

DESCRIPTION AND OPERATION > COMMUNICATIONS NETWORK - SYSTEM

OPERATION AND COMPONENT DESCRIPTION > GATEWAY MODULE



NOTE: The GWM, communicates with the 4 controller area networks (CAN). The OBD DLC is fitted to the GWM, and is the direct interface with the scan tool.

The GWM is mounted under the driver side instrument panel. The OBD connector is fitted to the GWM. The GWM acts as a central gateway to translate messages across all 4 vehicle controller area networks (CAN), and vice versa. The GWM is the only module on this vehicle with this ability. The GWM also serves as a termination module for each of the networks to which it is connected.

The 2 module communication networks connected to the DLC are HS-CAN1 and HS-CAN2. These 2 networks communicate directly with the diagnostic scan tool. The other 2 communication networks, HS-CAN3 and MS-CAN, communicate on the network, but do not communicate directly with the diagnostic scan tool. The GWM translates the messages from these 2 networks to the HS-CAN2, which transfers the signals to the diagnostic scan tool.



DESCRIPTION AND OPERATION > COMMUNICATIONS NETWORK - SYSTEM

OPERATION AND COMPONENT DESCRIPTION > HIGH SPEED CONTROLLER AREA NETWORK 1 AND 2 (HS-CAN1, HS-CAN2)

The HS-CAN1 and HS-CAN2 operate at a maximum data transfer speed of 500 Kbps and are designed for real time powertrain and driver feature information transfer and control. Modules on the HS-CAN1 and HS-CAN2 communicate using bussed messages. The HS-CAN uses an unshielded twisted pair cable, data bus (+) and data bus (-) circuits. In addition to scan tool communication, the HS-CAN allows sharing of information between all modules on each HS-CAN.

With the addition of more modules, network traffic has increased. This has created the need for an additional HS-CAN to manage the increased bus data carried on each network.

The GWM is used as a gateway for the messages to transfer between the scan tool and the modules on the HS-CAN1 and the modules on the HS-CAN2.

The scan tool communicates with the vehicle communication networks directly through the HS-CAN1 and HS-CAN2.

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