# Scan Tool Diagnosis

**Meets NATEF Task:** (A8-B-3) Diagnose driveability and emissions problems resulting from malfunctions of interrelated systems; determine necessary action. (P-2)

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**Name** _____ **Date** _____ **Time on Task** _____

**Make/Model/Year** _____ **VIN** _____ **Evaluation: 4 3 2 1**

(Not all of this data will be available on all vehicles or scan tools - if not available, put N.A.)

_____ **1.** DTCs: _____ Pending DTC:_____

_____ **2.** Engine coolant temperature (ECT): cold _____ warm _____

_____ **3.** Intake air temperature (IAT): cold _____ warm _____

_____ **4.** Upstream O2S1: lowest voltage observed _____ highest voltage observed _____

_____ **5.** Upstream O2S2: lowest voltage observed _____ highest voltage observed _____

_____ **6.** Downstream O2S: lowest voltage observed _____ highest voltage observed _____

_____ **7.** $O_2$ cross counts: @ idle____ @ 2,000 RPM____

_____ **8.** Injector pulse width: @ idle (park)_____ @ idle (drive)_____
@ 2,000 RPM (park)_____ @ 3,000 RPM (park)_____

_____ **9.** Spark advance: @ idle (park)_____ @ idle (drive)_____
@ 2,000 RPM (park)_____ @ 3,000 RPM (park)_____

_____**10.** Short term fuel trim (integrator): @ idle (park)_____
@ idle (drive)_____ @ 2,000 RPM (park)_____

_____**11.** Long term fuel trim (block learn): @ idle (park)_____ @ idle (drive)_____

_____**12**. P/S switch: OK_____ NOT OK_____

_____**13.** MAP: @ idle (park)_____ @ idle (drive)_____

_____**14.** MAF (grams/sec): @ idle (park)_____ @ idle (drive)_____
@ 2,000 RPM (park)_____ @ key on (engine off)_____

_____**15.** IAC counts: @ idle (park)_____ @ idle (drive)_____
@ A/C on (drive)_____ @ 2,000 RPM (park)_____

_____**16.** Throttle position (TP) sensor: @ idle____ @ W.O.T. engine off, ignition "on"_____

_____**17.** Battery voltage:_____

_____**18**. Troubles with the vehicle? (if any)_____