

4. **Smog Check Tests** - The vehicle must pass ALL of the following Smog Check tests (regardless of model year) using the donor vehicle Smog Check test type requirements:
 - a. BAR-97 tailpipe test (this item does not apply to diesel and hybrid vehicles). Acceleration Simulation Mode (ASM) test unless the vehicle is not compatible with dynamometer testing. In such cases, the Two Speed Idle (TSI) test shall apply. Emission standards appropriate for the model year of the donor vehicle will be applied. Note that Smog Check program area test types do not apply to engine changes i.e. Basic area vehicles will receive an ASM test
 - b. BAR-OIS test when an On-Board Diagnostics (OBD-II) certified donor engine is installed (ALL Smog Check program areas)
 - c. Malfunction Indicator Light (MIL) ("CHECK ENGINE" light) must pass the bulb check, and full OBD functionality. This includes donor engines equipped with OBD-I (1995 and older OBD equipped engines) capabilities
 - d. Visual inspection of all emissions control systems
 - e. Functional tests when applicable for the donor vehicle (this item does not apply to diesel or hybrid vehicles), including:
 - i. Ignition Timing Test
 - ii. EGR System Functional Test
 - iii. Low Pressure Fuel Evaporative Test (LPFET)
 - iv. Fuel Cap Integrity Test
 - f. Visible Smoke Test (this item does not apply to hybrid vehicles)
 - g. Liquid Fuel Leak (this item does not apply to diesel vehicles)

5. **Exhaust System** - All exhaust after-treatment devices (catalytic converters, Diesel Particulate Filters (DPF), Diesel Oxidation Catalysts (DOC), Selective Catalytic Reduction (SCR), etc.) the donor vehicle was certified to use must be present and positioned under the vehicle in the same linear position within the exhaust stream as measured from the exhaust manifold outlet. If the device is integrated with the exhaust manifold, it must remain that way. Tolerances for this measurement as are follows:
 - a. On the close-coupled end (nearest the engine), within 6 inches, and no closer than the stock configuration
 - b. On the other devices (rear catalyst, DPF, DOC, SCR, etc.) within 12 inches of the stock configuration

No other exhaust system changes are allowed, unless they occur downstream of the last emissions control device i.e. (Oxygen sensor (O₂), NO_x sensor, etc.). For example, the muffler location(s) may be modified.

6. **Exhaust Sensors** - All required after-treatment sensors including Oxygen (O₂) sensor(s) must:
 - a. Be within 1 inch of the original location (relative to the associated after-treatment device)
 - b. Have bungs properly welded into the exhaust pipes and must be oriented in the exhaust stream identically to the original configuration

7. **OBD-II System** - Any vehicle with a replacement engine from a donor vehicle that was originally equipped with an OBD-II system must support all OBD-II functionality from the donor vehicle:
 - a. Calibration Identification (CalID) and Calibration Verification Number (CVN) must match a certified configuration for the donor engine
 - b. ALL supported OBD readiness monitors must be in a ready (complete) condition. Vehicle owners may need to work with the manufacturer, dealer or repair shop with necessary tools and expertise to get potentially difficult monitors to be ready (complete)
 - c. Readiness monitors must clear and reset properly
 - d. The Original Equipment Manufacturer Diagnostic Link Connector (DLC) must be accessible and fully functional. No devices may be plugged into the DLC at the time of inspection. If more than one DLC is located on the vehicle, then the DLC for the engine must be labeled as "ENGINE DLC". The label must be robust, permanent, clearly readable, and highly visible
 - e. All sensors, switches, and wiring harnesses needed to make the system fully functional must be properly connected
 - f. MIL must be in a visible location on the vehicle's instrument cluster and be clearly labeled as a MIL and functioning

8. **Aftermarket Parts** - All non-OEM configurations or aftermarket components installed on the recipient vehicle or donor engine must adhere to BAR's Aftermarket Parts Verification Guidelines located in the Smog Check Reference Guide, Appendix G https://www.bar.ca.gov/pdf/Smog_Check_Reference_Guide.pdf. CARB's list of approved aftermarket parts with Executive Orders (EO's) can be found at <https://www.arb.ca.gov/msprog/aftermkt/devices/amquery.php>

9. **Emissions Systems** - All emissions systems (including the evaporative system monitoring) from the donor vehicle must be installed and fully functional. For example, the evaporative system components, i.e. plumbing, canister, tanks, valves, etc. must be present and functioning. If a non-OBD II certified vehicle is receiving an OBD II certified replacement engine, the transmission and fuel storage/evaporative system from the recipient vehicle may still be used. However, these components and systems must be integrated with the engine's OBD II system such that the OBD system's transmission and evaporative system monitoring strategies remain operational.