

**Automotive Technology 7<sup>th</sup> Edition**  
**Chapter 77: Electronic Throttle Control System**  
**Matching Quiz**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Matching: Choose the item in column 2 that best matches each item in column 1.**

- |                                    |  |           |
|------------------------------------|--|-----------|
| 1. APP Sensor                      | A. A wrench symbol displayed on the dash to indicate a fault in the system on a Ford vehicle.  | 1. _____  |
| 2. Servomotor                      | B. The DC electric motor that moves the throttle plate.  | 2. _____  |
| 3. Default / Fail-Safe Position    | C. A type of motor not used in ETC systems because it is too slow to react compared to a conventional DC motor.  | 3. _____  |
| 4. Spring Test                     | D. Two sensors that produce opposite analog voltage signals, which are used by the PCM to determine the throttle plate's position.                             | 4. _____  |
| 5. TP Sensors (potentiometer type) | E. Uses two or sometimes three separate sensors to provide redundant pedal position information to the controller.   | 5. _____  |
| 6. H-bridge circuit                | F. A system response to a detected failure that limits engine speed and disables cruise control but allows the vehicle to be driven slowly to a safe location. | 6. _____  |
| 7. Fault Mode ("limp home")        | G. The partially open position (16% to 20%) that the throttle plate is held in by a spring when the system is unpowered.                                       | 7. _____  |
| 8. Ford ETC Warning Lamp           | H. A circuit used by the PCM to control the throttle motor by reversing the polarity of power and ground.  | 8. _____  |
| 9. Throttle Body Relearn           | I. A procedure that must be performed after cleaning or replacing the throttle body so the PCM can learn the correct idle position.                            | 9. _____  |
| 10. Stepper Motor                  | J. A self-test performed by the PCM when the ignition is turned on to check that the throttle motor and spring are working correctly                           | 10. _____ |

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**Answer Key**

**Answer Key:**

1. E
2. B
3. G
4. J
5. D
6. H
7. F
8. A
9. I
10. C