Purpose
The purpose of this bulletin is to provide updated TP Sensor Adjustment and Troubleshooting instructions.

Motorcycles Affected
The revised TP Sensor Adjustment and Troubleshooting procedures are for use on all 2000 and 2001 Blast P3 model motorcycles.

Required Dealer Action
Use the procedures contained in this bulletin in lieu of the procedures in both the 2000 and 2001 Service Manuals.

Adjustment

NOTE
To gain access to the Throttle Position Sensor, remove the carburetor and air box as an assembly. See Section 4 of the appropriate service manual for procedure.

1. Adjust throttle position sensor as follows:
   a. Back off idle adjustment screw so throttle plate is fully closed.
   b. Completely open and close the throttle by rotating the throttle control through its full range of motion.
   c. Using special TORX bit (Snap-on® TTXR20E), loosen the two tamper-resistant T20 TORX screws just enough to allow sensor to rotate.
   d. Disconnect pin 3 in connector [88B] (main wire harness).
   e. Install Breakout Box Adaptors (HD-42962) and Breakout Box (HD-42682) using black connectors between connector halves [88A] and [88B].
   f. Turn ignition switch to ON. Using a multimeter, measure voltage between pin 3 (V/W) and pin 5 (BK).
   g. Adjust (rotate) throttle position sensor (TPS) until voltage reading is 0.5V +/- 0.05V.
   h. Completely open and close the throttle by rotating the throttle control through its full range of motion. Wide Open Throttle (WOT) should not exceed 3.7V and reading should increase consistently as throttle is opened. If the voltage reading is erratic or the voltage reading at WOT exceeds 3.7V see Figure 2 for diagnostic testing.
   i. Tighten TP Sensor mounting screws to 13-23 in-lbs (1.5-2.6 Nm).

2. Install carburetor and air box. See section 4 of the appropriate service manual for procedure.

WARNING
Pull up on seat to verify that it is properly secured, front and rear. A loose seat may shift during vehicle operation and startle the rider, possibly causing loss of vehicle control that could result in death or serious injury.

3. Adjust engine idle speed, as follows:
   a. Run engine at normal operating temperature.
   b. Adjust the throttle stop screw so the engine idles at 1200 rpm.

NOTE
To measure engine rpm, use a hand held inductive tachometer (Snap-on® ONO-SE-1100) to pick up the signal off the spark plug cable.

NOTE
After WOT, the TPS reading may not return back to exactly 0.5V +/- 0.05V. To re-check exact TPS voltage reading, turn cycle key off and on.
Figure 1. Throttle Position Sensor

**Auto-Enrichener/TP Sensor Connector [88]**

<table>
<thead>
<tr>
<th>Chamber Number</th>
<th>Wire Color</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Violet/Orange</td>
<td>Auto-Enrichener</td>
</tr>
<tr>
<td>2</td>
<td>Orange</td>
<td>Auto-Enrichener</td>
</tr>
<tr>
<td>3</td>
<td>Light Blue</td>
<td>TP Sensor Output</td>
</tr>
<tr>
<td>4</td>
<td>Yellow</td>
<td>TP Sensor Input</td>
</tr>
<tr>
<td>5</td>
<td>Black</td>
<td>TP Sensor Ground</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Not Used</td>
</tr>
</tbody>
</table>
DRIVABILITY TROUBLESHOOTING - Poor Performance, Poor Fuel Economy, Excessive Pinging

Figure 2. Drivability Troubleshooting

1. Locate connector [88A] and [88B] on the carburetor. Remove Pin #3 on the harness side. Install Breakout Box Adaptor (HD-42962) between [88A] and [88B]. Measure voltage between pin 3 and pin 5 on the Breakout Box. Voltage should change smoothly, slightly above 0.5V (closed throttle) and below 3.7V (open throttle). Does it?

   YES
   - Check Timing. See Ignition Module/Cam Position Sensor for procedure. Is Timing Set Correctly?
   - NO
     - Check Auto-Enrichener. See Section 7.6
     - NO
       - Adjust Timing.
       - YES
         - Replace Ignition Module
       - NO
         - Replace TP Sensor

   NO
   - Closed Throttle Voltage >0.55V or <0.45V
   - Recalibrate TP Sensor. See Section 7.4.

   0V
   - Check resistance Between Pin 3 and ground. Is resistance less than 1 ohm?
   - NO
     - NO
       - Replace TP Sensor
     - YES
       - Repair

   12V
   - Locate and Repair Short to voltage.

   No Change
   - Check continuity between breakout box pin 5 and connector [88B] pin 5. Continuity present?
   - NO
     - NO
       - Repair Open
     - YES
       - Replace TP Sensor

   Erratic or greater than 3.7V and less than 12V
   - Check connections. Terminals OK?
   - NO
     - NO
       - Repair
     - YES
       - Repair Open

NOTE
Male connectors are labeled “A”
Female connectors are labeled “B”

1. Remove seat and fuel tank cover. See 2.31 SEAT.