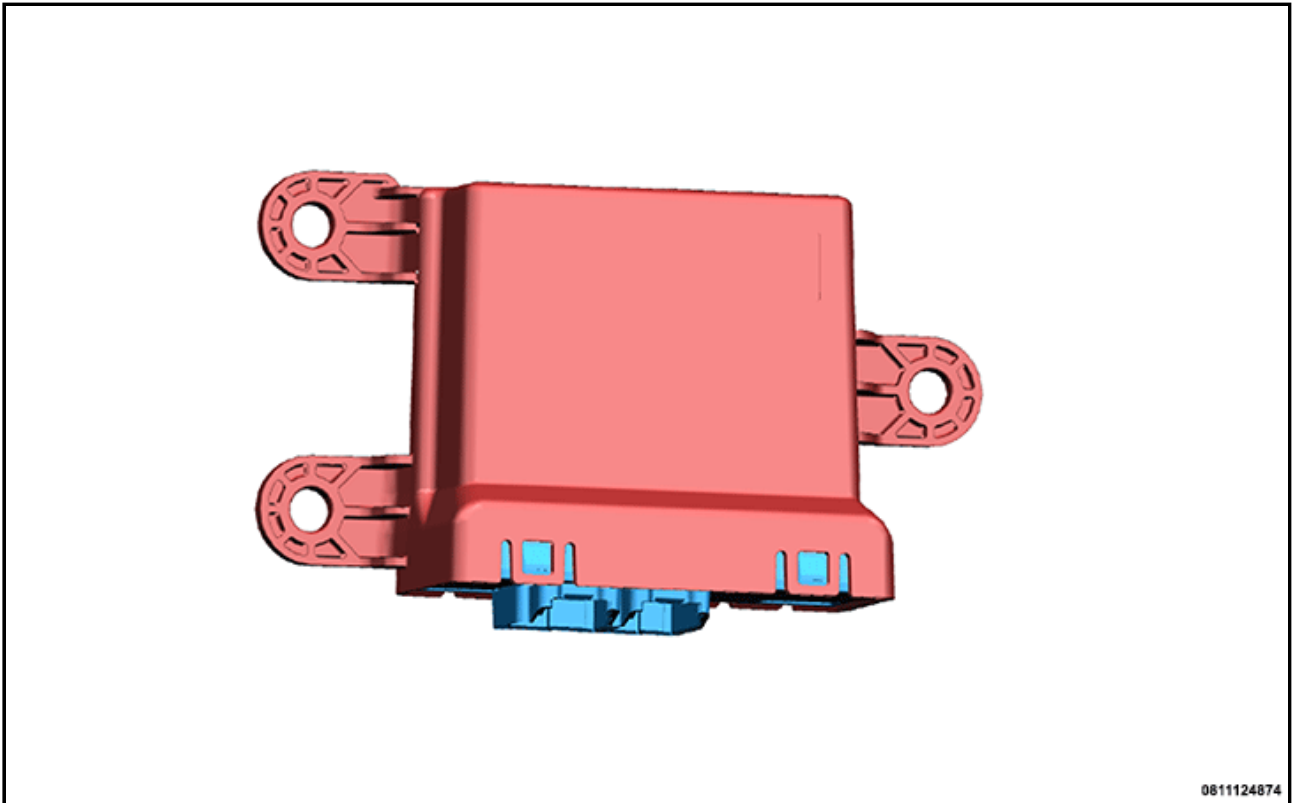**08 - Electrical/8E - Electronic Control Modules/MODULE, Security Gateway (SGW)/Description and Operation**

DESCRIPTION AND OPERATION

DESCRIPTION

0811124874

NOTE: The Security Gateway Module (SGW) is located behind the left lower dashboard trim panel.

The SGW module is a security hardware device to stop unwanted access and threats to the Controller Area Network (CAN) for the vehicle. The SGW module does not contain any drivers and therefore does not directly operate or control any vehicle components.

The complexity of in-vehicle networking has led to the development of a variety of bus standards and protocols that are specific to their communication domains. The SGW module serves as the information bridge between these communication domains and the diagnostic scan tool and the radio. Hardware security features of the SGW module are used to prevent unauthorized bus network access.

The SGW module is flash programmable. Failure to flash a newly installed SGW module will leave it in a locked mode. When in the locked mode, the SGW module will not operate.

OPERATION

The SGW module, located on the CAN architecture between the Data Link Connector (DLC), telematics module and the radio, prevents threat to the CAN bus systems through the DLC and the radio access points. A secure connection must be present to allow authentication between the SGW module and the diagnostic scan tool. The SGW module contains up to eight dual wire CAN bus channels that comply with the industry standard CAN-Flexible Data-rate (CAN-FD) bus architecture. The SGW module does not support partial networking functionality. Since the SGW module is a frame gateway, it also does not provide signal gateway functionality.

For diagnostics of the SGW module, (Refer to 29 - Non-DTC Diagnostics/Communication/Diagnosis and Testing) .

For Diagnostic Trouble Code (DTC) information, (Refer to 28 - DTC-Based Diagnostics/MODULE, Security Gateway (SGW) /Diagnosis and Testing).