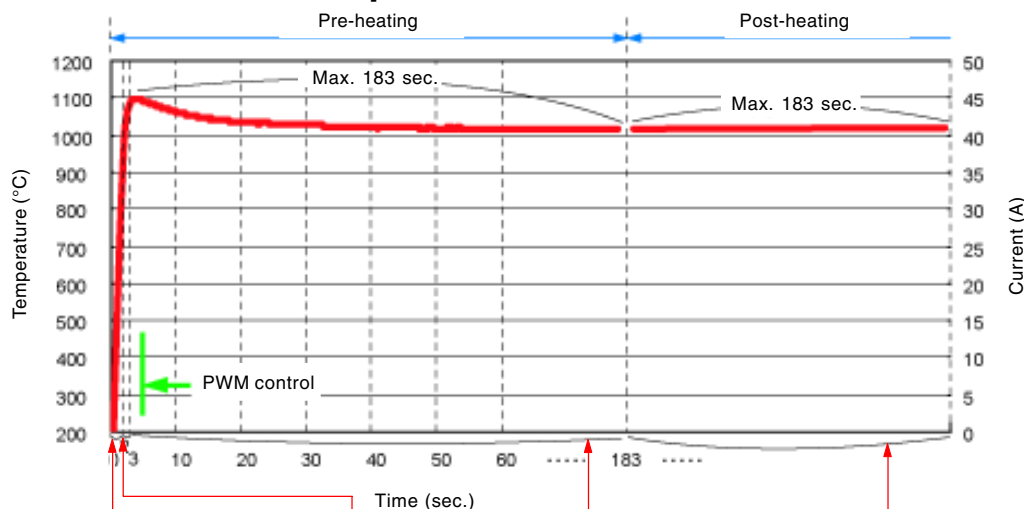


4. AQGS (ADVANCED QUICK GLOW SYSTEM) UNIT

The AQGS unit installed in D27DTP (POWER UP) engine can raise the the temperature of the glow plug up to 1,000°C in 2 seconds.

► AQGS Unit Control in Steps



1st step

When the ignition key is turned to ON position, the engine ECU sends the preheat signal to AQGS. Then, AQGS applies the voltage (approx. 11 V) to the glow plug for 2 seconds, and then the glow plug's temperature rises up to 1,000°C which is the target temperature. After 1st step, the preheat warning light (indicator) goes off.



NOTICE

- The voltage of battery should be over 11.5 V.

2nd step

When the engine cranking signal is received, AQGS applies the voltage (approx. 6.5 V) to the glow plug for 1 second, and then the glow plug's temperature increases up to 1,100°C (target temperature).



NOTICE

- This step is completed while the engine is cranking.

3rd step

AQGS applies the voltage (approx. 5.1 V) to the glow plug to keep its temperature at 1,000°C. This step can be operated for up to 183 seconds depending on the conditions of engine and glow plug.



NOTICE

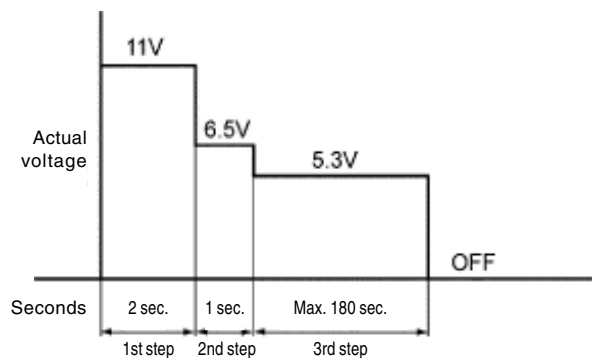
- Temperature fixing mode of glow plug: If there is no engine cranking signal after the 1st step is completed, AQGS skips the 2nd step and performs the 3rd step for approx. 28 seconds.

4th step

The post-heating is continued for up to 183 seconds to raise the temperature of the combustion chamber and reduce the amount the exhaust gas. After 183 seconds, AQGS unit cuts off the power supply to the glow plug.

Voltage patterns by steps

This shows the voltage and time supplied by AQGS by steps. As shown on the graph, the supplied voltage is decreased as the steps are continued. The 3rd step is to keep the temperature, not to raise it.



CHANGED BY	
EFFECTIVE DATE	
AFFECTED VIN	