INSTALLATION INSTRUCTIONS

DRAG SPECIALTIES PROGRAMMABLE SPEEDOMETER P/N 2210-0389/0390

ATTENTION INSTALLER (if other than owner): Please forward this Instruction Sheet to the purchaser of this product. These instructions contain valuable information necessary to the end user.

INTRODUCTION: These instructions describe the procedure for properly installing the programmable speedometer on 2001-2003 XL models (except 883C/1200C).

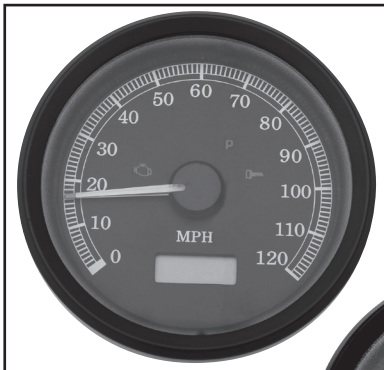
Review these instructions carefully before beginning, as they contain important information. Please retain for future reference.

Particularly important information is distinguished in these instructions by the following notations:

NOTE: A NOTE provides key information to make procedures easier or clearer.

CAUTION: A CAUTION indicates special procedures that must be followed to avoid damage to the motorcycle and/or accessories.

WARNING!: A WARNING indicates special procedures that must be followed to avoid injury to a motorcycle operator or person inspecting or repairing the motorcycle.



2210-0389

2210-0390

PROCEDURE:

REMOVAL AND INSTALLATION OF SPEEDOMETER:

1. SEE FIGURE 1. Remove the two screws and the back plate.

2. Depress the tab and remove the 12-pin connector from the back of the speedometer.

3. Push the speedometer through the front of the gauge bracket. Remove the front gasket from the old speedometer.

INSTALLATION OF THE NEW SPEEDOMETER:

NOTE: Glass cleaner may be applied to the inside of the rubber gasket to ease installation of the new speedometer.

1. Install the front gasket to the speedometer and slide the speedometer into the housing. Press firmly until fully seated.

2. Connect the 12-pin connector to the back of the speedometer.

3. Route the wires through the slot in the back of the instrument housing. Install the gasket on the back of the housing.

4. Install the back plate with two Allen screws.

PROGRAMMING THE SPEEDOMETER:

1. There are two different ways to program the speedometer. The first, and also the simplest way, is “Automatic Calibration” by driving a known distance. The second is “Manual Calibration” by determining the correct number of electronic pulses per mile/kilometer. The speedometer is capable of being calibrated between 3,000 and 90,000 pulses per mile/kilometer.

2. The speedometer is calibrated by using the trip meter reset button for the odometer.

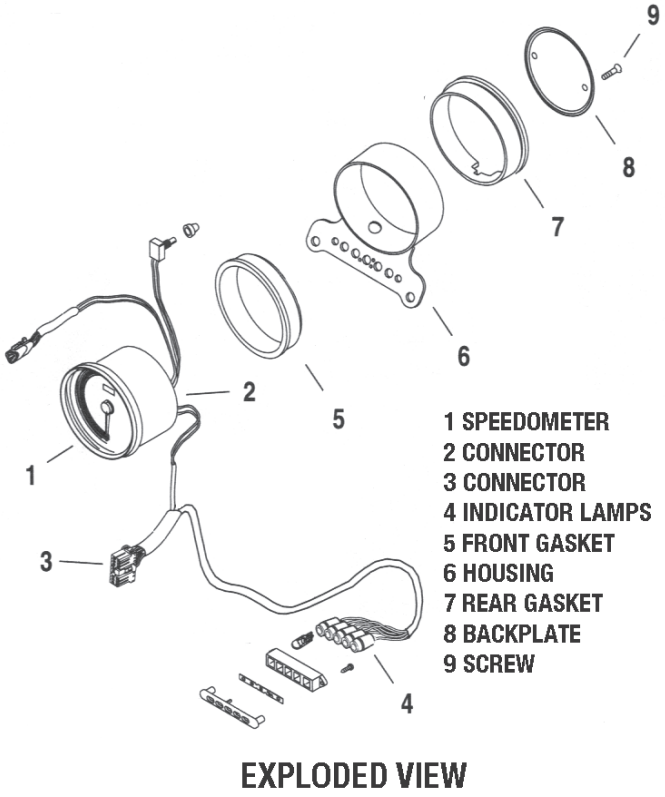


FIGURE 1

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CALIBRATING BY DRIVING A KNOWN DISTANCE:

NOTE: There are two different methods of switching modes used with the mode reset switch. The first is "press and release," which is a momentary push and then release the trip meter reset button. The second is "press and hold," which is a push and holding in of the trip meter reset button for two seconds.

3. With the odometer reading the total distance, press and hold the trip meter reset button until an "A" appears in the odometer window.

4. To start the known distance, press and hold the trip meter reset button again until "00000" appears. Put the motorcycle in gear and ride it exactly one mile/kilometer, speed is not critical. The window should record the number of pulses it recorded in the one-mile/kilometer distance. Using two consecutive mile/kilometer marker posts or other known distance is considered the best practice.

5. Press and hold the trip meter reset button again until the total distance on the odometer again shows. Calibration should be complete.

6. To test, ride the motorcycle one mile/kilometer at 60 mph/kph, which should take approximately 60 seconds.

CALIBRATING BY THE MANUAL METHOD:

7. Place the motorcycle on a stand so that the wheel that generates the pulses is off of the ground.

8. Place the speedometer on calibration mode by completing Step 3, above.

9. Carefully rotate the wheel 10 complete revolutions to get the pulse/10 revolutions amount.

NOTE: Read the number of pulses per ten revolutions on the odometer of the speedometer. Divide this number by 10 to get the number of pulses per tire revolution.

10. Determine the circumference of the tire/wheel combination.

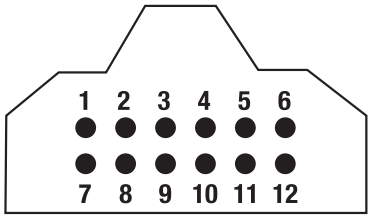
NOTE: The simplest method to determine circumference is to carefully measure around the tire at its largest diameter. The optional method is to determine the circumference by using the following forumla: Tire Diameter x 3.14159 = Circumference.

11. To determine the number of electronic pulses per mile/kilometer, using the following formula:

$$\frac{\textbf{63360 X \# OF PULSES PER TIRE RPM}}{\textbf{CIRCUMFERENCE = PULSES PER MILE/KILOMETER}}$$

12. We now need to enter the new pulse/distance ratio into the speedometer.

NOTE: The total number of pulses per mile/kilometer must range between 3,000 and 90,000. If you do not fall within this range, you must use a different method of generating the electronic pulses. Generally, this is a minimum of five pulses per tire revolution, but this can vary depending on the tire diameter.



1 SWITCH INPUT	**7 X**
2 SECURITY LP	**8 GND (-)**
3 PURSUIT INDICATOR	**9 SENSOR SIGNAL**
4 ENGINE LAMP	**10 SENSOR GND**
5 X	**11 SENSOR +12V DC**
6 SWITCH INPUT	**12 POWER (+)**

13. Place the speedometer back into calibration mode by completing Step 1.

14. Press and release the trip meter reset button, a "P" should show up in the odometer window.

15. Press and hold the trip meter reset button until the current pulse ratio appears in the odometer window. The first digit should be flashing.

16. Repeatedly press and release the trip meter reset button until the correct digit appears flashing in the window.

NOTE: If the pulse/distance ratio that you are entering has only four digits, you must enter a "0" as the first digit, such as "04572."

17. Next, to move to the second digit, press and hold the trip meter reset button until the second digit starts flashing.

18. Press and release the trip meter reset button until the correct second digit appears.

19. Press and hold the trip meter reset button to move to the third digit.

20. Repeat Steps 16 through 19 until all of the digits have been programmed. After the last digit has been programmed, press and hold the trip meter reset button to return to the normal odometer setting.

21. Programming should now be complete.

22. To test, ride the motorcycle one mile/kilometer at 60 mph/kph, which should take approximately 60 seconds.

WARNING!: Before operating the motorcycle, be sure all of the hardware is tight.