

1. EQUIPMENT & INTAKE

MAKE / MODEL	YEAR	ENGINE / SERIAL
VIN	ODOMETER / HOURS	ECM SW / CAL REV
CUSTOMER COMPLAINT (VERBATIM)		

2. FAULT CODES RETRIEVED

SPN	FMI	SA	COUNT	STATUS (A/I)	DESCRIPTION	LAMP

3. SYMPTOM VERIFICATION

- | | |
|--|--|
| ☐ No start / hard start | ☐ Low power / derate |
| ☐ Rough idle / misfire | ☐ Excessive smoke (color: __) |
| ☐ Regen issues / DPF full | ☐ DEF / SCR fault |
| ☐ Coolant / oil temp abnormal | ☐ Boost / VGT complaint |

4. HYPOTHESIS & DIAGNOSTIC PLAN

PRIMARY HYPOTHESIS (ROOT CAUSE SUSPECTED)

SECONDARY / ALTERNATE HYPOTHESIS

SYSTEMS TO TEST (IN ORDER)

5. DVOM / BENCH TEST RESULTS

#	TEST / CIRCUIT	PIN / LOCATION	SPEC (V/Ω/A)	MEASURED	PASS / FAIL
2					
3					
4					
5					
6					
7					
8					
9					
10					

6. WIRING / CIRCUIT SKETCH

Grid area for wiring or circuit sketch.

7. ROOT CAUSE ANALYSIS

CONFIRMED ROOT CAUSE (WHAT FAILED, WHY IT FAILED, HOW THE CODE WAS SET)

5-WHY CHAIN (WHY? → WHY? → WHY? → WHY? → WHY?)

8. REPAIR PERFORMED

PARTS REPLACED

LABOR TIME (HRS)

REPAIR PROCEDURE SUMMARY

9. VERIFICATION & ROAD TEST

- ☐ Codes cleared and stayed cleared after full duty cycle
- ☐ Live data returned to spec (KOEO / KOER)
- ☐ Regen / SCR efficiency verified (if applicable)
- ☐ Road / load test completed — no derate, no reoccurrence
- ☐ Customer complaint reproduced pre-repair and resolved post-repair

10. INSTRUCTOR SIGN-OFF

STUDENT SIGNATURE

INSTRUCTOR SIGNATURE / GRADE