

Vehicle Service Intake & Diagnostic Sheet

Customer Concern, OBD-II Scan Data & Requested Tech Inspection

PENDING FAULT: P0303

VEHICLE	VIN	ODOMETER	ENGINE & PLATFORM
2010 Nissan Altima 2.5	1N4AL2AP5AN469579	178,665 Miles	QR25DE 2.5L DOHC (L32)

Customer Concern & Stored Diagnostic Code

- DTC Stored:** P0303 – Cylinder 3 Misfire Detected (Logged as Pending DTC).
- Customer Concern:** Engine runs rough and shakes/shudders when idling at red lights; smooths out once driving at cruising speed.
- Dash Lights:** Instrument cluster has **VDC OFF** and **SLIP** lights illuminated. This is standard Nissan ECM behavior—the computer automatically disables traction control during an active engine misfire. Both lights clear once the misfire is fixed.

Engine Layout & Cylinder Numbering

- Engine Family:** QR25DE 2.5L 16-valve 4-cylinder (California PZEV PC certified).
- Cylinder Order:** Numbered sequentially **#1 – #2 – #3 – #4** from passenger timing belt side toward the driver transaxle/battery.
- Target Cylinder:** Cylinder #3 is the 3rd cylinder from the passenger timing chain (2nd from the air cleaner box).

Engine Running Sound & Mechanical Check

- Idle Sound:** Engine has a steady, rhythmic single-cylinder miss/skip at idle that tracks engine speed (~1,180 RPM cold idle down to ~1,110 RPM warm).
- Mechanical Health:** Rest of the engine sounds quiet and healthy—**no bottom-end rod knock, no timing chain slap, and no piston rattle.**
- Initial Diagnosis:** Consistent with a dropped Cylinder #3 ignition coil, fouled plug, or oil leaking into the spark plug well from the valve cover tube seal.

Requested Checkout Steps for the Tech

- Check Tube #3 for Oil:** Pull Coil #3 and check the rubber boot for engine oil. On this 2.5L QR25DE, the valve cover tube seals leak oil into the spark plug wells over time.
- Coil Swap Test:** Swap **Coil #3 over to Cylinder #2**. Clear code and see if the miss follows the coil to P0302. If it does, replace the coil.
- Spark Plug Condition:** Pull plug #3 (5/8" / 16mm socket). Check electrode wear and gap. At 178k miles, recommend replacing the full set of 4 NGK Laser Iridium plugs (DILKAR6A11).
- Injector / Wiring Check:** If the miss stays on #3 with a known-good coil and plug, check injector resistance (spec: **11.4 – 12.6 Ω**) and harness wiring.
- Secure Battery Clamp:** The metal battery hold-down clamp is disconnected and resting loose across the tray near the ECM harness. Please clean and bolt it down.

Inspection Photos & Component Locations

Dash Warning Lights, Scan Tool, Engine Bay & Battery Tray

INSPECTION PHOTOS



Plate 1: OBD2 Scan - Torque Pro Fault Log
Confirmed active P0303 – Powertrain: Cylinder 3 Misfire Detected logged as a Pending Fault.



Plate 2: Instrument Cluster Telemetry
178,665 verified miles. VDC OFF and SLIP indicators illuminated under ECM torque failsafe.



Plate 3: QR25DE 2.5L Engine Bay Layout
Cylinders 1-4 left-to-right. Cylinder #3 is located under the 3rd contour runner of the engine cover.



Plate 4: Battery & ECM Mounting Proximity
Corroded tie-down bracket resting loose across battery. Check ECM casing & wire harness directly adjacent.



Plate 5: Official Vehicle Identification Number (VIN)
1N4AL2AP5AN469579 (2010 Nissan Altima 2.5 Sedan, Canton MS Assembly Plant).



Plate 6: Underhood Emissions Certification
2010 MY Nissan California PZEV PC certification (Group: ANSXV02.585A, SAE 5W-30 oil specification).