Spitronics - ECU - Fuel System Test - Guide

1. Overview

This guide verifies injector operation and fuel system before first start.

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2. When to Use This Guide

• No start condition
• Suspected fuel issue
• First installation

⚠ **Warning**
Incorrect fuel setup may cause:
• Severe engine damage
• Unburned fuel contaminating spark plugs
• Fuel dilution in engine oil

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3. Requirements

• Injectors connected
• Sensors configured
• ECU powered

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4. Procedure

1. Insert injector fuses
2. Do NOT install fuel pump fuse yet
3. Switch ignition ON
4. Listen for injector clicking
5. Set:
   • Injector Ratio = 100%
   • Fuel Offset = 0%
6. Crank engine
7. Check realtime injector time

Expected Result:
• Injector time ±11–13 ms
• No errors present
• Fuel pump primes correctly

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5. Evaluate Injector Time

If 0 ms:
• Fuel compensation not active
• Common cause:
- Compensation graphs not filled in (graph line at bottom)
  • check air and water compensation graphs
- Unused sensors enabled (altitude/air sensor)
  • check altitude and air sensors

👉 Note:
If sensors are not used or connected ensure that they are switched off.

If too high (±16–25 ms):
Possible causes:
• Altitude sensor incorrect
• Water temperature sensor incorrect
• Injection Ratio incorrect
• Fuel map / compensation graphs incorrect

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6. Enable Fuel Pump

• Switch ignition OFF
• Insert fuel pump fuse (5A → 10A)
• Switch ignition ON

Expected:
• Pump runs ±3 seconds

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7. Start Engine

• Start engine

Expected:
• Engine starts
• Engine idles

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8. If Not Correct

• No injector time → setup issue
• High ms → sensor or map issue
• No pump → wiring or relay

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9. Notes

• Always verify injector time before enabling pump
• Incorrect sensors can cut fuel completely
• Do not proceed if values are incorrect

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10. Reference Links

ℹ Fuel Setup – Software