2008-2013 BMW 328i - Spark Plug Replacement

2008-2013 BMW 328i | Moderate | 1-2 hours | $55 DIY

TOOLS

Air Blow Gun Dielectric Grease Torque Wrench Gloves Socket Extensions 8mm Socket Bent Nose Pliers Ratchet Safety Glasses 14mm thin-wall 12-point spark-plug socket with rubber insert

PARTS

TRQ SPA02135 Spark Plug Set SPA02135 $54.95
NGK Laser Platinum Spark Plug Set NGETK00121 $71.95
BMW / Bosch OE Spark Plugs 12-12-2-158-253 / FR7NPP332

STEPS

1. **Cool the engine - The 2008-2013 BMW 328i (E90, N52 inline-6) uses BMW 12-12-2-158-253 /** Bosch FR7NPP332 multi-electrode plugs. These are PRESET - do not gap multi-electrode plugs (you'll damage them). Torque: CONFLICT - sources cite 23 Nm vs 30 Nm...
2. **Access the ignition coils - Remove the engine cover (it pulls off). Remove the cabin** filter housing/cowl panel if it's blocking the rear coils (common on the E90). Note the coil lever design - it's a BMW quirk.
3. **Remove one coil at a time - The N52's coil lever must be fully disengaged - if you yank** without flipping the lever, you'll break it. Inspect the boots.
4. **Remove the old spark plug - Use the 14mm THIN-WALL 12-point socket to remove the old** plug. A standard 14mm won't fit - the N52's plug wells are narrow, so the thin-wall 12-pt is mandatory. Turn counterclockwise. The old Bosch FR7NPP332 multi-electrode should show n...
5. **Gap and hand-thread the new plug - The new multi-electrode plugs are PRESET - do NOT gap** them. Inspect the new plug to ensure the electrodes weren't bent in shipping. NEVER use a wrench to start - the aluminum head strips. The 14mm thin-wall socket is for removal/instal...
6. **Torque to specification (verify!) - Torque to BMW spec - but there's a CONFLICT: 23 Nm** vs 30 Nm appear in sources. Do NOT guess. Check your BMW FSM or a reliable N52-specific source for the correct value. Use a torque wrench with the thin-wall 12-pt socket. Do not over...
7. **Reinstall the coil (seat the lever!) - The N52's coil lever MUST be fully engaged - a** partially seated coil causes the famous N52 misfire. Ensure each coil clicks/locks. Repeat for all 6 cylinders, one at a time. Reinstall the cowl panel/cabin filter housing if you removed it.
8. **Reassemble and test - Reinstall the engine cover. Start the engine - the N52 inline-6** should idle buttery smooth. Check for misfire codes. The N52's coil-lever quirk means a misfire after a plug change is almost always a poorly seated coil - recheck the lev...

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