

TO: ALL ISZAPT DISTRIBUTOR AND DEALER SERVICE PERSONNEL
SUBJECT: GENERATOR ENGINES WITH SCR PURGE TIMEOUT FAULT DTC P2458

Tier 4 Final engines utilizing the Selective Catalyst Reduction (SCR) emissions control system are required to passively or actively run a catalyst purge cycle every so often. This process uses heat generated from the Diesel Oxidation Catalyst (DOC) to purge the SCR catalyst of urea residue. If the engine is not able to reach and maintain proper operating temperature during a purge event, the unit will attempt to purge again. After three consecutive failed attempts, Diagnostic Trouble Code (DTC) P2458 "Purge Timeout Fault" will set in the Engine Control Unit (ECU). The engine will continue to run but will no longer be able to purge. This can lead to SCR catalyst inefficiency and plugging. Refer to the information below when addressing this concern.

Address any base engine or SCR DTCs and related failures before moving on to solely address the purge timeout concern. Base engine concerns that could lead to rough running will eventually have effect on the after treatment system. Be sure the engine itself is in good working order. The DOC can lose its ability to generate heat if it does not have enough exhaust heat, air, or fuel. If this is suspected, the most common cause is low load operation. Other common causes include poor diesel fuel quality and low atmospheric temperatures. If these conditions remain, the DOC itself can become coated with soot, thus affecting its chemical changing and heat generating ability. This can result in an inhibiting chain of events, leading to DTC P2458 mentioned above. Once these causes have been addressed, the machine can be recommissioned as outlined below.

As part of documentation best practice, use the E-IDSS to retrieve the Data Recording Module (DRM) file from the ECU. For the following procedure, a load bank and E-IDSS are required. The process can take up to four hours. Once the engine has reached normal operating temperature the engine can be loaded in attempt to clean the catalysts. Upon loading the engine, exhaust temperature of 350°C in front of DOC should be maintained; this will only happen in high load conditions. This parameter can be found in E-IDSS Engine Data as Exhaust Gas Temperature (EGT) #2. If the exhaust temperature does not reach or maintain 350°C, consider further engine performance inspection. Run the machine for up to four hours under continuous load maintaining the 350°C exhaust temperatures. Four hours is the recommended time to ensure a clean system. Next, perform a forced SCR purge with the E-IDSS. After a successful purge, test run the machine to ensure proper operation. Finally, check for DTC not present in DCU and ECU .

Best regards,

Isuzu PowerTrain Service

Exhaust Aftertreatment Assembly Reference

