in the ECM couplers. Be sure to only remove the B/Br pin that is positioned according to the illustration above. Removing another B/Br wire from the ECM will cause a malfunction unrelated to the EXCS.

12) Insulate the removed B/Br coupler pin with electrical tape to prevent contact to other wires, connections or ground. Reconnect the couplers to the ECM.

13) Lower the fuel tank and reinstall the bodywork and seats.

The GSX-R1000K2 may now be operated in a normal fashion without the EXCS self diagnosis function. Should the owner decide to reinstall the OEM exhaust system, the coupler pin may be reinserted into the ECM and the EXCVA may be reinstalled to the frame. Refer to the instructions for installing the EXCVA and adjusting the cables in chapter 4 of the GSX-R1000 Service Manual. 