

Z: Injection Control Pressure (ICP) Sensor

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Z1 DIAGNOSTIC TROUBLE CODE (DTC) P1280: ICP CIRCUIT LOW INPUT

- DTC P1280 indicates injector control signal circuit out of range low was detected during KOEO Self Test or during continuous diagnostic monitoring.
- Possible causes:
 - biased ICP sensor/PCM
 - open ICP sensor circuit
 - short to SIG RTN or PWR GND on ICP sensor circuit
 - open in VREF circuit
- Disconnect ICP sensor connector.
- Key on/engine off.
- Measure voltage between VREF Pin B and battery ground.

Is voltage reading $5\text{v} \pm 0.5$?

Yes	No
GO to Z2 .	REPAIR open in VREF Circuit 351 (BR/W). CLEAR DTCs and RETEST.

Z2 SIGNAL RETURN CIRCUIT CHECK

- Measure voltage between VREF Pin B and signal return Pin A.

Is voltage reading $5\text{v} \pm 0.5$?

Yes	No
GO to Z3 .	REPAIR open in signal return Circuit 359 (GY/R). CLEAR DTCs and RETEST.

Z3 ICP SIGNAL CIRCUIT CHECK

- Key off.
- Disconnect PCM. Inspect for loose, damaged or pushed-out pins. Repair as necessary.
- Connect breakout box. PCM disconnected.
- Measure resistance between Pin 87 and Pin C at ICP sensor harness connector.

Is resistance less than 5 ohms?

Yes	No
GO to Z4 .	REPAIR open in signal Circuit 812 (DB/LG) for F-Series or 535 (LB/R) for Econoline. CLEAR DTCs and RETEST.

Z4 VREF CIRCUIT CHECK

- Measure resistance between Test Pin 90 and Pin B at ICP sensor harness connector.

Is resistance less than 5 ohms?

Yes	No
GO to Z5 .	REPAIR open in VREF Circuit 351 (BR/W). CLEAR codes and RETEST.

Z5 SIGRTN CIRCUIT CHECK

- Measure resistance between Test Pin 91 and Pin A at ICP sensor harness connector.

Is resistance less than 5 ohms?

Yes	No
GO to Z6 .	REPAIR open in SIG RTN Circuit 359 (GY/R). CLEAR codes and RETEST.

Z6 SENSOR SIGNAL CIRCUIT SHORT TO GROUND

- Measure resistance between Pin 87 and Pins 25/51/76/77/91/103.

Is resistance greater than 10,000 ohms?

Yes	No
GO to Z7 .	REPAIR short to ground in signal wire Circuit 812 (DB/LG) for F-Series or 535 (LB/R) for Econoline. CLEAR DTCs and RETEST.

Z7 CHECK FOR SHORT ON PIN 87

- Connect breakout box to PCM.
- Measure resistance between Pin 87 and Pins 25/91/51/76/77 and 103.

Is resistance greater than 10,000 ohms?

Yes	No
REPLACE ICP sensor. RERUN Scan Tool Diagnostic Test.	REPLACE PCM. REMOVE breakout box. RECONNECT ICP sensor. RERUN Scan Tool Diagnostic Test.