G2.II PHEV (V6 Variants Only) – Misfires during Engine Warm-up

Vehicles Affected

Models	Model Year	Model Type	VIN Range	Vehicle-Specific Equipment
Panamera	As of 2021	97ABX1 97ADZ1 97ANX1 97BBX1 97BDZ1 97BNX1	N/A	E-Hybrid

Revision History

Revision	Release Date	Changes
0	September 5, 2023	Original document
1	August 20, 2024	Update of rpm under Condition Update of Technical Background Addition of note under Service Information

Condition

The presence of DME misfire faults P030X00 occurring during catalytic warm-up (or low engine temperatures), under low relative load for the internal combustion engine (ICE), at low ICE rpm (1400 - 3000 rpm). If there is a customer complaint for the check engine light (CEL), then it is likely the Instrument Cluster Fault P162400 ('Engine control indicator light switched on') results from the misfire fault(s).

If these conditions are present, it is therefore often possible to reproduce such misfires during catalytic warming of a cold engine as the drivetrain load supported by the electrical motor shifts to the ICE. A CEL requires two sequential drive-cycles with entered misfire faults; nonetheless, even when the misfire fault sets for the first time, operation of the electric motor (in E-Power or Hybrid Auto mode) suspends indefinitely for that drive cycle.

Technical Background

The misfire diagnostic is sensitive, yet accurate. In some instances, the engine operating conditions during catalytic warming may trigger misfire faults. In these instances, if the above listed conditions in the environmental fault data for the misfires exist, then replacing the fuel injectors may serve to remedy the misfiring.

NOTE: Misfire faults can arise for numerous reasons. If the above conditions in the environmental fault data do NOT exist, then the misfire cause requires further root cause diagnosis and remedy.

Service Information

1. Please inquire with the customer to learn the conditions under which the CEL appeared, and compare the environmental data with the conditions listed above.
2. Perform a brief test drive starting with some available State of Charge in the HV-Battery to allow the ICE to start and continue operation around 2000 rpm for approximately 90 seconds. During this drive, determine if there is a definite, perceivable misfire indicated by rough running and through observation of the misfire counter in the tester.
   a. If the fault data is consistent with the conditions above, and no rough misfires occur, then proceed to Step 3.
   b. If a rough running ICE accompanied by significant misfire counts is observable, then proceed to Step 4.
3. Please replace all of the six fuel injectors.
4. Please continue to diagnose and remedy the cause for the misfire(s), which may or may not include the injector(s).
   (Note: In some instances, rough running is also possible with the above mentioned conditions due to fueling being disabled after reaching a misfire threshold. However, other possible causes for rough running should be investigated first.)

Warranty

As always, please document the repair completely in PCSS.

For this repair, please code the "cause" as follows:

Cause location:	2440 Injector Valve
Cause symptom:	9725 Spare part fault

Please record the customer's statement in the PCSS job.

Use the following labor operations:

03350050	On board diagnostic.
03350053	On board diagnostic.
24402020	Injector valve remove and reinstall

Search Items

G2.II PHEV, Misfires, V6